

CHAPTER 11

PERIURBAN OPEN SPACES : A MISSING DISH ON THE BOOMTOWN PLANNING MENU?

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INTRODUCTION

The growth of cities has one inescapable consequence: the loss of open spaces. Wherever there is urban expansion, this inevitably results in constant urban and infrastructure development over paddocks, forests and shrub-covered areas (the latter two commonly known in Australia as ‘bush’). The precise spatial pace at which urban expansion occurs at the expense of these open spaces is hard to quantify. In Europe, the figure, possibly overestimated, for the decade 1990 to 2000 is 8000 square kilometres (an area the size of the island of Cyprus; EEA, 2006, p. 10). On a world scale, one estimate for the period from 1970 to 2000 has been 58,000 square kilometres (Seto, Fragkias, Güneralp & Reilly, 2011, p. 4), that is, a similar land area to that of Togo or Latvia. In Perth, the exact amount is unknown. The Western Australian Planning Commission (WAPC) estimates that Perth’s urban area has increased from 378 square kilometres in 1974 to 870 square kilometres in 2012 (WAPC, 2015a, p. 12). In other words, Perth has more than doubled in size in thirty-eight years. Adams (2010), however, considered that the urban expanse of Perth was already more than 1000 square kilometres in 2010, a figure which suggests that the WAPC has underestimated the rate of development. Be that as it may, this encroachment has taken place where ‘once there were greenfields’, to use Benfield, Raimi and Chen’s (2001) nostalgic words.

The direct effects of cities' expansion on open spaces are, in general terms, overlooked by urban and metropolitan planners. As noted by Murphy (2012, p. 172) in the broader Australian context, the 'primary recurring themes of metropolitan planning' have been 'growth management, population densities, urban renewal, activity centres, and related infrastructure needs', with limited attention being paid to those areas that were not within existing cities or were planned for future inclusion in urban areas. The same applies to Perth, where planning has basically 'endeavoured to shape the evolving metropolitan fabric, with clear spatial delineations for preferred urban development areas' (Adams, 2010, p. 33). This widespread neglect of open spaces in metropolitan contexts is alarming, given that when planning urban growth – which is clearly the primary intention of metropolitan planning in Australia and in Perth (Adams, 2010; Murphy, 2012; Stokes & Hill, 1992) – the 'other side of the same coin' is open space management and protection (Bengston, Fletcher & Nelson, 2004, p. 273).

It is therefore relevant to reflect on periurban open spaces when dealing with planning for Perth, a city which experienced substantial growth after the resources boom at the beginning of this decade, as elaborated in chapter 3. If urban expansion is expected to continue (WAPC, 2010, 2015a; Weller, 2009) as it has in the previous decades (Adams, 2010; Weller, 2009), then the open spaces that are likely to be affected or have been affected by this process are worth examining. While the concern of chapter 10 is with open spaces and liveability, this chapter focusses on open space on the urban edge for conservation and food security. Alongside this it is necessary to investigate the planning rationales used to support this process in order to elucidate the extent to which the lack of planning consideration of periurban open spaces is a shortcoming and how this might be addressed.

When referring to open spaces, the definition by Maruani and Amit-Cohen (2007, p. 2) applies: 'A built environment represents a high level of intervention in the ecosystem ... Open spaces,

on the other hand, are generally characterized by a low level of intervention that does not change their intrinsic 'naturalness', and allows continuous functioning of the ecosystems and survival of nature and landscape values', including 'parks and gardens, outdoor recreational areas, farmlands, forests or nature reserves'. With regard to the word 'periurban', English-speaking scholars have preferred the notion of the 'rural-urban fringe', which has an interchangeable meaning (Ravetz, Fertner & Nielsen, 2013). However, increasingly in Australia, 'periurban' is used instead of 'fringe', 'exurban', 'urban shadow', 'city's hinterland', 'edgelands' and other concomitant terms, given that the former is 'a term which combines the others' (Low-Choy, Sutherland, Gleeson, Dodson & Sipe, 2008, p. 3). Houston (2005, p. 209) was possibly the first scholar to do so in Australia, defining 'peri-urban regions [as] those superficially rural districts [that are] within the sphere of influence of adjacent urban centres understood to comprise the zone of transition between the edge of the newest suburbs and the outer limits of the commuter belt' (p. 209). The concept of 'periurban' is a neologism in English, whereas in French geography it has been used at least since the 1970s. For the purposes of this chapter, the periurban open spaces are restricted to those included within the borders of the metropolitan region of Perth, as defined by the WAPC (2010, 2014a, 2015a), thus also comprising the Peel region.

This chapter begins by reviewing periurban open spaces planning. It then turns to an examination of the history of metropolitan planning in Perth, similarly reviewed in chapters 7, 8 and 10, but here through the lens of periurban open spaces. The chapter concludes by outlining the planning implications of past and current policies. Methodologically, this research replicates for Perth the examination of perceptions and policies regarding the periurban areas of Sydney and Adelaide carried out by Bunker and Houston (2003).

PERIURBAN OPEN SPACES PLANNING

The list of available possibilities and tools for periurban open spaces planning is vast, as reported by commentators who have systematically attempted to embrace the existing options, including Bengston et al. (2004), Daniels (1999) and Bryant, Russwurm & McLellan (1982). Some options are unique to periurban environments, for instance, designating urban growth boundaries and greenbelts. However, most techniques can be applied elsewhere – in strictly urban or rural areas – as is the case with zoning and parks designation (including national, regional, natural, urban and/or agricultural parks, depending on the legislation and the specific case). Such planning can be statutory and binding or possess a more strategic orientation, although these distinctions can sometimes be blurred and/or can simultaneously occur at different scales. In Australia, for instance, it is common that metropolitan-wide and regional plans are generally strategic, while local plans tend to be statutory (Williams, 2012), often causing considerable gaps in implementation as has been observed in metropolitan Perth by Adams (2010) and Yiftachel and Kenworthy (1992), among others. In this section an overview of the options will be considered by means of a simplified evolutionary approach.

