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LEGISLATIVE ASSEMBLY

Environment and Planning Committee

Inquiry into environmental infrastructure for growing populations

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Legislative Assembly Environment and Planning Committee

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About the Committee

Functions

The Environment and Planning Standing Committee is established under the Legislative Assembly Standing Orders Chapter 24—Committees.

The Committee's functions are to inquire into and report on any proposal, matter or thing connected with the Department of Environment, Land, Water and Planning and related agencies.

The Standing Committee must inquire into, consider and report to the House on any proposal, matter or thing that is relevant to its functions and has been referred to the Committee by resolution of the House.

The Standing Committee may inquire into, consider and report to the House on any annual report or other document relevant to the functions of the Committee that is tabled in the House.

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This report is available on the Committee's website.

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Terms of reference

Inquiry into environmental infrastructure for growing populations

On 1 May 2019, the Legislative Assembly agreed to the following motion:

That this House:

An inquiry into the current and future arrangements to secure environmental infrastructure, particularly parks and open space, for a growing population in Melbourne and across regional centres to the Environment and Planning Committee for consideration and report no later than 31 December 2020.*

*The Speaker advised the House on 2 June 2020 that the Legislative Assembly Environment and Planning Committee had extended its reporting date for the Inquiry into environmental infrastructure for growing populations to 30 June 2021. This extension was agreed to by the committee under the resolution of the House on 23 April 2020.**

The reporting date was further extended to 30 September 2021 by resolution of the Legislative Assembly on 20 May 2021.*

***The reporting date was further extended to 10 February 2022 by resolution of the Legislative Assembly on 18 November 2021.

Chair's foreword

Parks and open space have always been fundamental to the liveability of our cities and towns. For many Victorians, the COVID-19 pandemic has led to a new appreciation of the outdoors and the benefits of connecting with nature. Access to parks and open space during this time has also helped many of us deal with the challenges of the pandemic, such as working from home, home-schooling, economic uncertainty, and separation from friends and loved ones.

In addition to a wide range of recreational opportunities, Victoria's environmental infrastructure—which includes forest and bushland, conservation and recreation reserves, sporting fields, canopy trees, wildlife corridors and waterways—also delivers important ecological services. These include mitigation of the effects of climate change and the protection of our state's unique biodiversity.

The Committee received the terms of reference for this inquiry before the onset of the COVID-19 pandemic, at a time when the populations of Melbourne and Victoria had been growing faster than at any other time in the history of the State. During the 10 years to 2019, Melbourne became home to an additional 1 million people, while Victoria experienced the largest and fastest annual growth of any Australian state or territory for most of the same period.

This record population growth has since paused due to the pandemic. However, the continuing strength of Victoria's economic, educational and lifestyle opportunities means that strong population growth is likely to resume in Melbourne and other parts of the State in coming years. In fact, Melbourne is forecast to grow by nearly 4 million people, to reach a total population of approximately 9 million, by 2056. Several regional and peri-urban areas are also forecast to grow strongly over the same period.

Historically, Melbourne and Victoria's regional centres have provided residents with access to parks and open space that has been the envy of the world. However, one of the legacies of the recent period of population growth in Melbourne and Victoria has been a significant increase in the demand for parks and open space and in the pressures placed on our environmental infrastructure. This demand will continue to rise in coming years as population growth resumes.

As the evidence provided to this Inquiry has highlighted, there is much that the Victorian Government can do—in partnership with local government and communities—to meet this demand while preserving our environmental infrastructure into the future.

This is a comprehensive report, which examines many factors relevant to the current and future provision of environmental infrastructure in Melbourne and in our growing regional centres and peri-urban areas. The report contains 57 recommendations aimed at preserving and expanding our networks of parks and open space, and the

ecological services they provide, for future generations of Victorians. While many of the Committee's recommendations are aimed at increasing the provision of new open space, others call for innovation in the way that open space is provided.

In addition to a number of state-wide recommendations, the Committee has made recommendations which aim to address particular environmental infrastructure challenges in different parts of metropolitan Melbourne (central and inner Melbourne; middle ring suburbs; and the outer suburbs), as well as in our growing regional centres and peri-urban areas.

Some of the key recommendations made by the Committee include:

- the establishment of a target to provide Melbourne's residents with access to a network of open spaces located closer to their homes
- a simplified process for planning scheme amendments aimed at the provision of public open space
- a more streamlined approach to the making of shared use agreements for restricted public land, such as Government schools
- a review of the requirements relating to the sale of surplus government land for use as public open space
- increased funding for Parks Victoria to improve conservation, particularly in Melbourne's outer suburbs
- a consistent reporting framework for tree canopy targets and stronger tree canopy controls across Melbourne, as well as the adoption of a tree canopy target for Melbourne's growth areas
- the development of funding arrangements to support a network of public open space across both established and growth areas in Melbourne's outer suburbs
- measures to boost the restoration of wetlands and waterways through the removal of concrete channels and contamination.

On behalf of the Committee, I would like to thank the many stakeholders who made submissions and attended public hearings for the Inquiry. The Committee is very grateful for the contributions made by such a wide range of individuals, community and non-government organisations, local governments and State government agencies.

I would also like to thank my fellow Committee Members, particularly the Deputy Chair, Mr David Morris MP, for their contributions and commitment throughout the Inquiry. On behalf of the Committee, I also extend our thanks to the Secretariat for their support, especially under the sometimes challenging circumstances created by the pandemic.



Ms Sarah Connolly MP
Chair

Executive summary

Chapter 1—Introduction

Victoria's environmental infrastructure, which includes public parks and open space, is fundamental to the liveability for which Melbourne and its regional centres are renowned. Securing and expanding environmental infrastructure, located within or close to urban areas, will be key to accommodating the significant population growth forecast for Melbourne and regional centres in future years.

Victoria's environmental infrastructure includes parks and open space; forest and bushland (both native vegetation and other forests); recreation reserves and sporting fields; canopy trees and wildlife corridors; and waterways.

The term 'open space' is often used to refer to environmental infrastructure. This is reflected in the three categories of open space defined by the Victorian Planning Authority (VPA): public open space; restricted public land; and private open space. This report is primarily concerned with the first two categories; private land (except for contaminated private land that may be suitable for special use following rehabilitation) does not fall within the current terms of reference.

The public generally enjoys unrestricted access to public open space, while access to restricted public land (such as reserves for services and utilities and Government schools) is often more limited and in some cases prohibited.

Environmental infrastructure offers a wide range of interrelated benefits. These include health and economic benefits (Chapter 2); environmental benefits (Chapter 3); and social benefits (Chapter 4).

Prior to the COVID-19 pandemic, the populations of Melbourne and Victoria had been growing faster than at any other period in the history of the state. While the COVID-19 pandemic has stalled this growth, it is likely that strong population growth will resume in coming years. This will in turn increase the demand for environmental infrastructure across Melbourne, in larger regional centres such as Geelong, Shepparton, Bendigo, Ballarat and Albury-Wodonga, as well as in peri-urban towns such as Bacchus Marsh, Warragul/Drouin and Gisborne. If the recent increase in home-based working arrangements continues in the years ahead, it is likely to further increase the demand for access to environmental infrastructure closer to people's homes.

The combination of these demographic changes will make innovative planning approaches crucial to meeting the future environmental infrastructure needs of Melbourne and growing peri-urban and regional centres.

Chapter 2—Health and economic benefits

Chapter 2 discusses the physical health, mental health and economic benefits of environmental infrastructure. It also discusses the benefits of nature-based or biophilic design, and ways to balance the competing needs of different users of open space.

The importance of environmental infrastructure to the health of all Victorians and to the State economy was noted by many stakeholders. The health benefits of environmental infrastructure have also been increasingly recognised within the scientific and medical community in recent years.

Environmental infrastructure plays a vital role in encouraging physical activity, including active transport such as walking and cycling, which has a wide range of health benefits. Other health benefits, particularly those provided by street trees and vegetation, include the possible mitigation of air pollution and the reduction of the urban heat island effect.

Growing populations create further demand for sporting facilities and place pressure on existing sporting facilities. This has led to some councils facing challenges in funding the delivery of new sporting facilities. Options for meeting future demand, particularly in more densely populated areas, include working to increase the capacity of existing facilities and the potential use of former industrial and building sites. Capacity increases may also be delivered by the increased use of synthetic surfacing and lighting.

Passive recreation (i.e. recreation activities other than organised sporting activities) has also become increasingly popular in recent years. There is significant potential to enhance the public open space around many sports grounds and facilities for the purposes of passive recreation.

Environmental infrastructure provides both direct and indirect benefits to the Victorian economy and will also be central to the State's economic recovery from the COVID-19 pandemic. Important insights into the longer-term social and economic value of environmental infrastructure can also be gained through environmental accounting, which will be adopted by DELWP and portfolio agencies in coming years.

Chapter 3—Environmental benefits

Chapter 3 focuses on the categories of public open space and restricted public land that are key to the protection of the natural environment and its biodiversity. These include: conservation reserves (protected areas); natural and semi-natural open space; services and utilities reserves; and parks and gardens, which typically retain less of their original vegetation and wildlife but can still offer potential for environmental restoration work, particularly through measures such as biolinks.

The chapter discusses the role of public open space and restricted public land in the conservation of ecosystems and landscapes across Melbourne and regional centres. It also discusses the importance of wildlife protection, which includes managing the impacts of the increasing usage of bushland reserves.

The chapter concludes with a discussion of Melbourne’s tree canopy, including the importance of tree canopy targets and the challenges that some councils face in protecting and expanding the tree canopy.

Chapter 4—Social benefits

Chapter 4 discusses the social benefits of environmental infrastructure and the challenges posed by the growth in demand for environmental infrastructure due to population growth and the COVID-19 pandemic.

The chapter focuses on the contribution that environmental infrastructure can make to social equity and social cohesion, as well as the important role of Traditional Owners.

Social equity improvements discussed in the chapter include: the goal of providing people with access to a network of open space located closer to home; increasing tree canopy cover in Melbourne’s growth areas; and boosting the accessibility of environmental infrastructure for all Victorian residents, regardless of individual characteristics such as age, gender, ability or cultural background.

Improvements to social cohesion discussed in the chapter include measures aimed at: addressing the needs of different demographic groups; promoting gender equity; and boosting community engagement, volunteering and community gardens.

The increasingly important role of Victoria’s Traditional Owners in the management of environmental infrastructure is discussed in the context of the State’s treaty process and in the emerging land use and development strategy for the Yarra River.

Chapter 5—Central and inner Melbourne

Chapter 5 discusses the unique environmental infrastructure challenges faced by inner metropolitan Melbourne.

The recent and forecast population growth of inner Melbourne presents several key challenges to the adequacy of existing environmental infrastructure. Most notably, increasing population density is a core factor driving demand for open spaces in these areas and is causing strain on existing environmental infrastructure. Local councils in inner metropolitan Melbourne also face competing demands for the use of existing environmental infrastructure, which have been highlighted during the COVID-19 pandemic.

The chapter discusses the role of open space contributions and planning amendments in meeting these challenges, as well as the potential for the provision of new open space through: streamlined leasing and land transfer processes; a review of the current open space contribution policy guidance; and the participation of private landowners in public private partnerships.

Chapter 6—Melbourne’s middle ring suburbs

Melbourne’s middle suburbs share a range of common environmental infrastructure challenges with inner Melbourne and regional centres.

These areas are forecast to experience a slower rate of population growth in future years compared to inner Melbourne and its outer suburban growth areas. However, middle-ring suburbs are already facing challenges in the provision of public open space, primarily due to their comparatively higher population densities.

In addition to the role of open space contributions and planning amendments, the chapter explores shared use agreements for restricted public land, such as Government schools. The chapter also explores options to increase the range of uses of existing public open space and changes to the existing requirements for the sale of surplus Government land for the provision of open space.

Chapter 7—Melbourne’s outer suburbs

Melbourne’s outer suburbs comprise both growth areas and established suburbs, which face distinctly different challenges with respect to the provision and maintenance of environmental infrastructure.

Residents of Melbourne’s growth areas typically enjoy high amounts of open space per person and live close to parkland. Residents of some older outer suburbs—like residents of some inner and middle-ring suburbs—have relatively low amounts of open space per person and poorer linkages to existing parkland.

The chapter includes a discussion of the importance of conservation in Melbourne’s growth areas, through the Melbourne Strategic Assessment, Regional Parks Program and proposed changes to the funding arrangements for Parks Victoria.

The chapter also discusses funding and planning for parks and open space in growth areas, as well as the issue of delays in the provision of environmental infrastructure, particularly of paths and trail networks.

The chapter also discusses the evidence received from several growth area councils that there is insufficient open space currently available in some established outer suburbs, due to a shortfall in available funding compared to newer suburbs.

Chapter 8—Regional Victoria and peri-urban Melbourne

Chapter 8 discusses the unique challenges and opportunities in the planning, development and maintenance of environmental infrastructure for Victoria’s regional areas.

Regional Victoria covers a varied range of landscapes and population demographics with diverse needs. Some of the unique characteristics of regional and rural Victoria include: large expanses of forests and farmland; land that is prone to flooding, drought

or bushfires; significant differences between regional cities and rural municipalities; and a reliance on public land for tourism as well as to ensure liveability for residents.

The chapter discusses the fundamental importance of partnerships and collaboration between communities, key agencies and Traditional Owners in securing environmental infrastructure for regional centres.

Measures with the potential to better secure both new and existing open space include: increased funding for open space in regional centres through targeted measures such as grants; engagement with regional councils on fire prevention activities; community consultation and engagement with regional councils to improve biodiversity; and scoping the potential for the rehabilitation of contaminated land for use as public open space across the state.

The chapter also discusses the potential for the development of a more streamlined Precinct Structure Planning process for high growth peri-urban areas to better secure environmental infrastructure in the future.

The chapter concludes with a discussion of the potential for improvements to the provision and maintenance of public open space along regional waterways.

Chapter 9—Melbourne’s waterways and wetlands

Chapter 9 discusses Melbourne’s waterways and wetlands, which are a fundamental element of the city’s environmental infrastructure and vital to its status as one of the world’s most liveable cities.

Numerous stakeholders emphasised the importance of conserving Melbourne’s waterways as a key component of a network of open spaces. The Committee also heard that existing planning mechanisms can be used to adequately conserve and protect waterways but that there is a need to apply such protections more widely across Melbourne.

The chapter discusses the increasing collaboration between Melbourne’s local councils and Melbourne Water to adopt innovative approaches to the capture of stormwater to both enhance the city’s parks and open spaces and ensure the city’s long-term water security. The issue of waterway and wetland restoration is also discussed, including the potential for the removal of concrete channels and soil contamination.

Findings and recommendations

1 Introduction

FINDING 1: While the COVID-19 pandemic has stalled the population growth in Melbourne and Victoria of recent decades, it is likely that strong growth will resume in coming years. This will in turn increase the demand for environmental infrastructure across Melbourne, peri-urban areas and larger regional centres. 14

FINDING 2: If the shift towards home-based working arrangements continues in the years ahead, this is likely to increase the demand for access to environmental infrastructure closer to people's homes. 14

FINDING 3: Innovative planning approaches will be crucial in order to meet the future environmental infrastructure needs of growing populations in Melbourne, peri-urban and regional areas. 15

2 Health and economic benefits

FINDING 4: Access to environmental infrastructure improves physical health. Environmental infrastructure can encourage physical activity, which is a protective factor against many health conditions. 20

FINDING 5: The extent to which vegetation in urban areas, including street trees, may reduce air pollution, is currently a matter of debate within the scientific literature. 22

FINDING 6: Environmental infrastructure in the form of street trees and vegetation reduces the urban heat island effect and helps reduce heat-related health problems. 24

FINDING 7: The provision of public open space that encourages walking can improve health and reduce the risk of a number of diseases. 27

FINDING 8: The provision of new walking corridors, and the expansion of existing corridors, has the potential to significantly increase rates of walking in urban areas for both recreation and commuting. 27

RECOMMENDATION 1: That the Victorian Government investigate all options for the identification and development of walking corridors. 27

FINDING 9: Separation of cycling paths from motor vehicle traffic is an important factor in increasing the sense of safety for cyclists when using cycling paths. Increasing the connectivity of cycling paths also encourages cycling both for active transport and recreation. 28

RECOMMENDATION 2: That the Victorian Government continue to work with local councils in Melbourne and regional centres to identify opportunities for increased separation and connectivity of cycling paths. 29

RECOMMENDATION 3: That the Victorian Government investigate ways of increasing cooperation between cyclists and walkers in the use of shared paths. 30

FINDING 10: Options for meeting the future demand for sporting facilities, particularly in more densely populated areas, include working to increase the capacity of existing sports fields and the potential use of former industrial and building sites. 33

FINDING 11: Capacity increases are often delivered by synthetic surfacing and lighting. However, the full environmental impact of those options is not necessarily well understood. 33

RECOMMENDATION 4: That the Victorian Government:

- a. investigate the environmental impacts, as well as cost-effective mitigation strategies, associated with the large-scale installation of synthetic surfaces in coming years; and
- b. undertake research to quantify the extent to which combining synthetic turf installation with lighting in and around community sporting clubs will increase opportunities for both active and passive recreation. 33

FINDING 12: Passive or unstructured recreation is an important use of environmental infrastructure that requires sufficient space and adequately funded facilities to achieve the best outcomes. There is significant potential to enhance the public open space around many sports grounds and facilities for the purposes of passive recreation. 36

FINDING 13: There is demand within metropolitan Melbourne and regional centres for an increase in the provision of separated walking and cycling paths. **37**

RECOMMENDATION 5: That the Victorian Government work with local councils to identify opportunities for increased separation of walking and cycling paths. **38**

FINDING 14: The incorporation of biophilic design principles can improve physical and mental health outcomes. **39**

RECOMMENDATION 6: That the Victorian Government conduct further investigation of biophilic design principles for new government projects and in planning provisions for new residential construction. **39**

FINDING 15: Environmental infrastructure, particularly in the form of well-designed public open space, can improve mental health by reducing stress and depression, and improving social connections. **42**

RECOMMENDATION 7: That the Victorian Government consider requiring local governments to actively consider the contribution of environmental infrastructure when developing their municipal public health and wellbeing plans. **44**

FINDING 16: Environmental infrastructure makes a significant contribution to the economy, through both direct and indirect economic benefits, cost savings and job creation. **46**

FINDING 17: Victoria's environmental infrastructure makes a vital contribution to the State's tourism economy and will be central to the State's economic recovery from the COVID-19 pandemic. **48**

FINDING 18: Environmental accounting can provide important insights into the economic value of a wide range of environmental infrastructure that may be otherwise difficult to quantify. **50**

3 Environmental benefits

FINDING 19: Well planned and managed environmental infrastructure across Melbourne and regional centres will have a vital role to play in meeting future environmental challenges, including threats to biodiversity and the impacts of climate change. 54

RECOMMENDATION 8: That the Victorian Government investigate environmental infrastructure measures that consider an ecosystems management approach, including ecosystems services targets, and measures to mitigate habitat loss and preserve biodiversity within Victoria’s urban planning, design and landscape management frameworks. 54

FINDING 20: The Community Land Trust model merits further investigation to determine its potential as a land conservation tool and as a way of increasing the access of local communities to parks and open space. 55

RECOMMENDATION 9: That the Victorian Government work with councils and developers with the aim of providing accessible and quality public open space that is dog friendly whilst also providing adequate safety for the community and protecting native animals. 59

RECOMMENDATION 10: That the Victorian Government conduct a public education and engagement campaign aimed at all user groups on the potential adverse impacts that their activities can have on wildlife and habitats. 60

RECOMMENDATION 11: That the Victorian Government implement a consistent reporting framework for tree canopy targets for each of Melbourne’s regions. 65

RECOMMENDATION 12: That the Victorian Government consider the establishment of stronger and more consistent tree canopy controls across Melbourne, particularly with respect to trees on public open space and restricted public land. 69

FINDING 21: There is significant variation in the relative proportions of tree canopy cover between different Melbourne municipalities, particularly between eastern and western metropolitan Melbourne. 69

RECOMMENDATION 13: That the Victorian Government consider adopting a tree canopy target for Melbourne’s growth areas and recognise the benefits of setting and reporting on interim targets. The Victorian Government should also quantify the contribution that its recently announced two-year program to plant 500,000 new trees across Melbourne’s west will make to this target and the contribution of all future tree-planting programs.

71

4 Social benefits of environmental infrastructure

FINDING 22: There has been a significant increase in demand for environmental infrastructure, particularly public open space, across Melbourne and regional Victoria in recent years. This demand has been accelerated by the COVID-19 pandemic.

73

RECOMMENDATION 14: That the Victorian Government set a target to provide Melbourne’s residents with access to a network of open spaces located closer to their place of residence. This could include consideration of a hierarchy of open space that caters to a range of uses, as well as the connections and means of access to such public open space.

80

FINDING 23: There are significant disparities in the amount of open space available per person between local government areas across metropolitan Melbourne.

81

RECOMMENDATION 15: That the Department of Environment, Land, Water and Planning work with the Victorian Planning Authority to better map and catalogue the quantity and types of open space available to residents of metropolitan Melbourne.

81

RECOMMENDATION 16: That the Department of Environment, Land, Water and Planning work with the Victorian Planning Authority to provide public open space data for the State’s regional centres.

81

RECOMMENDATION 17: That the Department of Environment, Land, Water and Planning develop tools to forecast demand for open space in Victoria.

83

FINDING 24: Public open space serves the whole of the Victorian community, but different members of the community have different needs and preferences that affect how they interact with environmental infrastructure.

86

RECOMMENDATION 18: That the Victorian Government work with local councils to identify opportunities for multi-use environmental infrastructure and the co-location of facilities for use by State Government agencies and local government. **91**

FINDING 25: The significant increase in female participation in organised sport has created a pressing need to ensure that sporting facilities are accessible to all genders. **94**

RECOMMENDATION 19: That the Victorian Government report, including via the Change our Game website, on the progress made in relation to the actions contained in recommendation 6 of the *Inquiry into Women and Girls in Sport and Active Recreation*. **94**

FINDING 26: Effective community engagement by Victoria’s local councils significantly enhances the suitability and quality of both new and upgraded open space. **96**

FINDING 27: Volunteers, particularly in the form of community groups, play an invaluable role in securing and maintaining Victoria’s environmental infrastructure and in contributing to community cohesion. However, both the Victorian Government and local governments have yet to unlock the full potential of the volunteer sector with respect to the provision and maintenance of environmental infrastructure. **98**

RECOMMENDATION 20: That the Victorian Government, as part of the Victorian Volunteer Strategy, work with local government to develop a strategic approach to volunteering for the establishment and maintenance of environmental infrastructure, and review the level and type of support available to volunteer groups focused on parks and open spaces. **98**

RECOMMENDATION 21: That the Victorian Government work to identify and eliminate the barriers to participation in improving and maintaining environmental infrastructure by volunteer groups. **98**

FINDING 28: Community gardens are an increasingly important form of environmental infrastructure for growing communities across Victoria, with immense potential to build community cohesion and promote sustainability. **101**

RECOMMENDATION 22: That the Victorian Government review existing policies on community gardens with the aim of improving coordination amongst government owners and managers of environmental infrastructure to identify and support suitable sites for community gardens. **101**

RECOMMENDATION 23: That the Victorian Government develop a pilot or trial scheme to fund community gardens located in one or more public housing estates. 101

RECOMMENDATION 24: That the Victorian Government take further steps to improve involvement of Traditional Owners in the planning, development and management processes around environmental infrastructure. 102

FINDING 29: Measures aimed at increasing the involvement of Traditional Owners in the management of some environmental infrastructure may have the potential to significantly enhance the protection of Aboriginal cultural heritage, as well as the environmental and recreational values of many open spaces, parks and reserves. 103

FINDING 30: The emerging land use and development strategy for the Yarra River, including the draft Yarra Strategic Plan and associated legislation and advisory bodies, represents an important model for the engagement of Traditional Owners in the management and development of public open space and restricted public land. 107

RECOMMENDATION 25: That the Victorian Government develop a strategy for the incorporation of Traditional Owner perspectives and management into the provision and maintenance of public open space and restricted public land wherever practicable. 107

5 Central and inner Melbourne

FINDING 31: Rapid population growth in inner metropolitan Melbourne presents an ongoing challenge to maintaining the standard of environmental infrastructure currently enjoyed by Melburnians. 113

FINDING 32: Local councils in inner metropolitan Melbourne are struggling to accommodate competing demands for the use of existing environmental infrastructure. 113

FINDING 33: The COVID-19 pandemic has altered the usage and demand for environmental infrastructure in inner metropolitan Melbourne. The long-term trends are yet to be understood. 115

RECOMMENDATION 26: That the Victorian Government work with all Victorian councils to simplify and streamline processes for planning scheme amendments, with a particular focus on assisting councils during the early stages of the amendment process. 118

RECOMMENDATION 27: That the Victorian Government work with inner metropolitan local councils to streamline leasing and land transfer processes, focusing on ways to improve timeliness. 120

RECOMMENDATION 28: That the Victorian Government consider ways to assist inner Melbourne councils to improve the quality of existing open space when reviewing the current open space contribution policy guidance. 121

FINDING 34: There is a lack of diversity of new open space available in inner metropolitan Melbourne. 122

FINDING 35: Public private partnerships can provide innovative solutions to the lack of available public open space in inner metropolitan Melbourne. 125

RECOMMENDATION 29: That the Victorian Government consider ways to streamline the regulatory environment to encourage private landowners to participate in public private partnerships. 125

6 Melbourne’s middle ring suburbs

RECOMMENDATION 30: That the Department of Environment, Land, Water and Planning, in conducting its review of existing open space contribution guidelines for established suburbs, include consideration of the relevant provisions in the *Subdivision Act 1988* (Vic), the adequacy of the current maximum open space contribution, the feasibility of a standard approach and guidance for councils seeking to apply a higher contribution rate, and review how councils collect, acquit and report on funds received through open space levies, including the frequency and timeliness with which funds are expended. 132

RECOMMENDATION 31: That the Victorian Government review and consider ways in which to streamline the process of making shared use agreements to maximise access to open space. 135

FINDING 36: Shared use agreements in relation to some categories of restricted public land may have a role to play in the provision of public open space. However, this may depend on the category of restricted public land and on the availability of nearby unrestricted public open space. It is also appropriate that shared use agreements are considered by councils on a case by case basis. 138

RECOMMENDATION 32: That the Victorian Government review the categories of restricted public land with the aim of identifying those categories that may present opportunities for public access under shared use agreements. **138**

FINDING 37: Melbourne’s middle ring suburbs are working to increase the range of uses and activities that can be supported by existing parks and open space. However, measurement of utilisation rates, particularly for different categories of users of passive open space, can be difficult. **140**

RECOMMENDATION 33: That the Victorian Government review the requirement for State Government agencies to seek the ‘highest and best-use’ when selling surplus government land for the purpose of providing open space. This could include the development of a framework to enable such land to first be offered to local or State government on a low or no cost basis and for an extended offer period. **142**

7 Melbourne’s outer suburbs

RECOMMENDATION 34: That the Victorian Government consider bringing forward the acquisition of the 15,000 hectares of land identified for the Western Grassland Reserve, along with interim acquisition targets. **148**

RECOMMENDATION 35: That the Victorian Government bring forward the acquisition of the 1,200 hectares of land required for the establishment of the Grassy Eucalypt Woodland Reserve, along with interim acquisition targets. **149**

RECOMMENDATION 36: That the Victorian Government investigate the feasibility of developing a tree protection policy, based on Whittlesea’s River Red Gum Protection Policy, for adoption by all growth area local government areas, either through their individual Planning Schemes or through a state-based protection policy. **152**

RECOMMENDATION 37: That Parks Victoria establish a program aimed at educating local communities about the environmental importance of Melbourne’s western grasslands, including challenges such as weed infestation. **153**

RECOMMENDATION 38: That the Department of Environment, Land, Water and Planning publish, and regularly update, a register showing the ownership of grassland and woodland, both within and outside the Urban Growth Boundary, that is affected by the Melbourne Strategic Assessment program. **154**

RECOMMENDATION 39: That the Victorian Government commit to a date for the acquisition of the land required for the Regional Parks Program, along with interim acquisition targets. 156

FINDING 38: The Committee considers that there is a strong case for a significant and ongoing funding increase, in real terms, for Parks Victoria. This increase should be sufficient to enable Parks Victoria to meet the growing costs of its asset maintenance and recurrent programs in Melbourne’s growth area local government areas. 159

RECOMMENDATION 40: That the Victorian Government review the provision of funding to Parks Victoria to meet the growing costs of its asset maintenance and recurrent programs. 160

RECOMMENDATION 41: That the Victorian Government consider the establishment of a rolling fund or similar mechanism, which would allow councils to increase their borrowing limits to achieve the earlier delivery of large-scale environmental infrastructure. Loans from the fund could be paid back when developer contributions fall due. 165

RECOMMENDATION 42: That the Victorian Government review the existing funding arrangements for renewal of parks within established suburbs in Melbourne’s outer suburbs. This could include consideration of recent and forecast population growth across both new and established suburbs. This could also include consideration of the feasibility of establishing funding arrangements that would support a network of public open space across both established and growth area suburbs. 165

8 Regional Victoria and peri-urban Melbourne

FINDING 39: Many of Victoria’s regional centres are experiencing significant population growth while populations are changing in some surrounding regional areas. While the COVID-19 pandemic has played a major role in driving this population growth, it is unknown whether this trend will continue. 170

RECOMMENDATION 43: That the Victorian Government consider measures to deliver environmental infrastructure in regional areas. 172

RECOMMENDATION 44: That the Victorian Government investigate options for better integrating Regional Growth Plans into planning schemes in regional areas. 176

FINDING 40: Victoria’s regional councils and key government agencies—including Parks Victoria and the Department of Environment, Land, Water and Planning—have established highly effective partnerships for the establishment and maintenance of environmental infrastructure, including conservation areas. **179**

RECOMMENDATION 45: That the Victorian Government explore options for increased funding and support of regional community groups involved in the preservation and maintenance of environmental infrastructure and landscapes. **182**

RECOMMENDATION 46: That the Victorian Government investigate the better utilisation of unused and surplus rail land for the creation of new public open space. **185**

RECOMMENDATION 47: That the Victorian Government consider the provision of grants to regional Victorian councils for the provision of new open space, passive recreation and environmental infrastructure. **187**

RECOMMENDATION 48: That the Victorian Government engage with regional councils on fire prevention activities. **192**

RECOMMENDATION 49: That the Victorian Government’s five-year evaluation of *Protecting Victoria’s Environment – Biodiversity 2037* undertake community consultation and engage with regional councils to address their concerns about biodiversity, including the effects of new developments on fragmented and inaccessible pockets of land. **199**

RECOMMENDATION 50: That the Victorian Government review all requirements regarding tree canopy coverage in regional areas to ensure tree planting is strategic and of good quality and that new developments provide enough space to plant trees. Future requirements should support collaboration between local councils, developers, planning authorities and other relevant stakeholders to reach agreement. **199**

FINDING 41: Some of Victoria’s regional and peri-urban councils face challenges in securing public open space due to the absence of state-wide definitions in existing planning legislation and planning schemes, which in turn makes it difficult to tailor provisions specific to such areas. **205**

RECOMMENDATION 51: That the Victorian Government review Victoria’s planning framework to define key terms and set explicit minimum standards in relation to the provision of open space for regional Victoria and peri-urban areas. **205**

RECOMMENDATION 52: That the Victorian Government undertake the following in relation to contaminated land across Victoria:

1. undertake scoping work to identify and assess contaminated land;
2. explore potential projects to rehabilitate land for conversion to public open space;
3. assess the cost of those projects; and
4. if required, explore alternate funding mechanisms for the delivery of such projects. **207**

RECOMMENDATION 53: That the Victorian Government consider extending the Precinct Structure Plan (PSP) 2.0 pilot process to include one or more high growth areas of regional and peri-urban Victoria, with the aim of developing a more streamlined PSP process for these parts of the state. **209**

RECOMMENDATION 54: That the Victorian Government consider the specific concerns raised by regional councils regarding the establishment and maintenance of public open space along regional waterways when it next reviews the *Water for Victoria* and regional Sustainable Water Strategies frameworks. **219**

9 Melbourne's waterways and wetlands

RECOMMENDATION 55: That the Victorian Government consider how it can improve the Integrated Water Management framework through increased clarity on roles and responsibilities, funding and the introduction of targets. **224**

RECOMMENDATION 56: That the Victorian Government work with local government and relevant agencies to provide additional guidance on local waterway management. **227**

FINDING 42: Melbourne's local councils, in collaboration with Melbourne Water, are adopting increasingly innovative approaches to the capture of stormwater to enhance parks and open spaces. These efforts will also be crucial to ensuring Melbourne's long-term water security. **231**

RECOMMENDATION 57: That the Victorian Government investigate the potential for a project to map wetlands and waterways that require restoration in Melbourne, including addressing the issues of removing concrete channels and soil contamination. **234**

Acronyms and terms

AAP	Adaptation Action Plan
ABGS	Australian Botanic Gardens Shepparton
active recreation	Leisure time physical activity undertaken outside of structured, competition sport.
active transport	Activities such as cycling or walking as a means of transport in place of driving or public transport.
AFL/AFLW	Australian Football League/AFL Women's
AH Act	<i>Aboriginal Heritage Act 2006 (Vic)</i>
AHURI	Australian Housing and Urban Research Institute
AILA	Australian Institute of Landscape Architects
AV	Aboriginal Victoria
BCS	Biodiversity Conservation Strategy for Melbourne's Growth Corridor
biodiversity	Biodiversity is all components of the living world: the number and variety of native plants, animals and other living things across land, rivers, coast, and ocean. See: https://www.environment.vic.gov.au/biodiversity/biodiversity-plan .
biolink	A 'biolink' is a wildlife corridor that connects pockets of native vegetation so wildlife can move more easily between areas.
biophilic design	Biophilic design seeks to accommodate the inherent human need for connection to nature within the modern built environment.
blue-green corridor	Open waterways and associated vegetation in urban areas.
blue infrastructure	Waterways and water bodies, such as rivers, lakes and bays.
CASBE	Council Alliance for a Sustainable Built Environment
CLT	Community Land Trust
CMA	Catchment Management Authority
daylighting	The process of removing underground pipes and restoring waterways to an open, above-ground channel.
DCP	Development Contribution Plan
DELWP	Department of Environment, Land, Water and Planning
ecosystem	All the living things (plants, animals and organisms) in a given area, interacting with each other, and with their non-living environments (weather, earth, sun, soil, climate, atmosphere).
ecosystem services	'The benefits provided to humans through the transformations of resources (or environmental assets, including land, water, vegetation and atmosphere) into a flow of essential goods and services e.g. clean air, water, and food.' ¹
environmental accounting	The modification of accounting systems to incorporate the use or depletion of natural resources.
EPA	Environment Protection Authority Victoria

¹ R Costanza, et al., 'The value of the world's ecosystem services and natural capital', *Nature*, vol. 387, 1997. quoted in Department of the Environment, Water, Heritage and the Arts, *Ecosystem Services: Key Concepts and Applications*, Occasional Paper No. 1, Canberra, 2009, p. 2.

Acronyms and terms

EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
FFA	Football Federation of Australia
FOMC	Friends of Merri Creek
FOSCVR	Friends of Scotchmans Creek and Valley Reserve
GAIC	growth areas infrastructure contribution
GEWR	Grassy Eucalypt Woodlands Reserve
GIS	geographic information system
GSF	Growing Suburbs Fund
ha	hectare
ICM	Integrated Catchment Management
ICP	Infrastructure Contributions Plan
ICR	Interface Councils Region
IMAP	Inner Melbourne Action Plan
IPAN	Institute for Physical Activity and Nutrition, Deakin University
IWM	Integrated Water Management
LGA	local government area
LUFP	Land Use Framework Plan
LUV	Land Use Victoria
MCMC	Merri Creek Management Committee
MDAP	Metropolitan Development Advisory Panel
MSA	Melbourne Strategic Assessment
NARI	National Ageing Research Institute
Open Space Strategy	A strategic approach for planning the current and future uses of open space within a municipality.
PAO	Public Acquisition Overlay
passive recreation	Recreational activities that are typically unorganized and non-competitive, such as cycling, and walking or picnicking.
peri-urban areas	Peri-urban areas are located on the periphery of Melbourne and at the 'interface between urban development and bush areas'
PIA	Planning Institute of Australia
PLA	Parks and Leisure Australia
PPP	public private partnership
PSP	Precinct Structure Plan
PV	Parks Victoria
RCS	Regional Catchment Strategy
RGP	Regional Growth Plan
SCEG	Surf Coast Energy Group
SLO	Significant Landscape Overlay
SSF	sustainable subdivisions framework

SWS	sustainable water strategy
TCPA	Town and Country Planning Association
tree canopy	The aboveground portion of a collection of individual trees.
UDIA	Urban Development Institute of Australia
UGB	Urban Growth Boundary
urban heat island effect	An effect where urban areas, due to the presence of hard surfaces such as buildings and roads, can be 4-5°C hotter than non-urban areas.
VAGO	Victorian Auditor-General's Office
VCOSS	Victorian Council of Social Service
VNPA	Victorian National Parks Association
VPA	Victorian Planning Authority
VPP	Victoria Planning Provisions
WGR	Western Grassland Reserve
Yarra MAC	Yarra River Protection Ministerial Advisory Committee
YRAP	Yarra River Action Plan
YSP	Yarra Strategic Plan

On 1 May 2019, the Parliament of Victoria's Legislative Assembly gave the Environment and Planning Committee terms of reference to conduct an inquiry into environmental infrastructure for growing populations. The terms of reference directed the Committee to investigate the current and future arrangements to secure environmental infrastructure, particularly parks and open space, for a growing population in Melbourne and across regional centres.

1.1 Background

1.1.1 What is environmental infrastructure?

An initial question for the Committee in deciding how to interpret the terms of reference for this Inquiry was the meaning to be given to the term 'environmental infrastructure'.

'Environmental infrastructure' is often used to refer to infrastructure such as water supply, sewerage, waste disposal, and pollution control services.¹ This usage of the term was also noted by some stakeholders who provided evidence to the Committee.² However, the wording of the terms of reference, 'environmental infrastructure, particularly parks and open space', suggests that is not the intended interpretation. The Committee also notes that environmental infrastructure is often used to refer to those elements of the natural environment that support society and the economy via the 'ecosystem services' that they provide. These elements include oceans, waterways and wetlands, forests and vegetation, and the atmosphere. The Committee decided at the beginning of the Inquiry that this latter interpretation better aligns with the reference to 'parks and open space' in the terms of reference.

In further defining the scope of environmental infrastructure relevant to the Inquiry, the Committee was also guided by the work of Infrastructure Victoria, which defines environmental infrastructure as referring to:

parks, green open spaces and corridors, woodlands, open countryside, sporting fields and private gardens. The elements within these different spaces work together to improve environmental health and mitigate the effects of climate change.³

1 Jerry A. Nathanson, *Environmental infrastructure* 2019, <<https://www.britannica.com/technology/environmental-infrastructure>> accessed 18 October 2021; Fiona Nunan and David Satterthwaite, 'The Influence of Governance on the Provision of Urban Environmental Infrastructure and Services for Low-income Groups', *International Planning Studies*, vol. 48, no. 4, 2001; Huaping Sun, et al., 'Nexus between environmental infrastructure and transnational cluster in one belt one road countries: Role of governance', *Business Strategy and Development*, vol. 1, no. 1, 2018.

2 See, for example, Town and Country Planning Association, *Submission 160*, received 28 September 2020, p. 1.

3 Infrastructure Victoria, *Getting to the root of Victoria's tree canopy struggle*, 2021, <<https://www.infrastructurevictoria.com.au/2021/05/05/getting-to-the-root-of-victorias-tree-canopy-struggle>> accessed 14 October 2021.

Infrastructure Victoria's *Infrastructure Strategy 2021–2051* (released in August 2021) also states:

Open space takes different forms, from bushland, water courses and parklands to sports fields, racetracks and utility reservations. Population growth and development activity is causing private outdoor space to decline in some places, leading to more reliance on public open spaces. Restrictions during the COVID-19 pandemic highlighted the importance of easy access to green and public open spaces, and the contribution this made to communities' physical and mental health, wellbeing, and resilience.⁴

Similarly, the submission provided by the Department of Environment, Land, Water and Planning (DELWP) grouped environmental infrastructure types into the following categories:

- open space and parks
- forest and bushland (native vegetation and other forests)
- recreation reserves/sporting fields
- canopy trees/cooling infrastructure/wildlife corridors
- waterways.⁵

The Committee also notes that the terms 'environmental infrastructure' and 'green infrastructure' are often used synonymously. As the Town and Country Planning Association noted in its submission:

As is the case with *Plan Melbourne 2017-2050* (Plan Melbourne) and in Victoria's regional growth plans, such elements are usually referred to as "green infrastructure" and "natural assets".

"Green infrastructure" describes the green spaces, trees, soils and water systems that intersperse, connect and provide vital life support for all of us and the other various fauna species within our urban environments.⁶

In summary, the Committee is mindful of the different meaning sometimes given to the term environmental infrastructure but has adopted the meaning used by Infrastructure Victoria and DELWP, which is outlined above. In applying this understanding of the term, the Committee developed the following list of environmental infrastructure that it considers of relevance to the current terms of reference:

- public parks and open space
- paths and roads, particularly where attached to parks and open space
- road and rail reserves

⁴ Infrastructure Victoria, *Victoria's infrastructure strategy 2021–2051: volume 1*, Melbourne, 2021, p. 113. (with sources)

⁵ Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 9.

⁶ Town and Country Planning Association, *Submission 160*, p. 1.

- sporting fields
- public forest and bushland
- botanical gardens
- wildlife corridors
- beaches and access points to open water, including jetties
- rivers, lakes and other inland water bodies.

Of equal importance, the Committee determined that the following would **not** be regarded as environmental infrastructure for the purposes of the current Inquiry:

- private open space (with the exception of contaminated private land that may be suitable for special use following rehabilitation as discussed in Chapter 8)
- infrastructure that supports the built environment (e.g. waste services and water distribution infrastructure)
- backyards, gardens and balconies
- plazas and malls
- agricultural land
- Melbourne's Green Wedges (currently mostly private land).

With respect to Crown land (land owned by the State or Commonwealth Government), the Committee decided to adopt a case by case approach (see, for example, the discussion of the shared use of Government schools in Chapter 6).

In developing its working definition of environmental infrastructure, the Committee has used the above lists as the first level of a two-part definition. For the second level of its definition, the Committee has drawn upon the definition of open space developed by the Victorian Planning Authority (VPA), which is discussed in the next section.

1.1.2 Types and categories of open space

The VPA has developed a multi-level definition of 'open space' which aims to reflect the range of land types and their diversity of functions and roles. The VPA defines open space as:

Land that provides outdoor recreation, leisure and/or environmental benefits and/or visual amenity.⁷

⁷ Victorian Planning Authority, *Metropolitan Open Space Network: Provision and Distribution*, 2017, p. 4.

The VPA's definition includes the following components:

- 'public open space', which is defined as publicly owned land that
 - is accessible to the community;
 - is set aside for the primary purpose of outdoor recreation and leisure, conservation, waterways, and/or heritage; and
 - provides one or more of outdoor recreation, leisure and environmental benefits and/or visual amenity.
- 'restricted public land', which is defined as publicly owned land:
 - where public access and/or use is restricted;
 - that is set aside for the primary purpose of outdoor recreation, conservation, heritage and/or services including transport, education, water, health or utilities; but
 - that provides one or more of outdoor recreation, leisure and environmental benefits and/or visual amenity
- 'private open space', which is defined as land that is privately owned or leased on a long-term basis to private operators, and where public access is prohibited or significantly restricted, but that may still contribute environmental benefits and visual amenity.⁸

The VPA's open space classification (reproduced below at Figure 1.1) also sets out a number of open space categories that sit under each of the above open space types.

The Committee determined at the beginning of the Inquiry to focus on the first two types of open space defined by the VPA; that is, public open space and restricted public land. The Committee is mindful that private open space can be converted into public open space or restricted public land in some circumstances (for example, the purchase of former farmland under the Melbourne Strategic Assessment, discussed in Chapter 7). However, the Committee determined at an early stage that a consideration of private open space largely sits outside the current terms of reference. This conclusion is supported by the weight of evidence provided to the Committee which is concerned almost exclusively with public open space and restricted public land. It should also be noted that under the VPA open space classification, parks fall within the definition of public open space.

Accordingly, references to 'environmental infrastructure' throughout this report should be read as referring primarily to the VPA's definition of public open space (in Figure 1.1 below). The report also discusses some categories of restricted public land, such as Government schools, cemeteries, public golf courses and conservation reserves/

⁸ Ibid., pp. 4-5.

protected areas. Unless otherwise stated, references to environmental infrastructure in this report do not include private open space. Examples include Melbourne's Green Wedges (the non-urban areas of metropolitan Melbourne that lie outside the Urban Growth Boundary) and agricultural land. Privately owned land of this type is also not the subject of the Inquiry, although the Committee notes that much of this land contributes both environmental benefits and visual amenity.

The Committee also notes that DELWP's Regional Growth Plans are primarily concerned with: the provision of 'open space' in the context of urban areas; the linking of existing publicly accessible open space networks and tracks; and investment in sporting infrastructure in key urban growth locations.⁹ Moreover, the Committee notes that the majority of the public land in Victoria's regions is already protected in parks, reserves and state forest.

The distinction between restricted public land and public open space reflects the distinction between arrangements to 'secure' environmental infrastructure (as expressed in the terms of reference) and arrangements to provide access to environmental infrastructure. In other words, arrangements to 'secure' environmental infrastructure need not necessarily include the provision of public access. Examples include the restricted public land categories of conservation reserves/protected areas and public golf courses. The Committee does not support the provision of public access to all forms of restricted public land but considers that public access should be considered for certain types of restricted public land on a case by case basis.

⁹ See, for example, Victorian Government, *Hume Regional Growth Plan*, 2014, pp. 69–70.

Figure 1.1 Open space classification and hierarchy

Open Space Types and Categories	Sub-Categories								Typical Access Classification Range			
	Core Open Space											
	Names	Local Network			Regional Network							
		Pocket	Neighbourhood	Community	District	Municipal	Metropolitan					
	Typical size / sub-descriptor	Less than 0.2ha	0.2-1ha	1.0-5.0Ha	5-15Ha	15-50Ha	Greater than 50ha	Open	Limited	Highly Limited	Closed	
Typical catchment/ length	200m-400m	400m	800m	1200m	> 0-5km	up to 15km						
Public Open Space												
Parks and gardens							✓	✓	x	x		
Civic squares and promenades							✓	✓	x	x		
Natural and semi-natural open space							✓	✓	x	x		
Sportsfields and organised recreation							✓	✓	x	x		
Recreation corridor							✓	✓	x	x		
Median parks							✓	✓	x	x		
Conservation reserves / protected areas							✓	✓	x	x		
Restricted Public Land (with open space potential)												
Services and utilities reserve							✓	x	✓	✓		
Government schools							x	✓	✓	x		
Tertiary institutions							x	✓	✓	x		
Cemeteries							✓	✓	x	x		
Transport reservations							✓	x	x	✓		
Public golf courses							x	x	✓	x		
Public race courses							x	x	✓	x		
Sportsfields and organised recreation							x	x	✓	✓		
Public housing reserves							x	x	✓	✓		
Natural and semi-natural open space							x	x	✓	✓		
Conservation reserves / protected areas							x	x	✓	✓		
Private Open Space												
Non government schools							x	x	✓	✓		
Private sportsfields							x	x	✓	✓		
Private golf courses							x	x	✓	✓		
Private race courses							x	x	✓	✓		
Private conservation							x	x	✓	✓		
Private outdoor shopping centre forecourts / plazas / malls							x	✓	✓	✓		

Source: Victorian Planning Authority, *Metropolitan Open Space Network: Provision and Distribution*, 2017, p. 22.

1.1.3 Application of the open space definitions to regional Victoria

While the VPA's open space classification system has been developed for application to metropolitan Melbourne, the Committee notes that it is also open to regional councils to apply the same system. As the VPA has stated, the revised Precinct Structure

Planning (PSP) Guidelines can be applied by all greenfields planning practitioners (even though the performance targets outlined in the Guidelines will need to be adapted for greenfields planning in peri-urban towns and regional Victoria).¹⁰ By way of further background, the draft Guidelines for Precinct Structure Planning in Melbourne’s Greenfields (September 2020) state:

In the regions, PSPs are prepared either by councils or in partnership with the VPA in some circumstances ...

... the VPA works closely with councils to assist in identifying strategic planning initiatives and processing of planning applications for strategic sites.

Regional cities and towns value their unique identity and local place values. It is vitally important that PSP areas in the regions set frameworks for growth that reflects this identity and values. A unique sense of place can be fostered by a range of urban design approaches, from the precinct to the site level. Planning for greenfield PSP areas in the regions must be carefully adapted to the local context.

The aims, principles and processes of the Guidelines can assist regional planners to formulate structure plans that adopt a collaborative and integrated approach, and a purpose and place-based focus.¹¹

The Committee also notes that the Victorian Government has committed to introduce the Infrastructure Contributions Plan (ICP) system in regional greenfield growth areas (Regional ICP) (as well as metropolitan greenfield growth areas and strategic development areas) to replace the current Development Contributions Plan (DCP) system.¹²

1.1.4 Growing populations

The Committee also decided, based on the reference to growing populations in the terms of reference, that its primary focus would be on environmental infrastructure that is within or close to urban areas, i.e. environmental infrastructure within Melbourne’s Urban Growth Boundary (UGB) or in, or near, the urban areas of regional and peri-urban cities and towns.

The VPA also makes the important point that the definition of open space ‘depends on the context—in a highly urban area, a narrow cycling trail or small vacant lot can be open space, while in areas with less built form it might take the shape of a lake, national park or set of playing fields.’¹³ This distinction also informed the Committee’s decision to focus on the provision of environmental infrastructure within or near the urban areas identified by the terms of reference, i.e. metropolitan Melbourne and regional centres.

¹⁰ Victorian Planning Authority, *How do the PSP Guidelines support planning in regional Victoria?*, 2020, <<https://vpa.vic.gov.au/faq/how-do-the-ppg-guidelines-support-planning-in-regional-victoria>> accessed 18 October 2021.

¹¹ Victorian Planning Authority, *Guidelines for Precinct Structure Planning in Melbourne’s Greenfields: Draft for Public Engagement September 2020*, 2020, p. 13.

¹² Victorian Planning Authority, *Regional Infrastructure Contributions Plan*, <<https://vpa.vic.gov.au/regional-infrastructure-contributions-plans>> accessed 18 October 2021.

¹³ Victorian Planning Authority, *Metropolitan Open Space Network*, p. 4.

Accordingly, areas of open space, such as national parks and state forests, which lie outside the metropolitan boundaries of Melbourne and regional centres are not the focus of the current Inquiry. The Committee is also mindful that residents of regional Victoria who live outside of larger regional centres typically already enjoy a high level of access to parks and open space. These parts of regional Victoria are therefore also not the focus of this Inquiry.

Given the emphasis in the terms of reference on growing populations, much of this report (like much of the evidence received by the Committee) is focused on Melbourne. This reflects the fact that Melbourne's population is forecast to grow by 4.1 million (or 84%) by 2056, compared to growth of 700,000 (or 47%) for regional Victoria (see Table 1.2 below). However, the Committee also received valuable evidence from a number of Victoria's rapidly growing regional centres, including Geelong, Ballarat and Bendigo, and some peri-urban areas, which is the subject of Chapter 8. While these areas often face unique challenges and opportunities in the provision of environmental infrastructure, they also share a number of commonalities with Melbourne. Accordingly, a number of the recommendations contained in Chapters 5 to 9 (which address environmental infrastructure across different parts of Melbourne and regional Victoria) would have state-wide application even though they are discussed within a particular geographic context. These recommendations are set out in Table 1.1 below. (Many of the recommendations contained in Chapters 2 to 4 would also have a state-wide application. However, given the thematic nature of those chapters, these recommendations are not included in Table 1.1).

Table 1.1 State-wide recommendations

Chapter/Page number	Recommendation
Chapter 5	
Page 118	Recommendation 26: That the Victorian Government work with all Victorian councils to simplify and streamline processes for planning scheme amendments, with a particular focus on assisting councils during the early stages of the amendment process. ^a
Page 125	Recommendation 29: That the Victorian Government consider ways to streamline the regulatory environment to encourage private landowners to participate in public private partnerships.
Chapter 6	
Page 132	Recommendation 30: That the Department of Environment, Land, Water and Planning, in conducting its review of existing open space contribution guidelines for established suburbs, include consideration of the relevant provisions in the <i>Subdivision Act 1988</i> (Vic), the adequacy of the current maximum open space contribution, the feasibility of a standard approach and guidance for councils seeking to apply a higher contribution rate, and review how councils collect, acquit and report on funds received through open space levies, including the frequency and timeliness with which funds are expended.
Page 135	Recommendation 31: That the Victorian Government review and consider ways in which to streamline the process of making shared use agreements to maximise access to open space.

Chapter/Page number	Recommendation
Chapter 6 (continued)	
Page 139	Recommendation 32: That the Victorian Government review the categories of restricted public land with the aim of identifying those categories that may present opportunities for public access under shared use agreements.
Page 142	Recommendation 33: That the Victorian Government review the requirement for State Government agencies to seek the 'highest and best-use' when selling surplus government land for the purpose of providing open space. This could include the development of a framework to enable such land to first be offered to local or State government on a low or no cost basis and for an extended offer period.
Chapter 7	
Page 160	Recommendation 40: That the Victorian Government review the provision of funding to Parks Victoria to meet the growing costs of its asset maintenance and recurrent programs.
Page 165	Recommendation 41: That the Victorian Government consider the establishment of a rolling fund or similar mechanism, which would allow councils to increase their borrowing limits to achieve the earlier delivery of large-scale environmental infrastructure. Loans from the fund could be paid back when developer contributions fall due.
Chapter 8	
Page 185	Recommendation 46: That the Victorian Government investigate the better utilisation of unused and surplus rail land for the creation of new public open space.
Page 207	Recommendation 52: That the Victorian Government undertake the following in relation to contaminated land across Victoria: <ol style="list-style-type: none"> 1. undertake scoping work to identify and assess contaminated land; 2. explore potential projects to rehabilitate land for conversion to public open space; 3. assess the cost of those projects; and 4. if required, explore alternate funding mechanisms for the delivery of such projects.
Chapter 9	
Page 224	Recommendation 55: That the Victorian Government consider how it can improve the Integrated Water Management framework through increased clarity on roles and responsibilities, funding and the introduction of targets.
Page 227	Recommendation 56: That the Victorian Government work with local government and relevant agencies to provide additional guidance on local waterway management. ^b

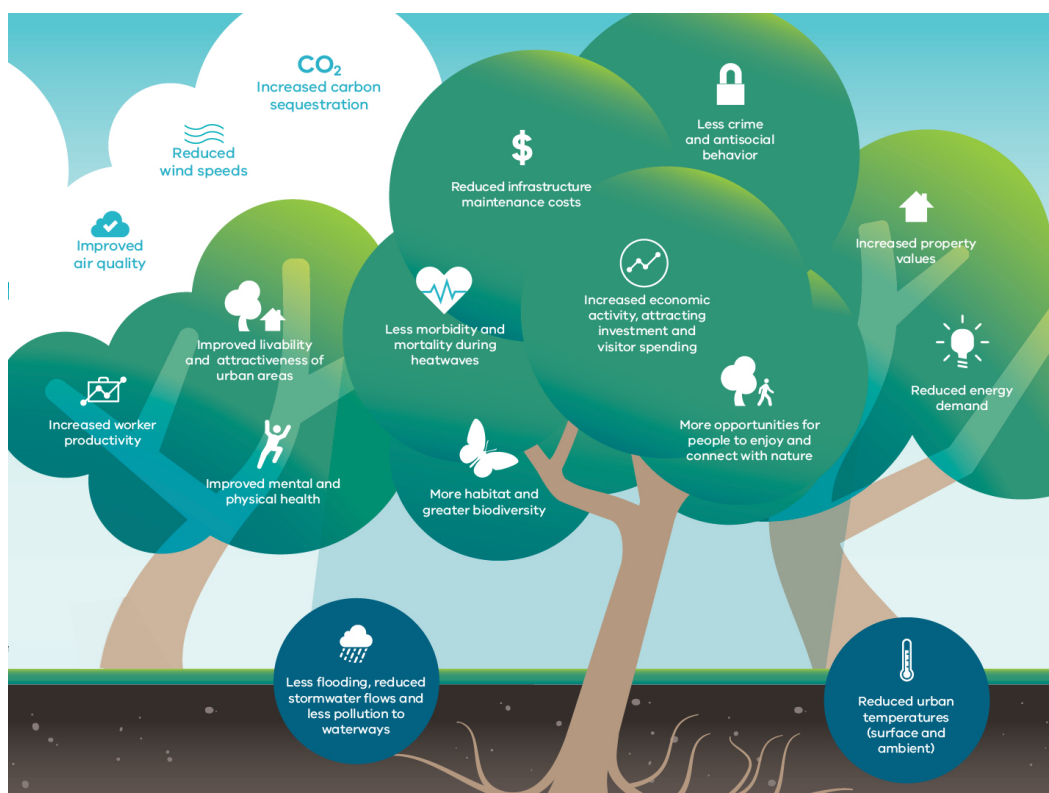
a. This issue is also discussed in Chapters 6, 7 and 8.

b. This issue is also discussed in Chapters 4 and 8.

1.1.5 Benefits of environmental infrastructure

There was near universal agreement among stakeholders that environmental infrastructure provides a wide range of health, environmental and social benefits. These benefits are the subject of Chapters 2, 3 and 4 respectively. The interrelated nature of these benefits is illustrated in Figure 1.2 below.

Figure 1.2 Key benefits of environmental infrastructure



Source: Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 15

1.1.6 Population growth and the impact of COVID-19

Prior to the COVID-19 pandemic, the populations of Melbourne and Victoria had been growing faster than at any other period in the history of the State.¹⁴ During the 10 financial years from 2010 to 2019, Melbourne grew by more than 1 million people, an average of more than 100,000 people per year.¹⁵ The State of Victoria also experienced the largest and fastest annual growth of any state or territory for most of the same period (annual growth of up to 150,000 people and an annual growth rate of up to 2.5% from 2011 to 2018).¹⁶ As at 30 June 2020, the populations of Victoria and Melbourne had reached approximately 6.7 million and 5.2 million respectively.¹⁷

The COVID-19 pandemic has had a significant impact on recent population growth in Melbourne, Victoria and throughout Australia. This was primarily due to the closure of Australia's international border from 20 March 2020 and the subsequent impact on net overseas migration (the net gain or loss of population through immigration to Australia

¹⁴ Infrastructure Victoria, *Submission 149*, received 28 September 2020, p. 11.

¹⁵ .id (informed decisions), *Greater Melbourne: Estimated Resident Population (ERP)*, <<https://profile.id.com.au/australia/population-estimate?WebID=260>> accessed 11 November 2021.

¹⁶ Department of Environment, Land, Water and Planning, *Victoria in Future 2019: Population Projections 2016 to 2056, 2019*, p. 7. See also: .id (informed decisions), *Victoria: Estimated Resident Population (ERP)*, <<https://profile.id.com.au/australia/population-estimate?WebID=110&BMID=10>> accessed 11 November 2021.

¹⁷ .id (informed decisions), *Victoria*; .id (informed decisions), *Greater Melbourne*.

and emigration from Australia).¹⁸ During the 2019–20 financial year, Melbourne’s population grew by approximately 80,000 people, while the rest of the State grew by 19,700.¹⁹ These figures were significantly below the annual averages for the previous 10 years, reflecting the impact of the closure of Australia’s international border just over three months earlier. Victoria experienced negative population growth (-0.6%) in the 12 months to 31 March 2021,²⁰ the latest period for which data is available.

Melbourne and Victoria are forecast to resume their population growth in coming years, with Melbourne forecast to become Australia’s most populous city by 2026–27 and to reach an estimated population of 6.2 million by 30 June 2031.²¹ According to the Australian Government’s Centre for Population, net overseas migration to Victoria will return almost to pre-COVID-19 levels by the 2023–24 financial year (at over 77,000), when the State will also experience estimated annual growth of 1.8%.²²

The most recent official State Government population forecast data is contained in *Victoria in Future 2019* (VIF2019), which covers the period from 2016 to 2056. VIF2019 projects that by 2056, Victoria will grow by 4.7 million people to reach a population of 11.2 million, while Melbourne will grow by approximately 4 million to reach a population of 9 million.²³

The impact of the COVID-19 pandemic on the forecasts contained in VIF2019 remains unclear. However, COVID-19 is more likely to impact VIF2019’s shorter-term forecasts (e.g. for 2026) than in subsequent decades. Support for this conclusion is also provided by the most recent (December 2020) *Population Statement*, released by the Australian Government’s Centre for Population. The Population Statement uses different scenarios to model future population growth, including the ‘central case scenario’ which aims to account for the impact of COVID-19. Under that scenario, national population is forecast to increase by 0.2 per cent in 2020–21 and 0.4 per cent in 2021–22, rising to 1.3 per cent by 2023–24. This compares with national average annual population growth of 1.6% over the last decade.²⁴

As COVID-19 restrictions are eased, it is likely that Victoria’s strong population growth will resume given the underlying assumptions in VIF2019 of ‘strong economic performance combined with education and lifestyle opportunities’ remain unchanged.²⁵

18 Australian Bureau of Statistics, *National, state and territory population*, 2021, <<https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/latest-release>> accessed 11 November 2021.

19 Australian Bureau of Statistics, *Regional population*, 2021, <<https://www.abs.gov.au/statistics/people/population/regional-population/2019-20>> accessed 11 November 2021.

20 Australian Bureau of Statistics, *National, state and territory population*.

21 Australian Government Centre for Population, *Population Statement*, Canberra, 2020, pp. 4–5. See also: Australian Government Centre for Population, *2020 Population Statement*, <<https://population.gov.au/publications/publications-population-statement.html>> accessed 11 November 2021.

22 Australian Government Centre for Population, *Population Statement, State and territory projections*, <<https://population.gov.au/data-and-forecasts/data-and-forecasts-dashboard-statement-state.html>> accessed 11 November 2021.

23 Department of Environment, Land, Water and Planning, *Victoria in Future 2019*, pp. 4, 7, 9.

24 Australian Government Centre for Population, *Population Statement*, p. 3.

25 Department of Environment, Land, Water and Planning, *Victoria in Future 2019*, p. 6.

VIF2019 continues to inform DELWP's planning, as well as that of other key agencies, such as the VPA. Both DELWP and the VPA have also noted that the impact of the pandemic on the population growth of Melbourne and Victoria is likely to be short-term.²⁶ As the VPA has stated in its Guidelines for Precinct Structure Planning in Melbourne's Greenfields:

Even when the impact of the COVID-19 pandemic is factored in, Victoria's growth will likely remain strong. It may take slightly longer to reach these numbers, but the growth fundamentals are likely to rebound in a relatively short timeframe.²⁷

The VIF2019 population projections for Melbourne and regional Victoria are set out below at Table 1.2. Average annual population growth rates (maximum and minimum) for Melbourne and regional Victoria from 2018 to 2036 are shown in Figure 1.3. As Figure 1.3 illustrates, Melbourne's new growth areas are forecast to experience the State's fastest population growth rates by a significant margin.

Table 1.2 Population projections for Melbourne and regional Victoria from 2019 to 2056

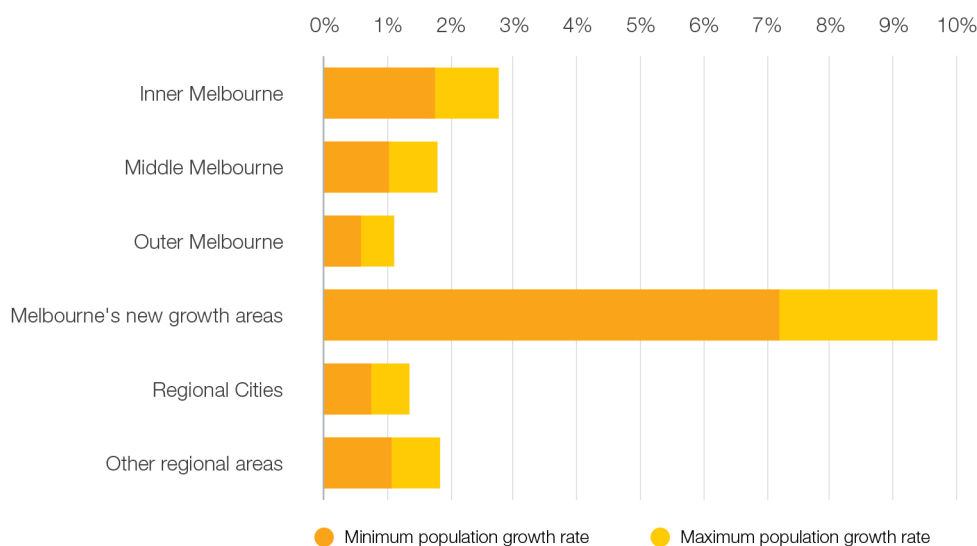
Area	Population 2019	Population 2056	Change (number)	Change (%)
Melbourne	4.9 million	9 million	4.1 million	84
Regional Victoria	1.5 million	2.2 million	700,000	47
Ballarat	165,000	257,000	92,000	56
Bendigo	160,000	251,000	91,000	57
Geelong	302,000	562,000	260,000	86
Hume	177,000	251,000	74,000	42
Latrobe-Gippsland	283,000	410,000	127,000	45
North West	152,000	156,000	4,000	3
Shepparton	133,000	167,000	34,000	26
Warnambool and SW	125,000	133,000	8,000	6

Source: Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 10.

²⁶ Department of Environment, Land, Water and Planning, *Submission 254*, p. 6; Victorian Planning Authority, *Guidelines for Precinct Structure Planning in Melbourne's Greenfields*, p. 6.

²⁷ Victorian Planning Authority, *Guidelines for Precinct Structure Planning in Melbourne's Greenfields*, p. 6.

Figure 1.3 Average annual population growth rates for Melbourne and regional Victoria from 2018 to 2036



Source: Infrastructure Victoria, *Victoria's infrastructure strategy 2021–2051: volume 1*, Melbourne, 2021, p. 196.

As highlighted in Table 1.2, Melbourne has experienced the greatest population pressure of all Victorian locations in recent years and this is expected to continue as COVID-19 restrictions are eased. Accordingly, the submissions of many stakeholders to this Inquiry have a large focus on the Melbourne metropolitan area, which is also reflected in this report. However, the Committee also received valuable evidence on regional and peri-urban areas, which is discussed in Chapter 8.

Victoria's larger regional cities, including Geelong, Shepparton, Bendigo, Ballarat and Albury-Wodonga, as well as peri-urban towns such as Bacchus Marsh, Warragul/Drouin and Gisborne, are expected to continue to experience strong population growth in coming years.²⁸

If the increased adoption of remote working arrangements during the COVID-19 pandemic is sustained, this may further boost population growth in regional centres. Notably, the largest fall in people moving to Melbourne in the six months to September 2020 came from regional Victoria, which had a 13 per cent drop in departures and which, in turn, drove the record largest six monthly net gain of people regional Victoria has experienced (8,600 people).²⁹ Melbourne continued to experience a net loss of people (4,800) to the rest of the state during the three months to the end of March 2021, the most recent period for which ABS data is available.³⁰ It is too early to predict the impact of easing COVID-19 restrictions on this trend.

²⁸ Infrastructure Victoria, *Submission 149*, p. 11.

²⁹ Australian Government Centre for Population, *Migration between cities and regions: A quick guide to COVID-19 impacts*, 2020, p. 6.

³⁰ Australian Bureau of Statistics, *Regional internal migration estimates, provisional*, 2021, <<https://www.abs.gov.au/statistics/people/population/regional-internal-migration-estimates-provisional/latest-release#victoria>> accessed 11 November 2021.

Many stakeholders to this Inquiry noted that effective long-term planning will be vital to ensure the adequate provision of environmental infrastructure in the context of a return to strong population growth. As Infrastructure Victoria stated in its submission:

if Victoria returns to its pre-pandemic population growth trajectory, it is important to understand the impact that this growth has on the provision and preservation of environmental infrastructure in different areas of Metropolitan Melbourne. Higher residential densities, smaller household sizes and changing job markets, increase the need and demand for easily accessible local open space in communities. This issue exists in both established areas as well as growth areas, however different problems are faced in the varying development contexts.³¹

As DELWP highlighted in its submission, the continuation of strong population growth in Melbourne and regional centres will require the provision of both new open space where possible and innovation in the way that space is provided:

With more people living in higher-density housing with smaller areas of private open space, our existing public open space will see more people using it, more often and for longer. There is often little opportunity to create large tracts of new open space in established areas. Creative thinking will be needed on local pocket parks, high-quality maintenance of existing parks, how best to share spaces and how to innovatively repurpose surplus public land to meet growing demand.³²

Several stakeholders noted that the requirement for many employees to work from home during the COVID-19 pandemic resulted in an increased appreciation and demand for local parks and open space. As restrictions ease, the longer-term legacy of COVID-19 on working arrangements remains unclear. However, some commentators and government agencies, such as the Australian Government Productivity Commission, have suggested that the incidence of working from home will be higher in the future than it was prior to the pandemic.³³ Like population growth, such a social shift would be likely to result in an ongoing increase in the demand for parks and open space overall, as well as for local environmental infrastructure closer to people's homes.

FINDING 1: While the COVID-19 pandemic has stalled the population growth in Melbourne and Victoria of recent decades, it is likely that strong growth will resume in coming years. This will in turn increase the demand for environmental infrastructure across Melbourne, peri-urban areas and larger regional centres.

FINDING 2: If the shift towards home-based working arrangements continues in the years ahead, this is likely to increase the demand for access to environmental infrastructure closer to people's homes.

³¹ Infrastructure Victoria, *Submission 149*, p. 11. (with sources)

³² Department of Environment, Land, Water and Planning, *Submission 254*, p. 22.

³³ See, for example, Productivity Commission, *Working from home: Research paper*, Canberra, 2021.

FINDING 3: Innovative planning approaches will be crucial in order to meet the future environmental infrastructure needs of growing populations in Melbourne, peri-urban and regional areas.

1.2 Inquiry process

The Committee called for public submissions to this Inquiry in July 2020. The Inquiry was advertised in *The Age* in August 2020, as well as on Facebook, Twitter and Instagram. The Committee also arranged for notice of the subsequent public hearings to be included on the Parliament of Victoria's Twitter and Facebook pages. A social media pack was created and sent to key stakeholders to share on their social media, and the social media pack was also available for download from the Committee's website.

The Committee Chair wrote directly to over 800 key stakeholders, inviting them to make submissions to the Inquiry. These stakeholders included local councils, residents and ratepayer organisations, friends of parks groups, environmental groups, development and planning organisations, universities, healthcare peak bodies, water corporations, and government and statutory authorities.

The Committee received 264 submissions. A list of stakeholders who made a submission can be found in Appendix A. The Committee held 10 days of public hearings between March and May 2021. Due to the COVID-19 public health emergency, all public hearings for the Inquiry were held virtually using Zoom. Most days of the public hearings were broadcast live on the Parliament's website. Appendix A also lists the witnesses who gave evidence to the Committee at the public hearings.

The Secretariat also conducted desktop research to inform the Committee on a range of issues covered in the report.

The Committee's work on the Inquiry was delayed by the COVID-19 public health emergency.

Under suspensions to standing and sessional orders agreed by the Legislative Assembly on Thursday 23 April 2020, the Speaker advised the House on 2 June 2020 that the Committee had extended its reporting date for the Inquiry to 30 June 2021.

On 20 May 2021, the Legislative Assembly further extended the reporting date to 30 September 2021.

On 18 November 2021, the Legislative Assembly further extended the reporting date to 10 February 2022.

1.3 Outline of the report

This report discusses the evidence the Committee received on environmental infrastructure in 9 chapters:

- Chapter 1 provides an introduction to the Inquiry, its context, scope and conduct.
- Chapter 2 discusses options for maximising the health and economic benefits of parks and open space for Melbourne, as well as growing regional centres and peri-urban areas.
- Chapter 3 examines the many environmental benefits of parks and open space, with a focus on the protection of ecosystems, landscapes and wildlife, as well as the importance of Melbourne's urban tree canopy.
- Chapter 4 explores the social benefits of environmental infrastructure, with a focus on the contribution that it makes to social equity and social cohesion, including the involvement of Victoria's Traditional Owners.
- Chapter 5 examines the current and future challenges faced by central and inner Melbourne in the provision of environmental infrastructure.
- Chapter 6 examines the current and future challenges faced by Melbourne's middle ring suburbs in the provision of environmental infrastructure.
- Chapter 7 examines the current and future challenges faced by Melbourne's outer suburbs in the provision of environmental infrastructure.
- Chapter 8 explores the unique challenges faced by regional and peri-urban Melbourne in the provision of environmental infrastructure, including the key roles of tree canopy and waterways.
- Chapter 9 explores the crucial contribution that Melbourne's waterways and wetlands make to the provision of environmental infrastructure and their increasing importance as Melbourne's population continues to grow.

2 Health and economic benefits

2.1 Introduction

Environmental infrastructure is increasingly being recognised by governments, businesses and global institutions as a capital asset that produces value [for] people, communities and society as a whole. It underpins our economy, supports community health and wellbeing, and provides a wide range of environmental goods and services that are essential for maintaining a healthy, liveable and sustainable environment for all.¹

The importance of environmental infrastructure to the economy and to the health of the community was noted by many stakeholders. This connection is encapsulated in Parks Victoria's 'Healthy Parks, Healthy People' policy, which has four key principles:

- The wellbeing of all societies depends on healthy ecosystems,
- Parks nurture healthy ecosystems,
- Contact with nature is essential for improving emotional, physical and spiritual health and wellbeing,
- Parks are fundamental to economic growth and to vibrant and healthy communities.²

Dr Meredith Dobbie, Chair, AILA Victorian Environment Committee, Australian Institute of Landscape Architects (AILA), spoke of the multiple health and wellbeing benefits of environmental infrastructure:

There is recognition that people ... need nature and, even more importantly in cities, they need urban nature, and there are countless studies that have demonstrated the benefit to the physical, emotional and mental wellbeing of people derived from nature—many empirical studies, so there can be little doubt about it. But we would encourage the Victorian government to consider environmental infrastructure and green infrastructure as delivering ecosystem services. ... There are countless functions that a piece of green infrastructure can supply when designed well.³

The submission from Helen Gibson, Catherine Heggen, Esther Kay, Ann Keddie, Jane Monk and Margaret Pitt stated, '[t]he point we make is that open space is essential to the operation and well-being of the community. It is not an optional add-on.'⁴

1 Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 14. (with sources).

2 Parks Victoria, *Submission 254F*, received 6 November 2020, p. 13.

3 Dr Meredith Dobbie, Chair, AILA Victorian Environment Committee, Australian Institute of Landscape Architects (AILA) Victorian Chapter, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 40.

4 Helen Gibson, et al., *Submission 182*, received 28 September 2020, p. 4.

This chapter discusses the physical health, mental health and economic benefits of environmental infrastructure. It also discusses the benefits of nature-based or biophilic design, and ways to balance the competing needs of different users of open space.

2.2 Physical health

The link between health and nature was highlighted by the Victorian Government's Memorandum for Health and Nature signed in 2017, which states 'that a thriving natural environment not only conserves biological diversity but also sustains the health and wellbeing of people and communities.'⁵ Many stakeholders also spoke of the benefits of environmental infrastructure for physical health.⁶

The health benefits of environmental infrastructure have also been increasingly recognised within the scientific and medical community in recent years. For example, a 2018 review and meta-analysis (based on 103 observational and 40 interventional studies) published by the University of East Anglia found:

Statistically significant health denoting associations between high versus low greenspace exposure groups ... for self-reported health, type II diabetes, all-cause and cardiovascular mortality, diastolic blood pressure, salivary cortisol, heart rate, heart rate variability (HRV), and HDL cholesterol as well as preterm birth and small size for gestational age births.⁷

('Greenspace' was defined by the authors as 'open, undeveloped land with natural vegetation ... [which] ... also exists in many other forms such as urban parks and public open spaces as well as street trees and greenery'.⁸ This definition is essentially analogous to the use of the term environmental infrastructure in the current Inquiry.)

Similarly, a 2008 article published in *The Lancet* based on a study of the population of England below retirement age found that:

⁵ Department of Environment, Land, Water and Planning, *Victorian Memorandum for Health and Nature*, 2017, <<https://www.environment.vic.gov.au/biodiversity/victorian-memorandum-for-health-and-nature>> accessed 19 October 2021.

