
The use of planning provisions and legislation to protect peri-urban agricultural land

Michael Buxton RMIT UNIVERSITY and Rachel Carey DEAKIN UNIVERSITY

Peripheral (peri-) urban areas on the fringes of Australia's major capital cities contain some of the country's most fertile agricultural soils. They are among the most productive agricultural regions in the country¹ and they make an important contribution to the nation's fruit and vegetable supply.² Yet they have been regarded in Australia as land awaiting urban development, and cities have continually expanded the urban frontier into areas of high value agricultural production. The accumulated scale of urban and rural-residential development now threatens the continued viability of agricultural production on the urban fringe.

The need to protect peri-urban agricultural land to meet food security challenges is now firmly on the international agenda. Many world cities are introducing strong legislative frameworks to protect highly fertile land in their rural hinterlands to increase urban resilience in the face of uncertainty and change. Australian states have used a range of statutory and other measures to delineate urban and rural land.³ Sometimes these have been specifically directed at the protection of agricultural production, such as in Adelaide or fringe areas of Melbourne during the 1970s. Generally, however, agriculture on the urban fringe has been regarded as expendable, as the fate of the Sydney greenbelt most dramatically illustrates. Sydney's greenbelt was lost to incremental urban development over a short period from the late 1950s.

The lack of effective long-term legislative and statutory frameworks for fringe urban areas has left Australia ill-prepared to address growing food security challenges. It also undermines initiatives to increase agricultural exports and has the potential to affect the capacity of future generations of Australians to feed themselves from sources of fresh local food.

This article outlines the importance of agriculture on the urban fringe, illustrates the failure to date of statutory measures in Australia to protect this vital resource, explores how cities elsewhere in the world have addressed the issue, and considers some statutory and policy options available to strengthen the protection of agricultural land on the urban fringe.

The food security challenge

The urban fringe of the major capital cities in Australia's five biggest states produces at least 25% of the total gross value of agricultural production in those states from just 3% of the agricultural land.⁴ Melbourne's green belt is the second-highest producer of agricultural products in Victoria, with a gross production in 2001 of \$890 million from 4010 farms, although the true value may be closer to double this figure.⁵ The agricultural output per hectare of this area is the highest in Victoria, at least three times greater than any other region in the state and four times the state average. Agricultural activities in 2004 occurred on 64% of land in Melbourne's green wedges.⁶

Urban fringe regions are particularly important to fruit and vegetable production. Melbourne's urban fringe produces around 40–50% of Victoria's vegetables and around 17% of the state's fruit,⁷ while Sydney's urban fringe accounts for at least 20% of the state's total vegetable production.⁸ The value of food production on the urban fringe of each of the capital cities amounts to over \$1 billion.⁹ They account for high proportions of perishable fruit and vegetables. The Sydney region produces 100% of the state's total production of Chinese cabbage and sprouts, 91% of spring onions and shallots, and 80% of mushrooms,¹⁰ while Melbourne's urban fringe produces over 90% of the state's strawberries, cauliflowers, asparagus and herbs and over 70% of the state's broccoli, lettuce and raspberries.¹¹

The main threats to food production on the fringe of Australia's capital cities are urban encroachment, existing rural land fragmentation and future subdivision. Yet growing pressures on global food production increase the need for production in fringe areas. These pressures include a growing world population; changes in global patterns of food consumption; the impacts of climate change; declining natural resources such as land, water and oil; and increasing energy costs.

Food security has been low on the policy agenda in Australia. Australia has a large food surplus, exporting around 60% of the food that it produces,¹² and is commonly perceived as "food secure". However, our high level of comfort in national food security masks

vulnerabilities in our food supply. Less than 10% of Australia's land is arable and therefore suitable for agriculture, and only a small proportion of this arable land has the type of high quality soil and water availability that makes it suitable for intensive agricultural uses.¹³ Much of the best quality land with the most secure sources of water is found on the coastal fringe of Australia around the major capital cities. These areas are not as reliant on the large-scale vulnerable irrigation schemes that are essential for farming further inland.

