# Green Wedge Planning Framework – Literature Review

## Introduction

Australian cities have spread across more than one million hectares of rural land since 1945 (Bruxton and Goodman 2004). The protection of rural lands in inter-urban breaks is a goal linked with urban containment. Inter-urban breaks and city greenbelts provide a setting for many regional services that support urban areas and buffer incompatible land uses while they also protect a range of landscape and environmental values. Melbourne's green wedges have been given protection in recognition of the fact that the urban environment has spilled into areas noted for their agricultural productivity, mineral resources and environmental and recreational values (Department of Infrastructure, Victoria 2002). Protecting these values and providing access to greenspace is important in maintaining quality of life in cities and ensures the social, aesthetic, environmental and economic benefits they provide flow through to the community (Casperson et al 2006).

Cities tend to follow radial development patterns spreading from the city centre along transport infrastructure routes before filling in the spaces between these corridors (Schrijin 2000). One of the issues of protecting inter-urban breaks from development is that they are vulnerable to new infrastructure demands such as road and rail as developing these networks through non-urban land is significantly less expensive (Casperson et al 2006). Once these corridors are established there are further development pressures on adjacent lands with good access to the infrastructure.

A city greenbelt concept was introduced in the UK to cope with the over-crowding of cites following WWII. It was originally intended to direct urban growth into satellite cities away from central metropolitan areas rather than to conserve the surrounding rural landscape (Frey 2000). Land within the inter-urban breaks of Copenhagen now used primarily for recreation was allocated to agricultural production and gardens for nearby markets in a 1947 master plan for the city and its surrounding areas.

Access to global markets led to a change in the relationship between cities and the surrounding rural areas lessening the need for agricultural productivity in close proximity to population centres (Frey 2000). Peri-urban and rural lands on the urban fringe face more acute pressure for land use change than those further a field. This is primarily due to the wider options of land use available, which combined with population and economic growth mean that the opportunity costs of land rise (Mallawaarchchi et al 2004). The disparity between urban industrial investment power and traditional agricultural and rural land uses is an important factor driving the urbanisation of the landscape surrounding cities (Schrijin 2000). Strong planning measures are needed to counter this disparity and prevent the incremental spill of urban land uses into rural areas.

Values associated with urban breaks.

Value of inter-urban breaks

- Scenic amenity – landscape diversity
- Air quality
- Recreation opportunities
- Sense of place – regional and community identity
- Environmental

- Climate change

Recreational use of large open spaces in inter-urban areas differs from smaller parklands located within the city. Typically smaller city parks are used for frequent short visits while larger more distant parks are used less frequently but the duration of the average visit is much longer (Turner 1992, Arnberger 2006).

## Protecting inter-urban breaks

Bruxton and Goodman (2004) identify a range of mechanisms that have been employed internationally to protect inter-urban areas from development. These include:

- Strategic policy statements
- Regional or subregional land use plans
- Land purchases
- Urban growth boundaries
- The purchase of land development rights from landowners on the urban fringe

Some cities are surrounded by natural landscape features that effectively contain urban growth and acts as inter-urban buffers. The Royal National Park in Sydney's south and the Stockholm archipelago have been effective natural buffers forcing urban consolidation while Copenhagen has relied on a history of planning measures to prevent sprawl onto terrain suitable for development in the inter-urban breaks (Casperson et al 2006). Less successful greenbelt planing attempt include the 1947 Sydney metropolitan plan which did identify a greenbelt but failed to identify alternative areas to accommodate population growth. This led to the incremental rezoning of the greenbelt as each development became a precedent for the further urban growth (Bruxton and Goodman 2004).

Melbourne's green wedges area also a legacy of past planning. For the most part they are located between areas of urban growth formed along major transport corridors (DI, Victoria 2000). The green wedges contain a range of urban activity support services including airports, sewage treatment plants, quarries and waste disposal that cannot be located in urban developments.

The Urban Growth boundary surrounding is comprised of an inflexible boundary around most of the city and a managed growth boundary along nominated growth corridors. It was adopted following the rezoning of 6000 hectares of land for residential and other urban related uses during the 1990's.