⁶ See, for example, Nillumbik Shire Council, *Submission 29*, received 4 September 2020, p. 6; Friends of Scotchmans Creek and Valley Reserve Inc., *Submission 36*, received 11 September 2020, p. 2; Michael Smyth, *Submission 52*, received 20 September 2020, p. 1; South Gippsland Conservation Society Inc, *Submission 78*, received 24 September 2020, p. 4; Australian and New Zealand Association for Leisure Studies, *Submission 132*, received 28 September 2020, p. 1; Moorabool Shire Council, *Submission 185*, received 28 September 2020, p. 1; Australian Institute of Landscape Architects (AILA) Victorian Chapter, *Submission 227*, received 1 October 2020, p. 7; Mr Rod Spivey, Senior Open Space Planner, Banyule Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 6; Associate Professor Jenny Veitch, National Heart Foundation of Australia Future Leader Fellow, Institute for Physical Activity and Nutrition (IPAN), Deakin University, public hearing, via videoconference, 30 March 2021, *Transcript of evidence*, p. 8; Dr Jonathan Spear, Deputy Chief Executive and Chief Operating Officer, Infrastructure Victoria, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 31.

⁷ Caoimhe Twohig-Bennett and Andy Jones, 'The health benefits of the great outdoors: A systematic review and metaanalysis of greenspace exposure and health outcomes', *Environmental Research*, vol. 166, 2018, pp. 628, 633. (references to figures omitted)

⁸ *Ibid.*, p. 628.

Health inequalities related to income deprivation in all-cause mortality [death from any cause] and mortality from circulatory diseases were lower in populations living in the greenest areas.⁹

The article also stated that:

the effect of green space is not solely based on promotion or enhancement of physical activity. Several studies have shown that contact (either by presence or visual) with green spaces can be psychologically and physiologically restorative, reducing blood pressure and stress levels.¹⁰

This recognition by the scientific and medical community of the varied and interrelated health benefits of environmental infrastructure was also noted by some stakeholders.¹¹

Similarly, the Centre for Urban Research, RMIT University stated that accessing environmental infrastructure improved:

Whole-of-population health outcomes through: obesity reduction; lowered blood pressure; extended life span; increased physical activity; faster surgical recovery; improved mental health, including decreased stress and depression; and reduced noise pollution.¹²

The Australian and New Zealand Association for Leisure Studies, an organisation of academics involved in leisure research and policy, noted the importance of environmental infrastructure in encouraging physical activity:

Green spaces in cities are crucial in reducing obesity – whether this is through encouraging participation in formal team or individual sports, walking, play or other outdoor activities. This is especially so in built-up areas with medium to high density apartment dwellings, where outdoor spaces contribute significantly to the overall liveability of these areas.¹³

A study in *The Lancet* modelled the changes in health for several cities, including Melbourne, if more people walked, cycled or used public transport to get around rather than motor vehicles. The study's modelling showed that 'Health gains were observed for all cities for cardiovascular disease, respiratory disease, and diabetes.'¹⁴

⁹ Richard Mitchell and Frank Popham, 'Effect of exposure to natural environment on health inequalities: an observational population study', *Lancet*, vol. 372, no. 9650, 2008, p. 1655.

¹⁰ Ibid. The authors cited the following journal articles in support of this point: T Hartig, et al., 'Tracking restoration in natural and urban field settings', *Journal of Environmental Psychology*, vol. 23, 2003; J Pretty, et al., 'The mental and physical health outcomes of green exercise', *Int J Environ Health Res*, vol. 15, 2005.

¹¹ See, for example, Zoos Victoria, *Submission 68*, received 23 September 2020, p. 3.

¹² Centre for Urban Research, RMIT University, *Submission 60*, received 22 September 2020, p. 4.

¹³ Australian and New Zealand Association for Leisure Studies, *Submission 132*, p. 1.

¹⁴ Mark Stevenson, et al., 'Land use, transport, and population health: estimating the health benefits of compact cities', *Lancet*, vol. 388, no. 10062, 2016. See also Mr Andrew Mosley, Advocacy Manager Vic/Tas, Heart Foundation, public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 17.

The Victorian Department of Health stated that obesity was the second-highest lifestyle risk factor for disease, second only to tobacco use.¹⁵

The United States Centers for Disease Control and Prevention has also found that 'physical activity has multiple health benefits, including reducing the risk for cardiovascular disease, diabetes, obesity, selected cancers, and musculoskeletal conditions'.¹⁶ The study also showed that the 'creation of or enhanced access to places for physical activity' was effective in increasing the number of people exercising at least 3 days a week by 25.6%.¹⁷

Dr Sandro Demaio, Chief Executive Officer of VicHealth, explained that 'Time outside decreases our stress levels; it decreases our cortisol levels. It's shown to increase your memory, your mood and even your immune function – likely all through the mediator of stress.'¹⁸

FINDING 4: Access to environmental infrastructure improves physical health. Environmental infrastructure can encourage physical activity, which is a protective factor against many health conditions.

2.2.1 Air pollution

Many stakeholders spoke of the link between increased environmental infrastructure in the form of trees and other vegetation, and reduced air pollution.¹⁹ As the Department of Environment, Land, Water and Planning (DELWP) has noted, 'Air pollution is detrimental to human health'.²⁰ In contrast, reduced air pollution leads to better health outcomes.²¹

In its policy paper on ambient air pollution, Doctors for the Environment Australia listed a number of negative health effects of air pollution:

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- 15 Department of Health, *Leading causes of disease and injury*, 2020, <<https://www.health.vic.gov.au/chief-health-officer/leading-causes-of-disease-and-injury>> accessed 11 November 2021.
- 16 Task Force on Community Preventative Services, *Increasing Physical Activity: A Report on Recommendations of the Task Force on Community Preventative Services*, 2001. See also Banyule City Council, *Submission 72*, received 23 September 2020, p. 2.
- 17 Task Force on Community Preventative Services, *Increasing Physical Activity*. See also Banyule City Council, *Submission 72*, p. 2.
- 18 VicHealth, *What is nature bathing and how does it benefit our health?*, 2020, <<https://www.vichealth.vic.gov.au/be-healthy/what-is-nature-bathing>> accessed 19 October 2021.
- 19 See, for example, Amy Henson, *Submission 71*, received 23 September 2020, p. 1; South Gippsland Conservation Society Inc, *Submission 78*, p. 8; Ms Brooke McKail, Manager, Policy and Research, Victorian Council of Social Service (VCOSS), public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 42; Infrastructure Victoria, *Submission 149*, received 28 September 2020, p. 7; Committee for Melbourne, *Submission 44*, received 16 September 2020, p. 1; Friends of Merri Creek, *Submission 221*, received 30 September 2020, p. 10; Department of Environment, Land, Water and Planning, *Submission 254*, p. 6; Ms Claire Ferres Miles, Chief Executive Officer, Sustainability Victoria, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, p. 13; Doctors for the Environment Australia, *Submission 165*, received 28 September 2020, p. 6.
- 20 Department of Environment, Land, Water and Planning, *Plan Melbourne 2017–2050: Metropolitan Planning Strategy*, 2017, p. 122.
- 21 Council Alliance for a Sustainable Built Environment (CASBE), *Submission 173*, received 28 September 2020, p. 5; David Taylor, *Submission 151, attachment 1*, received 28 September 2020, p. 89.

Air pollution worsens asthma and chronic obstructive pulmonary disease and can increase the risk of cardiac arrhythmia, heart attack, stroke and lung cancer, and hinder lung development. This translates to increases in emergency department presentations and hospital admissions, as well as deaths.

...

The health costs associated with the effects of air pollution in Australia are estimated at between \$11.1 billion and \$24.3 billion annually solely as a result of mortality.²²

Nursery & Garden Industry Victoria wrote in their submission about the ability of environmental or 'green' infrastructure to reduce the impact of air pollution:

Green infrastructure is also pertinent in urban centres to ameliorate air pollution, intercepting dangerous particulates affecting many with cardiorespiratory issues. The value of vegetation has been explored globally and it has been well documented that vegetation can remove air pollutants including particulate matter less than 10µm (PM10), ozone (O₃), nitrogen dioxide (NO₂), sulphur dioxide (SO₂) and volatile organic compounds (VOCs). These pollutants are either removed through direct absorption via uptake through leaf stomata, or interception into the tree or onto the tree surface. In addition to direct removal, the transpiration and canopy size of trees can reduce ambient temperatures, which in turn can directly reduce the frequency and intensity of ground-level O₃, the key component of smog.²³

Similarly, a 2020 author manuscript published by the United States Environment Protection Authority noted that:

Trees can improve air quality by removing particles and gases from the atmosphere and converting carbon dioxide into oxygen through the process of photosynthesis. When located near air pollution sources, trees and bushes can also increase air dispersion, improving local air quality, although some tree characteristics can also inhibit air flow and result in air pollution increases. Moreover, trees provide various ecosystem services in urban environments such as the regulation of temperature by providing shading, thermal comfort and the removal of other gaseous pollutants. In addition, trees can directly impact particulate matter (PM) concentrations in the air by removing, emitting, or particles being re-suspended from leaf or branch surfaces.²⁴

On the other hand, a 2020 study published by the United Kingdom Royal Society found that:

Quantification of the benefits of vegetation appears to be an emotive subject and estimates of the efficacy of vegetation and in particular trees to combat air pollution vary greatly in the literature. ... urban vegetation is estimated to account for only a small reduction in pollution levels and even very large-scale conversion of available open urban greenspace to urban forest would reduce urban air concentrations by only about

²² Doctors for the Environment Australia, Policy Paper on Ambient Air Pollution, 2017, p. 2

²³ Nursery & Garden Industry Victoria, *Submission 223*, received 30 September 2020, p. 5.

²⁴ Rima J Isaifan and Richard W Baldauf, 'Estimating Economic and Environmental Benefits of Urban Trees in Desert Regions', *Front. Ecol. Evol.*, vol. 8, no. 16, 2020, pp. 1-2. (with sources)

1% overall. The impact of small-scale green infrastructure implementations on air quality is very small, except where the vegetation acts as a barrier between source and receptor, and in most cases far less economic than implementing measures to reduce emissions in the first place. Thus, the benefit of urban tree planting for air pollution should in general only be considered as one of multiple benefits ...²⁵

FINDING 5: The extent to which vegetation in urban areas, including street trees, may reduce air pollution, is currently a matter of debate within the scientific literature.

2.2.2 Urban heat island effect

The urban heat island effect occurs in urban areas which, due to the presence of hard surfaces such as buildings and roads, can be 4–5°C hotter than non-urban areas.²⁶ The urban heat island effect ‘increases energy costs (e.g. for air conditioning), air pollution levels, and heat-related illness and mortality.’²⁷

Environmental infrastructure, including trees outside of parks, can alleviate the urban heat island effect.²⁸ According to DELWP, the estimated cooling effect of Melbourne’s street trees is ~0.7°C, while urban parkland and blue infrastructure (waterways and water bodies) contribute ~1.1°C and 1°C respectively.²⁹ An area or street that is shaded can be up to 10°C cooler than an area or street that is unshaded.³⁰

Many stakeholders noted that environmental infrastructure and its cooling effects would become more important in the future due to climate change.³¹ DELWP stated in its submission:

As the frequency and duration of extreme temperatures is set to increase in the future, Melbourne’s population becomes increasingly vulnerable to health complications associated with heat stress. Any cooling effect provided by green infrastructure is increasingly valuable in terms of avoiding morbidity and mortality.³²

25 E Nemitz, et al., ‘Potential and limitation of air pollution mitigation by vegetation and uncertainties of deposition-based evaluations’, *Philos Trans A Math Phys Eng Sci*, vol. 378, no. 2183, 2020, p. 17.

26 Department of Environment, Land, Water and Planning, *Plan Melbourne 2017–2050*, p. 116; Manningham City Council, *Submission 120*, received 27 September 2020, p. 4; Yarra Riverkeeper, *Submission 189*, received 28 September 2020, p. 8; Nursery & Garden Industry Victoria, *Submission 223*, p. 4.

27 Interface Councils, *Submission 146*, received 28 September 2020, p. 3.

28 Jesuit Social Services, *Submission 239*, received 8 October 2020, p. 1; VicWater, *Submission 243*, received 14 October 2020, p. 1.

29 Department of Environment, Land, Water and Planning, *Submission 254*, p. 16.

30 Goulburn Broken Greenhouse Alliance and Central Victorian Greenhouse Alliance, *Submission 229*, received 1 October 2020, p. 3; Friends of Buckley Falls, *Submission 121*, received 27 September 2020, p. 2.

31 See, for example, Chris Chesterfield, *Submission 190*, received 28 September 2020, p. 2; Australian Institute of Landscape Architects (AILA) Victorian Chapter, *Submission 227*, p. 7; Commissioner for Environmental Sustainability, *Submission 228*, received 10 October 2020, p. 7; Planning Institute Australia (Vic), *Submission 244*, received 16 October 2020, p. 3; Mr David Callow, Director, Parks and City Greening, City of Melbourne, public hearing, via videoconference, 22 March 2021, *Transcript of evidence*, p. 2; Ms Amy O’Keeffe, Senior Strategic Planner, City of Darebin, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 25; Ms Naomi Gilbert, Senior Coordinator, Healthy Built Environment, Heart Foundation, public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 28; Mr Tony Baker, Executive Officer, Vic Catchments, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, pp. 21–22; Ms Claire Ferres Miles, *Transcript of evidence*, p. 13.

32 Department of Environment, Land, Water and Planning, *Submission 254*, p. 29.

Increased temperatures can have major health impacts, particularly for ‘the most vulnerable such as the elderly, young and economically disadvantaged’.³³ Examples of heat-related health impacts include heat cramps and heat exhaustion which can lead to heatstroke, which is fatal in up to 80% of cases.³⁴

Heatwaves were described by stakeholders as ‘silent killers’,³⁵ with large numbers of deaths occurring during heatwaves in Victoria:

A total of 374 excess deaths were associated with Melbourne’s heatwave in January 2009, where excess deaths are the number of deaths over what would normally be expected for the same period. A further 167 excess deaths occurred during the 2014 heatwave.³⁶

Other negative impacts of heatwaves include increased antisocial behaviour, alcohol consumption³⁷ and domestic violence.³⁸

Extreme heat can also have a substantial economic effect. As DELWP stated in its submission:

The current total socio-economic costs of extreme heat in Melbourne (including heatwaves and single hot days over 30°C) are estimated to be significant ... These costs include productivity losses to the economy from heatwaves in Melbourne of over \$50 million per year and wider costs to the community from extreme temperatures in the City of Melbourne (for the CBD only) including additional hospital visits and deaths of approximately \$80 million per year.³⁹

Plan Melbourne stated that, ‘Within the City of Melbourne alone, the urban heat-island effect is projected to result in health costs of \$280 million by 2051.’⁴⁰

Increasing Melbourne’s vegetation coverage could reduce temperatures, with ‘a 10% increase in tree canopy cover lowering temperatures up to 1.5°C, suggesting that shading, tree canopy and natural turf is by far the most effective cooling strategy for Australia’.⁴¹ A temperature reduction would in turn lead to reduced health impacts and related costs. DELWP suggested that ‘There would be an estimated 5 to 28 percent reduction in heat related mortality from doubling Melbourne’s vegetation coverage from 15 to 30 percent’.⁴²

³³ Planning Institute Australia (Vic), *Submission 244*, p. 3.

³⁴ Better Health Channel, *Survive the heat*, <<https://www.betterhealth.vic.gov.au/campaigns/survive-the-heat>> accessed 21 November 2021.

³⁵ Doctors for the Environment Australia, *Submission 165*, p. 6; Dr Jennie Mills, Doctors for the Environment, public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 44.

³⁶ Taylor, *Submission 151, attachment 1*, p. 26. (with sources)

³⁷ J. Lander, et al., *Extreme heat driven by the climate emergency: impacts on the health and wellbeing of public housing tenants in Mildura, Victoria*, report for Mallee Family Care, 2019, pp. 12–13.

³⁸ AECOM Australia Pty Ltd, *Economic Assessment of the Urban Heat Island Effect*, 2012, p. 20.

³⁹ Department of Environment, Land, Water and Planning, *Submission 254*, p. 17.

⁴⁰ Department of Environment, Land, Water and Planning, *Plan Melbourne 2017–2050*, p. 116.

⁴¹ Nursery & Garden Industry Victoria, *Submission 223*, p. 4.

⁴² Department of Environment, Land, Water and Planning, *Submission 254*, p. 16.

Modelling by DELWP on the potential benefit of expanding the urban forest estimated the potential savings from the additional cooling effect 'to be between ~\$530 million and ~\$1.1 billion per year (in present value terms) for the Melbourne Metropolitan region in 2051'.⁴³

FINDING 6: Environmental infrastructure in the form of street trees and vegetation reduces the urban heat island effect and helps reduce heat-related health problems.

The role of the urban tree canopy and options for increasing tree cover in Melbourne and regional centres are discussed further in Chapters 3, 4 and 8. The broader environmental benefits of environmental infrastructure are discussed in Chapter 3.

2.2.3 Active transport

Active transport refers to activities such as cycling or walking as a means of transport in place of driving or public transport.⁴⁴ Associate Professor Jenny Veitch, National Heart Foundation of Australia Future Leader Fellow, Institute for Physical Activity and Nutrition (IPAN), Deakin University, stated that:

Parks can also encourage people to use active travel such as walking and cycling to get to parks or as a thoroughfare when using active travel to reach other destinations. ... We also need to ensure that we engage with community to discuss issues around availability, accessibility, design and quality and install safe walking and cycling paths to support active travel and reduce car use.⁴⁵

Dr Jonathan Spear, Deputy Chief Executive and Chief Operating Officer of Infrastructure Victoria, said 'it is the connectivity of open spaces that actually makes them more valuable and usable to people—they can use them for active transport, they can use them for clear corridors through established urban areas.'⁴⁶ Dr Spear added that Infrastructure Victoria has:

identified a few opportunities, especially the opportunity to substitute motorised transport with active transport, with cycling, and that is both for Melbourne CBD but also into activity centres like Monash, for example, which is closely related to Gardiners Creek, and Box Hill as well. So what we have recommended is that—we cannot necessarily upgrade all the bike paths and connections immediately, so some prioritisation needs to be done and there should be prioritisation for safe, separated cycling corridors that connect people to those sorts of activity centres in the first place, so Melbourne CBD but also activity centres like Box Hill and Monash, for example, and similarly in regional cities.⁴⁷

⁴³ Ibid., p. 30.

⁴⁴ Dr Jonathan Spear, *Transcript of evidence*, p. 35.

⁴⁵ Associate Professor Jenny Veitch, *Transcript of evidence*, pp. 8–9.

⁴⁶ Dr Jonathan Spear, *Transcript of evidence*, p. 31.

⁴⁷ Ibid., p. 38.

Mr Andrew Mosley, Advocacy Manager Vic/Tas, Heart Foundation, highlighted some of the factors that can increase the use of active transport:

Short travel distances between homes and local destinations increases the likelihood of walking. We also know that good public transport networks also support physical activity, as most trips usually start and end with a walking trip. The presence of footpaths is important because it encourages transport and recreational walking across our life course.⁴⁸

A number of stakeholders referenced the link between environmental infrastructure and active transport in realising the concept of the 20-minute neighbourhood, which is 'where people can access most of their everyday needs within a 20-minute walk, cycle or local public transport trip'.⁴⁹

2.2.4 Walking

Dr Jennie Mills from Doctors for the Environment Australia described walking as 'by far the most popular non-organised physical activity'.⁵⁰ Dr Mills stated:

As doctors, we know that incidental walking is an important strategy for maintaining good health, and we try to encourage it. But, on the other hand, walking is not measured by the Victorian institute survey that looks at transport. Walking is neglected. It has a low status. It is kind of considered routine and it tends to be a little bit neglected in terms of funding. It is given a low priority and it tends to fall through the cracks, I think, a little bit, so there may be some merit in asking whether or not it could have dedicated funding or a governance component from that point of view.⁵¹

Mr Peter Hughes, Walking Club of Victoria, noted that walking has a number of benefits:

We argue that walking in general has three benefits: physical and health benefits; social cohesion and social capital ... I would also like to argue that many of these benefits defray at least some of the costs of provision. That is particularly evident, I would argue, in rural and regional areas.⁵²

Parks Victoria stated in its submission that 'Walking and cycling are the most popular forms of physical activity with walking having a significant growth and a 43 per cent participation rate'.⁵³

The submission from the Yarra Riverkeeper stated that the Government should provide greater support for walking as a form of recreation:

Government support for walking is focused on walking as a transport option rather than as healthy social experience. Currently there is no government strategy for walking as

⁴⁸ Mr Andrew Mosley, *Transcript of evidence*, p. 18.

⁴⁹ Department of Environment, Land, Water and Planning, *Plan Melbourne 2017-2050*, p. 10.

⁵⁰ Dr Jennie Mills, *Transcript of evidence*, p. 44.

⁵¹ *Ibid.*, pp. 44-5.

⁵² Mr Peter Hughes, Walking Club of Victoria, public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 34.

⁵³ Parks Victoria, *Submission 254F*, p. 11.

a recreation. Such a strategy is needed, and government needs to expand the remit of Walking Victoria to include all forms of walking, especially including walking for pleasure.⁵⁴

Stakeholders also noted that walking is a form of physical activity that remains available to many older people.⁵⁵ Mr Andrew Kelly, Yarra Riverkeeper from 2014 to 2021, stated that:

walking is one of the prime forms of recreation, particularly as the community ages. It is something that has a great deal of mental value, of wellbeing value, as well as having fitness value for older people, so I think it needs to be an investment.⁵⁶

Mr Peter Hughes from Walking Victoria noted that walking can also reduce loneliness in older people:

For older people walking and similar activities have the benefit of providing social cohesion and mitigation of loneliness, which is identified increasingly as a significant problem for older people, and I think lockdown particularly demonstrated that across a range of age groups.⁵⁷

Many stakeholders stated that improved walking tracks and footpaths are needed to encourage more people to walk. The joint submission from Bendigo and District Environment Council (BDEC), Northern Bendigo Landcare Group (NBLG), Wellsford Forest Conservation Alliance, Biolinks Alliance, and Ironbark Gully Friends stated that in response to a survey about improving local areas:

The most common suggestion was to provide more or improved footpaths and walking tracks, extensions to existing footpaths and tracks, or better-connected footpaths and tracks, thus improving access to public facilities and open spaces in the area.⁵⁸

The Walking Club of Victoria also recommended the creation of walking corridors to link parks and other facilities such as public transport:

We recommend the creation of walking corridors joining suburban areas and urban parks to encourage both recreational walkers and commuters to travel by foot. While such corridors could link urban parks, they could also, where appropriate, link transport hubs - bus, train and tram. Some people prefer to commute by walking rather than by bicycle because of the lesser need for changing facilities and a change of clothes. ...

Walking corridors should be well designed to be both visually appealing (both for walkers and local residents) with trees and shrubs, and surfaces which are suitable for walkers. ... The state government should develop, in consultation with local councils,

⁵⁴ Yarra Riverkeeper, *Submission 189*, p. 12.

⁵⁵ Australasian Alliance for Walking Activity Groups, *Submission 110*, received 26 September 2020, p. 7; Victoria Walks Inc., *Getting Victorians back on their feet: Investing in walking*, p. 2.

⁵⁶ Mr Andrew Kelly, Yarra Riverkeeper and Vice-President, Yarra Riverkeeper Association, public hearing, via videoconference, 20 April 2021, *Transcript of evidence*, p. 42.

⁵⁷ Mr Peter Hughes, *Transcript of evidence*, p. 34.

⁵⁸ Bendigo and District Environment Council, et al., *Submission 143*, received 28 September 2020, p. 3.

a set of guidelines and standards along with tied funding to enable the creation of such walking corridors. It should be noted that in some areas much of the space and infrastructure already exists.⁵⁹

FINDING 7: The provision of public open space that encourages walking can improve health and reduce the risk of a number of diseases.

FINDING 8: The provision of new walking corridors, and the expansion of existing corridors, has the potential to significantly increase rates of walking in urban areas for both recreation and commuting.

RECOMMENDATION 1: That the Victorian Government investigate all options for the identification and development of walking corridors.

2.2.5 Cycling

While walking is the most popular non-organised physical activity, surveys show that cycling is either second,⁶⁰ or third,⁶¹ in popularity. This section discusses cycling in urban environments, particularly the role of cycling paths. Mountain bike riding is discussed in Chapter 3.

Like other forms of active transport, cycling can achieve health benefits, especially when it replaces car travel. As noted above, it has been estimated that implementing changes to make Melbourne more conducive to cycling (as well as walking and public transport) could reduce the burden of disease by 19%.⁶²

Plan Melbourne 2017–2050 also notes that cycling is becoming a more popular way to commute to work:

Cycling is a growing means of transportation around inner Melbourne. Journeys to work by bicycle almost doubled between 2001 and 2011. This compares to an increase in journeys to work of 25 per cent across all modes. It should be noted that the increase in bicycle commuting started from a small base.⁶³

⁵⁹ Walking Club of Victoria, *Submission 38*, received 14 September 2020, p. 7.

⁶⁰ Banyule City Council, *Submission 72*, p. 2.

⁶¹ Doctors for the Environment Australia, *Submission 165*, p. 12.

⁶² Mr Andrew Mosley, *Transcript of evidence*, p. 17.

⁶³ Department of Environment, Land, Water and Planning, *Plan Melbourne 2017–2050*, p. 69. (with sources)

The COVID-19 pandemic has also seen an increase in the number of people commuting to work via bicycle: 'A Bicycle Network count of 8,800 riders on April 25 showed the number had increased by 270 per cent compared with November last year.'⁶⁴

Several stakeholders called for the creation of new cycling paths and the connection of existing paths to encourage more cycling. For example, Mr John Myers stated in his submission that 'Melbourne should have safe, separated and linked bicycle infrastructure. Currently our network is limited by its lack of connectivity and its safety.'⁶⁵

Darebin City Council stated that one of the goals of its "Streets for People" project is to 'Increase cycling confidence along the corridors by providing high-quality cycling infrastructure that is well connected, easily navigated with varying degrees of separation and safety from moving traffic.'⁶⁶

Separation of cyclists from motor vehicle traffic was highlighted as an important consideration in the provision of cycling paths by several stakeholders.⁶⁷ Doctors for the Environment Australia cited a poll run by VicHealth in which 'Two-thirds [of respondents] said that they would be more likely to use bikes for transport if bike lanes were separated from the road.'⁶⁸

Yarra Ranges Council stated in its submission that:

Community feedback showed that separated bike paths/lanes would help more people riding and reduce the frustration of cars and bikes mixing in unsafe ways, along with increasing the footpath network in places where they currently don't exist.⁶⁹

FINDING 9: Separation of cycling paths from motor vehicle traffic is an important factor in increasing the sense of safety for cyclists when using cycling paths. Increasing the connectivity of cycling paths also encourages cycling both for active transport and recreation.

The Committee notes that the 2021–22 Victorian Budget announced funding for 'A package of priority projects ... to promote Victoria's walking and cycling network safety and usage'.⁷⁰ The Budget also announced that 'Active Transport Victoria will

⁶⁴ Timna Jacks, 'Car parks out, footpaths and cycling lanes in as city prepares for post-COVID commuters', *The Age*, 7 May 2020, <<https://www.theage.com.au/national/victoria/car-parks-out-footpaths-and-cycling-lanes-in-as-city-prepares-for-post-covid-commuters-20200507-p54qrp.html>> accessed 19 October 2021.

⁶⁵ John Myers, *Submission 49*, received 19 September 2020, p. 1.

⁶⁶ Darebin City Council, *Submission 233*, received 5 October 2020, p. 15.

⁶⁷ See, for example, Institute for Physical Activity and Nutrition (IPAN), Deakin University, *Submission 178*, received 28 September 2020, p. 5; Blackburn Village Residents Group, *Submission 191*, received 28 September 2020, p. 3.

⁶⁸ Doctors for the Environment Australia, *Submission 165*, p. 13.

⁶⁹ Yarra Ranges Council, *Submission 195*, received 28 September 2020, p. 2.

⁷⁰ Department of Treasury and Finance, *Victorian Budget 2021/22: Creating Jobs, Caring for Victorians: Service Delivery: Budget Paper No. 3*, Melbourne, 2021, p. 116.

continue to plan and deliver active transport commitments across Victoria's walking and cycling network'.⁷¹

The Committee also notes the role of the Strategic Cycling Corridors (SCCs) in Victoria, which were first developed in 2015. The Victorian Department of Transport's *Strategic Cycling Corridor Network Overview* (December 2020) provides the following background on the SCCs:

SCCs are important routes for cycling for transport [commuter trips for work or education and shorter local trips] and link up important destinations including the Central City, National Employment and Innovations Clusters, Metropolitan Activity Centres and other destinations of metropolitan and regional significance. SCCs can be on and off road, on municipal and state roads and are designed to provide a safe, lower-stress cycling for transport experience.⁷²

The Department of Transport has also noted the potential for separation of cyclists from motorists through the SCC network:

To minimise traffic stress, protected infrastructure such as cycleways and cycle paths can be installed to separate cyclists from vehicles. Internationally, cities that have invested heavily in connected and fully protected cycling corridors have recorded the biggest safety improvements and boosts to cycling participation. Implementing the level of stress approach when investing in the SCC network will also improve the perceived and actual safety of cyclists.⁷³

The Committee is also mindful that municipal councils were actively consulted by the Department of Transport (along with other key stakeholders) over an 18-month period from 2018 to 2019 in the review of the original SCC network. Municipal councils were also engaged in the development of the *Victorian Cycling Strategy 2018–28*, which was released in December 2017,⁷⁴ and which also adopts a strategic approach to the installation of cycling infrastructure that increases the physical separation of cyclists from motor vehicles.⁷⁵

RECOMMENDATION 2: That the Victorian Government continue to work with local councils in Melbourne and regional centres to identify opportunities for increased separation and connectivity of cycling paths.

Many cycling paths are currently shared use walking and cycling paths. The Committee discusses the possibility of separating walking paths and cycling paths in Section 2.2.8.

⁷¹ Ibid.

⁷² Department of Transport, *Strategic Cycling Corridor Network Overview: December 2020*, 2020, p. 3.

⁷³ Ibid.

⁷⁴ Ibid., p. 4.

⁷⁵ Department of Economic Development, Jobs, Transport and Resources, *Victorian Cycling Strategy 2018–28: Increasing cycling for transport*, Melbourne, 2017, p. 19.

Mr Peter Hughes from the Walking Club of Victoria recommended an advertising campaign in relation to shared paths: ‘So we have suggested the creation of television campaigns to effectively educate both walkers and cyclists on how to cooperate more in spaces.’⁷⁶ This could include educating ‘cyclists of the need to use bells or calling out to alert walkers of their presence as often the fast approach of a bike is not heard by walkers.’⁷⁷

In its position statement on shared paths, Victoria Walks also recommended an education campaign:

The Victorian Government should fund an education and signage program to promote a positive culture of sharing space, emphasise shared paths are low speed and that cyclists are legally required to give way to walkers.⁷⁸

RECOMMENDATION 3: That the Victorian Government investigate ways of increasing cooperation between cyclists and walkers in the use of shared paths.

2.2.6 Sporting fields and active recreation

Organised sports play an important role in keeping Victorians active. Approximately half of all Victorians participate in organised sports at least once a week.⁷⁹

The City of Yarra stated in its submission that open space has benefits, including ‘Physical fitness by participating in organised sport.’⁸⁰ Similarly, Moorabool Shire Council referred in its submission to the many benefits of participation in sport and active recreation:

Participation in recreation activities (both active recreation and organised sport) has been linked to the prevention and treatment of physical and mental illnesses, and has a useful role in reducing anti-social behaviour.

...

Moorabool also recognises that sport and active recreation brings people together and builds community cohesion. It connects Victorians to their communities, healthcare, education, training and economic opportunities and that sport and active recreation make a significant contribution to Victoria’s liveability.⁸¹

⁷⁶ Mr Peter Hughes, *Transcript of evidence*, p. 35.

⁷⁷ Walking Club of Victoria, *Submission 38*, p. 6.

⁷⁸ Victoria Walks Inc., *Shared paths - finding solutions: Position statement and recommendations*, p. 4.

⁷⁹ Department of Health and Human Services, *Active Victoria: A strategic framework for sport and recreation in Victoria 2017 - 2021*, Melbourne, 2017, p. 14.

⁸⁰ City of Yarra, *Submission 179*, received 28 September 2020, p. 2.

⁸¹ Moorabool Shire Council, *Submission 185*, pp. 1–2.

Yarra Ranges Council stated:

While there has been a shifting focus from structured sport to unstructured activity in Australia, adequate provision of space for structured sport is equally important.⁸²

Brimbank City Council also referred to the role of new and updated sporting facilities in keeping people active and providing social connections.⁸³

The Goulburn Broken Greenhouse Alliance and Central Victorian Greenhouse Alliance also highlighted the importance of sporting facilities for rural communities: 'Sporting teams and activity are often the heart of rural communities through direct participation, support groups and fan interest. Sports infrastructure and fields are essential foundations.'⁸⁴

Growing populations create further demand for sporting facilities and place pressure on existing sporting facilities. As Brimbank City Council stated in its submission, 'The growing population is only going to increase demand further and place additional use on existing sportsgrounds, which will increase maintenance costs further and [make] preservation of this environmental infrastructure even more difficult.'⁸⁵

Similarly, Banyule City Council also referred to the challenge of funding the expansion of sporting facilities:

Although sport fields across Banyule are well distributed, there is a need to ensure there is capacity in these facilities to work harder in the coming years to accommodate future additional use. Securing funding to facilitate this outcome is a common challenge for local governments across metropolitan Melbourne.⁸⁶

Manningham City Council is exploring options for increasing the capacity of existing facilities:

Manningham will be exploring increasing the capacity of existing facilities. This will be addressed through reviewing maintenance practices and plant, with the intention of increasing maintenance to subsequently increase a sports field's carrying capacity. Ultimately by increasing the capacity of a sports field, it provides a cost effective solution to meet future facility requirements without actually building new facilities. Furthermore, increasing availability of sports fields through allowing night matches is also being explored, along with the potential for additional synthetic surfaces to withstand increased use.⁸⁷

The Committee also received evidence suggesting that the potential benefits of using synthetic turf to increase playing capacity on sporting fields should be weighed against the potential for negative impacts on local communities. Although synthetic surfaces

⁸² Yarra Ranges Council, *Submission 195*, p. 2.

⁸³ Brimbank City Council, *Submission 103*, received 25 September 2020, pp. 3, 7.

⁸⁴ Goulburn Broken Greenhouse Alliance and Central Victorian Greenhouse Alliance, *Submission 229*, p. 3.

⁸⁵ Brimbank City Council, *Submission 103*, p. 3.

⁸⁶ Banyule City Council, *Submission 72*, p. 6.

⁸⁷ Manningham City Council, *Submission 120*, p. 2.

can increase capacity of sporting facilities, other stakeholders raised concerns about the use of synthetic turf. The community group Keep Hosken Reserve Accessible For All stated that synthetic turf and fenced-off sports grounds 'result in reduced access for multiple purposes and arguably a loss of local amenity including changing the local environment.'⁸⁸

Mr Warran Hocking, who provided a submission to the Inquiry as a private individual, also stated that synthetic turf limited the public's ability to use sporting grounds for other activities:

Synthetic turf has limited uses for the public compared to grass. Due to overheating of the surface in warm weather, hardness [of] the surface and many restrictions that is [sic] placed on its use. Synthetic turf is one dimensional in its use. For example the general public cannot picnic, roll around, rough play or wrestle with kids, walk [their] dogs, eat lunch, play contact sports or fly a kite on synthetic turf.⁸⁹

Ms Jane Holroyd, who also provided a submission to the Inquiry as a private individual, stated that synthetic turf can contribute to the urban heat island effect (which is discussed further in Section 2.2.2):

Increasing conversion of cool, shared grass spaces to hot synthetic turf suitable and appealing only for sport ... [is] particularly problematic in urban areas, where demand for green open space is fiercer, and the urban heat island impact is greater.⁹⁰

A study by the NSW Department of Planning on synthetic turf found that:

Synthetic turf playing surfaces can generate pollution in the form of rubber crumb (i.e., the recycled rubber infill commonly used for the base of synthetic turf fields) and microplastics from synthetic turf fibres. These pollutants can be ingested by players and run off into waterways and soils in the surrounding area.⁹¹

A Swedish study similarly found that 'Microplastics from artificial turfs have been recognized as the second most important source of microplastic emission in Sweden.'⁹² The Port Phillip EcoCentre and Port Phillip Baykeeper, Mr Neil Blake, have also recently highlighted the risk of synthetic grass tufts entering the Darebin Creek and Port Phillip Bay after they were blown from an oval in Melbourne's north.⁹³

Concerns were also raised about the waste created when synthetic turf needs to be replaced.⁹⁴

⁸⁸ Keep Hosken Reserve Accessible for All, *Submission 249*, received 29 October 2020, p. 2.

⁸⁹ Warran Hocking, *Submission 246*, received 20 October 2020, p. 1.

⁹⁰ Jane Holroyd, *Submission 253*, received 30 October 2020, p. 5.

⁹¹ Ethos Urban and Otium Planning Group, *Synthetic Turf Study in Public Open Space*, report for NSW Department of Planning, Industry and Environment, 2021, p. 11.

⁹² Ran Li, *Tracking Microplastics from Artificial Football Fields to Stormwater Systems: Master's Thesis*, Department of Physical Geography, Stockholm University, 2019, abstract.

⁹³ Rachel Eddie, 'We're running out of space': Turf wars heat up over synthetic grass', *The Age*, 18 April 2021, <<https://www.theage.com.au/national/victoria/we-re-running-out-of-space-turf-wars-heat-up-over-synthetic-grass-20210413-p57itd.html>> accessed 21 November 2021.

⁹⁴ Hocking, *Submission 246*, p. 2; Ethos Urban and Group, *Synthetic Turf Study in Public Open Space*, p. 41.

Ms Kaye Oddie, a resident of North Melbourne, suggested that some sporting facilities could be built on former industrial or building sites rather than on parkland.⁹⁵

The Committee also notes that the addition of lighting can significantly increase the usage of local sports infrastructure, not only by local sporting clubs but also by individuals who may wish to use such areas for activities such as walking and jogging at night. As Victoria Walks has noted, lighting ‘has a significant impact on orientation, security and visual quality at night’ and good lighting ‘is essential along pedestrian routes to strengthen the sense of security.’⁹⁶ The importance of lighting for sporting facilities is recognised by the 2021–22 Local Sports Infrastructure Fund (a state-wide competitive Victorian Government program), which includes community sports lighting among its five funding streams.⁹⁷

FINDING 10: Options for meeting the future demand for sporting facilities, particularly in more densely populated areas, include working to increase the capacity of existing sports fields and the potential use of former industrial and building sites.

FINDING 11: Capacity increases are often delivered by synthetic surfacing and lighting. However, the full environmental impact of those options is not necessarily well understood.

RECOMMENDATION 4: That the Victorian Government:

- a. investigate the environmental impacts, as well as cost-effective mitigation strategies, associated with the large-scale installation of synthetic surfaces in coming years; and
- b. undertake research to quantify the extent to which combining synthetic turf installation with lighting in and around community sporting clubs will increase opportunities for both active and passive recreation.

2.2.7 Passive and unstructured recreation

Walking, bird watching, nature study, swimming, playing and that great Ozzie [Australian] pastime - “mucking round” - are all part of the passive recreation palette.⁹⁸

The term passive or unstructured recreation was generally used by stakeholders to refer to all activities other than organised sporting activities. This could include walking, running or cycling, picnicking or simply sitting in a park.⁹⁹

⁹⁵ Kay Oddie, *Submission 26*, received 2 September 2020, pp. 2–3.

⁹⁶ Victoria Walks Inc., *Pedestrian Infrastructure*, <https://www.victoriawalks.org.au/pedestrian_infrastructure> accessed 21 November 2021.

⁹⁷ See Victorian Government, *Local Sports Infrastructure Fund*, <<https://sport.vic.gov.au/grants-and-funding/our-grants/local-sports-infrastructure-fund>> accessed 21 November 2021.

⁹⁸ Bendigo and District Environment Council, et al., *Submission 143*, p. 3.

⁹⁹ See, for example, Ms Marianne Richards, President, Town and Country Planning Association, public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 33; Yarra Riverkeeper, *Submission 189*, p. 12.

In its submission, Banyule City Council stated that more people participate in non-organised physical activities than in organised sport:

Whilst fully recognising the [importance] of organised sports, the number of those participating in non-organised/unstructured sports is in the majority with this trend expected to continue. This can be demonstrated by the VicHealth Indicators Survey 2015 attached. The estimates for Banyule show that 26.1% of the community participates in organised physical activity compared to 74.2% of the community participating in non-organised physical activity (such as walking, cycling jogging etc.).¹⁰⁰

The Yarra Riverkeeper also discussed the environmental benefits of passive recreation:

Reflective recreation is, often inappropriately, called passive recreation. It is one of the most valuable ways our parklands are experienced. More people walk and ride than [play] any other sport. It is low cost and doesn't damage the environment [in] such a way as to reduce other environmental services provided by parklands such as cooling.¹⁰¹

Parks and Leisure Australia noted that one of the benefits of unstructured recreation is its flexibility, which partly accounts for its rise in popularity. The group referred to the 'increased/ing community emphasis on health and wellbeing, particularly through walking and cycling and other activities that can be undertaken wherever and whenever people have the time or the opportunity.'¹⁰²

Greater Dandenong City Council noted that another benefit of unstructured recreation is that it is financially accessible to more people in:

Suburbs and regional areas with lower socio-economic communities, such as most Greater Dandenong residents, the cost of paid physical activities, including sporting club or gym memberships is not an affordable option. This places greater importance on the need for quality public open space for free or low-cost activities or programs.¹⁰³

Banyule City Council noted that the unstructured nature of passive recreation makes it difficult to count the number of people using environmental infrastructure in this way:

Given the difficulty in determining the usage of passive environmental infrastructure compared to the usage of active sports infrastructure, it is problematic to demonstrate value for money and to justify State funding towards these types of projects (i.e. infrastructure that supports active recreation can be easily demonstrated via the change in club membership over time whereas the lack of data collected for passive recreation is limited and not regularly captured).¹⁰⁴

The unstructured nature of passive recreation can also mean that users do not have the same lobbying power as a sporting club. As Mr Andrew Kelly, Yarra Riverkeeper and Vice-President, Yarra Riverkeeper Association, stated:

¹⁰⁰ Banyule City Council, *Submission 72*, p. 7.

¹⁰¹ Yarra Riverkeeper, *Submission 189*, p. 12.

¹⁰² Parks and Leisure Australia (Vic/Tas Region), *Submission 188*, received 28 September 2020, p. 1.

¹⁰³ Greater Dandenong City Council, *Submission 148*, received 28 September 2020, p. 3.

¹⁰⁴ Banyule City Council, *Submission 72*, p. 7.

We have a lot of sporting bodies at official government levels with organised sports that are advocating for their sports, and of course they are entitled to advocate for what they are interested in. But I think walkers are comparatively distributed members of the community and do not necessarily have a voice that matches their numbers.¹⁰⁵

The Committee also received evidence from individuals who called on the Government to provide funding and policy support for passive recreation and non-organised sport.¹⁰⁶

The Friends of the Australian Botanic Gardens Shepparton also stated that environmental infrastructure should cater for both organised sports and passive recreation:

There is a need for different forms of infrastructure to cater for the varying strata of populations. For the young and active, sport is an important driver. ... in more recent times it has also been recognised that more passive recreation is required for the remainder of the community, and so the wider environment is being employed for its [sic] importance and ability to provide what the majority is seeking.¹⁰⁷

Mr Peter Hughes of the Walking Club of Victoria stated that while more spaces are needed for passive recreation, this need not result in the removal of land from organised sports:

I do not want to take land away from sporting uses, because I think sporting uses are very important, particularly for younger kids and teens developing, but I think what we were suggesting is we need to allocate more space which does not necessarily have to be of the same sort—for example, you do not have to have absolutely flat areas for passive use, you do not necessarily have to have it as well cleared; it could be around sporting areas. That should not be seen as a waste of space but as a valuable use of space. It might be more like ribbon space that joins sporting areas.¹⁰⁸

Brimbank City Council stated that it increasingly aims to create environmental infrastructure that caters for both sports and passive recreation: ‘The focus is on sporting reserves that also provide passive recreation through playgrounds, outdoor gym equipment, circuit paths and extensive tree planting.’¹⁰⁹ Mr Adrian Gray, Manager, Urban Design at Brimbank City Council, explained:

What we try to do these days is we want to really utilise the passive component of sporting parks, where we put in circuit paths, where we put in destinations for people, so it is integrated in there. We are doing that really well across the municipality, so that utilisation cannot just be about sports. Sports is really important for that activity for the local community, but if you look at the numbers—and we have done this anecdotally—the community visitation, say, at some of these parks where they play cricket in summer

¹⁰⁵ Mr Andrew Kelly, *Transcript of evidence*, p. 42.

¹⁰⁶ See for example, Holroyd, *Submission 253*, p. 4; Oddie, *Submission 26*, p. 3.

¹⁰⁷ Friends of the Australian Botanic Gardens Shepparton, *Submission 53*, received 21 September 2020, p. 3.

¹⁰⁸ Mr Peter Hughes, *Transcript of evidence*, p. 37.

¹⁰⁹ Brimbank City Council, *Submission 103*, p. 2.

and soccer in winter, if you look at the perimeter where we have a circuit path, where we have fitness stations, where we have barbecue facilities or shelters and all that kind of stuff that attracts the local community, the numbers of use for the passive components is huge.¹¹⁰

Banyule City Council explained that there are a number of elements that need to be included in a park to support passive recreation:

The need to continue to support non-organised activity related environmental infrastructure is crucial going forward including: BBQ's; bike racks; drinking fountains; exercise/fitness equipment; half courts; areas for festivals and events; garden beds; open grassed areas; lighting; paths; playgrounds; public toilets; rubbish bins; seating; shelters; skate/BMX facilities; climbing walls; trees; water features/water sensitive urban design etc.¹¹¹

The City of Whittlesea agreed that there was 'A need to address the lack of well-integrated unstructured and informal open space facilities in many of the larger sporting reserves so that they appeal to a broader cross-section of the community.'¹¹²

FINDING 12: Passive or unstructured recreation is an important use of environmental infrastructure that requires sufficient space and adequately funded facilities to achieve the best outcomes. There is significant potential to enhance the public open space around many sports grounds and facilities for the purposes of passive recreation.

2.2.8 Shared walking and cycling paths

Many stakeholders expressed concern regarding the shared use of paths and trails by cyclists and walkers in urban areas.¹¹³

The Walking Club of Victoria stated in its submission that:

For all of these differing groups of walkers the concept of “shared spaces” is problematic. Walkers, particularly children and older walkers are vulnerable to fast moving pushbikes in urban areas, and to motor bikes and mountain bikes in the bush.

While we accept that shared spaces in urban areas have their value, we argue that walking tracks and bike pathways are currently incompatible, and that more needs to be done to make shared spaces safer to encourage more people to use them.¹¹⁴

¹¹⁰ Mr Adrian Gray, Manager, Urban Design, Brimbank City Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 10.

¹¹¹ Banyule City Council, *Submission 72*, p. 7.

¹¹² City of Whittlesea, *Submission 91*, received 25 September 2020, p. 25.

¹¹³ See, for example, Ocean Grove Community Association Inc., *Submission 35*, received 11 September 2020, p. 25; Oddie, *Submission 26*, p. 2.

¹¹⁴ Walking Club of Victoria, *Submission 38*, p. 5.

The Walking Club of Victoria recommended that walking and cycling paths should either be completely separated or shared tracks should have separators:

In urban areas more attention needs to be paid to creating spaces where walkers and cyclists are separated. This can be done by having completely separated tracks for walkers and bikes, or by having various forms of separation, which might be physical (such as the use of barriers on curves or narrow sections, for example); or virtual (such as the use of different surface treatments, or colour schemes).¹¹⁵

Similar views were expressed by a number of individuals who provided submissions to the Inquiry.¹¹⁶

In its position statement on shared paths, Victoria Walks discussed the safety issues involved with shared walking and cycling paths:

Recent evidence suggests that shared paths can be particularly hazardous for cyclists. For example, a study of cycling crashes in ACT found 36% were on shared paths. However the safety issues for walkers on shared paths do not appear to have been assessed by quality research – a significant gap given that shared paths are common infrastructure.¹¹⁷

Victoria Walks stated that shared paths are ‘very much a second best option’ and recommended separate paths whenever possible.¹¹⁸

The Boroondara Bicycle Users Group (BBUG) was supportive of a shift away from the use of open space and parks as commuting routes for cyclists and called for an increase in the provision of on-road cycling routes:

It is the position of BBUG that future transport planning should not rely on using open spaces and parks for transport or commuting cycling routes. There are some instances where this is appropriate and should be done, but these should be the exception rather than the rule. It is important to note that this can only be achieved if high-quality, safe and direct on-road cycling routes are provided instead. It is not a solution to ban or limit people riding bikes from parks without providing viable alternatives.¹¹⁹

FINDING 13: There is demand within metropolitan Melbourne and regional centres for an increase in the provision of separated walking and cycling paths.

The Committee notes that the Victorian Department of Transport’s *Strategic Cycling Corridor Network Overview* (December 2020) (discussed above at 2.2.5) also recognises the importance of separation between cyclists and pedestrians in areas of

¹¹⁵ Ibid.

¹¹⁶ See, for example, Kate Hutchison, *Submission 8*, received 21 August 2020, p. 1; Wendy Millar, *Submission 9*, received 23 August 2020, p. 1.

¹¹⁷ Victoria Walks Inc., *Shared paths - finding solutions*, p. 1. (with sources)

¹¹⁸ Ibid., p. 3.

¹¹⁹ Boroondara Bicycle Users Group, *Submission 236*, received 6 October 2020, p. 7.

higher conflict such as close to activity areas.¹²⁰ Similarly, the *Victorian Cycling Strategy 2018–28* also aims to increase the separation between cyclists and pedestrians, where practicable.¹²¹

RECOMMENDATION 5: That the Victorian Government work with local councils to identify opportunities for increased separation of walking and cycling paths.

2.3 Biophilic design

Many stakeholders noted the idea that access to parks and open space can support both physical and mental health, a view that is gaining increasing support from the scientific community.

Biophilia is ‘a desire or tendency to commune with nature’,¹²² and has been described as ‘a key human need’.¹²³ Emeritus Professor Stephen R. Kellert has explained the significance of biophilic design: ‘Biophilic design seeks to connect our inherent need to affiliate with nature in the modern built environment.’¹²⁴

Dr Ken Winkel from Doctors for the Environment Australia explained the benefits of biophilic design in public health facilities such as hospitals:

The whole idea of biophilic public health is emerging ... this was an idea [biophilia] that was articulated particularly by the entomologist EO Wilson which reflected an intrinsic affinity or desire to be in and around nature and animals and plants by humans.¹²⁵

A study published in the journal *Science* in 1984 showed that ‘patients with bedside windows looking out on leafy trees healed, on average, a day faster, needed significantly less pain medication and had fewer postsurgical complications than patients who instead saw a brick wall.’¹²⁶

Dr Jennie Mills from Doctors for the Environment Australia agreed:

There is even quite a lot of evidence that just exposure to greenery—some hospital studies show patients recovering better, having a better outcome, a better prognosis, if they have a green outlook. It does not even have to be that active component; even if it is passive, it can have a beneficial effect. So that is quite impressive in its own way.

¹²⁰ Department of Transport, *Strategic Cycling Corridor Network Overview*, pp. 7–10.

¹²¹ Department of Economic Development, Jobs, Transport and Resources, *Victorian Cycling Strategy 2018–28*, pp. 6, 17.

¹²² Merriam-Webster, *biophilia*, <<https://www.merriam-webster.com/dictionary/biophilia>> accessed 11 November 2021.

¹²³ David Taylor, *Submission 151*, received 28 September 2020, p. 1.

¹²⁴ Stephen R. Kellert, ‘What is and is not biophilic design?’, *Metropolis*, 26 October 2015, <<https://metropolismag.com/projects/what-is-and-is-not-biophilic-design>> accessed 21 October 2021.

¹²⁵ Dr Ken Winkel, Doctors for the Environment, public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 50.

¹²⁶ Deborah Franklin, ‘How Hospital Gardens Help Patients Heal’, *Scientific American*, 1 March 2012, <<https://www.scientificamerican.com/article/nature-that-nurtures>> accessed 28 October 2021.

Dr Neil de Wet, Medical Officer of Health, Toi Te Ora Public Health, New Zealand, has also described the links between environmental infrastructure and health, stating that there is:

a growing body of literature about the health benefits of living life in close proximity to trees and other plants. The emerging list of likely human health benefits is extensive and includes lowering stress hormones, improved immunity, lower blood pressure, less depression and anxiety, less cardiovascular disease, and possibly lower cancer risk and longer life expectancy. More trees and nature in daily life may even appear to be a protective factor helping prevent some of the harmful health effects of socio-economic disadvantage, and so helping to reduce socio-economic inequalities in health and highlighting “nature’s role as a critical health amenity”.¹²⁷

Similarly, according to a recent article in the University of Southern California’s *Illumin Magazine*, biophilic design also improves physical and mental health in everyday life:

Not only do biophilic cities improve our environment, but they also improve human mental and physical health. Issues like obesity and ADHD can be linked to a lack of connection with the environment. While having more greenery in cities is not an instant cure to these health issues, it has the potential to significantly help. Children that go to school in more natural spaces perform better academically. Employees who have workplaces with views of nature and green spaces tend to experience less stress, higher productivity, and more happiness. We spend much of our lives at school and at work, so being able to improve how we work in these places through biophilic design makes it that much more relevant and important to our society.¹²⁸

The Committee notes that while biophilic public health relates primarily to the design of hospitals and health facilities, the broader concept of biophilic design and biophilic cities is gaining increasing support around the world and is particularly relevant to the terms of reference for the current Inquiry.

FINDING 14: The incorporation of biophilic design principles can improve physical and mental health outcomes.

RECOMMENDATION 6: That the Victorian Government conduct further investigation of biophilic design principles for new government projects and in planning provisions for new residential construction.

¹²⁷ Neil de Wet, ‘Biophilic Public Health: Re-imagining Public Health for the 21st Century’, *Toi Te Ora Public Health*, May 2018, <<https://www.readkong.com/page/biophilic-public-health-re-imagining-public-health-for-the-6583027>> accessed 28 October 2021. (with sources)

¹²⁸ Olivia Morse, ‘Biophilic Cities: Good for Both Environmental Health and Human Health’, *Illumin Magazine*, 21 April 2021, <<https://illuminate.usc.edu/biophilic-cities-good-for-both-environmental-health-and-human-health>> accessed 28 October 2021.

2.4 Mental health

Many stakeholders spoke of the link between environmental infrastructure and mental health.¹²⁹

There is also a wide range of academic literature about the benefits of environmental infrastructure for mental health.¹³⁰ For example, a 2015 report prepared for Parks Victoria by Deakin University stated:

The restorative effects of exposure to parks and green open spaces give rise to countless personal benefits, such as recovery among individuals experiencing clinical conditions associated with anxiety and depression; chronic stress such as PTSD; reduced attentional fatigue in employees; and attenuation of hyperactivity in younger populations. Additionally, benefits include evocation of positive emotions, reduction of sub-clinical depressive/anxious states and increased feeling of individual resilience.¹³¹

Doctors for the Environment Australia noted that having open spaces nearby could provide mental health benefits whether the spaces are used or not:

A Perth study also assessed the impact of the quality of open spaces on stress levels and found that residents who lived closer to higher quality green open spaces were more likely to record lower levels of stress than those who lived near those of lower quality, regardless of whether the facilities were used. Spending time in a green, or natural, environment, whether for passive recreation or active exercise, has been shown to assist with anxiety and depression, and also boost self-esteem.¹³²

Dr Meredith Dobbie from the Australian Institute of Landscape Architects stated:

The social and mental impact of inadequate access to green space on an individual can be devastating, and there is much empirical evidence to demonstrate the benefits of that easy access to urban nature.¹³³

Similarly, Zoos Victoria cited research in its submission about the benefits of nature for mental health:

¹²⁹ See, for example, Trevor Hodson, *Submission 12*, received 25 August 2020, p. 1; Walking Club of Victoria, *Submission 38*, p. 3; National Ageing Research Institute, *Submission 42*, received 16 September 2020, p. 4; Greater Shepparton City Council, *Submission 86*, received 25 September 2020, p. 1; Master Builders Victoria, *Submission 154*, received 28 September 2020, p. 1; Mr Matt Ruchel, Executive Director, Victorian National Parks Association, public hearing, via videoconference, 20 April 2021, *Transcript of evidence*, p. 11; Dr Jonathan Spear, *Transcript of evidence*, p. 31.

¹³⁰ See, for example, Rita Berto, 'The Role of Nature in Coping with Psycho-Physiological Stress: A Literature Review on Restorativeness', *Behav. Sci.*, vol. 4, 2014; Meredith A Repke, et al., 'How does nature exposure make people healthier? Evidence for the role of impulsivity and expanded space perception', *PLoS ONE*, vol. 13, no. 8, 2018; Hannah Cohen-Cline, Eric Turkheimer and Glen E Duncan, 'Access to green space, physical activity and mental health: a twin study', *J Epidemiol Community Health*, vol. 69, no. 6, 2015; Gregory N Bratman, J. Paul Hamilton and Gretchen C Daily, 'The impacts of nature experience on human cognitive function and mental health', *Ann. N.Y. Acad. Sci.*, vol. 1249, 2012; Roland Sturm, 'Proximity to Urban Parks and Mental Health', *J Ment Health Policy Econ*, vol. 17, no. 1, 2014.

¹³¹ Mardie Townsend, et al., *Healthy Parks Healthy People: the state of the evidence 2015*, report for Parks Victoria, 2015, pp. 25–26. (with sources)

¹³² Doctors for the Environment Australia, *Submission 165*, p. 5.

¹³³ Dr Meredith Dobbie, *Transcript of evidence*, p. 41.

There is strong evidence that spending time in nature also has psychologically restorative effects with positive outcomes for emotional wellbeing and mental health, aiding with recovery from physiological stress and mental fatigue. People who live in areas with greater prevalence of green space and feel comfortable accessing this greenspace, tend to have reduced levels of depression, anxiety and stress, and improved general health and wellbeing.¹³⁴

The Nursery & Garden Industry Victoria noted the improvements in mental health for those with greater access to environmental infrastructure: ‘It has been found that adults with 30% or more of their urban area covered in some form of tree canopy had 31% lower odds of developing psychological distress.’¹³⁵

The Australian Institute of Landscape Architects also spoke of the mental health benefits of nature:

There is much research to show that access to nature, whether it is *bona fide* natural areas, urban parks or even green views, improves psychological and physical health and social functioning. Increasing access to views and natural landscapes brings health benefits such as better cognitive functioning, greater self-discipline and impulse control, improved mental health overall, and greater resilience in response to stressful life events.¹³⁶

The Goulburn Broken Greenhouse Alliance and Central Victorian Greenhouse Alliance’s joint submission discussed the capacity of green space to reduce stress and depression:

Mental health: much of the evidence indicates that viewing or experiencing green space and natural environments is associated with reduced levels of perceived and physiological stress, positive mood, feelings and emotions, reduced symptoms of depression and anxiety.¹³⁷

Similarly, the Heart Foundation stated, ‘A European study found that people who spent more time visiting green public open space had better mental health and vitality. This relationship was consistent across four cities, and all levels of education and socio-economic status.’¹³⁸

Mr Thami Croeser, Research Officer at the Interdisciplinary Conservation Science Research Group (ICON), RMIT University, noted that parks with greater biodiversity provide more mental health benefits:

Studies have shown, for example, that when you are in a park that has a bit of layering—it has got understorey, there are flowers, there is a diversity of trees, you can hear things like birdsong—those parks are much better for our mental health than just a dead simple few trees, monoculture and grass. So that layering is useful. ... But a park that is

¹³⁴ Zoos Victoria, *Submission 68*, p. 3. (with sources)

¹³⁵ Nursery & Garden Industry Victoria, *Submission 223*, p. 5.

¹³⁶ Australian Institute of Landscape Architects (AILA) Victorian Chapter, *Submission 227*, p. 7.

¹³⁷ Goulburn Broken Greenhouse Alliance and Central Victorian Greenhouse Alliance, *Submission 229*, p. 2.

¹³⁸ Heart Foundation, *Submission 106*, received 25 September 2020, p. 2.

biodiverse is also just a greater attraction. Getting people out and using these spaces is part of the challenge, and if you can have a park where people are able to hear birds, see flowers, experience nature, that is an important part of the infrastructure delivery, we think.¹³⁹

Environmental infrastructure can also provide opportunities for people to socialise, which can have a positive impact on mental health. As Zoos Victoria noted in its submission, ‘public green spaces can provide well-being benefits through increased social cohesion and enhanced social connectedness that comes from spending time in nature with friends and family.’¹⁴⁰

Similarly, the Heart Foundation stated in its submission that ‘green space is an important determinant of health, not just because it enables physical activity but also because it has been shown to promote higher levels of mental wellbeing and social connectedness.’¹⁴¹

The City of Yarra also referred to the social connections that open space can facilitate, noting the ‘Social connectedness and sense of belonging to the community by meeting people in the nearby open space. This can include meeting neighbours informally in the open space or catching up with family and friends.’¹⁴²

FINDING 15: Environmental infrastructure, particularly in the form of well-designed public open space, can improve mental health by reducing stress and depression, and improving social connections.

2.5 Municipal health plans

Under s 26 of the *Public Health and Wellbeing Act 2008* (Vic), each local council must ‘prepare a municipal public health and wellbeing plan within the period of 12 months after each general election of the Council’.¹⁴³ The ‘next municipal public health and wellbeing plans are due in October 2021’.¹⁴⁴ The plan must include goals and strategies to improve health and wellbeing in the community,¹⁴⁵ and specify how the council will work with the Department of Health and other agencies to accomplish the goals.¹⁴⁶

¹³⁹ Mr Thami Croeser, Research Officer, ICON Science Research Group, RMIT University, public hearing, via videoconference, 30 March 2021, *Transcript of evidence*, p. 5.

¹⁴⁰ Zoos Victoria, *Submission 68*, p. 3.

¹⁴¹ Heart Foundation, *Submission 106*, p. 2.

¹⁴² City of Yarra, *Submission 179*, p. 18.

¹⁴³ *Public Health and Wellbeing Act 2008* (Vic) s 26(1).

¹⁴⁴ Department of Health and Human Services, *Municipal public health and wellbeing planning 2021–2025: Advice Note 1*, 2020, p. 1.

¹⁴⁵ *Public Health and Wellbeing Act 2008* (Vic) s 26(2)(b).

¹⁴⁶ *Public Health and Wellbeing Act 2008* (Vic) s 26(2)(d).

Mr Peter McKinnon, Manager, Climate Futures at Wyndham City Council, noted that municipal public health plans are increasingly aligned with efforts to address environmental infrastructure challenges.¹⁴⁷

Mr Matthew Kerlin, Coordinator of Strategy and Policy, Greater Bendigo City Council, noted the link between local council public health and wellbeing plans and the Victorian public health and wellbeing plan, and the increasing recognition of the role of environmental infrastructure in such plans:

Yes, I guess when we talk about the public health and wellbeing plan we look towards the state public health and wellbeing plan ... we really appreciate that connection, and we saw it really strongly during the pandemic and lockdowns last year—the importance of green spaces and our walking and cycling paths to the community and to the community’s mental wellbeing, and we are seeing that a lot through the community engagement that we have already undertaken. So we see that as being something that will be at the forefront of both our council plan and our public health and wellbeing plan.¹⁴⁸

Ms Bernadette Thomas, Manager, Sustainable Environment, City of Hume, stated that while the officers who develop the municipal health and wellbeing plan are mainly focused on health and community services, ‘they will consult widely across the council for input’, including in relation to environmental infrastructure.¹⁴⁹

Similarly, Ms Fleur Anderson, Acting Executive Officer, Sustainability Planning, City of Whittlesea, stated:

at the City of Whittlesea we have a strong health-nature connect in the municipal health and wellbeing plan. There is lots of evidence base and research, and we have all experienced it with of course COVID as well in terms of connectivity to environment and mental health and physical health and wellbeing as well—emotional health and wellbeing.¹⁵⁰

Mr Andrew Mosley, Advocacy Manager Vic/Tas at the Heart Foundation, stated that the Heart Foundation was working with councils as they prepared their health and wellbeing plans in 2021, and saw the new plans as ‘an opportunity to implement and talk through some of the principles of *Healthy Active by Design* [a website created by the Heart Foundation to highlight how ‘best-practice’ planning and design of urban areas can improve Australians’ heart health] and work with those councils to help that become embedded in their work going forward.’¹⁵¹

¹⁴⁷ Mr Peter McKinnon, Manager, Climate Futures, Wyndham City Council, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 21.

¹⁴⁸ Mr Matthew Kerlin, Coordinator of Strategy and Policy, Greater Bendigo City Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, p. 24.

¹⁴⁹ Ms Bernadette Thomas, Manager, Sustainable Environment, Hume City Council, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 20.

¹⁵⁰ Ms Fleur Anderson, Acting Executive Officer, Sustainability Planning, City of Whittlesea, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 20.

¹⁵¹ Mr Andrew Mosley, *Transcript of evidence*, p. 24.

The evidence provided to the Committee suggests that local governments typically do consider and include environmental infrastructure when creating their municipal health and wellbeing plans. However, given the importance of environmental infrastructure to health and wellbeing, the Committee believes that local governments should be required to consider environmental infrastructure under the *Public Health and Wellbeing Act 2008* (Vic).

RECOMMENDATION 7: That the Victorian Government consider requiring local governments to actively consider the contribution of environmental infrastructure when developing their municipal public health and wellbeing plans.

2.6 Economic benefits and tourism

2.6.1 Economic benefits

Many stakeholders referred to the economic benefits of environmental infrastructure.¹⁵² As DELWP noted in its submission, such benefits can include ‘tourism dollars spent, trips generated, economic contributions and employment’.¹⁵³

Tourism, which is a major source of environmental infrastructure-related revenue, is discussed in more detail in Section 2.6.2. As has also been noted in Section 2.2, increased environmental infrastructure leads to improved health outcomes, which in turn reduces the financial burden on the State’s health system.

The submission from DELWP outlined a range of industries which benefit from environmental infrastructure-related employment:

Environmental infrastructure creates and sustains jobs through a variety of industries, such as environment and land management, tourism, recreation, urban and landscape design, boating, services and facilities management and maintenance, and asset construction.¹⁵⁴

The link between environmental infrastructure and the state’s economy is also noted in the 2017 *Victorian Memorandum for Health and Nature*, which identifies tourism as one of Victoria’s most significant drivers of jobs and economic growth, particularly in regional areas.¹⁵⁵

¹⁵² See, for example, Billie Giles-Corti, et al., RMIT University’s Urban Futures Enabling Capability Development Platform, *Submission 181*, received 28 September 2020, p. 1; Golden Plains Shire Council, *Submission 250*, received 29 October 2020, p. 1; Parks Victoria, *Submission 254F*, p. 13; City of Casey, *Submission 213*, received 29 September 2020, p. 2; Mr Julian Lyngcoln, Deputy Secretary, Planning, Department of Environment, Land, Water and Planning, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 3.

¹⁵³ Department of Environment, Land, Water and Planning, *Submission 254*, p. 6.

¹⁵⁴ *Ibid.*, p. 18.

¹⁵⁵ Department of Environment, Land, Water and Planning, *Victorian Memorandum for Health and Nature*. See also Council Alliance for a Sustainable Built Environment (CASBE), *Submission 173*, p. 6.

DELWP's *Protecting Victoria's Environment – Biodiversity 2037* quantifies some of the economic benefits of the State's environmental infrastructure (see Figure 2.1).

Figure 2.1 Economic benefits of Victoria's parks

Tourism: \$1.4 billion in spending per year associated with visits by tourists to Victoria's parks, generating \$1 billion gross value added to the state economy and 14,000 jobs.

Health benefits: visits to parks are estimated to save Victoria between \$80 million and \$200 million per year from avoidance of disease, mortality and lost productivity.

Water purification: avoided costs estimated at \$33 million per year in metropolitan areas and \$50 million per year in non-metropolitan areas.

Flood protection: \$46 million per year from avoided infrastructure costs.

Coastal protection: \$24 million-\$56 million per year from avoided costs (e.g. from erosion and storms).

Carbon sequestration: Victoria's terrestrial parks store at least 270 million tonnes of carbon. Marine parks store at least 850,000 tonnes. In addition, Trust for Nature reserves and covenants are estimated to store a further 12 million tonnes of carbon.

Source: Department of Environment, Land, Water and Planning, *Protecting Victoria's Environment – Biodiversity 2037*, 2017, p. 5.

Notably, environmental infrastructure can also increase the financial value of residential property.¹⁵⁶ Parks and Leisure Australia cited research from Perth which 'found that urban green infrastructure, including trees, attractive street verges, parks, and reserves, increased median house prices by over \$16,000.'¹⁵⁷ Similarly, DELWP noted that:

Being close to appealing open spaces improves the liveability of an area which is generally reflected in higher property value. A 2017 study found that improving Sydney urban waterways increased the value of properties close to the waterways by four to six per cent.¹⁵⁸

Victoria's parks also 'contain over one million hectares of catchments which supply water used for drinking, food production and other industries. The value of water filtration services provided by parks is estimated at \$83 million per year.'¹⁵⁹

¹⁵⁶ Planning Institute Australia (Vic), *Submission 244*, p. 3; Mr Julian Lyngcoln, *Transcript of evidence*, p. 4.

¹⁵⁷ Parks and Leisure Australia (Vic/Tas Region), *Submission 188*, p. 4.

¹⁵⁸ Department of Environment, Land, Water and Planning, *Submission 254*, p. 18.

¹⁵⁹ Parks Victoria, *Valuing Victoria's Parks*, <<https://www.parks.vic.gov.au/about-us/valuing-victorias-parks>> accessed 29 October 2021.

The submission from Vic Catchments stated, 'A socio-economic study in the Wimmera-Southern Mallee indicated that the economic value of waterways in the region to be around \$30M per year with an additional \$5M in health benefits.'¹⁶⁰

Mr Julian Lyngcoln, Deputy Secretary, Planning, DELWP, noted that environmental infrastructure provides 'products for use in the economy, such as food, raw materials and pharmaceuticals.'¹⁶¹ The *Plan Melbourne 2017-2050 Metropolitan planning strategy* noted the importance of Melbourne's green wedges in food production: 'some of Victoria's most productive agricultural land is located within these areas.'¹⁶²

Other uses of environmental infrastructure can lead to cost savings. Appropriate environmental infrastructure can lead to greater 'active transport', meaning walking or cycling rather than driving.¹⁶³ Walking or cycling instead of driving can lead to individual savings, as well as savings on road infrastructure. DELWP stated in its submission that:

A connected open space network that allows for walking and cycling reduces congestion and spending on infrastructure and vehicle operating costs, while improving people's health. Victoria Walks estimated in 2018 that if 50 per cent of short (less than 900m) trips by vehicle were instead made by walking (such as may occur if we improved trail networks), Victoria would save approximately \$166.4 million a year.¹⁶⁴

Walking and cycling can also provide other economic benefits. As the Walking Club of Victoria noted, studies have shown that greater provision for walkers and cyclists can lead to increased retail spending along main shopping streets.¹⁶⁵

FINDING 16: Environmental infrastructure makes a significant contribution to the economy, through both direct and indirect economic benefits, cost savings and job creation.

2.6.2 Tourism

Many stakeholders noted that tourism is a major economic benefit of environmental infrastructure.¹⁶⁶ Tourism creates jobs, and also brings money into the local economy from visitor spending.¹⁶⁷ Environmental based tourism can include activities such as bush walking, camping, cycling, and fishing,¹⁶⁸ as well as visiting natural landmarks, such as the Great Ocean Road.

¹⁶⁰ Vic Catchments, *Submission 254A*, received 6 November 2020, p. 2.

¹⁶¹ Mr Julian Lyngcoln, *Transcript of evidence*, p. 4.

¹⁶² Department of Environment, Land, Water and Planning, *Plan Melbourne 2017-2050*, p. 40.

¹⁶³ Dr Jonathan Spear, *Transcript of evidence*, p. 35.

¹⁶⁴ Department of Environment, Land, Water and Planning, *Submission 254*, p. 18.

¹⁶⁵ Walking Club of Victoria, *Submission 38*, p. 4.

¹⁶⁶ See, for example, Greater Shepparton City Council, *Submission 86*, p. 1; Mr Julian Lyngcoln, *Transcript of evidence*, p. 4; City of Casey, *Submission 213*, p. 2; Council Alliance for a Sustainable Built Environment (CASBE), *Submission 173*, p. 6; Mr Peter Hughes, *Transcript of evidence*, pp. 34-35; Town and Country Planning Association, *Submission 160*, received 28 September 2020, p. 4.

¹⁶⁷ Mildura Rural City Council, *Submission 144*, received 28 September 2020, p. 3; Mr Julian Lyngcoln, *Transcript of evidence*, p. 5; Australian Trail Horse Riders Association, *Submission 88*, received 25 September 2020, p. 1.

¹⁶⁸ Mornington Peninsula Shire, *Submission 64*, received 22 September 2020, p. 5.

Mr Stuart Hughes from Parks Victoria stated that, ‘Modelling shows there is \$2.1 billion worth of tourism expenditure relevant to the Parks estate, which generates over 20,000 direct and indirect jobs.’¹⁶⁹

Similarly, the submission from the Victorian National Parks Association stated that:

Victoria’s parks and waterways attract 98.5 million visitors each year. Of these visits, 53.8 million are to parks and 44.6 million are to piers and jetties around the bays. Tourists spend \$2.1 billion per year associated with their visits to parks, and add 20,400 jobs to the State’s economy, including many regional jobs. Nature-based visitors spent an estimated \$11.5 billion in Victoria in 2016–2017.¹⁷⁰

The term blue infrastructure refers to water-based environmental infrastructure, including rivers, coasts and bays. ‘Bay tourism and associated businesses contribute more than \$320 million per year to the economy.’¹⁷¹ Tourism is the second biggest industry in the Great Ocean Road region between Torquay and Lorne, contributing \$381 million to the local economy in 2017.¹⁷²

Bush walking can contribute to local economies, particularly regional economies. The Walking Club of Victoria explained:

It is common at the end of walks for groups ranging in size from 15 to 30 to spend time in local coffee shops before driving home. In some instances walkers prefer to stay overnight in the area, and in the case of “base camps” this may involve a group of 15 to 30 people using accommodation and hospitality in the region for 3 to 5 nights.¹⁷³

Cycle tourism also contributes to the tourism economy, with cycle tourism in the north east region of Victoria estimated to generate \$130 million per annum.¹⁷⁴ The joint submission from the Amy Gillett Foundation and the Centre for Accident Research and Road Safety – Queensland stated that cyclist tourists are slow tourists who ‘spend more money in local communities compared to car-based tourists’, with a total spend of \$978 per cyclist compared to \$595 per car-based tourist, and a daily spend of \$163 per cyclist compared to \$107 per car-based tourist.¹⁷⁵ Similarly, the Ocean Grove Community Association cited a study by La Trobe University, which ‘found that visitors to the Murray to Mountain Rail Trail in North East Victoria spent on average \$258 dollars per day’.¹⁷⁶

¹⁶⁹ Mr Stuart Hughes, Director, Park Planning and Policy, Parks Victoria, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, p. 2. See also Mr Matt Ruchel, *Transcript of evidence*, p. 13.

¹⁷⁰ Victorian National Parks Association, *Submission 198*, received 28 September 2020, p. 26. (with sources)

¹⁷¹ *Ibid.*, p. 33.

¹⁷² Great Ocean Road Coast Committee, *Submission 93*, received 25 September 2020, p. 1.

¹⁷³ Walking Club of Victoria, *Submission 38*, p. 4.

¹⁷⁴ Amy Gillett Foundation and Centre for Accident Research and Road Safety – Queensland (CARRS-Q), *Submission 247*, received 22 October 2020, p. 3.

¹⁷⁵ *Ibid.*

¹⁷⁶ Ocean Grove Community Association Inc., *Submission 35*, p. 34.

