In the 1980s in Sydney, as elsewhere, a new framing of the city emerged, in which global health and survival was considered to depend on the local intervention in and transformation of degraded urban environments. Underpinning this shift were distinct changes in meaning that Sydney-siders attached to their natural environment, which in turn shaped planning policy and legislation, directions in ecological research, and ultimately urban landscape projects. This paper charts this transition by examining ways in which ecologists, planners and designers constructed and communicated a new ecological understanding of Sydney in the 1980s and early 1990s, and explores Bicentennial Park as an urban landscape project which translated and expressed this new ecological framing of the city. The findings demonstrate that what we take for granted now—that ecology is urban, and that urban ecology offers a pathway to beneficial strategies for adaptation and resilience to environmental change—is a culturally and politically constructed framing of the city which emerged in the late 1970s through the 1980s. Bicentennial Park, now overshadowed by the surrounding Sydney Olympic Parkland is reconsidered for its contribution to ecological conservation as a basis of urban park design in Australia.

Keywords
Urban environmental planning; urban ecological conservation; Bicentennial Park, Australia

How to Cite

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INTRODUCTION

The 1988 Australian Bicentenary celebrations coincided with and sparked heightened concern for environmental change resulting from European settlement; consequently, conservation and restoration of flora and fauna were priorities on the planning agenda in Sydney in the years preceding and immediately following 1988. Government agencies, at the local, state and commonwealth levels, sponsored public domain projects, many with a conservation focus. As vegetation and landform became increasingly linked to Australian cultural identity and sense of place, protective and restorative measures for bushland, coastal wetlands and threatened species emerged as frameworks for revaluing and remaking degraded urban landscapes. The call to conserve vegetation communities became increasingly embedded in the planning discourse, and these same communities became both a political vehicle for the transformation of degraded sites, and an ideological basis for park design.

This paper examines the ways in which ecologists, planners and designers constructed and communicated ecological understandings of Sydney in the 1980s and early 1990s, and how these understandings shaped one of the city’s large parks. After situating the research in the context of scholarship on Australian designed landscapes of 1980s/1990s, this paper outlines the relevant cultural and institutional context of the time. It considers institutions which promoted new ways of thinking about the city, specifically the role of ecological communities, and urban planning policy and legislation which activated these new understandings. It then examines Bicentennial Park at Homebush Bay as an urban landscape project which translated and expressed this new ecological framing of the city.

BACKGROUND: HISTORIES OF URBAN ENVIRONMENTAL PLANNING AND URBAN PARKS IN AUSTRALIA

Commenting on Sydney’s urban planning history, Rob Freestone noted “Sydney has been shaped not by singular master plans but by an episodic history of many plans (big and small, local and central, private and public, green and brown, physical and social) and evolving planning ideologies, interacting and competing to produce a complex set of consequences.” The backdrop Freestone sketches applies just as aptly to the history of planning large urban parks in Sydney. Indeed, the history of the planning and design of urban parks in Sydney is characterised by the absence of a key, singular vision; instead Sydney’s parks have resulted from many plans, many agencies, and many diverse ambitions. It is also a history incompletely explored in existing scholarship, particularly with regard to the influence of culture and politics on the planning and design of urban designed landscape.

In the last 15 years, a growing volume of scholarship has explored the Australian domestic garden as a locus of culture, nature and politics, a place where indigenous plants are a medium for forging and renegotiating cultural identity. There is less attention to this interplay in relation to Australian large urban parks and their cultural and political contexts. Jodi Frawley’s work on Joseph Henry Maiden is an exception; Frawley demonstrates that Joseph Henry Maiden, Director of the Sydney Botanic Gardens between 1890 and 1924, established a distinct palette of tree species to inscribe spatial concepts of order and civility on urban space in NSW. Catherin Bull’s New Conversations with an Old Landscape (2002) established a typology of projects to interpret the nuanced design responses of landscape architects, with particular attention to the influence of the inspirations and demands of Australia’s unique environmental settings on design styles. New Conversations is significant in terms of charting the broad stylistic patterns and design achievements of the profession, and hints at the agency of institutions with regard to changing cultural values, project types, and design responses. Barbara Buchanan’s doctoral dissertation, a critical biography of architect Harry Howard, traced the emergence of the Sydney Bush School in the 1970s and 1980s as an aesthetic response by designers to distinctive aspects of place. Andrew Saniga’s (2012) sociological history of the profession identifies key achievements; places, projects and institutions highlighted by Saniga provide important reference points for this research. In Garden of Ideas (2012), Richard Aitken traced the
emergence of distinct garden styles in Australia; although he deftly acknowledges the interrelationships between botanic gardens, plant nurseries, societies and professional journals on garden styles, the focus is primarily residential gardens.


