

FOOD FOR THOUGHT: CHALLENGES AND OPPORTUNITIES FOR FARMING IN MELBOURNE'S FOODBOWL

A Foodprint Melbourne Report
July 2018



Funder

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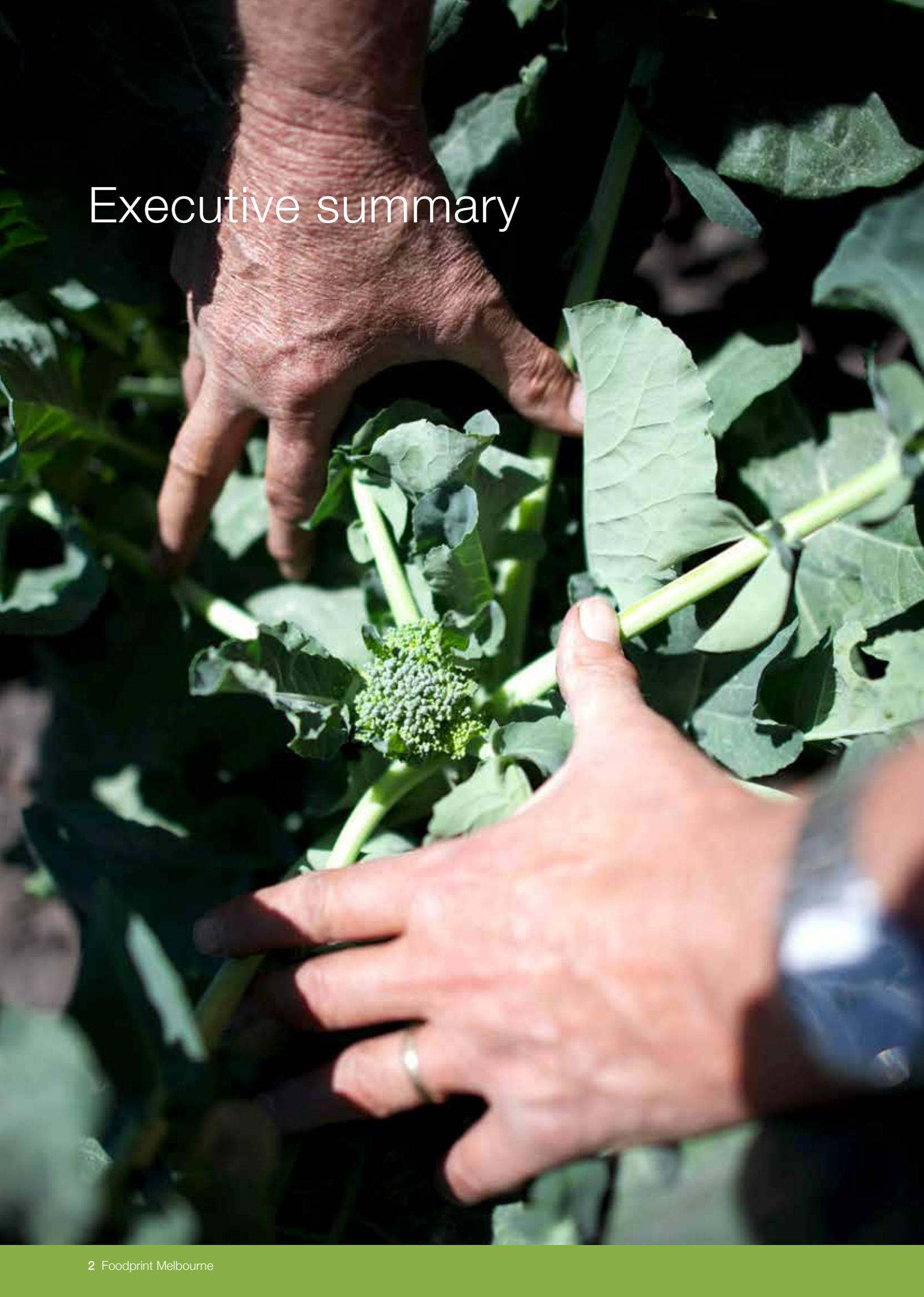


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Executive summary

This report identifies the policy challenges that need to be addressed to strengthen Melbourne's foodbowl and the opportunities that could be leveraged, focusing on three key policy issues: protecting farmland, strengthening the viability of farming and increasing water access. The main findings of this research include:

- The single most important step for strengthening Melbourne's foodbowl is to **provide certainty about the long term future** of Melbourne's green wedges and peri-urban areas, as a springboard for investment and innovation
- **Ongoing uncertainty limits investment** by farmers in Melbourne's foodbowl and **fuels speculative investment** in farmland, driving up land prices and undermining farm viability
- **Strong and consistent policy signals** are required to create certainty for Melbourne's foodbowl
- **Melbourne's green wedges and peri-urban areas of food production** require proactive management and investment
- There is a strong argument for **greater state government investment in recycled water infrastructure for agriculture** in Melbourne's foodbowl to increase the resilience of the city's food supply to climate risks
- An integrated water management framework offers an opportunity to **reconsider the value of recycled water for agriculture** in light of its broad social, economic and environmental benefits
- **Promoting farm viability** is as important to strengthening Melbourne's foodbowl and green wedges as protecting farmland
- **New opportunities are emerging to strengthen farm viability** in Melbourne's foodbowl, driven by a growing consumer interest in sourcing locally grown foods, new opportunities for agri-tourism and direct sales and increasing demand for ethical, sustainably-produced foods from smaller scale producers
- **State government has an important role to play** in helping farmers to leverage the opportunities for agriculture in Melbourne's foodbowl by increasing its policy focus on the region and providing agribusiness support
- Local governments play an important role in protecting farmland and promoting farm viability and there is **an opportunity for greater co-ordination across local governments** to share best practice and develop common strategies to strengthen Melbourne's foodbowl
- **It is important to build public support** and awareness of the benefits of Melbourne's foodbowl and green wedges to protect the region in the long term

A close-up photograph of a brown chicken with a red comb pecking at straw on the ground. The chicken is the central focus, with its head and neck in sharp focus as it pecks at a pile of dry straw. The background is blurred, showing more straw and a dark surface. The lighting is natural, highlighting the texture of the chicken's feathers and the straw.

SECTION 1

Introduction

Melbourne is surrounded by a highly productive foodbowl that is important to the food supply of this rapidly growing city. Previous generations have managed the resources of the city's hinterland to maintain the capacity of the land, waterways and ecosystems to feed the city's residents. The Kulin peoples skilfully managed the abundant food resources of this region for tens of thousands of years, before Europeans planted vegetable gardens, orchards and introduced livestock. However, rapid and continuing growth since the Second World War has threatened the capacity of Melbourne's hinterland to feed the city.¹

In the early 1970s, city planners acted to protect the open spaces and natural resources of Melbourne's hinterland, creating the city's *green wedges*.² This vision was reaffirmed 30 years later with the introduction of legislation to formalise and strengthen the green wedges, and the city's urban growth boundary was created.³ These important steps preserved some of the most productive farmland in the state and maintained a source of fresh, high quality foods close to the city that contribute to the city's liveability and support its reputation as a great city of food.⁴

However, this legacy is being put at risk. Multiple expansions of the city's urban growth boundary since its introduction have led to significant losses of farmland, and the weakening of green wedge regulations has allowed a wider range of land uses in the green wedges, increased land fragmentation and made it more difficult to farm in the region (see section 3). As we demonstrate, this has undermined stakeholder confidence and certainty in the future of Melbourne's green wedges and peri-urban areas, limiting investment by farmers and government in the region. Concerns about water availability and pressures on farm viability add to the challenges for farmers on Melbourne's fringe (see sections 4 and 5).

Yet there are also new opportunities emerging for farming in the region. There is growing interest from consumers in food provenance and sourcing locally grown foods, new opportunities for agri-tourism, and direct sales, and increasing demand for ethical, sustainably-produced foods from smaller scale producers on Melbourne's fringe (see section 5.3). If these opportunities are to be realised, new policy approaches are needed to secure the future of farming on Melbourne's fringe and to preserve the legacy of the green wedges, so that future generations can continue to meet some of their food needs from the highly productive foodbowl around the city.

New policy approaches are needed to secure the future of farming on Melbourne's fringe and to preserve the legacy of the green wedges.

1 Carey, R, Larsen, K, Sheridan, J and Candy, S (2016) *Melbourne's food future: Planning a resilient city foodbowl*. Melbourne: Victorian Eco-innovation Lab.

2 Melbourne and Metropolitan Board of Works (1971) *Planning policies for the Melbourne metropolitan region*. Melbourne: Melbourne and Metropolitan Board of Works.

3 Planning and Environment (Metropolitan Green Wedge Protection) Act 2003. Act No. 43/2003.

4 Carey, R, Larsen, K, Sheridan, J and Candy, S (2016) As above.

1.1 About this report

This report from the *Foodprint Melbourne* project explores the policy challenges facing Melbourne's foodbowl and identifies opportunities to strengthen food production on Melbourne's fringe. The report focuses on three key issues: protecting farmland, increasing water access and strengthening the viability of farming.

This report is based on (i) a review of Victorian government and local government policies that influence the protection of farmland, access to water and the viability of farming in Melbourne's foodbowl (ii) interviews with Victorian stakeholders about the challenges facing Melbourne's foodbowl and opportunities to address the challenges and (iii) a review of best practice in three leading international cities used as case studies (see section 1.3 for details of our approach).

This report does not make specific recommendations to address the challenges identified. Instead, we draw on three international case studies – of Toronto, Portland and Vancouver – to identify potential approaches to addressing challenges and leveraging opportunities in Melbourne's foodbowl.

This report will inform a series of *co-design workshops* to be held with stakeholders between July 2018 and February 2019, in which stakeholders will work in cross-sector teams to identify strategies to strengthen Melbourne's foodbowl. The outputs of these workshops will be documented in a final project report to be released in March 2019.

1.2 About the Foodprint Melbourne project

The Foodprint Melbourne project is led by an inter-faculty team at the University of Melbourne, with team members based in the Faculty of Veterinary and Agricultural Sciences and the Melbourne Sustainable Society Institute. The project is funded by the Lord Mayor's Charitable Foundation and involves local governments as key partners.

The previous phase of the Foodprint Melbourne project generated an evidence base about the significance of Melbourne's foodbowl to the city's food supply in the context of a rapidly growing population and pressures on food supply from climate change and declining supplies of the natural resources (such as land, water and fossil fuels) that underpin food production. Three reports⁵ made the case that Melbourne's foodbowl is a fundamental building block in a resilient and sustainable food system for Melbourne.

This report builds on the evidence base generated in the previous phase of the project, and it draws on the policy framework proposed in the previous phase to strengthen the resilience of Melbourne's foodbowl.⁶

5 Sheridan, J, Larsen, K, and Carey, R (2015) *Melbourne's foodbowl: Now and at 7 million*. Melbourne: Victorian Eco-innovation Lab; Sheridan, J, Carey, R and Candy, S (2016) *Melbourne's foodprint: What does it take to feed a city?* Melbourne: Victorian Eco-innovation Lab; Carey, R, Larsen, K, Sheridan, J and Candy, S (2016) As above.

6 Carey, R, Larsen, K, Sheridan, J and Candy, S (2016) As above.

1.3 Our approach

Review of the policy influences on farmland protection, water access and farm viability in Melbourne's foodbowl (see sections 3, 4 and 5) involved analysis of a range of state and local government documents relating to these issues, including relevant legislation, policies, reports of government inquiries, government department websites and media releases.

Our three case studies of international best practice (Toronto, Vancouver and Portland) were chosen because these cities are widely recognised as international leaders in protecting important regions of food production on their fringes, and because they face similar challenges to those faced by Melbourne. We carried out a review of key state (or province) and local governance mechanisms, policy and legislation related to protecting farmland and promoting farm viability.

We interviewed 24 stakeholders in Victoria during 21 interviews (some interviews took place with two stakeholders). Interviews were conducted with stakeholders from state government, local government, civil society groups and industry (including farmers). Each interview lasted 45-60 minutes and interviews were recorded with the consent of interviewees. We also interviewed 8 stakeholders from our international case study cities. These interviewees included representatives of key organisations involved in various aspects of the governance of city fringe foodbowls and several academics.



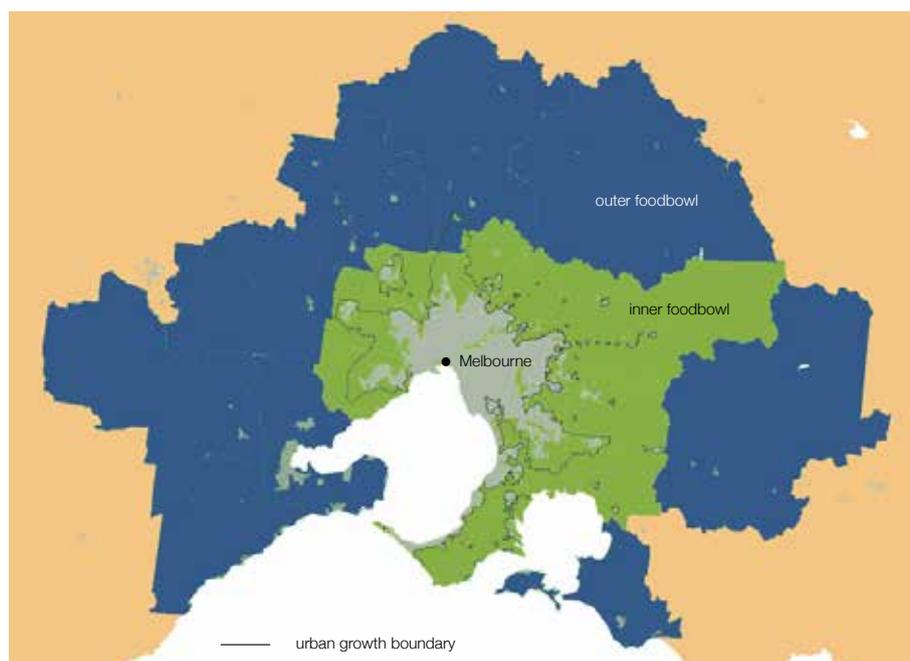
SECTION 2

Melbourne's foodbowl –
what's the problem?

“Melbourne has become the city it is for very good reasons. It’s got good soils, good climate, good water supply and all those things which make it valuable as a place to live but also make it valuable as a place to grow our food. That’s the conundrum we’re in”

Interview 15, Industry

Figure 1 Melbourne’s foodbowl



Melbourne’s foodbowl currently has the capacity to meet around 41% of the city’s food needs. It is a fundamental building block in a sustainable and resilient food supply for the city in the context of increasing pressures from population growth, climate change and declining supplies of the natural resources that underpin food production (such as land, water and fossil fuels).⁷

As Melbourne grows to a population of 7-8 million people by 2050, it will need at least 60% more food. However, the city’s foodbowl is at risk from population growth and urban sprawl. If the city continues to grow as it has in the past, the capacity of this foodbowl to feed the city could fall from 41% to around 18% by the time the city reaches a population of 7 million: Melbourne will have more people to feed, but less farmland to grow food.⁸ The city’s foodbowl is also at risk from water scarcity. Melbourne is in a water-scarce region of the world, the demands on existing water supplies are increasing and climate change is likely to lead to a reduction in water availability.⁹

7 Carey, R, Larsen, K, Sheridan, J and Candy, S (2016) As above.

8 Sheridan, J, Larsen, K, and Carey, R (2015) As above.

9 Sheridan, J, Carey, R and Candy, S (2016) As above.

In *Melbourne's food future: Planning a resilient city foodbowl*¹⁰, we presented an overarching policy framework for increasing the resilience of the city's foodbowl so that it supports the City of Melbourne's vision for a food system that is "secure, healthy, sustainable, thriving and socially inclusive". This policy framework has five overarching objectives focused on protecting farmland, addressing pressures on farm viability, increasing water availability through water reuse, growing a vibrant regional food economy and reducing and reusing food waste and organic waste.

This overarching policy framework emphasises the importance of taking an integrated food systems approach to addressing the policy challenges facing Melbourne's foodbowl. The case studies of international best practice presented here (see section 6) confirm the importance of adopting an integrated policy approach to strengthening Melbourne's foodbowl. They illustrate that promoting farm viability is as important to strengthening regions of city fringe food production as protecting farmland. Both Victorian and international stakeholders interviewed for this research emphasised the need for co-ordination across departments and policy silos for an effective approach to strengthening city fringe food production:

"You need to have people interacting, so you've got your planners interacting with your environmental people, interacting with the people with agricultural experience, actually talking to each other"

Interview 2, Civil society

"Food systems doesn't necessarily have...its own portfolio...so in a municipality, there may be one person who has an interest in food systems and takes on some of those projects, there may be an agricultural land use planner. But they don't know what's happening on their solid waste side, or they don't necessarily know what's happening on the engineering side... so there are all these pieces"

International interview 5, Vancouver

10 Carey, R, Larsen, K, Sheridan, J and Candy, S (2016) As above.

11 City of Melbourne (2012) Food City: City of Melbourne Food Policy

This report identifies the policy challenges that need to be addressed to strengthen Melbourne's foodbowl and the opportunities that could be leveraged, focusing on three key policy issues: protecting farmland, strengthening the viability of farming and increasing access to water. Many of the issues raised in this report were also raised in the 2010 Victorian Government *Inquiry into sustainable development of agribusiness in outer suburban Melbourne*¹², which emphasised the need for government action to promote agriculture on Melbourne's fringe as a basis for a more resilient food future for the city:

*"Our main finding is the need for action – decisions have to be made about future land use in some of these green wedge areas. In the Committee's view, agriculture is one of the best possible uses of green wedge land and this report shows that there are a raft of possibilities for making farming a more sustainable and profitable pursuit in the green wedges"*¹³

This report highlights the ongoing uncertainty about the future of Melbourne's foodbowl and green wedges and it underscores the continued need for government action to address the challenges and to leverage the opportunities.

Co-ordination is needed across government departments and policy silos for an effective approach to strengthening city fringe food production.

12 Outer Suburban Interface Services and Development Committee (OSISDC) (2010) *Inquiry into sustainable development of agribusiness in outer suburban Melbourne*. Final report. May 2010.

13 OSISDC (2010) As above.

SECTION 3

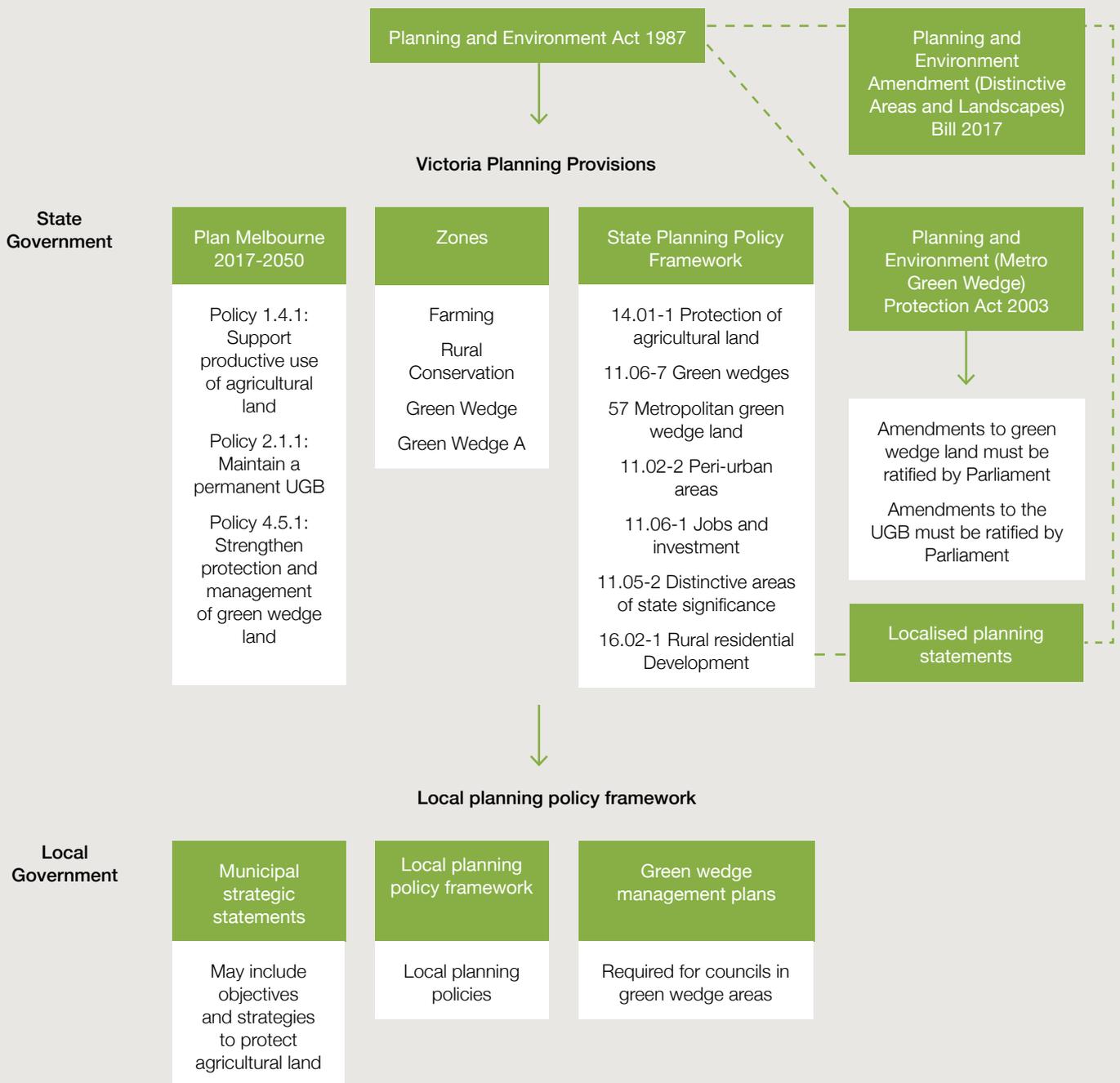
Protecting farmland



3.1 How does policy influence the issue?

A key factor affecting the protection of farmland in Melbourne's foodbowl is land use planning policy. This section identifies the main elements of planning policy at state and local government level that influence the protection (and loss) of farmland in Melbourne's foodbowl.

Figure 2 Policy and legislative framework supporting protection of farmland in Melbourne's foodbowl



The primary legislative framework for land use planning in Victoria is the *Planning and Environment Act 1987*.¹⁴ The Act sets out the *Victoria Planning Provisions (VPP)*, which are state-wide planning measures that local governments apply in developing their municipal planning schemes (see figure 1). Local governments have some flexibility in the way that they apply the VPP, in the zones and overlays that they choose to apply to land, for example. Local governments can also use schedules to nominate minimum lot or subdivision sizes that apply within different zones (see below).¹⁵ Both state and local government policy influences the protection of farmland in Melbourne's foodbowl, as outlined below. However, a key finding, confirmed by our case studies of international best practice, is the importance of strong state government planning policy for effective protection of farmland.

3.1.1 State government policy

Multiple elements of the *Planning and Environment Act* and the *Victoria Planning Provisions*¹⁶ aim to protect agricultural land in Victoria or on Melbourne's fringe for agricultural uses (see figure 2). They include:

- Objectives in **the State Planning Policy Framework**¹⁷, including objective 14.01-1 on the *Protection of agricultural land*¹⁸
- Objectives in **Plan Melbourne 2017–2050**, the city's metropolitan planning strategy
- Zones that specify agricultural uses, such as the Farming Zone and Green Wedge zones
- **The Planning and Environment (Metropolitan Green Wedge Protection) Act 2003**¹⁹ which ensures that proposed changes to Melbourne's urban growth boundary (UGB) and land in the city's "green wedges" must be ratified by the Victorian Parliament. Many areas of Melbourne's inner foodbowl fall within the city's green wedges

State Planning Policy Framework

Victoria's *State Planning Policy Framework* includes multiple objectives that relate to the protection of agricultural land, identified in table 1. These provisions "must be taken into account" by planners in local governments when making planning decisions.²⁰ However, planners consider objectives to protect agricultural land alongside other competing objectives (such as the need to increase housing provision) and the needs of multiple stakeholder groups (including local residents, farmers and politicians). These objectives are "ambiguous"²¹ and open to interpretation.

14 *Planning and Environment Act 1987*. Authorised version No. 134. No. 45 of 1987. Authorised version incorporating amendments as at 15 December 2017.

15 Llausas, A, Buxton, M and Beilin, R (2016) Spatial planning and changing landscapes: a failure of policy in peri-urban Victoria, Australia. *Journal of Environmental Planning and Management* 59 (7): 1304-1322.

16 The Victoria Planning Provisions are currently being updated with the aim of streamlining and simplifying the state planning framework. The provisions are expected to be amended in mid-2018.

17 The State Planning Policy Framework is the part of the Victoria Planning Provisions that identifies issues of strategic importance to state planning

18 Victoria Planning Provisions, Clause 14.01-1 Protection of agricultural land – http://planningschemes.dpcd.vic.gov.au/schemes/vpps/14_01_SPPF.pdf

19 *Planning and Environment (Metropolitan Green Wedge Protection) Act 2003*. Act No. 43/2003.

20 Victoria Planning Provisions, Clause 10, Operation of the State Planning Policy Framework – http://planningschemes.dpcd.vic.gov.au/schemes/vpps/10_00_SPPF.pdf

21 Butt, A (2014) Functional change and imagined place: The narratives and performance of peri-urban planning in Victoria, Australia. *Spaces and Flows: An International Journal of Urban and ExtraUrban Studies* 4: 37-47.

Table 1 Objectives to protect agricultural land in the Victorian State Planning Policy Framework (bolding added for emphasis)

Clause	Objective and strategies
14.01-1 Protection of agricultural land	<p>To protect productive farmland which is of strategic significance in the local or regional context</p> <p>Strategies include:</p> <ul style="list-style-type: none"> • Ensure that the State's agricultural base is protected from the unplanned loss of productive agricultural land due to permanent changes of land use. • Permanent removal of productive agricultural land from the State's agricultural base must not be undertaken without consideration of its economic importance for the agricultural production and processing sectors.
11.06-7 Green wedges	<p>To protect the green wedges of Metropolitan Melbourne from inappropriate development</p> <p>Strategies include:</p> <ul style="list-style-type: none"> • Protecting important productive agricultural areas such as Werribee South, the Maribyrnong River flats, the Yarra Valley, Westernport and the Mornington Peninsula. • Support existing and potential agribusiness activities, forestry, food production and tourism.
57 Metropolitan green wedge land	<ul style="list-style-type: none"> • To protect metropolitan green wedge land from uses and development that would diminish its agricultural, environmental, cultural heritage, conservation, landscape natural resource or recreation values. • To protect productive agricultural land from incompatible uses and development.
11.07-2 Peri-urban areas	<p>To manage growth in peri-urban areas to protect and enhance their identified valued attributes</p> <p>Strategies include:</p> <ul style="list-style-type: none"> • Identify and protect areas that are strategically important for the environment, biodiversity, landscape, open space, water, agriculture, energy, recreation, tourism, environment, cultural heritage, infrastructure, extractive and other natural resources. • Establish growth boundaries for peri-urban towns to avoid urban sprawl and protect agricultural land and environmental assets.
11.06 – 1 Jobs and investment	<p>To create a city structure that drives productivity, attracts investment, supports innovation and creates jobs</p> <p>Strategies include:</p> <ul style="list-style-type: none"> • Protect agricultural land and support agricultural production
11.05 -2 Distinctive areas of state significance	<p>To protect and enhance the valued attributes of the distinctive areas of the Bellarine Peninsula, Macedon Ranges, Mornington Peninsula and the Yarra Valley and Dandenong Ranges</p> <p>Strategies include:</p> <ul style="list-style-type: none"> • Avoid use and development that could undermine the long-term natural or non-urban use of land in these areas • Protect areas that are important to food production
16.02-1 Rural residential development	<p>To identify land suitable for rural living and rural residential development</p> <p>Strategies include:</p> <ul style="list-style-type: none"> • Manage development in rural areas to protect agriculture and avoid inappropriate rural residential development. • Ensure land is not zoned for rural living or rural residential development if it will encroach on high quality productive agricultural land or adversely impact on waterways or other natural resources.

For example, objective 14.01-1 on the *Protection of agricultural land*²² aims to “protect productive farmland which is of strategic significance in the local or regional context”. This suggests that some farmland should be protected, but not all, and it’s unclear which farmland should be protected. Other objectives state that “high quality productive agricultural land” should be protected, but it’s unclear which land counts as “high quality”. See below for the definition of “high quality productive agricultural land” in the Victoria Planning Provisions.