Environmental infrastructure can also encourage tourism outside of parks, beaches and cycle paths. For example, the Victorian Government's metropolitan planning strategy, *Plan Melbourne 2017-2050*, notes that 'Agricultural areas are also important agrifood tourism destinations.'¹⁷⁷ Agrifood tourism is defined as 'the act of going to a region to visit a working farm or other farm or food-related business (including restaurants, markets, produce outlets and natural attractions)'.¹⁷⁸

Tourism, including environmental tourism, has declined sharply since the COVID-19 pandemic reached Australia, due to lockdowns and border closures. Visitor numbers and tourism expenditure in Victoria have fallen to approximately half of their pre-COVID-19 numbers.¹⁷⁹

Mr Peter Hughes from the Walking Club of Victoria stated that investments in environmental infrastructure, such as maintenance or additional walking tracks, could 'provide a useful way to rebuild the economy and have long-term benefit both in urban areas and I would argue probably more so in regional areas, which have been hit by a decrease in tourism over the COVID period'.¹⁸⁰

Mr Stuart Hughes from Parks Victoria stated that:

Parks Victoria has got a record program of initiatives to deliver in the post-COVID environment, in a mode to make sure that we are getting people into nature, and we are making sure that the nature-based tourism sector, as well as the parks and the facilities that people enjoy, are only stronger, enhanced and have a great future.¹⁸¹

The submission from Parks Victoria also emphasised the role of public open space in providing support for interstate tourism and the creation of jobs as the economy emerges from the COVID-19 pandemic.¹⁸²

FINDING 17: Victoria's environmental infrastructure makes a vital contribution to the State's tourism economy and will be central to the State's economic recovery from the COVID-19 pandemic.

¹⁷⁷ Department of Environment, Land, Water and Planning, *Plan Melbourne 2017-2050*, p. 40.

¹⁷⁸ Regional Institute Australia, *Drivers of regional agritourism and food tourism in Australia*, <<http://inform.regionalaustralia.org.au/industry/agriculture-forestry-and-fisheries/item/drivers-of-regional-agritourism-and-food-tourism-in-australia>> accessed 29 October 2021.

¹⁷⁹ Department of Jobs, Precincts and Regions, *Coronavirus (COVID-19) impact on Victoria's Visitor Economy*, report prepared by Tourism, Events and Visitor Economy (TEVE) Research Unit, 2021; Kimberley Price, 'Regional Victorian tourism operators call for clear advice to build traveler confidence', *ABC News*, 19 September 2021, <<https://www.abc.net.au/news/2021-09-19/tourism-bounce-back-urges-state-government-clarity/100470314>> accessed 29 October 2021; Legislative Council Economy and Infrastructure Committee, *Inquiry into the impact of the COVID-19 pandemic on the tourism and events sectors*, Parliament of Victoria, Melbourne, 2021.

¹⁸⁰ Mr Peter Hughes, *Transcript of evidence*, p. 34. See also Walking Club of Victoria, *Submission 38*, pp. 5-8.

¹⁸¹ Mr Stuart Hughes, *Transcript of evidence*, p. 4.

¹⁸² Parks Victoria, *Submission 254F*, p. 16.

2.6.3 Environmental accounting

As discussed in this chapter, not all benefits of environmental infrastructure provide a direct economic return. However, this does not mean that environmental infrastructure does not provide a return on investment. As DELWP explained in its submission:

Making the case for investment in environmental infrastructure requires decision makers to appreciate the full range of benefits it provides. This is challenging because it requires the quantification and valuation of public good benefits that are hard to measure. As a result, environmental infrastructure can be seen purely as a cost rather than an infrastructure investment that delivers a return. This can lead to under investment in natural capital maintenance and restoration, lower levels of environmental goods and service production and ultimately sub-optimal levels of societal health and wellbeing and increased financial costs to the economy.¹⁸³

Mr Andrew Kelly, Yarra Riverkeeper from 2014 to 2021, agreed:

I think we need to reassess how we put the environment in our accounting. We need proper inventory and we need a proper way of managing maintenance costs, because I think, again, green infrastructure is different from hard infrastructure and we really need to adapt our accounting system so that we adequately value those and value their maintenance and expanding value over time, rather than a discounted value over time.¹⁸⁴

Similarly, the Metropolitan Development Advisory Panel stated that:

Metrics need to go beyond simply an area of open space per person. The relationship needs to consider issues such as quality, accessibility, fragmentation and diversity of infrastructure available to a community, and the link between environmental infrastructure, health and wellbeing. We suggest that developing new measures around access and intensity of use and educational values and would also be helpful.¹⁸⁵

Other stakeholders also noted that environmental infrastructure was rarely assessed or measured for its long-term benefits.¹⁸⁶

A number of stakeholders referred to the concept of ‘environmental accounting’ (also referred to as ‘environmental-economic accounting’) as a better measure of the benefits of environmental infrastructure.¹⁸⁷ Environmental accounting can be defined as ‘an integrating framework to report on the inventory of environmental assets and the services they provide in our society and economy over time, along with transactions involving spending on the environment.’¹⁸⁸

¹⁸³ Department of Environment, Land, Water and Planning, *Submission 254*, p. 18. (with sources)

¹⁸⁴ Mr Andrew Kelly, *Transcript of evidence*, p. 41.

¹⁸⁵ Metropolitan Development Advisory Panel (MDAP), *Submission 255*, received 13 November 2020, p. 2.

¹⁸⁶ Ms Robyn Mitchell, Coordinator, Open Space and Strategic Projects, Banyule Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 11; Dr John Tower, Australian and New Zealand Association for Leisure Studies (ANZALS), public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, pp. 11–12; Dr Jonathan Spear, *Transcript of evidence*, pp. 40–41.

¹⁸⁷ See, for example, Yarra Riverkeeper, *Submission 189*, p. 4; Mr Stuart Hughes, *Transcript of evidence*, p. 4.

¹⁸⁸ Department of Environment, Land, Water and Planning, *Accounting for the Environment*, 2020, <<https://www.environment.vic.gov.au/accounting-for-the-environment>> accessed 29 October 2021.

The United Nations System of Environmental-Economic Accounting (SEEA) provides 'a framework for organizing and presenting statistics on the environment and its relationship with the economy.'¹⁸⁹ DELWP stated in its submission that it is:

developing an urban natural capital account for Melbourne using the UN System of Environmental-Economic Accounting framework to compile and report information on the status and value of environmental infrastructure/natural capital within the city/State.¹⁹⁰

Similarly, the Parks Victoria draft Land Management Strategy – Outcomes Reporting Framework proposes as one of its outcome measures 'Capacity to measure environmental accounts consistent with the System of Environmental Economic Accounting (SEEA) principles.'¹⁹¹

DELWP has also set a 2022 target for the adoption of environmental-economic accounting by all environment portfolio agencies and for the increased uptake by businesses.¹⁹² The integration of the SEEA into reporting across the whole-of-government, and into decision making and evaluation of social, economic and environmental outcomes and trade-offs is a longer term goal. (SEEA was launched by the United Nations as a new global environmental accounting system in 2012).¹⁹³

Mr Stuart Hughes, Director, Park Planning and Policy, Parks Victoria, informed the Committee about *Valuing Victoria's Parks*, a joint project between Parks Victoria and DELWP in 2015, which used:

an environmental accounting framework to calculate, model the benefits that come from everything that is the parks and reserves. This spans everything from the role in water purification and water supply to Melbourne and the value of ecosystem services for the privileged position Melbourne has got about the close catchments, all the way through to what amenity value there is in people living around and near parks and open space for their residential property values. The report also then goes into nature-based tourism jobs outcomes, as I said at the outset. That report, those calculations, go to everything like carbon storage, flood mitigation, pollination and coastal protection, so a very comprehensive framework that government can continue to apply in understanding and generating benefits.¹⁹⁴

FINDING 18: Environmental accounting can provide important insights into the economic value of a wide range of environmental infrastructure that may be otherwise difficult to quantify.

¹⁸⁹ UN System of Environmental Economic Accounting, *Frequently asked questions*, <<https://seea.un.org/content/frequently-asked-questions>> accessed 29 October 2021.

¹⁹⁰ Department of Environment, Land, Water and Planning, *Submission 254*, p. 19. (with sources)

¹⁹¹ Parks Victoria, *Land Management Strategy Outcomes Reporting Framework: DRAFT - Sept 2021*, Melbourne, 2021, p. 9.

¹⁹² Department of Environment, Land, Water and Planning, *Protecting Victoria's Environment - Biodiversity 2037*, 2017, p. 15.

¹⁹³ *Ibid.*, pp. 30, 58.

¹⁹⁴ Mr Stuart Hughes, *Transcript of evidence*, pp. 4-5.

3 Environmental benefits

3.1 Introduction

There was near universal acknowledgement among stakeholders regarding the environmental benefits of public open space and restricted public land across Melbourne, peri-urban and regional centres.

As the Department of Environment, Land, Water and Planning (DELWP) stated in its submission:

the long-term health of the economy, as well as the welfare of the community, is inextricably linked to the health of the environment. Environmental infrastructure has unique intrinsic value but also provides goods and services that are essential to human health and well-being ... as well as providing products for use in the economy (such as food, raw materials and pharmaceuticals).¹

As illustrated in Figure 1.2 (Chapter 1), the benefits of environmental infrastructure include:

- increased carbon sequestration (vital for climate change mitigation)
- reduced wind speeds
- improved air quality
- less flooding, reduced stormwater flows and less pollution to waterways
- more habitat and greater biodiversity
- reduced urban temperatures (both surface and ambient).²

Figure 1.2 also illustrates the close interrelationships between these benefits and the economic, social and health benefits of environmental infrastructure.

This chapter focuses on categories of public open space and restricted public land that are key to the protection of the natural environment and its biodiversity. As outlined in Chapter 1, the Victorian Planning Authority has defined a wide range of public open space and restricted public land categories. Several of these categories are fundamental to the provision of ecosystem services through the contribution they make to the conservation of landscapes, ecosystems and wildlife. These include, but are not limited to, the categories of: conservation reserves (protected areas); natural and semi-natural open space; services and utilities reserves; and parks and gardens (which typically

¹ Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, pp. 14-15.

² *Ibid.*, p. 15.

retain less of their original vegetation and wildlife but can still offer potential for environmental restoration work, particularly through measures such as biolinks).³

The chapter also discusses: the potential role of community land trusts as a means of securing public land for conservation and recreation purposes; and Melbourne's urban tree canopy (the urban tree canopy in peri-urban Melbourne and regional centres is discussed in Chapter 8).

3.2 Ecosystem and landscape conservation

A central theme to emerge from the evidence provided to the Committee was the role of public open space and restricted public land in the conservation of ecosystems and landscapes across Melbourne and regional centres.

As DELWP's 2017 plan, *Protecting Victoria's Environment – Biodiversity 2037* (Biodiversity 2037), states:

The degraded health of Victoria's biodiversity is the result of many individual decisions and actions, or inactions, over two centuries. ... Even today, decision makers in government, business and land management too often fail to fully consider the impacts of their actions on biodiversity – and are not routinely required to do so.⁴

As DELWP stated in its submission, Biodiversity 2037 also explains how a healthy environment is fundamental to a healthy society and describes the vital health, economic and social benefits that biodiversity and ecosystems provide, including:

- underpinning the health and wellbeing of every Victorian;
- providing Traditional Owners and Aboriginal Victorians the opportunity to practice their culture and exercise their fundamental rights;
- providing life-sustaining services; and
- underpinning the resilience of key sectors of the economy through natural capital and ecosystem services.⁵

Biodiversity 2037 also sets out:

Victoria's shift in conservation planning and management towards considering whole ecosystems and landscapes (and the multiple species that make them up), rather than focussing on a species by species approach.⁶

Despite the impact of urbanisation on the landscape and ecosystems of Melbourne and regional areas, existing and future urban areas have a critical role to play in

³ Victorian Planning Authority, *Open Space Types and Categories*, <<https://vpa.vic.gov.au/wp-content/uploads/2017/06/Metropolitan-Open-Space-Strategy-Open-Space-Category-Definitions.pdf>> accessed 29 July 2021.

⁴ Department of Environment, Land, Water and Planning, *Protecting Victoria's Environment – Biodiversity 2037*, 2017, p. 10.

⁵ Department of Environment, Land, Water and Planning, *Submission 254*, p. 13.

⁶ *Ibid.*, p. 29.

the protection of Victoria's remaining biodiversity. As the Australian Conservation Foundation has recently noted:

While our national parks and wilderness areas are essential for protecting biodiversity, our cities and towns also provide critical habitat for threatened species. In fact, 25% of Australia's nationally listed threatened plants and 46% of threatened animals can be found in our urban areas. While many of these species also have habitat outside cities and towns, for 39 threatened species, these urban areas are the last remaining places in which they exist.⁷

RMIT's Centre for Urban Research outlined, in its submission, the importance of maintaining a network of open space to provide habitat for species and to compensate for the negative effects of urbanisation by supporting conservation and biodiversity.⁸

Similarly, the Victorian Commissioner for Environmental Sustainability, Dr Gillian Sparkes, stated in her submission that:

Victoria has the highest number of threatened species by subregion in Australia. Conserving habitats and connecting fragmented native vegetation to create nature corridors that allow species movement has been recognised in SoE [State of the Environment] reporting as helping to minimise the vulnerability of Victoria's threatened species. The provision of effective environmental infrastructure – both to offset the pressure of increasing population and to maximise the efforts of an engaged and concerned population – can assist in this conservation effort.⁹

DELWP also emphasised this point in its submission to the Inquiry:

In urban areas where only fragments of native vegetation and natural habitat remain, our parks, gardens, waterways and urban forests support our remnant biodiversity, particularly if we can keep fragments connected with biolinks and blue-green corridors.¹⁰

Similarly, Parks Victoria stated in its submission that the protection of urban biodiversity should be a central consideration:

when planning and managing open spaces in the city and regional growth areas. It is essential that open space can be well managed so it can adapt to and protect against the impacts of climate change through increased integrated water management, urban forest canopy and connectivity of habitat corridors and provision of sustainable built assets.¹¹

Dr Meredith Dobbie, Chair, Victorian Environment Committee, Australian Institute of Landscape Architects (AILA), identified the need for specific environmental infrastructure legislation in the protection of ecosystems within urban areas:

7 Australian Conservation Foundation, *The extinction crisis in Australia's cities and towns: How weak environment laws have let urban sprawl destroy the habitat of Australia's threatened species*, 2020, p. 2.

8 Centre for Urban Research, RMIT University, *Submission 60*, received 22 September 2020, p. 4.

9 Commissioner for Environmental Sustainability, *Submission 228*, received 10 October 2020, p. 9.

10 Department of Environment, Land, Water and Planning, *Submission 254*, p. 18.

11 Parks Victoria, *Submission 254F*, received 6 November 2020, p. 15.

We encourage an ecosystems management approach to urban planning and design, and landscape management. We believe that environmental infrastructure and green infrastructure need to be formally positioned in state policies and strategies, explicitly with ideally ecosystems services targets, which can then be evaluated and responded to post-occupancy assessment to see if in fact these targets are being reached, and if not, why not, and then future development can be improved as a consequence. We would need explicit environmental infrastructure, green infrastructure legislation, presumably through the planning scheme.¹²

As DELWP noted in its evidence to this Inquiry, new approaches to urban development will be fundamental to the accommodation of future population growth while improving ecosystem conservation in and around Victoria's major metropolitan centres.¹³

FINDING 19: Well planned and managed environmental infrastructure across Melbourne and regional centres will have a vital role to play in meeting future environmental challenges, including threats to biodiversity and the impacts of climate change.

The Committee notes that while Biodiversity 2037 sets state-wide targets, and contributing targets, aimed at protecting Victoria's biodiversity, these do not have the status of legislation. The Government may wish to consider the targets set out in Biodiversity 2037 as the basis for legislating an ecosystems management approach within the State's urban planning, design and landscape management frameworks.

RECOMMENDATION 8: That the Victorian Government investigate environmental infrastructure measures that consider an ecosystems management approach, including ecosystems services targets, and measures to mitigate habitat loss and preserve biodiversity within Victoria's urban planning, design and landscape management frameworks.

3.2.1 The role of Community Land Trusts

A Community Land Trust (CLT) (also known as a Community-owned Land Trust) is a not-for-profit legal entity that enables shared ownership of property. CLTs have become increasingly common in the United States and the United Kingdom as a means of providing affordable housing but are also used for conservation, recreation and agriculture. They also enable community development through community-based, accountable governance and membership.¹⁴

¹² Dr Meredith Dobbie, Chair, AILA Victorian Environment Committee, Australian Institute of Landscape Architects (AILA) Victorian Chapter, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, pp. 40–41.

¹³ See, for example, Department of Environment, Land, Water and Planning, *Submission 254*, p. 20.

¹⁴ Australian Housing and Urban Research Institute (AHURI), *What is a Community Land Trust?*, 2018, <<https://www.ahuri.edu.au/research/brief/what-community-land-trust>> accessed 25 November 2021; Gary Flomenhoft, *Community land trusts in Australia*, 2016, <https://communitylandtrust.com.au/wp-content/uploads/2016/10/community_land_trusts_in_australia_2009_uws.pdf> accessed 18 August 2021.

The Surf Coast Energy Group (SCEG) suggested in its submission that the Government should consider the introduction of measures aimed at improving urban conservation through support for CLTs.¹⁵

SCEG noted in its submission that:

There are many instances where communities would relish the opportunity to play a much greater role in the custodianship of nature in their collective back yard. For State Government the time has come to tap into that untapped enthusiasm.¹⁶

SCEG cited its conservation work in relation to Spring Creek valley, located in Torquay on the Surf Coast, as a case study and possible model for other communities:

The idea in a nutshell is to strive for greater ecosystem functionality across 700 hectares of the Spring Creek valley, and at the same time enable the community to collectively purchase land as part of a Community-owned Land Trust. Ownership brings new energy and the collective enthusiasm of an entire community to the table.¹⁷

SCEG outlined some of the ways in which the Victorian Government could work with communities to support their use of the CLT model as follows:

Whilst the process for us is legally complex and slow, the process could be expedited if State Government considered ways in which it could establish Community Land Bank and Community Land Trust templates to help communities work through legal, financial and governance aspects associated with Community Land Trusts.¹⁸

The Committee considers that the CLT model may have potential as both a land conservation tool and as a way of increasing the access of local communities to parks and open space. While the proposal by SCEG relates to rural land in the vicinity of a major regional centre (i.e. Geelong), the Committee considers that it may also be applicable in Melbourne's growth area municipalities. The Committee notes that a major advantage of the CLT model is its potential to maximise community engagement in the preservation and management of environmental infrastructure, while also addressing the problem of funding shortfalls leading to delays in the purchase of land for conservation purposes by councils.

FINDING 20: The Community Land Trust model merits further investigation to determine its potential as a land conservation tool and as a way of increasing the access of local communities to parks and open space.

¹⁵ Surf Coast Energy Group, *Submission 59*, received 21 September 2020, p. 6.

¹⁶ *Ibid.*, p. 4.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

3.3 Wildlife protection

Ms Lisa Palma, Chief Executive Officer, Wildlife Victoria, noted that growing human populations have direct impacts on wildlife and that balancing the needs of the two requires active management 'both at the proactive and strategic end and at the reactive end once larger populations of humans are in place'.¹⁹

Ms Palma informed the Committee that, as a wildlife emergency response rescue service, Wildlife Victoria is:

in a really unique position to be able to see the direct correlation between growing human populations and the detrimental impacts on our wildlife and its habitat. In considering the amenity of human populations it is important to understand and appreciate that wildlife play an important role in their contribution to ecological balance, so their loss or substantial reduction can have quite a significant detrimental flow-on effect on the ecosystem and hence the overall living conditions of growing human populations. We believe there is scope and opportunity for wildlife to live in harmony with growing human populations and the focus should be on such versus eradicating or killing indigenous wildlife populations to make way for humans.²⁰

Similarly, Friends of Bats & Bushcare, which carries out conservation work for the grey-headed flying fox colony and other wildlife at Yarra Bend Park in Kew/Fairfield, stated in its submission that Melbourne's growing population:

combined with the increased urbanisation of wildlife (as our environment degrades) places greater pressures on all even as small areas of green space and conservation zones become more valuable.²¹

3.3.1 The impact of domestic pets

The Committee received evidence that the rapid population growth that Melbourne has experienced in recent years has also resulted in a significant increase in the number of domestic animals. For example, Mr Jayden Mizzi, Team Leader, Growth and Investment Strategic Planning, City of Casey, stated at a public hearing that the local government area (LGA) had:

recorded an average of 100 new dog registrations each and every week over the last financial year, the 2019–20 financial year, which has important implications on the provision of parkland and in particular the provision of dog-friendly open space.²²

Ms Palma outlined the impact of the growing population of domestic pets in Victoria as follows:

¹⁹ Ms Lisa Palma, Chief Executive Officer, Wildlife Victoria, public hearing, via videoconference, 20 April 2021, *Transcript of evidence*, p. 33.

²⁰ *Ibid.*, p. 34.

²¹ Friends of Bats and Bushcare Inc., *Submission 7*, received 19 August 2020, p. 2.

²² Mr Jayden Mizzi, Team Leader, Growth and Investment Strategic Planning, City of Casey, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 5.

With a growing human population, we also anticipate a growing number of domestic pets as well, and attacks by domestic pets on native animals are having a very, very serious impact. From 2011 to the end of March this year, Wildlife Victoria had 9,211 native animals across multiple species reported into our emergency response service by the Victorian public as injured due to cat attack. For the same period 7,709 native animals were reported into our emergency service by the Victorian public as injured due to dog attack, and these are across multiple species. The dog attacks encompassed nearly 400 koalas and nearly 50 grey-headed flying foxes, which are a threatened species.²³

Ms Palma suggested in her view that in the majority of cases, these attacks resulted in the death or euthanasia of the injured native animal and that a significant number of pouch young were also left orphaned.²⁴ Wildlife Victoria also stated in its submission that because most attacks are not reported (either because they have not been witnessed, or the animal was already dead, or the dog owner chose not to seek help for the injured animal), the true scale of attacks by domestic dogs on wildlife is unknown.²⁵

Friends of Bats & Bushcare stated in its submission that:

Dogs off-lead and wildlife don't mix. Dogs are often off-lead irrespective of signage or education leading to dog-attack or chasing/disturbance and human conflict.

We ameliorate this by securing No-Go areas for humans and dogs by fencing, signage and planting while at the same time improving the experience of visitors by lookouts, interpretive signage, seating, and designated pathways. It works – most of the time.²⁶

Wildlife Victoria proposed several measures aimed at reducing the impact of domestic pets on Victoria's wildlife:

- installation of effective signage in all bushland reserves, public gardens, along rivers and wetlands, which:
 - state what is required (e.g. 'dogs must be on a lead', or 'dogs not permitted past this point')
 - explain why (many people do not understand the impact of dogs on wildlife)
 - identify the nearest 'off-lead' area
 - reinforce the rule that dogs must always be on-lead unless there is a sign indicating an 'off-lead' area
- provision of more fenced dog-exercise areas
- creation of 'no-dog zones' in sensitive wildlife areas
- establishment of dogs on lead as the norm
- increased monitoring and compliance.²⁷

²³ Ms Lisa Palma, *Transcript of evidence*, p. 34.

²⁴ Ibid.

²⁵ Wildlife Victoria, *Submission 138*, received 28 September 2020, p. 3.

²⁶ Friends of Bats and Bushcare Inc., *Submission 7*, p. 1.

²⁷ Wildlife Victoria, *Submission 138*, p. 4.

These measures would apply primarily in, or in parts of, metropolitan, regional and reservoir parks (dogs are not allowed in most national parks in Victoria).²⁸

By contrast, the Committee notes that a number of pet owner associations have advocated for free access to public open space for domestic pets, provided that owners comply with principles of 'responsible pet ownership'.²⁹ The Committee is also mindful that the vast majority of domestic pets are not involved in attacks on native wildlife.

The Committee notes that while most legal requirements in relation to dogs apply throughout Victoria (under the *Domestic Animals Act 1994* (Vic)), a number of matters remain the responsibility of local governments, including: whether dogs must be on a leash; and the identification of on/off leash areas and dog free areas.³⁰ This suggests that any increase in the incidence of dog attacks on native wildlife may be due to insufficient enforcement of existing measures by some local councils.

Public demand for pets has been amplified by the impacts of the COVID-19 pandemic. In its report, *Pets and the Pandemic*, Animal Medicines Australia (AMA) described the increased demand for pets during the pandemic as 'the biggest boom Australia has seen in pet ownership'.³¹ AMA estimated that pet ownership totals approximately 30.4 million nationally, with the number of households owning pets increasing by approximately 8% since 2019 due to COVID-19.³² The Committee notes that the majority of pet owners take significant care to ensure their pets are not involved in attacks on wildlife. The growing awareness that responsible pet ownership includes the protection of native wildlife is also highlighted by the increasing number of municipalities that require domestic cats to be secured, especially at night.³³

In its submission, Wildlife Victoria reflected on the long-term effects of this boom on native wildlife, stating:

An unprecedented boom in dog adoptions has occurred during the COVID-19 pandemic. With a growing population, and growing popularity of dogs as pets, we anticipate the impact of domestic dogs on wildlife will become even worse unless measures are taken to reduce the risk to wildlife of attack by domestic dogs.³⁴

²⁸ Parks Victoria, *Dog friendly parks*, <<https://www.parks.vic.gov.au/things-to-do/dog-friendly-parks>> accessed 9 September 2021.

²⁹ Dogs Victoria, *Responsible dog ownership*, <<https://dogsvictoria.org.au/family-pet/dogs-and-puppies/caring-for-your-dog/responsible-dog-ownership.html>> accessed 5 November 2021; Pet Industry Association, *Responsible pet ownership*, <<https://www.piaa.net.au/responsible-pet-ownership>> accessed 5 November 2021.

³⁰ Dogs Victoria, *Dogs and the Law*, <<https://dogsvictoria.org.au/family-pet/dogs-and-puppies/caring-for-your-dog/dogs-and-the-law.html>> accessed 24 July 2021.

³¹ Animal Medicines Australia, *Pets and the Pandemic: A social research snapshot of pets and people in the COVID-19 era*, 2021, p. 1.

³² *Ibid.*, p. 4.

³³ See, for example, City of Boroondara, *Cats*, <<https://www.boroondara.vic.gov.au/waste-environment/animals/cats>> accessed 5 November 2021.

³⁴ Wildlife Victoria, *Submission 138*, p. 3.

RECOMMENDATION 9: That the Victorian Government work with councils and developers with the aim of providing accessible and quality public open space that is dog friendly whilst also providing adequate safety for the community and protecting native animals.

3.3.2 Impacts of increasing usage of bushland reserves

Ms Palma outlined the challenge of protecting Victoria's wildlife despite the increasing usage of bushland reserves as the human population increases:

with expected increased usage of bushland reserves and parklands by growing human populations, the usage of such should be redefined to permit safe and general purpose usage that respects wildlife, enables the public to live in co-harmony with and enjoy wildlife and prevents wildlife suffering.³⁵

Friends of Bats & Bushcare stated in its submission that:

Parks are good for people but the expectation should *not be* that they access 100% of every square centimetre of ground. Some must be reserved for wildlife and excluded to humans. Most people understand and applaud this.³⁶

Wildlife Victoria proposed several measures in response to the increasing usage of bushland reserves, including: greater policing and protection; the setting aside of special purpose areas to preserve sensitive wildlife; greater public education and awareness; and the voluntary planting of indigenous vegetation and native gardens in new households as both a food source and habitat for wildlife.³⁷

A number of stakeholders noted that the use of bushland reserves, including trails for cycling and other off-road vehicles, has increased with the onset of the COVID-19 pandemic.³⁸ These stakeholders argued that this increased usage has ongoing impacts on native wildlife. For example, Darebin City Council reflected on the negative impacts of increased use of bushland reserves:

Shared trails have become cyclist superhighways, with overcrowding spilling into non formalised areas such as creek reserves and conservation sites. Increased traffic has led to a significant increase in litter/dog faeces which is problematic. Factoring in ongoing maintenance time and costs is critical for ongoing efficacy of environmental infrastructure.³⁹

³⁵ Ms Lisa Palma, *Transcript of evidence*, p. 34.

³⁶ Friends of Bats and Bushcare Inc., *Submission 7*, p. 2.

³⁷ Ms Lisa Palma, *Transcript of evidence*, p. 34.

³⁸ See, for example, Great Ocean Road Coast Committee, *Submission 93*, received 25 September 2020, p. 5.

³⁹ Darebin City Council, *Submission 233*, received 5 October 2020, p. 12.

Councils observed that during the pandemic there were increased instances in which illegal private infrastructure was constructed in public nature reserves. Manningham City Council noted that the pandemic has driven demand for mountain biking in local reserves and outlined the impact of this demand on local biodiversity:

More illegal jumps and trails are appearing in open space, which is coupled with more residents using our open space in general. This is not just having impacts on biodiversity, it's also resulting in instances of conflict between bike riders and other reserve users.⁴⁰

Wildlife Victoria also referred to the impacts on wildlife of trail bikes, mountain bikes and off-road vehicles when users create their own tracks and build unofficial jumps within bushland reserves.⁴¹ The submission stated:

These activities destroy habitat and create erosion that damages bushland and waterways. Fast-moving bikes also pose a threat to walkers. Trail bikes and all-terrain vehicles damage habitat by compacting soils, destroying vegetation and disturbing wildlife.⁴²

Wildlife Victoria made the following recommendations in relation to this issue:

- provide official mountain bike trails that are designed to minimise adverse impacts on wildlife habitat and discourage the proliferation of unofficial tracks and trails
- educate and engage: user groups (to reduce illegal and anti-social behaviours in bushland reserves and parks); and peer groups (so that they appreciate the adverse impacts of their activities on wildlife and habitats).⁴³

The Committee notes that, while Parks Victoria maintains a webpage which provides information about mountain bike trail networks across the state (www.parks.vic.gov.au/things-to-do/mountain-biking), it does not include information about the harm that can be done to the environment when riders do not use dedicated tracks. The same is true of the Parks Victoria webpage on four-wheel driving (www.parks.vic.gov.au/things-to-do/4wd).

RECOMMENDATION 10: That the Victorian Government conduct a public education and engagement campaign aimed at all user groups on the potential adverse impacts that their activities can have on wildlife and habitats.

Wildlife Victoria also called for increased detection and deterrence.⁴⁴

⁴⁰ Manningham City Council, *Submission 120*, received 27 September 2020, p. 7.

⁴¹ Wildlife Victoria, *Submission 138*, p. 5; Ms Lisa Palma, *Transcript of evidence*, p. 34.

⁴² Wildlife Victoria, *Submission 138*, p. 5.

⁴³ *Ibid.*

⁴⁴ *Ibid.*

The Committee notes that Parks Victoria operates a compliance and enforcement program, which can involve: the enforcement of legislation in response to public complaints; the conduct of investigations; issuing of fines; and prosecution of cases through the courts.⁴⁵ An increase in Parks Victoria funding, as recommended in Chapter 7, could enable a significant expansion of compliance and enforcement.

3.3.3 Fishing

Wildlife Victoria stated in its submission that:

Fishing can be damaging to the environment through waterbirds taking baited hooks, but most often from discarded hooks and lines causing entanglement and death of wildlife.

Entanglement in fishing hooks and lines are a frequent cause of injured wildlife reported to the Wildlife Victoria Emergency Rescue Service.⁴⁶

Wildlife Victoria stated that there were 298 such reports in 2018 and 255 in 2019, involving over 60 species including swans, pelicans, cormorants, flying-foxes and seals.⁴⁷

Friends of Bats & Bushcare also referred in its submission to the problem of wildlife entanglement in fishing line and hooks that are left in the water and trees. They argued that community education has limited effect, given that ‘abandoned, snared and cut-off line’ is an inevitable part of fishing and advocated for the exclusion of fishing from parks, other than at designated fishing points or jetties.⁴⁸

Wildlife Victoria also argued for the limitation of fishing to specified zones, which could be shown on mobile apps (such as Vic Fishing and GoFishVic). They also suggested that such apps should include education about the adverse impacts of lost hooks and lines on wildlife.⁴⁹

The Committee acknowledges that views vary on limiting recreational fishing in public open space. In this regard, recreational fishing organisations, such as VRFish, continue to advocate for access to recreational fishing.⁵⁰ The Committee notes that such authorities have implemented a range of campaigns, such as the *Care for Cod Campaign*, in conjunction with the Victorian Fisheries Authority, in order to foster responsible fishing and minimise the environmental impacts that may occur.⁵¹

⁴⁵ Parks Victoria, *Compliance and enforcement*, <<https://www.parks.vic.gov.au/get-into-nature/conservation-and-science/conserving-our-parks/compliance-and-enforcement>> accessed 5 November 2021.

⁴⁶ Wildlife Victoria, *Submission 138*, p. 5.

⁴⁷ *Ibid.*, pp. 5–6.

⁴⁸ Friends of Bats and Bushcare Inc., *Submission 7*, p. 2.

⁴⁹ Wildlife Victoria, *Submission 138*, p. 6.

⁵⁰ See, for example, Julia Menzies, *Review of the Victorian Recreational Fishing Peak Body*, report for VRFish Review Steering Committee, 2020.

⁵¹ VRFish, *Care for Cod*, <<https://www.vrfish.com.au/education/campaigns/care-for-cod>> accessed 5 November 2021.

3.4 Melbourne's tree canopy

Several stakeholders referred to the importance of protecting and expanding Melbourne's urban tree canopy, which is sometimes also referred to as Melbourne's 'urban forest'. As DELWP stated in its submission:

significantly greater levels of canopy trees and water sensitive urban design will be required across vast areas of Melbourne to protect vulnerable populations from the effects of urban heat.⁵²

In this section, the Committee discusses the importance of tree canopy targets for Melbourne and some of the challenges that councils currently face in protecting and expanding the urban forest. It should be noted that the tree canopy (and tree canopy targets) for a given LGA or Melbourne region refer to the tree canopy across both public and private land.⁵³ Several stakeholders also noted that although tree canopy is increasing in Melbourne's west (from a significantly lower base) it continues to decline in Melbourne's east, particularly due to the removal of trees from single lot developments.⁵⁴ This issue is discussed in Section 3.4.1 below. The challenges facing the urban tree canopy in regional centres are discussed in Chapter 8.

Surveys of Melbourne's tree canopy coverage use aerial imagery and software to map both the surface area and height of vegetation (trees below 3 metres in height are not included).⁵⁵ The Committee received evidence regarding the tree canopy targets that have been established by many of Melbourne's councils. For example, the City of Hobsons Bay stated in its submission that by:

increas[ing] overall tree canopy cover to 30% by 2040, Hobsons Bay will be curbing the urban heat island effect, creating a diverse urban forest and fostering the community's knowledge and appreciation of trees.⁵⁶

Brimbank City Council stated in its submission that it was one of the first councils to create specific requirements for the provision of trees, in front and back yards, in planning schedules for single unit developments. The Council also stated that 'A key component of this success was the positioning of the *Greening The West* (2013) vision which seeks to increase tree canopy cover across the west from below 10% to 30% to mitigate the impacts of heatwaves'.⁵⁷

⁵² Department of Environment, Land, Water and Planning, *Submission 254*, p. 30.

⁵³ See, for example, Victorian Government, *Draft Inner South East Metro Land Use Framework Plan: Chapter 09: Sustainability and Resilience*, p. 93.

⁵⁴ See, for example, Brimbank City Council, *Submission 103*, received 25 September 2020, p. 5; City of Monash, *Submission 90*, received 25 September 2020, p. 5; ICON Science Group, *Submission 67*, received 23 September 2020, p. 7.

⁵⁵ See, for example, The Nature Conservancy and Resilient Melbourne, *Living Melbourne: Our Metropolitan Urban Forest*, Melbourne, 2019, p. 24; J. Hurley, et al., *Urban Vegetation Cover Change in Melbourne 2014 - 2018*, Centre for Urban Research, RMIT University, Melbourne, 2019, pp. 6-8.

⁵⁶ Hobsons Bay City Council, *Submission 145*, received 28 September 2020, p. 4.

⁵⁷ Brimbank City Council, *Submission 103*, p. 4.

Similarly, Monash City Council referred in its submission to the *Monash Urban Landscape and Canopy Vegetation Strategy* (MULCVS), which has set a target of achieving 30% canopy cover across the LGA by 2040.⁵⁸

Some stakeholders called for tree canopy targets to be mandated.⁵⁹ A number of stakeholders also called for legislation and investment to support local councils in the delivery of their tree canopy targets. For example, Nursery and Garden Industry Victoria stated:

Many councils have developed or are developing urban forest plans, however there is little state legislated support, policies or investment to help reverse the significant losses endured over decades of poor planning; only weak guidelines, that are often successfully challenged.⁶⁰

Similarly, the submission from Blackburn and District Tree Preservation Society called for tree and vegetation controls to be ‘extended throughout LGAs across Victoria to help facilitate further protection of trees and vegetation in the state.’⁶¹

DELWP currently supports tree canopy targets for each of Melbourne’s six regions—for the years 2030, 2040 and 2050—through its endorsement of *Living Melbourne – our metropolitan urban forest (Living Melbourne)*,⁶² which aims to significantly increase the total canopy tree coverage across Melbourne by 2050. See Table 3.1 below.⁶³

⁵⁸ City of Monash, *Submission 90*, p. 5.

⁵⁹ See, for example, Parks and Leisure Australia (Vic/Tas Region), *Submission 188*, received 28 September 2020, p. 5.

⁶⁰ Nursery & Garden Industry Victoria, *Submission 223*, received 30 September 2020, p. 6.

⁶¹ Blackburn & District Tree Preservation Society, *Submission 184*, received 28 September 2020, p. 8.

⁶² Department of Environment, Land, Water and Planning, *Submission 254*, p. 34.

⁶³ *Ibid.*

Table 3.1 Targets for tree canopy, and for canopy and shrubs, by Melbourne region to 2050

Region/Local government authorities	Existing 2015		Target 2030		Target 2040		Target 2050	
	Total % tree canopy	Total % tree canopy & shrubs	Total % tree canopy	Total % tree canopy & shrubs	Total % tree canopy	Total % tree canopy & shrubs	Total % tree canopy	Total % tree canopy & shrubs
Western								
Brimbank, Hobsons Bay, Maribyrnong, Melton, Moonee Valley, Wyndham	4	15	9	20	14	25	20	30
Northern								
Banyule, Darebin, Hume, Mitchell, Moreland, Nilumbik, Whittlesea	12	24	17	29	22	34	27	39
Inner								
Melbourne, Port Phillip, Yarra	13	18	18	23	23	28	28	33
Southern								
Casey, Frankston, Greater Dandenong, Kingston, Cardinia, Mornington Peninsula	16	34	21	39	26	44	30	50
Inner South-East								
Bayside, Boroondara, Glen Eira, Stonnington	22	39	24	44	27	49	30	50
Eastern								
Knox, Manningham, Maroondah, Monash, Whitehorse, Yarra Ranges	25	44	27	49	29	50	30	50

Source: The Nature Conservancy and Resilient Melbourne, *Living Melbourne: Our Metropolitan Urban Forest*, Melbourne, 2019, p. 50.

DELWP has also endorsed (and is a member organisation of) Greening the West (a 23-member partnership of councils, government agencies, and industry and community groups committed to greening Melbourne's Western Growth Corridor).⁶⁴ Notably, Greening the West has also adopted the tree and vegetation targets developed for Western Melbourne through the *Living Melbourne* strategy.⁶⁵

DELWP defines its endorsement of *Living Melbourne* as meaning that it supports the strategy's 'vision, goals and actions, and commit[s] to work in partnership with the other endorsing organisations towards its implementation.'⁶⁶

⁶⁴ Ibid., pp. 23, 34.

⁶⁵ Greening the West, *A regional approach to delivering community health and wellbeing: Strategic plan 2020–2025*, 2020, p. 47.

⁶⁶ Department of Environment, Land, Water and Planning, *Living Melbourne: our metropolitan urban forest*, 2020, <<https://www.planning.vic.gov.au/policy-and-strategy/planning-for-melbourne/plan-melbourne/cooling-greening-melbourne/living-melbourne-our-metropolitan-urban-forest>> accessed 25 August 2021.

The Committee also notes that DELWP released a draft of *Melbourne's Future Planning Framework* in August 2021 for public feedback. The draft framework comprises six Land Use Framework Plans (LUFs) aimed at guiding strategic land-use and infrastructure development for the next 30 years and 'aligning state and local planning strategies'.⁶⁷ The purpose of the LUFs is to guide the application of the guiding principles, outcomes, directions and policies contained in *Plan Melbourne 2017–50*.⁶⁸

Notably, the draft LUFs contain the same tree canopy targets for 2050 as those set out in *Living Melbourne* (Table 3.1 above). The targets for each Melbourne region, contained in Chapter 9 of each of the draft LUFs, are categorised as 'directions'. The LUFs state that each direction will be 'implemented through regionally-specific strategies' identified in the relevant LUF⁶⁹ and that:

The strategies outlined in this LUF will be implemented at the local level in a range of ways. For instance, amendments will be made to the planning schemes to give relevant regional strategies status in the Planning Policy Framework and updates will be made to local housing and local industrial land use strategies.⁷⁰

The Committee notes that the LUFs contained in the draft *Melbourne's Future Planning Framework* (which DELWP has identified as a key implementation action under *Plan Melbourne 2017–2050*) will provide additional support for the targets for each of Melbourne's six regions contained in *Living Melbourne*. The Committee also notes the proposal in the draft LUFs to amend planning schemes to give relevant regional strategies status in the Planning Policy Framework. The Committee also notes that the draft LUFs do not include the targets for tree canopy and shrubs contained in *Living Melbourne* (see Table 3.1 above). Given the importance of understorey vegetation for wildlife, the Committee considers that these targets should also be included.

RECOMMENDATION 11: That the Victorian Government implement a consistent reporting framework for tree canopy targets for each of Melbourne's regions.

While the Committee considers that the establishment of tree canopy targets for each of Melbourne's regions is an important starting point, it also received evidence regarding the various challenges that government and non-government agencies face in increasing Melbourne's urban tree canopy, particularly in established suburbs. These challenges will need to be addressed if Melbourne is to achieve the tree canopy targets that have been set for future years.

⁶⁷ Engage Victoria, *Melbourne's Future Planning Framework*, <<https://engage.vic.gov.au/mfpf>> accessed 27 August 2021.

⁶⁸ Ibid.

⁶⁹ See, for example, Victorian Government, *Draft Inner South East Metro Land Use Framework Plan*, p. 98.

⁷⁰ See, for example, Victorian Government, *Draft Inner South East Metro Land Use Framework Plan: Chapter 10: Implementation*, p. 138.

Several councils which represent established Melbourne suburbs gave evidence that ‘infill’ housing developments can cause significant loss of tree canopy coverage in these areas.⁷¹ This impact arises primarily through the loss of trees on private land (i.e. in front and back yards when an existing property is sub-divided). However, there are also significant challenges to increasing the tree canopy on certain types of public land, such as nature strips and rail reserves, where proximity to existing infrastructure can impede the planting of additional trees and vegetation.⁷²

As Darebin City Council stated in its submission:

Overall, strong more consistent controls across the state could overcome many of the challenges and barriers – creating more certainty for community and developers alike, achieving better outcomes more effectively and with less cost.⁷³

Darebin City Council also referred in its submission to recent academic research regarding the effectiveness of significant tree registers, local laws, and planning overlays. It also referred to a study that included interviews with urban foresters and urban planners in local government, which found that:

“the professionals interviewed believe these mechanisms are applied too subjectively and are undermined by exemptions, lack of enforcement, and inadequate penalties. They also believe that private landholders exaggerate tree ‘risk’ and that education programs to improve community support for private trees and their retention are critical to reverse canopy loss.”⁷⁴

Similarly, Monash City Council stated in its submission that there is a ‘clear need for adequate controls to be in place at a local level to protect and enhance urban canopy vegetation’.⁷⁵ It also noted that the Monash Urban Landscape and Canopy Vegetation Strategy (MULCVS) recommended the strengthening of the Council’s existing local planning policies and the introduction of more widespread controls to reduce canopy loss.⁷⁶

Monash City Council also stated that it had submitted a request to DELWP for authorisation of an amendment to the Monash Planning Scheme to apply the Significant Landscape Overlay (SLO) over most areas of the municipality. The submission noted that councils are limited to the tools available within the Victoria Planning Provisions (VPP) and that the SLO is regarded as the best tool currently available for the preservation of trees. The submission also noted that the Minister for Planning had

71 See, for example, Darebin City Council, *Submission 233*, p. 8; Frankston City Council, *Submission 261*, received 19 December 2020, p. 3.

72 See, for example, Darebin City Council, *Submission 233*, p. 8.

73 Ibid., p. 11.

74 Chris Clark, Camilo Ordóñez and Stephen J Livesley, ‘Private tree removal, public loss: Valuing and enforcing existing tree protection mechanisms is the key to retaining urban trees on private land’, *Landscape and Urban Planning*, vol. 203, 2020, p. 1., quoted in Darebin City Council, *Submission 233*, p. 11.

75 City of Monash, *Submission 90*, p. 5.

76 Ibid.

approved a similar amendment for Whitehorse City Council, with a sunset clause of 12 months.⁷⁷

Mr Andre Schmid, Senior Strategic Planner, Monash City Council, advised the Committee at a public hearing that despite more than 18 months of discussions with DELWP, no clear direction had been provided regarding authorisation of its request to amend the Monash Planning Scheme.⁷⁸ Mr Schmid stated:

Ultimately council would like to stress to the inquiry that municipalities across Victoria have been proactive in trying to protect and enhance canopy vegetation at significant cost to our communities, both in environmental values but also in terms of how much it costs to undertake the work and get through the process. However, barriers and delays at the State Government level are hampering these attempts.⁷⁹

Similarly, Brimbank City Council stated in its submission that tree requirements specified in planning schedules:

need to be applied to the whole of Melbourne to ensure that trees are provided when single lots are subdivided, as Melbourne becomes a denser city. ... The planning scheme needs to be consistent for all of Melbourne to ensure a consistent urban forest is achieved across all suburbs.⁸⁰

Mr Adrian Gray, Manager, Urban Design, Brimbank City Council, also called for changes to electric power line clearance guidelines that apply in metropolitan Melbourne as opposed to fire-prone peri-urban and regional areas, noting that the current guidelines apply the same pruning standards regardless of fire risk.⁸¹ Similarly, Manningham City Council referred in its submission to the 'conflicting objectives' of the Planning Scheme, noting that:

The Environment Significance, Significant Landscape and Vegetation Protection Overlays are routinely undermined by the Bushfire Management Overlay objectives and Clause 52.12 Bushfire Exemptions. Clause 52.12 Bushfire Exemptions permit vegetation clearing under the 10/30 or 10/50 rule, without requiring a planning permit and no requirement to offset the vegetation loss.⁸²

Mr Stuart Moseley, Chief Executive Officer, Victorian Planning Authority (VPA) summarised the impact of conflicting regulatory regimes on street canopy cover as follows:

Critical, for example, in determining street tree canopy cover is the engineering requirements that electrical and gas utilities place on the proximity of street trees to and the nature of drainage arrangements around services infrastructure. Sometimes

⁷⁷ Ibid., pp. 5–6.

⁷⁸ Mr Andre Schmid, Senior Strategic Planner, City of Monash, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, pp. 23–24.

⁷⁹ Ibid.

⁸⁰ Brimbank City Council, *Submission 103*, p. 5.

⁸¹ Mr Adrian Gray, Manager, Urban Design, Brimbank City Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 3.

⁸² Manningham City Council, *Submission 120*, pp. 5–6.

those changes happen part way through a development process. So a developer may have approval for a certain configuration of street cross-section with a certain distribution of street trees, and part way through the process of getting that approved the gas and utility street tree clearance requirements can change, do change, making it not possible to achieve that approved planning outcome anymore. So the issue for the committee is that these regulatory regimes do not speak to each other and a change in one can make work directly contrary to what another requires.⁸³

The Committee also received evidence in support of the proposal that the Department of Transport could be supported to plant more trees along transport corridors.⁸⁴

DELWP stated in its submission that it is currently working on options for the Victoria Planning Provisions to improve the contribution of the planning system to cooling and greening (i.e. Melbourne's urban forest).⁸⁵ DELWP also noted in its submission that the *Five-Year Implementation Plan for Plan Melbourne 2017–2050* includes a plan for a 'whole-of-government approach to greening and cooling Melbourne' (Action 91) which is aimed at addressing the current trend of tree canopy decline in Melbourne.⁸⁶

Action 91 contains a number of measures aimed at increasing the coverage of Melbourne's urban forest, including:

- assembling and disseminating spatial data on the green space network, existing tree cover and surfaces to provide a baseline for modelling future greening strategies
- working with local government to establish greening targets for each of the metropolitan regions
- supporting development of municipal urban forest strategies using a coordinated approach with the Department of Transport (DoT), transport operators, and other public land owners and managers.⁸⁷

The Committee welcomes the measures contained in Action 91 of the *Five-Year Implementation Plan for Plan Melbourne 2017–2050*, particularly the commitment to a coordinated approach with DoT, private road operators and other public land owners and managers. However, the Committee also considers that many of the challenges currently facing the protection and expansion of Melbourne's tree canopy could be addressed through greater centralisation of relevant planning powers that are currently shared between councils and various government agencies and statutory authorities. Such a reform could relieve some of the responsibility that is currently borne by councils with respect to Melbourne's urban tree canopy and achieve greater consistency and stronger enforcement, for example by investing those powers in a body such as the VPA or through the establishment of regional planning authorities.

⁸³ Mr Stuart Moseley, Chief Executive Officer, Victorian Planning Authority, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 30.

⁸⁴ See, for example, Mr Adrian Gray, *Transcript of evidence*, pp. 12–13.

⁸⁵ Department of Environment, Land, Water and Planning, *Submission 254*, pp. 29–30.

⁸⁶ *Ibid.*

⁸⁷ Department of Environment, Land, Water and Planning, *Plan Melbourne 2017–2050: Five-year implementation plan*, 2019, p. 30.

The Committee is mindful that government tree planting programs should not be restricted to streets and public parks. There are categories of restricted public land which may be owned by local, state or federal government and which have other primary uses (for example road and rail reserves), which may in some cases also have significant potential for additional tree planting. The Committee also received evidence on the need for councils to consider the suitability of the trees that are planted in public open space in terms of ongoing maintenance costs and safety considerations.⁸⁸

RECOMMENDATION 12: That the Victorian Government consider the establishment of stronger and more consistent tree canopy controls across Melbourne, particularly with respect to trees on public open space and restricted public land.

3.4.1 Variation in tree canopy cover across Melbourne

The Committee also received evidence on the variation in tree canopy cover between Melbourne's east and west. A 2018 academic report commissioned by DELWP indicates the scale of the challenge. That study, which included all trees of at least 3 metres in height, found that coverage in the Western Region of Melbourne (comprising the LGAs of Moonee Valley, Maribyrnong, Brimbank, Hobsons Bay, Melton and Wyndham) was significantly lower than in any other metropolitan region at only 3.8% for urban and non-urban areas combined. By way of comparison:

- Inner Melbourne (comprising the LGAs of Yarra, Port Phillip and Melbourne) had the second lowest amount of canopy coverage at 12.6% for urban and non-urban areas combined, despite its comparative urban density
- Eastern Melbourne (comprising the LGAs of Yarra Ranges, Manningham, Maroondah, Whitehorse, Knox and Monash) had the highest amount of canopy coverage at 27.1% for urban and non-urban areas combined.⁸⁹

The unequal distribution of canopy cover across Melbourne is illustrated in Figure 3.1. Other rapidly growing parts of the city also suffer from a lack of canopy cover. For example, the City of Casey, one of the fastest growing LGAs in the nation, has just 10.2% canopy cover according to the same study.⁹⁰

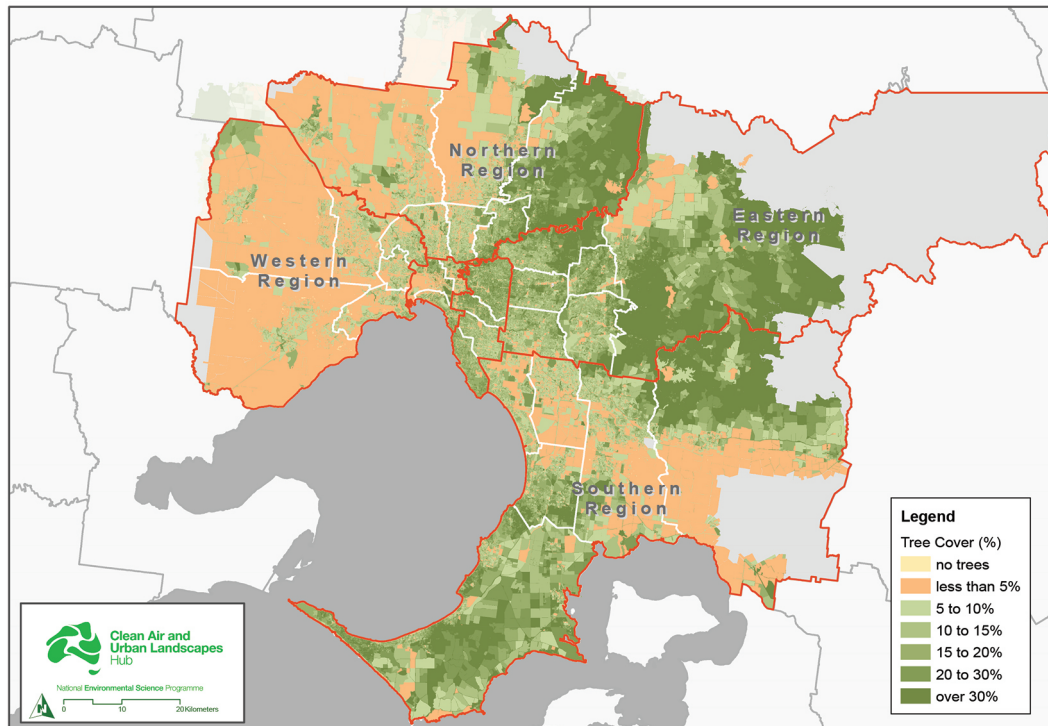
FINDING 21: There is significant variation in the relative proportions of tree canopy cover between different Melbourne municipalities, particularly between eastern and western metropolitan Melbourne.

⁸⁸ See, for example, Mr Sam Taylor, Member, Vic/Tas Regional Council, Parks and Leisure Australia (Vic/Tas Region), public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 14.

⁸⁹ J. Hurley, et al., *Urban Vegetation Cover Analysis, Melbourne Metropolitan Region 2018*, report for Department of Environment, Land, Water and Planning, Melbourne, 2018, pp. 10, 12, 14. See also: Hurley, et al., *Urban Vegetation Cover Change in Melbourne 2014 - 2018*, p. 8.

⁹⁰ Hurley, et al., *Urban Vegetation Cover Analysis, Melbourne Metropolitan Region 2018*, p. 10.

Figure 3.1 Tree canopy cover in Metropolitan Melbourne



Source: J. Hurley, et al., *Urban Vegetation Cover Analysis, Melbourne Metropolitan Region 2018*, report for Department of Environment, Land, Water and Planning, Melbourne, 2018, p. 3.

Many submissions to this Inquiry—from community organisations, councils, statutory bodies and planning professionals—highlighted both the importance of canopy cover generally and the goal of reducing disparities in canopy coverage across Melbourne. Several submissions also outlined the challenges involved in efforts to improve canopy coverage.

In August 2021, Infrastructure Victoria released its 30-year infrastructure strategy, *Victoria’s Infrastructure Strategy 2021–2051*. Recommendation 77 of the strategy sets a target of 30% tree canopy coverage in new growth areas. The recommendation states:

Over the next 30 years, achieve 30% tree canopy coverage in new growth areas by mandating coverage during precinct development, funding relevant Victorian Government agencies and local government to plant, replace and maintain canopy trees, and work with utility providers to remove barriers to tree planting.⁹¹

Elaborating on this point, the strategy states that:

The Victorian Government should develop clear compliance guidelines for planning approvals and Precinct Structure Plans and undertake monitoring and enforcement. Guidelines could require planting appropriately mature trees, consider species diversity,

⁹¹ Infrastructure Victoria, *Victoria’s infrastructure strategy 2021–2051: volume 1*, Melbourne, 2021, p. 24.

support new trees' maintenance on private land for at least two years, watering trees on public land (see recommendation 14), and accommodating underground utilities.⁹²

In its submission to this Inquiry, Infrastructure Victoria elaborated on some of the strategies the Government could adopt to achieve this goal:

For the contribution of public land to the tree canopy target, the Victorian Government could also deploy targeted funding for planting, maintenance and replacement. This funding could be provided to local governments to maintain canopy trees on local and connector streets, boulevards and parks, once developer maintenance periods conclude. For example, the NSW Government funds a grants program aiming to plant five million trees in greater Sydney.⁹³

The Committee notes the Government's announcement in May 2021 that it would invest \$5 million in a two-year program to plant 500,000 new trees across Melbourne's west. The trees will be planted in the municipalities of Maribyrnong, Wyndham, Melton, Brimbank, Moonee Valley and Hobsons Bay.⁹⁴ The Committee welcomes this announcement, particularly as it targets Melbourne's western region which, as noted above, currently has a significantly lower proportion of tree canopy coverage than the rest of Melbourne. The Committee also considers, particularly as the announcement of the program was made prior to the release of Infrastructure Victoria's 30-year infrastructure strategy, that it would be useful for the Government to quantify the contribution that the program will make to tree canopy coverage across Melbourne's western region.

RECOMMENDATION 13: That the Victorian Government consider adopting a tree canopy target for Melbourne's growth areas and recognise the benefits of setting and reporting on interim targets. The Victorian Government should also quantify the contribution that its recently announced two-year program to plant 500,000 new trees across Melbourne's west will make to this target and the contribution of all future tree-planting programs.

⁹² Ibid., p. 211. (with sources)

⁹³ Infrastructure Victoria, *Submission 149*, received 28 September 2020, p. 24.

⁹⁴ Roy Ward, 'Half a million trees to be planted in Melbourne's west to bridge gap with leafy suburbs', *The Age*, 13 May 2021, <<https://www.theage.com.au/politics/victoria/half-a-million-trees-to-be-planted-in-melbourne-s-west-to-bridge-gap-with-leafy-suburbs-20210513-p57ri1.html>> accessed 29 July 2021. See also Lily D'Ambrosio, *500,000 Trees For A Cooler, Greener West*, media release, Government of Victoria, 13 May 2021.

4 Social benefits of environmental infrastructure

This chapter explores the social benefits of environmental infrastructure. It also explores the challenges posed by the growth in demand for environmental infrastructure due to population growth and the COVID-19 pandemic. It presents recommendations aimed at maximising the social benefits of environmental infrastructure for all Victorians now and in the future. The Committee is mindful that many of the health and environmental benefits of environmental infrastructure discussed in Chapters 2 and 3 also have important social benefits. Similarly, many of the social benefits discussed in this chapter also have health and environmental effects.

The centrality of environmental infrastructure to the lives of Victorians was dramatically illustrated in 2020, during the early stages of this Inquiry. As part of the public health response to the COVID-19 pandemic, Victorians found themselves spending more time in their immediate areas, especially in outdoor spaces near their homes.

As discussed in Chapter 1 (Section 1.1.6), there is substantial anecdotal evidence, and a growing body of data, that demonstrates a large increase in the use of environmental infrastructure since early 2020. This increase occurred on top of an already growing demand for environmental infrastructure. For example, Parks Victoria noted in its submission that:

In 2018/19 more than 29.5 million people visited a major metropolitan park managed by Parks Victoria, and it was a significant increase from 16 million people in 2014/15 ... In addition, more than 80.4 million people visited one of Melbourne's bays. Of those, more than 51.6 million visited a pier, which is a significant increase from the 39 million visitors to a pier in 2016/17.¹

While this represents only a handful of the many types of environmental infrastructure available to Victorians, it is an important indication that demand for environmental infrastructure in Victoria has been increasing not just through population growth, but through changes in behaviour, driven by commitments to health and well-being, and an increasing recognition of the importance of connection with nature.

FINDING 22: There has been a significant increase in demand for environmental infrastructure, particularly public open space, across Melbourne and regional Victoria in recent years. This demand has been accelerated by the COVID-19 pandemic.

This chapter is divided into three sections. Firstly, the chapter examines the role environmental infrastructure plays in ensuring social equity in Melbourne (Section 4.1.1)

¹ Parks Victoria, *Submission 254F*, received 6 November 2020, p. 6.

and across Victoria (Section 4.1.2) and looks at some of the options for Government to contribute to increased equity of access to environmental infrastructure. Secondly, the chapter looks at the role environmental infrastructure plays in social cohesion, and how the Government can build on this to strengthen Victorian communities (Section 4.2). Finally, the chapter examines the role Traditional Owners play in the custodianship of much of Victoria's environmental infrastructure and, alongside Victoria's treaty process, the role they can play as partners in the future (Section 4.3).

4.1 Social equity

Many submissions noted the important contribution that environmental infrastructure makes to social equity (i.e. fairness and access to opportunity within a society). For example, Jesuit Social Services stated that 'Investment in our environmental infrastructure is a crucial element of building more equitable, sustainable, and resilient communities.'²

The World Resources Institute provides a useful definition of social equity in the context of environmental infrastructure:

Social equity aims to achieve fair outcomes for all. This can only happen by recognizing that individuals and social groups face unique challenges and require different levels of support based on their specific needs. Expanding and protecting green spaces without efforts to achieve social equity can worsen spatial and social inequalities and reinforce marginalized communities' lack of access to the benefits that urban parks provide.³

Several stakeholders noted that there are significant differences in the amount and quality of environmental infrastructure available to Victorians depending on where they live. However, it should be noted that these differences exist primarily between parts of Melbourne, with residents of regional centres and peri-urban areas typically enjoying a high level of equity of access to environmental infrastructure. This difference between Melbourne compared to regional and peri-urban areas is reflected in the structure of this chapter: Section 4.1.1 is confined to a discussion of social equity challenges in Melbourne, while the remainder of the chapter looks more widely at the social benefits of environmental infrastructure across the State.

While recognising that some level of disparity in the availability of environmental infrastructure is inevitable, the Committee is mindful that insufficient access to environmental infrastructure can have a range of negative impacts for individuals and families. It follows that access to environmental infrastructure is an important

² Jesuit Social Services, *Submission 239*, received 8 October 2020, p. 1.

³ Definition available here: World Resources Institute, *Green Space: An Underestimated Tool to Create More Equal Cities*, 2020, <<https://www.wri.org/insights/green-space-underestimated-tool-create-more-equal-cities>> accessed 29 July 2021. See also PolicyLink's definition: 'PolicyLink defines equity as "just and fair inclusion into a society in which all can participate, prosper, and reach their full potential." ... Unlike equality, which connotes sameness, equity is responsive to difference; equitable policies actively mitigate the disproportionate harm faced by certain communities.' from American Planning Association, *Social Equity*, <<https://www.planning.org/knowledgebase/equity>> accessed 29 July 2021.

contributor to both social equity and social cohesion. For instance, Dr Meredith Dobbie, Chair, Victorian Environment Committee, Australian Institute of Landscape Architects (AILA), stated that:

COVID-19 has demonstrated that equity of access to open spaces across Victoria is not balanced ... The social and mental impact of inadequate access to green space on an individual can be devastating, and there is much empirical evidence to demonstrate the benefits of that easy access to urban nature.⁴

Access to the health and environmental benefits of environmental infrastructure is also an equity issue, as the Heart Foundation notes:

there is an important equity argument here. Having access to transport options like public transport, walking and cycling are key features which help to promote equitable outcomes and by extension support quality of life for disadvantaged populations, older Australians and children, those in outer growth areas and remote and regional Australians. So in that sense environmental infrastructure can encourage walking and does have a strong equity rationale. We know that obesity is high in lower socio-economic areas and outside capital cities. Walking is free and generally more accessible ... Only 17 per cent of people from non- English-speaking backgrounds participate in sport and recreation and do need accessible physical activity options.⁵

Finally, the Committee heard from stakeholders involved in the provision of social services that equity should be a central principle of the Government's approach to the provision of environmental infrastructure. For example, the Victoria Council of Social Service (VCOSS) stated that:

equity and socio-economic disadvantage should be a major factor in decisions about new and upgraded green space. Low-income suburbs and those with already poor access to parks should be at the top of the list. Growth areas on Melbourne's fringe, like Werribee, are areas of particularly high need. Communities where density is high and people are less likely to have their own private backyards and green spaces—for example, around public housing towers—are also significant priorities.⁶

This section discusses the areas where the provision of environmental infrastructure intersects with questions of social equity. It focuses on those areas where the Committee heard evidence of existing inequality and proposes measures aimed at reducing these inequalities. Two crucial areas of inequality are discussed:

- open space in metropolitan Melbourne
- accessibility of environmental infrastructure throughout Victoria.

⁴ Dr Meredith Dobbie, Chair, AILA Victorian Environment Committee, Australian Institute of Landscape Architects (AILA) Victorian Chapter, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 41.

⁵ Mr Andrew Mosley, Advocacy Manager Vic/Tas, Heart Foundation, public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 17.

⁶ Ms Brooke McKail, Manager, Policy and Research, Victorian Council of Social Service (VCOSS), public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 42.

4.1.1 Open space inequality in metropolitan Melbourne

Melbourne has a long history of effective open space planning extending back to the 19th century and the beginnings of European colonisation. Prior to this, the landscape around the area that is now Melbourne was managed by its Traditional Owners, whose ongoing role is discussed in Section 4.3. Urban open space planning began in Melbourne in the middle of the 19th century, when:

parks and gardens became increasingly important ... Urban parks were the response to concern about overcrowding and the condition of the poor, and huge public gardens displayed wealth, power and triumph over nature. The people of Melbourne agitated for the government to set aside land for recreation and social connectedness. Charles Latrobe reserved from sale land that is now Royal Park, Princes Park, Albert Park Reserve, Fawkner Park, Yarra Park and the Royal Botanic Gardens.⁷

This farsighted policy meant that as Melbourne boomed during the Gold Rush, the provision of open space was able to keep pace with the growth in its population. This approach to planning was not restricted to Melbourne. During the late 19th and early 20th centuries:

strong, independent statutory bodies with high level engineering capabilities were made responsible for the funding and delivery of major state infrastructure ... Outside Melbourne, the Town and Country Planning Board worked with the major cities, towns, and rural municipalities to help them address their own land use and infrastructure planning needs.

These large statutory authorities of the pre-war period continued to plan for and provide new infrastructure well into the last two or three decades of the twentieth century ...⁸

As a result, Victoria continues to enjoy a legacy of public open space, including along foreshores and in regional and peri-urban areas such as Ballarat, Bendigo and the Mornington Peninsula, that remains unusual and highly regarded by world standards.

Melbourne has experienced two subsequent waves of population growth: the decades immediately after the Second World War; and the period from the early 2000s until the beginning of the COVID-19 global pandemic.⁹ This growth is discussed in more detail in Chapter 1.

This recent period of population growth has been accompanied by a significant increase in demand for open space, both in developed areas of the City and in high-growth areas currently under development on the City's fringe. The challenge for the Government now is to maintain and improve access to open space, even as the population grows and demand increases.

⁷ Department of Environment, Land, Water and Planning, *Open space for everyone – Open Space Strategy for Metropolitan Melbourne 2021*, Melbourne, 2021, p. 16.

⁸ Infrastructure Victoria, *Learning from the past: A history of infrastructure planning in Victoria*, 2016, p. 1.

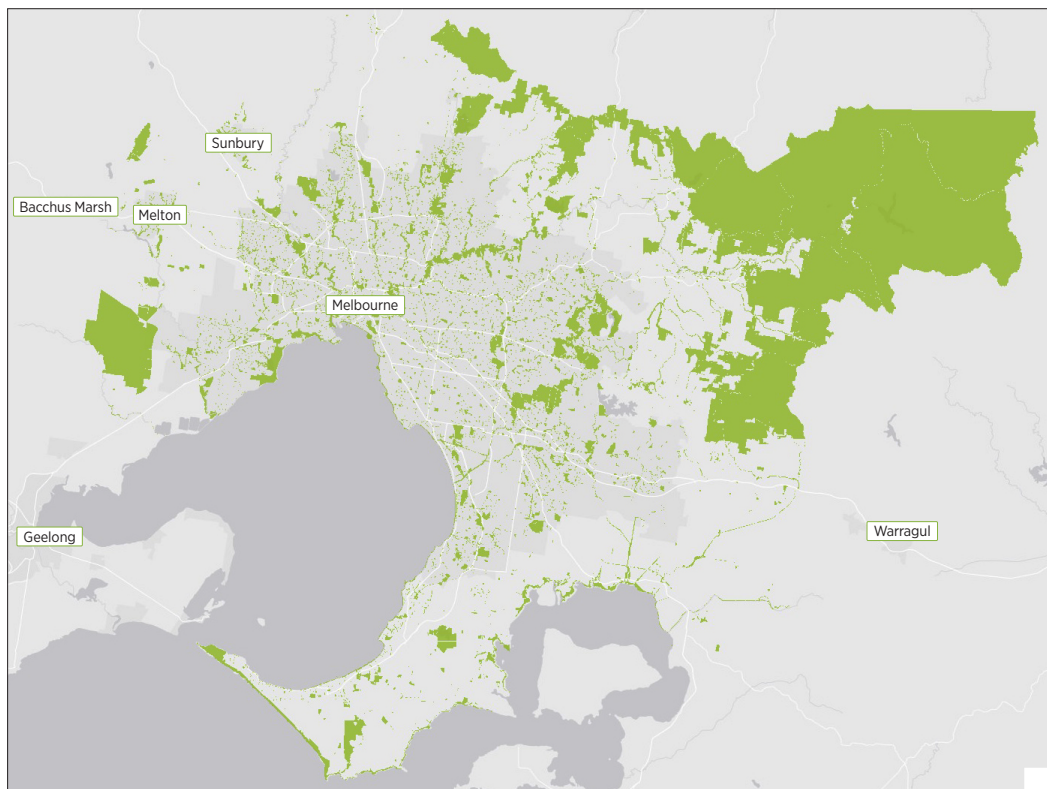
⁹ Mr Chris Chesterfield, Birrarung Council, public hearing, via videoconference, 20 April 2021, *Transcript of evidence*, p. 20.

As part of its policy response to this challenge, in April 2021 the Government released *Open space for everyone – Open Space Strategy for Metropolitan Melbourne 2021*, which contains important insights into the current state of open space available to residents of the city. The strategy notes that according to the Victorian Planning Authority’s (VPA) Metropolitan Open Space Network portal (a geographic information system (GIS) dataset of the open space network in metropolitan Melbourne available on the VPA website):

there is about 23,700 ha of open space within Melbourne’s Urban Growth Boundary. While the mapping provides a start to understanding differences in the open space available to different neighbourhoods, it does not indicate differences in the function or quality of the open space or in the ease of access to it. These things greatly influence the extent to which current and future communities can use their local open space. Melbourne’s growth over time has created differences in the quality, type and mix of open space across inner, middle and outer suburbs that also need to be considered in future funding decisions based on equity.¹⁰

Interactive maps which show the distribution of publicly accessible open space across metropolitan Melbourne (and omit ‘restricted’ open space) can be accessed via the VPA portal as illustrated in Figure 4.1.

Figure 4.1 Publicly accessible open space across metropolitan Melbourne

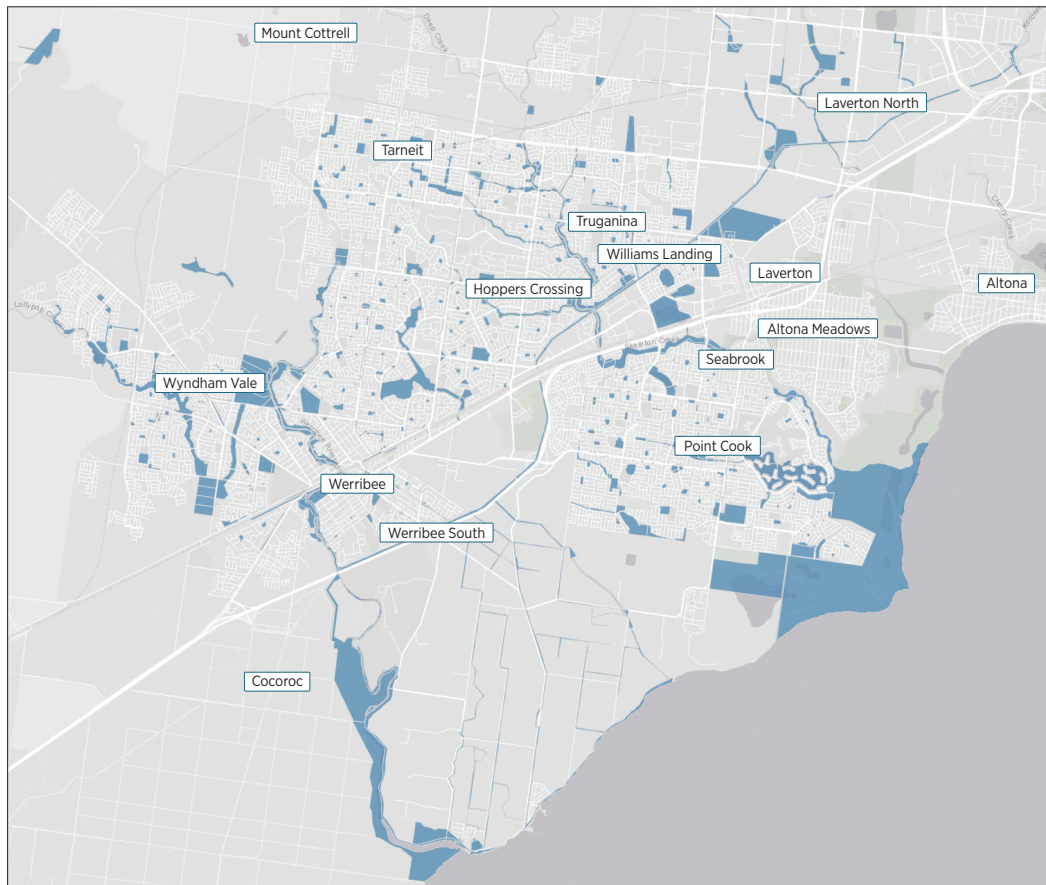


Source: Victorian Planning Authority, *Melbourne open space network*, <<https://planvic.maps.arcgis.com/apps/MapJournal/index.html?appid=8965d9701575408e8ea7f59772e82e10>> accessed 29 July 2021.

¹⁰ Department of Environment, Land, Water and Planning, *Open space for everyone – Open Space Strategy for Metropolitan Melbourne 2021*, p. 18.

The VPA also maintains an ‘Open Data Site’ (at <https://data-planvic.opendata.arcgis.com>), which provides a number of data sets, including for the Melbourne metropolitan open space network (entitled ‘VPA Open Space’). As illustrated in Figure 4.2, this data set enables members of the public to generate interactive maps using a range of additional filters. See for example Figure 4.2 below, which shows open space that is freely accessible to the public in the municipality of Wyndham.

Figure 4.2 Freely accessible open space in Wyndham LGA



OS_Access: Open Closed Highly limited Limited

Note: The VPA Open Space dataset defines the four levels of access to open space (OS_ACCESS) as follows:

- ‘Open’—Freely accessible by the public all of the time.
- ‘Closed’—Access is not possible by the public most of the time.
- ‘Limited’—Access is free of charge but may be managed in some way, such as designated opening days/hours.
- ‘Highly limited’—Access is more significantly restricted by fees and charges and/or barrier fencing.¹¹

Source: Victorian Planning Authority, *VPA Draft Open Space Data*, <<https://data-planvic.opendata.arcgis.com/datasets/da1c06e3ab6948fcb56de4bb3c722449/explore?layer=true&location=-37.752599%2C145.310379%2C9.44>> accessed 29 July 2021.

According to a 2020 report by Mosaic Insights (which drew on data from the VPA, OpenStreetMap and the Australian Bureau of Statistics), approximately 500,000 Melburnians do not live within 400 metres walking distance of public open space. The report also found that:

¹¹ Victorian Planning Authority, *Open Space Types and Categories*, <<https://vpa.vic.gov.au/wp-content/uploads/2017/06/Metropolitan-Open-Space-Strategy-Open-Space-Category-Definitions.pdf>> accessed 29 July 2021.

