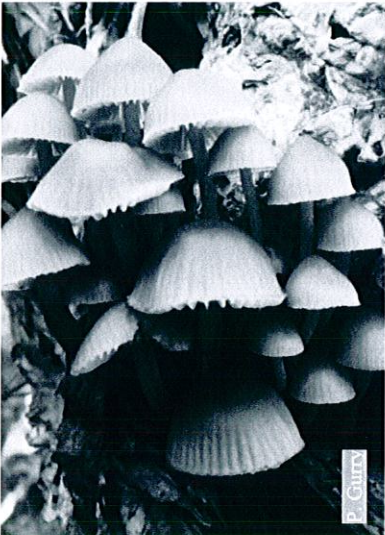
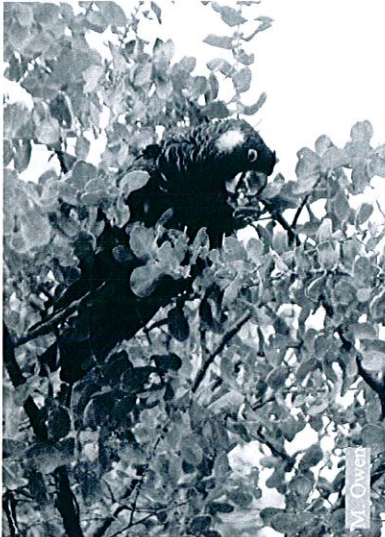


PERTH'S BUSH FOREVER REPORT CARD

Proceedings of a one-day conference
exploring Bush Forever, the
WA Government's commitment to its
implementation and site management
issues, 7 December 2012



Robertson Lecture Theatre
Murdoch University

Published May 2013 by:

Urban Bushland Council (WA) Inc.
PO Box 326, West Perth
Western Australia 6872

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Urban Bushland Council (WA) team:

Sue Radford (Editor) with assistance from Kim Sarti and Mary Gray.

Proceedings compiled by Kim Sarti.

National Library of Australia Cataloguing-in-Publication entry:

Perth's Bush Forever Report Card (2012: Perth, WA) Proceedings of a one-day conference exploring Bush Forever, the WA Government's commitment to its implementation and site management issues, 7 December 2012.

Includes bibliographical references.

ISBN 978-0-646-59379-1 (paperback)

1. Nature conservation – Western Australia – Perth – Congresses
2. Natural areas – Western Australia – Perth – Congresses
3. Forests and forestry – Western Australia – Perth – Congresses
4. City planning – Western Australia – Perth – Congresses

- I. Radford, Sue (Editor)
- II. Urban Bushland Council (WA) Inc.
- III. Title

333.782099411

Front cover: Menzies' Banksia (or Mungyt) *Banksia menziesii*. Photo Tony Kirkby.

Rear cover: Banksia woodland and mixed low shrubland at Kensington Bushland (Bush Forever Site 048). Photo and cover design by Kim Sarti.

The Urban Bushland Council acknowledges generous funding assistance from the following organisations for the symposium and production of the proceedings.



Department of
Environment and Conservation



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WHAT IS THE URBAN BUSHLAND COUNCIL?

The Urban Bushland Council is a voluntary, non-government organisation that is an association of about 70 community conservation groups concerned about urban bushland. Formed in March 1993, it is the peak community organisation for urban bushland conservation and protection in WA.

THE ROLES OF THE URBAN BUSHLAND COUNCIL

- ❖ **Local action and networking** through providing a forum to support local community groups by encouraging local action and networking and by providing access to ideas, information and expertise concerning bushland.
- ❖ **Policy development** through debate, developing and promoting policy for the protection and management of urban bushland.
- ❖ **Lobbying** by providing an avenue for influence by letter writing, submissions, delegations and media contact in seeking legislative change for bushland protection.
- ❖ **Raising public awareness** of the values and problems facing urban bushland.

CURRENT ACTIVITIES

- ❖ **Bush Forever:** The UBC is still campaigning for statutory protection and management for all Bush Forever sites. There remains no overall legal protection in place that applies to all Bush Forever sites. Adequate resources for management to maintain conservation values are essential for Perth's biodiversity hotspot in the face of a drying climate and continuing urban sprawl into intact Banksia woodlands.
- ❖ **Local bushland and Perth Biodiversity Project (PBP):** We call for mandatory Local Biodiversity Strategies to be implemented by all Councils according to the 'Local Government Biodiversity Planning Guidelines' (2004) and to actively manage their local bushland in conjunction with Friends groups to retain values. We call for the retention and recurrent funding of the PBP to assist local governments with their biodiversity strategies.
- ❖ **Threatened Banksia Woodlands:** The UBC and the Wildflower Society of WA have nominated the Banksia woodlands of the southern Swan Coastal Plain as a threatened ecological community (TEC) under the Commonwealth's Environment Protection and Biodiversity Conservation Act. The nomination will be assessed by December 2014.
- ❖ **Climate change:** Falling ground water levels are threatening bushland ecosystems. The UBC is calling for strategic management of ground water levels (including meters on all bores and volumetric charges) to protect sensitive areas and the fostering of a water conservation ethic in the community and within industry, especially horticultural industries which use huge volumes of groundwater for irrigation.
- ❖ **Endangered Black Cockatoos:** The UBC actively supports the Cockatoo Coalition in lobbying for the protection of the three endangered species of black cockatoos: Baudin's, Carnaby's and the Forest Red-tailed Black Cockatoo and their habitats.
- ❖ **Biodiversity Conservation Act for WA:** We call for a modern Act to replace the out-dated and ineffective Wildlife Conservation Act (1950). The current Act does not have a process for listing and recovering threatened species, nor does it provide any protection for fauna habitat or threatened ecological communities.
- ❖ **Other campaigns:** Numerous campaigns by Friends groups to save local and regional bushland are supported by the UBC.

PREFACE

Since its inception in 1993, the Urban Bushland Council has lobbied for public recognition, protection and management of the rich biodiversity of urban bushland in the Perth region and the south west of Western Australia. After a series of community and government initiatives including extensive flora and vegetation survey of the Swan Coastal Plain, the comprehensive 'whole of government' plan called 'Bush Forever' was launched by the State Government in December 2000. It includes a set of 287 regionally significant bushland areas (fully described and documented) to be set aside and conserved; a process for identification and protection of local bushland by local government authorities; and thirdly recognises regional and local ecological linkages for protection.

The Urban Bushland Council has always strongly supported the implementation of Bush Forever which was set to be completed in 10 years, by 2010. However, by 2012, the implementation process was far from complete. The community became increasingly concerned that resources for securing and management of sites were progressively curtailed especially during the last four years. So in mid-2012, the Council initiated a Bush Forever campaign to call on the government to publicly identify the status of the implementation process. After discussions with many government officers and an unremarkable response to the community request for a status report, we as a community organisation decided to present the Bush Forever Report Card Conference.

These proceedings tell the story of the history and implementation of the Bush Forever plan. The Urban Bushland Council has presented a community Report Card on the plan.

The Urban Bushland Council formed a Steering Group for the Bush Forever campaign. Its work included organising a preliminary workshop in September with government officers, meetings and discussions with government agencies involved with implementation and the subsequent Bush Forever Report Card Conference which was held on Friday 7 December 2012 at Murdoch University. The work of the Steering Group members Cath Cooper, Rahima Bannerman, Felicity McGeorge and Mary Gray together with support from Executive Committee members is warmly acknowledged.

The Urban Bushland Council acknowledges the generous funding by the Department of Environment and Conservation, the Wildflower Society of Western Australia, and Natural Area & Management Services. This enabled the production of these proceedings, employment of conference organiser Rachel Inglis and editor Sue Radford, and subsidised audio-visual recording of the day by Bryn Watkins of Entity Media. Murdoch University kindly donated the use of the Robertson Lecture Theatre for the day of the conference.

Many volunteers assisted on the day of the conference and their valuable contribution and good spirit is highly valued.

The Urban Bushland Council acknowledges the generous contribution by all the speakers who collectively gave a comprehensive picture of all the work done by government and community over the years. The conference was well attended by 120 people from government, private and community sectors, but with remarkable absence of the government utilities. Participants engaged and networked enthusiastically on bushland matters.

Feedback from attendees gave consistent messages – Bush Forever implementation must be completed and properly funded: with statutory protection for all Bush Forever sites; greatly increased government resources to manage these unique public assets for future generations; public education and awareness of our unique bushland and its values.

Mary Gray
President, Urban Bushland Council.

PERTH'S BUSH FOREVER REPORT CARD CONFERENCE

7th December 2012

Robertson Lecture Theatre, Murdoch University

Registration: 8:30 am		
Session 1:		
Chair: Mary Gray		
8:45 – 9:00 am	Hon. John Day, MLA Minister for Planning	Introduction, Welcome and Official Opening
9:00 – 9:30 am	Greg Keighery (DEC)	Dreams, Schemes and Realisation – Natural Area Conservation in Perth, 1829 to 2012
9:30 – 10:00 am	Bronwen Keighery	Perth's Bushplan/Bush Forever – An Insider's View
10:00 – 10:30 am	Loretta Van Gasselt (Department of Planning)	Landuse Planning and Bush Forever – a Journey
10:30 – 11:00 am	MORNING TEA	
Session 2:		
Chair: Felicity McGeorge		
11:00 – 11:30 am	David Mitchell (DEC)	The Department's Implementation of Bush Forever
11:30 – 12:00 pm	Kate Brown (DEC)	Bush Forever and The Department of Environment and Conservation's Urban Nature Program
12:00 – 12:20 pm	Jessica Smith (EDO)	The MRS Text Amendment for Bush Forever
12:20 – 12:40 pm	Rod Giblett (Friends of Forrestdale)	Case Study: Save the Anstey-Keane Bush Forever Site (Site 342)
12:40 – 1:40 pm	LUNCH	
Session 3:		
Chair: Eddy Wajon		
1:40 – 2:10 pm	Mary Gray (UBC)	Bush Forever Report Card
2:10 – 2:40 pm	Andrew Del Marco and Renata Zelinova (WALGA)	Perth Biodiversity Project and Local Biodiversity Strategies
2:40 – 3:00 pm	Tony Fowler and Vicki Laurie (NRPG)	Case Study: Hawkevale Bushland (Bush Forever Site 122)
3:00 – 3:30 pm	AFTERNOON TEA	
Session 4:		
Chair: Rahima Bannerman		
3:30 – 3:50 pm	Chris Portlock (Shire of Serpentine-Jarrahdale)	Case Study: Shire of Serpentine-Jarrahdale's Local Biodiversity Strategy
3:50 – 4:10 pm	Linda Metz (City of Cockburn)	Case Study: Managing Forever? Local Governments Role in Bush Forever
4:10 – 4:30 pm	Greg Keighery	Conclusion and the way ahead

OFFICIAL OPENING OF PERTH'S BUSH FOREVER REPORT CARD CONFERENCE

HON. JOHN DAY, MLA, MINISTER FOR PLANNING

Good morning everyone. It is my pleasure to welcome you to the Urban Bushland Council's Bush Forever conference. Thank you to Mary Gray and the Urban Bushland Council for organising this conference and for inviting me here today.

Australia has a major role to play in the conservation of biodiversity, as it is one of the world's most biologically diverse nations, supporting hundreds of thousands of species that are found nowhere else in the world.

Government at all levels has a role to play in biodiversity conservation, as does industry and the community generally. Perth's Bush Forever program is an excellent example of how we can work together to implement a major conservation program and achieve some exceptional results.

Today's conference brings together several organisations and individuals involved in Bush Forever over the past 12 years, to hear about the challenges, successes and the lessons learnt. The conference also includes the launch of the Urban Bushland Council's independent Bush Forever Report Card.

Today's conference and Report Card will be a valuable contribution to the Department of Planning's review of the Bush Forever program, which will be undertaken next year.

I'm sure many of you know the history leading up to preparation of Bush Forever, and you will hear more about that from a number of speakers today. In December 2000, the Western Australian Government launched the Bush Forever initiative, an ambitious ten-year agenda which aimed to protect the native bushland on the Swan Coastal Plain within the Perth metropolitan region.

The Bush Forever strategy identified over 51,000 hectares of regionally significant bushland for protection, covering 26 vegetation complexes and comprising some 287 specific sites.

Alongside this, \$100 million was allocated by the State Government, through the Metropolitan Region Improvement Fund, for acquisition of privately owned Bush Forever sites, over a 10 year program.

As an implementation plan and whole-of-government initiative, Bush Forever was designed to identify, protect and manage regionally significant bushland in order to achieve a sustainable balance between conservation and development in metropolitan Perth.

It provided a policy and application framework to ensure bushland protection and management issues in the Perth metropolitan region were appropriately addressed and integrated with broader land use planning and decision making.

A driving theme of Bush Forever was "keeping the bush in the city". It noted that urban bushland contributes to Perth's unique character and quality of life for both visitors and residents alike, and described urban bushland as "the heart and lungs of the city".

Bush Forever has been the single most important piece of State Government policy that protects our urban bushland. The principles of the policy have been to avoid, minimise and mitigate the clearing of protected Bush Forever areas.

As I mentioned, it was considered to be ambitious program, yet in 2000 we could barely have anticipated the substantial growth pressures and rising land values that were to be experienced in Perth over the following decade.

However a committed group, including the Western Australian Planning Commission, the Department of Environment and Conservation, and groups such as the Urban Bushland Council pressed on, aware that it was more important than ever to conserve urban bushland, for the environmental and community benefit, now and into the future.

Twelve years on, you have gathered here today to reflect on how the Bush Forever initiative has been implemented –

Has Bush Forever made a difference?

Have we achieved the targets set out in 2000?

It has made a difference. Government adoption and implementation of Bush Forever has resulted in the conservation of hundreds of public and privately owned bushland sites across the metropolitan region, resulting in the preservation of biodiversity, native species habitat and local amenity.

It has also provided for public appreciation and enjoyment of Perth's unique bushland and educational opportunities.

In addition to this, implementation has resulted in the adoption of *State Planning Policy 2.8 – Bushland Policy for the Perth Metropolitan Region*, gazetted in June 2010, and Metropolitan Region Scheme (MRS) Amendment for Bush Forever and Related Lands, passed by Parliament in September 2010.

There is still more work to be done under the Bush Forever program, with MRS amendments currently being prepared for additional nominated Bush Forever sites, and the MRS Amendment defining Bush Forever in the MRS Text is now out for public comment.

Furthermore, the State Government remains committed to ongoing

conservation, not only through the Bush Forever program, but also through the development of new initiatives, such as the Perth and Peel Strategic Assessment.

The Strategic Assessment will produce a plan to protect matters of national environmental significance under the Commonwealth *Environment Protection and Biodiversity Conservation Act*. This will include areas already protected by Bush Forever, as well as identifying other areas requiring conservation under the plan.

The Strategic Assessment is being developed alongside the WAPC's sub-regional structure plans, and will provide a holistic approach to balancing biodiversity conservation with urban development. Public comment will be invited mid-2013.

Projects such as Bush Forever and the Strategic Assessment demonstrate our combined government and community's commitment and capabilities in relation to conservation and sustainable development.

I envisage that a continued focus on initiatives such as these will establish us as a leading practice example, both nationally and internationally.

Today's conference agenda is a busy one, with a great range of speakers involved in implementing Bush Forever over the past 12 years. I'm sure it will be a very informative day.

Thank you everyone, I hope you enjoy the conference.

DREAMS, SCHEMES AND REALISATION – NATURAL AREA CONSERVATION IN PERTH, WESTERN AUSTRALIA, 1829 TO 2012

Greg Keighery, Department of Environment and Conservation

SUMMARY

A number of thematic time lines that led to *Bush Forever* are explored. These provide the context to show how the capacity and information to inform the public and professional attempts to conserve our unique biota have evolved. Concurrently the threats to the biota changed along with the capacity to manage both large and small areas of bushland. Despite a number of issues remaining with the implementation of *Bush Forever*, the level of planning and commitment for nature conservation within a biodiverse, rapidly growing metropolitan region is, truly world class. *Bush Forever* has been more successful in achieving on ground conservation outcomes than many highly publicised and internationally published, conservation planning projects elsewhere.

INTRODUCTION

Why was a conservation plan for the Perth Metropolitan Region (PMR) produced in 1998/2000, not in 1900 or 1950? Like any science-based endeavour, a major conservation plan does not appear *de novo*, it always builds on what has gone before and is reliant on the breadth and quality of these efforts. The roads leading to *Bushplan/Bush Forever* can seem disconnected, but combined they provided the impetus, information and individuals, which coalesced in a particular time to undertake the plan.

The review is divided into two major periods:

BB – Before *Bush Forever*, 1901–2000 (in three parts); and

AB – After *Bush Forever*, 2001–2012.

This paper briefly outlines the major developments of each period that have led to *Bushplan/Bush Forever* in the context of the development of natural area conservation in Western Australia.

Essentially a successful conservation plan requires:

- information to bolster the case for conservation against competing uses;
- an informed public;
- groups and individuals, both public and professional that promote, conserve and manage our biological heritage; and
- a framework, selecting and protecting conservation areas.

Obviously this brief review is not a comprehensive account of the development of the Nature Conservation reserve network in Western Australia (WA) or the personalities involved. More complete accounts are found in Chapter 2 of the Academy of Science report in 1963 being: a History of the Reserve Movement in Western Australia 1829–1961, pp. 9–53; Moore (1993); Burbidge (1983); and Rundle (1996). For the Swan Coastal Plain and the period in Western Australia from 1963, however, there is no general overview, except for the vignettes in O'Connor and Parker (2000).

In addition this overview principally focuses on developments in flora conservation, since flora data is readily obtained by mapping and a surrogate for the more cryptic and poorly understood invertebrates (and I am a survey botanist). However, large amounts of fauna data were used in *Bush Forever*, originating from publications, the Western Australian Museum database, Birds Australia Bird Atlas and WA Museum survey reports and consultant reports.

BB - 1829–1901: Colonial Era

Table 1: Key events in the Colonial period

<p>Australasian Association for the Advancement of Science – formed in 1886 (Australian Academy of Science, 1980).</p> <p>Kings Park gazetted in 1872.</p> <p>South Dandalup Reserve of 64,000 ha gazetted in 1894, now State Forest.</p> <p>Some Legal Protection of Flora and Fauna, i.e.: Preservation of Game Act (1872), the Parks and Reserves Act (1895) and Permanent Reserve act (1899) establishing 'A' Class reserves.</p> <p>Mueller Botanical Society forms in 1897, becomes WA Natural History Society, 1903, then Royal Society of WA in 1914.</p> <p>Western Australian Museum established in 1891.</p> <p>Colonial collectors e.g. Drummond succeeded by local naturalists/scientists by 1901.</p> <p><i>Flora Australiensis</i> published in seven volumes from 1863 to 1877 in London, by Bentham and von Mueller.</p>

This lengthy period includes the commencement of European settlement in Western Australia through to the establishment of the State and federation. Notable steps were legal provisions for reserving land, and an emerging recognition of the need to conserve native flora and fauna fostered by the local and national professional bodies (Table 1). These developments led to the proclamation of the first reserves for this purpose, although they were comparatively short lived. Significantly late in the period came the establishment of institutions such as the WA Museum, and the growth of educated, interested members of the

public, which in time would develop public opinion towards conservation. However, most biological expertise still resided outside Western Australia.

A number of factors were against conservation planning during our colonial period. There was little loss of native vegetation within seemingly endless natural areas, limited resources for management and the slow development of local natural history knowledge. However, significantly, the notion that intact bushland areas were required to conserve our native flora and/fauna began to be understood.

BB - 1901–1950: Slow Accumulation

Table 2: Key events in a Slow Accumulation period

<p>Western Australian Herbarium: various guises from 1895, mainly from 1916, although formally established in 1929, (George, 2009).</p> <p>Forests Department formed in 1919.</p> <p>State Gardens Board founded in 1920, precursor to the National Parks Board, 1957.</p> <p>WA Naturalists' Club, formed in 1924. Publication of the journal <i>W.A. Naturalist</i> commences in 1947.</p> <p>Flora Field Guides commence with Pelloe (1921), continue with Gardner and Dell (1935–1997).</p> <p>Flora Guides to specific groups commence with Pelloe (1930) on Orchids.</p> <p>WA Gould League forms in 1939 (www.wagouldleague.com.au).</p> <p>WA Naturalists' Club Fauna Guides commence with Glauert (1950), then continued by WA Museum (?1967).</p>

With the formation of the Forests Department a public agency with interests in retaining, managing and promoting the conservation of

natural areas was established. Towards the end of the same period two other permanent public bodies (Museum and Herbarium) were

established to document the species of plants and animals in Western Australia. Other significant events were the publication of information on both general and specific aspects of the flora and the formation of the first significant natural history non-government organisation (NGO). Significantly, natural history became part of the state education curriculum with the formation of the Gould League in 1939.

Conservation activities were mainly limited to attempts to preserve forests from being opened for agriculture. The commencement of the National Park network began with reserves at Yanchep and the Capes. Very large areas of natural vegetation remained around Perth and throughout Western Australia but with limited material and manpower, growth of the reserve network was slow. However, as this quote from

Emily Pelloe in the 1929 Yearbook demonstrates, even at this period, far sighted biologists reflected on the missed opportunity, that this lack of conservation planning and reserve establishment before clearing and grazing for agriculture, created.

“The Eastern Wheatbelt sand-plains, for instance, sole habitat for hundreds of precious species, are fast becoming devastated without reserve in the interests of agriculture. It may be that in 2029, regret will be expressed that so little effort was made as far back as 1929 to ensure the preservation of the rare and beautiful flora. To deny future generations the right to enjoy its wonders is to deserve the censure of the unborn.”

The next period will unfortunately amply demonstrate her prescience.

BB - 1951–1980: Growth and Loss

Table 3: Key events in Growth and Loss period

Wildflower Society of Western Australia, formed 1958, Review of conservation activities in Moyle (2005).
Blackall and Grieve Keys to the native flora were produced, from 1954 to 1998, (George, 2009, pp.172–174).
Soil Mapping of Swan Coastal Plain completed (Bettenay <i>et al.</i> , 1960).
Fauna Protection Advisory Committee, established under the Wildlife Protection Act-1950, which eventually became the Department of Fisheries and Fauna (1964), then Fisheries and Wildlife (1974): establishes and manages nature reserves and wildlife protection.
1960–1980: Massive clearing occurs in Wheatbelt, northern sandplain, Mallee and Esperance Sandplain Bio-geographic regions. Books on the special places of various naturalists (Serventy - Dryandra, (1970) or York Main on the central Wheatbelt, (1967)) show what is being lost.
Kings Park and Botanic Garden formed in 1961.
Academy of Science Report - 1961, published in 1963.
Conservation Council formed in 1967.
Biological Survey of WA commenced in Department of Fisheries and Wildlife in 1972.
<i>Descriptive Catalogue of Western Australian Plants</i> published in 1970.
<i>Sense of Place</i> published in 1972.
Vegetation Survey of Western Australia, 1:1,000,000 and 1:25,000 published from 1972–1980 (See Beard, 1990).
Report on conservation of major plant communities of Australia. (Specht <i>et al.</i> 1974).
Conservation Through Reserves Committee (CTRC) established in 1972.
1974 to 1975 CTRC 1–5 and 8–12 System Reports, draft for comment in 1974 and final in 1976.
1978–1980 CTRC System 7 Report a draft for comment in in 1978 and final in 1980.
First Rare Flora report for WA (Marchant and Keighery, 1979).
Background data for System Six, published in an Atlas, including vegetation complexes by Heddle <i>et al.</i> 1980.

This period saw a steady flow of information to the public through general and specific field guides, including keys to all flowering plants of southern Western Australia. Also the formation of Fisheries and Fauna, the National Parks Board and the State Botanic Garden, which together with the WA Museum, completed a set of State government bodies to develop and disseminate knowledge of the state's biota and manage and guide nature conservation.

The arrival of John Beard to head the state botanic garden (Kings Park) was pivotal to two ground-breaking developments – the publication of a descriptive catalogue of the flora of the state and mapping of the state's vegetation. Compilation of data on the distribution and ecology of the flora of the State in an annotated geographic catalogue, allowed not only for the planting of garden beds with a regional context, but allowed the public to appreciate the rapid turnover of species over WA, especially in regard to the Perth's flora in the Jarrah Forest and Swan Coastal Plain. Concurrent with this was an understanding that plants occur in communities i.e. vegetation types that also vary enormously over the state. Mapping of WA's vegetation through survey commenced and maps began to be published. This mapping formalised a number of natural regions across WA (16 become 24, now 53 subregions including the Swan Coastal Plain) and describes their principal vegetation types.

As development and clearing accelerated, a substantive push began to acquire representative areas of native vegetation throughout Western Australia for retention and protection in conservation reserves. A general review by the Australian Academy of Science of reserves prepared in 1961 but published in 1963 resulted in major increases of large national parks and nature reserves. Individuals (especially C.A. Gardner) and government (especially in Fisheries and Wildlife) argued for numerous areas to be made reserves during this period.

Meanwhile, widespread clearing for agricultural development occurred in many natural regions with little attempt to undertake biological surveys or create a reserve network in these areas. Pleas for preliminary surveys were made

by many biologists during this period, including John Beard using the newspapers.

"The 1960s were the years of the great surge in agricultural development when the Brand government committed itself to the release of one million acres of crown land each year, without environmental assessment other than rudimentary soil surveys. In vain I urged a botanical survey of such land to determine what was there before being ploughed out. This was not politically acceptable, as it was feared that the discovery of rare species would lead to demands for reserves. We shall never know how many species have been rendered extinct in consequence". (Beard, J. 1990)

With issues of increasing development and land use conflicts the newly created Environmental Protection Authority (in the then Department of Conservation and Environment) commissioned a co-ordinated state wide review of conservation reserves (CTRC). For this review the state was divided into 12 systems. The final reports on 11 systems prepared by the Committee and endorsed by the EPA were produced by the end of this period. These recommendations underpin major increases in the reserve network throughout Western Australia over the next two decades. However, the most difficult area, System 6 (the greater Perth) commenced in 1976 but was not released until the next period. Meanwhile, public interest in our local natural heritage was widely promoted by the award-winning book *Sense of Place* by George Seddon. This book notes how special our City's setting is, and documents for everyone the special features that make our City unique. Also why the Swan Coastal Plain has such extraordinary biodiversity.

During this period a complete transfer of knowledge and expertise had occurred. Both public and private expertise and knowledge of the State's biota and especially conservation status now largely resided in Western Australia. Of course external efforts continued, for example at the national level, but conservation planning also underwent significant changes. For example following the release of the Specht (1974) report on the conservation of vegetation alliances Australia wide, the Commonwealth commenced a process leading to CAR (Comprehensive, Adequate and Representative) reserve planning at a national scale.

BB - 1981–2000: Bushplan/Bush Forever happens

Table 4: Key Events leading to Bush Forever

CTRC System Six – Green Book - 1981, Red Book - 1983.
Rare Flora Surveys commenced - 1982.
<i>Flora of the Perth Region</i> - 1987.
Conservation and Land Management (CALM) formed in 1984.
Forest Management Plans (1987), Regional Forest Agreement (RFA) - 1998–1999.
Swan Coastal Plain (SCP) Floristic Surveys - (1991–1994).
Threatened Ecological Communities surveys and listings commenced - 1993.
Urban Bushland Council WA formed - 1993.
Interim Biogeographical Regionalisation of Australia (I.B.R.A.) published - 1995.
Swan Coastal Plain Survey Museum Fauna Reports summarised in How <i>et al.</i> , 1996.
System Six Update commenced - 1994.
Swan Coastal Plain Wetland Mapping - 1996 (Hill <i>et al.</i> , 1996 a & b).
Online data sources (e.g. Florabase - 1998) began.
Reserve Surveys of SCP reported - 1999.
Regional Significance - Bushplan - 1998/Bush Forever - 2000.
Regional Forest Agreement (RFA) - updated reserves in forested areas of Perth, see CALM, 1994, 1998; Havel and Heddle, 2000 and Conservation Commission, 2004.
Major expansion of Perth and satellite towns causing greatly increased clearing of native vegetation.

Following on from the broad-brush Statewide reports, the C.T.R.C. and the E.P.A. focused on the most difficult area (Perth and Environs) commencing in 1976 until the publication of the plan in 1981 and 1983. However, at the same time Perth was commencing an era of unprecedented growth, which had major impacts on this largely unfunded initiative.

Meanwhile all managers of conservation lands (Fisheries and Wildlife, Forests and National Parks) were united in a single department (CALM) in 1983, which changed the vesting and focus of all State forests, including the Perth area.

At the national level, the Prime Minister made a major Statement on CAR (Comprehensive, Adequate and Representative) reserve planning in 1992, followed by guidelines in Australian Nature Conservation Agency (1993). Australia was divided into 53 bio-geographic regions (Thackway and Creswell, 1995) for this level of planning, of which the Swan Coastal Plain is one. These developments enable targeted federal funding to create an Australia-wide reserve network.

Scientific data became more targeted and widely available (with floristic surveys, reserve surveys, vegetation mapping (structural and complexes), wetland mapping, System Six update data) both in reports and publications. Increasing use of databases, including Geographic Information Systems and the Internet make these data available to be synthesised into documentation of the regional significance of remnant bushland of the Perth area.

A decade after its release, it became increasingly apparent that implementation of the System Six recommendations was not occurring and that a new approach was needed. The Department of Conservation and Environment decided to build on the floristic survey and to prepare a new plan, the System Six/System One update in 1994.

Interest in the natural environment also hit a high during the period, with separate environment sections in major papers including *The West Australian*. Ministers for the Environment became more senior positions and there was enlargement and growth of environmental non-government organisations.

This encouraged the provision of resources to undertake the detailed conservation planning needed to replace the CTCRC reports.

To document the conservation values of land against other competing uses, requires details of the floristics and structure of each plant community to determine the degree of variation in vegetation. Such data sets in Western Australia were relatively recent, but were now available. Together with floristics and vegetation maps, species data on plants and animals were used to provide the detailed basic information required to make recommendations on the conservation value of bushland, in a regional context, in *Bush Forever*. This level of data collation and synthesis was not undertaken (or perhaps more correctly not available) for any previous plan in Western Australia.

This level of information, clearly documenting the biological values of bushland areas and making them of regional significance, was basic to assessing the value of bushland in a planning context as noted in the prelude to *Bush Forever*:

"The aim of the Bush Forever policy is to provide a policy and implementation framework that will ensure bushland protection and management issues in the Perth Metropolitan Region are appropriately addressed and integrated with broader land use planning and decision-making. This will

secure long-term protection of biodiversity and associated environmental values. The policy recognises the protection and management of significant bushland areas as a fundamental consideration in the planning process, while also seeking to integrate and balance wider environmental, social and economic considerations." Government of Western Australia (2000,a).

One of the major failings of conservation planning both in Australia and overseas has been the disconnection between the theory and reality of acquiring land to implement the design (Rebeleo *et al.*, 2011). A major strength of Bushplan was that it was a plan, not a strategy, with whole-of-government commitment (note the author is the Government of Western Australia!!) There was also funding to acquire critical habitat and rigorous reasons why the areas were selected, with the known information on each area readily available. Despite many issues remaining with implementation, the level of planning and commitment for nature conservation within a biodiverse, rapidly growing Metropolitan region provided by *Bush Forever* is world class. The plan has been much more successful in producing on-ground results, than many highly publicised and internationally published (Balmford, 2003) conservation planning projects elsewhere.

AB - 2001–2012: Implementing Bush Forever and the Next phase

Table 5: Key Events in Implementation of Bush Forever

<p>Western Australian Local Government Association (WALGA), Perth Biodiversity Project, 2001- (Del Marco <i>et al.</i>, 2004 and www.councils.wa.gov.au/directory/walga/index.html/pbp).</p> <p>Tuart Atlas produced in 2003.</p> <p>Continuing transfer of land into conservation management.</p> <p>Swan Bioplan commenced (area reports: Whicher Range, Busselton Plain and Peel completed).</p> <p>Biological Information files archived at Department of Environment and Conservation (DEC) Library, and available as PDFs.</p> <p>Species level data sets (significant species, genetic variation) prepared.</p> <p>Locally Significant areas (Western Suburbs Plant Biodiversity Report).</p> <p>Major expansion of Perth and satellite towns continues. Perhaps the largest area of native vegetation clearance State wide is now on the Swan Coastal Plain.</p>

Quite justifiably *Bush Forever* was awarded the Premiers prize for public sector excellence in 2002. On a personal note I know that the project succeeded because the EPA obtained a technical expert on the area for the System Six update. Secondly it was a multi-department initiative with cabinet and ministerial backing. It would never have been completed without the drive, dedication, considerable input of expertise and sheer hard work by the Bush Forever team, despite numerous setbacks and obstacles. Their dedication was a major reason the then Minister for the Environment, Judy Edwards, awarded a substantial grant to Terrestrial Ecosystems Branch to extend the work throughout the Swan Coastal Plain and adjacent landforms (Swan Bioplan).

Unfortunately Swan Bioplan concluded without the unified outcomes achieved in *Bush Forever* and the EPA has relinquished a role in strategic reserve planning it occupied for 50 years from 1972. However, significant resources in terms of reports with significant reservation outcomes e.g. Whicher Scarp and data archiving have occurred. The process of implementing Bush Forever continues and has expanded into many levels including local biodiversity strategies, which are being delivered via WALGA, Greenways and individual bushland sites.

CONCLUSION

The pathways to *Bush Forever* mirror the increasing availability of biological data to both professional and public biologists and the increasing appreciation of the landscapes, flora and fauna of Perth, both locally and on a national and international scale. The need for state-wide, regional and local planning to minimise loss of biodiversity also developed in a similar manner, as threats and competition for land uses changed. This led to a Government-wide decision for a regional plan for Perth.