## Economic Drivers

The disparity between urban industrial investment power and agricultural and rural land uses in inter-urban breaks has been an important factor driving the urbanisation of the landscape surrounding cities (Schrijin 2000). Strong planning measures are needed to counter this disparity and prevent the incremental spill of urban land uses into rural areas. An urban footprint boundary is one mechanism that has been utilised in Australia and overseas. Legislating an urban footprint boundary helps to prevent property speculation inflating land

prices in inter-urban breaks and focus investment into urban areas (Bruxton and Goodman 2004). The expansion of the commuter belt has led to an increase in demand for detached housing on urban fringes. Population growth and a trend to smaller household size has also put pressure on the urban fringe and resulted in green field developments both in Australia and overseas.

## Peri-Urban Settlements

Peri-urban settlement pressures in South-East Queensland has had a range of impacts including further fragmentation of remnant vegetation and wildlife corridors, affecting the hydrological regime and led to land use changes that have exacerbated the spread of non-native flora and fauna species. It has also altered the social fabric of rural communities as land use has moved from traditional farming to become increasingly urban. Agricultural enterprises have decreased in size and number to and there has been a move to more intensive production practices. So while total land under cultivation has decreased some sectors have seen significant increases in production (Low Choy et al 2008).

Peri-urban communities
The low population density of peri-urban settlements means providing urban support services is unviable

in peri-urban settlements – economically unviable need to remove the expectation that it is an option. Need increased population density in settlement clusters outside the main metropolitan area to ensure that open space is maintained while communities become more self-sufficient and support systems become more viable.

## Conclusions

A strong planning framework is necessary to keep investment in urban areas and retain inter-urban areas for rural production and recreation purposes. Cities that have successfully retained inter-urban breaks have done so by employing a range of planning measures at regional and local levels of government.

Vulnerable to economic and population growth, newer car commuting communities, weaker economic basis of rural industries compared to urban/industrial sectors. Could a wave of baby boomer retirees looking for retirement incomes lead to the expansion of peri-urban communities surrounding Brisbane as small lots are sold and developed.

Incremental rezoning of land reduces public confidence in the planning system.

Low density settlements outside the main metropolitan areas cannot be provided with the urban services available in more highly populated areas.

Land acquisition has been a common feature in European cities that have successfully retained inter-urban breaks. Land acquisitions by local government authorities proven necessary in securing inter-urban open space (Frey 2000, Casperson et al 2006).

**Bibliography:**


Amati, M., Yokohari, M., (2006) *Temporal changes and local variations in the functions of London's green belt*. Landscape and Urban Planning 75 125–142.

Bruxton M., Goodman, R. (2004) *Limits to cities: the theory and practice of the international use of green belts and urban growth boundaries*. RMIT University

Bruxton M., Goodman, R. (2004) *Planning policy and the future of Melbourne's green belt*. School of Social Science and Policy RMIT University

Casperson, O. H., Konijnendijk, C. C., Olafsson, A. S. (2006) *Green space planning and land use: An assessment of urban regional and green structure planning in Greater Copenhagen*. Danish Journal of Geography 106(2)

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

Frey, H.W., (2000) *Not green belts but green wedges: the precarious relationship between city and country*. URBAN DESIGN International 5, 13-25.

Gayler, H. T., (1982) *Conservation and Development in Urban Growth: The Preservation of Agricultural Land in the Rural-Urban Fringe of Ontario*. The Town Planning Review, Vol. 53, No. 3, pp. 321-341

Kühn, M., (2003) *Greenbelt and Green Heart: separating and integrating landscapes in European city regions*. Landscape and Urban Planning 64 19–27.

Low Choy, D., Sutherland, C., Gleeson B., Sipe, N., and Dodson J. (2008) *Change and Continuity in Peri-Urban Australia: Peri-Urban Futures & Sustainable Development*. Monograph 4, Griffith University, Brisbane.

Mallawaarachchi, T., Morrison, M. D., Blamey, R. K., (2006) *Choice modelling to determine the significance of environmental amenity and production alternatives in the community value of peri-urban land: Sunshine Coast, Australia*. Land Use Policy 23 323–332.

McEldowney, M. (2005) *The Rural-Urban Interface: Outskirts of European Cities* in Planning in Ireland and Beyond, School of Environmental Planning, Belfast, pp. 319-332.

Queensland Department of Infrastructure and Planning (2009) *South East Queensland Regional Plan 2009–2031*.

Turner, T. (1992) *Open Space Planning in London: From standards per 1000 to green strategy*. The Town Planning Review 63 (4) p365–386.

Turner T. (2006) *Greenway planning in Britain: recent work and future plans*. Landscape and Urban Planning 76 p240–251.