High quality productive agricultural land²⁴

“Land which is used for animal husbandry or crop raising, and is capable of continuing to sustain agricultural production, and:

- is of prime, or very good, agricultural quality, having regard to soil type, growing season, and availability of infrastructure, and is of sufficient extent to support agricultural activities on an economically viable scale; or
- has been identified through a regional, sub-regional, or local study as being of particularly good quality and strategic significance for agriculture in the regional or local context”

There are no publicly available maps of which land the Victorian Government regards as “high value productive agricultural land”, nor government-endorsed guidelines for determining which land has this status. The Victorian Department of Environment, Land, Water and Planning is currently undertaking a review to “identify areas of strategic agricultural land in Melbourne’s green wedges and peri-urban areas” as part of the implementation of *Plan Melbourne 2017-2050*.²⁵ This initiative has the potential to provide clarity about which areas of land are regarded as “high value”.

Localised planning statements

In 2017, the *Distinctive Areas and Landscapes Bill*²⁶ was passed by the Victorian Government, which enables the Government to declare areas of Victoria “distinctive areas and landscapes” to protect their unique features (including natural resources, biodiversity and ecosystems) for future generations. The Mornington Peninsula, Bellarine Peninsula, Dandenong Ranges, Macedon Ranges and Yarra Ranges have so far been declared “distinctive areas and landscapes” and *localised planning statements* have been developed for each region that outline strategies to protect the areas for future generations.

22 Victoria Planning Provisions 14.01 Agriculture, 14.01-1 Protection of agricultural land - http://planningschemes.dpcd.vic.gov.au/schemes/vpps/14_01_SPPF.pdf (accessed on 14 June 2018)

23 Butt, A (2014) As above.

24 Victoria Planning Provisions, General Terms - <http://planningschemes.dpcd.vic.gov.au/schemes/vpps/72.pdf> (accessed on 14 June 2018)

25 Action 17, Support strategic planning for agriculture, in *Plan Melbourne Implementation Actions: Plan Melbourne 2017-2050* (p 3).

26 Planning and Environment Amendment (Distinctive Areas and Landscapes) Bill 2017.

Localised planning statements are developed as a partnership between state government and local government.²⁷ They include objectives focused on protecting agricultural land in the regions and promoting agriculture (see, for example, the statements for the Yarra Ranges²⁸ and the Mornington Peninsula²⁹). They highlight the role of agriculture in contributing to the distinctive values and economies of the areas and strengthen the imperative to prevent subdivision and fragmentation of agricultural land.

The Planning and Environment (Metropolitan Green Wedge Protection) Act 2003

Melbourne's green wedges were set aside in the early 1970s³⁰ as the "lungs" of the city (see figure 3). They border the urban growth boundary, forming a "green belt" that aims to protect non-urban land uses outside the boundary, including areas for conservation, recreation and agriculture.³¹ The green wedges contain much of the farmland in Melbourne's inner foodbowl (see section 2), and are a key mechanism through which farmland in this region is protected.

There are no publicly available maps of which land the Victorian Government regards as "high value productive agricultural land"

27 Victorian Government (2018) Planning, policy and initiatives – localised planning statements - <https://www.planning.vic.gov.au/policy-and-strategy/localised-planning-statements> (accessed 14 June 2018).

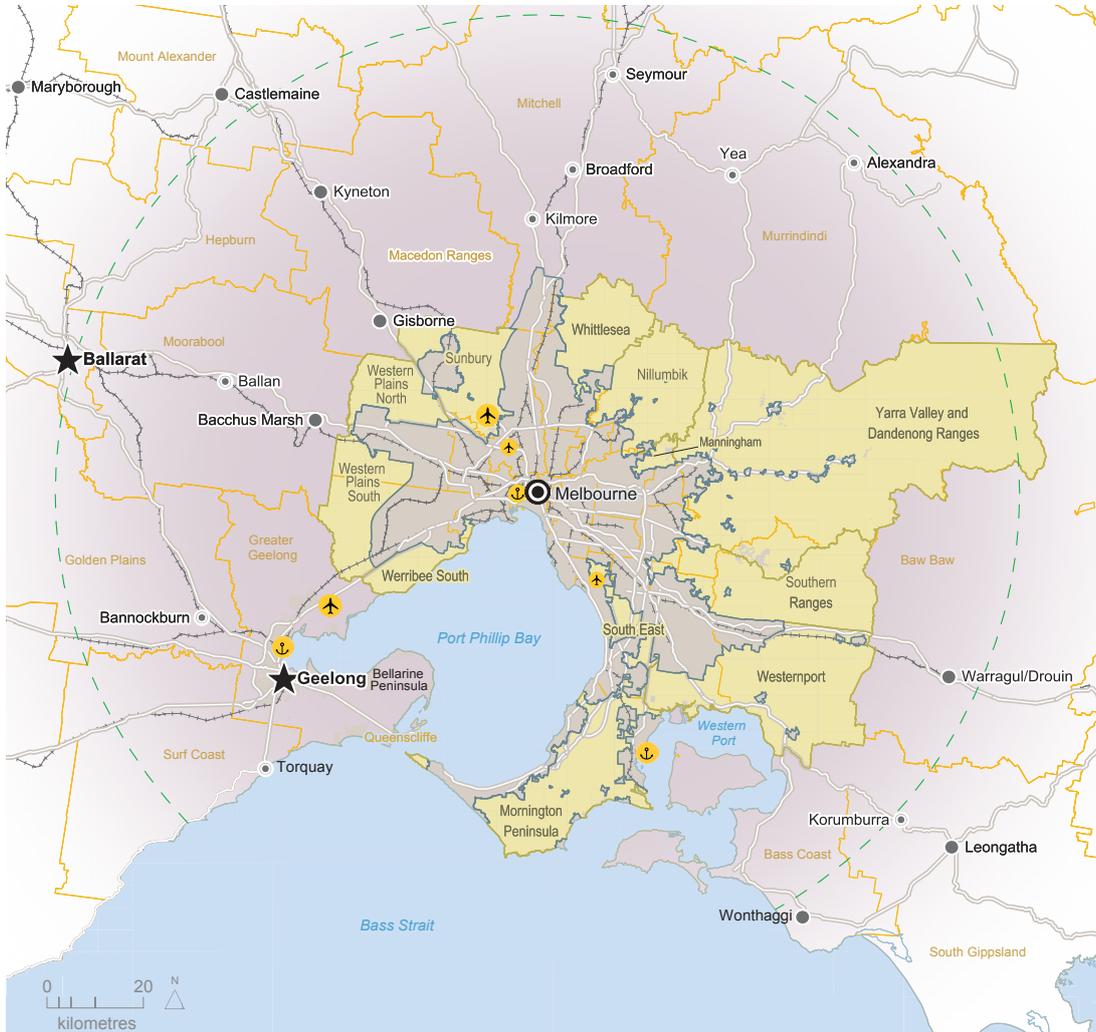
28 Yarra Ranges Council (2017) Yarra Ranges localised planning statement.

29 Victorian Government (2014) Mornington Peninsula localised planning statement. Melbourne: Victorian Government.

30 Melbourne and Metropolitan Board of Works (1971) As above.

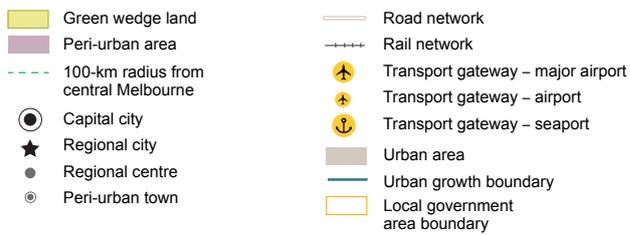
31 Department of Infrastructure (2002) *Melbourne 2030: Planning for sustainable growth*. Melbourne: Department of Infrastructure.

Figure 3 Melbourne's green wedges
Source Department of Environment, Land, Water and Planning



Map 19

Melbourne's green wedges and peri-urban areas



Source: Department of Environment, Land, Water and Planning

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GROW WHERE.



GROW
3977

LAND NOW SELL



The city's urban growth boundary (UGB) was established in 2002 in the *Melbourne 2030* metropolitan planning strategy, when the protection of the city's green wedges was also formalised. The *Metropolitan Green Wedge Protection Act (2003)* was introduced to give legislative protection to the green wedges by ensuring that both houses of parliament must ratify amendments to the city's UGB or to subdivision controls in green wedge zones.³² However, this "permanent" boundary has been extended three times since, resulting in the loss of significant areas of agricultural land.³³

Plan Melbourne 2017-2050

Plan Melbourne 2017-2050, the latest iteration of the city's metropolitan planning strategy, has a number of policies that support the protection of farmland in Melbourne's foodbowl (see table 2).³⁴

Table 2 Policies that support the protection of agricultural land in Plan Melbourne 2017-2050 (bolding added for emphasis)

Policy no.	Policy
1.4.1	<p>Support the productive use of land and resources in Melbourne's non-urban areas</p> <p>"Agricultural production in green wedges and peri-urban areas is vital to Melbourne's long-term food security due to its proximity to markets, access to infrastructure and labour, and quality soils. Agricultural areas are also important agrifood tourism destinations as well as acting as green buffers for urban areas.</p> <p>In green wedges and peri-urban areas, competing land uses (such as urban development and rural living) threaten agricultural production. Councils need support to maintain the long-term economic and social value of agricultural production.</p> <p>Agricultural land in green wedges and peri-urban areas should be retained for productive use so it is not permanently lost." (p 40)</p>
2.1.1.	<p>Maintain a permanent urban growth boundary around Melbourne to create a more consolidated, sustainable city</p> <p>"Maintaining a permanent urban growth boundary sends a clear message about the long-term development priorities for Melbourne and Victoria. These policies include...protecting the values of non-urban land, opportunities for productive agricultural land and significant landscapes..." (p 47)</p>
4.5.1	<p>Strengthen protection and management of green wedge land</p> <p>"...There is a need to ensure the planning controls in place for Melbourne's green wedges are robust and can deliver ongoing environmental, cultural and health and wellbeing benefits to the community, while supporting agricultural businesses and jobs..." (p 89)</p>
7.1.2	<p>Support planning for growing towns in peri-urban areas</p> <p>"...Growth boundaries should be established for each town to avoid urban sprawl and protect agricultural land and environmental assets" (p 131)</p>

32 Planning and Environment (Metropolitan Green Wedge Protection) Act 2003. Act No. 43/2003.

33 Buxton, M and Carey, R (2014) The use of planning provisions and legislation to protect peri-urban agricultural land, *Australian Environment Review*, September 2014, p 191-195.

34 DELWP (2017) Plan Melbourne 2017-2050, Metropolitan Planning Strategy. Melbourne: Department of Environment, Land, Water and Planning.

The strategy recognises the importance of protecting farmland on the city fringe for the city's future food security (see policy 1.4.1). It also commits to maintain the city's permanent UGB to send, "a clear message about the long term development priorities for Melbourne and Victoria"³⁵. However, extensions to the UGB since it was introduced in 2002 undermine the clarity of the signals sent by government about the intent to maintain the boundary and protect areas of agricultural land for the long term, fuelling land speculation and rising land prices (see section 3.2).

Plan Melbourne 2017-2050 is a strategic document that, "where relevant, planning and responsible authorities must consider and apply"³⁶. However, like objectives in the State Planning Policy Framework, its policies are open to interpretation by local government planners and are balanced alongside other competing priorities. The main way that local government planners operationalise objectives for protecting farmland is through the use of land use controls, such as zoning, overlays and limits on subdivisions.³⁷

Zones

The Victoria Planning Provisions include a number of zones that specify agriculture as an intended land use (among other purposes) and that promote the protection of farmland, including the Farming Zone, Green Wedge and Green Wedge A zones and the Rural Conservation Zone (see Table 3). Zones (and overlays) are a key mechanism for implementing state and local planning policy frameworks. Zones define the intended uses of land and restrictions on uses, and they are one of the main planning provisions used by local governments and other planning authorities to assess land use planning applications.³⁸

Extensions to the Urban Growth Boundary since it was introduced in 2002 undermine the clarity of the signals sent by government about the intent to maintain the boundary and protect areas of agricultural land for the long term.

35 Policy 2.1.1 Maintain a permanent urban growth boundary around Melbourne to create a more consolidated, sustainable city, *Plan Melbourne 2017-2050*.

36 Victoria Planning Provisions, Clause 9, Plan Melbourne - http://planningschemes.dpcd.vic.gov.au/schemes/vpps/09_SPPF.pdf (accessed 14 June 2018)

37 Budge, T et al (2011) *Does Australia need a national policy to preserve agricultural land?* Sydney: Australia Farm Institute.

38 Llaugas, A, Buxton, M and Beilin R (2016) As above.

Table 3 Zones in the Victoria Planning Provisions that promote the protection of land for agriculture (bolding added for emphasis)

Zone	Purposes relevant to protecting farmland
35.04 Green Wedge Zone	<ul style="list-style-type: none"> • To provide for the use of land for agriculture. • To recognise, protect and conserve green wedge land for its agricultural, environmental, historic, landscape, recreational and tourism opportunities, and mineral and stone resources. • To encourage use and development that is consistent with sustainable land management practices. • To encourage sustainable farming activities and provide opportunity for a variety of productive agricultural uses.
35.05 Green Wedge A Zone	<ul style="list-style-type: none"> • To provide for the use of land for agriculture. • To ensure that use and development promotes sustainable land management practices and infrastructure provision.
35.06 Rural Conservation Zone	<ul style="list-style-type: none"> • To encourage development and use of land which is consistent with sustainable land management and land capability practices, and which takes into account the conservation values and environmental sensitivity of the locality. • To provide for agricultural use consistent with the conservation of environmental and landscape values of the area.
35.07 Farming Zone	<ul style="list-style-type: none"> • To provide for the use of land for agriculture. • To encourage the retention of productive agricultural land. • To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture. • To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.

Zones can only be introduced or amended by state government through the Victoria Planning Provisions. However, local governments can fine tune the provisions of zones to local circumstances through the use of “schedules”. Sometimes, these local schedules water down the provisions in zones, undermining their usefulness for farmland protection e.g. by reducing the minimum subdivision and lot size (see section 3.2).

In September 2013, the Victorian Government made changes to the Rural Conservation Zone³⁹ that significantly weakened the zone by allowing unrestricted commercial and agricultural uses in what was formerly the strongest green wedge zone. The Government also weakened the usefulness of the Green Wedge Zone for farmland protection by reducing minimum lot sizes in some zones, reducing restrictions on subdivisions, easing restrictions on commercial uses and allowing a wider range of uses and developments without permits.⁴⁰ These changes were significant as the subdivision of large properties into smaller lots, an increase in the number of lots and the introduction of commercial and other non-farm uses are likely to lead to progressive loss of farmland.⁴¹ Subdivision leads to land fragmentation, fuelling speculative investment, and the introduction of commercial and urban uses leads to land uses that are incompatible with agriculture and increases conflicts between farmers and non-farming neighbours (see section 3.2).⁴² The 2013 changes to these zones undermine overarching objectives in the State Planning Policy Framework and *Plan Melbourne 2017-2050* to provide long term protection for productive farmland on Melbourne's fringe.

Effective preservation of farmland requires strong policies to contain urban development to existing urban areas.

Urban development

Effective preservation of farmland not only requires policies to promote the use of farmland for farming. It also requires strong policies to contain urban development to existing urban areas (to the greatest extent possible) to prevent the conversion of productive farmland to new urban uses. Melbourne has historically accommodated much of its new growth in low density housing on the urban fringe.⁴³ *Plan Melbourne 2017-2050* aims to reduce urban sprawl and increase housing density in existing urban areas. It proposes an aspirational target of 70% of new housing in established urban areas. However, analysis by Deloitte Access Economics for the Foodprint Melbourne project suggests that a target of 70% infill of existing urban areas, and 30% of new housing in outer suburban growth areas would still lead to significant loss of production capacity in Melbourne's foodbowl⁴⁴, and Buxton and colleagues have estimated that 78% of population growth could be accommodated in existing urban areas for a population of 8 million.⁴⁵

39 The changes were made under the *Planning and Environment Amendment (General) Act 2013*, Amendment VC103 on 5 September 2013

40 Llausas, A, Buxton, M and Beilin R (2016). As above.

41 Buxton, M, Carey, R and Phelan, K (2016) The role of peri-urban land use planning in resilient urban agriculture: A case study of Melbourne, Australia. In Maheshwari, B, Singh, V and Thoradeniya, B (eds) *Balanced urban development: options and strategies for liveable cities*. Springer.

42 Buxton, M, Carey, R and Phelan, K (2016) As above.

43 Spencer, A., Gill, J., & Schmahmann, L. (2015) Urban or suburban? Examining the density of Australian cities in a global context. Paper presented at *The State of Australian Cities Conference 2015*, 9–11 December 2015, The Gold Coast, Queensland.

44 Deloitte Access Economics (2016) *The economic contribution of Melbourne's foodbowl*. A report for the Foodprint Melbourne project, University of Melbourne. July 2016. Melbourne: Deloitte Access Economics.

45 Buxton, M, Hurley, J and Phelan, K (2015) Melbourne at 8 million: Matching land supply to dwelling demand. Melbourne: RMIT University, Centre for Urban Research

Farmland on Melbourne's fringe is not only lost to housing development. It is also displaced by commercial and infrastructure development. Threats to farmland in Melbourne's foodbowl in recent years have included:

- A proposal to build **a new cemetery** of 130 ha on the Heatherton market gardens in the Kingston green wedge (a decision is expected in 2018)⁴⁶
- Consideration of the Werribee South market gardens in the Werribee South green wedge as a site for **a new container port**.⁴⁷ The Werribee South market gardens produce around 10% of Victoria's vegetables
- A proposal to build a **new youth justice centre** adjacent to the Werribee South market gardens (a new site has since been proposed)⁴⁸
- A proposal by AGL to site a **new gas pipeline** across farms in Clyde/Deavon Meadows to the South-east of Melbourne, which some farmers say would make their farms unviable⁴⁹

Decisions on these infrastructure proposals fall under a range of ministerial portfolios within the Victorian Government, including the Minister for Health (cemeteries), the Minister for Ports (new ports), the Minister for Youth Affairs (youth justice centre) and the Minister for Energy, Environment and Climate Change (gas pipelines). It is unclear whether a formal process exists for considering the impact of these decisions in relation to planning objectives to retain productive agricultural land and to prevent land uses that adversely impact agriculture.

Summary

There are multiple policy statements and mechanisms within the Victoria Planning Provisions for the protection of farmland in Melbourne's foodbowl, including zoning that promotes agriculture, the green wedges and an Urban Growth Boundary. However, as section 3.2 highlights, the intent of these policies is undermined by actions that weaken them, leading to a lack of certainty among stakeholders about the Victorian Government's commitment to retain areas of productive agricultural land on Melbourne's fringe for the long term.

46 Chohan, N (2015) Secret plan for huge new Melbourne cemetery. *The Age*, 17 September 2015; van Estrop, C (2016) Heatherton cemetery on hold as Cheltenham and Brighton cemeteries near capacity. *Herald Sun*, 1 October 2016.

47 Carey, A (2014) Werribee South market gardens best site for Bay West port, study finds. *The Age*, 14 November 2014.

48 Dowling, D and White, A (2017) Major announcement on Werribee South youth prison. *Herald Sun*, 15 March 2017.

49 Laskie, A (2018) South Gippsland gas pipeline proposal: new veggie scrap over plans. *Weekly Times*, 3 May 2018.

3.1.2 Local government policy

Although state governments have primary responsibility for land use planning policy and regulation in Australia, they devolve much of the day to day responsibility for planning decisions to local governments.⁵⁰ Local governments draw on the Victoria Planning Provisions to create local planning schemes. They create a municipal strategic statement (MSS), which is a statement of the local government's strategic planning and development objectives and a local planning policy, which sets out how they will implement the objectives and strategies in the MSS.

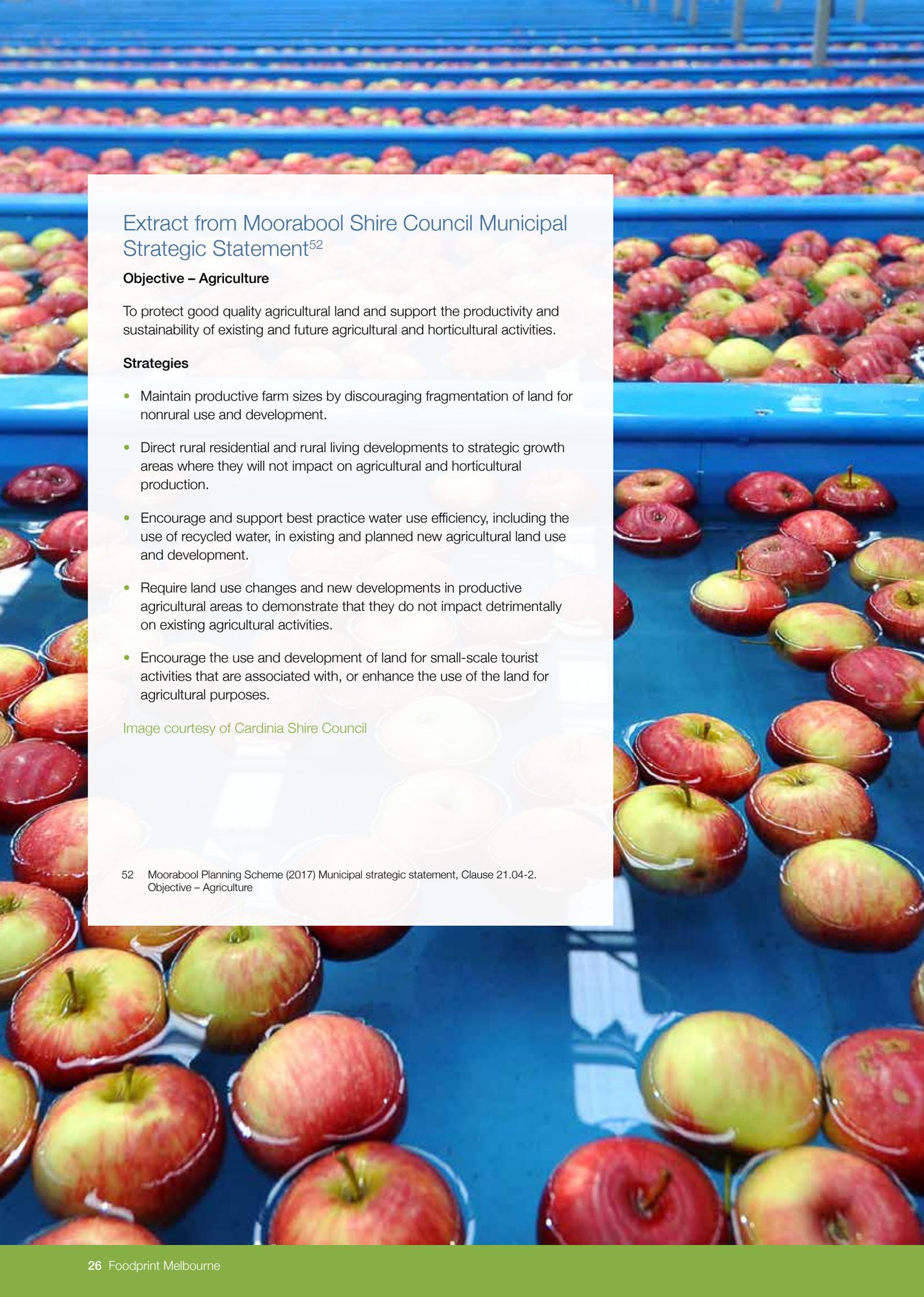
Municipal strategic statements

Municipal strategic statements are important to protecting farmland in Melbourne's foodbowl because they set the strategic direction for local government planning and guide planners in their day to day decision-making. Some local governments in Melbourne's foodbowl (such as Moorabool Shire Council and Mornington Peninsula Shire) have used these documents to set clear objectives to protect agricultural land. For example, Moorabool Shire Council has multiple statements throughout its MSS that relate to protecting agricultural land, including an urban growth strategy to, "avoid urban development where it is likely to impact on highly productive agricultural land, environmental values and the long-term sustainability of natural resources" and a specific strategy focused on protecting agricultural land and promoting agricultural activities (see below).⁵¹ It makes clear the need to direct urban development away from areas of agricultural production, to prevent subdivisions that lead to land fragmentation, and also to encourage small-scale agri-tourism that has the potential to enhance farm viability (see section 3.3).

Municipal strategic statements are important to protecting farmland in Melbourne's foodbowl because they set the strategic direction for local government planning.

50 Budge, T and Butt, A (2017) Farmland preservation in Australia. In Caldwell, W, Hiltz, S and Wilton, B (eds) *Farmland preservation: Land for future generations*. 2nd edition. Winnipeg: University of Manitoba Press.

51 Moorabool Planning Scheme (2017) Municipal strategic statement, Clause 21.03-2 Objective – Urban growth management



Extract from Moorabool Shire Council Municipal Strategic Statement⁵²

Objective – Agriculture

To protect good quality agricultural land and support the productivity and sustainability of existing and future agricultural and horticultural activities.

Strategies

- Maintain productive farm sizes by discouraging fragmentation of land for nonrural use and development.
- Direct rural residential and rural living developments to strategic growth areas where they will not impact on agricultural and horticultural production.
- Encourage and support best practice water use efficiency, including the use of recycled water, in existing and planned new agricultural land use and development.
- Require land use changes and new developments in productive agricultural areas to demonstrate that they do not impact detrimentally on existing agricultural activities.
- Encourage the use and development of land for small-scale tourist activities that are associated with, or enhance the use of the land for agricultural purposes.

Image courtesy of Cardinia Shire Council

52 Moorabool Planning Scheme (2017) Municipal strategic statement, Clause 21.04-2. Objective – Agriculture

Mornington Peninsula Shire also has multiple statements throughout its MSS about the need to protect agricultural land, including a detailed policy on “Supporting agriculture and primary production”.⁵³ However, not all local governments in Melbourne’s foodbowl use their municipal strategic statements as effectively as they could to set a strong direction for farmland protection. Where weaker language is used in statements about protecting farmland (e.g. “consider” rather than “ensure”, “used primarily for” rather than “used for”), there is greater room for ambiguity in day to day planning decisions. Moreover, as section 5 highlights, policy to promote the productive and viable use of farmland is as important as policy to protect it.

Even where local governments have strong policies to protect farmland, they can be overridden by the state government. This has occurred in multiple expansions of the UGB, leading to conflict between state and local governments over the issue of protecting farmland. In the 2010 expansion of the UGB, for example, 43,000 hectares of green belt land were incorporated within the UGB, contradicting the *Melbourne 2030* metropolitan planning strategy and the *Metropolitan Green Wedge Protection Act (2003)*. This expansion included 4000 hectares of market garden land in the City of Casey, despite the City of Casey arguing against it.⁵⁴ Local government objectives to protect farmland can also be undermined by rulings of the Victorian Civil and Administrative Tribunal (VCAT) that overturn local council decisions to reject developments on or close to farmland in green wedge and peri-urban areas.⁵⁵

Local planning policies

Local governments develop local planning policies that describe how they will implement their planning objectives. They have some flexibility in interpreting the Victoria Planning Provisions, and use schedules to adapt provisions to local circumstances, often to alter the minimum lot and subdivision sizes that apply within zones or the restrictions on building dwellings.⁵⁶ The minimum lot and subdivision size specified in the Farming, Rural Conservation and Green Wedge Zones is 40 hectares (8 hectares in the Green Wedge A Zone).⁵⁷ However, local governments have adapted this minimum so that lot and subdivision sizes vary widely from 0.6 to 100 hectares. Different minimum sizes may be applied to the same zone in different parts of a local government area.⁵⁸

Reducing lot and subdivision sizes has a number of adverse impacts. Smaller lots command higher land prices⁵⁹, which undermines the viability of farming (see section 3.2) and fuels speculation. More dwellings tend to be constructed on smaller rural lots, which also increases land prices and may impede future farming activities. Often local government areas that allow subdivisions into smaller lots have objectives in their MSS to protect farmland, but these objectives are undermined by a more permissive approach to subdivision.⁶⁰

53 Mornington Peninsula Planning Scheme (2017) Municipal strategic statement, Clause 21.09-2 – Supporting agriculture and primary production

54 Dowling, J (2010) Green land cut back as Melbourne grows much bigger. *The Age*, 29 July 2010.

55 Khadem, N (2010) ‘Grey areas’ in green wedge scheme. *The Age*, 20 February 2005.

56 Llaugas, A, Buxton, M and Beilin, R (2016) as above. Choy, D and Buxton, M (2013) Farming the city fringe: Dilemmas for peri-urban planning. In Farmer-Bowers, Q, Higgins, V and Millar, J (eds) *Food security in Australia – challenges and prospects for the future*. Springer.