- there are pockets of residential areas in Melbourne where more than one third of the population lives beyond an easy walking distance of open spaces
- there are suburbs with particularly low access to open space throughout the LGAs of Moonee Valley and Moreland City and several LGAs in the east and southeast with poor access to open space, including Glen Eira, Boroondara, Monash and Bayside.¹²

It should be noted that the report also states that ‘There is also the opportunity to refine the walkability thresholds, as the blanket 400 m distance to open space has been superseded by more sophisticated metrics that relate to different types of open space.’¹³

The VPA describes the delivery of ‘a network of open spaces that are located to ensure community access within a safe 5 minute walk (approximately 400m) of 95% of residents’, as one of the six principles (or the ‘6 Pillars’) of its open space network planning for metropolitan Melbourne.¹⁴ The VPA notes that in relation to this principle of ‘equitable distribution’, 81% of Melbourne’s population lives within 400m safe walking distance of ‘Public Open Space’. It also notes, however, that the gaps in the network are not distributed evenly, and that those areas with more integrated street and path networks tend to have fewer gaps.¹⁵

Several stakeholders expressed support for the 400-metre safe walking distance measure as a planning principle. For example, Mr Julian Lyngcoln, Deputy Secretary, Planning, Department of Environment, Land, Water and Planning (DELWP), stated:

400 metres is probably a 10-minute round trip there and back. People will walk 10 minutes to lots of things, 20 minutes starts to become a stretch and beyond that you start to see the big drop-off of people accessing those things—so providing them as locally and as close to people as possible is an advantage.¹⁶

Similarly, Dr Meredith Dobbie, Chair, Victorian Environment Committee, AILA, stated that AILA supports the aim of every Victorian resident being able to access public open space within 400 metres of their home.¹⁷

The Committee is mindful of the VPA’s view that:

no one element or factor in isolation can deliver a high quality open space network. Instead there are a range of universal “ingredients” that can be mixed and matched and used in different proportions to underpin spatial planning solutions that are responsive to local or regional circumstances.¹⁸

¹² Mosaic Insights, *Activating schools and golf courses transforms access to open space*, 2020, <<https://mosaicinsights.com.au/allowing-public-access-to-schools-and-golf-courses-could-deliver-30-million-of-health-and-community-benefits>> accessed 8 November 2021.

¹³ Ibid.

¹⁴ Victorian Planning Authority, *Melbourne open space network*, <<https://planvic.maps.arcgis.com/apps/MapJournal/index.html?appid=8965d9701575408e8ea7f59772e82e10>> accessed 29 July 2021. See also Victorian Planning Authority, *Metropolitan Open Space Network: Provision and Distribution*, 2017, p. 6.

¹⁵ Victorian Planning Authority, *Melbourne open space network*.

¹⁶ Mr Julian Lyngcoln, Deputy Secretary, Planning, Department of Environment, Land, Water and Planning, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 16.

¹⁷ Dr Meredith Dobbie, *Transcript of evidence*, p. 41.

¹⁸ Victorian Planning Authority, *Melbourne open space network*.

The Committee also notes that although larger parks are often located further from residents, they typically offer a wider range of both active and passive recreational options than smaller local parks, such as pocket parks. For example, research reported by the Heart Foundation has found that residents who live within 1.6 kilometres of larger neighbourhood parks engage in 150 minutes more recreational walking per week than those who can only access smaller parks within the same distance.¹⁹

The Committee considers that consideration of walking distance to open space may provide a measure that could be used to drive future improvements in the equity of access to open space across Melbourne. However, such consideration should also take into account the different categories and sizes of open space that may be available within walking distance, such as smaller local pocket parks and larger municipal and metropolitan parks within the regional network (see Figure 1.1 in Chapter 1).

RECOMMENDATION 14: That the Victorian Government set a target to provide Melbourne’s residents with access to a network of open spaces located closer to their place of residence. This could include consideration of a hierarchy of open space that caters to a range of uses, as well as the connections and means of access to such public open space.

The VPA, in its submission, provided background information on the data used in its Metropolitan Open Space Network portal, noting that it uses:

a comprehensive GIS dataset of the existing open space network throughout the Melbourne metropolitan area. This dataset builds upon the important work completed through the Victorian Environmental Assessment Council’s Metropolitan Melbourne Investigation (2011), as well as GIS data provided to the VPA by Melbourne’s 32 metropolitan councils and a variety of other agencies.²⁰

In addition, the VPA recommended that measures should be taken, in conjunction with the Metropolitan Open Space Strategy, to ‘protect and enhance existing open spaces, underpinned by spatial data’ and to ‘plan for an increase in open space, particularly in areas identified as lacking access to open space’.²¹ The Committee considers that the Metropolitan Open Space Network portal, and the data on which it is based, is a valuable resource for such future planning. Moreover, the development of a richer and more complete picture of the availability of open space will be vital to addressing inequities in its provision.

However, as noted above (in the quote from DELWP’s *Open Space for Everyone*), the VPA’s Metropolitan Open Space Network portal does not indicate differences in the function or quality of open space in metropolitan Melbourne or in the ease of access to it. The Committee also notes that:

¹⁹ Heart Foundation, *Public open space*, <https://habd-dev.heartfoundation.org.au/images/uploads/Design_Features/Public_Open_Space/Public_Open_Space.pdf> accessed 21 November 2021.

²⁰ Victorian Planning Authority, *Submission 225*, received 1 October 2020, p. 3.

²¹ Ibid.

- the open space data which forms the foundation of the maps in the portal is not currently being maintained (following the transfer of responsibility for the GIS data from the VPA to DELWP)
- images in pop-out panels currently relate only to the open space category for the selected feature (the VPA notes that additional work is required to further customise this information, e.g. through the inclusion of images to make the portal more interactive).²²

FINDING 23: There are significant disparities in the amount of open space available per person between local government areas across metropolitan Melbourne.

RECOMMENDATION 15: That the Department of Environment, Land, Water and Planning work with the Victorian Planning Authority to better map and catalogue the quantity and types of open space available to residents of metropolitan Melbourne.

The Committee also notes that the VPA portal does not currently provide public open space data for any of Victoria's regional centres, including centres such as Geelong, Ballarat and Bendigo, which have experienced significant population growth in recent years. The Committee considers that the inclusion of such data via the VPA portal would be useful to residents and the many government and non-government agencies involved in open space planning in the state's regional centres.

RECOMMENDATION 16: That the Department of Environment, Land, Water and Planning work with the Victorian Planning Authority to provide public open space data for the State's regional centres.

Cataloguing the deficits in the open space networks of metropolitan Melbourne and regional centres as comprehensively as possible will provide both a valuable snapshot of current access and support better strategic planning in the future.

As DELWP noted in its submission:

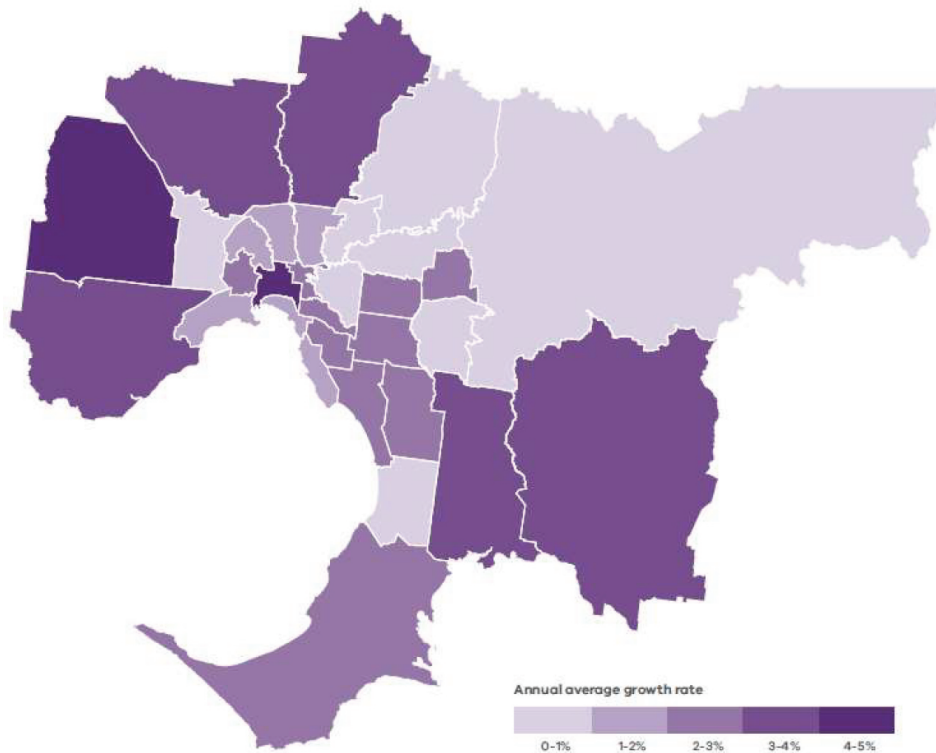
Demand for open space will be unequal. As [Figure 4.3 below] shows, forecast population growth from 2018 to 2036 is uneven across the city. It is unprecedented for Melbourne's growth areas, but it's also significant in established areas. The greatest growth will be in the cities of Wyndham (204,000 people), Casey (182,000 people), Melton (175,500 people) and Whittlesea (141,100). For comparison, in 2018 the Cities of Moreland, Monash and Melton had 182,000, 200,000 and 157,000 people respectively, so this forecasted growth is like adding a new LGA to each of the growth areas. The City of Melbourne is forecast to have the strongest growth (122,700 people) in the established areas, mainly in the Central Business District, Docklands and Southbank.

²² Victorian Planning Authority, *Melbourne open space network*.

In some areas (such as the Mornington Peninsula and Yarra Valley), tourism will drive population pressures on open space. The population of activity centres (such as Box Hill) is forecast to grow strongly; the incremental redevelopment of regenerating suburbs will result in weaker population growth.²³

What this indicates is that the challenge is twofold. Firstly, current disparities need to be identified and where possible reduced. Secondly, as Figure 4.3 illustrates, because the patterns of forecast population growth for Melbourne are uneven, they will impose a dynamic series of challenges for future open space planning.

Figure 4.3 Annual average rate of population change, metropolitan municipalities, 2018–36



Source: Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 21. Adapted from Department of Environment, Land, Water and Planning, *Victoria in Future 2019: Population Projections 2016 to 2056*, 2019.

Finally, as discussed in Chapter 1, the COVID-19 pandemic has had a negative, but likely short-term, impact on population growth in Victoria. The response to the pandemic has also resulted in an increase in the demand for open space from Victorian residents, which many commentators have predicted will be ongoing due to the increase in the proportion of employees working from home. While the future effects of these changes remain unclear, they are important factors in determining how the state could allocate its resources to provide the quantity and types of open space that Victorians will need in the future.

²³ Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 21. (with sources)

RECOMMENDATION 17: That the Department of Environment, Land, Water and Planning develop tools to forecast demand for open space in Victoria.

4.1.2 Accessibility of environmental infrastructure

In this section, the Committee discusses the ways in which open space can be developed and maintained to maximise its accessibility to all Victorian residents, regardless of individual characteristics such as age, gender, ability or cultural background. More specific considerations around accessibility are addressed in Section 4.2.1 below.

Several community groups, including Friends of Wilson Botanic Park Berwick, the South Gippsland Conservation Society and Blackburn & District Tree Preservation Society, as well as individual submitters, specifically referred to the need to consider disability access to environmental infrastructure.²⁴

Ms Fleur Anderson, Acting Executive Officer, Sustainability Planning, City of Whittlesea, observed that:

So it is really about how we activate these spaces so that people come and meet these spaces for the first time, but then it is making sure that the amenity is in the spaces so that if people are bringing their aged parents, they know there is a toilet there. If they are wanting to walk at dusk, they know there is security lighting et cetera.²⁵

Mr Julian Lyngcoln, Deputy Secretary, Planning, DELWP, explained the importance of an 'environmental justice' approach to improving the accessibility of environmental infrastructure:

The state government does promote the idea of environmental justice, which holds that all people should have equitable access to nature for enjoyment, recreation and cultural and spiritual reasons and as a way to enhance their mental and physical health. There are many reasons that people cannot or choose not to have daily contact with nature, and that could be to do with their distance from green space and their ability to access it from other cultural issues or safety issues or from disability as well. The natural environment experiences that Victoria offers will be unfamiliar to some. Providing and improving natural spaces, facilities and programs in the right places will give people from varying cultures more opportunities to experience nature. Another important aspect of environmental justice is the notion that people with disability should have easy access to the benefits of nature as well, and Parks Victoria ... is undertaking work to remove barriers to park access and participation for visitors with disability.²⁶

²⁴ See submissions, Friends of Wilson Botanic Park Berwick, *Submission 28*, received 4 September 2020, p. 2; South Gippsland Conservation Society Inc, *Submission 78*, received 24 September 2020, p. 3; Blackburn & District Tree Preservation Society, *Submission 184*, received 28 September 2020, p. 3; Jill Pickering, *Submission 112*, received 26 September 2020, p. 1.

²⁵ Ms Fleur Anderson, Acting Executive Officer, Sustainability Planning, City of Whittlesea, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 21.

²⁶ Mr Julian Lyngcoln, *Transcript of evidence*, p. 5.

The Committee considers there is merit in enhancing the accessibility of environmental infrastructure.

4.2 Social cohesion

As the past year in Victoria and Melbourne has so powerfully illustrated, environmental infrastructure provides an increasingly important avenue for social connection and cohesion. The Committee understands that there is some academic debate around definitions of social cohesion.²⁷ However, the Committee has adopted the simple definition developed by the OECD, whereby a society can be called 'cohesive' if it 'works towards the well-being of all its members, fights exclusion and marginalisation, creates a sense of belonging, promotes trust, and offers its members the opportunity of upward social mobility'.²⁸

Ms Brooke McKail, Manager, Policy and Research, VCOSS, outlined some of the ways in which improvements to the accessibility of environmental infrastructure can promote social cohesion:

At VCOSS we advocate that parks should be free and accessible to everyone. They need to be safe and inclusive for children. We know the benefits of playgrounds and outdoor spaces for children's development and social connection and for older people and people with disability, and I know you would have heard that earlier today with the National Ageing Research Institute appearing. Women and gender-diverse people in particular, we know, will not use public space if it does not feel safe for them, if it is not well lit; and for large families space to hold family gatherings and celebrate events would be just as important as, I guess, the sporting ovals or facilities that we sometimes think about when we think about community facilities. Well-designed public space can foster greater inclusion and enhance social cohesion. ... I would also like to add that community gardens are a wonderful addition to public green space.²⁹

In the following subsections of the report (4.2.1 to 4.2.5), the Committee considers:

- the potential for environmental infrastructure to simultaneously meet the diverse needs of different demographic groups
- the promotion of gender equity through support for the involvement of women and gender diverse people in organised sport and active recreation
- the role and importance of community engagement in decisions about the provision of environmental infrastructure
- the role of volunteering
- the role of community gardens.

²⁷ See, for example, Xavier Fonseca, Stephan Lukosch and Frances Brazier, 'Social cohesion revisited: a new definition and how to characterize it', *Innovation: The European Journal of Social Science Research*, vol. 32, no. 2, 2019.

²⁸ OECD, *Perspectives on Global Development 2012: Social Cohesion in a Shifting World*, OECD Publishing, Paris, 2011, p. 17.

²⁹ Ms Brooke McKail, *Transcript of evidence*, p. 43.

4.2.1 Addressing the needs of different demographics

The Committee received evidence from a range of stakeholders about the important role that environmental infrastructure can play in meeting the diverse needs of Victorians, while also encouraging connection between groups who might otherwise have limited opportunities for interaction. Public open space plays an especially important role in this respect.

Darebin City Council, in its submission to this Inquiry, emphasised the importance of a ‘human-rights centred approach’ to environmental infrastructure.³⁰ The Council highlighted the obligation that applies to all municipal councils, under Victoria’s *Charter of Human Rights and Responsibilities Act 2006* (Vic), to act in a way that is compatible with human rights,³¹ including in the provision of environmental infrastructure. Specifically, the Council noted that planning for environmental infrastructure at the local government level must take into account the following rights:

- The right to freedom of movement
- The right to protection from discrimination
- Protection of families and children
- Cultural rights, particularly for Aboriginal and Torres Strait Islander people
- Right to privacy
- Right to information.³²

Darebin City Council went on to note that:

Differences in the availability of environmental infrastructure can be amplified [for] already marginalised community members. For example, people experiencing homelessness, people with cognitive impairments or people living with a disability may experience difficulties in exercising and advocating for their rights – particularly to public authorities, such as Council.³³

Ms Rachel Ollivier, General Manager, City Sustainability and Strategy, Darebin City Council, expanded on this point at a public hearing:

It is partly about the design of the space and how different segments of the community feel welcome in it. For example, women often tell us that they feel unsafe when there is not good lighting, so they use spaces less. We are aware that parks have often been designed from a particular cultural heritage background, so they are not places where some of our community see themselves reflected. It is about making space that connects with individuals so they feel welcome.

³⁰ Darebin City Council, *Submission 233*, received 5 October 2020, p. 16.

³¹ See *Charter of Human Rights and Responsibilities Act 2006* (Vic) s1(2)(c).

³² Darebin City Council, *Submission 233*, p. 16.

³³ Ibid.

The way that I think we might navigate to a better way of doing open space is essentially by talking to our disadvantaged and diverse community better about what they need. There is some work in different parts of the world that is about connecting streetscapes and open spaces better so that there is that sense of passive surveillance and people feel safe because there are others around them. Particularly there are opportunities for civic spaces like libraries or museums to connect well with parks ... We are very conscious ... that it is easy for people at real disadvantage to be excluded from everywhere, like homeless people, for example.³⁴

Similarly, Ms Kate Jewell, Coordinator, City Strategy and Place Planning, Glen Eira City Council, noted that the municipality gave particular consideration to the needs of different cultural groups during the recent update of its open space strategy.³⁵ Ms Jewell stated:

there was certainly work done with some of the different cultural groups within Glen Eira, which found that they were most comfortable using spaces like schools and church grounds—not church grounds but religious facilities, so using open space that is often associated with those facilities ...

And particularly with some of the elderly within the Glen Eira population and those with limited mobility, some of the community gardens that have been established, particularly in conjunction with other community facilities, like senior citizens facilities, like community centres, were a really valued resource for our community and for those elements of the community that had particular challenges in terms of mobility. So it was typically those places where people felt safe and familiar, that they were not going to stand out too much, that their children felt comfortable using those spaces.³⁶

The evidence clearly highlights both the challenges and potential for public open space to contribute to social cohesion. Cultural and linguistic diversity, gender, socio-economic background and age all impact on how a particular demographic group uses public space, and how planning and maintenance decisions could take into account the ways in which these different needs interact.

FINDING 24: Public open space serves the whole of the Victorian community, but different members of the community have different needs and preferences that affect how they interact with environmental infrastructure.

Ms Jewell's reference to the specific needs of older community members was echoed in other evidence the Committee received. For example, Associate Professor Pazit Levinger, Senior Research Fellow, National Ageing Research Institute (NARI), stated that NARI is:

working on age-friendly communities, and what we witness and what we see quite often is that recreational outdoor space and parks are mainly focused on facilities and

³⁴ Ms Rachel Ollivier, General Manager, City Sustainability and Strategy, City of Darebin, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 33.

³⁵ Ms Kate Jewell, Coordinator, City Strategy and Place Planning, Glen Eira City Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 33.

³⁶ *Ibid.*, pp. 33–34.

amenities that cater for the younger demographic. You see a lot of sports facilities, but very rarely are older people's needs actually catered for or taken into account. So really for us we highly advocate making sure the design is very careful, that your landscapers or city designers are aware of things around locations and the environment, accessibility—that it is actually suitable for all ages and also all abilities.³⁷

There is a broad consensus among demographers that in the coming decades Victoria's population (in common with the rest of the nation) will continue to both grow and age. According to the Productivity Commission, the:

population aged 75 or more years is expected to rise by 4 million from 2012 to 2060, increasing from about 6.4 to 14.4 per cent of the population. In 2012, there was roughly one person aged 100 years old or more to every 100 babies. By 2060, it is projected there will be around 25 such centenarians.³⁸

Environmental infrastructure in Victoria can play a role in ensuring that the needs of this growing cohort are met, while also securing social cohesion. Assistant Professor Levinger stated that there is a need for:

better guidance and overarching state policy that caters for that age group [e.g. 60 years and over]—really to help with a better decision-making process. We do see a fair bit of fragmentation within councils, within the structures, and we hope with our partnership we are able to get all of them at the same table. So when you have a landscape within the policy and within marketing and promotion and with the positive ageing team, it is a better way to actually make sure design is suitable.³⁹

One way of addressing these needs is to take an approach to the design of public open space that aims to make the available environmental infrastructure suitable for multiple uses by a diverse range of users. Such an approach could be developed in a series of state-wide guidelines to assist local government in delivering on this goal. There are already resources developed that could help in the formulation of such guidelines. For example, researchers associated with NARI have published 'Guidance about age-friendly outdoor exercise equipment and associated strategies to maximise usability for older people'.⁴⁰

This design activity is being actively supported by several councils in Victoria, under the title of 'Exercise interveNtion outdoor proJect in the cOmmunitY for older people' or ENJOY.⁴¹ It is a partnership between NARI and Whittlesea City Council, Wyndham City Council, Old Colonists' Association of Victoria and Gandel Philanthropy.⁴² This has

³⁷ Associate Professor Pazit Levinger, Senior Research Fellow, National Ageing Research Institute, public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 19.

³⁸ Productivity Commission, *An Ageing Australia: Preparing for the Future*, Commission Research Paper, Canberra, 2013, p. 2.

³⁹ Associate Professor Pazit Levinger, *Transcript of evidence*, p. 20.

⁴⁰ Pazit Levinger, et al., 'Guidance about age-friendly outdoor exercise equipment and associated strategies to maximise usability for older people', *Health Promotion Journal of Australia*, vol. 32, no. 3, 2020.

⁴¹ See, Pazit Levinger, et al., 'Exercise interveNtion outdoor proJect in the cOmmunitY for older people - the ENJOY Senior Exercise Park project translation research protocol', *BMC Public Health*, vol. 19, no. 933, 2019.

⁴² See National Ageing Research Institute, *The ENJOY Trial: Exercise interveNtion outdoor proJect in the cOmmunitY*, <<https://www.nari.net.au/the-enjoy-trial>> accessed 29 July 2021.

led to ‘Seniors Exercise Parks’ being built in Ballarat (Figure 4.4), Ivanhoe, Thomastown and elsewhere.⁴³ Such amenities not only have health benefits similar to those outlined in this chapter; they also have important social cohesion benefits, as they send a clear message that environmental infrastructure in those communities is intended to be used by all members of the community.

Figure 4.4 Seniors Exercise Park, Mount Pleasant Reserve, Ballarat



Source: Lark Industries, *Mt Pleasant Reserve Seniors Park, Mount Pleasant VIC*, <https://www.larkindustries.com.au/portfolio_post_list/mt-pleasant-reserve-seniors-parks-mount-pleasant-vic> accessed 26 November 2021.

Alongside the evidence provided by research groups and councils, the Committee also heard from individual Victorian residents who support the multi-use approach. Ms Kathryn Stanislawski, for example, called for:

Diversification in areas where existing investment (such as recreation reserves) could enable them to be upgraded to make them more multi-use spaces. Many areas are only used on weekends for matches and some weeknights for training – often only for a few hours and not all year round. We should make the investment into these spaces achieve more for the whole of the community.⁴⁴

A similar approach was also recommended by some peak bodies. The submission from Parks and Leisure Australia (Vic/Tas) called for:

⁴³ National Ageing Research Institute: *What is the Seniors Exercise Park?*, <<https://www.nari.net.au/seniors-exercise-park>> accessed 11 November 2021.

⁴⁴ Kathryn Stanislawski, *Submission 40*, received 14 September 2020, p. 1.

The co-location of playgrounds, outdoor exercise equipment and skate parks to better use space and encourage intergenerational play should be promoted. Alongside outdoor exercise equipment and skate areas, playgrounds can also consider co-locating with multi-court spaces. These spaces allow participation in unstructured tennis/basketball etc without the need to commit to club structures or timelines. Many people are seeking out these opportunities as they are time poor or lack the skill or interest in competitive or club based activities. The maintenance and development of appropriately designed spaces in popular and accessible sites is key to their success ...

It is important that local governments aim to provide a range of activity types, challenges, opportunities and diversity across the public open spaces. Parks and public open spaces generally have their own unique character and charm. With good design and commitment to ensuring that the local character and environment is protected and enhanced (e.g. trees, vegetation types, view lines, etc) our public open spaces will continue to be valued and respected by the public.⁴⁵

Mr Sam Taylor, Member, Vic/Tas Regional Council, Parks and Leisure Australia, expanded on this point during the Committee's public hearings, noting that:

The other really critical one that we are seeing more and more in a non-traditional way is the co-locating of facilities together, so we have got a number of facilities now that include maybe some outdoor gym equipment for older adults, a skate area, a learn-to-ride area, a playground, and so the whole family goes into one place and can sort of exercise and be physically active together. We are seeing that is really important. Probably the critical part of it is getting into those dead spaces that traditionally have not been well used, like underneath bridges, and that have not been well utilised and trying to get some use out of those spaces. Where we are already seeing the benefits is that what these spaces are doing is attracting people into recreation who traditionally do not participate, so be that CALD groups, young females as another example, people with disabilities—so trying to engage those groups by making the offering slightly different, I suppose.⁴⁶

The above evidence suggests that there is substantial potential for both local and State government to play a greater role in ensuring that environmental infrastructure offers a wide range of activities and caters to all demographics. To do this, the Government can draw upon innovative design and policy processes that enable new and existing public open space to have multiple uses. This work should not occur solely at the State level—as the Committee has heard, there are examples of individual councils doing valuable work in this area that could be studied and adopted more broadly.

One example of this is the City of Melbourne's *Skate Melbourne Plan 2017–2027*.⁴⁷ Mr Taylor, of Parks and Leisure Australia, highlighted this plan, stating that:

the stuff the City of Melbourne are doing around allowing some spaces in the city to be used for people to skate, so not creating skate parks as such but just designing areas

⁴⁵ Parks and Leisure Australia (Vic/Tas Region), *Submission 188*, received 28 September 2020, pp. 7–8.

⁴⁶ Mr Sam Taylor, Member, Vic/Tas Regional Council, Parks and Leisure Australia (Vic/Tas Region), public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 9.

⁴⁷ City of Melbourne, *Skate Melbourne Plan 2017–2027*.

in a way that can allow for that type of use, for people to use it for skating and those things, but also still be usable space for people to migrate through or to sit in and those types of things.⁴⁸

The plan aims to do three things. It looks to develop more multi-use spaces throughout the City for all users; it encourages a healthy and diverse skating culture; and plans for adequate spaces for all skating styles.⁴⁹ While the strategy is aimed at a particular sport, it offers lessons for all levels of government. The plan looks holistically at the sport and notes that skating provides several benefits:

- It is an active and creative recreational activity.
- It injects vibrancy, culture, and economic benefits to urban spaces.
- It makes spaces safer by increasing natural surveillance.
- Skate facilities have high usage volumes for small footprints, and can be cheaper to maintain than other recreational infrastructure.
- Well-designed spaces attract national and international visitors.
- It is a global industry and a potential career path for some, especially as skating is now an Olympic sport.⁵⁰

The Committee notes that several of these benefits also apply to a range of other activities that can be built into multi-use space (e.g. basketball and netball rings, handball courts, children's water pumps / fountains and outdoor performance spaces). Ensuring public open space is used throughout the day can also increase the safety of a space. It also has the potential to increase the amenity of the space for women and gender diverse people while addressing safety concerns, which the Committee heard can inhibit the use of public open space.⁵¹

Similarly, the potential for skating spaces to deliver high usage volumes relative to their small footprints, and their ability to be incorporated into shared spaces, may provide a model for the co-location of other facilities in new environmental infrastructure.

One example that fulfills the goals highlighted by the City of Melbourne is the Neil Street Reserve in Carlton. This 'neglected and disused section of road in an inner-Melbourne suburb was redeveloped into neighbourhood public open space ... between 2014 and 2015'.⁵² The reserve is a good illustration of both the repurposing of underused space as environmental infrastructure and the principles of co-location and multiple use. According to Landezine, an international landscape architecture website:

48 Mr Sam Taylor, *Transcript of evidence*, p. 9.

49 See City of Melbourne, *Skate Melbourne Plan 2017-2027*, p. 7.

50 Ibid.

51 See, for example, Ms Brooke McKail, *Transcript of evidence*, p. 43.

52 See Landezine International Landscape Award, *Grey to Green: Neill Street Reserve*, <<https://landezine-award.com/grey-to-green-neill-street-reserve>> accessed 29 July 2021. See also City of Melbourne, *Neighbourhood and local parks and reserves*, <<https://www.melbourne.vic.gov.au/community/parks-open-spaces/guide-to-parks/pages/neighbourhood-local-parks-reserves.aspx>> accessed 29 July 2021.

The final design responded to the complex levels and access issues by locating sports courts on the flatter areas of the site. Areas for community gatherings were situated in the most central, least overshadowed areas, while passive spaces were positioned in quieter areas near a local Church. The multipurpose sports courts were refined to suit the competing demands for basketball, volleyball, bike polo, futsal and netball. Robust design detailing was also added to accommodate skateboard and BMX use, in recognition of the recreation value of these activities and the inevitability of them taking place.

Paths shared between pedestrians and bicycles were designed for universal access and the park was lit with LED public lighting. The contaminated soil was used for benching under the concrete slabs of the sports courts, which saved the substantial cost of disposing the soil off-site. To soften the new 'hard' scape, 35 existing mature trees were retained, while 96 new trees and 10 mature palms were planted along the length of the park.⁵³

RECOMMENDATION 18: That the Victorian Government work with local councils to identify opportunities for multi-use environmental infrastructure and the co-location of facilities for use by State Government agencies and local government.

4.2.2 Gender equity

As highlighted by the evidence discussed above, one of the ways in which improvements to environmental infrastructure can help increase social equity is by encouraging the use of such infrastructure by women and gender diverse people. A key area here is women's involvement in organised sport.

The success of the AFL Women's (AFLW)—the Australian Rules professional competition for women—has been particularly notable in Victoria in recent years. The popularity of the AFLW has also been credited with significantly boosting the participation of women and girls in Australian Rules Football and sport more generally. While the impact of COVID-19 on participation rates is not yet clear, data from 2019 suggests there has been a surge in female participation. As the Commonwealth-backed Ausplay survey of 20,000 Australians has revealed:

The number of women over the age of 15 who participated in Australian rules football at least once a week has nearly doubled, from 32,000 in 2017 to 60,000 in 2018, according to the survey.⁵⁴

Figures released by the AFL in 2018 show a 14.2% spike in growth over the same period, and a total of 530,166 females playing the game.⁵⁵ Similarly, the Football Federation

⁵³ Landezine International Landscape Award, *Grey to Green: Neill Street Reserve*.

⁵⁴ Yan Zhuang, 'Number of women playing footy surges post AFLW', *The Age*, 29 April 2019, <<https://www.theage.com.au/sport/afl/number-of-women-playing-footy-surges-post-aflw-20190429-p51i5j.html>> accessed 29 July 2021.

⁵⁵ See Mitch Cleary, *Females lead big rise in football participation rate: Females now make up almost a third of all football players, new figures show*, <<https://www.afl.com.au/news/100303/females-lead-big-rise-in-football-participation-rate>> accessed 29 July 2021.

of Australia (FFA) noted in March 2020 that the number of women and girls playing football had risen to record levels, highlighting growth of 11% in female participation.⁵⁶ While this growth in female participation in sport is widely celebrated, it has also created challenges, particularly for some local councils.

For example, Mr Luke Connell, Manager, Policy, Design and Growth Area Planning, Cardinia Shire Council, noted that the challenges of delivering new infrastructure with current levels of developer contributions (see Chapters 5, 6 and 7), 'is compounded now with the amazing levels of female involvement in AFL and cricket et cetera, which is something that lots of councils are dealing with'.⁵⁷ The submission from Yarra Ranges Shire Council made a similar point:

the unprecedented growth in female participation in traditional male dominated sports that has reinforced the inadequacy of the current open space provision for structured sport. Yarra Ranges has seen an increase of over 2,000 women and girls playing Aussie Rules, Cricket and Soccer over the past three years, with many clubs doubling the use of already stretched facilities.⁵⁸

Mr Taylor, of Parks and Leisure Australia, outlined the challenge currently facing councils and other managers of environmental infrastructure:

The reason we are really seeing the pressure there [on existing sporting facilities] more than anything is the growth of female participation in non-traditional female sports, which is a fantastic thing to be happening. We are seeing the exponential growth in women and young girls participating in football, soccer and cricket—particularly AFL, and we link that to the AFLW being so successful. That is creating pressure on grounds, just in terms of allocations. Many inner-city councils just do not have enough grounds to allocate to the number of teams now that are participating. We are investigating at the moment, for example, pushing into night matches and more intensive use of those grounds. Obviously it comes with more cost when they play on those grounds et cetera—but then, yes, as you mentioned, a big focus as well on changing facilities and effectively expending millions to incorporate more changing rooms. ... there is definitely real pressure across both ovals and facilities.⁵⁹

In 2017, the Victorian Government published its Female Friendly Sport Infrastructure Guidelines, which were developed following engagement with community organisations, academic researchers and sporting groups.⁶⁰ The guidelines highlight a range of factors aimed at supporting female friendly sporting infrastructure, including:

- Buildings and surrounding areas that offer supporting resources, including:
 - unisex change facilities that cater for the needs of both males and females

⁵⁶ FFA Media, *Census 2019: Women and girls drive huge increase in football participation*, 2020, <<https://www.myfootball.com.au/news/women-and-girls-drive-huge-increase-football-participation-2>> accessed 29 July 2021.

⁵⁷ Mr Luke Connell, Manager, Policy, Design and Growth Area Planning, Cardinia Shire Council, public hearing, via videoconference, 10 March 2021, *Transcript of evidence*, p. 3.

⁵⁸ Yarra Ranges Council, *Submission 195*, received 28 September 2020, p. 3.

⁵⁹ Mr Sam Taylor, *Transcript of evidence*, p. 10.

⁶⁰ See Sport and Recreation Victoria, *Female friendly sport infrastructure guidelines*, 2017, <<https://sport.vic.gov.au/publications-and-resources/female-friendly-sport-infrastructure-guidelines>> accessed 29 July 2021.

- inviting community spaces
- prioritisation of safety (Crime Prevention Through Environmental Design - CPTED)
- clean and easily accessible facilities
- adequate lighting in and around the facility
- family friendly attributes including baby change amenities
- Organisations that offer supporting resources, including:
 - inclusive policies and practices
 - flexible timing of programs and competitions to cater for families-children's care
- Equality in use and flexibility in scheduling to encourage all participants.⁶¹

The guidelines emerged from a recommendation of the *Inquiry into Women and Girls in Sport and Active Recreation*, which was established in 2014 to advise the Victorian Minister for Sport on the actions that could be undertaken to increase participation by women and girls in sport and active recreation.⁶² The recommendation and actions in the report were expected to be implemented over five years starting from 2015. Of particular relevance to the current Inquiry is recommendation 6, which states:

6. Deliver female friendly built environments and equitable facility usage policies

To achieve the equitable provision of, and access to, high quality female friendly sport and active recreation facilities, which will support existing and new participation opportunities, state and local government, as well as the sector must work together to implement the following actions:

- Ensure that the built environment is appropriate by applying universal design principles and other good design considerations.
- Encourage facility owners and managers to review access and usage policies to ensure females have a fair share of access to the highest quality facilities at the best and most popular times. Usage policies need to consider not just competition time, but training times, and the distribution between traditional competition and other participation opportunities, as well as different sports.
- The advisory panel acknowledges that there are already a number of local government authorities (the primary owners of community sport and active recreation facilities) that are already active in developing policies, strategies and audit tools to address access and use. Facilitating a universal adoption of these practices will drive change further.
- Address safety issues. There has been work over many years by local government on effective built environment design principles to reduce crime and improve sport and active recreation environments, which are often isolated places at night and

⁶¹ See *ibid.*

⁶² See report: *Inquiry into Women and Girls in Sport and Active Recreation, A Five Year Game Plan for Victoria, 2015.*

during other off peak usage periods, should be regularly assessed to address safety concerns.⁶³

The Committee notes that the Government has accepted this recommendation, along with the other recommendations contained in the report. The Government has also established the *Change our Game* website in response to the report (<https://changeourgame.vic.gov.au>) which states that the Government is working with the sport and recreation sector, as well as local governments and other partners, to implement the recommendations contained in the report.⁶⁴

FINDING 25: The significant increase in female participation in organised sport has created a pressing need to ensure that sporting facilities are accessible to all genders.

RECOMMENDATION 19: That the Victorian Government report, including via the Change our Game website, on the progress made in relation to the actions contained in recommendation 6 of the *Inquiry into Women and Girls in Sport and Active Recreation*.

4.2.3 The importance of community engagement

Community engagement (also referred to as public engagement) can be defined as:

a planned process with the specific purpose of working with individuals and groups to encourage active involvement in decisions that affect them or are of interest to them.

Engagement refers to the range of opportunities stakeholders and the community have to participate in a project from educating individuals or groups about a project; obtaining community feedback at a key project stage or milestone; or working collaboratively with stakeholders to address local issues.⁶⁵

Maximising the social benefits of environmental infrastructure requires effective community engagement. Given that community use of environmental infrastructure, and particularly public open space, is both a positive for the health of the State's residents (as demonstrated in Chapter 2) and aids in social cohesion (as discussed above), every effort should be made to ensure widespread community involvement in the provision and renewal of environmental infrastructure.

Effective community engagement goes beyond surveying and acknowledging community attitudes and includes, firstly, a commitment to build and renew environmental infrastructure in a way that encourages and facilitates community involvement, and, secondly, where possible, the co-design and co-production of

⁶³ Ibid., p. 31.

⁶⁴ Victorian Government, *Change Our Game: Working to level the playing field for women and girls in sport and active recreation*, <<https://changeourgame.vic.gov.au/home>> accessed 1 September 2021.

⁶⁵ Engage Victoria, *About Us*, <<https://engage.vic.gov.au/about>> accessed 29 July 2021.

facilities with the community that the infrastructure will service. As Dr Dobbie, of the Australian Institute of Landscape Architects, stated:

the opportunities for co-production of environmental and green infrastructure with a range of stakeholders, including community members, ensures buy-in, ownership and ultimately success in ensuring that the various functions that the place has been designed to provide are those which the local community desire, and by having a sense of ownership the local community is then much more inclined to use it but also to help take care of it. And especially when we are talking about green infrastructure, which is designed to fulfil specific technical functions often reliant on ecological functions of that landscape, a sense of ownership is likely to enhance a responsibility, a care towards the landscape, and if people care for it, they will value it, and if they value it, they are much more likely to ensure its survival.⁶⁶

The Committee heard evidence on the importance of community engagement from a diverse group of stakeholders.

Mr Jayden Mizzi, Team Leader, Growth and Investment Strategic Planning, City of Casey, noted that community engagement itself revealed the importance of quality environmental infrastructure for social cohesion, noting that ‘park cleanliness and lack of maintenance was the top reason why residents felt less connected to the place they live’.⁶⁷

Similarly, Mr Matthew Kerlin, Coordinator of Strategy and Policy, Greater Bendigo City Council, noted ‘the importance of green spaces and our walking and cycling paths to the community and to the community’s mental wellbeing, and we are seeing that a lot through the community engagement that we have already undertaken’.⁶⁸

The Committee also received several submissions from individuals and community organisations who emphasised the importance of effective community engagement in the delivery of environmental infrastructure.⁶⁹

This view was also expressed by Infrastructure Victoria, which noted in its submission that a community engagement exercise undertaken by the agency in late 2019:

concluded that quality urban design is the most important principle for [urban] density and it *must* include green space – more than the bare minimum – and should maintain the integrity of the natural environment. Participants specified that green space should be provided to levels higher than the bare minimum, to encourage more trees and plants that create shade, cool areas and genuinely pleasant visual experiences beyond the standard requirements.⁷⁰

⁶⁶ Dr Meredith Dobbie, *Transcript of evidence*, p. 41.

⁶⁷ Mr Jayden Mizzi, Team Leader, Growth and Investment Strategic Planning, City of Casey, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 5.

⁶⁸ Mr Matthew Kerlin, Coordinator of Strategy and Policy, Greater Bendigo City Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, p. 24.

⁶⁹ See, for example, Mark Gordon, *Submission 46*, received 17 September 2020; David Taylor, *Submission 151*, received 28 September 2020; Friends of Steele Creek, *Submission 158*, received 28 September 2020; Environmental Justice Australia, *Submission 161*, received 28 September 2020; Port Phillip EcoCentre, *Submission 197*, received 28 September 2020; Goulburn Broken Greenhouse Alliance and Central Victorian Greenhouse Alliance, *Submission 229*, received 1 October 2020.

⁷⁰ Infrastructure Victoria, *Submission 149*, received 28 September 2020, p. 7. See also their report *Density Done Well*, included as an appendix to this submission.

This level of community engagement, typically done through surveys or similar exercises in data gathering, is important in guiding the overall strategic approach to renewing and developing environmental infrastructure, and with careful design should enable governments to determine where the equity gaps are. Melbourne Water's Yarra Strategic Plan (discussed in detail at Section 4.3.2) is a good example of best practice in this area.⁷¹

The Committee notes that under the *Local Government Act 2020* (Vic), Victorian local councils are required to adopt and maintain a community engagement policy, which gives effect to community engagement principles (sections 55 and 56 respectively).

FINDING 26: Effective community engagement by Victoria's local councils significantly enhances the suitability and quality of both new and upgraded open space.

4.2.4 Volunteering and environmental infrastructure

Environmental infrastructure can also facilitate social cohesion by providing a wide variety of community volunteering opportunities. The Committee received substantial evidence of a high level of volunteer engagement in securing and maintaining environmental infrastructure within metropolitan Melbourne and Victoria's regional centres. This theme was particularly strong in the submissions provided by individuals and community groups.⁷²

Dr Gillian Sparkes, the Commissioner for Environmental Sustainability Victoria, noted that volunteering is central to community engagement with environmental infrastructure:

Victorians support environmental conservation extensively through volunteering. For example, Parks Victoria engages an extensive community network across the State, including 234 volunteer (or volunteer-involving) organisations. The Victorian Government's Biodiversity 2037 plan recognises the value of Victorians connecting with nature in order to improve their health and wellbeing and achieve environmental

71 See Melbourne Water, *Yarra Strategic Plan*, 2021, <<https://www.melbournewater.com.au/about/strategies-and-reports/yarra-strategic-plan>> accessed 29 July 2021.

72 See, for example, Friends of Damper Creek Reserve, *Submission 4*, received 17 August 2020; Friends of Bats and Bushcare Inc., *Submission 7*, received 19 August 2020; Friends of Wilson Botanic Park Berwick, *Submission 28*; Friends of the Great South West Walk, *Submission 30*, received 4 September 2020; Friends of Drouin's Trees, *Submission 31*, received 7 September 2020; Friends of Scotchmans Creek and Valley Reserve Inc., *Submission 36*, received 11 September 2020; Friends of the Yarra Valley Parks Inc., *Submission 45*, received 17 September 2020; Friends of the Australian Botanic Gardens Shepparton, *Submission 53*, received 21 September 2020; Friends of Lake Knox Sanctuary, *Submission 70*, received 23 September 2020; Friends of Braeside Park, *Submission 87*, received 25 September 2020; Friends of Edithvale Seaford Wetlands, *Submission 92*, received 25 September 2020; Friends of the Barwon, *Submission 97*, received 25 September 2020; Friends of Buckley Falls, *Submission 121*, received 27 September 2020; Newlands Friends of the Forests, *Submission 127*, received 27 September 2020; Friends of the Glenfern Green Wedge, *Submission 128*, received 27 September 2020; Friends of Steele Creek, *Submission 158*; Friends of Canadian Corridor, *Submission 164*, received 28 September 2020; Friends of the Box Ironbark Forests (Mount Alexander Region), *Submission 177*, received 28 September 2020; Friends of Leadbeater's Possum, *Submission 205*, received 28 September 2020; Ironbark Gully Friends, *Submission 207*, received 28 September 2020; Friends of Edwards Point, *Submission 218*, received 30 September 2020; Friends of Merri Creek, *Submission 221*, received 30 September 2020; Friends of the Earth Melbourne, *Submission 231*, received 2 October 2020; Kinglake Friends of the Forest, *Submission 235*, received 5 October 2020; Friends of Newport Lakes, *Submission 241*, received 12 October 2020.

protection objectives. Volunteers often require strong environmental infrastructure in order to achieve these objectives, but also contribute to the maintenance of environmental infrastructure through their activities.⁷³

This last point is crucial. While growing populations can place additional stress on existing environmental infrastructure, this growth can also be utilised to increase community involvement in the maintenance of environmental infrastructure and the support of Victoria's conservation efforts. As the Commissioner noted, research by Parks Victoria 'found that the largest proportion of volunteer activities [undertaken within Parks Victoria supervised locations] were focused on habitat restoration, followed by environmental research, historic heritage conservation and gardening'.⁷⁴

Parks Victoria also acknowledged the importance of volunteers and volunteer organisations in its evidence to the Committee and advised that it factors this involvement into its strategic considerations.⁷⁵

Volunteer involvement with environmental infrastructure is especially important in rural and regional areas where the relative size of some environmental infrastructure means that maintenance and upkeep can be more financially challenging. The Castlemaine Landcare Group noted that volunteering can also foster a sense of community ownership of environmental infrastructure.⁷⁶ DELWP's *Victorians Volunteering for Nature: Environmental Volunteering Plan* (2018) supports this position, noting that 'stronger community connection' is one of the valuable aspects of volunteering.⁷⁷ This can create a virtuous circle, whereby volunteering improves the quality and amenity of the environmental infrastructure, which fosters community engagement and enjoyment, which in turn reinforces volunteer involvement.⁷⁸

This ongoing volunteer engagement is not without its challenges, however. Ms Claire Ferres Miles, Chief Executive Officer, Sustainability Victoria, noted that:

One of the big learnings that we have found is there is a key issue in the environmental portfolio about volunteer burnout. There are people in our communities who are really passionate but just are stretched too thin and they just run out of hours, and so a key part of the community power hubs program is actually having funding from government to pay for a staff member to support the community groups in terms of building their capacity.⁷⁹

⁷³ Commissioner for Environmental Sustainability, *Submission 228*, received 10 October 2020, p. 9.

⁷⁴ Ibid.

⁷⁵ Mr Stuart Hughes, Director, Park Planning and Policy, Parks Victoria, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, p. 4.

⁷⁶ Castlemaine Landcare Group, *Submission 203*, received 28 September 2020, p. 3.

⁷⁷ Department of Environment, Land, Water and Planning, *Victorians Volunteering for Nature: Environmental Volunteering Plan*, 2018, p. 5.

⁷⁸ See, for example, Robyn Molsher and Mardie Townsend, 'Improving Wellbeing and Environmental Stewardship Through Volunteering in Nature', *EcoHealth*, vol. 13, 2016; Thomas G. Measham and Guy B. Barnett, 'Environmental Volunteering: motivations, modes and outcomes', *Australian Geographer*, vol. 39, no. 4, 2008.

⁷⁹ Ms Claire Ferres Miles, Chief Executive Officer, Sustainability Victoria, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, p. 17.

The Committee heard calls for similar support from other organisations. For example, the Phillip Island Conservation Society recommended that the government provide 'Further support for Landcare and Coastcare financially and ... administrative support to continue their work involving volunteers, staff and contractors in large-scale planting, weeding, etc.'⁸⁰ The Werribee River Association highlighted the pressure on volunteers collecting litter.⁸¹ Baw Baw Shire argued that 'There is chronic underinvestment and a lack of support for these voluntary committees [of management], which can result in cost shifting between levels of government'.⁸²

Finally, the submission from Friends of the Earth Melbourne highlighted the Urban Forests and River Keepers Project, which aims:

to educate and train unemployed youth and mature age volunteers, and could also fulfil Centrelink's mutual obligation requirements, in urban forestry and river management skills. It would provide a study stream and a pathway to future traineeships, apprenticeships and employment opportunities. The project would support existing urban environmental projects to reduce the impacts of climate change and contribute to the rehabilitation, conservation and management of the Yarra River and surrounding urban bushland areas in the City of Melbourne and City of Yarra.⁸³

The Committee notes that the Government has established the Volunteer.vic website to lead the development of a state-wide volunteering strategy, see:

www.volunteer.vic.gov.au/victorian-volunteer-strategy.

FINDING 27: Volunteers, particularly in the form of community groups, play an invaluable role in securing and maintaining Victoria's environmental infrastructure and in contributing to community cohesion. However, both the Victorian Government and local governments have yet to unlock the full potential of the volunteer sector with respect to the provision and maintenance of environmental infrastructure.

RECOMMENDATION 20: That the Victorian Government, as part of the Victorian Volunteer Strategy, work with local government to develop a strategic approach to volunteering for the establishment and maintenance of environmental infrastructure, and review the level and type of support available to volunteer groups focused on parks and open spaces.

RECOMMENDATION 21: That the Victorian Government work to identify and eliminate the barriers to participation in improving and maintaining environmental infrastructure by volunteer groups.

⁸⁰ Phillip Island Conservation Inc, *Submission 74*, received 24 September 2020, p. 3.

⁸¹ Werribee River Association, *Submission 152*, received 28 September 2020, p. 3.

⁸² Baw Baw Shire, *Submission 199*, received 28 September 2020, p. 5.

⁸³ Friends of the Earth Melbourne, *Submission 231*, p. 8.

4.2.5 Community gardens

As a form of environmental infrastructure, community gardens play a unique role in building social cohesion. Community gardens are parcels of land on public and private property gardened by members of the community, usually in partnership with a non-profit organisation or a local council. The land used for community gardens is owned by different entities, but broadly the main owners include local governments, schools, churches and religious organisations, and State Government housing estates.

The Committee received several submissions from individuals who expressed strong support for community gardens.⁸⁴ For example, Ms Anne Heath Mennell identified the potential that community gardens, along with urban farms and private gardens, could play in a vision of the near future for Victoria:

All new housing in the future has access to usable gardens of some kind, whether private, communal or cooperative, on the ground, on walls or on roofs. Urban farms and community gardens are common, allowing people to source fresh food to supplement whatever they produce themselves.

...

Permaculture principles, which emulate the way nature works, have changed people's thinking about their gardens, in terms of design, food production and sustainability.

...

Gardens in this Victoria of the future are not only productive, but beautiful as well ... Victoria is once again known as the Garden State.⁸⁵

Ms Brooke McKail, Manager Policy and Research, VCOSS, described the increasingly important contribution that community gardens make to social cohesion:

I would also like to add that community gardens are a wonderful addition to public green space. There are community gardens being run by community organisations, including VCOSS members, all over the state. They depend on funding and access to land, which is not always easy to secure. There are some really fantastic examples, including of community gardens established around public housing properties that are not only improving access to nutritious and affordable food for those families and households but also teaching people about growing their own produce, improving food literacy and encouraging residents to come together and socialise.⁸⁶

⁸⁴ See Gordon, *Submission 46*; Amy Henson, *Submission 71*, received 23 September 2020; Anne Heath Mennell, *Submission 102*, received 25 September 2020.

⁸⁵ Heath Mennell, *Submission 102*, p. 6.

⁸⁶ Ms Brooke McKail, *Transcript of evidence*, p. 43.

VCOSS recommended in its written submission that the Government provide direct funding for community gardens, along with healthy eating education programs.⁸⁷ VCOSS stated in its submission that:

Establishing new community gardens should be encouraged and could be incorporated into plans for constructing new parks or redeveloping existing ones. Budgets for maintaining green space could also include funding for local organisations to maintain these assets and lead education programs about healthy eating.⁸⁸

The final report of this Committee's *Inquiry into tackling climate change in Victorian communities* recommended that 'the Victorian Government establish a small grants program for neighbourhood houses and community groups to establish, maintain or improve community gardens'.⁸⁹ This recommendation was supported in principle by the Government, which also noted that:

The Victorian Government currently supports community gardens indirectly via funding mechanisms to agencies such as VicHealth and other organisations including Cultivating Communities.

In combination with support for community gardens provided by a number of local councils across Victoria, the Government maintains that existing avenues are the most appropriate to support community gardens and deliver place-specific outcomes for the community.⁹⁰

When asked about the role that the Government could play in encouraging and supporting community gardens, Ms McKail suggested that:

In terms of what the state government can do, I guess the thing that comes to immediate mind for us is the vital role that organisations like neighbourhood houses play and community hubs play in bringing people together to identify these needs to maintain gardens. I think they are organisations that are always struggling, they are organisations that have limited capacity—groups like neighbourhood houses. So I think there is a recognition and a role that the state government can play in strengthening those really local small community-based organisations that lead and foster this work, that have their connections to their community. They are often based near public housing towers or they are based in low-income communities, so they really have that reach to be able to enable these kinds of projects that have the great outcomes.⁹¹

The Committee also received evidence on the role that the Government could play in the creation of community gardens within existing but underused environmental infrastructure. For instance, Ms Bronwen Hamilton, Manager, Victorian Design Review Panel, Office of the Victorian Government Architect, observed that:

⁸⁷ Victorian Council of Social Service, *Submission 252*, received 30 October 2020, p. 4.

⁸⁸ Ibid.

⁸⁹ Parliament of Victoria, Legislative Assembly Environment and Planning Committee, *Inquiry into tackling climate change in Victorian communities*, November 2020, p. 205.

⁹⁰ Government of Victoria, *Response to the Parliament of Victoria, Legislative Assembly Environment and Planning Committee, Inquiry into tackling climate change in Victorian communities*, 24 June 2021, p. 40.

⁹¹ Ms Brooke McKail, *Transcript of evidence*, p. 47.

there are parts also of Melbourne Water’s infrastructure, who I understand is the largest landholder in Melbourne, where the green area covered over pipelines is being used by communities for community gardens—not hard infrastructure, but it is ... multi-use and extending the access to green space that communities have.⁹²

FINDING 28: Community gardens are an increasingly important form of environmental infrastructure for growing communities across Victoria, with immense potential to build community cohesion and promote sustainability.

RECOMMENDATION 22: That the Victorian Government review existing policies on community gardens with the aim of improving coordination amongst government owners and managers of environmental infrastructure to identify and support suitable sites for community gardens.

RECOMMENDATION 23: That the Victorian Government develop a pilot or trial scheme to fund community gardens located in one or more public housing estates.

4.3 Involvement of Traditional Owners

Victoria’s Traditional Owners have a unique and important role to play in the management and development of environmental infrastructure throughout the State. This section discusses: the connection between Aboriginal cultural heritage and environmental infrastructure; the connection between environmental infrastructure and Victoria’s treaty process; and the Yarra Strategic Plan, as a model of successful engagement and co-management between the Government and Traditional Owner organisations.

Aboriginal Victoria noted in its submission that the ‘protection of Aboriginal cultural heritage is a necessary part of planning decisions in relation to urban development’ in Victoria.⁹³

Aboriginal Victoria also stated in its submission that ‘The protection and management of Aboriginal cultural heritage is relevant to the Inquiry’s consideration of how environmental infrastructure is secured’⁹⁴ and that:

the setting aside of environmental assets and infrastructure in areas being opened up to development is an avenue and an opportunity for protecting and promoting Aboriginal cultural heritage. Many of the types of environmental infrastructure ... parks, open space, forest and bushland, wildlife corridors and waterways – may fit the definition of ‘areas

⁹² Ms Bronwen Hamilton, Manager, Victorian Design Review Panel, Office of the Victorian Government Architect, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 47.

⁹³ Aboriginal Victoria, *Submission 34*, received 11 September 2020, p. 2.

⁹⁴ *Ibid.*, p. 1.

of cultural heritage sensitivity.’ Setting aside such places from intensive development, where they contain Aboriginal cultural heritage, can facilitate compliance with the [Aboriginal Heritage] Act. It can also add substantially to the other environmental and recreational values being protected in open spaces, parks and reserves.⁹⁵

Several other submissions called for ongoing or increased consultation and engagement with Traditional Owners in future planning for environmental infrastructure.⁹⁶

Notably, the Yarra Riverkeeper Association stated in its submission that:

In any consideration of environmental infrastructure Traditional Owners must be placed front and centre. Traditional Owner values within parklands need to be mapped as a matter of urgency. The steps that need to be taken to restore cultural values need to be taken urgently, including cultural flows for waterways. Traditional owner management participation in any management body, such as Green Infrastructure Victoria or a taskforce, is a necessity to understand the full extent of the value of environmental infrastructure. It should be a matter of priority to employ First People rangers to maintain, protect and improve our green infrastructure.⁹⁷

Environmental Justice Australia also stated that the Government’s approach to environmental infrastructure should:

not only be guided by models of ecological protection, recovery and restoration ... but also by models of cultural restoration led by Traditional Owners. This may be a protracted and uneven process but it is an essential one ... Such an approach should be extended in a systematic or programmatic fashion to all key natural sites across urban and peri-urban areas, especially those identified as priorities by Traditional Owners.⁹⁸

RECOMMENDATION 24: That the Victorian Government take further steps to improve involvement of Traditional Owners in the planning, development and management processes around environmental infrastructure.

4.3.1 Victoria’s treaty process and environmental infrastructure

The Victorian Government is currently undertaking a process of treaty making with Aboriginal Victorians. A treaty is an agreement between sovereign entities, such as states, nations or governments. Treaties can also include agreements between Indigenous peoples and a relevant government, as has occurred in other jurisdictions internationally, for example in New Zealand / Aotearoa and Canada.

To achieve this, the Government has undertaken a three-stage process. In Phase 1, a First Peoples’ Assembly of Victoria was constituted. This was a democratically

⁹⁵ Ibid., pp. 1–2.

⁹⁶ See, for example, Phillip Island Conservation Inc, *Submission 74*, p. 3; Friends of Steele Creek, *Submission 158*, p. 3; Yarra Riverkeeper, *Submission 189*, received 28 September 2020, p. 2; Darebin City Council, *Submission 233*, p. 15.

⁹⁷ Yarra Riverkeeper, *Submission 189*, p. 2.

⁹⁸ Environmental Justice Australia, *Submission 161*, p. 13.

elected representative body for Traditional Owners of country and Aboriginal Victorians. The Assembly's structure includes 32 Traditional Owner member seats, made up of 11 reserved member seats representing each formally recognised Traditional Owner group and 21 general member seats. In Phase 2, which is currently underway, negotiations between the Victorian Government (representing the State of Victoria) and the First Peoples' Assembly will take place. This phase is intended to establish the structures and supports for future treaty negotiations. With these elements agreed and in place, Phase 3, the treaty negotiation proper, will begin.⁹⁹

As Aboriginal Victoria notes on its website:

There are no rules about what should and shouldn't be in a treaty. Victoria's treaty will be shaped by history, and the social and political context of our state, and the aspirations of Aboriginal and non-Aboriginal Victorians.

Victoria's treaty could include ... the transfer of decision-making power and resources so that Traditional Owners and Aboriginal Victorians can make decisions about the matters that affect their lives.¹⁰⁰

Accordingly, any future treaty or treaties could affect the management and ownership of some environmental infrastructure, as well as the way that environmental infrastructure is designed and built in the future. The Committee considers that an increased involvement in the management of public open space and restricted public land by Traditional Owners has the potential to significantly enhance the protection of Aboriginal cultural heritage, as well as the environmental and recreational values of many open spaces, parks and reserves.

FINDING 29: Measures aimed at increasing the involvement of Traditional Owners in the management of some environmental infrastructure may have the potential to significantly enhance the protection of Aboriginal cultural heritage, as well as the environmental and recreational values of many open spaces, parks and reserves.

4.3.2 Securing the Yarra River (Birrarung) and its parklands: an example of co-management

The draft Yarra Strategic Plan (YSP) represents the latest stage in a model aimed at enhancing the provision and maintenance of a piece of environmental infrastructure that is especially precious to many Melburnians: the Yarra River corridor. Central to this model is a partnership approach between the Government and Traditional Owners of the lands through which the river flows (the Wurundjeri Woi-wurrung people).¹⁰¹

⁹⁹ The information in this paragraph is drawn from First Peoples - State Relations, *Treaty process: Find out about Victoria's nation-leading treaty process*, 2021, <<https://www.firstpeoplesrelations.vic.gov.au/treaty-process>> accessed 26 November 2021.

¹⁰⁰ Ibid.

¹⁰¹ Department of Environment, Land, Water and Planning, *Protecting the Yarra River (Birrarung)*, 2020, <<https://www.water.vic.gov.au/waterways-and-catchments/protecting-the-yarra>> accessed 29 July 2021.

In February 2017, the Victorian Government released the Yarra River Action Plan (YRAP), which requires the river to be managed as:

a living integrated entity with a voice; centred by Traditional Owner values and perspectives; and underpinned by coordinated planning frameworks.¹⁰²

The YRAP contained 30 actions aimed at the long-term protection of the river and its parklands, which were developed in response to recommendations of the Yarra River Protection Ministerial Advisory Committee (Yarra MAC) in its final report. The actions included: the establishment of the *Yarra River Protection (Wilip-gin Birrarung murrong) Act 2017* (Vic) (the Act); interim Yarra River Planning Controls; and the development of a 50-year Community Vision and a Yarra Strategic Plan to be made every 10 years to deliver on the vision.¹⁰³

The draft YSP, which was released for public comment in January 2020, was Melbourne Water's first integrated corridor plan to be developed collaboratively by Traditional Owners and all 15 State and local government agencies involved in managing the river. The final plan was due to be released in late 2021.¹⁰⁴

Under the Act, the final YSP will implement a long-term Community Vision for the river, aimed at providing an integrated river corridor plan for the collaborative management of the river and its parklands across public agencies.¹⁰⁵

Ms Marianne Richards, President, Town and Country Planning Association (TCPA), stated the following in relation to the draft YSP:

This is probably in our experience the best, most recent example of emerging best practice. Firstly, it was coordinated across several agencies. It was led by Melbourne Water with Parks Victoria and local government. It embraced the Indigenous groups. It embraced community organisations such as Yarra keepers. It primarily considered the values and needs of the Yarra River across all its reaches, right from the Yarra Valley down to the river mouth. It considered the contribution of the qualities of the river to parkland opportunities for the growing population for active and passive users—the active users walking and cycling and doing sporting activities and the passive sitting and resting in nature and studying in nature. And it recognised, perhaps, the emergence of new data collection via citizen science, which is certainly within TCPA's scope. That was, certainly over my 40 years experience in town planning, an approach that was very different.¹⁰⁶

Several other stakeholders expressed support for the approach to protecting the Yarra River and its parklands contained in the draft YSP and its related initiatives.

¹⁰² Department of Environment, Land, Water and Planning, *Yarra River Action Plan*, 2020, <<https://www.water.vic.gov.au/waterways-and-catchments/protecting-the-yarra/action-plan>> accessed 29 July 2021.

¹⁰³ Ibid.

¹⁰⁴ Melbourne Water, *Yarra Strategic Plan*.

¹⁰⁵ Department of Environment, Land, Water and Planning, *Yarra Strategic Plan*, 2020, <<https://www.water.vic.gov.au/waterways-and-catchments/protecting-the-yarra/yarra-strategic-plan>> accessed 26 November 2021.

¹⁰⁶ Ms Marianne Richards, President, Town and Country Planning Association, public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 33.

For example, Mr Matt Ruchel, Executive Director, Victorian National Parks Association (VNPA), referred to the ‘great work done around the Yarra River’ in the context of the YRPA and *Plan Melbourne 2017-2050* (the Government’s metropolitan planning strategy for Melbourne and the State).¹⁰⁷ Similarly, Dr Bruce Lindsay, Senior Lawyer, Environmental Justice Australia, noted that the objectives of the Act ‘include ecological health and the integration of environmental, social and cultural considerations’.¹⁰⁸

Mr Julian Lyngcoln, Deputy Secretary, Planning, Department of Environment, Land, Water and Planning, stated that the Act:

was put in place to treat the Birrarung as a single entity to ensure the protection of both the waterway and its surrounds, to ensure protection of access, to ensure there are effective planning controls in place around development around that waterway, and also to engage with Traditional Owners and consider Aboriginal cultural values and social values in the planning and management of waterways. That is a prime example of where legislation has been used, and we are now building as a department on that work around the Yarra River and doing work around the Barwon River and waterways of the west as well.¹⁰⁹

Furthermore, Ms Karen Lau, Executive Director, Catchments, Waterways, Cities and Towns Division, DELWP, highlighted the importance of engagement and integration between the relevant agencies and the community in their ongoing work to finalise the Yarra Strategic Plan:

That is working right across local government areas and multiple state-based agency boundaries after a really detailed conversation with the community. That is one where an independent panel has said, ‘This is possibly, thanks to Melbourne Water, one of the most comprehensive community engagement processes we have seen’, and I think that which brings those water and land agencies together along with the community is going to deliver really, really great assets.¹¹⁰

The Committee considers that the Act represents an important symbolic and practical example of Traditional Owner recognition. It is also notable that a new statutory body, the Birrarung Council, was created under the Act to manage the Yarra River as a whole and to provide it with recognition as a living entity.

As Aunty Alice Kolasa, a Wurundjeri Woi-wurrung elder, noted in a speech to the Legislative Assembly prior to the reading of the Woi-wurrung language Preamble to the Act:

this Bill will guarantee that the Birrarung will be protected by law and benefit from the custodianship of a body known as the Birrarung Council. As the First Nations people, our

¹⁰⁷ Mr Matt Ruchel, Executive Director, Victorian National Parks Association, public hearing, via videoconference, 20 April 2021, *Transcript of evidence*, p. 12.

¹⁰⁸ Dr Bruce Lindsay, Senior Lawyer, Environmental Justice Australia, public hearing, via videoconference, 20 April 2021, *Transcript of evidence*, p. 27.

¹⁰⁹ Mr Julian Lyngcoln, *Transcript of evidence*, p. 4.

¹¹⁰ Ms Karen Lau, Executive Director, Catchments, Waterways, Cities and Towns, Department of Environment, Land, Water and Planning, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, p. 32.

place in this new governance structure is also enshrined into law. Through this process the State has recognised the Woi-wurrung as the First People of the Birrarung. The journey to achieving this type of structural inclusion, has been hard won. It commenced from the moment of first contact and was the “Yiookgen Dhan Liwik-al” - the dream of our Ancestors.¹¹¹

The creation of the Birrarung Council establishes a co-management approach to the Yarra River and its parklands. As the Chair of Birrarung Council, Mr Chris Chesterfield, stated:

The Act ... establishes the Birrarung Council as a bicultural voice for the river and a champion for Traditional Owner and community aspirations for the Birrarung, for the Yarra River. So we have a membership which comprises currently three Wurundjeri elders as well as a number of citizens of the state.¹¹²

Mr Chesterfield also noted that the creation of the Birrarung Council allows for a type of advocacy and policy making that incorporates the perspectives of Traditional Owners from the ground up, and which has lessons that can be applied to other forms of environmental infrastructure as well as ‘grey’ infrastructure. Mr Chesterfield stated that this:

is something that Birrarung Council is working on with Wurundjeri elders and the Department of Environment, Land, Water and Planning at the moment. It is expanding the concept of net gain—a requirement that all infrastructure projects should actually deliver a net gain. You have heard of concepts like regenerative infrastructure. Birrarung Council is trying to get North East Link to recognise that opportunity at the moment. We have seen projects in the past that do that ... I just think that is a way that we can reverse that sort of incremental decline in our livability and our environment. Every time we do urban development or an infrastructure project where we look at offsetting negative impacts through things like net gain, we need to actually build these regenerative concepts into our ongoing grey infrastructure investment.¹¹³

While the scale of the Yarra River and the complexity of its management needs pose unique challenges, the approach outlined here offers important lessons for other environmental infrastructure strategies. Perhaps unsurprisingly, the most immediate impact of this work has been felt in waterways management. This is apparent in, for example, the discussion paper prepared by the Barwon River Ministerial Advisory Committee, *Our living rivers of the Barwon* (2019) and in *Protecting the Waterways of the West* (2019), prepared by the Waterways of the West Ministerial Advisory Committee. As the latter group notes:

We support the need for genuine and lasting partnerships with the Wurundjeri Woi wurrung and Wadawurrung peoples, to understand their culture and connections to Country in the way we plan for and manage the region’s waterways. By integrating

111 Wurundjeri, *Parliamentary Speech*, 2017, <https://www.wurundjeri.com.au/wp-content/uploads/pdf/Wurundjeri_parliamentary_speech_download_a.pdf> accessed 29 July 2021.

112 Mr Chris Chesterfield, *Transcript of evidence*, p. 19.

113 *Ibid.*, p. 21.

traditional knowledge with contemporary western ecological and community knowledge, we can deliver better environmental outcomes and make communities more liveable, sustainable, and inclusive.

We embrace the spirit of reconciliation, working towards equity of outcomes and ensuring an equal voice for Australia's first people.¹¹⁴

FINDING 30: The emerging land use and development strategy for the Yarra River, including the draft Yarra Strategic Plan and associated legislation and advisory bodies, represents an important model for the engagement of Traditional Owners in the management and development of public open space and restricted public land.

RECOMMENDATION 25: That the Victorian Government develop a strategy for the incorporation of Traditional Owner perspectives and management into the provision and maintenance of public open space and restricted public land wherever practicable.

¹¹⁴ Waterways of the West Ministerial Advisory Committee, *Protecting the Waterways of the West Discussion Paper*, Department of Environment, Land, Water and Planning, Melbourne, 2019, p. 6.

5 Central and inner Melbourne

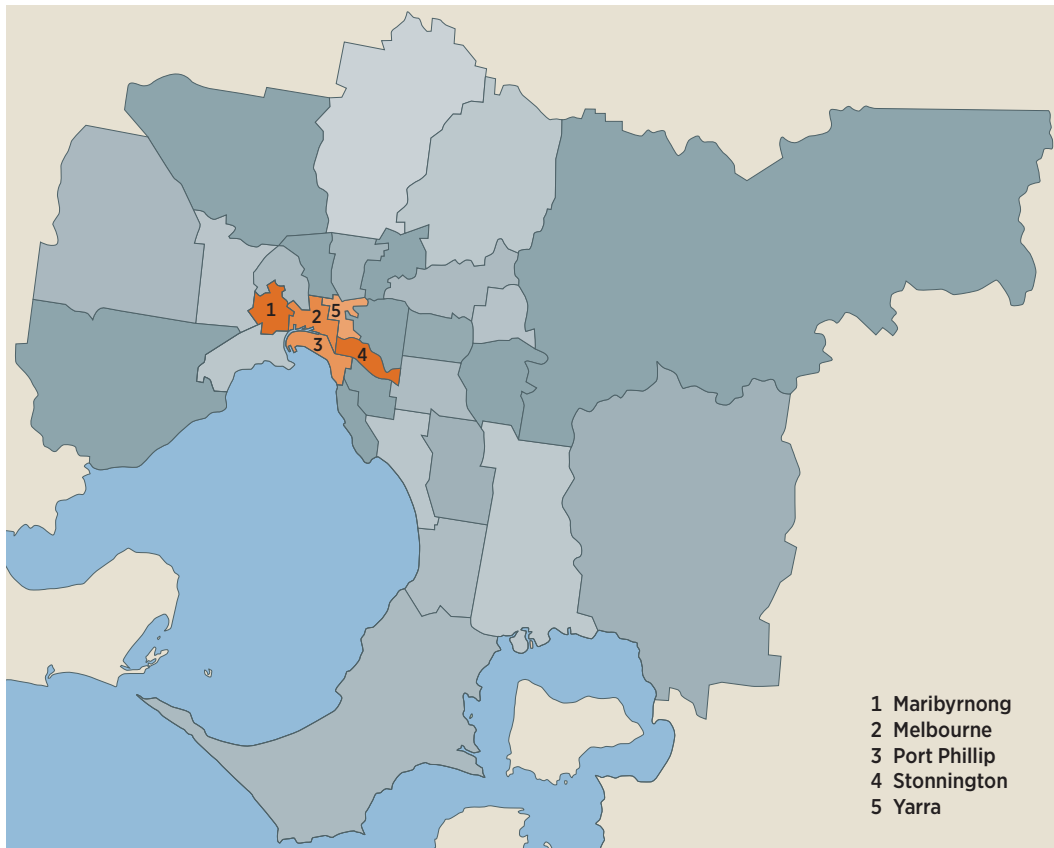
5.1 Introduction

This chapter highlights the unique environmental infrastructure challenges faced by inner metropolitan Melbourne, which the Committee has defined primarily as comprising the local government areas (LGAs) of Melbourne, Stonnington, Yarra, Port Phillip and Maribyrnong. The Committee notes that there are varying definitions of 'inner' Melbourne but has adopted, as a starting point, the definition represented by the Inner Melbourne Action Plan (IMAP), which is described as 'a multi-council framework for the future growth and development of the inner Melbourne region' and which also makes up the Central Subregion under *Plan Melbourne*.¹ These five inner Melbourne LGAs (which are also known as the IMAP councils) are illustrated in Figure 5.1. below. The Committee is mindful that some middle ring LGAs, such as the City of Moonee Valley, also contain inner suburbs, such as Ascot Vale. Accordingly, this chapter also discusses evidence from some middle ring LGAs where relevant to the context of inner Melbourne.

The subsequent three chapters will outline the unique challenges facing other Victorian urban and regional centres, which have been divided based on their shared demographic and geographic profiles.

¹ City of Melbourne, *Inner Melbourne Action Plan*, <<https://www.melbourne.vic.gov.au/building-and-development/urban-planning/city-wide-strategies-research/Pages/inner-melbourne-action-plan.aspx>> accessed 19 October 2021.

Figure 5.1 Inner Melbourne LGAs



Source: Legislative Assembly Environment and Planning Committee.

5.2 Population growth

Rapid population growth presents an ongoing challenge to the adequacy of existing environmental infrastructure in inner metropolitan Melbourne. The following section outlines the current trends in population growth and the implications of this growth for the adequacy of existing environmental infrastructure.

5.2.1 Current trends

The inner metropolitan LGAs are home to some of the most rapidly growing populations in Victoria.² In addition to natural population growth and internal migration, this rapid growth has stemmed in large part from a significant increase in overseas migration, with inner city Melbourne experiencing a net overseas migration gain of 1,800 people in the 2019–20 financial year.³ Despite the impact of COVID-19, inner Melbourne’s population growth is projected to resume in the near future (see Section 5.2.4 below).

² Department of Environment, Land, Water and Planning, *Victoria in Future 2019: Population Projections 2016 to 2056*, 2019, p. 12.

³ Australian Bureau of Statistics, *Regional population, 2021*, <<https://www.abs.gov.au/statistics/people/population/regional-population/latest-release>> accessed 5 October 2021.

LGAs in inner metropolitan Melbourne are expected to experience strong growth over the next 15 years.⁴ Notably, the City of Melbourne is projected to experience the third most rapid growth within this period of any Victorian LGA. The strongest growth is forecast to occur in established areas, including the Central Business District, Docklands and Southbank.⁵ Table 5.1 below provides an overview of the projected growth in inner metropolitan LGAs within the next 15 years. This data is extracted from *Victoria in Future 2019*, which was published prior to the start of the COVID-19 pandemic (July 2019). However, it remains the most recent official State Government projection of population in coming decades.

Table 5.1 Estimated resident population in inner metropolitan Melbourne LGAs, 2018–2036

	Population 2018	Population 2036	Change (number)	Change average rate (%)
IMAP councils				
City of Melbourne	169,960	292,630	122,670	3.1
City of Port Phillip	113,200	159,450	46,250	1.9
City of Yarra	98,520	136,450	37,930	1.8
City of Stonnington	116,210	146,890	30,680	1.3
City of Maribyrnong	91,390	147,460	56,080	2.7

Source: Department of Environment, Land, Water and Planning, *Victoria in Future 2019: Population Projections 2016 to 2056*, 2019, pp. 12–13.

5.2.2 Densification

Rapid population growth presents several key challenges to the adequacy of existing environmental infrastructure in inner metropolitan Melbourne. Most notably, increasing population density is a core factor driving demand for open spaces in these areas and is causing strain on existing environmental infrastructure. The inner metropolitan areas of Melbourne are the most densely populated areas in Australia.⁶ However, the proportion of open space per person is decreasing within these densified areas.⁷ For example, the City of Yarra argued that the increasing densification is contributing to the underprovision of open space within the municipality. The Council stated that the open space ratio was 28 square metres per person in 2016—significantly lower than the average 79 square metres per person in other areas of metropolitan Melbourne. If continued at this rate, it is projected that by 2041, there will only be 16 square metres

⁴ Department of Environment, Land, Water and Planning, *Victoria in Future 2019*, p. 12.

⁵ Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 21.

⁶ Australian Bureau of Statistics, *Regional population*.