Australia is recognised as one of the World's 12 megadiverse countries with an exceptionally rich biota and extremely high endemism. The southwest of Western Australia, with over 5,000 species of flowering plants of which 80% of species are endemic, is recognised as one of 35 megadiverse regions internationally (Myers *et al.* 2000). Western Australian plants make a

major contribution to Australia's international recognition. Perth itself, with over 1,300 native species, is the only capital city set within a biodiversity hotspot for native flora (DEHWA, 2009), yet this is still not well known or acknowledged both locally or nationally, compared with the other similar city, Cape Town (Rebelo *et al.*, 2011).

Although data are vital, attempts to preserve our unique natural heritage have always relied on dedicated individuals both within Government and outside (Burbidge, 1983). Driven humans remain the greatest resource for conservation as monetary and other rewards rarely follow.

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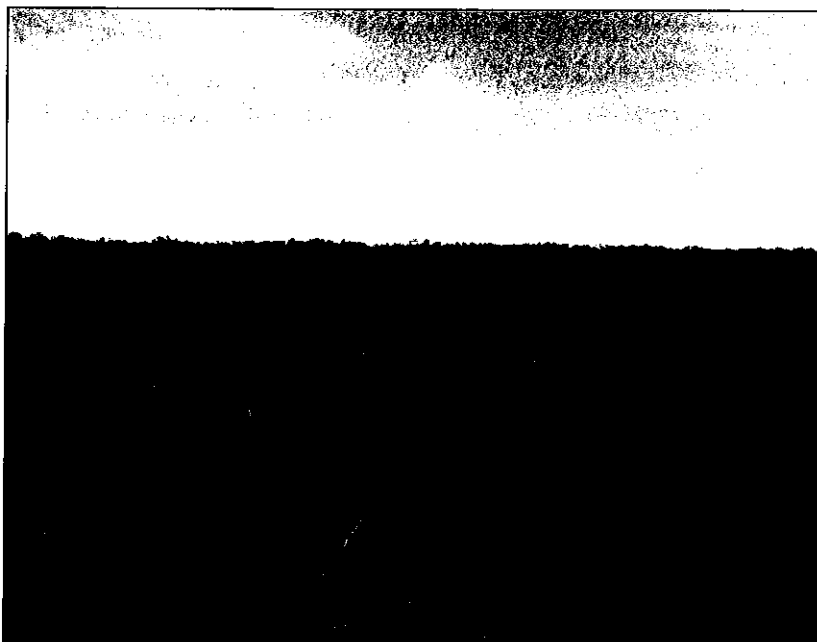
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▲ **Port Kennedy Scientific Park** (Bush Forever Site 377) is a relic foredune plain comprising long, low parallel dunes 1–2 m high with wetland communities in the intervening swales.



▲ **Trigg Bushland** (Bush Forever Site 308) is a Threatened Ecological Community under pressure from adjacent housing. (K. Clarke)

PERTH'S BUSHPLAN / BUSH FOREVER – AN INSIDER'S VIEW

Bronwen Keighery

SUMMARY

Perth was built in bushland. Together with the river, this bushland has established a sense of place for the people of the capital of Western Australia. The government publications *Perth's Bushplan* and *Bush Forever* defined the nature and extent of Perth's regionally significant bushland on the Swan Coastal Plain and identified in detail, those areas to be protected as *Bush Forever* Sites. It also defined the method by which the Sites would be protected, acknowledged the need for management of the Sites and partly funded the ongoing management of the Sites. Together these plans and the period from 1997 to 2010 are termed the *Bush Forever* Project.

The Project brought together more than 50 years of work associated with government (federal, state and local), community research projects, consultative programs, policies and strategies. Four key independent boards and their associated government departments were involved in the Project; the Western Australian Planning Commission (WAPC) / Ministry for Planning (MfP), Environmental Protection Authority (EPA) / Department Environmental Protection (DEP), National Park and Nature Conservation Authority (NPNC) / Department of Conservation and Land Management (CALM), and the Water and Rivers Commission Board (WRCB) / Water and Rivers Commission (WRC).

The *Bush Forever* Project defined areas of regionally significant bushland after the definition in the state's 1997 Urban Bushland Strategy for the Perth Metropolitan Region (PMR), Swan Coastal Plain (SWA). Nearly 52,000 hectares of regionally significant bushland and their associated wetlands (18% of the Perth Metropolitan Region (PMR) on the Swan Coastal Plain) were recognised for protection. This vast area is grouped in 287 *Bush Forever* Sites, which range in size from 1 ha to over 9,000 ha. The *Bush Forever* Sites were selected on the basis of six defined environmental criteria to ensure, that together, they contained representation of the biodiversity of the Plain. A seventh criterion

recognised, and generally accounted for, pre-existing zoning and land-use constraints. This work began to establish bushland (and all native vegetation) as a land-use in the planning sense.

The 287 *Bush Forever* Sites are comprehensively catalogued, each being mapped, its natural values described and protection mechanisms defined in two major government publication sets. *Perth's Bushplan*, launched in November 1998 was the draft Plan, for public comment. The later publication *Bush Forever* in December 2000 was the final Plan endorsed by the state government. This report takes into account the issues raised during the public comment period.

The two reports were developed with reference to around 500 reports and publications, supported by substantial specific area vegetation and flora investigation, some wetland and some fauna work. The *Bush Forever* Site descriptions provide consistent and comprehensive information on each of the Sites. Through the reports and the supporting set of biological files in the Department of Environment and Conservation Science Library (previously CALM), this information is available for use in implementation processes and management of the Sites. This comprehensive regional information provides an invaluable framework for considering the environmental impacts of proposals and plans on biodiversity in the PMR, making them an important tool for local and regional planning.

With the release of the *Perth's Bushplan* in 1998 a dedicated *Bush Forever* Office was established in MfP to directly liaise with landowners, developers, stakeholders, community groups, local government and government agencies to implement Site-specific recommendations for each *Bush Forever* Site. MfP (later the Department of Planning and Infrastructure, [DPI]) co-ordinated the continuing work of the four agencies to facilitate the implementation. The pivotal reliance on vegetation and flora information was recognised in the employment of a

botanist in the DPI to support botanists from the DEP and, to a lesser extent, CALM.

The *Bush Forever* report was followed by a number of other initiatives/programs outlined in the report. These included the:

- Conclusion of the investigation of areas the public considered suitable for inclusion in *Bush Forever*;
- Formation of two groups to consider implementation and management namely, the *Bush Forever* Advisory Group, a committee of the WAPC and a *Bush Forever* 'Management Advisory Service' within CALM (now called Urban Nature within the Department of Environment and Conservation, [DEC]);
- Recognition of local bushland through the Perth Biodiversity Project (a local government biodiversity project);
- Development and release of a Metropolitan Scheme Amendment to be used to establish areas of Parks and Recreation Reservation on selected areas of *Bush Forever* Sites and recognition of *Bush Forever* areas for bushland protection.

An important aim of *Bush Forever* was to foster a greater awareness and appreciation of urban bushland, and to develop a stronger sense of responsibility and belonging by the broader Perth community. This was to be achieved through educational programs addressing general *Bush Forever* biodiversity, and training in management and interpretation related to the Sites. This was achieved to a very limited extent. Active management of the Sites by state and local government, community Friends groups and individual owners is poorly resourced both in a monetary and expertise sense. The failure of government to continue to develop and adequately fund ongoing research, educational and management programs related to the *Bush Forever* Project and the Sites, has not maintained the awareness and appreciation of Perth's unique biodiversity, let alone led to increased appreciation of Perth's urban bushland. With our continuing alienation from our natural world, along with widespread recognition that play in the natural world is fundamental to human health and learning, this outstanding resource, Perth's protected bushland that we have invested millions of

dollars in retaining, is not appreciated, loved and managed as it deserves. There is an urgent need to integrate exposure to and learning about, Perth's unique natural heritage to build a creative, caring community in Western Australia's capital city and ensure that our irreplaceable natural heritage is preserved for future generations.

INTRODUCTION

Bushland has long been an integral part of Perth, the bushland together with the river, established a clear sense of place for many of the people of the capital of Western Australia (WA). The Kings Park bushland has long typified this association. Kings Park was set aside as public lands as early as 1831 and gazetted as a public park in 1872. While initially there were incursions of development into the bushland, substantial opposition to any major incursions soon developed. In the late 1950s this approach culminated in a clause being inserted in the *Reserves Act* effectively prohibiting clearing of bushland within the Park without the consent of both Houses of Parliament. At this same time, with the expansion of Perth into the surrounding bushland, planning began to establish a network of parkland throughout metropolitan Perth. Bushland was not always seen as integral to public parks. However, with public calls for the retention of bushland and the increasing appreciation of the international significance of our bushland's unique biodiversity, planning increasingly took into account protection of bushland.

A series of contentious issues in the late 1980s and early 1990s around retention of bushland in places such as Beeliar Regional Park, Trigg Dunes, Bold Park, Hepburn Heights, Brixton Street Wetlands and Shenton Park bushland, culminated in a number of government agencies developing programs to identify regionally significant urban bushland. During this period the majority of proposals before the EPA related to bushland on the Swan Coastal Plain. While the 1983, System 6 report recommendations, covered some areas (Beeliar Regional Park, Trigg Dunes and Bold Park), others (Hepburn Heights, Brixton Street Wetlands and Shenton Park bushland) were not mentioned in the report.

In 1997 a number of state government urban bushland conservation planning projects came together resulting in the publication of a draft plan, *Perth's Bushplan* and a final plan *Bush Forever*. This co-operative project from 1997 to 2010 was called the *Bush Forever Project* (Government of WA 2002). As the history of establishing a network of protected bushland areas in the Perth Metropolitan Region has been long and contentious it was essential that the Project addressed environmental, social and economic outcomes. There was particular need to clearly establish the process for the identification of regionally significant bushland areas. All too often, the community, land developers, mining companies and local and state governments became entrenched in disputing the particular value of a bushland area. As a consequence efforts and monies were focussed on retaining the area, not on how the area could be protected and managed.

The *Bush Forever Project*, a conservation plan for the Perth Metropolitan Region (PMR) Swan Coastal Plain had three key outcomes, being:

- Identification of the bushland areas to be protected as *Bush Forever Sites*;
- Identification and application of protection mechanisms; and
- Management of the *Bush Forever Sites*.

The first outcome was completed in early 2000s, with finalisation of the consideration of all nominated additional areas. The second outcome was planned to have been completed by 2010 and the third is ongoing. However as these outcomes are interrelated, it was essential for the four government agencies to co-operate on the Project. This co-operation was a key strength of the Project. While some details of the three outcomes are outlined below, this paper focuses on the first of these outcomes.

THE BUSH FOREVER PROJECT: A UNIQUE COOPERATIVE GOVERNMENT VENTURE

The *Bush Forever Project* brought together more than 50 year's work associated with government (federal, state and local) and community research projects, consultative programs, policies and strategies (Table 1). Four key independent boards and their associated government departments were involved in the Project being the Environmental

Protection Authority (EPA) / Department of Environmental Protection (DEP), National Parks and Nature Conservation Authority (NPNCA) /Department of Conservation and Land Management (CALM), Western Australian Planning Commission (WAPC) / Ministry for Planning (MfP) and the Water and Rivers Commission Board WRCB) / Water and Rivers Commission (WRC). The group formed by these key departments was supported by a number of advisory/reference groups that included representation from local government, mining, developers, conservation and other government departments. Meetings of all groups were peppered with many robust discussions, and at times the process was exhausting for all involved. However, the essential good will of each party (necessarily working from very different agenda), and recognition of Perth's unique biodiversity allowed the group to reach consensus on most issues. When this could not be reached the group was able to move on.

The *Bush Forever Project* largely fulfils the state government's commitments to four policies and strategies for the Perth Metropolitan Region (PMR) Swan Coastal Plain; being:

EPA's 1983 System 6 study and the update of the study begun in 1994;

Western Australian Government's 1995 *Urban Bushland Strategy*;

Aspects of the 1997 *Wetlands Conservation Policy for Western Australia* (1997); and

State Government's commitment to the 1996 *National Strategy for the Conservation of Australia's Biological Diversity*, in that it seeks to establish a representative system of protected areas.

Table 1: Timeline of planning and conservation plans/actions until the release of *Bush Forever* in 2000.

	WAPC/MfP (and precursors)	WRCB/WRC (and precursors)	EPA/DEP (and precursors)	NPNCA/CALM (and precursors)
1955	Stephenson Hepburn Report			
1962	Metropolitan Region Scheme inaugurated		Australian Academy of Science Committee on National Parks	
1963				
1972			EPA established Conservation through Reserves Committee (CTRC) to review conservation reserves throughout Western Australia	Biological Survey Program (1972 ongoing)
1979			CTRC reported on 11 of the 12 Systems (Red Books)	
1980			Vegetation complex mapping (Heddlie <i>et al.</i> 1980)	
1981			System 6 Green Book	
1982				Rare Flora surveys (1982 ongoing)
1983			System 6 Red Book (DCE 1983)	
1985		Wetland mapping classification and evaluation (1985–1996)		
1990	METROPLAN (DPUD 1990)			
1991			Ecoplan strategy (1991 ongoing as Urban Nature in DEC)	Floristic Survey of the Swan Coastal Plain (1991–1994) (Gibson <i>et al.</i> 1994)
1993	Perth Environment Project (1993–1997)		Red Book Status Report Review of status of all Systems recommendations	Threatened Ecological Communities Project (1993 ongoing) (English & Blyth 1997, 1999)
1994			System 6 and part System 1 Update initiated (including additional surveys, 1994 ongoing)	
1995	Urban Bushland Strategy (Government of WA 1997)	Water Resource Protection Strategies	System 6 and part System 1 Update Program - public submissions (DEP 1996, 1998)	
1996		Wetland mapping, classification and evaluation report. (Hill <i>et al.</i> 1996)		
1997	AGWEST vegetation mapping Greenways (Tingay 1998a)	Verification and conservation category wetlands (Semeniuk 1997)	System 6 and part System 1 Update: PMR/SCP	Gnangara Park (Bailey 1997)
1998 DRAFT PERTH'S BUSHPLAN				
1999	Submissions received Consideration of submissions (MfP co-ordination agency)			
2000	Bushplan Reference Group Report (Ministerial Committee) Submissions Report (MfP co-ordination agency)			
BUSH FOREVER 2000				
2001	Implementation of <i>Bush Forever</i> (MfP co-ordination agency)	Implementation of <i>Bush Forever</i>	Implementation of <i>Bush Forever</i> System 6 and Part System 1 Update: other than PMR/SCP	Implementation of <i>Bush Forever</i> Ongoing identification and acquisition of areas of significance.

THE BUSH FOREVER SITES – DEFINED AREAS OF REGIONALLY SIGNIFICANT BUSHLAND

Nearly 52,000 hectares of regionally significant bushland and their associated wetlands, 18% of the PMR on the Swan Coastal Plain, are recognised for protection by the Project. This vast area was grouped in 287 *Bush Forever* Sites, which range in size from 1 ha to over 9,000 ha. The *Bush Forever* Sites were selected on the basis of six defined environmental criteria (Table 2). Together they provide representation of the biodiversity of the Plain.

A sound technical basis for selecting the areas was paramount. The first criterion, 'representation of ecological communities', had at its core the World Conservation Union standard of protecting at least 10% of the original vegetation types in the Swan Coastal Plain portion of the PMR. To apply this part of the first criterion, the extent of bushland in the PMR was mapped by MFP in 1994 (Connell 1995) and native vegetation was mapped in 1998 by the Department of Agriculture

(AGWEST 1998). The focus was on bushland, as the most intact areas of native vegetation were the preferred areas for protection. While it was recognised that areas of sand, mud, and rock, highly altered native vegetation and that open water provided habitat for native animals and some plants, these were seen as necessarily additional to the at least 10% bushland protection. Along with the natural resource, defined bushland areas on the Plain were assessed against the six criteria on the basis of a review of all known and available information and extensive focused fieldwork. Around 500 reports and publications were researched, 100s of hours were spent in the field cataloguing the vegetation and flora of numerous specific areas; and 1000s of hours were spent on the analysis and synthesis of all vegetation and flora data alongside fauna and wetland data to produce the summary of all information in the *Bush Forever* Site descriptions.

Table 2: Environmental criteria for the selection of regionally significant bushland for inclusion in *Bush Forever* Sites

Representation of ecological communities: A number of areas selected to represent the range of ecological communities and the places in which these communities merge.
Diversity: Areas with a high diversity of flora and/or fauna species or communities in close association.
Rarity: Areas containing rare or threatened communities or species, or species of restricted distribution.
Maintaining ecological processes or natural systems: Maintenance of ecological processes or natural systems at a regional or national scale.
Scientific or evolutionary importance: Areas containing evidence of evolutionary processes either as fossilised material or as relict species and areas containing unusual or important geomorphological or geological sites; Areas of recognised scientific and educational interest as reference sites or as examples of the important environmental processes at work.
General criteria for the protection of wetland, streamline and estuarine fringing vegetation and coastal vegetation: Conservation Category Wetland areas including fringing vegetation and associated upland vegetation. Coastal vegetation within the accepted coastal management zone.

A number of core regional studies as outlined below, were central to application of the criteria.

VEGETATION AND FLORA

1980 Heddle, Loneragan and Havel Vegetation of the Darling System. In: DCE 1980 *Atlas of Natural Resources, Darling System, Western Australia*. Department of Conservation and Environment, Perth, WA.

1994 Gibson, Keighery, Keighery, Burbidge and Lyons *A Floristic Survey of the Southern Swan Coastal Plain*. Unpublished Report for the Australian Heritage Commission prepared by Department of Conservation and Land Management and the Conservation Council of Western Australia (Inc.). The study was a joint community/government project and involved substantial community participation.

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1996 How, Harvey, Dell and Waldock Ground Fauna of Urban Bushland Remnants in Perth. Report to the Australian Heritage Commission, Canberra, Australian Capital Territory. This work followed the 1994 and 1996 floristic work and was able to focus on areas identified for their particular regional floristic characteristics.

Most of these studies were relatively recent, being completed in the 1990s. As a consequence many were available in Geographic Information System (GIS) format and able to be intersected with the native vegetation mapping to aid in the application of the criteria.

A significant strength of the project was the core involvement of a group of the authors of the key regional projects: Allan Hill in the WRC, wetland; Bronwen Keighery in DEP, vegetation and flora; and John Dell, fauna, initially from the WA Museum and in later stages of the Project from DEP. Bronwen worked fulltime on the Project, the others part-time. Other authors were involved through the technical advisory group.

In addition to these environmental criteria a seventh criterion (see below) was applied.

Criteria not relevant to determination of regional significance, but which may be applied when evaluating areas having similar values: Attributes which taken alone do not establish regional significance, but which can add to the value of bushland and enhance its contribution to *Bush Forever*.

This criterion recognised, and generally accounted for, existing zoning and land-use constraints. This information was available in GIS formats and the identification of the Sites was aided by the intersection of this information with the mapped native vegetation. In the selection process publicly owned land was generally preferred to those in private ownership. If privately owned, however, land zoned rural, was generally

favoured to that zoned urban. In a number of cases there was only one area with a particular set of regional characteristics and these could at times be protected at significant cost. A number of initially private areas in the Greater Brixton Street Wetlands are an example of this.

The 287 *Bush Forever* Sites are comprehensively catalogued in the Project. Each Site is mapped, the natural values described and protection mechanisms defined in two major publication sets.

- The draft Plan, *Perth's Bushplan*, a document in four volumes containing over 800 pages and over 100 maps, was officially launched in November 1998 for public comment.
- The final Plan, *Bush Forever*, which takes into account the issues raised during the public comment period, was released in December 2000. *Bush Forever* is in 4 volumes containing over 800 pages and over 80 maps.

These reports provide consistent and comprehensive information on each of the Sites as well as providing background on all sets of data used to describe regional significance. This information is available for use in implementation and management of the Sites. The comprehensive regional information also provides an invaluable framework for considering the environmental aspects of proposals and plans and their effect on biodiversity in the region, making them an important tool for local and regional planning.

Additional report review, field investigation and reports on specific areas continued through the public comment period between *Perth's Bushplan* and *Bush Forever*, and beyond *Bush Forever*, in response to queries regarding the regional significance of a Site or part Site. More than 100 other areas suggested for possible inclusion in *Bush Forever* were investigated; this was not completed until post *Bush Forever* release. Investigations were completed as far as possible after the release of *Bush Forever* with 17 of the 109 areas being deemed suitable for inclusion in *Bush Forever*. DEP and Department of Planning and Infrastructure (DPI, renamed MfP) worked with the landowner/s to address the regional significance of the bushland in these areas and

investigate mechanisms by which they could be added to *Bush Forever*.

PROTECTION OF BUSH FOREVER SITES

The Ministry for Planning was recognised as the lead agency due to its many statutory roles and responsibilities, which are required for the effective implementation of *Bush Forever*. In recognition of the MfP's lead role in the implementation, a *Perth's Bushplan/Bush Forever* Office was created to facilitate a 'one-stop-shop' concept. The Office was set up on the release of the *Perth's Bushplan*. The role of the Office was to liaise with landowners, developers, stakeholders, community groups, local government and government agencies to implement Site-specific recommendations for each Site. The *Perth's Bushplan/Bush Forever* Office initially had four staff including planners, environmental officers and a botanist. Botanical and zoological experts principally from DEP, but also from CALM, supported these staff. Wetland mapping and classification information came from the WRC wetlands branch.

Over 2,000 submissions were received during the public comment period and the *Perth's Bushplan/Bush Forever* Office and the necessary experts from the other three agencies also liaised with the various groups to develop Site specific recommendations for each Site, and to progress their implementation, where possible. A 'Summary of Submissions' report released in December 2000 summarises the key issues raised during the public submission phase and the *Bush Forever* Office response.

Bush Forever proposed a range of approaches to implementation that were underpinned by 'principles of equity, sustainable development and fairness to landowners'. Accordingly, implementation recommendations were often individualised to take into account each Site's natural values and the opportunities and constraints associated with the implementation of the recommendations of that Site. The latter included factors such as ownership, zoning, subdivision/development approvals, mineral leases, resource areas and regional infrastructure requirements.

An integral, and essential, part of the Project was the parallel identification of

implementation mechanisms that sought to achieve the best conservation outcomes, while recognising existing planning commitments and the limits of Government's financial resources. *Bush Forever* accepted and necessarily recognised that biodiversity conservation would not be achieved by governments alone, with a reliance on a system of conservation reserves. The combined efforts of State and local governments, the community and private landowners were promulgated and promoted as essential for the protection of valuable bushland resources.

The first approach required from government, outlined in the urban bushland strategy, was to reserve (and purchase as required) all identified areas of regionally significant bushland, but was considered to be too costly to government. It did not account for local government and private land holders interests in retaining and managing their areas of regionally significant bushland. A significant contributor to the increased costs for government between the adoption of the *Urban Bushland Strategy* and the outcomes of the Project, was the government directive that government lands supporting regionally significant bushland outside the conservation estate, was required to be purchased, rather than transferred between departments as had generally been the case in the past.

Bush Forever incorporated site auditing as an ongoing process to monitor the status of each Bush Forever Site, in order to:

- Ensure the achievement of the objectives of the site implementation recommendations.
- Assess the targets set in Bush Forever for protecting at least 10 per cent of each vegetation complex.
- Sign off on sites as fully protected. Criteria to be developed to determine the site protection status and when a site can officially be signed off as fully implemented.
- Assess other proposed additional site nominations against the regionally significant bushland and planning criteria in full consultation and agreement with affected landowners.
- The site auditing process enables priority sites to be identified and Bush Forever Site

recommendations/status and boundaries to be reviewed.

ALL OF GOVERNMENT RECOGNITION AND DEDICATED FUNDING

The Project's profile was such that it gained funding from general revenue to identify the Sites, develop the Site-specific descriptions and produce the *Perth's Bushplan* and *Bush Forever* reports. While such funding is rarely adequate it was sufficient to fund additional staff in both MfP and DEP. However key staff in these departments did many hours of unpaid work. For the success of the Project, each bushland area subject to a recommendation had to be investigated from a planning and natural value perspective. This research had to be robust enough to both counter any immediate opposing arguments for protection, and future legal challenges. This information is summarised in the reports but was supported by dedicated planning (MfP), administrative (DEP) and biological (DEP) files established to track this process.

The Project was endorsed by the WA Cabinet in 2000 with the release of *Bush Forever* and further endorsed by the following Government. Funding was allocated from general revenue to fund the *Bush Forever* Office for three years. \$100 million was allocated by the WAPC from the Metropolitan Region Improvement Fund for the purchase and on-going management of Sites added to the conservation estate as a result of *Bush Forever*. Implementation planning involved both purchase and a range of other mechanisms, including off-reserve management agreements, reservation and government acquisition and negotiated planning solutions. Complimentary vegetation protection and management was also achieved on private lands through land clearing controls and off-reserve private management agreements. These 'complimentary mechanisms' include voluntary agreements, or covenants. Where appropriate, *Bush Forever* also supported innovative concepts such as rural subdivisions for conservation.

As the Project identified regionally significant bushland on private lands, particular attention was given to private landowners. The need to positively engage these landowners has been

consistently acknowledged and acted upon. Each affected landowner was contacted individually when *Perth's Bushplan* and *Bush Forever* was released. Visits to land owners properties were regularly organised to discuss implementation. Planners and botanists were both available for these visits so that the planning and environmental aspects of implementation could be addressed and discussed.

MANAGEMENT OF THE BUSH FOREVER SITES

Integral to the *Bush Forever* Project was planning for the ongoing maintenance of the values of the *Bush Forever* Sites through appropriate management. CALM (now DEC) is responsible for the ongoing management of those areas reserved and for providing support for management of lands in local government and private ownership. Support included private/local government management advice through Land for Wildlife, Conservation Covenants and Ecoplan. In the early 2000s Ecoplan went from DEP to CALM and evolved into the Urban Nature program that was initially supported through *Bush Forever* funds.

POST BUSH FOREVER COMMITMENTS

***Bush Forever* Statement of Planning Policy**

Bush Forever recommended the preparation of a Statement of Planning Policy (SPP) for policy guidance, design guidelines and legal planning controls for clearing, to support and ensure the plan was effectively implemented. This was not finalised until 2010 as SPP 2.8. At the same time a Metropolitan Region Scheme (MRS) amendment recognised all *Bush Forever* Sites shown as an overlay on the MRS map.

Local Bushland

The Urban Bushland Strategy differentiated regionally and locally significant bushland. Some support was given to recognition of local bushland through the local government biodiversity project, and the Perth Biodiversity Project. Initially an officer from *Bush Forever* funding was employed and 'Bush Forever departments' participated in this related program. This Project and the related Perth Plant Biodiversity Project (Western Australian Local Government Association Perth Biodiversity Project, Department of Environment and Department of Conservation and Land Management, 2005) complimented

Bush Forever and the latter provides the basis of an excellent training program on Perth's plant biodiversity.

Public Awareness Strategy

There were plans for a *Bush Forever* Public Awareness Strategy. The Strategy was to allow for: direct communication with affected landowners, stakeholders and community groups, local government and the general public. Programs were created specifically for landowners, helping them to gain easy access to information about *Bush Forever*, self-management of conservation lands, and the range of government assistance available. During the term of the *Bush Forever* Office, other public awareness activities, including annual reporting and the publication of a *Bush Forever* Newsletter, media events, workshops and public displays were organised as required. An education program was planned specifically for secondary and tertiary students, but this did not eventuate.

CONCLUSION

The *Bush Forever* Project is pivotal in recognising, documenting, protecting and managing the biodiversity of Perth for the benefit of the people of Perth and the broader Western Australian, Australian and international communities. Through this Project, Perth, the capital city of a state that is nationally and internationally renowned for its biodiversity, has set national benchmarks for the conservation of biodiversity on the Perth Swan Coastal Plain. *Bush Forever* is generally accepted by national, state and local governments and community as a way forward for regional biodiversity protection in Perth. The 2001 Australia State of the Environment report highlighted *Bush Forever* as a world-leading program in urban biodiversity initiatives.

Bush Forever serves as an outstanding role model for public sector co-ordination, illustrating how effective a whole-of-government approach, combined with a commitment to community consultation and public service, can be. The development of the draft and final plan not only harnessed the expertise and skills of various government agencies, but also involved the co-operation of landowners, developers and the community.

With the vast amount of information resources that contributed to the compilation of *Bush Forever*, it has been recognised that the strategy reflects the most up-to-date knowledge of the ecology of the PMR and can be regarded as a best practice example of a whole-of-government approach to biodiversity conservation planning in the Metropolitan Region.

Perth's Bushplan was honoured for its commitment to public communication and customer service during the development of the plan, when it received the top award in the category of Comprehensive Communication Program at the 1999 Annual Public Relations Institute of Australia WA Awards for Excellence. In 2002 the *Bush Forever* Project 1997 to 2010 received the Premier's Award in the Sustainable Environment Category.

The potential existed for an expansion of the *Bush Forever* policy north and southwards in order to eventually cover the entire Swan Coastal Plain. This was realised in funding for Swan Bioplan. However, while Swan Bioplan had a number of significant outcomes, government department co-operation proved far less successful than the *Bush Forever* Project. A number of factors appear to have contributed to this, including departmental upheaval with the WRC, DEP and CALM being changed significantly in both name and responsibility. The Terrestrial Ecosystem Branch from DEP has been in five different departments from the initiation of the project to the present. Essentially in 2012 most conservation planning and management has become the responsibility of the Department of Environment and Conservation (DEC) but the funding for dedicated expert officers to do this work in an urban framework has been lost or consumed in other projects. In addition the broad government and community will to protect bushland areas covered by the *Bush Forever* Project is much diminished.

An important aim of *Bush Forever* was to foster a greater awareness and appreciation of urban bushland and to develop a stronger sense of responsibility and belonging from the broader Perth community. This was to be achieved through active management of the Sites by state and local government, community Friends

groups and individual owners of *Bush Forever* Sites. The failure of government to continue to develop and adequately fund continuing research, educational and management programs related to the *Bush Forever* Project and the Sites, has not maintained the awareness and appreciation of Perth's unique biodiversity, let alone led to increased appreciation of Perth's urban bushland. A proposal for an annual or biennial *Bush Forever* Festival was developed after a 2006 review to address this issue. The proposal focused on science and the arts in years K to 12; 'open days' at the *Bush Forever* Sites; and showcasing the aspects of Perth's biodiversity and the continued investigations on this biodiversity. The aim was to have a layered festival that celebrated our biodiversity and allowed for participation by the general public as well as developing the skills and knowledge of those who continue to work tirelessly for protection and management of Perth's bushland. This was not developed beyond the initial proposal.

The lack of continuing funding for education programs together with the loss of technical expertise in government has diminished government's ability to foster a greater awareness and appreciation of urban bushland both in the community and in government. With our continuing alienation from our natural world alongside widespread recognition that 'play in the natural world' is fundamental to human health and learning, it is even more vital that Perth's people are given opportunities to celebrate our biodiversity and bushland. It is vital to integrate exposure and learning in these natural heritage areas to build a creative, caring community in Western Australia's capital city.

Sadly, while we have rightly invested millions of dollars in retaining and protecting bushland areas (our natural heritage), we are failing to maintain this irreplaceable resource for us and for the world. The failure to adequately fund management of these areas is akin to building a road network and just patching holes when they happen to be noticed. We need a maintenance program, supported by the appropriate expertise to guide the work and train the workers whether they be voluntary or employed. We need dedicated funds for bushland just as we do for roads. This together with an education program as outlined above

would enrich our lives and develop in all a sense of place and belonging.

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▲ Morrison Featherflower *Verticordia nitens* –
Melaleuca Park, Bush Forever Site 399.
(B. Keighery)



▲ Common Hovea *Hovea trisperma*
var. *trisperma*. (B. Keighery)

LANDUSE PLANNING AND BUSH FOREVER – A JOURNEY

Loretta Van Gasselt, Department of Planning

Bush Forever identifies Regionally Significant Bushland, on the Swan Coastal Plain portion of the Perth Metropolitan Region, for protection. Bush Forever fulfils the commitment to prepare a strategic plan for the conservation of metropolitan bushland as identified in the Department of Planning and Urban Development's Urban Bushland Strategy (1995). It also substantially meets the WA Governments commitments to the 1996 National Strategy for the Conservation of Australia's Biodiversity as it seeks to:

- Establish, as far as possible, a representative system of protected areas;
- Promote the conservation of ecological systems and the biodiversity they support through a range of mechanisms; and
- Protect sites of significance through government reservation and acquisition.

Consistent with the Urban Bushland Strategy and 1998 Western Australian Planning Commission (WAPC) Bushplan, Bush Forever aims to protect at least 10% of the original extent of each of the original 26 vegetation complexes of the Swan Coastal Plan portion of the Perth Metropolitan Region as defined by Heddle, Loneragan and Havel in 'Vegetation of the Darling System' 1980.

The Bush Forever process identified 287 sites containing 51,200 ha of bushland for protection, which is equivalent to 18% of the original vegetation extent in the subject area. Of the regionally significant vegetation identified, almost two-thirds (33,400 ha) already had some form of protection through Parks and Recreation reservation in the Metropolitan Region Scheme (MRS) and / or tenure arrangements. Another one-quarter of the regionally significant vegetation (13,200 ha) was owned in 2000 by Commonwealth, State or local government and most of this was reserved for Public Purposes in the MRS. The remaining 9% of Bush Forever areas were privately owned within land zoned Rural (4,270 ha) or Urban, Urban Deferred or Industrial (330 ha) in the MRS.