57 Victoria Planning Provisions – Section 30, Zones.

58 Llaugas, A, Buxton, M and Beilin, R (2016) as above.

59 Barr and McKenzie (2007) in Buxton, M, Carey, R and Phelan, K (2016) As above.

60 Choy, D and Buxton, M (2013). As above.

Green wedge management plans

Local governments in green wedge areas are also required to have green wedge management plans that specify their vision and objectives for the green wedge, including the natural resources that should be protected and preferred land uses.⁶¹

Some green wedge management plans contribute to the protection of farmland in Melbourne's foodbowl by articulating a vision for agriculture as part of the green wedge and by proposing strategies to support agricultural activities. For example, Mornington Peninsula Shire's green wedge management plan includes as part of its vision:

"A place where sustainable agriculture is supported and the productive capacity of land is conserved and enhanced for the future"⁶²

It also has an objective to "promote and support farming and agricultural productivity in the green wedge" and has implemented multiple strategies to achieve this objective (see section 3.3). However, the implementation of green wedge management plans overall has been patchy. Some local governments in green wedge areas have not developed green wedge management plans, and some green wedge management plans do not place significant emphasis on protecting agricultural land and supporting agriculture:

"The green wedge management plans, I think have been a flop. They're moderately reasonable in some municipalities; other municipalities, they haven't even done them yet"

Interview 3, Civil society

Moreover, green wedge management plans currently have the status of overarching policy statements but do not have statutory force. There are opportunities to strengthen these plans (see section 3.3).

Summary

Local governments play an important role in implementing policy to support the protection of farmland by making it a focus of municipal strategic statements, local planning policies and green wedge management plans. However, the schedules developed by local governments to adapt planning provisions to local needs can water down farmland protections. State government policies can also undermine the efforts of local government to protect farmland, as seen in previous expansions of the UGB.

61 Victorian Government (2018) Planning, policy and initiatives – green wedges - <https://www.planning.vic.gov.au/policy-and-strategy/green-wedges> (accessed 14 June 2018)

62 Mornington Peninsula Shire (2012) Interim green wedge management plan. September 2012.

3.2 What are the policy challenges?

This section discusses the policy challenges to protecting farmland in Melbourne's foodbowl raised by stakeholders in interviews.

Uncertainty about the future of the green wedges

The protection of Melbourne's green wedges is a clear overarching policy objective in the State Planning Policy Framework⁶³, and the Victorian Government's commitment to protect the green wedges has recently been reaffirmed in *Plan Melbourne 2017-2050*.⁶⁴ However, many interviewees (farmers, local government, industry and some state government interviewees) expressed a wide-spread perception amongst stakeholders that there is ongoing uncertainty about the future of the green wedges:

"Just about everyone around tells me, it will go, the green wedge is going to go... I'd really like the government to come out and say, if it's green wedge, it's staying green wedge"

Interview 7, Farmer

"Part of the dysfunction in land use is because of uncertainty, chronic uncertainty about whether that will remain as rural land or not"

Interview 8, Government

The widespread sense of uncertainty among stakeholders about the future of Melbourne's green wedges and peri-urban areas was also highlighted in the *2010 Inquiry into Sustainable Development of Agribusiness in Outer Suburban Melbourne*.⁶⁵ Uncertainty about the future of the green wedges and farmland in Melbourne's peri-urban areas inhibits investment by both government and farmers. Farmers are reluctant to make investments that they may not recoup the benefits of, and government is reluctant to make long term investments in public infrastructure for agriculture in areas that may become housing:

"Nobody is going to invest in something that's going to be turned over to urban development. We can't do that"

Interview 16, Government

"[They're] 50 to 100-year assets...civil assets...well, what if they're only there for 10 years? You've just put money into a 50-year asset that is only in use for 10 years. So certainty is an important thing when it comes down to supplying or building infrastructure"

Interview 11, Government

There is ongoing uncertainty among stakeholders about the future of the green wedges.

63 Victoria Planning Provisions, section 10 – State Planning Policy Framework

64 DELWP (2017) Plan Melbourne 2017-2050. As above.

65 OSISDC (2010) As above.

Stakeholder and community uncertainty about the future of Melbourne's green wedges is one of the most significant challenges to the long term future of Melbourne's foodbowl. Stakeholders in our three international best practice cities also highlighted the importance of creating a sense of *long term certainty* for strengthening regions of city fringe food production:

"The key lesson is just you have to make a choice ... so we made the choice to set the land aside, and once you do that it's kind of got to be seen as a choice you're making and you're going to stick with it so you can really go for it, and maybe that's the lesson that's most important, is you've just got to decide once and for all whether you want it or not."

International interview 1, Vancouver

See section 3.3 for opportunities to create greater certainty.

Speculative investment in land on the UGB

"Land banking" (speculative investment in land on the UGB to make a profit if it is rezoned for residential development) is a significant barrier to protecting farmland in Melbourne's foodbowl. Parcels of green wedge zoned farmland close to the UGB are openly marketed as "land banking" opportunities (see the example opposite), which drives up the price of farmland, fueling further speculative investment, and undermining the viability of farming.⁶⁶

Lack of certainty about the future of the green wedges and unplanned changes to the UGB fuel this speculative investment:

"The urban growth boundary is not supposed to move but it's moved before...so if you buy close enough to the urban growth boundary and you sit on it for 30 years, the chances are you'll be within the urban growth boundary within that time. So I don't know how you change that"

Interview 4, Government

Land banking drives up the cost of land beyond the price at which farmers can use it to farm profitably, impeding the ability of farmers to expand their farms or of new farmers to buy or lease land in the foodbowl (see section 5)⁶⁷:

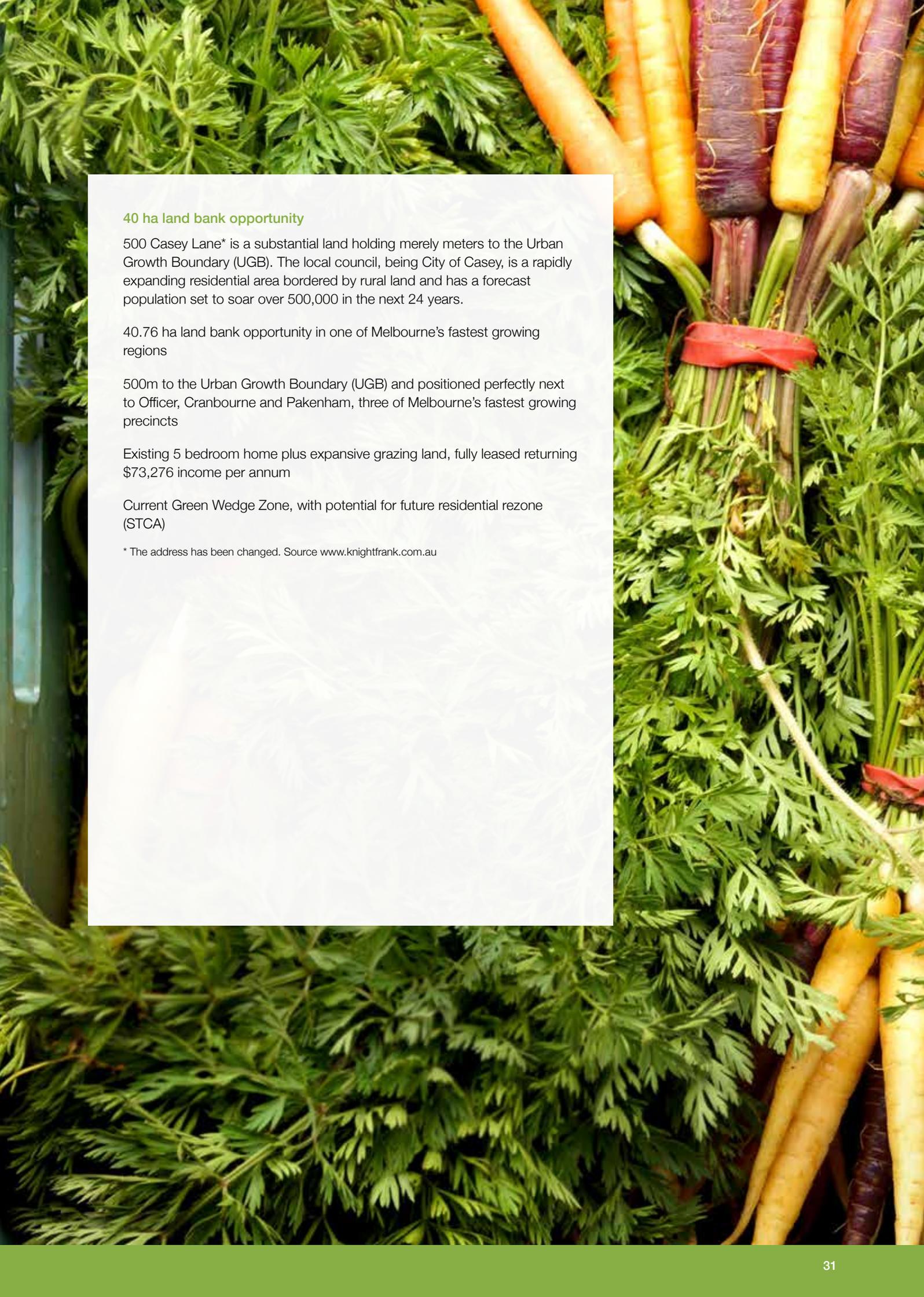
"It's also difficult for [farmers] to expand and grow, because to go out and spend \$150,000 on an acre, your ability to pay the interest on that by growing any crop, any vegetable crop, it's a moot point"

Interview 9, Farmer

Uncertainty about the future of Melbourne's green wedges is one of the most significant challenges to the long term future of Melbourne's foodbowl

66 Buxton, M, Carey, R and Phelan, K (2016). As above.

67 See also OSISDC (2010) As above.



40 ha land bank opportunity

500 Casey Lane* is a substantial land holding merely meters to the Urban Growth Boundary (UGB). The local council, being City of Casey, is a rapidly expanding residential area bordered by rural land and has a forecast population set to soar over 500,000 in the next 24 years.

40.76 ha land bank opportunity in one of Melbourne's fastest growing regions

500m to the Urban Growth Boundary (UGB) and positioned perfectly next to Officer, Cranbourne and Pakenham, three of Melbourne's fastest growing precincts

Existing 5 bedroom home plus expansive grazing land, fully leased returning \$73,276 income per annum

Current Green Wedge Zone, with potential for future residential rezone (STCA)

* The address has been changed. Source www.knightfrank.com.au

Speculative investment is sometimes accompanied by intense lobbying of state government politicians and local government councillors to rezone farmland for residential use. Some stakeholders highlighted this as a significant barrier to protecting farmland on Melbourne's fringe:

"Councils are listening to the people who are pushing most and the people who are pushing most are the people who want to be able to subdivide their land"

Interview 2, Civil society

Speculative investment is one of the most difficult challenges to address in protecting farmland. Our three international best practice cities – Vancouver, Toronto and Portland – continue to be subject to speculative investment on their urban fringes (see section 6):

"Speculation is a stubborn weed. It's hard to kill it"

International interview 4, Vancouver

However, Portland has introduced "urban reserves" outside their UGB that have the potential to concentrate speculative investment in specific areas, easing pressure in other areas (see section 3.3).

Under-utilisation of farmland

Farmland in Melbourne's foodbowl is often under-utilised and does not realise its full productive capacity due to land banking, the fragmentation of land into smaller parcels and the increasing number of part-time farmers or "rural lifestylers" moving into peri-urban areas.

Land banking undermines the productive capacity of farmland in Melbourne's foodbowl as land is left idle or sometimes used to dump rubbish:⁶⁸

"They're speculating on the land...our neighbour over the back bought the land ... for \$16,000 an acre. He's now trying to sell it to me for \$130,000 an acre and he's done nothing to it. In fact, he's just dumped rubbish on it...and this was good, prime production land that's just gone to waste, because he's going to sell it one day."

Interview 7, Farmer

68 OSISDC (2010) As above.

People are increasingly moving into areas of Melbourne's foodbowl motivated primarily by the desire for a rural lifestyle, rather than a career in farming. This is a pattern common to the peri-urban areas of other cities⁷⁰. Although "rural lifestylers" may also farm, they typically engage in low intensity farming that does not utilise the land to its full capacity. Sometimes, they engage in a minimum level of agricultural activity to qualify for a dwelling on their land or a discount on local government rates:

"There's a lot of land that is getting the agricultural rate...but it's being used for horses which is not really food production. Or it's being used at a very low intensity so three or four cows on a 10 hectare property...people get their house by having agriculture and they get the agricultural rate for having agriculture but it's not really contributing a lot to our food security. It's a very much lower intensity than what the land is capable of supporting."

Interview 5, Government

There is an opportunity to encourage greater utilisation of farmland in Melbourne's foodbowl and a higher level of productivity through the design of differential rates schemes, for example, and through the provision of extension services (see section 5).

Land fragmentation and weakening of restrictions on land uses

There is an on-going process of land fragmentation in Melbourne's foodbowl, as farmland is subdivided into smaller and smaller blocks, and as more dwellings are allowed on those blocks⁷¹. This is one of the most significant challenges for the protection of farmland as it becomes increasingly difficult to farm on smaller blocks of land and with non-farming residents in close proximity (see section 5.2). Some interviewees highlighted the scale of the challenge:

"There's two big problems for agriculture...in the peri urban [area] at the moment and one is that massive amount of subdivided land"

Interview 3, Civil society

"Land fragmentation is so amazingly frustrating because it's baseless. So as an example, a working farm recently sold in [this region], 99 hectares. It's zoned Green Wedge A...no one has been out to do soils testing or to quantify the value of that land from a productive perspective...Green Wedge A, you can subdivide down to eight [hectares]. So that property will be subdivided into 12 properties and probably end up a little horse ghetto"

Interview 4, Government

69 Butt, A (2013) Development, dilution and functional change in the peri-urban landscape: What does it really mean for agriculture? In Farmer-Bowers, Q, Higgins, V and Millar, J (eds) *Food security in Australia – challenges and prospects for the future*. Springer.

70 Llaugas, A, Buxton, M and Beilin, R (2016) as above.

71 Buxton, M et al (2014) Alternative futures for Melbourne's peri-urban region. December 2014. Melbourne: RMIT University.

In addition to allowing smaller subdivisions than the green wedge zone (where the minimum lot size is 40 hectares), the Green Wedge A Zone is more permissive in the land uses it allows⁷², and some stakeholders felt that this zone is eroding the integrity of planning in the green wedges.

In 2003, restrictions on the green wedge zones were loosened to allow a wider range of land uses including horse stables, places of worship, accommodation and restaurants (see section 3.1). This has enabled a broader range of non-farming uses in the green wedges and some civil society stakeholders feel that this has fueled urban development, posing a significant risk to the future of the green wedges:

"If this continues as it is there won't be any green wedges. They'll disappear. They'll become urbanised"

Interview 2, Civil society

Allowable uses in the green wedges need to be tightened, and there are measures that both state and local government can take to ensure this (see section 3.3).

Affordable housing and challenges to development in inner and middle suburbs

Melbourne is the most rapidly growing city in Australia⁷³, with predictions that the city's population will grow to 8 million by around 2050.⁷⁴ The Victorian Government has a target to build 50,000 new homes per year, and to release around 100,000 new lots in the growth corridors on Melbourne's fringe, to accommodate population growth and address concerns about housing affordability.⁷⁵

The Victorian Government also has a policy objective to, "increase development opportunities in the inner and middle suburbs".⁷⁶ Increased development in the inner and middle ring suburbs of Melbourne at higher rates of urban density has the potential to ease pressure for housing development on Melbourne's fringe. However, there are challenges to achieving this, including delays in planning approvals and providing necessary infrastructure⁷⁷, and resistance to growth in middle ring suburbs. Yet if these challenges can be addressed, there is significant scope for greater development in existing urban areas to reduce pressure on Melbourne's foodbowl:

"There is scope for doing a lot more [in inner and middle suburbs], but to some extent, it's been easier to continue developing on the fringe..."

There is an on-going process of land fragmentation in Melbourne's foodbowl as farmland is subdivided into smaller and smaller blocks, and as more dwellings are allowed on those blocks.

72 Victoria Planning Provisions – Section 30, Zones

73 ABS (2016) Population projections, Australia 2012 to 2101: Victoria. Canberra: Australian Bureau of Statistics.

74 DELWP (2017) Plan Melbourne 2017-2050. As above.

75 Victorian Government (2017) Homes for Victorians, Housing supply and planning – Increase the supply of houses through faster planning - <https://www.vic.gov.au/affordablehousing/housing-supply-and-planning.html> (accessed 18 June 2018).

76 Victorian Government (2017) As above.

77 Victorian Government (2017) Homes for Victorians – planning initiatives fact sheet - <https://www.vic.gov.au/affordablehousing/housing-supply-and-planning.html> (accessed 18 June 2018).

"...the development industry as a whole, doesn't really care whether development happens on the urban fringe or whether development happens in apartments or infill development or whatever. The industry will adapt and change to the opportunities that exist. But when you've got 100,000 people arriving in Victoria every year plus natural population growth, all we're saying is we need more opportunities to be able to satisfy that demand"

Interview 15, Industry

The type of planning that occurs in outer urban growth corridors also has implications for agriculture in the green wedges. Low density sprawl in urban corridors leads to wasteful use of land and increases pressure on the green wedges. No mandatory urban densities apply in Melbourne's urban growth corridors, so new housing in the growth corridors is constructed at some of the lowest densities in the world. A 2007 study, for example, showed that increasing density to 20 lots per hectare in new estates could achieve 61 per cent more dwellings in the same area and save 45 per cent of land used for housing.⁷⁸

Poor understanding of agriculture in the planning profession

Some stakeholders suggested that effective planning in Melbourne's foodbowl was undermined by a poor understanding within the planning profession of the needs of agriculture, as a result of the profession's focus on urban issues.

"The planners that I've worked with, other than one...have no idea about agricultural production and how land use planning influences [it]"

Interview 4, Government

Some suggested this was partly due to a lack of training and expertise in the planning profession on agricultural issues:

"Rural planning is something that [planners] are not concerned with. They're concerned with urban...and it's the urban side most of them are brought up to be involved with... when it comes to rural it's like second cab off the rank"

Interview 2, Civil society

In some countries, such as the United States, food system planning is emerging as a sub-discipline within the planning profession, and planners are beginning to receive more training in agricultural and food system issues. For example, the American Planning Association has developed a policy guide on agricultural land preservation⁷⁹, has a Food Interest Group of planners actively engaged in food system planning and has developed a range of resources to assist with planning healthy, sustainable food systems.⁸⁰ These developments have not yet taken place in Australia.

78 Buxton, M, Scheurer, J. (2007) *Urban Policy and Research* 25 (1): 91-111.

79 American Planning Association (1999) Policy guide on agricultural land preservation - <https://www.planning.org/policy/guides/adopted/agricultural.htm> (accessed 18 June 2018)

80 American Planning Association (2018) Food systems - <https://www.planning.org/ontheradar/food/> (accessed 18 June 2018)

3.3 Opportunities

Provide certainty about the future of Melbourne's foodbowl

In 2010, a Victorian Government inquiry into the Sustainable Development of Agribusiness in Outer Suburban Melbourne⁸¹ concluded that greater certainty was needed about the long term future of farming in the green wedges and peri-urban Melbourne in order to encourage investment. Certainty has not yet been provided and is still needed. This is perhaps the single most important step that could be taken to strengthen Melbourne's foodbowl. Certainty creates confidence for stakeholders, acting as a springboard for investment and innovation.

To provide certainty, strong and consistent policy signals are needed from the Victorian Government (see below) and, crucially, *long term planning*. Several interviewees highlighted the need for clearer long term planning about where growth will occur if there is a need to extend Melbourne's UGB:

"Let's acknowledge that the urban growth boundary is going to get moved now and then. Let's just be realistic. But...let's just say if we moved it, we're going to move it here, and we're never going to move there. That way, we can at least say we've got our growth corridors and people will continue to speculate in those areas. But if we just said no, we're never going to move it in between Melton and Wyndham, that's just fixed absolutely, then maybe we could start to extinguish that speculation there"

Interview 8, Government

"We don't really do enough long term planning to say in this area, this corridor is the one that we're ear marking for the future growth... when the boundary does change again, next time it's going to change in this area. Now that would just mean that everyone will go in there and jump on that land and buy it up. But that's not necessarily a bad thing because that means that all the attention is being focused in the area that the government wants to develop. The area down here, which you might want to protect for whatever reason, be it environmental values or value its farm production, there's not so much speculation goes on in that area"

Interview 15, Industry

The city of Portland in Oregon (US) has adopted a similar approach of providing long term certainty about where future growth will (and will not) occur by developing a 50-year growth plan⁸². It has designated "urban reserves", where growth will occur if the city's urban growth boundary is extended, and "rural reserves" that will be protected from urban development for at least 50 years (see case study).⁸³

Greater certainty is needed about the long-term future of farming in the green wedges and peri-urban Melbourne.

81 OSISDC (2010). As above.

82 Metro (2000) *The nature of 2040: The region's 50-year plan for managing growth*. Portland: Metro.

83 2040 Growth Concept - <https://www.oregonmetro.gov/2040-growth-concept> (accessed 19 June 2018).



Case study: Portland – creating certainty with a 50-year plan for managing growth

The city of Portland in Oregon has provided certainty for its peri-urban regions of food production by developing a 50-year plan for urban growth.⁸⁴ *The Nature of 2040* plan was developed in 1995 and presents a long term vision for managing growth in such a way that urban areas are contained and the natural and environmental values of the city's hinterland are protected. This process also led to the creation of urban and rural reserves in 2010.⁸⁵

Portland's urban reserves indicate where urban development will take place over the next 50 years if the city's urban growth boundary needs to be extended. Oregon state law also defines strict criteria by which land can be considered for inclusion in the urban growth boundary, classifying land as Priority 1-4. Land in the urban reserves (Priority 1) must be considered for inclusion first. Productive farmland and forests (Priority 4) can only be considered for inclusion after all other options have been exhausted and, if farmland must be included, the poorest quality farmland is included first (see section 6.3 for further details).⁸⁶

The city's rural reserves protect areas that are important for farming and areas important for conservation (such as wetlands and rivers) for 50 years. The reserves are protected through legislation enacted by the state of Oregon. Prior to the creation of the rural reserves, "land owners at the edge of the boundary were in perpetual limbo, unsure whether or when their lands might be targeted for urbanisation".⁸⁷ Investment in the region was also affected. The urban and rural reserves around Portland provide the community with long term certainty.

Image courtesy of Christine Rondeau (CC BY 2.0)

84 Metro (2000). As above.

85 Metro (2018) Urban and rural reserves - <https://www.oregonmetro.gov/urban-and-rural-reserves> (accessed 19 June 2018).

86 Metro (2018a) Urban growth boundary, guidelines - <https://www.oregonmetro.gov/urban-growth-boundary> (accessed 19 June 2018).

87 Metro (2018) As above.

“It’s really a certainty for both sides. The urban reserves provide certainty for the cities to plan where to go. The rural reserves provide certainty to the farmers...this is going to be protected for that long...so they can invest in their land, whether it’s agricultural infrastructure like irrigation or perennial crops or all kinds of different things that farmers plan down the road. So the key thing to me is certainty”

International interview 8, Portland

Map agricultural land on Melbourne’s fringe

There are currently no comprehensive (publicly available) maps of productive areas of farmland on Melbourne’s fringe that should be protected from urban development, and some interviewees suggested that these maps should be created. Some interviewees also suggested that there is a need to clarify which areas of Melbourne’s green wedges have conservation value and which have agricultural value. In other words, which areas should be protected for agriculture in the long term?

The Victorian Department of Environment, Land, Water and Planning is currently undertaking a mapping process to “identify areas of strategic agricultural land in Melbourne’s green wedges and peri-urban areas” as part of the implementation of Plan Melbourne 2017-2050. In this process, consideration will be given to soils, landscapes, water access, climate change and available infrastructure.⁸⁸

The cities of Portland and Vancouver undertook comprehensive mapping of agricultural land on their fringes as part of the process of providing long term protection for those areas. Land in Vancouver’s Agricultural Land Reserve (see section 6.1) was assessed according to a Land Capability Classification System that ranges from Class 1, where land has climate and soils that allow a wide range of crops to be grown, to class 7, which is non-arable land that is not suitable for agriculture.⁸⁹

88 Action 17, Support strategic planning for agriculture, in *Plan Melbourne Implementation Actions: Plan Melbourne 2017-2050* (p 3).

89 Provincial Agricultural Land Commission (2018) Agricultural land, agricultural land capability classification system - <https://www.alc.gov.bc.ca/alc/content/alr-maps/agricultural-land> (accessed 19 June 2018).

A key question driving Portland's study of agricultural lands was: "what factors affect the ability of an area to successfully conduct commercial agricultural operations over an extended period? Which lands surrounding the existing boundary meet these criteria?"⁹⁰ The viability of farmland was a critical consideration, and the growing consumer interest in artisan agriculture and purchasing locally grown food was considered as part of the assessment:

"With the trends in the local food economy and the growth of it in the Portland area, there are some areas...that have a higher viability for commercial agriculture just basically to serve that local food need. They can operate on smaller parcels... It promotes some smaller-scale agriculture where they can be targeted and maybe servicing some restaurants, servicing farmers' markets and the like. In a food city like Portland where it's such a foodie culture, they've got a ready-made market there. So a lot of these lands, these areas that were rural-residential at best and maybe hobby farmers at worst...they have become more and more viable"

International interview 8, Portland

Like Portland (also Vancouver and Toronto), Melbourne has a strong food culture, with a growing interest in the provenance of food and local sourcing.⁹¹ There is an opportunity for mapping of Melbourne's "strategic agricultural lands" to consider these consumer trends in the approach adopted to assessing the viability of agricultural lands on Melbourne's fringe.

Strengthen the Green Wedge Protection Act

One of the actions in the *Plan Melbourne 2017-2050* implementation plan⁹² is to review the green wedge planning provisions to ensure that they support the strategy's objectives to protect the green wedges. One way of providing greater certainty for Melbourne's green wedges would be to strengthen the *Planning and Environment (Metropolitan Green Wedge Protection) Act 2003* (see section 3.1.1). Some civil society interviewees suggested that this act needs to be overhauled to more clearly define the values of the green wedges in legislation and to send a clear signal:

"There needs to be another version of the Green Wedge Protection Act...which makes clear what these areas are for and what is not going to be allowed... there's got to be a message sent, hands off...the only way to do that is to define the values in the legislation"

Interview 3, Civil society

⁹⁰ Metro (2018). As above.

⁹¹ Carey, R, Larsen, K, Sheridan, J and Candy, S (2016) As above.

⁹² Action 72, Review green wedge planning provisions, in *Plan Melbourne Implementation Actions: Plan Melbourne 2017-2050* (p 9).

They also suggested that zones, subdivisions and other controls should be specified within the legislation to address weaknesses in their current application that undermine the integrity of the green wedges (see section 3.2). In 2010, the Outer Suburban Interface Services and Development Committee also emphasised the need for a new policy statement from the Victorian Government to more clearly define the purpose and values of Melbourne's green wedges⁹³:

"The Committee finds that a policy statement is needed from the Victorian Government which clearly sets out the purpose and values of the green wedges and explains how and why the government will seek to manage and improve them in coming decades. In comparison to other green wedge/greenbelt regimes examined by this Committee, state governments in Victoria have at times appeared to adopt a 'set and forget' attitude"

Outer Suburban Interface Services and Development Committee (2010)

Strengthen green wedge management plans

Green wedge management plans are important in specifying the values and resources in individual green wedge areas that should be protected, and the activities and land uses that will be supported.⁹⁴ However, green wedge management plans currently lack statutory force, which undermines their influence on planning decisions, such as disputes that come before VCAT, for example. One of the actions in the *Plan Melbourne 2017-2050* implementation plan⁹⁵ is to strengthen green wedge management plans by including a legislative requirement in the *Planning and Environment (Green Wedge Metropolitan Protection) Act 2003* for local governments to prepare and review plans. This mechanism could be used to give green wedge management plans statutory force. State government can also strengthen green wedge management plans by ensuring that all local governments in green wedge areas are funded and supported to develop and *implement* their plans.

Local governments can strengthen the effectiveness of green wedge management plans to protect farmland by (i) ensuring that they include strong statements about protecting farmland and promoting agriculture and by (ii) giving these policies statutory force through introducing relevant measures into their local planning policies.

