

Strategic Plan:
City of Wyndham
Biodiversity and
Population Growth

Prepared by Janyce McMurtrie

2011

Strategic Plan for Wyndham

Part 1: Executive Summary

Preserving biodiversity¹ in areas of rapid population growth such as Wyndham, is a significant planning issue. This report presents three key objectives: to increase incentives to preserve biodiversity, to maximise land capability and to provide open space in addition to grassland reserves in the City of Wyndham. This report details strategies based on the approach that urban expansion, current off-setting practices and low perceived value result in the degradation of significant ecological communities and the sacrifice of biodiversity.

Part 2: The Issue - Biodiversity and Population Growth

The City of Wyndham is undergoing significant rapid expansion as part of Melbourne's Urban Growth Boundary² (UGB) (GAA 2009). Like other areas of Australia where population has been driven by the State Government's job creation, affordable housing and pro-family policies (Abel et.al. 2011), Wyndham experienced population growth of 8.8% in 2009-2010 (ABS 2011). Rapid growth is forecast to continue, with a predicted population of 277,000 by 2026 (Growth Areas Authority 2009). This locks the City into a trajectory of urban sprawl, large houses and increasing transport and infrastructure provision. As Wyndham is home to critically endangered Natural Temperate Grasslands (Growth Areas Authority 2010), this environmentally expensive trajectory will result in the irreplaceable loss of biodiversity. Wyndham requires strategic planning responses to reduce spatial fragmentation (Buxton et.al 2008) and to address the loss of essential biodiversity.

Part 3: Planning Response

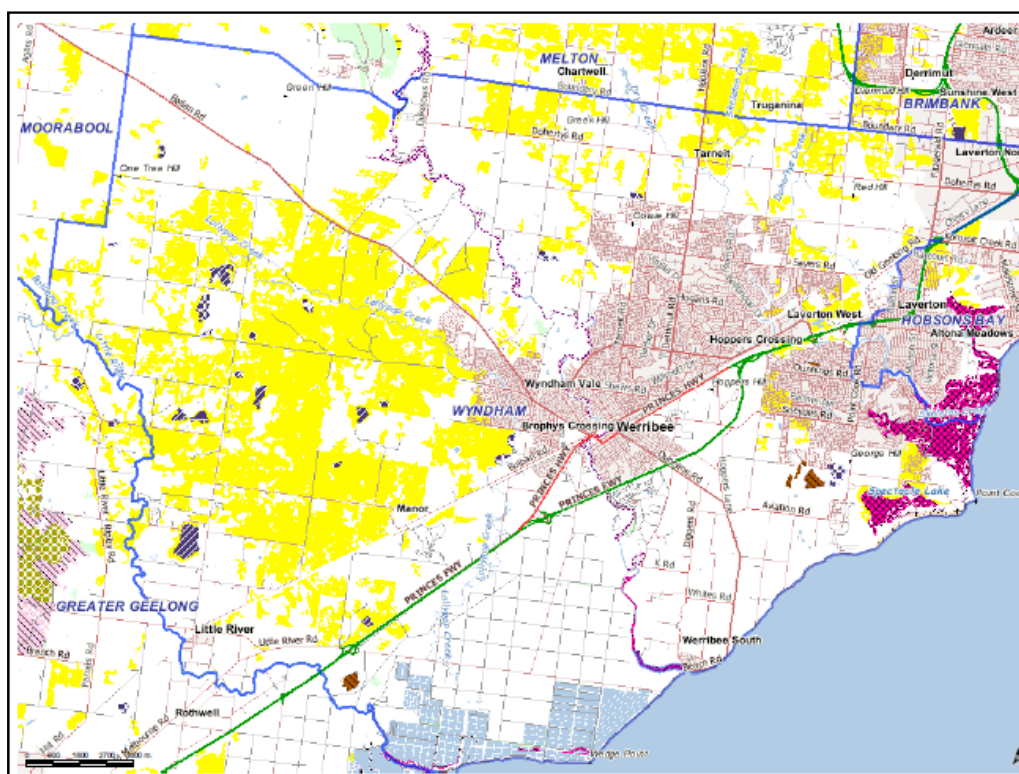
3.1 OBJECTIVE: To increase incentives to preserve biodiversity in Wyndham

¹ Biodiversity is the variety of living organisms including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. This includes genetic variation, diversity between species and ecosystem diversity (CBD 2011).