Fringe area agricultural land is a precious and finite resource that has been consistently undervalued in Australia for its contribution to food security. Growing pressures on food production now require governments to act cautiously to retain this resource in order to protect cities against future uncertainty and radical changes in conditions.

Retaining food production close to major cities also has the potential to increase food system resilience in the face of declining supplies of fossil fuels. Our food system is highly dependent on oil. As supplies of fossil fuels continue to decline, oil prices are likely to rise and this will place pressure on food prices, particularly for foods that travel long distances and for perishable foods that require refrigerated transportation. The further that highly perishable foods such as fruit and vegetables need to travel, the more expensive they are likely to become. Cities can also provide considerable assistance to fringe area agriculture. For example, water treatment plants can provide access to recycled water for food production, and short supply chains provide significant advantages in transport costs.

What are the most effective international approaches?

Urban and peri-urban food production is increasingly seen as a core feature of a secure food system. In his 2014 final report, the United Nations Special Rapporteur on the Right to Food emphasised the critical role of urban and peri-urban agriculture in strengthening the resilience of city food systems:

...it is vital that cities assess their food dependencies, identify weaknesses and potential pressure points and, where possible, develop a variety of channels through which they can procure their food. Urban and peri-urban agriculture, as well as the development of short food chains connecting cities to their local foodshed, will therefore play an increasingly important role.¹⁴

The green belts of the United Kingdom, the agricultural parks of Milan and Barcelona in Europe, and the metropolitan planning strategies of Chicago and Port-

land in the United States provide contrasting approaches to protecting peri-urban food production. Some of the most successful approaches are in the Canadian cities of Toronto and Vancouver.

Vancouver was an early pioneer of legislation to protect urban fringe farmland. The province of British Columbia introduced legislation to establish an Agricultural Land Reserve (ALR) in 1973 after significant loss of farmland around the city. The ALR covers around 5% of the province and includes 4.7 million hectares of land, which is protected by a special land use zone. Land capability is assessed against a "Land Capability Classification" system to determine which land is part of the ALR and an independent Commission is responsible for administering the land use zone and preserving agricultural land in the province. Vancouver's approach has evolved over time into a package of related measures that now include the Farm Practices Protection (Right to Farm) Act (RSBC 1996) and a city food strategy.¹⁵

The Ontario Greenbelt was established around Toronto and surrounding areas through the Greenbelt Act (SO 2005). The Ontario Greenbelt protects around 1.8 million acres of agricultural and environmentally sensitive land in the region from development. A Greenbelt Council was established to provide advice to the Minister on administering the Greenbelt, and performance measures were established to track the effectiveness of the Greenbelt Plan. The Greenbelt has high levels of public support, and although farms in the Greenbelt are 33% smaller than the average farm in the state, gross revenue per acre is 12% higher.¹⁶

Effective international approaches to protecting agriculture on the urban fringe use varying models of governance that include state, local government and regional control over decision-making, and sometimes independent bodies to administer planning frameworks. Implementation methods also vary, relying alternatively on legislated protection of high quality agricultural lands or on statutory policy and zoning measures. However, decision-makers in these cities have formed a broad political, business and community consensus on the need to protect agricultural land on the urban fringe, and have adhered to long-term plans. Even where power is retained largely in local authorities, as in cities in the north-western United States such as Portland in Oregon, these bodies have established strong coalitions of support for policies and have maintained the integrity of policy measures over long periods of time.

Approaches to protecting agricultural land on Australia's urban fringe

Australian state governments, regional governments and local councils have adopted a range of regulatory measures to limit development on agricultural land on

urban fringes, including legislative, policy and statutory planning measures, such as the use of zone and overlay controls. Voluntary measures and incentives, such as rate reductions and land care, have also been used, but with little effect in preventing development. However, some tools that have proved effective in other countries, such as the declaration of agricultural reserves and the purchase or transfer of development rights, have not been used in Australia.

