



PART D

THE CONTRIBUTION OF PUBLIC LAND TO LIVEABILITY AND NATURAL VALUES

This part of the discussion paper defines liveability and describes the contribution of public land to liveability. Public land's contribution to public open space and the protection of biodiversity, and its role in aiding communities adapt to and mitigate climate change are explored, along with opportunities for enhancing this contribution. Also discussed are the values and scope of public land 'not committed to a specific use' and opportunities for future uses relevant to Melbourne's liveability and natural values.

5

THE CONTRIBUTION OF PUBLIC LAND TO MELBOURNE'S LIVEABILITY

5.1 What is liveability?

*Liveability reflects the wellbeing of a community and comprises the many characteristics that make a location a place where people want to live now and in the future.*¹⁶⁸

Melbourne is often discussed as a liveable city but there is neither a universal definition of liveability nor agreement as to what makes a location liveable. These references to Melbourne as a liveable city are often taken from assessments made for particular purposes, such as rankings for determining remuneration for expatriate executives. Mercer's *Quality of living index* is an example of such rankings.¹⁶⁹

Two relatively recent Victorian government reports provide insights into some factors considered to contribute to liveability for Victorian communities. *A strategic framework for creating liveable new communities* focuses on the social, economic and environmental conditions necessary for creating liveable new communities in Melbourne's growth areas.¹⁷⁰ It identifies the following four liveability goals:

- ▶ high quality job opportunities
- ▶ healthy, safe and socially connected communities
- ▶ affordable living
- ▶ sustainable natural and built environments.

*A state of liveability: an investigation into enhancing Victoria's liveability** examines the links between liveability and the competitiveness of Victoria.¹⁶⁸ It identifies three drivers of liveability:

- ▶ economic strength and markets
- ▶ governments and decision making
- ▶ communities and human rights.

VEAC's focus for this investigation is the contribution of public land to the liveability of communities in metropolitan Melbourne. The material used in this chapter is largely drawn from a report commissioned by VEAC. *The contribution of public land to Melbourne's liveability*³ was developed from a review of liveability and environmental literature relevant to public land use within Melbourne.

5.2 Community wellbeing

The Victorian Competition and Efficiency Commission's definition of liveability was used in *The contribution of public land to Melbourne's liveability*. It has been adopted by VEAC for this discussion paper as it identifies community wellbeing as the core component of liveability and acknowledges that there are many contributors to liveability (i.e. "the many characteristics that make a location a place where people want to live").

Liveability relates to positive social, economic, environmental, cultural and governance outcomes in communities. It can be described in terms of the following five domains:

- ▶ healthy, safe and inclusive communities
- ▶ dynamic resilient local economies
- ▶ sustainable built and natural environments
- ▶ culturally rich and vibrant communities
- ▶ democratic and engaged communities³.

These domains can be considered as goals which governments work towards in order to maintain or enhance liveability, with public land being one of the contributors to achieving these goals.

* In this report the Victorian Competition and Efficiency Commission (VCEC) describes competitiveness as the ability to attract and retain capital and develop and use resources efficiently. The VCEC identified a number of features of strong communities including engagement and wellbeing, cultural diversity, local amenity, access to services and housing affordability.¹⁶⁸

5.3 The contribution of public land to Melbourne's liveability

Since the early days of the European settlement of Victoria, successive governments have provided community services on public land in order to enhance Melbourne's liveability. As early as 1839 substantial areas of Crown land were allocated for parks and gardens as "settlers from Europe introduced emerging ideas about the need for open public land, to provide 'breathing space' for rapidly expanding industrial cities."⁸ By 1857 Yan Yean Reservoir was providing the water supply necessary to support and expand the colonial settlement. Many of greater Melbourne's major roads were built during the 1850s, along with the early development of Melbourne's railways providing for the transportation of people and goods. From the early 1850s, substantial public buildings and offices were built by the Government, initially focusing on court houses and police stations to support law and order, but very quickly including other major educational and cultural buildings including the University of Melbourne and the State Library.⁸

The contribution of public land to liveability has continued with the ongoing provision of roads, hospitals, schools, open space and other community services on public land. Although it seems self-evident that public land makes this contribution, it does not appear to have been articulated and documented; potentially giving rise to its importance being underestimated by policy and decision makers.

Table 5.1 documents the contribution of public land to Melbourne's liveability in a summary form against the five liveability goals. Natural environments feature frequently in this table as contributors to physical, mental and social wellbeing. Biodiversity on public land has its own intrinsic value and ecosystem services values as well as this 'liveability value'. These are discussed further in chapter 8.

The literature review supporting the material in table 5.1 is documented in *The contribution of public land to Melbourne's liveability*.³ The report notes that some literature does not distinguish between land owned by the State and land owned by local councils or, in some cases, between open space on public and private land.

Land owned by local councils makes significant contributions to the liveability of communities through community facilities and services and open space. This land often adjoins and is indistinguishable from public land, and even when this is not the case, is generally considered by members of the community to be part of the public land estate.



Table 5.1

Contributions of public land to liveability

LIVEABILITY GOAL: Healthy, safe and inclusive communities
<p>Public land contributes to physical health as:</p> <p>Parks, walking and cycling tracks, beaches and sports grounds enable organised and non-organised high intensity physical exercise in outdoor spaces.</p> <p>Parks, sports centres, swimming pools and schools enable children to play sport and have free play contributing to physical and mental health.</p> <p>Public hospitals, maternal and child health services provide health services and parks, tracks, beaches, sports grounds and other public land facilitate preventative health measures.</p> <p>Vegetated parks, coastal reserves and rivers provide exposure to nature which contributes to physical and mental wellbeing.</p> <p>Water catchments and treed parks enhance air and water quality.</p>
<p>Public land contributes to mental health as:</p> <p>Natural environments alleviate mental fatigue and exposure to these environments is linked to mental wellbeing.</p> <p>Some parks provide the opportunity to participate in environmental programs which are associated with improvements to mental health.</p>
<p>Public land contributes to social capital as:</p> <p>Community hubs, shopping strips, parks, schools and other public spaces are used for socialising and community activities.</p> <p>Parks, nature strips, coastal foreshores and riverbanks provide green spaces in urban settings. There is a positive correlation between the greenness of spaces and social participation.</p> <p>Accessible public spaces contribute to the independence and social connection of young people.</p> <p>Public transport infrastructure and walking and bicycle paths facilitate social, economic and health outcomes in communities.</p> <p>Public housing provides affordable accommodation which facilitates physical and emotional wellbeing and results in improved community wellbeing and social cohesiveness.*</p>
<p>Public land contributes to community safety as:</p> <p>Police and emergency services facilities are located on public land.</p>
<p>Public land contributes to a sense of pride and attachment to place as:</p> <p>Well designed and maintained public spaces, such as streets, shopping strips and parks, engender a positive neighbourhood identity.</p> <p>National parks and other biodiversity conservation areas provide reassurance to people that natural environments are being protected.</p> <p>Public facilities, such as schools, museums, galleries and libraries, provide educational programs and community activities across age groups, ethnicities and education levels.</p>
<p>Public land contributes to early childhood development and lifelong learning as:</p> <p>Most schools, museums, galleries, public libraries, zoos and other facilities that provide education programs are on public land.</p> <p>Children learn from experiencing natural environments, many of which are protected in conservation reserves on public land.</p>

* Public housing was not documented as contributing to liveability in The contribution of public land to Melbourne's liveability.

LIVEABILITY GOAL: Dynamic resilient local economies

Public land contributes to stimulated and sustainable economies as:

Commercial and community activities at art galleries, zoos, botanic gardens, beaches, parks, sporting venues and other public places draw residents and tourists and generate significant employment.

Roads and railways facilitate commerce and trade.

Physical activity on public land provides health benefits, which reduces health care costs.

LIVEABILITY GOAL: Sustainable built and natural environments

Public land contributes to water and air quality as:

Forested water catchments protect Melbourne's water quality.

National parks, state forests and other vegetated public land absorb carbon and offset greenhouse gas emissions.

Public land contributes to biodiversity conservation as:

Conservation reserves contribute to the protection of Australia's biodiversity, including threatened flora and fauna.

Parkland corridors provide habitat links across landscapes.

Public land contributes to environmentally sustainable urban areas as:

Walking and cycling paths can reduce travel in vehicles, thereby reducing greenhouse gas emissions.

Urban parks and street trees reduce the 'urban heat island effect', increasing the comfort of the community and reducing the need for mechanical cooling.

LIVEABILITY GOAL: Culturally rich and vibrant communities

Public land contributes to artistic expression and cultural diversity as:

Large art institutions, such as the National Gallery of Victoria and the Victorian Arts Centre, and smaller local community centres provide venues for artistic and cultural activities.

Public land contributes to local, metropolitan and international sporting events and activities as:

Public sports grounds, swimming pools, beaches and streets enable participation in sports clubs which contribute to building cultural identity.

Major and local sporting events at these sites contribute to the cultural fabric of communities.

Public land contributes to Melbourne's heritage as:

The remaining intact Indigenous cultural heritage sites in metropolitan Melbourne are largely on public land and are an important part of Melbourne's heritage.

Iconic post contact sites, such as the Exhibition Building and State Library, contribute to the heritage of Melbourne.

LIVEABILITY GOAL: Democratic and engaged communities

Public land contributes to consultation and engagement as:

Community management of public land through committees or boards enhances democracy.

Public land provides opportunities for conservation and other groups to be involved in land management and related activities.

Public land contributes to community action as:

Public demonstrations on public land, such as Spring and Collins Streets and the steps of Parliament House, enable political expression within the broader community.

Community centres and neighbourhood houses provide places to facilitate community decision making and consultation.

The added value of public land

The contributions documented in table 5.1 demonstrate that public land contributes to the range of liveability goals in many different ways. Some of these contributions could also be made on private land. For example, private art galleries and music venues contribute to artistic expression and privately owned heritage buildings contribute to our understanding of Melbourne's heritage.

However, unlike private land, public land provides governments with opportunities to utilise land for the purposes it sees fit. In the context of this discussion, this is to improve social, economic, environmental, cultural and governance (or liveability) outcomes. These are generally 'public good' or utilitarian purposes such as conservation of the natural environment, providing opportunities for recreation and relaxation, the delivery of public services and utilities, and securing land for use by future generations.

Public land provides benefits to members of the community, often without being required to pay for access to private services and/or land holdings and generally without being excluded based on ownership or club membership. Most importantly, stability or permanence is generally associated with public land, but not with private land.

However, although public ownership of land may provide more access to, and permanency of benefits it does not provide a guarantee that the 'public good' will be realised. Liveability benefits are most likely to be realised when there is adequate and effective:

- ▶ supply of public land, taking into account its location, size (i.e. appropriate to the catchment it is serving) and connectivity;
- ▶ management of public land and the amenity provided;
- ▶ governance arrangements such as community engagement and partnerships with local government.³

If we accept that public land contributes to liveability, a failure to secure an adequate supply of public land means that governments and community members have reduced capacity to affect liveability for current and future generations. Equally, where the land is, what happens on the land and how it's managed makes a difference to liveability outcomes.³

Assessing whether these public land contributions are sufficient

Although many of the contributions of public land to Melbourne's liveability have now been documented, the extent of these contributions has not been measured. Further, there are no or few accepted standards* for providing services or achieving outcomes on public land to meet the liveability goals across metropolitan Melbourne. This makes it difficult to determine whether this contribution, or the breadth of public land contributions, is sufficient.

* The Draft Precinct Structure Plans developed by the Growth Areas Authority can be considered as a form of liveability standards for Melbourne's growth areas. However, these cover a broader range of contributions to liveability than those provided by public land.

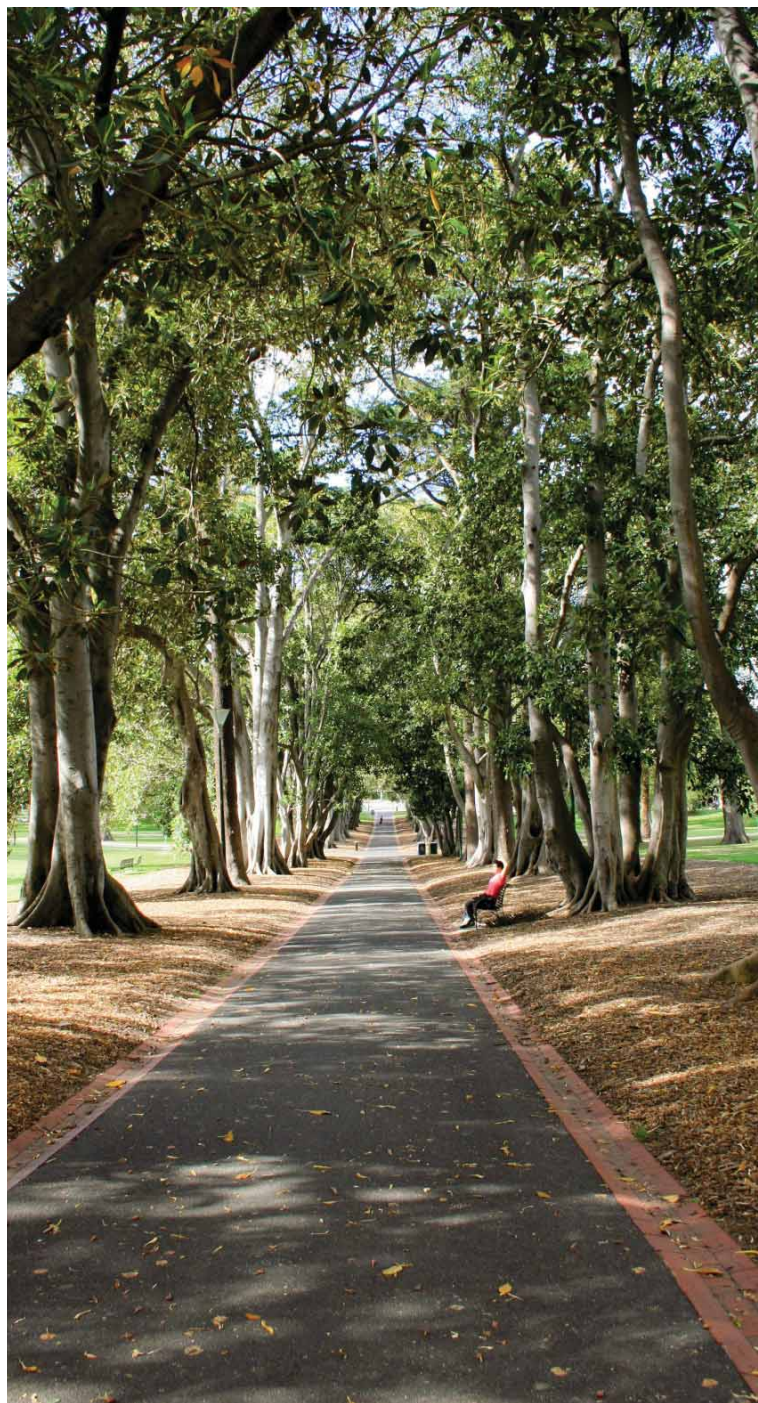
5.4 Opportunities for enhancing the contribution of public land to Melbourne's liveability

Metropolitan Melbourne is a heavily populated urban environment and its population is rapidly growing. It is estimated that around 4.7 million people will live in the investigation area by 2026.⁴ As Melbourne grows, more people will use its public land – its open space, roads, railways, paths and trails, hospitals, schools and utilities.

Melbourne has a diverse community. Although Australia generally has an ageing population, the age profile of residents varies across municipalities. Melbourne is also a very multicultural community. Different age groups, and potentially different cultural groups, have different needs and want different benefits from public land – for example schools, playgrounds, sports ovals, walking paths, parks, places to meet and socialise, health services and hospitals, public housing and public transport.

Melbourne will need to accommodate an expanding, ageing and culturally diverse population and ideally provide for this population to have access to public land and the services and utilities on it. There will be pressure on natural environments in the face of changing weather patterns and urbanisation. There will be pressure on services and utilities due to increasing demand and diverse needs.

All of these factors impact on current and future liveability. Chapters 6, 7 and 8 include discussions on the ways public land contributes to Melbourne's liveability. Also discussed in chapter 6 is the complementary or shared use of public land to achieve multiple liveability outcomes. Chapter 9 includes a discussion of the opportunities for surplus public land to further enhance these contributions to Melbourne's liveability.



6 PUBLIC OPEN SPACE IN METROPOLITAN MELBOURNE

CHAPTER 6 discusses the contribution of public open space to Melbourne's liveability and provides some background to open space planning in the metropolitan area. It describes the extent and ownership of public open space across the investigation area, and discusses some of the major issues associated with, and future options for, providing public open space.

Comments are invited on a number of specific issues throughout this chapter.

6.1 What is public open space?

6.1.1 A DEFINITION

Any discussion of public open space requires an accepted meaning of the term. The definition below was developed by VEAC for this purpose.

Public open space is public land and local council land that has an accepted and ongoing community use for outdoor recreation and informal activities, and that is freely accessible to the public.

The following matters were taken into account when developing this definition:

- Open space on public land and local council land is generally more permanent than open space on private land, such as privately-owned bushland, farmland and golf courses.
- Public open space is largely unbuilt and available for outdoor recreation (both organised sports and non-organised recreation, such as jogging, walking and cycling) and informal activities (such as picnicking, nature appreciation and reading).
- Public open space is freely accessible: that is, access does not require exclusive club membership, and entry is not prevented by physical barriers such as permanently locked gates.

6.1.2 OWNERSHIP OF PUBLIC OPEN SPACE

Public open space within metropolitan Melbourne is owned by the Crown, public authorities and local councils. Open space is described at several levels, according to the community (or catchment) it services: state, regional, district and local. State-level open space, such as national and State parks, is Crown land. Regional open space is generally Crown land, although some proposed new regional parks will be formed from a combination Crown land, secondary use of public authority land and local council land. Local and district open space is generally owned by local councils.

Land owned by local councils is included in this discussion of public open space as, although VEAC's role is to conduct investigations of public land, it considers that the role of municipal land in the public open space network must be acknowledged.

6.1.3 CATEGORIES OF PUBLIC OPEN SPACE

Open space differs according to its form, its uses and the size of the community that it services. It can be land with intact native vegetation, planted gardens, playgrounds, running tracks or paved squares and promenades. Its use for recreation can be secondary to other uses, such as floodplain management, and it can be primarily used by local neighbourhoods or by people from across the State and beyond. Table 6.1 describes the different categories of public open space in metropolitan Melbourne and the catchments they service.