The emergence of modern environmental planning in the 1970s and 1980s in the United States, Europe and Australia was marked by two distinct phases. Daniels describes the first as a “command and control” approach, characterised by the introduction of numerous government regulations to control environmental impacts and reduce pollution. The second phase, which emerged through the 1980s, refuted the strict regulatory approach and introduced incentives, to encourage compliance and in growing recognition of the link between economy and caps and trades. Freestone describes the 1970s as the breakthrough decade; with clear echoes of the command and control approach of the United States, this was a period in Australia when key legislation was enacted, environmental commissions formed, and numerous environmental planning reports produced. Environmental planning in the 1980s in Australia diverged slightly from international patterns as an emerging concern for sustainability expanded and was integrated into the existing regulatory framework.

The sheer volume of policies and legislative acts introduced across the 1970s and 1980s in NSW speaks for the breadth of issues at play, with a concern for urban ecology evident in targeted planning instruments. Broad scale concern for improved environmental management replaced the NSW State Planning Authority with the NSW Planning and Environment Commission in 1974; this was followed by the enactment of the NSW Heritage Act and Heritage Council (1977) and the Environmental Planning and Assessment Act (EP&A Act) in 1979. The EP&A Act introduced new types of planning instruments which have directed environmental planning and management in significant ways. For example, and of relevance to this research, State environmental Planning Policies 14 and 19, gazetted in 1984 and 1986 respectively, were directed, again respectively, at the conservation of Coastal Wetlands and Bushland in Urban Areas. Both exemplify urban planning policies which brought the concerns of urban ecology, specifically, fragmentation and loss of biodiversity—onto the policy agenda, thereby influenced shifts in practices of landscape planning, management and design. Regional Environmental Plans, on other hand, directed and coordinated redevelopment of discrete and state-deemed significant urban areas. Examples include SREP 24 Homebush Bay (1993) which informed the transformation of degraded land into Sydney Olympic Park.

The new directions in environmental planning also reflected the strength and influence of grassroots environmental efforts, which also became institutionalised in the 1970s and 1980s. The Total Environment Centre, a non-profit environmental lobbying group, was established in Sydney in 1972. Greening Australia, focused on restoring and conserving biodiversity, was established in 1982. The Bradley technique for regenerating the local bushland was adopted by local councils and disseminated in the 1989 book, *Bush Regeneration: Recovering Australian Landscape*. Landcare, rural in focus, and founded in 1986, was another important catalyst for community awareness and participation. Widening cultural interest in and concern for native vegetation in the 1980s is also evident in numerous field guides published in the 1980s.

These were also the decades when Australian universities established centres for environmental studies and related programs, for example both the University of Melbourne and Macquarie University established a Centre for Environmental Studies in the early 1970s. At Macquarie, directed by academic staff, postgraduate students produced a variety of reports, mainly environmental impact assessments between 1971 and 1989. Reflecting a shifting scope of concern, the Macquarie institute was renamed the Centre for Environmental and Urban Studies in 1981. A few projects advocated for design initiatives—notably a report commissioned by Concord Council to consider a ‘bicentennial’ park at Homebush Bay. In 1974, the University of New South Wales established its undergraduate landscape architecture program, the first in Australia.
Institutional environmental initiatives from the late 1960s through to the early 1990s of note include the Australian Institute of Landscape Architects (AILA), founded in 1966. The Landscape Section of the NSW Public Works Department (NSW PWD), established in the 1970s, expanded to 40 staff in the mid-1980s, one of the largest landscape offices in the country. This group undertook several major reclamation projects, including Chipping Norton Lakes, a stabilisation and reconstruction of sand and gravel mining site on the George’s River in Sydney’s southwest. They also directed a suite of three new parks as Bicentennial projects: the Mt Tomah Botanic Gardens in the Blue Mountains; the Mt Annan Botanic Gardens, in Sydney’s southwest, and Bicentennial Park at Homebush Bay.