The range of regulatory measures used in Australia will be outlined below using the urban fringe area of Melbourne as a case study. Strong statutory land use controls were used until the early 1990s to protect the resources of Melbourne's peri-urban regions. Melbourne's green belt was officially established in the 1971 Melbourne strategic plan, *Planning Policies for the Melbourne Metropolitan Region*. The 1971 plan tried for the first time in Victoria to change landowner expectations and eliminate land speculation in rural areas. It confined urban growth to corridors separated by non-urban areas in a plan that has defined the direction of urban growth and the shape of Melbourne over the last 40 years. It introduced high minimum subdivision sizes up to 80 hectares, strong land use controls, the preservation of large metropolitan farms, and the introduction of more restrictive uses in environmental zones.

The Victorian government expanded the green belt in the Melbourne 2030 plan of 2002 to 8829 km² and used legislation to supplement protective statutory planning measures, passing the *Planning and Environment (Metropolitan Green Wedge Protection) Act 2003 (Vic)*. This defined an Urban Growth Boundary (UGB) and green wedges, and also required prior ministerial approval before councils could initiate planning scheme amendments and parliamentary ratification for any change to the UGB or subdivision controls in a total of 17 fringe area planning schemes. However, parliamentary control proved to be no obstacle to breaches of this Act, as both major political parties acted together to constantly expand the boundary.

During the 1970s, the Victorian government also established regional planning authorities under legislation, as well as strong policies to maintain agriculture and other rural uses in the Mornington Peninsula and the Upper Yarra Valley and Dandenong Ranges. Land tenure was identified as a key factor with the capacity to alter these areas to an urban condition. Existing lots posed a significant threat. In the Upper Yarra Valley and Dandenong Ranges region, for example, about 62% of the 17,273 rural lots did not contain dwellings and 42% of the 43,334 urban lots were vacant, with the potential to double through subdivision.¹⁷ Land subdivision practices were the fundamental influence on forms of development.

In response to these perceived threats, the state government, regional authorities and local councils introduced regulatory limits to rural subdivision through minimum subdivision sizes of between 25 and 60 hectares, and prevented the further subdivision of extensive urban areas. They amalgamated thousands of existing titles in restructured lot patterns and the state government purchased thousands more lots to add to parks. These measures were intended to control land speculation and prices and increase the potential to innovate. This remains Australia's most radical policy response to the potential of peri-urban development to alter a region's functioning characteristics.

The need for additional regulatory land use tools to reduce land fragmentation can be seen in the broader band of peri-urban councils outside Melbourne's green belt that extends up to 150 kms from the city's central business district. Dwellings will be constructed by 2025 on a large existing pool of vacant and newly subdivided lots in these councils, severely reducing the capacity for further agricultural production. Existing regulatory controls over land uses are mismatched to land characteristics and the strongest zones and other tools are used rarely.

At present, development is limited on rural lots in proclaimed water supply catchments to a minimum developable density of one dwelling per 40 hectares, with the potential to reduce the maximum number of future rural dwellings from 7178 to 343. New potential policy measures include the transfer of existing rural lots to townships, the maintenance of strong rural subdivision controls, rural lot restructure and amalgamation, and limitations on rural housing construction.

Two methods are widely proposed in Australia to reduce the capacity for development in existing small lots. First, applying a minimum lot size requirement for a dwelling can prevent dwelling construction on many vacant lots. A minimum lot size of 40 hectares over a group of eight Victorian peri-urban councils would reduce rural development capacity on vacant rural lots from 48,261 to 5911 dwellings, the greatest reduction of 86% occurring in the Farming Zone. Second, a tenement control is a powerful tool requiring a minimum land size for the approval of a dwelling over multiple lots held in the same ownership — particularly in the Farming Zone, where 70% of lots in the eight municipalities are held in common ownership. Tenement controls were widely used in Victorian planning schemes until the Kennett Coalition government abolished them in the 1990s. A 25 hectare tenement control applied to the 10,196 properties held in multiple lots would reduce the dwelling potential from 46,179 on multiply owned lots to 14,597, and a 40 hectare control to 7395 dwellings.¹⁸