The Western Australian Government committed up to \$100 million towards the implementation of Bush Forever, primarily for land acquisition. Over \$96 million has been spent since 2000 on acquisition for approximately 1,100 ha of Bush Forever land. Bush Forever recognises that, although government ownership may be the most appropriate form of protection, a broad range of alternatives to government acquisition can also be used. These include the negotiation of solutions within the existing planning framework to balance the needs of conservation and development. Management advice and agreements with private landowners or government agencies have been established and conservation covenants and financial assistance for conservation management have also been implemented.

There have been a number of key achievements in the development and implementation of Bush Forever, some of which are outlined below.

1. STATUTORY IMPLEMENTATION MILESTONES AND BUSH FOREVER ACTIONS

The MRS defines the future use of land, dividing it into broad zones and reservations. The MRS uses a set of maps and a scheme text. The scheme text provides planning rules for zones and reservations which are shown on the maps in different colours and patterns. This plan has been in operation since 1963 and provides the legal basis for planning in the Perth Metropolitan Region. To plan for changing needs, the MRS map is amended frequently through MRS amendments that require Minister approval, as well as Governor approval and Parliament resolution if it is a major MRS amendment.

The implementation of Bush Forever required the WAPC to initiate a MRS amendment (1082/33) intended to introduce a special control area (SCA) for Bush Forever sites. Also to prepare a State Planning Policy (SPP) to assist the WAPC and local governments, to deal consistently with planning proposals affecting Bush Forever sites. In 2004, the WAPC released

the following package of measures for public consultation:

- Draft Statement of Planning Policy No. 2.8: Bushland Policy for the Perth Metropolitan Region (SPP 2.8) to provide a policy and implementation framework for bushland protection and management in the Perth Metropolitan Region;
- MRS Amendment 1082/33 'Bush Forever and Related Lands', which sought to create a SCA ('Bush Forever Protection Area') in the MRS and apply it to all Bush Forever sites and to reserve 94 Bush Forever sites for 'Parks and Recreation' (WAPC 2004);
- Planning Bulletin No. 69: Proposed Bush Forever Protection Areas (WAPC 2004) to advise of a package of statutory planning measures that were being introduced, to ensure that bushland protection and management issues are appropriately addressed in planning decisions and actions in the Perth Metropolitan Region.

These documents formed the basis for the planned implementation process of Bush Forever.

Metropolitan Region Scheme Amendment 1082/33

The report and submissions on MRS Amendment 1082/33 was presented to the WAPC in March 2006. The WAPC resolved to adopt MRS Amendment 1082/33 subject to modifications, including:

- Removing the SCA provision from the MRS text as the Environmental Protection Act 1986 (EP Act) provided regulations for clearing controls and the WAPC considered that this legislation, as well as a Notice of Delegation to Local Authorities to determine Planning Applications and the implementation of SPP 2.8, would achieve the original objectives of the SCA provisions outlined in the MRS amendment. The WAPC also sought to keep the MRS as simple, broad and general as possible and this was the essential reason why SCAs were not kept as part of the MRS; and
- Renaming 'Bush Forever Protection Areas' to 'Bush Forever areas', and retaining the 'Bush Forever areas' on the MRS map as a geographical notation to alert landowners to bushland protection considerations.

The MRS Amendment passed through both Houses of Parliament with an effective date of 15 September 2010.

MRS Amendment 1082/33 is the largest MRS amendment ever undertaken by the WAPC to date and was a significant achievement. The two main outcomes of MRS Amendment 1082/33 were:

- 'Bush Forever areas' were introduced onto the MRS Maps. 'Bush Forever areas' are a policy overlay and do not affect the current zoning or reservation of land. The policy overlay assists landowners, both private and public, in identifying if a land parcel has regionally significant bushland and associated ecological linkages which need to be taken into consideration, if there is contemplation of a land use change;
- 94 sites identified as Bush Forever, covering both public and private land, were rezoned from their existing zone or reservation to 'Parks and Recreation' reservation.

State Planning Policy No. 2.8: Bushland Policy for the Perth Metropolitan Region (SPP 2.8)

State planning policies are prepared and adopted by the WAPC under statutory procedures set out in part 3 of the Planning and Development Act 2005. The process of preparing a state planning policy also includes public consultation and consideration by the Planning Minister and the Governor. The WAPC and local governments must have 'due regard' to the provisions of state planning policies when preparing or amending local planning schemes and when making decisions on planning matters.

SPP 2.8 was gazetted on 22 June 2010 and its purpose is to guide and inform agencies, authorities, landowners and the broader community which bushland protection and management issues are to be taken into account by the WAPC and local governments, when considering a proposal which is likely to have an impact on bushland in the Perth Metropolitan Region.

The policy recognises the protection and management of significant bushland areas as a fundamental consideration in the planning process. It also seeks to integrate and balance wider environmental, social and economic

considerations to secure long-term and improved environmental outcomes.

SPP 2.8 applies in two instances. Firstly, to any proposal that is likely to have an adverse impact on regionally significant bushland identified as Bush Forever and secondly, to any proposal that is likely to have an adverse impact on local bushland (bushland that is not contained within a Bush Forever area).

Regionally Significant Bushland – Section 5.1 of SPP 2.8

SPP 2.8 sets out general policy objectives and policy measures applicable to regionally significant bushland within all Bush Forever areas. Proposals within or adjacent to Bush Forever areas need to ensure that all reasonable steps have been taken to avoid, minimise or offset any likely adverse impacts on regionally significant bushland.

Where a proposal is likely to cause an unavoidable adverse impact on regionally significant bushland within a Bush Forever area, an assessment of that impact is required to be undertaken. SPP 2.8 Appendix 1 and 2 outlines the impact assessment process and criteria requirements.

SPP 2.8 also sets out specific policy measures applicable to each of the following site implementation categories, which apply in addition to the general policy measures. Site implementation categories have been designated based on the MRS zoning of the subject site and any known planning considerations (as applicable):

- Bush Forever reserves - are Bush Forever lands which have the highest conservation value and are complementary to the Parks and Recreation MRS reservation;
- Urban, industrial or resource development - are Bush Forever lands identified in 2000 as having an existing planning constraint. These lands are usually zoned Industrial, Urban or Urban Deferred in the MRS;
- Government lands or public infrastructure - are Bush Forever lands that acknowledge essential public infrastructure may need to be located within a Bush Forever area. These lands are usually reserved Public Purpose, Regional Roads or Railways in the MRS;

- Rural lands - are Bush Forever lands generally privately owned and support rural living subdivision for conservation and rural development. These lands are complementary to the Rural zoning in the MRS; and
- Regional creek line - are Bush Forever lands which aim to support the protection and management of regionally significant bushland and wetland dependent vegetation along regional creek lines.

SPP 2.8 also provides best practice criteria for rural subdivision and development in the rural lands site implementation category (SPP 2.8 Appendix 3) to improve conservation, while Appendix 4 (SPP 2.8) sets out offset criteria according to conservation significance.

Some Bush Forever areas will not be reserved for a public purpose, and will continue to be zoned land intended for private use and ownership. SPP 2.8 does not prohibit the private use of Bush Forever land. It encourages private use and enjoyment in accordance with SPP 2.8, including the use of single building envelopes to protect bush quality. If the Government plans exclusive public use of the private freehold land, it must seek to reserve or acquire the land or place public use rights over the land.

Local Bushland – Section 5.2 of SPP 2.8

Land outside of the Bush Forever areas may contain local bushland and, until such time as a local bush land protection strategy has been prepared and approved, the policy measures pertaining to local bushland in SPP 2.8 should be considered as part of any decision-making process by the relevant authority.

The SPP encourages the preparation of a local bushland protection strategy as a preferred basis for decision making. Local bushland strategies are prepared by or for local governments to identify locally significant bushland sites for protection and management. Local bushland strategies focus on bushland areas and are not intended to cover parkland cleared areas, isolated trees in cleared settings or local natural areas.

Metropolitan Region Scheme Amendment 1236/57

The current 'Bush Forever area' land identified on the MRS maps does not have corresponding reference in the MRS text. As a result a minor MRS amendment was advertised in late 2012 and is currently being finalised by the WAPC (MRS Amendment 1236/57) to insert the definition of a 'Bush Forever area' in the MRS text to link the text with the MRS maps and the 'Bush Forever area' definition in SPP 2.8.

The current MRS text allows 'permitted development' to be carried out on reserved lands, owned or vested in a public authority within a Bush Forever area, providing it does not involve the clearing of regionally significant vegetation within any Bush Forever areas. Written approval from the Commission is required if clearing of regionally significant vegetation within a Bush Forever area is to be carried out. The proposed MRS text amendment will allow 'permitted development' to be carried out within Bush Forever on reserved lands owned or vested in a public authority if the development is in accordance with a management plan approved by the Commission or in accordance with a written agreement between the Commission and the public authority. The mechanism of a management plan or agreement for 'permitted development' is considered a more strategic and contextual approach to such development and will provide for a more holistic overview of the protection and management actions within the Bush Forever area.

Planning Bulletin 69 – Bush Forever Areas

The Department of Planning (DoP) is also in the process of revising Planning Bulletin 69 to reflect the successful gazettal of SPP 2.8, the finalisation and status of the MRS Amendments, the notice of delegation for local government, and all other updates to Bush Forever that have occurred since 2004. The reviewed Planning Bulletin is planned for release in 2013.

2. THE DOP'S ADVISORY ROLE

A 'Bush Forever Office' was formed in 1998 within the Ministry of Planning (now DoP) as the lead co-ordination and implementation agency for the statutory roles and responsibilities of Bush Forever. The Bush Forever Technical Advisory Working Group was formed in early 2001 shortly after Bush Forever was released and consisted of officers in DoP, Department of Environmental Protection (DEP), Conservation and Land Management (CALM), and the Western Australian Local Government Association (WALGA). The Working Group discussed site specific issues as well as general Bush Forever matters and was chaired by the Bush Forever Office.

The Bush Forever Office existed within DoP until late 2006. Since then, its role has been undertaken by the policy section within DoP, reflecting the change in programme requirements at the time when most major statutory actions of Bush Forever were being finalised. The Bush Forever Interagency Technical Advisory Group continued to meet on an as-needs basis until May 2008.

During the time of the Bush Forever Office, the DoP was the lead agency for all statutory and strategic matters relating to Bush Forever. The DoP remains the lead agency for strategic policy and land use planning advice on Bush Forever matters. The Department of Environment and Conservation (DEC) has taken on a more prominent statutory role in providing advice on Bush Forever related matters on subdivision and development applications.

Local Government has delegated authority under the Planning and Development Act, 2005 to determine development proposals on zoned lands under the MRS, including proposals within or adjacent to a Bush Forever area. Local Government is currently required to consult with the DoP Policy Development Team on proposals that, in its opinion, may have a significant direct or indirect adverse impact on a Bush Forever area.

CONCLUSION

Bush Forever has accomplished the State Government's commitment to prepare a strategic plan for the conservation of bushland in the Perth Metropolitan Region. The DoP, WAPC and DEC, along with community groups promoting Bush Forever, have made many significant achievements which have contributed to implementation of the State Strategic Plan and Bush Forever Policy.

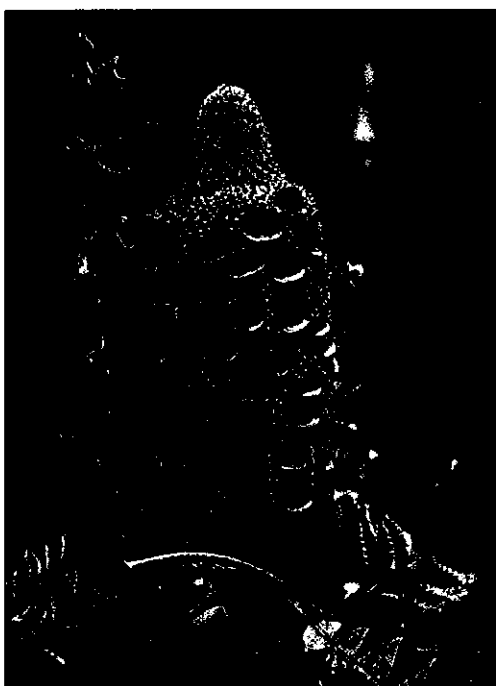
However, it is acknowledged there is still more to be done to achieve all the Bush Forever policy actions and in the case of on-site management, this remains an ongoing commitment. The State Government is committed to Bush Forever outcomes and continues to support protection and management of Perth's Bush Forever areas.



◀ Menzies' Banksia *Banksia menziesii*.
(M. Owen)



▲ Candlestick Banksia *Banksia attenuata*.
(M. Brundrett)



◀ Bull Banksia *Banksia grandis*.
(M. Brundrett)

Fruiting cones of three species of *Banksia* to be found on the Swan Coastal Plain.

THE DEPARTMENT'S IMPLEMENTATION OF BUSH FOREVER

David Mitchell, Department of Environment and Conservation

OVERVIEW

The Department of Environment and Conservation's role in Bush Forever is discussed plus notes on the *Environmental Protection and Biodiversity Conservation* (EPBC) Act and the Strategic Assessment of the Perth and Peel regions.

INTRODUCTION

The most obvious role for the Department of Environment and Conservation (DEC) in the implementation of Bush Forever, is as manager of conservation lands. However, DEC has also had other involvement with the development and implementation of Bush Forever.

As Greg Keighery and others discuss in their papers, over time, the State had protected large areas of bushland and wetlands as conservation reserves. DEC (and CALM (Conservation and Land Management), its predecessor agency) is the primary manager of the State's conservation lands and so prior to Bush Forever, already managed a large area of conservation estate. DEC now manages just over 31% of the area of remnant bushland, or 14% of the total area, of the Bush Forever study area.

Selecting areas already under some form of protection was a major consideration in the initial selection of sites in Perth's Bushplan and in the selection of sites it was assessed how well the existing protected areas met the criteria and targets for regional significance. Therefore, all CALM Act lands were included as Bush Forever sites. Site selection then focused on identifying additional areas to better meet the criteria and targets.

As described by Greg Keighery and Bronwen Keighery there has been a long history of research and survey in the greater Swan Coastal Plain including by CALM and other agencies and groups. Significant survey and research information and data that had been collected by CALM was used in the selection of sites. This included the large data collection on the distribution of plant and animal species in CALM databases, as well as studies such as the

Floristic Survey of the southern Swan Coastal Plain, carried out by a large number of volunteers and published by Neil Gibson, Bronwen Keighery, Greg Keighery, Allan Burbidge and Mike Lyons in 1994.

CALM was one of the agencies, along with the then Ministry for Planning, Department of Environmental Protection and Water and Rivers Commission, that participated in the preparation of the Perth's Bushplan and Bush Forever documents from 1996 through to release of the final Bush Forever in 2000.

As the States' primary manager of conservation lands, DEC has an important role in the ongoing implementation of Bush Forever through the management of sites for conservation. DEC is the intended end-manager of many of the newly identified Bush Forever areas.

When Bush Forever was released in 2000 it identified 51,200 ha of regionally significant bushland to be protected in 287 sites (Figure 1). At that time CALM managed approximately 25,900 ha in 102 sites or part sites as CALM Act lands, that is national parks, conservation parks, nature reserves and State forest. CALM also co-ordinated management planning for regional parks and managed some areas of regional park land on behalf of the Western Australian Planning Commission (WAPC) (Figure 2).

Including management of regional park land as well as new reserves, DEC is now involved in the management of 120 sites or part-sites totalling 39,525 ha.

After DEC, the Western Australian Planning Commission is the manager of the next largest area of Bush Forever sites, owning over 16,000 ha including over 5,000 ha of regional park areas that are managed by DEC on behalf of the WAPC.

As part of the release of Bush Forever in 2000, the State government approved the allocation of \$100 million from the WAPC's Metropolitan Region Improvement Fund over ten years for acquisition and management of newly

identified Bush Forever sites, in addition to the existing commitments for the acquisition and management of regional parks.

In 2011–12 DEC and WAPC identified up to 9,000 ha of WAPC owned land (in addition to those lands within regional parks) that could be considered for transfer to DEC management. Discussions are continuing over which of these can be transferred, and when. Such a transfer would be a significant increase in the area of conservation land managed by DEC. Final decisions on transfer of lands will be made by government and will be dependent on ensuring that sufficient resources for adequate ongoing management are available.

There is a general expectation that DEC will eventually manage the greatest proportion of Bush Forever sites. Other areas of WAPC-owned Bush Forever sites, would be more reasonably transferred to local government management, for example additions to existing local government reserves, or where a local government is more appropriately located or has resources to manage them.

The level of management effort and therefore cost for areas of bushland varies based on factors such as:

- Size and shape of bushland.
- Type and magnitude of threatening processes, and the values threatened.
- Level of access, use and expectations of quality and aesthetics of infrastructure, such as fencing, paths and facilities.

The costs of management by DEC range from \$20/ha to \$900/ha per year depending on the site and threatening processes, while the costs of establishing reserves are 3–4 times higher for the first year or two. The cost for revegetation and reconstruction is 10 to 100 times this per hectare. These costs apply regardless of who manages the area and so local governments that manage bushland have similar or higher costs for management.

Bush Forever was predicated on a philosophy of sites being protected by a variety of mechanisms, and that management would occur under a range of regimes involving different managers (State government, local government and private organisation and individuals).

Even with the largest amount of the WAPC Bush Forever sites holdings transferred to DEC management, there will still be approximately 13,000 ha not under direct DEC management which include:

- Local Government – 3,400 ha;
- State Government agencies – 2,000 ha +, e.g. Kings Park and Bold Park are about 660 ha;
- Commonwealth Government – 4,800 ha, e.g. Perth and Jandakot airports, Department of Defence lands;
- Private ownership – 2,800 ha [approximately 400 private land holders with between 2 ha to 1,000 ha each].

There is an expectation that these Bush Forever areas also receive good conservation management and that owners/managers provide this management. Therefore there are expectations from off-reserve programs by DEC and other organisations to support these other land managers.

DEC OFF-RESERVE AND ADVISORY PROGRAMS

DEC does provide a number of off-reserve and advisory programs which include:

- Urban Nature program.
- Voluntary Nature conservation covenants.
- Land for Wildlife.
- Direct advice provided by DEC regional and specialist staff.

There are many other programs from other organisations that can support management of bushland, many of these are designed as voluntary, or opt-in programs.

The Urban Nature program is based in DEC's Swan Region and aims to provide technical advice, support and information for all bushland managers, including local government, private landowners, friends groups as well as to DEC itself.

The Urban Nature program seeks to build the capacity of bushland managers through various ways:

- Training.
- Site specific advice and assistance.
- Identifying, promoting and demonstrating best practice bushland management.

See Kate Brown's paper on the Urban Nature program in these proceedings.

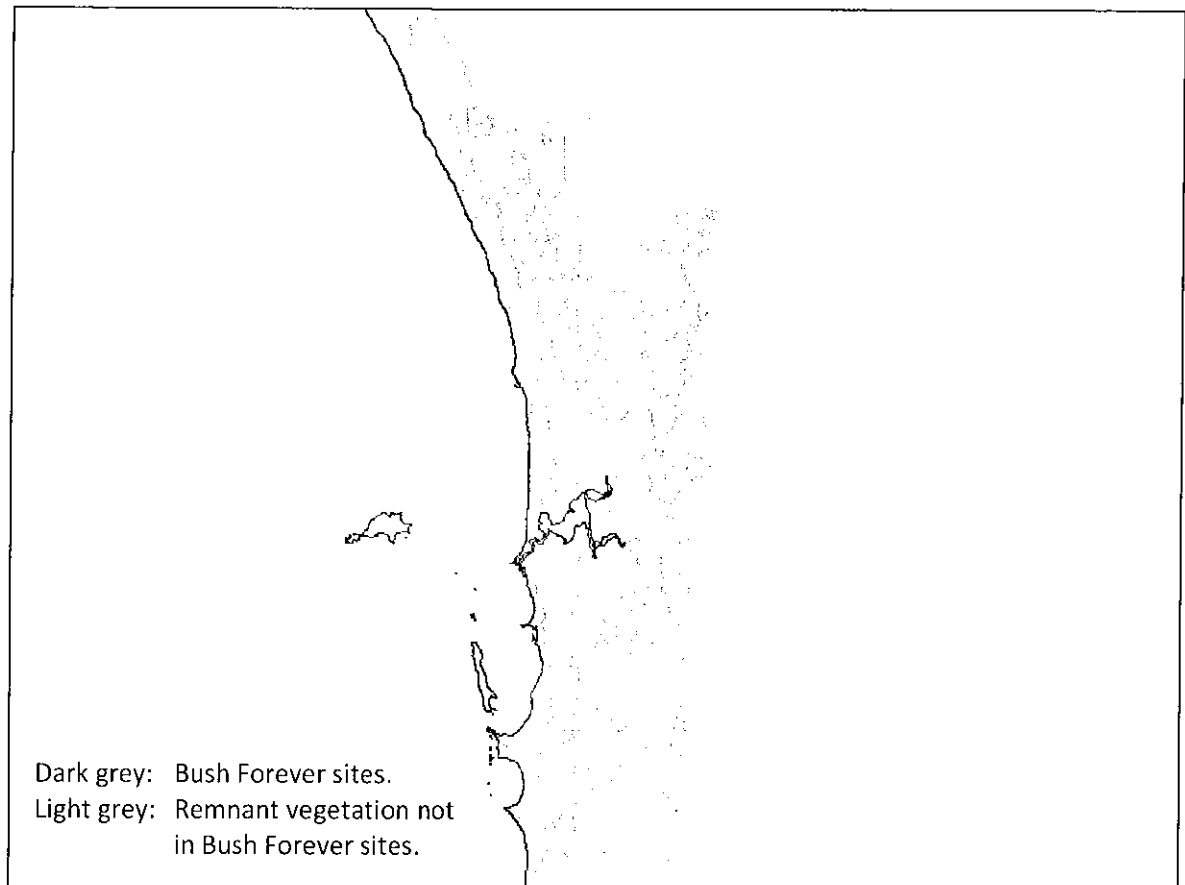


Figure 1. Remnant vegetation and Bush Forever Sites 2000

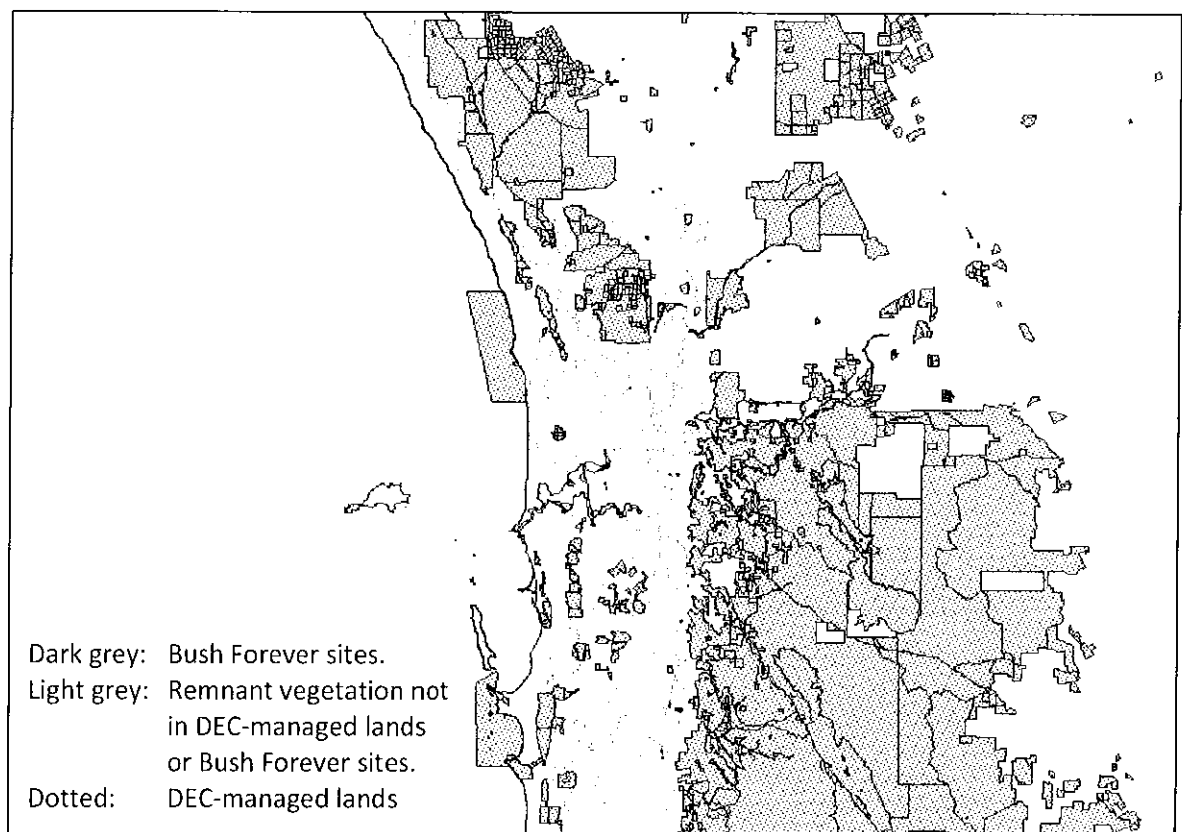


Figure 2. Remnant vegetation, Bush Forever Sites and DEC managed areas 2000

Voluntary Nature Conservation Covenants are available through DEC as well as the National Trust. These conservation covenants schemes were developed as voluntary opt-in programs but sometimes have been made a condition of subdivision, with varying levels of success.

The DEC nature conservation covenant is a voluntary, legally binding document that has provisions restricting activities that might threaten the land's conservation values. Each conservation covenant is individually negotiated between DEC and the landowner, and aims to maintain the conservation values of the bushland whilst allowing for flexibility to reflect the landowner's wishes for the land.

The advantages of a Voluntary Nature Conservation Covenant are:

- It provides long-term security for the land;
- Ensures that future purchasers are aware of the conservation values of the land, which can attract sympathetic purchasers;
- The landowner may be eligible for other incentives, such as tax concessions and rate adjustment, or grants.

More information on DEC's nature conservation covenants is available at:
<http://www.dec.wa.gov.au/management-and-protection/conservation-on-other-lands/covenant-program.html>

Similarly DEC's *Land for Wildlife* is a voluntary scheme that aims to encourage and assist private landholders to provide habitats for wildlife on their property. A major difference between these two schemes is that registering with Land for Wildlife is not legally binding, it does not alter the legal status of the property in any way and owners may withdraw at any time if they wish.

More information on DEC's *Land for Wildlife* scheme is available at:
<http://www.dec.wa.gov.au/management-and-protection/conservation-on-other-lands/land-for-wildlife.html>

There has been some uptake by owners of Bush Forever sites of these programs. For example, as of 2006, some 17 landowners in Bush Forever sites have been considered for nature conservation covenants, and 16 Bush Forever sites have Land for Wildlife registrations (often covering only part of Bush Forever site).

However, many owners of bushland in metropolitan areas have expectations for future development and limited interest or understanding of the biodiversity value of bushland or of the appropriate management of that land. Voluntary conservation programs do not provide much incentive for landowners to change their expectations.

BUSH FOREVER – THE GAPS

Over ten years from the release of Bush Forever in 2000, there are still some gaps in the delivery of Bush Forever. Some of the later papers in this conference proceedings cover these, however, this is an opportunity to identify some:

- Protection or Delivery gaps – not all sites are in their desired final protection or management regime. Bush Forever did envisage a range of management types – but these may not have eventuated or have not delivered as well as expected. What is required to move things along and improve protection?
- Process gaps – what legal or other mechanisms exist or need to exist to enable better implementation of Bush Forever? If these mechanisms already exist, what is stopping them working better?
- Resource gaps – to fund additional levels of the existing service and new services. There is always a need for additional resources, but how much is reasonable?
- Participation and support gaps – encouragement and incentives for land owners and the broader community to contribute. How can we provide sufficient encouragement and incentives to private landowners (what can we offer someone with development expectations?).
- Protection gaps – not all sites are equally protected (some examples will be provided in later papers).
- Expectation gaps – what do the community and stakeholders expect: – i.e. what level of protection (not all sites are equally protected); what level of management; and what expectation of greater State government control or advice is there?

Those who attended this conference are "ahead of the game", most already have a strong understanding of the uniqueness of our

local bushland and a desire to better protect and manage it. Unfortunately this understanding is not shared by the majority of the population, nor of decision makers.

When a larger proportion of the general community understands and cares about the biodiversity of the Perth region, then the will and resources to respond to the gaps in implementation of Bush Forever and provide for improved biodiversity conservation outcomes in general, are more likely to be provided.

THE STRATEGIC ASSESSMENT OF THE PERTH AND PEEL REGION.

The *Environment Protection and Biodiversity Conservation Act, 1999* (EPBC Act) protects nationally and internationally important flora, fauna, ecological communities, Ramsar wetlands and heritage places. The EPBC Act defines these as "matters of national environmental significance" (MNES).

While application of EPBC Act has historically been on a project-by-project assessment of actions, the EPBC Act also allows for strategic assessments to consider, and potentially approve, a series of future proposals or developments (actions) over a much larger scale and timeframe (even if the developer is currently not known). This is done through the assessment and endorsement of a 'policy, plan or program' which outlines how impact on MNES will be avoided or minimised.

The benefits of strategic assessment can include:

- A co-ordinated, landscape-scale approach to biodiversity conservation (can better deal with cumulative impacts);
- Consideration of environmental matters early in the planning process;
- Setting clear "goal posts" of what is to be achieved (greater certainty);
- Reduced administrative burdens for proponents and governments.

The State and Commonwealth signed an agreement to carry out a Strategic Assessment of development in the Perth and Peel regions in August 2011 (Figure 3). The Strategic Assessment is being prepared by the WA Department of the Premier and Cabinet; Department of Environment and Conservation

(DEC); Department of Planning (DOP); Office of the Environmental Protection Authority (OEPA); Department of Mines and Petroleum (DMP); Department of Water (DoW); with the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (SEWPAC). It is expected that the draft Strategic Assessment documents will be ready for release in 2013.

At a broad level, the EPBC Act strategic assessment process involves:

- Preparation of a program or MNES Plan – which describes the 'actions' to be taken, and the measures (outcomes and commitments) that will specifically address impacts of the actions on MNES.
- Preparation of an impact assessment report – which analyses the impacts and outcomes for MNES from the implementation of the MNES Plan.
- Assessment and endorsement by Commonwealth Minister of the MNES Plan.
- The Commonwealth Minister may then approve the taking of an 'action' or 'class of actions' in accordance with the endorsed MNES Plan. This allows actions to proceed without need for EPBC Act project-by-project assessment.

Any action that does not comply with the endorsed MNES Plan is still subject to project-by-project assessment.

The development that will be considered in the Strategic Assessment will be based on:

- Directions 2031 and Beyond (framework for housing, infrastructure and services in the Perth and Peel region) and draft Sub-regional strategies (inner and four outer sub-regions).
- Sub-regional structure plans are being prepared as a result of the draft Sub-regional strategies.
- These documents will identify existing zoned land and new areas for potential growth (urban expansion areas and urban investigation areas, industrial investigation areas etc.)
- The Strategic Assessment will also consider other development such as extraction of basic raw materials and the infrastructure

required to support the growth of the Perth and Peel.

These various statutory planning documents and framework will define the actions in the MNES Plan (what and where) and will be a major mechanism for delivery of outcomes.

As well as considering listed MNES, a strategic assessment is also required to consider:

- The environment in a broader sense (ecologically sustainable development)
- Uncertainty, risk and adaptive management

In addition the WA government wants to include State environmental issues and factors within this process such as:

- State listed threatened and priority species and ecological communities.
- Wetlands – Nationally significant wetlands, Conservation Category Wetlands (CCW), Environmental Protection Policy (EPP).
- Vegetation (poorly retained) and habitat generally.
- Sustainability (urban design, infrastructure etc.)

The Strategic Assessment will include formal advice from the EPA under Section 16(e) of the Environmental Protection Act. This EPA advice will:

- Look at a broad range of factors (biodiversity, air quality, water quality, etc.), and
- Provide policy and guidance to ensure environmental outcomes are delivered

Proponents will need to demonstrate that they meet the outcomes of the Section 16(e) advice to have a referred proposal not assessed by the EPA.

WHAT CAN THE STRATEGIC ASSESSMENT OFFER BUSH FOREVER – AND VICE VERSA?

The State is still early in process of developing the Strategic Assessment and so definitive outcomes from the process are not yet available, however as noted by the Hon. John Day in his opening address, a significant part of the State's biodiversity response will be based on the benefits provided by Bush Forever and similar programs.

Therefore the Strategic Assessment could be seen as a vehicle to "re-invigorate"

implementation of Bush Forever; to recognise the importance of urban bushland as well as the progress made to date in the identification and protection of important areas. There are opportunities to provide increased protection and management of important bushland and wetlands by:

- Confirming the importance of Bush Forever.
- Improving the protection and management of sites (acquisition, change to purpose or vesting).
- Providing guidance and rules for avoidance, mitigation and offsets.
- Protecting additional areas and values.
- Provision of new resources and new information.