In 1980, the environmental studies centre at Macquarie University produced a study titled ‘A Bicentennial Park for Sydney, Homebush Bay: a report.’ In 1981, the Sydney Royal Botanic Gardens (RBG) established in 1816, first published Cunninghamia, a journal focusing on plant ecology of eastern Australia. The primary focus of Cunninghamia has been dissemination and discussion of the vegetation surveys in NSW. For the Bicentenary, the RBG exhibited the surveys of the Sydney region; well-received, the display was expanded into a book, Taken forGranted in 1990. Complementing the botanical field guides of the 1980s and the RBG surveys, Taken for Granted catered to local interests and concerns; its focus on the local history of land-use changes in Sydney’s suburbs conveys the story of landscape diversity and change over time. By Benson’s own account, this work is a simplification of complex vegetation patterns, but importantly, it provided an accessible account of suburban environmental history.

BICENTENNIAL PARK: A CASE STUDY OF TRANSFORMATIVE URBAN ENVIRONMENTAL PLANNING

Bicentennial Park is located in Homebush Bay, a large estuary on the south edge of the Parramatta River, fed by Haslam’s Creek and Powell’s Creek. (See Fig 1) In the late 18th and 19th centuries Homebush Bay was settled by Europeans. From the late 19th to the mid-20th centuries, several state industrial and defense operations occupied the area, including a naval armaments depot, the NSW Abattoir; and the NSW State Brick Works. From the mid-20th century, much of Homebush Bay was reclaimed to accommodate industrial and manufacturing businesses. By the 1970s, as Sydney expanded westward from the central business district towards Parramatta, Homebush Bay was highly degraded, with toxic soils and polluted water.

Bicentennial Park emerged from a series of NSW government initiatives focused on transforming Homebush Bay into an economic hub for Sydney’s geographic centre, and an emergent demographic centre. A 1978 state government proposal to construct a sports stadium and recreational facility at Homebush Bay was revised in 1980 into two separate proposals: 80 hectares of wetlands and rubbish tip was excised, and an indoor sports centre and business centre were established separately. The NSW State Sport Centre was completed in 1984, followed by the adjacent Australian Business Centre. The 80 hectares of excised lands – 50 hectares of wetlands and 30 hectares of tip — was designated as Bicentennial Park in 1983; the NSW Public Works Department began design and construction the same year. The park opened on 26 January 1988, and in 2001 the three projects were integrated into the broader mosaic of Sydney Olympic Park, which today comprises 440 hectares, and includes the Olympic urban core and surrounding parklands. (See Fig. 2)

In 1978 the Environmental Studies Centre at Macquarie University produced a study titled ‘A Bicentennial Park for Sydney, Homebush Bay: a report.’ The study focused on remnant wetlands, bird habitat and visual degradation, and concluded that the potential of the site was its ecological significance, due to the extent and rarity of the mangrove wetland and its potential to provide habitat, to protect the food chain, the commercial fishing economy and to provide recreational facilities. The report opened with this: … all of Homebush Bay would be ideal in all its facets – from … stadium to wetlands – for development as a great park. In an urban area these attributes are rare and special qualities and an opportunity arises for Sydney to celebrate its first 200 years by dedicating this land as a Bicentennial Park. This would be consistent with current views of re-using and rejuvenating city areas and this area has excellent potential for this purpose …
The Macquarie report calls out the importance of wetlands specifically in relation to their urban context—and advocates the co-existence of wetlands within an urban area. This case was strengthened in 1988, when Peter Clarke and Doug Benson, ecologist at the Sydney Royal Botanic Gardens, published a survey of Homebush Bay which emphasised rarity and significance of vegetation. They lauded the conservation achievements within Bicentennial Park, and highlighted the presence of additional patches of rare, remnant vegetation communities throughout Homebush Bay, in effect advocating for additional planting and conservation strategies to protect these woodlands and marshes, alongside the mangroves.

The planning and preparation for the 1993 bid to host the 2000 Olympics in Sydney buoyed the significance of Bicentennial Park to global levels. Because the Park was proof that rejuvenation of Homebush Bay presented an opportunity to conserve ecologically significant habitats and species, in addition to serving as a platform for expanded conservation measures, the mangroves and marsh converted quickly into a strategic asset. They also became a cornerstone of the Homebush Bay Regional Environmental Plan (SREP 24), gazetted in September 1993 (in tandem with the preparation of the Sydney bid for the 2000 Olympics), which established a framework for coordinated development across the area, and integrating ecological, social and economic concerns.

The Bicentennial Park Trust’s first strategic plan, prepared in 1992, emphasised the park’s international significance, stating, "...the worldwide significance of estuarine and wetlands means the Trust’s responsibility goes beyond the park boundaries," and focused on global outcomes of decisions, and the opportunity to contribute research to a global network. The significance of ecological habitats dominated subsequent portrayals of the importance of the new park. A 1993 video produced by the Bicentennial Trust exclaimed that Bicentennial Park was more than a recreation area: 60% 'natural', it was hailed as an oasis, a sanctuary; the wetlands critical to the economy and global research. In 2001, a second video produced by the Trust described the park as a locus of...
dedication to and expertise in conservation, stating that “world survival depends” on this “natural wonderland.”