Mornington Peninsula Shire's draft green wedge management plan includes an objective to "recognise and protect the value of the Mornington Peninsula for agriculture and to support and encourage sustainable agricultural land use", which includes actions to "rigorously oppose any amendments to the Urban Growth Boundary that would result in any loss of green wedge land" and to "rigorously oppose any amendments to the Green Wedge Zone which would reduce the minimum lot size requirements or introduce excision provisions".⁹⁶ The plan also recognises the importance of using provisions in the Shire's local planning policy to protect farmland to the greatest extent possible.

One way of providing greater certainty for Melbourne's green wedges would be to strengthen the *Metropolitan Green Wedge Protection Act 2003*.

93 OSISDC (2010) As above.

94 DELWP (2015) Preparing a green wedge management plan, practice note 31 - https://www.planning.vic.gov.au/__data/assets/pdf_file/0029/97166/PPN31-Preparing-a-Green-Wedge-Management-Plan_June-2015.pdf (accessed 20 June 2018).

95 Action 73, Green wedge management plans, in *Plan Melbourne Implementation Actions: Plan Melbourne 2017-2050* (p 9).

96 Mornington Peninsula Shire (2018) *Green wedge management plan (draft)*. Exhibition version June 2018. Mornington Peninsula Shire (p 67).

Cardinia Shire used its local policy planning policy⁹⁷ to give objectives in its Western Port green wedge management plan statutory force. The policy defines a precinct for agriculture, horticulture and soil-based food production within the green wedge, and it aims to discourage non-rural land uses (schools, places of worship etc.) from locating in the precinct and surrounding areas. It also encourages the consolidation of lots throughout the precinct. In this way, it aims to address land fragmentation and tighten land uses in the precinct to counter the weakening of green wedge planning provisions that occurred in 2013 (see section 3.1.1).⁹⁸

Raise public awareness of the value of agriculture in the green wedges

Melbourne's green wedges were originally protected in 1971 as the green "lungs" of the city, areas of "open spaces protected from urban development".⁹⁹ The green wedges have conservation, recreation and agricultural values.¹⁰⁰ However, some stakeholders emphasised the need for better public awareness of their agricultural values:

"There needs to be a stronger recognition of agriculture in the green wedges as both a productive thing but it's also an amenity, community thing"

Interview 2, Civil society

In its 2010 report, the Outer Suburban Interface Services and Development Committee also highlighted the need for better public understanding of the role of agriculture in the green wedges:

"The Committee believes there is a need to build public understanding of the green wedges and the important role that agriculture plays within them. The Committee sees benefits in a communication campaign taking this message to the wider community"

Outer Suburban Interface Services and Development Committee (2010)

97 Cardinia Shire Council (2017) *Cardinia Western Port green wedge management plan*. Adopted May 2017. Officer: Cardinia Shire Council.

98 The changes were made under the *Planning and Environment Amendment (General) Act 2013*, Amendment VC103 on 5 September 2013

99 Melbourne and Metropolitan Board of Works (1971) *Planning policies for the Melbourne metropolitan region*. Melbourne: Melbourne and Metropolitan Board of Works.

100 Department of Infrastructure (2002) *Melbourne 2030: Planning for sustainable growth*. Melbourne: Department of Infrastructure.

Our international case study cities undertake significant public engagement on the protection of their peri-urban regions and in promoting the regions (see section 6), achieving high levels of public support. In 2008, around 95% of residents in British Columbia supported the province's Agricultural Reserve¹⁰¹, and in a 2015 survey, over 90% of Ontarians said that they supported the Greenbelt around Toronto and more than half engaged in recreational activities in the Greenbelt.¹⁰² Ontario, in particular, has put significant effort into actively promoting its Greenbelt region to the public (see the case study). A 2010 study of greenbelts worldwide undertaken by the province's Friends of the Greenbelt Foundation underscored the importance of actively promoting the Greenbelt, emphasising, "it is important that the public understand what [greenbelts] are, the benefits they provide, and how to connect with them. This need to emotionally connect local people to their greenbelts is crucial to maintaining and strengthening them into the future".¹⁰³

Increase urban density in inner and middle suburbs

There is a relationship between the amount of development that can be accommodated in inner and middle suburbs of Melbourne and the amount of pressure placed on farmland on the urban fringe:

"It's that tension between the opportunities that exist in these inner and middle ring suburbs versus the need just to have X thousands of new households every other week coming into Victoria"

Interview 15, Industry

Some interviewees emphasised that if development opportunities can be opened up more rapidly in the inner and middle suburbs of Melbourne and hurdles to development (such as delays in approvals, decontamination of brownfield sites and rerouting major infrastructure) can be reduced, development pressure could be eased in the outer suburbs. They also emphasised the need for strong government targets for increasing urban density in inner and middle suburbs.

Strong government targets are needed to increase urban density in the inner and middle suburbs.

101 Ipsos Reid Public Affairs (2008) *Poll of public opinions toward agriculture, food and agri-food production in BC*. Report for Investment Agriculture Foundation of BC. Vancouver: Ipsos Reid Public Affairs.

102 Greenbelt Foundation (2015) *Public opinion on the Greenbelt, its review and local food*. Poll conducted by Environics. Ontario: Greenbelt Foundation.

103 Carter-Whitney, M (2010) *Ontario's greenbelt in an international context*. Ontario: Friends of the Greenbelt Foundation.

Case study: Toronto – promoting the Greenbelt

Ontario's Friends of the Greenbelt Foundation is an independent not-for-profit organisation that aims to “co-ordinate and fund activities that bolster the richness of life in the Greenbelt”.¹⁰⁴ It was established with a \$25 million endowment from the Ontario provincial government, and the provincial government remains its main source of funding.

The foundation funds environment, farming and tourism projects that enhance the values of the Greenbelt. It also promotes the Greenbelt and its benefits, encouraging the public to visit and engage actively with the region. A Greenbelt Route has been created, a 475 km cycle track that runs through the Greenbelt, connecting cyclists with agri-tourism outlets, including pick-your-own farms and wineries.¹⁰⁵ Signage is used widely to promote the region, telling visitors “you are now entering the Greenbelt”.

The foundation has around 50,000 ‘friends’ on a mailing list, who receive newsletters that promote seasonal activities in the Greenbelt, often connected to seasonal foods. A ‘Greenbelt Fresh’ brand also promotes food from the Greenbelt and connects consumers with Greenbelt farmers.¹⁰⁶

Image courtesy of Joseph Morris (CC BY-ND 2.0)

104 Friends of the Greenbelt Foundation (2018) About the Greenbelt Foundation - <http://www.greenbelt.ca/foundation> (accessed 20 June 2018).

105 Friends of the Greenbelt Foundation (2018a) Loops - <http://www.greenbelt.ca/route-loops> (accessed 20 June 2018).

106 Greenbelt Fresh (2018) - <https://www.greenbeltfresh.ca> (accessed 20 June 2018)

A photograph of a hydroponic garden. Several white channels are filled with various leafy green plants. In the foreground, there are bright green, bushy plants. In the middle ground, there are rows of purple basil plants. To the right, there are long, thin green chives. The background is filled with more green foliage, creating a lush, vibrant scene.

SECTION 4

Increasing access to water

4.1 How does policy influence the issue?

Water access is one of the most significant constraints on agricultural production in Melbourne's foodbowl and a key issue influencing the viability of farming in the region¹⁰⁷ (see section 5). The availability of water for agriculture in the region is decreasing due to increased competition from other water users (particularly Victoria's growing population), the need to restore minimum environmental flows in river systems and the impacts of climate change.¹⁰⁸ This has led to an increased focus on water re-use for agriculture in Melbourne's foodbowl, particularly the use of recycled water from the city's water treatment plants.¹⁰⁹

State governments have primary responsibility for water policy in Australia, and the main legislative framework for managing Victoria's water resources is the *Water Act 1989*. A wide range of organisations are involved in water management in Melbourne's foodbowl, including Victorian government departments (particularly the Department of Environment, Land, Water and Planning), Melbourne Water, water retailers, catchment management authorities, the Environment Protection Agency and the Essential Services Commission.¹¹⁰ This section focuses particularly on the role of Victorian government departments, Melbourne Water and the water retailers in developing and implementing policy that influences water availability in Melbourne's foodbowl.

The federal government has increased its involvement in water policy in recent years, particularly in the Murray Darling Basin.¹¹¹ Melbourne's foodbowl is situated outside of the Murray Darling Basin, and federal water policy has less influence in the region. Nonetheless, the federal government is an important source of funding for feasibility studies and infrastructure projects in Melbourne's foodbowl. A number of recent feasibility studies to increase access to recycled water in areas of Melbourne's foodbowl have been funded through the National Water Infrastructure Development Fund.¹¹²

This section identifies the main elements of state government water policy that influence water access in Melbourne's foodbowl. It has a particular focus on policy that influences use of recycled water for agriculture.

Left: Image courtesy of Mornington Peninsula Shire

107 OSISDC (2010) As above.

108 DELWP (2016) *Water for Victoria*. Melbourne: Department of Environment, Land, Water and Planning.

109 Carey, R, Larsen, K, Sheridan, J and Candy, S (2016) As above.

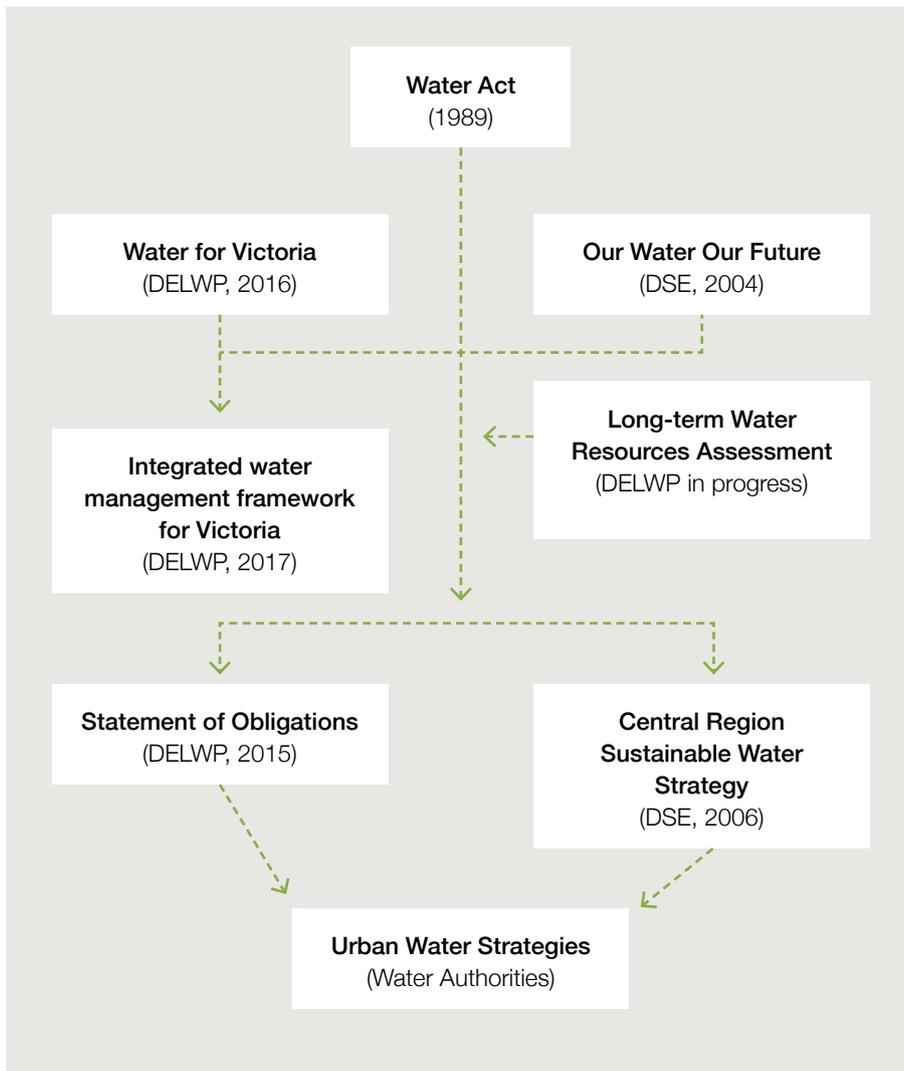
110 DELWP (2017) Integrated water management framework for Victoria: An IWM approach to urban water planning and shared decision making throughout Victoria. Melbourne: Department of Environment, Land, Water and Planning.

111 Commonwealth of Australia. Water Act 2007, Basin Plan. Prepared for subparagraph 44(2)(c)(ii) of the Water Act 2007.

112 Department of Infrastructure, Regional Development and Cities (2018) National water infrastructure development fund: Feasibility studies - <https://infrastructure.gov.au/infrastructure/water-infrastructure/nwi-development-fund/feasibility-studies.aspx> (accessed 20 June 2018).

4.1.1 State government

Figure 4 State policy influences on water availability in Melbourne's foodbowl



Water Act (1989)

The *Water Act 1989* sets the legal framework for management of the state's water resources for the benefit of Victorians.¹¹³ The Water Act is administered by Melbourne Water, which is a statutory authority owned by the Victorian Government. Melbourne Water supplies water (including recycled water) to water retailers¹¹⁴, who deliver it to the community, including farmers.

¹¹³ Melbourne Water (2018) Water Act 1989 - <https://www.melbournewater.com.au/about-us/publications-and-policies/legislation-and-policies/water-act>

¹¹⁴ The water retailers who supply water in Melbourne's foodbowl are South-East Water, Southern Rural Water, Western Water and Yarra Valley Water.

The Minister for Water issues *statements of obligations* to Melbourne Water and the water retailers, which set out the obligations and guiding principles under which they operate.¹¹⁵ These obligations identify priorities that shape the programs and investments of the water corporations, and they therefore have a significant influence on the provision of water (including recycled water) for agriculture in Melbourne's foodbowl.

Water for Victoria (2016)

Water for Victoria (2016)¹¹⁶ is the Victorian Government's current strategic policy framework for managing water in the state. It sets the overarching policy direction. It also forms a key part of the state government's strategy for adapting to the impacts of climate change. The *Climate Change Act 2017*¹¹⁷ requires all levels of water planning in the state to consider climate change adaptation.¹¹⁸ However, this policy says little about water for agriculture, and more specifically, the delivery of recycled water for agriculture. Recycled water objectives in the document focus primarily on public green spaces, rather than agriculture. It contains relatively weak policy statements related to agriculture, such as, "suitable water, particularly recycled water, can be a reliable source of supply and may become an increasingly attractive source for some farm businesses".¹¹⁹ However, it does state that, "the Department of Environment, Land, Water and Planning will work with water corporations and the Essential Services Commission to investigate mechanisms to increase the uptake of recycled water."¹²⁰

Our Water Our Future (2004)

Our Water Our Future is the previous Victorian Government water policy, developed during the Millennium Drought, which significantly reduced streamflows and water availability in Victoria.¹²¹ This policy set the framework for sustainable water management in Victoria, and included targets for use of recycled water.¹²² A target was set to recycle 20% of the wastewater from Melbourne's water treatment plants by 2010, which was included in the statement of obligations for the water corporations. The policy and target led to a number of actions to increase the use of recycled water in Melbourne's foodbowl, including an upgrade of the Eastern Treatment Plant at Carrum in Melbourne's south-east to treat all water at the plant to class A standard for large scale water recycling.¹²³ Class A recycled water can be used for a wide range of purposes, including food production (see case study).¹²⁴

115 DELWP (2018) Water corporations - <https://www.water.vic.gov.au/water-industry-and-customers/water-corporations> (accessed 24 June 2018).

116 DELWP (2016) *Water for Victoria*. Melbourne: Department of Environment, Land, Water and Planning.

117 DELWP (2017a) Climate change Act 2017, Overview – fact sheet - https://www.climatechange.vic.gov.au/_data/assets/pdf_file/0022/55282/CC-Act-2017_Fact-Sheet_Overview_v2.pdf

118 DELWP (2018a) Central region sustainable water strategy review. June 2018. Draft report for consultation. Melbourne: Department of Environment, Land, Water and Planning.

119 DELWP (2016). As above p 64.

120 DELWP (2016). As above p 87.

121 DELWP (2016a) Managing extreme water shortage in Victoria: Lessons from the millennium drought. Melbourne: Department of Environment, Land, Water and Planning.

122 DSE (2007) *Our water, our future: The next stage of the Government's water plan*. Melbourne: Department of Sustainability and Environment (this plan updates the 2004 *Our water our future* policy)

123 The Eastern Treatment Plant treats around half of the city's sewage and industrial wastewater (DSE, 2007).

124 DHSS (2018) Class A recycled water. Melbourne: Department of Health and Human Services. Available: <https://www2.health.vic.gov.au/public-health/water/alternative-water-supplies/class-a-recycled-reclaimed-water> (accessed 22 June 2018).

Recycled water for agriculture in Melbourne's foodbowl

Melbourne has two main wastewater treatment plants that treat the city's wastewater, the Eastern and Western Treatment Plants. Both have schemes to recycle wastewater up to treated class A water¹²⁵ which can be used for agriculture.¹²⁶ Schemes to provide recycled water for agriculture also exist at several smaller water treatment plants on Melbourne's fringe, such as the scheme at the Boneo treatment plant in the Mornington Peninsula.¹²⁷

Around 80 farmers in the Eastern Irrigation Scheme use water from the Eastern Treatment Plant, mainly to grow vegetables.¹²⁸ In 2005, the Western Treatment Plant began supplying recycled water to farmers at the Werribee Irrigation District in Werribee South, an area of intensive horticultural production which grows around 10% of Victoria's vegetables. This scheme enabled the region to keep producing vegetables at the height of the Millennium Drought.¹²⁹ However, a relatively small proportion of the water treated at Melbourne's two main water treatment plants is currently used for agriculture (around 9%).¹³⁰ More of this recycled water could be used for agriculture if there was greater investment in infrastructure to store the water for use during the growing season and to pipe the water to farmers.

125 Water treated to class B and C can also be used for some types of agriculture, such as livestock grazing, orchard fruits and olive production.

126 Carey, R, Larsen, K, Sheridan, J and Candy, S (2016) *Melbourne's food future: Planning a resilient city foodbowl*. Melbourne: Victorian Eco-innovation Lab.

127 Sheridan, J, Carey, R and Candy, S (2016) *Melbourne's foodprint: What does it take to feed a city?* Melbourne: Victorian Eco-innovation Lab.

128 Trility (2018) Eastern irrigation scheme - <https://trility.com.au/eastern-irrigation-scheme-customer-information/about/> (accessed 22 June 2018).

129 Carey, R, Larsen, K, Sheridan, J and Candy, S (2016) As above.

130 Melbourne Water (2016) *Enhancing life and liveability. Annual report 2015-16*. Melbourne: Melbourne Water.

Long term water resources assessment

The Water Act 1989 requires the Minister for Water to undertake a state-wide assessment of the long term availability of water in Victoria every 15 years to determine whether water availability has changed in the context of climate change, population growth and other water demands. This informs decision-making for water planning, including water for agriculture. The first long term water resource assessment for southern Victoria is currently in progress and will be completed in 2021.¹³¹

Central Region sustainable water strategy (2006)

State government water policies and the long term water resources assessment inform the development of regional sustainable water strategies. Sustainable water strategies aim to secure Victoria's water supply over the long term (for a period of 50 years) and manage risks to supply.¹³² Much of Melbourne's foodbowl falls under the Central Region sustainable water strategy.¹³³ These strategies are reviewed at least every 10 years. A review of the Central Region strategy began in 2016 and is ongoing.¹³⁴

The Central Region sustainable water strategy has a strong focus on wastewater re-use in the context of climate change and a rapidly growing population. It emphasises the need to substitute potable water (fresh drinking water) with recycled water and stormwater where possible. It outlines how the Central Region will achieve the target to recycle 20% of the water treated by Melbourne's water treatment plants, including actions focused on supplying recycled water for agriculture. It also includes an action to require Melbourne's water corporations to set new targets for substituting potable water with recycled water and stormwater once the 20% target has been achieved.¹³⁵ However, the requirement for Melbourne's water corporations to set water recycling targets was later discontinued.¹³⁶ Melbourne's water corporations are currently required to develop urban water strategies, which are 50-year strategies for securing water supplies.¹³⁷ However, they have relatively little emphasis on recycled water for agriculture, and there is currently no requirement to include targets for water recycling in the strategies.

131 DELWP (2018b) Long term water resource assessment - <https://www.water.vic.gov.au/planning-and-entitlements/long-term-water-resource-assessment> (accessed 22 June 2018).

132 DELWP (2018c) Sustainable water strategies - <https://www.water.vic.gov.au/planning-and-entitlements/sustainable-water-strategies> (accessed 22 June 2018).

133 DSE (2006) Sustainable water strategy: Central region. Melbourne: Department of Sustainability and the Environment. Action to 2055. This strategy was updated in 2007 and reviewed in 2016.

134 DELWP (2018a) Central region sustainable water strategy review. June 2018. Draft report for consultation. Melbourne: Department of Environment, Land, Water and Planning.

135 DSE (2006) As above, action 3.16 p 53.

136 See DWELP (2018d) Central region sustainable water strategy, Action 3.16, action status - <https://www.water.vic.gov.au/planning-and-entitlements/sustainable-water-strategies/central-region-sustainable-water-strategy> (accessed 24 June 2018).

137 DELWP (2018a) As above.

Port Phillip and Westernport catchment management strategy

Victoria's *Catchment and Land Protection Act 1994* sets the framework for management of the state's water catchments. Regional catchment management authorities develop integrated catchment management strategies that focus on sustainable management of land and water resources and promote biodiversity. Much of Melbourne's foodbowl lies within the *Port Phillip and Westernport Catchment*. The *Port Phillip and Westernport catchment management strategy* sets objectives and strategies for healthy waterways. It also sets targets and an over-arching objective for Melbourne's hinterland:

“To retain extensive and healthy rural landscapes and open space around Melbourne that supports habitat for native species, productive and valuable agriculture, food security, clean air, carbon sequestration, water quality, social amenity values, cultural values and tourism. The priority is to retain, as much as is practicable, the extent of land zoned as green wedge, rural conservation, farm, rural living or some relevant special uses”¹³⁸

Like Victoria's integrated water management framework (see below), the Port Phillip and Westernport catchment management strategy provides an integrated approach to management of land and water resources. It includes objectives related to protection of the city's hinterland, although it currently has a relatively limited focus on management of sustainable farming within the hinterland.

Integrated water management framework for Victoria

In 2017, the Victorian Government introduced an integrated water management framework for the state, the first time that such a framework has been introduced in Australia. This approach is part of the Victorian Government's *Water for Victoria* policy.¹⁴⁰ Integrated water management is a cross-sector and collaborative approach to managing water that focuses on how finite water supplies can best be managed to deliver environmental, social and economic benefits. The approach is based on a greater degree of collaboration between stakeholders in the water sector, and between levels of government, as a basis for generating new ways of thinking about how to manage water.¹⁴¹ By considering different elements of the water cycle together in an integrated way (including waterways, bays, management of waste water and stormwater)¹⁴², this approach has the potential to generate new ways of assessing the multiple benefits of recycled water use for peri-urban agriculture (see section 4.5).

138 DELWP (2018d) Catchment management framework - <https://www.water.vic.gov.au/waterways-and-catchments/our-catchments/catchment-management-framework> (accessed 26 June 2018). Bolding added for emphasis.

139 Melbourne Water (2013) Stormwater strategy: A Melbourne Water strategy for managing rural and urban water runoff. November 2013. Melbourne: Melbourne Water.

140 DELWP (2016) As above.

141 Hassing et al. (2009) Integrated water resources management in action. The United Nations World Water Assessment Programme, Dialogue paper. Paris: UNESCO.

142 DELWP (2017b) As above.

4.1.2 Local government

Local governments in Victoria have relatively little involvement in water management in Melbourne's foodbowl, as state government assumes the major responsibility for managing water. Local governments play a more significant role in managing stormwater and have responsibility for drainage infrastructure in their regions.¹⁴³ Investigations into the possibilities to reuse stormwater for agriculture in Victoria are currently underway¹⁴⁴, but the potential of stormwater to support food production in Melbourne's foodbowl is still unclear.¹⁴⁵

A number of local governments in Melbourne's foodbowl have been active in advocating for greater access to recycled water for farmers in their regions. In 2011, Cardinia Shire Council, Mornington Peninsula Shire and the City of Casey collaborated on a proposal to establish an intensive area of food production in Melbourne's south-east, the Bunyip Food Belt, supplied with recycled water from the Eastern Treatment Plant.¹⁴⁶ This proposal has not yet come to fruition. Moorabool Shire Council and the City of Melton (with other partners) also recently supported the Western Irrigation Network Feasibility Study, which is investigating the potential to create a new region of intensive agriculture supplied by recycled water in Melbourne's west.¹⁴⁷

Victoria's new integrated water management framework¹⁴⁸ presents an opportunity for local governments to play a greater role in water management in Melbourne's foodbowl.

Integrated Water Management forums will be established as a key part of implementing this framework, including forums for the five main water catchments in the metropolitan Melbourne region. These forums will include representatives of local governments alongside representatives of state government and catchment management authorities, and the outcomes from these forums have the potential to influence both local government plans and Victorian Government policies.¹⁴⁹

143 Melbourne Water (2013) Stormwater strategy: A Melbourne Water strategy for managing rural and urban water runoff. November 2013. Melbourne: Melbourne Water.

144 Melbourne Water (2013) As above.

145 Carey, R, Larsen, K, Sheridan, J and Candy, S. (2016) As above.

146 Shanahan, M (2014) Bunyip food belt – lessons learned. Paper presented to the International Conference on Peri-Urban Landscapes: Water, Food and Environmental Security proceedings, Sydney.

147 Western Water (2017) Western Irrigation Network (WIN) feasibility study. Fact sheet. Sunbury: Western Water.

148 DELWP (2017b). As above.

149 DELWP (2017b). As above.

4.2 What are the policy challenges?

Uncertainty about land use limits investment in water infrastructure

Uncertainty about the future of agriculture in Melbourne's green wedges and peri-urban areas (see section 3.2) undermines stakeholder confidence in investing in long term water assets in the region, such as new infrastructure to deliver recycled water to farmers:

"We've got certainty for the next 10 years. We'd even need longer than 10 years, because the investment we'd be putting in is a pipeline in the ground. It's going to be 50 to 100 years the pipeline's going to be there...at the end of that 10 or 20 year contract are there going to be other farmers still there?"

Interview 19, Industry

Indeed, investments have previously been made in water infrastructure for agriculture in areas of Melbourne's fringe that have subsequently been included in the UGB, in Melbourne's south-east, for example:

"There was a system...out in Clyde...that was funded by the government, but, funnily enough, all of that farmland's now getting chopped up for housing, despite the fact that there's an irrigation system there, which just boggles my mind... surely, if you get water access, there should be some sort of covenant on the land that it stays in agricultural production"

Interview 7, Farmer

Perverse policy outcomes such as the one described above are indicative of a **disconnect between land use planning policy and water policy** in Victoria. Some stakeholders highlighted the need for better integration of these two areas of policy. For example, there is a current policy debate about the benefits of moving from centralised sewage treatment (at large scale water treatment plants) to decentralised sewage treatment (smaller scale sewage treatment operations throughout the city that could extend water reuse to more urban areas).¹⁵⁰ However, some regions of Melbourne's foodbowl that currently have access to recycled water for agriculture, such as Werribee Irrigation District or the Eastern Irrigation District, are dependent on existing large scale centralised water sewage treatment at the city's two main water treatment plants:

"The question is, do you make the decision to keep the foodbowl first and then work around that with your sewerage? Or do you make a decision about decentralisation and then the foodbowl becomes an outcome?"

Interview 11, Government

There is an opportunity through the Victorian Government's new Integrated water management framework to rethink the relationship between land use planning and water management (see section 4.5).

¹⁵⁰ Fam, D e tal. (2014) Emergence of decentralised water and sanitation systems in Melbourne, Australia. *International Journal of Water* 8 (2): 149-165.

Weak policy settings discourage investment in water reuse

Some interviewees suggested that the current Victorian policy framework for water management is weak on promoting water reuse and that this hinders investment by the city's water corporations in infrastructure to increase the provision of recycled water for agriculture:

"There are no big recycled water plans in place, that is there are no big changes planned for recycled water use, because there are no clear government levers for that at this point in time. If you read Water for Victoria there is clear intent to make integrated water management happen and to provide fit-for-purpose water and reduce reliance on the traditional potable water source. But without levers like targets, obligations, or how we account for benefits there are significant constraints to actually make those things happen."

Interview 11, Government

These interviewees particularly drew attention to the absence of targets for water reuse in the current *statement of obligations* that set the obligations and priorities for the region's water corporations (see section 4.1.1). As one interviewee put it, "no targets, no obligation, no money". The regulatory environment of the water corporations requires them to demonstrate the prudence and efficiency of any proposed spending. Water corporations generally demonstrate prudence by linking a project to an obligation, a government target or the willingness of customers to pay for the project. They typically demonstrate efficiency by considering various options, their costs and benefits. Although it is possible to justify a recycled water project on the basis of efficiency alone, demonstrating prudence by linking projects to targets and obligations strengthens the case for project funding.