⁷ As the Committee has discussed in Chapter 4, the amount of public open space available per person within a given LGA (or public open space as a percentage of an LGA) is just one measure of accessibility and needs to be considered alongside factors such as the types of available public open space, its proximity and quality.

of open space per person.⁸ Regarding the densification in the municipality, the Council stated:

Increased urban densities result in less private open space and 85 per cent of Yarra's population live in medium and high density dwellings compared to 33 per cent in Greater Melbourne. This means that residents have less private open space available to them which increases their reliance on public open space. Typically this adds to the amount of people using public open space and increases the diversity of reasons why they use it.⁹

Increasing densification in inner metropolitan areas is a core challenge identified in *Open Space for Everyone*, metropolitan Melbourne's 2021 open space strategy. The strategy highlighted the strain that densifying populations may put on existing open spaces:

With more people living in higher-density housing with no private open space, our existing open space will see more people using it, more often and for longer. There is often little opportunity to create large tracts of new open space in established areas.¹⁰

Challenges to the adequacy of existing infrastructure are likely to continue in the future. The Department of Environment, Land, Water and Planning (DELWP) noted in its submission:

In areas of higher density housing, less residents have access to expansive private open spaces, so are therefore more reliant on the public provision of parks and gardens. As Melbourne densifies, this will become a more common situation.¹¹

Local councils emphasised that densification has not been consistent across their municipalities. In this regard, the challenges may disproportionately affect some areas and increase existing inequities. The City of Moonee Valley stressed that it is important to consider inconsistency in patterns of growth and population density, and the impact that this has on the equitable provision of open space. Regarding this issue, Mr Brett Walters, Director of Strategy and Planning for the City of Moonee Valley, noted:

With respect to the impact of population growth, our population is increasing and the demographics are changing as well. We are projected to have a variety of densities across the neighbourhoods—from activity centres like Moonee Ponds, with 49 dwellings per hectare, to lower-density suburban residential neighbourhoods like Strathmore, with an average of 12 dwellings per hectare. And we see that activity growth around rail corridors, essentially ... With respect to the difference in availability ... [t]here is quite a strong difference between different parts of the municipality.¹²

⁸ Mr Michael Ballock, Executive Planner, Strategic Projects, Yarra City Council, public hearing, via videoconference, 22 March 2021, *Transcript of evidence*, p. 13.

⁹ City of Yarra, *Submission 179*, received 28 September 2020, p. 19.

¹⁰ Department of Environment, Land, Water and Planning, *Open space for everyone – Open Space Strategy for Metropolitan Melbourne 2021*, Melbourne, 2021.

¹¹ Department of Environment, Land, Water and Planning, *Submission 254*, p. 48.

¹² Mr Brett Walters, Director, Strategy and Planning, Moonee Valley City Council, public hearing, via videoconference, 22 March 2021, *Transcript of evidence*, p. 14.

FINDING 31: Rapid population growth in inner metropolitan Melbourne presents an ongoing challenge to maintaining the standard of environmental infrastructure currently enjoyed by Melburnians.

5.2.3 Accommodating diverse and competing interests

As population growth and densification occur in these areas, the demand on existing open space is also growing. However, such space must accommodate a range of diverse and competing uses, such as providing for both active and passive recreational activity.¹³ Local councils highlighted that population growth has been accompanied by shifting demographics which are changing the role of, and demand for, environmental infrastructure. However, the Committee heard that local councils in inner metropolitan Melbourne face several challenges in accommodating these competing demands within existing spaces. These challenges include:

- creating formal and long-term arrangements for the competing uses of open space¹⁴
- disrupting historical usage of open space for certain types of activity¹⁵
- determining who will be responsible for managing competing uses of open space.¹⁶

Councils noted that they have struggled to address these challenges. For example, the City of Port Phillip noted that the diversification of local populations, stemming from new population growth, is resulting in greater contestation over competing uses of public open space in the municipality. The Council recommended that the way to combat this challenge is to provide more 'flexible, multipurpose infrastructure moving forward'.¹⁷

FINDING 32: Local councils in inner metropolitan Melbourne are struggling to accommodate competing demands for the use of existing environmental infrastructure.

5.2.4 Impact of COVID-19

The Committee notes that the COVID-19 pandemic may alter projected models of population growth and the role and demand for public environmental infrastructure in inner metropolitan Melbourne. Diverse factors, including stalling interstate and international migration, will likely have impacts on projected growth rates and demographics.

¹³ Ms Claire Ulcoq, Open Space Planner, City of Port Phillip, public hearing, via videoconference, 22 March 2021, *Transcript of evidence*, p. 19; Mr Brett Walters, *Transcript of evidence*, p. 18.

¹⁴ Ms Claire Ulcoq, *Transcript of evidence*, p. 17.

¹⁵ Mr Brett Walters, *Transcript of evidence*, pp. 18,24; Ms Claire Ulcoq, *Transcript of evidence*, p. 17.

¹⁶ Mr Michael Ballock, *Transcript of evidence*, p. 19.

¹⁷ Ms Claire Ulcoq, *Transcript of evidence*, p. 20.

Against this backdrop, COVID-19 restrictions on movement and successive lockdowns have altered the usage of local public open space by many residents. Local councils in inner Melbourne saw increased usage of public open space in response to the COVID-19 pandemic.¹⁸ In light of this trend, the City of Port Phillip stated that the pandemic has highlighted the necessity of providing adequate public open space, arguing:

The COVID-19 pandemic has demonstrated the importance of public open spaces, more than ever, in supporting the health and wellbeing of the community. There has been a significant increase in the number of people using public open spaces in the municipality different times of the day, which has seen an increase in community interest for Council to change or upgrade its existing public spaces. Councils must be agile and flexible in their approach to responding to disruptors, such as the COVID-19 pandemic, to ensure the future accessibility, safety and liveability of public open space.¹⁹

Similarly, Citizens for Melbourne argued that the COVID-19 pandemic has served to highlight many long-term problems which inhibit the provision of adequate environmental infrastructure in inner metropolitan Melbourne. In particular, the organisation noted:

The movement restrictions—which have been an important part of minimising the spread of COVID-19—have exposed long-running deficiencies and inequalities in Melbourne’s planning in relation to the availability and quality of public space across the city.²⁰

Noting the impacts of COVID-19 on patterns of behaviour, a number of stakeholders to the Inquiry highlighted the need for the planning of environmental infrastructure to account for the impacts of the pandemic. Within the context of inner metropolitan Melbourne, the Committee for Melbourne emphasised the importance of considering the long-term impacts of the COVID-19 pandemic in future strategic planning to secure environmental infrastructure. The organisation stated:

As Melbourne recovers from the COVID-19 crisis and the population continues to grow over the coming decades, the demand placed on the city’s environmental infrastructure will grow. The Committee encourages the development of an integrated plan that would ensure there is enough environmental infrastructure to meet community needs and expectations now and into the future.²¹

Similarly, the City of Melbourne contended that the pandemic has provided an important opportunity for state and local governments to work together to plan the role that open space will play in Melbourne’s recovery.²²

¹⁸ City of Melbourne, *Submission 186*, received 28 September 2020, p. 2; City of Port Phillip, *Submission 260*, received 17 December 2020, p. 4.

¹⁹ City of Port Phillip, *Submission 260*, p. 4.

²⁰ Citizens of Melbourne, *Submission 180*, received 28 September 2020, p. 2.

²¹ Committee for Melbourne, *Submission 44*, received 16 September 2020, p. 2.

²² City of Melbourne, *Submission 186*, p. 2.

The Committee acknowledges that the COVID-19 pandemic has had a number of profound effects on ordinary patterns of use of public open space. Whilst noting that, at this stage, it may be unclear what the long-term effects of the pandemic may be, the Committee considers that future planning must account for potential impacts. The Committee also notes that ongoing consultation with local councils may play an important role in this future planning to ensure that there is equitable provision of public open spaces.

FINDING 33: The COVID-19 pandemic has altered the usage and demand for environmental infrastructure in inner metropolitan Melbourne. The long-term trends are yet to be understood.

5.3 Open space contributions and planning amendments

5.3.1 Open space contributions

A number of inner Melbourne councils criticised the existing open space contributions system and noted aspects of the system as barriers to their ability to provide adequate environmental infrastructure within their municipalities. As discussed in Chapter 6, several of Melbourne's middle ring councils were also critical of the current open space contributions system.

The *Subdivision Act 1988* (Vic) and the *Planning and Environment Act 1987* (Vic) contain provisions for open space contributions. Open space contributions are made to the relevant council when land is subdivided and are made as percentages of the land or land value. Contribution rates are set at 5% under the authorising legislation.²³ However, councils may apply higher contribution rates where an applicant agrees.²⁴ The system applies in relation to land which is intended to be used for residential, industrial or commercial purposes.

The City of Yarra claimed that, due to rate capping and demands for other services, the purchase of land for new open space can only be financed through higher open space contribution rates.²⁵ In this regard, the Council argued that the ability of councils to adjust their contribution rates enables them to maintain effective open space strategies:

Each municipality tends to take a different approach to open space provision depending on the existing provision of open space, population dynamics, growth and structure. As a consequence, each municipality has an effective open space strategy and has arrived at differing contribution rates. A consistent theme is that municipalities that have amended their contribution rates have introduced significant increases in the rates.²⁶

²³ *Subdivision Act 1988* (Vic) s 18(1).

²⁴ *Subdivision Act 1988* (Vic) s 18(4).

²⁵ City of Yarra, *Submission 179*, p. 26.

²⁶ *Ibid.*, p. 24.

However, the Council also noted that changing contribution rates is ‘a time consuming and expensive exercise with no guarantee of success’.²⁷ (As discussed in Chapter 6, several of Melbourne’s middle ring councils expressed a similar view.)

Other inner metropolitan councils criticised certain elements of the current open space contribution scheme. Primarily, councils noted that the current public open space contribution schemes do not meet their needs to offset the costs of developing new, or maintaining existing, environmental infrastructure.²⁸ Notably, a number of councils criticised the lack of consideration for funding required to maintain existing open space in the current open space contribution scheme.²⁹ These councils argued for the expansion of the scheme to cover maintenance costs, claiming that rate capping prevents them from obtaining sufficient funds.³⁰

Whilst noting councils’ views, the Committee considers that shortfalls in funding the purchase and maintenance of open space could also be met through the use of general rates revenue. In particular, calls for increased rates and expansion of the open space contribution scheme to cover maintenance costs would be an overreach. Such an extension of the scheme would undermine its intended purpose.

Additionally, some inner metropolitan councils criticised the limited zones covered by the open space contribution. The City of Melbourne raised concerns about the exclusion of certain open space from the open space contribution scheme, including student housing, commercial buildings and ‘developments that do not subdivide, which might be hotels or other mixed-use developments’.³¹ Ms Fiona Finlayson, Team Leader, Open Space Planning, City of Melbourne, stated:

One other challenge ... was also the exclusion from open space contributions for things like student housing, ... and also office/commercial developments. So we cannot secure open space land contributions through the planning scheme for those sorts of developments. So that is broader than a planning scheme amendment at just our local level—that is state policy.³²

The City of Melbourne also stated that the contribution system does not meet the LGA’s needs for the range of open space required to offset current and future development:

Our current public open space contribution scheme, whether it be land or cash that developers are required to contribute, does not meet the needs for the range of open space that we have seen to offset the amount of development that is happening in the City of Melbourne. When I say a ‘range of open space’ needs, we are talking about

²⁷ Ibid., p. 27.

²⁸ See, for example, Mr David Callow, Director, Parks and City Greening, City of Melbourne, public hearing, via videoconference, 22 March 2021, *Transcript of evidence*, p. 2; City of Yarra, *Submission 179*, p. 24.

²⁹ See, for example, Ms Claire Ulcoq, *Transcript of evidence*, p. 26; Mr Brett Walters, *Transcript of evidence*, p. 26; Mr Michael Ballock, *Transcript of evidence*, p. 26.

³⁰ See, for example, Mr Brett Walters, *Transcript of evidence*, p. 26.

³¹ Ms Fiona Finlayson, Team Leader, Open Space Planning, City of Melbourne, public hearing, via videoconference, 22 March 2021, *Transcript of evidence*, p. 8.

³² Ibid., p. 6.

active recreation needs, passive recreation needs, and water-sensitive urban design within landscapes. Essentially the property prices within Melbourne outstrip the cash we receive in terms of acquiring new land for public open space.³³

The Committee notes that DELWP released its *Open Space for Everyone – Open Space Strategy for Metropolitan Melbourne 2021* in July 2021. The strategy includes a commitment to ‘Review and ensure the effectiveness of current open space contribution guidelines in addressing legacy issues and differing needs in established suburbs, growth areas and areas of entrenched disadvantage.’³⁴ The Committee considers that the review may provide an opportunity for local councils’ concerns to be addressed.

Given the similarity in the challenges faced by inner and middle ring Melbourne with respect to open space contributions, the Committee has recommended in Chapter 6 (Recommendation 30) that DELWP, in conducting its review of existing open space contribution guidelines for established suburbs, includes consideration of the relevant provisions in the *Subdivision Act 1988* (Vic), the adequacy of the current maximum open space contribution, and the feasibility of a standard approach and guidance for councils seeking to apply a higher contribution rate.

5.3.2 Planning amendments

The Committee also received evidence from inner metropolitan municipalities regarding delays in the consideration of planning scheme amendments. The City of Yarra argued that the process for seeking amendments on development contribution plans is slow. Mr Michael Ballock, Executive Planner, Strategic Projects, Yarra City Council, noted that there are two key reasons for the delays:

Firstly, I think it is a matter of resourcing. I am not sure that the department is as well resourced as it could be, just simply to deal with the volume of work that it has got. That is DELWP. I think the second thing is that, if you like, the authorisation process in particular is unclear. I suppose the conventional wisdom is that what DELWP should be looking at is: is the amendment, if it is approved, going to be something that is really inappropriate to include in the planning scheme? Whereas it appears more recently that what the department is doing is going through the minutiae of the amendment, which is really a panel process. I mean, it is the public hearing, the panel that goes through the detail of, if you like, what the amendment is actually proposing. So I think clarity with that would be useful.³⁵

The City of Melbourne also described delays that the Council had experienced, noting:

So there is a planning scheme amendment potential, which can be a lengthy process. We have mentioned the Open Space Strategy which was endorsed in 2012. The planning

³³ Mr David Callow, *Transcript of evidence*, p. 2.

³⁴ Department of Environment, Land, Water and Planning, *Open space for everyone – Open Space Strategy for Metropolitan Melbourne 2021*, p. 45.

³⁵ Mr Michael Ballock, *Transcript of evidence*, p. 17.

scheme amendment did not go through until 2016, so we were already a few years behind.³⁶

As discussed in Chapters 6, 7 and 8, the planning scheme amendment process can also present challenges to the provision of public open space for councils in middle ring and outer suburban Melbourne, as well as in regional and peri-urban areas. The Committee therefore considers that the Victorian Government could work with LGAs across the State to simplify and streamline the process for seeking planning scheme amendments, with a focus on assisting councils during the early stages of the amendment process.

RECOMMENDATION 26: That the Victorian Government work with all Victorian councils to simplify and streamline processes for planning scheme amendments, with a particular focus on assisting councils during the early stages of the amendment process.

5.4 New open space

One of the environmental infrastructure challenges faced by all councils in established areas of Melbourne is the provision of new open space. This challenge is especially acute for inner metropolitan councils because their population growth, density and level of development means that locating sufficient land is difficult. The following section outlines the core challenges facing the acquisition of new open space in inner metropolitan Melbourne.

5.4.1 Funding

Funding the acquisition of new public open space is a core challenge facing councils in inner metropolitan Melbourne. Local councils argued that high land values in combination with the lack of adequate funding undermines their ability to compete for the acquisition of public land. The City of Port Phillip reflected on the struggles of obtaining funding for public open space:

Providing new public open space to increase provision in these areas is increasingly challenging due to high land values, making it more expensive to buy land.³⁷

The Council also noted that contamination of public open space is making it increasingly expensive to remediate land.³⁸

The City of Melbourne pointed to the lack of funding for open space in new developments and renewal areas as a core limitation in current arrangements. The City argued that the substantial costs and complexity associated with securing new land is

³⁶ Ms Fiona Finlayson, *Transcript of evidence*, p. 6.

³⁷ City of Port Phillip, *Submission 260*, p. 4.

³⁸ *Ibid.*

outweighed by the funding currently available.³⁹ The City of Melbourne further argued that reform should ensure that the system adequately addresses ‘the real cost of land for public purposes in urban renewal areas’ and supports ‘the provision of critical public infrastructure’.⁴⁰

Ms Fiona Finlayson of the City of Melbourne noted that:

We will receive cash, but then there is the mismatch of being able to apply that cash to a sufficiently sized open space in the area that it is required. It is really very difficult to achieve, and we have seen that most of our success has been in reclaiming areas of road to extend existing open space to sort of create new open space where there was previously roadway, which is good. It improves amenity. It has a use, but it is not serving that broader recreational function.⁴¹

The City of Moonee Valley was critical of the requirement that state agencies transfer land at full market value (also referred to as ‘highest and best use’, see Chapter 6):

Agencies are bound by their own rules regarding transfer at full market value, and in the case of land it might be zoned residential 1. This is a pretty significant financial barrier for councils when the intended end use is for public recreation, which is intrinsically a lower financial value use. If you consider that we need to redevelop it into whatever form of open space we create, that is quite a prohibitive cost for a local government authority, particularly in a rate-capping environment, although we do welcome recent grants provided by the Victorian government in assisting on this issue; we have received funding for pocket parks and dog parks, and we look forward to more collaboration of that type.⁴²

The City of Moonee Valley also noted difficulties in leasing land between agencies:

We try and get some excess VicTrack land to support the community desire for improved amenity, and it can take a couple of years to negotiate a lease currently. It seems quite time consuming and a bit jarring for the community advocates who only see bureaucracy between groups and a lack of decision-making.⁴³

Noting the complexities of securing new land through open market competition, the City of Melbourne recommended that the Victorian Government should set aside State-owned land for the creation of new open space in urban renewal areas. The Council suggested that, in the context of the City of Melbourne, at least 40 hectares of land across multiple sites would be required.⁴⁴

³⁹ Ms Fiona Finlayson, *Transcript of evidence*, p. 4.

⁴⁰ City of Melbourne, *Submission 186*, p. 13.

⁴¹ Ms Fiona Finlayson, *Transcript of evidence*, p. 6.

⁴² Mr Brett Walters, *Transcript of evidence*, p. 15.

⁴³ *Ibid.*

⁴⁴ City of Melbourne, *Submission 186*, p. 4.

RECOMMENDATION 27: That the Victorian Government work with inner metropolitan local councils to streamline leasing and land transfer processes, focusing on ways to improve timeliness.

5.4.2 Guidance

Strategic planning in the development of environmental infrastructure is essential to ensure open space meets the needs of inner metropolitan Melbourne residents. In its submission, DELWP stated:

the many social, environmental and economic changes facing metropolitan Melbourne and our community mean we cannot continue to plan for open space as we have in the past and expect to create an equivalent legacy. These changes are unprecedented in scale, interrelated, and present us with both a need and an opportunity to work together to achieve the benefits of implementing the strategic framework.⁴⁵

However, a number of stakeholders advocated for greater engagement by the Victorian Government in future acquisition of public open space. Some inner Melbourne councils noted that the acquisition of new open space is 'opportunistic'.⁴⁶ Inner metropolitan municipal governments called for stronger State Government leadership and strategic support to help secure new land for public open space and ensure that local governments and landowners are working together to manage the spaces. For example, the City of Port Phillip suggested that the Victorian Government could develop a more strategic approach to public land acquisition by playing a stronger role in policy coordination across the inner metropolitan area. Ms Ulcoq of the City of Port Phillip stated:

If the state government has policies in place that we can use as an evidence base when we are preparing our public space strategy and preparing those guidelines that come out of that strategy, that would definitely help us as a council to be able to say, 'This is something that's recommended at, I guess, all levels of government', and to be able to demonstrate how it has worked in other local governments is really useful for us as well.⁴⁷

Similarly, the City of Melbourne advocated for increased assistance from the State Government in identifying and securing new land. Ms Finlayson, on behalf of the Council, stated:

In terms of the provisions in the planning scheme, I think there are state policy changes that could be made there to increase the ease of securing land for development sites of all kinds that are increasingly used in an area.⁴⁸

⁴⁵ Department of Environment, Land, Water and Planning, *Submission 254*, p. 36.

⁴⁶ See, for example, Mr Michael Ballock, *Transcript of evidence*, p. 26.

⁴⁷ Ms Claire Ulcoq, *Transcript of evidence*, p. 18.

⁴⁸ Ms Fiona Finlayson, *Transcript of evidence*, p. 8.

RECOMMENDATION 28: That the Victorian Government consider ways to assist inner Melbourne councils to improve the quality of existing open space when reviewing the current open space contribution policy guidance.

5.4.3 Size and diversity of new open space

The Committee received evidence that there is a lack of new open space which can accommodate a range of diverse demands in inner metropolitan Melbourne. Acquiring new large open space is particularly challenging for established inner metropolitan councils. The Committee received evidence from a range of stakeholders who emphasised this issue.⁴⁹ For example, the City of Melbourne noted that conflicting potential uses of large space is a core factor precluding the Council from acquiring sufficient large spaces.⁵⁰ Mr David Callow, Director of Parks and City Greening, City of Melbourne, noted:

there is a hierarchy of other open space needs as well. There is a good example in West Melbourne of a site that we were able to purchase adjacent to an existing park and we were able to effectively double the size of the park. But those opportunities are really rare, and they are usually around those very local open spaces, the very small sites. But the squeeze we are feeling is at the big end of town in terms of very large sites that can accommodate active recreational needs, and those sites really do not come to market, or not very often. Often the sites where we need those are held by other state government agencies, whether it be VicTrack or another agency in that regard.⁵¹

The City of Yarra similarly noted that there is a lack of diversity in the types of open space which are available to residents across inner metropolitan Melbourne.⁵² However, this issue may disproportionately affect some areas of the City more than others. The Council commented:

There are some areas of the City where there are gaps in the distribution of any open space. In other precincts, such as Collingwood, Cremorne and parts of Richmond, there is a lack of larger areas of open space with only small local or local open space being provided. While the smaller open spaces are valuable, there can be a lack of diversity of the range of facilities and the sense of space that can be achieved because of their smaller size.⁵³

The Council further noted that due to the lack of available space, the Council will 'need to purchase land for new open space rather than solely rely on land contributions or conversion of Council owned land from another use'.⁵⁴

⁴⁹ See, for example, City of Yarra, *Submission 179*, p. 23.

⁵⁰ Ms Fiona Finlayson, *Transcript of evidence*, p. 7; Mr David Callow, *Transcript of evidence*, p. 7.

⁵¹ Mr David Callow, *Transcript of evidence*, p. 7.

⁵² City of Yarra, *Submission 179*, p. 23.

⁵³ *Ibid.*, p. 21.

⁵⁴ *Ibid.*, p. 23.

Mr Callow of the City of Melbourne pointed to the need for collaboration:

We need the right opportunities to be able to acquire or deliver in partnership with others small and other local open spaces as well. That could be delivered through improvements to the contributions scheme, but from our end we probably need better ways to be able to work really nimbly in taking advantage of those acquisition opportunities as well.⁵⁵

FINDING 34: There is a lack of diversity of new open space available in inner metropolitan Melbourne.

5.5 Collaboration and partnerships

Responsibility for the development and maintenance of environmental infrastructure in inner metropolitan Melbourne is shared across various government and non-government actors. Collaboration between these actors is key to maintaining existing, and developing new, projects within the sector. A number of stakeholders emphasised the importance of facilitating greater collaboration between actors. The Committee for Melbourne noted:

from the committee's perspective one of the things that we found with a lot of these good ideas is that what is actually lacking is the collaboration and certain agencies speaking to one another and coming up with a joint solution. So one of the things that I think also some of the other contributors have said in terms of the importance of building environmental infrastructure is that the kind of regulatory regime, as well as other incentives, need to be talking to one another and need to be well aligned to actually make it happen.⁵⁶

Due to the limited number of publicly owned open spaces in central metropolitan areas, partnerships between local and State government and the private sector may provide an alternative solution to increasing the amount of public open space in inner metropolitan Melbourne. Public private partnerships (PPPs) are identified as a core model for fostering innovation in future infrastructure delivery in the *Victorian Infrastructure Plan*.⁵⁷

The Committee received evidence from stakeholders who noted that PPPs may be a key solution to addressing current shortages of open space in densified areas of inner metropolitan Melbourne. In particular, stakeholders drew the Committee's attention to the *Grey to Green* project, which is currently 'investigating how to transform

⁵⁵ Mr David Callow, *Transcript of evidence*, p. 9.

⁵⁶ Ms Martine Letts, Chief Executive Officer, Committee for Melbourne, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, pp. 44–45.

⁵⁷ Victorian Government, *Victorian Infrastructure Plan: World-class infrastructure strengthens Victoria as a globally connected economy, an equitable society and an environmental leader*, Melbourne, 2017.

privately-owned, under-utilised, small spaces in the City of Melbourne into areas of green public amenity'.⁵⁸

In evidence to the Committee, the Committee for Melbourne highlighted the progress of the program and noted some of the barriers it is currently facing:

From the building owners' perspective we found that there was a large percentage of the building owners that had actually already considered creating publicly available green spaces and paying for them, but for 60 per cent—the other side—the things that really came forward from them as barriers were: it was perceived as too costly; a lot of them felt that they did not have the space to do that; and also they had either encountered or just perceived that there would be permit issues associated with applying for green spaces. However, out of the 50 per cent surveyed, 50 per cent were very interested—very interested in pursuing it.⁵⁹

Additionally, the Committee for Melbourne noted that legal issues, including public liability, were not strong factors deterring private landowners from participating in the program.⁶⁰

The figure below outlines survey data compiled by the Committee for Melbourne on the reception of the program by office workers and building owners.

Figure 5.2 Grey to Green program survey data



Source: Committee for Melbourne, public hearing, via videoconference, 9 March 2021, presentation.

⁵⁸ Committee for Melbourne, *Future Focus Group: Grey to Green Project*, 2020, <<https://melbourne.org.au/news/future-focus-group-grey-to-green-project>> accessed 26 November 2021.

⁵⁹ Mr Nicholas McVey, Head of Commercial Revenue, Yarra Trams, Committee for Melbourne, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 44.

⁶⁰ Ibid.

The increased use of PPPs to secure environmental infrastructure may require coordination and cooperation between multiple actors in the private sector, and at State and municipal government levels. In this regard, the Committee for Melbourne acknowledged the role of the City of Melbourne in the planning of the program. Ms Antara Mascarenhas, Group Manager, Stakeholder Relations, Australian Energy Market Operator, Committee for Melbourne, noted that:

We worked closely with the City of Melbourne. We had already done prior analysis and mapping through their open spaces program, and this informed the Grey to Green project. So we see an opportunity here, particularly during COVID recovery—an opportunity to rejuvenate the city and to attract workers and residents. With work-from-home arrangements, we feel the CBD needs some quick, early wins to bring workers back to the city and entice them and also create opportunities for business owners. So we see an opportunity for the development of public outdoor green spaces and greening private land through arrangements with the council.⁶¹

Similarly, Mr Nicholas McVey, Head of Commercial Revenue, Yarra Trams, Committee for Melbourne, pointed out that this work built upon work undertaken by the City of Melbourne:

the City of Melbourne had already gone through a sort of desktop mapping analysis of the green space available in the CBD, and essentially the outcome that they had come to was there really is a very limited amount of greening opportunities available in public space in Melbourne's Hoddle grid in particular. They mapped out all of the green space that was available and found several gaps, and ultimately what they found was that the only way these gaps could be plugged was through the transformation of privately owned space into publicly available green space. They had about 250 potential greening sites. There were about 46 gaps that they found where there was insufficient access—and there is further detail that we can provide around what this means, and there were particular criteria that they referred to. We have only got some of that, but more in depth will be available through the City of Melbourne. And then there were 10 particular sites—and these particular sites were office building areas and the sort of areas within them or around them—that could be accessed by the public but were not greening.⁶²

Some stakeholders to the Inquiry emphasised that the Victorian Government could play a larger role in facilitating PPPs, including through facilitating connection between local councils and private landowners, and streamlining the regulatory environment. Ms Jane Keddie, Vice-President, Planning Institute of Australia, Victorian Division, noted that initiatives such as the Grey to Green project provide innovative opportunities for providing environmental infrastructure. However, Ms Keddie emphasised the need for the Victorian Government's involvement. Ms Keddie noted that such projects:

are fantastic and they certainly offer opportunities, but all of those come with funding implications as well, and for council there are numerous layers of funding that they need to consider. I think again, it has come up before and it is another really clear area, there

⁶¹ Ms Antara Mascarenhas, Group Manager, Stakeholder Relations, Australian Energy Market Operator, Committee for Melbourne, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 43.

⁶² Mr Nicholas McVey, *Transcript of evidence*, p. 43.

is a lot that could be done in terms of actually integrating decision-making ... So there are numerous barriers that I think the state could certainly play a role in, I guess, streamlining. That valuation of environmental infrastructure within the decision-making around those spaces would help.⁶³

Representatives of the Committee for Melbourne suggested that increased funding and a 'regulatory sandbox' could help incentivise private landowners to participate in PPPs.⁶⁴ The Committee notes that such a 'regulatory sandbox' would involve the trial of PPPs under a relaxed regulatory environment on a small scale to establish what long-term regulatory changes should be made.⁶⁵ Mr McVey stated:

If the building owners and managers felt like they were involved in a grant or a funding source that the government had already bought into, I think that the perception that they would run into roadblocks along the way would decrease sometimes.⁶⁶

FINDING 35: Public private partnerships can provide innovative solutions to the lack of available public open space in inner metropolitan Melbourne.

RECOMMENDATION 29: That the Victorian Government consider ways to streamline the regulatory environment to encourage private landowners to participate in public private partnerships.

⁶³ Ms Jane Keddie, Vice-President, Planning Institute of Australia, Victorian Division, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 49.

⁶⁴ Ms Antara Mascarenhas, *Transcript of evidence*, p. 45.

⁶⁵ Mr Nicholas McVey, *Transcript of evidence*, p. 45.

⁶⁶ *Ibid.*

6 Melbourne's middle ring suburbs

6.1 Introduction

Melbourne's middle ring local government areas (LGAs), which form a ring around inner Melbourne (illustrated in Figure 6.1 below), include Hobson's Bay, Moonee Valley, Moreland, Darebin, Banyule, Manningham, Boroondara, Whitehorse, Monash, Glen Eira, Bayside and Kingston.¹ The Committee notes that there are varying definitions of Melbourne's middle ring suburbs. However, as discussed in Chapter 5, the Committee has adopted the definition of inner Melbourne (and therefore of Melbourne's middle ring) developed by the Inner Melbourne Action Plan Implementation Committee (IMAP).

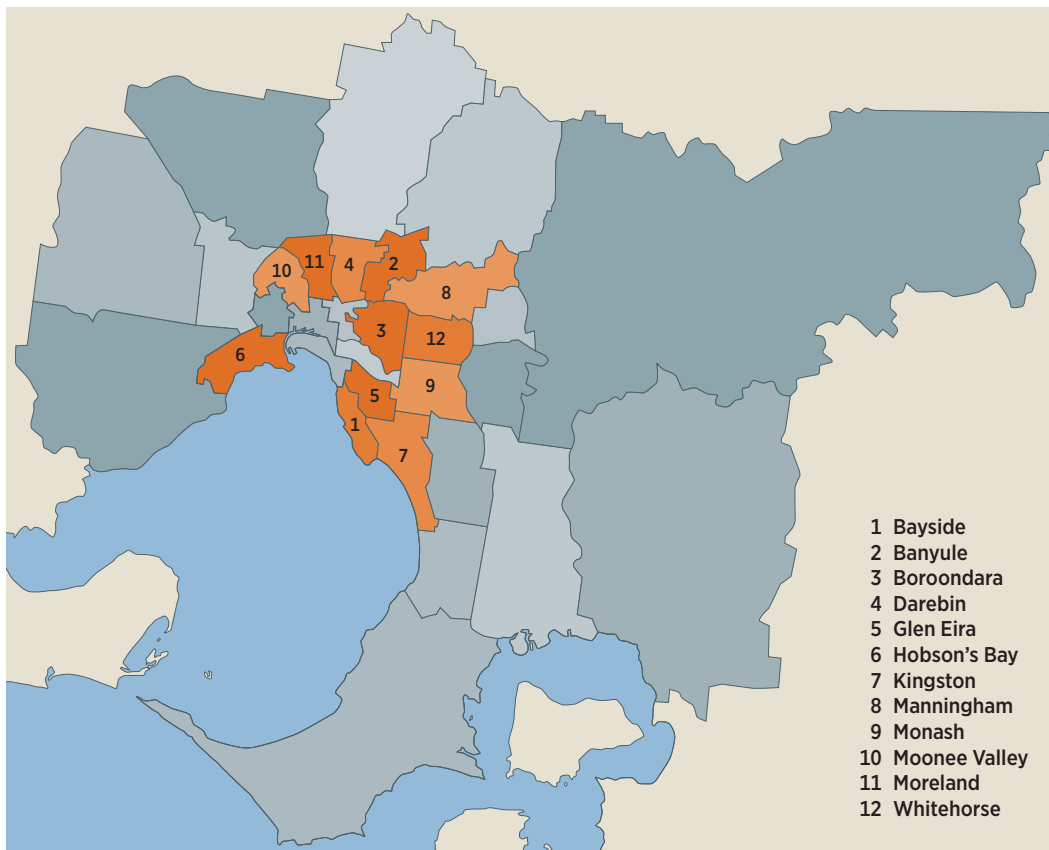
The suburbs within Melbourne's middle ring LGAs share a range of common environmental infrastructure challenges with inner Melbourne and regional centres. These shared challenges are discussed elsewhere in this report. For example, the evidence received from middle ring councils regarding the urban tree canopy is discussed in Chapter 3, while the importance of Melbourne's waterways and wetlands is discussed in Chapter 9. In this chapter, the Committee considers several issues that are of either unique or particularly acute relevance to Melbourne's middle ring councils.

In recent years, Melbourne's middle ring suburbs have experienced a slower rate of population growth than the City's outer suburban areas. This is despite the fact that jobs and services continue to be concentrated in inner and middle areas, with approximately two-thirds of metropolitan jobs expected to be located in these areas by 2050.²

1 Infrastructure Victoria, *Submission 149*, received 28 September 2020, p. 2.

2 Ibid.

Figure 6.1 Melbourne's middle ring LGAs



Source: Legislative Assembly Environment and Planning Committee.

As illustrated in Figure 1.3 (Chapter 1), Melbourne's middle ring suburbs are forecast to experience a slower rate of population growth in future years compared to inner Melbourne and its outer suburban growth areas. However, middle ring suburbs are already facing challenges in the provision of public open space, primarily due to their comparatively higher population densities.

As the Department of Environment, Land, Water and Planning (DELWP) noted in its submission, while Melbourne's housing stock comprises mostly detached housing with private open space, there has been a shift to medium and higher density housing, notably in middle ring suburbs.³ DELWP also noted that there are greater opportunities for new public open space in Melbourne's middle ring (and outer suburbs) compared to inner Melbourne.⁴

The challenge for middle ring (and inner) Melbourne was also outlined by RMIT's Centre for Urban Research:

³ Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 22.

⁴ *Ibid.*, p. 33.

densification of existing areas across inner and middle Melbourne is seeing increasing populations in areas without increasing protections and increases of environmental infrastructure planning.⁵

Similarly, Swinburne University School of Design stated in its submission that:

In metropolitan areas, the newer fringe is better served [in terms of the availability of environmental infrastructure] than many middle and inner suburbs

...

It is more challenging to retrofit inner and middle suburban walking and cycling routes as this often requires re-allocation of street space, plantings amongst services and infrastructure, undergrounding of public parking and the acquisition of land ...⁶

The Australian Housing and Urban Research Institute (AHURI) stated in its submission that the accommodation of Melbourne's future population growth should involve the renewal of 'greyfield' areas (ageing tracts of inner and middle ring suburbia that are underutilised economically and environmentally).⁷ AHURI stated:

Australian cities continue to sprawl, exacerbating socio-spatial inequalities in Australia [sic] cities, but also represent an increasing cost in providing environmental, social and transport infrastructure. AHURI research has shown that to accommodate future growth and better utilise existing land and infrastructure, there will need to be a large scale renewal of the middle ring 'greyfield' areas in Australian cities, which are dominated by aging housing stock and underutilised land. The design of this redevelopment would need to engage responsively to the environment, (including preservation of green spaces or established trees, and provide better sustainable outcomes, such as more open space, and increased renewable energy production), instead of relying on further sub-division that results in less optimal use of land and progressive reduction in private green spaces.⁸

This chapter outlines several options for increasing the amount and quality of public open space in Melbourne's middle ring suburbs, including: the role of open space contributions and planning amendments; increasing the shared use of some open space that is typically unavailable to the public; and increasing the range of uses of existing public open space. The Committee heard evidence regarding possible changes to the sale of 'surplus' government land as a means of increasing public open space.

6.2 Open space contributions and planning amendments

The Victoria Planning Provisions provide (at Clause 53.01) that a person who proposes to subdivide land must make a contribution to the council for the provision of public open space. This contribution is usually 5% of the land or of the value of the land in

⁵ Centre for Urban Research, RMIT University, *Submission 60*, received 22 September 2020, p. 5.

⁶ Swinburne University School of Design, *Submission 98*, received 25 September 2020, p. 2.

⁷ Australian Housing and Urban Research Institute (AHURI), *Submission 76*, received 24 September 2020, p. 4.

⁸ Ibid. (with sources)

established suburbs (the rate is 10% in Melbourne's growth areas). Any amount above 5% needs to be strategically justified and applied by the local council.⁹

Public open space contributions are only required where an existing lot is subdivided into 3 or more lots, or if a lot in a 2 lot subdivision is deemed capable of further subdivision (generally if one of the lots is more than 500 square metres). The requirement to make a contribution is only triggered by the subdivision; developers can build any number of dwellings on an existing lot without incurring the fee. The contribution is only collected once, so if it has been paid for a previous subdivision of the land, it cannot be applied to a new subdivision.¹⁰

Mr Andre Schmid, Senior Strategic Planner, City of Monash, was critical of the provisions in the *Subdivision Act 1988* (Vic) outlined above¹¹ and stated at a public hearing that the legislation and regulations that govern the provision of open space in established suburbs 'are outdated and were developed prior to the significant population density increases' of recent years.¹² Mr Schmid also noted that local authorities had been waiting for approximately a decade for a review of open space contributions to occur and in the meantime had been 'required to undertake their own background work and amendments at significant cost'.¹³

Mr Schmid also referred to the Victorian Environmental Assessment Council's 2011 report, *Metropolitan Melbourne Investigation - Final Report*, which recommended (recommendation 9) that the Government:

review the open space policy, the provisions of the Victorian planning provisions and also the Subdivision Act, with the aim of assisting metropolitan councils to meet the challenges of population increase by maximising the contribution of open space through subdivision of land. This recommendation, although supported in principle by the government of the day, was never acted upon.¹⁴

Mr Schmid also informed the Committee that Monash City Council had recently attempted to change its open space contribution rate (from a maximum of 5% to 10% for all subdivisions)¹⁵ through a planning scheme amendment based on a standard of 30 square metres per capita.¹⁶

Mr Schmid informed the Committee that Planning Panels Victoria had rejected the Council's application.¹⁷

⁹ Department of Environment, Land, Water and Planning, *Submission 254*, pp. 42, 67.

¹⁰ Change of Plan Town Planning Services, *What are the common council contributions for developments?*, <<https://changeofplan.com.au/what-are-the-common-council-contributions-for-developments>> accessed 18 October 2021.

¹¹ Mr Andre Schmid, Senior Strategic Planner, City of Monash, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, pp. 22–23.

¹² *Ibid.*, p. 22.

¹³ *Ibid.*, p. 23.

¹⁴ *Ibid.*

¹⁵ Planning Panels Victoria, *Monash Planning Scheme Amendment C148 Open Space Contributions: Interim Panel Report*, 2020, pp. i, 1.

¹⁶ Mr Andre Schmid, *Transcript of evidence*, p. 23.

¹⁷ *Ibid.*

Planning Panels Victoria found that:

a municipal wide benchmark of 30 square metres was something of an illusionary target. In a built-up area like Monash the opportunity to acquire additional open space is severely constrained, a view supported by the evidence presented to the Panel. In addition, as population increases the ratio per capita will, of necessity, decrease and so a per capita standard has only limited value. The Panel concludes that it is a flawed metric for the calculation of an appropriate open space levy rate.

...

An implementation plan which nominates precincts in which land acquisition will be sought and projects and works in open spaces with cost estimates is a more appropriate basis for the calculation of a contribution rate.¹⁸

Similarly, Ms Kate Jewell, Coordinator, City Strategy and Place Planning, City of Glen Eira, stated that Glen Eira has also faced significant barriers when seeking to amend the local planning scheme to increase open space contributions from private developments.¹⁹

Ms Jewell explained that one of the reasons why the City of Glen Eira had been compelled to seek an increase to the open space contribution was the difficulty and expense involved in requiring developers to include adequate open space within larger urban renewal sites where the largest proportion of its future population growth will be accommodated.²⁰

Ms Jewell also noted that these barriers include the requirement to provide detailed costings during the early stages of a proposed amendment and are more onerous for less well-resourced councils.²¹

Darebin City Council stated in its submission that it had proposed a planning scheme amendment that relied on the same methodology proposed by the City of Monash and subsequently rejected by Planning Panels Victoria, but had since decided to delay the planning panel hearing 'to allow officers to undertake further strategic work to support the increase to the open space levy.'²² The submission also called for additional planning guidance on an appropriate methodology to calculate open space developer contributions.²³

Ms Rachel Ollivier, General Manager, City Sustainability and Strategy, City of Darebin, expanded on this point at a public hearing, suggesting that the Government could

¹⁸ Planning Panels Victoria, *Monash Planning Scheme Amendment C148 Open Space Contributions*, p. 32.

¹⁹ Ms Kate Jewell, Coordinator, City Strategy and Place Planning, Glen Eira City Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 21.

²⁰ *Ibid.*, p. 28.

²¹ *Ibid.*, p. 21.

²² Darebin City Council, *Submission 233*, received 5 October 2020, p. 9.

²³ *Ibid.*, p. 10.

consider the establishment of a simplified or standardised approach to such planning scheme amendments across Melbourne.²⁴

The Committee notes the challenges that councils face in the creation of new open space and parks in established suburbs, as well as the difficulties that some councils have faced when attempting to increase the open space contribution rate.

However, the Committee also notes that some councils have accumulated significant reserves through open space levies and there is limited visibility over where and when these funds are expended. In particular, the Committee notes that, unlike Development Contribution Plans in the growth areas, there is often no nexus between the area in which the levy is collected and the area in which it is expended. In fact, the areas in which there is the highest development pressure (and by extension where demand for more public open space is likely to grow) may miss out from the creation of additional open space due to the higher cost of land relative to other areas of the municipality.

The Committee further notes that in any rising property market, the accumulation and retention of significant cash reserves over a number of years will result in reduced purchasing power of those reserves.

The Committee notes that DELWP released its *Open Space Strategy For Metropolitan Melbourne 2021* in July 2021, which includes a commitment to 'Review and ensure the effectiveness of current open space contribution guidelines in addressing legacy issues and differing needs in established suburbs, growth areas and areas of entrenched disadvantage.'²⁵ The Committee welcomes the announcement of this review and notes that it will provide an opportunity to investigate and address the concerns of middle ring councils.

The Committee also considers that this review may provide an opportunity for a broader review of how councils collect, acquit and report on funds received through open space levies.

RECOMMENDATION 30: That the Department of Environment, Land, Water and Planning, in conducting its review of existing open space contribution guidelines for established suburbs, include consideration of the relevant provisions in the *Subdivision Act 1988* (Vic), the adequacy of the current maximum open space contribution, the feasibility of a standard approach and guidance for councils seeking to apply a higher contribution rate, and review how councils collect, acquit and report on funds received through open space levies, including the frequency and timeliness with which funds are expended.

The Committee also received evidence from middle ring municipalities regarding the extent of delays in the consideration of planning scheme amendments more generally.

²⁴ Ms Rachel Ollivier, General Manager, City Sustainability and Strategy, City of Darebin, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 31.

²⁵ Department of Environment, Land, Water and Planning, *Open space for everyone – Open Space Strategy for Metropolitan Melbourne 2021*, Melbourne, 2021, p. 45.

Mr Schmid stated:

even with some of the more simple, site-specific ones et cetera, there is a lot more involvement with [departmental] officers than what used to be. To get authorisation we are having to do a lot more work and we provide information beforehand. That can often push the process, even at the start before you even get to authorisation, and then through the authorisation and the panel hearing process et cetera and then to the minister stage. Just all the way along the track things have changed quite significantly in terms of times ... Things have pushed out across the board, really, how we go through an amendment ...²⁶

Ms Jewell also stated that she had seen an increase in the time taken to process amendments, as well as in the number of amendments that are ultimately abandoned, noting 'That kind of suggests that they are ill-founded in the first instance'.²⁷

While the Committee heard some support for the option of imposing legislative time-limits on the consideration of planning scheme amendments,²⁸ there was also support for the option of simplifying the amendment process.

The Committee considers that the Government could work more closely with middle ring LGAs to simplify and streamline the planning scheme amendment process. The Committee also considers that councils could benefit from the expertise of DELWP during the initial stages of the amendment process to identify applications that may be ill-founded. The Committee has recommended in Chapter 5 (Recommendation 26) that the Government work with all Victorian councils to simplify and streamline processes for planning scheme amendments, with a particular focus on assisting councils during the early stages of the amendment process.

6.3 Shared use agreements for restricted public land

The Committee received evidence from a number of middle ring LGAs on some categories of restricted public land (with open space potential), as defined by the Victorian Planning Authority (VPA) (see VPA definition in Chapter 1). Examples identified by the VPA include: services and utilities reserves; government schools; cemeteries; transport reservations; and public golf courses. This section begins with a discussion of Government schools as this is the category of restricted public land on which the Committee received a significant amount of evidence.

Consideration of the potential for shared use of restricted public land is particularly important for Melbourne's middle ring (and inner suburbs) because of the expense and difficulty involved in purchasing additional parks and open space in these areas. This includes examining shared use agreements.

²⁶ Mr Andre Schmid, *Transcript of evidence*, p. 36.

²⁷ Ms Kate Jewell, *Transcript of evidence*, p. 36.

²⁸ See, for example, Ms Amy O'Keeffe, Senior Strategic Planner, City of Darebin, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 35.

6.3.1 Government schools

A number of middle ring councils identified public school grounds as representing a significant opportunity to provide their residents with access to additional public open space.

Mr Rod Spivey, Senior Open Space Planner, Banyule City Council, stated that the Council is 'keen to investigate access to public schools and other land in public ownership through joint use agreements.'²⁹

Similarly, Ms Jewell of Glen Eira stated:

We would like to also see that publicly held open space—for example, within schools and other facilities—be more readily accessible. ... Certainly we have a number of state high schools and primary schools that have wonderful playing ovals and the like and courts that are not accessible to the public, to our community, at times when those schools are closed. They are often located in the very areas where there are denser populations and any form of open space would be very much appreciated.³⁰

Mr Tony Peak stated that Whitehorse City Council has several shared use agreements, which work well once they are finalised but for which the negotiation process can be protracted. He also noted that:

it appears that you have got to have the capital funding approved in your capex budget or in your long-term financial plan to satisfy the requirements of the department that is going to do the works. There does not seem to be a lot of trust around that principle. I know that we had one at Livingstone Primary School. It works exceptionally well, but we had to wait until we got the funding in the capex budget... Once we had that the document flowed relatively quickly, but it was very protracted up to that point.³¹

Mr Spivey of Banyule City Council also referred to his experience in establishing shared use agreements with local primary schools:

the amount of backwards and forwards and the amount of time it took to get all the information in and, you know, make sure everyone was happy was a fairly prolonged experience. So in many ways, yes, they are fantastic once they are all sorted out, but getting them to a point where they are resolved is a fairly long and protracted process, I find.³²

Mr Adrian Gray stated that Brimbank City Council also has several shared use agreements with local schools and that the 'process is usually quite good' but that there have been occasions when a school has declined to be involved.³³

²⁹ Mr Rod Spivey, Senior Open Space Planner, Banyule Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, pp. 7, 12.

³⁰ Ms Kate Jewell, *Transcript of evidence*, pp. 21–22.

³¹ Mr Tony Peak, Manager, Property and Rates, Whitehorse City Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 17.

³² Mr Rod Spivey, *Transcript of evidence*, p. 18.

³³ Mr Adrian Gray, Manager, Urban Design, Brimbank City Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 18.

Similarly, Mr Schmid of the City of Monash stated:

we have to look at innovative ways of how we provide for additional demand, and part of that we have identified could be through some joint [shared] use of school grounds.

It probably needs some sort of policy shift, I guess, within the education department to be more supportive of that. I think a lot of schools are quite keen to not open them up sometimes, because it does have implications for security and overuse and so forth. But we definitely do identify it as another way of trying to increase the ability to provide for more sporting use, I guess.³⁴

The evidence provided by each of the above councils confirms that, in the case of shared use agreements with local Government schools, the onus is on the local council to make a proposal and demonstrate that it has sufficient funding available. It is also notable that individual schools have the power to reject a shared use proposal. The Committee considers that an increase in the involvement of the Department of Education and Training with respect to shared use agreements could help to streamline and expedite the negotiation process. This would not exclude schools, clubs and organisations reaching their own separate shared use agreements.

RECOMMENDATION 31: That the Victorian Government review and consider ways in which to streamline the process of making shared use agreements to maximise access to open space.

6.3.2 Other categories of restricted public land

As outlined above, there are several additional categories of restricted public land identified by the VPA that may have potential for shared use. The Committee received only limited evidence on these categories but plans by the Greater Metropolitan Cemeteries Trust to establish a large public cemetery at Harkness in Melbourne's west, which would also serve as a recreational space, is a notable example.³⁵

Mr Julian Lyngcoln, Deputy Secretary, Planning, DELWP, described the project as:

about the reimagining of a memorial park. That is being done in collaboration, and the design and approach will look for solutions that will allow for memory and loss, life and celebration—but to intertwine that with access to shared open space. That long-term legacy project will demonstrate how we can optimise and creatively design open space to maximise its value. It goes back to that principle I mentioned earlier about the multifunctionality.³⁶

³⁴ Mr Andre Schmid, *Transcript of evidence*, p. 35.

³⁵ See, for example, Maeve McGregor, 'Cemeteries could be places where we can all find some rest and peace', *The Age*, 18 July 2021, <<https://www.theage.com.au/national/victoria/cemeteries-could-be-places-where-we-can-all-find-some-rest-and-peace-20210716-p58aab.html>> accessed 27 October 2021.

³⁶ Mr Julian Lyngcoln, Deputy Secretary, Planning, Department of Environment, Land, Water and Planning, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 7.

Similarly, Ms Lorrae Wild, Managing Lead, Urban Design and Architecture, Transport Infrastructure, Office of the Victorian Government Architect, stated:

There is quite a bold vision set at the moment for reimagining the public cemetery in Melton, called Harkness, as future open space and blue and green infrastructure. It is a very, very large tract of land, and the Greater Melbourne Cemetery Trust has taken the initiative to actually rethink it as a multilayered bit of infrastructure that becomes a regional resource destination and does not lock land away for years and years and years or for generations as a cemetery.³⁷

Mr Lyngcoln noted, however, that the competing needs of different users can also pose challenges for the shared use of restricted public land, such that the provision of access for recreational purposes can have a detrimental effect.³⁸

The Committee also received some evidence on the potential for public golf courses to be used for other purposes, such as passive recreation. This particular category of restricted public land attracted some media attention during Melbourne's initial COVID-19 lockdown in 2020. The most high-profile example was the Northcote Public Golf Course, a 9-hole public course located in the City of Darebin.

Although the course was initially 'occupied' by members of the public following the introduction of COVID-19 restrictions, the City of Darebin and Leisure Management Solutions, which is contracted by the Council to manage the course, subsequently agreed (in July 2020) to open the course to the public during lockdown restrictions.³⁹ The Committee notes that the existing contractual agreement is due for renewal in 2022 and that the Council has agreed to engage in community consultation for a future shared use arrangement.⁴⁰

The Committee notes that in the meantime the Northcote Golf Club has developed a shared use model with the Merri Creek Management Committee which includes concurrent usage (as opposed to alternating use on different days), supported by the fencing off of certain areas and additional path connections.⁴¹

A number of stakeholders expressed support for an increase in shared use arrangements for public golf courses, including Mr Andrew Kelly, Yarra Riverkeeper and Vice-President, Yarra Riverkeeper Association;⁴² Dr Jonathan Spear, Deputy Chief Executive and Chief Operating Officer, Infrastructure Victoria;⁴³ and Ms Bronwen

³⁷ Ms Lorrae Wild, Managing Lead, Urban Design and Architecture, Transport Infrastructure, Office of the Victorian Government Architect, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 46.

³⁸ Mr Julian Lyngcoln, *Transcript of evidence*, p. 9.

³⁹ Melissa Davey, 'Fair way? Covid turned a Melbourne golf course into a public park and now no one wants to leave', *The Guardian*, 17 October 2020, <<https://www.theguardian.com/australia-news/2020/oct/17/fair-way-covid-turned-a-melbourne-golf-course-into-a-public-park-and-now-no-one-wants-to-leave>> accessed 18 October 2021.

⁴⁰ Cr Lina Messina, Mayor, City of Darebin, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, pp. 30–31.

⁴¹ Ms Danielle Green MP, Parliament of Victoria, public hearing, via videoconference, 20 April 2021, *Transcript of evidence*, p. 43.

⁴² Mr Andrew Kelly, Yarra Riverkeeper and Vice-President, Yarra Riverkeeper Association, public hearing, via videoconference, 20 April 2021, *Transcript of evidence*, p. 43.

⁴³ Dr Jonathan Spear, Deputy Chief Executive and Chief Operating Officer, Infrastructure Victoria, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 31.

Hamilton, Manager, Victorian Design Review Panel, Office of the Victorian Government Architect.⁴⁴

However, support for the shared use of public golf courses was neither universal nor unqualified. For example, Dr John Tower of the Australian and New Zealand Association for Leisure Studies (ANZALS) stated at a public hearing:

I think the whole idea of shared spaces has a lot of merit, but I am also very conscious that often in terms of pursuing sports there is a need for very specialised, dedicated types of facilities, and so it is not necessarily something that you can just open up and allow people to start using. It diminishes the quality of the sporting experience and those sorts of things.

...

Ultimately you end up getting into one of those wicked-problem scenarios where you have got two groups with very conflicting ideas and expectations and threading that path of compromise is going to be the only way you are going to find a viable solution. Getting those groups that are interested in getting access and maintaining the existing group's access is part of the challenge of all of that, but unless you get them talking to each other and working together, it is not going to be resolved.⁴⁵

Similarly, Mr Sam Taylor, Member, Vic/Tas Regional Council, Parks and Leisure Australia, stated:

it is definitely something that should be encouraged under certain circumstances, but it is a risky business because there are many different stakeholders.

...

I suppose, in summary, it is something that PLA sees as an opportunity, but also we have got to be mindful that there are many different stakeholders and many different views and so it has to be really carefully balanced to try and keep everyone happy or satisfied, I guess, from our perspective.⁴⁶

Notably, the Committee also received evidence that the level of demand for unrestricted access to public golf courses can vary significantly depending on the availability of nearby public open space. For example, as Mr Brett Walters, Director, Strategy and Planning, Moonee Valley City Council, stated at a public hearing:

The City of Moonee Valley has one golf course, a nine-hole golf course on the Maribyrnong River called the Riverside golf course. The pressures that you have seen—well, Northcote is the obvious one that I know of that was occupied during the pandemic—have not really emerged for Moonee Valley, and it is partially because of

⁴⁴ Ms Bronwen Hamilton, Manager, Victorian Design Review Panel, Office of the Victorian Government Architect, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 46.

⁴⁵ Dr John Tower, Australian and New Zealand Association for Leisure Studies (ANZALS), public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 5.

⁴⁶ Mr Sam Taylor, Member, Vic/Tas Regional Council, Parks and Leisure Australia (Vic/Tas Region), public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, p. 5.

where it is, spatially. It is part of a linear park network along the edge of the Maribyrnong River, so in its specific location there is plenty of open space around the golf course itself, so we are not experiencing any particular outcry about that facility.⁴⁷

The Committee is also mindful that public golf courses provide an affordable and accessible option for members of the public for whom the membership costs and often longer journey times to private golf clubs may be prohibitive. As Golf Australia states in its 2018-2021 Strategic Plan, public golf facilities also play an 'important role ... within the sport's pathway',⁴⁸ which aims to 'Engage and connect with all golfers and potential golfers'.⁴⁹

The Committee is mindful that there are several other categories of restricted public land for which the intended primary use may be undermined by shared use agreements. Examples include tennis courts, bowling clubs, public swimming pools and a range of sporting fields (particularly for sports that require specialised surfaces or maintenance to a certain standard).

The Committee notes that a significant amount of public land is reserved for single uses and considers that a review aimed at identifying the categories of restricted public land that may present opportunities for multiple use could provide an important resource for councils in identifying potential future shared use agreements. The Committee considers it is equally important that a case by case approach is adopted when considering the appropriateness of shared use agreements. Finally, the Committee notes that while this issue is particularly relevant to middle ring LGAs, there may also be potential for additional shared use agreements throughout Melbourne, as well as in regional and peri-urban areas.

FINDING 36: Shared use agreements in relation to some categories of restricted public land may have a role to play in the provision of public open space. However, this may depend on the category of restricted public land and on the availability of nearby unrestricted public open space. It is also appropriate that shared use agreements are considered by councils on a case by case basis.

RECOMMENDATION 32: That the Victorian Government review the categories of restricted public land with the aim of identifying those categories that may present opportunities for public access under shared use agreements.

⁴⁷ Mr Brett Walters, Director, Strategy and Planning, Moonee Valley City Council, public hearing, via videoconference, 22 March 2021, *Transcript of evidence*, pp. 19–20.

⁴⁸ Golf Australia, *Growing the Game of Golf in Australia 2018-2021: Strategic Plan*, p. 2.

⁴⁹ *Ibid.*, p. 1.

6.4 Increasing the range of uses of existing public open space

The Committee heard from several middle ring councils regarding their commitment to increasing the range of uses and activities that can be supported by unrestricted public open space. By way of example, the addition of fencing around a sports oval can enable it to also be used as a dog park during certain times of day. However, these councils also informed the Committee that they do not currently have the measurement tools to determine the maximum possible uplift in the utilisation of existing environmental infrastructure.

Mr Adrian Gray, Manager, Urban Design, Brimbank City Council, stated at a public hearing:

What we try to do these days is ... utilise the passive component of sporting parks, where we put in circuit paths, where we put in destinations for people, so it is integrated in there. We are doing that really well across the municipality, so that utilisation cannot just be about sports. Sports is really important for that activity for the local community, but if you look at the numbers—and we have done this anecdotally—the community visitation, say, at some of these parks where they play cricket in summer and soccer in winter, if you look at the perimeter where we have a circuit path, where we have fitness stations, where we have barbecue facilities or shelters and all that kind of stuff that attracts the local community, the numbers of use for the passive components is huge, because it [is] every day.⁵⁰

Mr Gray went to state that although it is very important that parks function for the whole community, the Council does not currently measure the utilisation rates for a given park or piece of open space according to different user groups.⁵¹

Similarly, Ms Robyn Mitchell, Coordinator, Open Space and Strategic Projects, Banyule City Council, stated that the Council does not typically measure utilisation levels by different categories of users and noted that such measurement is a necessary first step in quantifying the economic and wider value of environmental infrastructure:

I think there is actually a massive gap in the industry across the board of open space and green infrastructure and environmental infrastructure... you cannot yet quantify an open space or a park. I think we do not have the ecosystem services. We do not have the quantification of that yet. We do not have the shade value. We do not have the cooling value and what that does for people's health and how much money it is saving the state on people going into hospital, and I think that is what is missing.⁵²

Mr Leigh Morris, Recreation and Open Space Development Lead, Whitehorse City Council, informed the Committee that the Council intends to measure the uptake of its

⁵⁰ Mr Adrian Gray, *Transcript of evidence*, p. 10.

⁵¹ *Ibid.*, pp. 10–11.

⁵² Ms Robyn Mitchell, Coordinator, Open Space and Strategic Projects, Banyule Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 11.

trial of smart lighting at some sports reserves, which is aimed at extending their usage to other activities, such as dog walking. He noted that measurement tools could include Facebook check-ins as well as traditional site observations.⁵³

Mr Spivey of Banyule City Council noted that this issue applies primarily in relation to the use of parks and open space for passive recreation:

it is probably a lot easier to quantify the use of [open space for] active recreation. I mean, I guess it is very easy to see the numbers associated with clubs increasing, whereas with passive open space, you know, you have got such a broad, wide variety of people using that space for different purposes it is quite hard to get a fix or a quantum.⁵⁴

FINDING 37: Melbourne's middle ring suburbs are working to increase the range of uses and activities that can be supported by existing parks and open space. However, measurement of utilisation rates, particularly for different categories of users of passive open space, can be difficult.

6.5 Sale of government land

The Committee heard from a number of middle ring LGAs that the requirement for state government agencies to seek the highest and best use when selling surplus land poses a significant barrier to the acquisition of such land by councils. This can result in middle ring LGAs missing out on the opportunity to purchase surplus government land for use as unrestricted public open space.

Mr Peak of Whitehorse City Council outlined the problem of highest and best use as follows:

When the state government sells land to council, the expectation is that we will pay highest and best-use value—so we will pay the highest price for the land. That is problematic in that we are using it for a lesser use.⁵⁵

Mr Peak went on to refer to the example of the former Nunawading Primary School site, which the Council was able to purchase (for use as a community hub and public open space) after a caveat was placed on the future sale of the property by the Council. Mr Peak stated:

With the one we did with the Nunawading Primary School we put a caveat on the title that if we did sell the site we would pay the market value difference of 40 per cent. So we got a 40 per cent discount and we said if we ever sold this site we would pay a 40 per cent premium back.⁵⁶

⁵³ Mr Leigh Morris, Recreation and Open Space Development Lead, Whitehorse City Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 11.

⁵⁴ Mr Rod Spivey, *Transcript of evidence*, p. 12.

⁵⁵ Mr Tony Peak, *Transcript of evidence*, p. 5.

⁵⁶ *Ibid.*

Mr Leigh Morris of Whitehorse City Council stated that when Council is required to pay a premium for a site, it decreases their reserve funding for the purchase of strategic sites (i.e. sites that have been identified by Council for future purchase to address gaps in the open space network).⁵⁷

Mr Peak also stated his support for the development of a framework whereby if a particular parcel of land stays within the public sector and remains in public use, its ownership could be transferred between levels of government at a discounted rate that reflects the purpose for which it is used rather than its market value.⁵⁸

Ms Ollivier of the City of Darebin also expressed support for such a reform.⁵⁹

Similarly, Councillor Lina Messina, Mayor of Darebin City Council, stated that the Government 'has a role to play in setting these rules and the sale of its own land, looking at government-to-government acquisitions that are affordable'.⁶⁰ Cr Messina also called for increased collaboration and coordination between state government agencies involved in infrastructure upgrades.⁶¹

The Victorian Auditor-General's Office (VAGO) found in its 2018 report, *Managing Surplus Government Land*, that:

Administrative policies and processes do not support agencies to make the best use of their surplus government land. Current policies emphasise the financial value of land and do not provide guidance to agencies on how to achieve best value.⁶²

VAGO also noted that Land Use Victoria (LUV) had developed the Victorian Government Land Use Policy and Guidelines, which include a new definition of 'public value', which:

considers intergenerational, social and environmental values, as well as economic benefits. It also focuses on best value from a whole-of-government perspective, whereas current policies only require agencies to consider their own portfolio-specific needs. Government approved the final version of LUV's policy in December 2017.⁶³

However, VAGO also found that this had not resulted in 'a common understanding of value' among government agencies because current policies continue to 'emphasise the financial value of land and do not provide guidance to agencies on how to achieve best value.'⁶⁴

⁵⁷ Mr Leigh Morris, *Transcript of evidence*, p. 5.

⁵⁸ *Ibid.*, pp. 9–10.

⁵⁹ Ms Rachel Ollivier, *Transcript of evidence*, pp. 26–27.

⁶⁰ Cr Lina Messina, *Transcript of evidence*, p. 24.

⁶¹ *Ibid.*

⁶² Victorian Auditor-General, *Managing Surplus Government Land*, Victorian Auditor-General's Office, Melbourne, 2018, p. 8.

⁶³ *Ibid.*

⁶⁴ *Ibid.*

The Committee considers that the policy of seeking the highest and best use for the sale of government-owned land should continue to apply when land is sold for private development. However, the evidence suggests that there may be value in the Government undertaking a review of the policy in relation to parcels of government-owned land that are essentially transitioning from one public purpose to another via a change in ownership from the State to a municipality. Such a review could also investigate the feasibility of a system that recognises the ongoing public ownership of such land and allows for the price to be adjusted accordingly. In view of the work that has been undertaken by LUV in developing a new definition of 'public value', the Government may wish to consider boosting LUV's capacity to advise and assist government agencies when selling surplus government land to local councils for use as open space.

RECOMMENDATION 33: That the Victorian Government review the requirement for State Government agencies to seek the 'highest and best-use' when selling surplus government land for the purpose of providing open space. This could include the development of a framework to enable such land to first be offered to local or State government on a low or no cost basis and for an extended offer period.

7

Melbourne's outer suburbs

7.1 Introduction

Melbourne's outer suburbs comprise both growth areas and established suburbs, which face distinctly different challenges with respect to the provision and maintenance of environmental infrastructure.

Residents of Melbourne's growth areas typically enjoy high amounts of open space per person and live close to parkland. For these areas, the primary challenge is the funding of conservation sites and regional parks. Residents of some older outer suburbs—like residents of some inner and middle ring suburbs—have relatively low amounts of open space per person and poorer linkages to existing parkland. Accordingly, a number of the recommendations contained in Chapters 5 and 6 are also relevant to these parts of outer Melbourne.

As with the definitions of inner and middle ring Melbourne, there is no single universally accepted definition of outer suburban Melbourne. However, the Interface Councils Region (ICR) provides a useful starting point. The ICR is a group of ten local government areas (LGAs) that form an urban ring around metropolitan Melbourne, comprising Cardinia, Casey, Hume, Melton, Mitchell, Mornington Peninsula, Nillumbik, Whittlesea, Wyndham and Yarra Ranges.¹ Of the 10 Interface LGAs, seven are defined as Growth Area Councils and three are defined as Green Wedge Councils (Nillumbik, Yarra Ranges and the Mornington Peninsula).

The seven Growth Area Councils all contain land that is located within one of Melbourne's four Growth Corridors,² which are forecast to accommodate close to half of Melbourne's new housing supply over coming decades.³ Each of the four Growth Corridor Plans aims to set the strategic direction for future urban development in the Growth Corridors, including the identification of:

- areas suitable for urban development
- areas of high environmental or landscape value, which will be protected from development, and 'constrained' land (i.e. land that is unsuitable for development such as flood prone areas)
- the integrated open space network.⁴

By contrast, the three Green Wedge Councils do not contain land within Melbourne's Growth Corridors. (There are 12 designated green wedge areas across 17 of Melbourne's

1 Interface Councils, *Submission 146*, received 28 September 2020, p. 2.

2 Growth Areas Authority, *Growth Corridor Plans: Managing Melbourne's Growth*, 2011, p. 7.

3 Ibid., p. 5.

4 Ibid., p. 6.

LGAs, which form a ring around metropolitan Melbourne.⁵ Some of these LGAs, such as Casey and Cardinia, are Growth Area Councils.)

The Committee also notes that Mitchell Shire Council is defined as a regional council under the *Regional Development Victoria Act 2002* (Vic). However, its membership of the ICR group reflects the rapid population and urban growth experienced within parts of the LGA in recent years.

Melbourne's outer suburbs are forecast to play a fundamental role in accommodating future population growth. The ICR currently accommodates approximately 40% of Victoria's population and 47% of Melbourne's population.⁶ As one of the fastest growing areas in Australia, it is forecast to accommodate 53% of Melbourne's population growth between 2016 and 2031.⁷

7.2 Conservation in Melbourne's growth areas

As discussed in Chapter 3, public open space and restricted public land have a critical role to play in the conservation of ecosystems and landscapes across Melbourne and regional centres. In this section, the Committee discusses two programs that are considered fundamental to conservation and the protection of biodiversity in Melbourne's rapidly growing outer suburbs: the Melbourne Strategic Assessment; and the Regional Parks program. The section also discusses the issue of funding for the acquisition and management of conservation sites and regional parks.

7.2.1 Melbourne Strategic Assessment

The Melbourne Strategic Assessment (MSA) program was the first strategic assessment (i.e. landscape scale assessment) endorsed under the federal *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (the EPBC Act). It was conducted following the listing by the Australian Government, under the EPBC Act, of both Natural Temperate Grasslands and Grassy Eucalypt Woodlands as critically endangered.⁸

The Victorian Volcanic Plain bioregion covers approximately 2.3 million hectares and is one of just 15 biodiversity hotspots in Australia. It provides habitat for 65 nationally threatened species and 173 threatened species in Victoria. Before the arrival of Europeans, more than one third of the State was covered by Natural Temperate Grasslands and Grassy Eucalypt Woodlands (see Figure 7.1 below). Today, less than 5% of these ecological communities remain.⁹

5 Department of Environment, Land, Water and Planning, *Green wedges*, 2021, <<https://www.planning.vic.gov.au/policy-and-strategy/green-wedges>> accessed 5 November 2021.

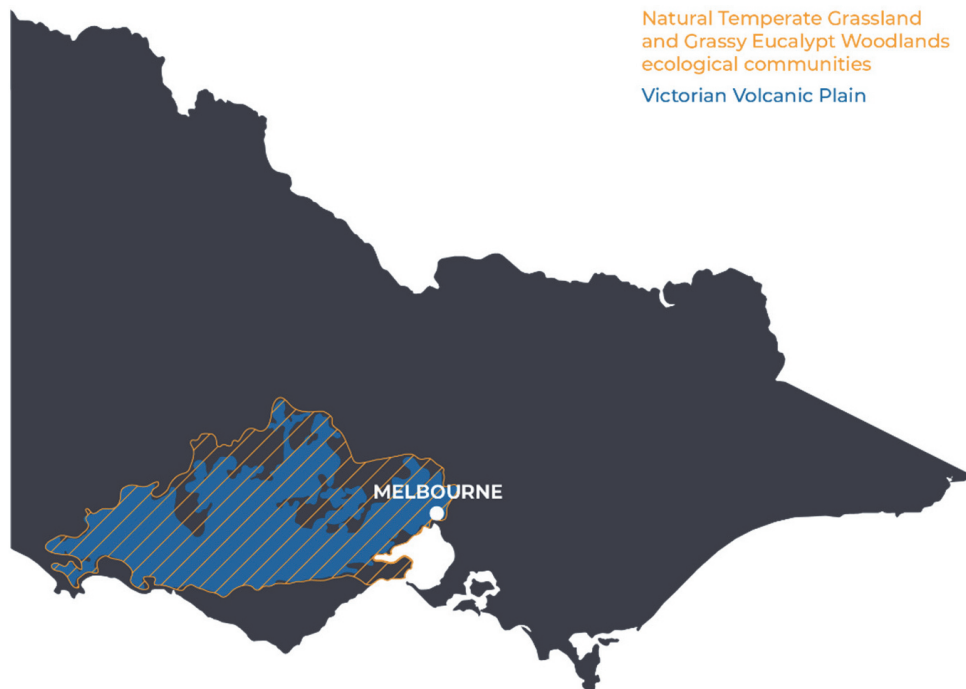
6 City of Casey, Cardinia Shire Council, Hume City Council, Melton City Council, Mitchell Shire Council, City of Whittlesea and Wyndham City Council.

7 Interface Councils, *Submission 146*, p. 2.

8 Victorian Auditor-General's Office, *Protecting Critically Endangered Grasslands*, 2020, pp. 21–22.

9 *Ibid.*, p. 18.

Figure 7.1 Pre-European extent of Natural Temperate Grassland and Grassy Eucalypt Woodlands



Source: Victorian Auditor-General's Office, *Protecting Critically Endangered Grasslands*, 2020, p. 18.

The MSA program was endorsed by the Australian Government on 2 February 2010 and is aimed at managing the environmental impact of urban development in Melbourne's growth areas. Under the program, the Australian and Victorian Governments committed to:

- improve the composition, structure and functioning of Natural Temperate Grasslands and Grassy Eucalypt Woodlands (which occur primarily within the Victorian Volcanic Plain bioregion)
- improve conservation outcomes for several other EPBC Act-listed flora and fauna species
- establish and preserve two grassland reserves outside the Urban Growth Boundary (UGB) by 2020 to offset the impact of development occurring in the expanded growth areas:
 - a 15,000 hectare Western Grassland Reserve (WGR)
 - a 1,200-hectare Grassy Eucalypt Woodland Reserve (GEWR)
- establish and preserve 36 conservation areas in the expanded UGB to protect areas with the highest identified biodiversity values.¹⁰

¹⁰ Ibid., pp. 7, 23. See also Department of Planning and Community Development, *Delivering Melbourne's Newest Sustainable Communities: Program Report*, East Melbourne, 2009, pp. 48, 53.

Western Grassland Reserve

Several stakeholders expressed concern about the delay in the establishment of the Western Grassland Reserve (WGR) under the MSA.¹¹ The WGR largely sits within the City of Wyndham but includes 1,500 hectares within the City of Melton.

Wyndham City Council stated in its submission:

The proposed Western Grassland Reserve, situated on Melbourne's western urban fringe, was a key mechanism established to offset the biodiversity losses associated with urban development and to protect critically endangered grasslands. Although the reserve was to be delivered in 2020, as of April 2020 less than fifteen percent of the reserve has been secured and there is significant concern that the biodiversity values on the remaining private lands within the reserve area are in decline.¹²

Mr Luke Shannon, General Manager, Planning and Development, Melton City Council, was also critical of the delayed establishment of the WGR under the MSA, noting that the land for the WGR:

is to be acquired by the state over time using money paid by developers for offsets as they develop land within the urban growth boundary. Unfortunately only a quite small portion has been acquired to date, and the area is degrading quite significantly. The council would certainly urge for that to be acquired at the earliest opportunity so that it can be maintained and again provide the owners with the certainty that they are looking for in that area.¹³

The Victorian Auditor-General's Office (VAGO) found in its June 2020 report, *Protecting Critically Endangered Grasslands*, that the Department of Environment, Land, Water and Planning (DELWP) had not met the State's commitment to establish the WGR and GEWR by 2020. VAGO stated:

The MSA program schedule and associated protection of environmental values in the reserves was based on early acquisition of the land. The MSA program based the 10-year land acquisition timeframe on the understanding that the state would commit significant funding for the program. This did not occur and DELWP has not acquired land as intended, which increases the risk that its ecological condition has degraded and may continue to do so.¹⁴

VAGO also noted in its report that DELWP had yet to purchase some properties assessed as the highest priority:

In part, this is because DELWP is allowing landowners to decide when to sell rather than compulsorily acquiring the land.

11 Wyndham City Council, *Submission 193A*, received 6 October 2020, pp. 4,7; Victorian National Parks Association, *Submission 198*, received 28 September 2020, p. 12.

12 Wyndham City Council, *Submission 193A*, p. 4.

13 Mr Luke Shannon, General Manager, Planning and Development, Melton City Council, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 10.

14 Victorian Auditor-General's Office, *Protecting Critically Endangered Grasslands*, p. 31.

Acquisition is also limited by the amount of money DELWP has to make purchase offers, and by landowners' willingness to accept the offers made.¹⁵

At the time of the VAGO report, DELWP cited a number of reasons for the delayed acquisition of WGR land, including failed landowner negotiations, funding constraints and slower than anticipated development rates.¹⁶

Mr Greg Bursill, General Manager, Lovely Banks Development Group, Urban Development Institute of Australia, also referred to the impact of funding constraints. Mr Bursill noted that although public acquisition overlays had been applied across the 15,000 hectares of the WGR, the levies on the development industry in the growth areas had failed to provide the cash flow for Government to fund the necessary acquisitions.¹⁷ Mr Bursill stated that the system:

does not allow for forward funding to bring forward the acquisitions so they happen earlier, and the opportunity would be for government to invest to help facilitate and fast-track the acquisitions so that the benefits and the rehabilitation of that land that is subject to the PAO [Public Acquisition Overlay] for nature conservation can be delivered a lot earlier rather than over a much longer period of time, like 30 years to 40 years. It could be acquired earlier, would be our view.¹⁸

VAGO noted the introduction of recent reforms by DELWP aimed at addressing the delays in the MSA program:

DELWP recently updated the regulatory framework that supports the MSA program and is changing its approach to acquisition and management of targeted land. However, it has yet to show whether it can offset losses of native vegetation due to urban development, or how it will preserve ecological values to meet its commitments under the MSA program.¹⁹

VAGO also noted the introduction of the *Melbourne Strategic Assessment (Environment Mitigation Levy) Act 2020 (Vic)* (in force from 1 July 2020) which introduced a new levy system for developers under which fees are adjusted annually by reference to the CPI as well as by approximately 20% per year for the first five years of the Act.²⁰

Like VAGO, the Victorian National Parks Association stated in its submission that there is a need for further reform of the MSA program.²¹

The Committee notes the ongoing delay in the delivery of the WGR and the evidence of its ongoing loss of biodiversity. The Committee considers that this could be addressed by bringing forward the WGR.