Table 6.1
Open space categories

CATEGORY	DESCRIPTION	CATCHMENT
Protected area National and state parks, nature conservation reserves, natural features reserves that are part of the protected area system (bushland areas, streamside areas and scenic reserves)	These areas are set aside for the conservation and protection of natural ecosystems, landscape character and/or historical and scenic features. All are part of Victoria's protected areas system (see chapter 4). They can be used for non-organised recreation and informal activities, provided this does not damage any natural or heritage values.	State
Multiple-purpose area Wetlands, stream frontages, state forests	These natural and semi-natural or historic areas have a resource, service and utility use or natural drainage function. They are managed for the protection of their nature conservation values, along with these other uses. Recreational uses vary, depending on how compatible they are with the conservation values and other uses of the areas.	Regional/district
Nature-based recreation area Regional or metropolitan parks, coastal parks, coastal reserves	Areas with natural and semi-natural values primarily used for non-organised recreation and informal activities. These areas are generally vegetated, but this can range from remnants of native vegetation through to revegetated and semi-landscaped areas. They are generally larger and have more nature conservation values than parkland and gardens.	Regional/district
Parkland and garden Formal public gardens, pocket parks and playgrounds	Generally intensively landscaped areas that provide for a range of non-organised recreation and informal activities.	District/local
Organised recreation area Sports fields, bowling greens, public golf courses and driving ranges, tennis courts, netball and basketball courts and public swimming pools	Areas used for playing organised (often club-based) sport in an outdoor setting.	District/local
Services and utilities area Pipe tracks, retarding basins, aqueducts and some power line easements	Areas used primarily for service delivery purposes that have a secondary recreational use.	District/local
Civic square and promenade Areas such as Federation Square and Southbank promenade.	Major hard-surfaced open areas and long, open areas (often adjacent to rivers) used for non-organised recreation and informal activities (such as community gatherings).	District/local
Recreation trail Trails such as the metropolitan trail network and rail trails	Off-road pathways used for walking and cycling that link areas of public open space.	Regional/local

6.2 Contribution of public open space to liveability

Public open space was the most common theme raised in submissions to the investigation and by the Community Reference Group. Many submissions commented on the mental and physical health benefits of recreating out of doors; the benefits to the environment from the conservation or re-planting of native vegetation, and the opportunities provided by linear open space for creating habitat links and corridors; and the benefits in counteracting the loss of private open space in a time of increased housing density. Many submissions also raised concerns about the loss of open space in particular municipalities, the need to protect open space from further loss and the need for additional open space to meet increasing population levels. Some submissions were concerned about the disposal of public land that is currently used or could be used for open space.

Public open space is a key contributor to Melbourne's liveability.³ It contributes to a range of liveability goals including healthy, safe and inclusive communities, dynamic resilient local economies, sustainable built and natural environments and culturally rich and vibrant communities.

Some examples of the contribution of public open space to Melbourne's liveability are provided below. These are drawn from the literature review undertaken in *The contribution of public land to Melbourne's liveability*³ and from information collected through municipal household and on-site surveys.^{171,172,173,174,175}

Physical health

Public open space provides for a broad range of organised and non-organised recreational uses which may increase physical activity levels. Parks, walking and cycling tracks, beaches and sports grounds enable organised and non-organised high intensity physical exercise in outdoor spaces, as well as play opportunities for children. This is particularly important within the context of rising obesity levels amongst children and adults (approximately 17 per cent of Victorian adults are classified as obese) and the reduction in size or loss of private backyards.¹⁷⁶

Open space, especially at the local level, is valued by the community for its importance in maintaining a healthy lifestyle and for the recreational opportunities it provides. For example, walking paths and playgrounds are considered as very important facilities in open space areas by residents of many municipalities including Kingston, Yarra, Darebin and Moreland.

Mental health

Public open space is increasingly the only natural or semi-natural environment available in densely populated urban areas. Exposure to natural environments has intrinsic health benefits, whilst a lack of nature has been linked to trends such as attention deficit disorders and depression in children. It also provides opportunities to undertake informal activities such as relaxing and being in nature, which can benefit mental health.

Social capital

Public open space contributes to social capital as it provides opportunities for group gatherings (such as picnics and barbecues) and to socialise and meet new people. It can also encourage social connections and can help new arrivals to integrate into a community. Opportunities for gathering in groups for activities such as picnicking and barbecues provided by open space are highly valued by residents of municipalities such as Kingston, Yarra, Darebin and Moreland.^{171,172,173,174,175}

6.3 A history of Melbourne's public open space planning

Stimulated and sustainable economies

Public open space offers a variety of activities which draw residents and tourists to city squares and promenades, beaches and parks, which in turn generate employment and contribute to economic growth. Commercial and community activities (such as private fitness coaching/ classes and weekend markets) occur within public open space, and communities and the private sector benefits from this free, or low cost, facilitation.

Environmentally sustainable urban areas

The greening and cooling effect of public open space on residential and commercial areas helps people cope with increased temperatures. Urban residents are provided with a direct link to the natural heritage of an area, providing opportunities to experience natural values.

Local communities place a high value on open space containing natural values.⁴⁶ For example, when surveyed by their councils, residents in the Darebin, Kingston, Moreland and Yarra municipalities identified natural values as the key value of open space. Open space is also seen as offering opportunities to be "in touch with nature". Residents also increasingly considered the retention of remnant vegetation and revegetation of public open space to aid the preservation of threatened species and local habitats as being of high importance.

Artistic expression and cultural diversity

Public open space provides venues for local community activities and cultural festivals, displays and programs which contribute to the vitality, diversity and liveliness of urban areas. It also contributes to local, metropolitan and international sporting events and activities. Large scale sporting events contribute to the cultural fabric of a community and draw civic engagement, and membership of sports and other recreation clubs contributes to building cultural identity at a local, regional and metropolitan level.

Melbourne has a long history of reserving public land for open space, dating back to the 1830s and 1840s. Pressure to set aside public land for recreation was, however, often overshadowed by the need to provide land for the developing colony.

The history of open space planning in Melbourne is also long, but somewhat sporadic. A ring of large parklands was established around Melbourne during the 1840s, including the Royal Botanic Gardens Melbourne and Kings Domain, Royal Park and Princes Park and Fitzroy Gardens. Other parks such as Albert Park, Carlton (Exhibition) Gardens, Treasury Gardens and Fawkner Park were established soon after.

As the population increased, new suburbs were developed from subdivision of rural holdings. The absence of an ordered planning framework often meant that public open space was made available only because small areas were not suitable for housing.

In 1929, the Metropolitan Town Planning Commission undertook a major examination of public open space in Melbourne. The Commission reported that there were insufficient parks and that new parks were not being systematically created to meet the needs of the expanding metropolis. The Commission recommended minimum guidelines for provision of recreation space, and published a plan for a system of parks along Melbourne's major waterways. The vision was not implemented at the time, largely due to the Great Depression and the Second World War. Figure 6.1 shows the Commission's 1929 plan for existing and proposed open space in Melbourne.

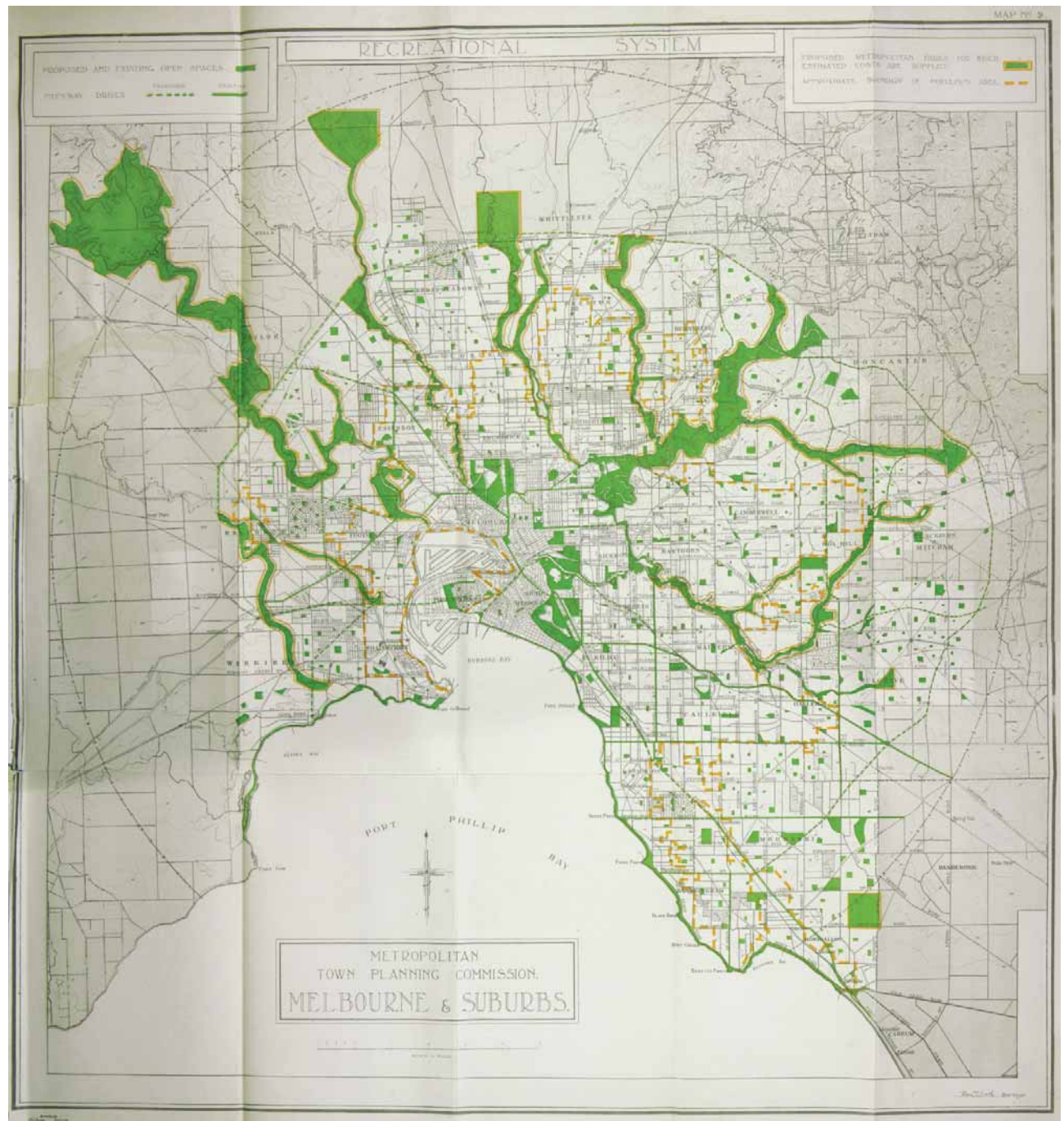
This 1929 vision was reinvigorated by the Melbourne and Metropolitan Board of Works (MMBW) in a 1971 corridor wedge plan. This plan set the scene for metropolitan growth: it provided for green wedge corridors between growth corridors, and reserved land for parkland along the river corridors. Over the next 20 years the MMBW acquired large areas of land and commenced the establishment of many of the metropolitan parks along the major river corridors, including Yarra Valley, Dandenong Valley and Maribyrnong Metropolitan Parklands.

A new Metropolitan Open Space Plan was published in 1988, with a focus on conservation, provision and distribution of public open space. The plan committed to the development of a linear network of public open space along the major river systems and Port Phillip Bay foreshore, and new parks and reserves such as Plenty Gorge Regional Park, Braeside Metropolitan Park, Royal Botanic Gardens Cranbourne and Point Gellibrand Coastal Heritage Park.

Figure 6.1

Plan of general development, Melbourne: existing and proposed recreational system

Source: Report of the Metropolitan Town Planning Commission 1929



6.4 : Open space strategies for metropolitan Melbourne

Strategic planning for open space has continued to the present day with the development of *Linking People and Spaces* and its integration into *Melbourne 2030*.^{1,13} The strategy plans for the further development and enhancement of the 'metropolitan open space network' by the Victorian government. This network covers regional level metropolitan parks on public land (most commonly managed by Parks Victoria), the metropolitan trail network and the major waterways and coastal foreshores of Port Phillip Bay and Western Port. Six new parks are to be established to meet the regional open space needs of Melbourne's new growth areas (Werribee River Regional Park, Werribee Township Regional Park, Kororoit Creek Regional Park, Merri Creek Regional Park, Melton Township Regional Park and Cranbourne Regional Park), as well as an expansion of the metropolitan trail network. Parks Victoria is currently updating *Linking People and Spaces*, for proposed release in 2010.

As well as planning for regional open space, almost all municipalities have prepared municipal open space strategies which provide comprehensive planning for community access to all types of metropolitan open space (regional, district and local), including both Crown and local council owned open space. However, these plans have been developed without the benefit of a Melbourne-wide strategic open space framework and in the absence of metropolitan-wide policies and guidelines for the provision of open space opportunities. As a result, open space provision requirements can vary between municipalities and, as there is no requirement for local councils to develop such open space strategies, not all have done so.

There appears to be little coordination within state government or between local and state governments for strategic open space planning. For example, strategies such as *Linking People and Spaces* and *Melbourne 2030* address regional open space planning and issues, while local council strategies generally focus on local and district open space.^{1,13} Further, the open space guidelines for Melbourne's growth areas provide for local and district active open space, but not regional active open space.

The implications of the absence of a strategic open space plan for Melbourne potentially include an ad-hoc approach to public open space planning and funding in some areas and a lack of consistency in public open space provision and management across municipal boundaries.

COMMENTS INVITED

A metropolitan wide public open space strategy should be developed for metropolitan Melbourne addressing public open space elements such as the provision, accessibility and type of public open space. This would provide a consistent framework for individual municipal open space strategies, which all councils should be required to prepare.

Metropolitan wide and local council strategies should be maintained and updated at regular intervals (for example, every five to ten years).

6.5 : Open space standards

The *Planning and Environment Act 1987* provides for the Minister for Planning to prepare a set of standard provisions for planning schemes called the Victoria Planning Provisions (VPP). Open space standards for local, district and linear open space are described in Clause 56-05 of these provisions and in the Growth Areas Authority's Precinct Structure Planning Guidelines.

These standards are largely applied in greenfield development sites in outer municipalities and growth areas. There are no dedicated guidelines to guide middle and inner municipalities that are faced with providing open space as part of the redevelopment of urban sites.

Three generic types of standards are discussed below: proportion of open space in an area, open space per capita and access to open space.

Proportion of open space

In the growth areas of metropolitan Melbourne, the Growth Area Precinct Structure Planning Guidelines (PSPG) set open space standards of 10 per cent of net developable area (i.e. land available for development) in residential areas. Approximately six per cent of this land is for active open space i.e. for sporting use (as active open space in the guidelines is defined as sporting space).¹⁷⁰ This net developable area excludes encumbered land, arterial roads, railway corridors, government schools and facilities and public open space.¹⁷⁰

In established areas, the most applicable 'standard' is the five per cent contribution from subdivision proponents under the *Subdivision Act 1988*. While this has the

6.6 : Public open space inventory

potential to support an area-percentage standard, the contribution may be taken as land or value of the land or a combination of both (and it only applies to parts of a municipality where there may be a subdivision). Section 6.9.1 discusses contributions under the *Subdivision Act 1988* in more detail.

Open space per capita

Open space per capita standards are useful in guiding broad land use planning, particularly within developing areas. An open space per capita standard used in Victoria is 3.03 hectares per thousand people, of which 1.5 hectares is for organised recreation. One example of the use of this standard is Bayside City Council's *Community Neighbourhood and Audit Tool* which specifies that the public open space provision should be at least three hectares per thousand residents.¹⁷⁷ This standard was originally developed by the Melbourne and Metropolitan Board of Works in 1954. It is similar to the New South Wales standard of 2.83 hectares per thousand, although somewhat lower than the generally accepted standard of 4 to 5 hectares per thousand used in Queensland. The major limitation of these standards is that they don't take into account the function, quality and accessibility of open space, or the specific needs of a community.¹⁷⁸ Accessibility is discussed below.

Accessibility

Access to open space by the local and wider community is another important standard. A benchmark for community access to open space is the walkable distance for every resident, without significant barriers such as freeways or railways.

With this in mind, Clause 56-05 of the Victoria Planning Provisions (VPP) and the guidelines for open space in Melbourne's growth areas indicate that local parks should be within 400 metres walking distance of at least 95 per cent of all dwellings, and active open space within one kilometre of 95 per cent of all dwellings.¹⁷⁹ Many local council open space strategies also specify benchmarks for accessibility. Internationally, the *United National Environmental Accord Green Cities Declaration* states that there should be an accessible public park or recreational open space within 500 metres (a 'walkable' distance) of every city resident by 2015.¹⁷⁹ Best practice standards in the United Kingdom indicate that there should be an accessible green space no more than 300 metres (or five minutes walk) from home.¹⁸⁰

The data that informs the discussion throughout much of the remainder of this chapter is drawn from an inventory of public open space compiled by VEAC (with the assistance of public authorities and local councils). This inventory has been created as a spatial database and contains information on the amount, type, location and ownership of public open space across the investigation area. This is the first time that information about open space on Crown, public authority and municipal land across the investigation area has been compiled in one place.