According to the mainstream literature, planning pioneers can be traced to the nineteenth century (Hall, 1988, 2002), when the Industrial Revolution made possible the exponential growth of cities, both internally (resulting in very high densities) and externally (the phenomenon of urban spread). According to Hall (1988, 2002), whose focus is on the Anglo-American planning tradition, the most influential and ground-breaking thinker was Howard who, in 1898, proposed a ‘garden city’, combining the advantages of town and countryside, suggesting that each town should be surrounded by a large greenbelt, easily accessible to everyone, and that the urban fabric should contain fields and parks within it. In reality, consistent and more elaborate ideas had already been proposed and implemented by Cerdà half a century before in Barcelona through the adoption of comprehensive urban and

regional planning theory. For the purposes of this text, the contribution from these early developments is their proposed urban containment and the designation of open spaces, including fields, to encourage healthier and socially progressive communities.

Through the work of Geddes and Unwin, among others, and the development of regional planning as a distinctive discipline after the 1920s, Howard's ideas were implemented to some extent by Abercrombie in the Greater London Plan of 1944 (Hall, 1988, 2002). This plan has become an inspiration across the world and is still studied in planning schools. The plan established a greenbelt around London as an agricultural zone and as a continuation of a park system that also penetrated the city. The evolution of the London greenbelt in itself shows how periurban open-space management and planning has evolved in the last seventy years. Interestingly, it remains ostensibly the same in physical terms and has been used as a planning framework in other urban areas of the UK (Cullingworth & Nadin, 2002; Hall, 2002) and internationally (see Bunker & Houston, 2003, for Australia). However, its attributed roles have been modified from agriculture and recreation to environmental and landscape conservation, with recreation still seen as important but agriculture and forestry activities largely disregarded (Cullingworth & Nadin, 2002; Gallent & Shaw, 2007; Gant, Robinson & Fazal, 2011). The reasons for this change are complex and in part dependent on the transitional and unstable nature of periurban areas, but they are also associated with the rise of ecological planning as a fashionable trend, as later described.

Regional planning in the 1920s was already making use of the notion of 'park' for periurban open spaces. For instance, the proposal for the metropolitan region of New York led by Adams in 1929 identified specific natural areas that could be acquired for public use. He persuaded various public agencies to purchase land to implement parks. Despite the precedents dating since ancient history, the contemporary meaning of 'park' in regional planning departs from that of the first national park designated in 1872 in the USA. The analysis of this seminal park by Depraz (2008) shows how it was grounded

on identity, heritage and nationalist concepts, together with the purpose of providing recreation for Americans. The use of 'national' attached to 'park' is indeed relevant. This notion was soon translated to other Anglo-Saxon settler countries such as Australia, where seven years after the establishment of Yellowstone National Park, the first national park was designated. According to Harper (2007), the nationalist and heritage intentions reported in the American counterpart are also present in this early park near Sydney, thus periurban, with its focus on urban leisure. 'In contrast to today's understanding of national parks, preservation of the native fauna and flora was not the motivating factor' (Harper, 2007, p. 41).

Ecological planning and conservation became a major planning focus 'in the 1960s [...] consolidated into a systematic planning method' (Maruani & Amit-Cohen, 2007, p. 8). The consequences of this new wave are illustrated by the already mentioned greenbelts and parks – originally they were not created for the purpose of environmental conservation, but they are now understood in this sense. This change has characterised the post-1960s greenbelts and parks, but it has also transformed the pre-existing ones. The rise and consolidation of environmental sciences such as ecology and landscape ecology have transformed planning as a discipline in the last few decades. Currently periurban open spaces are commonly managed and planned by means of models such as Forman's (1995) mosaic, consisting of patches, corridors and matrices, which are used for calculations of so-called landscape structure, heterogeneity and connectivity. Practical verifications of this model, like Forman's (2004) proposed application to Barcelona, demonstrate that the 'most natural' areas are more managed and protected – becoming strictly designated areas, such as parks – while other open spaces (e.g. farmlands) are often disregarded and assessed as non-compliant with environmental conservation. The momentum achieved by this burgeoning biocentric planning wave is advancing further through the theoretical constructs of green infrastructure and ecosystem services, which are becoming popular (EEA, 2011; McManus, 2010). A key learning from this wave is the understanding of periurban

open spaces not as individual and independent components, but as an integrated network that works, or has to work, as an ecological system, implying the establishment of corridors and greenways (Depraz, 2008; EEA, 2006; Forman, 2004, 1995; Gallent & Shaw, 2007; Maruani & Amit-Cohen, 2007).

Callau (2009) analysed the implementation of this environmental agenda in the periurban Dutch provinces. Her conclusion is that each new 'Note' (national spatial plans in the Netherlands are called 'Notes', see Merlin, 2002) since the 1970s has progressively entailed more difficulties for farming and set new natural and water area targets, sometimes by purchasing farmlands from farmers, especially in the 'green heart' (*Groene Hart* in Dutch), which, despite its name, is mainly agricultural. In this sense, periurban open spaces are increasingly regarded as natural, pristine and wild areas, even if in reality they are not, to the degree that they can be designated to be 're-naturalised'. Roger (1997) has described this trend as 'green idolatry' (*verdolatrie* in French) and Ojeda (2006) has coined the term 'chlorophilism'. This biocentric conservatism, rooted in the Western conceptual schism between 'nature' and 'society', is creating so-called conservation refugees, i.e. people who used to live in open spaces, commonly farming or shepherding, who are now being forced into the cities. This concept has been popularised by Dowie (2009) referring to indigenous peoples displaced because of conservation policies. This process is noticeable in some periurban areas, where, after the 'refugees' have departed as a result of the designation of protected areas or water-capture projects flooding lands, the spaces are managed for developing wilderness and recreation and then luxury lodges are developed, catering to upper class urbanities.¹ One interesting alternative pathway is a device developed in France, the so-called *parcs naturels régionaux* (regional natural parks), designated since 1967 for nature protection but also for managing agriculture and cultural heritage, developing rural areas and providing leisure opportunities (Depraz, 2008; Merlin, 2002). This initiative has been transferred to other countries albeit under different names.