¹⁵ Ibid.

¹⁶ Ibid., p. 34.

¹⁷ Mr Greg Bursill, General Manager, Lovely Banks Development Group, Urban Development Institute of Australia, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 51.

¹⁸ Ibid.

¹⁹ Victorian Auditor-General's Office, *Protecting Critically Endangered Grasslands*, p. 31.

²⁰ Ibid., p. 45.

²¹ Victorian National Parks Association, *Submission 198*, p. 13.

RECOMMENDATION 34: That the Victorian Government consider bringing forward the acquisition of the 15,000 hectares of land identified for the Western Grassland Reserve, along with interim acquisition targets.

Grassy Eucalypt Woodland Reserve

The Grassy Eucalypt Woodland (GEWR) of the Victorian Volcanic Plain comprises open woodland of River Red Gums, many of which are hundreds of years old, as well as woodland birds, possums and threatened species such as the Golden Sun Moth, Striped Legless Lizard and threatened flora. As part of the extension of the Urban Growth Boundary, in 2009 the Victorian Government made a commitment to the Australian Government to secure 1,200 hectares of the GEWR by 2020.²²

The City of Whittlesea explained the environmental significance of the GEWR in its submission:

We only have five percent of the Grassy Eucalypt Woodland remaining in Victoria, and less than one per cent in good condition. The protection of this land is urgent. Much of the area identified as the Grassy Eucalypt Woodland Reserve investigation area has a long history of stock grazing and other land management practices that are often incompatible with native vegetation management.²³

The City of Whittlesea went on to state that although Environmental Significance Overlays are in place and the GEWR investigation area has been broadly identified, no land had yet been secured and there were no land management agreements in place.²⁴

The City of Whittlesea also outlined the adverse environmental impacts of delays in the establishment of the GEWR:

Continued delays in securing sites supporting Grassy Eucalypt Woodland may result in significant loss and/or further degradation of this valued and critically endangered environmental community. Inaction could see us [lose] our last, significant parcels of beautiful big Red Gum trees and associated native grasses and habitats – which are the environmental hallmarks of our municipality.²⁵

Ms Fleur Anderson, Acting Executive Officer, Sustainability Planning, Whittlesea City Council, stated:

At the moment we are advocating heavily for the state government to meet their commitment around securing the 1200-hectare grassy eucalypt woodland reserve. I know that DELWP are moving through a series of workshops at the moment, but currently their strategy focuses on using the environmental levy to purchase that space

22 City of Whittlesea, *Urgent Need To Protect The Grassy Eucalypt Woodland Reserve*, 2019, <<https://whittlesea.vic.gov.au/media/4919/sustainable-environment-grassy-eucalypt-woodland-reserve-2019.pdf>> accessed 7 September 2021.

23 City of Whittlesea, *Submission 91*, received 25 September 2020, p. 32.

24 Ibid., p. 31.

25 Ibid., p. 32.

over time. Our advocacy position would be around to deliver that space under the original time line, which was to be by last year—I know that is not possible, but to deliver it as soon as possible whilst that quality of habitat still exists in the north.²⁶

The City of Whittlesea recommended in its submission that the following actions should be taken to facilitate the establishment of the GEWR:

- Apply a public acquisition overlay to the GEWR investigation area
- Develop a legal mechanism to enter into purchasing arrangements with landowners
- Secure additional funding to purchase and protect land across the GEWR.²⁷

The City of Whittlesea also recommended that the following actions should be urgently taken to progress the goal of securing the GEWR by 2020:

- A. The public release of the plan to acquire relevant parcels of land. The release of this document is important so that Council and the community can be confident that progress is being made towards the Government's commitment to secure 1200ha of Grassy Eucalypt Woodland Reserve and that there is an action plan towards achieving this commitment.
- B. The identification of land parcels for acquisition and/or management within the four priority categories.
- C. Commencement of communication and negotiations with land owners.
- D. Establishment of management agreements with land owners under Section 69 of the Conservation Forests and Land Act 1987 (Vic) and/or purchase of land for priority parcels.²⁸

The Committee notes the ongoing delay in the establishment of the GEWR and the evidence from the City of Whittlesea that, as at September 2020, no land had been secured and no land management agreements had been put in place. For the same reasons as noted above in relation to the WGR, the Committee considers that the recent changes to the development levy system are unlikely to significantly improve this situation in the near future. The Committee also notes that without rapid action, the land available for the establishment of the GEWR will continue to experience environmental degradation.

RECOMMENDATION 35: That the Victorian Government bring forward the acquisition of the 1,200 hectares of land required for the establishment of the Grassy Eucalypt Woodland Reserve, along with interim acquisition targets.

²⁶ Ms Fleur Anderson, Acting Executive Officer, Sustainability Planning, City of Whittlesea, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 16.

²⁷ City of Whittlesea, *Submission 91*, p. 31.

²⁸ *Ibid.*

Wider environmental impacts of the Melbourne Strategic Assessment

In addition to the delayed establishment of the WGR and GEWR under the MSA, several stakeholders raised concerns about the wider environmental impacts of the program. Foremost among these was the evidence of an increase in wholesale clearance of native vegetation, particularly single old trees, located in growth areas but outside of the WGR or GEWR. Stakeholders also raised concerns regarding management and ownership issues of land identified for inclusion in the WGR and GEWR.

Mr Jayden Mizzi, Team Leader, Growth and Investment Strategic Planning, City of Casey, stated that the MSA program has had a negative impact on native vegetation located inside growth areas but outside of the future WGR or GEWR. Mr Mizzi stated that the MSA program:

does not sufficiently protect native vegetation in growth areas. It sets an expectation for the development industry that wholesale clearance of vegetation is appropriate. Whilst there are obvious conservation benefits to the creation of new consolidated ecological spaces, like the western grassland reserve, individual scattered trees and vegetation throughout urban areas have landscaped climate and health benefits that warrant their attention.²⁹

Similarly, the Hume City Council stated in its submission that although land zoned Urban Growth Zone within the municipality has generally low tree canopy cover, 'current development practices within this zone are removing any existing canopy cover'.³⁰

Ms Bernadette Thomas, Manager, Sustainable Environment, Hume City Council, stated that the MSA does not protect vegetation in growth areas and contributes to a net loss of vegetation despite the practice of offsetting into grasslands, particularly the western grasslands.³¹

Ms Thomas also stated:

A lot of large, single old trees are lost through the development process in the growth areas, and they do not need to be. But the way that the MSA is implemented and the focus on the biodiversity conservation strategy areas mean that often those couple-of-hundred-year-old river red gums in Hume are lost through the development process, and because they are outside of patches they then are not part of a reserve.³²

Ms Thomas also noted that single old trees contribute to biodiversity outcomes despite being located outside of conservation sites, as well as to amenity, climate change mitigation and landscape character.³³ Ms Thomas stated that although Hume City

²⁹ Mr Jayden Mizzi, Team Leader, Growth and Investment Strategic Planning, City of Casey, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 6.

³⁰ Hume City Council, *Submission 157*, received 28 September 2020, p. 7.

³¹ Ms Bernadette Thomas, Manager, Sustainable Environment, Hume City Council, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 7.

³² *Ibid.*, p. 8.

³³ *Ibid.*

Council does a lot of work aimed at incorporating single old trees into new parks and open spaces within the growth areas:

if a developer does not have to keep a large old tree, then often, as much as council officers negotiate, those trees will be lost to the environment and to the community.³⁴

Ms Thomas stated that there may be opportunities through the Precinct Structure Plan (PSP) development process to identify such trees and the space required to preserve them.³⁵ Ms Thomas also stated:

of course you do not just want to protect one tree on its own with a sort of concrete jungle around it. So you would be aiming to protect it in some form of reserve, and that is what we do at Hume as much as we possibly can—if there is a single old tree or even a couple that are adjacent to each other, we will aim to protect them in a reserve. Sometimes it might be next to an open space area so that it has sort of that landscape amenity as well as protecting the tree on its own and any biodiversity values that go with it. ... It works best where there is a patch of trees so it can be sort of accumulated into a reserve, but it does not often work when there is a single tree on its own.³⁶

The Committee received evidence that the City of Whittlesea (which sits within the Northern growth corridor with the City of Hume and the City of Mitchell)³⁷ has had significant success in the protection of single old trees under its River Red Gum Protection Policy. Ms Fleur Anderson, Acting Executive Officer, Sustainability Planning, City of Whittlesea, outlined the policy at a public hearing and stated that it has achieved approximately 80% retention of viable and safe River Red Gums within the municipality.³⁸ This supports anecdotal evidence that it is much more difficult for developers to remove significant old trees in the City of Whittlesea than in other growth corridor municipalities.³⁹

Whittlesea's River Red Gum Protection Policy, which is contained in the Whittlesea Planning Scheme (clause 22.10), contains the following key measures:

- Recognise the intrinsic value of River Red Gums in establishing character and identity in urban and rural areas.
- Request a comprehensive site analysis and arborist's report with any planning proposal for development on land which contains one or more remnant River Red Gums.
- Encourage that the majority of River Red Gums proposed for retention are sited in public open space reserves and/or road reserves.

³⁴ Ibid.

³⁵ Ibid., p. 11.

³⁶ Ibid.

³⁷ Department of Environment, Land, Water and Planning, *About the Melbourne Strategic Assessment Program: Protecting biodiversity in our growth areas*, 2021, <<https://www.msa.vic.gov.au/about>> accessed 8 September 2021.

³⁸ Ms Fleur Anderson, *Transcript of evidence*, p. 16.

³⁹ Ms Danielle Green MP, Parliament of Victoria, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 12.

- Ensure that, where a tree is to be located in a lot, the lot is large enough to accommodate a suitable development envelope that does not disturb the tree or its root system.
- Ensure that, where feasible, areas of significant River Red Gum regeneration are protected in any development proposal.
- Encourage tree removal to be generally limited to only those trees independently assessed as presenting a danger to people and property.⁴⁰

The Committee considers that Whittlesea's River Red Gum Protection Policy may provide a model for the more effective protection of single old or significant trees throughout Melbourne's growth corridors. The Committee also notes that the protection of native vegetation in Victoria often relies on a single clause in a local planning scheme, in contrast to a number of other states, such as New South Wales, which have state-based protection policies.⁴¹ The Victorian Government may therefore wish to consider the feasibility of a state-based policy for the protection of single old or significant trees in Melbourne's growth area LGAs.

RECOMMENDATION 36: That the Victorian Government investigate the feasibility of developing a tree protection policy, based on Whittlesea's River Red Gum Protection Policy, for adoption by all growth area local government areas, either through their individual Planning Schemes or through a state-based protection policy.

The Committee also received evidence regarding some of the interconnected challenges involved in maintaining the conservation value of the land that has been identified for inclusion in the WGR. These include weed management and the need for greater community education and clarity of land ownership.

Ms Kylie Trott, Executive Director, Operations, Parks Victoria, referred to the ongoing challenges of managing the conservation value of WGR land, particularly the control of weeds, such as serrated tussock:

it is a long-term program that we have for implementing the new grasslands that are coming on board, and with things like the serrated tussock we are making sure that we have got management plans in place where we are spraying the weeds as they are coming up. This year was quite unfortunate with the COVID restrictions and not being able to get the contractors in to spray the weeds before they seeded or to put up that temporary fencing to contain the seed heads. ...we will continue to be spraying those weeds and putting up temporary fencing in future years to try to minimise that impact

⁴⁰ City of Whittlesea, *River Red Gum Protection Policy*, <<https://www.whittlesea.vic.gov.au/media/1286/river-red-gum-protection-policy.pdf>> accessed 8 November 2021.

⁴¹ The Urban Fringe Dweller, *Red River Gum Protection Policy - City of Whittlesea*, 2019, <<https://urbanfringedweller.blogspot.com/2019/03/river-red-gum-protection-policy-city-of.html>> accessed 8 November 2021; Brendan Sydes, 'Vegetation clearing gets green light', *Park Watch*, no. 256, 2014, pp. 10-11.

on the community. But with the former private land coming into the park it is an ongoing program for us in managing things like the serrated tussock within those former properties that are now part of the park.⁴²

Ms Trott also referred to the importance of community engagement in the protection of grasslands:

Grasslands are really special places but can be undervalued by people because they are different to a normal type of park that you might see, so we certainly have got a role in community engagement and working with community to understand the parks that are in their neighbourhood and how we can work together to make sure that we are creating those environments to protect those little critters.⁴³

Similarly, Mr Peter McKinnon, Manager, Climate Futures, Wyndham City Council stated:

I think the key other component of that is making sure we are building this in conjunction and co-designing it with our community, who have got limited knowledge or awareness of what these environmental ecosystems and this infrastructure could actually mean for their cities.⁴⁴

Mr McKinnon also outlined the impact of the lack of clarity in relation to the ownership of land affected by the MSA program:

We have found there has been a lack of management or clarity on some of the ownership of some of these sites, and this is both within the urban growth boundary and sites outside of it, which has led to some environmental degradation, particularly of the grassland reserves, which we know have got such intrinsic remnant value. We can see that sort of environmental degradation when that clarity around land ownership and management is not put forward.⁴⁵

The Committee considers that, as the custodian of conservation land under the MSA program, Parks Victoria should take a leading role in educating the local community about the environmental importance of grasslands and their associated challenges, such as weed infestation. The Government also has a role to play in clarifying the ownership of grassland and woodland, both within and outside the UGB, under the MSA program. This information should be publicly available and regularly updated.

RECOMMENDATION 37: That Parks Victoria establish a program aimed at educating local communities about the environmental importance of Melbourne's western grasslands, including challenges such as weed infestation.

⁴² Ms Kylie Trott, Executive Director, Operations, Parks Victoria, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, p. 6.

⁴³ Ibid.

⁴⁴ Mr Peter McKinnon, Manager, Climate Futures, Wyndham City Council, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 3.

⁴⁵ Ibid.

RECOMMENDATION 38: That the Department of Environment, Land, Water and Planning publish, and regularly update, a register showing the ownership of grassland and woodland, both within and outside the Urban Growth Boundary, that is affected by the Melbourne Strategic Assessment program.

7.2.2 Regional Parks Program

The Regional Parks Program aims to establish three new regional parks in Melbourne's growth area LGAs of Melton, Wyndham and Casey. DELWP is responsible for the progressive acquisition of land and preparation of park plans and infrastructure, while Parks Victoria will be responsible for the management of the parks once they are established. The parks are:

- Kororoit Creek Regional Park
- Werribee Township Regional Park
- Clyde Regional Park.⁴⁶

According to DELWP, in addition to providing significant open space for the rapidly growing population in Melbourne's southeast and west, the new parks will also 'provide protection of important environmental assets and biodiversity values'.⁴⁷

Mr Shannon, Melton City Council, outlined some of the challenges involved in establishing the Kororoit Creek Regional Park:

The park location has not been completely defined, but it is a significant park in that it is 260 hectares in size, and it does require a particular precinct structure plan to be completed to enable the boundaries to be defined. The land is currently in private ownership, and there is certainly a fairly pressing need to define the boundaries of the park to give the owner certainty and for it to be acquired and used for regional recreation and particularly environmental purposes straddling the Kororoit Creek.

...

The questions of acquisition and ongoing maintenance certainly need resolution between local and state government, but again a significant opportunity and one of the benefits that will come from the growth that we are experiencing.⁴⁸

Mr McKinnon, City of Wyndham, made the following points in relation to the Werribee Township Regional Park:

We are waiting on both DELWP and Parks Victoria to start slowly but surely acquiring that land, making that land good from an environmental point of view. So any

⁴⁶ Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 26.

⁴⁷ Department of Environment, Land, Water and Planning, *Regional parks*, <<https://www.planning.vic.gov.au/policy-and-strategy/regional-parks>> accessed 8 November 2021.

⁴⁸ Mr Luke Shannon, *Transcript of evidence*, pp. 9–10.

mechanisms or strategies in place through government to help accelerate key pieces of infrastructure like that would be most welcomed by Wyndham.⁴⁹

Mr Mizzi, City of Casey, outlined the history and progress towards the establishment of the Clyde Regional Park. Mr Mizzi noted that although it took 17 years to confirm the final location for the site:

we would see the final planning exercise to secure that PAO as a demonstration of a really successful partnership approach between local and state government and state agencies. The 120-hectare Clyde regional park is to be co-located with an 80-hectare sport and active recreation precinct, which will be delivered by council, and a 198-hectare Melbourne Water retarding basin. So the combined infrastructure will provide the full gamut of passive and active recreation, with opportunities for native vegetation, habitat creation and integrated water management.⁵⁰

Mr Mizzi also stated that (like the City of Wyndham in relation to the Werribee Township Regional Park) the City of Casey is now calling on the State Government to act on the public acquisition overlay and prioritise the land acquisition for the establishment of the Clyde Regional Park.⁵¹

Similarly, Ms Thomas, Hume City Council, stated:

There are a lot of different issues with private ownership of designated open space areas, so we really need, I guess, the government to be very proactive right at the start of those processes so that we have surety that particularly the private open space areas will become part of the parkland and that we are not kind of chasing our tails towards the end of those park development processes.⁵²

Mr Greg McLaren, Manager, Urban and Open Space Planning, Hume City Council, also stated that there is a need to expedite the delivery of regional parks:

the planning is getting a bit out of kilter. ... We have got subdivisions and developments, and we are starting to get close to the area where we need the regional plan to guide us. I would really reinforce that if it came out of this process, a really strong focus on moving forward those regional parks and the planning that is required, we would all be up for it.⁵³

The Committee notes that the same approach to both securing and acquiring the land for the Regional Parks Program will apply as that used for the MSA. DELWP stated in its submission that the land for the establishment of the three new regional parks will be secured via a combination of:

- Public Acquisition Overlay (PAO) that has been applied to 36 parcels of land

⁴⁹ Mr Peter McKinnon, *Transcript of evidence*, p. 4.

⁵⁰ Mr Jayden Mizzi, *Transcript of evidence*, pp. 6–7.

⁵¹ *Ibid.*, p. 7.

⁵² Ms Bernadette Thomas, *Transcript of evidence*, p. 8.

⁵³ Mr Greg McLaren, Manager, Urban and Open Space Planning, Hume City Council, public hearing, via videoconference, 9 March 2021, *Transcript of evidence*, p. 25.

- the MSA process, either via transfer of land to the Crown or securing via section 69 agreement.⁵⁴ (Agreements made under section 69 of the *Conservation, Forests and Lands Act 1987* (Vic) can be used to impose restrictions on the use and development of Conservation Areas and require the landowner and any future landowners to maintain habitat and prevent it from degrading).⁵⁵

DELWP also stated in its submission that the acquisition of the land for the Regional Parks Program (i.e. after the land has been secured via the above measures), 'is based on building relationships with landowners and purchasing through negotiation, rather than compulsory acquisition'.⁵⁶

Given the limited progress that has been made in the acquisition of land for the WGR and GEWR under the MSA process, there may be a risk that the adoption of the same approach to securing and acquiring the land for the Regional Parks Program could lead to similar delays. Accordingly, the Committee considers that the Government should consider similar reforms to the acquisition of the land for the Regional Parks Program as those which it has recommended in relation to the MSA.

RECOMMENDATION 39: That the Victorian Government commit to a date for the acquisition of the land required for the Regional Parks Program, along with interim acquisition targets.

7.2.3 Funding for conservation in outer Melbourne

In this section, the Committee considers the challenges associated with the funding of land and wildlife conservation in and around Melbourne, with a particular focus on growth area suburbs. The issue of funding is relevant to both the acquisition and management of conservation sites and regional parks, and is also closely connected to the level of funding available for Parks Victoria. The issue of funding for local parks and open space is discussed in the following section.

Ms Bernadette Thomas, Manager Sustainable Environment, Hume City Council, stated at a public hearing that the Hume City Council does not receive any State Government funding to support its management of conservation sites. Ms Thomas also stated that the funding allocated to such sites is effectively reduced after they have been transferred to the State Government, which can in turn have adverse impacts on council managed reserves.⁵⁷

⁵⁴ Department of Environment, Land, Water and Planning, *Submission 254*, p. 26.

⁵⁵ Department of Environment and Primary Industries, *Land protection under the Biodiversity Conservation Strategy: Melbourne Strategic Assessment*, Melbourne, 2014, p. 3. See also section 69 of the *Conservation, Forests and Lands Act 1987* (Vic).

⁵⁶ Department of Environment, Land, Water and Planning, *Submission 254*, p. 26.

⁵⁷ Ms Bernadette Thomas, *Transcript of evidence*, p. 8.

Ms Thomas suggested that the management of biodiversity conservation sites that are transferred to the State Government could be improved through increased funding, particularly for Parks Victoria:

So we are keen to see an enhanced level of funding, particularly for Parks Victoria, because a number of particular biodiversity conservation strategy sites will come into Parks Victoria management and from past experience we have already seen that that can be problematic because Parks Vic is not funded adequately, I suppose, to manage those reserves for their conservation values and therefore for local residents and community to make use of those sites.⁵⁸

On the issue of funding for the acquisition of conservation sites or regional parkland, Ms Thomas stated:

With the sites nominated that are in [private] ownership often there is no funding to acquire those sites until much later, and even sometimes when developers have paid their contribution that is also still not making its way to either purchasing that land or the offsets into the Werribee grasslands as well. So it is a similar situation where the framework is set up, the planning has sort of been committed to, but the funding required for that planning to really move somewhere and into implementation is lacking. Often that is around acquiring private land parcels to sort of realise the vision of either a regional parkland or a biodiversity conservation reserve under the BCS [Biodiversity Conservation Strategy].⁵⁹

Mr Shannon of Melton City Council also informed the Committee that there are currently no state-owned regional parks in the City of Melton and identified the level of funding provided to Parks Victoria as a cause of delay in the establishment of two such parks within the municipality: Kororoit Regional Park and Toolern Creek Regional Park.⁶⁰ In relation to Toolern Creek Regional Park, Mr Shannon stated:

That is a 130-hectare park which effectively runs through the middle of the Melton township. It is land currently owned by council that has been agreed to be gifted to Parks Victoria for their ongoing maintenance and improvement. That gifting has not yet occurred. However, we are ready to do so, and we are certainly very anxious for Parks Victoria to be able to invest in that really significant regional park.⁶¹

Similarly, Mr Mizzi of the City of Casey stated in relation to the proposed Clyde Regional Park that:

there was a budget commitment that was included as part of that commitment to deliver a number of regional parks around Melbourne. The funding for that—our understanding is that Parks Victoria will not proactively acquire land from private owners. ... it essentially means that where there is a budget commitment that is not necessarily going to be spent any time soon. I do not believe that any of the land

⁵⁸ Ibid.

⁵⁹ Ibid., p. 25.

⁶⁰ Mr Luke Shannon, *Transcript of evidence*, pp. 9, 17, 23.

⁶¹ Ibid., p. 9.

for the Clyde regional park has been acquired yet. ... if there are a series of different landowners that they need to deal with, it may take 15 or 20 years for the land to actually be usable if they continue with that path.⁶²

Ms Thomas posed the question whether the funding received by Parks Victoria has matched the significant increase in the amount of land that it is required to manage:

I do not know whether there has been any investigation on the growth in the quantum of land that Parks Victoria has to manage over time and the funding that has gone side by side with that. That might be a worthwhile exercise to go through— to see what is that changeover timing, the quantum of land, the management needed. What is the funding that they have had over that time and what is the funding that they actually need? Because I think we will find that there is a reasonable gap between those two.⁶³

The City of Whittlesea noted in its submission that this funding gap would be exacerbated by the establishment of the WGR and GEWR, since they will increase the amount of Parks Victoria managed land in and around Melbourne by more than one third.⁶⁴

Notably, Melbourne's growth areas and other outer suburban LGAs were not alone in calling for increased funding for Parks Victoria. As discussed in Chapter 8 (Section 8.2.2), several regional councils also provided evidence that Parks Victoria currently receives insufficient funding to effectively manage and develop environmental infrastructure.

On the issue of funding, Parks Victoria stated in its submission that:

investment models need to be enabled to deliver a timely and consistent method of ongoing park planning and establishment, servicing and ongoing maintenance, revitalisation and programming for activation. Short-term project-based models not connected to a long-term strategic investment program are limited and do not enable flexibility and responsiveness to community expectations and growth and effective ongoing management.⁶⁵

Mr Matthew Jackson, CEO, Parks Victoria, expanded on these points at a public hearing. Mr Jackson stated that while Parks Victoria receives significant tied funding for programs, an increase in ongoing program funding would enable an improvement in park planning and establishment. Mr Jackson cited the example of grasslands, noting that when these areas become national parks, they then require funding for conservation action planning, rangers and/or science and protection—including fire protection for communities—to ensure that they are managed to an appropriate level.⁶⁶

⁶² Mr Jayden Mizzi, *Transcript of evidence*, p. 24.

⁶³ Ms Bernadette Thomas, *Transcript of evidence*, p. 23.

⁶⁴ City of Whittlesea, *Submission 91*, p. 31.

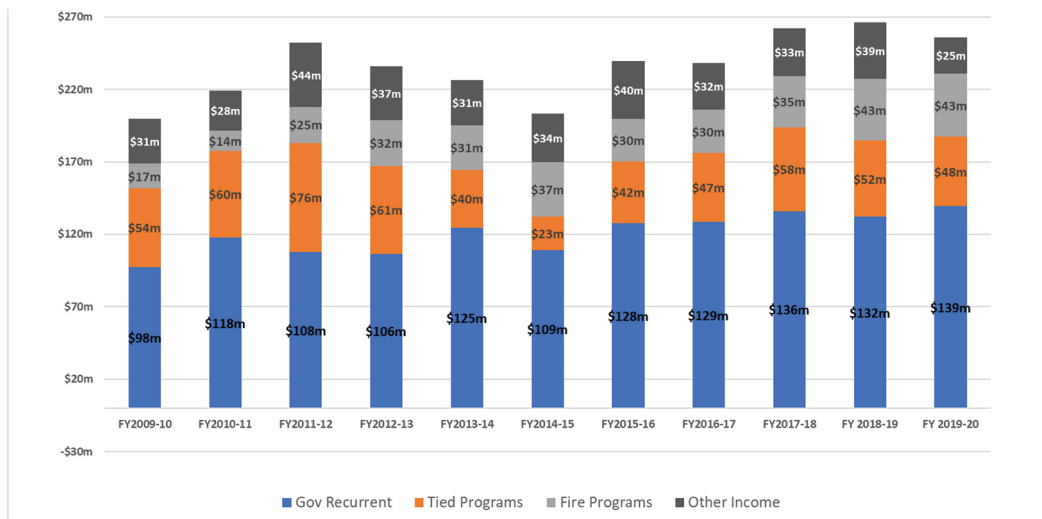
⁶⁵ Parks Victoria, *Submission 254F*, received 6 November 2020, p. 10.

⁶⁶ Mr Matthew Jackson, Chief Executive Officer, Parks Victoria, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, pp. 7–8.

Mr Jackson also stated that while Parks Victoria had in recent years received a significant increase in Government funding—including an approximate doubling in annual funding for capital works compared to 2010—there remains a need for ‘some form of long-term funding program of asset maintenance and recurrent programs’ to cover the operational expenditure required to manage Parks Victoria’s new large assets. By way of example, Mr Jackson noted that four years ago Parks Victoria had proposed a ‘cost of service model’ to the Government, which resulted in an allocation of \$79 million over four years and the ongoing engagement of 57 additional park rangers.⁶⁷

Following the public hearing, Parks Victoria provided the Committee with operational funding data for each of the financial years from 2009–10 to 2019–20. As shown in Figure 7.2, this data is broken down into: government recurrent funding; tied programs; fire programs; and other programs.

Figure 7.2 Summary of Parks Victoria income profile 2009–10 to 2019–20



Notes

All Gov Recurrent, Tied Programs and Fire Programs include funding for staff and related costs. Tied funding programs range from the direct delivery of conservation programs (such as pest animal control) to the project management of the creation of new assets. The Fire Programs include the resources for staff, vehicles and related plant and equipment for fire preparedness, prevention and suppression activities. Other Income includes revenue from Income Generating Activities (e.g. leases and licences etc), Insurance Claims and other miscellaneous income such as interest.

Source: Parks Victoria, Inquiry into environmental infrastructure for growing populations public hearings, response to questions on notice received 7 June 2021.

FINDING 38: The Committee considers that there is a strong case for a significant and ongoing funding increase, in real terms, for Parks Victoria. This increase should be sufficient to enable Parks Victoria to meet the growing costs of its asset maintenance and recurrent programs in Melbourne’s growth area local government areas.

67 Ibid.

RECOMMENDATION 40: That the Victorian Government review the provision of funding to Parks Victoria to meet the growing costs of its asset maintenance and recurrent programs.

7.3 Funding and planning for local parks and open space in growth areas

Several stakeholders provided evidence to the Committee that was broadly supportive of the current approach to the provision of parks and open space in Melbourne's newer outer suburban developments. For example, Mr Mizzi of the City of Casey stated:

Growth area councils like Casey have the opportunity to capitalise on greenfield urban development by requiring the provision of new open space, and it is evident that this has been successful to a degree. There was a report published by the Victorian Planning Authority, the VPA, in 2017 which estimated that Casey has about 80.7 square metres of open space per person, which is on par with other growth area councils across Melbourne. On a positive note, that is well above the metropolitan average of 57 square metres, so it is clear that growth area planning is doing something right.⁶⁸

However, the Committee also received evidence from a number of growth area LGAs calling for increased funding for environmental infrastructure through existing funding mechanisms, including Development Contributions Plans (DCPs), Infrastructure Contributions Plans (ICPs), the Growth Area Infrastructure Charge (GAIC) and the Growing Suburbs Fund.

7.3.1 Developer contributions

DCPs provide for payments or works-in-kind towards the provision of infrastructure made by the proponent of a new development. The *Planning and Environment Act 1987* (Vic) allows for development contributions to be provided through the:

- planning scheme amendment process
- planning permit process, or
- building permit process.⁶⁹

ICPs, which will replace DCPs over time, currently apply to greenfield growth areas and strategic development areas as defined by Ministerial Direction. ICPs are the mechanism for applying an infrastructure levy. They outline the strategic justification for applying the levy, infrastructure that will be funded by the levy—which can include parks and open space—and when the infrastructure will be delivered. Like DCPs, ICPs allow for a collecting agency (typically the council) to accept works-in-kind. The existing

⁶⁸ Mr Jayden Mizzi, *Transcript of evidence*, p. 5.

⁶⁹ Department of Sustainability and Environment, *Development Contributions Guidelines: Version 5.9, 2007*, p. 4.

DCP system has been retained for councils that choose to prepare a fully costed and apportioned DCP in areas where there will be no applicable standard levies under an ICP. Previously approved DCPs will also continue to operate.⁷⁰

Several growth area councils submitted that the funds provided for new infrastructure did not provide for ongoing maintenance⁷¹ (notwithstanding the significant increase in rateable properties attached to that infrastructure spend).

The Victorian Auditor-General's Office (VAGO) released an assessment of development contributions in Victoria in March 2020, which highlighted several issues with the planning and delivery of infrastructure, including environmental infrastructure.⁷²

The report concluded that:

- The mix of developer contributions in Victoria: DCPs (mainly for established areas); ICPs (mainly for growth areas); and the GAIC, were not delivering the required infrastructure for Victoria's growing populations because state agencies have not managed development contributions tools strategically to maximise their value and impact.
- The ICP program's implementation is delayed. DELWP and VPA's effort to implement the ICP program has reduced its focus on addressing the existing issues with the DCP program, which remains unnecessarily complex, costly and time-consuming for councils to use.⁷³

The report identified the need for further work and structural reform of the developer contribution system to provide benefits to growing communities across the State.⁷⁴

7.3.2 Growth Area Infrastructure Charge

Several outer suburban councils called for a review of both the level of the GAIC and the way in which it is directed as a way of securing additional environmental infrastructure in growth area LGAs.⁷⁵

GAIC is a charge paid by developers that contributes to the cost of infrastructure in Melbourne's growth areas. Where a GAIC payment is required, all or part of the payment can be offset under an agreement between the developer and the Government. These arrangements are known as Work-in-Kind (WIK) and enable the developer to instead

⁷⁰ Department of Environment, Land, Water and Planning, *Overview of the Infrastructure Contributions Plan System*, 2016, <https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.vic-engage.files/1815/2634/6296/Document_309a_-_Att_1_-_Overview-of-ICP-System.pdf> accessed 6 October 2021.

⁷¹ See, for example, Mr Luke Connell, Manager, Policy, Design and Growth Area Planning, Cardinia Shire Council, public hearing, via videoconference, 10 March 2021, *Transcript of evidence*, p. 2; Mr Luke Shannon, *Transcript of evidence*, pp. 13-14; Mr Greg McLaren, *Transcript of evidence*, p. 8; Mr Peter McKinnon, *Transcript of evidence*, p. 14; Mr Jayden Mizzi, *Transcript of evidence*, p. 14.

⁷² Victorian Auditor-General's Office, *Managing Development Contributions*, 2020.

⁷³ Department of Environment, Land, Water and Planning, *Submission 254*, p. 41.

⁷⁴ Ibid.

⁷⁵ See, for example, Mr Greg McLaren, *Transcript of evidence*, p. 19; Mr Luke Shannon, *Transcript of evidence*, p. 19.

provide land, carry out infrastructure work, or a combination of both.⁷⁶ The GAIC only applies to land in the contribution area, which is growth area land zoned for urban use and development in the seven growth area municipalities.⁷⁷

Mr Shannon of Melton City Council outlined the operation of the GAIC as follows:

GAIC is slightly different [to DCPs / ICPs] insofar as that is money collected by the state government directly from the developer—just over \$100 000 per hectare of developer land—and that goes into a pool which is then expended on identified state infrastructure. That might be key roads, key reserves, hospitals, the high order type activities. There is certainly an opportunity there for acquisition of land for environmental infrastructure at a state level.⁷⁸

Mr Shannon stated that there is a lack of clarity as to how the GAIC is and will be used, and called for a review aimed at achieving a more targeted approach to the expenditure of GAIC funds.⁷⁹ Mr Shannon stated:

The riskiest thing with the GAIC allocation is that it is eroded through a series of small innocuous-type projects. It really needs to go to strategically important projects. I think there needs to be some clarity around that, but I think reviewing the scale and where it is allocated is timely because it has been in place for probably 10 years and to my knowledge has not really been reviewed in any meaningful way since then.⁸⁰

Similarly, Mr Mizzi stated that the GAIC could play a greater role in the funding of regional environmental infrastructure and identified the development of a metropolitan open space strategy as a tool to guide where the GAIC or other grants or funding should be directed.⁸¹

As noted above, VAGO found in 2020 that the GAIC was not delivering the required infrastructure for Victoria's growth areas because state agencies have not managed development contributions tools strategically to maximise their value and impact.⁸² VAGO also found that:

The state-managed GAIC program is inefficient and lacks strategic effect because project funding decisions are split between two disconnected processes. This limits DELWP's ability to direct GAIC project funding towards the areas of greatest benefit and perform financial management of GAIC trusts.⁸³

76 Department of Environment, Land, Water and Planning, *Growth areas infrastructure contribution*, 2021, <<https://www.planning.vic.gov.au/legislation-regulations-and-fees/planning-legislation/growth-areas-infrastructure-contribution>> accessed 8 November 2021.

77 State Revenue Office Victoria, *Growth Areas Infrastructure Contribution*, 2021, <<https://www.sro.vic.gov.au/growth-areas-infrastructure-contribution>> accessed 8 November 2021.

78 Mr Luke Shannon, *Transcript of evidence*, pp. 13–14.

79 *Ibid.*, p. 14.

80 *Ibid.*, p. 19.

81 Mr Jayden Mizzi, *Transcript of evidence*, p. 18.

82 Victorian Auditor-General's Office, *Managing Development Contributions*, p. 8.

83 *Ibid.*

DELWP stated in its submission that while it is actively working to address some of the above environmental infrastructure funding issues, like the DCP system, other parts of the system (like GAIC funding arrangements) are outside its influence (funded through the Department of Treasury and Finance) and require a whole of government approach to reform. DELWP also stated that the Government is planning to undertake further work on development contributions in 2020–21.⁸⁴

7.3.3 Growing Suburbs Fund

The Growing Suburbs Fund (GSF) is a \$375 million investment over 7 years aimed at assisting the delivery of local community infrastructure for growing outer suburbs. The program aims to respond to the pressures experienced by interface and peri-urban communities by bringing forward local community facilities. The Victorian Government announced \$50 million in funding for the GSF in the 2021–22 State Budget.⁸⁵

Several stakeholders identified the GSF as a possible source of additional funding to boost the delivery of parks and open space in Melbourne's outer suburban LGAs.⁸⁶ Others called for the establishment of a dedicated fund for the provision of environmental infrastructure in growing suburbs.⁸⁷

The Committee notes that the 2020–21 Application Guidelines for the GSF encouraged funding applications across five broad infrastructure categories, three of which would encompass environmental infrastructure projects proposed by councils, including:

- sport, recreation, and leisure facilities that have dedicated community space and support multiuse purposes
- environmental and climate change resilience
- placemaking, civic amenity, and community connecting.⁸⁸

(The other two categories were: community health and wellbeing; and early education, libraries, learning and training.)⁸⁹

The Committee is mindful that applications by councils for funding towards community infrastructure under the GSF will reflect the priorities of a given council in a particular funding round. The Committee also notes that many of the funding concerns raised by stakeholders in this section are closely connected to concerns about the timing of the delivery of environmental infrastructure in new suburbs. This issue is the subject of the following section.

⁸⁴ Department of Environment, Land, Water and Planning, *Submission 254*, p. 41.

⁸⁵ Department of Jobs, Precincts and Regions, *Growing Suburbs Fund*, <<https://www.localgovernment.vic.gov.au/grants/growing-suburbs-fund>> accessed 18 October 2021.

⁸⁶ See, for example, Mr Peter McKinnon, *Transcript of evidence*, p. 4; Mr Greg McLaren, *Transcript of evidence*, p. 10.

⁸⁷ See, for example, Mr Peter McKinnon, *Transcript of evidence*, p. 4.

⁸⁸ Department of Jobs, Precincts and Regions, *2020–2021 Growing Suburbs Fund: Application Guidelines - Round 2*, Melbourne, 2020, p. 7.

⁸⁹ *Ibid.*

7.4 Timing and connectivity of environmental infrastructure

Several councils referred to the issue of delays in the provision of environmental infrastructure in Melbourne's outer suburbs, particularly of paths and trail networks. This issue is closely related to the problem of out of sequence development in Melbourne's growth areas and has a significant bearing on the provision of land for use as public open space generally (i.e. regardless of whether the land is used primarily for conservation, or for passive or active recreation). Some of the specific concerns raised included:

- residential developments can occur in a 'patchwork quilt' manner, leading to delays in road and open space connections, including walking and cycling paths⁹⁰
- active recreation reserves may straddle more than one property so that the land may only come into council's ownership over a long period of time as each property is developed⁹¹
- forward funding of infrastructure is a key challenge, with some councils considering commercial loans as an option, which may not be viable on a larger scale.⁹²

Several councils called for a more integrated approach through the PSP process, or other mechanisms, to reduce delays in the delivery of infrastructure, including parks and open space.⁹³

Some councils made the point that the primary funding challenge faced by growth area councils is in relation to large scale regional infrastructure, which is currently funded through the GAIC and the GSF, rather than local infrastructure, which is typically funded through the ICP framework and public open space contributions.⁹⁴ These councils expressed their support for a state government rolling fund or similar mechanism, which would allow councils to both increase their borrowing limits and draw upon the fund to achieve the earlier delivery of large-scale environmental infrastructure. Loans from the fund could then be paid back when developer contributions fall due.⁹⁵

While there are currently a number of funding streams on which councils can draw for the provision of environmental infrastructure in Melbourne's growth area suburbs, the evidence suggests that there is a need for a more strategic and responsive approach to such funding, particularly as a way of mitigating the gaps in the open space network caused by out of sequence developments. This challenge will become increasingly critical given the forecasts of significant population growth in Melbourne's outer

⁹⁰ Mr Luke Shannon, *Transcript of evidence*, p. 25; Mr Greg McLaren, *Transcript of evidence*, pp. 13, 26–27; Ms Bernadette Thomas, *Transcript of evidence*, p. 7.

⁹¹ Mr Luke Shannon, *Transcript of evidence*, p. 25.

⁹² See, for example, Mr Jayden Mizzi, *Transcript of evidence*, p. 27.

⁹³ See, for example, Mr Luke Shannon, *Transcript of evidence*, p. 25; Mr Greg McLaren, *Transcript of evidence*, pp. 26–27; Ms Bernadette Thomas, *Transcript of evidence*, p. 7.

⁹⁴ See, for example, Mr Jayden Mizzi, *Transcript of evidence*, p. 18.

⁹⁵ Mr Greg McLaren, *Transcript of evidence*, p. 27; Mr Jayden Mizzi, *Transcript of evidence*, p. 27.

suburbs in future decades. The establishment of a rolling fund or similar mechanism, which would allow councils to increase their borrowing limits, may address this need.

RECOMMENDATION 41: That the Victorian Government consider the establishment of a rolling fund or similar mechanism, which would allow councils to increase their borrowing limits to achieve the earlier delivery of large-scale environmental infrastructure. Loans from the fund could be paid back when developer contributions fall due.

7.5 Parks and open space funding in established outer suburbs

Several growth area councils submitted that there is insufficient open space currently available in their established suburbs,⁹⁶ due to a shortfall in available funding compared to newer suburbs.⁹⁷ Some councils also noted that their established suburbs are experiencing significant population growth, and therefore demand for parks and open space, due to infill and high density developments.⁹⁸ Suggested funding reforms to deliver a more integrated approach across new and established suburbs included: allowing developer contributions to be directed towards environmental infrastructure in established suburbs;⁹⁹ and the provision of dedicated funding for environmental infrastructure.¹⁰⁰

The Committee notes the evidence from outer suburban LGAs calling for a more integrated response to the provision of environmental infrastructure across both new and established suburbs. However, the Committee is not convinced that requiring development contributions for already established suburbs would be the most efficient or effective means of increasing the available funding for parks and open space in established outer suburbs. Nevertheless, the Committee considers that there may be scope for consideration of a more holistic approach to the funding of parks and open space across outer suburban LGAs, which takes account of population growth in both new and established suburbs.

RECOMMENDATION 42: That the Victorian Government review the existing funding arrangements for renewal of parks within established suburbs in Melbourne's outer suburbs. This could include consideration of recent and forecast population growth across both new and established suburbs. This could also include consideration of the feasibility of establishing funding arrangements that would support a network of public open space across both established and growth area suburbs.

⁹⁶ See, for example, Mr Peter McKinnon, *Transcript of evidence*, p. 3; Wyndham City Council, *Presentation*, supplementary evidence received 9 March 2021, p. 3.

⁹⁷ See, for example, Mr Greg McLaren, *Transcript of evidence*, pp. 8,13,5; Mr Jayden Mizzi, *Transcript of evidence*, p. 5; City of Whittlesea, *Submission 91*, p. 8.

⁹⁸ See, for example, City of Whittlesea, *Submission 91*, p. 8; Mr Luke Connell, *Transcript of evidence*, p. 2.

⁹⁹ Mr Greg McLaren, *Transcript of evidence*, p. 19.

¹⁰⁰ Ms Bernadette Thomas, *Transcript of evidence*, p. 7; Mr Peter McKinnon, *Transcript of evidence*, p. 4.

8 Regional Victoria and peri-urban Melbourne

Victoria’s regional areas experience unique challenges and opportunities in the planning, development and maintenance of environmental infrastructure. Regional Victoria covers a varied range of landscapes and population demographics with diverse needs. Some of the unique characteristics of regional and rural Victoria include large expanses of forests and farmland; land that is prone to flooding, drought or bushfires; significant differences between regional cities and rural municipalities; and a reliance on public land for tourism as well as to ensure liveability for residents.¹

Victoria has 48 regional and rural councils and 10 main regional cities. As Table 8.1 demonstrates, these are generally categorised into either five, eight or nine key regions.

Table 8.1 Victoria’s regions and regional cities

Five regional categories	Eight regional categories	Nine regional categories	10 regional cities
Barwon South West	Central Highlands	Barwon	Ballarat
Gippsland	G21 - Geelong Region Alliance	Central Highlands	Greater Bendigo
Grampians	Gippsland	Gippsland	Greater Geelong
Hume	Great South Coast	Goulburn	Greater Shepparton
Loddon Mallee	Hume	Great South Coast	Horsham
	Loddon Mallee North	Loddon Campaspe	Latrobe
	Loddon Mallee South	Mallee	Mildura
	Wimmera Southern Mallee	Ovens Murray	Wangaratta
		Wimmera Southern Mallee	Warrnambool
			Wodonga

Sources: Regional Development Victoria, *Victoria’s Regions*, <<https://www.rdv.vic.gov.au/victorias-regions>> accessed 20 August 2021; Department of Environment, Land, Water and Planning, *Regional growth plans*, 2019, <<https://www.planning.vic.gov.au/policy-and-strategy/regional-growth-plans>> accessed 18 October 2021; Infrastructure Victoria, *Victoria’s infrastructure strategy 2021–2051: volume 1*, Melbourne, 2021, p. 214; Regional Development Victoria, *Victoria’s Regions*, <<https://www.rdv.vic.gov.au/victorias-regions>> accessed 20 August 2021.

In addition to regional hubs, Victoria has areas that are designated as ‘peri-urban’. Peri-urban areas are located on the periphery of Melbourne and at the ‘interface between urban development and bush areas’.² Peri-urban areas face unique challenges in terms of environmental infrastructure, including expanding population size and

¹ City of Greater Bendigo, *Submission 77*, received 24 September 2020, p. 2.

² Holly Foster, et al., ‘Peri-urban Melbourne in 2021: changes and implications for the Victorian emergency management sector’, *Australian Disaster Resilience Knowledge Hub*, <<https://knowledge.aidr.org.au/resources/aiem-jul-2013-peri-urban-melbourne-in-2021-changes-and-implications-for-the-victorian-emergency-management-sector>> accessed 18 October 2021.

diversity, increased demand for public services (including open spaces and waterways), urban development and conflicting uses for land.³ Victoria's peri-urban areas include Baw Baw, Moorabool, Golden Plains, Surf Coast, Bass Coast, Murrindindi, Mitchell and Hepburn.⁴

The Committee received evidence from the peri-urban councils of Moorabool Shire Council (Moorabool Shire), Baw Baw Shire Council (Baw Baw Shire) and Golden Plains Shire Council (Golden Plains Shire). While their evidence is considered in this chapter, the focus is on regional Victoria more broadly and the regional councils that provided evidence to the Committee. This is primarily the City of Ballarat (Ballarat Council), City of Greater Bendigo (Bendigo Council) and City of Greater Geelong (Geelong Council), but the Committee also considers evidence provided by Greater Shepparton City Council (Shepparton Council), Campaspe Shire Council (Campaspe Council), Wellington Shire Council (Wellington Council) and Mildura Rural City Council (Mildura Council). The Committee recognises that while some concerns and opportunities raised by councils are unique to their regions, some issues will also apply to regional Victoria more broadly.

8.1 Population growth

Growing populations place additional pressure on environmental infrastructure, open spaces, water systems and biodiversity. The Committee observed that Victoria's regions are experiencing population growth with differing patterns, including rapidly increasing population, moderately increasing populations and even declining or stagnant population growth. This poses a range of challenges for Victoria's regions, but also a variety of opportunities to increase access to and interaction with open spaces and waterways.

8.1.1 Current forecasts

It is expected that Victoria's regions will experience population growth differently. The Department of Environment, Land, Water and Planning (DELWP) provided data in its submission to the Inquiry which indicated that overall, the population of regional Victoria is expected to grow by 47% by 2056. When considering specific regions, the data provided by DELWP indicates that:

- Geelong's population is expected to grow by 86% (similar to the population growth expected in Melbourne)
- the population size of Ballarat, Bendigo, Hume and Latrobe-Gippsland is expected to grow in the range of 42–57%

³ Ibid.

⁴ Department of Environment, Land, Water and Planning, *Map 19: Melbourne's green wedges and peri-urban areas*, 2017, <https://www.planmelbourne.vic.gov.au/_data/assets/pdf_file/0007/376648/Map_19_greenwedge_periurban.pdf> accessed 18 October 2021.

- Shepparton’s population is expected to grow by 26%
- the populations of North West Victoria, and of Warrnambool plus South West Victoria, are expected to grow by 3% and 6%, respectively.⁵

As illustrated in Figure 1.3 (Chapter 1), Infrastructure Victoria has forecast average population growth rates, from 2018 to 2036, for Victoria’s regional cities and other regional areas, which are similar to those for middle and outer Melbourne.⁶ However, as DELWP noted in its submission, ‘Regional areas often have different pressures to population growth and some even have the challenge of population decline. This poses a very different set of problems to growth pressures’.⁷

Victoria’s infrastructure strategy 2021–2051 also recognised that regional Victoria has complex needs and the specific population demographics of regional areas will have different impacts on infrastructure compared to Melbourne and urban areas:

regional Victoria has higher levels of disadvantage, exacerbated by many complex factors including industry restructuring, an older population, and greater exposure to climate change impacts ... Regional Victoria’s diverse and changing demographic mix is likely to alter future service demand. Ageing populations, most notably in small rural communities, will affect the scope and mix of services needed. Conversely, some regional cities and peri-urban areas are experiencing rapid population growth, placing pressure on services and facilities.⁸

In summary, the diversity of regional areas means that the impacts of population growth are not uniform. For example, Mr Keith Oberin, General Manager, Community, at Campaspe Council, told the Committee at a public hearing that while some larger towns are growing slightly in population size, the population of smaller towns in the region are either declining or stagnant.⁹ Mildura Rural City Council, the largest municipality in Victoria in terms of land size, also noted that the populations of many of its small remote settlements are ageing and declining.¹⁰ On the other hand, in the City of Mildura itself, ‘investment into environmental infrastructure to support population growth is required’.¹¹ Mildura Council also explained that as ‘the proportion of older people increases, older people will need to be encouraged to be active. Infrastructure that promotes non organised physical activity will be critical in ensuring this is achieved’.¹² Ballarat Council also noted in its submission that most of its ‘population growth is occurring on the fringes of the Ballarat township’.¹³

⁵ Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 10.

⁶ See also Infrastructure Victoria, *Victoria’s infrastructure strategy 2021–2051: volume 1*, Melbourne, 2021, p. 196.

⁷ Department of Environment, Land, Water and Planning, *Submission 254*, p. 10.

⁸ Infrastructure Victoria, *Victoria’s infrastructure strategy 2021–2051*, p. 238. (with sources)

⁹ Mr Keith Oberin, General Manager, Community, Campaspe Shire Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, p. 7.

¹⁰ Mildura Rural City Council, *Submission 144*, received 28 September 2020, p. 2.

¹¹ *Ibid.*, p. 4.

¹² *Ibid.*, p. 3.

¹³ Ballarat City Council, *Submission 264*, received 26 April 2021, p. 1.

The COVID-19 pandemic has also affected population growth in different ways. *Victoria's infrastructure strategy 2021–2051* revealed that 'more people moved to regional areas during the COVID-19 pandemic ... Each region is responding to these shared drivers of change in unique ways'.¹⁴ For example, Bendigo Council submitted that the populations of Victoria's 10 regional cities are 'mostly growing at or near to record rates' and 'are mostly experiencing a surge in growth due to the pandemic with people looking to relocate and work more remotely'.¹⁵ However, the Committee notes it is unknown if population changes driven by the COVID-19 pandemic are a long-term trend.¹⁶

FINDING 39: Many of Victoria's regional centres are experiencing significant population growth while populations are changing in some surrounding regional areas. While the COVID-19 pandemic has played a major role in driving this population growth, it is unknown whether this trend will continue.

8.1.2 Challenges and impacts of population growth

The Committee heard that different experiences of population growth or decline in regional areas have a range of impacts on environmental infrastructure. Concerns raised by regional councils regarding population growth, urban sprawl and development pressures included:

- the loss of native vegetation through increased development¹⁷
- a reliance on developers to contribute to existing and new environmental infrastructure¹⁸
- increased stress on the environment or new subdivisions that do not adequately consider increased community interactions with the environment when designed¹⁹
- pressures on water supplies and a growing need to take water from waterways to supply rural and urban areas²⁰
- increased demand for environmental infrastructure and open spaces that places pressure on council budgets and resources²¹
- increased costs associated with maintaining open spaces and waterways.²²

¹⁴ Infrastructure Victoria, *Victoria's infrastructure strategy 2021–2051*, p. 213.

¹⁵ City of Greater Bendigo, *Submission 77*, p. 2.

¹⁶ Infrastructure Victoria, *Victoria's infrastructure strategy 2021–2051*, p. 238.

¹⁷ Mildura Rural City Council, *Submission 144*, p. 4.

¹⁸ Ballarat City Council, *Submission 264*, p. 2; Greater Shepparton City Council, *Submission 86*, received 25 September 2020, p. 3.

¹⁹ North Central CMA, *Submission 254C*, received 6 November 2020, p. 2; Greater Shepparton City Council, *Submission 86*, p. 3.

²⁰ Vic Catchments, *Submission 254A*, received 6 November 2020, p. 4; Corangamite CMA, *Submission 254B*, received 6 November 2020, p. 2.

²¹ Ms Natalie Robertson, Director, Development and Growth, Ballarat City Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, pp. 13–14; Greater Shepparton City Council, *Submission 86*, p. 3.

²² Mildura Rural City Council, *Submission 144*, p. 4; North Central CMA, *Submission 254C*, p. 2.

Concerns about both growing and declining populations highlight that developers play a key role in ensuring environmental infrastructure is responsive to the needs of communities in regional areas. This requires strong planning legislation that is relevant to regional areas and adequately protects open spaces,²³ and strong partnerships between councils, planning authorities and developers.²⁴ Both Moorabool and Ballarat Councils stated in their submissions that:

appropriate management of population growth, and specifically the delivery of adequate environmental infrastructure for such growth, depends on there being improvements made in the legislation to enable us to enforce the planning standards that we know are necessary to achieve the outcome.²⁵

Similarly, North Central CMA (Catchment Management Authority) stated that new subdivisions, built to meet the needs of a growing population:

present opportunities for community interaction with environmental infrastructure through the creation of council reserves which can promote connection through the inclusion of walking tracks or open spaces along waterways for the community to utilise ... However, in our experience not all councils have a clear vision or the capacity to create and maintain new public reserves along waterways ... An improperly planned interface ... is a missed opportunity for the provision and preservation of environmental infrastructure. The result is usually a space that is not valued as it is underutilised, weed infested, inaccessible, and unsafe.²⁶

Vic Catchments outlined in its submission that the pressures from growing populations and development can be minimised through supporting and empowering landholders and the community to ‘develop thriving liveable communities’.²⁷ Planning provisions are explored in greater depth in Section 8.3.6 and Section 8.4.3. The need for additional funding to accommodate growing populations was also an issue raised by councils and is considered in Section 8.3.1.

Conversely, population decline also has implications for environmental infrastructure. Mildura Council submitted that the population decline experienced in remote areas of its region, combined with the physical isolation of those communities, means investment in environmental infrastructure is financially challenging. However, the importance ‘of these types of infrastructure within isolated communities is now more important than ever’.²⁸

Wellington Council expressed similar concerns to the Committee, stating that regional towns, ‘beyond acceptable commuting time from Melbourne, have much to offer in terms of liveability and environmental infrastructure’:

²³ Ballarat City Council, *Submission 264*, p. 2; Moorabool Shire Council, *Submission 185*, received 28 September 2020, p. 2.

²⁴ Moorabool Shire Council, *Submission 185*, p. 3.

²⁵ Ballarat City Council, *Submission 264*, p. 3; Moorabool Shire Council, *Submission 185*, p. 3.

²⁶ North Central CMA, *Submission 254C*, p. 2.

²⁷ Vic Catchments, *Submission 254A*, p. 3.

²⁸ Mildura Rural City Council, *Submission 144*, pp. 3-4.

However, regional areas find it difficult to attract development because of the high development costs and lack of potential returns. Development costs relate mainly to the need to provide expensive infrastructure, such as public open spaces and stormwater treatment wetlands. These costs, combined with low margins and slower rates of growth, act as a disincentive to residential development, despite the obvious benefits of decentralising from Melbourne, now a more tangible option, to the more liveable and sustainable neighbourhoods able to be developed in regional towns.²⁹

Mildura Council called for research into the social impacts of the COVID-19 pandemic to ‘determine the best way to provide and protect environmental infrastructure into the future’, on the basis that anecdotal evidence of decentralisation to regional centres from urban areas suggests more rapid population growth may place added pressure on existing environmental infrastructure.³⁰

In relation to peri-urban suburbs, Baw Baw Shire outlined that it is one of the ‘fastest growing peri-urban shires in Victoria’ and this growth will result in a ‘range of significant environmental and open space related challenges’.³¹ Similarly, Golden Plains Shire highlighted that population growth in regional cities like Geelong and Ballarat places pressure on its ability to provide and maintain open spaces.³²

The Committee notes that environmental infrastructure is required in rural and regional areas experiencing both increasing and decreasing populations to ensure social connection and access to the health and wellbeing benefits discussed in Chapters 2 and 4.

The Committee is concerned by the evidence that some regional councils, such as the Shire of Moorabool and the City of Ballarat, are facing challenges to the provision of environmental infrastructure due to a lack of legislative authority to enforce planning standards and the relative expense faced by developers. The Committee considers that residents of all regional areas should have access to the same standards of environmental infrastructure as in Melbourne or any of the State’s regional centres.

RECOMMENDATION 43: That the Victorian Government consider measures to deliver environmental infrastructure in regional areas.

8.1.3 Opportunities arising from population growth

Population growth can offer opportunities for regional communities. For example, Shepparton Council outlined in its submission that the positive impacts of increased population growth include:

²⁹ Wellington Shire Council, *Submission 11*, received 24 August 2020, p. 1.

³⁰ Mildura Rural City Council, *Submission 144*, p. 6.

³¹ Baw Baw Shire, *Submission 199*, received 28 September 2020, pp. 1-2.

³² Golden Plains Shire Council, *Submission 250*, received 29 October 2020, p. 1.

the opportunity to design new subdivisions that incorporate natural drainage lines into public open space with constructed wetlands for the treatment of stormwater. These areas provide large areas of open space with walking tracks, native landscaping and wetlands which benefit water birds, turtles, fish and other aquatic life. These areas are highly valued by most residents and provide easy access to passive outdoor recreation.³³

The potential for decentralisation from Melbourne and a more mobile workforce as a result of the COVID-19 pandemic was also recognised by several stakeholders. For example, Moorabool Shire stated:

We recognise that our residents and visitors are in a fortunate position of being able to access a variety of different forms of open space and that accessibility to environmental infrastructure is key to attracting and retaining a highly mobile workforce in peri-urban Melbourne and regional Victoria.³⁴

The Committee considers that it may be good practice for councils and other government authorities to develop holistic strategies to capitalise on the opportunities created by population growth in regional areas and effectively manage issues that may arise. Mr Rodney Thomas, Manager, Environment and Waste Services, Geelong Council, spoke about the Barwon River Parklands initiative as an example of this approach. Mr Thomas stated that the initiative aims to ‘establish a continuous chain of urban parklands, open space and conservation reserves along the Barwon River’.³⁵ The initiative recognises that ‘Green open spaces are vital to community wellbeing and with a rapidly growing population, the demand for access to parklands is increasing’.³⁶ Mr Thomas stated that the Barwon River Parklands is currently extremely well utilised and that the Council is seeking to develop a new master plan for the area to ensure it is up to date and responsive to future needs.³⁷ The master plan will ‘develop detailed designs for infrastructure and initiatives that will create better connectivity, improve accessibility and enhance the environmental, cultural and recreational features of the parklands’.³⁸

The Victorian Government established Regional Growth Plans (RGPs) in 2014 for eight key regions to provide a broad land use and development strategy, as summarised in Table 8.2.³⁹ The Victorian Government’s planning website, last updated in September 2019, states that the RGPs are to be updated every four to six years, although it is not clear to the Committee if or when the reviews are expected to occur.

³³ Greater Shepparton City Council, *Submission 86*, p. 3.

³⁴ Moorabool Shire Council, *Submission 185*, p. 1.

³⁵ Mr Rodney Thomas, Manager, Environment and Waste Services, Greater Geelong City Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, p. 28.

³⁶ G21 - Geelong Region Alliance, *Barwon River Parklands*, <<https://g21.com.au/project/barwon-river-parklands>> accessed 18 October 2021.

³⁷ Mr Rodney Thomas, *Transcript of evidence*, p. 28.

³⁸ G21 - Geelong Region Alliance, *Barwon River Parklands*.

³⁹ Department of Environment, Land, Water and Planning, *Regional growth plans*, 2019, <<https://www.planning.vic.gov.au/policy-and-strategy/regional-growth-plans>> accessed 18 October 2021.

Table 8.2 Victoria's Regional Growth Plans and key actions on environmental infrastructure

Name	Key cities/municipalities	Key actions on environmental infrastructure
Central Highlands	Ararat, Ballarat, Golden Plains (northern portion), Hepburn, Moorabool and Pyrenees	<ul style="list-style-type: none"> • Direct settlement growth and development to areas where it will avoid impacting on high value environmental assets, including designated water supply catchment areas, strategically important terrestrial habitat, soil health, waterways and wetlands • Strategically plan for enhancements to environmental assets to enhance land, water and biodiversity assets, including land critical for connecting areas of high value habitat • Encourage strategic land use planning that promotes adaptable land uses that respond to climate change and enable economic diversification • Take a precautionary approach in planning new developments by avoiding locations that pose an extreme risk from bushfire or flood.
G21 - Geelong Region Alliance	City of Greater Geelong, Colac Otway Shire, Surf Coast Shire, Borough of Queenscliffe, Golden Plains (southern portion)	<ul style="list-style-type: none"> • Maintain and enhance natural assets • Protect and build on natural assets by maximising key opportunities to link and rehabilitate ecosystems, and enable sustainable and planned productive uses • Sustain the health of natural assets by considering future challenges in the management, planning and development of these assets • Build resilience and the environmental condition of the region's parks and reserves.
Gippsland	Bass Coast, Baw Baw, East Gippsland, Latrobe, South Gippsland and Wellington	<ul style="list-style-type: none"> • Manage Gippsland's environmental and heritage assets to achieve the best outcomes for the region's environment, economy and community • Plan for potential impacts and opportunities arising from climate change and initiatives that support national and global action to reduce greenhouse gas emissions.
Great South Coast	Corangamite, Glenelg, Moyne, Southern Grampians and Warrnambool	<ul style="list-style-type: none"> • Avoid settlement growth in areas of high environmental, heritage or scenic value and in areas at extreme risk from natural hazards including bushfire, catchment flooding, coastal erosion and coastal storm inundation • Consider regionally significant environmental assets and regional catchment strategy priorities in local planning decisions and in the implementation of this plan • Identify the preferred location, configuration and composition of native vegetation corridors, including those containing offsets for native vegetation clearance, through collaboration with natural resource management agencies • Encourage projects that improve the management and sustainable use of water resources • Develop a flexible approach to land use planning in order to adapt to land use changes resulting from climate change, economic diversification and future growth trends • Recognise the importance of environmental assets for the delivery of a range of environmental values, including a range of ecosystem services and economic opportunities through market-based instruments such as the native vegetation offset markets.

Name	Key cities/municipalities	Key actions on environmental infrastructure
Hume	Alpine, Benalla, Greater Shepparton, Indigo, Mansfield, Mitchell, Moira, Murrindindi, Strathbogie, Towong, Wangaratta and Wodonga	<ul style="list-style-type: none"> • Protect, maintain and enhance the region's environmental assets • Recognise the importance of ecosystem services provided by land, soil, vegetation and water resources, as well as their intrinsic values and their economic and social contribution • Identify opportunities to improve or establish regional vegetation links • Plan for the potential impacts of, and opportunities arising from climate change.
Loddon Mallee North	Buloke, Campaspe, Gannawarra, Mildura and Swan Hill	<ul style="list-style-type: none"> • Protect and improve the condition of the region's environmental and cultural heritage assets to achieve the best outcome for the region's environment, economy and community • Plan for and manage potential risks and opportunities arising from climate change and initiatives that support national and global action to reduce greenhouse gas emissions.
Loddon Mallee South	Central Goldfields, Greater Bendigo, Loddon, Macedon Ranges and Mount Alexander	<ul style="list-style-type: none"> • Protect and improve the condition of the region's important environmental assets such as the forests, wetlands and rivers • Manage settlement growth to limit the impact on agricultural productivity, natural resources and environmental assets • Minimise the impacts of land use change and development on areas with significant environmental assets.
Wimmera Southern Mallee	Hindmarsh, Horsham, Northern Grampians, West Wimmera and Yarriambiack	<ul style="list-style-type: none"> • Protect landscapes and cultural heritage places from development that detracts from its significance • Work with Catchment Management Authorities to protect terrestrial habitat and the biodiversity it supports through identification of appropriate locations for links and corridors for plants, animals and ecosystems • Use appropriate planning scheme provisions and policies to protect water supply assets of regional importance from development that may have a detrimental impact on water quality or water yield.

Source: compiled by the Environment and Planning Committee based on the eight Regional Growth Plans, accessible here: Department of Environment, Land, Water and Planning, *Regional growth plans*, 2019, <<https://www.planning.vic.gov.au/policy-and-strategy/regional-growth-plans>> accessed 18 October 2021.

Vic Catchments submitted that RGP are underutilised in the planning process and that there would be additional benefits from aligning the boundaries of RGP and Victorian CMAs. Mr Tony Baker, Executive Officer at Vic Catchments, expanded on this point at a public hearing:

there was a lot of work and effort spent on regional growth plans at the time and a lot of investment from a lot of authorities, but I feel that in some cases those regional growth plans have probably been left on the shelf somewhat. There needs to be a concerted effort, or a disciplined effort I suppose, to go back to those regional growth plans and make sure when there are planning decisions being made that they are referenced ...

the CMAs have done the work in terms of identifying where the priority locations are for work around environmental infrastructure or natural assets ...⁴⁰

Aside from Vic Catchments, the Committee received very little evidence about the operation of RGPs from regional authorities. This also suggests that the RGPs are underutilised, despite the Victorian Government's intention that they should 'have status as part of the Victoria Planning Provisions and planning schemes'⁴¹ and the fact that they are now included within the list of overarching settlement strategies within regional planning schemes.⁴²

The Committee considers that there is a strong case for the Victorian Government to consider reviewing and updating the plans.

RECOMMENDATION 44: That the Victorian Government investigate options for better integrating Regional Growth Plans into planning schemes in regional areas.

8.2 Partnerships, collaboration and governance in regional areas

Developing and preserving environmental infrastructure, open space and waterways in regional Victoria requires partnerships between a range of government authorities and groups. Successful governance structures need to be enacted to ensure that environmental infrastructure is planned and maintained effectively and collaboratively.

8.2.1 Key agencies

In its submission, DELWP noted that a range of organisations partner to deliver work programs in Victoria's regions, including DELWP, as the 'lead department that sets the policy and strategic directions for several agencies and authorities', Parks Victoria, the Victorian Planning Authority (VPA), CMAs, VicWater and Melbourne Water, Sustainability Victoria and local councils.⁴³

In addition, partnerships with developers, Aboriginal and Torres Strait Islander groups, communities, landowners, volunteers and committees of management are vital to ensure that environmental infrastructure is fit-for-purpose and meets the needs of users. This section discusses the relationships between some of these authorities and organisations in the context of the provision and maintenance of environmental infrastructure for regional Victoria.

⁴⁰ Mr Tony Baker, Executive Officer, Vic Catchments, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 22.

⁴¹ See, for example, Victorian Government, *Central Highlands Regional Growth Plan*, Melbourne, 2014, p. 85.

⁴² See, for example, Department of Environment, Land, Water and Planning, *Ballarat Planning Scheme*, 2021, p. 7, cl. 11.01-1S.

⁴³ Department of Environment, Land, Water and Planning, *Submission 254*, p. 10.

8.2.2 Department of Environment, Land, Water and Planning, and Parks Victoria

The Committee received some evidence from regional councils about the relationship they have with the Victorian Government. For instance, Mr Paul Gangell, Manager, Parks and Open Space, Greater Bendigo City Council, outlined the *Reimagining Bendigo Creek* project, which is facilitated by the Council but managed with other government agencies, including DELWP and Parks Victoria:

we are all on the same page and all heading in the same direction. I think we are working well as a team ... the funding for *Reimagining Bendigo Creek* was a state government initiative, and I think that has brought many agencies together. While we do not have the answers, we have got a partnership and collaboration working well. We are meeting together, we are trying to leverage off each other's budgets and we are all heading in the same direction, which is great.⁴⁴

Mr Matthew Kerlin, Coordinator of Strategy and Policy, Greater Bendigo City Council, expanded on this point, noting that there has been an increase in the quality of collaboration between the Council and state agencies, including DELWP and Parks Victoria, over the past few years in particular.⁴⁵ Similarly, Mr David Collins, Coordinator, Environment and Sustainability, Golden Plains Shire Council, stated that the Council works 'closely with DELWP on lots of land issues'.⁴⁶

Parks Victoria manages parks, reserves and environmental assets 'that are of national, state or regional significance', including many located in regional Victoria.⁴⁷ Mr Stuart Hughes, Director, Park Planning and Policy, Parks Victoria, outlined Parks Victoria's commitment to a partnership approach at a public hearing, stating that the agency 'aspires to be a great partner' across government organisations, local councils and community groups.⁴⁸

The funding of Parks Victoria, given the substantial amount of land it manages, was an issue repeatedly raised with the Committee. For example, Shepparton Council noted that much of the public bushland in its region is managed by Parks Victoria and that:

One of the main constraints on developing effective environmental infrastructure in these areas is the reduced funding and resources the local Parks Victoria team have for development and management of environmental infrastructure. A strong relationship exists between the local Parks Victoria team and Council, however, the resourcing constraints negatively impact the implementation of various infrastructure projects

⁴⁴ Mr Paul Gangell, Manager, Parks and Open Space, Greater Bendigo City Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, p. 26; City of Greater Bendigo, *Reimagining Bendigo Creek Project Brief*, <<https://www.bendigo.vic.gov.au/media/3609>> accessed 18 October 2021.

⁴⁵ Mr Matthew Kerlin, Coordinator of Strategy and Policy, Greater Bendigo City Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, p. 26.

⁴⁶ Mr David Collins, Coordinator, Environment and Sustainability, Golden Plains Shire Council, public hearing, via videoconference, 10 March 2021, *Transcript of evidence*, p. 29.

⁴⁷ Parks Victoria, *Submission 254F*, received 6 November 2020, pp. 1-2.

⁴⁸ Mr Stuart Hughes, Director, Park Planning and Policy, Parks Victoria, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, p. 3.

and in turn the community's opportunity to experience the natural area in a sensitive manner.⁴⁹

Mr Keith Oberin, General Manager, Community, Campaspe Council, also drew the Committee's attention to concerns about 'the resourcing of Parks Victoria to be able to manage those spaces [reserves and wetlands] in an appropriate manner and to be able to allow the community access to those areas'.⁵⁰

Friends of the Australian Botanic Gardens Shepparton (Friends of ABGS) emphasised similar concerns in its submission in reference to planning processes:

Strengthening of the responsibility of local Parks staff to make decisions at a local level would simplify and speed up the process. Relationships between all agencies and volunteer groups are excellent and would be further improved if local managers had more devolved power to act ... We believe that State Government should allocate much more importance and funding to Parks Victoria, so that these vital remnants can be restored and preserved into the future.⁵¹

A particular concern raised by Mr Oberin was the failure of Parks Victoria (and the Victorian Government) to fully implement robust recommendations made by the Victorian Environmental Assessment Council (VEAC), for example, in its *River Red Gum Forests Investigation* and *Box-Ironbark Forests & Woodlands Investigation*.⁵² A submission from a collection of Bendigo and Central Victoria community groups also raised this issue, advocating for the acceptance of all VEAC recommendations from its *Central West Investigation*.⁵³

A collection of Bendigo and Central Victoria community groups stated in their submission that:

Whilst Bendigo is a 'City in a Forest', unfortunately it is not a city in a protected or well managed forest. There is a serious funding shortfall in the State government agencies (Parks Victoria and DELWP) charged with managing and overseeing the state, regional and national parks bordering the city.⁵⁴

In addition, Ms Sharon Terry, Manager, Environment, Greater Shepparton City Council, noted that while public land is primarily managed by Parks Victoria, jointly with the Yorta Yorta nations, the Council also manages native open space. Ms Terry told the Committee they have 'worked really strongly' to develop a critical partnership with land managers and agencies who are responsible for managing natural resources.⁵⁵ Ms Terry outlined that a key partnership with Parks Victoria is the *RiverConnect* project,

⁴⁹ Greater Shepparton City Council, *Submission 86*, p. 3.

⁵⁰ Mr Keith Oberin, *Transcript of evidence*, p. 2.

⁵¹ Friends of the Australian Botanic Gardens Shepparton, *Submission 53*, received 21 September 2020, p. 5.

⁵² Mr Keith Oberin, *Transcript of evidence*, p. 2.

⁵³ Bendigo and District Environment Council, et al., *Submission 143*, received 28 September 2020, p. 4.

⁵⁴ *Ibid.*, p. 5.

⁵⁵ Ms Sharon Terry, Manager, Environment, Shepparton City Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, p. 2.

which was created due to community concerns about the management of rivers, waterways and floodplains by various agencies. Ms Terry described the relationship with Parks Victoria as ‘very strong’, but noted that it took nearly a decade to agree on a management arrangement. Further, Ms Terry advocated for a streamlined communication process, outlining that while the key agencies now have shared objectives the process can still be ‘clunky’ and inconsistent advice is sometimes provided by Parks Victoria and DELWP.⁵⁶

Mr Collins from Golden Plains Shire also provided examples to the Committee of instances of ‘communication breakdown’ between the Council and DELWP.⁵⁷

Mr Stuart Hughes, Director, Park Planning and Policy, Parks Victoria, stated that the agency is currently developing an ‘inaugural land management strategy’, which will be the ‘underpinning framework’ for planning policies and project delivery. Mr Hughes outlined that the strategy would also be a means of ensuring the community is aware of Parks Victoria’s plans and direction.⁵⁸

As discussed in Chapter 7 (Section 7.2.3), Mr Matthew Jackson, Chief Executive Officer, Parks Victoria, informed the Committee that the agency currently receives the highest level of funding (in nominal terms) in its history. However, additional obligations placed on Parks Victoria under various Acts, as well as increased costs associated with fire management, detract from business as usual activities and strain the organisation’s resources. In addition, obtaining sustainable and longitudinal funding can be a problem when funding is tied to one-off projects.⁵⁹ Mr Jackson called for increased long-term funding for asset maintenance and recurrent programs.⁶⁰

FINDING 40: Victoria’s regional councils and key government agencies—including Parks Victoria and the Department of Environment, Land, Water and Planning—have established highly effective partnerships for the establishment and maintenance of environmental infrastructure, including conservation areas.

As the Committee has found in Chapter 7 (Recommendation 40) there is a strong case for a significant and ongoing funding increase, in real terms, for Parks Victoria. It is important that the recommended funding increase is sufficient to enable Parks Victoria to meet the growing costs of its asset maintenance and recurrent programs in the State’s regional areas, as well as in Melbourne’s growth area municipalities.

⁵⁶ Ibid., pp. 5–6.

⁵⁷ Mr David Collins, *Transcript of evidence*, p. 24.

⁵⁸ Mr Stuart Hughes, *Transcript of evidence*, p. 5.

⁵⁹ Mr Matthew Jackson, Chief Executive Officer, Parks Victoria, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, pp. 8–9.

⁶⁰ Ibid., p. 7.