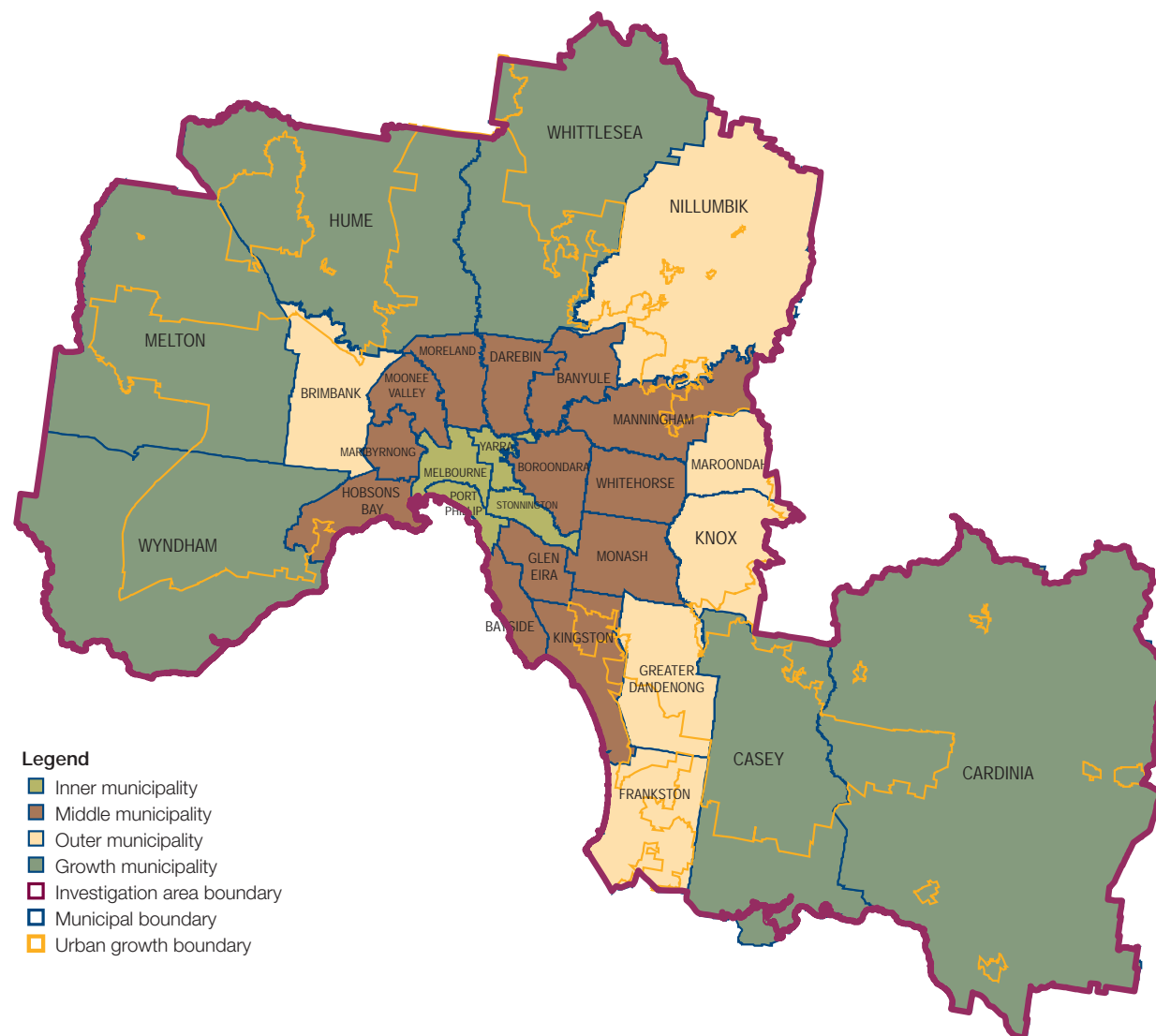
The following sections use analyses of the inventory data to describe and compare public open space across municipalities in the investigation area. In some cases two sets of analyses have been undertaken – one for the entire investigation area and another for those areas of municipalities that are within the urban growth boundary. The rationale for undertaking this second set of analyses is that residential areas in some municipalities are primarily inside the urban growth boundary, with large rural areas or large national and state parks outside the urban growth boundary. The inclusion of areas containing low populations and/or large areas of public open space outside the urban growth boundary may skew the results of the data analysis. Figure 6.2 shows the urban growth boundary in the investigation area. Comparisons have also been made between the inner, middle, outer and growth municipalities of metropolitan Melbourne (also shown in figure 6.2).

Maps C and D show one of the outcomes of this inventory: public open space across the investigation area by function and ownership. Appendix 6 shows the data used in the analysis.

Figure 6.2

Urban growth boundary and inner, middle, outer and growth municipalities in the investigation area

Source: DPCD 2009; DPCD 2010



It is expected that VEAC's inventory of public open space will produce a baseline for future investigations of Melbourne's public open space, and will aid in strategic public open space planning at a local and state government level. It may also support strategic planning and policy development for state and local governments. As such, it should be made available to a wide range of stakeholders, including state government departments, local councils and the community.

The inventory should be updated at regular intervals to maximise its value and its currency. This will allow trends in public open space provision to be monitored over time. It will also provide a record of additions and losses in public open space across metropolitan Melbourne.

COMMENTS INVITED

The public open space inventory developed by VEAC should be maintained and updated at regular intervals (for example, every five to ten years).

6.7 Melbourne's public open space network

6.7.1 EXTENT OF PUBLIC OPEN SPACE

The Metropolitan Melbourne Investigation area contains approximately 67,150 hectares of public open space, while the investigation area within the urban growth boundary contains approximately 22,130 hectares of open space. This difference is largely due to the presence of several large parks, such as Kinglake National Park and Bunyip State Park, on Melbourne's fringes.

6.7.2. OWNERSHIP OF PUBLIC OPEN SPACE

Map D shows the ownership of public open space across the investigation area. Most public open space in the investigation area is located on Crown land (48,245 hectares or 72 per cent). This large area is also a reflection of the large parks on the fringes. Approximately four per cent (2,880 hectares) is located on public authority land, primarily as a secondary use of land providing other public services and utilities. The remainder (16,025 hectares or 24 per cent) is located on local council land.

Inner municipalities generally contain a higher proportion of public open space located on Crown land than on municipal land. The amount of public open space on Crown land within inner municipalities reflects historic patterns of public open space provision and acquisition. A number of parks were set aside on Crown land in the municipalities of Melbourne, Port Phillip and Yarra shortly after European settlement (for example, Royal Botanic Gardens and Domain, Royal Park, Princes Park, Fitzroy Gardens, Albert Park, Carlton (Exhibition) Gardens, Treasury Gardens and Fawkner Park). However, this is not uniform across all inner municipalities. The rapid pace of settlement meant that some inner municipalities were required to purchase public open space. For example, Prahran Council (now Stonnington City Council, which has the lowest amount of Crown land in inner Melbourne) purchased land to establish Victoria Gardens, Toorak Park and Greville Street Gardens.¹⁸¹

The reverse is generally true for middle municipalities, with a higher proportion of public open space located on municipal land rather than Crown land. Municipal public open space within these areas is often smaller and more fragmented than areas of public open space on Crown land. Municipalities with few river and streams within their boundaries (for example, Stonnington and Glen Eira) were unable to supplement their open space needs from the Crown land streamside reserves that were established in 1888.

When considering the entire investigation areas, outer and growth municipalities generally contain a higher proportion of Crown land than middle municipalities, with large areas of public open space on Crown land in regional, state and national parks and along waterways such as the Yarra and Plenty Rivers. However, within the urban growth boundary, open space in outer and growth municipalities is generally located on municipal land. Councils in outer and growth municipalities have obtained much of their open space land through the Precinct Structure Plans in growth areas and through land subdivision negotiations with land developers that designate part of new subdivisions as public open space. The proportion of public open space in each municipality is discussed later in this chapter.

Although VEAC's definition of public open space specifies that public open space has an ongoing use, public authorities generally reserve the right to dispose of land that they no longer require to deliver their services. The open space inventory includes a small number of VicTrack sites. VicTrack has advised that any of its freehold land used as public open space may be sold or utilised for transport purposes in the longer term, and that parts of the land may be required to be used from time to time as access to rail infrastructure, subject to any existing third party leases.

6.7.3 CATEGORIES OF OPEN SPACE

Figure 6.3 shows the proportion of each type of public open space across the investigation area and within the urban growth boundary.

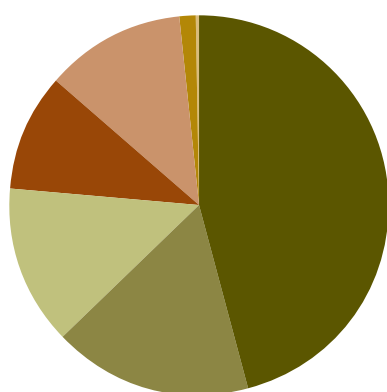
Approximately two-thirds of public open space within the investigation area is in protected areas and nature-based recreational areas. More than half of the public open space within these categories occurs within outer metropolitan Melbourne in two parks, Kinglake National Park and Bunyip State Park.

The proportion of each type of public open space changes substantially when only land within the urban growth boundary is considered. The most common type of public open space inside the urban growth boundary is organised recreation areas (approximately one-third of all open space) and parklands and gardens (approximately one-quarter of all open space). Less than ten per cent of public open space falls within protected areas, as Kinglake National Park and Bunyip State Park lie outside the urban growth boundary.

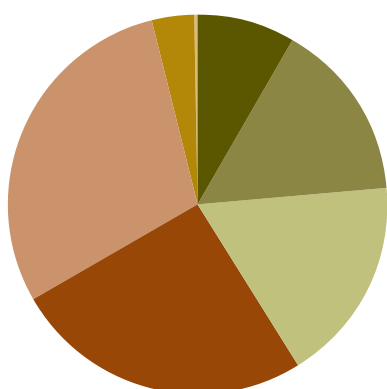
Small amounts of public open space are located within civic areas and promenades and service and utilities areas for both the entire investigation areas and within the urban growth boundary.

Trails are an important component of the public open space network. Only some trails are recorded in VEAC's open space inventory due to the difficulties of accurately mapping such an extensive network, and they are not included in the open space analysis. However, the metropolitan trail network is shown as an overlay on maps C and D in this discussion paper.

Figure 6.3
Public open space by category in the investigation area (top) and within the urban growth boundary (bottom)



- Protected area 46%
- Nature-based recreation area 17%
- Multiple-purpose area 13%
- Parkland and garden 10%
- Organised recreation area 12%
- Services and utilities area 2%
- Civic square and promenade <1%



- Protected area 9%
- Nature-based recreation area 15%
- Multiple-purpose area 17%
- Parkland and garden 26%
- Organised recreation area 30%
- Services and utilities area 4%
- Civic square and promenade <1%

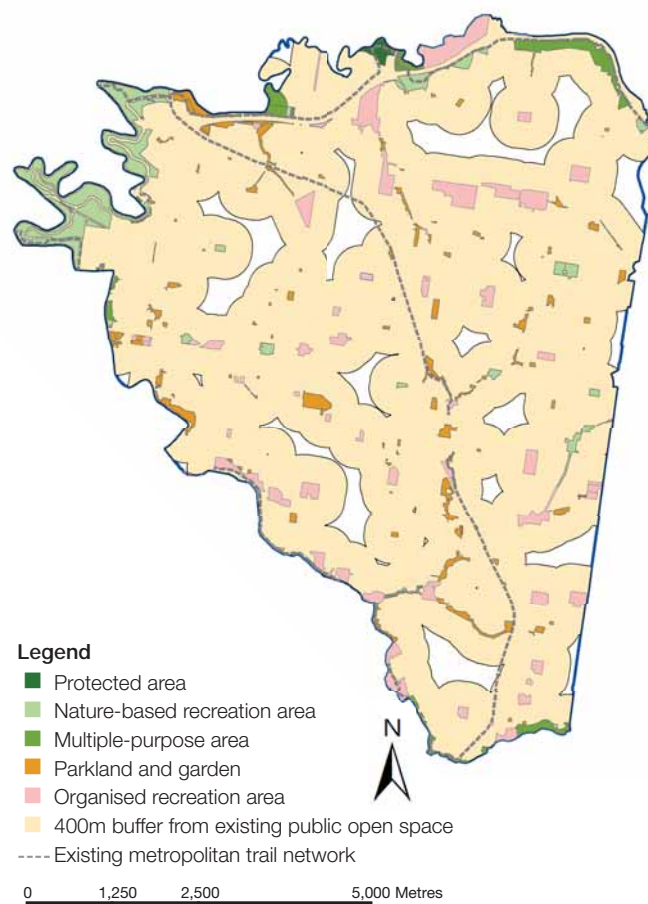
6.7.4 DISTRIBUTION OF PUBLIC OPEN SPACE

There are a number of ways of describing the distribution of open space across the investigation area. The proportion of municipal area and area per capita ratios are discussed below. These have also been discussed in section 6.5 in relation to public open space standards.

When considering these comparisons, it needs to be kept in mind that these two measures do not take into account accessibility or "quality" of open space within municipalities. Some municipalities within the investigation area with comparatively low per capita levels or low proportions of open space may have high quality open space that is well dispersed throughout the municipality.

An example of this is the City of Boroondara, which has a comparatively low level of open space area per thousand people within the investigation area. However, as shown in figure 6.4 below, most residents have access to open space within a walkable distance (in this case, 400 metres). Areas in white indicate where residents do not have access to open space within 400 metres, or where there are 'gaps' in the open space network.

Figure 6.4
Accessibility of public open space in Boroondara



Proportion of municipality area

Approximately 12 per cent of all land within the investigation area is public open space and this increases to 18 per cent if industrial, green wedge and agricultural areas are excluded. Similarly, while approximately four per cent of all land within the urban growth boundary is public open space, this increases to 11 per cent if industrial, green wedge and agricultural areas are excluded.

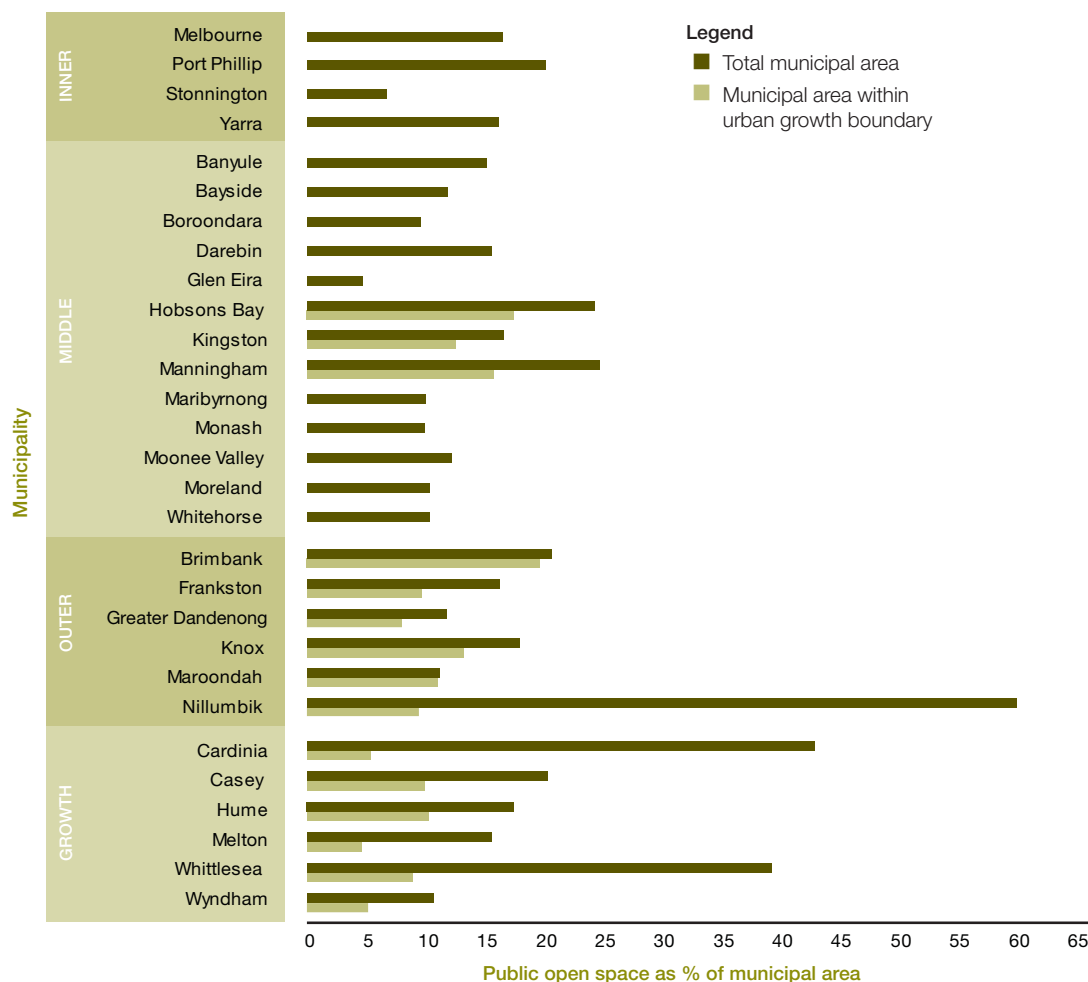
These measures of the proportion of open space are not directly comparable with the 10 per cent guidelines contained in the Precinct Structure Planning Guidelines (PSPG) as the guidelines apply to net developable area, i.e. land suitable for housing (see section 6.5).¹⁷⁰

Figure 6.5 shows public open space as a proportion of the total area of each municipality (excluding industrial, green wedge and agricultural areas) for the entire investigation area and within the urban growth boundary.

Municipalities with the lowest amount of public open space as a proportion of their municipality area include Glen Eira (4.7 per cent), Stonnington (6.7 per cent), Boroondara (9.6 per cent) and Monash (9.9 per cent). By contrast, Nillumbik (60.1 per cent), Cardinia (42.9 per cent) and Whittlesea (39.3 per cent) contain the highest amount of public open space as a proportion of the entire municipality, which is unsurprising given the relatively large land area and small population centres in these municipalities.

The picture changes when the amount of public open space is considered as a proportion of municipality within the urban growth boundary. The greatest difference can be observed in the outer and growth municipalities (where only part of the municipality lies within the urban growth boundary). For example, less than ten per cent of Melton, Cardinia and Nillumbik contain public open space when only considering areas inside the urban growth boundary. There is no clear pattern across municipalities, with comparatively low proportions observed in both established and growth municipalities.

Figure 6.5
Proportion of public open space in each municipality



Public open space per capita

Public open space per capita varies widely within the investigation area, from one hectare/1000 people in Glen Eira to 343 hectares/1000 people in Cardinia. Public open space within Cardinia is substantially higher than any other municipality, a reflection of this municipality's low population and large size.

The median public open space per capita across metropolitan Melbourne is 7 hectares/1000 people. Most inner and middle municipalities contain less than this median. Although the City of Melbourne contains the median level of open space, it has many non-resident open space users, such as city workers, students and tourists.