² Urban growth boundary (UGB) is an indicative line that depicts the long-term extent of urban development of metropolitan Melbourne (DSE 2005). The UGB separates urban land which can be used for housing, industry and commerce from rural land suitable for conservation, agriculture, resource development and suitable community infrastructure like airports, water supply and sewage treatment facilities (DSE 2005)

Introduction: Wyndham is home to the critically endangered native vegetation community Natural Temperate Grassland of the Victorian Volcanic Plain (EVC³ 132) (Growth Areas Authority 2010). This significant remnant ecosystem is limited to Victoria's basalt plain (Beeton 2008). The species within this community are particularly well adapted to the low fertility, low rainfall (Wyndham 2007) and flat topography of Wyndham's volcanic plain. Although greatly fragmented and in decline (Beeton 2008), the grasslands have survived over two centuries of farming and urban encroachment (Growth Areas Authority 2010) predominantly due to the harsh, flat dry nature of the area (Moore 2011). The remaining 1% of this ecological community (Morton 2008) is now under further threat of clearing due to urban expansion [Figure 1].

Figure 1: Wyndham Native Vegetation Extent 2005 Map



Source: DSE: online, 2011

Scale 1:100,000 at A3 size

Remnant vegetation makes a major contribution to the region's amenity (Buxton et al 2008) in addition to providing essential ecosystem services such as carbon sequestration, erosion protection, soil health, water cycling, climate regulation and

³ Ecological Vegetation Class (EVC) - A Victorian classification of vegetation into units of co-occurring plant species which are defined by a combination of floristics, life form, position in the landscape, and locality to particular environments (Department of Sustainability and Environment 2004).

pollination (MA 2005, United Nations Environmental Programme 2010). These values are not reflected in current Victorian land clearance and development practices. The Volcanic Plains Grasslands are protected under the *Environment Protection and Biodiversity Conservation Act 1999* (Growth Areas Authority 2010) and Victorian Planning Framework (DPCD 2010 Clause 12-03-1 p2). However, current legislation allows off-setting⁴ for land clearance (DNRE 2002). Off-setting is in essence treating environmental assets as a tradable commodity (Haughton & Counsell 2004) resulting in cumulative loss of biodiversity (Abel et.al 2011). This trade-off approach has been used to legitimise environmental degradation (Haughton & Counsell 2004).

Scientific consensus predicts a continuing loss of biodiversity escalating the risk of drastic consequences to humans (TEEB 2010). Unless urgent action is taken to reverse current trends, survival thresholds⁵ may be crossed resulting in the serious loss of ecosystem services (UNEP 2010). To avoid this situation, strategies based on economic thinking are needed to reflect the contribution of biodiversity and ecosystem services to humankind (TEEB 2010).

3.1.1 Strategy A: *To provide incentives to developers to preserve biodiversity in development planning phase.*

Rationale: Protecting biodiversity should be seen as an investment rather than a cost (UNEP 2010). The failure to assign the full economic values of ecosystems and biodiversity has been a significant factor in their continuing loss and degradation (MA 2005). As a result, vegetation clearance has led to fragmentation and increased vulnerability of species (Buxton et.al 2008). Valuing the contribution of grasslands to carbon sequestration is an important tool for communicating and mainstreaming biodiversity. Incentives can be one method of translating this knowledge into behavioural change to protect biodiversity (TEEB 2010). Eliminating harmful subsidies can be another tool for conserving biodiversity (UNEP 2010) and important landscapes such as the Natural Temperate Grasslands of the Victorian Volcanic Plain (DPCD 2010

⁴ Offset – permanently protected indigenous vegetation as a replacement for cleared vegetation (DSE 2008)

⁵ Threshold - Limit beyond which capacity to provide useful services may be seriously reduced (TEEB 2010).

Clause 12-03-1 p2). This strategy acknowledges the financial value of ecosystem services.

