

Reconciling Urban Landscape Values

A case study of Ottawa and Canberra's urban open space systems

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Protecting the landscape values of urban open spaces in the face of significant change to the surrounding urban structure highlights a particular tension between two apparently conflicting goals for more sustainable development. On one hand the compact city agenda seeks to increase the density of cities and on the other, large tracts of urban open space, left undeveloped for its scenic quality, conservation or recreation values, provide innumerable ecosystem services. The apparent tension is that these landscapes can contribute to the dispersed urban structure. Despite the innumerable ecosystem services these landscapes offer, they contribute to the dispersed nature of the city and are costly and difficult to manage.

This tension is further complicated when these urban landscapes are gazetted as part of a national significance narrative and remote from the municipal challenges of delivering a more sustainable urban form. For the capital cities of Australia and Canada, this has resulted in a complex set of policy issues that highlight the challenges of planning and managing urban landscapes.

This paper explores the history of open space systems gazetted by national governments in Ottawa and Canberra, the respective capitals of Canada and Australia. It examines how these cities have approached their metropolitan planning strategies and comments on the way landscapes have been accommodated in future urban growth through strategic plans and policies. In doing so it identifies the challenges faced when urban open spaces, deemed to be locally or nationally significant, compete for increasingly scarce government resources and face increasing pressures from urban consolidation.

Introduction

The last decade has seen a change in attitude toward the value of urban open spaces as citizens become increasingly literate concerning environmental challenges brought about by urban growth and climate change. The increasing interest in the environmental quality of cities has focused on a variety of landscapes ranging from single trees to urban forests and national parks. Such a change in attitude has brought about a greater awareness and political acceptance of the need for a coordinated approach to planning and management of urban open spaces (Goode 1998; Antrop 2004a; Baycan-Levent, Vreeker et al. 2009).

Developing policy to retain and manage these landscapes requires planning practices and systems to interrogate the social, economic and environmental values of those urban open spaces. At a metropolitan scale urban open space can provide ecosystem services important for human well being. However, because they also separate urban centres, it can be argued that they also contribute to urban sprawl (Erickson 2004). Defining and identifying these values provides a better understanding of the contribution the landscape plays in the urban structure and how the built form and open spaces can be appropriately modified to achieve sustainable cities.

From a governance perspective, questions are also being asked about how to distribute the cost of managing these open spaces (Pearson, Pearson et al. 2013). The attribution, and at what level communities (municipal, state or national) bear the real and opportunity costs of these open spaces gives impetus to the need to determine an objective, sustainable approach to valuing landscapes. Therefore a balanced approach is needed to determine a sustainable urban open space policy for sustainable growth.

This paper reviews historical and contemporary strategic plans, policy documents and reports pertaining to planning renewal and the creation and management of open space systems for Ottawa and Canberra. As capital cities, these case studies share similar governance structures based on the Westminster system. Both cities are also undergoing reviews of the planning systems at federal and municipal level in order to establish growth strategies for the next half century. Around these discussions, the notion of national significance is an important factor in planning for these cities. This paper draws out lessons for all cities faced with the challenge of balancing landscape values and urban identity in the face of urban growth.

The Ottawa and Canberra open space systems were gazetted by their national governments in 1958 and 1984 respectively. Spatially, they remain substantially unchanged- avoiding encroachment by development. This is largely due the national governments exerting authority over local municipal authorities in relation to metropolitan planning. Similarly both the National Capital Greenbelt (greenbelt) in Ottawa and the National Capital Open Space System (NCOSS) in Canberra were conceived as critical elements in determining the long term urban boundary of the city. These two themes are explored further in this paper as it supports the findings of this paper.

Values underpinning different approaches to conserving urban landscapes

Conserving landscapes can be thought of from two approaches. The first is to conserve certain landscape types and, by implication, practices and rituals that shape that landscape. The second identifies the landscape as a tool for implementing sustainability objectives (Antrop 2006).