Public open space per capita is generally higher in the growth municipalities than in inner, middle and outer municipalities, and is generally lowest in the inner municipalities. Municipalities with the lowest public open space per capita include Glen Eira, Stonnington, Boroondara and Moreland. These municipalities also contain low levels of public open space as a proportion of municipal area (see previous section). Similarly, municipalities such as Cardinia, Nillumbik and Whittlesea with the highest proportion of public open space per capita also contain the highest amount of public open space as a proportion of municipal area.

Figure 6.6 shows public open space per thousand people for each municipality within metropolitan Melbourne. This highlights the generally low levels of public open space per capita in inner and middle municipalities when compared to the outer and growth municipalities.

6.7.5 THE IMPLICATIONS OF PROJECTED POPULATION GROWTH FOR PUBLIC OPEN SPACE

Population projections prepared by the Victorian Government indicate continued strong population growth in metropolitan Melbourne.¹² No municipality within the investigation area is projected to experience population decline over the coming two decades (see section 3.4 for more detail).

An additional 600,000 new homes will need to be accommodated in Melbourne within the next 20 years.¹² It is projected that 47 per cent of new homes will be accommodated in growth areas, with the remaining 53 per cent to be built in established areas.¹²

The public open space inventory developed by VEAC provides a 'snapshot' of public open space at a single point in time. Some idea of future per capita provision can be gained by applying population projections for metropolitan Melbourne to the current area of public open space and land subject to Public Acquisition Overlays (PAOs) (that is, land that proposed to be acquired by an authority) for additions to regional parks. It is recognised that PAOs will not be the only source of future public open space but other sources, such as development contributions, are too difficult to project. This analysis is limited, but it provides some preliminary observations on future public open space per capita within metropolitan Melbourne if no additional open space is provided outside of that already committed under existing PAOs.

Figure 6.6 shows public open space per capita (hectares per thousand people) for each municipality in the investigation area in 2006 (the date of Australia's most recent population census), 2016 and 2026.

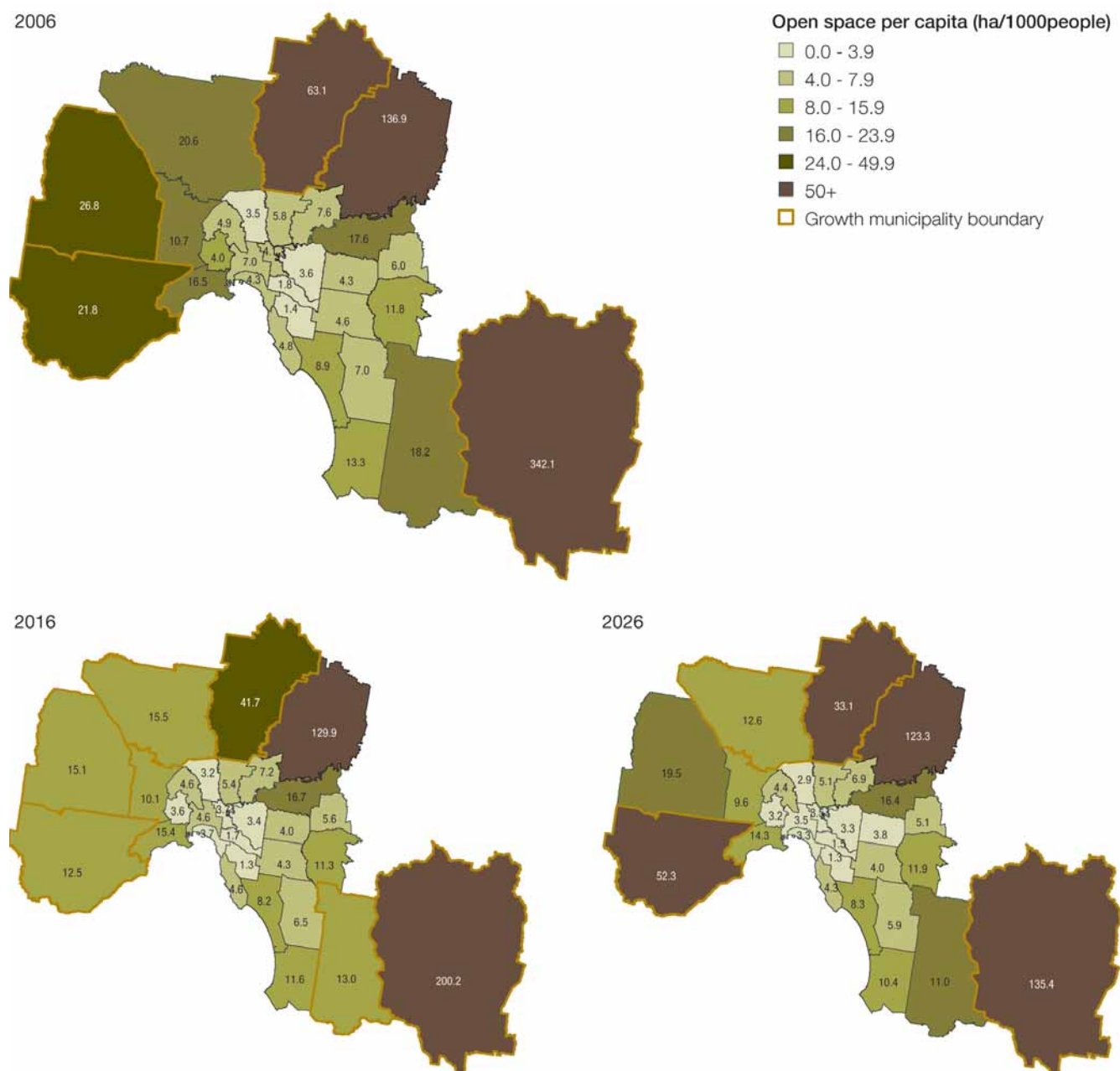
When considering the entire investigation area, the potential decrease in public open space per capita between 2006 and 2026 is generally greatest for growth municipalities. This is to be expected given the projected increases in population density in these areas. However, growth municipalities have, and are projected to retain, higher per capita levels of open space than most other municipalities. Further, it is anticipated that new open space will be provided in these areas through the planning process and, in some cases, new regional parks will cater for the projected population increases.

Public open space per capita in the City of Melbourne will also decrease significantly given its anticipated strong population growth in areas like Docklands. Municipalities like Glen Eira and Stonnington, with low per capita provision, will in all likelihood have decreased per capita levels of open space. While there are potential opportunities for increasing the amount of public open space in growth municipalities, there is less available land in the City of Melbourne and other established municipalities.

Figure 6.7 shows public open space per capita in 2006, 2016 and 2026 for areas within the urban growth boundary. The analysis uses overall population figures from Victoria in the Future 2008 for each municipality.¹⁵⁰ That is, it does not differentiate between population inside and outside of the urban growth boundary in the investigation area. It is assumed that a low proportion of the population currently resides outside the urban growth boundary in the investigation area.

Figure 6.6

Public open space per capita for current (2006) and predicted (2016 and 2026) population in the investigation area

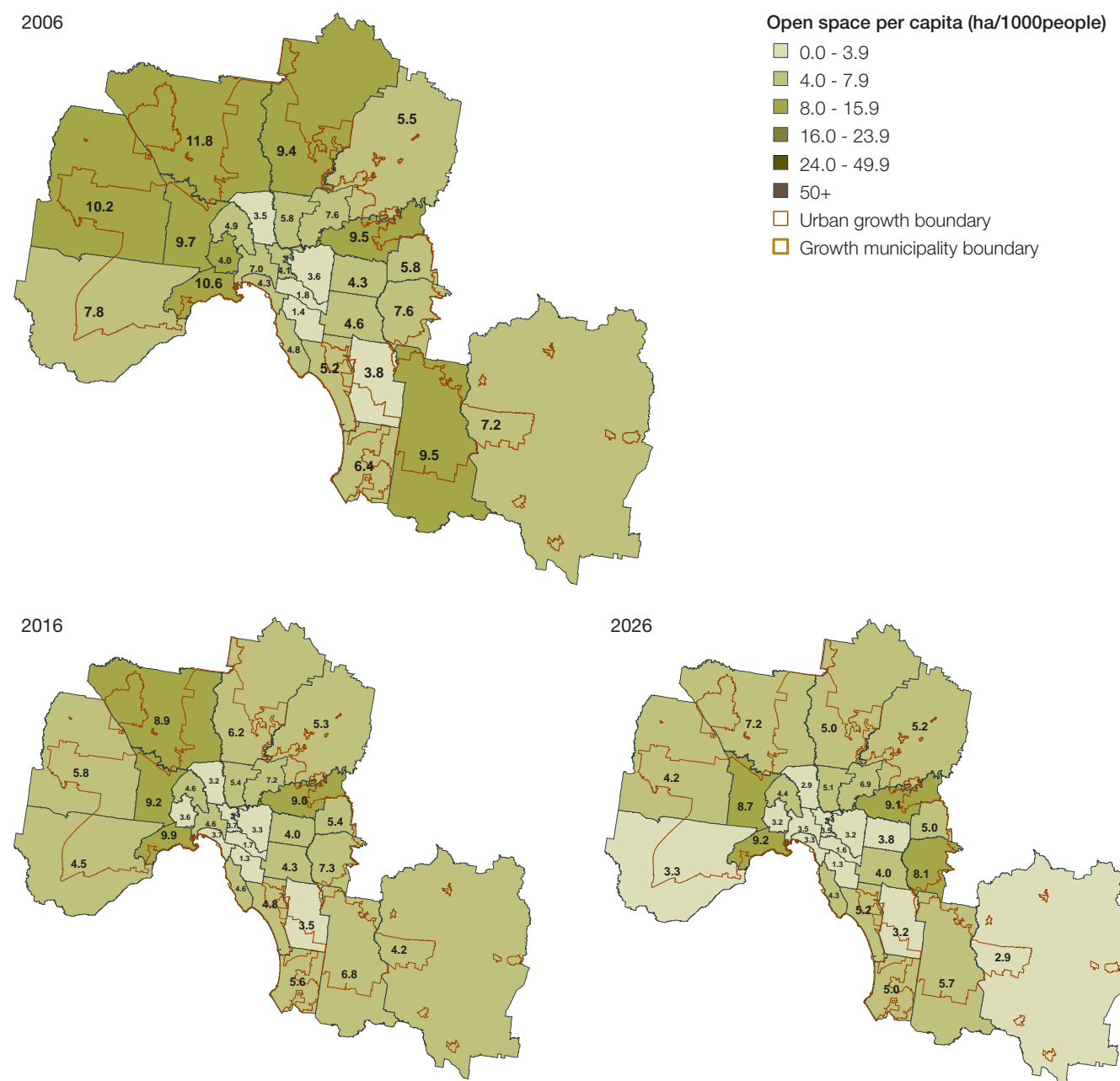


As shown, public open space per capita could decrease over time for all municipalities except Knox. Growth municipalities, such as Cardinia, will be relying upon the planning process and possibly the creation of new regional parks to offset these potential decreases. Otherwise, levels of open space per capita in outer municipalities may decrease to lower levels than some inner municipalities. Increasing population and limited opportunities for the creation of new public open space are likely to mean that public open space per capita within inner and middle municipalities remains low.

While the analysis does not include all sources of future public open space provision, it provides insights and may identify pressures from existing and increasing population densities on public open space across metropolitan Melbourne. It highlights the importance of taking opportunities to create areas of new public open space in areas of high and increasing ratios of population to public open space.

Figure 6.7

Public open space per capita for current (2006) and predicted (2016 and 2026) population within the urban growth boundary



6.8 Protecting Melbourne's public open space network

There are many historic examples where a reduction in parkland area has not been replaced (see box 6.1). Today, open space is generally protected through legal mechanisms. For example, clause 12.05 of the State Planning Policy Framework of the Victoria Planning Provisions and the Parklands Code^{1,13} outline measures to protect open space within metropolitan Melbourne from being depleted through encroachment or excision for other projects.

The State Planning Policy Framework and the Parklands Code apply to open space on public land. Both state that there should be no long-term reduction in open space area, and where a reduction in open space must take place, it should be replaced with land of equal or greater size and quality. This aims to ensure that public open space cannot be diminished without a proper public process, and replacement with land of equal or greater quality. An example of the application of clause 12.05 and the code is the Royal Children's Hospital. A new hospital is being constructed in Royal Park adjacent to the existing facility. The existing hospital is to be demolished and its site is to become part of the park to replace land used for the new hospital.

Despite this protection, some specific legislation (such as legislation establishing freeway construction entities) overrides the general planning principles in the State Planning Policy Framework of the Victoria Planning Provisions. Open space can also be reduced in area by new building works. A common instance is where an addition is required to an existing public building in a local park. This may not be seen as a significant loss, although in municipalities with a low level of open space, incremental losses of this nature can have an impact. Also, significant areas of reserved Crown open space have been lost to public access by the construction of enclosed and gated sporting stadiums (e.g. Yarra Park, Royal Park, Princes Park and Albert Park).

Some smaller areas of open space are not zoned as open space, e.g. They may, for example, be zoned as residential and have no protection under the planning scheme.

Protection of the land can be further enhanced by ensuring all open space areas are appropriately permanently reserved (in the case of Crown land) and/or zoned for open space use under the Planning Scheme (in the case of municipal land).

COMMENTS INVITED

Open space should be protected by ensuring appropriate legal status is given to the land. Crown land areas should be permanently reserved under the *Crown Land (Reserves) Act 1978* for public parks, public recreation or other more specific purposes. Municipal land should be correctly zoned as Public Park and Recreation Reserve or Public Conservation and Resource.

Open space should also be protected from incremental loss of area. If open space must be reduced in area then this should be based on consideration of the costs and benefits to the community and on the basis that replacement land be sought. It is important that a public process to review the losses and gains be undertaken. This may require strengthening of relevant planning provisions.

Box 6.1

Loss of open space – three inner Melbourne case studies

Royal Park

While still a large area of open space, Royal Park has lost a significant area of open space for arterial roads, rail and tram lines, Melbourne Zoo and the Hockey and Netball Centre and the 1953 Royal Children's Hospital (amongst others). As a result, Royal Park has been reduced in size by approximately a third since its establishment in 1854, from 283 hectares to 170 hectares.¹⁸¹

Yarra Park

Yarra Park in East Melbourne was established in 1850 with an area of 40 hectares, but has become fragmented and reduced over time. Parts of the park were used for buildings, railway lines and sporting ovals such as the Melbourne Cricket Club (MCG) and Richmond Cricket Club (3.6 hectares and 2.4 hectares respectively). The park's area was reduced in 1875 by the extension of Swan Street across the Park to the Yarra River. Brunton Avenue and the railway tracks running from Flinders Street Railway Station to Richmond station effectively cut Yarra Park in two. The 1956 Olympic Games in Melbourne resulted in the construction of the Olympic Swimming Pool and cycling velodrome in Yarra Park.

Albert Park

Albert Park was reserved in 1862, but an area was sold on the eastern side of the park for housing in 1875. Smaller sections of the park were also excised for schools and an army signals depot, and an aquatic and indoor sports was constructed in the Park in 1997.

Open space additions

Despite these historic encroachments, there have been additions within inner Melbourne such as Birrarung Marr (about eight hectares, created to partly replace open space lost during the construction of the Melbourne Park sports precinct) and new areas of open space in Docklands (approximately 17 hectares, most of which is hard-paved water frontage).

6.9 Providing new open space

VEAC's open space inventory indicates that public open space per capita is generally higher in the growth and outer municipalities than in inner and middle municipalities. Similarly, inner and middle municipalities contain low levels of public open space as a proportion of municipal area. Projected increases in population are likely to place more pressure on existing open space in municipalities across the investigation area. New public open space will need to be provided to enable current levels of open space provision to be maintained as Melbourne's population increases. While it is envisaged that the Precinct Structure Planning Guidelines will facilitate creation of new open space in growth municipalities, it will be much more difficult to apply similar standards in established municipalities.

A number of different mechanisms for creating public open space are discussed below.

6.9.1 PLANNING MECHANISMS

The creation of public open space commonly occurs through contributions from developers required under the *Subdivision Act 1988* or alternatively, the Victoria Planning Provisions.

Subdivision Act 1988

Contributions under the *Subdivision Act 1988* are the most common mechanism used to provide open space contributions in established municipalities. Local councils can require a contribution for public open space from subdivision proponents under the Act. This requirement may be met through a land or cash contribution (up to five per cent), or a combination of both. Any payments must be used to purchase new, or improve existing, open space. There is some evidence to suggest that the contribution is generally accepted as a cash contribution, particularly in established areas with higher rates of infill.¹⁶⁸

Open space contributions received as cash, rather than as land contributions, are required to be used to acquire land elsewhere, upgrade existing open space facilities or undertake capital works on undeveloped open space. Improvements in quality and access to open space is the method employed by most inner and middle ring municipalities, as the alternative of land acquisition is seen to be cost prohibitive.

Improvements in quality, such as the ability to accommodate larger numbers of users and uses on the same space, environmentally sustainable design, improvements in safety, increased accessibility, particularly for an ageing population, and public knowledge of where open space is located, are very important uses of cash contributions.

Some municipalities have identified neighbourhoods that require additional open space in their open space strategy documents and have taken steps to identify funding and acquire land. In the future, more inner and middle municipalities may need to consider using developer contributions for acquisition of land as their populations increase and adequate improvements to open space quality have been made.

Some types of subdivisions are exempt from an open space contribution from developers (for example, two lot subdivisions that are unlikely to be further subdivided, and land and buildings that have made the contribution previously). Local councils also have discretion to exempt any new types of land use or development from the payment of open space contributions (for example, private schools and hospitals or churches on the basis that they provide a community service).

Further, local councils can only require an open space contribution if there is a requirement for more open space as a result of the subdivision. The contribution may be challenged by the subdivision proponent if they consider that there is adequate open space nearby or that it is provided as part of the development.

The effectiveness of the Act as a mechanism for open space contribution depends on whether it is applied to greenfield or outer urban developments as opposed to infill developments.¹⁶⁸ The contribution is calculated as a percentage of the area of the land or land value. It does not take into account the number of potential residents of the new subdivision, even if it is a medium or high density development. Conversely, growth municipalities commonly receive more than the maximum of five per cent public open space specified under the Subdivision Act – often up to 15 per cent (although, as explained below, Development Contributions Plans and schedules to Clause 52.01 are more commonly used in the growth areas).