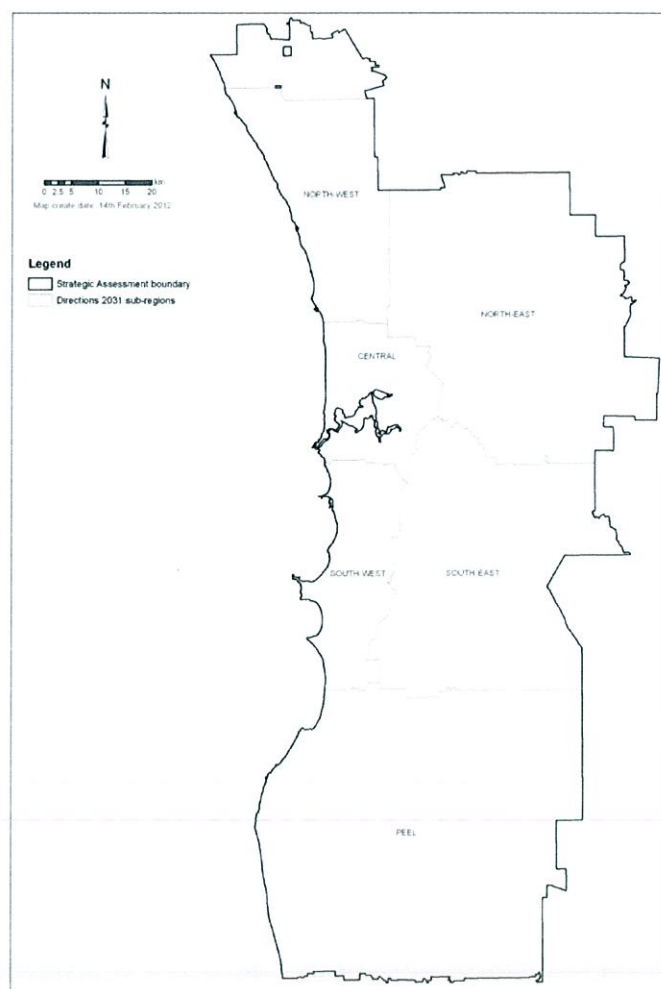


Figure 3. Boundary of the Strategic Assessment of the Perth and Peel region

ABSTRACT OF BUSH FOREVER AND THE DEPARTMENT OF ENVIRONMENT AND CONSERVATION'S URBAN NATURE PROGRAM

Kate Brown, Grazyna Paczkowska and Julia Cullity

The Urban Nature program operates out of the Department of Environment and Conservation (DEC), Swan Region.

The main objectives of the program are:

1. Identify, demonstrate and promote best practice bushland management

Currently we are working at five demonstration sites (2,830 ha). The sites have been selected to reflect the most intact and largest examples of bushland across the landforms of the Swan Coastal Plain and include, from east to west across the plain, Port Kennedy, Paganoni Swamp, Lowlands, Brixton Street Wetlands and Talbot Road Bushland.

Learnings from research trials, adaptive management and on ground works on the demonstration sites are extended to managers of Bush Forever sites and other regionally

significant bushland across the Swan Region. Managing invasive species, inappropriate fire regimes, inappropriate access and developing techniques for restoration of ecological communities is the focus of our work at the demonstration sites. The program works with community volunteers and land managers at these sites to foster development of skills and to facilitate funding for management and restoration.

In addition to the demonstration sites the program has direct involvement in management of an additional 17 sites (3,488 ha) and provides technical advice, much of it based on the outcomes of work on demonstration sites, to managers of a further 41 sites (25,692 ha).

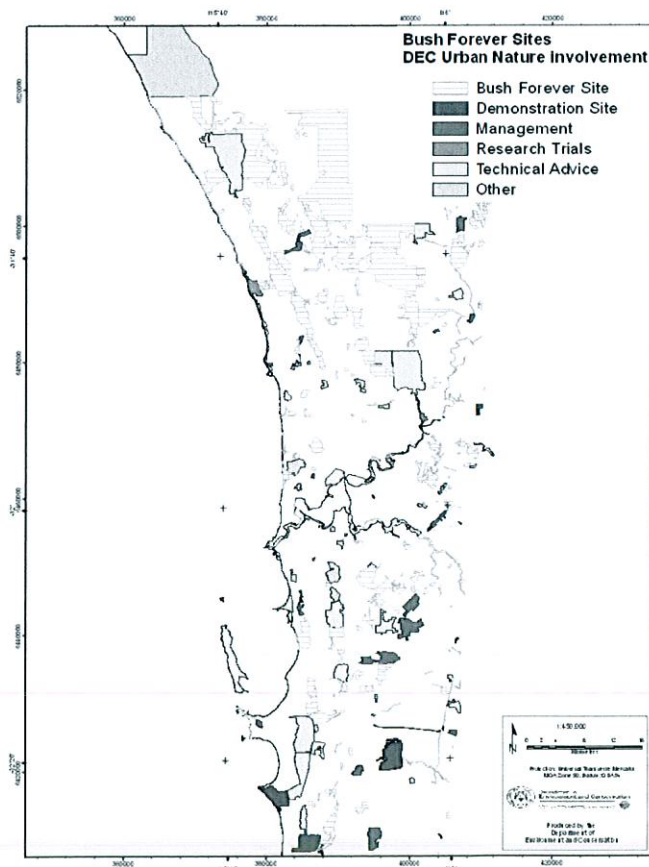
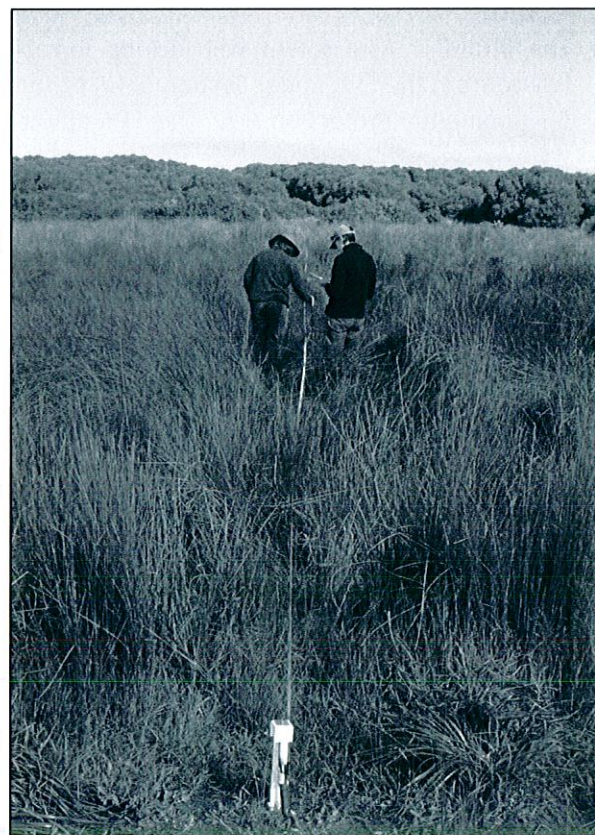


Figure 1a. The Urban Nature Program is currently involved in the management of 89 sites (44,710 ha = 43% of total Bush Forever area).



1b. Measuring regeneration in the Sedgeland of Holocene dune swales threatened ecological community following removal of environmental weed *Euphorbia terracina*.

2. Produce and distribute technical information relating to bushland management

The results of the work on demonstration sites and from research and adaptive management trials is written up into:

- Operational guidelines e.g. Brown, Bettink, Paczkowska, Cullity and French (2011),
- Management notes e.g. Brown and Bettink (2009),
- Reports e.g. Bettink (2008),
- Popular articles e.g. Brown, Paczkowska, Huston and Withnell (2008),
- Conference proceedings e.g. Urban Nature (2006, 2007), Brown and Paczkowska (2012), Valentine, Brown, Ruthrof, Stubbs and Wilson (2012)
- Peer-reviewed scientific articles e.g. Bettink and Brown (2011), Brown and Bettink (2010), Brown and Paczkowska 2008.

3. Raise awareness of the values of Perth bushlands and wetlands and fosters the development of skills through the provision of field days, workshops and training programs

Currently the program liaises with over 60 stakeholders and produces a quarterly newsletter (Bushland News) that is sent out to just under 2,000 subscribers. The program developed a nationally accredited week-long bushlands weeds course that was run on an annual basis for land managers across Western Australia. We currently run an annual workshop series for managers of *Environment Protection and Biodiversity Conservation Act 1999* listed clay-based wetlands of the Swan Coastal Plain, a monthly seminar series to promote and extend research and management projects from across the Swan Region to DEC staff, regular field days at demonstration sites for community volunteers, land managers and scientists, and Urban Nature officers regularly present their work at workshops and conferences.



Figure 2. Regina Drummond (Friends of Brixton Street Wetlands) addressing participants at one of the annual clay-based wetlands workshop.

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THE MRS TEXT AMENDMENT FOR BUSH FOREVER

Jessica Smith, Environmental Defender's Office

Bush Forever MRS Text Amendment 1236/57 – 2012								
Clause no.	MRS text currently	MRS text amendment						
Clause 3(1)	Currently no mention of Bush Forever in Clause 3(1).	"Bush Forever area" means an area referred to in clause 28A(2);						
Clause 16(1a)	Development on reserved land owned by or vested in a public authority may be commenced or carried out without the written approval of the Commission if the development is – (a) permitted development that does not involve the clearing of regionally significant vegetation on a site specified as a <i>Bush Forever</i> site in the <i>Bush Forever Final Report</i> published by the Commission in December 2000; or (b) expressly authorised under an Act to be commenced or carried out without the approval of the Commission.	Development on reserved land owned by or vested in a public authority may be commenced or carried out without the written approval of the Commission if the development is – (a) permitted development other than development in a Bush Forever area; or (ba) permitted development in a Bush Forever area carried out in accordance with – (i) a written agreement between the Commission and the public authority; or (ii) a management plan approved by the Commission; or (b) expressly authorised under an Act to be commenced or carried out without the approval of the Commission.						
Clause 28A	No equivalent clause.	<p>Part IVA – Bush Forever areas</p> <p>28A. Bush Forever areas</p> <p>(1) The purpose of this clause is to identify regionally significant bushland as Bush Forever areas.</p> <p>(2) Land is identified as a Bush Forever area in the manner described in the Table column 1.</p> <table><tr><th>Column 1</th><th>Column 2</th></tr><tr><th>Legend on Scheme Map</th><th>Area</th></tr><tr><td>All land hatched</td><td>Bush Forever area</td></tr></table> <p>(3) The identification of an area as a Bush Forever area – (a) operates in addition to the provisions of this Scheme applying to any underlying zone or reserve and any general provisions of the Scheme; and</p> <p>does not operate to zone or reserve that area.</p>	Column 1	Column 2	Legend on Scheme Map	Area	All land hatched	Bush Forever area
Column 1	Column 2							
Legend on Scheme Map	Area							
All land hatched	Bush Forever area							

HOW CAN YOU COMMENT ON THE MRS TEXT AMENDMENT?

- The MRS Text Amendment is open for public comment until **5:00 pm on Friday 18 January 2013**.
- You can get the amendment report (which describes the proposed amendment) from:
 - the WAPC website
www.planning.wa.gov.au;
 - the WAPC office – 140 William St, Perth;
 - the Battye Library – Alexander Library building;
 - Offices of metropolitan local governments.
- To make a submission, you need to complete and lodge a form 57 with the WAPC (the form is available from the same places as the amendment report).
- The WAPC will accept submissions in a number of different ways:
 - by post, addressed to:
Secretary
WAPC
Locked Bag 2560
Perth WA 6000
 - by email: mrs@planning.wa.gov.au.
 - by fax: (08) 6551 1901.
 - by hand: WAPC, 140 William St, Perth.

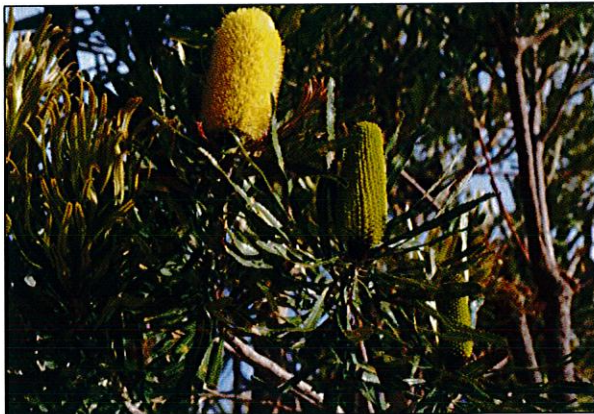
The contact details are listed at the bottom of Form 57.



▲ Clearing of Banksia woodland at Jandakot Airport – Bush Forever Site 388.



▲ **Star Swamp** (Bush Forever Site 204) is a valuable ecological remnant of the Spearwood Dune System. (K. Clarke)



▲ **Candlestick Banksia** (or Biara)
Banksia attenuata. (M. Brundrett)



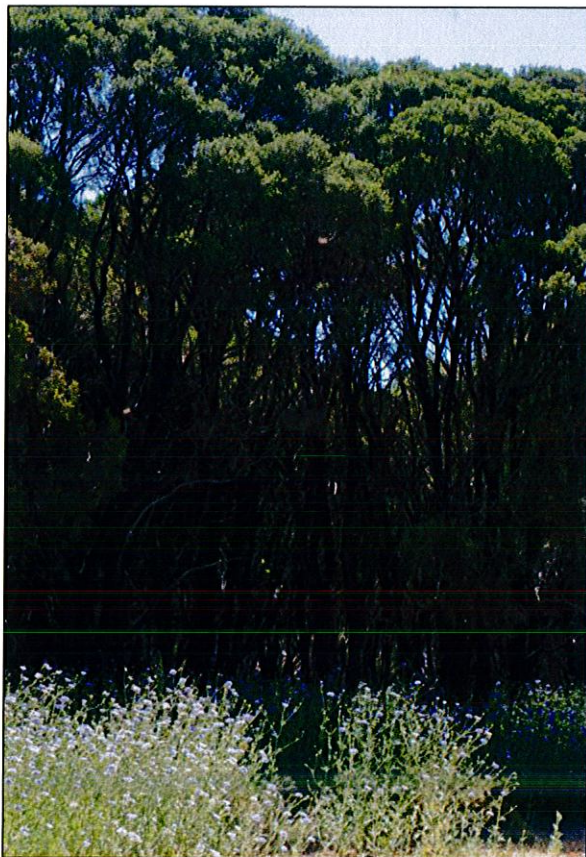
▲ **Chenille Honey myrtle**
Melaleuca huegelii. (M. Brundrett)



◀ **One-sided Bottlebrush**
Calothamnus quadrifidus.
(M. Brundrett)



▲ Coastal strip of Kwongan heath from Burns Beach to Hillarys – Bush Forever Site 325. (K. Clarke)



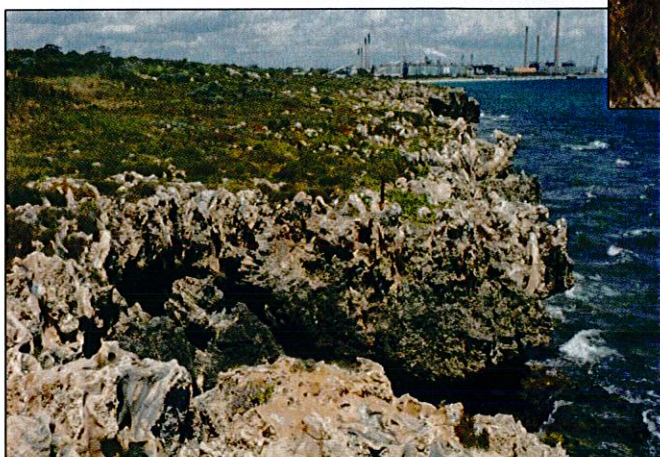
▲ Rottnest Teatree *Melaleuca lanceolata* (K. Clarke) with Blue Lace-flower *Trachymene coerulea* ► in foreground. (K. Clarke)



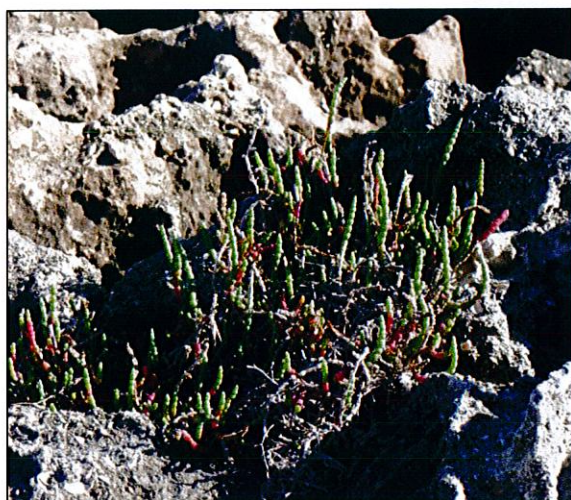
▲ Summer-scented Wattle *Acacia rostellifera*. (K. Clarke)



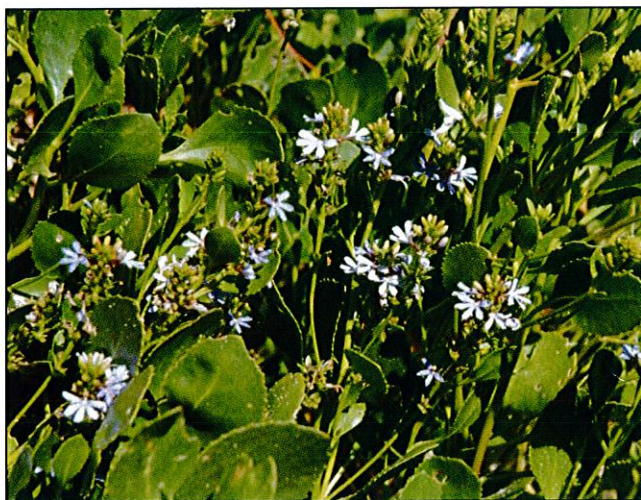
Burns Beach Bushland of Kwongan
heath – Bush Forever Site 322. ►
(K. Clarke)



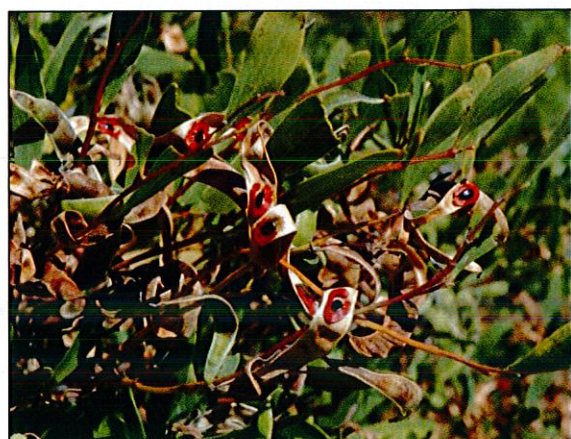
◀ Henderson/Naval Base, adjacent bushland –
Bush Forever Site 346. (K. Clarke)



▲ Beaded Samphire *Sarcocornia quinqueflora*.
(K. Clarke)



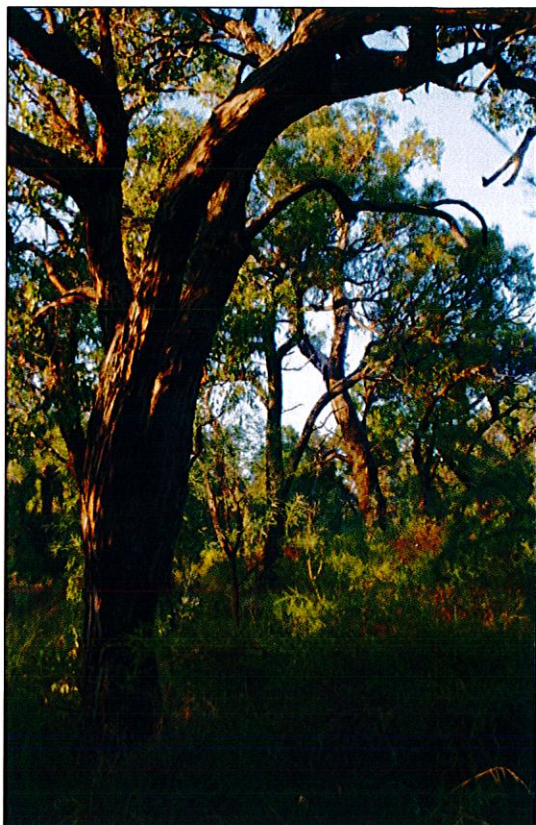
▲ Thick-leaved Fan-flower *Scaevola crassifolia*.
(K. Clarke)



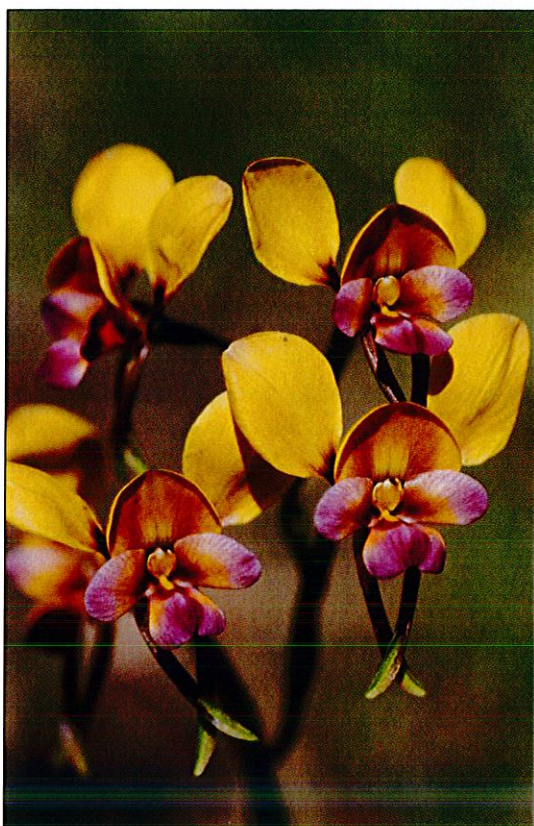
▲ Red-eyed Wattle *Acacia cyclops*. (K. Clarke)



▲ Cockies Tongues *Templetonia retusa*. (K. Clarke)



▲ **Underwood Avenue Bushland** (Bush Forever Site 119) is a woodland dominated by Jarrah and Tuart with *Banksia attenuata*, *B. menziesii* and *B. prionotes* (pictured). (M. Owen)



▲ *Diuris* sp. – Underwood Avenue, Bush Forever Site 119. (M. Owen)



▲ Carnaby's Cockatoo feeding on Banksia seeds – Underwood Avenue, Bush Forever Site 119. (M. Owen)



▲ Forest Red-tailed Black Cockatoo
Calyptorhynchus banksii naso. (M. Owen)



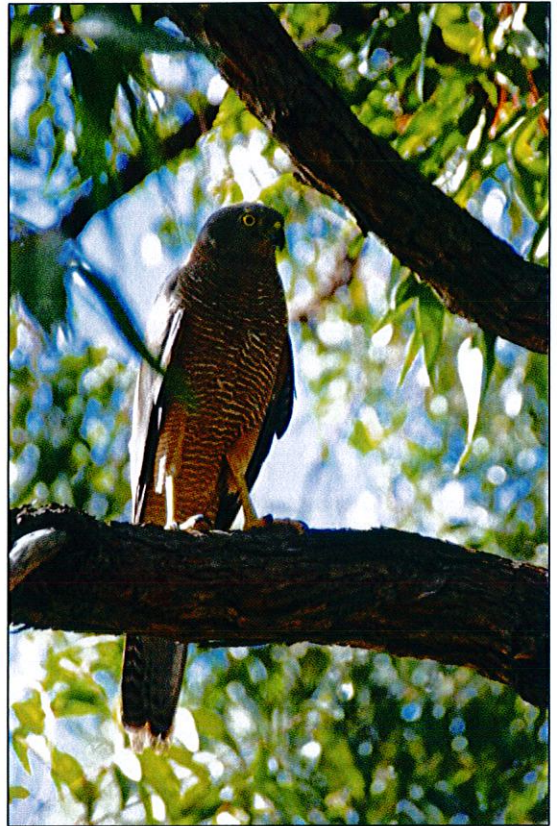
▲ Scarlet Runner *Kennedia prostrata*. (M. Owen)



▲ Pixie Mops *Petrophile linearis*. (M. Owen)



▲ Rhubarb Bolete *Boletellus obscurecoccineus*.
(M. Owen)



▲ Brown Goshawk *Accipiter fasciatus* –
Underwood Avenue, Bush Forever Site 119.
(M. Owen)



▲ Bobtail *Tiliqua rugosa* – Underwood Avenue,
Bush Forever Site 119. (M. Owen)



▲ **Banksia woodland, Koondoola** (Bush Forever Site 201) is a Threatened Ecological Community comprising *Banksia attenuata* over species-rich dense shrublands. (K. Clarke)



▲ Tawny Frogmouth *Podargus strigoides*.



▲ WA Christmas Tree *Nuytsia floribunda*.



◀ Yellow Navel
*Lichenomphalia
chromacea*.
(M. Brundrett)



▲ Holly-leaved Banksia *Banksia ilicifolia*.



▲ Rose-tipped Mulla Mulla *Ptilotus manglesii*.
(M. Brundrett)



▲ Hairy Yellow Pea
Gompholobium tomentosum.



▲ Eyelash Cup Fungus *Scutellinia scutellata*.
(M. Brundrett)



▲ Crusader Bug *Mictis* sp.

◀ *Zamia Macrozamia fraseri*



▲ Anstey-Keane Dampland (Bush Forever Site 342) with Fringed Regelia *Regelia ciliata* in foreground. (B. Fremlin)



▲ Female Splendid Fairy-wren *Malurus splendens*. (B. Fremlin)



▲ Woolly Dragon *Hemiphora uncinata*. (B. Fremlin)



◀ Heath Monitor *Varanus rosenbergi*. (B. Fremlin)



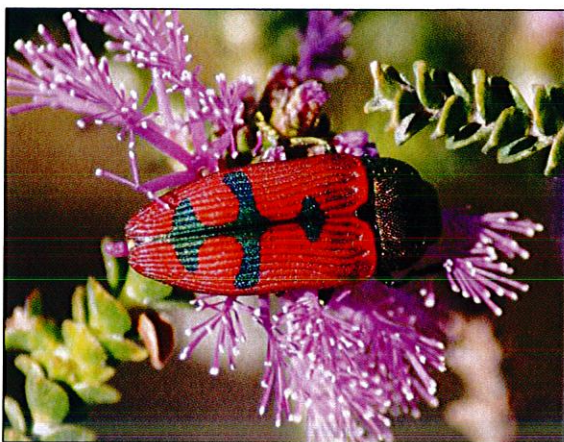
▲ Sand Bottlebrush *Beaufortia squarrosa*
Anstey-Keane Dampland. (B. Fremlin)



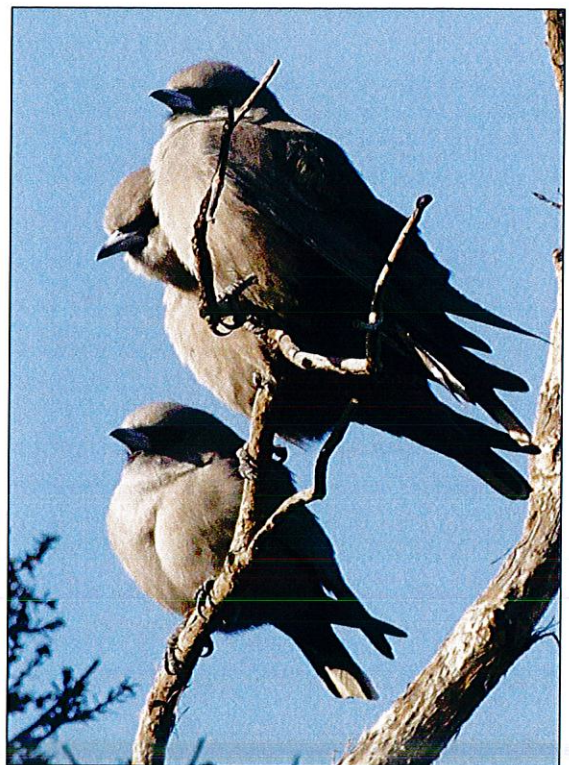
▲ Blue-banded Bee species on *Regelia ciliata*.
(B. Fremlin)



▲ Australian Painted Lady *Vanessa kershaw* on
a *Dasypogon bromeliifolius* flower. (B. Fremlin)



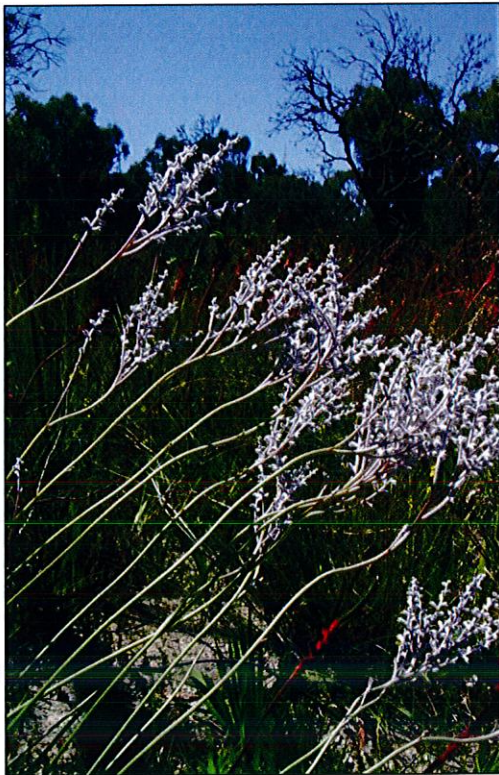
▲ Jewel Beetle *Castiarina aureola*. (B. Fremlin)



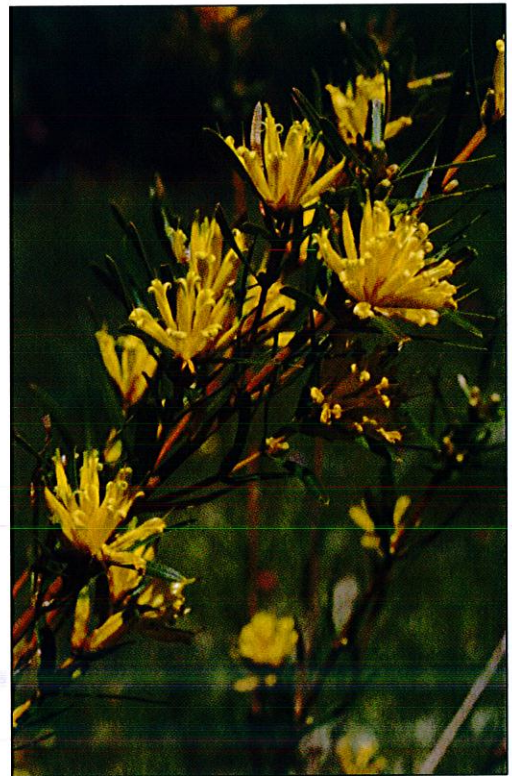
▲ Black-faced Woodswallow *Artamus cinereus*.
(B. Fremlin)



▲ **Hawkevale Bushland** (Bush Forever Site 122) is a species-rich shrubland that is an endangered Threatened Ecological Community. (K. Sarti)



▲ Wavy-leaved Smokebush *Conospermum undulatum* (Declared Rare Flora). (K. Sarti)



▲ Many-flowered Honeysuckle *Lambertia multiflora* var. *darlingensis*. (M. Brundrett)



▲ Donkey Triggerplant *Styloidium diuroides*.
(M. Brundrett)



▲ Lance-leaved Cassia *Labichea punctata*.



▲ Blue Tinsel Lily *Calectasia narragara*.
(M. Brundrett)



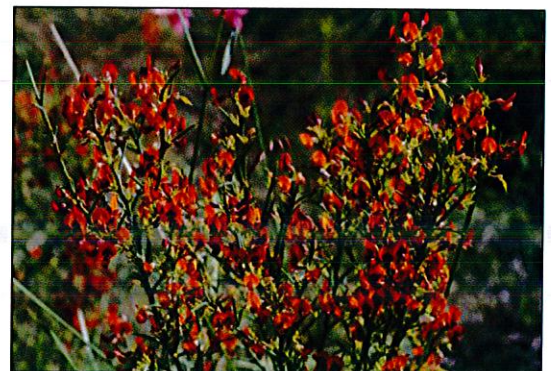
▲ *Melaleuca trichophylla* complex. (M. Brundrett)



▲ Winter Bell *Blancoa canescens*.
(K. Sarti)



▲ Bristly Cottonhead *Conostylis setigera*.
(M. Brundrett)



▲ Firebush *Daviesia physodes*. (M. Brundrett)



▲ *Amanita* sp. – Warwick Open Space,
Bush Forever Site 202. (M. Brundrett)



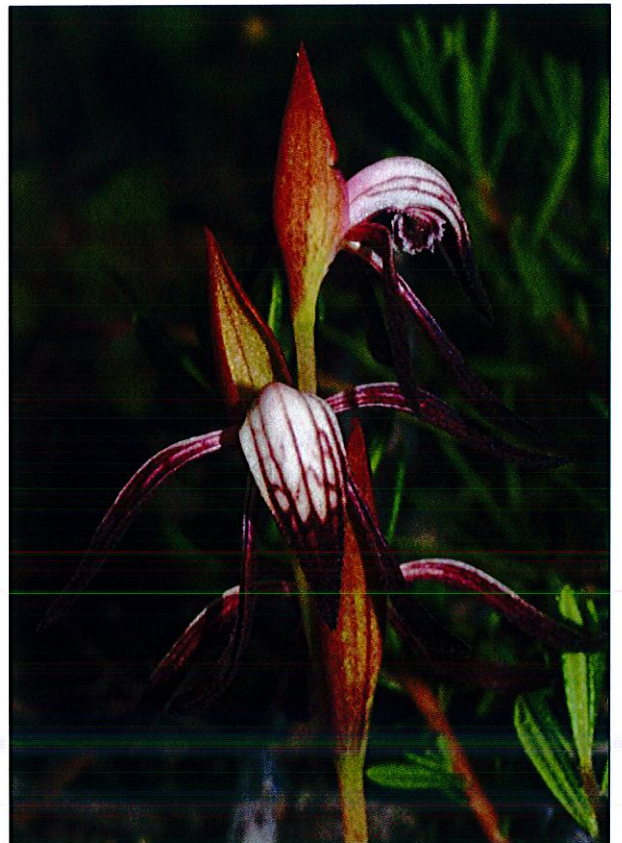
▲ Pink Fairy Orchid *Caladenia latifolia* – Warwick
Open Space, Bush Forever Site 202.