The target included in the previous Victorian Government policy *Our Water, Our Future*¹⁵¹ (and in the earlier statement of obligations) to recycle 20% of water treated by Melbourne's two main water treatment plants acted as a trigger that enabled the water corporations to share the costs of providing recycled water for agriculture with other water users (that is, with the general public).¹⁵² The absence of such a target reduces the options for water corporations to share these costs, so that farmers are typically asked to meet the full costs of investments in recycled water infrastructure, as well as the costs of treating the water to an appropriate standard for food production (see below).

However, some stakeholders suggested that targets for water re-use should be used with caution, as they have the potential to lead to perverse policy outcomes:

"I think uninformed targets are probably not helpful ...the integrated water management approach is really about identifying what is the optimal solution for the whole of the community and then working towards getting there. When that has been done targets are one way of achieving that. But just by making up a random number, like 25 per cent... I don't think it's a good idea. But a well informed target, it's one of the many policy things I think that could be considered"

Interview 16, Government

151 DSE (2007) As above.

152 See Melbourne Water (2017) Bulk recycled water - <https://www.melbournewater.com.au/about-us/services-and-prices/bulk-recycled-water> (accessed 25 June 2017). See Melbourne Water (2017) As above.

Uncertainty about the future of agriculture in Melbourne's green wedges and peri-urban areas undermines stakeholder confidence in investing in long term water assets in the region.

Full cost recovery for recycled water discourages uptake by farmers

Without appropriate policy triggers, water corporations have few options to share the costs of investing in recycled water for agriculture with other water users. The other possible mechanism (in addition to targets in the statement of obligations) is to demonstrate that there has been consultation with other customers and that they are willing to contribute to the additional costs of water recycling.¹⁵³ Some water retailers, such as South East Water, have undertaken this type of consultation with water customers to assess their willingness to contribute to investment in recycled water infrastructure for farmers.¹⁵⁴

The default policy position is that water security for food production is the responsibility of farmers and that they should bear the full costs of building infrastructure to deliver recycled water for agriculture and of treating the water:

“Water security is a risk held by the farmer and it’s their obligation, and that’s how the whole framework is set up”

Interview 6, Industry

“The policy which is determined by the state government is a cost recovery model. So it’s costing them about \$150 megalitre to treat the water to Class A and then they send it out into the ocean. The ocean’s obviously not paying for that water but if a farmer wants to tap into that and use it, then they get charged that cost of treatment”

Interview 5, Government

If farmers are asked to bear the full costs of delivering recycled water, it can become prohibitively expensive.¹⁵⁵ High water costs exacerbate pressures on farm viability (see section 5.2) and the price that farmers are able to bear depends on the value of the crop that they produce:

“The price of recycled water’s around \$300 to \$400 a megalitre... I guess that price is okay for wineries, golf courses, the higher value properties, cherry trees, olive groves. But when you get to your broadacre customers who are growing pasture for cattle grazing, we’ve found that price [level that farmers accept] is a lot lower. Probably \$50 to \$100 is about what they’re willing to pay for the water”

Interview 19, Industry

The policy of asking farmers to meet the full costs of infrastructure development and water treatment for recycled water delivery has hindered expansion of recycled water availability in Melbourne’s foodbowl and limited opportunities to establish new areas of intensive food production close to the city’s water treatment plants, such as the proposed Bunyip Food Belt.¹⁵⁶

153 See Melbourne Water (2017) As above.

154 South East Water (2017) 2018 pricing submission: A submission for water and sewerage pricing for the 2018-2023 regulatory period. Melbourne: South East Water.

155 Shanahan, M (2014) As above.

156 Shanahan, M (2014) As above.

The benefits of water reuse for agriculture are undervalued

Treated sewage and industrial wastewater must be disposed of in some way. The two main options for disposal are to reuse the water (for urban uses, industrial uses or agriculture) or to dispose of the water in waterways (i.e. to discharge it in rivers or at sea). Much of the wastewater treated by Melbourne's two main wastewater treatment plants is currently discharged at sea, rather than being reused – around 84% was disposed of in this way in 2014-15.¹⁵⁷

Wastewater discharged into waterways needs to be treated before it can be disposed of this way.¹⁵⁸ It is then discharged in accordance with a licence that sets the standard for protecting public health and the environment. However, it may still contain nutrients (such as phosphorous and nitrogen), salts or traces of metals that can adversely impact the environment. Reusing water for agriculture rather than discharging it to waterways can have environmental benefits, although the effects of these elements on agriculture also need to be considered (see 'Water quality' below).¹⁵⁹ Reusing water for agriculture also reduces stress on waterways as less water needs to be extracted for agriculture and it conserves potable (drinking) water for other uses. Using recycled water for agriculture has additional economic and social benefits, such as increasing the economic output from agriculture or increasing the affordability of fresh foods during drought.¹⁶⁰ However, the broad range of benefits from water reuse for agriculture does not typically factor into decision-making about how to dispose of wastewater:

"Our two main options for managing the recycled water is we either release it to the waterway where there's a...license to do so, or we sell it to customers for irrigation...it comes down to what's the cheapest way - or who's willing to pay the most for it, or who's closest so the pipeline and the infrastructure is cheaper to get it to"

Interview 19, Industry

The main consideration in decision-making is the cost of disposing of the wastewater. For regions that are close to a waterway (such as the sea) that wastewater can be discharged to, this is likely to be the lowest cost option. Inland water treatment plants typically reuse higher proportions of wastewater¹⁶¹, due to the difficulty and cost of discharging this water at sea. Some stakeholders highlighted that there is currently no assessment framework to consider the broader costs and benefits of reusing waste water:

"One of the issues is there is really no economic model that looks at the opportunity cost of discharging water into the bay versus investing and distributing it around for agriculture, for example, or other uses."

Interview 6, Industry

The default policy position is that farmers should bear the full costs of building infrastructure to deliver recycled water for agriculture and of treating the water.

157 Melbourne Water (2015) Enhancing Life and Liveability. Melbourne: Melbourne Water.

158 EPA (2009) Guidelines for risk assessment of wastewater discharges to waterways. Melbourne: Environment Protection Agency.

159 Garcia and Pargament (2015) Reusing wastewater to cope with water scarcity: Economic, social and environmental considerations for decision-making. *Resources, Conservation and Recycling* 101: 154-166.

160 During the Millennium Drought, the cost of fresh vegetables rose 33% between 2005-2007 and the cost of fresh fruit rose by 43% over the same time period (Quiggin, 2007 in Carey et al., 2016 – as above).

161 Recycled Water in Australia (2018) How much water is recycled in Australia? - <http://www.recycledwater.com.au/index.php?id=62> (accessed 25 June 2018).

Current decision-making frameworks disincentivise use of recycled water for agriculture in many circumstances because they undervalue the benefits. There is an opportunity to rethink models for assessing the costs and benefits of water reuse for agriculture as part of an integrated water management approach (see section 4.3).

Water quality is an issue

There is high demand for recycled water from farmers in Melbourne's foodbowl (see section 4.3). However, a number of interviewees highlighted the issues in achieving recycled water of suitable quality for agriculture, particularly horticulture:

"The big challenge with the recycled water is the salinity. So, during the Millennium Drought it was varying between 1600 EC and 2300 EC. So, the optimum level is no or very limited amounts of salt, maybe up to a few hundred EC. Lettuce starts getting affected at probably 1200 or 1300 EC, brassicas start to get affected at 1600 EC"

Interview 6, Industry

Growers in the Werribee Irrigation District who receive recycled water from the Western Treatment Plant have had ongoing issues with high salinity levels in recycled water, which has at times affected the quality of produce.¹⁶² Recycled water at Werribee is 'shandied' with river water to reduce salinity levels.¹⁶³ Desalination plants have also been proposed as a solution to reducing salt levels in recycled water in Melbourne's foodbowl. However, this would come at considerable cost:

"[The water] is recycled to a Class A, it's very high standard in terms of bacterial cleanliness and all that sort of stuff but there's still very high salt contents which is not suitable for some horticultural crops, so it would need to be [desalinated] which makes it a bit more of an expensive proposition"

Interview 5, Government

While the nutrients (nitrogen and phosphorous) present in recycled water can be of benefit for agriculture¹⁶⁴, ongoing efforts are required to develop cost-effective ways to reduce salinity levels in recycled water for use in Melbourne's foodbowl.

162 Ker, P (2009) Growing pains. *Sydney Morning Herald*, 25 February 2009 - <https://www.smh.com.au/environment/growing-pains-20090225-8hkr.html> (accessed 25 June 2018).

163 Southern Rural Water (2016) Recycled water (Werribee) - <http://www.srw.com.au/water-systems/recycled-water-werribee/> (accessed 14 November 2016)

164 Garcia and Pargament (2015) As above.

4.3 Opportunities

Leverage the high demand from farmers for recycled water

Interviewees emphasised that despite concerns about the cost of recycled water and water quality (see section 4.2), there is high demand from farmers in Melbourne's foodbowl for recycled water:

"Some of the farmers that have approached us... they've asked us what it would take for them to set up their own Class A facility. So if they can't get it done through the water retailers, they've actually starting to think about can they do it themselves... But the fact that they're approaching us to say, if you're not going to do it we'll stump up the money in this ourselves. If they can see the benefit from a commercial point of view...then obviously the demand's there"

Interview 11, Government

"We'd love to be able to plug into an irrigation system. A recycled water pipe goes...a couple of kilometres away, but there doesn't seem to be any interest from the ... powers-that-be, piping that water to us. It would support a lot of jobs. It would really increase production"

Interview 7, Farmer

"You talk to any farmer... if yeah, there was water there at my gate I'd use it. The barrier there is the investment for them and for us to get it up"

Interview 19, Industry

The high level of interest from farmers in accessing recycled water in Melbourne's foodbowl was also emphasised by the findings of the 2010 *Inquiry into sustainable development of agribusiness in outer suburban Melbourne*. Water access was the number one issue raised by stakeholders during the inquiry, and the inquiry committee concluded that, "the future of agriculture in the green wedges is dependent on access to high quality recycled water".¹⁶⁵

There is high demand from farmers in Melbourne's foodbowl for recycled water.

165 OSISDC (2010) As above, p 144.

Harness wastewater and stormwater generated on the urban fringe for agriculture

Rapid population growth on Melbourne's urban fringe poses a significant challenge for farmland protection (see section 3.2). However, it's an opportunity to increase water reuse for agriculture in Melbourne's foodbowl. Vast quantities of wastewater will be generated in Melbourne's growth areas.¹⁶⁶ Interviewees emphasised that more wastewater would be generated in growth areas than could be reused in urban areas and that solutions would need to be found to dispose of the water:

"There's an enormous amount of storm water and recycled water that is being generated in these [growth] areas that cannot all be reused within the urban areas...so there's a huge opportunity to supply these areas with recycled water and stormwater"

Interview 16, Government

"[This region's] going to triple in size...so it's increasing by far what we've got currently coming into [the region] at the moment. So there's a huge amount of recycled water's going to come this way, so we've completed a feasibility study on...where we see the demand for recycled water is over here. We've spoken with the farmers"

Interview 19, Industry

Melbourne's population growth will also lead to an increase in stormwater runoff (due to an increase in hard surfaces such as roofs, roads and paved areas) that could lead to a greater risk of flooding. The frequency and intensity of stormwater runoff is also expected to increase as a result of climate change.¹⁶⁷

"There is more stormwater than we can healthily put down our waterways"

Interview 16, Government

The potential of stormwater harvesting for agriculture is as yet unclear. Issues include the irregularity of supply (where and how to store the water until it is required by farmers) and the level of pollutants in the water.¹⁶⁸

The increase in recycled water and stormwater expected as a result of Melbourne's population growth presents an opportunity to apply an integrated water management approach¹⁶⁹ to investigate solutions that achieve multiple social, economic and environmental benefits by making more of this water available to farmers in Melbourne's foodbowl (see below).

166 City West Water, South East Water, Yarra Valley Water and Melbourne Water (2017) Water for a future thriving Melbourne. An overview of how Melbourne's metropolitan water industry is working together to secure water supplies for the next 50 years. Melbourne.

167 Melbourne Water (2013) As above.

168 Nnadi, E, Newman, A, Coupe, S and Mbanaso, F (2015) Stormwater harvesting for irrigation purposes: An investigation of chemical quality of water recycled in pervious pavement system. *Journal of Environmental Management* 147: 246-256.

169 DELWP (2017) As above.

Use an integrated water management approach to rethink water reuse

The new integrated water management framework that has been introduced by the Victorian Government¹⁷⁰ presents an opportunity to manage water reuse in a more holistic way. Different elements of the water cycle can be considered together – including waterways, management of wastewater and stormwater, and potable and alternative supplies – and the elements can be reconfigured into new types of solutions. One interviewee described an example where stormwater had been harvested by water retailer A, who then ‘swapped’ it with water retailer B, who delivered the water to farmers in an irrigation district and provided an equivalent amount of river water in return that was supplied to residential customers. In this way, water can be managed as an overall resource, regardless of its source, with a focus on providing water that is “fit for purpose”.

An integrated water management approach also focuses on understanding the water cycle within its broader context, including climate change, population growth and land use.¹⁷¹ It presents an opportunity to consider water management and land use management more holistically, and to recognise the strategic significance of productive farmland located close to secure sources of recycled water (from water treatment plants) in the context of a warming climate. It also offers an opportunity to consider protecting areas of agricultural land close to secure sources of water or areas where significant investment has been made in water infrastructure, such as irrigation infrastructure to deliver recycled water.

Develop integrated assessment frameworks for costing the delivery of recycled water for agriculture

An integrated water management framework also offers an opportunity to consider the value of recycled water in the context of its broad economic, social and environmental benefits (see section 4.1.1) and to rethink frameworks for assessing the cost of recycled water. Decisions about disposing of wastewater are often made on the basis of the most cost-effective method of disposal, without fully considering the multiple benefits of reuse (see section 4.2):

“There’s a real need for a good investment evaluation framework so we can actually count the non-monetary benefits of supplying alternative water sources”

Interview 11, Government

Rapid population growth on Melbourne’s fringe presents an opportunity to increase water reuse for agriculture in Melbourne’s foodbowl

170 DELWP (2017) As above.

171 DELWP (2017) As above.

For example, there is a cost to treat water before it is disposed of at sea, but that cost is rarely factored into assessments of the price that farmers should be charged for recycled water:

“Our argument is, you’re treating [the water] regardless. If the ocean’s not paying for it, why should the farmers have to pay for it? At least it’s getting used productively if the farmers use it. So that’s one of the ... policy areas that needs to change”

Interview 5, Government

“To use recycled water directly for agriculture, for example, I think there’s a little bit of work to be done in translating the cost...and understanding what’s the business’s usual cost to get rid of this water and then how could some of that cost then be allocated to developing another scheme that’s more productive?”

Interview 16, Government

Reusing water for agriculture has multiple social, economic and environmental benefits. There is an opportunity to develop new approaches to costing water reuse that draw on the Victorian Government’s integrated water management framework to factor these benefits into decisions about investing in infrastructure to increase water reuse for agriculture in Melbourne’s foodbowl.¹⁷³

172 Garcia and Pargament (2015) As above.

173 Melbourne Water (2016) As above.

Strengthen government commitment to fund recycled water projects for agriculture

Many interviewees suggested that government has a role to play in investing in infrastructure to deliver recycled water for agriculture:

“For me, it’s quite legitimate for government to make capital contributions into things that promote productivity and expansion of agriculture, and particularly to provide security for water in the line of climate change”

Interview 6, Industry

The 2010 Victorian Government Inquiry into sustainable development of agribusiness in outer suburban Melbourne also recommended:

“That the Victorian Government, in partnership with relevant stakeholders, including water authorities, commits to funding recycled water schemes for agriculture in peri-urban areas”

OSISDC (2010)¹⁷⁴

Melbourne is a rapidly growing city, which will place greater demands on both its water supply and its food supply.¹⁷⁵ Risks to food supply from climate change are also increasing, particularly from water scarcity.¹⁷⁶ There is a strong argument for greater government investment in infrastructure that will increase the resilience of the city’s food supply in the face of these risks.

There is an opportunity to develop new approaches to costing water reuse that draw on the Victorian Government’s integrated water management framework.

174 OSISDC (2010) As above, recommendation 10, p 19.

175 Carey, R, Larsen, K., Sheridan, J. and Candy, S. (2016) As above.

176 Porter, J. R., Xie, L., Challinor, A.J., Cochrane, K., Howden, S.M. Iqbal, M.M., Lobell, D.B., and Travasso, M.I. (2014) Food security and food production systems. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. In Barros, V.R., Field, C.B., Dokken, D.J., Mastrandrea, M.D., Mach, K.J., Bilir, T.E., Chatterjee, M., Ebi, K.L., Estrada, Y.O., Genova, R.C., Girma, B., Kissel, E.S., Levy, A.N., MacCracken, S., Mastrandrea, P.R. and White, L.L. (eds.) (2014) As above, pp. 485-533.



SECTION 5

Strengthening the
viability of farming

Protecting farmland is not in itself sufficient to retain food production on Melbourne's fringe and to ensure that future generations continue to have access to sources of fresh food growing close to the city. If Melbourne is to retain its foodbowl as the city grows, it must be viable for farmers to farm there.

Farmers in Melbourne's foodbowl, like those elsewhere in Victoria and the rest of Australia, are caught in a cost-price squeeze.¹⁷⁷ The cost of inputs to farming (like land, water, fertilisers, seeds and labour) has been steadily rising and the price that farmers receive for their produce has been falling, particularly as a result of downward pressure on prices applied by Australia's major supermarkets.¹⁷⁸ Ongoing structural change in the farming sector and competition from low cost imports add to the pressures on farm viability.¹⁷⁹

Farmers on Melbourne's fringe face additional challenges, including higher land costs and rates, and "right to farm" conflicts with their non-farming neighbours (see section 3.2). The "high volume production" strategy adopted by many farmers to address pressures on farm viability¹⁸⁰ (see figure 5) is unrealistic for the majority of farmers on Melbourne's fringe, who are unable to expand to achieve economies of scale, due to land fragmentation and the high cost of land (see section 3.2). While farms in Melbourne's foodbowl range in size from small to large scale, there is a relatively high proportion of small scale farms and part-time farmers.¹⁸¹

If Melbourne is to retain its foodbowl as the city grows it must be viable for farmers to farm there.

177 Carey, R and McConell, K (2011) A resilient fruit and vegetable supply for a healthy Victoria: Working together to secure the future. A report from the Food Alliance.

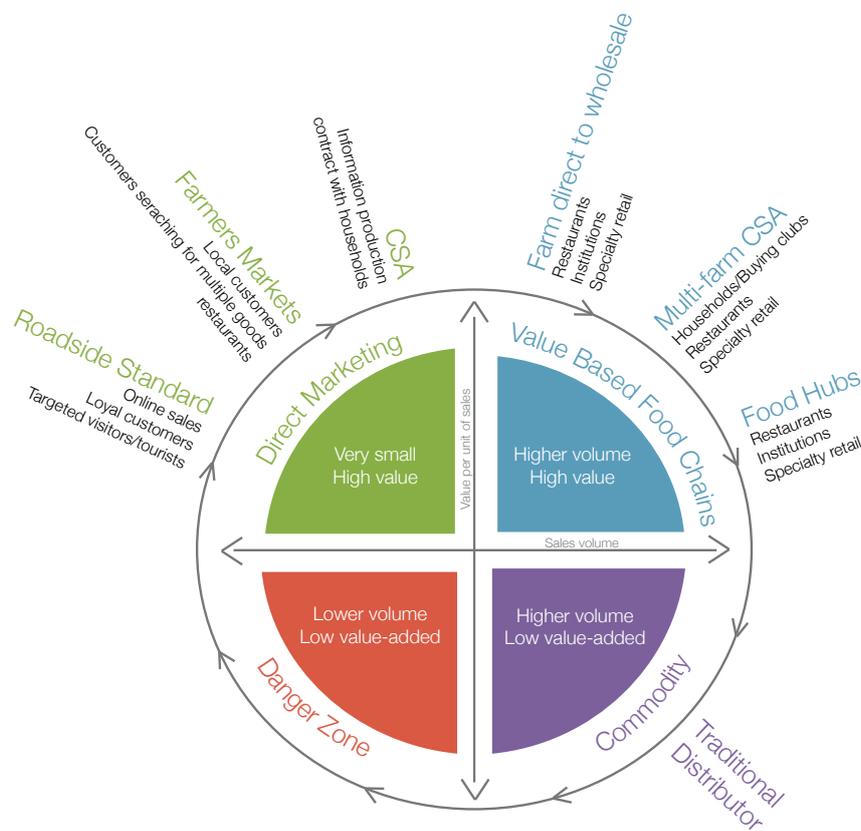
178 James, S (2016) Beyond local food: How supermarkets and consumer choice affect the economic viability of small-scale family farms in Sydney, Australia. Area 48: 103-110.

179 Carey, R, Larsen, K., Sheridan, J. and Candy, S. (2016) As above.

180 Nous Group (2015) Contemporary business strategies and learning models in the agrifood industry, AgriFood Skills Australia. Canberra: AgriFood Skills Australia

181 Parbery, P, Wilkinson, R and Karunaratne, K (2008) Square pegs in green wedges: landholders and natural resource management in Melbourne's rural hinterland. Melbourne: Department of Primary Industries.

Figure 5 Typology of value creation strategies. Adapted from Bauman et al. (2016).



This section explores some of the particular challenges to farm viability experienced by farmers in Melbourne’s foodbowl and some of the opportunities open to them to improve farm viability, such as niche or “artisanal” production, agri-tourism and direct marketing focused on selling into local and regional markets.

The concept of “farm viability” is interpreted in different ways¹⁸², but it is understood here to mean the ability of farmers to farm productively so that they are able to maintain an economically viable business, keep the land in agriculture and farm in a way that the land remains productive for the long term.¹⁸³

182 Higgins, V (2001) Governing the boundaries of viability: Economic expertise and the production of the ‘low income farm problem’ in Australia. *Sociologica Ruralis* 41 (3): 358-374.

183 This definition draws on a definition in Washington State Conservation Commission (2016), Agricultural Viability Toolkit, <http://scc.wa.gov/wp-content/uploads/2016/11/Agricultural-Viability-Toolkit-VSP-final.pdf> (accessed 26 June 2018).

5.1 How does policy influence the issue?

Farm viability is influenced by a wide range of factors, including the global and national economy, patterns of global trade, labour and immigration laws, the price of farm inputs (such as seeds, fertilisers, water and land) and the policies and practices of the major supermarkets, food processors and wholesalers. It is also influenced by the policies of governments at all levels (national, state and local) and by a broad range of government policy portfolios (including trade, economy, regional development, water, land use planning and agriculture). This review focuses specifically on the policies of the Victorian state government and local governments. It aims to identify some of the main state and local government policies that influence farm viability in Melbourne's foodbowl (see figure 6), but it does not claim to be exhaustive.

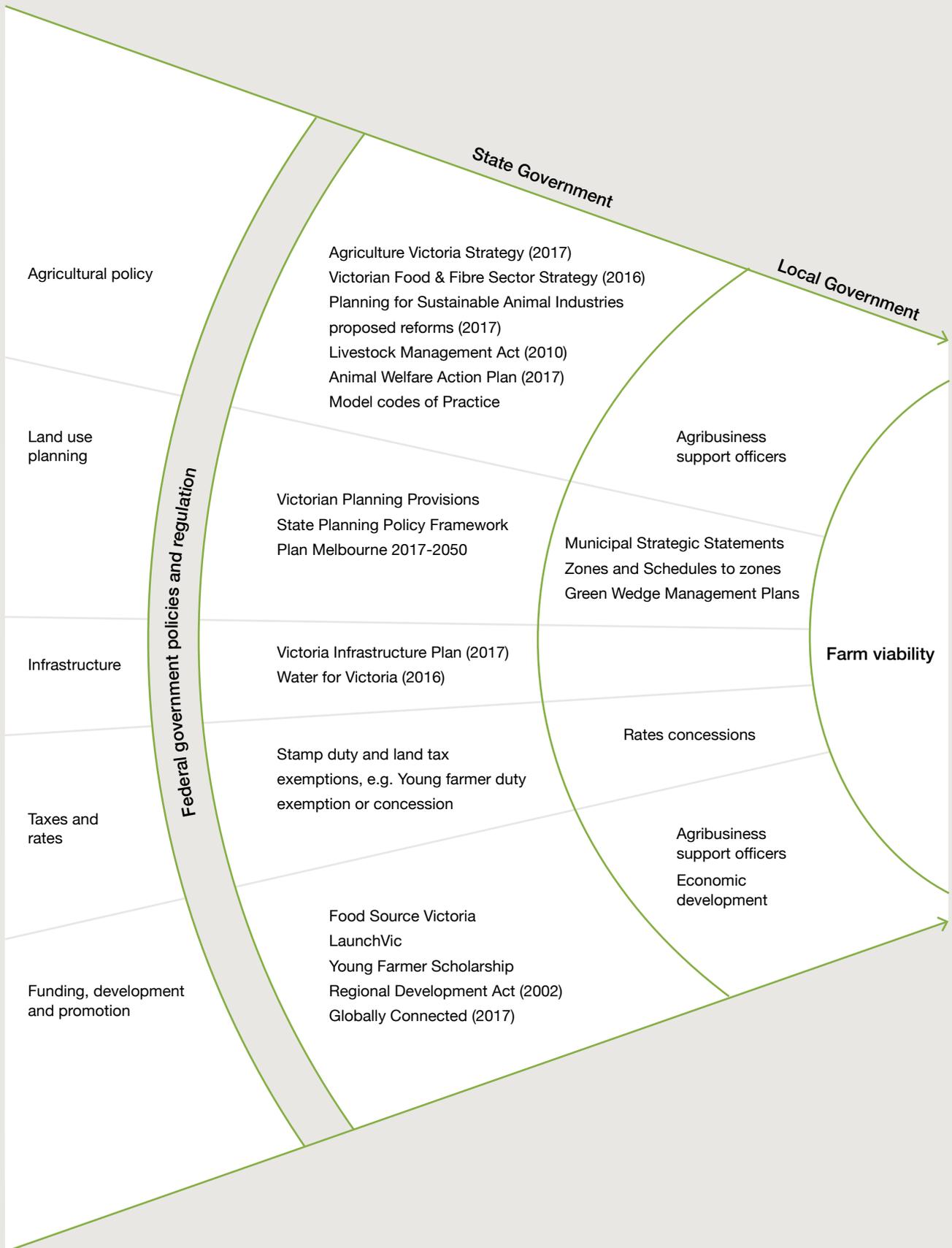
A key finding of this review is that while there are a wide range of policies that influence farm viability in Melbourne's foodbowl (both positively and negatively), there are almost **no state government policies that aim specifically to improve the viability of farming in Melbourne's foodbowl** (some local governments have introduced policies, such as reductions in rates).

This is a significant failure of policy. A central objective of the Victoria Planning Provisions is to protect Melbourne's green wedges (see section 3.1.1), and one of the main land uses in the green wedges is agriculture. A key lesson from cities around the world with effective greenbelts is that to protect greenbelts, it is essential to introduce policies to promote the viability of the farmers who farm there.¹⁸⁴

To protect greenbelts it is essential to introduce policies to promote the viability of the farmers who farm there.

¹⁸⁴ Carter-Whitney, M (2010) Ontario's greenbelt in an international context. Ontario: Friends of the Greenbelt Foundation; Tatebe et al. (2018) Protection is not enough: Policy precedents to increase the agricultural use of British Columbia's farmland. British Columbia: Institute for Sustainable Food Systems.

Figure 6 State and local government policy influences on farm viability in Melbourne's foodbowl



5.1.1 State government policy

Agriculture policy

Agriculture Victoria Strategy

The *Agriculture Victoria Strategy* (2017)¹⁸⁵ is Victoria's agricultural policy. It outlines six strategies for building a globally competitive, innovative, resilient and diverse agricultural sector. They focus on trade and market access, smart agriculture, smarter regulation, risk management, intensification of agriculture and animal welfare. Victoria is a significant exporter of agricultural products, primarily meat, animal fibres, grains and dairy products.¹⁸⁶ The primary focus of the strategy is on increasing exports of these key sectors, particularly to Asia where, "demand from the emerging Asian middle class presents a major opportunity for growth in Victorian agriculture".¹⁸⁷ For example, the strategy for "trade and market access" is to "maintain existing and facilitate new access to export markets".¹⁸⁸ This policy focus on promoting large-scale, export-oriented agriculture has been a dominant thrust of both state and national agricultural policy for some years.¹⁸⁹ The strategy also has a significant focus on improving farm productivity through the use of new technologies (smart agriculture).