3.1.2 Strategy B: *To provide rate rebates for volunteering in Indigenous Vegetation management*

Rationale: Involve communities in the conservation of the habitats of threatened and endangered species and communities as identified under the Flora and Fauna Guarantee Act 1988 such as native grasslands and wetlands (DPCD 2010 Clause 12.01-1 p1). The volunteering levels in Wyndham are relatively low (25.9%) compared to Victorian rates (40.8%) (CIV 2011). Community Action Grants may be one method for Council to address this shortfall by supporting local communities to undertake activities such as revegetation, rehabilitation, weed removal, pest control, and improving land management (DSE: online 2011). This strategy is designed to encourage volunteering in conservation through financial incentives.

3.2 OBJECTIVE: To maximise land capability to protect biodiversity

Introduction: In response to population growth, the State Government has rezoned land to increase housing supply in high-demand areas (Abel et.al 2011) including Wyndham. Expansion may appear to be an easy solution but there are alternatives with fewer costs to biodiversity, society and the environment. With consideration and planning, an integrated approach to land use can address the needs of the broader population while protecting biodiversity to balance social, economic and environmental concerns (Beer, Maude & Pritchard 2003). Facilitating increased housing yield in strategic locations can reduce new dwellings in greenfield and dispersed development areas (DPCD 2010 Clause 16.01-2 p1). Objective 3.2 considers strategies to maximise urban land use within existing areas in preference to further expanding Melbourne's boundaries (Committee of Melbourne 2009).

3.2.1 Strategy A: *To remove single-dwelling covenants to incorporate higher-density development into structure plans*

Rationale: Sustainable regional development can be interpreted according to the needs and desires of various stakeholders (Haughton & Counsell 2004). For example urban compaction can cause the loss of vegetation or it can be

achieved through higher density housing. Although the Wyndham Growth Area Framework recommends protecting environmentally sensitive areas and ensuring sustainable development (Growth Areas Authority 2006), Wyndham's current planning policy is to protect biodiversity outside the UGB accepting the loss of remnant vegetation within the UGB (Moore 2011: pers. comm.) as a more tolerable option than higher density housing. Wyndham's single-dwelling covenant supports this policy. [Figure 2 refer to attachment 1]

Figure 2: Wyndham Single-dwelling per Lot Restriction Plan

Source: Moore 2011

Removing covenants along major roads such as Princess Highway, Ballan Road and Sneydes Road would increase housing supply in existing urban areas with access to infrastructure and services (DPCD 2010 Clause 16.01-1 p1), providing accommodation close to employment and activity centres (Committee of Melbourne 2009, DPCD 2010 Clause 16.01-2 p1). This strategy achieves a balance between additional housing and biodiversity protection (Buxton et.al 2008) ensuring that new building minimises the removal or fragmentation of native vegetation (DPCD 2010 Clause 12.01-1 p1). In addition, it avoids disordered and inefficient urban development (Buxton et.al 2008).

3.2.2 Strategy B: *To provide incentives to develop a range of housing options to reduce average house sizes*

Rationale: The planning system needs to support the appropriate quantity, quality and type of housing (DPCD 2010 Clause 21.05-2 p1). The average household size in Wyndham in 2006 was 2.9 people (ABS 2011, Moore 2011: pers.comm.) This is predicted to decrease to 2.7 by 2026 (Moore 2011: pers.comm.). As an estimated 50% of new houses are 3 bedroom and 45% are 4 bedroom (Moore 2011: pers.comm.), this represents 1-2 spare bedrooms per house. This translates to people paying for surplus space and resources. In 2006, 20.8% of Wyndham households were spending 30% or more of gross household income on rent or mortgage, compared to the state average of 17.7% (Vichealth: online, 2011). Housing needs to be affordable (Committee