AN EVOLUTION OF PERIURBAN OPEN SPACES PLANNING IN PERTH

The Precedents

Weller (2009), Yiftachel and Alexander (1995), Singleton (1992) and Carr (1979), among others, argue that the 1955 Stephenson-Hepburn Plan is the start of metropolitan planning in Perth. However, some forms of planning had been practised from the early years of the colony and especially after the passing of the *Town Planning and Development Act* in 1928. In the 1890s and the first decades of the twentieth century, discussions on open spaces were continuous. McManus (2010) and Webb (1979) underline the impact of Howard's 'garden city' and the 'city beautiful' ideals of the 1910s in Perth. There were also regular attempts by citizens and authorities to plant trees and to encourage market gardens for food provisioning. A case in point is Kings Park, which was set aside as parkland in 1831 (McManus, 2010). This parkland of 4 square kilometres is the most emblematic open space in central Perth (of course, originally it was periurban) and has evolved over time to include areas of native vegetation but also botanic gardens, some infrastructure and memorials. This open space is nowadays surrounded by urban fabric and roads. The only interconnections that might be designed in terms of green infrastructure include Bold Park (the largest expanse of bush nearby) and the coastal dunes and cliffs, areas which are now threatened by the controversial Underwood Avenue Bushland development proposal.²

The Metropolitan Town Planning Commission, created in 1927 and whose advice was rarely followed (Foley, 1995), delivered a report in 1930 that 'for the first time, presents an image of the metropolis' (Stokes & Hill, 1992, p. 113). This text aimed to guide the development of metropolitan Perth and is relevant as it analysed regional open spaces, with prospective indications, including a section on food supply and markets (Metropolitan Town Planning Commission, 1931, p. 148–50). This topic is nowadays non-existent in planning documents, but the 1930

report is interestingly consistent with the current recommendations for integrating food issues in planning by the APA (2007). This report could also be considered 'modern' because it included considerations on Perth that mirrored those of EEA (2011) and Weller (2009).

The provision of sufficient open spaces for the enjoyment of the community in large cities is now generally accepted as an integral part of city planning, and it is generally believed that proper outdoor recreation has a beneficial effect...

Open spaces are the lungs of the community and must be so placed to render them of value to the greatest number of the people without the necessity for going great distances from their homes or their work for their recreation or pleasure...

The great stretches of the Swan River at our very door ... and the long line of ocean frontage of the Indian Ocean within a few miles of the heart of our city, are great [...] gifts ... The Darling Ranges on our eastern front, with National Park and its beauties of inland park lands, and King's Park ... are gifts ... It is for us then to protect and preserve these great gifts and to do our bit towards the needs of health and recreation of the generations to come. (Metropolitan Town Planning Commission, 1931, p. 94).

The Initial Plans

Dooley and Pilgrim (2010), McManus (2010), Singleton (1992), Weller (2009) and also chapters 7 and 8 highlight the crucial importance of the 1955 Stephenson-Hepburn Plan in the protection of extensive open spaces that are nowadays parklands as originally envisaged (e.g. Darling Range, Gnaragana, Jandakot). These open spaces were mainly targeted for recreation, with a limited environmental assessment, resulting in an insufficient

protection of the then existing wetlands (McManus, 2010; Singleton, 1992). But the available literature does not highlight that the 1955 maps also defined 'areas for intensive agricultural use'. These areas were designated in the Swan Valley, in a corridor from Osborne Park to Wanneroo, in several valleys of the Darling Range (e.g. Roleystone) and in a corridor from Spearwood to Rockingham. In contrast to the importance given by the 1955 planning document to bush parklands, the role attributed to these agricultural open spaces went unnoticed. The aim of protecting bush in 1955 was largely respected – despite management mistakes such as planting pines in Gnangara (McManus, 2010) – but the mapped farmlands have disappeared, except in the Swan Valley and northernmost section of Wanneroo.

The Stephenson-Hepburn Plan was indeed a recommendation report. The Metropolitan Region Scheme, gazetted in 1963, was the first land-use plan in place, being managed by the new Metropolitan Region Planning Authority whose first members were appointed in 1960 (Adams, 2010; Carr, 1979; Foley, 1995; Stokes & Hill, 1992; Yiftachel & Kenworthy, 1992). Foley (1995, p. 8) noted that the 1963 Scheme 'did not differ greatly from the advisory 1955 Stephenson-Hepburn plan'. However, 'a more spread-out kind of city' was envisaged in 1963 in comparison to 1955 (Yiftachel & Kenworthy, 1992, p. 132) and, critically, the three open spaces areas that had been zoned in 1955 as 'areas for rural use' ('areas for intensive agricultural use', 'areas for development as woodlands or forests' and 'general rural zone') were slightly modified. Most of the earmarked future woodlands and forests in 1955 were zoned in 1963 under categories such as 'parks & recreation', 'state forests' and 'water catchments', all of them 'reserved lands' from urban expansion. The public acquisition of these 'reserved lands' has been a very common policy in metropolitan Perth since the 1960s (Carr, 1979, Foley, 1995; McManus, 2010; Singleton, 1992). But the 'areas for intensive agricultural use' disappeared as a specific land-use zone, and were subsumed into an unspecific 'rural zone'. In this sense, the intensive farmlands that were considered

unique in planning terms in 1955 were, in 1963, condemned to encroachment in the medium term. The practicalities of this are complex, but local councils were given powers to re-zone rural lands, which were not granted in the 'reserved lands'.

[W]hen making or amending a town planning scheme ... a local authority shall have regard to the primary use for which the land to which the town planning scheme relates is zoned under the Scheme, ... but nothing in the Scheme prevents a local authority from making proper provision for that land or portion to be otherwise used or zoned for some other use. (art. 25 of the Metropolitan Region Scheme, p. 2321, Government Gazette 9/8/1963).

From the 1970s to the 2000s, with a Reference to the Swan Valley

Following the Australian pattern of providing overarching plans for metropolitan areas (Williams, 2012), the plans for Perth after the 1963 Scheme adopted a strategic character, the rationale being that growth strategies were needed to guide the numerous piecemeal amendments of the Scheme that were required as growth accelerated from the 1960s (Foley, 1995). Among others, Adams (2010), Carr (1979), Foley (1995), Stokes and Hill (1992), Weller (2009), and Yiftachel and Alexander (1995) give insights on these metropolitan strategies: the *Corridor Plan* (1970), *Metroplan* (1990) and *Network City* (2004). The first two are examined in this point while the latter is analysed in the following.

The Corridor Plan aimed to direct urban growth into four major corridors: north west, south west, east and south east. Each of these encroached on significant pieces of land zoned as rural in 1963, especially the first and the fourth. Specific plans for each corridor re-zoned land, channelling urban development and infrastructure. 'By 1990 urban zoned land had indeed spread into these corridors; as well as into many other areas which had not been identified for urban growth potential' (Adams, 2010, p. 39).