The first approach recognises customary rituals that shape the landscape (Olwig 2002). Change to urban open spaces thought of in this way are characterised by loss of identity, diversity, and coherence of existing landscape values. It threatens stability which is often associated with loss of ecological integrity, community tranquility and authenticity (Lowenthal 1985; Lowenthal 2007). From a planning policy perspective, changes to the spatial structure of open spaces is often met with often vigorous resistance by community groups who view development in or even near urban open space as a threat to landscape values. This approach to sustaining landscapes sees human intervention in social or ecological systems as a disturbance. It resists the opportunity for changes that may also provide positive outcomes in the face of contemporary planning goals such as consolidation and containment.

The second approach focuses on the performance of the landscape, where the value is measured by indicators and performance measures (MacKenzie and Sumartojo 2012; MacKenzie and McKenzie 2013). This approach uses the capacity of the landscape to provide measurable benefits that drive policy settings for planning and management.

The benefits provided by urban open spaces are well documented. Measurable ecosystem services produced by urban open space contribute positive benefits through a variety of functions including; human health (Tzoulas, Korpela et al. 2007) and quality of life (Bolund and Hunhammar 1999; Chiesura 2004), spaces for working and living (Rottle 2006) and creation of 'new standards' for aesthetics and landscape management (Cranz and Boland 2004). Other environmental benefits include maintenance of biodiversity (Bryant 2006), wind protection (Kongjian Yu, Dihua Li et al. 2006), microclimate regulation (Gomez, Tamarit et al. 2001) and recreational activities like walking, nature viewing and education (Hamilton and Quayle 1999).

Notwithstanding the benefits provided by the landscape, changes to planning and management of urban open spaces result from a set of narrowly defined outcomes loosely connected to a vague definition of sustainability (MacKenzie and Sumartojo 2012). This metrics approach to determining landscape value in the context of achieving sustainable outcomes treats landscapes as form of 'natural capital' (Antrop 2006). The concept of natural capital is not governed by the landscape as a physical space with multiple and changing tacit and tangible values, but a single measurable outcome determined by indicators that are negotiated. In short, landscape values are determined by what indicators are included and what are left out (MacKenzie and McKenzie 2013).

The formulation of guidelines supported by metropolitan plans may provide a vision for a sustainable landscape at a holistic scale; however development projects are specific to sites and rarely coordinated. By adopting this performance approach to urban open space planning, the concept of landscape as a form of natural capital can be and is often severely reduced through incremental development (Antrop 2006). By examining the history of the development of

metropolitan planning of Ottawa and Canberra through the lens of landscape values we can develop a better understanding of the role of landscapes in metropolitan planning.

Canberra's Strategic Planning

The importance of the landscape in Canberra's urban structure was assured from its inception because of its particular planning history. It was a product of a vision resulting from the fathers of Federation, and through them the Australian people who embodied the idea of a national capital that expressed the symbolic union of the states to form the Commonwealth. Key to this vision was an aspiration to locate a capital in the Australian landscape, most visibly expressed in the site selection (Headon 2003) and the winning design for the city by Walter and Marion Griffin. While framework and landscape vernacular of the city was established in the inter-war years, the majority of urban development in Canberra occurred after World War II (Freestone 1989).

Prior to self-government, the Australian Capital Territory's strategic planning, design and construction of public infrastructure were all under the direction of the National Capital Development Commission from 1958 to 1988 (NCDC). The vesting of city planning and building in the NCDC allowed this organisation, on behalf of the federal government, to implement contemporary planning theories that continue to have a profound effect on Canberra's urban structure and reflect the community's strong association with 'landscape' and 'place' manifest in the term understood across Australia, 'the bush capital'.

From its inception to demise the NCDC was concerned to ensure Canberra would be an enviable city nationally and internationally (Lloyd and Troy 1981). This focus was driven by a sense of national pride and to ensure the public servants, transferred from Melbourne and Sydney, enjoyed every amenity and convenience. This included the provision of natural open spaces for recreation but also to build strong sense of community and belonging in the new Capital. The planners set out Canberra's polycentric urban structure with districts separated by open space surrounding suburbs that contained local centres and schools no more than a 5 to 10 minute walk from the majority of homes.