25 Bold and engaging woodcut images of the mangroves’ fauna were used on the website. Repeated across print and digital media, the images assisted with the cultural construction of the mangroves—and by association, Bicentennial Park—as an icon of conservation in an urban context.

A series of master plans for Homebush Bay were produced beginning in 1990. Along with configuring Olympic facilities, these plans expanded the urban conservation role of Bicentennial Park. Because the ecologically significant wetlands edging the Bay could not be developed, they were tagged, ironically, “environmental constraints” and converted into an extended Bicentennial Park, known as Millennium Parklands, to provide a ‘unique natural setting,’ for the core of Olympic activity. As these plans evolved, the so-called natural environment was not such a constraint: it provided three different functions: conservation, buffer, and open space. The new urban centre at SOP was wrapped in a large, multifunctional park system, which is now an important benefit of the SOP, providing one of Sydney’s largest ‘green’ recreational resources. (See Fig. 3)

A NEW TYPE OF PARK?

If a key legacy of the Sydney Olympic Games was reshaping Sydney’s spatial structure, then Bicentennial Park played a critical role as a testing ground for rethinking park typology. Scott Hawken recently described Sydney Olympic Park as ‘a city in a park,’ highlighting the extent and significance of parkland in one Sydney’s newest suburbs. The rooms/walls/corridors structure of Millennium Parklands—which wraps around the urban core of the Sydney Olympic Park, draws heavily on landscape ecological concepts, and embeds the closed ‘room’ of mangroves in Bicentennial Park as a key structural component.

Saniga describes Bicentennial Park as “perhaps the most significant project undertaken by the NSW PWD in the 1980s.” The site presented complex engineering and design challenges; subsidence, stability, and toxicity were difficult to predict across most of the site. The areas of fill had no record or monitoring of waste, and the adjacent wetlands were far from healthy. The construction process, started in 1983, involved myriad state agencies: led by the Landscape Section of the NSW Public Works Department with an Interim Management Committee, which included representatives from the NSW Premier’s Department; the Royal Botanic Gardens; Centennial Park; the NSW Department of environment and Planning; a geographic ecologist from Macquarie University; and representatives from the three adjacent local councils.

During construction, the lead landscape architect, Lorna Harrison claimed that the park presented an opportunity “to create an exciting and unique contrast between man-made [sic] and natural landscape within the framework of an urban park.” At the same time, critical reviews claimed that with extensive conservation areas integrated into the park, Bicentennial Park was a new type of park. For Harrison, there was even higher ground than newness to claim. Ideological tensions underpinned and motivated her design aims, and the aspiration to emulate grand urban traditions was more than a design statement; Harrison was taking aim at what she referred to as “Bib and Bub and the Bad Banksia Man:”

– the Bicentennial Park does seek to re-establish the great landscape traditions established in history and in the early years of Australia. Traditions which have been rejected emphatically by the Sydney School of Landscape Design and which have resulted in poor representations of Australian bushland located inappropriately within the urban fabric; a lack of reference to an historical continuum which has led to design solutions which pay little heed to the articulation of external space and the planning and design of landscape for artistic effect.
Harrison was not alone in this campaign: the day the Park opened, 1 January, 1988, the Sydney Morning Herald echoed this theme, noting the distinction between Bicentennial Park and recent parks, and emphasising Bicentennial Park references to the great traditions of park making. But what did this mean? Both Harrison and Ron Powell, the project manager, identified design principles employed to link the park to the ‘grand tradition,’ namely, geometry, focal points and axes. Unlike 19th and early 20th century rus in urbe idiom, the main design device of Bicentennial Park was internal contrast, between the 50 ha of ‘natural’ wetlands and the park constructed over 30 hectares of waste; second in importance were two axes. An east/west axis features a canal of 200 jets of water, culminating at its high point in a treillage. Both the treillage and the fountains centred and connected the park to its surrounds, especially the Sports Centre to the southwest and Concord station to the southeast. A north/south axis, articulated by an avenue of trees created the ‘mangrove vista,’ and focused attention from afar on the wetlands. (See Fig. 4) By the mid-1990s, it seemed that Harrison may have exceeded—or missed—her expectations: the strength of the internal contrast was such that in 2001, Bicentennial Park was separated from the mangroves, which were renamed Badu mangroves. Both now are distinct precincts, two of 17, within SOP, and the mangroves are one of 5 precincts devoted to ecological conservation.