In the 1970s, the emerging environmentalist paradigm resulted in an increasing attention to bushlands and wetlands, which began to be managed by the new Department of Conservation and Environment and other environmental agencies (Dooley & Pilgrim, 2010; McManus, 2010) resulting in a kind of ‘double protection’, since these areas had already been set aside by the Scheme and the metropolitan plans. Even though the Corridor Plan in itself was environmentally blind, the pace of bushland acquisition between the corridors has been stable (Singleton, 1992). This contrasts with the destiny of the periurban farmlands. Indeed, the Corridor Plan identified agricultural precincts: for market gardening, the area east of the Joondalup Lake not affected by the north west corridor; and an area east of Rockingham not affected by the south west corridor; and the Swan Valley for viticulture. Beyond the fact that these were minuscule compared to the 1955 areas designated for agricultural use, their mid-term sustainability (except in the case of the Swan Valley) has been scant.

Metroplan was a continuation of the Corridor Plan, adding a fifth north-eastern development corridor, despite the rhetoric claiming the need for a more compact urban form. The rural zone was defined as ‘non-urban’ and the agricultural areas individualised by previous plans were deleted, including the Swan Valley, which was targeted for urban expansion. However, the regional open space system (parklands) was reinforced, with specific protection of the Darling Range escarpment and, consistent with the 1955 Plan, the Darling Range bushlands, Gnangara (extended to the north) and Jandakot (extended to the south) were maintained as protected. Adams (2010) reported that Metroplan deleted growth zones in the eastern corridor affecting the Darling Range in favour of identifying a new corridor to the north east. This shift can be seen as a move towards protection of bushland in the Hills, which impacted on the farmland in the foothills.

Other evidence of the increasing importance of the environmental approach to periurban open-spaces planning is the implementation of a regional parks policy since the 1990s (Dooley

& Pilgrim, 2010) and the impact of the Bush Forever Report of 2000 (McManus, 2010). Despite criticisms, these are positive major outputs in the development of parklands and the protection of the remaining native bush on the Swan Coastal Plain. Their sustained importance is evidenced by the fact that updated websites reporting progress in protection of these areas are maintained.³ The eleven regional parks in Metropolitan Perth (four in the Darling Range) seem somewhat inspired by the French regional natural parks because of their alleged deliberative management and other differences they have as compared to the well-established top-down systems of the national parks (three in the Darling Range). However, in contrast to the French situation, the regional parks in Perth lack a specific management agency and exclude farming and cultural landscapes (although local government agencies are working with Aboriginal people, as elaborated in chapter 6, and some parks been re-named with Noongar toponyms). Indeed, the Rockingham Lakes Regional Park includes previous farmland such as that on the shore of the Lake Walyungup which is now designed to develop a natural character (Department of Environment and Conservation, 2010, p. 49) in an area that the Corridor and the Stephenson–Hepburn Plans had previously zoned for ‘market gardening’ and ‘intensive agricultural use’, respectively. Again, this momentum that bushland and parkland is gaining contrasts with the treatment of farmland.

A different direction might have been taken if the ‘Metropolitan Rural Policy’ released in 1995 had been implemented.⁴ It stated that farmland was not being protected, instead it was ‘viewed as a pool of land available for future development’ (Ministry of Planning, 1995, p. 1). In this sense, it acknowledged that there was a need ‘for more integrated long-term planning of rural land in the metropolitan region’, with a view to ‘conserve the productive potential of agricultural land’ (Ministry of Planning, 1995, pp. 2, 7). The key principle of this document was that each local government (LG) would have a series of maps assisting its own ‘local rural strategies’, including one on ‘high capability agricultural land’ that

highlighted the existing farmland in 1995 within the unspecific 'rural zone' of the Metropolitan Region Scheme. Supposedly, each LG had to recognise, in its own 'local rural strategy', the value of these farmlands by 'protect[ing] productive agricultural land and ensur[ing] existing agricultural pursuits are retained' (Ministry of Planning, 1995, p. 10). After twenty years, and taking into account that most of the farmlands that were then mapped have already been encroached upon or are planned to be converted into urban use in the future, it seems obvious that these 'local rural strategies' have been absent and/or ineffective.

Additional evidence of the regressive planning consideration attributed to farmlands is evident when examining the mid-term destiny of the 'Agricultural Priority Management Areas' mapped by the Department of Agriculture in 2002. The guidelines for town planning were quite strict.

Proposals to rezone land, subdivide or develop within the 'Priority Agriculture' zone for any other beneficial non-agricultural uses are to be accompanied by an Agricultural Impact Assessment ... (art. 5.2.1 of the Statement of Planning Policy No. 11 Agricultural and Rural Land-use Planning, p. 1011, Government Gazette 12/3/2002).

The map was not definitive (see the following paragraph), but it clearly identified the area of Wanneroo east of Lake Joondalup, the Swan Valley, some orchard areas in the Hills, Pinjarra-Murray and other areas.

The proposed areas should be subject to community consultation before being included in local planning strategies and town planning schemes. Areas not shown in the figures may also be designated ... Conversely, some areas may also be removed. (Appendix 4 of the Statement of Planning Policy No. 11 Agricultural and Rural Land-use Planning, p. 1019, Government Gazette 12/3/2002).

But the point to retain is that this 2002 attempt was overtaken by the subsequent 2012 *State Planning Policy No. 2.5* (WAPC, 2012a) that replaced it. In fact, WAPC (2012a) omitted the map defining proposed 'Priority Agricultural Land' and postponed its precise definition (WAPC, 2014b, sets the guidelines to do so in an unspecified future). The situation of farmland in the Perth region was referred to as follows.

In future years metropolitan Perth and Peel will continue to accommodate the majority of the State's population growth; and landowners of rural land may experience pressure for urbanisation. Rural land will become more contested as the land is either required for urban purposes, identified for environmental protection, needed for infrastructure; or set aside for basic raw material extraction. ... Some existing rural or rural living areas may come under pressure for conversion to urban purposes. (WAPC, 2012a, p. 4).