This polycentric structure set up multiple landscape values for Canberra's urban open space system. In 1977 Seddon's work recognised the significance of this and the need to reconcile these multiple landscape values if Canberra's open space system was to be retained and not inadvertently compromised by future growth of the city. Seddon emphasised the national importance of the open spaces in the system they established and this is reflected in the name, the National Capital Open Space System (NCOSS)

Seddon's investigation into the proposal to formalise an open space structure into the metropolitan plan raised a number of questions about landscape values and the purpose of an identified open space system. He emphasised the importance of understanding the NCOSS as more than a land use category. Seddon argued that 'land by its very nature, is a non-homogenous commodity, and sites differ greatly in their attractiveness' (Seddon 1977). He was most concerned about how the landscape would be valued for recreation and visual amenity. However, managing the visual impact of development remained an integral principle of the NCOSS objectives, in particular, how the visual setting or view from certain points around the ACT would represent the lineage to the original Griffin

design. Seddon was also concerned how the landscape setting invoked meanings of national significance.

As a direct result of Seddon's work, the NCDC formalised the landscape structure of the Canberra metropolitan plan by recognising the NCOSS. The NCDC emphasised the national importance of Canberra's urban open spaces by the formal adoption of the NCOSS in the metropolitan Y plan for Canberra (NCDC 1984). In keeping with the Griffin landscape aspiration, the hills and ridges within and around the urban area of Canberra were to be kept free of development, to act as a backdrop and setting for the city, and provide a means of separating and defining the towns.

Further to this, notions of national significance, experienced through the landscape setting, were further complicated by the emerging concerns about managing the multiple goals of municipal land management and expressing national significance through the NCOSS. The major concerns were pragmatic issues to do with future land ownership between a territory administration and the federal government, access for recreation, environmental management and division of planning responsibility. As the city has grown, the division between the urban and non-urban spaces has become more prominent and pressure from users has increased.

In response to the adoption of the NCOSS into the Y plan, Seddon argued that a future territory government should adopt a 'honey pot' approach to land management and identify a few areas to be intensively used and managed. He believed largely dispersed medium intensity use of the NCOSS would be damaging both ecologically and economically (Seddon 1984).

Self government and its implications for NCOSS

In 1988, the federal government of the day granted self-rule to the ACT as a 'gift' to the Australian people to recognise the bicentenary of white settlement. Being Australia's National Capital, the Commonwealth reserved the right to ensure Canberra was planned and managed according to its national significance. This was an inspired act of cost shifting as it passed the financial responsibility of managing Canberra's urban open spaces along with providing state and municipal services to the people of the ACT, through its own territory government, while ensuring the Commonwealth had control over strategic development, effectively retaining planning control over 70% of the ACT.

By the early 1990s, the ACT, as a self-governing territory, was the focus of both the new National Capital Planning Authority (NCPA) and the ACT government. The major debates between agencies revolved around division and transfer of land management responsibilities (Reid 2002). At the time, the community was concerned about the apparent mismatch between infrastructure planning and the erosion of open space areas, containing high value ecological and scenic assets. The community cited poor communication between different agencies at Federal and Territory level. Central to this debate was the role of the NCOSS in sustaining both explicit and tacit landscape values held to be important to the community and as part of the City's planning legacy. The NCPA also continued to investigate how to promote and make meaningful the NCOSS to the Australian people. This included an investigation how NCOSS areas could be managed and classified to reflect conservation values as well as examining development potential for recreation and tourism.

At this time, the geographical spread of the city and the generous, but now ageing infrastructure posed significant tangible and opportunity costs to Canberra's social, economic and environmental sustainability. Of note were persistent tensions regarding the spreading greenfield developments and the challenges faced by land managers responsible for the NCOSS. Partly in response to these pressures, the Canberra Spatial Plan was developed. It identified the importance of creating a more compact city (Canberra Spatial Plan 2004) and applied a 'city limits' planning approach, similar to the growth strategy developed for Melbourne at the time.