The strategy has no specific focus on the challenges facing peri-urban farmers, and it has little focus on horticulture, the most important agricultural sector in Melbourne's foodbowl. Almost half of Victoria's vegetables are produced in Melbourne's foodbowl¹⁹⁰, and the fruit and vegetable industries make the largest contribution to economic output and jobs in agriculture in the region.¹⁹¹ However, the fruit and vegetable industries focus primarily on the domestic market and are not strongly export-oriented.¹⁹² In its analysis of farm typologies and their challenges and opportunities, the *Agriculture Victoria Strategy* includes the beef, dairy, grains and sheep sectors, but does not consider horticultural production.¹⁹³

There is no agriculture policy in Victoria focused specifically on the needs of city fringe farmers.

185 DEDJTR (2017) *Agriculture Victoria strategy: Supporting Victoria's agriculture*. Melbourne: Department of Economic Development, Jobs, Transport and Resources.

186 DEDJTR (2017a) *Victorian food and fibre export performance report 2016-17*. Melbourne: Department of Economic Development, Jobs, Transport and Resources.

187 DEDJTR (2017) As above p 5.

188 DEDJTR (2017) As above p 7.

189 See, for example, Australian Government (2015) *Agricultural competitiveness white paper: Stronger farmers, stronger economy*. Canberra: Australian Government; DEDJTR (2015) *Victoria's future industries. Food and fibre sector discussion paper*. Melbourne: Department of Economic Development, Jobs, Transport and Resources.

190 Carey, R, Larsen, K., Sheridan, J. and Candy, S. (2016) As above.

191 Deloitte Access Economics (2016) *The economic contribution of Melbourne's foodbowl. A report for the Foodprint Melbourne project*. Melbourne: Deloitte Access Economics.

192 Vegetable exports accounted for around 1% of the value of Australian agricultural exports in 2015-2016 – ABARES (2018) *Vegetable industry* - <http://www.agriculture.gov.au/abares/research-topics/surveys/vegetables#data-and-other-resources> (accessed 27 June 2018).

193 DEDJTR (2017) As above.

The *Agriculture Victoria Strategy* generally overlooks the needs of farmers in Melbourne's foodbowl through its focus on export-oriented agricultural industries. However, there are a number of objectives and initiatives within the strategy that have potential relevance for city fringe farmers. They include:

- **The Young Farmers Ministerial Advisory Council**, which advises government about actions and opportunities to attract and retain young people in agriculture (see section 5.2 on the challenges of succession planning)
- **The Young Farmers Scholarship program**, which provided up to \$10,000 for young farmers aged 35 and under to 'upskill' and 'invest' in their careers
- **Innovation** in business models and investment models – the strategy recognises the potential of short value chains, leasehold and share farming, and opportunities in tourism and niche sectors
- **Resilience** – the strategy recognises the need for agricultural industries to develop resilience to potential shocks and stresses, including shocks and stresses related to climate change, such as drought and other extreme weather events (see section 4 on the challenges of water scarcity in Melbourne's foodbowl)

The strategy also includes priority action 16 (which relates to an action in the *Victorian Food and Fibre strategy* – see 'Economic policy and regional development' below) to support the implementation of regional partnerships by developing an agricultural prospectus for each region of Victoria. The agricultural prospectuses will describe the issues and opportunities facing each region and the programs and services provided by Agriculture Victoria that are relevant to the region. This is a key opportunity to address the particular challenges and opportunities in Melbourne's foodbowl (see section 5.2). However, no regional partnership has been established for the Melbourne metropolitan region¹⁹⁴ and it is unclear whether Agriculture Victoria intends to develop a prospectus for the region.

Artisinal agriculture and premium food program

In May 2018, the Victorian Government announced a \$2 million *Artisinal agriculture and premium food program*¹⁹⁵, which aims to, "increase opportunities to access markets for high-value, specialty food and produce; and provide tailored biosecurity and industry support for Victoria's artisanal agriculture and premium food sector". The program recognises that artisan and premium foods support agri-tourism and help shape Victoria's food culture. It is unclear what initiatives the program will fund. However, community consultations have taken place during June-July 2018, with a number occurring in Melbourne's foodbowl region.

¹⁹⁴ Regional Development Victoria (2018) Regional partnerships – connecting local priorities into the heart of government - <http://www.rdv.vic.gov.au/regional-partnerships> (accessed 28 June 2018).

¹⁹⁵ Agriculture Victoria (2018) Growing Victoria's artisanal agriculture and premium food sector - <http://agriculture.vic.gov.au/agriculture/food-and-fibre-industries/artisanal-agriculture> (accessed 28 June 2018)

Economic policy and regional development

Food and fibre sector strategy (2016)

The food and fibre sector is one of six priority sectors identified by the Victorian Government with the potential to drive the greatest growth in the Victorian economy and job creation. The *Food & Fibre Sector Strategy* is the Victorian Government's strategy for growing the sector.¹⁹⁶ The strategy has five key themes – to attract more ideas and investment, to help business innovate and grow, to capture market opportunities, to develop our infrastructure and to improve the business environment. One of the actions to improve the business environment involves the establishment of regional partnerships (discussed above).

Implementation of this strategy is supported by four major funds¹⁹⁷:

- \$200 million **Future Industries Fund**
- **\$508 million Premier's Jobs and Investment Fund**, including \$60 million for 'LaunchVic' to encourage the establishment of innovative new businesses
- **\$500 million Regional Jobs and Infrastructure Fund**, which includes \$20 million for the Food Source Victoria program to help businesses collaborate to gain advantages of scale
- **\$200 million Agriculture Infrastructure and Jobs Fund** to drive growth, create jobs and boost exports

There are elements of each of these funds which are relevant to agricultural businesses, such as the \$60 million LaunchVic program, which includes Rocket Seeder, an accelerator to support entrepreneurs in the food and fibre sector.¹⁹⁸ However, some of these funds are not available to farmers or food businesses in Melbourne's foodbowl. The *Regional Development Victoria Act (2002)* defines which parts of Victoria are regional. It underpins regional development policy and funding, and administration of funds such as the Regional Jobs & Infrastructure Fund (including the \$20 million Food Source Victoria fund).¹⁹⁹ Greater Melbourne, which contains much of Melbourne's foodbowl (particularly the inner foodbowl) is not considered to be regional.²⁰⁰ As a result, city fringe farmers often miss out on opportunities for funding and support.

196 DEDJTR (2016) *Food and Fibre Sector Strategy: Victoria's Future Industries* - www.business.vic.gov.au/futureindustries (accessed 28 June 2018)

197 DEDJTR (2016) As above.

198 See <https://www.rocketseeder.com> (accessed 28 June 2018)

199 For the eligibility criteria for the Food Source Victoria Fund, see http://agriculture.vic.gov.au/__data/assets/pdf_file/0009/348579/FSV-Planning-Grants-Application-Guidelines_1.pdf (accessed 28 June 2018).

200 See the Regional Development Victoria definition of regions - <http://www.rdv.vic.gov.au/victorian-regions> (accessed 28 June 2018)

Land use planning Policy

Land use planning policy (see section 3) can have a significant impact on farm viability. The Victoria Planning Provisions recognise that “high quality productive agricultural land” should be of, “sufficient extent to support agricultural activities on an economically viable scale”.²⁰¹ Although the Victoria Planning Provisions recognise the importance of economic viability to maintaining productive farmland, they do not generally aim to actively promote farm viability.

Land use planning policy can sometimes adversely affect farm viability. For example, in a Farming Zone (or a Green Wedge or Green Wedge A zone) the area used to sell and display primary produce cannot exceed 50 square metres²⁰², and only produce “grown on the land or adjacent land” can be sold (including processed goods made from that produce, such as jams).²⁰³ This places restrictions on farmgate sales, which provide a useful income stream for farmers. For example, produce from other farms in the region cannot be sold in a farmgate store. This condition of the Farming Zone is currently being reviewed as part of reforms to the Victoria Planning Provisions, with a proposal to allow farmers to increase the floor area for sales and allow a wider range of produce to be sold.²⁰⁴

A review of planning regulations for animal industries by the Intensive Animal Industries Committee also began in Victoria in 2015, with the aim of making recommendations on how the Victoria Planning Provisions could best support the expansion of animal industries in a way that meets community expectations and achieves sound environmental outcomes.²⁰⁵ The review has concluded and reforms to the Victoria Planning Provisions have been announced that, “take a graduated approach to planning controls based on risk”.²⁰⁶ In 2015, a decision by the Victorian Civil and Administrative Tribunal (VCAT) had classified a small scale free range piggery in Melbourne’s foodbowl as “intensive animal husbandry” rather than “extensive animal husbandry” on the basis of the amount of supplementary feed bought onto the farm, a decision that triggered the requirement for a planning permit.²⁰⁷ The reforms propose a new definition for *grazing animal production* that allows farmers to provide any amount of supplementary feed, as long as their intent is to operate their farm based on extensive grazing. The reforms recognise the relatively low risks that small scale free range poultry and pig farms pose to the environment and the community, and a simplified permit process has been introduced for these farms.²⁰⁸ These reforms are an example of how the planning process can promote the viability of small scale, sustainable farms in Melbourne’s foodbowl.

201 Victorian Planning Provisions, General terms - <http://planningschemes.dpcd.vic.gov.au/schemes/vpps/72.pdf> (accessed 28 June 2018)

202 Victorian Planning Provisions, Clause 35-07, Farming zone - http://planningschemes.dpcd.vic.gov.au/schemes/vpps/35_07.pdf (accessed 28 June 2018)

203 Victorian Planning Provisions, Clause 74 Land use terms - <http://planningschemes.dpcd.vic.gov.au/schemes/vpps/74.pdf> (accessed 29 June 2018).

204 DELWP (2017) Reforming the Victorian Planning Provisions. October 2017. Melbourne: Department of Environment, Land, Water and Planning.

205 Planning Panels Victoria (2015) Animal Industries Advisory Committee discussion paper. Melbourne: Planning Panels Victoria.

206 DEDJTR (2018) Planning reforms for animal industries: The Victorian Government’s response to consultation on proposed planning reforms for animal industries. Melbourne: Department of Economic Development, Jobs, Transport and Resources.

207 Planning Panels Victoria (2015) As above.

208 DEDJTR (2018) As above.

Tax and social security policies

Farm viability in Melbourne's foodbowl is influenced by a range of federal and state tax and social security policies that particularly affect farm succession planning and new entrants aiming to buy their first farm. Relevant federal tax policies are not discussed here.

One significant state government policy that affects succession planning and young farmers buying their first farm is stamp duty exemptions. Stamp duty is payable (on a sliding scale) when assets are bought and sold in Victoria, including farmland. Up to 5.5% duty is payable for property valued above \$960,000.²⁰⁹

The Victorian State Revenue Office offers some stamp duty exemptions for transfer of farmland. Young farmers (under 35) buying their first farmland can access (as of 1 July 2018):²¹⁰

- A full exemption from duty on farmland valued at no more than \$600,000
- A concession from duty for farmland valued between \$600,001 and \$750,000

In view of the inflated value of farmland in Melbourne's foodbowl (see section 3.2), consideration could be given to extending these exemptions for young farmers wishing to purchase farmland of greater value on the city fringe.

The transfer of a family farm to a family member in Victoria is also exempt from stamp duty if the land is being actively farmed. More stringent conditions apply if the farmland is in an urban zone of Greater Melbourne to prevent tax avoidance.²¹¹

Other policies

There are a range of other policies and regulations that govern agricultural practices in Victoria, including animal welfare (e.g. the Model Codes of Practice²¹² for intensive livestock industries), food safety (e.g. PrimeSafe²¹³), biosecurity and environmental management. These policies and regulations may have a significant impact on farm viability as they affect farm practices and carry costs for compliance. Regulations and systems of compliance are often designed for the requirements of large scale farm operations and can be particularly onerous and costly for smaller scale farmers in Melbourne's foodbowl. Organisations representing smaller scale producers, such as the Australian Food Sovereignty Alliance, have argued that systems of compliance for small scale farms should be reviewed to ensure they are "fit for purpose and appropriate to scale".²¹⁴

Land use planning policy can have a significant impact on farm viability

209 State Revenue Office (2018) Other transactions and declarations of trust rates - <https://www.sro.vic.gov.au/node/1491> (accessed 28 June 2018).

210 State Revenue Office (2018a) Young farmer duty exemption or concession - <https://www.sro.vic.gov.au/node/1428> (accessed 28 June 2018)

211 State Revenue Office (2018b) Family farm exemption - <https://www.sro.vic.gov.au/node/1426> (accessed 28 June 2018)

212 Department of Agriculture and Water Resources (2018) Australian animal welfare standards and guidelines (Model Codes of Practice) - <http://www.agriculture.gov.au/animal/welfare/standards-guidelines> (accessed 28 June 2018).

213 PrimeSafe (2018) Legislation and regulation - <https://www.primesafe.vic.gov.au/about-us/legislation-and-regulation> (accessed 28 June 2018).

214 Australian Food Sovereignty Alliance (2016) Response to the Productivity Commission's inquiry into the impact of regulatory burden in Australian agriculture - <https://afsa.org.au/wp-content/uploads/2016/03/Submission-regulatory-burden-in-agriculture-inquiry.pdf?189db0&189db0> (accessed 28 June 2018).

5.1.2 Local Government policy

Economic development and agriculture policy

The policy vacuum that exists at state government level in promoting farm viability on Melbourne's fringe has been taken up by local governments, who play the primary role in supporting farmers in Melbourne's foodbowl. Local governments support farmers in Melbourne's foodbowl in a number of ways including:

- Defending their right to farm in the face of complaints from non-farming neighbours
- Providing economic development support
- Using local planning schemes to protect farmland from urban conversion or encroachments (see section 3.1.2)
- Providing a discount on rates for farmland that is actively farmed

Interviewees (particularly farmers) emphasised the importance of local government support to their confidence in continuing to farm on Melbourne's fringe, particularly in areas close to the UGB:

"We've got a lot of support from local councillors wanting us to expand the business and keep employing people and do all of those things ... our business development representative from the council, she's often telling us it's our right to farm, that's how we can answer it if we're getting people complaining about tractors and things on the weekends as they start to build houses closer to the farm, then they've said that they support us"

Interview 12, Farmer

Only a couple of councils in Melbourne's foodbowl employ an agribusiness officer who provides dedicated support to farmers - Mornington Peninsula Shire and the City of Whittlesea. The support that these officers provide to farmers includes:

- educational workshops on a range of topics including farm practices, market strategy, supply chain logistics and farm management
- the development of regional branding strategies, such as the Mornington Peninsula Produce brand
- advocating for farmers in council policy and planning decisions
- advocating for recycled water access for agriculture in the region
- support in accessing council services

There is an opportunity to extend the support of agribusiness officers across Melbourne's foodbowl. (see section 5.3).

One of the most useful forms of support that local governments provide to strengthen farm viability is applying differential rates for farmland. Under the Local Government Act (1989) local councils are able to apply a lower rate to farmland. The rates discount applied varies across Victoria at the discretion of individual local governments.²¹⁵ For example, within Melbourne's foodbowl, Mornington Peninsula Shire reduces rates on farmland by 65%, City of Whittlesea by 40%²¹⁶ and Wyndham City by 20%.²¹⁷ Some local governments in regional Victoria apply farm differential rates of 90-100%.²¹⁸ The Victorian Farmers Federation has argued that a differential rate should be applied to all farmland and that the Local Government Act (1989) should be amended to require local governments to apply a differential rate.²¹⁹ In view of the very high land prices on Melbourne's fringe, there is an opportunity for local governments to make a significant difference to the viability of farms in their regions through the application of substantial differential rates.

215 Victorian Government (2013) Ministerial guidelines for differential rating. Published in the government gazette on 23 April 2013. Melbourne: Department of Planning and Community Development.

216 City of Whittlesea (2017) Proposed annual budget 2018-19. City of Whittlesea.

217 Wyndham City (2016) Rating strategy. June 2016 - <https://www.wyndham.vic.gov.au/sites/default/files/2016-06/Wyndham%20City%20Rating%20Strategy%202016%20-%20Finala.pdf> (accessed 29 June 2018).

218 VFF (2015) Inequities in rural rating: A comparison of the rates on businesses in rural and regional Victoria. Melbourne: Victorian Farmers Federation.

219 VFF (2015) As above.



5.2 What are the challenges?

Land prices and availability limit farm expansion

Land prices in Melbourne's foodbowl are inflated well beyond their agricultural value due to the widespread perception that land on the edge of the UGB is likely to be rezoned for urban development, and due to demand for land from people seeking a rural lifestyle (see section 3.2). This can make land in Melbourne's foodbowl unaffordable for many farmers:

"The land is too expensive. They can get more land and better water access [elsewhere]"

Interview 4, Government

There are also limited opportunities for farmers to expand into conveniently located or contiguous land²²⁰:

"There's not really the capacity to expand farms down here. You can't really buy the neighbour often, it doesn't kind of come up like that"

Interview 5, Government

In order to expand, farmers in Melbourne's foodbowl sometimes distribute their farming operations across multiple smaller farm areas, which has its own costs and disadvantages, and can lead to conflict with urban neighbours:

"[Farmers] have to be able to get from one property to the other, so they have to be driving their tractors on those roads and now they're getting a lot of complaints from cars that want to use the same road because there is road dirt and their cars get dirty"

Interview 9, Farmer

Left: Image courtesy of Tracy O (CC BY-SA 2.0)

220 Barr, N (2005) The changing landscapes of rural Victoria. Melbourne: Department of Primary Industries.

Some farmers have also responded to the constraints on expanding in Melbourne's foodbowl by buying additional farms in other regions of Victoria, where they are able to expand their farm operations.

Preventing land fragmentation and discouraging land speculation are important mechanisms for controlling land prices on Melbourne's fringe. Green Wedge Management Plans and other local government planning policies play an important role but require support from state government and bodies such as VCAT (see section 3).

Right to farm conflicts

The challenges of farming close to urban areas have been well documented.²²¹ One of the challenges in Melbourne's foodbowl is increasing "right to farm" conflicts, when non-farming neighbours object to farm activities such as spraying and applying manure:

"It's getting harder. People complain about the smell of the chicken manure and those kinds of things."

Interview 13, Farmer

"[One grower] was spreading chicken manure and within about 15 minutes of starting to spread chicken manure he had guys in the Wyndham Harbour ... ringing up EPA ... and the EPA were there within 15 minutes ... and shut down the activity"

Interview 9, Farmer

Non-residential development (which may be allowed in green wedge areas) such as schools or places of worship can also lead to increased difficulties for farmers in carrying out normal farm activities:

"So those six schools, that's where we will find a little bit of difficulty, I think, as the schools get bigger, because they're all putting on new campuses. We're already scheduling our trucks to arrive and dispatch outside of school times, either before school starts or during school or after it's over."

Interview 12, farmer

Right to farm conflicts can be reduced by preventing inappropriate development in farming areas. Support from local governments is important in defending the "right to farm" in Melbourne's foodbowl (see above). Tasmania has introduced Right to Farm legislation, the *Primary Industry Activities Protection Act (1995)*, which was amended in 2016. The Act strengthens protection for farmers by specifying the conditions under which farming activity does not constitute a nuisance.²²² Tasmania is the only state in Australia that has introduced Right to Farm legislation to date. The NSW Government has also introduced a Right to Farm policy, but has not yet legislated.²²³

221 See James (2016) As above, and Barr (2005) As above.

High costs of farming on the city fringe

Interviewees highlighted the high costs of farming on Melbourne's fringe as one of the main challenges to farm viability. Due to the high price of land, local government rates are higher in Melbourne's foodbowl than in other farming areas:

"Rates, rates, and rates was the first thing [farmers] brought up. Yeah, then land fragmentation"

Interview 4, Government

"You've got growers who are looking at tens of thousands of dollars' worth of rates fees when actually what they're doing is still farming. So that's another thing that has to be worked out. Your rates shouldn't be based on the land value. It should be based on the land usage essentially. If you're still doing farming activities, how could you possibly be spending hundreds of thousands of dollars on rates just because you haven't decided to sell yet?"

Interview 9, Farmer

While the proximity of their farms to markets in the city is generally an advantage for farmers in Melbourne's foodbowl, for farmers in Melbourne's south-east, the relocation of the wholesale market from Footscray to Epping has also increased the distance and cost of getting produce to market (the increased costs have a disproportionate impact on small farms):

"We're starting to feel the pain of the tolls a bit and we're spending about \$500 a week now on tolls because of... where the market's located. ... There's no eastern link to get around Melbourne. You have to go through Melbourne. So there's a cost of \$500 a week roughly, just to go to the ... wholesale market"

Interview 7, Farmer

The high cost of farming on Melbourne's fringe is one of the main challenges to farm viability.

222 Parliament of Tasmania (2016) Primary industry Activities Protection Amendment Bill (2016). Fact Sheet - http://www.parliament.tas.gov.au/bills/Bills2016/pdf/notes/8_of_2016-Fact%20Sheet.pdf (accessed 29 June).

223 NSW Department of Primary Industries (2015) Right to Farm policy - <https://www.dpi.nsw.gov.au/agriculture/lup/legislation-and-policy/right-to-farm-policy> (accessed 29 June 2018).



Access to labour

Accessing sufficient labour and the high cost of labour is a key challenge for farmers across Victoria.²²⁴ Visas have been introduced for temporary migrants to address this labour shortage, including the 417 Working Holiday Visa, which allows visa holders to apply for a second year of a working holiday visa if they complete three months of “specified work” (which includes harvesting of fruit and vegetable crops) in a regional area. However, as city fringe areas are not considered “regional”, this limits access to this supply of labour in Melbourne’s foodbowl.²²⁵ Difficulty in accessing labour leads some farmers to resort to using illegal labour:

“Backpackers can’t get their rural or regional work down here ... all the vegie farms...are all using illegal labour because that’s the only thing that’s available to them.”

Interview 5 Government

“In my particular area...access to legal labour and the use of legal labour is what separates people who can do it at a low price and make money and people who can do it at a low price and are losing money...I can’t grow anymore because my ability to access legal labour is so difficult.”

Interview 13, Farmer

Farmers in Melbourne’s foodbowl have called for the 417 Working Holiday Visa to be opened up to farmers in the Melbourne metropolitan area.²²⁶

Successful succession planning

As the challenges for farm viability have intensified in Melbourne’s foodbowl, successful farming businesses have adapted their operations and business models to remain profitable. For many, these changes have included successful succession to the next generation, who are often willing to try new things:

“There’s some orchardists that are still farming the way they were 15-20 years ago and they’re very much struggling and nearly going out of business. Then there’s the farmers who have got a second or third or fourth or fifth generation that have come in and changed their business model to be agritourism, value-add, all that sort of stuff and they’re the ones that are thriving and growing and doing really well”

Interview 5, Government

224 Mares, P (2006) Labour shortages in Murray Valley horticulture: A survey of growers’ needs and attitudes. Swinburne Institute for Social Research.

225 Department of Home Affairs (2018) Working holiday visa (subclass 417) - <https://www.homeaffairs.gov.au/trav/visa-1/417-#tab-content-1> (accessed 29 June 2018).

226 Kotsios, N (2017) Backpacker labour: equality demand from peri-urban farmers. *Weekly Times* 25 May 2017.

However, there are many challenges to effective family succession in Melbourne's foodbowl, which include having no one in the family who is interested in taking over the farm, the high value of farmland, competition from other land uses, the high level of potential debt for new entrants to farming and a lack of support for new farmers:

"The pathways into farming are eroded. Like there's, on one hand, uninspiring TAFE courses which are geared towards just working for someone else in dairy or from a big operation. There's just nowhere to go. The other erosion is there's much bigger farms now and there's less family farms, less farms to pass onto families."

Interview 14, Farmer

Lack of state government policy focus on city fringe agriculture

A key challenge to promoting farm viability in Melbourne's foodbowl is the lack of a clear policy focus by state government on city fringe agriculture. Agriculture Victoria's (previously the Department of Primary Industries) focus on the major export-oriented agricultural commodities (see section 5.1.1) overshadows the significance of horticultural production close to the city.

Agriculture Victoria has at times seen few options for maintaining viable farming in peri-urban Melbourne in light of pressures on farming and industry restructuring.²²⁷ It has also tended to see small scale farms as having little potential to increase their productivity.²²⁸ However, increasing consumer interest in local food, food provenance, ethically produced foods and purchasing direct from farmers²²⁹ is opening up new opportunities and new routes to profitability for farmers on Melbourne's fringe.

A key challenge to promoting farm viability in Melbourne's foodbowl is the lack of a clear policy focus by state government on city fringe agriculture.

227 E.g. Barr, N (2005) As above.

228 E.g. Wilkinson, R, Barr, N and Hollier, C (2011) Segmenting Victoria's farmers. Melbourne; Department of Primary Industries.

229 DAFF (2012) FOODMap: an analysis of the Australian food supply chain. Canberra: Department of Agriculture, Fisheries and Forestry; DAFF (2012a) Australian food statistics 2010-11. Canberra: Department of Agriculture, Fisheries and Forestry



5.3 Opportunities

“It’s a beautiful region. It’s only an hour from the city so I don’t think you’re going to be able to drive down those [land] values. What you have to do is increase the productive capacity of the land to get the value out of it. That’s through value-add, it’s through agritourism, it’s through water, increasing intensity of agriculture”

Interview 5, Government

Interviewees highlighted multiple opportunities to increase the viability of farms in Melbourne’s foodbowl by leveraging the area’s unique advantages, including its proximity to the city and markets, its accessibility to visitors and tourists and the rising consumer interest in sourcing high quality and artisanal foods that have been sustainably and ethically produced.

Increase farm income through diversification, niche products and agritourism experiences

The close proximity of the large urban population of Melbourne was seen by many interviewees as an opportunity for farmers to gain a greater share of the food dollar by selling direct to consumers, restaurants and other local businesses:

“I’d like to get more customers through our farm shop, because that’s our most profitable enterprise. There’s no freight. People come to us. No packaging.”

Interview 7, Farmer

“Given that you could access or get access to people who are willing to pay close to retail, then...there’s probably an opportunity to get an income stream from that”

Interview 13, Farmer

Some farmers in Melbourne’s foodbowl had developed relationships with chefs and were selling direct to restaurants, and sometimes growing to order, contributing to the thriving food and gastronomic culture of Melbourne:

“What we do at our farm, we are picking and delivering on the very same day. So we receive orders overnight from chefs that are literally looking in the cool room, okay, this is what I need. We compile a list early in the morning and then we’re picking and by about midday, we’re on the road delivering for a few hours. ... I’m interested in growing the unusual things. That’s one thing that keeps me interested and it’s why I do it.”

Interview 14, Farmer

Selling direct also enables farmers to diversify and experiment with new products, benefiting from customer feedback and from tourist traffic to some areas of Melbourne's foodbowl. Agri-tourism opportunities enable farmers to diversify beyond direct sales to a wider range of services and on-farm experiences:

"One of those things we've identified...is the opportunity for agri-tourism, and getting more people connected to even understanding how the food's grown probably has to happen within that hour and half belt of Melbourne"

Interview 10, Government

Food and wine tourism is increasingly important to Victoria's tourism industry. There is a growing focus on culinary tourism in Australia, and tourism research suggests that good culinary tourism experiences for visitors have a strong focus on fresh locally sourced food that highlights the food's provenance and connection to the region.²³⁰

Some stakeholders (including farmers) emphasised that the proximity of city fringe farms to Melbourne enables relationships and experiences to be created that can educate consumers about their food and the challenges of farming:

"I'm really hoping that if people do come out to... [our farm], they might buy some good value [produce]..., but when they do see our product out and about, they'll understand this is a product that actually comes from a farm ... They can see that we don't add anything weird into our products, they're totally processed in the best way possible with the least intervention as possible, so I'm really hoping for that connection."

Interview 12, Farmer

Increasing exports was also seen by some farmers as a potential diversification strategy that could improve farm viability, because of their close proximity to road and airport transport hubs:

"Because we're close to Asia, air freight has been really good. So I can...pick stuff on Monday, Monday night it's at the airport, Tuesday morning it's flying, Tuesday afternoon it's in Singapore.... We hit the premium market"

Interview 7, Farmer

"Export is so critical, because we can supply our market, the Australian market, but we're not probably big enough as a country of 26, 27 million people to have high volume production because of the sensitivity of the market"

Interview 1, Government

There are opportunities to increase the viability of farming in Melbourne's foodbowl by leveraging the area's unique advantages.