▲ Foul-smelling Red Fingers *Colus pusillus* –
Warwick Open Space, Bush Forever Site 202.



▲ Graceful Sun-moth *Synemon gratiosa* –
Warwick Open Space, Bush Forever Site 202.



▲ Red Beaks *Pyrorchis nigricans* – Warwick Open
Space, Bush Forever Site 202.

CASE STUDY: SAVE THE ANSTEY-KEANE BUSH FOREVER SITE #342

Rod Giblett and John Ryan, Friends of Forrestdale

ANSTEY-KEANE SITE REPORT CARD

Rod Giblett, Friends of Forrestdale

The Anstey-Keane Bush Forever Site is part of Jandakot Regional Park. It is located in Forrestdale within the City of Armadale.

381 species of native flora have been recorded at this site. This is the second highest number of floral species out of all the Bush Forever sites. It is second only to the Greater Brixton site. The Anstey-Keane site includes rare flora and two threatened ecological communities. However, it is important to note that a full survey of the site has never been undertaken. Far more species of flora and fauna may exist on the site than have been recorded to date.

For instance, in December 2010 the Western Australian Museum reported the discovery of a new species of bee, the 'megamouth bee' *Leioproctus muelleri*, at the site.

The site is bounded by Armadale Road to the south, Ranford Road to the north-east, Skeet Road to the north-west and Anstey Road to the south-east. The site has seven owners and managers; two are lots still in private hands. One lot belongs to Landcorp, the semi-government land agency and developer. A road reserve is vested in the City of Armadale. The Water Corporation has a drain that goes right through the middle and Western Power has an easement for two sets of power lines that criss-cross the site. The balance is managed by the Department of Environment and Conservation Regional Parks Branch. The easiest place to access the site is at the corner of Anstey and Keane Roads where there is a stile.

The site is facing many threats. For a start, the City of Armadale is proposing to extend Keane Road right through the middle of the site. This proposed road would not only destroy the flora in the road reserve, which contains some of the most pristine flora in the site but also seriously compromise the fauna which lives there, including bandicoots and kangaroos that live in the site and cross the road reserve. The proposal for the road was first made nearly five years ago and a Public Environmental Review under the Environmental Protection Act has

been in preparation since then. Participants at this conference are encouraged to make a submission opposing the road.

The area is also an important dampland and so it should be nominated to be added to the Directory of Important Wetlands in Australia to try to ensure that its values are conserved and not compromised by a road cutting through it. The Wetlands Conservation Society and the Friends of Forrestdale are encouraging the state government to make the nomination – Environment Minister Marmion has not replied to our letter. This is an embarrassing lapse of ministerial protocol, especially when his counterpart in Minister Day has replied to several letters about Anstey-Keane as a Bush Forever site. The site is being regularly damaged by off-road vehicle use and rubbish dumping.

The Urban Bushland Council and the Friends of Forrestdale are calling on the state government to expedite as fast as possible, the acquisition of the two lots in private hands. In the meantime we are calling on them to take urgent action to control off-road vehicle use. We are also calling on the City of Armadale to cede its vesting to the Crown for the Keane Road reserve. It has ceded its vesting in various road reserves in Bush Forever site 345 around Forrestdale Lake. The reasons for doing so and the conservation values of the site are well-documented in Bush Forever.

Here is my report card on Anstey-Keane Bush Forever site:

Land acquisition	Fail
Ceding of road reserve	Fail
Prevention of off-road vehicle use	Fail
Prevention of rubbish dumping	Fail
Nomination to Directory of Important Wetlands in Australia	Fail
Stakeholder co-operation	Pass
Leadership by government and senior management	Fail
CONSERVATION OF BUSHLAND	Fail

The conservation values of the area are beautifully presented in an article published in 'Landscape' magazine (Winter 2009) published by the Department of Environment and Conservation. Copies of this are available as a reprint.

Dr John Ryan of Edith Cowan University selected the Anstey-Keane Bush Forever site as one of his case studies for his recently completed PhD thesis on the cultural botany of south west Australian flora. His paper is presented below in these proceedings.

THE HERITAGE VALUES OF ANSTEY-KEANE BUSH FOREVER SITE: A PERSONAL REFLECTION

John Ryan, Edith Cowan University

Botanically diverse places, such as Anstey-Keane Damplands in the southern suburbs of Perth, have diverse natural and cultural heritage values. My hope is that we can identify and leverage these different heritage values in our conservation efforts, as proponents of the Bush Forever program and as advocates of Western Australian flora and fauna. Since coming to Perth in 2008, I've developed a keen interest in the cultural significance of South-West flora, inspired initially by reading George Seddon's books 'Sense of Place', 'Landprints: Reflections on Place and Landscape' and 'The Old Country'. As a plant enthusiast (rather than a botanist), I came from the north-eastern United States where I was involved in rare and endangered flora conservation. My interest is in the occurrence of South-West plant species in literature, art, explorers' accounts, settler diaries, community memories and other expressions of the past and present.

Anstey-Keane has been part of my heritage research, along with other key biodiversity enclaves in the greater South-West hotspot: Fitzgerald River National Park between Albany and Esperance, Lesueur National Park between Perth and Geraldton, and more recently Kings Park and Botanic Garden. Why is Anstey-Keane significant for our State's heritage? The first reason is its botanical diversity: 381 total plant species, second only in the metropolitan area to the Greater Brixton Street Wetlands. The second is its endangered status: I feel a sense of urgency for Anstey-Keane, as a repository of biodiversity in the northern Pinjarra Plain and within the rapidly expanding southern suburbs.

The third is its suburban location: between Armadale and Cockburn, Anstey-Keane is more accessible to a growing urban and suburban population centre than the regional national parks. It can be a place to educate people about plant diversity and the importance of protecting bushland. The fourth is its potential for conservation visibility: progress made at Anstey-Keane can serve as an example of best practice in Western Australia. Again, the proximity of the site to Perth, in this regard, can be an asset. The fifth is cultural heritage value: along with biodiversity and proximity to a growing population, comes a host of cultural values or what I'd like to refer to as botanical heritage.

Botanical heritage, also known in the literature as plant-based cultural heritage, is a living heritage relating the past, present and future to plants, people and place. When it comes to heritage, we tend to think of the past. I prefer to think in terms of our inheritance of the past and its ripple effect in the present, ensuring a vital, just and multi-species future. We've inherited places like Anstey-Keane and are charged to care for them in a variety of ways, including conserving their cultural legacies. For me, botanical heritage includes the living plants and their ecological and genetic values as well as the cultural heritage associated with the plants. There are three categories of botanical heritage that I have been researching: (a) plants as materials for food, ornamentation, medicine and fibre; (b) plants as subjects of literary, artistic or historical representation; and (c) plants as catalysts of community memory, cultural identity and personal well-being.

Amongst the 381 plant species at Anstey-Keane, there are those that distinguish the botanical character of the place. Consider the Swamp Fox Banksia, Sand Bottlebrush, Woolly Dragon, Purdie's Donkey Orchid, Green Kangaroo Paw and *Regelia ciliata*, from where proposed name 'Regelia Reserve' comes. When I first visited Anstey-Keane in 2008, there was a profusion of Red and Green Kangaroo Paws (*Anigozanthos manglesii*), a species with a remarkable cultural legacy. *Anigozanthos manglesii* is in the Haemodoraceae family, a word derived from *haima* for blood and *doron* for gift. It is literally a gift of blood. *Anisos* denotes 'unequal' and *anthos* 'flower', alluding

to unequal lobes of the perianth. Its species name refers to Captain James Mangles (1786–1867), botanical enthusiast and cousin of Lady Stirling, who visited the Swan River Colony in 1831. The plant has several common names, including Mangles Kangaroo Paw and Common Green Kangaroo Paw, as well as numerous Nyoongar names, including Kuttych, Kurulbrang, Krulbrang, Nollamara and Yonga Marra. Nyoongar people consumed the tender, starchy rhizomes before the emergence of the flower. In 1834, botanist David Don published in *The British Flower Garden*, the first formal description of a cultivated Mangles Kangaroo Paw: *'This singularly beautiful species of Anigozanthos was raised in the garden at Whitmore Lodge, Berks, the seat of Robert Mangles, Esq. from seeds brought from Swan River by Sir James Stirling, the enterprising governor of that colony, by whom they had been presented to Mr. Mangles'*. The flower now frames the crown of the Western Australian Coat of Arms. The blazon reads: 'And for Crest: On a Wreath Or and Sable The Royal Crown between two Kangaroo Paw (*Anigosanthos* [sic] *Manglesii*) flowers slipped proper'. Later in the history of Western Australia, it was selected as State Floral Emblem in 1960, in a proclamation made by then Premier of Western Australia, David Brand. These are just a few examples indicating how the heritage of this species can be approached from different historical moments and cultural traditions.

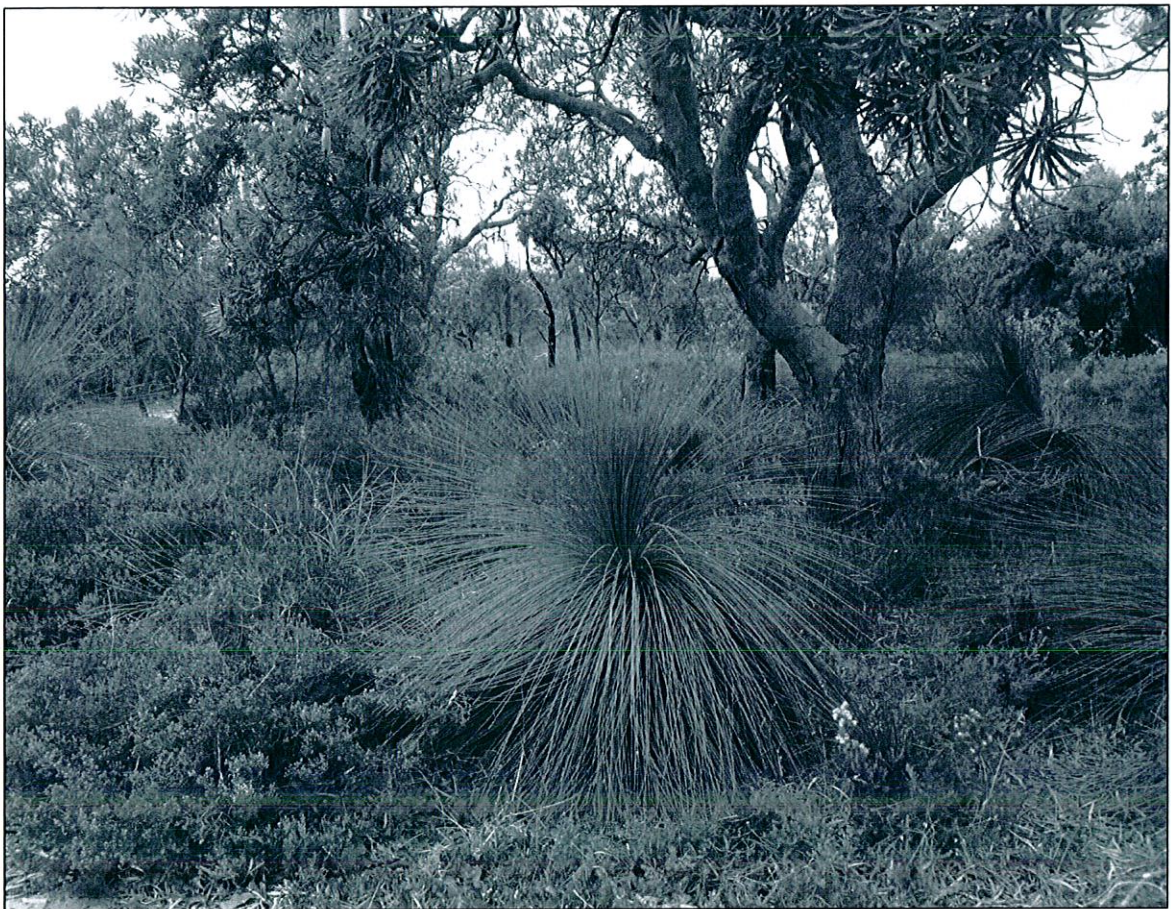
Another prominent example of a plant with strong heritage value is Balga, a species most readers will be familiar with. Its genus name *Xanthorrhoea* comes from *xanthos* for 'yellow' and *rheo* for 'flow', indicating its resin. The epithet *preissii* recalls Johann August Ludwig Preiss (1811–1883), a German-born British botanist and zoologist. Balgas are also known as Grass Trees or especially in colonial times, Blackboys. Numerous Nyoongar names are known: Baaluk, Balag, Balka, Barro, Kooryoop, Paaluc, Palga and Yarrlok. The species has strong Nyoongar cultural legacy. The long, thin fronds of the Balga, called mindarie, were used

as bedding and to protect the roof of a mia-mia. When it rained, the water flowed along the underside of the fronds, keeping those inside dry. Colonists used the mindarie in a similar way for thatch. Nyoongar people used the resin as a binding agent, after crushing it in a heated stone pot with charcoal and kangaroo droppings. The molten resin produced by this process became a cement to fasten objects together, such as stone spearheads and wooden shafts. Moreover, Nyoongar people used Balga resin for tanning hides. Resin was dissolved in water in a rock hole heated by hot stones. The hides of yonga (kangaroo) and koomal (possum) were scraped, softened and then put in the rock hole for a period of soaking. The skins were then used as bookha (clothes), wogga (blankets) or coorda (carry-bags). Colonists processed the resin in a similar way to yield varnish. Additionally, Nyoongar people used the long stem of the flower as a torch, particularly useful when shifting campsites. The shaft of Balga was used for igniting fires. As the 'refrigerator' of the bush, Balga housed bardi grubs, which were collected from the trunks of dying trees as a nutritious and sustaining bush food.

Finally, I would like to stress that biodiversity is closely connected to cultural heritage. Thus, we can think of both conserving and creating heritage values. In conserving the plants, we conserve their cultural heritage values for future generations. However, I feel we also have to help create heritage. This means, for example, bringing artists, poets, novelists, documentary film makers, performers, cooks and others to places like Anstey-Keane to create new cultural expressions of the biodiversity. The arts and sciences can contribute collaboratively to conservation through their respective strengths. My initiative FloraCultures, funded by Edith Cowan University and in partnership with Kings Park, is an online archive and guide to Perth's plant-based cultural heritage. It is in production in 2013. Anstey-Keane is one of the sites that will eventually be included because it is integral to Perth's botanical heritage.



▲ Kensington Bushland, Kensington – Bush Forever Site 048. (K. Sarti)



▲ Cottonwood Crescent, Dianella – Bush Forever Site 043. (K. Sarti)

BUSH FOREVER REPORT CARD

Mary Gray (President) and Cath Cooper (Vice President), Urban Bushland Council

'By implementing Bush Forever, we can achieve the aim of "Keeping the Bush in the City", and continue to create a city that is the envy of the rest of the world.'

This quote comes from the 'Foreword' to *Bush Forever Volume 1* (December 2000), Graham Kierath, Minister for Planning; Cheryl Edwardes, Minister for the Environment and Kim Hames, Minister for Water Resources.

'Conserving biological diversity (biodiversity) is one of the major global environmental challenges facing humanity

'Australia has a major role to play in the conservation of biodiversity as it is one of the world's most biologically diverse nations, supporting species generally found nowhere else. Perth's biodiversity is one of the highest recorded in any major city, and through Bush Forever, Perth has the unique opportunity to become the biodiversity capital of Australia.'

'Every city needs its natural spaces: they are impossible to replace once lost.'...

'An important aim of Bush Forever is to foster a greater awareness and appreciation of urban bushland, and to develop a stronger sense of responsibility and belonging by the community through active management to control threatening processes.'

'The vision is the creation of a conservation estate of which Perth can be justly proud, so that everyone has their own "Kings Park" within easy reach for present enjoyment and as a legacy of our unique quality of life, to hand on to our children.'

The Vision, *Bush Forever Volume 1* (December 2000).

INTRODUCTION

The Western Australian Bush Forever initiative was introduced in 2000 by the State Government, to provide ongoing protection and conservation for areas of regionally significant bushland in the rapidly growing urban area of Perth. Over the last 12 years the plan has been partially implemented with the acquisition of a number of Bush Forever Areas

(BFAs) and the establishment of the Urban Nature group in the Department of Environment and Conservation (DEC). There is, however, a deep concern that, left incomplete, the plan has not and will not achieve its vital aim of protecting these priceless natural areas which contain astounding, world-recognised biodiversity.

The Urban Bushland Council WA (UBC) represents some 70 community groups and is committed to the protection of urban bushland. In 2012 the UBC met with a wide range of government and volunteer stakeholders to assess the level of implementation. The aim was to highlight areas of success as well as deficiencies in order to raise government and community awareness of the situation and to advocate for the full protection and conservation of all Bush Forever Areas.

The results from our workshop in September 2012, meetings and investigations are contained in this paper which has been framed as a UBC Report Card for Bush Forever implementation, along with our specific recommendations to achieve full compliance with the intentions of Bush Forever. We thank those people that met with us and the UBC members that worked on this project.

HISTORICAL CONTEXT

The Urban Bushland Council has always been a strong supporter of Bush Forever. Indeed during the 1990s the Council consistently lobbied the State Government for a conservation scheme to be introduced and adopted. The first position paper by the Council in June 1994 was entitled: *'Protecting our Bushland Heritage – a position paper towards statutory protection of urban bushland.'* It called for a State Government statutory policy on urban bushland with nine measures recommended.

In 1995, the State Government released the *'Urban Bushland Strategy'*. Then in 1996 the *'National Strategy for the Conservation of Australia's Biological Diversity'* was released and WA became a signatory. *'Perth's Bushplan'* published in December 1998 was jointly

prepared by the Environmental Protection Authority (EPA), Western Australian Planning Commission (WAPC), National Parks and Nature Conservation Authority (NPNCA), Department of Conservation and Land Management (CALM) and the Water & Rivers Commission (WRC). 'Bushplan' was officially endorsed and launched by the State Government in December 2000 re-named as 'Bush Forever'.

Here we are twelve years later in December 2012. Bush Forever is a comprehensive plan of action which was to be implemented over a ten-year period. It sought to protect and conserve 51,200 ha of regionally significant bushland on the Swan Coastal Plain part of the Perth Metropolitan Region, including the addition of 17,800 ha of bushland not protected in 2000.

The Bush Forever text in Volume 1 sets out six 'Policy Objectives' to be implemented by four 'Policy Measures' and fifteen 'Actions'. The UBC believes these are very clear and comprehensive and commends the officers and the government of the day for researching and preparing such an outstanding plan of action to keep Perth as the 'City in the Bush'.

REPORT CARD FOR BUSH FOREVER POLICY OBJECTIVES

The Bush Forever Policy Objectives focus on protection of regionally significant bushland, with the word 'protection' appearing in four of these six Policy Objectives. Management is also a key word, appearing in two of the Objectives. Importantly, *Protection is defined as "all of the processes of ensuring the continued existence and viability of bushland, and may include preservation, maintenance and restoration"*. (Bush Forever Vol. 1, p. 9). Thus the objective of management is certainly included.

As at December 2012, none of the six Policy Objectives has been fully achieved, only four have been partly achieved, and two are not achieved (Figure 1).

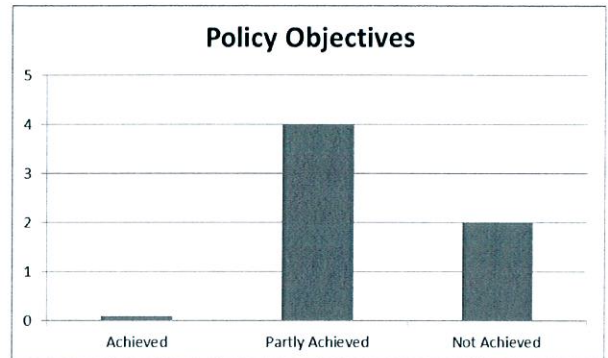


Figure 1. Implementation of Bush Forever Policy Objectives at December 2012

POLICY OBJECTIVES ACHIEVED Nil

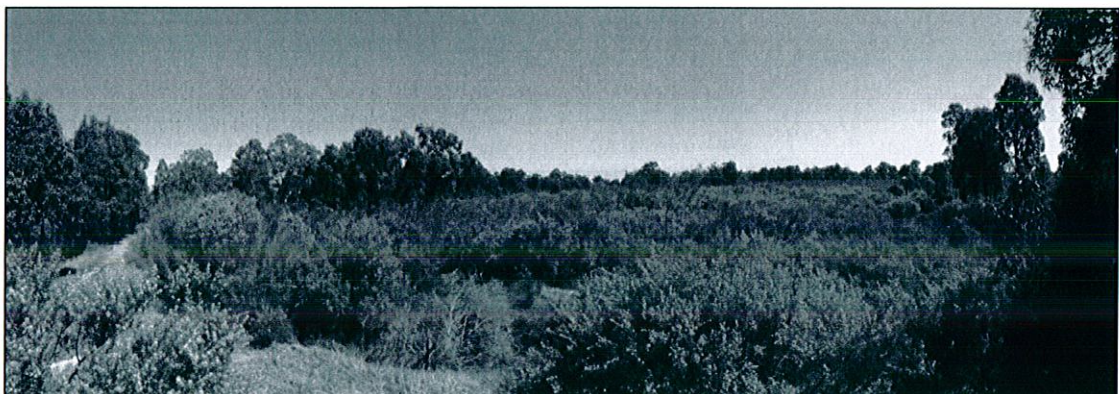
POLICY OBJECTIVES PARTLY ACHIEVED

Policy Objective 1

'To meet the needs and aspirations of the community of Western Australia for the appropriate protection and management of bushland of regional significance in the Swan Coastal Plain portion of the Perth Metropolitan Region.'

PARTLY ACHIEVED

Community aspirations for bushland conservation were clearly evident in the ten years leading up to the release of Bush Forever in 2000 and indeed, we believe, it was community pressure that resulted in Bushplan coming into fruition.



▲ Brixton Street Wetland, Kenwick – Bush Forever Site 387. (K. Sarti)

As an example, on 3rd June 1997 at the National Trust's Old Observatory, the UBC presented *Community Expectations of Perth's Bushplan and Government Policy Arrangements for the retention and management of urban bushland* to officers Gary Whisson, Department of Environmental Protection; David Nunn, Ministry For Planning; David Mitchell, Conservation and Land Management; and Andrew Watson, Agriculture WA. This was based on 14 case studies provided by community groups. The key expectations from these groups were for:

1. Statutory recognition and protection for urban bushland.
2. A new 'Bushland Conservation' zone in the Metropolitan Region Scheme (MRS).
3. Immediate interim protection of all Bushplan areas.
4. A process for approval of clearing.
5. An Urban Bushland Authority – with statutory powers.
6. An improved public appeals process – for bushland decisions in the planning process
7. Regional Parks legislation.
8. A management framework for regional bushland.
9. Protection for local bushland.
10. A Management framework for local bushland.
11. A Bushland Levy.
12. Where there are proposed sales of school bushland to provide funds for schools, retention of bushland to be advocated for education of children.
13. Exemption from Land Tax for private bushland managed for conservation (covenants, zoning).

Another very significant initiative established in 1991 by the EPA, was Ecoplan under the outstanding direction and leadership of Margo O'Byrne. It was a direct response to the Conservation Council's request to encourage public ownership of System 6 areas (which was the forerunner of Bush Forever). The strategies employed by Ecoplan included the publication of a quarterly Newsletter, 'Ecoplan News'; skills training for community volunteers which developed into the Skills for Nature Conservation program (in partnership with

Swan Catchment Centre and Greening Australia) ; support for community bushland management, Bushland Care Days (in partnership with Conservation Volunteers Australia and sponsored by Alinta Gas). Between 1991 and 2001 the number of 'Friends of' groups increased from approximately 20 to more than 400 (M. O'Byrne pers. comm., November 2012). O'Byrne wrote about community involvement in urban bushland in four publications: Craig *et al.* 2000, McDonald (Ed) 2001, Paulin 2006, and Urban Bushland Council WA 1998.

In the next decade, results of two community surveys conducted in 2007 and 2008 across five Local Governments in the Perth Metropolitan Region showed that over 90% of respondents thought it to be important to have some natural bushland in the local area. Over 80% of respondents considered the local natural bushland to be a good place for wildlife, over 60% considered it attractive, relaxing and that it increased the value of local property. The survey questionnaires were distributed to randomly selected residents living near one of 15 bushland reserves, and the response rate was three times the expected rate for the selected survey method (R. Zelinova, WALGA pers. comm., October 2012).

The community aspirations are for protection and management. Protection has only been partially achieved. We have not been told how many of the 287 Bush Forever Areas have been secured for the purpose of conservation or the number that are properly protected and managed.

We do know however, that many areas (covering 33,400 ha) in the year 2000, were already protected to some extent in local government reserves and nature reserves. Of the additional 17,800 ha to be added, 94 Areas were rezoned in 2010 to Parks and Recreation (P&R) Reservation in the major MRS Amendment for Bush Forever and related lands. Other Areas have been rezoned to P&R in other major Amendments. But many of the individual sites within these Areas have not yet been acquired by the WAPC and are not actively managed to retain their conservation values.

An example of this is the Case Study given in these proceedings for the Anstey-Keane Damplands, recognised as being in the highest priority for conservation due to its rich biodiversity. Part of the Area is unfenced, part is unmanaged. Without adequate gates, unauthorised access by vehicles has resulted in rubbish dumping, damaged vegetation, making tracks and has facilitated weed invasion. Also a road reserve through the damplands has not been revoked.

Whilst Parks and Recreation reservation provides some protection in that the intent is for these areas to be acquired by government eventually, there is no obligation on the land manager to retain conservation values in the interim. Some sites are well managed by their landholders and local communities, but it is the lack of adequate management of State and local government sites which is the biggest shortfall and this is of enduring community concern.

Data for August 2012 shows that 101 (out of 287) Bush Forever Areas or part Areas have no management agency assigned (Hansard, 2012). This applies to more than one third of Areas.

Policy Objective 2

'To establish a conservation system that is, as far as is achievable, comprehensive, adequate and representative (CAR) of the ecological communities of the region.'

PARTLY ACHIEVED

This Policy Objective has only been partly achieved.

A target of retention and protection of at least 10% of each of the 26 Heddle vegetation complexes was set, rather than at least 10% (or other higher figure) of each of the more specific Floristic Community Types. This was because comprehensive data was only available for the broader Heddle complexes. Floristic Community Types were used, however, in site selection. (See Keighery, B. page 13 in these proceedings).

The Government has not provided data to show the percentage that has now been secured for each vegetation complex. We do know, however, that complexes such as Karrakatta Central and South, and Bassendean

Central and South still do not have at least 10% secured and protected for the Perth Metropolitan Region. Much of the latter has been lost by extensive clearing of top quality bushland and vegetated wetlands in both Perth and Jandakot Airports, permitted by the owners, the Commonwealth Government. They can never be replaced.

Given the status of the Swan Coastal Plain as a globally recognised hotspot of plant diversity, the failure of successive State governments, and especially the incumbent government, to achieve the planned protection as outlined in the Bush Forever plan is both regrettable and inexcusable.

RECOMMENDATION

- I. All Bush Forever areas be formally secured and protected by January 2015 and managed for the purpose of nature conservation so that a world class CAR reserve system is in place for Perth ahead of expanding suburbia.

Policy Objective 3

'To achieve the protection of Bush Forever Sites through a collective and shared responsibility on the part of government, landowners and the community.'

PARTLY ACHIEVED

Protection through a collective and shared responsibility has only been partially achieved.

There has certainly been much achieved by shared responsibility of key agencies such as DEC, WAPC, Planning, and the Western Australian Local Government Association (WALGA) with landowners and the community. Urban Nature in DEC and the Perth Biodiversity Project (PBP) based in WALGA represent outstanding examples of a shared responsibility for assessment and management of bushland sites, and PBP has enhanced support within Local Governments for Bush Forever. This work is discussed in the paper by Zelinova and Del Marco – refer page 70 in these proceedings.

The State Government has still not provided formal protection over all Bush Forever sites so that all agencies are required to share the

responsibility for protection. Legally binding protection is needed under both the Planning and Development Act 2005, *and* under either the Conservation and Land Management Act or the Environmental Protection Act. Without formal protection over all of Bush Forever, some Government agencies such as Main Roads (Roe-8 proposal), Landcorp (Point Peron and Mangles Bay Marina proposal), and some local governments (City of Armadale proposed road through Anstey-Keane Damplands) are not sharing the 'whole of government' responsibility and are not respecting the conservation policy status of Bush Forever Areas. These agencies have failed to modify their development plans to avoid Bush Forever Areas.

Also some private landholders have not taken their share of responsibility to maintain conservation values.

Policy Objective 4:

'To secure partnerships between landowners, government and the community in conservation management through government and community advice, assistance and incentives.'

PARTLY ACHIEVED

Partially achieved.

There have been some major achievements in conservation management:

Ecoplan was established in the 1990s in DEP and then this evolved into:

Urban Nature established in CALM (now DEC).

The Land for Wildlife program supports private landholders (although there are few in Bush Forever sites).

Conservation covenants with either the National Trust or DEC who give conservation management advice and assistance.

Lowlands Bushland (BF368, BF372) is a good example for private owners, with more than 1,000 ha of Bush Forever. Also North East Ellen Brook Bushland, Bullsbrook (BF002).

Some councils have initiated partnerships and support with landholders of Bush Forever. For example, the Shire of Serpentine-Jarrahdale provides technical advice to private landholders

and has a conservation zone in its Town Planning Scheme.

Privately owned Bush Forever Areas protected by Conservation Covenants with DEC are:

- BF site 291 (Covenant area 4.066 ha).
- BF site 463 (Covenant area 17 ha, not yet registered on title, however is a condition of development).
- BF site 213 (Covenant area 213 ha).
- BF site 070 (Covenant area 10.61 ha).
- BF site 369 (four Covenant areas – 6.8, 1.4, 6.1 and 2.26 ha).

Many community Friends groups assist in conservation management of reserves in partnership with their land managers, especially Local Government Authorities. Unfortunately these excellent initiatives only extend to a fraction of Bush Forever Areas.

RECOMMENDATIONS

II. Support via partnerships and/or incentives be made available for all Bush Forever Areas.

III. A State-based conservation incentive scheme be established for private landholders.

POLICY OBJECTIVES NOT ACHIEVED

Policy Objective 5

'To establish a range of measures that will enable the recommendations of Bush Forever for the protection of regionally significant bushland to be protected by 2010'

NOT ACHIEVED

This objective has not been achieved either **by 2010** or by today December 2012.

It is not known how many of the 287 Bush Forever Areas (BFAs) have been acquired and/or formally secured for protection. Whilst Parks and Recreation (P&R) zoning provides some protection, there are many sites not so rezoned, and even P&R zoned bushland may be cleared for active recreational uses such as ovals, tennis courts and recreation centres. Over all Bush Forever Areas, there is no legally binding protection of bushland values *per se*.

Furthermore, lack of active management at so many sites means a failure in 'protection'.

We do know that, as of August 2012, there are 101 (out of 287) Bush Forever Areas or part of Areas with no management agency assigned. In October 2010 the respective figure was 106 sites, so in two years only 5 additional Areas have acquired a management agency.

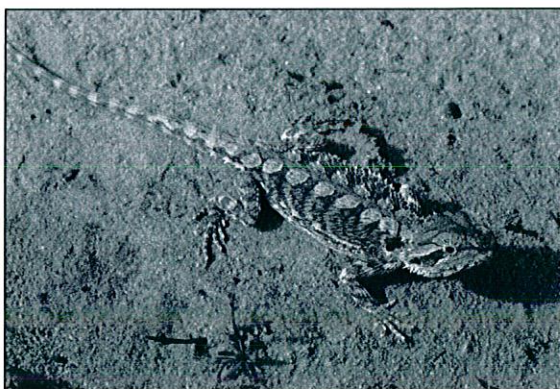
As at August 2012, a total of 79 (out of 287) Bush Forever Areas or part of Areas are privately owned, the same figure as at October 2010. Private ownership may not be a problem as many landholders are actively or passively managing their sites to retain their values. In other private sites, however, lack of management and degradation of values from disturbance, weed invasion and vandalism is a major problem. **Once areas are degraded, they can never be restored or revegetated to their former condition.**

Policy Objective 6

'To bring greater certainty to the process of land use planning and environmental approvals by the early identification and protection of areas of regionally significant bushland.'

NOT ACHIEVED

This Objective is not achieved. Again it is the legally binding protection for all sites that is missing. If all sites were legally protected from incursions and clearing not permitted, planning certainty would prevail.



▲ Western Bearded Dragon *Pogona minor*.
(M. Brundrett)

REPORT CARD FOR BUSH FOREVER POLICY MEASURES

There are four Bush Forever Policy Measures and as at December 2012 only two of these have been fully achieved. One has been partly achieved and one has not been achieved (Figure 2).