The provisions of the Subdivision Act relating to open space contributions do not appear to be responsive to the changing needs of municipalities, particularly:

- ▶ the rationale for the maximum five per cent contribution rate is not strategic as it relates to the area under subdivision, not the increase in population resulting from the subdivision
- ▶ the provisions are applied in an inconsistent way across municipalities
- ▶ the provisions are not linked to municipal open space policies and strategic plans that identify the open space needs of growing populations in inner and middle municipalities.

Victoria Planning Provisions

The Victoria Planning Provisions are state-wide provisions that form a template from which the planning schemes of all municipalities are sourced and constructed. Through the State Planning Policy Framework (clauses 12 and 15) and particular provisions (clause 56.05 and 52.01), they provide guidance and tools to municipalities for acquiring public open space through the land development process. Clause 52.01 enables local councils to specify their own contribution rate, in place of the maximum five per cent specified in the Subdivision Act, for public open space, provided this can be justified via a planning scheme amendment. If no contribution rate is specified, a contribution of up to five per cent may still be required under the Subdivision Act.

Schedules to Clause 52.01 essentially enable local councils to set their own contribution rates that reflect local circumstances. Approximately 15 of the 29 municipalities within the investigation have established their own contribution rates and the remaining municipalities rely on the five per cent maximum contribution available under the Subdivision Act. There is considerable variation in the contribution rates levied across metropolitan Melbourne. Many municipalities have settled on a five per cent contribution with higher contribution levels required in specific precincts. For example, while Maroondah requires an eight per cent contribution in a specific precinct, Greater Dandenong requires 20 per cent contribution in a specific precinct. Others have a sliding scale with lower contributions required for smaller subdivisions. In Glen Eira the contribution is a minimum of two per cent for a three-lot subdivision and 3.55 per cent for a six-lot subdivision.

COMMENTS INVITED

The open space contribution provisions of the *Subdivision Act 1988* and Victoria Planning Provisions should be reviewed with the aim of facilitating appropriate levels of open space contributions, particularly in inner and middle municipalities.

The Development Contributions Plan Overlay (Clause 45.06) in the Victoria Planning Provisions facilitates payment of development contributions, one-off payments or in-kind provision of works, services or facilities, by developers. Development contributions to planned infrastructure (such as public open space) are required to meet the needs of communities resulting from new developments.

Development Contributions Plan Overlays are commonly used for planning greenfield sites in the outer and growth municipalities. Development Contributions Plans (strategic plans for infrastructure projects required for an area), allow local councils to specify local requirements, including variations to open space provision to reflect local needs, or specifying what type of land may be included.

Thirteen of the municipalities within the investigation area have Development Contribution Overlays that specify open space contributions

6.9.2 PUBLIC ACQUISITION OVERLAYS

The Government maintains a long term land acquisition program, primarily for securing open space land for metropolitan parks or regional level parks. These areas are defined by Public Acquisition Overlays (PAO) in planning schemes. In some instances, the PAO land is situated in middle municipalities that have a low level complement of open space and have been listed in planning schemes for scores of years. Many of these sites are located along Melbourne's major river systems and are gaps in public access to the river. The purchase of this land has been constrained by limited available financial resources.

6.9.3 MULTIPLE USE AND USERS

Public land, particularly public open space, within the metropolitan area often fulfils multiple functions and meets a range of community expectations. Approximately 2,880 hectares, or four per cent, of public open space is located on public authority land. This percentage increases to nine per cent if only open space within the urban growth boundary is considered.

Most of this land (more than 90 per cent) belongs to Melbourne Water (generally along stream frontages, wetlands, retarding basins and pipe tracks). Melbourne Water has recently launched the '84Hundred campaign' which encourages the recreational use of waterways. The campaign aims to raise public awareness of the natural, social and recreational values of waterways within the Port Phillip and Western Port catchment, and encourages people to enjoy, value and protect rivers and creeks in Melbourne. Another example of the multiple use of Melbourne Water land is the incorporation of a retarding basin into the Merri Creek Regional Park.

Other councils and public authorities have entered into agreements with VicRoads or VicTrack to use land adjacent to freeways and railways as bicycle paths. Shared use agreements also allow local councils and schools to enter into arrangements for community use of school sportsgrounds in areas deficient in public open space.

Multiple uses of this land are often viewed as a pressure on public land and one that is increasing as Melbourne's population increases. However, the multiple use of public authority land can maximise access for the greatest number of people and, in some situations can provide 'new' public open space for communities.

COMMENTS INVITED

Multiple uses of public authority land should be encouraged as a means of providing additional public open space in metropolitan Melbourne.

7 CLIMATE CHANGE AND PUBLIC LAND

Section 2.4 discussed Melbourne's changing climate. **CHAPTER 7** discusses the predicted impacts on public land, with an emphasis on how climate change will affect Melbourne's liveability and natural values on public land. It also discusses the role public land can play in adapting to the impacts of climate change.

7.1 The impacts on public land

Melbourne has experienced higher than average temperatures and lower rainfall for the last decade, even when the natural variability of the climate is taken into account. Altered weather patterns are most likely to be related to climate change and are projected to increase in frequency and/or severity.⁶⁷ Some of the implications for public land are discussed below.

Rainfall variability

Severe rainfall shortages have been experienced in Melbourne over recent years. Although there has been a return to wetter conditions this year, it is unlikely that this reflects a long-term shift back to above average rainfall – Melbourne city last registered annual rainfall above the long-term average of 647mm in 1996.⁶⁶

Water shortages have had a significant effect on the natural environment and many metropolitan parks and gardens have suffered significant stress. There is ongoing concern that the reduction in rainfall is a step-down from the previous long-term average, and that this may have significant consequences for the future management of parks, reserves and recreation areas on public land.

Parks, recreation reserves and treed streets are important visual elements of the Melbourne metropolitan area. These areas of public land provide important contributions to Melbourne's liveability as well as providing habitat and corridors for some native species.

Many public land managers are adapting their management practices to the changing weather conditions. Some examples are presented in box 7.1.

Box 7.1

Adapting to the effects of reduced rainfall on public land

The predicted impacts of climate change include drier conditions and hotter average temperatures. Throughout the investigation area, hotter and drier conditions have significantly affected public parks and recreation areas. Public land managers have adapted to the changing climate by undertaking a range of measures including those discussed below.



Parklands and gardens

The City of Melbourne alone has over 50,000 trees of which 18,000 are located on roadsides and boulevards. These trees are important contributors to Melbourne's liveability. Alternative water supplies and mulch beds have been used to support significant trees and parks through extended dry periods. The selection of species more tolerant of dry conditions for future plantings is also a way of reducing water needs.

Sports grounds

The Sustainable Sports Grounds Program is a fund provided by the Department of Planning and Community Development to support local councils in implementing sustainable water management practices for sport and recreation facilities. The aim of the program is to 'weather proof' sports facilities through the installation of synthetic turf, developing fields with drought resistant turf species and water harvesting or water efficiency projects. Many sporting groups have been asked to adjust their patterns of use – particularly training use – on sports fields to help maintain good playing conditions throughout the season.

Urban water conservation

The Victorian Government's Stormwater and Urban Water Conservation fund promotes the reduction in use of drinking water through demonstration projects. One such example is the diversion and treatment of stormwater from three large drains into Albert Park Lake. Stormwater collected from surrounding suburbs is stored in the lake and treated for irrigation of the 19 sports grounds at this park. This reuse of stormwater also reduces runoff and pollution into Port Phillip Bay.

Left: During the recent extended dry conditions and summer heatwaves, many public land managers used slow-feed watering to maintain trees. The picture shows traffic management barriers being used for this purpose and mulch beds to maintain soil moisture around tree roots.

Increased bushfire risk

Many Melburnians live on the urban fringes in areas at risk of bushfire. In 2009, there were bushfires at Kilmore East–Murrindindi, Bunyip State Park, Narre Warren North, Endeavour Hills and Plenty Gorge. This affected around 24,440 hectares of land, including some 17,250 hectares of public land in the municipalities of Nillumbik, Whittlesea, Casey and Cardinia in the Metropolitan Melbourne Investigation area.

Climate change is predicted to increase bushfire risk. In Melbourne, the number of 'extreme' fire danger days is expected to increase by between 12 and 38 per cent by 2020, and by between 20 and 135 per cent by 2050.^{64,182}

The Victorian government recently accepted the Victorian Bushfires Royal Commission's recommendations to substantially increase fuel reduction by prescribed burning and other measures on public land, while also undertaking to eliminate the source of some fires.² Enhanced research and monitoring will be undertaken to inform adaptive management and the impact on natural values of increased prescribed burning.

Impacts on biodiversity

Major land use change in Australia over last 200 years has greatly altered many ecosystems and species compositions. Climate change will compound this existing stress for many plants and animals and reduce the capacity of natural adaptive processes.¹⁸³ Indeed, many species that are not currently threatened may become so. The pressures on biodiversity from climate change are discussed in chapter 8.

The orange-bellied parrot *Neophema chrysogaster* is an example of a threatened species that could be subject to further pressures from the effects of climate change. A case study on the orange-bellied parrot, which overwinters in coastal saltmarsh on public land within the investigation area, is presented in box 7.2.



Box 7.2

Potential implications of climate change for the orange-bellied parrot

A coastal species, the critically endangered orange-bellied parrot – a small grass parrot of coastal south-eastern Australia – may be particularly susceptible to the effects of climate change. The orange-bellied parrot breeds in Tasmania, before migrating across Bass Strait to Victoria and over-wintering in Victorian and South Australian coastal saltmarsh habitats. Approximately 50 mature birds remain in the wild and the captive breeding program for the species comprises around 160 birds.^{184,185} Up to 70 per cent of the entire Victorian population is concentrated at three wintering sites around western Port Phillip Bay and the Bellarine Peninsula.¹⁸⁶

On the mainland the orange-bellied parrot depends on coastal saltmarsh vegetation communities for food and habitat. These environments are threatened by rising sea levels. Adding to these existing threats, climate change impacts may lead to a further overall reduction in saltmarsh habitat through permanent inundation and greater frequency of major storms increasing coastal erosion. A significant decrease in food and habitat resources would have disastrous consequences for the wild population of orange-bellied parrots which are highly dependent on high-quality saltmarsh.¹⁸⁵ Increased storm frequency may also affect the seasonal Bass Strait migration of the species.

Above: Each winter the critically endangered orange-bellied parrot migrates to Victoria's coastal saltmarshes. Climate change may pose a further threat to this species.

Flooding and erosion

Climate change is predicted to increase the occurrence of extreme weather events such as flash floods and storms. The risks include erosion, damage and loss of infrastructure or property, and flooding or inundation. There are significant risks for tourism and recreation as well as economic costs associated with asset maintenance and repair – for example, flooding of drainage systems or erosion of coastal roads. Many areas of public land across the investigation area perform a function of flood retention or detention and storm water drainage. Many of these areas are also semi-natural wetland environments and recreation areas (e.g. Truganina Swamp, Edithvale-Seafood Wetlands and Galada Tamboore in Merri Creek Parklands).

The results of changing rainfall patterns, particularly increased time between rainfall events and high intensity storm events, are also likely to have negative effects on both sewerage and drainage infrastructure.⁸⁹



Above: A severe storm in April 2009 caused extensive damage to the coastal foreshore and promenade at Black Rock. In general, the effects of sea level rise are most pronounced during storm events.

Coastal impacts

Sea-level rise in future decades will affect the coastlines of Port Phillip Bay and the Western Port region with erosion in many locations, particularly during storm events. For example, storm surge inundation simulations for the Western Port region suggest that a current one in 100 year storm surge could become a one in one to one in four year storm surge by 2070.¹⁸⁷

Many natural systems, including estuaries, coastal vegetation, wetlands and reefs are likely to become increasingly vulnerable. For metropolitan Melbourne some of the most significant impacts will include erosion of beaches and loss of coastal landscapes, damage and loss of infrastructure or property, and flooding or permanent inundation.^{64,188}

Most of Melbourne's Port Phillip Bay coast is fringed by Crown land reserves (about 92 per cent). Communities and assets along the Victorian coastline will increasingly come under threat from coastal flooding due to rising mean sea levels and possible changes in weather patterns that drive sea level extremes such as storm tides.¹⁸⁹ Rising sea levels will generally reduce access to public land beaches and foreshores impacting on a popular open spaces and community assets. Planning processes will need to take into account the lifetime of coastal assets – often 100 years or more – in those areas vulnerable to sea level rise.³⁹ In addition, areas where sea level rise and flooding will have a combined effect may present significant engineering problems, for example with bridges over the lower Yarra and Maribyrnong Rivers.

The Future Coasts Program is undertaking extensive data collection and modelling of the physical vulnerability of Victoria's coast to climate change.¹⁹⁰ Strategies for managing risks include: development of set-backs for locations susceptible to flooding and erosion, increased beach renourishment; and protection measures such as sea walls.

7.2 Public land's role in mitigating and adapting to climate change

As described above, some of the most significant risks for public land in metropolitan Melbourne and its associated infrastructure are from extreme weather events. These include heat waves, long-term drought, thunderstorm or heavy rainfall events, flooding, erosion, and coastal inundation from storm surge combined with sea level rise.^{67,64,68} The role of public land in mitigating and adapting to the negative impacts of climate change is discussed below.

Countering urban heat islands

In built-up city areas like urban Melbourne, hard impermeable surfaces such as infrastructure, roads, pavement and building roofs heat above air temperature on hot and sunny days, and slowly release heat during the night. This is the heat island effect caused by urbanisation.⁶³ Figure 7.1 shows how urban temperatures are typically lower at the urban-rural border than in densely urbanised areas.¹⁹¹

Elevated temperatures from urban heat islands, particularly during summer, can increase the energy used for cooling, and compromise health and comfort.

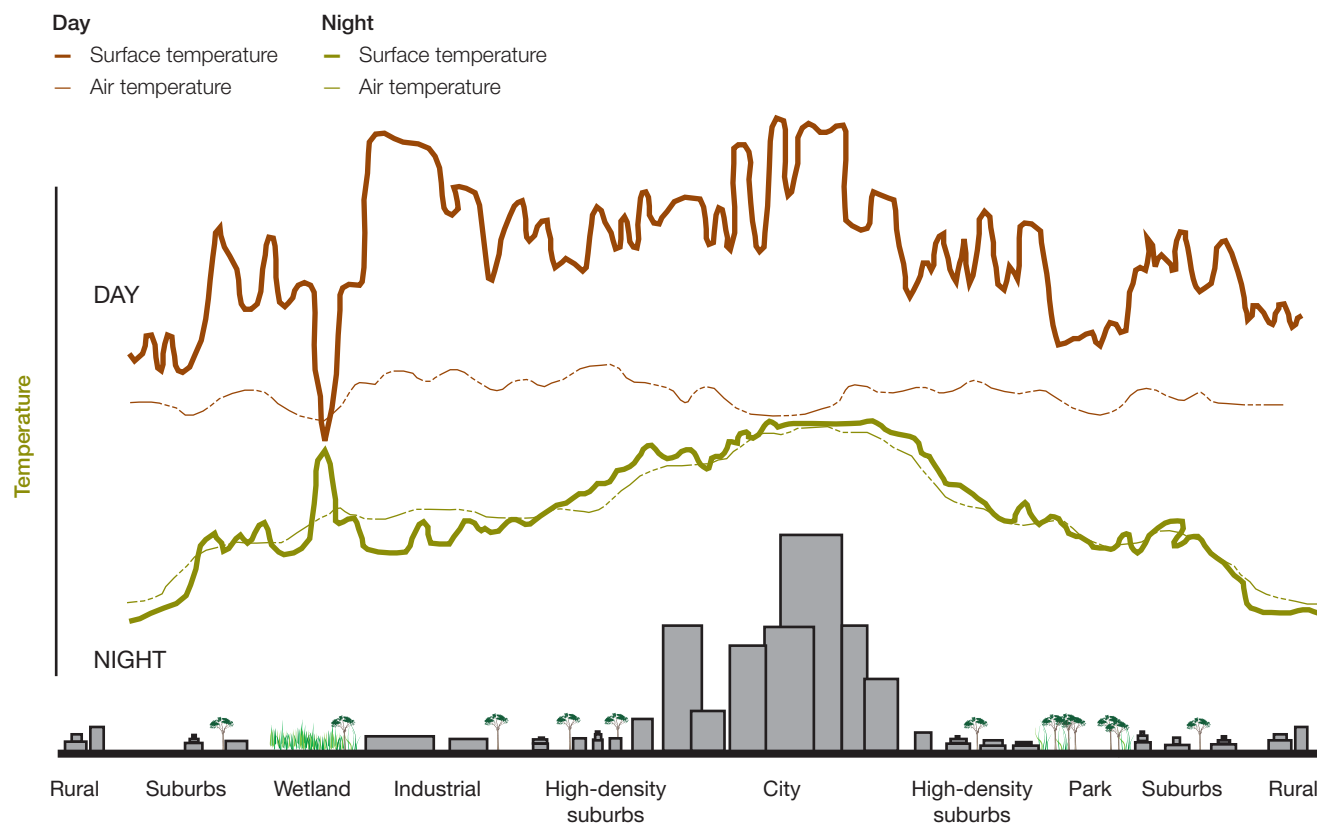
Parks and other treed areas and bodies of water can create cooler areas within a city by providing shading and evaporative cooling. In metropolitan Melbourne, public land containing treed nature strips and parks can reduce the impacts of urban heat islands and protect Melbourne's liveability. For example street trees provide:

- ▶ shade for homes and buildings, reducing interior temperatures and the costs of cooling
- ▶ shaded paths encouraging walking and cycling
- ▶ habitat for some native animals.

However, the ability of 'park cool islands' to provide thermal cooling is highly dependent on soil moisture and water supply. Trees respond to the stress of drought and heat by reducing surface area through dropping leaves. The reduced tree canopy then provides less shade and the surrounding soil loses more moisture through evaporation. Until recently, the extended dry period across Melbourne and the region affected the ability of vegetation to provide cooling by both lowering moisture levels and reducing tree canopy or shaded areas. Many trees died due to this drought and temperature stress.