230 Tourism Australia (2013) There's nothing like Australia: Food and wine - <http://www.tourism.australia.com/en/about/our-campaigns/theres-nothing-like-australia/food-and-wine.html> (accessed 29 June 2018); Tourism Australia (2013) Gourmet tourism is growing - <http://www.tourism.australia.com/content/dam/assets/document/1/6/x/6/y/2002570.pdf> (accessed 29 June 2018)

Exporting, supplying the domestic market through conventional channels and supplying direct weren't seen by farmers as either/or propositions. Some farmers were using all three channels.

Some interviewees identified barriers to direct marketing. For example, there are tensions between the visual amenity expectations of Green Wedge Zones and farmers' desire to erect farm buildings, such as greenhouses and chicken sheds, or to use signage to draw visitors and tourists to their farms. Planning laws that restrict farmgate sales to what grows on your own farm or adjacent land (see section 5.1.1) also make it challenging to meet consumer expectations:

"Farm gates for example...we should be sort of promoting and making it as easy as we can for farmers to sell their produce from their farm gates because that's the most profitable way to sell your produce but restrictions around how much you can sell and what you can sell and where you can sell it from and all that sort of stuff makes it very difficult.

Interview 5, Government

Use differential rates to reduce the cost of farming in Melbourne's foodbowl and encourage productive use of farmland

Applying differential farm rates is one of the main opportunities to reduce the cost of farming in Melbourne's foodbowl. It is a tangible way for local governments to address the impacts of high land costs on farm viability. It also encourages productive use of farmland:

"It has worked relatively well at this point to try and encourage people either to continue to farm or to ramp up their production system a little bit so that they're considered commercial. Or you know, how do I get the farm rate? What would I have to do for that? Okay, maybe I can look at what I do on my farm a bit differently and whether or not we can make that into a bit more of a commercial entity...I'll get some money off the rates as well so that's a bit of an extra incentive."

Interview 4, Government

However, some interviewees suggested that farm rates could encourage more productive use of farmland if they were graded to differentiate between farmers who are meeting minimum requirements to receive the farm rate and those who investing in their farms to achieve greater productivity:

"Potentially, something... that they could do is have...variable scaling for rates, dependent on level of intensity. So, if you're just going to farm cows, you get this level of farm rates but if you're going to actually put money in and do stuff on a farm, then...your rates are lowered down to this level. So, it would encourage greater activity to occur."

Interview 13, Farmer

Some local governments do not apply differential rates for farmland and the Victorian Farmers Federation has argued that they should be required to do so under the Local Government Act (1989) (see section 5.1.2). Eligibility to receive the reduced differential farm rate and the process involved also differs between councils.

Farmers on the fringes of Toronto (Ontario), Vancouver (British Columbia) and Portland (Oregon) receive a standard farm differential tax rate set by the province or state. In Ontario, farmers across the province are taxed at 25% of the residential property tax rate (i.e. a 75% reduction).²³¹ In the province of British Columbia, farmers in the Agricultural Land Reserve (including those on the fringe of Vancouver) receive a standard 50% reduction in property taxes²³², and in Oregon, farmers are taxed on the farm value of their land rather than its market value²³³, which results in a substantial reduction in taxes:

“Let’s say you’re farming next to the Portland Metro urban growth boundary, you’ve got a 40-acre parcel next to it. The farm value of that would probably be, depending on how it’s irrigated, anywhere from \$10,000 to \$15,000 per acre. The development value of that, if you were being taxed at its value to be potentially urbanised or whatever, would be anywhere from \$120,000 an acre to \$250,000 an acre. So you’re getting taxed at that \$10,000 an acre instead of that \$100,000 an acre”

International interview 8, Portland

Strengthen the right to farm in Melbourne’s foodbowl

As urban development encroaches on Melbourne’s foodbowl, farmers are increasingly subject to complaints from non-farming neighbours (see section 3.2). Some interviewees emphasised the need to strengthen the right to farm in urban fringe areas:

“If you want us to stay here farming then you have to make farming a priority and support farming activities which means the farmers come first. If we’re spreading chicken manure, that’s just too bad for the residents. There should be a campaign saying to the residents if you want to move into this area sometimes we’re going to spray, sometimes we’re going to harvest, sometimes there is going to be noise, sometimes you’ll be dodging tractors”

Interview 9, Farmer

While recent Victorian planning reforms go some way to easing this conflict for livestock producers²³⁴, the right to farm could be strengthened further. Each of our international best practice case cities has right to farm legislation in place (at state or provincial level) (see section 6) and this is something that Victoria could also consider. However, right to farm legislation needs to exist alongside other complementary measures, most importantly, measures to prevent inappropriate development that interferes with farming activities (see section 3):

231 Ontario Ministry of Agriculture, Food and Rural Affairs (2018) Farm property class tax rate program - <http://www.omafra.gov.on.ca/english/policy/ftaxfacts.htm> (accessed 29 June 2018).

232 British Columbia, Property taxes – agricultural land reserve - <https://www2.gov.bc.ca/gov/content/taxes/property-taxes/annual-property-tax/reduce/agricultural-land-reserve> (accessed 29 June 2018).

233 Oregon Department of Revenue (2014) Farm use manual - https://www.oregon.gov/DOR/forms/FormsPubs/farm-use-manual_303-422.pdf (accessed 29 June 2018).

234 DEDJTR (2018) As above.

“The thing to remember about right-to-farm is it ... provides you immunity from nuisance and trespass lawsuits from local regulation of agricultural practices, but it doesn't protect you from the shadow cast by non-farm development. So, yeah, okay, the neighbour next door to you can't complain about the odours or the dust coming from your operation. But, gee, their dog's running loose, it could be on your farm That's not a right-to-farm issue, that's a land-use issue, keeping the non-compatible uses away. So right-to-farm is another tool but it's not a panacea... it's a good complementary tool, but it doesn't stand very well by itself.”

International interview 8, Portland

Provide agribusiness support across Melbourne's foodbowl

“You can protect the land base but there needs to be a functioning agri-support network so the farmers can actually farm into the long term.”

International interview 7, Toronto

Policy to promote the viability of farming in Melbourne's foodbowl is as important to the long term protection of Melbourne's green wedges and peri-urban areas as policy to protect farmland. Each of our international best practice case studies has introduced a variety of policies and initiatives to actively promote the viability of farming on the city fringe (see section 6).

Interviewees who farm in regions of Melbourne's foodbowl where there is an agribusiness officer (see section 5.1.2) clearly value the support provided. Local government agribusiness officers fill an important advisory role given the lack of support from state government agricultural extension officers.²³⁵ Some interviewees also highlighted a relative lack of support in Melbourne's foodbowl from agribusiness and industry groups, due to the fragmented and small-scale nature of farming in the region. There is a strong argument for providing more agricultural extension officers throughout Melbourne's foodbowl:

“There's a really good case for extending [agribusiness officers]...into every interface council. Because state government isn't there. So it could be argued that it's a bit of cost shifting on the state government, but local government has an opportunity to do something very substantial in the interface councils in this area”

Interview 4, Government

Only a couple of local governments in Melbourne's foodbowl fund an agribusiness officer to support farmers in their area (see section 5.1.2), and there is an opportunity for state government to step in and fund agribusiness officers across Melbourne's foodbowl regions.

²³⁵ Australian House of Representatives Standing Committee on Agriculture, Fisheries and Forestry (2007) Skills: Rural Australia's Need - Inquiry into rural skills training and research. Canberra: Parliament of Australia.

Other forms of support that could be provided for farmers in Melbourne's foodbowl include funding for shared infrastructure to encourage innovation, such as community kitchen incubators that can be shared by small scale farmers to facilitate product innovation²³⁶, or infrastructure to meet a need that isn't currently serviced in the supply chain, such as a mobile abattoir in a region ill-served by abattoirs. A key issue in providing such support is to address the exclusion of the Melbourne metropolitan area from some agricultural and regional development funds (see section 5.1.1) by extending eligibility for the funds to include the region or by establishing new funds aimed specifically at farmers on Melbourne's fringe.

Share local government best practice in promoting farm viability

In the absence of state government policy focused on promoting farm viability in Melbourne's foodbowl, local governments play an essential role, from defending the "right to farm" to offering differential rates (see above), promoting regional produce and developing farmgate trails.²³⁷ However, good practice is patchy across local government areas and there is an opportunity for local governments to provide more effective support to farmers in Melbourne's foodbowl by sharing lessons learned and best practice.

In some of our international best practice cities, local governments are sharing best practice in promoting farm viability on the city fringe and working together on common goals for city fringe areas of food production. Metro Vancouver (a metropolitan governance body comprising 21 municipalities and a treaty First Nation)²³⁸ has a Regional Food System Strategy that includes goals to, "improve the financial viability of the food sector" and to "increase capacity to produce food close to home".²³⁹ Seven municipalities in the Golden Horseshoe area on Toronto's fringe came together with other stakeholders in 2012 to form the Golden Horseshoe Food and Farming Alliance and to adopt a common plan²⁴⁰ to "help the food and farming sector remain viable in the face of land use pressures at the urban-rural interface as well as other challenges" (see the case study).²⁴¹

There is an opportunity for local governments to provide more effective support to farmers in Melbourne's foodbowl by collaborating and sharing best practice.

236 Walzer, N. ed. (2007) *Entrepreneurship and Local Economic Development*, Plymouth: Lexington Books.

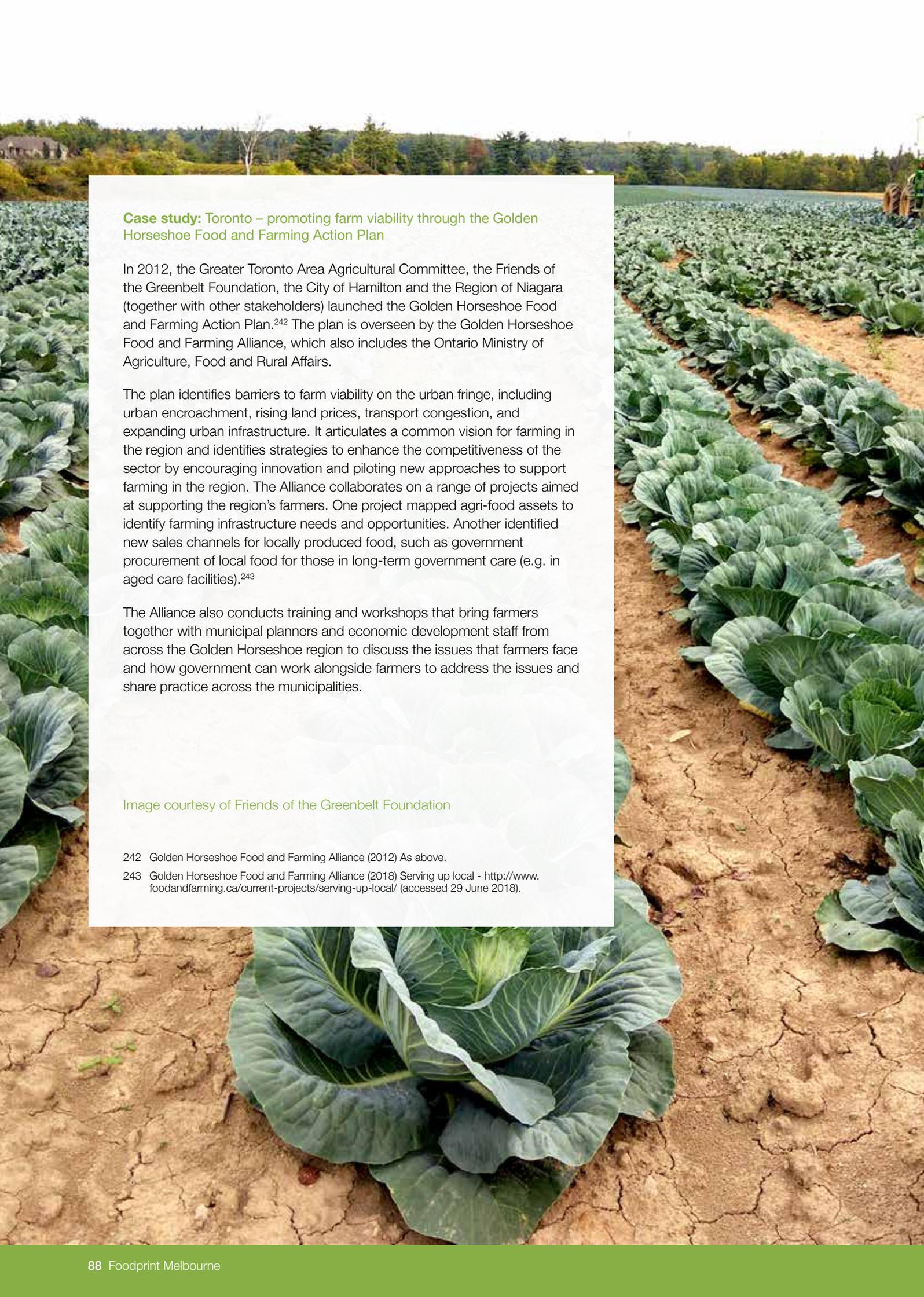
237 Mornington Peninsula Shire (2018) Mornington Peninsula Produce - <http://www.mpproduce.com.au> (accessed 29 June 2018).

238 ICELI (2014) Vancouver, Canada: Targeting NEXUS food security: Vancouver's Regional Food System Strategy. An Urban NEXUS case study. August 2014.

239 Metro Vancouver (2016) Regional food system action plan. Vancouver: Metro Vancouver p3.

240 Golden Horseshoe Food and Farming Alliance (2012) Food and farming: An action plan 2021. Golden Horseshoe agriculture and agri-food strategy.

241 IPES Food (2017) What makes urban food policy happen? Insights from five case studies. International Panel of Experts on Sustainable Food Systems.



Case study: Toronto – promoting farm viability through the Golden Horseshoe Food and Farming Action Plan

In 2012, the Greater Toronto Area Agricultural Committee, the Friends of the Greenbelt Foundation, the City of Hamilton and the Region of Niagara (together with other stakeholders) launched the Golden Horseshoe Food and Farming Action Plan.²⁴² The plan is overseen by the Golden Horseshoe Food and Farming Alliance, which also includes the Ontario Ministry of Agriculture, Food and Rural Affairs.

The plan identifies barriers to farm viability on the urban fringe, including urban encroachment, rising land prices, transport congestion, and expanding urban infrastructure. It articulates a common vision for farming in the region and identifies strategies to enhance the competitiveness of the sector by encouraging innovation and piloting new approaches to support farming in the region. The Alliance collaborates on a range of projects aimed at supporting the region's farmers. One project mapped agri-food assets to identify farming infrastructure needs and opportunities. Another identified new sales channels for locally produced food, such as government procurement of local food for those in long-term government care (e.g. in aged care facilities).²⁴³

The Alliance also conducts training and workshops that bring farmers together with municipal planners and economic development staff from across the Golden Horseshoe region to discuss the issues that farmers face and how government can work alongside farmers to address the issues and share practice across the municipalities.

Image courtesy of Friends of the Greenbelt Foundation

242 Golden Horseshoe Food and Farming Alliance (2012) As above.

243 Golden Horseshoe Food and Farming Alliance (2018) Serving up local - <http://www.foodandfarming.ca/current-projects/serving-up-local/> (accessed 29 June 2018).

Develop a state government policy to promote agriculture on Melbourne's fringe

There is an opportunity for the Victorian Government to strengthen its protection of Melbourne's green wedges and to grow the regional economy by developing a policy to promote agriculture on Melbourne's fringe:

"There needs to be a greater recognition at the state government level of the importance of the rural landscape and the importance of agriculture because it's...the single most important component in maintaining the values of the green wedge. That's the way I view it. If you take out agriculture from the green wedge, what have you got? That's the question I ask. What have you got?"

Interview 2, Civil society

In our best practice cities, the state or provincial government has introduced a variety of measures to promote agriculture on the fringe (see section 6).

An agricultural prospectus could be developed for the Melbourne metropolitan region that describes the particular issues facing the agriculture sector in the region (see section 5.1.1) and that identifies strategies to support farmers in taking advantage of the opportunities presented by farming on the fringe, including agri-tourism, development of innovative artisanal and niche products and direct marketing to local consumers, restaurants and other businesses.



SECTION 6

International best practice

6.1 Vancouver

6.1.1 The problem

Vancouver, in the province of British Columbia, is growing rapidly (with a growth rate of 6.5%²⁴⁴, compared to Melbourne at 2.7%²⁴⁵). Metro Vancouver has a population of around 2.5 million people and is expected to grow to a population of around 3.44 million by 2041²⁴⁶. The Vancouver metropolitan region is geographically constrained – with the sea to the west, mountains to the north and east and the US border to the South – which puts pressure on land for development. British Columbia has the mildest climate in Canada and can grow a wider range of crops than other parts of the country²⁴⁷, but only 5% of the province is good quality agricultural land²⁴⁸, and much of this land is close to Vancouver and other metropolitan regions. Up until the 1970s British Columbia had been losing up to 6000 hectares of agricultural land a year.²⁴⁹ Public concern about the loss of farmland grew and the issue dominated the 1972 provincial election.²⁵⁰

6.1.2 The solution

In 1973, the newly elected provincial government acted to stop the loss of agricultural land by establishing an Agricultural Land Reserve.²⁵¹ Since then, a number of other measures have been introduced in British Columbia by provincial and local governments to strengthen protection of farmland and to promote farming. Some of the most significant measures are described below.

244 Statistics Canada (2017) Population size and growth rate among census metropolitan areas (CMAs) in Canada 2006-2011 and 2011-2016, ranked by percentage growth in 2016 - <https://www150.statcan.gc.ca/n1/daily-quotidien/170208/t003a-eng.htm> (accessed 4 July 2018).

245 ABS (2018) 3218.0 Regional population growth, Australia 2016-17 - <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3218.0> (accessed 4 July 2018).

246 Metro Vancouver (2011) Metro Vancouver's regional growth strategy. Appendix A - <http://www.metrovancouver.org/services/regional-planning/PlanningPublications/TableA1-PopDwelUnitEmpProjforMVSubregMuni.pdf> (accessed 2 July 2018).

247 Stobbe, T, Cotteleer, G and van Kooten, G (2009) Hobby farms and protection of farmland in British Columbia. *Canadian Journal of Regional Science* XXXII (3): 393 – 410.

248 Regional District of Central Okanagan (2017) Agricultural land reserve: A guide for applications to the Provincial Agricultural Land Commission - <https://www.regionaldistrict.com/media/128878/ALRBrochure.pdf> (accessed 2 July 2018).

249 Stobbe, T, Cotteleer, G and van Kooten, G (2009) As above.

250 Garrish, C (2002) Unscrambling the omelette: Understanding British Columbia's Agricultural Land Reserve. *BC Studies* 136, Winter 2002/03: 25-55.

251 Garrish (2002) As above.

Agricultural Land Reserve

The Agricultural Land Reserve (ALR) was established by the Land Commission Act (1973).²⁵² The ALR contains around 5% of British Columbia's land mass²⁵³ (or around 4.72 million hectares of land²⁵⁴), including around 61,000 hectares of land in Metro Vancouver. The ALR is a provincial zone that recognises agriculture as the priority use.²⁵⁶ Non-farming activities and subdivisions are restricted in the zone.²⁵⁷ A detailed land capability study was used to establish the boundaries of the ALR, and a process for adding land to the ALR and for removing it was included in the legislation.²⁵⁸

Agricultural Land Commission

An independent Agricultural Land Commission (ALC) was established through the *Land Commission Act (1973)* to oversee the ALR. The Commission is an independent tribunal of appointed commissioners (and around 30 staff), who administer the Act. The commissioners review applications to remove, subdivide (or sometimes include) land in the ALR. The Commission has considered over 45,000 applications since it was established.²⁵⁹ Removing land from the ALR is a multi-tiered process. To remove land from the ALR, applicants must first get the support of their local council, before the application goes to a regional panel and then on to the Commission's executive committee.²⁶⁰ No land can be removed from the ALR without the approval of the executive committee and, in practice, very few approvals are given to remove land from the reserve.²⁶¹ Although there have been some boundary changes to the ALR, the size of the overall reserve has changed little since the early 1970s.²⁶² Stakeholders interviewed in Vancouver saw the work of the Commission as essential in maintaining the ALR:

"In my view the independent appointed tribunal (the ALC) is the stroke of genius that has allowed the ALR to persist for almost 50 years....having an ALC - an appointed body - that has decision making discretion is a useful and important and, I would say, absolutely essential tool in keeping public support for the ALR program"

International interview 4, Vancouver

252 Nixon, D and Newman, L (2016) The efficacy and politics of farmland preservation through land use regulation: Changes in southwest British Columbia's Agricultural Land Reserve. *Land Use Policy* 59: 227-240.

253 ALC (2002) Preserving our foodlands. Vancouver: The BC Agricultural Land Commission.

254 Androkovich, R (2013) British Columbia's agricultural land reserve: economic, legal and political issues. *Land Use Policy* 30: 365-372.

255 Metro Vancouver (2014) Farming in Metro Vancouver. Metro facts in focus policy backgrounder - http://www.metrovancouver.org/services/regional-planning/PlanningPublications/Farming_In_Metro_Vancouver_Oct_2014.pdf (accessed 3 July).

256 The original reserve established in the legislation was a broader "greenbelt", including lands with environmental values and parklands, but the reserve was refocused on agricultural lands after a change of government in 1975 (personal communication - International interview 4, Vancouver).

257 ALC (2018) Living in the ALR. Provincial Agricultural Land Commission - <https://www.alc.gov.bc.ca/alc/content/alr-maps/living-in-the-alr> (accessed 3 July 2018).

258 Androkovich, R (2013) As above.

259 ALC (2018a) Operations and governance, Commission operations - <https://www.alc.gov.bc.ca/alc/content/about-the-alc/operations-governance> (accessed 3 July 2018).

260 See ALC (2018a) As above and ALC (2018b) Working with local governments - <https://www.alc.gov.bc.ca/alc/content/about-the-alc/working-with-local-governments>

261 ALC (2002) As above.

262 Nixon, D and Newman, L (2016) As above.

"[The ALC is] incredibly important. They operate at arm's length from government. They have a set of rules that they're obligated to follow and they do a pretty good job...if it weren't for the Agricultural Land Commission and this whole ALR, that land would be gone. There's no doubt about it. That independent quasi-governmental body that oversees the act and the ALR is incredibly important and in fact people are calling for it to be further empowered"

International interview 2, Vancouver

Farm Practices Protection Act

In 1996 British Columbia introduced the Farm Practices Protection (Right to Farm) Act.²⁶³ The act protects farmers within the ALR from nuisance law suits when carrying out "normal farm practices". A "normal farm practice" is defined in the act as an activity "that is conducted by a farm business in a manner consistent with proper and accepted customs and standards as established and followed by similar farm businesses under similar circumstances".²⁶⁴ "Normal farm practices" are not defined in detail in the regulation, but the Ministry of Agriculture has developed a set of guidelines, the *Farm practices in BC reference guide*, which describes current farm practices.²⁶⁵ Stakeholders interviewed in Vancouver highlighted the importance of the act in strengthening farming in the ALR:

"The right to farm act...basically says, if you're a farmer in BC you have the right to carry out reasonable farm activities, even if it bothers your neighbour and that's been critical"

International interview 1, Vancouver

"The [Farm Practices Protection Act] establishes a tribunal to adjudicate conflicts, preventing them going to the courts. This is a huge benefit to the farmer because [they] cannot be sued for 'normal farm practices', which might be deemed offensive to a resident...it's important especially when you're constrained with really tight urban edges"

International interview 4, Vancouver

In addition to the Farm Practices Protection Act, there are several other pieces of provincial legislation that strengthen farming in British Columbia. They include the Land Title Act, which enables authorising officers to refuse subdivisions or require buffers for farmland to prevent interference with farm operations and the Local Government Act, which empowers local governments to introduce agricultural bylaws that zone land for agriculture and provide buffering for farmland.²⁶⁶

263 Farm Practices Protection (Right to Farm) Act (RSBC 1996) Chapter 131.

264 Farm Practices Protection (Right to Farm) Act (RSBC 1996) Chapter 131. Part 1 – Definitions.

265 Province of British Columbia (2018) Farm practices in BC reference guide - <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/strengthening-farming/farm-practices-in-bc-reference-guide> (accessed 3 July 2018).

266 Province of British Columbia (2018a) Legislation for strengthening farming - <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/strengthening-farming/legislation-for-strengthening-farming> (accessed 3 July 2018)

Metro Vancouver Regional Food System Action Plan

“It has become evident that a regional federation of local governments working together on some issues provides an effective way to optimise the building of a resilient, sustainable regional food system”²⁶⁷

In addition to provincial laws, there are a number of local government initiatives that support British Columbia’s ALR. One of the most important is the *Metro Vancouver Regional Food System Action Plan*.²⁶⁸

Metro Vancouver is a metropolitan governance body that comprises 21 local governments, an electoral area and a treaty first nation. It manages regional growth for the Vancouver metropolitan area. Metro Vancouver adopted a *Regional Food System Strategy* in 2011, which is linked to its metropolitan planning strategy.²⁶⁹ The *Regional Food System Strategy* “promotes agricultural viability, especially for food production, and supports protection of agricultural lands”.²⁷⁰

The Regional Food System Action Plan outlines some common objectives agreed by local governments and a series of specific actions that will be taken to achieve them. They include actions to “protect the region’s farmland in support of the provincial Agricultural Land Reserve” and to “encourage new farms by putting resources into establishing incubator farms and supporting business and skills training”.²⁷¹ The *Regional Food System Action Plan* extends the metropolitan planning strategy’s goal of protecting agricultural land to actions that aim to promote the viability of farming on that land:

“[Metro Vancouver’s] mandate is primarily around land and land use – [it] can advocate on those issues because broadly they fit within the mandate of protecting agricultural land...it’s not a case of just ‘protect agricultural land’ but also to put that land into action, to put that land into the activity of growing food”

International interview 5, Vancouver

Metro Vancouver also has an *Agricultural Advisory Committee* that provides advice on the protection of agricultural land and promoting the viability of farming in the region.²⁷²

267 Metro Vancouver (2016) Metro Vancouver regional food system action plan. Vancouver: Metro Vancouver.

268 Metro Vancouver (2016) As above.

269 Metro Vancouver (2011a) Metro Vancouver 2040: Shaping our future. Regional growth strategy. Vancouver: Metro Vancouver.

270 Metro Vancouver (2011a) As above p 5.

271 Metro Vancouver (2016) As above p 11 and 12.

272 Metro Vancouver (2018) Regional planning committee, Agricultural advisory committee. Terms of reference – 2018. Vancouver: Metro Vancouver.

6.1.3 Benefits

British Columbia's approach to protecting farmland and promoting farm viability in the Metro Vancouver area has resulted in a wide range of benefits:

- The Metro Vancouver region produces **27% of the value of British Columbia's agriculture** on 1.5% of the land²⁷³
- Agriculture in the Metro Vancouver region provides **around 8,000 jobs**²⁷⁴
- The **number of farms in the Metro Vancouver region is increasing**, unlike many other areas of the country²⁷⁵
- By 2002, the **loss of agricultural land from the ALR had been contained** to less than 500 hectares per year²⁷⁶
- There is **strong public support for the ALR** – in polling, 95% of the general public in British Columbia say that they support the ALR and the policy of protecting farmland²⁷⁷
- Vancouver has developed **strong food culture with its roots in locally sourced, sustainably produced food** that supports the city's culinary tourism²⁷⁸

6.1.4 On-going challenges

Farming in British Columbia's ALR faces some ongoing challenges:

- Only **around 50% of agricultural land in the ALR is actively farmed**, 25% is unavailable to farming because of existing land uses that are incompatible with farming²⁷⁹
- **Land speculation continues** in the ALR, driving up the price of land. In 2016, farmland in the Metro Vancouver region fetched prices of up to CAN\$80,000 per acre for land parcels up to 40 hectares and CAN\$150,000 to \$350,000 per acre for land parcels of less than 5 acres, undermining the viability of farming in the region²⁸⁰

273 Metro Vancouver (2014) As above.

274 Metro Vancouver (2014) As above.

275 Metro Vancouver (2014) As above.

276 ALC (2002) As above.

277 Ipsos Reid (2014) Poll of public opinions toward agriculture, food and agri-food production in BC. Vancouver: Ipsos Reid Public Affairs.

278 Tourism Vancouver (2018) – Restaurants, Four elements of Vancouver - <https://www.tourismvancouver.com/restaurants/dining-guides/4-elements-vancouver-cuisine/> (accessed 3 July 2018).

279 Metro Vancouver (2014) As above.

280 Sussman, C, Dorward, C, Polasub, W and Mullinix, K (2016) Home on the range: Cost pressures and the price of farmland in Metro Vancouver.