In the decade after self-government many Canberrans considered the planning system to be developer driven, threatening the city's open space and suburban quality. The ACT Labour Party was elected on a planning platform to address this decline. Once elected the government undertook a number of actions. The first was to introduce the Garden City Territory Plan Variation No. 200 which essentially restricted subdivision to 'core' areas around shops and centres. Simultaneously it commenced the first comprehensive strategic planning review and introduced a consultative Neighbourhood Planning Program. Despite this, community resistance to redevelopment continued, along with growing concerns for a loss of accessibility and environmental amenity

For the ACT Government the costs of maintaining, let alone further investing in Canberra's social services, extensive urban infrastructure, inclusive of the urban open spaces and streetscapes, was becoming more critical given its limited sources of revenue. In a bid to be canvas these issues and the community's concern for Canberra's environmental amenity, the ACT Government, before reviewing its strategic policies undertook two key community consultation projects. The Sustainable Future project (2009) brought together key stakeholders to consider the issues and potential responses to managing Canberra's urban ecology. From this project, the consultation project, 'Time to Talk: Canberra 2030' canvassed the wider community. This consultation delivered back to ACT Government key messages. Central among them was the notion that the city should increase in density but not at the expense of the quality of the urban landscape or threaten the integrity of the NCOSS.

In 2012 the ACT Government replaced the 2004 Spatial Plan with the ACT Planning Strategy as the key reference for guiding development. The goal of the new strategy was to retain the metropolitan spatial structure while changing the built form and retaining the quality of open space at a local and district level. This Strategy reinforced the intention to create a more compact and efficient city and it adopted a more integrated, systemic approach to addressing the issues associated with this goal. The outcomes and actions, in response to Time to Talk: Canberra 2030, reinforced the principles behind the metropolitan structure set out by the NCDC. In keeping with the new town principles adopted by the NCDC, the new ACT Planning Strategy reinforced the identifiable town centres and directly linked land use and transport planning while advocating residential intensification in the town centres and along the major public transport routes. History shows that through conscious incorporation of the landscape in metropolitan planning, the landscape has been sustained as a land use classification, largely unchanged since the inception of the NCOSS and strongly linked to the original Griffin vision. However, the landscape has, more recently, been co-opted to perform essential measurable functions contributing to the City's sustainable development agenda.

In preparing the ACT Planning Strategy, the ACT Government undertook a vulnerability of assessment of the metropolitan structure to climate change (AECOM 2012). This work established

the importance and the value of the urban open space with regard to ameliorating extreme weather conditions. Further analysis also identified the importance of these open spaces for the migration of species, psychological and physical human health. This work established the performative value of the landscapes in the urban structure and the impact it has on the urban form such as on the design and construction of buildings and infrastructure. The lesson here has been to ensure the value of these landscapes is fully accounted as this will reveal that not all the landscapes are of equal value.

This, of course goes to the issue that Seddon raised in his review of the NCOSS. Treating all landscapes in the system as homogenous poses a threats to its integrity and management overall. Firstly, the extent of these landscapes presents a financial burden for the municipal authorities charged with their management. Maintaining basic pest and weed control is logistically impossible and the consequence that much of the system declines. Secondly, the opportunity cost for these authorities in development forgone is so great, that if the contribution that the landscape makes is not well understood, then the whole system may be compromised by incremental loss.

Ottawa's Greenbelt

Ottawa is an intimate, human-scaled city that emerged like many other North American forestry towns. Unlike Canberra, Ottawa's urban structure and form is less geometric. Whereas Canberra was designed around the ornamental Lake Burley Griffin, urban growth in Canada's capital fanned out from the Ottawa River in a more organic fashion (Erickson 2004). The City Beautiful urban design approach has been considered and debated for nearly a century in Ottawa, and yet the city has rejected such grandiose schemes, reflecting its origins as a mill town. Despite humble origins, Ottawa grew rapidly after the second world war, compelling the Prime Minister Mackenzie King to develop the city's first metropolitan plan in the late 1940s. Like Canberra, the urban open space was consciously incorporated into the plan. However, low density urban expansion has been the dominant shaping force of Ottawa for most of the second half of the 20th century.