Figure 7.1

Air and surface temperatures of differing urban forms¹⁹¹



Providing ecological connectivity

Land that links areas of habitat has been identified as being critical to maintaining biodiversity in the long term under the threat of climate change, and many existing biodiversity links across Melbourne are on public land. Existing natural areas of public land, such as parks and reserves, and smaller public land areas such as Crown river frontages, are the building blocks of landscape-scale connectivity strategies. There is, however, growing evidence that public land, and in particular national parks and conservation reserves, may not be effective alone in mitigating the effects of climate change on Australia's biodiversity.^{192,183} Private freehold land will be required to play a role in restoring important connections.

Across the state many parks and reserves are large enough to enable native plants and animals to "move", recolonise and reconfigure in response to climate change.¹⁹³ However, in a highly urbanised area like Melbourne, scope to improve ecological connectivity may be limited (see chapter 8).

There are also ecological networks at a global scale that are threatened by climate change. Several species of migratory wading birds annually visit wetlands across the investigation area from as far away as Siberia. These birds are protected under international conventions (JAMBA, CAMBA, ROKAMBA and Bonn). Wetland sites of International significance, identified under the Ramsar convention, found in the investigation area include the western shoreline of Port Phillip Bay (including the Western Treatment Plant), Edithvale-Seafood Wetlands and Western Port (see chapter 2.3).

COMMENTS INVITED

Vegetated public land plays an important role in adapting to climate change. Street trees and urban parks help counter urban heat islands, while more natural areas of public land provide the linkages that are critical for flora and fauna under threat from the impacts of climate change.

8

ENHANCING BIODIVERSITY IN METROPOLITAN MELBOURNE

Section 2.3 describes the natural values of the investigation area. **CHAPTER 8** discusses the pressures on biodiversity and opportunities to maintain and enhance its protection within the investigation area.

8.1 Pressures on biodiversity

Many of the pressures on biodiversity within the investigation area are the result of past and current land uses such as agriculture and urban development. These include habitat loss and fragmentation, invasive species, altered fire regimes and recreation and tourism pressures. Additional pressures include processes such as climate change. VEAC's recently released *Remnant Native Vegetation Investigation Discussion Paper* provides a discussion of threats to biodiversity at a statewide level.¹⁹⁴

Most of suburban Melbourne has been irreversibly changed. It is the most altered landscape in Victoria from a biodiversity perspective, not only in terms of the amount of direct habitat loss but also because the land and associated land uses between remaining fragments of habitat are so inhospitable to native biodiversity. For example, hard-surfaced built environments, gardens dominated by exotic plants, and high densities of domestic pets (particularly cats and dogs), are all potential barriers to the successful dispersal of native species.

8.1.1 HABITAT LOSS

Habitat loss is a major cause of species decline in Australia. Within metropolitan Melbourne this has occurred as a result of land use changes such as clearance for urban development, agriculture, extractive industries and infrastructure. Impacts on native flora and fauna are often immediate and permanent.

During Melbourne's settlement phase, broad-scale vegetation clearance for development and agriculture was widespread and systematic. Native vegetation retention controls introduced in the late 1980s halted broad-scale habitat clearance within the investigation area. However, incremental habitat removal continues for residential

housing, infrastructure projects such as road widening, land subdivisions, fire protection and agricultural activities. Land-use decisions are often made on a case-by-case basis and generally don't take into consideration the cumulative effect of incremental habitat loss.¹⁹⁵

Local extinction of species may also occur with a substantial delay following habitat loss (known as an "extinction debt"). Modelling of plant species data and remnant habitat for Melbourne suggests that there may be a significant flora extinction debt – up to 55 per cent of (pre-European) plant species may be lost in the future as a consequence of historical vegetation clearance and land management (even with no further habitat loss or modification).¹⁹⁶ Focussed management actions can enhance the long-term persistence of species and reduce the likelihood of extinction debt.

8.1.2 HABITAT FRAGMENTATION

Most of the investigation area is a fragmented landscape, although parts of the north-east remain relatively intact. Fragmented native ecosystems can experience altered community and landscape dynamics such as increased flora and fauna mortality rates, decreased plant recruitment rates (the process by which seedlings establish themselves) and fluctuations in population size.¹⁹⁷

Small, isolated patches are generally less likely to support viable flora and fauna populations and communities than networks of larger, well-connected habitat patches. There are a number of findings that demonstrate the reduced ecological viability of small patches. For example, bird species richness (the number of different species in a given area) was shown to be lower in smaller habitat patches than larger patches in southern-eastern Melbourne.¹⁹⁸ Smaller grassland patches in western Melbourne had a higher probability of being degraded than larger patches over a fifteen year period.¹⁹⁹

Despite this, sometimes, smaller habitat areas can play an important role in the protection of biodiversity.²⁰⁰ For example, important populations of the threatened Eltham copper butterfly *Paralucia pyrodiscus lucida* occur in small, relatively isolated remnant patches in Eltham.

Vegetated habitat corridors are considered one means of restoring structural connectivity in a fragmented landscape. For example, the Port Phillip and Westernport Catchment Management Authority's *Living Links* program aims to create biolinks within the Dandenong creek catchment in the south-east of the investigation area. The recently released Land and Biodiversity White Paper and VEAC's *Remnant Native Vegetation Investigation Discussion Paper* also stress the importance of functional connectivity, with the White Paper identifying regional-scale biolinks for Victoria.^{14,194}

8.1.3 HABITAT DEGRADATION

The continued degradation of remaining native vegetation is currently the major threat to Victoria's biodiversity. Remaining areas of native vegetation face potential loss of habitat condition through a range of pressures including physical fragmentation, invasions of introduced species, changes to fire regimes and climate change. The interaction between these various pressures is often complex and unpredictable. The pressures are discussed in more detail below.

Invasive species

Australia has had a long period of geographic isolation resulting in high levels of endemism in our native flora and fauna. As a result, the introduction of plants and animals has dramatically affected many of our natural ecosystems, and directly led to species extinctions in most bioregions in Australia.

Melbourne contains an abundance of introduced species (for example, planted non-native gardens), leading to significant opportunities for the more invasive of these species to move into more natural areas. Introduced species threaten native biodiversity in multiple ways, including direct competition for resources, alteration of habitat conditions, hybridisation with native species and predation.²⁰¹ It is expected that some invasive species will be favoured by predicted global climate change, leading to greater impacts on native ecosystems within Melbourne.⁵

Altered fire regimes

Fire in urban and semi-urban areas can have devastating impacts, as occurred in the Victorian bushfires on 7 February 2009. Parts of the investigation area were also affected by the 1939 Black Friday and 1983 Ash Wednesday fires.

Bushfires occur naturally throughout many Victorian landscapes. The response of flora and fauna species and communities to fire is complex. In some cases, fire can provide appropriate conditions for the regeneration of many of Melbourne's native flora species and communities. Different vegetation communities such as grasslands, heathlands and woodlands all have their own tolerances to fire and require different fire regimes (factors such as the intensity, frequency, seasonality and scale of fire) to ensure their long-term viability.

The management of fire regimes in metropolitan areas can be complex given the close proximity of people to vegetated areas. The impact of bushfires and public concern about potential fire hazard has resulted in the use of fuel management techniques such as prescribed burns.²⁰² The impacts of prescribed burns on individual species are often poorly understood. However, frequent prescribed burns can negatively impact on some plant species if they are unable to reach maturity and produce sufficient seed before the next fire episode.

Fire suppression can also have a detrimental effect on some vegetation communities. For example, grassland and heathland communities rely on fire to stimulate seed release and create open spaces for seedling germination, and a lack of fire can impede successful regeneration within these communities.^{203,204} An accumulation of heavy fuel loads can also result in large, very intense and ecologically damaging bushfires.

Climate change

Human-induced climate change is likely to compound existing stresses on flora and fauna and reduce the capacity of natural adaptive processes.¹⁸³ It is difficult to predict the exact impacts of climate change on flora and fauna due to uncertainty about how ecological processes will interact with one another. However, impacts may include changes in the distribution and abundance of flora and fauna species. Factors contributing to the vulnerability of Melbourne's biodiversity to climate change include:

- ▶ generally low relief of the metropolitan area and hence limited scope for altitudinal migration of species
- ▶ low and variable rainfall and considerable between-year variation in climate
- ▶ extensive and ongoing habitat degradation, loss and fragmentation
- ▶ a high proportion of species with narrow geographic or climatic ranges.²⁰⁵

Climate change may also affect ecosystems through sea level rise, increased frequency and intensity of fires and invasive species. Indeed, many species that are not currently threatened may become so, particularly those that depend on environments at risk such as coastal shorelines and wetlands, or those vegetation communities that are sensitive to more frequent and intense fires.

Marine environments are not the specific focus of this investigation, but it is noted that marine species will be affected directly and indirectly by climate change, particularly in temperate and coastal areas. Impacts include ocean acidification, changes in temperature, currents, winds, nutrient supply and rainfall. This will affect groups such as phytoplankton and zooplankton resulting in cascading effects in food webs.^{182,206}

Flora and fauna species within the investigation area most at risk from the effects of climate change include those with one or more of the following ecological attributes:

- ▶ genetically impoverished and/ or localised populations (e.g. helmeted honeyeater *Lichenostomus melanops cassidix*, Eltham copper butterfly);
- ▶ species/ communities with specialised habitat requirements, a narrow range of physiological tolerance, or limited adaptive capacity (e.g. Leadbeater's possum *Gymnobelideus leadbeateri* and little penguin *Eudyptula minor*);
- ▶ narrow geographic ranges or disjunct populations (e.g. southern brown bandicoot *Isodon obesulus obesulus*); or
- ▶ species that depend on other species or habitats that may be restricted (e.g. orange-bellied parrot).

Chapter 7 includes a case study on the implications of climate change for one of these species, the orange-bellied parrot.

Recreation and tourism

Areas of public land with natural values in metropolitan Melbourne are often subject to multiple land uses in addition to conservation. For example, larger parks serve conservation, recreation and tourism functions. Land managers in urban areas often face the challenge of protecting natural areas while also providing sustainable recreational and tourism opportunities.

Most visitor activity in parks and reserves with biodiversity values is concentrated at serviced areas or along access roads and tracks, with impacts associated with recreational activities generally confined to small

sections of a park or reserve.¹⁶⁰ Similarly, many parks in Melbourne are suited to high concentrations of visitors due to their lower natural values and developed facilities. However, impacts on natural values can occur when inappropriate and unsustainable behaviour occurs in natural areas. For example, inappropriate access by vehicles and pedestrians can cause erosion, degraded habitat and displacement of native fauna.¹⁷ The impacts of inappropriate uses in areas containing natural values are often incremental, with some impacts becoming self-sustaining over time (for example, weeds can continue to spread even if there is no further use of an area).

The high value placed on recreational and visitor use of public open space in Melbourne also means that opportunities for restoring structural habitat connectivity through revegetation are more limited than in rural areas of Victoria.

Box 8.1

Contribution of biodiversity to liveability

The terms of reference for the Metropolitan Melbourne Investigation require VEAC to report on the contribution of public land to Melbourne's liveability and opportunities for enhancing this contribution.

Biodiversity is essential for human existence – it contributes to the healthy environments, clean air and water that support human life. These services to humanity are termed “ecosystem services” and include temperature amelioration (e.g. reduction of the “urban heat island” effect), reduction of greenhouse gas emissions through carbon capture, air purification, water filtration and drainage and waste decomposition.²⁰⁷ (Exotic vegetation can also provide these benefits.)

Areas with native biodiversity can provide local residents and other urban dwellers with a direct link to the natural heritage of an area and contribute to a sense of place in urban environments.⁴⁶ The contribution of biodiversity to liveability is reflected in community attitudes towards nature. Remnants of habitat within urban areas are usually highly valued by the local community.⁴⁶ Similarly, having nature in close proximity (e.g. in urban or national parks), or just knowing it exists, is important to people regardless of whether they are regular ‘users’ of it.²⁰⁸

A key opportunity to enhance biodiversity, and therefore liveability, in the investigation area is to protect natural habitats on public land.

8.2 Protecting biodiversity in metropolitan Melbourne

A key response to the pressures facing biodiversity in the investigation area is to enhance the protection of natural habitats on public land. Globally, protected areas are the cornerstone of efforts to protect biodiversity. The protected areas system is discussed below, along with other mechanisms for protecting biodiversity on both private and public land in metropolitan Melbourne (and in Victoria more generally).

Protected areas in urban environments face a number of pressures such as fragmentation and human disturbance which are common to all natural areas (see section 8.1). However, being surrounded by people can also be an advantage, making it easier for protected areas to gain public support.²⁰⁹ This is evidenced by the public interest generated by campaigns such as “Save the Dandenongs” campaign in the 1940s and 1950s, and the large number of environmental community groups operating in metropolitan Melbourne today (see box 8.2, right).

Urban and peri-urban areas contribute to wider efforts to conserve biodiversity, a contribution that is recognised internationally. For example, approximately 20 per cent of the Greater London Area is assessed as valuable wildlife habitat, and both remnant and ‘designed’ natural areas (such as artificial or reclaimed wetlands) in London are considered important in efforts to conserve biodiversity.²¹⁰ The International Union for the Conservation of Nature’s (IUCN) World Commission on Protected Areas has established a specialist group on cities and protected areas to, amongst other things, advance a broader IUCN urban initiative, which has a goal of improving lives of city dwellers while strengthening protection of nature.

8.2.1 VICTORIA’S PROTECTED AREA SYSTEM

In past VEAC investigations, protection of biodiversity has been achieved through additions to Victoria’s protected areas (or conservation reserve) system, which forms part of the National Reserve System (NRS). The goals and requirements of the National Reserve System are summarised in box 8.3. In the following discussion, ‘protected areas system’ and ‘conservation reserve system’ are used interchangeably. Protected areas within the investigation area are listed in appendix 5.

Box 8.2

Community groups - working to improve Melbourne’s biodiversity

Community groups make a vital contribution to the protection and maintenance of natural areas in metropolitan Melbourne. Friends groups, committees of management and advisory committees, Coast Action/Coastcare groups, Waterwatch groups and others work to restore the natural values of public land through activities such as revegetation, pest plant and animal control, and erosion and salinity control.

The Port Phillip and Western Port region has more than 380 community groups (this figure excludes Landcare groups, which typically operate on private land) that contribute directly to managing public land with natural values.⁴⁵ These groups also receive support from public land managers such as local government, Parks Victoria and Melbourne Water. Two examples of the important work undertaken by Melbourne’s community groups are provided below.

Reducing salinity at Braeside Park

Braeside Park is a 293 hectare conservation reserve located in Braeside in Melbourne’s south-east. The park contains river red gum *Eucalyptus camaldulensis* woodlands and wetlands. A number of red gums contain hollows (often a limiting resource within urban environments), providing resources for hollow-dependent mammals and birds. The wetlands, although mostly dry in recent years, also provide important habitat for waterbirds and migratory waders.

The health of the red gum woodlands throughout Braeside Park was declining due to salinity in the late 1990s. Friends of Braeside Park and Parks Victoria planted thousands of trees, shrubs and grasses over a four year period in areas affected by salinity with the aim of reducing salinity and establishing new habitat areas. Volunteers also monitored the watertable levels and salinity concentrations within the park.



Restoring the Ngarri-djarrang (Central Creek) grassland

The Ngarri-djarrang Grassland Reserve is a nine hectare reserve located at Central Creek in Reservoir, in Melbourne's north. It contains areas of threatened plains grassland and grassy wetland ecosystems. The site has a long and diverse land use history, which resulted in a long-term decline in vegetation quality.

The Merri Creek Management Committee has carried out habitat restoration and maintenance at the reserve since 1993. Activities include intensive weed control, revegetation and ecological burning.

Above: Many community groups and volunteers take part in land management activities in Melbourne's parks and reserves. The photo above shows volunteers helping with revegetation works on National Tree Day 2010.

Box 8.3

The National Reserve System

The National Reserve System is largely made up of the protected areas established and managed by the states and territories over land and inland freshwater, but it also includes Indigenous and private protected areas. The goal of the National Reserve System is to develop and effectively manage a comprehensive, adequate and representative (CAR) national system of protected areas. **Comprehensiveness** relates to the need to include the full range of ecosystems within the reserve system. **Adequacy** relates to the need to ensure ecological viability, resilience and integrity of each ecosystem in the reserve system.

Representativeness relates to the need to ensure that the examples of those ecosystems represented in the reserve system reasonably reflect the biotic diversity of those ecosystems.

To be part of the National Reserve System, areas must fall within the IUCN definition of protected areas. That is, they must be clearly defined geographical spaces, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.

*Australia's Strategy for the National Reserve System 2009–2030*¹⁰ includes the following national targets for the reserve system:

- ▶ examples of at least 80 per cent of all regional ecosystems in each bioregion by 2015
- ▶ examples of at least 80 per cent of all regional ecosystems in each subregion by 2025
- ▶ core areas for the long-term survival of threatened ecosystems and threatened species habitats in each of Australia's bioregions by 2030
- ▶ critical areas for climate change resilience, such as refugia, to act as core lands of broader whole of landscape scale approaches to biodiversity conservation by 2030.

Within Victoria, Ecological Vegetation Classes (EVCs) are the principal unit for vegetation mapping for land-use planning and management in Victoria, and are used as ecosystem surrogates to measure progress against these targets.

In 1997, nationally agreed criteria were established for CAR reserve systems in forests in Australia (commonly known as the JANIS criteria). The JANIS criteria set targets for the amount of each forest ecosystem that should be reserved in each bioregion (namely 15 per cent of the pre-1750 extent, 60 per cent of the current extent for vulnerable ecosystems, and 100 per cent of the current extent for rare and endangered ecosystems). The criteria allow for both “dedicated” reserves and “informal” “reserves which do not all fall within the National Reserve System, but the criteria nevertheless provide additional guidance for establishing Victoria’s conservation reserve system.

The protection of natural habitats in metropolitan Melbourne is underpinned by the protected areas system which, as discussed in box 8.3, aims to include representative examples of all ecosystems. Many ecosystems in metropolitan Melbourne are poorly represented in the protected areas system. As well as providing permanent habitat protection, a strategic, well planned and managed network of protected areas is probably the most important strategy for reducing the negative impacts of climate change on biodiversity.¹⁰

Private protected areas contribute to the National Reserve System, and can be useful when options for public reserves are limited. They are achieved by the covenanting of properties or establishing other legal instruments and agreements to meet reserve system standards by individual landholders, non-government organisations or corporate bodies. Private protected areas may also be located on public authority freehold land.