While other open spaces are protected and managed, in farmland planning a pro-urban development narrative has been adopted. As identified above, the exception to this pattern is the Swan Valley, whose Planning Act passed in 1995 prevented urban development and subdivision in a precinct of 70 square kilometres, a unique and stringent protective tool within Perth's periurban open spaces. However, this was not because of mainstream planning – as seen above, Metroplan forecast an urban corridor therein – but as a consequence of a campaign in the area driven by local residents to protect the Swan Valley (Yiftachel & Alexander, 1995). In this sense, the relevance of civil society in shaping periurban open-spaces management is again verified (Bryant, 1995; Daniels, 1999; Paül & Haslam McKenzie, 2013). In the twenty years of this protection, tensions have increased, especially between the burgeoning tourism industry and the agricultural sector, which is under constant challenge – e.g. the table grape industry has collapsed

after the WA market was opened to Californian exporters; several market gardens have closed; a significant part of the wine which is sold in the wineries for tourists is not from the Swan Valley but from elsewhere, such as the Margaret River region. The WAPC (2012b) produced a paper acknowledging:

The establishment of incompatible land-uses, activities and development could have a significant effect on the sustainability of agribusiness and agritourism in the Valley. This becomes more of an issue if agricultural land is lost to other land-uses and/or if new activities and developments are adjacent to existing agribusiness/agritourism. These new pressures, such as subdivision and general tourism facilities/activities, then impact on both the viability of business and the rural character of the Valley. (WAPC, 2012b, p. 8)

It seems evident that, despite the Act in place since 1995 (amended in 2006), planning for the Swan Valley remains controversial. In interviews conducted in the area in late 2014,⁵ planning was always mentioned as a challenge, with divergent views about the future. Interestingly, one interviewee proposed that the Swan Valley be equalised with another open space that is protected bushland (Kings Park) in order to guarantee that the former will be saved for the long term, as is the case for the latter.

The Swan Valley Planning Act has really failed in the sense it hasn't preserved the viticulture. ... At the end of the day the State Government needs to realise that if they are really serious about it they have to be putting their hands in their pockets ... because just by ... putting an Act in place, ... you've drawn a line on a map, right?, and you say 'everything in here is covered by this legislation, you can't subdivide, you can't do this, you can't do that, you can't develop', and then just let it go, doesn't mean

that it's going to work, and this is what they have done. ... The way that they treat Kings Park, they've got a huge area right in the middle of the city and they're saying 'this is worthy of retention' ... That costs the State Government tens of millions of dollars to maintain, and it's beautiful, and it'll be there forever ... And you've got the Swan Valley, which to me is a gem, and is worthy of retention, and, if you lose it, it's gone forever and ... the State Government has to treat the Swan Valley as another Kings Park. (Interviewee 5, 20/11/2014).

Network City and the Case of Wanneroo

In contrast to the previous plans, Network City (WAPC, 2004) was short-lived and only in place for half a decade. Moreover, it received strong criticism from Maginn (2007), McManus (2010) and Weller (2009), among others. By means of a rhetorical participative process, it was supposed to produce a sustainable and more compact metropolis, with 60 per cent of new housing developed in established suburbs, rather than new development areas. The remaining 40 per cent was forecast to occur in new suburbs, some of them envisaged in previous plans but some new, in particular in the south west corridor which, in the 1990 Metroplan, extended to Rockingham, but in 2004 was further expanded to Mandurah. Peel was, in practice, already seen as part of the metropolitan region, as forthcoming planning documents have confirmed (e.g. WAPC, 2010, 2014a, 2015a). In short, Network City was a mere continuation of previous pro-urban growth and spread planning trends. An UGB, defined as 'a line drawn on a map to contain urban growth and separate it from rural and environmentally sensitive lands' (WAPC, 2004, p. 113), was expected to be established for metropolitan Perth as claimed by the public during the participation process – but this has never happened.

Verification of the effects on the ground of Network City can be seen in the remaining farmlands in the LG area of Wanneroo,

mostly in its south-eastern ribbon. WAPC (2007) was following Network City principles when declaring its intentions for these open spaces, mentioning limits to urban spread. However, on agriculture it noted:

It is recognised that quality horticultural land in close proximity to urban populations is a limited resource. For many years, much of east Wanneroo has remained rural zoned land ... promoting the retention of productive rural zoned land and agricultural/horticultural land-uses and not supporting further subdivision of productive rural land.

While this may have been justified in the past, the long-term availability of groundwater for horticulture in east Wanneroo can no longer be a given. (WAPC, 2007, p. 10)

This text is contradictory: if it is acknowledged that quality horticulture near cities is desirable, why then question it? The lack of groundwater is the excuse given for rezoning, the result being urban growth, which was quickly planned in the area through the East Wanneroo Structure Plan (WAPC, 2011a). Ironically, the latter document included several pictures of beautiful farmlands, but the basic intention is for urban development and thus agricultural extinction. Again, it has to be highlighted that the 1955 Stephenson-Hepburn Plan had zoned this area as intensive agricultural and that, in 2002, the A4 Carabooda-Wanneroo 'Agricultural Priority Management Area' (see *Statement of Planning Policy No. 11* mentioned earlier) included the area affected by WAPC (2011a). In fact, urban expansion was anticipated by farmers a decade ago, acknowledging the existence of the impermanence syndrome (Low-Choy et al., 2008; Päul & Haslam McKenzie, 2013).

My family was a pioneer of Wanneroo. When my father bought our own plot of land, there was nothing here,

all was bush, and we began to plant cabbage, potatoes, cauliflowers and beans near the lake. We used to sell our products in the Metropolitan Markets at Wellington Street, in West Perth. But unfortunately Wanneroo won't be market gardening any more. Since 1975 the only thing we're seeing here are new house blocks for people who work in Perth. We don't want to develop, it's too early, but maybe we'll do this in the future, depending on the Shire. One day it'll come. (Interviewee 2, 7/12/2003).⁶

WAPC (2007) mentioned the option of a Gnangara agricultural precinct implying the clearing of part of the Gnangara Forest for agriculture was to compensate for farmland loss.⁷ This has not happened. It can be inferred that, by applying sustainability criteria, farmland can be converted into bush (and, as the Wanneroo case shows, into urban development), but land-use movement in the opposite direction is unfeasible.

Directions 2031

The current metropolitan strategic plan for the region of Perth is marked by the same ambition as the former ones – growth. Indeed, it assumes that previous plans that to some extent sought to restrict expansion have failed: 'Previous planning approaches focussed on limiting the take up of land for urban development. However, the urban area of the Perth region has continued to grow' (WAPC, 2010, p. 8). The existing land zoned as 'urban' and 'urban deferred' by 2010 is presented as insufficient to cope with the forecast growth, resulting in a requirement for an additional 446 square kilometres. Explicitly, the zones for expansion are divided into 'urban expansion areas' (rezoning in the short term, expected to happen within five years) and 'investigation areas' (potential rezoning in the short to medium term, expected to occur within ten years).