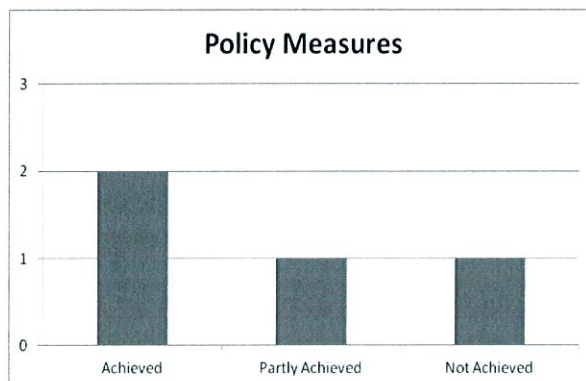


Figure 2. Implementation of the Bush Forever Policy Measures, December 2012.

POLICY MEASURES ACHIEVED

Policy Measures 1 and 2

Bush Forever released and endorsed.

ACHIEVED

The first two Policy Measures have been achieved: Bush Forever was released and endorsed in December 2000, and successive governments have continued their endorsement and implementation process.



▲ Harsh Hakea *Hakea prostrata*. (M. Owen)

POLICY MEASURES PARTLY ACHIEVED

Policy Measure 4

Presumption against clearing where less than 10% of a vegetation complex currently remains on the Swan Coastal Plain portion of the Perth Metropolitan Region.

PARTLY ACHIEVED

This measure is partly achieved.

In 2004 amendments to the *Environmental Protection Act 1986* introduced the Environmental Protection (Clearing of Native Vegetation) Regulations 2004. Most clearing however, on the Swan Coastal Plain was exempt from assessment under these clearing regulations where land was zoned urban, urban deferred or industrial. This is contrary to the spirit and intent of the clearing principles. Areas on the eastern side of the Swan Coastal Plain and where less than 10% of a vegetation complex remains have been lost as a result of this exemption.

RECOMMENDATIONS

- IV. Legislative protection be given to Threatened Ecological Communities (TEC) and vegetation complexes/ecological communities of which less than 10 per cent remains (based on current statistics) within the new metropolitan boundary defined for the Strategic Review of the Perth and Peel Region.
- V. A new legally binding instrument be introduced by the State to prohibit clearing and to require protection of all TECs and complexes State-wide where less than 10% remains. It should be noted that no such WA State instrument is in place as at December 2012.
- VI. A new WA Biodiversity Conservation Act be introduced as a high priority with the above features included.

POLICY MEASURES NOT ACHIEVED

Policy Measure 3:

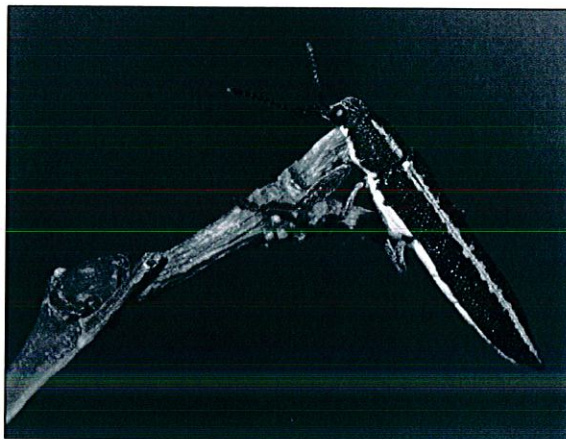
Seek to avoid adverse impacts on regionally significant bushland identified in Bush Forever.

NOT ACHIEVED.

This policy measure has failed.

Government instrumentalities and others are still proposing various developments and disturbance in Bush Forever sites. This is contrary to the spirit and intent of a 'whole-of-government' policy. The lack of status of Bush Forever sites has meant that the policy measure to '**seek to avoid adverse impacts**' is not being taken seriously by some government landholders. The following examples are being, or have been, formally assessed by the EPA and are totally unacceptable:

- Main Roads proposal for extension of Roe 8 Highway through North Lake/Bibra Lake BF site 244.
- City of Armadale proposal for a local road across Anstey-Keane Damplands, BF site 379.
- Landcorp proposal for housing and canal development in Point Peron and Mangles Bay marina, BF site 355.
- University of Western Australia proposal for housing development in Underwood Avenue Bushland, BF site 119.



▲ Long-nosed Weevil *Rhinotia* sp. on Acacia at Warwick Open Space, Bush Forever Site 202.
(M. Brundrett)

REPORT CARD FOR BUSH FOREVER ACTIONS

There are 15 Bush Forever Actions and as at December 2012 five of these have been fully achieved. Six have been partly achieved and four have not been achieved (Figure 3).

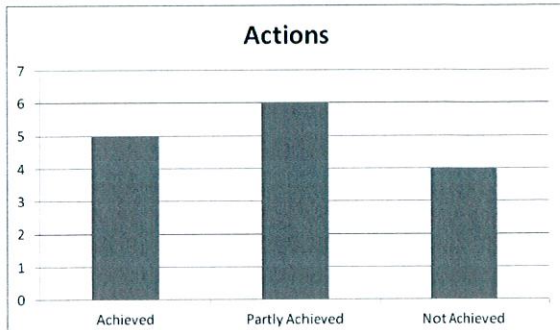


Figure 3. Implementation of the Bush Forever Actions, December 2012.

ACTIONS ACHIEVED

Actions 2 and 8

Bush Forever Advisory group established for three years, Urban Nature advisory service established.

ACHIEVED

In the initial years of implementation, the UBC was represented on the Bush Forever Advisory Group which was well-supported by the Planning Department and DEP.

Urban Nature was the name given to the 'Bush Forever Management Advisory Service' and was established to provide technical advice and on-ground support in the Swan Region including the Perth hills and Peel region. It is one of the outstanding highlights of the Bush Forever process.

As part of demonstrating best management practice and developing technical guidelines, Urban Nature officers have established a series of demonstration sites across the different landforms of the Swan Coastal Plain. Research trials are also often established at these sites. Urban Nature works with DEC district officers and associated community groups to manage threatening processes and to bring in funding to carry out the work. The sites often form the basis of field days and training workshops – on average six are held annually. Currently work is at five demonstration sites (extending over 2,830.49 ha).

The on-ground work and research at the demonstration sites is extended to management across Bush Forever sites and other regionally significant bushland and currently Urban Nature has had direct involvement in management of 17 sites (3,488.38 ha) and provides technical advice to a further 41 sites (25,692.3 ha).

Urban Nature currently liaises with over 60 stakeholders and produces a quarterly newsletter (Bushland News) that is posted to just under 2,000 stakeholders.

Since 2004, Urban Nature has produced 10 scientific publications, written over 50 newsletter articles, delivered over 60 presentations and produced a series of brochures, workshop proceedings and reports. It has developed a database that delivers up-to-date biology and control information on 300 species of the most serious weeds in the region to stakeholders across the State and developed standard procedures for mapping weeds in bushland and wetlands.

The current 2012 staffing level is 2.5 Full Time Equivalents (FTE). The Biodiversity Conservation Initiative (BCI) funded by the State Government and Perth NRM provided an additional boost with 1 x FTE for 3 years from 2006 to 2009 and funds for on-ground management by field staff at DEC Bush Forever Sites.

- Urban Nature involved: – 89 sites (44,710.24 ha = 40.8% of total BF area)
- Demonstration – 5 sites (2,830.49 ha)
- Management – 17 sites (3,488.38 ha)
- Research trials – 8 sites (1,027 ha)
- Technical Advice – 41 sites (25,692.3 ha)
- Other – 18 sites (11,672.05 ha)

The total area in the 287 Bush Forever sites is 109,634.38 ha.

Action 4:

Bush Forever office advisory and support services.

ACHIEVED

The Bush Forever Office and the inter-agency technical co-ordinating group and key agencies (DEP, CALM, Planning) provided support and technical advice to the Bush Forever Advisory Group (BFAG).

The Bushland Management Advisory Service was called 'Urban Nature' and it continues in DEC with permanent staff as detailed above.

Action 10:

Perth Biodiversity Project to support local governments.

ACHIEVED

In 2001–2002 the Perth Biodiversity Project (PBP) commenced. Phase 1 (2001–2004) was funded through Natural Heritage Trust 1, the Department of Planning contributing towards one Local Planning Officer role within the PBP team, local government contributions and Western Australian Local Government Association (WALGA) support (formerly Western Australian Municipal Association).

In 2004, Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region were published by the Western Australian Local Government Association. The local biodiversity planning process described in the Guidelines has been endorsed by the EPA (Guidance Statement No 33, 2008) and the WAPC (2011).

The Guidelines include templates for natural area assessments that were adopted by local governments. Some 16 out of 19 local governments in the Perth Metropolitan Region with more than 20 ha of bushland reserves under their management used the Natural Area Initial Assessment templates to record the ecological values and management issues for bushland reserves managed by local government. Most information collected using the Natural Area Initial Assessment (NAIA) Templates is stored in the Regional NAIA Database, available through the PBP website: <http://spatial.agric.wa.gov.au/naia/code/default.asp>

Phase 2 (2004–2008) of the PBP was funded through Natural Heritage Trust 2, Swan Catchment Council and with continued support from local governments and WALGA.

While local governments support the PBP through annual subscription, the continuation of the program is fully dependent on grant funding. PBP has received funding to continue its work until June 2014 but the emphasis is on working with regional local governments experiencing development pressure.

RECOMMENDATIONS

VII. Three full-time permanent staff be provided by State funding to provide technical support services to local authorities in the Perth-Peel regions, for the preparation and implementation of their Local Biodiversity Strategies.

VIII. Preparation and implementation of Local Biodiversity Strategies according to the guidelines be mandatory for all local authorities in the Perth-Peel region and be implemented by 2015.

Action 11:

Information support to local government.

ACHIEVED

Support was initially provided by the Bush Forever Office until it was disbanded. This role has been implemented with great success through the work of the Perth Biodiversity Project based in WALGA as detailed above in Action 10. This level of support must be continued.

ACTIONS PARTLY ACHIEVED

Action 1:

Bush Forever will be implemented as a whole-of-government process with the establishment of coordinated administrative and decision making structures, with the Ministry of Planning functioning as the lead coordination and implementation agency.

PARTLY ACHIEVED

Bush Forever commenced as a whole-of-government process, with the Department of Planning and Urban Development, now Department of Planning (DOP) as the lead agency.

The EPA was a protagonist for Bushplan in the 1990s but after 2000, it withdrew from the implementation process after providing brief advice in Bulletin 1007 January 2001 under Section 16(e) of the Environmental Protection Act 1986.

Leadership and co-ordination across agencies by the Bush Forever Office was effective while the Office existed as a separate office with four staff including an ecologist. In the last five years, however, when staff was reduced and the separate Bush Forever Office closed, the implementation process has dwindled with a lack of leadership and co-ordination. Currently DOP and DEC are the only two agencies involved in the process.

In 2010, DEC was given the responsibility of commenting on all statutory referrals dealing with Bush Forever. Previously there was some duplication as the referrals came to both DOP and DEC. This arrangement is now formalised in the 2010 Memorandum of Understanding between DOP and DEC, which explains the roles and responsibilities between the two agencies.

While sites are being slowly acquired by the WAPC, initial capital works have not always been carried out and conservation management is not being implemented. There has been no additional allocation of operational resources for management of new sites being transferred to the conservation estate under DEC. The current government atmosphere of budget cutbacks is swamping this fundamental requirement to properly manage these irreplaceable natural assets in Perth's Bush Forever areas.

Furthermore, the whole of government approach has not been faithfully adhered to, especially by government utilities. It is time that agencies such as Landcorp, Ministry of Housing, Main Roads, Department of Transport, Water Corporation and all local authorities adjusted their operational plans so that incursions into Bush Forever sites and local reserves are avoided. Statutory protection for all Bush Forever sites should be enacted so that developments involving clearing and disturbance are not permitted activities in law.

The lack of focus over the past five years by Government on continuation of implementation of Bush Forever is clearly evident. Clarification of the lead agency and commitment to Bush Forever as a 'whole of government' plan is again required for 2013 onwards.

Thus Action 1 is only partially implemented.

Action 3

A Bush Forever Office will be maintained within the Ministry of Planning with a coordinator and dedicated full-time staff to coordinate implementation and the activities of key government agencies on Bush Forever matters in liaison with an inter-agency technical coordinating group.

PARTLY ACHIEVED

This Action has only been partly implemented. The Bush Forever Office established in the Planning Department was initially an effective initiative leading the co-ordination of implementation with four staff including an Ecologist. However, it disappeared as a separate well-resourced unit and in recent years only one officer who is not an ecologist nor botanist has been working – mostly reactively – on Bush Forever. Thus important actions and initiatives such as the Public Awareness Strategy (A13) and the ongoing auditing process (A15), have not been done. Essential initiatives, the MRS amendment and Statement of Planning Policy, have been very slow to emerge and the MRS text amendment has still not been finalised after 12 years.

The State Planning Policy 2.8 for bushland in urban areas is now in place, but is not legally binding.

Action 9

The future control and management of conservation areas reserved through the implementation of Bush Forever will be established with due consideration of the purpose and intent of the reserve in liaison with the management bodies.

PARTLY ACHIEVED

As already stated, there are still 101 Bush Forever Areas or parts of Areas where no management agency has been assigned. This is more than one third of Areas, so clearly future control and management is lacking for one third of Bush Forever. This is the major shortfall of Bush Forever implementation.

The process of transferring the high value sites to the formal conservation estate under the CALM Act and the Land Administration Act seems to have stalled. A bundle of sites (covering ≈4,000 ha) of high conservation value acquired by the WAPC, are not yet transferred to the conservation estate and are not actively managed with proper new allocations of budget to DEC (see Action 1 above). It is unacceptable for such irreplaceable public assets to be neglected in this way.

RECOMMENDATION

- IX. A fully funded program be introduced to properly manage all the Bush Forever Areas transferred to DEC for management after acquisition by the WAPC.

ACTIONS NOT ACHIEVED

Action 5

'An inter-agency memorandum of understanding will be prepared to define key agency roles and responsibilities and establish administrative and decision-making structures necessary to provide a coordinated approach to the implementation of Bush Forever between the key participating agencies; other government agencies will be involved as required.'

NOT ACHIEVED

A Memorandum of Understanding (MOU) was supposed to be prepared from the outset to define key agency roles and responsibilities, administrative and decision-making structures, and the involvement of other agencies. This was not done.

Some structures were established such as the Interagency Technical Working Group. However, without a formal MOU and without the co-ordination of the Bush Forever Office after it closed, it ceased functioning.

In 2010, DEC was given the responsibility of commenting on all statutory referrals dealing with Bush Forever sites. Previously there was some duplication as the referrals came to both DOP and DEC. There is a recent 2010 MOU between DOP and DEC, explaining the roles and responsibilities between the agencies

concerning these statutory referrals. Notably this should not be confused with the overarching MOU that was intended for Action 5.

Action 6

'The Western Australian Planning Commission (WAPC) will consider initiating Amendments to the Metropolitan Region Scheme Text and the Metropolitan Region Scheme to introduce a Special Control Area and clearing controls for Bush Forever Sites, where appropriate.'

NOT ACHIEVED

Interim protection was not achieved. Introduction of Special Control Areas under the Planning and Development Act 2005 (and its predecessor) for interim protection, would have been very beneficial, and could have avoided the problems, losses and uncertainty resulting from lack of proper protection.

In addition, a regulation under the Environmental Protection Act could have been introduced in the year 2000 and is still an option which the UBC supports. It could provide for protection for all sites and a management obligation to approved standards. This would imply a requirement for proper resourcing by all land managers in their operational budgets.

Indeed a motion to this effect was debated in 2011 in State parliament, but was not supported by Government Members in the Legislative Council and did not pass

It is salutary to note that the community aspiration expressed over the last 20 years in calls for overall statutory recognition and protection of regionally significant bushland on the Swan Coastal Plain has still not been set in place.

Action 13

'The Ministry for Planning, in liaison with other key agencies and the BMAS, supported by the Bush Forever Management facilitator, will develop information and education resources programs for landholders, schools and the general public in conjunction with other programs.'

NOT ACHIEVED

Whilst there were initiatives initially by the Bush Forever Office, the general community awareness and education plans have not been carried out. The 2006 proposal for a Bush Forever Festival recommended and supported by the community and Chairman of the WAPC never eventuated.

Even the most basic strategy to inform the public of the existence and purpose of each Bush Forever site on a sign at each site has not been done. Our requests to successive Ministers for common signage for all Bush Forever sites and for awareness of Bush Forever have failed, despite initial enthusiasm by almost every Environment Minister over the 12 years.

RECOMMENDATION

- X. A major public awareness and ongoing education program be implemented. Our children and the community need to be made aware of the values of the bush and be provided with opportunities to experience, learn about, and enjoy their local bushland areas.

Action 15

The Ministry for Planning (Bush Forever Office), in liaison with the other key agencies and the BAG, will develop criteria, monitoring and review procedures for the ongoing auditing of Bush Forever, including the periodic review of new information on the ecology of the Swan Coastal Plain.

NOT ACHIEVED

Especially over the past five years, the failure of Government to conduct the 'ongoing auditing of Bush Forever' including individual site auditing as stipulated, is a major issue of concern. We do not know what has been achieved for each site and we do not know the extent of achievement towards a CAR conservation system.

We note that the Minister for Planning, Hon. John Day in his opening address to this conference made a firm commitment to conduct an audit in 2013.

RECOMMENDATIONS

- XI. A comprehensive audit of each Bush Forever Area and of the progress toward a CAR system for the Perth Metropolitan Region be completed and made publicly available as a priority in early 2013.
- XII. New information now available in Swan Bioplan and other surveys for Perth and Peel regions be reviewed and used as the basis for extending Bush Forever into the remainder of the Swan Coastal Plain and Perth hills, with a new funding source defined and introduced by the WAPC.

CONCLUSION

Given the incredibly rapid growth of Perth and encroachment of development around Bush Forever Sites, the resulting degradation from illegal activities and neglect, e.g. the Anstey-Keane case study, is of enormous concern.

It is essential that substantial resources be allocated to complete the implementation of Bush Forever, including acquisitions and management of sites.

Let us achieve the recommendation to have all Bush Forever Sites secured and protected by 2015. Let us work more urgently towards having protection and management of sufficient of our natural resources so that conservation of our unique, enviable and irreplaceable 'bush' can be considered Comprehensive, Adequate and Representative.

The enviable international reputation of Perth for having 'Bush in the City' is at risk. Our national and international responsibility to protect our unique and irreplaceable biodiversity is of enormous importance.

Completion of Bush Forever is an integral part of the provision of state infrastructure for Perth. It is recommended that urgent action be taken to upgrade and reinstate the features of Bush Forever that worked so well initially.

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PERTH BIODIVERSITY PROJECT AND LOCAL BIODIVERSITY STRATEGIES

Renata Zelinova (WA Local Government Association) and Andrew Del Marco (Ironbark Environmental)

ABSTRACT

The importance of local bushland in maintaining biodiversity in a region has been well recognised and supported by State policy in Western Australia since 1995. However, it was not until the establishment of the Perth Biodiversity Project in 2001 and the publication of the Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region in 2004, that a consistent approach to local biodiversity conservation planning was adopted. Since then many Local Governments have been developing and implementing local biodiversity strategies in and outside the Perth Metropolitan Region.

This paper provides an overview of the local biodiversity conservation planning process, and the range of tools available to Local Government to implement that process. It summarises the key outcomes, the benefits and the challenges of a consistent and rigorous approach to local biodiversity conservation planning in the Perth Metropolitan Region.

INTRODUCTION

Local Biodiversity Strategies (LBS) enable Local Government to identify and protect locally significant bushland and other natural areas through appropriate local land use planning, land management and community engagement mechanisms. Local biodiversity strategies assist Local Government with meeting community expectations that local bushland will be protected and with meeting the legislative and policy requirements to protect the environment. The preparation and implementation of an LBS is one of the main ways in which local bushland protection can occur in Western Australia, with the support of the State Government.

Local Governments in the Perth Metropolitan Region, and elsewhere in the State, are empowered to prepare and implement local biodiversity strategies through the Bush Forever (State of Western Australia, 2000)

initiative. Specific measures are outlined in the State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region (a policy of the Western Australian Planning Commission) and the Planning Bulletin No 69. Previous to Bush Forever, the State Government's Urban Bushland Strategy (State of Western Australia, 1995), also encouraged local governments to identify and protect locally significant bushland through the preparation of local bushland strategies and to integrate them into local planning strategies and schemes.

In 2001, the Western Australian Local Government Association with the support of the Swan Catchment Council and State Government agencies, secured funding to commence the Perth Biodiversity Project and support the preparation of local biodiversity strategies. The project initially focused on Perth Metropolitan Local Governments, the provision of practical and financial support to Local Government to manage significant bushland and the preparation of Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region (Del Marco *et al.*, 2004). The Guidelines were the first manual to assist Local Governments to prepare local bushland strategies (or local biodiversity strategies as they became known), encouraging rigorous and consistent approach to strategic, local, biodiversity conservation planning.

Copy of the Guidelines can be obtained through the Perth Biodiversity Project or downloaded from <http://pbp.walga.asn.au/Publications.aspx>.

The Guidelines describe the ecological criteria for prioritising local biodiversity assets, detail the proposed steps of the local biodiversity conservation planning process and provide an overview of mechanisms for biodiversity conservation, including model texts. Information and statistics on vegetation status for each Local Government area were included but these have been updated since the publication of the Guidelines. The most up-to-date vegetation retention and protection status

data is available through the Perth Biodiversity Project website

(<http://pbp.walga.asn.au/Tools/MappingandInformation.aspx>).

The adaptability of the Perth focused local biodiversity conservation planning process to other regions of Western Australia, was demonstrated through the work of the South West Biodiversity Project that operated from Bunbury between 2005 and 2009. With the

support of WALGA, City of Bunbury and the South West Catchment Council, the Project team worked with twelve Local Governments along the southwest coast and published a Local Government Biodiversity Planning Guidelines Addendum to the South West Biodiversity Project Area in 2007. The Addendum (Molloy *et al.*, 2007) includes ecological data and planning considerations specific to the South West region.

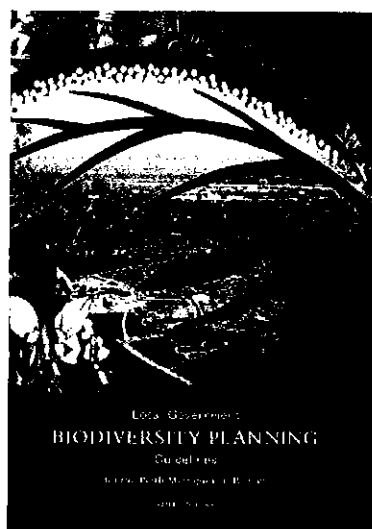


Figure 1: Front covers of the two publications providing guidance to local biodiversity conservation planning in the southwest of Western Australia.

The Perth and the South West Biodiversity Project provided assistance through the delivery of programs and development of tools, including:

- Targeted Grants program devolved funding (2003–2007) to undertake ecological assessments of natural areas managed by Local Government, to develop and implement community engagement and professional training programs, to prepare management plans and funding towards on-ground management of priority biodiversity assets;
- Natural Area Initial Assessment (NAIA) Templates to provide for a consistent approach to ecological assessments of natural areas across a Local Government area and across the whole region;
- Natural Area Initial Assessment Regional Database, which collates information from individual Local Governments;
- Spatial and statistical analysis of remnant vegetation and biodiversity feature distribution for each Local Government area and the biogeographic region;
- Environmental Planning Tool, an on-line viewer of environmental spatial data relevant to land use planning;
- Regional ecological linkages for Perth and the Southwest, methodology and mapping;
- Perth Region Plant Biodiversity Project provided reference material on the characteristics of plant communities found in the Perth Region;
- Networking and information sharing through Natural Area Managers Forums and Biodiversity Planners Forums;
- Biodiversity Milestone Awards Program, recognising Local Government achievements in the local biodiversity planning process;

- Local Nature Spot project, that tested the effectiveness of community based social marketing principles that influence human behaviours which are incompatible with conservation management objectives in local reserves;
- Training on the use of all biodiversity conservation planning tools.

LOCAL BIODIVERSITY STRATEGIES

Local Biodiversity Strategies (LBS) deal with local natural areas. Local natural areas are natural areas that exist outside of Bush Forever Sites, the DEC managed lands and Regional Parks. Natural areas include areas which contain native species or communities in a relatively natural state and hence contain biodiversity.

The preparation of an LBS is a strategic process which:

- Assesses the ecological values of *local natural areas*;
- Considers the opportunities and constraints to their conservation within the planning and environment frameworks (policy and legislation);
- Identifies local priorities for biodiversity conservation;
- Identifies mechanisms to achieve local biodiversity conservation objectives.

Mechanisms to protect locally significant natural areas primarily involve the local planning system, provisions for biodiversity conservation in the local planning strategy, local planning scheme, and local planning policies. The LBS process also looks strategically at how the Local Government intends to better manage the natural areas on lands under its care and control (e.g. local reserves and council owned-freehold lands) and how private landholders can be supported to retain and manage natural areas on their lands

In urbanising environments, an LBS is developed in the challenging space between planning for development and planning for biodiversity conservation.

It is important to emphasise that an LBS is much more than a "Greening Plan", Corridor Strategy or Bushland Management Plan. An LBS covers all land tenures, including public and

private lands, as long as the land supports a local natural area.

PROCESS FOR LBS PREPARATION

The local biodiversity planning process is a four phase process, as shown below.

Phase 1: Scoping

- Obtain Council commitment, allocate resources & identify stakeholders
- Awareness raising/training *
- Establish a Steering/Working Group (to facilitate Phase 2 and 3)

Phase 2: Draft Local Biodiversity Strategy

- Identify biodiversity assets and their conservation significance (GIS, mapping and statistics)*
- Develop vision and targets for biodiversity conservation
- Assess opportunities and constraints to biodiversity conservation
- Release Draft document with proposed implementation mechanisms for public consultation*

Phase 3: Final Local Biodiversity Strategy

- Adopt a Local Biodiversity Strategy with an Action Plan *

Phase 4: Implementation

- Local planning framework amendments*
- Local Planning Policy*
- Incentive Strategy for Private Land Conservation*on-ground management in accordance with an Action Plan for management of Local Government reserves*
- Establishing a reporting process*

The asterisk * identifies steps that are being recognised through the Biodiversity Milestone Awards program. For more information go to <http://www.pbp.walga.asn.au/BiodiversityAwards.aspx>.

It is in Phase 2 where the technical, analytical and constraints/opportunities analysis occurs, by the team of specialists and relevant stakeholders preparing the LBS. The general methodology used in Phase 2 is summarised in Figure 2.

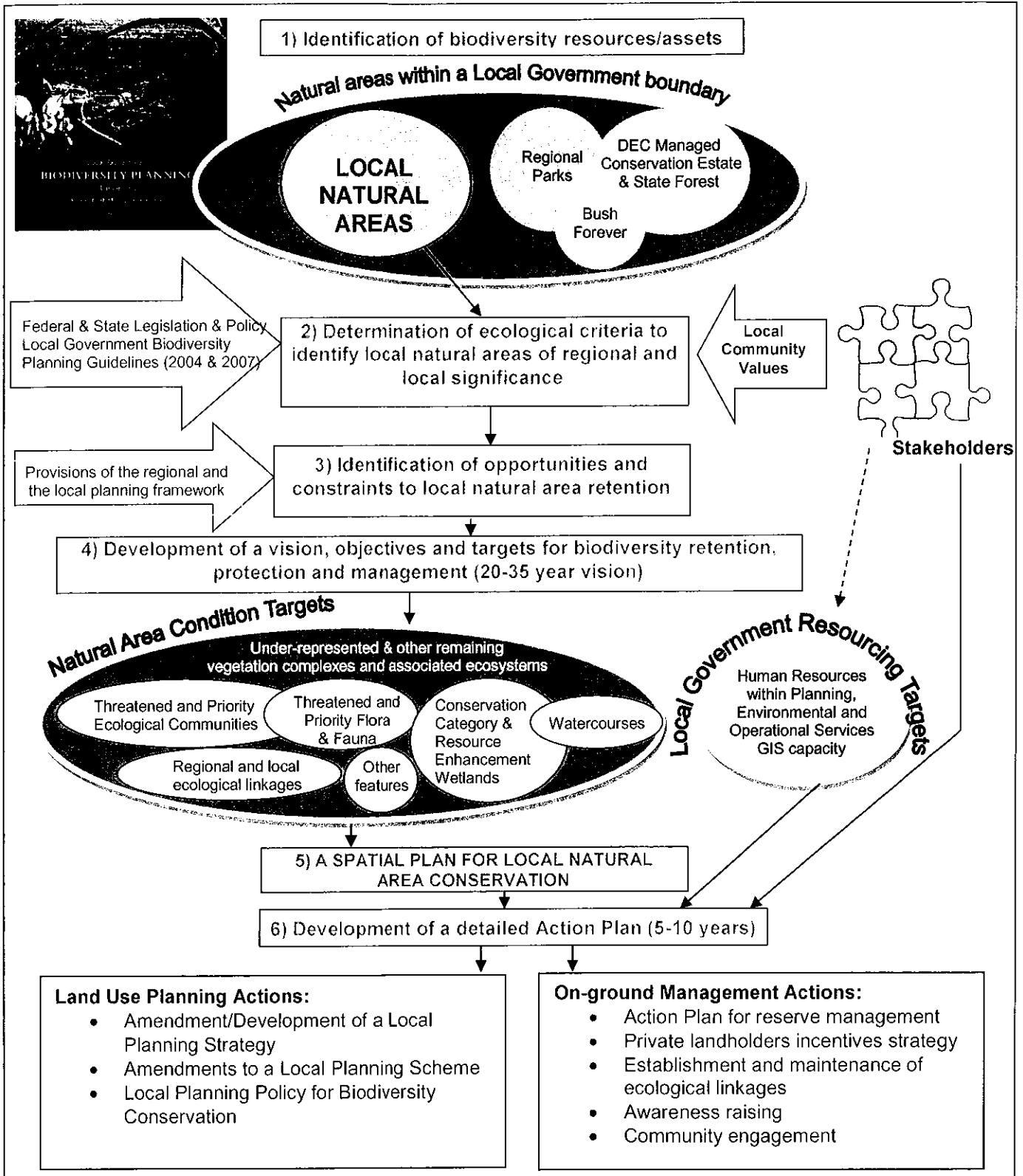


Figure 2: Generalised key elements of the local biodiversity conservation planning methodology used to prepare a local biodiversity strategy (Phase 2) with examples of key implementation actions (Zelinova *et al.*, 2012).

A key part of the methodology is the development of quantifiable targets to protect at least a set percentage of the broad vegetation types that occur in the Local Government area. In the absence of detailed floristic type mapping across the Local Government area, vegetation complex mapping is used to set these targets. The targets may be apportioned to different parts of the Local Government area, where this is the best way of ensuring they can be achieved through an application of a range of mechanisms. These can include proposals for improved land use provisions, use of existing good opportunities for natural area retention and protection, or negotiating better outcomes, within the limited land use provisions.

Spatial distribution of targets for retention of each vegetation complex across the Local Government area provides for equity and a sense of shared contribution through the local community.

Before entering into Phase 3, the Local Government should apply a rigorous consultation process, both internal and external to test the scientific validity and feasibility of the draft strategy. Consultation with landholders, local community and state agencies is required.

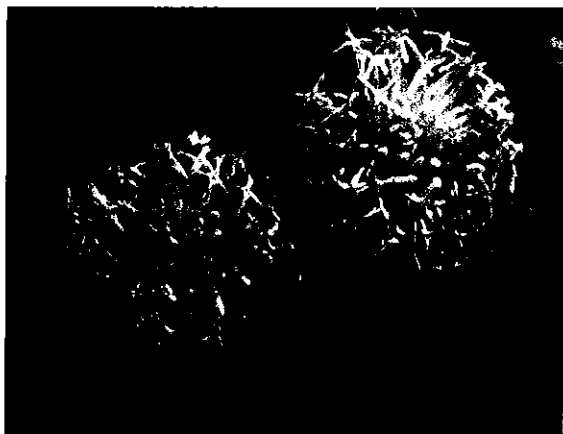
Phase 4 of the local biodiversity conservation planning process is the implementation phase. The vision of a Local Biodiversity Strategy may take decades to achieve in a Local Government

area with many natural areas. High priority actions, however, can be realised within the first 3 to 5 years of adoption. Figure 2 summarises the main implementation components and associated actions which may be included. These components are either linked to land use planning or bushland management.

The end result of Phases 2 and 3 of the LBS process is a document which:

- Provides an overview of biodiversity values and planning constraints/opportunities for biodiversity protection in the Local Government area;
- Sets out a vision and local biodiversity conservation targets;
- Identifies spatial priority areas for conservation;
- Identifies relevant mechanisms to achieve the conservation objectives, using the tools in the local land use planning system and the management of bushland on public and private lands.

Since the release of the Local Government Biodiversity Planning Guidelines (2004) and Addendum for the South West Biodiversity Project Area (2007), seven local governments have adopted an LBS with quantitative targets and six local governments have a draft LBS awaiting public consultation or adoption (See Figure 3). The Shire of Murray has initiated the local biodiversity conservation planning process in 2012.



▲ White Pimelea *Pimelea leucantha*.
(M. Brundrett)



▲ Mayweed Sunray *Hyalosperma cotula*.