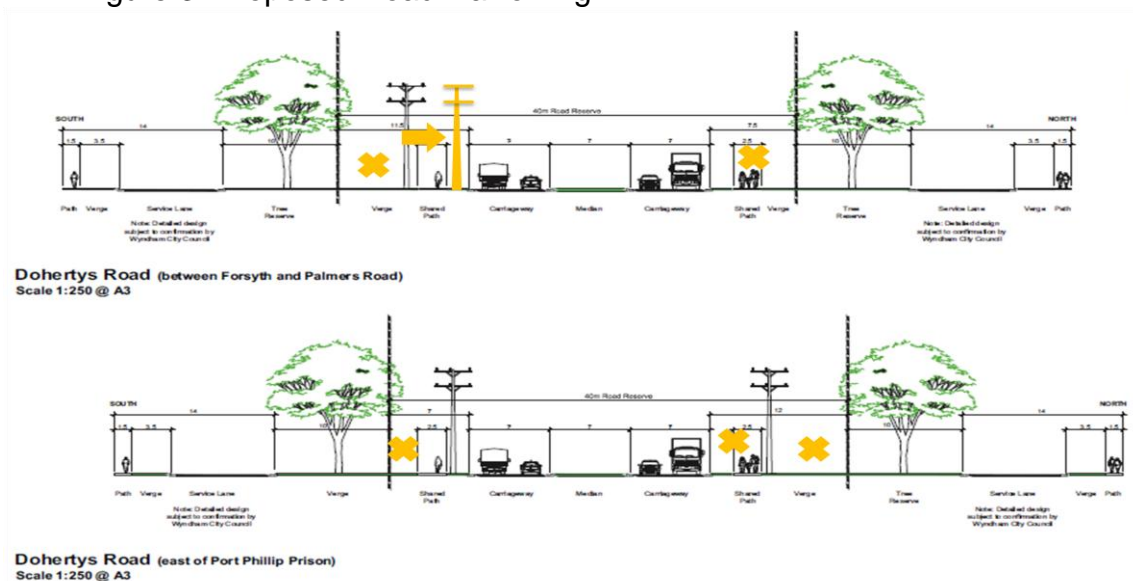
of Melbourne 2009) but people purchasing larger houses than necessary, equates to less affordable housing.

Creating zoned planning incentives to developers to construct a range of appropriate types of housing is one creative method of increasing housing density. According to Bundy, increasing the minimum housing density to fifteen dwellings per hectare would provide adequate housing within the UGB to last approximately nineteen years (Green Wedge Coalition: online, 2009). This strategy would accommodate a greater percentage of the population in appropriately sized, affordable houses while ensuring that development minimises the removal of native vegetation (DPCD 2010 Clause 12.01-1 p1) and protects rural landscapes and habitats (Buxton et.al 2008).

3.2.3. Strategy C: To reduce road reserve sizes to improve land use capability

Rationale: Reducing and reconfiguring road reserves is one method of developing underutilised urban land. It is possible to narrow proposed ninety-eight and eighty-eight metre road reserves (GAA 2009) by 15 or 16m by eliminating duplications [highlighted in orange in Figure 3]. Furthermore, it is feasible to create one-way circulation through some local road sections, equating to halving road reserve width. This would liberate land for development while still achieving the goal of better transport choices and highly accessible industrial areas.

Figure 3: Proposed Road Narrowing

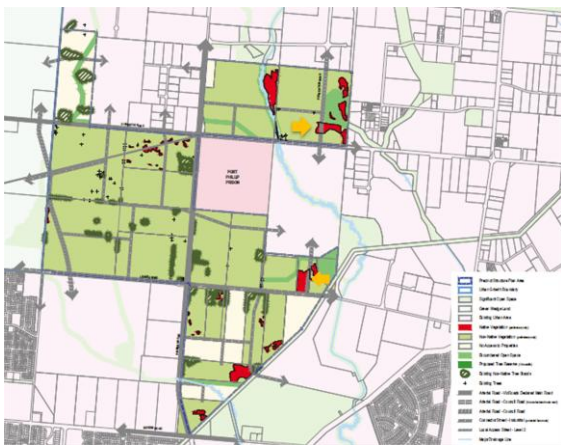


Source: Adapted from GAA 2009, p.26

3.2.4. Strategy D: To reconfigure roads to reduce biodiversity loss

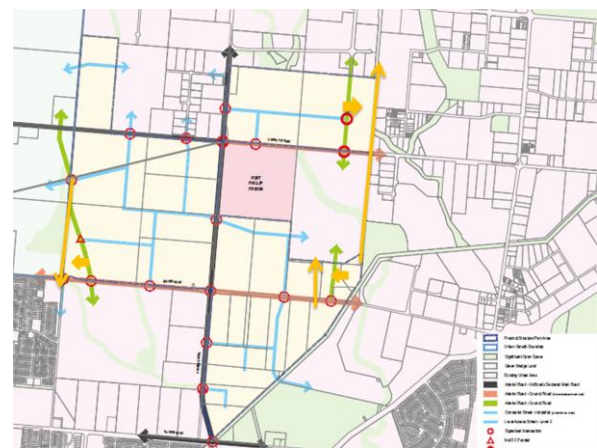
Rationale: Reconfiguring road locations is an achievable means of protecting biodiversity. Wyndham is currently proposing construction of two roads through indigenous vegetation in Truganina (Wyndham 2009, p.10) [highlighted in orange in Figure 4]. These roads could be relocated [highlighted in orange in Figure 5] to directly protect native vegetation without impact to traffic flow or access. This strategy reflects that biodiversity values are considered worthy of protection.