How are the open spaces positioned with regard to the urban expansion needs? On the one hand, the 'sustainable city' target of

the plan – ‘We should grow within the constraints placed on us by the environment we live in’ (WAPC, 2010, p. 63) – is translated into protecting biodiversity, wetlands, water resources, the coastline, etc., plus expanding the ‘open spaces network’, understood as parklands. Urban spread is not going to impact on them. On the other hand, the open spaces entitled to accommodate the desired urban growth are farmlands. This is obvious when reading that

Rural land should be protected until conversion to urban use is required and the extension of urban services is approved as part of the sequencing of development. (WAPC, 2010, p. 50)

Directions 2031 zones as future ‘priority industrial sites’, ‘urban expansion areas’ and ‘investigation areas’ farmlands that were mapped as ‘Agricultural Priority Management Areas’ under the surpassed 2002 *Statement of Planning Policy No. 11*. Wanneroo has already been mentioned in this respect, but the same applies to parts of the LG areas of Serpentine-Jarrahdale and Rockingham. Directions 2031, therefore, does not ‘recognise the primacy of rural land’ (WAPC, 2010, p. 50), but rather it subtly suggests how to convert substantial parts of it into urban uses.

Reference to the Swan Valley and the Darling Range (now termed the Perth Hills) is in the sense that they are considered as ‘metropolitan attractors’, meaning that the former holds ‘restaurants, breweries, wineries, cafés, distilleries and accommodation’, that the latter encompasses ‘largely natural areas, with many reserves, cycle trails and contain[s] part of the Bibbulman Track’ (WAPC, 2010, p. 83). Thus, tourism is emphasised and agriculture is omitted. Planning seems then more oriented to capture visitors than to protect and manage open spaces. The north east corridor that had been somewhat stunted by the Network City strategy seems again to have gained momentum, although ‘this growth will need to be carefully planned to ensure the natural attributes, built heritage and local character of the area are protected’ (WAPC, 2010, p. 83),

again, omitting to note that the Swan Valley and its environs is a fertile agricultural area.

CONCLUSIONS

Boomtown planning has overtly favoured urban spread since its inception in the 1950s, resulting in a significant loss of open spaces that in the inner metropolitan area has been almost total (with the exception of Kings Park, some riverside sites and other discrete pieces of land) and in the outer fringe has gained momentum – especially in the north and the south west corridors (i.e. the coastal zone) – while in the Darling Range open spaces seem to have been more fortunate, with strong protection (four regional parks and three national parks) and the removal of the eastern growth corridor. The findings of the analysis undertaken here are consistent with the observations of other commentators (e.g. Adams, 2010; Weller, 2009; Yiftachel & Kenworthy, 1992) that the planning obsession in Perth has been, and still is, taking into account Directions 2031, urban growth.⁸ Figures regarding encroachment have been published, but there is still a need, as this contribution has attempted to do, to identify and characterise the open spaces that have been affected and that are targeted for development right now.

This chapter has shown that there are two types of open spaces in Perth: (1) farmlands, indiscriminately encroached upon; and (2) bushlands, largely protected and managed as parklands under different categories. Critically, this distinction was not present in the seminal 1955 planning document, but it is a gap that has expanded since the 1963 Scheme. The emergence of environmentalism in the 1970s accelerated this schism and it has been widened by the biocentric planning philosophy that has developed in recent decades. A notable consequence of this is the strict distinction in Directions 2031 between rural (agricultural) areas ‘protected until conversion to urban’ and the long-term protected forested areas and wetlands.

As was allegedly suggested during the public participation phase, the UGB envisaged by the 2004 Network City framework might have provided more consistency between the planning treatment of farmlands and bushland faced with urban encroachment but, regrettably, it was not implemented. Similarly, some of the basic principles of the Ministry of Planning's *Metropolitan Rural Policy* (1995) seemed to offer a good framework for a real policy for protecting and managing periurban open spaces, but it was also not developed and transferred responsibilities to LGs, enabling the state planning authorities to abrogate their responsibilities in this respect.

To sum up, it can be argued that open spaces are not a missing dish in the boomtown planning menu, but rather that some ingredients are notably absent in this dish. The need for this dish to be cooked with all the required ingredients – with the open spaces considered and planned for in a comprehensive and inclusive manner – has been acknowledged by theoretical developments such as spatial matrix, (green) corridor and green infrastructure (e.g. Depraz, 2008; EEA, 2011; Forman, 1995; Maruani & Amit-Cohen, 2007) that seem to have been ignored or only partially explored in Perth.

A disregard for periurban farmlands in the planning process is not unique to Perth, as the international literature confirms (Benfield et al., 2001; Callau, 2009; Daniels, 1999) and as Australian scholars have already noted (Bunker & Houston, 2003; Houston, 2005; Low-Choy et al., 2008). However, in Perth, this problem seems especially challenging as shown by Haslam McKenzie (2013). Contemporary and forward-thinking town and regional planning integrates food issues, including periurban farmlands (APA, 2007; Päül & Haslam McKenzie, 2013), among other reasons because, without farming activities near cities, there are no opportunities to produce short-distance supply chains (see chapter 19). This is something that Perth should consider sooner rather than later. Specific locations that have been identified in this paper such as the Swan Valley and Wanneroo, even though

their agricultural identity seems to have been generally omitted, still offer real opportunities in this regard. Moreover, the literature (Depraz, 2008; Dowie, 2009; Ojeda, 2006; Roger, 1997) shows how basing open-spaces planning solely on an environmental perspective can be perverse.

Periurban open spaces hold intrinsic complexities (Bryant et al., 1982; Bunker & Houston, 2003; Gallent & Shaw, 2007; Maruani & Amit-Cohen, 2007; Ravetz et al., 2013).). There is no single way to plan them and indeed a wide range of options and tools are available (Bengston et al., 2004; Daniels, 1999). It might be argued that the population growth rate of Perth – over the last decades and forecast into the near future (WAPC, 2010, 2015a; Weller, 2009) – makes open-spaces protection and management extremely difficult in this boomtown. However, most of the planning options and tools essayed abroad have also taken place under extreme population pressure conditions. Thus, there is still a long way to go in Perth.