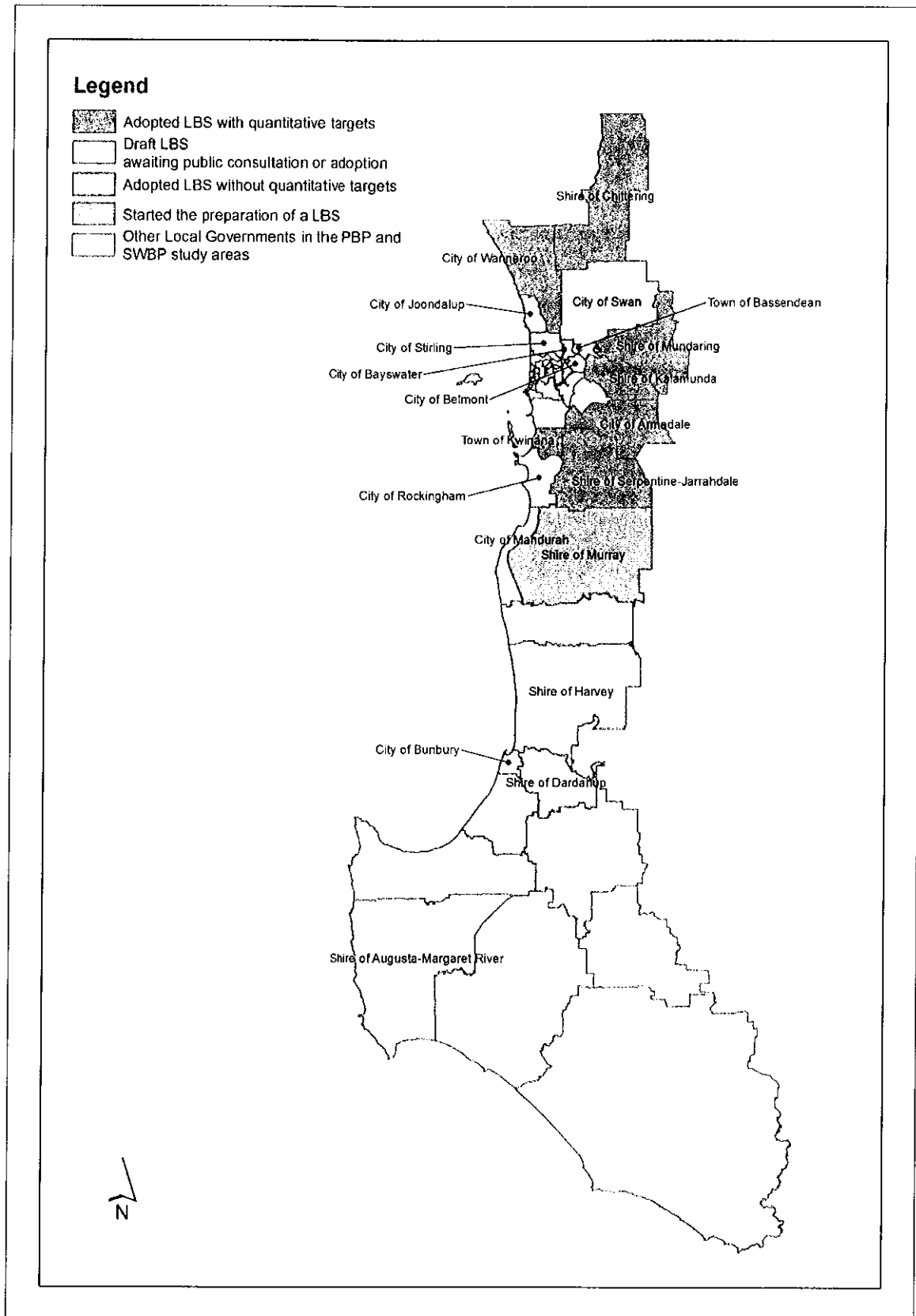


Figure 3: Local Governments and the preparation of local biodiversity strategies, south west Western Australia; status as at 2012. Key to abbreviations: LBS – Local Biodiversity Strategy, PBP – Perth Biodiversity project, SWBP – South West Biodiversity Project.

INTEGRATION OF BIODIVERSITY CONSERVATION WITH LOCAL LAND USE PLANNING

Changes in land use provide various opportunities for addressing biodiversity conservation locally. Conversely, if these opportunities are not seized, the planning system can also act as a major threat to biodiversity conservation. LBSs help the local governments harness these opportunities.

Of the opportunities provided through land use planning, the most significant of these are at the highest or strategic levels of planning (Figure 4). These higher or strategic levels are the local government's planning strategy, planning scheme and to a lesser degree local planning policy.

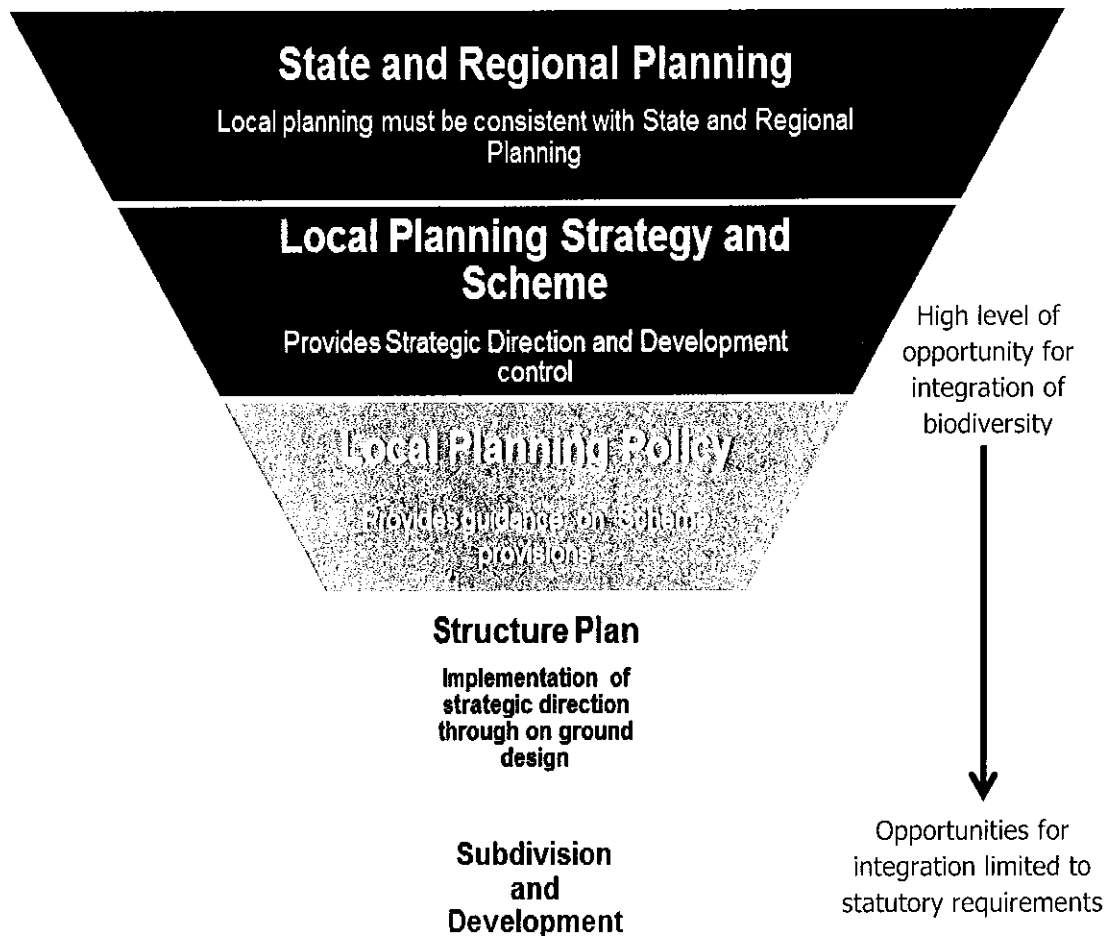


Figure 4: Opportunities to integrate biodiversity conservation into the land use planning system.
(Source: WAPC, 2011).

Whilst opportunities also exist to protect specific natural areas as part of structure plans and subdivisions, these opportunities are curtailed by provisions in the local planning strategy and the scheme.

Local Governments are encouraged by the Western Australian Planning Commission to directly integrate relevant components of their local biodiversity strategy into the local planning strategy and the local planning

scheme. Local planning policies for biodiversity conservation can only be effective if provisions exist in the local planning scheme to support local biodiversity conservation. Integration of local biodiversity conservation objectives into the local land use planning mechanisms ensure consistency in consideration of biodiversity, in decision making by Local Government and the State Government.

Examples of where Local Governments with an LBS have integrated local biodiversity conservation objectives into their planning system include:

- **Local Planning Strategy:**
 - Shire of Mundaring
 - Shire of Kalamunda (Draft)
 - Shire of Chittering (Amendment)
- **Local Planning Scheme:**
 - Shire of Mundaring
 - City of Wanneroo
 - Shire of Chittering
- **Local Planning Policy**
 - Shire of Serpentine-Jarrahdale
 - City of Wanneroo
- **Structure/subdivision planning**
 - City of Wanneroo
 - Shire of Chittering

Precedents also exist of where the Department of Planning and the State Administrative Tribunal have given weight to a draft LBS (not yet integrated into a local scheme due to time constraints) in determining proposed scheme amendments which could have impacted on significant local natural areas. This resulted in greater protection of bushland than would have otherwise occurred.

KEY ACHIEVEMENTS SINCE 2004

Through the work of the Perth and the South West Biodiversity Projects, with the support of WALGA, Local Governments, Federal and State Government, NRM (Natural Resource Management) regions and the community, the following has been achieved for local natural area protection since 2004:

- Endorsement of the local biodiversity planning process at State level. The EPA Guidance Statement No 33 published in May 2008, directly refers proponents to the Local Government Biodiversity Planning Guidelines for a methodology to identify locally significant biodiversity assets.
- 17 Local Governments are developing Local Biodiversity Strategies or similar and an additional 2 local governments that developed an Action Plan for natural areas managed by Local Government.

- Potential protection of 17,430 ha of local natural areas through implementation of 10 Local Biodiversity Strategies.
- 16 out of 20 Local Governments with more than 20 ha of bushland reserves under their management are working with the Perth Biodiversity Project.
- 7 out of 12 Local Governments working with the South West Biodiversity Project are using the Natural Area Initial Assessment Template.
- Sustained support of the PBP and participation in the local biodiversity conservation planning by Local Governments.
- Demonstrated increased allocation of resources towards natural area conservation. A Local Government capacity survey conducted in 2001 established the baseline, and it was repeated in 2007, showing an increase of 31% in salaries and activities related to biodiversity conservation across 21 of 24 Local Governments in the Perth Metropolitan Region. This represents an increase spending of more than \$1.61 million dollars in 2005–2006 when compared with the 2000–2001 financial year. The survey results also showed that for every \$1 received by Local Governments through external grants, Local Government contributed \$6 toward biodiversity conservation projects (Perth Biodiversity Project, 2007).
- Demonstrated applicability of the local biodiversity planning process outside the Perth Metropolitan Region (See Figure 3).
- Formation of effective partnerships between Local Government, State Government and NRM sectors.
- Demonstrated effectiveness of local biodiversity conservation planning as a mechanism for increased retention and protection of biodiversity through land use planning.
- Decision support tools and remnant vegetation data being used by a range of stakeholders, across public and private sectors.
- Local Biodiversity Strategies noted as valid consideration in land use planning by the Department of Planning and the State

Administrative Tribunal (SAT decision Bernardini and Western Australian Planning Commission [2010] WASAT 105).

SIGNIFICANCE OF LOCAL NATURAL AREAS ASSERTED

Since late 2009, the Perth Biodiversity Project is advancing new initiatives to assist local bushland protection, including the Regional Framework for local biodiversity conservation priorities for Perth and Peel. The Regional Framework is a web-based information and analysis tool to help users to assess, at a regional scale, the ecological significance and the potential opportunities and constraints for biodiversity conservation. It can be accessed via the following link

<http://pbp.walga.asn.au/ProjectPrograms/RegionalFrameworkforLocalBiodiversity.aspx>.

The Regional Framework for local biodiversity conservation priorities provides:

- A frame of reference for identification of local biodiversity conservation priorities;
- New datasets to assess the regional context of remnant vegetation (2010 remnant vegetation extent (replacing EPA regional context datasets)
<http://pbp.walga.asn.au/Publications.aspx>);
- Easy access to a range of spatial data (raw and interpreted) to inform land use planning at all stages;
- Identifies priority local natural areas for further investigation of their biodiversity conservation values.

Analysis of the remnant vegetation retention and protection status revealed that there are seven vegetation complexes that are endemic to the Perth and Peel Region Scheme areas, with more than 90% of their pre-European extent limited to the administrative boundaries. Retention levels for three of these, Beermulah, Cannington and Forrestfield, could potentially reduce to less than 10% of their pre-European extent.

Conservation efforts in the Perth and Peel regions are important for an additional nine vegetation complexes which have between 60% and 90% of their pre-European extent within the regions' administrative boundaries. Retention levels for six of these could potentially reduce to less than 10% of their pre-

European extent, including Bassendean Central and South, Guildford, Karrakatta Central and South, Serpentine River, Southern River and Swan vegetation complex (Zelinova *et al.*, 2012). Retention levels of an additional 16 vegetation complexes could be reduced below the threshold levels considered critical to maintaining ecological viability of the ecological communities they represent. The potential retention status was based on assumptions of levels of clearing expected within the provisions of the Metropolitan and Peel Region Scheme land use provisions (Zelinova *et al.*, 2012).

Future retention of several significant vegetation complexes in the Perth and Peel will depend on actions within one or two Local Government Areas. For example, 80% of the current extent of Beermulah vegetation complex, endemic to Perth and Peel, occurs in the City of Swan. Historically, only one third occurred in that City, half of the pre-European extent occurred in the Shire of Serpentine-Jarrahdale and 20% in the City of Armadale. Considering that only 6% of the pre-European extent of Beermulah complex remains and only 2% is protected, further conservation efforts within the City of Swan will be critical to the long term conservation of ecological communities relying on the Beermulah vegetation complex (Zelinova *et al.*, 2012).

Similarly, the largest portions of the Forrestfield vegetation complex remain in the Shires of Murray and Serpentine-Jarrahdale; Cannington complex, in the Shires of Murray and Waroona and several other Local Government areas retain significant portions of potentially threatened vegetation complexes (Zelinova *et al.*, 2012). This analysis demonstrates the importance of conservation efforts at local levels to achieving outcomes at the regional level.

Finally, the statistical analysis of the potential retention status of various vegetation types in the Perth and Peel regions also showed that implementation of Local Biodiversity Strategies will improve the retention/protection status of vegetation complexes in these regions. For example, without specific targets for the protection of remnant vegetation representative of the Darling Scarp, its

retention status could fall to below the 30% of its pre-European extent in Perth and Peel considering the current land use provisions of the Metropolitan and Peel Region Schemes. However, if specific targets are set out for this vegetation complex in Local Biodiversity Strategies, the Darling Scarp vegetation complex should be retained above the 30% threshold level.

FUTURE CHALLENGES

There is still significant work to be done to support Local Government's conservation of biodiversity. Some of this work has become evident through the implementation of local biodiversity strategies. The key challenges and recommendations on how to address them are listed below:

1. Limited opportunities are available to provide for vegetation retention/protection on lands zoned urban, industrial or rural residential.
 - The current regional and local planning provisions need to be amended to provide greater flexibility with the 10% Public Open Space (POS) allocation. POS allocations should be increased because:
 - State Government allocates increasingly limited resources to acquire regionally significant natural areas for reservation and conservation. Further there is no dedicated funding mechanism to acquire regionally significant natural areas outside the Metropolitan Region.
 - Urban densities are increasing and more POS is required to compensate for less private open space (smaller backyards).
2. There is a common, false perception that all rural lands provide for natural area retention.
 - It is not correct to expect or assume that rural lands will retain natural areas, especially where the land is zoned or developed for rural residential subdivision with lot sizes around 1 ha. Fragmentation due to clearing to accommodate boundary fencing, access tracks, fire risk management activities around the buildings and other

infrastructure is a problem. Lack of mechanisms that encourage effective cluster style subdivisions and their acceptance by developers as a marketable product, reduces the viability of natural vegetation and the lack of management for conservation of vegetation retained in these rural landscapes, leads to significant degradation of the quality of the natural area.

- Most natural areas in rural residential landscapes in the Metropolitan Region are unlikely to meet the strict criteria used to select sites suitable for conservation covenants and thus became eligible for support through the covenanting agencies. There are only four Local Governments in the Metropolitan Region Scheme area that adopted an incentives strategy to support biodiversity on private lands; they are the Shire of Serpentine-Jarrahdale, Shire of Mundaring and City of Cockburn. The City of Armadale offers support for restoration of riparian vegetation on private lands through its Stream Care Program.
3. There is inconsistent support to Local Governments and State Government to support regional and local biodiversity conservation. Continuous support is required to:
 - Fund regular updates of the spatial datasets (native vegetation mapping and statistics) which support biodiversity conservation.
 - Provide core funding to Local Governments, especially those with high growth futures to prepare local biodiversity strategies and facilitate implementation, in particular the integration into land use planning. The current support is dependent on grant funding, which does not allow for continuity and certainty. The effects of this can be clearly seen in significant delays or a complete halt of the local biodiversity conservation planning process within Local Governments that worked with the South West Biodiversity

Project and which could not continue post October 2009 due to the lack of funding.

4. A lack of recognition and guidance on the protection of "Peel Regionally Significant Natural Areas" through State Government policy or as special provisions/ recognitions in the Peel Region Scheme is a concern.
 - The Environmental Protection Authority has identified the Peel Regionally Significant Natural Areas and published the Environmental Protection Bulletin No 12 (EPA, 2010). This outlines its expectations for development proposals and planning scheme amendments affecting these sites. However, there is no written state planning policy on how these areas are to be considered through the regional or local planning system. An analogy would be that it's akin to having Bush Forever without the Site Implementation Practice Notes and the SPP 2.8. Options include a Peel 'Bush Forever', or a formal recognition of the Peel Regionally Significant Areas in the Peel Region Scheme, or some other mechanism that will provide for adequate consideration of conservation values of these regionally significant areas in land use planning.
5. Insufficient land use planning and state policy provisions fail to facilitate connectivity across the landscape. High level (policy or legislation) provisions are required to guide a standard of connectivity to be maintained through the landscape across a range of land uses. The Strategic Assessment process for Perth and Peel regions (EPBC Act Strategic Assessment) provides an opportunity to introduce this policy or amendment to the Perth and Peel Region Schemes.
6. A limited uptake of cluster style rural subdivisions which protect and manage retained bushland is a concern.
 - There is a need to investigate and introduce changes to the current planning and land administration systems to encourage greater uptake of cluster style rural subdivisions providing

for management of retained bushland for conservation.

ACKNOWLEDGEMENTS

The Perth Biodiversity Project is supported by the Western Australian Local Government Association with funding through the State NRM Program and Local Government subscriptions, working in partnership with the Department of Planning, South West Catchment Council and the Department of Environment and Conservation. The State NRM funding currently extends the project activities till June 2014.

The Project's previous activities were funded through:

- 2009–2011 State NRM Program through the Western Australian Planning Commission/Department of Planning
- 2008–2009 Caring for Our Country, an Australian Government initiative, through the Perth Region NRM
- 2004–2008 Natural Heritage Trust 2, the Federal and State Government initiative through the Swan Catchment Council
- 2001–2004 Natural Heritage Trust 1, the Federal and State Government initiative through the Swan Catchment Council and with funding support from the Department of Planning and Infrastructure.

Local Governments were contributing to the project with annual subscriptions and the Western Australian Local Government Association has supported the project in-kind and financially since its inception.

Many activities were delivered in partnership and with in-kind support by the Department of Environment and Conservation, the Department of Environment, the Office of the Environmental Protection Authority, the Department of Agriculture and Food, Greening Australia WA and Birds Australia.

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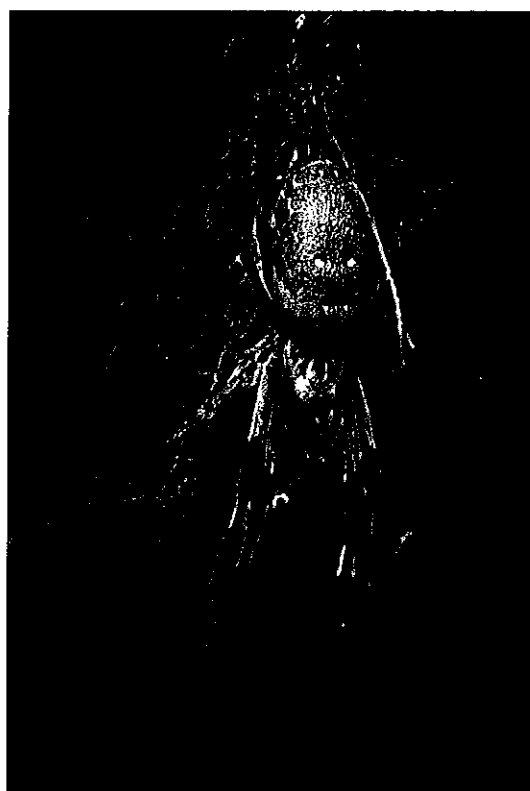
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▲ Pearl Flower *Conostephium pendulum*.
(K. Sarti)



▲ Golden Orb-weaver Spider *Nephila* sp.
(M. Brundrett)

CASE STUDY: HAWKEVALE BUSHLAND BUSH FOREVER SITE #122

Vicki Laurie and Tony Fowler, Nature Reserves and Preservation Group

Hawkevale Bushland is situated in the Perth foothills, near the corner of Kalamunda Road and the Roe Highway, in the High Wycombe area.

My brief summary highlights the complexity of land management in urbanising areas and how, when it comes to what we do with the legacy of nature, there are so many competing interests.

My colleague Tony Fowler and I were members of the Nature Reserves Preservation Group (NRPG) in the late 1990s when we discovered that a 37 hectare area, containing a big swathe of Jarrah/Banksia woodland, was about to be obliterated to make way for housing.

As Bronwen and Greg Keighery have explained, Jarrah/Banksia woodland is a disappearing habitat on the Swan Coastal Plain. Yet it is extremely beautiful. Hawkevale was a quiet woodland, disturbed only by trail bikes and people dumping rubbish on its margins. It had no local advocates, no Friends Group, since few people lived right on its doorstep.

We were concerned that almost all of this relatively large area was going to be lost. Our group, the Nature Reserves Preservation Group, is – as the name suggests – all about preserving bushland in the Kalamunda Shire and local hills area. It was formed by Tony Fowler and others when the shire announced plans to sell off local nature reserves that were 'surplus to requirements'.

At Hawkevale, we faced an uphill battle, because the land in question was owned by the ACTIV Foundation, which assists people with intellectual disabilities and their families. ACTIV had been given parcels of land in the 1950s, then far out of the urban area but now swallowed up by urbanisation.

This patch of Banksia woodland had been left standing on the north side of a housing estate. In 1992, CALM (now DEC) (see glossary), recommended its conservation. In 1993, the State Planning Commission rezoned the area as 'Urban' under the Metropolitan Region Scheme, but noted that if further studies

revealed a need to reserve significant areas for conservation this would be done.

That same year, the Liberal Coalition government released its 'Policies for the Nineties' statement which contained a promise. It would ... "offer financial incentives to private land owners to preserve Banksia woodlands" because of the urgent threat to this vegetation type.

In 1995, the Department of Environmental Protection (DEP) nominated the area as one of the most species-rich sites out of 700 surveyed. So far, so good.

In September 1996, ACTIV announced it wished to use all 37 hectares of land for 270 homes, 37 duplexes, a retirement village and aged care unit. They called it Australia's first integrated community for the intellectually disabled. Several blocks would be sold to general residential buyers to fund the development. Some 3.12 hectares of bush would be left.

So began just one of so many clashes between planning for people and environmental protection.

Hawkevale Bushland had already been recognised as containing one of three most threatened plant communities remaining on the Swan Coastal Plain. There had been a DEP recommendation that 20 hectares, the best bush areas, needed to be conserved to maintain its environmental value. Other government departments, the WA Conservation Council and bushland advisory groups like us advised the bush should be kept.

Things got fairly heated; ACTIV understandably felt they were being thwarted in valid ambitions. Ian Taylor, the former Opposition member, weighed in. His wife was on the ACTIV board. He attacked the Conservation Council and hills-based greenies 'who know no bounds', he declared, in throwing up obstacles in ACTIV's way.

In October 1996, the Kalamunda shire, which also had a role in approving the housing estate, debated the issue. It was compelled to comply

with the State Planning Commission in its town planning scheme. But several councillors came and saw the bushland, and vowed to help find a solution for all parties. Could they swap an existing shire reserve in exchange for conserving Hawkevale?

Such talk did not go down well. One furious ACTIV executive rang my colleague Tony after the NRPG publicly criticised the sudden and, we felt, suspicious appearance of wide firebreaks that had been bulldozed right through the middle of the bushland. ACTIV said the fire authorities had demanded it. The executive said to Tony: "I like to fight by Queensberry rules, but if push comes to shove, I'm prepared to fight dirty."

In November 1996, John Day, our local member for Darling Range, and now Minister in the Barnett government, said he would support Kalamunda Shire in its bid to seek the retention of 20 hectares of high conservation value bushland. John Day was one of the primary architects of the Bush Forever plan and was heavily involved in drawing up its content right at the time of the Hawkevale controversy.

He said publicly: "In view of the government's Urban Bushland Strategy (the working title for Bush Forever) and the regional significance of the High Wycombe bushland, I believe there is no realistic alternative other than to conserve the area. To do otherwise would be to go against the government's policy of protecting threatened ecosystems". He had written to the Minister for Planning in these terms.

He went on: "The Urban Bushland Strategy has established a target of retaining 10% of the original bushland of each type of vegetation complex in the metropolitan area. It is estimated that only 8% of the vegetation type of which this land is part now remains."

In November 1996, the Kalamunda shire councillors voted eight to four in favour of preserving the bushland that had been recognised as 'significant' in a number of reports.

Just to complicate things further, there was a State election in December that year. We in the NRPG had to keep abreast of each party's promises, lobby the candidates, and send introductory letters to the next person who

might have the fate of Hawkevale in their hands.

In May 1997, we had a personal assurance from Graham Keirath, Minister for Planning, that he was trying to find solutions, like a land swap. We wrote to Cheryl Edwardes, then Minister for Environment; we said how pleased we were that the Hawkevale bushland had just been singled out as worthy of conservation under the Perth Bush Plan, "which your government has admirably undertaken in order to save just such metropolitan bush areas." We added; "All in all, what more credentials does a bit of bush need to be saved?!"

We also urged that there be compensation provided for ACTIV as the landholder, reminding Mrs Edwardes that the Liberal government in 1993 had made a specific promise to compensate owners of land containing rare Banksia woodland. "ACTIV would appear to fall right into that category, a certain amount of compensation being one part of a compromise package."

Our letter went on: "When the Hawkevale bushland has been recognised by every environment agency in government as worth preserving for posterity, it would be of great credit to your government if it could resolve the matter in favour of development on non-bush areas. So much native bush has been lost in the metropolitan area already; please help us conserve this beautiful twenty hectares. Thanking you sincerely for your consideration."

Kings Park botanical expert Kingsley Dixon had noted Hawkevale's remarkable plant diversity, including rare species, as "excellent to outstanding." It was a "mini-Kings Park", he said. He noted that a rare Smokebush, *Conospermum undulatum*, was growing all over the site. It was a declared rare flora (which means Minister's permission is needed to clear land on which it lives).

However, in December 1997, Planning Minister Kierath decided that ACTIV could go ahead. The compromise deal was that, under an agreement reached between the government and Activ Foundation, 10.4 hectares of the northern section of the bush would be preserved.

In return, ACTIV would get its plant nursery moved at government expense and a land swap of DOLA land. A bit of shire reserve land in the vicinity of ACTIV's proposed housing site would be handed over to them, a concession would be given on land density on the proposed housing estate along with a sum of money from the Planning Commission as the balance of what's owed to ACTIV for its concessions.

Our group, the Nature Reserves Preservation Group, noted 'with regret' the reality of the loss of land in a public statement. "It seems so sad that this small surviving stand of Banksia woodland, which has now shrunk to less than 9% of what was originally here on the Swan Coastal Plain, will now shrink even further," said Gladys Lourvanij, president of the NRPg.

Ironically, she said, Hawkevale had "every conservation tick it could possibly get, and is identified by all government conservation agencies as deserving the highest priority for preservation. The government has set itself a target of saving a minimum of 10% of all bushland types in wider Perth; we are already below that here. And still Hawkevale can't be saved in its entirety."

She went on: "Commendably, Minister Kierath himself ordered a further biological survey in recent weeks, and apart from already known species on site, a rare Smokebush *Conospermum undulatum* was found growing by Dr Kingsley Dixon, one of the State's top botanical experts. This plant is protected by legislation and yet half of it must now be sacrificed in the proposed compromise deal over Hawkevale."

Mrs. Lourvanij said although the Minister's efforts are acknowledged in trying to resolve this difficult issue, "it gets back to whether our community is really serious about wanting to stop destroying our natural heritage. When will we say 'Enough is enough' and put in the resources to help landowners save bush?"

With gritted teeth, we then set about mitigating the damage, arguing for wide buffer zones, fencing, drainage systems that caused least impact on the bush. We asked that all large trees in the proposed development area be retained.

An intervening period saw the bush further degraded while ACTIV prepared its plans. In September 2004 I wrote to CALM to plea for fencing to stop four-wheel drivers careering through the 'saved' portion of bush, and causing a menace to neighbours. CALM would not pay for it because the land had not yet been transferred to them.

What we found so perplexing in our protracted and time-consuming campaign was that, throughout the whole affair, Perth Bush Plan was being drawn up jointly by CALM, Ministry for Planning, Water and Rivers and DEP. It was a detailed and laudable attempt to identify all our remaining bushland in the metropolitan area and save it before it was too late.

Here was a plan to save precisely the kind of valuable bush that Hawkevale was. It was a prime candidate for top-priority rescue. Yet the same government shaping Bush Plan was telling us that it hadn't the funds to buy the land outright. Ultimately it could save less than half the bush and then only because we had lobbied so hard and brought the issue to the attention of government.

Today, Hawkevale is under the control of DEC, which does periodic work in it. There was a fire in the bush a year or so ago, and a DEC spokesman told me this week, that weed mitigation will be carried out soon. A rare flora survey has just been completed. Meanwhile, there are many, many weeds, and trail bikes are still a problem. If you stand on a manicured lawn in the Hawkevale estate and look at the bush, it looks scruffy, neglected and uninviting – until you walk into it in spring. Kangaroo Paw stand shoulder high in thick colourful stands, in the midst of yellow *Hibbertia*, *Lambertia multiflora*, Star of Bethlehem (*Calectasia narragara*) and red *Blancoa canescens*. Some Banksia are several metres high and very old.

There is funding from government for Regional Parks and Bush Forever sites, a total of \$1.53 million from the Environmental Community Grants Program during 2012. It is "for projects that rehabilitate, conserve, enhance or restore natural areas or values within areas that are designated as regional parks or Bush Forever sites, as well as for activities that raise public awareness for nature conservation within Regional Parks and Bush Forever sites."

Neither the Kalamunda shire nor any community group is available to apply for money. Hawkevale bushland has no Friends Group supported by Kalamunda Shire, as many areas of bush do, because the shire has no role at all in the area's management.

Finally, there are other Bush Forever sites within Kalamunda Shire. There are 13 within the area, of which 6 are under the Shire's management. They duly appear in the Shire's inventory of rare flora and its wildlife corridor plan. There's a bit of weed control and some Dieback control but it is very scarce, because there is no budget for it.

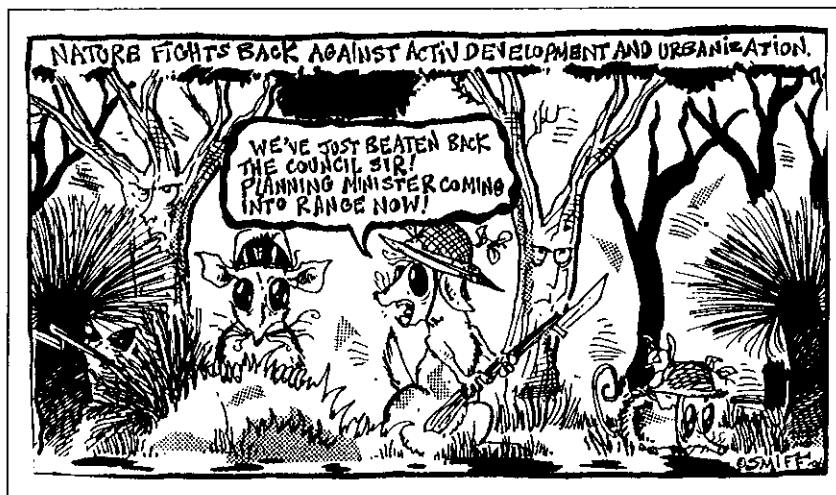
Poison Gully, one of the Bush Forever sites, is often vandalised and has two female carers, both splendid members of NRPB, who have battled for years to care for their bush. It has no regular budget for any bush care.

Another Bush Forever site, Maida Vale Reserve, got some work done this year, because both the Eastern Metropolitan Region Council and

DEC applied for money and received about \$10,000 each. Yet another Bush Forever site, at Hartfield Park, is under threat of demolition to make way for more playing fields.

A Kalamunda Shire employee with conservation duties told me that the Bush Forever system is commendable, but limited. "It's a planning tool, and occasionally mentioning that it is a Bush Forever site helps us to get the odd grant," the person said. "But there's no continuity and no funding, so how can we do a lot?" The person had also heard a rumour that DEC funding for bush grants might dwindle next year.

If I had to say what the underlying message is in our experience of trying to save a patch of bush, it is that human need for built infrastructure will always outrank the need to conserve bush. Until, that is, we decide as a society that bushland corridors and recreational wild places are as fundamentally, uncompromisingly important as bricks, mortar and concrete.