CONCLUSION

Bicentennial Park has not won many accolades from the Australian Institute of Landscape Architects, and yet from the perspective mapped out in this paper, it clearly has contributed to the integration of ecological conservation into urban parks in Australia, an important legacy. As with Sydney’s planning history, there is no single figure or institution which played a defining role in making Bicentennial Park, but rather a web of ecologists; botanists; environmentalists, planners and landscape architects. This complexity was all the more acute at the time, given that the 1980s in Australia was a time of re-articulating cultural identity. New values took shape, and varied institutional initiatives were implemented, and as we have seen, ideological battles ensued.
The manner in which ecological knowledge and expertise was interpreted and applied to reshaping of degraded sites was a key factor with the systematic documentation of regional ecology provided by the Sydney RBG vegetation surveys especially critical. The maps readily communicated extensive habitat fragmentation across the Sydney region; which in turn reflected urban degradation, and this implied narrative of civic declension became a rallying call for change. Another key factor was the establishment of landscape architecture as a profession in Australia, which provided a distinctive skill base and formative ideologies. The Bicentennial Park Trust was a critical agent in terms of situating the Park as significant in regional and global terms. Mangroves and mudflats were transformed from urban dumping ground into a significant urban space of healthy retreat, helped along by “mangrove mania.” In the end, an urgent environmental fix evolved into a complex spatial fix, with Sydney Olympic Park as the headline legacy, but the process had wider and more nuanced outcomes as well, contributing to the about the aesthetics of park design, and demonstrating the capacity of landscape architecture to play a significant role in the mitigation of large scale urban environmental degradation.
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Endnotes
1 Buchanan, “Modernism Meets the Bush,” Buchanan discusses this at length in her PhD.
2 This perspective is informed by Jens Lachmum’s essay, “Making an Urban Ecology.” See his outline of aims, page 205: “…examine the underlying practices and discourses by which nature in the city of West Berlin was framed as a nexus of scientific and political activities. Rather than providing objective information about flora and fauna, …cultural entrepreneurs who created and promoted new framings of, or ways of conceptualising, the city, its component parts, its environmental conditions, and the goals of an appropriate urban policy.”
3 Freestone, “Planning Sydney,” 141-142.
4 Dyson, “Rethinking Australian Gardens;” Holmes, “Growing Australian Landscapes.”
5 Prawley, “Campaigning for Street Trees.”
6 Buchanan, “Modernism Meet the Bush.”
7 Saniga, Making Landscape Architecture in Australia.
8 Daniels, A Trail Across Time.184
9 Ibid., 186.
10 Freestone, Australian Environmental Planning, 27.
12 The information on the Macquarie University Centre is derived from a survey of the Macquarie University Library catalogue of the centre’s work. Survey conducted by the author.
13 Ibid., 176-183.
14 Ibid., 206.
15 Ibid., 207.
17 Howell and Benson, Taken for Granted; Benson, Doug, “Oral History: Doug Benson,” 8.
19 Sydney Olympic Park Authority, “History and Heritage.”
20 Eskell & Macquarie University Centre for Environmental Studies, “A bicentennial park for Sydney.”
23 Bicentennial Park Trust, Annual Report, 2.
24 Pearman et al, Bicentennial Park: making a difference.
25 Bissett et al, Bicentennial Park Homebush Bay.
26 Bicentennial Park Trust website.
27 Young, “Homebush Bay Master Plan,” 221.
28 Ibid., 222-223
29 Young, “Homebush Bay Master Plan,” 222-223; Searle, “Long-term Impacts”. Also note that Western Sydney Parklands opened in 2006, and is now Sydney’s largest parkland.
30 Searle, “Long-term Impacts.”
31 Hawken, “Sydney Olympic Park 2030.”
32 Saniga, 207.
33 “Bicentennial Park Newsletter”
35 O’Brien and Thorman, “Mangroves, People, and Factories,” 291; McConville, “All this: and a treillage,” 49.
37 Haskell, “From Rubbish Dump to Parkland.”
39 Harrison, “Bicentennial Park.”

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Figure 2. PWP Landscape Architecture, view online http://www.pwpla.com/projects/millennium-parklands
Figure 3. PWP Landscape Architecture, view online at http://www.pwpla.com/projects/millennium-parklands
Figure 4. NSW Public Works Department, republished in Crosweller, Rod et al. “Bicentennial Park, Sydney.”