The Ottawa Greenbelt covers an area of 20 000 hectares, with an average width of four kilometres and over forty kilometres in length. The landscape is a mixture of introduced species and native forests, agricultural land and large infrastructure sites such as the Macdonald-Cartier international airport (National Capital Commission 2002). The greenbelt was gazetted as part of the then Prime Minister Mackenzie King's commitment to formalise a metropolitan plan for Ottawa. The French architect and planner Jacques Greber, along with professional staff from the Federal District Commission completed the city's first plan for the capital in 1950. Consistent with new town – garden city principles, popular since the turn of the century, the inclusion of a greenbelt was a significant spatial element of the plan (Taylor, Paine et al. 1995). The planning of the greenbelt was based on containing the national capital region projected population and associated infrastructure. The size and shape of the greenbelt was primarily to provide access to nature for recreation for the urban population- rather than the protection of natural systems or ecological resources (Taylor, Paine et al. 1995).

However the primary function of the Ottawa greenbelt was to prevent urban expansion into the productive agricultural land surrounding the city. The boundary of the greenbelt and, by definition, the extent of the urban footprint was determined as the most efficient economic and practical area that could be serviced by a municipal agency at reasonable cost (National Capital Commission 1992).

Within eight years of the greenbelt gazettal, urban expansion was placing pressure on greenbelt boundary. In order to protect these urban open spaces, the federal government bought 15 000 hectares to add to the 20 000 hectares already in federal ownership between 1958 and 1966. In order to retain agricultural production close the city, the federal government leased back land to farmers. However the short term leases and the perceived lack of lease certainty have resulted in a lack of investment in infrastructure and a resulting retreat of farming from the area (Fung and Conway 2007).

Since then, the greenbelt has been successful in providing a land reserve for government and institutional buildings, containing the city within the reserve boundary, and providing a range of landscape types from natural forests to pastoral open space accessible to residents. However, the greenbelt has had limited success in containing urban growth or affecting urban densities. Satellite communities have expanded adjacent to the outer limits of the greenbelt (Fung and Conway 2007). The main contribution of the greenbelt has been to separate these newer satellite communities from the old urban area. While the greenbelt has not contained Ottawa's growth, it has significantly shaped the urban structure of the city. This was reflected in the federal government's 2001 decision to retain the greenbelt in the amalgamation of the former Ottawa urban area, the regional government and ten other local municipalities to create the City of Ottawa.

Ottawa's contemporary strategic planning

In 2011 the national and municipal agencies in the City of Ottawa partnered to prepare a long term plan for the National Capital Region. *Choosing our Future* set a goal of developing a sustainable, resilient and liveable region. The National Capital Commission (NCC) and the City of Ottawa have now commenced separate, complementary strategic planning reviews. The NCC's 'Horizon 2067' is a review of the metropolitan structure that commenced in August 2011 and this is due for completion in 2017. The City of Ottawa embarked, *Building a Liveable Ottawa 2031* in January 2013.

The NCC, similar to the NCA, has a statutory duty to prepare plans for and assist in the development, conservation and improvement of the National Capital Region. It is also required to ensure the nature and character of the seat of the government of Canada is managed in accordance with its national significance. However, the NCC has taken a greater role in the strategic planning of the capital than its Australian counterpart. The NCC review addresses, at the very broadest level, land use, public transport, employment, economic viability and quality of living – issues critical to urban growth - as well as national issues pertaining to symbolism and promotion of the capital region.

In its draft form the review contains three objectives that specifically relate to the management of open spaces in the greenbelt. These include; better integration of natural areas into the urban fabric, pilot projects focused on ecological and sustainable agriculture and new tools for the protection of valued ecosystems. In a similar vein to the ACT Government's strategic planning exercise, *Horizon 2067* has repositioned the landscape values of these urban open spaces to incorporate metrics to measure the performance of the landscape as part of its sustainable development agenda.