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Letters to the Editor

Send your letters to
Box 162, Mundaring, 6073

CASE STUDY: SHIRE OF SERPENTINE-JARRAHDAL'S BIODIVERSITY STRATEGIES

Chris Portlock, Shire of Serpentine-Jarrahdale

The Serpentine Jarrahdale Shire is committed to biodiversity conservation and restoration of bushlands and wetlands, demonstrating innovation and industry leadership.

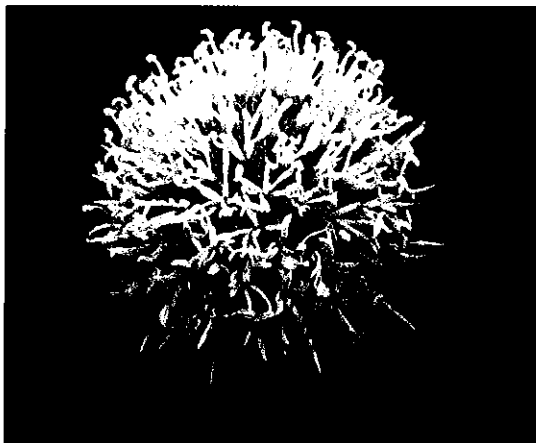
In October 2008, the Shire developed a Local Biodiversity Strategy, helping to identify fundamental biodiversity values and features of the locality. This recognised Potentially Significant Local Natural Areas (PSLNA) and the need for verification of these as possible Significant Local Natural Areas. Stemming from this original document, the Shire further established a Biodiversity Planning Policy, allowing for the security of Potentially Significant Local Natural Areas, and an additional Biodiversity Incentives Strategy. The Biodiversity Incentives Strategy is an advanced implementation strategy, delivered through a program called 'Healthy Habitats'. 'Healthy Habitats' is a partnership program with the community Landcare organisation, which delivers one-on-one support to local landowners with high value local natural areas, to help promote biodiversity conservation on private properties.

Biodiversity has been recognised as a fundamental key asset in Serpentine Jarrahdale, and tree and plant protection areas have been incorporated into the Town Planning

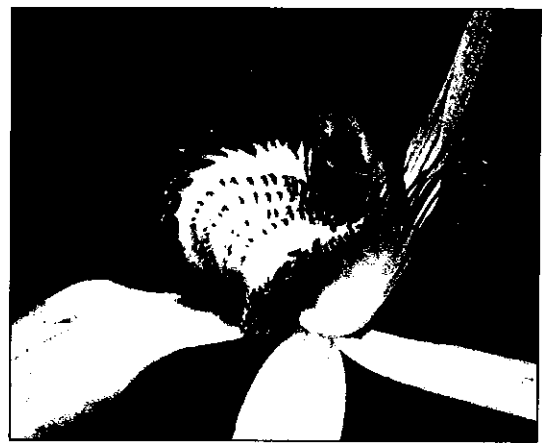
Scheme (TPS2). This provides all trees above a certain height and trunk diameter with legislative protection fines and the capacity for the Council to declare tree and plant preservation areas.

The Shire has employed a full-time Botanist and Natural Area Ecologist to engage in the administration and completion of its outlined biodiversity objectives. This includes flora surveys of all significant natural area reserves, along with recording and monitoring programs using NAIA (Natural Area Initial Assessment) templates, initially developed under the Perth Biodiversity Program (PBP).

With the adoption of the original Local Biodiversity Strategy, mechanisms are provided for greater targeted protection and a higher standard of local management of biodiversity. The Shire's Local Planning Strategy is currently being prepared with the advantage of a Local Biodiversity Strategy having been put in place, using the same robust public consultation process. Biodiversity conservation will now be a legitimate consideration in statutory planning applications and will be developed further into other local government statutory documents, with collaboration from other organisations and State government agencies.



▲ Drumsticks *Dasypogon bromeliifolius*.
(M. Brundrett)



▲ White Spider Orchid *Caladenia longicauda*.
(M. Brundrett)

MANAGING FOREVER? A LOCAL GOVERNMENT AUTHORITY ROLE IN BUSH FOREVER

Linda Metz, City of Cockburn

SUMMARY

The City of Cockburn manages several Bush Forever sites that act as both conservation reserves and sites for recreation. This creates a dilemma for management as often the needs and expectations of the public are not the same as required for conservation management. As a consequence the City has developed a range of techniques to both engage the public and promote conservation outcomes.

Two case studies are presented identifying both challenges and opportunities.

INTRODUCTION

There are 1,093 hectares of reserves that are currently the responsibility of the City of Cockburn. The quality of this bushland ranges from degraded through to excellent and it is contained within 82 reserves. Of these 82 reserves, a proportion is actively managed. These reserves are scattered throughout the City and consist of coastal, wetland and upland areas. Sizes range from small reserves surrounded by parkland of approximately 3,500 square metres to larger reserves of 256 hectares. Of the 82 reserves, 13 are included in Bush Forever. Bush Forever is a State Government initiative that aims to protect regionally significant bushland.

BUSH FOREVER WITHIN THE CITY

The 13 reserves classified as Bush Forever comprise 734 hectares or 67% of the City's Reserves. The majority of these sites are zoned as local reserves under Parks and Recreation and are a mix of recreation and conservation and are associated with wetlands.

The main threats to Bush Forever areas are environmental weeds, feral animals, illegal access, illegal rubbish dumping, increased fire frequency, disease such as Dieback, untreated storm water and climate change.

In addition because these reserves are so heavily used by community members for a range of other activities, balancing their needs and those of conservation can be a challenge. These reserves have been modified to include provision for: walking trails, infrastructure,

dogs, providing amenity and active public open space.

Recently in response to climate change and associated legislation, development of offsets for greenhouse gas emissions may become part of the reserve landscape.

These measures can be at odds with core strategic conservation needs, where large intact areas are needed to maintain diversity of species and connectivity across the landscape.

However, the most important aspect to long-term effective management of Bush Forever sites, is that of good planning outcomes and appropriate resourcing. The City along with several other local governments have developed a range of planning tools to enable areas of conservation significance to be identified and protected where possible within the planning framework.

The City has developed a Natural Area Management Strategy that seeks to outline an approach for management of our natural areas. This will be achieved by prioritising reserves, addressing threats, use current resources efficiently and effectively and gradually increase resources and funding.

CASE STUDY 1

Banksia/Eucalypt Woodland Reserve

Banksia/Eucalypt Woodland located in Aubin Grove is Bush Forever site 492. The site, which has consolidated two areas to form a 40 hectare reserve has been included in the Jandakot Regional Park and is zoned Parks and Recreation. The majority of this reserve, 85% is in very good to excellent condition.

Recognised as having high conservation value, the City was able to negotiate with developers to gain improvements in conservation objectives such as removing woody weeds within the reserve and also putting in place infrastructure that will encourage visitation by the public.

Opportunities as part of this approach are:

- Maintaining high quality bushland through provision of resources for weed control and development of a management plan,
- Community engagement,
- Education through installation of signage,
- Passive recreation through provision of internal paths.

CASE STUDY 2

Yangebup Lake

Yangebup Lake is part of Bush Forever site 256 and includes Little Rush Lake to the north. The two sites are separated by Osprey Drive. The site is located within the Beeliar Regional Park and is zoned under Parks and Recreation within the City's town planning scheme. The reserve area is 133 ha and contains a Conservation Category Wetland and significant flora and fauna such as Quendas, Rainbow Bee-eaters and foraging habitat for endangered Black Cockatoos. However, due to past historical uses the reserve has suffered significant impacts and approximately 50% is now in degraded condition. Some of the major and ongoing issues at this reserve include weed invasion, poor water quality and nuisance insects such as midges.

The location of this reserve makes it a major recreation node for local residents and there is considerable pressure to manage this site, especially for fire hazards and midges, which includes periodic aerial treatment.

However, this has provided a good opportunity to undertake restoration works along with a range of educational activities.

Opportunities:

- Restoration of degraded areas: opportunities to trial new and novel approaches,
- Community partnerships for revegetation.
- Environmental education initiatives,
- Indigenous involvement and education though engaging local indigenous educators,
- Offsets in the form of revegetation.

As these areas become increasingly visited by the public, demand for management has led to an increased pressure on local government to manage these sites not just for conservation outcomes, but also for recreation and public amenity.

This requires long-term resourcing for both operational expenditure and staff, managing sites that are becoming more fragmented, which in some cases are losing vigour and condition, as well as reducing risks to surrounding property and people through fire management.

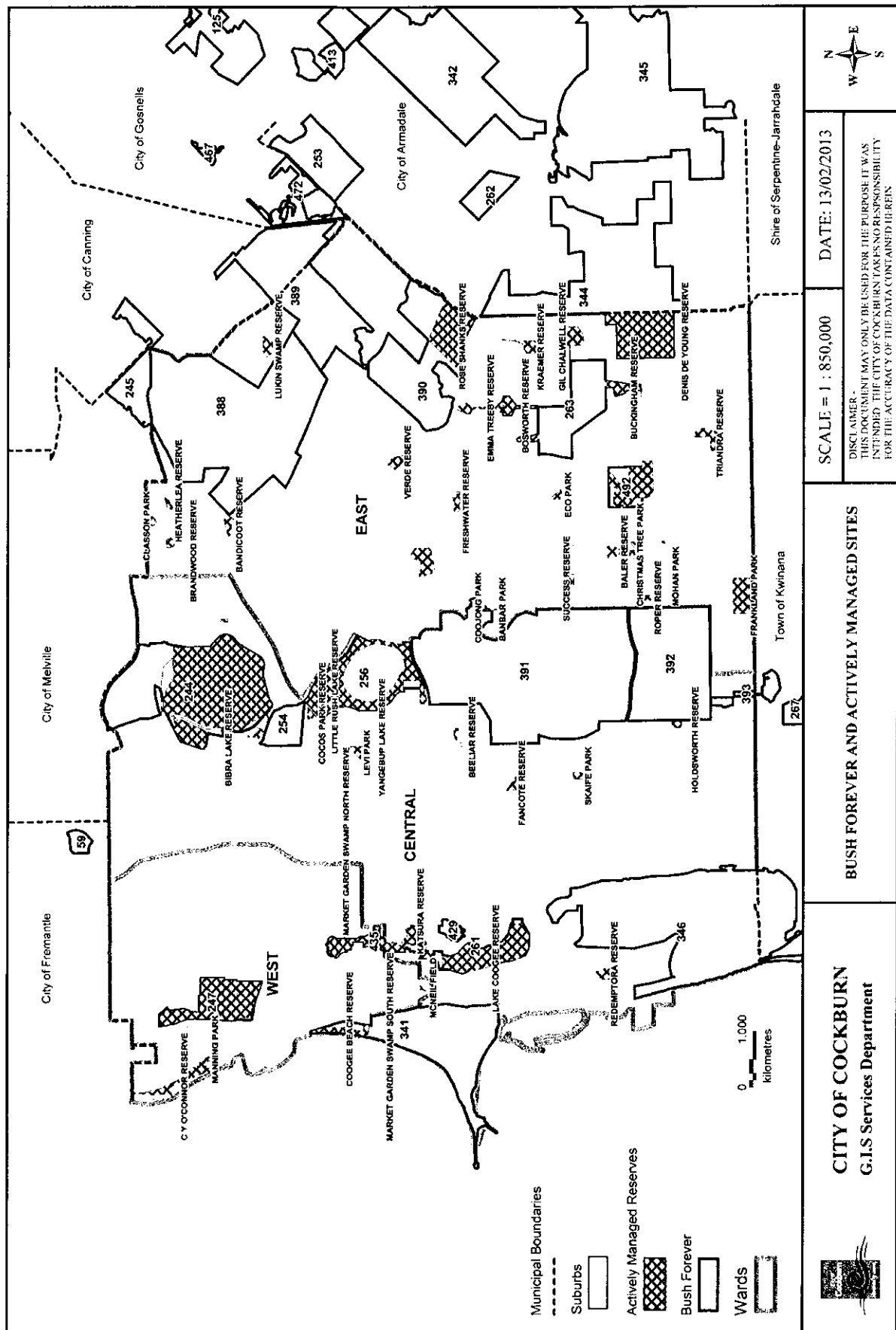
Bush Forever sites provide an invaluable resource for both community and conservation, but need to have community participation to ensure that they are valued and thus recognised as necessary elements within our suburban landscape.

CONCLUSIONS

Local Governments (LGAs) are in a unique position in terms of how these reserves are managed into the future. LGAs can provide a number of benefits that will promote conservation outcomes but also enhance community involvement, which is vital to the long term viability of Bush Forever sites. LGAs are able to:

- Provide long term management,
- Recognise Bush Forever in town planning schemes and zone accordingly,
- Increase resource capability,
- Increase community capacity building and education,
- Balance conservation and community needs,
- Link with current research,
- Support local "Friends of" groups.

LGAs seek to work collaboratively with state government, the community and other stakeholders to manage Bush Forever sites and by increasing community participation, these sites can be regarded as significant and fundamental to providing a healthy community and ecosystem.



CONCLUSION AND THE WAY AHEAD

Greg Keighery

CONCLUSION

What are the major points and conclusions that can be drawn from the information that has been presented in such a varied, interesting and informative manner, and in subsequent discussions?

Three major themes are evident. First, Bush Forever, a regional conservation plan for the Perth Metropolitan Region, has largely been successful in achieving its major outcomes. By 2012 it is largely operational with approximately 80% of sites heading towards final management. For example the Department of Environment and Conservation (DEC) has 39,500 ha of 52,000 ha listed in Bush Forever under nature conservation tenure.

Secondly, the proposed ten-year review of the plan is promised for 2013. We trust this will celebrate achievements of Bush Forever as well as highlight current and future issues to be addressed. Many speakers, and the conference in total, endorsed that the 2013 review should include an audit of the status and progress of all sites. For example, given that the highly biodiverse Greater Brixton Street Wetlands are now nationally listed and largely under conservation management, the apparently equally diverse Anstey-Keane Damplands are not. This has led to significant misuse and consequent degradation issues, with potential loss of biodiversity values.

Finally several speakers and the general discussion focused on a series of individual areas. It was noted that there was a need for statutory protection of all Bush Forever sites to hasten the completion of the process. Although the listing of areas in the MRS amendment in 2010 was welcomed, formally recognising bushland conservation as a land use purpose is needed.

WAY AHEAD

Obviously there are numerous issues that are not dealt with in the current plan. One area discussed by several reports was integration of management. It was never intended that all areas should come under DEC control. Therefore a major current and future issue is how to manage regionally significant sites outside nature conservation tenure i.e. those under Local Government Authorities, other State Agencies or the Commonwealth, rather than DEC.

Obviously Bush Forever being a plan to conserve regionally significant areas, numerous locally significant areas could not be included as Bush Forever sites. There is an issue about conserving, managing and integrating locally significant areas, their ecological linkages, rivers and wetlands into the conservation plan for Perth. Local Biodiversity Strategies need obligatory status and formal recognition.

Another major gap noted was the lack of education and knowledge about the values of Perth's and WA's bushland. Speakers noted that to promote and conserve Perth's Bushland, resourcing for management and education was an urgent priority, both for children and adults, to develop a regional and local sense of place for the community. There is a need for public understanding of the need to preserve our unique natural heritage as a valid land use in itself. This hopefully will lead to informed friends and lovers of urban bushland as well as informed politicians.

Many presentations and questions noted that managers are still not coping with and managing overarching, threatening processes e.g. fragmentation, altered hydrology, climate change, fire, weed and feral animal invasion.

The conference noted that there is no proposed mechanism for updating Bush Forever or extending Bush Forever with new data and new legislation. For example, Bush Forever Areas could all be listed under the Commonwealth EPBC Act as '*Matters of National Environmental Significance*' and in the Strategic Plan for Perth and Peel Regions. Many

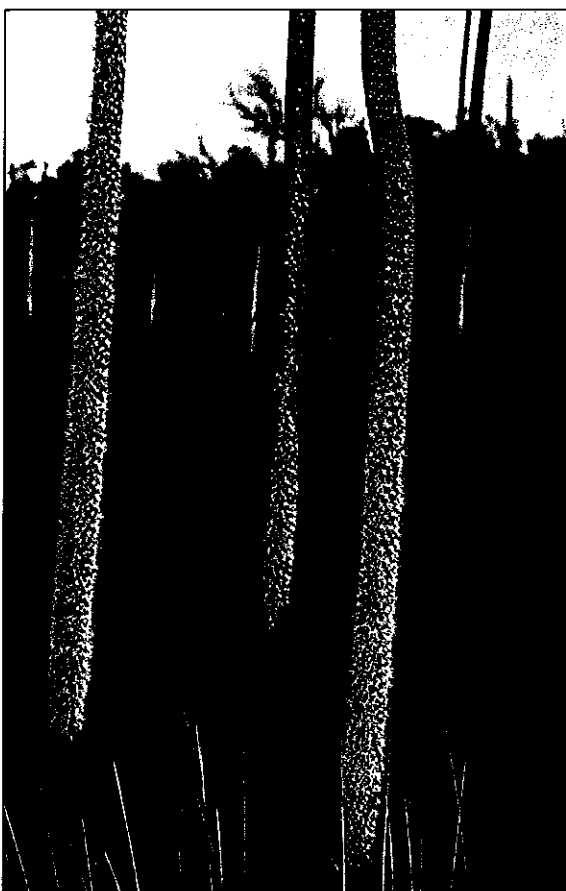
thought that there is a perceived shift in the current Strategic plan for the Perth-Peel region to preserving only the rare species, and not preserving what is the common. Planning should have progressed beyond this retrograde focus which leads to many now common species becoming rarer. Bush Forever is about managing diversity, not just what is currently rare.

Finally there was some discussion about the current and future role of the public and the Environmental Protection Authority (EPA) in clearing assessments, especially non Bush Forever sites. Participants perceived a lack of transparency for the public because DEC manages, reviews, advises and approves such proposals. Unfortunately, no-one from the Office of the EPA was present at the conference to address these points.

STATEMENT FROM THE CONFERENCE

Given the rapid growth of Perth and encroachment of development around Bush Forever Sites, with the resulting degradation from illegal activities and neglect, it is recommended that substantial resources be allocated to complete the implementation of *Bush Forever* including acquisitions and management of sites, as an integral part of the provision of state infrastructure for Perth.

Put to the conference participants and passed by those present, unanimously.



▲ Balga *Xanthorrhoea* sp. flower spikes.
(M. Brundrett)



▲ Cow Kicks *Stylidium schoenoides*. (M. Brundrett)



▲ Dragonfly. (M. Brundrett)

DELEGATES

Christine Allbeury	Urban Bushland Council	Bronwen Keighery	Wildflower Society of WA
Marjorie Apthorpe	Friends of North Ocean Reef - Illuka Foreshore	Greg Keighery	Department of Environment and Conservation
Rahima Bannerman	Friends of Western Swamp Tortoise	Stephen Kern	Ecoscape
Geoff Barrett	Department of Environment and Conservation	Heidi Khojasteh	Town of Mosman Park
Ben Blomfield	Friends of Paganoni Swamp	Frances Kininmonth	Eastern Hills Wildflower Society
Warwick Boardman	Urban Bushland Council supporter	David Knowles	Spineless Wonders
Joan Boardman	Community member	Kirsten Knox	Emerge Associates
David Bright	Wildflower Society of WA	Rae Kolb	Stirling Natural Environment Coastcare
Kate Brown	Department of Environment and Conservation	Walter Kolb	Stirling Natural Environment Coastcare
Christine Burtenshaw	City of Armadale	Rebekkah Lamont	Eastern Metropolitan Regional Council
Christina Carey	Botanic Gardens and Parks Authority	Margaret Larke	WA Naturalists' Club
Karen Clarke	Department of Environment and Conservation	Vicki Laurie	Nature Reserves Preservation Group
Sue Conlan	Friends of Mosman Park	Jane Leahy-Kane	Swan Estuary Reserves Action Group Inc
Cath Cooper	Urban Bushland Council	Di Lynne	Friends of Mosman Park
Diana Corbyn	Friends of Ken Hurst Park	Victoria Maguire	Perth Region NRM
Julia Cullity	Department of Environment and Conservation	Rosemary Martin	Community member
Lesleigh Curnow	Challenger Institute of Technology	Britta Mathews	ENV Australia
Christine Curry	Friends of Star Swamp	Nicole Matthews	Department of Sustainability, Environment, Water, Population and Communities
Richard Daniel	Ecoscape	Margaret Matthews	Friends of Wireless Hill
Stefan de Haan	Department of Environment and Conservation	Sharon McArthur	Mullaloo Beach Community Group
Andrew Del Marco	Urban Bushland Council supporter	Catherine McChesney	Botanic Gardens and Parks Authority
Bob Dixon	Botanic Gardens and Parks Authority	Dougal McColl	Urban Bushland Council supporter
Beverly Drayton-Witty	Natural Area Holdings	Sarah McElwee Over	Cockatoo Coalition
Valerie English	Department of Environment and Conservation	Felicity McGeorge	Save Beeliar Wetlands
Tony Fowler	Nature Reserves Preservation Group	Linda Metz	City of Cockburn
Bryony Fremlin	Friends of Forrestdale	Jacqueline Milner	Natural Area Holdings
Sharon Genovese	Nature Reserves Preservation Group	David Mitchell	Department of Environment and Conservation
Rod Giblett	Friends of Forrestdale	Brian Moyle	Wildflower Society of WA
Ciaran Gibson	Biota Environmental Sciences	Judy Olsen	Men of the Trees – Peel District
Michael Gorman	City of Stirling	Catherine O'Neill	Swan Estuary Reserves Action Group Inc
Mary Gray	Urban Bushland Council	Julie Ophel	City of South Perth
Helen Griffiths	Department of Planning	Jean-Paul Orsini	Swanbourne Coastal Alliance
James Gummer	Natural Area Holdings	Margaret Owen	Friends of Landsdale
Heidi Hardisty	Friends of Lake Claremont	Erin Pears	Department of Sustainability, Environment, Water, Population and Communities
Myles Harmer	Community member		Chittering Landcare Centre
Pat Hart	SERCUL		William Bay National Parks Association
Roz Hart	Friends of Shenton Bushland	Susan Pedrick	Friends of Star Swamp
Emilie Hethey	Wildflower Society of WA	Margaret Pieroni	City of Wanneroo
Alan Hill	Friends of Quenda Creek		Serpentine Jarrahdale Shire
Norman Hodgkinson	Friends of Paganoni Swamp	David Pike	
Rachel Inglis	Urban Bushland Council	Sasha Poli	
Leisha Jack	Friends of Sandover Reserve	Chris Portlock	
David James	Friends of Forrestdale		

Perth's Bush Forever Report Card Conference

Catherine Prideaux	Department of Environment and Conservation	Kerry Smith	Wildflower Society of WA
Sue Radford	Urban Bushland Council supporter	Lynda Smith	Friends of The Spectacles
Kirsten Richards	Office of Hon Alison Xamon, MLC	Patricia Smith	Friends of the Cockburns Wetlands
Margaret Rogers	Men of the Trees – Peel District	Irene Tallentire	Urban Bushland Council supporter
Tahlia Rose	Department of Premier and Cabinet	Jo Taylor	City of Stirling
Chris Round	City of Wanneroo	Barry Urban	Office of Hon Dr Sally Talbot, MLC
Tony Roupheel	Urban Bushland Council supporter	Loretta Van Gassel	Department of Planning
John Ryan	Friends of Forrestdale	Wayne Van Lieven	City of Gosnells
Karen Sanders	Department of Environment and Conservation	Eddy Wajon	Wildflower Society of WA
Kim Sarti	Bungendore Park Management Committee	David Wake	Quinns Rocks Environmental Group
Tracey Scroop	Department of Planning	Catherine Webb	ENV Australia
Marion Shaw	Cockburn Wetlands Education Centre	Estelle Whitford	Alcoa of Australia
Vanessa Slater	Serpentine Jarrahdale Shire	John Williams	Friends of Lightning Swamp
		Renata Zelinova	WALGA
		John Znidarsic	Urban Bushland Council supporter



▲ White Bunny Orchid *Eriochilus dilatatus*.
(M. Brundrett)



▲ Swan River Myrtle *Hypocalymma robustum*. (K. Sarti)

APPENDICES

A. Acronyms and Frequently used Abbreviations

ANCA	Australian Nature Conservation Agency (1993–1998).
BCI	Biodiversity Conservation Initiative.
BF	Bush Forever – a long-running initiative to identify and protect areas of regionally significant bushland and associated wetlands on the Swan Coastal Plain in the Perth Metropolitan Region. Final plan endorsed by the State Government in December 2000.
BFA	Bush Forever Area.
BFAG	Bush Forever Advisory Group.
BMAS	Bushland Management Advisory Service.
Bushplan	Precursor to Bush Forever – a draft plan released for comment in November 1998.
CALM	(Department of) Conservation and Land Management (precursor to DEC).
CAR	Comprehensive, Adequate and Representative (conservation reserve system).
CTRC	Conservation Through Reserves Committee.
DCE	Department of Conservation and Environment.
DEC	Department of Environment and Conservation.
DEP	Department of Environmental Protection.
DOP	Department of Planning.
DPUD	Department of Planning and Urban Development (later named Department of Planning).
EPA	Environmental Protection Authority.
EPBC Act	(The Commonwealth) Environment Protection and Biodiversity Conservation Act 1999 – legislation to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places – defined in the EPBC Act as matters of national environmental significance.
GIS	Geographic Information System – a system designed to capture, store, manipulate, analyse, manage and present all types of geographical data.
Greenways	Strategic plan for Perth's Greenways prepared for Environment Australia, 1998.
Hedde complex	A plant community or vegetation complex associated with particular soil/landform units as described by Hedde, E.M. <i>et al.</i> (1980).
IBRA	Interim Biogeographic Regionalisation for Australia.
Kwongan	A Bibbelmun (Noongar) Aboriginal term defined as a 'type of country ... [that is] sandy and is open without timber-sized trees but with a scrubby vegetation.'
LBS	Local Biodiversity Strategy.
MfP	Ministry for Planning.
MNES	Matters of National Environmental Significance <i>vide</i> EPBC Act.
MOU	Memorandum of Understanding.
MRS	(Perth) Metropolitan Region Scheme.
NAIA	Natural Area Initial Assessment.
NGO	Non-Government Organisation.
NPNCA	National Parks and Nature Conservation Authority (now Conservation Commission).
NRM	Natural Resource Management.

P&R	Parks and Recreation (reservation).
PBP	Perth Biodiversity Project – a local government initiative supported by the Western Australian Local Government Association for 32 Perth Metropolitan Region Local Governments and several peri-urban Local Governments.
PMR	Perth Metropolitan Region.
POS	Public Open Space allocation.
Ramsar	The “Ramsar Convention on Wetlands” (signed in Ramsar, Iran in 1971) is an inter-governmental treaty that commits its member countries to maintain the ecological character of their Wetlands of International Importance.
RFA	Regional Forest Agreement.
SCA	Special Control Area under the (WA) Planning and Development Act.
SEWPAC	Commonwealth Department of Sustainability, Environment, Water, Population and Communities.
SPP	Statement of Planning Policy – prepared and adopted by the WAPC under statutory procedures including public consultation and consideration by the Planning Minister and the Governor.
SWBP	South West Biodiversity Project – developed by WALGA to assist country Local Governments manage natural areas and assist key decision making within the land use planning process (ended in September 2009 due to lack of funding).
TEC	Threatened Ecological Community.
UBC	Urban Bushland Council WA Inc. – the peak community voluntary organisation for urban bushland conservation and protection in WA, particularly of the greater Perth, Peel and Busselton regions, in areas influenced by urbanisation.
UWA	University of Western Australia.
WA	Western Australia.
WALGA	Western Australian Local Government Association.
WAMA	Western Australian Municipal Association (now Western Australian Local Government Association).
WAPC	Western Australian Planning Commission.
WRC	Water and Rivers Commission.

B. WAPC Bush Forever Acquisitions

SUBURB	SITE	AREA (ha)
Bullsbrook	Site 002	25.9225
Ellenbrook	Site 023	27.1199
Red Hill	Site 042	3.2744
Dianella	Site 043	5.7831
High Wycombe	Site 045	1.0423
Wattle Grove	Site 050	2.9463
Orange Grove	Site 051	3.9669
Oakford	Site 065	18.8331
Serpentine	Site 074	67.2663
Baldivis	Site 075	9.1712
Bullsbrook	Site 097	21.3550
High Wycombe	Site 122	5.5128
High Wycombe	Site 123	15.2419
Gosnells	Site 124	0.6140
Southern River/Huntingdale	Site 125	58.3191
Carabooda	Site 129	7.6992
Tapping	Site 164	4.0400
Forrestdale	Site 253	13.0000
Bibra Lake	Site 254	22.0000
Mandogalup	Site 267	16.3289
Anketell	Site 270	30.5342
Parmelia/Leda	Site 272	19.4493
Baldivis	Site 275	182.2206
Bullsbrook	Site 294	2.0853
Neerabup	Site 295	9.6107
Maida Vale	Site 316	1.0266
Forrestfield	Site 319	8.0047
Byford	Site 321	1.4417
Burns Beach	Site 322	153.3357
Wanneroo	Site 327	56.5968
Southern River	Site 340	2.2780
Forrestdale	Site 342	13.9602
Forrestdale	Site 344	17.0540
Forrestdale	Site 345	42.8049
Oakford	Site 348	6.1131
Wellard	Site 349	17.0987
Mundijong	Site 362	8.2379
Baldivis	Site 376	4.2443
Mirrabooka	Site 385	1.5552
Kenwick	Site 387	7.7904
Banjup	Site 390	20.0515

SUBURB	SITE	AREA (ha)
Mandogalup	Site 393	3.2627
Karnup	Site 395	45.6880
Southern River	Site 413	50.9039
Southern River	Site 464	23.6187
Southern River	Site 465	9.1453
Aubin Grove	Site 492	26.6614
Alexander Heights	Site 493	10.0165
TOTAL		1104.2272

C. UBC Call for Action on Bush Forever – February 2013

The Urban Bushland Council calls for public recognition of Perth's rich Banksia woodlands and wetlands of the Swan Coastal Plain as a biodiversity hotspot of the world by:

- Complete implementation of the now partly-implemented Bush Forever Plan 2000.
- A comprehensive audit in 2013 of all Bush Forever Areas.
- Extending Bush Forever to include the Peel region, Swan Bioplan, Whicher Scarp, Darling Range, Bunbury Region Scheme, with new funding source similar to the Metropolitan Region Improvement Fund.

with

STATUTORY PROTECTION

- Statutory protection including a management obligation under the environment portfolio to apply to all Bush Forever Areas and to all land holders of Bush Forever Areas.
- Prohibition of clearing in Bush Forever Areas and regional ecological linkages.
- Revision of the proposed MRS Text Amendment to include statutory definition, protection and management of all Bush Forever Areas, with clearing not permitted.
- A legally defined responsibility for DEC to assume leadership of Bush Forever: Co-ordination and support of Bush Forever across agencies and landholders to shift to a new unit in the Nature Conservation Division of DEC with appropriate new funding.
- 'Special Control Areas' under the Planning And Development Act 2005 declared for all Bush Forever Areas that are not zoned Parks and Recreation under the MRS.
- Mandatory Local Biodiversity Strategies developed and implemented by 2015 according to the LBS Planning Guidelines by WALGA for all local government authorities in the Perth and Peel regions.
- Linkages: Statutory definition, protection and management of regional and local ecological linkages in the Perth and Peel regions.
- Update and extend Bush Forever with new data and protection in new WA *Biodiversity Conservation* legislation.

BUDGET

- State Government increased funding for management and education, including massively increased funding and staff for the Nature Conservation Division of DEC.
- Operational budget allocation by non-conservation agencies to manage their Bush Forever sites to maintain values and prevent degradation.
- An increase in the Metropolitan Region Improvement Tax (MRIT) rate to 0.2¢/\$ to properly fund acquisition of Bush Forever Areas and initial capital works.

EDUCATION AND AWARENESS

- A new focus on bushland education of the Perth community, children and adults, to develop community pride in a sense of place.

MANAGEMENT

- Management of overarching, threatening processes: clearing, fragmentation, hydrological change, weeds, feral animals, and disease.
- For the 13,000 ha of Bush Forever Areas outside DEC-managed lands, all government landholders (Commonwealth, Landcorp, Water Corporation, Department of Housing etc.) be subject to the management obligation as above and thus be required to actively manage their sites to prevent degradation and retain conservation values.
- Integration of locally significant natural areas with ecological linkages, rivers and wetlands.

AUDIT

- A comprehensive audit in 2013 of each Bush Forever Area and of the progress toward a CAR reserve system for the Perth Metropolitan Region to be completed and made public as a priority in early 2013.

LOCAL GOVERNMENT

- Mandatory Local Biodiversity Strategies, developed and implemented by 2015 according to the LBS Planning Guidelines by WALGA for all local government authorities in the Perth and Peel regions.
- State Government funding for 3 full-time permanent staff to support development and implementation of Local Biodiversity Strategies.

COMMONWEALTH

- All Bush Forever Areas declared '*Matters of National Environmental Significance*' under the Commonwealth EPBC Act.
- The Strategic Assessment for Perth and Peel changing its focus to *managing the unique diversity on the Swan Coastal Plain of an internationally recognised biodiversity hotspot*, not just what is rare.
- Recognition and protection of the network of regional and local ecological linkages in the Perth and Peel regions under the National Wildlife Corridors Plan and the proposed National Wildlife Corridors Act.
- An end to clearing Banksia woodlands and black cockatoo habitat on the Swan Coastal Plain.



A tree you pass by every day is just a tree. If you are to closely examine what a tree has and the life a tree has, even the smallest thing can withstand a curiosity, and you can examine whole worlds.

William Shatner, Canadian actor 1931–



Perth's Bush Forever Areas (South)