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NOTES

- 1 I am in debt to Prof Scott William Hoeffle (Universidade Federal do Rio de Janeiro, Brazil), who suggested this idea in his presentation delivered at the 23rd Colloquium of the Commission on Sustainable Rural Systems (held in Portugal in August 2015). The disclaimer applies.
- 2 See <http://www.bushlandperth.org.au/campaigns/save-underwood-avenue-bushland> (Accessed 8/2015).
- 3 See Bush Forever as a policy adopted by the Department of Planning at <http://www.planning.wa.gov.au/publications/5911.asp> (Access 8/2015).
- 4 I am in debt to Prof Neil Foley, who told me about this document.
- 5 Unpublished transcribed, semi-structured interviews carried out in the context of a research on landscape and heritage in the Swan Valley, with an approval granted by the Human Ethics Office of the University of Western Australia.
- 6 Notes from one of the interviews held in Wanneroo with farmers.
- 7 A report, *The Feasibility of a New Horticulture Precinct on the Gnanagara Mound* was drafted in 2008 by two consultants for the Department of Agriculture (Economics Consulting Services, 2008).
- 8 The new metropolitan strategic plan which has been released for consultation in 2015, *Perth and Peel@3.5million*, does not differ in this respect. A quick analysis of the document, which is expected to be approved in 2016, reveals that growth is again at the forefront. WAPC (2015a, pp. 53–9) contains a section on environment which deals with protecting remaining forests, bushfire management, water resources etc., aspects that have been repeatedly covered by previous plans. Interestingly, the draft includes for the first time since 1955 a snapshot on rural land which refers to the farmlands of Wanneroo, Kwinana, Swan, Armadale and Kalamunda as ‘food production areas close to population centres [that help] to reduce the costs of transport and labour and ensure a continuous fresh supply’ and assumes that ‘[a] significant amount of suitable agricultural land has been already lost’ (WAPC, 2015a, pp. 50–1). However, there is no planning commitment to protect these farmlands. Indeed, WAPC (2015b) assumes encroachment on all remaining farmlands in East Wanneroo following on from what had been previously zoned by WAPC (2011).

REFERENCES

- Adams, T. (2010). Taming an Urban Frontier? Urban expansion and metropolitan spatial plans in Perth 1970–2005. In I. Alexander, S. Greive & D. Hedgcock (Eds.), *Planning Perspectives from Western Australia. A reader in theory and practice*. North Fremantle, WA: Fremantle Press, 33–47.
- Australian Planning Association (APA). (2007). *Policy Guide on Community and Regional Food Planning*. Chicago, IL, and Washington, DC: American Planning Association. Retrieved from <https://www.planning.org/policy/>

- guides/adopted/food.htm.
- Benfield, F.K., Raimi, M.D. & Chen, D.D.T. (2001). *Once There Were Greenfields. How urban sprawl is undermining America's environment, economy and social fabric*. New York/Washington, USA: Natural Resources Defense Council/Surface Transportation Policy Project.
- Bengston, D.N., Fletcher, J.O. & Nelson, K.C. (2004). Public Policies for Managing Urban Growth and Protecting Open Space: Policy instruments and lessons learned in the United States. *Landscape and Urban Planning*, 69, 271–86.
- Bryant, C.R. (1995). The Role of Local Actors in Transforming the Urban Fringe. *Journal of Rural Studies*, 11(3), 255–67.
- Bryant, C.R., Russwurm, L. & McLellan, A. (1982). *The City's Countryside. Land and its management in the rural-urban fringe*. London, UK: Longman.
- Bunker, R. & Houston, P. (2003). Prospects for the Rural-Urban Fringe in Australia: Observations from a brief history of the landscapes around Sydney and Adelaide. *Australian Geographical Studies*, 41(3), 303–23.
- Callau, S. (2009). Els espais agraris periurbans a Europa: El cas d'Holanda. In Ò. Alfranca & M. Pujolà (Eds.), *Agricultura periurbana*. Barcelona, Spain: Universitat Politècnica de Catalunya, 118–39.
- Carr, D. (1979). Metropolitan Design. In J. Gentilli (ed.), *Western Landscapes*. Nedlands, WA: The University of Western Australia, 383–99.
- Cullingworth, B. & Nadin, V. (2002). *Town & Country Planning in the UK*. London, UK: Routledge.
- Daniels, T.L. (1999). *When City and Country Collide. Managing growth in the metropolitan fringe*. Washington, USA: Island Press.
- Department of Environment and Conservation. (2010). *Rockingham Lakes Regional Park Management Plan 2010 – Management Plan No. 67*. Perth/Rockingham: Conservation Commission of Western Australia/ Department of Environment and Conservation/City of Rockingham.
- Depraz, S. (2008). *Géographie des espaces naturels protégés. Genèse, principes et enjeux territoriaux*. Paris, France: Armand Colin.
- Dooley, B. & Pilgrim, A. (2010). Regional Parks: From concept to reality in a multi-agency environment. In I. Alexander, S. Greive & D. Hedgcock (Eds.), *Planning Perspectives from Western Australia. A reader in theory and practice*. North Fremantle, WA: Fremantle Press, 154–71.
- Dowie, M. (2009). *Conservation Refugees: The hundred-year conflict between global conservation and native peoples*. Boston, MA: Massachusetts Institute of Technology.
- EEA. (2006). *Urban Sprawl in Europe*. Luxembourg: Office for Official Publications of the European Communities.