Despite very little conscious collaboration¹ between the respective planning agencies concerned with the review of metropolitan plans in Canberra and Ottawa, both cities are undergoing similar processes of renewing approaches to metropolitan planning at both state and federal levels. The

evidence from both case studies show that the role and function of the landscape continues to provide the symbolic role, underpinned by planning legacies and heritage values implicit in the urban open spaces. In addition, each city is looking for ways to incorporate more contemporary understandings of landscape values underpinned by ecological function and ecosystem services.

Discussion

The spatial structure of cities are a product of the geo-physical constraints of the land and the path dependencies generated by the decisions of city founders (Troy 2004). The strategic planning exercises and the issues of dealing with dual planning system in the national capitals of Ottawa and Canberra can provide some insight as to how cities might reconcile their changing urban structure while retaining these urban open spaces and meeting the challenges of a establishing a more sustainable city.

Canberra and Ottawa, like all cities, emerged around specific geographic patterns such as rivers, hills and forests, however from their inception, the competition for land uses has necessitated the protection of landscape values through formal incorporation into metropolitan plans. The challenge for cities remains that modern planning separates and is continuing to break the nexus between landscape and the urban structure. In the cases presented in this paper, the notion of national significance unites the concept of the urban and the landscape, making separation of these planning functions impossible. The landscape is central to the identity of these cities which complicates urban open space planning and management.

The logic and attraction of a compact urban form presents a spatial structure to deal with demographic, economic and environmental change. However such an approach creates ongoing challenges for how we manage urban landscapes and the associated values that are held to be important to the community and in the case of Canberra and Ottawa, the nation.

If planning policies are to be effectively administered for these landscapes, a value must be ascribed, as well as objectives and/or controls for its management. Whether the underpinning values focus on conservation or performance, attempting to make what is often subjective, more objective in a planning system is what could be instructive for the management and allocation of urban landscapes.

The 2012 ACT Planning Strategy has attempted to achieve this. It differed from the previous strategic plan, by taking the approach to set out principles and actions to guide change in Canberra's urban form, not just its spatial structure. The 2012 Strategy reinforced the value of the metropolitan open space structure but also reinforced the need for the urban open space to be of a higher quality, working harder with what ecosystem services and the landscape values it provided. Ottawa on the other hand has focussed on a stronger relationship between the different levels of government to ensure the significance of the landscape is recognised, while at the same time allowing for development to occur adjacent to and inside the greenbelt.

The capital city status of the case studies sets out what is important about urban open spaces in the context of the urban structure. In other words, the landscape provides a setting for the national institutions as well as defining the urban edge. In the case of Ottawa the landscape contains the city,

where as in Canberra it separates the self contained towns. However, this only partially ascribes a value for while the respective federal and municipal plans attempt to articulate what is important about their urban open spaces, they do not go on to define the relative value of these spaces to the city. In order to achieve the goals of sustainable urban development, both cities need to comprehend the value of compact urban form while conserving the relative value of urban open spaces. These concepts are not mutually exclusive, but rather, combine to deliver a better outcome than what currently exists.

Conclusion

This paper has established that the structure of the city and hence the structure of the urban landscape are a legacy of conscious incorporation of urban open spaces into metropolitan planning. Similarly, conserving landscape values requires a more thorough assessment of the goals of retaining essential landscape characteristics while allowing cities to grow. Canberra and Ottawa demonstrate the advantages of addressing the spatial structure (delivered through the urban open spaces) and built form at the same time to achieve a more sustainable city.

A more rigorous establishment of the multiple values of the landscape will make setting out objectives for its management and the development of a compact city agenda clearer. For both national capitals, it is necessary for the federal planning administrations to define what is significant about these landscapes. Determining the value of these landscapes makes decision making more transparent in the endeavour to achieve a more sustainable city.

¹ Canberra and Ottawa are members of Capital Alliance an informal association of planned capital cities around the world. <http://capitalsalliance.org/default1.aspx> accessed 5th December 2013.

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