- The integrity of the ALR faces on-going challenges due to **population growth and pressure on housing affordability**.²⁸¹ Vancouver faces severe housing affordability pressures, which have been linked to low household incomes²⁸² and speculative investment in the property market by non-BC residents. This has led to calls for land to be taken out of the ALR.²⁸⁴ However, the provincial government has not linked pressure on housing affordability to urban boundaries and is moving to strengthen the ALR.²⁸⁵

6.2 Toronto

6.2.1 The problem

Toronto, in the province of Ontario, is Canada's largest city and is growing rapidly (with a growth rate of 6% compared to Melbourne at 2.7%).²⁸⁶ The Greater Toronto Area has a population of around 5.9 million and is predicted to reach 9.7 million by 2041.²⁸⁷ The Golden Horseshoe region on Toronto's fringe is an important agricultural region. The Golden Horseshoe and Greater Golden Horseshoe regions (two horseshoe-shaped peri-urban rings around Toronto) contain some of Canada's best agricultural land²⁸⁸ and together account for around 36% of Ontario's agricultural output.²⁸⁹ Toronto's growth has been accompanied by significant sprawl, and in 2002, researchers showed that if the metropolitan region continued on its existing growth trajectory, there would be significant further loss of high quality agricultural land.²⁹⁰ Public concern grew about the loss of rural areas on Toronto's fringe²⁹¹, and in the 2003 provincial election, the Liberal Party made the creation of a Greenbelt a central election promise.²⁹²

Left: Images courtesy of Tracy O (CC BY-SA 2.0), Angel Jarup (CC BY 2.0), Ruth Hartnup (CC BY 2.0)

281 Province of British Columbia (2018) Homes for B.C: A 30 point plan for housing affordability in British Columbia.

282 Metro Vancouver (2018b) About housing affordability - <http://www.metrovancouver.org/services/regional-planning/housing-affordability/about-housing-affordability/Pages/default.aspx> (accessed 4 July 2018)

283 Johnston, P (2018) BC speculation tax: Here's what you need to know. Vancouver Sun 29 March 2018.

284 Fraser Institute (2016) Local regulations limit Metro Vancouver housing supply, stifle affordability - <https://www.fraserinstitute.org/article/local-regulations-limit-metro-vancouver-housing-supply-stifle-affordability> (accessed 4 July 2018)

285 Metro Vancouver (2018b) As above.

286 Statistics Canada (2017) As above.

287 Ontario Ministry of Finance (2018) Ontario population projections update 2017-2041 - <https://www.fin.gov.on.ca/en/economy/demographics/projections/> (accessed 4 July 2018).

288 Government of Ontario (2017) Greenbelt Plan 2017. Effective 1 July 2017.

289 Cummings, H et al. (2015) Dollars & sense: opportunities to strengthen southern Ontario's food system. Friends of the Greenbelt Foundation.

290 Macdonald, S and Keil, R (2012) The Ontario Greenbelt: Shifting the scales of the sustainability fix? *The Professional Geographer* 64 (1): 125-145.

291 Cadieux, K, Taylor, L and Bruce, M (2013) Landscape ideology in the Greater Golden Horseshoe Greenbelt Plan: Negotiating material landscapes and abstract ideals in the city's countryside. *Journal of Rural Studies* 32: 307-319.

292 Macdonald, S and Keil, R (2012) As above.



6.2.2 The solution

In 2005, Ontario's liberal provincial government passed legislation to establish a Greenbelt in the Greater Golden Horseshoe region.²⁹³ Since the creation of the Greenbelt, Ontario's provincial government has undertaken a number of other steps to actively promote the protection of farmland and the viability of farming in the region. The key elements of their approach are described below.

Greenbelt

Ontario's Greenbelt is a region of "Protected Countryside" lands around Toronto that have important agricultural and environmental values. Around 43% of land in the Greenbelt is used for agriculture.²⁹⁴

The Greenbelt Act passed in 2005 required the development of a Greenbelt Plan, which recognises that the "Protected Countryside" consists of a "natural system" and an "agricultural system" (and settlements).²⁹⁵ The "agricultural system" comprises both the agricultural land in the region and the "agrifood network" – that is, the infrastructure and assets that are important to the viability of agriculture. In other words, the plan recognises that promoting the viability of agriculture is important to protecting the Greenbelt, and it encourages municipalities to enhance the viability of the agri-food network by, "providing opportunities to support access to healthy, local, and affordable food, urban and near-urban agriculture, food system planning and promoting the sustainability of agricultural, agri-food and agri-product businesses".²⁹⁶

Greenbelt Council

The Greenbelt Council is a public advisory body established to provide advice to the Minister of Municipal Affairs on the management of the Greenbelt, including 10-yearly reviews of the *Greenbelt Plan*. Members of the Greenbelt Council are appointed by the Minister.²⁹⁷ In 2018, the Council was expanded and its remit extended to include advising on implementation of the Greater Golden Horseshoe Growth Plan.²⁹⁸

293 Macdonald, S and Keil, R (2012) As above.

294 Macdonald, S and Keil, R (2012) As above.

295 Government of Ontario (2017) Greenbelt Plan (2017). Effective 1 July 2017.

296 Government of Ontario (2017) As above.

297 Ontario Ministry of Municipal Affairs and Housing (2018) Greenbelt Council terms of reference - <http://www.mah.gov.on.ca/Page18805.aspx> (accessed 4 July 2018).

298 Government of Ontario (2018) Ontario ensuring greener growth in the Golden Horseshoe. Media release 16 April 2018 - <https://news.ontario.ca/mma/en/2018/04/ontario-ensuring-greener-growth-in-the-greater-golden-horseshoe.html> (accessed 16 April 2018).

Friends of the Greenbelt Foundation

The Friends of the Greenbelt Foundation is a not-for-profit organization established shortly after the Greenbelt was created.²⁹⁹ Its role is to *actively promote* the Greenbelt to ensure that it is relevant to the general public and promotes the livelihoods of those who live and work there.³⁰⁰ It was established with a CAN\$25 million grant from the provincial government of Ontario³⁰¹ which remains the major funder of the Foundation:

"I think the province recognised, at least at the political level perhaps, that you can introduce stronger protection for farmland, for natural heritage systems, but in both cases they're living systems...so there needs to be restoration and enhancement to actually get the most out of those natural features and the system. Ditto for agriculture; you can protect the land base but there needs to be a functioning agri- support network so the farmers can actually farm into the long term"

International interview 7, Toronto

The Foundation funds projects that strengthen the region.³⁰² Since 2005, it has invested \$47 million in supporting farming, tourism and conservation in the Greenbelt³⁰³, including projects to introduce signage to tell people they are entering the Greenbelt, to create a cycle route through the Greenbelt and to promote tourism. As one interviewee put it they, "help people understand where the Greenbelt is, what its benefits are, why they should care".

Greenbelt Fund

In 2010, a not-for-profit Greenbelt Fund was also set up to promote agriculture in the Greenbelt (and more broadly within Ontario).³⁰⁴ The Government of Ontario is the primary funder of the Greenbelt Fund, which provides grants to promote agriculture and protect the "agricultural integrity" of the Greenbelt.³⁰⁵ The Fund has several grant streams focused on improving the food literacy of the general public, increasing the amount of local food purchased by public institutions in Ontario, and increasing market access for farmers by supporting food hubs and new and emerging markets. It also supports *Greenbeltfresh.ca* and *Ontariofresh.ca*, online marketing services that promote sales of local food from the Greenbelt and Ontario.³⁰⁶

299 Friends of the Greenbelt Foundation (2018) About the Greenbelt Foundation - <http://www.greenbelt.ca/foundation> (accessed 4 July 2018).

300 Amati, M and Taylor, L (2011) Conference report: the death and life of greenbelts: Local solutions for global. Toronto 22-24 March, 2011. *Town Planning Review* 82 (6): 733-737.

301 Macdonald, S and Keil, R (2012) As above.

302 Cadieux, K, Taylor, L and Bunce, M (2013) Landscape ideology in the Greater Golden Horseshoe Greenbelt Plan: Negotiating material landscapes and abstract ideals in the city's countryside. *Journal of Rural Studies* 32: 307-319.

303 Friends of the Greenbelt Foundation (2018) As above.

304 Greenbelt Fund (2018) About the Greenbelt Fund - <http://www.greenbeltfund.ca/about> (accessed 5 July 2018).

305 KPMG (2017) Financial statements of Greenbelt Fund, year ended March 31, 2017 - https://d3n8a8pro7vhm.cloudfront.net/greenbeltfund/pages/54/attachments/original/1499692208/2017_Greenbelt_Fund_Financial_Statements.pdf?1499692208 (accessed 5 July 2018).

306 See <http://www.greenbeltfund.ca>

Farming and Food Production Protection Act (1998)

In 1998, the Government of Ontario passed a *Farming and Food Production Protection Act* that aims to protect the right to farm across the province and prevent nuisance lawsuits related to normal farm practices.³⁰⁷

Normal farm practices are defined broadly in the Act as practices that are “conducted in a manner consistent with proper and acceptable customs and standards as established and followed by similar agricultural operations under similar circumstances” or that “make use of innovative technology in a manner consistent with proper advanced farm management practices”.³⁰⁸ A Normal Farm Practices Protection Board appointed by the responsible Minister resolves disputes by ruling on nuisance cases brought before it and determines what is “normal farm practice”.³⁰⁹

Local Food Act (2013)

Ontario is a net food importer. It has been estimated that Ontarians consume around \$20 billion in imported food each year that could be produced in the state.³¹⁰ In 2013, the Government of Ontario passed a Local Food Act that aims to encourage the development of new markets for local food, increase awareness of local food and promote successful local food economies and systems through the province. The Minister of Agriculture and Food is also required to set local food targets and to report each year on local food activities.³¹¹

Golden Horseshoe Food and Farming Alliance

In 2012, seven key municipalities in the Greater Golden Horseshoe region came together with other organisations (including the Friends of the Greenbelt Foundation, the Toronto Region Conservation Authority and the Ontario Ministry of Agriculture, Food and Rural Affairs) to form the Golden Horseshoe Food and Farming Alliance.³¹²

The alliance developed a common plan, the *Golden Horseshoe Food and Farming Action Plan 2021*³¹³, which sets out strategies to address challenges to the viability of farming in the region. The plan has become the official policy of the seven municipalities, which each contribute \$30,000 to the running of the alliance.³¹⁴ The policy enables the municipalities to speak with one voice on important issues affecting food and farming in the region, to share best practice and to work in a co-ordinated way on common strategies.

307 Farming and Food Production Protection Act, 1998, S.O. 1998, C1 - <https://www.ontario.ca/laws/statute/98f01> (accessed 5 July 2018).

308 Farming and Food Production Protection Act, 1998 As above – Part 1, Definitions.

309 Ontario Ministry of Agriculture, Food and Rural Affairs (2018) Citizens guide to the Normal Farm Practices Protection Board - <http://www.omafra.gov.on.ca/english/engineer/nfppb/guide.htm> (accessed 5 July 2018).

310 Cummings, H et al. (2015) As above.

311 Bill 36 (Chapter 7, Statutes of Ontario, 2013). An Act to Enact the Local Food Act, 2013, and to Amend the Taxation Act 2007 to provide for a tax credit to farmers for donating certain agricultural products that they have produced.

312 Golden Horseshoe Food and Farming Alliance (2018) About the Golden Horseshoe Food and Farming Alliance - <http://www.foodandfarming.ca/about/> (accessed 5 July 2018).

313 Golden Horseshoe Food and Farming Alliance (2012) Golden Horseshoe Food and Farming Action Plan 2021: Golden Horseshoe agriculture and agrifood strategy.

314 IPES-Food. 2017. What makes urban food policy happen? Insights from five case studies. International Panel of Experts on Sustainable Food Systems.

6.2.3 Benefits

- The Greenbelt **contributes CAN\$ 9.1 billion to the economy** each year³¹⁵
- There are **161,000 jobs** in the Greenbelt³¹⁶
- There is strong public support – polling shows that **9 out of 10 Ontarians support the Greenbelt**³¹⁷
- **Greenbelt farms are highly productive** – in 2005, the average net revenue of a Greenbelt farm was CAN\$155 per acre, compared to CAN\$105 per acre for the rest of Ontario³¹⁸
- **Greenbelt farms are highly efficient** – they produce more revenue per acre, but are 39% smaller than the average farm in Ontario³¹⁹
- **60% of Ontario's employment in post farmgate food processing and manufacturing** is located in the Greenbelt³²⁰
- Land in the Greenbelt contributes **CAN\$ 95 m in recreational value** each year³²¹
- Each grant awarded by the Greenbelt Fund creates an average CAN\$ 1 million in additional **sales of local food**³²²

6.2.4 Ongoing challenges

- Toronto is facing significant **housing affordability challenges**³²³, which has led to calls for land to be released for housing from the Greenbelt. However, in 2017, the total supply of unbuilt land available in the Greater Golden Horseshoe area was estimated to be around 125,000 hectares³²⁴
- Ontario's **new Premier**, (elected in June 2018) **proposed early in the election campaign to develop the Greenbelt**, but later committed to protect the Greenbelt in its entirety after a public and political backlash during the election campaign³²⁵
- **Speculative investment in farmland** has continued on the edge of the Greenbelt, driving up land prices and putting pressure on the Greenbelt boundary. One development group is estimated to own around 9,700 acres of land close to the boundary³²⁶

315 Friends of the Greenbelt Foundation (2018) As above.

316 Friends of the Greenbelt Foundation (2018) As above.

317 Friends of the Greenbelt Foundation (2015) Public opinion on the Greenbelt, its review and local food. Poll conducted by Environics in August and September 2015.

318 Cummings, C, Megens, S and Murray, D (2007) Agriculture in Ontario's Greenbelt: Facts and figures from the Canadian Agricultural Census. University of Guelph.

319 JRG Consulting Group (2014) Agriculture by the numbers: Understanding the Greenbelt's unique advantages. Friends of the Greenbelt Foundation.

320 JRG Consulting Group (2014) As above.

321 Friends of the Greenbelt Foundation (2018) As above.

322 Greenbelt Fund (2018) As above.

323 RBC (2018) RBC Housing affordability report. Royal Bank of Canada - <http://www.rbc.com/newsroom/reports/rbc-housing-affordability.html> (accessed 5 July 2018)

324 Neptis (2017) An update on the total land supply: Even more land available for homes and jobs in the Greater Golden Horseshoe. 9 March 2017. The Neptis Foundation.

325 CBC News (2018) Ford abandons proposal for Greenbelt development after backlash. CBC News, 1 May 2018 - <https://www.cbc.ca/news/canada/toronto/ford-wynne-greenbelt-development-election-1.4643189> (accessed 5 July 2018).

326 Ontario Federation of Agriculture/Environmental Defence (2018) Farmland at risk: why land use planning needs improvements for a healthy agricultural future in the Greater Golden Horseshoe. November 2015.



6.3 Portland

6.3.1 The problem

Portland is the largest city in Oregon (US), and one of the biggest cities in the Pacific Northwest, with a population of around 2.4 million people in the metro area.³²⁷ Its growth rate has slowed in the last year to around 1.7%, but it has grown rapidly over the last 10 years with significant inward migration.³²⁸ From 2001 to 2012, it had one of the highest rates of productivity growth in the US, outpacing Silicon Valley.³²⁹ Agriculture is one of Oregon's most important industries, contributing around US\$5.7 billion in farm output in 2014³³⁰, and counties in the Portland metro region are some of the top producing agricultural counties in the state.³³¹ During the 1950s and 1960s, there was major loss of forest and agricultural land in Oregon, and by the early 1970s, momentum had built to protect farmland as a significant asset.³³²

6.3.2 The solution

"There's no one tool that I can attribute to its success – it's a combination of things, a comprehensive approach"

International interview 8, Portland

Oregon passed landmark legislation in 1973, the *Land Use Act*, which set state-wide goals for land use planning and required all cities in Oregon to set urban growth boundaries, with sufficient land to accommodate urban growth for a period of 20 years.³³³ This has since been followed by a suite of other measures to protect farmland and promote the viability of farming. The key elements of the approach are described below.

Left: Images courtesy of NRCS Oregon (CC BY 2.0), Kori Monster (CC BY 2.0), Sharat Ganapati (CC BY 2.0)

327 Metro (2016) Portland region nears 2.4 million residents, growing by 41,000 last year. *Metro News*, 23 March 2016 - <https://www.oregonmetro.gov/news/portland-region-nears-24-million-residents-growing-41000-last-year> (accessed 5 July 2018).

328 Forbes (2018) Full list – America's fastest growing cities 2018 - <https://www.forbes.com/sites/samanthasharf/2018/02/28/full-list-americas-fastest-growing-cities-2018/#2c291d4a7feb> (accessed 5 July 2018).

329 Metro (2015) 2014 Urban growth report. Investing in our communities 2015-2035 - <https://www.oregonmetro.gov/sites/default/files/2015/10/27/20151026-Final-UGR.pdf> (accessed 5 July 2018).

330 Sorte, B et al. (2015) Oregon agriculture, food and fibre: an economic analysis. Oregon State University Rural Studies Program, December 2015.

331 Agri-Business Council of Oregon (2011) Portland metro area facts - <http://www.oregonfresh.net/education/portlandmetro.php> (accessed 5 July 2018).

332 Kline, J et al. (2014) How well has land use planning worked under different governance regimes? A case study in the Portland, OR-Vancouver, WA metropolitan area, USA. *Landscape and Urban Planning* 131: 51-63.

333 Kline, J et al. (2014) As above.

Urban Growth Boundary

An urban growth boundary (UGB) was established around Greater Portland in 1980. Under Oregon Law, the UGB is reviewed every 6 years or earlier if there is less than a 20-year land supply within the UGB according to growth projections. The boundary has been extended many times since it was introduced and, in fact, was never intended to be static. However, there is a clear procedure and governance process for expanding the boundary (see 'Metro' below), and most expansions of the UGB are very small, 20 acres or less.³³⁴

Urban and rural reserves

In 2007, Oregon passed *Senate Bill 1101* to allow the creation of urban and rural reserves outside Portland's UGB. *Urban reserves* identify areas outside the boundary where urban development will occur over a 50-year period if the boundary needs to be expanded. *Rural reserves* identify areas of high agricultural and conservation value that will be protected for a period of 50 years. Before the urban and rural reserves were designated, detailed mapping of land in the Portland metro region was undertaken, which included a process to map productive and viable agricultural lands (see section 3.3).³³⁵ The aim is to facilitate more effective planning for both urban and rural areas on the fringe, to provide certainty to all stakeholders and to reduce the impact of land speculation:

"In effect, because we now have targeted areas it's taken away a lot of land speculation in the areas that aren't designated urban reserves. So those lands... don't have the urban speculative value that they had. So they provide a lot more certainty to the agricultural community in terms of their long-term investments into that land...it's really a certainty for both sides. The urban reserves provide certainty for the cities to plan where to go. The rural reserves provide certainty to the farmers in the area...so they can invest in their land"

International interview 8, Portland

Metro

Metro is a directly elected regional government that manages land use planning and parks in the Portland metropolitan region. It is the only elected regional government of its type in the US.³³⁶ Metro is responsible for growth planning and managing Portland's UGB, and state law defines strict criteria that must be followed in reviewing the UGB.

334 Metro (2018) Urban growth boundary - <https://www.oregonmetro.gov/urban-growth-boundary> (accessed 6 July 2018).

335 Metro (2018a) Urban and rural reserves - <https://www.oregonmetro.gov/urban-and-rural-reserves> (accessed 6 July 2018).

336 Metro (2018b) What is metro? - <https://www.oregonmetro.gov/regional-leadership/what-metro> (accessed 6 July 2018).

First the Metro Council (of elected Metro councillors and president) must examine the efficiency of land use inside the boundary and opportunities to use brownfield sites. If projected growth cannot be accommodated within the UGB for the next 20 years, the Metro Council considers land outside the boundary for inclusion, according to priorities defined by state law. Land in urban reserves is priority 1, followed by land next to the UGB that is not forest or farmland. The lowest priority land for inclusion is forest or farmland. If farmland must be considered for inclusion in the UGB, then the poorest quality farmland must be considered first. In other words, the most productive farmland on Portland's fringe is the last land that can be considered for inclusion in the UGB, only once all other options have been exhausted.³³⁷ Amendments to the boundary must also be approved by Oregon's Land Conservation and Development Commission.³³⁸

Exclusive Farm Use zone

Farmland outside Portland's UGB which is not in urban reserves is protected by an Exclusive Farm Use Zone, as required by state law. The minimum lot size in the Exclusive Farm Use Zone is 80 acres (160 acres for rangeland) to prevent land being subdivided into parcels that hinder agriculture, and new dwellings not associated with farming are strictly limited in the zone. Farms inside an Exclusive Farm Use Zone are also protected by the *Right to Farm Law 1993* (see below), and land taxes on their farms are assessed at land value rather than market value.³³⁹

Right to Farm Law

Oregon introduced a *Right to Farm Law* in 1993 which protects farmers in areas zoned for farming from nuisance law suits related to normal farm practices. The farming practices protected under the law are those that "are or may be used on a farm or forestland of similar nature" and "are generally accepted, reasonable and prudent methods for the operation to obtain profit in money".³⁴⁰ Oregon Department of Agriculture also runs a farm mediation program that can mediate in the event of nuisance complaints.³⁴¹

Initiatives to support new and small farmers

Oregon has a range of initiatives to support new farmers and small farms (often run by civil society groups) including Oregon Farm Link, which helps new farmers find land to lease from older farmers, and programs to provide financing for new farmers.³⁴² The United States Department of Agriculture also provides significant support to small scale farmers across the country to move into direct marketing through its farmers market and local food promotion program³⁴³ and to encourage new farmers to join the industry.³⁴⁴

337 Metro (2018) As above.

338 Oregon Department of Land Conservation and Development (2018) Land Conservation and Development Commission - <https://www.oregon.gov/LCD/pages/lcdc.aspx> (accessed 6 July 2018).

339 Oregon Department of Revenue (2014) As above.

340 Oregon Department of Agriculture (2014) Oregon's right to farm law. May 2014.

341 Oregon Department of Agriculture (2018) Mediation - <https://www.oregon.gov/ODA/AboutUs/ComplaintsDisputes/Pages/Mediation.aspx> (accessed 5 July 2018)

342 Oregon Department of Agriculture (2018b) New and small farms - <https://www.oregon.gov/ODA/agriculture/Pages/NewSmallFarms.aspx> (accessed 6 July 2018).

343 USDA (2018) Farmers market promotion program - <https://www.ams.usda.gov/services/grants/fmpp> (accessed 6 July 2018).

344 USDA (2018a) New Farmers - <https://newfarmers.usda.gov/new-farmers> (accessed 6 July 2018).

6.3.3 Benefits

- **Over 100,000 people are employed in Portland's food economy**, around 11% of those employed in the region³⁴⁵
- Portland has developed its **own unique and vibrant food culture**, with a significant emphasis on food carts and locally sourced foods, which has become a tourism drawcard³⁴⁶
- Between 1982 and 1997, **Oregon lost the least farmland of any US state**³⁴⁷
- **Oregon loses farms at a much lower rate than the rest of the US** – between 1978 and 2002, Oregon lost half as many large farms as the US average and the loss of mid-size farms was four times lower in Oregon than the national average³⁴⁸
- **Net farm income per acre more than doubled in Oregon** between 1995 and 2005 from \$16 per acre to \$38 per acre³⁴⁹

6.3.4 Ongoing challenges

- Like Vancouver and Toronto (and many other cities worldwide)³⁵⁰, Portland is experiencing **housing affordability challenges**, driven by rapid growth. However, the increase in house prices has slowed in recent years.³⁵¹
- A trend to approving **non-farm land uses in the Exclusive Farm Use Zone** is leading to increasing land use conflicts and has the potential to undermine the integrity of agriculture in the zone.³⁵²

345 Green, J, Schrock, G and Liu, J (2015) Portland's food economy: Trends and contributions. Portland State University.

346 Loughlin, M (2014) Portland a la carte: The city's brilliant street food scene. The Guardian - <https://www.theguardian.com/travel/2014/may/30/portland-oregon-street-food-scene> (accessed 6 July 2018).

347 USDA Natural Resources Conservation Service (2001) in Johnston, J (2011) Oregon's land use system and farmland protection.

348 Oregon Department of Land Conservation and Development (2018a) DLCD farmland protection - <https://www.oregon.gov/lcd/pages/farmprotprog.aspx> (accessed 6 July 2018).

349 Oregon Department of Land Conservation and Development (2018a) As above.

350 Demographia (2018) 14th annual Demographia housing affordability survey 2018. Rating middle income housing affordability - <http://www.demographia.com/dhi2018.pdf> (accessed 6 July 2018)

351 Hamilton, R (2017) You are here: A snapshot of housing affordability in Greater Portland. Metro News, 1 November 2017. Metro - <https://www.oregonmetro.gov/news/you-are-here-snapshot-housing-affordability-greater-portland> (accessed 6 July 2018).

352 Lehman, R (2015) Conflicts in resource zones. Oregon Chapter of the American Planning Association.

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6.4 Lessons for Melbourne

The approaches adopted by Toronto, Vancouver and Portland to protecting farmland and promoting farm viability on their city fringes are varied, but they have many elements in common. These common strategies offer important lessons for Melbourne in considering how best to strengthen the city's foodbowl:

Greenbelts need proactive management and investment

Each of our international best practice cities proactively manages their greenbelt, urban growth boundary or agricultural land reserve, with state or provincial governments taking a strong role (see below). They also invest in city fringe regions of food production. They do this in different ways – through the governance bodies that manage the region, by promoting the region to the general public and by establishing initiatives to support farmers in the region. A key feature in each case is that legislation to protect the region is just a starting point – a range of other mechanisms are required to realise the benefits of these regions for economic growth, livelihoods, environmental services and food production.

Protecting farmland is not enough

Protecting farmland is not in itself enough to maintain city fringe regions of food production. Unless measures are taken to promote the viability of farming and encourage active use of the land (see below), the productive capacity of these regions is likely to be gradually eroded. As agriculture is a key land use that maintains open spaces and rural landscapes in greenbelts, a decline in agriculture is likely to also undermine the fundamental integrity of the greenbelt.

A suite of tools is needed

A suite of tools is required to strengthen city foodbowls. In addition to legislation to protect farmland, supportive measures introduced by our case study cities include right to farm legislation, taxation policies that significantly reduce land taxes on land that is actively farmed, initiatives to assist new farmers to enter farming in the regions, investment in infrastructure (e.g. food processing infrastructure and food hubs) that enables small-medium scale farmers to value-add and gain greater control over their supply chains and initiatives to promote direct sales of local food. In Melbourne's case, securing access to water is also crucial.

State government leadership is essential

In each of our case study cities, the state or provincial government has shown strong leadership in actively supporting regions of food production and greenbelts on the city fringe. The state has legislated to protect important regions of food production for the long term and has held the line on urban boundaries, sending strong and consistent policy signals. This does not necessarily mean that urban boundaries are static or absolutely fixed, but effective governance processes and frameworks have been established so that changes are modest, occur in a predictable way and minimise the impact on productive farmland and the viability of farming.

Good governance is key

Each of our case study cities has established an independent body responsible for managing changes to the urban growth boundary, green belt or agricultural land reserve and a clear process for managing changes to the boundary that is underwritten by legislation. These governance mechanisms establish some independence in management of the boundary from the government of the day and provide a useful buffer against ongoing lobbying and development pressure.

Strong regulation drives certainty and innovation

Strong regulation that protects farmland for the long term (e.g. for a period of at least 50 years, as Portland has done through its rural reserves) creates a higher degree of certainty for all stakeholders in managing both farms and urban growth, acting as a springboard for investment and innovation. Certainty depends not only on strong regulation, but on the political will to hold the line and maintain urban boundaries in the face of ongoing pressure for development. For our case study cities, creating a high degree of certainty has brought benefits in economic development, culinary and agritourism and a strong local food culture.

Local government co-ordination strengthens agriculture on the fringe

Each of our case study cities has a mechanism for co-ordinating local or regional government action in relation to farming on the city fringe. In Portland's case, the mechanism is a regional 'metro' government focused on managing the urban growth boundary. Toronto and Vancouver each have mechanisms that focus more specifically on establishing a joint vision for farming and the food system and strategies to strengthen these systems. These mechanisms provide a powerful way for local governments to speak with one voice in relation to farming on the city fringe, share best practice, co-ordinate local action and advocate to the provincial or state government.

Building public support is vital

The experience of our case study cities suggests that to protect greenbelts and city fringe areas of food production over the long term it is important to build a high level of public support for these areas and awareness of their benefits. In each of these cities, public pressure has been an important factor in driving action to protect regions on the city fringe, and has been instrumental at critical junctures in resisting pressure for development and maintaining the integrity of the regions.