Figure 4: Biodiversity and Road Conflicts



Source: Adapted from GAA 2009, p.23

Figure 5: Proposed Road Reconfiguration



Source: Adapted from GAA 2009, p.24

3.3 OBJECTIVE: To provide recreational open space in addition to preserve biodiversity in Wyndham

3.3.1 Strategy A: To provide both recreational open space and conservation open space

Rationale: The key threats to the survival of the volcanic plains grasslands include changes to land management practices, herbicide use, fertilisers, weed invasion (Beeton 2008, TEEB 2010), disturbance and over-exploitation (TEEB 2010). Land use intensification and urbanisation tend also to create landscape homogenisation and a decline in systems balance (Selman 2006). It is therefore necessary to create separate reserves for recreation and conservation. This diversification; in addition to protecting biodiversity by differentiating and separating uses (Buxton et.al 2008), also protects the

distinction between urban and rural character leading to a creation of specificity of place (Selman 2006). This strategy is designed to protect biodiversity through appropriate land-use planning (DPCD 2010 Clause 12.03-1 p2) while importantly maintaining liveability (Collits 2008).

Conclusion

Wyndham's population growth requires an integrated planning approach that balances social, economic and environmental concerns (Beer, Maude & Pritchard 2003). By working with landholders, developers and other stakeholders it is possible to protect biodiversity from development (Parberry 2008). Creative policy which values biodiversity such as reconfiguring roads and promoting incentives can protect temperate grasslands while addressing the key challenge of additional housing and service provision in a time of rapid population growth.

Bibliography

Abel N, Gorddard, R, Harman, B, Leitch, A, Langridge, J, Ryan, A & Heyenga S 2011, 'Sea Level Rise, coastal development and planned retreat: analytical framework, governance principles and an Australian case', *Environmental Science Policy*, p.864.

Australian Bureau of Statistics 2007, *2006 Census community profile series: Wyndham basic community profile*, Commonwealth of Australia, viewed online 6 June 2011, <http://www.censusdata.abs.gov.au>

Australian Bureau of Statistics 2011, *Population Estimates by Statistical Local Areas 2001-2010*, released 31 March 2011, Commonwealth of Australia, viewed online 18 April 2011, <http://www.censusdata.abs.gov.au>

Beer, A, Maude, A & Pritchard B, 2003, *Developing Australia's Regions – Theory and Practice*, UNSW Press, Sydney.

Buxton, M, Alvarez, A, Butt, A, Farrell, S, & O'Neill, D, 2008 *Planning Sustainable Futures for Melbourne's Peri-Urban Region: Summary Report*, RMIT University, November 2008, Melbourne.

Community Indicators Victoria:online (CIV) 2011, *Wyndham Wellbeing Report*, viewed online 6 June 2011, http://www.communityindicators.net.au/wellbeing_reports/wyndham

Collits, P 2008, 'Planning for Regions in Australia', in Thompson, S (Ed), *Planning in Australia: An Overview of Urban and Regional Planning*, Cambridge University Press, Port Melbourne, pp.179-197.

Committee of Melbourne 2009, *Submission to the Urban Growth Boundary Review: Report for Public Consultation*, July 2009, viewed online 20 April 2011, http://melbourne.org.au/static/files/assets/9de60379/090717_CFM_Urban_Growth_Boundary_Review.pdf

Department of Natural Resources and Environment (DNRE), 2002, *Victoria's Native Vegetation Management – A Framework for Action*.