8.2.2 OTHER MECHANISMS FOR BIODIVERSITY PROTECTION

Many important ecological processes and threats operate at scales larger than individual protected areas, and some of these threats are best addressed at multiple scales: local, regional and landscape. There is a range of other mechanisms for biodiversity protection outside of the protected areas system for both public and private land. Some of these are discussed below.

Other parks and public land

Some public land with high biodiversity values is reserved primarily for other purposes (such as some natural features reserves, state forest and regional parks). Many of these areas have management objectives or management plans that aim to protect their biodiversity values.

Some public authority land also contains significant biodiversity values and is managed to protect those values. Significant sites owned by Melbourne Water (for example, the Edithvale-Seaford Wetlands) are discussed in chapter 10.

Waterways

Melbourne’s waterways network makes a major contribution to biodiversity protection through the linkages it provides between inner urban areas and larger protected areas in outer Melbourne. Melbourne’s rivers and creeks are some of our most valuable natural assets, and provide immense community benefits. They face a number of challenges including poor water quality, reduced flows, and the need for protection and enhancement of streamside vegetation and habitats.

Covenants and agreements

As mentioned in the previous discussion of private protected areas, mechanisms such as covenants and agreements can be used to protect natural values on private land outside the public protected areas system. The covenant or agreement provides on-title and permanent protection. For example, Trust for Nature is a statutory body that enters into voluntary conservation covenants with private landholders on their land, permanently protecting significant areas of natural habitat. Trust for Nature also manages a revolving fund to purchase properties of high conservation value, which it then on-sells with a conservation covenant.

Legislation and policy

Biodiversity is also protected and managed through legislation and policies. Some of the more commonly used tools are discussed below.

Victoria Planning Provisions

The Victoria Planning Provisions provide the framework, standard provisions and State planning policy for all Victorian planning schemes. These planning provisions state that a planning permit is required to remove, destroy or lop native vegetation, with some exemptions for fire-prone areas. They also allow local councils to apply a Vegetation Protection Overlay or an Environmental Significance Overlay to particular areas with environmental values (for example, private land along the Yarra River frontage). Additional planning controls are applied to areas with planning overlays, providing special protection for vegetation and other environmental assets.

Victoria's Native Vegetation Management: A Framework for Action

This state-wide policy framework for the protection and management of native vegetation in Victoria.¹⁶ The primary goal of the framework is 'a reversal, across the entire landscape, of the long-term decline in the extent and quality of native vegetation, leading to a net gain'. Three steps are applied to decisions on the protection or removal of native vegetation: (1) *avoid* the removal of native vegetation, (2) *minimise* the removal of native vegetation through appropriate planning and design, and (3) appropriately *offset* the loss of native vegetation. Native vegetation that is removed must be "offset" through the protection and management of similar vegetation types. For example, if an area of native grassland is removed, another area of native grassland should be protected and/or managed to offset the loss. Losses can also be offset through revegetation in some circumstances.

Threatened species legislation

Flora and fauna communities and species considered threatened in Victoria are protected by federal and state legislation. For example, the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* seeks to protect nationally threatened species, while Victoria's *Flora and Fauna Guarantee Act 1988* protects threatened species and communities within Victoria. Any direct or indirect impacts from development on threatened species listed under these Acts must be assessed. The other primary piece of Victorian legislation providing for the protection, conservation and management of Victoria's biodiversity is the *Wildlife Act 1975*.

Threatened species advisory lists

The Department of Sustainability and Environment's threatened species advisory lists contain flora and fauna considered critically endangered, endangered, vulnerable, poorly known, near threatened or extinct in Victoria. The advisory lists are not the same as the threatened list under the *Flora and Fauna Guarantee Act 1988*. There are no legal requirements that flow from inclusion of a species in the advisory lists.

COMMENTS INVITED

There are pressures on biodiversity in metropolitan Melbourne. The protection of areas with natural values is a key mechanism for enhancing Melbourne's biodiversity. Readers are invited to comment on recommendations in Chapter 10 to enhance biodiversity values on public land in the investigation area.

9 VALUES AND FUTURE USES OF SURPLUS PUBLIC LAND

One of the terms of reference for this investigation requires VEAC to assess the values of Crown land and public authority land for areas not committed to a specific use, and report on appropriate future uses relevant to Melbourne's liveability and natural values.

CHAPTER 9 addresses this term of reference by:

- ▶ defining 'public land not committed to specific use'
- ▶ describing the values and scope of this land
- ▶ discussing the policies and processes for determining appropriate future uses of this land
- ▶ reporting on appropriate future uses of this land relevant to Melbourne's liveability and natural values.

At the end of this chapter, comments are invited on a number of topics.

9.1 : What is public land 'not committed to a specific use'?

Since the early days of colonisation, successive Victorian governments have allocated public land for public purposes and disposed of other public land. A short history of public land allocation and disposal in Victoria is provided in box 9.1, right. In current times, public land no longer required for its original purpose is assessed by the owning authority to determine if it is required for an alternative use. If there is no alternative use, the land is usually identified as surplus and disposed of.

For the purposes of this investigation, VEAC will refer to Crown land and public authority land not committed to a specific use as surplus public land, defined as:

- a** land for which there is no current or planned use
- b** land that has a current use which will cease in the foreseeable future
- c** land that has no current use, but may be required in the long-term future.

Land in categories a) and b) is frequently considered by public authorities to be surplus land that can then be reallocated to another use, leased or sold. Land in category c) also may be considered to be surplus by public authorities because of the difficulties involved in projecting long-term demographic changes and the subsequent future demand for land for public purposes. School sites are an example of land that may become surplus as local communities age or change, but could conceivably be needed in the future if young families were to return to the locality.

9.2 : Values of surplus public land

The public land estate is dynamic; land is regularly bought, sold and transferred. This makes it difficult to assess the values and scope of surplus public land sites across the investigation area. A broad understanding of the values of surplus public land in general (rather than of particular sites) can be gained from considering its value to its owners and/or managers and users – public authorities and the Melbourne community.

Box 9.1

A short history of public land allocation and disposal in Victoria

Prior to European settlement, much of southern and central Victoria was the traditional estate of five tribal or language groups: the Bun Wurrung, Woi Wurrung, Wada Wurrung, Djadja Wurrung and Daung Wurrung.⁷

With the colonisation of Victoria in the 1830s all land was considered to be the property of the Crown. Since that time, Crown land has been allocated for public purposes, sold or leased. The sale or granting of Crown land in freehold title provided for the settlement and future of Victoria through the establishment of cities and townships, private dwellings, infrastructure and agriculture.

In 1837, Senior Crown Surveyor Robert Hoddle was instructed to survey parishes, locate roads and village sites and to 'reserve all tracts or pieces of land that may appear to be required for public purposes...' Other instructions required land to be reserved for government purposes, for public buildings, church, parsonage, school, market place, gaol, Court House, watchhouses, burial places, and places for the recreation or amusement of the inhabitants.¹⁴¹ An Act to authorise the first sales of 'waste land belonging to the Crown' was passed in 1842. The proceeds of sale were to be applied to the public service of the Colony among other purposes.¹⁴⁰

Many early municipalities had smaller Crown reserves set aside for public purposes in keeping with their then status as small villages. As the population expanded, new suburbs were developed from subdivision of rural holdings. Government departments acquired land to provide services, such as schools.

Reserved land was frequently disposed of as a result of pressure from landholders for access to more land, and based on colonial policies to make land available for selection. Many timber reserves, town commons and racecourses were terminated in this way.¹⁴¹ The large parks in and around the City of Melbourne were established under Governor Latrobe as early as 1846. Many parks, however, have been reduced in size by incremental excisions – for example Royal Park has been reduced in area from 283 hectares at its establishment in 1854, to its current extent of around 170 hectares.¹⁴⁰

The broad-scale sale of Crown land effectively ceased in the late 1960s when a major public controversy arose over the government's proposed disposal of 80,000 hectares of vegetated Crown land in the Wimmera region of Victoria for agricultural use. The 'Little Desert controversy' as the issue was known, galvanised the public and conservation groups into opposition to the proposal with the result that no land was made available for agriculture in the Little Desert. It also ushered in a radically new system of public land decision-making, including the creation of the Land Conservation Council, a predecessor of VEAC.²¹¹

Although disposal of Crown land no longer occurs on a large scale, smaller areas of Crown land deemed to be surplus have always been disposed of by government. Public authorities also continue to dispose of their surplus freehold land. Crown land and public authority freehold land (together termed 'public land') may become surplus for a range of reasons, such as the closure of a school or hospital, or they may be the residual area of land acquired for a freeway, or an unused road.

In 1983, the identification and sale of surplus Crown land properties became more systematic and was specifically aimed at the generation of funds for government works. In 1986, the Victorian Auditor-General, reporting on the disposal of surplus court buildings recommended that consistent policies be applied across the public sector to the disposal of government properties that are surplus to requirements.²¹² Around the same time, the then Department of Property and Services introduced new measures for classifying Crown land into public (heritage) land that was to be retained in public ownership and government (transactional) land that could be disposed of by sale or lease. The *Crown Land Assessment Guidelines*²¹³ outline the classification process that is in current use. These guidelines are discussed further in appendix 7.

9.2.1 THE VALUE OF SURPLUS LAND TO PUBLIC AUTHORITIES

VEAC's discussions with several land-owning public authorities indicate that they value their freehold land and the Crown land they manage as a means of fulfilling their legislated functions and charters, which includes the most effective management of their assets. In this context, the value of any land that is surplus to current and future requirements tends to be its financial value to be realised on sale and/or the reduction in management costs achieved on disposal.

In some cases public authorities rely on revenue from land sales to fund purchases of new land to deliver services. For example, the Department of Education and Early Childhood Development (DEECD) uses funds from the sales of school sites that are no longer needed to assist with the purchase of new school sites in areas of increasing demand.

An example of the value of land to public authorities is provided in section 16 of the *Transport Act 1983*. This requires the Roads Corporation (trading as VicRoads) to consider the achievement of objects set out in the Act including:

to manage its assets effectively, including real estate, to protect future options and to provide for the planning, design, construction and management of new infrastructure and facilities as required.

There is an expectation within the Victorian government that government business enterprises will operate efficiently and in a commercial manner and provide an appropriate return to government. The *Water Act 1989*, the *Rail Corporations Act 1996*, and the *State Owned Enterprise Act 1992* respectively provide for water and rail corporations to pay the state a dividend as determined by the Treasurer after consultation with the relevant board and Minister. For example, the *State Owned Enterprise Act 1992*, which applies to VicTrack and VLine, states:

The principal objective of each state business corporation is to perform its functions for the public benefit by:

- a** operating its business or pursuing its undertaking as efficiently as possible consistent with prudent commercial practice; and
- b** maximising its contribution to the economy and wellbeing of the state.

The above legislated requirements do not, however, preclude government businesses from delivering whole of Victorian government priorities which may impact on their dividends. This is generally done in consultation with the Treasurer and/or relevant Minister.

9.2.2 THE VALUE OF SURPLUS PUBLIC LAND TO THE MELBOURNE COMMUNITY

The counterpoint to the value of surplus public land to public authorities is the value that the community places on it.

VEAC's consultations with the Community Reference Group for this investigation revealed a number of strongly held perspectives that provide some insights into the community value of surplus public land. These perspectives were also very clear in some submissions made to the investigation.

The first perspective is that public land is highly valued and is viewed as a finite, and possibly scarce, community resource. Community consultations indicated that Melbourne communities particularly value surplus public land that is, or has the potential to be, public open space. The grounds of former schools and natural or semi-natural spaces were often used as examples of such land.

One of the reasons that surplus land appears to be highly valued is a perception that public open space is diminishing in some neighbourhoods as a result of the sale and development of surplus public authority land and the subsequent conversion of open space to built space. For example, the development of former school sites was mentioned by the Community Reference Group and in several submissions. The view was put forward that when disposing of former school sites, vegetated areas or sports fields should be retained as public open space.

The Community Reference Group argued strongly that public land contributing to open space and land with natural and semi-natural values should not be sold. Some considered that any public land sales should be justified against liveability criteria or offset with land purchases.

Meeting the needs of future generations was also a concern of the Community Reference Group. It commented that Melbourne's increasing population and urban density were putting pressure on existing, and creating a need for more, open space and community facilities and services. It considered that some surplus land should be retained because government may be unable to repurchase suitable land due to either reduced availability or high land prices.

9.3 Scope of surplus public land



Above: DSE undertakes assessments of Crown land values using the Crown Land Assessment Guidelines (see appendix 7)

The second perspective is that the wider community does not recognise different ownerships of public land. Community consultations indicated that all land owned by the state (and to some extent local councils) tends to be viewed as public land, not as Crown land, VicTrack land, Melbourne Water land, and so on. As a consequence, there is a view that public land that is no longer needed for one public purpose should be automatically considered for another public purpose.

Underpinning this is a third perspective that public land is paid for and owned by the community to meet community needs. Community views indicated opposition to the sale of land which has a clear potential for meeting other community needs.

Disposal of public land was a theme raised in approximately 40 per cent of submissions. Recurring issues included requests to allocate adjacent surplus public land to an existing open space reserve; dissatisfaction with the disposal process (regarding lack of transparency, process and notification of decisions to dispose of surplus land); local councils' inability to afford to purchase surplus land; and strong views that public land should be available for the best public use at no further cost to the public.

Public authorities would each be aware of their own surplus land, but there is no central listing of this land. This, and the dynamic nature of surplus public land, makes it difficult to determine its scope.

9.3.1 AMOUNT OF SURPLUS PUBLIC LAND

Some surplus public land sites can be identified from the Government Land Monitor's sales bulletin board. (This internal state government electronic bulletin board is maintained by the Land Monitoring Unit of the Department of Planning and Community Development). However, listing of surplus land on the bulletin board is currently not mandatory and sites are only listed for 30 days.

Some understanding of the scope of surplus public land can be gained from VEAC's public land database for the investigation. As explained in chapter 4, VEAC has categorised public land according to its use. Some areas of land remain uncategorised because they have no clear public land use. Their future use may be under consideration, they may be surplus to requirements, or they may have an identified future use as private land, such as land that is to be developed and sold for private housing.

VEAC has identified hundreds of sites amounting to 1,161 hectares (0.7 per cent of all public land) as 'uncategorised public land'. At the time of compiling this database, many of these sites would have fitted within VEAC's definition of 'land not committed to a specific use'. However, it is likely that some of these sites will now be allocated to another use or disposed of. It is also likely that some sites that VEAC has identified as having a current public land use have since become surplus.

Assuming that most surplus public land will eventually be transferred or sold, some further understanding of its scope and significance can be gained from examining the land transactions of several of the largest public land owners and managers in the investigation area. Other than the Crown, which owns an estimated 80 per cent of public land within the investigation area, Melbourne Water, VicRoads, the Department of Education and Early Childhood Development (DEECD) and VicTrack are the largest public land owners (see chapter 4 for more detail). Collectively these public authorities own approximately 17 per cent of public land, and manage substantial areas of Crown land, within the investigation area.

Table 9.1 summarises public land sales and transfers for Melbourne Water, DEECD, VicRoads and VicTrack over the previous three years. Land acquisitions are also summarised so that these land disposals can be understood within the broader context of changes to the public land estate.

Table 9.1

Land disposals and acquisitions in the investigation area by four public authorities*

FINANCIAL YEAR	PUBLIC AUTHORITY	AREA SOLD (HA)	AREA TRANSFERRED AT NO COST (HA)	AREA ACQUIRED (HA)
2006-07	Melbourne Water	50.88	21.91	52.27
	DEECD	11.65	nil	58.28
	VicRoads	16.73	nil	127.80
	VicTrack	1.20	5.82	2.26
Total		80.47	27.73	240.61
2007-08	Melbourne Water	40.39	93.96	42.09
	DEECD	1.02	nil	52.54
	VicRoads	36.74	nil	255.42
	VicTrack	2.27	nil	15.82
Total		80.42	93.96	365.87
2008-09	Melbourne Water	25.17	39.85	61.70
	DEECD	2.12	nil	34.95
	VicRoads	111.61	20.58	29.73
	VicTrack	1.72	0.46	nil
Total		140.62	60.89	126.38
Grand total		301.50	182.58	732.86

*The data provided by the public authorities varied. Some may have combined land transfers, and relinquished Crown land with land sales. Some may have combined land acquired through transfer with land purchases.

As this table shows, approximately 302 hectares of public land was sold during this three year period and a further 183 hectares was transferred. This indicates that around 484 hectares (or 4.84 square kilometres) of public land was considered to be surplus by these four land owners and managers.

Clearly, not all surplus public land leaves the public land estate. Some land is sold or transferred in accordance with the applicable legislation to other public authorities for other public uses. For example, in 2007-08, Melbourne Water transferred approximately 90 hectares of freehold land at Frankston Reservoir to the Crown to establish a natural features reserve. In 2008-09, VicRoads transferred 20.58 hectares of land to the Crown for the creation of the Mullum Mullum Creek Parklands and sold 0.29 hectares to VicTrack for the redevelopment of the Coolaroo railway station. In the same year (2008-09) Melbourne Water transferred 21.56 hectares to other water authorities for service provision, 17.7 hectares to VicRoads for the Dandenong Bypass and 0.59 hectares to the City of Melbourne for public open space.

As table 9.1 also shows, the area of land acquisitions was more than double the area of land sales and one and a half times the area of sales and transfers combined. This shows that the combined landholdings of these public authorities increased over this three year period. This is not surprising given that land is needed for the new schools, roads, and other services that are being developed to accommodate Melbourne's population growth.

There have also been other additions to the public land estate in this period. Since 2006-07 Department of Sustainability and Environment (DSE) has acquired more than 440 hectares (4.4 square kilometres) of freehold land across approximately 30 sites. The majority of acquisitions were purchases of private land subject to long-term public acquisition overlays for additions to regional parks. The acquisitions also included a small number of blocks that were transferred at no cost from other public authorities, including land transferred as native vegetation offsets.