8.2.3 Community engagement

As users of open space and waterways, members of the community are central to the planning and maintenance of environmental infrastructure in regional Victoria. Capitalising on their knowledge, passion, experience and time is a means to enhance the development and maintenance of open space. For example, a collection of Bendigo and Central Victoria community groups submitted that:

there are tremendous opportunities for the State Government, in co-operation with City of Greater Bendigo Council, and many keen community groups, including the Dja Dja Wurrung, to develop superb environmental infrastructure which blends with our magnificent box and ironbark surrounds, and fosters our unique indigenous wildlife.⁶¹

Councils work closely with the general community and recognise that engaging with residents can ensure community support and that environmental infrastructure is fit-for-purpose. For example, Golden Plains Shire noted that community engagement is increasingly essential in ensuring that its open spaces are accessible to all and meet community expectations:

Along with the challenges, we're also seeing an increase in the desire for residents to play a part in managing and improving their own Environmental Infrastructure ... People are wanting to get out and improve their local parks and reserves; we've seen a huge increase in the number of community planting events supported by Council over the past year. This trend for local interest and action is one that we're keen to support going forward.⁶²

Bendigo Council recognised this too, listing several initiatives in the Bendigo area aimed at 'democratising' public space. This included 'Greater investment, coordination and support for community involvement in park management activities'.⁶³

Parks Victoria noted that the community may want different things from environmental infrastructure, which may conflict.⁶⁴ Golden Plains Shire also acknowledged this, with Mr Collins stating at a public hearing that 'we actually get quite a divergence in what people ask for, which becomes a challenge', for example, some residents may want open space left in a 'pristine condition' and others may want infrastructure built.⁶⁵ Mildura Council, Bendigo Council and North Central CMA also highlighted challenges associated with managing greater community expectations for the provision of high-quality environmental infrastructure.⁶⁶

⁶¹ Bendigo and District Environment Council, et al., *Submission 143*, p. 1.

⁶² Golden Plains Shire Council, *Submission 250*, p. 2.

⁶³ City of Greater Bendigo, *Submission 77*, pp. 1, 7.

⁶⁴ Mr Stuart Hughes, *Transcript of evidence*, p. 10.

⁶⁵ Mr David Collins, *Transcript of evidence*, p. 28.

⁶⁶ Mildura Rural City Council, *Submission 144*, p. 4; North Central CMA, *Submission 254C*, p. 2; City of Greater Bendigo, *Submission 77*, p. 3.

The Committee appreciates that community engagement can be challenging for regional councils. Nevertheless, the Committee considers that the challenges associated with community consultation and meeting community expectations could be openly addressed by councils. Dedicated community engagement officers or staff with a community engagement component to their role, as well as community engagement strategies or plans, could be adopted by regional councils and other authorities to ensure environmental infrastructure meets the needs of communities.

Committees of management for Crown land can be established under certain Victorian legislation to manage open spaces or environmental infrastructure.⁶⁷ The Committee received evidence from a range of Inquiry participants about how they operate. For example, Mr Thomas from Greater Geelong City Council told the Committee at a public hearing that while its work with committees of management is not always seamless and challenges can arise, for the most part, the relationship is ‘pretty good’ and they work together ‘very closely’.⁶⁸

In its submission, Baw Baw Shire Council noted that one of the challenges of committees of management is that they ‘do not receive any ongoing operational funding and there are minimal DELWP grant opportunities’.⁶⁹

Mr Cheatley, Manager, Infrastructure Maintenance, Baw Baw Shire Council, also stated that the Council relies on ‘friends of’ and volunteer groups to maintain smaller, less significant open spaces.⁷⁰ The Committee received submissions from a range of friends of groups in regional Victoria, demonstrating their importance in maintaining landscapes and advocating for the enhancement of environmental infrastructure. For example, the Friends of the Great South West Walk submitted:

The Great South West Walk is maintained almost entirely by the Friends group with minimal financial support from ParksVic. It could not exist without the ongoing support of the Friends who donate approximately 5000 volunteer hours per annum to maintain, improve and market the Walk.⁷¹

A collection of Bendigo and Central Victoria community groups advocated for increased funding for community and Landcare groups to deliver environmental infrastructure, conservation and community capacity-building initiatives.⁷² Similarly, Friends of ABGS outlined the community awareness-raising activities that they, Landcare, the CMA and Council undertake in the municipality. Friends of ABGS also recommended that the Government continue to provide financial assistance and expertise for community awareness, bushland enhancement, flora and fauna preservation and facility development activities.⁷³

⁶⁷ See *Crown Land (Reserves) Act 1978 (Vic)*; *Local Government Act 2020 (Vic)*.

⁶⁸ Mr Rodney Thomas, *Transcript of evidence*, p. 35.

⁶⁹ Baw Baw Shire, *Submission 199*, p. 5.

⁷⁰ Mr Will Cheatley, Manager, Infrastructure Maintenance, Baw Baw Shire Council, public hearing, via videoconference, 10 March 2021, *Transcript of evidence*, p. 22.

⁷¹ Friends of the Great South West Walk, *Submission 30*, received 4 September 2020, p. 1.

⁷² Bendigo and District Environment Council, et al., *Submission 143*, p. 13.

⁷³ Friends of the Australian Botanic Gardens Shepparton, *Submission 53*, pp. 2, 7.

The Committee considers that the work undertaken by volunteer groups and management committees is vitally important for maintaining and maximising the use of environmental infrastructure and that they could be provided with increased support to undertake this work. Adequate support for volunteer groups would ensure they can undertake work safely and manage environmental infrastructure to a high standard.

RECOMMENDATION 45: That the Victorian Government explore options for increased funding and support of regional community groups involved in the preservation and maintenance of environmental infrastructure and landscapes.

Landcare groups are also a means for members of the community to connect and ‘shape the future of our land, biodiversity and waterways’.⁷⁴ As DELWP outlined:

Landcare began in Victoria in 1986 as a mechanism for enabling private land managers to work together to improve biodiversity conservation on their properties, and in their catchments and is a highly successful community-based volunteer movement. In Victoria there are now around 600 Landcare groups and 64 Landcare networks, and more than 500 other community-based natural resource management groups. Victoria’s Landcare and other environmental volunteer groups have around 60,000 members and involve an additional 45,000 volunteers who contribute their time and energy each year to help care for our natural resources.⁷⁵

DELWP funds 10 Regional Landcare Coordinator positions and a state-wide Aboriginal Landcare Facilitator position.⁷⁶ Landcare groups play a particularly important role in achieving conservation outcomes on private land across regional Victoria.

Vic Catchments recommended in its submission that market-based methods be applied to unlock public value from private land:

To ramp up the effort in protecting and extending environmental infrastructure (native vegetation, waterways threatened fauna, natural ecosystems, landscape values, etc.), a tailored program that extends this approach across Victoria through a tender could be considered.⁷⁷

Similarly, Friends of ABGS stated that there are some areas of remnant bushland in its region that are privately owned but poorly managed or neglected. If the landowner is uncooperative and not inclined to focus on conservation, rectifying land management issues can be difficult. Friends of ABGS recommended that ‘other forms of incentive, compensation or encouragement’ be provided to private landowners to protect biodiversity and bushland, where appropriate.⁷⁸

⁷⁴ Landcare Victoria, *What is Landcare?*, <<https://www.landcarevic.org.au/home/what-is-landcare>> accessed 18 October 2021.

⁷⁵ Department of Environment, Land, Water and Planning, *Submission 254*, p. 39.

⁷⁶ Ibid.

⁷⁷ Vic Catchments, *Submission 254A*, p. 4.

⁷⁸ Friends of the Australian Botanic Gardens Shepparton, *Submission 53*, p. 6.

8.2.4 Aboriginal and Torres Strait Islander communities and Traditional Owners

Partnerships with Aboriginal and Torres Strait Islander communities and Traditional Owners play an increasingly important role in the protection, promotion and management of ‘Aboriginal cultural heritage as an integral part of land and natural resource management’.⁷⁹ As DELWP stated in its submission, ‘developing partnerships with Traditional Owners in land management is key to improving how we care for and manage our forests and land.’⁸⁰ Further, projects to protect and improve Victoria’s waterways can support Traditional Owners’ relationship to country and improve ‘cultural knowledge and understanding across communities and government agencies’.⁸¹

Community engagement is an important means of protecting Aboriginal heritage. As Mr Hughes from Parks Victoria highlighted:

we have spent a significant amount of time researching the environmental values, researching the tangible and intangible cultural values in the landscape, and relaying that information—where it is culturally appropriate—to the community, so they can get a broader understanding about what is significant as a cultural landscape ... we are taking the Victorian community on a journey about what is the protection of values in a mode where it still enables access, recreation and nature-based tourism to occur ... that is the future of, I guess, land management in Victoria as more and more joint management arrangements and *Traditional Owner Settlement Act* outcomes arise.⁸²

As an example of good practice, Mr Thomas from Geelong Council informed the Committee at a public hearing that the Council works closely with Traditional Owners to manage conservation reserves, including native grasslands and tree cover. Geelong Council is currently negotiating ‘an Aboriginal cultural heritage land management agreement, which will see us working even further with the Wadawurrung to restore our reserves’.⁸³

The protection and management of Aboriginal cultural heritage and consultation with Traditional Owners is facilitated through the *Aboriginal Heritage Act 2006* (Vic) (AH Act). Aboriginal Victoria (AV), the Victorian Government body responsible for administering the AH Act, stated in its submission to the Committee:

Urban development has the potential to impact on Aboriginal cultural heritage values, especially where it proceeds on previously undisturbed land ... If such activities are proposed in ‘areas of cultural heritage sensitivity’, then a cultural heritage management plan must be approved before planning authorisation may be granted.⁸⁴

⁷⁹ Aboriginal Victoria, *Submission 34*, received 11 September 2020, pp. 1–2.

⁸⁰ Department of Environment, Land, Water and Planning, *Submission 254*, p. 11.

⁸¹ *Ibid.*, p. 23.

⁸² Mr Stuart Hughes, *Transcript of evidence*, p. 10.

⁸³ Mr Rodney Thomas, *Transcript of evidence*, p. 33.

⁸⁴ Aboriginal Victoria, *Submission 34*, p. 1.

While this is applicable across Victoria, the Committee notes it is particularly pertinent to regional Victoria as ‘areas of cultural heritage sensitivity’ include land where Aboriginal cultural heritage sites likely exist, including ‘land within 200 metres of waterways, coastal land and National Parks’.⁸⁵ AV stated that reserving ‘environmental assets and infrastructure in areas being opened up to development is an avenue and an opportunity for protecting and promoting Aboriginal cultural heritage’. AV elaborated, stating:

Dialogue with Traditional Owners is a necessary part of the statutory processes of developing cultural heritage management plans and obtaining permits. This also becomes an avenue for fostering constructive community relationships and contributing to reconciliation and Aboriginal self-determination.

The protection of Aboriginal cultural heritage is a necessary part of planning decisions in relation to urban development. An important strength of Victoria’s approach is that the AH Act requires consideration of Aboriginal cultural heritage values, and engagement with Aboriginal Traditional Owners, *ahead* of planning decisions and activity authorisations, ensuring proper consideration, care and protection of Aboriginal cultural heritage from the start.⁸⁶

Parks Victoria has a particularly strong relationship with Traditional Owners. At a public hearing, Mr Hughes from Parks Victoria outlined the agency’s ‘managing country together framework’, which provides Traditional Owners with a strong voice in the future direction of parks and waterways. Parks Victoria has 26 parks and reserves that are currently jointly managed with Traditional Owners.⁸⁷

Victoria’s infrastructure strategy 2021–2051 recommends that the Victorian Government ‘support and partner with Aboriginal communities to develop an Aboriginal tourism strategy’ and continue to develop ‘Joint Management Plans between Traditional Owners and the Victorian Government [that] recognise and use traditional knowledge and culture to manage some national parks and other protected areas’.⁸⁸ The Committee supports these recommendations.

While the Committee recognises that regional and rural councils may have partnerships with Aboriginal and Torres Strait Islander groups in their regions that were not included in their evidence to the Committee, some submissions from regional councils did not mention partnerships with Traditional Owners.

8.2.5 Other groups

A range of other groups are also required to work with councils, authorities and government to ensure that the benefits of environmental infrastructure are maximised. One example, particularly relevant to regional areas with ageing populations, is the

⁸⁵ Ibid.

⁸⁶ Ibid., p. 2. (emphasis in original)

⁸⁷ Mr Stuart Hughes, *Transcript of evidence*, pp. 2–3.

⁸⁸ Infrastructure Victoria, *Victoria’s infrastructure strategy 2021–2051*, p. 222.

work of the National Ageing Research Institute (NARI). NARI outlined in its submission the work that it has done with several local governments to create outdoor spaces that are age-friendly and accessible.⁸⁹

Another example was provided by Campaspe Council regarding unused rail reserves and the land management practices of VicTrack. Campaspe Council stated that it was 'disappointed with the inconsistent land management practices of VicTrack' and provided a case study, outlining:

A prime example where the local community has realised the benefits of a disused rail reserve is in Girgarre where VicTrack transitioned management of the disused rail reserve to the Crown (DELWP) whom then established a local community committee of management. Whilst this has been a great outcome for the community and council the remainder of the disused reserve (outside of Girgarre township) remains in VicTrack management.⁹⁰

The Council also noted that VicTrack owns or manages pockets of land across Victoria on behalf of the Crown, some of which have been identified as surplus to need. However, VicTrack retains the discretion to sell or lease the land. Campaspe Council highlighted two key issues with this, primarily the 'Lack of opportunity for community use of undeveloped and redundant rail land' and VicTrack's need 'for commercial return on the sale of undeveloped and redundant rail land where commercial opportunity may exist'.⁹¹ At a public hearing, Mr Oberin outlined a potential solution: any rural land with no 'future commercial value should be transitioned back to the Crown and DELWP', and subsequently 'the community can enter into an arrangement, a committee of management with the Crown'.⁹²

The Committee discussed the better use of vacant rail reserves and how they could significantly improve access to open spaces in regional communities. The Committee considers that DELWP and the Victorian Government could explore this option in detail to determine its feasibility, the extent and availability of such land across the state and any potential implications.

RECOMMENDATION 46: That the Victorian Government investigate the better utilisation of unused and surplus rail land for the creation of new public open space.

8.2.6 Maximising partnerships and collaboration

The Committee considers that partnerships and governance structures can be effectively utilised by government authorities and other groups to maximise the value of open spaces and waterways. As Baw Baw Shire argued in its submission: 'differing

⁸⁹ National Ageing Research Institute, *Submission 42*, received 16 September 2020, p. 4.

⁹⁰ Campaspe Shire Council, *Submission 13*, received 26 August 2020, p. 1.

⁹¹ *Ibid.*, p. 2.

⁹² Mr Keith Oberin, *Transcript of evidence*, p. 3.

approaches to management of land can have varying outcomes to the quality of parks, reserves and open space areas'.⁹³

Much of the evidence received by the Committee in relation to partnerships between DELWP, Parks Victoria, councils and communities was positive. While there are specific examples of scope for improvement, the Committee was encouraged by the evidence it received and the level of community engagement occurring in Victoria's regions.

Bendigo Council made comments in relation to the management of a range of national, state, regional and local parks and reserves in the region by Parks Victoria, DELWP, Coliban Water and the Council. The Council stated that the 'patchwork of ownership' of such open space can exacerbate disjointed land management practices and cited the example of Crown land, which may be managed: by Council through a committee of management; directly by the Victorian or federal government; or under a lease or license.⁹⁴

8.3 New and existing open spaces

In previous chapters, the Committee has discussed the health benefits (Chapter 2), improvements to ecosystem services (Chapter 3) and social benefits (Chapter 4) that can be realised by expanding and better maintaining environmental infrastructure. The Committee is mindful that many regional communities already enjoy access to natural environments, ecosystems and open spaces that allow their members to unlock these benefits. However, the Committee recognises that regional Victorian cities and communities rely extensively on public land assets for liveability, to meet recreational needs and for tourist and visitor economies.⁹⁵ Moreover, existing open spaces need to be protected and effectively managed, and new open spaces need to be developed to meet the needs of growing populations in regional centres. This section considers some of the concerns highlighted by councils in rural and regional areas regarding new and existing open spaces and discusses potential opportunities to improve the planning and maintenance of open spaces.

8.3.1 Funding

One of the key issues on which the Committee received a significant amount of evidence was the costs faced by regional councils in developing and maintaining open space.⁹⁶ Potential solutions suggested by regional councils included minimising or

⁹³ Baw Baw Shire, *Submission 199*, p. 5. See also City of Greater Bendigo, *Submission 77*, p. 1.

⁹⁴ City of Greater Bendigo, *Submission 77*, p. 4.

⁹⁵ *Ibid.*, p. 2.

⁹⁶ See, for example, Ballarat City Council, *Submission 264*, p. 3; Mildura Rural City Council, *Submission 144*, p. 5; Greater Shepparton City Council, *Submission 86*, p. 3; City of Greater Bendigo, *Submission 77*, p. 3; Mr Paul Gangell, *Transcript of evidence*, p. 21; Golden Plains Shire Council, *Submission 250*, p. 1; Ms Bridget Wetherall, Director, Infrastructure and Environment, Ballarat City Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, p. 12; Mr Will Cheatley, *Transcript of evidence*, p. 21; Mr David Collins, *Transcript of evidence*, p. 28.

subsidising the development costs associated with the provision of environmental infrastructure,⁹⁷ and reform of the Development Contribution Plan (DCP) system.⁹⁸

The Committee recognises that there may be some scope for reform of the DCP system but is mindful of the need to avoid measures that could deter potential development in regional areas due to high environmental infrastructure costs, as experienced by Wellington Council.⁹⁹ In addition, DCPs are not always suitable in rural areas as small development levels may mean they are unwarranted and the time and location of growth can be unpredictable.¹⁰⁰

However, the Committee recognises that there is potential to increase Victorian Government funding for open space in regional centres through targeted measures such as grants. The Committee also notes the view that there are currently more grant opportunities available for organised sporting activities than for active and passive recreation and open spaces.¹⁰¹

RECOMMENDATION 47: That the Victorian Government consider the provision of grants to regional Victorian councils for the provision of new open space, passive recreation and environmental infrastructure.

8.3.2 Equitable access to open space

DELWP defined the concept of environmental justice as the idea ‘that all people should have equitable access to nature for enjoyment, recreation, cultural and spiritual reasons’ and to enhance their mental and physical health. DELWP also outlined potential barriers to accessing environmental infrastructure, including ‘distance from green spaces, difficulties of access, discomfort, cultural issues and disability’.¹⁰²

Ms Marianne Richards, President of the Town and Country Planning Association (TCPA), highlighted at a public hearing that the accessibility of environmental infrastructure is particularly important for regional towns and cities in the context of a population shift towards regional areas.¹⁰³ Ms Richards suggested that in order to understand the variation in access to open space across regional areas, a ‘stocktake’ of environmental infrastructure should occur, followed by the establishment of basic standards.

⁹⁷ Wellington Shire Council, *Submission 11*, p. 2.

⁹⁸ Ballarat City Council, *Submission 264*, p. 4; Mr Matthew Kerlin, *Transcript of evidence*, p. 22; City of Greater Bendigo, *Submission 77*, p. 3; Mildura Rural City Council, *Submission 144*, p. 5.

⁹⁹ Wellington Shire Council, *Submission 11*, p. 1.

¹⁰⁰ Department of Sustainability and Environment, *Development Contributions Guidelines: Version 5.9*, 2007, p. 14.

¹⁰¹ Mr Paul Gangell, *Transcript of evidence*, p. 20; Mr Matthew Kerlin, *Transcript of evidence*, p. 20; City of Greater Bendigo, *Submission 77*, p. 3; Bendigo and District Environment Council, et al., *Submission 143*, p. 4.

¹⁰² Department of Environment, Land, Water and Planning, *Submission 254*, p. 31.

¹⁰³ Ms Marianne Richards, President, Town and Country Planning Association, public hearing, via videoconference, 31 March 2021, *Transcript of evidence*, pp. 31–33.

Afterwards, a ‘reconciliation for each region between the planned population’ and the delivery of environmental assets for growing populations can be undertaken.¹⁰⁴

As discussed in Section 8.2.3, communities in regional Victoria are diverse: they may want different things from public land and may have different experiences in accessing open space. The ‘lack of equity in the provision and distribution of spaces’ can be difficult for councils to navigate, as identified by Bendigo Council.¹⁰⁵ Bendigo Council acknowledged that in its municipality, some communities have better access to high-quality open space and that communities experiencing socio-economic disadvantage and some growth areas ‘are notable amongst those communities with lower levels of access’. This is linked to historic and current investment practices.¹⁰⁶ A collection of Bendigo and Central Victoria community groups also raised the issue of accessibility in a submission to the Committee, recommending that the Inquiry recognise the importance of all residents, not just those in affluent areas, having equitable access to public spaces and treespaces. They suggested the provision of increased funding for all regions to provide environmental infrastructure upgrades to address disparities in access to public space, including the provision of disabled parking and access for people with mobility aids.¹⁰⁷

Ms Sue Hawes, Senior Open Space Planner, Greater Geelong City Council, told the Committee at a public hearing that addressing the inequity of access to open space is a key issue for the municipality.¹⁰⁸ Similarly, Baw Baw Shire noted that the practice of developers providing money instead of open spaces in brownfield developments:

means that accessibility to good quality public open space, within a desirable walking/cycling distance, can be limited for those in the community within these areas. This limits the liveability of these existing areas, particularly given access to quality open space is considered a key aspect of a liveable community, and creates inequity in access to good quality parks and open space.¹⁰⁹

Further, Baw Baw Shire stated the ‘development-by-development approach to open space assets can lead to significant discrepancies in the quality of open space’.¹¹⁰ Golden Plains Shire submitted that while residents in the Shire may not have been restricted to the 5 kilometre travel limit imposed in Melbourne during the COVID-19 pandemic, they may want to remain close to home when accessing environmental infrastructure. This means access to diverse open spaces is important for residents who may not want to travel far from home.¹¹¹

¹⁰⁴ Ibid., p. 32.

¹⁰⁵ City of Greater Bendigo, *Submission 77*, p. 1.

¹⁰⁶ Ibid., p. 3.

¹⁰⁷ Bendigo and District Environment Council, et al., *Submission 143*, p. 7.

¹⁰⁸ Ms Sue Hawes, Senior Open Space Planner, Greater Geelong City Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, p. 29.

¹⁰⁹ Baw Baw Shire, *Submission 199*, p. 2.

¹¹⁰ Ibid.

¹¹¹ Golden Plains Shire Council, *Submission 250*, p. 2.

The Committee considers that equitable access to open space should be considered as part of planning mechanisms and community engagement strategies at regional councils. This should include an emphasis on ensuring that access to open space is equitable, for example, by engaging with groups who may have different accessibility needs. The Committee has made a number of recommendations in Chapter 4 aimed at delivering more equitable access to open space across Victoria. A number of these recommendations are as relevant to regional Victoria as they are to Melbourne, as is the Committee's recommendation in Chapter 6 (Recommendation 31) in relation to the shared use of some restricted public land such as Government schools. As discussed in Chapter 1, although a significant amount of land, including private open space, falls outside the Committee's definition of environmental infrastructure, much of this land contributes both environmental benefits and visual amenity.

8.3.3 The impacts of the COVID-19 pandemic and tourism

The COVID-19 pandemic has increased the demand for open space in regional Victoria, both from residents and visitors. Shepparton Council stated in its submission that after the COVID-19 pandemic began, the use of shared paths in bushland increased significantly, placing additional demand on environmental infrastructure. Shepparton Council emphasised that this illustrated 'the need for appropriate facilities such as seating, toilets, picnic spaces, lighting, safety provisions, waste facilities and drinking water access in appropriate locations for public use'.¹¹²

Mildura Council noted that due to the COVID-19 pandemic, it 'will likely see a reduction in community members participating in organised sporting clubs and events due to the cost', and consequently, the 'need for infrastructure that provides free recreational opportunities is paramount and remains a priority'.¹¹³ Similarly, Golden Plains Shire stated that 'COVID-19 has highlighted the importance of the design, use [and] location of environmental infrastructure'.¹¹⁴ Corangamite CMA stated:

While Geelong has had access to trails and Parklands along the Barwon River, the current experience of the pandemic has demonstrated a significant use of these areas which in turn identifies that people place a significant social value on being able to access well maintained open and natural spaces for recreation and well-being.¹¹⁵

Greater Geelong City Council, Ballarat City Council and Shepparton City Council also provided evidence of similar experiences within their municipalities during the pandemic.

Mr Thomas from Greater Geelong City Council stated at a public hearing:

open space has been really, really important during the pandemic ... We have really seen people utilise that public open space more than ever, and that leads us to think as well

¹¹² Greater Shepparton City Council, *Submission 86*, p. 4.

¹¹³ Mildura Rural City Council, *Submission 144*, pp. 5–6.

¹¹⁴ Golden Plains Shire Council, *Submission 250*, p. 2.

¹¹⁵ Corangamite CMA, *Submission 254B*, p. 2.

that having really high-quality environmental infrastructure is really important moving forward for the community.¹¹⁶

Similarly, Ballarat City Council acknowledged that the COVID-19 pandemic had highlighted an increased demand for access to open spaces and that the community's priority is for 'unstructured recreation' like parks and trails.¹¹⁷ The Council advised that it was undertaking public consultation on a new council plan and, partly due to the COVID-19 pandemic, community feedback indicates support for increased environmental sustainability, natural resources and 'good green streetscapes'.¹¹⁸

Similarly, the Committee heard that Shepparton Council has developed a *COVID-19 Pandemic—Community Recovery Plan*, the central theme of which is to 'identify ways to increase the opportunities for the community to engage in environmental infrastructure really close to the home'.¹¹⁹ Some of the actions in the plan include expanding 'green urban spaces providing increased shade and seating' and identifying 'vacant urban land for temporary green spaces'.¹²⁰

The Committee commends the above councils for prioritising the provision of increased environmental infrastructure in their council plans and COVID-19 recovery plans to address the effects of the pandemic. Considering environmental infrastructure as a key element of recovery plans and ways in which to better utilise public land and open spaces will be an important means of improving health, wellbeing and the environment in a post-COVID-19 future.

The Committee also heard that regional towns are experiencing varied impacts on tourism due to the COVID-19 pandemic. For example, Mildura has experienced reduced tourism as a result of the COVID-19 pandemic,¹²¹ but Baw Baw Shire has experienced an increase in visitors.¹²² For Mildura, lower tourism rates mean decreased revenue and for Baw Baw Shire, higher tourism rates mean increased demand for and maintenance of facilities.¹²³

Tourism is incredibly important for regional Victoria's local economies, but it also impacts environmental infrastructure. *Victoria's infrastructure strategy 2021–2051* notes that tourism to regional areas can 'enhance environmental conservation' and:

Regional Victoria offers a diversity of natural assets such as alpine forests, deserts, coastal areas and rainforests. It contains important Aboriginal cultural and heritage assets. Across Australia, nature-based tourism has been an area of particularly

¹¹⁶ Mr Rodney Thomas, *Transcript of evidence*, p. 28; Mr Matthew Kerlin, *Transcript of evidence*, p. 24; Ms Sharon Terry, *Transcript of evidence*, p. 2.

¹¹⁷ Ms Natalie Robertson, *Transcript of evidence*, p. 14.

¹¹⁸ Ibid.

¹¹⁹ Ms Sharon Terry, *Transcript of evidence*, p. 8.

¹²⁰ Greater Shepparton City Council, *Greater Shepparton COVID 19 Pandemic - Community Recovery Plan*, 2021, p. 38.

¹²¹ Mildura Rural City Council, *Submission 144*, p. 6.

¹²² Mr Will Cheatley, *Transcript of evidence*, p. 26.

¹²³ Mildura Rural City Council, *Submission 144*, p. 6; Mr Will Cheatley, *Transcript of evidence*, p. 26.

strong growth, emerging as an important motivator for travel. In 2019, nature-based experiences drew 22% of visitors to regional Victoria.¹²⁴

Historically, Victoria's regions have received vastly lower levels of tourism compared to Melbourne. The first time tourism spending in regional Victoria was higher than in Melbourne was 2020, predominately due to COVID-19, but it was still 44% lower than tourism rates in 2019.¹²⁵ Addressing the overall reduction in regional tourism during the pandemic and its implications for environmental infrastructure will likely remain an ongoing challenge that individual regions will need to manage, with support from the Victorian Government.

Victoria's infrastructure strategy 2021–2051 has a focus on facilitating regional nature-based tourism investment, where regional Victoria 'has a comparative advantage' due to its diverse natural experiences and landscapes.¹²⁶ The strategy recommends that the:

Victorian Government should develop a statewide nature-based tourism strategy within the next two years. The strategy should take account of nature-based tourism investments, investigate public land near national parks and provide a framework for infrastructure funding by the Victorian and Australian governments, re-examine existing policies, balance increased tourism with its environmental impacts, and consider localised risks (like bushfires and flood), accessibility and planning regulations.¹²⁷

The Committee recognises the importance of adequately funding, developing, maintaining and enhancing open space and environmental infrastructure in Victoria's regional areas.

8.3.4 Climate change, bushfires and natural disasters

Victoria's infrastructure strategy 2021–2051 notes that 'Climate change is forecast to bring higher temperatures, more days of extreme heat, declining rainfall and more frequent catastrophic bushfire conditions to regional Victoria'.¹²⁸ Similarly, the Committee's *Inquiry into Tackling Climate Change in Victorian Communities*, tabled in 2020, highlighted the wide-ranging implications of climate change, including increased risk of bushfires, heatwaves, changes in rainfall patterns and increased risk of either water shortages or flooding, and loss of natural biodiversity.¹²⁹

As discussed in Section 8.2.2, additional obligations placed on Parks Victoria have strained its resources. This includes fire management, which requires Parks Victoria to move staff from other business units to control fire outbreaks, detracting from business

¹²⁴ Infrastructure Victoria, *Victoria's infrastructure strategy 2021–2051*, p. 217. (with sources).

¹²⁵ Ibid. (with sources).

¹²⁶ Ibid., p. 221.

¹²⁷ Ibid. (with sources)

¹²⁸ Ibid., p. 238. (with sources)

¹²⁹ Parliament of Victoria, Legislative Assembly Environment and Planning Committee, *Inquiry into tackling climate change in Victorian communities*, November 2020, pp. xi-xii.

as usual activities. Several councils raised concerns about fire management, including Bendigo Council which discussed the potential bushfire risk to urban boundaries and populations.¹³⁰ Golden Plains Shire noted that the open spaces, reserves and parks that attract new residents to Victoria's regions can be a concern in terms of fire management, compounded by a lack of knowledge new residents have about fire risk.¹³¹ Mr Collins from Golden Plains Shire stated that Parks Victoria manages land in its region that is a high fire risk and 'do a really good job', but any further support provided by the Victorian Government would be useful.¹³²

RECOMMENDATION 48: That the Victorian Government engage with regional councils on fire prevention activities.

The Committee's *Inquiry into Tackling Climate Change in Victorian Communities* identified that many Victorian 'rural and regional communities are already working to adapt to the reality of climate change and to mitigate its future impacts'.¹³³ This was also demonstrated in evidence received during this Inquiry. For instance, Bendigo Council stated that climate change will be a key focus of its council health and wellbeing plan.¹³⁴ Further, its *Managed Growth Strategy* will consider, in detail, how the interface between forest and urban areas can be managed to minimise the risk of bushfires, while also meeting State planning policies that prioritise the protection of human life.¹³⁵ Similarly, Ms Terry from Shepparton Council commented that the Council has a climate change focus in its urban forest strategy and that 'the lens of climate change really must be considered' in all planning discussions.¹³⁶ Shepparton Council recommended that future environmental infrastructure planning decisions should consider climate change.¹³⁷

The Committee's *Inquiry into Tackling Climate Change in Victorian Communities* found that Victoria's planning scheme 'presents substantial opportunities for climate change adaption, particularly to mitigate heatwaves and other extreme weather events'.¹³⁸ It also made multiple recommendations beyond planning provisions in relation to regional communities and climate change. Some of the key relevant recommendations and the Victorian Government's response are outlined in Table 8.3.

¹³⁰ Mr Matthew Kerlin, *Transcript of evidence*, p. 20.

¹³¹ Golden Plains Shire Council, *Submission 250*, p. 1.

¹³² Mr David Collins, *Transcript of evidence*, pp. 31–32.

¹³³ Parliament of Victoria, Legislative Assembly Environment and Planning Committee, *Inquiry into tackling climate change in Victorian communities*, p. xi.

¹³⁴ Mr Matthew Kerlin, *Transcript of evidence*, p. 24.

¹³⁵ City of Greater Bendigo, *Submission 77*, p. 6.

¹³⁶ Ms Sharon Terry, *Transcript of evidence*, p. 8.

¹³⁷ Greater Shepparton City Council, *Submission 86*, p. 4.

¹³⁸ Parliament of Victoria, Legislative Assembly Environment and Planning Committee, *Inquiry into tackling climate change in Victorian communities*, p. 178.

Table 8.3 Key recommendations from the *Inquiry into Tackling Climate Change in Victorian Communities* relevant to regional communities and environmental infrastructure

Committee recommendation	Government response and key explanations
<p>Recommendation 39: That the Victorian Government consider the establishment of a long-term infrastructure fund to support local organisations in mitigating the consequences of climate change on public infrastructure, especially infrastructure that mitigates climate change-related hazards.</p>	<p>Under review</p> <ul style="list-style-type: none"> The Victorian Government acknowledges the potential impact of climate change on public infrastructure. Further analysis is required to determine the effectiveness of existing initiatives for local-scale hazard reduction and adaptation planning ... The Government is strengthening its long-term, strategic approach to supporting regional and local adaptation priorities and projects under the four-year \$9.32 million Supporting our Regions to Adapt program. In addition, under the <i>Climate Change Act 2017</i>, five-yearly Adaptation Action Plans (AAP) are to be prepared to improve the resilience of seven key systems vulnerable to climate impacts.
<p>Recommendation 45: That the Victorian Government seek to amend the <i>Planning and Environment Act 1987</i> and/or the <i>Climate Change Act 2017</i> to ensure that consideration of climate change receives stronger emphasis in the Victorian planning system.</p>	<p>Support in principle</p> <ul style="list-style-type: none"> The current objectives of the <i>Planning and Environment Act 1987</i> readily provide for consideration of climate change issues and there are specific references to climate change and greenhouse gas reduction in the Victoria Planning Provisions. The planning system provides substantial opportunities to address climate change adaptation. To support updated responses the Victorian Government is developing a Built Environment System AAP as required under the <i>Climate Change Act 2017</i>. This Built Environment AAP will provide an opportunity to examine the role of relevant instruments to support climate change adaptation, and its development is the most appropriate forum for further investigation of legislative amendments addressed by this recommendation. A draft Built Environment AAP will be released for public comment and it is expected to be finalised by 31 October 2021.
<p>Recommendation 48: That the Department of Environment, Land, Water and Planning consult with local government and the building industry on options to improve the alignment of planning and building regulation to better consider climate change impacts and environmentally sustainable design.</p>	<p>Support in full</p> <ul style="list-style-type: none"> The Victorian Government supports the intent of improving planning and building regulation to better consider climate change impacts and sustainability requirements. The Government is preparing a Built Environment AAP (as required under the <i>Climate Change Act 2017</i>). This plan will consider the role of the planning and building systems in supporting climate change adaptation. Stakeholders including the building industry and local government will be consulted over 2021.
<p>Recommendation 64: That the Victorian Government investigate opportunities for the integration of underutilised Crown land into biolink projects with revegetation and protection activities to be led by local Landcare and other community groups.</p>	<p>Support in full</p> <ul style="list-style-type: none"> The Victorian Government has a range of existing processes, procedures and plans to implement this recommendation. Victoria's biodiversity policy, Biodiversity 2037 sets out an ambitious plan to stop the decline of biodiversity and achieve overall biodiversity improvement, including a net gain in extent and condition of terrestrial habitat and a target of 200,000 ha of revegetation by 2037. This plan is supported by decision support tools and regional biodiversity response planning to maximise cost effective biodiversity outcomes. These tools and planning exercises are used to inform investment decisions and focus on-ground actions. They also help identify the best locations to restore habitat and manage land for improved biodiversity outcomes. <p>(Continued)</p>

Committee recommendation	Government response and key explanations
<p>Recommendation 64 (Continued)</p>	<ul style="list-style-type: none"> • The <i>Climate Change Act 2017</i> provides for carbon sequestration agreements on Crown Land. The Land Use, Land Use Change and Forestry emissions reduction sector pledge includes actions to explore Carbon Sequestration Agreements as a mechanism for land restoration under the new Nature Restoration for Carbon Storage— BushBank program. This is a \$76.98 million program over the next 16 years to support revegetation and restoration of public and private land to increase carbon sequestration and deliver biodiversity benefits. The BushBank program will be designed during 2021, investigating opportunities to revegetate underutilised Crown land. • Biodiversity 2037 and the BushBank program collectively provide opportunities to revegetate suitable Crown land to achieve increased carbon sequestration and improve habitat for biodiversity. Bushbank will be implemented in partnership with Traditional Owners who will identify and potentially lead revegetation projects on Crown land with other partners. The program will also investigate opportunities to complement private and philanthropic investment in carbon sequestration so that these can achieve better biodiversity conservation objectives. • Importantly, these investigations will consider potential impacts of revegetation on adjacent private land, such as increased fire risk, impacts on agriculture, and long-term management requirements such as potential costs associated with increased pest and weed management, fence repair and fire preparedness, as well as any impacts for entry, egress and travel of oversized agricultural vehicles. • Project and planning and activities are likely to be led by the Crown land manager, Traditional Owners or their agents. Landcare and community groups are likely to participate in planting activities where suitable.

Source: Compiled by the Environment and Planning Committee based on: Government of Victoria, *Response to the Parliament of Victoria, Legislative Assembly Environment and Planning Committee, Inquiry into tackling climate change in Victorian communities*, 24 June 2021.

8.3.5 Biodiversity and greening strategies

As noted in Chapter 3, DELWP's *Protecting Victoria's Environment – Biodiversity 2037* (Biodiversity 2037) recognises the importance of the State's biodiversity and the threats that it faces:

Rich though it remains today, Victoria's natural environment is not as healthy as it once was. The wonderful tapestry of plant and animal life that makes up our terrestrial, waterway and marine environments has been under sustained pressure for nearly two centuries, resulting in the degradation and loss of numerous native species and habitats.¹³⁹

Protecting the biodiversity of Victoria's regions and ensuring new developments are 'green' was a strong theme raised by regional councils. As Bendigo Council outlined:

There is great opportunity to protect, enhance and create biodiversity corridors and renaturalised landscapes to support local flora & fauna during planning for a growing population. The protection and enhancement of native vegetation minimising further

¹³⁹ Department of Environment, Land, Water and Planning, *Protecting Victoria's Environment – Biodiversity 2037*, 2017, p. 4. (with sources)

habitat loss, reducing devaluation of land by reducing erosion and salinity, protecting bio-system services like cleansing of water and air and safeguard ongoing gene flow to secure biodiversity.¹⁴⁰

Biodiversity 2037 outlines the multiple benefits of preserving and enhancing biodiversity and commits to conserving biodiversity through increased investment.¹⁴¹ While not specific to regional Victoria, DELWP stated in its submission that it has implemented a range of tools to protect and manage natural ecosystems, including Biodiversity Response Planning (BRP), which is:

an area-based planning approach to biodiversity conservation in Victoria; designed to strengthen alignment, collaboration and participation between government agencies, Traditional Owners, non-government agencies and the community. BRP aims to progressively deliver a collective area-based response to the state-wide targets in Biodiversity 2037.¹⁴²

Biodiversity 2037 aims to establish a more holistic approach to the management of ecosystems, as opposed to a 'species by species approach'. DELWP uses a 'collaborative, landscape level approach to biodiversity response planning that provides a mechanism for all stakeholders ... to work together to identify priority outcomes for biodiversity—including actions on private land'.¹⁴³

Ms Terry from Shepparton Council observed that Biodiversity 2037 has increased the community's sense of ownership of public space, provided benefits to both the community and the State, and has also provided resources to improve biodiversity outcomes. However, Ms Terry noted there is still a 'clunkiness' in project approval processes, as well as confusion about responsibilities and funding streams between the Council, Parks Victoria and DELWP.¹⁴⁴

Similarly, Mr Collins from Golden Plains Shire outlined the challenges involved in the protection of environmental areas during urban development:

Areas such as the reserves, lakes, riparian corridors and coasts are being increasingly fragmented through the changes in land use for road construction and development. This places increasing and in some instances impossible pressure on all the layers within the natural system, all these layers that ultimately have evolved to be interconnected to one another. Once this fragmentation happens it is often left to local governments or in some cases catchment authorities to try and bridge the gap or repair the connection, which in some cases may be impossible.¹⁴⁵

Mr Collins expressed concern that development may diminish the ecological value of reserves, which would become isolated and not as easily accessible to residents.

¹⁴⁰ City of Greater Bendigo, *Submission 77*, p. 5.

¹⁴¹ Department of Environment, Land, Water and Planning, *Protecting Victoria's Environment - Biodiversity 2037*, p. 46.

¹⁴² Department of Environment, Land, Water and Planning, *Submission 254*, p. 29.

¹⁴³ Ibid.

¹⁴⁴ Ms Sharon Terry, *Transcript of evidence*, p. 6.

¹⁴⁵ Mr David Collins, *Transcript of evidence*, p. 23.

He advocated for 'specific legislation, regulation and support of the state government' to address this.¹⁴⁶ The Planning Institute Australia (Vic) ('PIA Victoria') stated in its submission that the Victorian Government currently has a focus on protecting existing 'State significant' biodiversity assets through the planning framework, which can potentially lead to 'the loss of regionally or locally significant environmental assets'.¹⁴⁷

Bendigo Council also argued that 'strict protection and enhancement guidelines must be implemented and adhered to' in order to maintain and improve natural landscapes. It further outlined that early consultation between local government, DELWP and private landowners is key to identifying which landscapes require protection and establishing what measures should be put in place. In Bendigo, not all biodiversity corridors are on public land, so engaging with private landowners to create biodiverse networks of open space is required.¹⁴⁸

The evidence provided by stakeholders indicates that biodiversity protection mechanisms in regional Victoria can be improved, particularly in terms of reducing the extent to which new developments produce fragmented and inaccessible biodiversity pockets. One means of protecting biodiversity and open space is through planning mechanisms and buffers. Corangamite CMA outlined several planning mechanisms that manage the impact of population growth and protect natural landscapes, including green wedges that act as 'strategic breaks' between residential estates, and provide natural and recreational value.¹⁴⁹ Similarly, Bendigo Council stated that:

Remnant vegetation including large established trees requires adequate and untouched protection buffers to remain viable and ongoing funds are required to maintain and improve the quality of these landscapes.

Depending on the type and quality of the corridor or landscape the level of public access needs to be carefully considered as these areas can be sensitive to overuse and misuse. Community expectations and the ongoing management of these assets needs to be established and addressed in the early planning stages.¹⁵⁰

The Committee also received extensive evidence from regional stakeholders on the use of tree canopy targets as a greening strategy for new developments. Shepparton Council, for example, has a 'One Tree Per Child' program, where one locally indigenous plant is planted for each child in its municipality under the age of 18. Schools, communities and local businesses participate in the program, which has received 'overwhelming positive feedback'.¹⁵¹ The Committee understands DELWP and the VPA also have a policy of increasing tree canopy coverage, consistent with many urban and regional council policies.¹⁵²

¹⁴⁶ Ibid.

¹⁴⁷ Planning Institute Australia (Vic), *Submission 244*, received 16 October 2020, p. 7.

¹⁴⁸ City of Greater Bendigo, *Submission 77*, p. 5.

¹⁴⁹ Corangamite CMA, *Submission 254B*, p. 2.

¹⁵⁰ City of Greater Bendigo, *Submission 77*, p. 5.

¹⁵¹ Greater Shepparton City Council, *Submission 86*, p. 2.

¹⁵² Ms Jessica Hurse, Manager, Planning and Growth, Greater Geelong City Council, public hearing, via videoconference, 21 April 2021, *Transcript of evidence*, p. 31.

Ms Terry from Shepparton Council said the potential for the region's trees to be utilised as an 'innovative open native space' is not fully appreciated under current planning schemes.¹⁵³ Shepparton Council currently has a 40% target for tree cover in urban areas and is seeking to increase this. Ms Terry stated that one of the challenges of its urban greening strategy is the conflict between the outcomes sought by councils and developers in terms of the sometimes poorer quality of vegetation that is planted by developers.¹⁵⁴ Mr Oberin from Campaspe Council shared these concerns, outlining that retrofitting streetscapes can be extensive due to developers planting poor quality trees.¹⁵⁵

Ballarat Council also has a 40% tree cover target in its urban forest plan, primarily on road reserves and council-owned land.¹⁵⁶ Ballarat Council advocated for a stronger planning scheme that incorporates greening initiatives, like tree canopy targets, to support the ability of councils to require developers to meet standards and targets. The Council also called for funding to be provided by the Victorian Government to support these initiatives and allow for the ongoing maintenance of green spaces.¹⁵⁷

At a public hearing, Mr Gangell from Bendigo Council noted that when Council requests wider nature strips in new developments to support canopy trees to cool the city, developers often call for the additional land to be included as part of their open space contribution. Mr Gangell stated that the Council does not consider this to be equitable and finds it challenging to grow good canopy trees in some newer developments due to the road reserve being too slim. Mr Gangell recommended that nature strips should be excluded from developer contributions to open space, through minimum standards as discussed in Section 8.3.6.¹⁵⁸ Similarly, representatives from Greater Geelong City Council noted that planting trees on streets can be problematic due to the narrow space provided and that cost is the biggest impediment to reaching urban forestry targets.¹⁵⁹ The Council also stated that it is working with other councils to undertake a pilot study on how to best meet tree canopy objectives and address barriers to the delivery of tree canopies.¹⁶⁰

As discussed in Chapter 3, Mr Stuart Moseley, Chief Executive Officer at the VPA, suggested that tree canopy target mechanisms could be improved by ensuring all stakeholders are committed to the targets. This would include better communication between utility companies and developers and better integration of their planning requirements. Another major factor is the standards set by local councils, which can be inconsistent. Mr Moseley questioned whether more consistent design principles could

¹⁵³ Ms Sharon Terry, *Transcript of evidence*, p. 8.

¹⁵⁴ Ibid.

¹⁵⁵ Mr Keith Oberin, *Transcript of evidence*, p. 9.

¹⁵⁶ Ms Natalie Robertson, *Transcript of evidence*, p. 12.

¹⁵⁷ Ibid.; Ms Bridget Wetherall, *Transcript of evidence*, p. 12.

¹⁵⁸ Mr Paul Gangell, *Transcript of evidence*, pp. 20–21.

¹⁵⁹ Ms Sue Hawes, *Transcript of evidence*, p. 32; Mr Rodney Thomas, *Transcript of evidence*, pp. 31–32.

¹⁶⁰ Ms Jessica Hurse, *Transcript of evidence*, p. 31.

be adopted across local councils.¹⁶¹ Similarly, Vic Catchments highlighted that in order for tree canopy cover to effectively address the heat island effect, trees need to be planted ‘in the right place for the right purpose’.¹⁶²

PIA Victoria noted that current offset requirements in planning legislation ‘in many cases results in the loss of local biodiversity in specified locations’.¹⁶³ Mr Thomas from Geelong Council recommended a review of the State’s vegetation offset policy—established to guarantee that no net loss of environmental biodiversity occurs during development—to ensure that vegetation is actually being preserved. He also suggested that such a review could consider whether the vegetation that is planted can be used for open space and is accessible by the public, rather than provided solely for conservation purposes.¹⁶⁴ Likewise, Infrastructure Victoria advocated for a review of developer open space contributions and offset policies. In particular, it argued the review should consider how developer contributions deliver open space in a connected and holistic way and how to use tree canopy targets to incentivise the retention of existing, mature trees.¹⁶⁵

As the VPA outlined in its submission, vegetation offset policies in Victoria’s growth corridors are facilitated through the *Biodiversity Conservation Strategy* (BCS). The VPA contended that the strategy ‘avoids the retention of a patchwork of unlinked and unviable small parcels of biodiversity surrounded by development in favour of the strategic development of meaningful conservation solutions with stronger ecological values’.¹⁶⁶ The VPA further noted that in its experience, ‘potential conservation reserves need to be identified and protected early in the planning process’. The VPA recommended that a strategic approach to biodiversity conservation should be extended to other major growth areas, ‘where planning for biodiversity is at risk of being inconsistent and fragmented, leading to uncertainty, dispute, delay and poorer environmental outcomes’.¹⁶⁷ The VPA stated that:

An example where such an approach could be valuable would be within the northern and western growth areas of Geelong where existing land use plans arguably set an expectation that certain areas can be developed, however future required ecological survey work (in the absence of a Strategic Assessment) may suggest otherwise. This will potentially lead to challenges, uncertainty and sub-optimal outcomes for both the environment, developers and local communities. A well-developed Strategic Assessment for these areas could deliver improved results.¹⁶⁸

161 Mr Stuart Moseley, Chief Executive Officer, Victorian Planning Authority, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 33.

162 Mr Tony Baker, *Transcript of evidence*, pp. 21–22.

163 Planning Institute Australia (Vic), *Submission 244*, p. 7.

164 Mr Rodney Thomas, *Transcript of evidence*, p. 29.

165 Dr Jonathan Spear, Deputy Chief Executive and Chief Operating Officer, Infrastructure Victoria, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 32.

166 Victorian Planning Authority, *Submission 225*, received 1 October 2020, p. 2.

167 *Ibid.*

168 *Ibid.*

The Committee notes that Biodiversity 2037 is evaluated every five years 'through a series of internal and external audits' that assess 'performance, spending and alignment with goals', as well as whether the strategy is making progress towards its 'vision, targets and broad outcomes'.¹⁶⁹ While the Victorian Government does not state when this will occur on its website, if the strategy was implemented in 2017 this should occur around 2022. The Committee considers that a more strategic biodiversity conservation and planning approach in regional areas, as advocated for by the VPA in relation to major growth areas, could be considered as part of this evaluation. The evaluation could undertake extensive consultation with regional councils and community groups to address some of the concerns raised above. In addition, the Victorian Government's response to Recommendation 64 of the *Inquiry into Tackling Climate Change in Victorian Communities* (Table 8.3 above) may address many of the concerns raised by Inquiry stakeholders.

RECOMMENDATION 49: That the Victorian Government's five-year evaluation of *Protecting Victoria's Environment - Biodiversity 2037* undertake community consultation and engage with regional councils to address their concerns about biodiversity, including the effects of new developments on fragmented and inaccessible pockets of land.

RECOMMENDATION 50: That the Victorian Government review all requirements regarding tree canopy coverage in regional areas to ensure tree planting is strategic and of good quality and that new developments provide enough space to plant trees. Future requirements should support collaboration between local councils, developers, planning authorities and other relevant stakeholders to reach agreement.

8.3.6 Planning and development

Strategic and thorough planning in the development of environmental infrastructure is essential to ensure open spaces meet the needs of regional communities. As Corangamite CMA stated in its submission:

Part of securing environmental infrastructure for regional Victoria now and into the future should focus on conservation and enhancement of our natural resources including waterways, biodiversity and sustainable agricultural systems, so that they can continue to provide environmental, social, cultural and economic benefits ... The key element is the use of appropriate planning tools. It is more costly to rectify the impacts of population growth and development on environmental assets than to protect these assets in the first instance through planning mechanisms.¹⁷⁰

¹⁶⁹ Department of Environment, Land, Water and Planning, *Biodiversity 2037 Monitoring, Evaluation, Reporting and Improvements Framework (MERF): A supporting document for Protecting Victoria's Environment - Biodiversity 2017, 2020*, <<https://www.environment.vic.gov.au/biodiversity/biodiversity-2037-monitoring-evaluation-reporting-and-improvements-merf-framework>> accessed 18 October 2021.

¹⁷⁰ Corangamite CMA, *Submission 254B*, p. 1.

Regional councils raised several concerns regarding the planning and development of open spaces, including the impact of planning policies that have evolved incrementally:

Bendigo, along with most towns and cities has a legacy of largely piecemeal and incremental decision making over a long time. Many of these decisions are based around political or community expectations and infrastructure standards of the time the area was developed ... The resulting sprawling urban areas often contain isolated and disconnected areas of park, remnant vegetation and open space.¹⁷¹

Ms Richards from TCPA stated that there is 'no consistent approach to the planning for open space parklands and environmental assets' in regional cities. Ms Richards also stated that it is often necessary to consult multiple strategies to understand the 'big picture' plan in a particular region.¹⁷²

The Committee also received evidence on planning in new subdivisions in regional areas. Mr Collins from Golden Plains Shire noted that, understandably, developers tend to focus on open spaces within a specific development pocket when building new subdivisions. This, combined with councils that are inclined to only consider one development at a time, can lead to environmental infrastructure that is disconnected. Mr Collins asserted that 'government could drive the need for all layers of the public and private sectors involved to ensure that environmental assets are interconnected'.¹⁷³

Shepparton Council submitted that while state planning policies provide the Council with 'a platform to secure some environmental infrastructure' in new developments, limitations arise based on the classification of vegetation under the Victorian Government's Native Vegetation Information Management Tool, combined with an attitude of offsetting in land management, rather than minimising or avoiding the disturbance of natural vegetation.¹⁷⁴ Similarly, Ms Hawes from Geelong Council stated that 'open space does not have primacy in the design process for new estates'.¹⁷⁵

Ms Hawes also noted that the Council has learnt from previous planning decisions that did not provide adequate, good quality open space.¹⁷⁶ This highlights another issue the Committee heard about from several stakeholders: the need to retrofit poorly planned developments to allow for environmental infrastructure. Mr Collins from Golden Plains Shire stated that disconnected and poorly planned subdivisions result in pressure on local governments to 'figure out how to connect these areas as the populations increase'.¹⁷⁷ Likewise, Bendigo Council highlighted in its submission that the retrofitting of established developments to meet modern standards and linking older areas can be problematic in its region as the connecting spaces include floodplains, contaminated land or otherwise encumbered space. The Council stated:

¹⁷¹ City of Greater Bendigo, *Submission 77*, p. 2.

¹⁷² Ms Marianne Richards, *Transcript of evidence*, p. 33.

¹⁷³ Mr David Collins, *Transcript of evidence*, p. 23.

¹⁷⁴ Greater Shepparton City Council, *Submission 86*, p. 4.

¹⁷⁵ Ms Sue Hawes, *Transcript of evidence*, p. 30.

¹⁷⁶ *Ibid.*, p. 33.

¹⁷⁷ Mr David Collins, *Transcript of evidence*, p. 23.

The cost of purchasing land in existing urban areas is often high as it is zoned residential, has existing development and usually requires the purchase of multiple sites to make necessary connections and have a functional size. For new growth areas, the current Victorian planning system is set up in a way that the minimum standard fulfils meaningful objectives for environmental protection and enhancement. Higher proportions of public open spaces, improved waterways, regard for existing flora and fauna are all mandated when planning new areas. Contrarily, little guidance for improvements to existing urban areas is provided with relatively few funding streams and opportunities available, especially for the provision of passive and informal recreation spaces.¹⁷⁸

Similarly, Mr Cheatley of Baw Baw Shire observed that good quality environmental infrastructure should be installed during development rather than afterwards, so as to avoid burdening councils and existing ratepayers with the cost of ensuring communities have appropriate access to environmental infrastructure.¹⁷⁹

As mentioned in Section 8.1.2, property developers play a key role in the adequate planning and effective delivery of open spaces and waterways. Ms Terry of Shepparton Council observed that developers seek to maximise profits, which can create conflict with the outcomes sought in council greening strategies. Ms Terry noted that the work required to monitor the actions of developers can be significant and that education and engagement with developers is important to achieve better community outcomes.¹⁸⁰ This approach was supported by Campaspe Council, Mildura Council and Moorabool Council.¹⁸¹

Shepparton Council outlined its role as a partner in the trial of the Sustainable Subdivisions Framework.¹⁸² According to the Council Alliance for a Sustainable Built Alliance (CASBE), the Sustainable Subdivisions Framework has a focus on environmental sustainability outcomes, is designed for regional communities and growth areas and ‘seeks to mitigate the impacts of a fundamentally changing climate to create subdivisions that can adapt to the changing climate’.¹⁸³ The framework is being trialled to ‘understand the impact of using the SSF [Sustainable Subdivisions Framework] for the assessment of subdivision applications’. In addition:

Through the trial councils will work collaboratively with the development community to understand how the Framework can support the delivery of long-lasting sustainable community developments ... From a council perspective the trial will be run through existing planning process utilising existing staff resources. The project aims to foster and recognise the important partnerships between engineering and planning departments within council in the subdivision process.¹⁸⁴

¹⁷⁸ City of Greater Bendigo, *Submission 77*, pp. 2–3. See also Planning Institute Australia (Vic), *Submission 244*, p. 8.

¹⁷⁹ Mr Will Cheatley, *Transcript of evidence*, p. 21.

¹⁸⁰ Ms Sharon Terry, *Transcript of evidence*, p. 8.

¹⁸¹ Mr Keith Oberin, *Transcript of evidence*, p. 9; Mildura Rural City Council, *Submission 144*, p. 5; Moorabool Shire Council, *Submission 185*, p. 2.

¹⁸² Greater Shepparton City Council, *Submission 86*, p. 4.

¹⁸³ Council Alliance for a Sustainable Built Environment (CASBE), *Introducing the Sustainable Subdivisions Framework*, <<https://www.casbe.org.au/what-we-do/sustainable-subdivisions>> accessed 18 October 2021.

¹⁸⁴ *Ibid.*

In addition to Shepparton Council, 30 councils are participating in the trial, including the councils of Ballarat, Bendigo, Geelong, Golden Plains, Mildura, Moorabool, Shepparton, Wangaratta and Wodonga. The trial is expected to end in March 2022.¹⁸⁵ The Committee looks forward to the outcomes of the trial.

CASE STUDY 8.1: *Mildura Riverfront Precinct*

Mildura Council presented the *Mildura Riverfront Precinct* as a good example of planning. The precinct is a 'key strip of land' that was developed into 'a series of interconnecting projects linking the CBD to the riverfront, through development of specific cultural, commercial, retail, residential, transport, tourism, and parkland components'.

Mildura Council explained the project took more than 10 years of planning and community consultation to develop 'innovative approaches and strong partnerships that aligned local, State and Federal Governments policy and priorities, to adopt a creative model, enabling design flexibility'.

Key learnings from the project include the finding that 'Complex projects take a significant amount of time to get right, design should not be rushed, with community an important consideration in the journey of developing the vision'.

Source: Mildura Rural City Council, *Submission 144*, received 28 September 2020, pp. 7–8

Regional Victorian councils made several recommendations to improve Victoria's planning legislation and framework, including better minimum standards for development in regional areas. Moorabool Shire, supported by Ballarat Council, stated in its submission that the provision of environmental infrastructure to support its growing population is dependent on the Council, the VPA and developers reaching an agreement. In its experience, stakeholders often apply planning provision standards differently, partly due to resistance from developers to apply standards that are specific to the area in which development is to occur.¹⁸⁶ Moorabool Shire submitted:

To the best of our knowledge, there is no legislation or formally adopted planning provisions at the state level (within government or an authority such as the VPA) that supports municipalities and their planning teams to develop their own standards, formally adopt them and make them binding to the degree that they could only be varied at their discretion.¹⁸⁷

Moorabool Shire noted its ability to resist pressure from developers to ensure favourable environmental infrastructure outcomes is ineffective without planning legislation that includes provisions specific to regional or peri-urban areas:

For example, as a peri-urban/regional Council which attracts residents for reasons such as lower density living and greater access to public space, it is not always relevant to

¹⁸⁵ Ibid.

¹⁸⁶ Moorabool Shire Council, *Submission 185*, p. 2; Ballarat City Council, *Submission 264*, p. 2.

¹⁸⁷ Moorabool Shire Council, *Submission 185*, p. 2.

apply the same provision standards for environmental infrastructure in our Council as those that are used in urban and more densely populated areas.¹⁸⁸

Moorabool Shire advocated for improvements to planning legislation to ensure planning standards are implemented that are enforceable, adequately manage population growth and plainly define the need by all stakeholders to plan growth and greenfield areas in a manner that is contextually relevant to the regional area.¹⁸⁹

Similarly, Baw Baw Shire submitted that there are limited opportunities to develop good quality open space in brownfield locations. This is exacerbated by a lack of open space standards, insufficient land in built-up areas to convert to open space and an increase in land market values prohibiting councils from acquiring land to invest in open space:

Often within resource constrained Council's [sic], the standard of infrastructure and open space assets is determined on a development-by-development basis within municipalities. This is often due to the lack of prescribed open space standards or the resources required to develop such standards. This development-by-development approach to open space assets can lead to significant discrepancies in the quality of open space, and becomes particularly dependent on the proposal of the development.¹⁹⁰

Baw Baw Shire advocated for state-wide minimum standards of open space to ensure consistent levels of liveability in growing municipalities. Local councils could then utilise this as a baseline and add complementary standards specific to the requirements of each municipality.¹⁹¹

Mr Gangell from Bendigo Council supported the introduction of minimum standards on the width of road reserves to support vegetation and tree growth.¹⁹² Similarly, Ms Natalie Robertson from Ballarat Council contended at a public hearing that Victoria's planning legislation should be stronger, more explicit and enforceable. While this can be controlled to a certain extent through local regulations, Ms Robertson suggested that state and local regulations should be more strongly aligned so that state policy adequately supports local policy, for example, through zoning or overlay provisions.¹⁹³

Ms Hawes informed the Committee that Geelong Council is currently undertaking a review of its open space policy within the context of the State's planning scheme. Ms Hawes stated that it would be 'advantageous' if the Victorian Government implemented state-wide definitions of key terms, such as encumbered and unencumbered open space and 'fit-for-purpose' open space. This would also ensure developers have clear guidelines to refer to.¹⁹⁴ Similarly, Ms Terry of Greater Shepparton

¹⁸⁸ Ibid., p. 3.

¹⁸⁹ Ibid., pp. 2–3.

¹⁹⁰ Baw Baw Shire, *Submission 199*, p. 2.

¹⁹¹ Ibid.

¹⁹² Mr Paul Gangell, *Transcript of evidence*, p. 21.

¹⁹³ Ms Natalie Robertson, *Transcript of evidence*, pp. 15–16.

¹⁹⁴ Ms Sue Hawes, *Transcript of evidence*, p. 29.

City Council recommended a review of the definition of native vegetation in the State's planning scheme to increase its value and allow for more 'innovative open native space'.¹⁹⁵ Bendigo Council also advocated for expanding 'the definitions and terms for public space to include in between spaces such as streetscapes, laneways and connections to allow holistic offerings for communities'.¹⁹⁶

Ms Hawes also recommended that the Victorian Government undertake a review of the VPA guidelines to address 'the appropriate level of contribution for land for recreation'. Ms Hawes noted the current guidelines are based on a formulation made 10 years ago and the recent Precinct Structure Planning Guidelines released for consultation did not include an updated figure.¹⁹⁷ Ms Hawes stated:

The VPA standards have fairly much been adopted across Victoria, even though they originally only applied to the growth areas. They are the sorts of standards which now everyone at least at a minimum is trying to achieve with regard to their open space ... I think over the years we have become a little bit more savvy in trying to be far more prescriptive in what is acceptable and not acceptable, but getting some definitions into the planning scheme would certainly help to assist us ... because we seem to have the same conversations over and over and over again with developers with regard to what is suitable as primary recreational open space versus just other types of open space.¹⁹⁸

Likewise, Mr Collins recommended that the Victorian Government may want to consider a 'code' to protect 'trunk' environmental infrastructure, (i.e., higher-level environmental infrastructure that is shared between multiple developments or across a catchment).¹⁹⁹ Examples include existing significant public parks, green corridors, open spaces and sporting facilities, as well as infrastructure like water treatment facilities, water catchments, and bicycle and walking tracks.²⁰⁰

The Committee considers, depending on the outcome of the trial, that the Sustainable Subdivisions Framework could consider how to implement planning mechanisms in regional Victoria that prioritise open space and native vegetation, plan open spaces in new developments consistently and holistically, and link open spaces between old and new developments.

The Committee notes the evidence that some of Victoria's regional and peri-urban councils face challenges in securing public open space due to the absence of applicable state-wide definitions in existing planning legislation and planning schemes. The Committee considers that the Government should investigate the feasibility of developing state-wide minimum standards in relation to the provision of open space in growing regional and peri-urban municipalities, which local councils could use as a baseline for the addition of complementary standards specific to their municipality.

¹⁹⁵ Ms Sharon Terry, *Transcript of evidence*, p. 8.

¹⁹⁶ City of Greater Bendigo, *Submission 77*, p. 6.

¹⁹⁷ Ms Sue Hawes, *Transcript of evidence*, pp. 29–30.

¹⁹⁸ *Ibid.*, p. 33.

¹⁹⁹ Mr David Collins, *Transcript of evidence*, p. 23.

²⁰⁰ See Brisbane City Council, *Local Government Infrastructure Plan (LGIP) 2016–2026*, 2021, <<https://www.brisbane.qld.gov.au/planning-and-building/planning-guidelines-and-tools/local-government-infrastructure-plan>> accessed 18 October 2021.

FINDING 41: Some of Victoria’s regional and peri-urban councils face challenges in securing public open space due to the absence of state-wide definitions in existing planning legislation and planning schemes, which in turn makes it difficult to tailor provisions specific to such areas.

RECOMMENDATION 51: That the Victorian Government review Victoria’s planning framework to define key terms and set explicit minimum standards in relation to the provision of open space for regional Victoria and peri-urban areas.

8.3.7 Land contamination

Bendigo Council raised the issue of its mining heritage and contaminated soil, either on or adjacent to public land. This creates the risk of exposure to contaminated soil by humans and flora and fauna, as well as ‘challenges for increasing the use of public land for recreational activities, including identification of highly contaminated properties, appropriate remediation methods, and ongoing maintenance and management’.²⁰¹ Identifying which land is contaminated and informing the community of the associated risks are particular challenges faced by Bendigo Council. The Council also noted that the community may feel frustrated when seemingly vacant land is not utilised.²⁰²

At a public hearing, Mr Gangell from Bendigo Council stated that there is a reluctance from the State Government to develop on contaminated land and to undertake a comprehensive risk assessment to understand the extent of the problem:

our perception of state government at the moment is that, while they are certainly supportive of looking at these parcels, there is a lack of available funding on their part to tackle that, to investigate how sites can be rehabilitated and opened up to the public ... which leads us to be quite reluctant in taking over any Crown land reserve at the moment unless it provides a real, clear benefit to the community.²⁰³

Bendigo Council recommended in its submission for funding to be provided to identify, investigate and remediate contaminated land, increased clarity on who is responsible for managing contaminated land, better coordination and cooperation between responsible agencies, land managers and owners, and increased communication with the public about the management of contaminated public land.²⁰⁴ Further to this, a register of contaminated land was suggested as a good starting point as currently there is no proactive way for Bendigo Council to identify which contaminated land they wish to utilise. Instead, projects arise from community pressure or planned works, and the community often does not understand the ‘lag time involved for council and DELWP to

²⁰¹ City of Greater Bendigo, *Submission 77*, p. 4.

²⁰² Ibid.; Mr Paul Gangell, *Transcript of evidence*, p. 19.

²⁰³ Mr Paul Gangell, *Transcript of evidence*, p. 22.

²⁰⁴ City of Greater Bendigo, *Submission 77*, p. 6.

resolve' contamination issues. Mr Gangell also stated that DELWP sometimes lacks the resources to investigate potential land contamination for one or more financial years.²⁰⁵

The Committee did not receive extensive evidence from other regions on this issue, apart from Ballarat Council, which stated that managing the delivery of infrastructure in particular growth areas can be challenging due to a range of issues, including land contamination.²⁰⁶ Despite this, the Committee recognises that there is potentially significant value in unlocking parcels of contaminated land and converting them into open space. This should be done holistically and based upon an initial assessment project aimed at identifying the extent of the issue in Victoria's regions and peri-urban areas. Given the significant potential for the rehabilitation of brownfield sites across the State for use as public open space, this work should be undertaken on a state-wide basis, including metropolitan Melbourne.

The Committee notes that the Environment Protection Authority Victoria (EPA) currently works with councils, through planning permits and land zoning, to protect the community from contamination risks and provides councils with advice on strategic land use decisions.²⁰⁷

Recent legislative changes (in force from 1 July 2021) have provided the EPA with increased powers in relation to the management of contaminated land and groundwater. The changes include:

- the use of notices to investigate, environment action notices, corporate redirection notices and site management orders to help the EPA ensure long-term management of contaminated land
- the introduction of a preliminary risk screen assessment by the EPA to assist planning authorities and provide a clearer process for appointing and maintaining environmental auditors.²⁰⁸

The Committee considers that the recently expanded powers of the EPA with respect to the management of Victoria's contaminated land means that it may be well placed to take a leading role in working with councils across the State to identify and assess the potential for rehabilitation of parcels of contaminated land for use as public open space.

There is significant potential for the rehabilitation of contaminated land for use as public open space across the State. The Environment Protection Authority Victoria could assume a central role in working with local councils to identify, assess and rehabilitate such land.

²⁰⁵ Mr Paul Gangell, *Transcript of evidence*, p. 23.

²⁰⁶ Ballarat City Council, *Submission 264*, p. 3.

²⁰⁷ Environment Protection Authority Victoria, *Our approach to managing contamination in Victoria*, 2021, <<https://www.epa.vic.gov.au/for-business/new-laws-and-your-business/manage-contaminated-land>> accessed 26 October 2021.

²⁰⁸ *Ibid.*

RECOMMENDATION 52: That the Victorian Government undertake the following in relation to contaminated land across Victoria:

1. undertake scoping work to identify and assess contaminated land;
2. explore potential projects to rehabilitate land for conversion to public open space;
3. assess the cost of those projects; and
4. if required, explore alternate funding mechanisms for the delivery of such projects.

8.3.8 Issues raised by peri-urban councils

Peri-urban councils attract strong population growth as they provide the benefits of convenience, proximity to the city and other regional centres, as well as a range of high-quality open spaces and recreation areas.²⁰⁹ Peri-urban councils also experience unique challenges, similar to those faced by interface councils, covered in Chapter 7.

Precinct Structure Plans (PSPs) are provided by the VPA and other planning authorities for suburbs in Melbourne's growth areas and greenfield areas throughout the state to facilitate urban growth.²¹⁰ Baw Baw Shire stated that most of its forecast population growth is expected to occur in Drouin and Warragul as a result of the PSPs for these townships.²¹¹ The Council stated that this growth is expected to bring a range of significant environmental and open space related challenges and noted that:

Whilst land is often set aside within larger 'green fields' development; infill 'brown fields' development, where cash in lieu of donating the physical open space is necessary, can lead to limited opportunities to provide for good quality parks and open space areas. This is exacerbated in broader built up areas where there is insufficient land available to do so. The continuing increase in the market value of land is making it cost prohibitive for many Council's [sic] to acquire land and invest in the development of quality parks and open space in existing residential areas.²¹²

This limits the accessibility of open space and the liveability of the area, and creates inequity in the quality of developments.²¹³ Similarly, Golden Plains Shire observed that:

The perception is that due to lots of open space in peri-urban, regional and rural areas, developers don't need to ensure open space is provided in new developments. If new environmental infrastructure isn't coming online, it puts increasing pressure on what already exists. Within Golden Plains Shire this pressure is coming from internal

²⁰⁹ Golden Plains Shire Council, *Submission 250*, p. 1; Moorabool Shire Council, *Submission 185*, p. 1; Baw Baw Shire, *Submission 199*, pp. 1-2.

²¹⁰ Victorian Planning Authority, *How do the PSP Guidelines support planning in regional Victoria?*, 2020, <<https://vpa.vic.gov.au/faq/how-do-the-ppg-guidelines-support-planning-in-regional-victoria>> accessed 18 October 2021.

²¹¹ Baw Baw Shire, *Submission 199*, p. 2.

²¹² Ibid.

²¹³ Ibid.

population growth and as a result of regional development sprawling closer. Further, if good quality, strategic and usable open space doesn't come as part of large scale developments, when will it?²¹⁴

Baw Baw Shire also raised the issue that PSP-driven development has resulted in some small towns in its municipality losing the 'small town feel' that attracts many residents:

Because of development accelerated by the PSP's, significant trees have been systematically lost from the urban landscape as a result of not having their importance considered in the existing PSPs (other than providing some general statements and guidelines that are proven not to be efficient). These significant trees within the urban landscape could have been protected/retained in order to contribute and add to the neighbourhood character of these townships, which is valued by the community.²¹⁵

Friends of Drouin's Trees noted a similar issue in its submission, stating:

Baw Baw Shire is one of Victoria's key areas for natural environment asset value. The key towns have precious pieces of bushland, remnant large trees, old trees planted at settlement, tree corridors on roadside reserves and many potential places to be preserved for public usage.

But housing development which is not responsive to the natural environment and seeks to impose houses on to a blank landscape means loss of these assets to the community now and for the future.²¹⁶

Friends of Drouin's Trees was also highly critical of PSPs in the Baw Baw region, stating they were implemented by the Victorian Government without adequate scrutiny and have allowed for 'rapid and unprecedented development at a rate that cannot be monitored', as well as a loss of significant trees and natural environments.²¹⁷ Baw Baw Shire also stated that PSPs have resulted in indexed land values that are not aligned with market values, leaving a shortfall that has to be funded by the Council. The projected costs associated with delivering infrastructure to meet community expectations also exceeds the allowances provided in PSPs and DCPs:

This poses a significant affordability risk for Council's that may have to fund the gap to provide adequate facilities, and in the absence of being able to fund these facilities and infrastructure it will likely result in delayed development of these spaces. This will result in significant segments of the community within these areas not having access to quality open space and sporting reserves for a number of years.²¹⁸

Baw Baw Shire advocated for a review of PSPs and DCPs to address land valuations and made several recommendations for future PSP developments to ensure that sporting reserves are fit-for-purpose.²¹⁹ Baw Baw Shire also recommended that the

²¹⁴ Golden Plains Shire Council, *Submission 250*, p. 1.

²¹⁵ Baw Baw Shire, *Submission 199*, p. 4.

²¹⁶ Friends of Drouin's Trees, *Submission 31*, received 7 September 2020, p. 3.

²¹⁷ *Ibid.*, pp. 1-2.

²¹⁸ Baw Baw Shire, *Submission 199*, p. 4.

²¹⁹ *Ibid.*, pp. 4-5.

State Government assist peri-urban councils to ‘cope and absorb [the] impacts of development ... to ensure good quality open space can be developed and renewed in the future’.²²⁰

The Committee understands that the VPA is currently developing ‘PSP 2.0’, which will place greater emphasis on the ‘early identification of opportunities and constraints in the precinct’, stakeholder engagement and place-based co-design. It will also develop a ‘unique identity and character for the PSP area, primarily through a Vision and Purpose Co-design workshop with council, agencies and landowners/developers’.²²¹ The VPA is also reviewing its PSP Guidelines, however it acknowledged that these ‘will need to be adapted for greenfield planning in peri-urban towns and regional Victoria’:

As part of the consultation process, the VPA is asking regional stakeholders how the principles and performance targets identified in the Guidelines can be adapted for regional settings ... Further work will be required to develop ‘Volume 2’ of the Guidelines to address planning for urban renewal, including renewal in established regional Victorian centres.²²²

PSP 2.0 and the Guidelines are expected to be implemented in 2021, with the VPA currently undertaking a pilot program in some outer Melbourne suburbs. The VPA states on its website that:

As part of this pilot program, the VPA is working with key councils, agency, landowner and industry stakeholders with an ‘onboarding’ program, focusing on the cultural changes needed to promote a solutions mindset required to achieve a streamlined PSP process and plan with a vision.²²³

The Committee considers that the concerns of peri-urban councils who gave evidence to the Inquiry could be considered by the Victorian Government and the VPA as part of the PSP review and through a possible extension of the current pilot program.

RECOMMENDATION 53: That the Victorian Government consider extending the Precinct Structure Plan (PSP) 2.0 pilot process to include one or more high growth areas of regional and peri-urban Victoria, with the aim of developing a more streamlined PSP process for these parts of the state.

8.4 Waterways

Rivers and waterways are an essential component of many regional ecosystems. The management of these environments is also vital for ensuring that people, flora and fauna have an adequate water supply, particularly in the context of growing

²²⁰ Ibid., p. 3.

²²¹ Victorian Planning Authority, *What are the key differences in the Precinct Structure Planning process under PSP 2.0?*, 2020, <<https://vpa.vic.gov.au/faq/psp-2-0-what-are-the-key-differences-in-the-precinct-structure-planning-process-under-2-0>> accessed 18 October 2021.