Threats also exist to agriculture from other forms of development. The Kennett government deregulation of rural zones in 1996 included only three prohibited uses and led to widespread pressure for the location of urban-related uses in the green belt. Residential rezoning and tourism and recreation proposals increased markedly, with 4000 hectares being developed between 1996 and 2002. Between 2003 and 2007, the Bracks Labor government increased regulatory planning controls over urban-related rural uses, including large conference centres, hotels and other commercial uses, and residential housing. These have been maintained for the Melbourne green belt by the Napthine Coalition government, but removed for rural land in the broader peri-urban area, making available large areas of agricultural land for commercial use.

The state government's new metropolitan plan, Plan Melbourne, proposes a more regional approach to integrating metropolitan and peri-urban development. The plan acknowledges the need to better identify and protect strategically important agricultural land. It also includes proposals to investigate a "high value agricultural food overlay" and to require localised planning statements in some areas to acknowledge the importance of food production. However, the plan makes no specific commitments to introduce strong legislative or regulatory measures at state government level to protect peri-urban agriculture.

A range of regulatory measures has been adopted over recent decades to protect agricultural land on the fringe of Australia's cities, but these have failed to prevent continued loss of highly fertile farmland on the urban fringe. In Victoria, strong regulatory controls introduced during the 1970s have been progressively weakened. Australian approaches have generally been characterised by a lack of long-term planning and a failure to achieve a broad political and community consensus on the need to protect agricultural land on the urban fringe.

Conclusion

Cities that protect the natural resources of their hinterlands will increase their adaptability and be more likely to thrive over the next century. Retaining the potential for agricultural production near cities will be a key element in their success in the face of increasing pressures on global food production. This potential can only be safeguarded through an emphasis on retaining land for agriculture, rather than viewing land on the urban fringe as a commodity to be consumed by urban development. The application of uncompromising regulatory measures over the long term is the only way to prevent the incremental loss and eventual destruction of hinterland resources. Effective land use planning and

regulation can eliminate land speculation and fragmentation and so maintain comparative rates of return on capital investment. A broad political and public consensus must also be achieved on the need to protect agricultural land on the urban fringe.

Statutory and other regulatory controls need to be linked to a package of measures that promote the viability of agriculture in urban fringe regions. This includes measures to promote the purchase of local foods, to address the costs of farming on the urban fringe, and to support the development of appropriate infrastructure for local food distribution, including more independent food retailing. Cross-sectoral government policies that integrate policy across all government sectors for the retention of fringe area agriculture are needed urgently in place of the contradictory and fragmented policy approaches that currently apply.

Michael Buxton

*Professor Environment and Planning
RMIT University*

Rachel Carey

*Research Fellow
Food Alliance
Deakin University*

Footnotes

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2. For statistics on vegetable production in the Sydney region, see I Sinclair et al "From the outside looking in: the future of Sydney's rural land — background issues and workshop outcomes" May 2004, available at www.ruralplanning.com.au. For statistics on vegetable production in the Melbourne region, see the findings of the Food Alliance's Know Your Foodbowl research project, available at www.foodalliance.org.au.
3. T Budge "Farmland preservation in Australia: emerging issues and fragmented responses" in *Farmland Preservation: Land for Future Generations*, ed W Caldwell et al, University of Guelph 2007.
4. Above, n 1.
5. A Langworthy and T Hackett *Farming Real Estate? Challenges and Opportunities for Agribusiness in the Urban Fringe — Yarra Valley Region* Swinburne University of Technology, Melbourne 2000.
6. Port Phillip and Westernport Catchment Management Authority *Port Phillip and Western Port Regional Catchment Strategy 2004–9* 2004.
7. Food Alliance "Findings of the Know Your Foodbowl research project 2014", available at www.foodalliance.org.au.
8. Sinclair et al, above, n 2.

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10. Sinclair et al, above, n 2.
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12. Department of Foreign Affairs and Trade *Trade at a Glance* Australian Government 2012.
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