9.3.2 CHARACTERISTICS OF SURPLUS PUBLIC LAND

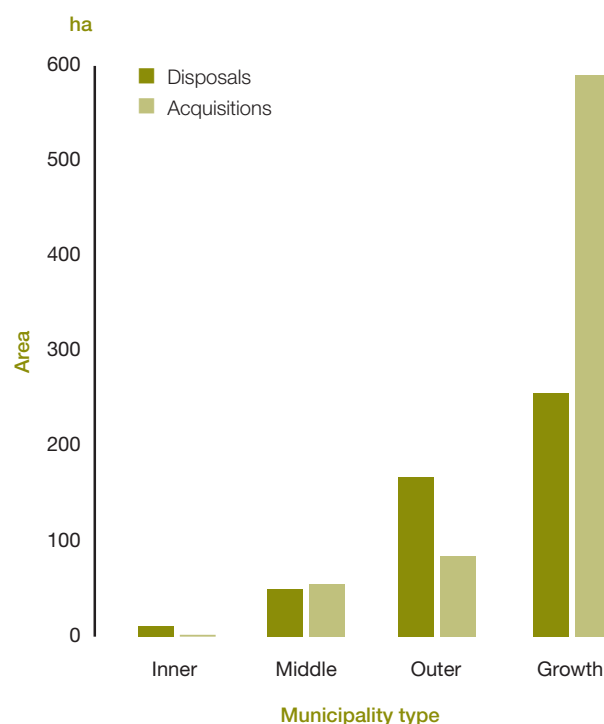
Overall, the information provided by the four public authorities indicates that there is great variation in the characteristics of surplus public land. The blocks that were sold or transferred ranged in size from around 0.01 hectares to more than 90 hectares. There were many very small parcels – the majority of VicTrack's, VicRoads' and Melbourne Water's land disposals were less than one hectare. There were, however, others that were more significant – for example, Melbourne Water disposed of nine sites of between eight and 93 hectares in area and VicRoads disposed of five sites of between 10 and 60 hectares in area. While many sites were either sold or transferred for alternative public purposes, others were sold for private uses such as private residential and industrial developments.

A possible explanation for the community perception that the public land estate is diminishing might be that land purchases are primarily occurring in outer and growth municipalities, while land sales are occurring in established municipalities. DEECD land transactions during the period could support this perception. It sold ten sites across the metropolitan area and purchased land for 26 new schools in the outer and growth municipalities and one school site extension in a middle municipality. Figure 9.1 shows the land disposals and acquisitions by Melbourne Water, the DEECD, VicRoads and VicTrack in inner, middle, outer and growth municipalities over the three year period. It partially supports this explanation by showing that most public land acquisitions were in growth municipalities. However, most public land sales were also in the growth municipalities and, although disposals exceeded purchases in inner and outer municipalities, the amount of land was much smaller.

A further explanation of the community perception that the public land estate is diminishing may be that communities value small or particular areas of surplus public land. It is feasible, for example, that small areas of surplus public land in inner municipalities are valued because they provide recreational or green spaces (possibly incidentally to their primary purpose) which are not in abundance and are difficult to replace. A small number of submissions mentioned the closure and sale of specific schools sites in relation to the loss of open space. These closures had occurred over the last 20 years and were largely in established suburbs.

Figure 9.1

Land disposals and acquisitions by type of municipality for four public authorities in the investigation area



9.4 Policies and processes for determining appropriate future uses of surplus public land

9.4.1 GOVERNMENT POLICY

The *Policy and instructions for the purchase, compulsory acquisition and sale of land*²⁰ are administered by the Government Land Monitor. The document, which is known as the Government Land Monitor's Policy, was developed to ensure accountability and integrity in land transactions. It outlines a best practice approach that must be implemented by all public authorities when selling land and includes the following major components:

- ▶ Public land is not to be sold at less than the market value determined by the Valuer-General.
- ▶ First right of refusal to purchase surplus public land must be offered to other public authorities.
- ▶ The price paid for public land by public authorities is the value determined by the Valuer-General.
- ▶ Public land that is not purchased by public authorities must be:
 - ▷ rezoned prior to sale to maximise its valuation and sale price
 - ▷ marketed appropriately to achieve adequate exposure to the market and maximise the sale price
 - ▷ sold by public auction or public tender, unless sale by private treaty has been approved by the Minister for Finance in relation to Crown land or the Minister for Planning in relation to freehold public land.

As indicated previously, the policy does not require that all public land to be disposed of is listed on the Government Land Monitor's sales bulletin board. Local council submissions to this investigation and submissions to the 2008 *Legislative Council Select Committee on Public Land Development* highlighted a general dissatisfaction with the consultation on the disposal of public land.¹⁷⁷ The main concerns were that the land disposal process is not transparent, and there is insufficient time after being notified of a future land sale for local councils to assess the land and arrange funds to acquire land, or make representations to manage the land as a committee of management.

The policy applies to all sales of public land. There are, however, land transfer mechanisms other than sale. Public authority freehold land that is no longer required for its

original use can be transferred to the Crown at nil cost for another public use. This can be done in accordance with existing statutory procedures, such as those possible under the *Land Act 1958* and the *Crown Land (Reserves) Act 1978*. Mullum Mullum Park, Warrandyte-Kinglake Nature Conservation Reserve, Werribee River Regional Park and part of Merri Creek Regional Park, for example, were created with land transferred to the Crown from public authorities. Public authorities consulted by VEAC considered transfers at no cost to be exceptions, rather than general practice.

9.4.2 PROCESSES RELATING TO THE ASSESSMENT AND SALE OF SURPLUS PUBLIC LAND

Crown land

There are different processes for assessing whether surplus Crown land and public authorities' freehold land should be retained or disposed of. These are summarised and a more detailed account is provided in appendix 7.

DSE is required to assess whether surplus Crown land, including land relinquished by other public authorities, has 'public land values' and should be retained. The role stems from the role of the Minister for Environment and Climate Change in relation to land reserved under the *Crown Land (Reserves) Act 1978* and the *Land Act 1958*. This assessment is undertaken against criteria grouped into six main categories: environment/conservation; cultural/historical; social/community/Aboriginal; recreation/tourism; resource production/utilisation; strategic/other including government policies.²¹³ Box 9.3 (right) summarises assessment outcomes from July 2006 to March 2010.

Crown land assessed as having no identified public values, or land identified with lesser public land values that can be adequately protected by covenant or other instrument, may be sold. The Minister for Finance is responsible for selling Crown land and therefore land determined to be suitable for sale is sold by the Department of Treasury and Finance (DTF).

Land assessed as having important public land values and potential alternative uses is retained in Crown ownership for reallocation to another public use, in consultation with potential land managers. This could result, for example, in the addition of land to an existing park, the reuse of former government buildings by local communities, or allocation of land to another public authority for another public purpose. The land may be managed by another public authority, a local council or a committee of management, or managed under lease or licence.

Box 9.3

Summary of Crown land assessment outcomes

Between July 2006 and March 2010 DSE assessed 62 sites or approximately 180 hectares of surplus Crown public land within the investigation area. The sites varied significantly in size. These assessments resulted in approximately:

- ▶ 13 sites[^] totalling 48 hectares assessed as suitable for retention as Crown land
- ▶ 36 sites[^] totalling 90 hectares assessed as suitable for sale
- ▶ 16 sites totalling 42 hectares assessed as suitable for sale with protective instruments, such as overlays or covenants.

Some of these sites were relinquished to the Crown by public authorities and may be included in the land disposals of the selected public authorities as shown in table 9.1. Some sites were transferred or sold to these authorities and may be included as acquisitions in table 9.1.

[^] Three sites were assessed as being suitable for part retention and part sale.

Source: Derived from information provided by Department of Sustainability and Environment

The *Crown Land Assessment Guidelines* provide for surplus Crown land that is assessed as having a local community use to be retained in Crown ownership and subsequently reserved for a public purpose. There is no payment required of the new public land manager – usually the relevant local council or committee of management – as the land is retained by the Crown for a new public purpose.

VEAC received some submissions from local councils requesting that surplus Crown land sites be allocated for a range of public purposes. This indicates that there may have been a shift from providing this land under committee of management arrangements, and that there is now an expectation within the Victorian government that local councils will purchase Crown land for local community uses.

The community use of former courthouses provides an example of this policy shift. In past decades disused courthouses were retained as Crown land and allocated to local councils for use by service clubs.²¹² However, several years ago Kew courthouse was sold to City of Boroondara for use as a community facility. The alternative would have been to retain the courthouse as Crown land and appoint the local council or another body as committee of management.

Public authority land

Freehold land owned by public authorities may be considered for sale in keeping with the commercial or operational objectives of the authority. Public authorities are not obliged to assess whether their surplus land is suitable for an alternative public purpose, nor are they obliged to retain land with public land values, unless the land is subject to a government-approved LCC recommendation. Land with potential alternative public uses may be offered for purchase for public purposes on a first right of refusal basis to other public authorities and then to the relevant local council (although this is not currently mandatory) at market value as determined by the Valuer-General. Land having significant values, such as biodiversity or heritage values, may be sold subject to protective covenants or other planning instruments.

9.5 Revenue generation from land sales

The Department of Treasury and Finance has annual revenue targets for the sale of surplus land, with a target of \$40 million in 2009-10.²¹⁴ These revenue targets are one of the main drivers of Crown land (and some public authority freehold land) sales. Targets and revenue generated for the years 1998-99 to 2009-10 are summarised in table 9.2.

Public land sales have realised \$600 million over the past eleven years. It is noted that the value of actual sales has decreased since 1999-2000. Some public authorities indicated to VEAC that the supply of surplus land is decreasing and is becoming limited to smaller parcels as the larger and more valuable areas were disposed of some time ago.

Table 9.2
Annual land sales for the Department of Treasury and Finance

FINANCIAL YEAR	LAND SALES (\$MILLION)	
	Actual	Target
2008-09	\$33.0	\$30.0
2007-08	\$38.0	\$70.0
2006-07	\$49.9	\$40.0
2005-06	\$30.0	\$30.0
2004-05	\$31.7	\$30.0
2003-04	\$50.0	\$30.0
2002-03	\$41.0	\$50.0
2001-02	\$54.4	\$50.0
2000-01	\$87.0	\$50.0
1999-00	\$105.0	\$60.0
1998-99	\$80.0	\$50.0
Totals	\$600.0	\$490.0

Source: Victorian Budget Papers 1998-99 to 2010-11

9.6 Enhancing the contribution of surplus public land to liveability

Surplus public land has two avenues by which it can contribute to Melbourne's liveability. It can be retained in public ownership and allocated to other public purposes such as those described in chapter 5. As discussed in that chapter, public ownership of land may provide more access to, and permanency of, community benefits.

Alternatively, surplus public land can be sold to private landholders for other purposes that benefit Melbourne communities. Affordable housing is an example of a liveability outcome that could be provided both by public land (i.e. as public housing) and by surplus public land that is sold for private housing developments. Aged care facilities are an example of a liveability outcome that could be achieved on surplus public land that is sold to a private or local council operator.

Despite the potentially small amounts of land involved, VEAC's consultations with the community reveal a concern that not enough surplus public land is being retained and reallocated for public purposes. This is possibly because relatively small areas of land in urban areas, such as former school sites and courthouses and land remaining after construction of roads, are rare and highly attractive for open space and community facilities. It is also possibly due to a view that all surplus public land should be available for other community uses, regardless of its ownership. Several means of maximising the contribution of surplus public land to the liveability of metropolitan Melbourne are discussed below.

9.6.1 CENTRAL LISTING OF ALL SURPLUS FREEHOLD PUBLIC LAND

Crown land is only identified as surplus after it has been assessed to determine its public land values. Public authority land, however, is generally not assessed for its values beyond the service delivery requirements of the authority. Mandatory listing on an accessible register, such as the Government Land Monitor's sales bulletin board, would result in a single reference point for all public authorities and local councils wishing to identify surplus public land that is available for public purposes and would increase the opportunities for surplus land to contribute to Melbourne's liveability.

Notification of forthcoming sales of surplus freehold public land is dependent upon public authorities voluntarily listing land on the bulletin board for thirty days and/or advising relevant local councils. Notification on the sales bulletin board for a longer time period, possibly in excess of 60 days, would provide potential Victorian and local

government purchasers with sufficient time to consider and arrange for land purchases. It may also be beneficial to maintain the listing on the bulletin board until the land is reallocated or sold to provide a current register of all public land that is available for sale.

COMMENTS INVITED

All surplus Crown land and public authority freehold land should be listed on the Government Land Monitor's sales bulletin board. The bulletin board should be accessible to all public authorities and local councils. Listings on the bulletin board should be for at least 60 days and should be maintained until the land is allocated to another use or sold.

9.6.2 PRICING PUBLIC LAND TO BE USED FOR PUBLIC PURPOSES

In general, Crown land is sold if it is assessed as having no public land values, or if the values can be protected through legal instruments such as covenants. However, sales of Crown land may also be driven by revenue targets, management costs or the inability to find a suitable manager.

While it is common practice for local councils to provide land for local community services, there is also a history of Crown land being for retained public purposes but with management delegated to local councils. There may be occasional opportunities to provide land for these purposes when suitable Crown land becomes available.

COMMENTS INVITED

Crown land that is assessed as suitable for another public use should be retained by the Crown and made available at no cost to a new manager, either under assignment or committee of management arrangements.

Sales of most public authority freehold land are generally associated with requirements for cost effective delivery of services and to return a dividend to the State, or the need to generate funds for other land purchases. These requirements may or may not be consistent with maximising the contribution of public land to Melbourne's liveability.

Public authorities and local councils wishing to *acquire* surplus Crown and freehold public land are required to meet the Valuer-General's valuation. Due to the high cost of land in Melbourne, this price could be prohibitive for many authorities and municipalities.

One way of managing the price of land to be purchased by other public authorities or local councils for public purposes land is to zone it to reflect its intended community use.

COMMENTS INVITED

Public authority freehold land that is assessed as suitable for another public use could be (re) zoned to reflect its intended public use and sold at a price that reflects this use. This would require an amendment to the Government Land Monitor's Policy and the funding implications for the public authorities selling land would need to be considered.

9.6.3 FUNDING FOR MANAGEMENT OF CROWN LAND

In some cases local councils and other land managers may be unwilling to take on the management of some Crown land due to the associated costs. Although DSE is the default manager of Crown land, it is often not in a position to manage additional land. Attempts to shift the cost of land management onto other land managers has the potential to compromise assessments by creating a driver for selling land, despite it having significant values.

COMMENTS INVITED

Clarifying responsibilities and/or additional resourcing for the management of Crown land should be considered.

9.7 : Appropriate future uses of land not committed to a specific use relevant to Melbourne's liveability and natural values

The provision of public open space and conservation of biodiversity were two of the most common themes raised during the community consultation for this investigation. Public open space and land with natural values also featured strongly in the literature review commissioned by VEAC on the contribution of public land to Melbourne's liveability (see chapter 5). This section discusses the opportunities provided by surplus public land sites to contribute to public open space and biodiversity conservation within the investigation area.

Open space

Chapter 6 identifies public open space as a key contributor to Melbourne's liveability. It also notes that public open space per capita is projected to decline for almost all municipalities in the investigation area, and particularly in established areas.

There is generally limited scope to create additional public open space in established areas due to the low availability of suitable land. Surplus public land could be seen as one means of providing new open space in municipalities with lower levels of open space per capita.

Surplus public land in fifteen municipalities with less than the median level of public open space per capita (current or future) was investigated by VEAC for public open space opportunities. Sites were assessed on the basis of location and general accessibility only. Quality was not taken into account.

VEAC found limited public open space opportunities on surplus public land, particularly within established municipalities. Six sites totalling 13.6 hectares (or 0.14 square kilometres) were initially identified as having some potential to provide public open space within five municipalities. One site, VicRoads land along Edgars Creek, accounted for 10.5 hectares. The Victorian Government recently announced that this site will become Crown land and be permanently reserved as parkland (see box 9.4).

The remaining five sites were largely unbuilt, semi-natural areas located on public authority-owned land. The sites ranged in size from 0.3 to 1.4 hectares. They were generally located in residential areas adjacent or near to existing areas of public open space. Given the small number and size of these remaining sites, VEAC has decided that it is better to focus its attention on the

processes for the identification and disposal of surplus public land, rather than on the potential future uses for individual surplus land sites.

Although this exercise reveals the limited opportunities available at this time, it also indicates that these opportunities may need to be taken when they arise. The Edgars Creek land is an example of such an opportunity.



Box 9.4

Case study: Edgars Creek Parkland

Edgars Creek Parkland is located in the City of Moreland. Much of the site is currently VicRoads freehold land. The land was purchased for construction of a road, but is no longer required. It is part flood zone, part residential zone and part industrial zone.

Within the investigation area, the City of Moreland has the third lowest amount of public open space per capita and a below average area of open space as a proportion of the municipality. The VicRoads land has been used by the community for recreation for the past thirty years. It adjoins City of Moreland freehold land and Melbourne Water freehold land providing a contiguous area of open space.

The Victorian Government recently decided to transfer the VicRoads land to the Crown and assign it to the City of Moreland as a committee of management. Transfer to the Crown and reservation as parkland will secure the site as public open space.

Above: VicRoads freehold land at Edgars Creek is to be transferred to the Crown and become permanent parkland.

Biodiversity conservation

Chapter 8 discusses the contribution of biodiversity on public land to Melbourne's liveability and natural values. It outlines the pressures on biodiversity within the investigation area and mechanisms for protecting biodiversity.

Chapter 10 includes draft recommendations to include a small number of public land sites with important natural in Victoria's protected areas system. Two of these sites are on surplus public land and these are described in box 9.5 below.

Box 9.5

Case study: Sherwin Ranges southern and northern buffers

The Sherwin Ranges southern buffer is located directly north of Yan Yean reservoir in the City of Whittlesea and is approximately 81 hectares in area. It contains remnant native vegetation including one threatened Ecological Vegetation Class (EVC) – Valley Grassy Forest. A number of threatened flora and fauna species have been recorded in the immediate vicinity of the site, including brush-tailed phascogale *Phascogale tapoatafa*, barking owl *Ninox strenua*, southern toadlet *Pseudophryne semimarmorata* and clover glycine *Glycine latrobeana*.

The northern buffer was reserved for water supply purposes in 1872 as part the Yan Yean reservoir catchment. It is approximately 136 hectares in area and is contiguous with Kinglake National Park.

Both the northern and southern buffer area sites are located on Crown land. They are no longer required by Melbourne Water for water supply purposes. Chapter 10 includes draft recommendations to add these two areas to Kinglake National Park.