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- EEA. (2011). *Green Infrastructure and Territorial Cohesion*. Luxembourg: Office for Official Publications of the European Communities.
- Foley, N. (1995). *An Outline of the Evolution of Town and Regional Planning Administration in Western Australia 1927–1995*. [Unpublished text]
- Forman, R.T.T. (1995). Some General Principles of Landscape and Regional Ecology. *Landscape Ecology*, 10(3), 133–42.
- Forman, R.T.T. (2004). *Mosaico territorial para la Región Metropolitana de Barcelona*. Barcelona, Spain: Gustavo Gili.
- Gallent, N. & Shaw, D. (2007). Spatial Planning, Area Action Plans and the Rural-Urban Fringe. *Journal of Environmental Planning and Management*, 50(5), 617–38.
- Gant, R.L., Robinson, G.M. & Fazal, S. (2011). Land-use Change in the ‘Edgelands’: Policies and pressures in London’s rural-urban fringe. *Land-use Policy*, 28, 266–79.
- Hall, P. (1988). *Cities of Tomorrow*. Oxford, UK: Blackwell.
- Hall, P. (2002). *Urban and Regional Planning*. London, UK: Routledge.
- Harper, M. (2007). *The Ways of Bushwalker. On foot in Australia*. Sydney, NSW: University of New South Wales Press.
- Haslam McKenzie, F. (2013). Food Security in a Two-Speed Economy: Horticultural production in Western Australia. In Q. Farmar-Bowers, V. Higgins & J. Millar (Eds.), *Food Security in Australia. Challenges and prospects for the future*. Dordrecht, the Netherlands: Springer, 339–51.
- Houston, P. (2005). Re-valuing the Fringe: Some findings on the value of agricultural production in Australia’s peri-urban regions. *Geographical Research*, 43(2), 209–22.
- Low-Choy, D., Sutherland, C., Gleeson, B., Dodson, J. & Sipe, N. (2008). *Change and Continuity in Peri-urban Australia: Peri-urban futures & sustainable development*. Brisbane, QLD: Griffith University.
- Maginn, P. (2007). Deliberative Democracy or Discursively Biased? Perth’s dialogue with the city initiative. *Space and Polity*, 11(3), 331–52.
- Maruani, T. & Amit-Cohen, I. (2007). Open Space Planning Models: A review of approaches and methods. *Landscape and Urban Planning*, 81, 1–13.
- McManus, P. (2010). Planning with and for Trees in Perth: Yesterday, today and tomorrow. In I. Alexander, S. Greive & D. Hedgcock (Eds.), *Planning Perspectives from Western Australia. A reader in theory and practice*. North Fremantle, WA: Fremantle Press, 340–53.
- Merlin, P. (2002). *L’aménagement du territoire*. Paris, France: Presses Universitaires de France.
- Metropolitan Town Planning Commission (1931). *Report of the Metropolitan Town Planning Commission*. Perth, WA: Government Printer.

- Ministry of Planning (1995). *Metropolitan Rural Policy. A policy statement for rural land in the Perth metropolitan region*. Perth, WA: Ministry of Planning.
- Murphy, P. (2012). The Metropolis. In S. Thompson & P.J. Maginn (Eds.), *Planning Australia. An overview of urban and regional planning*. Port Melbourne, Vic: Cambridge University Press, 155–79.
- Ojeda, J.F. (2006). Paseando por paisajes de Doñana de la mano de algunos de sus Creadores Contemporáneos. In J.F. Ojeda, J.C. González Faraco & A. López Ontiveros (coords.), *Doñana en la cultura contemporánea*. Madrid, Spain: Ministerio de Medio Ambiente, 171–204.
- Paül, V. & Haslam McKenzie, F. (2013). Peri-urban Farmland Conservation and Development of Alternative Food Networks: Insights from a case-study area in metropolitan Barcelona (Catalonia, Spain). *Land-use Policy*, 30(1), 94–105.
- Ravetz, J., Fertner, C. & Nielsen, T.S. (2013). The Dynamics of Peri-Urbanization. In K. Nilsson, S. Pauleit, S. Bell, C. Aalbers & T.S. Nielsen (Eds.), *Peri-Urban Futures: Scenarios and models for land-use change in Europe*. Dordrecht, the Netherlands: Springer, 13–44.
- Roger, A. (1997). *Court traité du paysage*. Paris, France: Gallimard.
- Seto, K.C., Fragkias, M., Güneralp, B. & Reilly, M.K. (2011). A Meta-Analysis of Global Urban Land Expansion. *PLoS ONE*, 6(8), e23777.
- Singleton, J. (1992). Environmental Planning for the Swan Coastal Plain. In D. Hedgcock & O. Yiftachel (Eds.), *Urban and Regional Planning in Western Australia*. Bentley, WA: Paradigm Press, 235–51.
- Stokes, R. & Hill, R. (1992). The Evolution of Metropolitan Planning in Western Australia. In D. Hedgcock & O. Yiftachel (Eds.), *Urban and Regional Planning in Western Australia*. Bentley, WA: Paradigm Press, 111–30.
- Webb, M.J. (1979). Urban Expansion, Town Improvement and the Beginning of Town Planning in Metropolitan Perth. In J. Gentilli (ed.), *Western Landscapes*. Nedlands, WA: The University of Western Australia, 359–82.
- Weller, R. (2009). *Boomtown 2050. Scenarios for a Rapidly Growing City*. Crawley, WA: UWA Publishing.
- Western Australian Planning Commission (WAPC). (2004). *Network City: Community planning strategy for Perth and Peel*. Perth, WA: State of Western Australia.
- Western Australian Planning Commission (WAPC). (2007). *The Future of East Wanneroo. Land-use and water management in the context of Network City*. Perth, WA: State of Western Australia.
- Western Australian Planning Commission (WAPC). (2010). *Directions 2031 and Beyond. Metropolitan planning beyond the horizon*. Perth, WA: State of Western Australia.

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- Western Australian Planning Commission (WAPC). (2011). *East Wanneroo Structure Plan*. Perth, WA: State of Western Australia.
- Western Australian Planning Commission (WAPC). (2012a). *State Planning Policy No. 2.5 – Land-use planning in rural areas*. Perth, WA: State of Western Australia.
- Western Australian Planning Commission (WAPC). (2012b). *Swan Valley Land-use and Management Discussion Paper*. Perth, WA: State of Western Australia.
- Western Australian Planning Commission (WAPC). (2014a). *State Planning Strategy 2050. Planning for Sustained Growth and Prosperity*. Perth, WA: State of Western Australia.
- Western Australian Planning Commission (WAPC). (2014b). *Rural Planning Guidelines*. Perth, WA: State of Western Australia.
- Western Australian Planning Commission (WAPC). (2015a). *Perth and Peel@3.5million. Draft*. Perth, WA: State of Western Australia.
- Western Australian Planning Commission (WAPC). (2015b). *North-West Sub-regional Planning Framework. Towards Perth and Peel@3.5million. Draft*. Perth, WA: State of Western Australia.
- Williams, P. (2012). Statutory Planning. In S. Thompson & P.J. Maginn (Eds.), *Planning Australia. An overview of urban and regional planning*. Port Melbourne, Vic: Cambridge University Press, 98–123.
- Yiftachel, O. & Alexander, I. (1995). The State of Metropolitan Planning: Decline or restructuring?. *Environment and Planning C: Government and Policy*, 13, 273–96.
- Yiftachel, O. & Kenworthy, J. (1992). The Planning of Metropolitan Perth: Some critical observations. In D. Hedgcock & O. Yiftachel (Eds.), *Urban and Regional Planning in Western Australia*. Bentley, WA: Paradigm Press, 131–48.