²²² Victorian Planning Authority, *How do the PSP Guidelines support planning in regional Victoria?*

²²³ Victorian Planning Authority, *PSP 2.0*, <<https://vpa.vic.gov.au/project/psp-2-0>> accessed 18 October 2021.

populations. In addition, climate change and the increased risk of drought or flooding means that the management of waterways is more important now than ever.

8.4.1 Key agencies and strategies

As DELWP outlined in its submission, it works with CMAs in Victoria's regions to plan, design and deliver waterway projects in local areas, including by 'protecting and revegetating waterway frontages, making rivers, lakes and wetlands more accessible to the community for recreation; and engaging local groups in citizen science activities'.²²⁴

CMAs work closely with the local community, particularly Landcare and Friends Groups, and provide financial incentives to private landowners or landholders to encourage them to change water management practices.²²⁵ Vic Catchments—a collaboration of Victoria's CMAs—outlined in its submission that CMAs are at 'the front-line of natural resource management' and work 'side-by-side with communities' to deliver projects that 'improve and protect our rivers, landscapes and wildlife corridors while supporting productivity from our land, water and biodiversity resources'.²²⁶

CMAs use the Integrated Catchment Management (ICM) framework to adopt a holistic approach 'for community, land, water and biodiversity planning and delivery'. ICM aligns with government policies, regional strategies and local government planning frameworks, captures the 'values and priorities of regional communities' and brings together 'partners from across a region to identify and respond to challenges that cannot be solved by one organisation or stakeholder alone':

ICM enables partners to collaborate on ideas and opportunities, to deliver on a range of benefits; leverage effort and resources; make informed decisions across 'silos' through trade-off discussions; and work towards a shared long-term vision.²²⁷

Each CMA develops a Regional Waterway Strategy, which aligns with the State waterway management framework and 'comprehensively outlines regional planning, action, targets and management arrangements for delivering an integrated set of waterway health projects'.²²⁸ Additionally, each CMA develops a Regional Catchment Strategy (RCS) as the 'primary planning framework for integrated water, land and biodiversity resources and are prepared at the regional scale',²²⁹ which applies an ICM approach.²³⁰ RCSs emphasise community engagement and are developed using a place-based systems approach in consultation with regional agencies, local government, non-government organisations, community groups and Traditional Owners.²³¹

²²⁴ Department of Environment, Land, Water and Planning, *Submission 254*, p. 23.

²²⁵ Mr Tony Baker, *Transcript of evidence*, p. 21.

²²⁶ Vic Catchments, *Submission 254A*, p. 1.

²²⁷ *Ibid.*, p. 2; Mr Tony Baker, *Transcript of evidence*, p. 21.

²²⁸ Department of Environment, Land, Water and Planning, *Submission 254*, p. 23.

²²⁹ *Ibid.*

²³⁰ Vic Catchments, *Submission 254A*, p. 2.

²³¹ *Ibid.*, pp. 2-3.

In addition, *Water for Victoria* is a Victorian Government strategy created to address the impacts of population growth and climate change on water systems. *Water for Victoria* involves 69 ‘actions’, many of which are relevant to regional Victoria, such as Action 3.3 (Invest in integrated catchment management), in relation to which *Water for Victoria* states:

19 regional projects have been delivered to strengthen integrated catchment management and deliver actions from *Our Catchments, Our Communities*. Further investment is supporting the development of regional catchment strategies and delivering the next round of stewardship projects across Victoria through continuing action of DELWP, Catchment Management Authorities (CMAs), sector partners, Traditional Owners and the community.²³²

In addition, Action 5.1 calls for the use of ‘diverse water sources to protect public spaces’, which is being advanced through the Integrated Water Management (IWM) program and forums.²³³ DELWP informed the Committee that over the past three years, 97 projects integrating IWM have been established. These include projects in Geelong, Warrnambool, Euroa, Warragul and Wangaratta. DELWP observed that the IWM program has provided strong support for local government and CMAs to identify projects and utilise water sensitive design principles, as well as resulting in improved community outcomes and better ‘water management, protection and creation of green infrastructure’.²³⁴

Ms Sharyon Peart, Chair, Vic Catchments, expressed the view that Victoria has a ‘terrific governance structure’ in terms of regulatory and functional arrangements.²³⁵ Ms Peart highlighted that:

All CMAs have fairly robust relationships with their local government partners ... we do involve our local government partners with our RCS development, which we are currently working through. I actually see that going forward that that relationship is strengthening because the RCS informs investment in each catchment region.²³⁶

However, Vic Catchments also emphasised that improvement can be made, stating that while RCSs have an important role to play as a ‘roadmap for securing environmental infrastructure at a regional level’, improvements to their implementation can be made as CMAs rely upon the contribution of other groups.²³⁷ This includes interrelations with local government and planning schemes. Vic Catchments provided the example of local councils and authorities not being obligated to align their planning decisions with RCSs. Vic Catchments expanded on this at a public hearing, stating that while RCSs can be useful, they are often not adequately embedded into local council planning schemes.²³⁸

²³² Department of Environment, Land, Water and Planning, *Water for Victoria: Action Status Report July 2021*, 2021, p. 3.

²³³ *Ibid.*, p. 7.

²³⁴ Department of Environment, Land, Water and Planning, *Submission 254*, p. 56.

²³⁵ Ms Sharyon Peart, Chair, Vic Catchments, public hearing, via videoconference, 27 April 2021, *Transcript of evidence*, p. 25.

²³⁶ *Ibid.*, p. 23.

²³⁷ Vic Catchments, *Submission 254A*, p. 3.

²³⁸ Mr Tony Baker, *Transcript of evidence*, p. 23.

Further, Mr Baker from Vic Catchments outlined that while improvements can be made, any changes would need to carefully consider the ‘separation of powers and conflicts of interest of different organisations,’ for example, by ‘recognising that water authorities have a commercial aspect to their business—they sell products—whereas CMAs are not-for-profit, environmentally focused’.²³⁹

Mr Collins from Golden Plains Shire also recognised the importance of successful collaboration between agencies at a public hearing, stating there are often multiple agencies involved in waterway and water management:

We might have ourselves and DELWP; we often have adjacent Parks Victoria land. The Corangamite Catchment Management Authority gets involved; in some cases Southern Rural Water gets involved where water takes play a part. Wathaurong, the Traditional Owners of our area, too have a large vested interest in water. So there are a number of key stakeholders, and water tends to be a tricky space to deal with.²⁴⁰

Mr Cheatley from Baw Baw Shire also provided evidence about the need to strengthen relationships between agencies for the ongoing maintenance of waterways, particularly concerning confusion around maintenance responsibilities.²⁴¹ While recognising that finding a solution may not be easy, Mr Collins proposed that having one central coordinating agency may improve relationships and improve residents’ experience of engaging with water authorities.²⁴²

The Committee acknowledges concerns raised by stakeholders regarding partnerships, collaboration and the management of Victoria’s waterways and that more can be done. The Committee understands that RCSs are currently under review and considers that this could be an appropriate forum to consider the concerns of Vic Catchments and local councils.

The Committee heard that community engagement is an important element of successful water system design and management. Vic Catchments made the point that CMAs’ engagement with the community can improve land and waterway management practices through education.²⁴³ In addition, *Water for Victoria’s* website states:

We are proud to be delivering Water for Victoria actions in collaboration with water corporations, catchment management authorities, the Victorian Environmental Water Holder, Traditional Owner groups, local government and community partners.

Our approach focuses on strengthening local relationships and putting community at the centre of decision making and the delivery of priority water projects for Victoria’s cities, towns and regions.²⁴⁴

²³⁹ Ibid., p. 25.

²⁴⁰ Mr David Collins, *Transcript of evidence*, p. 24.

²⁴¹ Mr Will Cheatley, *Transcript of evidence*, p. 25.

²⁴² Mr David Collins, *Transcript of evidence*, p. 24.

²⁴³ Vic Catchments, *Submission 254A*, p. 4.

²⁴⁴ Department of Environment, Land, Water and Planning, *Water for Victoria*, 2021, <<https://www.water.vic.gov.au/water-for-victoria>> accessed 18 October 2021.

Similarly, North Central CMA informed the Committee that it has several programs to support community engagement with waterways and environmental infrastructure, including the Waterwatch and River Detectives citizen science programs.²⁴⁵ River Detectives is a:

statewide education and citizen science program that aims to engage and inspire young people to become future stewards of the environment. The program provides access to professional learning opportunities for educators and volunteers, water science and macroinvertebrate monitoring kits, and an online platform for classroom resources and data capture ... The River Detectives program supports younger generations to become actively involved in caring for our precious waterways and promotes broader community engagement with our region's waterways.²⁴⁶

CASE STUDY 8.2: *RiverConnect*

Based in the Shepparton and Mooroopna communities, *RiverConnect* is a good example of community engagement, collaboration between agencies and a strategic approach to water management. *RiverConnect* is funded by Shepparton Council and Goulburn Broken CMA to deliver a 'multi-agency and whole-of-community approach' to managing the region's rivers and floodplains. The program is delivered in partnership with Parks Victoria, DELWP, the Department of Education and Training, Traditional Owners, Goulburn Valley Water, and environment and Landcare groups.

RiverConnect runs school and community education activities, educating residents and visitors on 'the local wildlife, waterways, wetlands, aquatic life, plants and the ecology of our rivers and floodplains'. The program also provides facilities and activities to enable community access to the river and undertakes river and wetland restoration, protection and enhancement. Vic Catchments outlined the mission of *RiverConnect* is to 'create a vibrant, more cohesive Greater Shepparton community through developing a strong sense of belonging and connection to our rivers' and Shepparton Council noted the increasing demand for the project highlights the desire of the community to continue to learn about and respect waterways and bushland areas.

Sources: RiverConnect, *About Us*, <<https://riverconnect.com.au/about>> accessed 18 October 2021; Greater Shepparton City Council, *Submission 86*, pp. 2, 5; Vic Catchments, *Submission 254A*, p. 2.

²⁴⁵ North Central CMA, *Submission 254C*, p. 1.

²⁴⁶ Ibid.

8.4.2 Changes in water patterns due to growing populations and climate change

The Committee heard that changes in water patterns have had a mixed impact in Victoria's regional areas. Biodiversity 2037 recognised that climate change is placing increasing pressure on the environment and causing 'changes to waterway flows, levels and regimes'.²⁴⁷ Further:

Marine and waterway environments are threatened by ongoing coastal development and infrastructure, runoff of excessive nutrients and sediments from catchments, high levels of water consumption, altered flow regimes, pollution and the introduction of existing and new marine pests.²⁴⁸

In addition, DELWP noted in its submission that:

Under climate change, the ecological condition of floodplains will continue to decline without intervention. By constructing environmental infrastructure to enable water delivery, environmental water can be diverted from the river to water high value wetlands and floodplains. This mimics natural flood events and improves the condition of vegetation communities and provides habitat for native fish, birds, frogs and turtles.²⁴⁹

Vic Catchments stated in its submission that a 'natural impact of population growth is the need to secure fit for purpose water supply', increasingly taken from waterways to supply rural and regional areas.²⁵⁰ Vic Catchments noted that:

While this is being addressed as part of Sustainable Water Strategies and the Victorian Water Grid, more work is required to make sure the water in our waterways is sufficient to sustain the environmental Infrastructure valued by the growing community. This will ensure ... that we continue to support resilient and liveable cities with social, economic, environmental and cultural benefits.²⁵¹

Similarly, Corangamite CMA—operating in the Geelong and Barwon region—submitted that urban development built adjacent to waterways creates additional threats due to increased run-off reducing water quality.²⁵² Friends of the Barwon submitted to the Committee that the rivers in its region pose an opportunity to build environmental infrastructure in 'transformative ways', however, the opportunities are 'under imminent threat from urban encroachments that are already gnawing at the skirts of our river corridors'.²⁵³ Similarly, North Central CMA noted that new subdivisions provide communities with the opportunity to connect with waterways, however, 'not all councils

²⁴⁷ Department of Environment, Land, Water and Planning, *Protecting Victoria's Environment - Biodiversity 2037*, p. 11.

²⁴⁸ *Ibid.*, p. 10.

²⁴⁹ Department of Environment, Land, Water and Planning, *Submission 254*, p. 31.

²⁵⁰ Vic Catchments, *Submission 254A*, p. 4.

²⁵¹ *Ibid.*

²⁵² Corangamite CMA, *Submission 254B*, p. 2.

²⁵³ Friends of the Barwon, *Submission 97*, received 25 September 2020, p. 3.

have a clear vision or the capacity to create and maintain new public reserves along waterways'.²⁵⁴

Shepparton Council stated in its submission that much of the urban population growth in its region is along remnant waterway natural areas or incorporates areas subject to flooding, which creates both positive and negative impacts:

Negative impacts are a result of the increase in interface between people and nature including increased cat and dog predation on local wildlife, a decline in fauna and flora species vulnerable to a change in human induced land use, conflict between unwanted fauna (snakes, lizards, corellas), increased illegal rubbish dumping, illegal camping and unauthorised destructive vehicle activity.

Some positive impacts include the opportunity to design new subdivisions that incorporate natural drainage lines into public open space with constructed wetlands for the treatment of stormwater. These areas provide large areas of open space with walking tracks, native landscaping and wetlands which benefit water birds, turtles, fish and other aquatic life. These areas are highly valued by most residents and provide easy access to passive outdoor recreation.²⁵⁵

As an example of good practice, Shepparton Council outlined its implementation of 'Water Sensitive Urban Design principles' over the past 15 years and construction of 15 wetlands that capture and treat stormwater. It stated that the sites 'use multiple sedimentation ponds to filter the heavy pollutants from stormwater and provides a beautiful space for passive recreational activities such as walking and cycling on their adjoining paths'.²⁵⁶

The Committee also heard from North Central CMA, a key partner in *Reimagining Bendigo Creek*, which the CMA described as a 'flagship project' managed by Bendigo Council with the aim of creating a 'healthier, more inclusive, more connected and more beautiful Creek that the greater Bendigo community will respect and value'.²⁵⁷ It aims to achieve this through several strategies, including by limiting 'the impact of climate change with water sensitive urban design and traditional ecological knowledge' and managing 'flood risk with appropriate infrastructure and landscape treatments'.²⁵⁸ In addition, the Bendigo Council and North Central CMA established a 'dedicated team' of citizen scientists who 'track and communicate the long-term ecological condition of the creek as it undergoes transformative changes over the coming years'.²⁵⁹

As the Committee found in its *Inquiry into Tackling Climate Change in Victorian Communities*, regional councils have already begun implementing a range of strategies to manage changes in water patterns due to growing populations and climate change.

²⁵⁴ North Central CMA, *Submission 254C*, p. 2.

²⁵⁵ Greater Shepparton City Council, *Submission 86*, p. 3.

²⁵⁶ *Ibid.*, p. 5.

²⁵⁷ North Central CMA, *Submission 254C*, pp. 1-2.

²⁵⁸ *Ibid.*, p. 2.

²⁵⁹ *Ibid.*, p. 1.

8.4.3 Planning and maintenance

Adequate planning is vital to ensure that Victoria's waterways are managed to address the impacts of growing populations and climate change.²⁶⁰ As North Central CMA stated:

Where subdivisions occur near waterways the North Central CMA regularly asks for a waterway reserve be created in favour of the relevant council, which allows environmental infrastructure to be preserved and promoted whilst also achieving appropriate waterway setbacks and reduced flood risk.

However, in locations where appropriate overlays are not present the opportunity to create waterway reserves can be missed. Which can lead to loss of potential open spaces for the community and to a reduction of or damage to environmental infrastructure due to encroachment and poor management of waterway corridors.²⁶¹

North Central CMA raised the issues of councils lacking a clear vision or the capacity to establish and maintain public open spaces along waterways; improperly planned interfaces between developments and waterways, resulting in underutilised and inaccessible spaces; and planning mechanisms that allow the development of new subdivisions too close to waterways, resulting in improper protection or development of environmental infrastructure.²⁶² Likewise, PIA Victoria highlighted in its submission:

While waterways are to be considered in open space strategies, waterways are not consistently recognised or protected through the planning schemes ... Planning for most waterways is very ad-hoc ... with little clarity about how responsibilities for delivering their varied benefits operate and a reluctance by many land managers to take on responsibility for management of these important corridors, in many cases due to funding concerns—this has and will continue to result in land in these corridors being retained in private rather than public ownership.²⁶³

Further, North Central CMA outlined that the process of changing planning mechanisms can be drawn out and face resistance from local government, communities and developers.²⁶⁴ North Central CMA stated in its submission:

developers undertaking subdivisions are continuously looking to avoid having to give up land to create waterway reserves or looking for ways to keeping them as small as possible ... While protection of environmental assets can be given a level of protection using planning controls (such as setbacks), there is no opportunity to provide public access to these waterway corridors. There are no planning controls to stop this and it could have consequences in the future by not allowing sections of waterways to be connected to one another for public access.²⁶⁵

²⁶⁰ Corangamite CMA, *Submission 254B*, p. 1.

²⁶¹ North Central CMA, *Submission 254C*, p. 3.

²⁶² *Ibid.*, pp. 2–3.

²⁶³ Planning Institute Australia (Vic), *Submission 244*, p. 8.

²⁶⁴ North Central CMA, *Submission 254C*, p. 3.

²⁶⁵ *Ibid.*, pp. 3–4.

North Central CMA stated that it regularly experiences pushback from developers against planning conditions aimed at ensuring an appropriate distance between developments and waterways as they pose a threat to the health of waterways and vegetation. North Central CMA also stated that historical planning decisions that resulted in reduced access to waterways and other environmental infrastructure have created a perceived ‘right’ among developers to do the same with new developments.²⁶⁶

Corangamite CMA outlined its management of the impact of population growth through the Barwon Rivers Parklands partnership, which applies an integrated and holistic approach to the planning of new developments.²⁶⁷ Corangamite CMA submitted that its region has experienced rapid development, including a 189% increase in planning applications from 2006/07 to 2019/20. It outlined that this increase has placed pressure on its Floodplain Management Team to meet minimum statutory planning timeframes, compounded by a need for specialised floodplain advice and increased complexity of planning applications for new developments.²⁶⁸

Ms Terry from Shepparton Council also discussed planning challenges during a public hearing. Ms Terry stated that the Council ascribes to water sensitive design principles, as do many councils, which includes specific water capture and management requirements for new developments. However, she also identified scope for improvements:

we need to really assess the suitability of those developments and look at dealing with the impacts that climate change will create on those existing structures and then how do we be a bit smart about how we design what we do in the future ... [The IWM forums are] going to be a really important conversation for that. And certainly developers do contribute to those open spaces or those community-owned assets that are part of those developments, and water retention, stormwater, is part of that.²⁶⁹

Maintenance of waterways was also an issue raised with the Committee. Mr Cheatley from Baw Baw Shire outlined Council’s process of inheriting the management of environmental infrastructure and open spaces built during the course of new development. This includes the management of natural environments and wetland areas, rather than traditional open spaces. For Baw Baw Shire, this is placing pressure on its ability to maintain the spaces to a high standard considering it may not necessarily have the expertise to maintain wetland areas.²⁷⁰ The ongoing management of floodplains, drainage systems and waterways is a particular issue in the Baw Baw region due to the large amounts of rainfall it receives,²⁷¹ which the Committee recognises may be exacerbated in the future due to climate change.

²⁶⁶ Ibid., p. 4.

²⁶⁷ Corangamite CMA, *Submission 254B*, p. 2.

²⁶⁸ Ibid., p. 1.

²⁶⁹ Ms Sharon Terry, *Transcript of evidence*, p. 7.

²⁷⁰ Mr Will Cheatley, *Transcript of evidence*, p. 28.

²⁷¹ Ibid., p. 30.

Vic Catchments submitted that in its experience, 'current development arrangements and decision making can often lead to decisions that allow cumulative impacts, where existing native vegetation, waterways, drainage lines, wetlands, and open space is gradually degraded by development pressures'. As part of a successful planning process, Vic Catchments recommends that native vegetation buffer zones be provided along waterways where possible and that large trees and remnant habitats on private and public land should be safeguarded to protect biodiversity and water quality, an approach supported through RCSs.²⁷²

Similarly, Mr Oberin from Campaspe Council noted that much of the vegetation in the region is located alongside watercourses and there are opportunities to increase the connectivity of open space corridors along waterways. Campaspe Council is currently undertaking work to provide open space links, for example, through the development of bridges and rail trails.²⁷³ Likewise, North Central CMA stated that it has applied Melbourne Water guidelines to the development of greenfield areas, intending to preserve waterway corridors and allow them to be used as open spaces and waterway reserves. While North Central CMA is using the Melbourne Water guidelines because it did not have its own, it is now working with Bendigo Council to develop waterway setback guidelines. If successful, North Central CMA will seek to implement the guidelines with other councils in its catchment area.²⁷⁴

The Committee considers that regional CMAs and councils should continue to protect water corridors, waterways and water reserves through their planning schemes and acknowledges that the Victorian Government is trying to address challenges in the provision and maintenance of waterways in Victoria's regions. As Biodiversity 2037 outlines:

Altered hydrological regimes and ongoing demands for water are placing increasing pressure on Victoria's marine and waterway ecosystems. Programs delivering environmental flows to priority waterways and managing specific threats to waterway ecosystems will continue as part of the government's *Water for Victoria* plan and the *Victorian Waterway Management Strategy*.²⁷⁵

Water for Victoria focuses on implementing a responsive and strong planning framework to manage the impact of climate change and population growth on Victoria's waterways. *Water for Victoria's* action status report outlines that work to simplify water regulation and management is ongoing.²⁷⁶ *Water for Victoria* also prioritises the development of sustainable water strategies (SWSs) for some of Victoria's regions. SWSs are 'regionally focused and identify and manage threats to the supply and quality of water resources ... and identify the potential to improve waterway health'.²⁷⁷ Four regions currently have SWSs, including the Central Region, Northern

²⁷² Vic Catchments, *Submission 254A*, p. 3.

²⁷³ Mr Keith Oberin, *Transcript of evidence*, p. 7.

²⁷⁴ North Central CMA, *Submission 254C*, p. 4.

²⁷⁵ Department of Environment, Land, Water and Planning, *Protecting Victoria's Environment - Biodiversity 2037*, p. 47.

²⁷⁶ Department of Environment, Land, Water and Planning, *Water for Victoria: Water Plan*, 2016, p. 10.

²⁷⁷ *Ibid.*, p. 130.

Region, Gippsland Region and Western Region.²⁷⁸ An SWS for Southern Victoria is currently being developed.²⁷⁹

Several suggestions for improvement were made by stakeholders. Corangamite CMA submitted that under the SWS in its region, more work is needed to ensure the remaining water in waterways can sufficiently sustain environmental infrastructure for growing communities.²⁸⁰ Vic Catchments suggested there ‘would be merit in exploring stronger links between planning schemes and RCSs’.²⁸¹ Similarly, Ballarat Council advocated for ‘stronger policy’ in growth areas ‘to ensure a more efficient planning and delivery of stormwater collection, treatment and reuse’, particularly given that while the ‘Council can strive for best practice solutions, this will require significant investment and funding’.²⁸²

The Committee understands that SWSs are to be reviewed at least every 10 years and assessments undertaken every five years. Some of these have been undertaken recently.²⁸³ Given the feedback from Inquiry stakeholders, the Victorian Government may wish to consider the specific concerns raised by regional councils when next reviewing the *Water for Victoria* and SWS frameworks.

RECOMMENDATION 54: That the Victorian Government consider the specific concerns raised by regional councils regarding the establishment and maintenance of public open space along regional waterways when it next reviews the *Water for Victoria* and regional Sustainable Water Strategies frameworks.

²⁷⁸ Department of Environment, Land, Water and Planning, *Sustainable water strategies*, 2021, <<https://www.water.vic.gov.au/planning/long-term-assessments-and-strategies/sws>> accessed 18 October 2021.

²⁷⁹ Ibid.

²⁸⁰ Corangamite CMA, *Submission 254B*, p. 2.

²⁸¹ Vic Catchments, *Submission 254A*, p. 3.

²⁸² Ballarat City Council, *Submission 264*, p. 4.

²⁸³ Department of Environment, Land, Water and Planning, *Sustainable water strategies*.

9 Melbourne's waterways and wetlands

9.1 Melbourne's creeks and rivers

Melbourne's waterways are a fundamental element of urban environmental infrastructure and vital to its status as one of the world's most liveable cities. This was apparent in evidence heard by the Committee throughout the Inquiry. As Melbourne Water submitted:

The water industry makes a fundamental contribution to the liveability of our cities and regions through the delivery of essential water and sewerage services. Water will be vital to transforming our cities and regions into cooler, greener and more liveable places. The water industry has an opportunity to build on it's [sic] existing contribution, to also deliver liveability outcomes and contribute to blue-green infrastructure, maximising the value from water and sewerage assets.¹

Waterways, creeks and rivers fulfil several functions in Melbourne, including providing: habitats for local wildlife; respite, relaxation and connection to nature for residents; drainage, stormwater and flood management; sewerage management and water treatment; a reliable water supply; contributing to greener, cooler cities and liveable urban environments; and potentially increasing property values.²

This section provides an overview of the key strategies and stakeholders in the management of Melbourne's waterways and discusses the challenges and opportunities on the topics of conservation, public recreation, management of waterways and waterway restoration.

9.2 Key strategies and stakeholders

The Department of Environment, Land, Water and Planning (DELWP) delivers the Victorian Waterway Management Program and the Victorian Waterway Management Strategy, which provide the state-wide waterway management policy framework. As discussed in Chapter 8, DELWP is also responsible for *Water for Victoria*, the key Victorian Government strategy for addressing the effects of population growth and climate change on waterways. DELWP is also a partner in several waterway projects in Melbourne, including *Greening the West*, *Greening the Pipeline*, *Waterways of the West* and the *Yarra River Action Plan*, discussed in Chapter 4.

1 Melbourne Water, *Submission 254D*, received 6 November 2020, p. 2.

2 Friends of Merri Creek, *Submission 221*, received 30 September 2020, p. 8; Merri Creek Management Committee, *Submission 176*, received 28 September 2020, p. 3; Melbourne Water, *Submission 254D*, p. 2.

Melbourne Water is the key water authority in Melbourne that contributes to the planning, designing and delivery of water restoration projects in Melbourne. Melbourne Water is required to develop a Regional Waterway Strategy, which aligns with the state-wide water policy framework and 'outlines regional planning, action, targets and management arrangements for delivering an integrated set of waterway health projects'.³ Melbourne Water has also developed the *Healthy Waterways Strategy 2018-28* (the Strategy) to meet this requirement. The Strategy was developed through a collaborative co-design approach with over 220 organisations in Melbourne.⁴ Importantly, the Strategy highlights a shift from an isolated, project-based approach to waterway management to one that considers water systems holistically and delivers integrated community outcomes.⁵ Representatives from Melbourne Water emphasised at a public hearing that a key focus for the agency is the liveability of Melbourne and residents' connection to nature.⁶

Chapter 8 of this report discusses the importance of volunteer groups in managing environmental infrastructure, and advocating for the enhancement and protection of land and waterways in regional Victoria. Volunteer groups play a similarly crucial role in Melbourne, as is clear in the evidence provided to the Committee from a number of friends of and volunteer groups, highlighting their essential role in enhancing waterways. For example, Friends of Merri Creek (FOMC) provided details of its community activities, which include weeding and ecological restoration, water quality monitoring and public walks. It also advocates for wetland restoration and water quality improvements, and engages in planning processes to protect the Merri Creek corridor from development.⁷

The chapter also examines Victoria's Integrated Water Management (IWM) framework and forums, a collaborative approach to protecting urban waterways and sharing management responsibilities across a range of organisations with 'intersecting responsibilities'.⁸ The City of Melbourne stated in its submission that its *Municipal Integrated Water Management Plan 2017* uses a strategic IWM approach to coordinate 'management of all components of the water cycle including water consumption, rainwater, stormwater, wastewater and groundwater, to secure a range of benefits for the wider catchment'.⁹ Similarly, VicWater outlined in its submission that IWM initiatives have allowed the water industry to be more proactive about delivering environmental infrastructure and contributing to liveability, as well as allowing local government and water corporations to promote integrated environmental infrastructure planning.¹⁰

³ Department of Environment, Land, Water and Planning, *Submission 254*, received 6 November 2020, p. 23.

⁴ Melbourne Water, *Submission 254D*, p. 15.

⁵ *Ibid.*, p. 18.

⁶ Mr Gavan O'Neill, General Manager, Customer and Strategy, Melbourne Water, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, p. 22; Mr Greg Bain, Manager, Community Engagement, Melbourne Water, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, p. 23.

⁷ Friends of Merri Creek, *Submission 221*, p. 1. See also Friends of Damper Creek Reserve, *Submission 4*, received 17 August 2020; Friends of Scotchmans Creek and Valley Reserve Inc., *Submission 36*, received 11 September 2020; Friends of Steele Creek, *Submission 158*, received 28 September 2020.

⁸ Department of Environment, Land, Water and Planning, *Submission 254*, p. 24.

⁹ City of Melbourne, *Submission 186*, received 28 September 2020, p. 9.

¹⁰ VicWater, *Submission 243*, received 14 October 2020, pp. 1-2.

Mr Greg Bain, Manager, Community Engagement at Melbourne Water, and Ms Karen Lau, Executive Director, Catchments, Waterways, Cities and Towns Division at DELWP, also spoke about IWM at a public hearing, with Mr Bain emphasising that IWM and IWM forums are critical to achieving better outcomes for the community and waterways.¹¹ Ms Lau noted the vital role DELWP plays in applying 'integrated land and water planning to really enhance the role that rivers, creeks and wetlands play in the health and wellbeing of metropolitan populations'.¹² DELWP also uses IWM to match water supply and water demand through increased 'access to recycled water and stormwater to irrigate open space for urban greening and urban cooling'.¹³

Melbourne Water reflected on the IWM framework and forum in its submission, outlining that it is 'critical to Melbourne's long-term resilience and water security, with the potential to deliver long-term benefits by further diversifying water sources and effectively increasing water system capacity to meet the needs of the growing population'.¹⁴ However, Melbourne Water noted:

Realising the potential benefits of IWM would be accelerated by enhanced clarity about roles and responsibilities between the different levels of government, service delivery agencies, and other stakeholders; a mature fit for purpose investment framework; and a target (for example a volumetric, catchment or place based target) could also catalyse the level of investment needed to make IWM business as usual practice, and deliver the resilience benefits of diversified water resources.¹⁵

Mr Gavan O'Neill, General Manager, Customer and Strategy at Melbourne Water, expanded on this point at a public hearing, stating that while IWM forums have been an effective mechanism for ensuring stakeholders with a vested interest are 'at the table':

anything that can be done to clarify any particular agency's role in this space, particularly because it is new and emerging, would be really valued ... The more clarity that you can bring around what a particular organisation's role is, the more likely they are to lean in to that accountability and then invest with confidence around it.¹⁶

Mr O'Neill further advocated for increased funding that adequately recognises the importance of IWM and goes beyond financial costs to also consider broader social benefits and enable organisations to invest with more certainty.¹⁷ In addition, VicWater's submission quoted the view of the Water Services Association of Australia that:

Currently there are significant impediments to realising the liveability benefits of urban water investments ... While planning for green and blue infrastructure can start to unlock improved liveability outcomes, there are currently no clear pathways to deliver and fund these initiatives. There are opportunistic case studies that can show the way, however

¹¹ Mr Greg Bain, *Transcript of evidence*, p. 25.

¹² Ms Karen Lau, Executive Director, Catchments, Waterways, Cities and Towns, Department of Environment, Land, Water and Planning, public hearing, via videoconference, 12 May 2021, *Transcript of evidence*, p. 25.

¹³ Ibid.

¹⁴ Melbourne Water, *Submission 254D*, p. 4.

¹⁵ Ibid.

¹⁶ Mr Gavan O'Neill, *Transcript of evidence*, p. 26.

¹⁷ Ibid.

there are no systemic pathways from a policy or regulatory point of view that enable this approach consistently.¹⁸

VicWater suggested in its submission that increased funding should be allocated to fully realise the multiple benefits of environmental infrastructure.¹⁹ Similarly, the City of Melbourne recommended that funding should be provided to support projects that 'enhance water security'.²⁰ Ms Fiona Finlayson, Team Leader, Open Space Planning at the City of Melbourne, expanded upon this at a public hearing, outlining that current state funding mechanisms for open spaces in renewal areas and new developments are not adequate to address 'the substantial cost and complexity of securing land', including based on issues like contamination, stormwater management and 'water-sensitive integrated water management requirements'.²¹ In addition, Ms Kate Jewell, Coordinator, City Strategy and Place Planning, Glen Eira City Council, highlighted at a public hearing that the municipality needs to reprioritise and improve its stormwater management and use of water-sensitive design principles.²² Stormwater management is discussed further in Section 9.4.

RECOMMENDATION 55: That the Victorian Government consider how it can improve the Integrated Water Management framework through increased clarity on roles and responsibilities, funding and the introduction of targets.

9.3 Multiple uses of waterways: conservation and public recreation

The Committee heard from numerous stakeholders about the importance of conserving Melbourne's waterways as a key component of a network of open spaces, including from Merri Creek Management Committee (MCMC), Friends of Damper Creek Reserve, Friends of Scotchmans Creek and Valley Reserve (FOSCVR) and Melbourne Water.²³ As Melbourne Water identified:

Our rivers, creeks, wetlands, floodplains, estuaries and bays are shared places of significance for Victoria's economic prosperity, Traditional Owners, local communities and biodiversity ... Our waterways connect communities of plants and animals; provide amenity to urban and rural areas, and engage communities with their environment; and are managed sustainably to enhance environmental, economic, social and cultural values.²⁴

¹⁸ VicWater, *Submission 243*, p. 2.

¹⁹ *Ibid.*, p. 3.

²⁰ City of Melbourne, *Submission 186*, p. 14.

²¹ Ms Fiona Finlayson, Team Leader, Open Space Planning, City of Melbourne, public hearing, via videoconference, 22 March 2021, *Transcript of evidence*, p. 4.

²² Ms Kate Jewell, Coordinator, City Strategy and Place Planning, Glen Eira City Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, p. 21.

²³ Merri Creek Management Committee, *Submission 176*, p. 3; Friends of Damper Creek Reserve, *Submission 4*, p. 2; Friends of Scotchmans Creek and Valley Reserve Inc., *Submission 36*, p. 2; Melbourne Water, *Submission 254D*, p. 4.

²⁴ Melbourne Water, *Submission 254D*, p. 4.

Waterways need to be protected from human uses and other risks, including erosion and downstream turbidity. As FOMC stated:

Waterways should be an attractive and valued asset to an urban area, but there are real risks that erosion of both natural and constructed waterways in new suburbs with dispersive soils will lead to the adoption of 'hard engineering' treatments such as pipes and sealed channels, and soil conditions will prevent the establishment of riparian vegetation in accordance with Melbourne Water's guidelines for waterway corridors in greenfield development areas.²⁵

Further, FOSCVR stated that the COVID-19 pandemic resulted in an 'observable increase in damage to vegetation and soft pathways from foot and bike traffic', indicating that public open spaces are currently at their 'sustainable limits' and need to be increased, as well as 'efforts to upgrade management supported'.²⁶

The rivers and creeks of Melbourne are also used by residents for public recreation purposes and to meet their physical and mental wellbeing needs. Stakeholders highlighted the need for additional public parkland, particularly along waterways, in urban areas due to the diminishing size of private outdoor spaces, high-density living environments and increased urban development.²⁷ The COVID-19 pandemic has resulted in a surge in demand for access to water corridors. For example, the Merri Creek Parklands have been used throughout the pandemic as a 'place for exercise, recreation, respite from indoors and contact with nature'.²⁸ Melbourne Water's submission also illustrated that the number of people cycling on waterway trails increased during the pandemic.²⁹

The balance between public recreation and other waterway uses needs to be actively managed. As FOMC outlined:

Increased use of urban parkland areas has identified pressure points in recent times. Design and on-ground measures are needed to facilitate successful co-existence of fragile ecosystems with passive and active recreation. The same spaces should not be expected to meet both conservation and community recreational needs.³⁰

Issues raised by stakeholders included ensuring off-lead dog areas adequately protect local wildlife; ensuring paths and trails are wide enough and up to standard; providing access points to creeks; providing adequate space for bush kinders and other nature play for children; and revegetation processes to manage the impacts of additional uses.³¹

²⁵ Friends of Merri Creek, *Submission 221*, p. 9.

²⁶ Friends of Scotchmans Creek and Valley Reserve Inc., *Submission 36*, p. 2.

²⁷ Friends of Merri Creek, *Submission 221*, p. 10; Friends of Scotchmans Creek and Valley Reserve Inc., *Submission 36*, pp. 1-2; Melbourne Water, *Submission 254D*, p. 5.

²⁸ Merri Creek Management Committee, *Submission 176*, p. 6. See also Friends of Merri Creek, *Submission 221*, p. 8; Melbourne Water, *Submission 254D*, p. 5; Friends of Scotchmans Creek and Valley Reserve Inc., *Submission 36*, p. 4.

²⁹ Melbourne Water, *Submission 254D*, p. 5.

³⁰ Friends of Merri Creek, *Submission 221*, p. 10.

³¹ Merri Creek Management Committee, *Submission 176*, p. 6; Friends of Merri Creek, *Submission 221*, p. 10.

The Committee heard that existing planning mechanisms can be used to adequately conserve and protect waterways but that there is a need to apply such protections more widely across Melbourne. FOMC submitted:

Securing the multiple values of waterway corridors in suburbs undergoing redevelopment requires strong Planning Scheme protection from encroaching, environmentally degrading, visually dominant or intrusive redevelopment. Such controls, including height and setback limits, have been introduced and recently made permanent along the Yarra River, but need to be extended to the Yarra tributaries including Merri and Darebin Creeks, as well as other urban waterways which are subject to similar development pressures.³²

Similarly, MCMC highlighted that the planning of environmental infrastructure should consider the multiple needs of people and nature when utilising existing waterways and natural wetlands: 'It should not be assumed that meeting the minimum requirements for flood protection, stormwater treatment and waterway health will meet these wider needs'.³³ MCMC recommended that 'Waterway corridors should be of a sufficient width to provide well-functioning and resilient open space networks for people and nature'.³⁴

As Melbourne Water identified, the challenge of balancing multiple uses of waterways and water corridors highlights the importance of planning and integrated land use frameworks.³⁵ FOMC outlined in its submission several recommendations aimed at facilitating the better balancing of waterway uses, including by using strategic open space planning in Melbourne to identify gaps and ways to increase connection with nature, particularly in high-density areas. FOMC also recommended initiating 'a program supporting site-specific measures to resolve conflicts between uses and values of environmental infrastructure'.³⁶

Melbourne Water identified that planning can constrain the ability to align and connect waterways and blue-green infrastructure. While IWM forums have enabled progress, Melbourne Water outlined 'Strategic planning for blue-green infrastructure needs to be better integrated early into the land use planning process' to enable a better understanding of the multiple benefits of waterways and to clarify the roles and responsibilities of waterway management. Melbourne Water noted that it has partnered with DELWP to establish a blue-green corridor plan for Melbourne which could also involve input from other stakeholders.³⁷ Similarly, the Metropolitan Development Advisory Panel (MDAP) suggested that waterway outcomes could be enhanced with additional guidance provided by the Victorian Government on how to protect waterways, consistent across all local government jurisdictions.³⁸

³² Friends of Merri Creek, *Submission 221*, p. 9.

³³ Merri Creek Management Committee, *Submission 176*, p. 3.

³⁴ Ibid.

³⁵ Melbourne Water, *Submission 254D*, p. 5.

³⁶ Friends of Merri Creek, *Submission 221*, p. 11.

³⁷ Melbourne Water, *Submission 254D*, pp. 2-3.

³⁸ Metropolitan Development Advisory Panel (MDAP), *Submission 255*, received 13 November 2020, p. 3.

MDAP referred to the Yarra River Action Plan as an example of the standard that could be applied to other local government areas to achieve better waterway outcomes through the provision of additional guidance from the Victorian Government.³⁹ As the Committee discussed in Chapter 4, the Yarra River Action Plan and the Yarra Strategic Plan represent a notable example of the management and protection of waterways. The Plan, which aims to provide an integrated approach to the management of the river corridor, was developed in partnership with Traditional Owners, and 15 state and local government agencies.⁴⁰ The Committee is mindful, however, that the process that resulted in the Yarra River Action Plan and the Yarra Strategic Plan may not be transferable throughout Victoria and considers that future guidance on local waterway management should be tailored according to local conditions and engagement processes.

RECOMMENDATION 56: That the Victorian Government work with local government and relevant agencies to provide additional guidance on local waterway management.

9.4 Managing waterways

Stakeholders identified several challenges associated with the management of waterways in Melbourne. Firstly, managing the impacts of stormwater run-off was identified as a challenge as increased population density and hard-surface coverage burdens drainage systems and watercourses, resulting in rapid rain run-off and contributing to erosion and flooding.⁴¹ As Melbourne Water stated:

Increased urban development also presents challenges to waterways as catchment imperviousness and drainage infrastructure expand—it is predicted the region will be 59% more impervious within the next 50 years—increasing stormwater volumes and intensity.⁴²

Dr Bruce Lindsay, Senior Lawyer, Environmental Justice Australia, spoke about stormwater management at a public hearing, outlining that reforming stormwater management is key to facilitating improvements in urban environments. This is due to urban stormwater systems essentially inverting natural hydrology and ecosystem dynamics: after rain events, water drains rapidly into streams, the volume and timing of which can degrade and pollute water, instead of rain slowly entering streams and replenishing vegetation.⁴³

³⁹ Ibid.

⁴⁰ Melbourne Water, *Yarra Strategic Plan*, 2021, <<https://www.melbournewater.com.au/about/strategies-and-reports/yarra-strategic-plan>> accessed 29 July 2021.

⁴¹ Friends of Damper Creek Reserve, *Submission 4*, p. 2; Friends of Scotchmans Creek and Valley Reserve Inc., *Submission 36*, p. 2.

⁴² Melbourne Water, *Submission 254D*, p. 4.

⁴³ Dr Bruce Lindsay, Senior Lawyer, Environmental Justice Australia, public hearing, via videoconference, 20 April 2021, *Transcript of evidence*, p. 28.

FOMC also highlighted that waste and pollution, particularly from contaminants in stormwater (for example, litter that washes down street drains to waterways) damages the overall health of waterways. FOMC advocated for a commitment from all levels of government to tackle waste and pollution and for the introduction of waste and litter prevention strategies to be expedited.⁴⁴ In addition, FOMC explained in its submission that significant rain events over recent years have contributed to a decline in water quality in Merri Creek due to 'high levels of suspended sediment and turbidity', exacerbated by urban development.⁴⁵

Friends of Damper Creek Reserve suggested the 'conversion of stormwater drainage systems to favour recharge of groundwater', water retention features to control stormwater inputs and 'individual stormwater inflow points ... via rain gardens to slow storm water ingress', rather than concrete drains that exacerbate downstream flooding.⁴⁶ Similarly, FOSCVR advocated for increased efforts to mitigate rapid stormwater run-off through water retention facilities that slow water flow into rivers and reduce 'impermeable surface coverage in private dwellings, and industrial/commercial developments'.⁴⁷ It suggested that this could be better facilitated through the 'strategic implementation of water sensitive urban design principles' and adoption of new technologies.⁴⁸

Dr Lindsay also argued at a public hearing that better regulation and policy is required:

Healthy streams are essential to beneficial environmental infrastructure. Healthy streams in growth communities cannot be achieved without setting higher planning and infrastructure standards that effectively avoid urban run-off flowing into streams, retaining it or enabling its subsurface infiltration ... If communities and industry can get on top of the stormwater problem, then not only will we have healthier urban waterways but we will likely capture larger volumes of water that can reduce pressures on an already overtaxed water supply system.⁴⁹

Dr Lindsay explained that amendments to the *Environment Protection Act 2017 (Vic)*, which came into effect in 2021, posed an obligation on a range of actors 'to effectively treat stormwater as a source of pollution and harm, environmentally and to human health'.⁵⁰ Dr Lindsay expressed the view that this amendment will be 'quite important' in driving better waterway outcomes.⁵¹ The Environment Protection Authority released guidance in July 2021 based on these amendments to improve the management outcomes of urban stormwater in Victoria.⁵² Dr Lindsay also spoke about the need to

⁴⁴ Friends of Merri Creek, *Submission 221*, p. 13.

⁴⁵ *Ibid.*, p. 9.

⁴⁶ Friends of Damper Creek Reserve, *Submission 4*, p. 2.

⁴⁷ Friends of Scotchmans Creek and Valley Reserve Inc., *Submission 36*, p. 3.

⁴⁸ *Ibid.*

⁴⁹ Dr Bruce Lindsay, *Transcript of evidence*, p. 28.

⁵⁰ *Ibid.*, p. 29.

⁵¹ *Ibid.*

⁵² Environment Protection Authority Victoria, *Urban stormwater management guidance*, 2021, <<https://www.epa.vic.gov.au/for-business/find-a-topic/prevent-water-pollution/urban-stormwater-management-guidance>> accessed 22 October 2021.

address the fragmentation of roles in managing stormwater systems and to apply a holistic ecological and hydrological approach to managing stormwater to achieve better outcomes.⁵³

VicWater stated in its submission that one of the key roles of the water industry is to harvest stormwater in collaboration with local government.⁵⁴ The Committee received evidence on some of the different solutions that are currently being implemented. For example, the City of Darebin outlined in its submission that the City of Kingston created a developer contributions scheme, the first of its kind in Victoria, to encourage developers to comply with stormwater management requirements in the planning framework through voluntary contributions. The scheme provided the City of Kingston with funding to construct stormwater infrastructure that met water sensitive urban design principles. The City of Kingston won the Stormwater Victoria award for Excellence in Policy and Education in 2018 for the initiative.⁵⁵ Mr Brett Walters, Director, Strategy and Planning, City of Moonee Valley, spoke about a similar initiative at a public hearing, introduced in 2019 to assist with the financing of 'sustainable water capture, treatment, storage and re-use'.⁵⁶ The City of Moonee Valley introduced a 'water-sensitive urban design voluntary contribution scheme for development applications to meet their onsite stormwater quality obligations'.⁵⁷

Similarly, Melbourne Water's *Healthy Waterways Strategy* sets 'ambitious stormwater targets' that will require 'extensive stormwater solutions that can manage flows as well as water quality'.⁵⁸ Melbourne Water has recognised that attempting to address stormwater challenges, as well as the pressures of climate change and urbanisation, 'is both challenging and urgent due to the pace and scale of growth, the complexity of the technical solutions involved, and the significant planning already underway (including waterway corridor planning, precinct structure plans and development services schemes)'.⁵⁹ Mr Adrian Gray, Manager, Urban Design, Brimbank City Council, also spoke about a solution being implemented within the LGA, funded by Melbourne Water, City West Water and DELWP. The 'oasis projects' and 'oasis parks' initiatives involve retrofitting parks to capture and use stormwater to irrigate parks and sports fields.⁶⁰ Mr Gray explained:

we trap stormwater—all parks generally have stormwater running underneath them or near them—and getting that stormwater out of the drains and into the park network and treated and stored and used for irrigation, not only in the sporting area but the passive area, supports that uplift in utilisation from our perspective.⁶¹

⁵³ Dr Bruce Lindsay, *Transcript of evidence*, pp. 29–30.

⁵⁴ VicWater, *Submission 243*, p. 1.

⁵⁵ Darebin City Council, *Submission 233*, received 5 October 2020, p. 16.

⁵⁶ Mr Brett Walters, Director, Strategy and Planning, Moonee Valley City Council, public hearing, via videoconference, 22 March 2021, *Transcript of evidence*, p. 14.

⁵⁷ *Ibid.*

⁵⁸ Melbourne Water, *Submission 254D*, p. 5.

⁵⁹ *Ibid.*

⁶⁰ Mr Adrian Gray, Manager, Urban Design, Brimbank City Council, public hearing, via videoconference, 25 March 2021, *Transcript of evidence*, pp. 2–3.

⁶¹ *Ibid.*, p. 10.

The Committee commends Melbourne Water and local councils that have begun addressing these challenges.

Melbourne Water identified the additional challenges of balancing the management of water supply with other water uses, and managing changes in irrigation and water demand. Melbourne Water noted that the water supply in Melbourne is 'largely dependent on catchment inflows', assets that are 'subject to significant and increasing risks associated with, for example, urbanisation (including pollution), bushfire, unauthorised access and pests'.⁶² In addition, Melbourne's water supply needs to be balanced with changes in recreational water uses:

Any change / increase in recreational use of these areas must be based on robust decision making. This decision making must adequately and appropriately consider both the direct and cumulative impacts of land use change on water quality and quantity, as well as the subsequent impact on affordability from increased water treatment or the risk of replacing of lost yield.⁶³

Melbourne Water is anticipating a reduced demand for water in the short-term due to the COVID-19 pandemic, but stated that long-term demand is expected to increase.⁶⁴ Additional problems to be considered at a broad scale to 'understand how to adapt and strengthen the water sector' include water affordability and community expectations of water services.⁶⁵ Melbourne Water advocated for an 'adaptive planning approach, with regular updating of outlooks and investment plans to reflect the most up to date information', to provide 'a strong platform for prudent and efficient investment aligned to customer needs'.⁶⁶

Further, Melbourne Water highlighted that a rise in irrigation may be required in the future to maintain vegetation in Melbourne, due to climate change reducing the availability of water and an increased aggregate amount of vegetation as the city expands and introduces new green spaces.⁶⁷ Melbourne Water has undertaken scenario planning on potential alterations to water demand based on these factors, which indicate that Melbourne's 'greening demands could potentially double by 2050'.⁶⁸ Melbourne Water stated in its submission that:

This highlights the continued need for water planning and strategies to be adaptable to a wide range of potential futures (including climate change and population growth), and to take account of the broader interactions that will impact and change future water demands.⁶⁹

⁶² Melbourne Water, *Submission 254D*, p. 3.

⁶³ Ibid.

⁶⁴ Ibid.; Mr Greg Bain, *Transcript of evidence*, p. 23.

⁶⁵ Melbourne Water, *Submission 254D*, p. 3.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Ibid., p. 4.

Melbourne Water identified IWM as 'critical to Melbourne's long-term resilience and water security, with the potential to deliver long-term benefits by further diversifying water sources and effectively increasing water system capacity to meet the needs of the growing population'.⁷⁰

FINDING 42: Melbourne's local councils, in collaboration with Melbourne Water, are adopting increasingly innovative approaches to the capture of stormwater to enhance parks and open spaces. These efforts will also be crucial to ensuring Melbourne's long-term water security.

9.5 Restoring waterways

The importance of restoring existing waterways to ensure they can be enjoyed by the community was addressed in a submission from FOSCVR, which argued:

Melbourne has an appalling history of treating its natural waterways as convenient drains ... This has led to poor creek corridor management focussed on flood mitigation, convenient drainage and often leading to creeks being placed in barrel drains and disappearance of creeks underground.

Creeks need to be seen as a vital part of our environmental assets and funded and managed accordingly. In Monash, much work has been done to rehabilitate damaged waterways, and these provide a much used and valued public resource, however, much more could be done to improve creek environs and ensure that creek corridors provide a continuous public pathway.⁷¹

Similarly, Dr Lindsay from Environmental Justice Australia stated at a public hearing that 'Historically in urban design [waterways] have been treated as drains. The tide is turning on this treatment. Communities, scientists and academics are recognising the ecological values associated with waterways. Government is slowly catching up.'⁷²

MCMC also stated that the 'restoration of natural wetlands should be a priority'.⁷³ MCMC and FOMC highlighted in their submissions that constructed wetlands are not a suitable alternative to restoring natural wetlands, with FOMC stating:

Natural wetlands are far superior to constructed wetlands on ecological and waterway protection grounds. This is because most of the biodiversity of natural wetlands (particularly the diversity of flora) and the production of resources for fauna, occurs within the zone that is inundated when water levels are high and exposed when water levels are low. In natural wetlands this zone of fluctuating water levels can be very wide. In contrast, constructed wetlands tend to have steep banks and so the area between the high and low water levels is often a narrow strip of limited diversity.⁷⁴

⁷⁰ Ibid.

⁷¹ Friends of Scotchmans Creek and Valley Reserve Inc., *Submission 36*, p. 3.

⁷² Dr Bruce Lindsay, *Transcript of evidence*, p. 27.

⁷³ Merri Creek Management Committee, *Submission 176*, p. 3.

⁷⁴ Friends of Merri Creek, *Submission 221*, p. 9. see also Merri Creek Management Committee, *Submission 176*, p. 3.

FOMC noted that while many of Melbourne's natural wetlands have been lost, restoration is still possible and made several recommendations to ensure that natural and drained wetlands are 'mapped and protected via strategic growth area planning' and as part of IWM.⁷⁵

Mr Gray from Brimbank Council also spoke about restoring wetlands and creeks at a public hearing, noting that the *Greening the West* project to develop a wetland at Upper Stony Creek included a component to naturalise concrete channels. Mr Gray stated that the 'legacy of soil contamination' complicated the delivery of this project and advocated for increased support from the Victorian Government to local councils to remove concrete channels and address the implications of soil contamination.⁷⁶ Mr Gray added that while the project involved collaboration between a range of government bodies that was largely successful, the concrete channels remain and do not live up to community expectations of environmental infrastructure. Mr Gray stated that partnerships and a shared vision of environmental infrastructure between councils and Melbourne Water is crucial and supported the suggestion of a mechanism to allow state and local governments to collaborate more effectively and develop blue-green infrastructure.⁷⁷ Similarly, Ms Finlayson of the City of Melbourne stated that plans to restore and increase the usage of waterways in areas like Moonee Ponds Creek would benefit from the Victorian Government taking a stronger leadership role to facilitate collaboration between relevant bodies.⁷⁸

A notable example of the successful restoration of a Melbourne waterway is the 'daylighting' of Dandenong Creek, outlined in Case Study 9.1. MDAP outlined the view in its submission that the daylighting of waterways can be an effective way of delivering IWM and green infrastructure with multiple beneficial outcomes. It also called for better support to local councils 'to prepare management plans for water corridors with high biodiversity and/or visitor values'.⁷⁹

75 Friends of Merri Creek, *Submission 221*, pp. 9-10.

76 Mr Adrian Gray, *Transcript of evidence*, p. 3.

77 *Ibid.*, p. 16.

78 Ms Fiona Finlayson, *Transcript of evidence*, p. 5.

79 Metropolitan Development Advisory Panel (MDAP), *Submission 255*, p. 3.

CASE STUDY 9.1: Dandenong Creek

Dandenong Creek is in Melbourne's eastern and south-eastern suburbs, and is one of the most visited waterways in Melbourne. It is a popular spot for recreation, including bike riding, running and dog walking.

In the 1960s the Dandenong Valley Authority did works to mitigate flooding in the area, including straightening parts of the creek around Bayswater and Heathmont. As part of these works, a section of the creek in Heathmont was put underground in concrete pipes.

Melbourne Water consulted with the community as part of the Enhancing Our Dandenong Creek project, and the community wanted the underground part of the creek to be restored. In 2018 the underground section of Dandenong Creek was 'daylighted', which means removing the underground pipe and restoring the creek to an open channel. Approximately 830 metres of pipe were removed between the HE Parker Reserve and the railway bridge, along with 16,000 cubic metres of soil.

After the pipe was removed, Melbourne Water planted 27,000 native plants along the newly daylighted section of creek. The community is enjoying the restored section of creek, and being able to see and hear the water. Locals have told Melbourne Water, 'This is just fabulous! I'm so glad that you guys did this! I didn't even realize that I missed it as a waterway, but now that it's here I can't imagine what this place would be without it.'

The daylighted section of the creek also has environmental benefits. The old concrete pipe was a barrier to native fish, eels and turtles in the Dandenong Creek being able to migrate up or downstream. Birds have also flocked to the area.

Melbourne Water considers the daylighting of Dandenong Creek to be a success, and is now looking at daylighting other waterways.

Sources: Melbourne Water, *Dandenong Creek resurfaces thanks to major rehabilitation*, 2017, <<https://www.melbournewater.com.au/water-data-and-education/news/dandenong-creek-resurfaces-thanks-major-rehabilitation>> accessed 9 July 2021; Melbourne Water, *Enhancing our Dandenong Creek*, <<https://www.melbournewater.com.au/building-and-works/projects/enhancing-our-dandenong-creek>> accessed 9 July 2021; Melbourne Water, *Video: Enhancing Our Dandenong Creek - more than a sewerage management project*, 2020, <<https://www.melbournewater.com.au/media/14606>> accessed 9 July 2021; Melbourne Water, *Sarah Watkins - Enhancing Our Dandenong Creek Program*, 2018, <<https://www.melbournewater.com.au/media/6231>> accessed 9 July 2021. See also Croydon Conservation Society, *Submission 101*, received 25 September 2020; VicWater, *Submission 243*, received 14 October 2020; Jeannie Haughton, *Submission 245*, received 20 October 2020.

The Committee notes that similar works will commence next year to transform a 500 metre section of the Moonee Ponds Creek by removing the concrete lining that was installed in the 1960s. The plan includes the planting of indigenous plants, and the installation of rock weirs, places to sit, and separate cycling and walking paths.

The Chain of Ponds collaboration, which links local councils, water authorities and user groups along the creek, aims to make the work replicable to other sections of the waterway in the future.⁸⁰

RECOMMENDATION 57: That the Victorian Government investigate the potential for a project to map wetlands and waterways that require restoration in Melbourne, including addressing the issues of removing concrete channels and soil contamination.

**Adopted by the Legislative Assembly Environment and Planning Committee
55 St Andrews Place, East Melbourne
29 November 2021**

⁸⁰ Margaret Paul, 'Community's decades-long fight pays off with plan to restore 'concrete creek' at Moonee Ponds', *ABC News*, 10 October 2021, <<https://www.abc.net.au/news/2021-10-10/concrete-creek-in-moonee-ponds-restored-after-community-campaign/100525776>> accessed 11 October 2021.

Appendix A

About the Inquiry

A.1 Submissions

Submission number	Name of submitter
1	Gabrielle Stokes
2	Damian McCrohan
3	South Eastern Centre for Sustainability
4	Friends of Damper Creek Reserve
5	Pony Club Victoria Inc.
6	ANGAIR Inc.
7	Friends of Bats and Bushcare Inc.
8	Kate Hutchison
9	Wendy Millar
10	Graeme Hanigan
11	Wellington Shire Council
12	Trevor Hodson
13	Campaspe Shire Council
14	Ingrid Dodd
15	Louise Barbagallo
16	Sue Hardy
17	John Jenkins
18	John Cahill
18A	John Cahill—supplementary submission
19	Patrick Larizza
20	Gary Sanderson
21	Rachael Ferguson
22	Thomas Nixon
23	Leadsun Australia
24	Anthony Downing
25	John Chapman
26	Kaye Oddie
27	Brian Kuster

Submission number	Name of submitter
28	Friends of Wilson Botanic Park Berwick
29	Nillumbik Shire Council
30	Friends of the Great South West Walk
31	Friends of Drouin's Trees
32	Robyn Senini
33	Name withheld
34	Aboriginal Victoria
35	Ocean Grove Community Association Inc.
36	Friends of Scotchmans Creek and Valley Reserve Inc.
37	Confidential
38	Walking Club of Victoria
39	Walkerville Foreshore Reserve Committee of Management Inc.
40	Kathryn Stanislawski
41	Frank Edwards
42	National Ageing Research Institute (NARI)
43	Graham Proctor
44	Committee for Melbourne
45	Friends of the Yarra Valley Parks Inc.
46	Mark Gordon
47	Don Owers
48	Lawrence Reddaway
49	John Myers
50	Hans Georg Hennig
51	Sustainable Population Australia
52	Michael Smyth
53	Friends of the Australian Botanic Gardens Shepparton Inc.
54	Lesley Dalziel
55	Aireys Inlet and District Association Inc.
56	Lee Gardiner
57	Royden James
58	Sharon Berry
59	Surf Coast Energy Group
60	Centre for Urban Research, RMIT University
61	Frankston Beach Association
62	Rachael Miller

Submission number	Name of submitter
63	John Cull
64	Mornington Peninsula Shire
65	Save Tootgarook Swamp
66	Denise Robinson-Hurst
67	ICON Science Group
68	Zoos Victoria
69	Lawrence St Leger
70	Friends of Lake Knox Sanctuary
71	Amy Henson
72	Banyule City Council
73	Sandringham Foreshore Association
74	Phillip Island Conservation Society Inc.
75	Walkerville Ratepayers and Residents Association
76	Australian Housing and Urban Research Institute (AHURI)
77	City of Greater Bendigo
78	South Gippsland Conservation Society Inc.
79	Batesford, Fyansford, Stonehaven Landcare Inc.
80	Moriac Community Network
81	Jessica Brown
82	Melbourne Trail Horse Riders Club
83	Guy Dutson
84	Barry Lingham
85	Fiona Grinham
86	Greater Shepparton City Council
87	Friends of Braeside Park
88	Australian Trail Horse Riders Association
89	Spring Creek Horse Rides
90	City of Monash
91	City of Whittlesea
92	Friends of Edithvale Seaford Wetlands
93	Great Ocean Road Coast Committee
94	Sue Forster
95	Surfers Appreciating Natural Environment (SANE)
96	Surrey Hills Progress Association
97	Friends of the Barwon

Submission number	Name of submitter
98	Swinburne University School of Design
99	Breamlea Coastcare
100	Corinella Residents and Ratepayers Association Inc.
101	Croydon Conservation Society
102	Anne Heath Mennell
102A	Anne Heath Mennell—supplementary submission
102B	Anne Heath Mennell—supplementary submission
103	Brimbank City Council
104	Bel Fin
105	Keilor Residents & Ratepayers Association
106	Heart Foundation
107	Pesh Wilson
108	Nillumbik Horse Action Group
109	John Birthisel
110	Australasian Alliance for Walking Activity Groups
111	Nathan Osbourne
112	Jill Pickering
113	Heather Paulet
114	Smythesdale Athra Club
115	Forrest Horse Riding Club
116	Douglas Needham
117	Kay Cruse
118	Grant Brace
119	Carolyn Johnston
120	Manningham City Council
121	Friends of Buckley Falls
122	Rose Nechwatal
123	Australian Brumby Alliance
124	Confidential
125	Daniel Appleby
126	Ashlee Appleby
127	Newlands Friends of the Forests
128	Friends of the Glenfern Green Wedge
129	Adrian Puglia
130	Greening of Riddell

Submission number	Name of submitter
131	Chris Thrum
132	Australian and New Zealand Association for Leisure Studies
133	Bendigo Mountain Bike Club
134	Confidential
135	Spray Point and Wild Coast Conservation Group
136	Confidential
137	Healesville to Phillip Island Nature Link
138	Wildlife Victoria
139	Craig Thomson
140	Aldo Penbrook
141	Naomi Kinsella
142	Riddells Creek Landcare
143	Bendigo and District Environment Council (BDEC), Northern Bendigo Landcare Group (NBLG), Wellsford Forest Conservation Alliance, Biolinks Alliance, and Ironbark Gully Friends
144	Mildura Rural City Council
145	Hobsons Bay City Council
146	Interface Councils
147	BEAM Mitchell Environment Group
148	Greater Dandenong City Council
149	Infrastructure Victoria
150	The Kensington Association
151	David Taylor
152	Werribee River Association
153	Riverland Conservation Society of Heidelberg
154	Master Builders Victoria
155	Housing Industry Association
156	Richard Goonan
157	Hume City Council
158	Friends of Steele Creek
159	Combined Residents of Whitehorse Action Group (CROWAG)
160	Town and Country Planning Association
161	Environmental Justice Australia
162	Trudy Little
163	Albert Park Yacht Club
164	Friends of Canadian Corridor

Submission number	Name of submitter
165	Doctors for the Environment Australia
166	Sally Eldridge
167	James Walker
168	Susan Murphy
169	Marilyn Olliff
170	Trust for Nature
171	Wallan Environment Group
172	Phil Wright
173	Council Alliance for a Sustainable Built Environment (CASBE)
174	Irene Wright
175	Deborah Evans
176	Merri Creek Management Committee
177	Friends of the Box Ironbark Forests (Mount Alexander Region)
178	Institute for Physical Activity and Nutrition (IPAN), Deakin University
179	City of Yarra
180	Citizens of Melbourne
181	Billie Giles-Corti, Jan Scheurer, Michael Buxton, Alan Pears, Usha Iyer-Raniga, Sarah Bekessy, Lauren Rickards, John Fein, Felicity Roddick, RMIT University's Urban Futures Enabling Capability Development Platform
182	Helen Gibson, Catherine Heggen, Esther Kay, Ann Keddie, Jane Monk and Margaret Pitt
183	Birrarung Council
184	Blackburn & District Tree Preservation Society
185	Moorabool Shire Council
186	City of Melbourne
187	Protectors of Public Lands, Victoria
188	Parks and Leisure Australia (Vic/Tas Region)
189	Yarra Riverkeeper
190	Chris Chesterfield
191	Blackburn Village Residents Group
192	Jerome N Rachele and Maximillian P de Courten
193	Wyndham City Council
193A	Wyndham City Council—supplementary submission
194	North and West Melbourne Association
195	Yarra Ranges Council
196	MAB Corporation

Submission number	Name of submitter
197	Port Phillip EcoCentre
198	Victorian National Parks Association
199	Baw Baw Shire
200	Phillip Island Boardriders Club Committee
201	Pat Turner and Chris Healy
202	Bush User Groups United
203	Castlemaine Landcare Group
204	Jane Kopecek
205	Friends of Leadbeater's Possum
206	Ballarat Social Trail Horse Riders Club
207	Ironbark Gully Friends
208	Andrew Booth
209	Malcolm Robins
210	Brian Coffey
211	Catherine Rouse
212	Bendigo District ACF Community
213	City of Casey
214	Emma Songdahl
215	Whitehorse City Council
216	Glen Eira City Council
217	Macedon Ranges Residents' Association
218	Friends of Edwards Point
219	Kilmore and District Residents & Ratepayers Association (KADRRRA)
219A	Kilmore and District Residents & Ratepayers Association (KADRRRA)— supplementary submission
220	Latrobe University
221	Friends of Merri Creek
222	Australian Government Department of Agriculture, Water and the Environment
223	Nursery & Garden Industry Victoria
224	Craig Jones
225	Victorian Planning Authority
226	Greater Metropolitan Cemeteries Trust
227	Australian Institute of Landscape Architects (AILA) Victorian Chapter
228	Commissioner for Environmental Sustainability

Submission number	Name of submitter
229	Goulburn Broken Greenhouse Alliance and Central Victorian Greenhouse Alliance
230	Christa Botsman
231	Friends of the Earth Melbourne
232	Julie Trigg and Peter Schmidt
233	Darebin City Council
234	Rubicon Forest Protection Group
235	Kinglake Friends of the Forest
236	Boroondara Bicycle Users Group
237	Darren McClelland
238	Mitchell Shire Council
239	Jesuit Social Services
240	Rail Trails Australia
241	Friends of Newport Lakes
242	Hamilton Field Naturalists Club
243	VicWater
244	Planning Institute Australia (Vic)
245	Jeannie Haughton
246	Warran Hocking
247	Amy Gillett Foundation and Centre for Accident Research and Road Safety - Queensland (CARRS-Q)
248	Christine K Singam
249	Keep Hosken Reserve Accessible for All
250	Golden Plains Shire Council
251	Australian Deer Association
252	Victorian Council of Social Service
253	Jane Holroyd
254	Department of Environment, Land, Water and Planning (DELWP)
254A	Vic Catchments
254B	Corangamite Catchment Management Authority (CMA)
254C	North Central Catchment Management Authority (CMA)
254D	Melbourne Water
254E	Sustainability Victoria
254F	Parks Victoria
255	Metropolitan Development Advisory Panel (MDAP)
256	Bendigo Family Nature Club

Submission number	Name of submitter
257	Keysborough Golf Club
258	Darebin Appropriate Development Association
259	Office of the Victorian Government Architect
260	City of Port Phillip
261	Frankston City Council
262	Urban Development Institute of Australia (UDIA)
263	Alison Joseph
264	Ballarat City Council

A.2 Public hearings

The Committee held the following public hearings via Zoom:

- Tuesday 9 March
- Wednesday 10 March
- Monday 22 March
- Thursday 25 March
- Tuesday 30 March
- Wednesday 31 March
- Tuesday 20 April
- Wednesday 21 April
- Tuesday 27 April
- Wednesday 12 May.

Tuesday 9 March

Organisation	Name	Position
Round table group 1		
Wyndham City Council	Peter McKinnon	Manager, Climate Futures
City of Casey	Jayden Mizzi	Team Leader, Growth and Investment Strategic Planning
City of Whittlesea	Susan Hecker	Manager, Parks and Urban Design
	Fleur Anderson	Acting Executive Officer, Sustainability Planning
Hume City Council	Bernadette Thomas	Manager, Sustainable Environment
	Greg McLaren	Manager, Urban and Open Space Planning
Melton City Council	Luke Shannon	General Manager, Planning and Development
Round table group 2		
Council Alliance for a Sustainable Built Environment	Natasha Palich	Executive Officer
Planning Institute of Australia, Victorian Division	Jane Keddie	Vice-President
Master Builders Victoria	Rebecca Casson	Chief Executive Officer
Housing Industry Association	Mike Hermon	Executive Director, Planning and Development
Australian Institute of Landscape Architects (AILA) Victorian Chapter	Heath Gledhill	Victorian Chapter President
	Ella Gauci-Seddon	Victorian Chapter Vice-President
	Dr Meredith Dobbie	Chair, AILA Victorian Environment Committee
Committee for Melbourne	Martine Letts	Chief Executive Officer
	Nicholas McVey	Head of Commercial Revenue, Yarra Trams
	Antara Mascarenhas	Group Manager, Stakeholder Relations, Australian Energy Market Operator
Urban Development Institute of Australia	Greg Bursill	General Manager, Lovely Banks Development Group

Wednesday 10 March

Organisation	Name	Position
Round table group 3		
Cardinia Shire Council	Luke Connell	Manager, Policy, Design and Growth Area Planning
Mornington Peninsula Shire Council	Jo-Anne Elvish	Open Space Planning and Projects Coordinator
Yarra Ranges Shire Council	Phil Murton	Manager, Recreation, Projects and Parks

Organisation	Name	Position
Round table group 4		
Baw Baw Shire Council	Will Cheatley	Manager, Infrastructure Maintenance
Golden Plains Shire Council	David Collins	Coordinator, Environment and Sustainability

Monday 22 March

Organisation	Name	Position
City of Melbourne	David Callow	Director, Parks and City Greening
	Fiona Finlayson	Team Leader, Open Space Planning
Round table group 5		
Yarra City Council	Michael Ballock	Executive Planner, Strategic Projects
Moonee Valley City Council	Brett Walters	Director, Strategy and Planning
City of Port Phillip	Claire Ulcoq	Open Space Planner

Thursday 25 March

Organisation	Name	Position
Round table group 6		
Whitehorse City Council	Leigh Morris	Recreation and Open Space Development Lead
	Tony Peak	Manager, Property and Rates
Brimbank City Council	Adrian Gray	Manager, Urban Design
Banyule Council	Rod Spivey	Senior Open Space Planner
	Robyn Mitchell	Coordinator, Open Space and Strategic Projects
Round table group 7		
Glen Eira City Council	Kate Jewell	Coordinator, City Strategy and Place Planning
City of Monash	Sherry Hopkins	Coordinator, Strategic Planning
	Andre Schmid	Senior Strategic Planner
City of Darebin	Cr Lina Messina	Mayor
	Rachel Ollivier	General Manager, City Sustainability and Strategy
	Amy O'Keeffe	Senior Strategic Planner

Tuesday 30 March

Organisation	Name	Position
Round table group 8		
Centre for Urban Research, RMIT University	Associate Professor Melanie Davern	Acting Deputy Director
	Associate Professor Andrew Butt	Associate Dean of Urban Planning, Convener of Planning and Transport in City Regions
ICON Science Research Group, RMIT University	Thami Croeser	Research Officer
Swinburne University School of Design	Dr Ian Woodcock	Senior Lecturer, Urban Design, and Course Director, Architecture and Urban Design
Institute for Physical Activity and Nutrition (IPAN), Deakin University	Associate Professor Jenny Veitch	National Heart Foundation of Australia Future Leader Fellow
La Trobe University	Paul Farley	Executive Director, Infrastructure and Operations
	Simon Barnes	Director, Planning and Business Services

Wednesday 31 March

Organisation	Name	Position
Round table group 9		
Australian and New Zealand Association for Leisure Studies (ANZALS)	Dr John Tower	
	Katie McDonald	
	Dr Trudie Walters	President
Parks and Leisure Australia (Vic/Tas Region)	Sam Taylor	Member, Vic/Tas Regional Council
Round table group 10		
Heart Foundation	Andrew Mosley	Advocacy Manager Vic/Tas
	Naomi Gilbert	Senior Coordinator, Healthy Built Environment
National Ageing Research Institute	Associate Professor Pazit Levinger	Senior Research Fellow
Round table group 11		
Town and Country Planning Association	Marianne Richards	President
Walking Club of Victoria	Peter Hughes	
Round table group 12		
Victorian Council of Social Service (VCOSS)	Brooke McKail	Manager, Policy and Research
	Ben Latham	Policy Advisor, Climate Equity
Doctors for the Environment	Dr Jennie Mills	
	Dr Ken Winkel	
	Dr Manasa Saripalli	

Tuesday 20 April

Organisation	Name	Position
Commissioner for Environmental Sustainability	Dr Gillian Sparkes	Commissioner
	Scott Rawlings	Director, Science and Reporting
	Fiona McKenzie	Principal Science Writer
Victorian National Parks Association	Matt Ruchel	Executive Director
Birrarung Council	Chris Chesterfield	Chairperson
Environmental Justice Australia	Dr Bruce Lindsay	Senior Lawyer
Wildlife Victoria	Lisa Palma	Chief Executive Officer
Yarra Riverkeeper Association	Andrew Kelly	Yarra Riverkeeper and Vice-President
Friends of Bats and Bushcare	Lawrence Pope	President
	Dr Megan Davidson	Secretary

Wednesday 21 April

Organisation	Name	Position
Round table group 13		
Shepparton City Council	Sharon Terry	Manager, Environment
Campaspe Shire Council	Keith Oberin	General Manager, Community
Ballarat City Council	Natalie Robertson	Director, Development and Growth
	Bridget Wetherall	Director, Infrastructure and Environment
	Steve Van Orsouw	Executive Manager, Operations, in the Infrastructure and Environment Directorate
	Joanna Cuscaden	Executive Manager, Development Facilitation, in the Development and Growth Directorate
Greater Bendigo City Council	Matthew Kerlin	Coordinator of Strategy and Policy
	Paul Gangell	Manager, Parks and Open Space
Greater Geelong City Council	Rodney Thomas	Manager, Environment and Waste Services
	Sue Hawes	Senior Open Space Planner
	Jessica Hurse	Manager, Planning and Growth

Tuesday 27 April

Organisation	Name	Position
Department of Environment, Land, Water and Planning	Julian Lyngcoln	Deputy Secretary, Planning
	Andrew Gear	Executive Director, Planning Implementation and Heritage
	James Todd	Executive Director, Biodiversity
	Lisa Opray	Director, Land Governance
	Stuart Hughes	Director, Park Planning and Policy, Parks Victoria
Vic Catchments	Tony Baker	Executive Officer
	Sharyon Peart	Chair
Round table group 14		
Victorian Planning Authority	Stuart Moseley	Chief Executive Officer
	Peter Murrell	Sustainability Officer
	Filipina Moore	Director, Strategy
Infrastructure Victoria	Dr Jonathan Spear	Deputy Chief Executive and Chief Operating Officer
	Charles Waingold	Director, Networks and Planning
	Dr Kath Phelan	Principal Planner
Office of the Victorian Government Architect	Lorrae Wild	Managing Lead, Major Transport Infrastructure program
	Bronwen Hamilton	Manager, Victorian Design Review Panel

Wednesday 12 May

Organisation	Name	Position
Parks Victoria	Matthew Jackson	Chief Executive Officer
	Kylie Trott	Executive Director, Operations
	Stuart Hughes	Director, Park Planning and Policy
Sustainability Victoria	Claire Ferres Miles	Chief Executive Officer
Round table group 15		
Melbourne Water	Gavan O'Neill	General Manager, Customer and Strategy
	Greg Bain	Manager, Community Engagement
	Neil Featonby	Program Manager, Reimagining Your Creek
Department of Environment, Land, Water and Planning - Waterways, Cities and Towns Division	Karen Lau	Executive Director, Catchments
	Deb Brown	Director, Resilient Cities and Towns Branch, Catchments
	Nikki Gemmill	Senior Manager, Urban Water Policy, Resilient Cities and Towns Branch, Catchments

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