Department of Planning and Community Development (DPCD) 2010, *Victorian State Planning Policy Framework*, viewed online 20 April 2011, http://www.dse.vic.gov.au/planningschemes/aavpp/12_sppf.pdf

Department of Sustainability and Environment (DSE), 2005, *Melbourne 2030: Planning for Sustainable Growth*, viewed 4 May 2011, <http://www.dse.vic.gov.au/melbourne2030online>

Department of Sustainability and Environment 2008, *Bushbroker: Trading Native Vegetation Credits*, March 2008, Victorian Government, Melbourne.

Department of Sustainability and Environment 2009, "Land and biodiversity", *State of the environment report Victoria 2008 – Government response*, revised 26 November 2009, viewed online 5 April 2011 <http://www.dse.vic.gov.au>.

Department of Sustainability and Environment 2011, *Victorian Landcare Gateway*, last updated 5 June 2011, viewed online 8 June 2011, <http://www.landcarevic.net.au/news/cag-1112-open>

Environment Defenders Office 2011, *EPBC Strategic Assessment - expansion of Melbourne's Urban Growth Boundary*, updated 28 January 2011, viewed online 28 April 2011, <http://www.envirolaw.org.au/portals/ugb>

Bundy, J 2009, 'Why UGB Expansion Plans are Seriously Flawed', *Greenwedge Coalition – A Vision for Melbourne*, updated 10 February 2009, viewed online 31 May 2011, <http://gwc.org.au/node/73>

Growth Areas Authority 2006, *Wyndham Growth Area Framework Plan*, viewed online 28 April 2011, www.wyndham.vic.gov.au/building-planning/strategic/framework

Growth Areas Authority 2009, *Truganina Employment Precinct Structure Plan*, Wyndham City Council, December 2009.

Growth Areas Authority 2010, *The New Urban Growth Zone*, viewed online 28 April 2011, <http://www.gaa.vic.gov.au/ugz>)

Haughton, G & Counsell, D 2004, 'Regions and sustainable development: regional planning matters', *The Geographical Journal*, vol. 170, no.2, pp. 135-145, Blackwell Publishing, UK.

Millennium Ecosystem Assessment (MA): online 2005, viewed 7 June 2011, <http://www.millenniumassessment.org/en/Index-2.html>

Morton, A 2008, 'More loss than gain in encroaching urban sprawl on threatened open plains', *The Age*, 31 May 2008, Melbourne.

Selman, P 2006, *Planning at the landscape scale*, Routledge, UK.

TEEB 2010, *The Economics and Ecosystems of Biodiversity: Mainstreaming the Economics of Nature: A Synthesis of the Approach, Conclusions and Recommendations of TEEB*, viewed online 6 June 2011, www.teebweb.org

United Nations Environment Programme 2010, *Convention on Biological Diversity*, viewed online 7 June 2011, <http://www.un.org/en/events/biodiversityday/convention.shtml>

United Nations Environment Programme 2011, *Strategic Plan for Biodiversity 2011-2020 and the Aichi Targets*, viewed online 7 June 2011,

<http://www.cbd.int/decision/cop/?id=12268>

Vichealth 2011, 'Wyndham Wellbeing Report', *Community Indicators Victoria: online*, viewed 8 June 2011,

http://www.communityindicators.net.au/wellbeing_reports/wyndham

Wyndham City Council 1999, *Wyndham Planning Scheme*, viewed online 5 May 2011, http://www.wyndham.vic.gov.au/building_planning/strategic/municipalstrategic

Wyndham City Council 2007, *The Benefits of native pastures*, Melbourne.

Wyndham City Council 2011, *Wyndham Strategic Framework Plan*, viewed online 5 May 2011,

http://www.wyndham.vic.gov.au/building_planning/strategic/municipalstrategic

Appendix A: List of Presenters

Moore, J 2011, Manager Strategic Planning Wyndham City Council, presentation to RMIT at Wyndham City Council, Melbourne, 4 April, 2011.

Appendix B: List of Sources

Department of Sustainability and Environment 2011, *Ecological Vegetation Classes Map*, viewed 9 May 2011,

www.mapshare2.dse.vic.gov.au/MapShare2EXT/imf.jsp?site=bim

Growth Areas Authority 2009, *Truganina Employment Precinct Structure Plan*, Wyndham City Council, December 2009.

Moore, J 2011, Manager Strategic Planning Wyndham City Council, presentation to RMIT at Wyndham City Council, Melbourne, 4 April, 2011