

WHEN A COASTAL BOARDWALK IS NOT A GOOD IDEA

Boardwalks can provide the public with safe access to natural areas such as wetlands, cliff tops, and gorges. What is often ignored by planners however, are the unavoidable negative impacts of boardwalks, such as damage to the environment during construction and maintenance of the structure, the introduction of weeds, litter, fire risk, fragmentation and other types of disturbance which can result in degradation of the area intended to be protected.

There are some areas where boardwalks should never be built. The South Trigg Beach Class A Reserve is one of these areas.

This coastal reserve between North Scarborough Beach and South Trigg Beach is recognised for its regional significance as an example of an intact Quindalup dune foreshore in near pristine condition. It forms part of the larger *Bush Forever Site 308 – Trigg Bushland and adjacent coastal reserve*. It is the only coastal reserve in the City of Stirling that has an A classification. This classification, awarded in 2001 by a far-sighted State Environment Minister, is used solely to protect areas of high conservation value.

The City's original 1988 Management Plan for the coastal reserve was based on research which had resulted in its inclusion in the System 6 Study Report. This research identified the Trigg Bushland and the adjoining coastal reserve as having

conservation significance due to the rarity of reserved areas within the metropolitan area which provide an example "... of successional vegetation development from the beach, through mobile and sand dune systems to mature Tuart Woodlands (System 6 Study)."



This would be a starting point for the proposed boardwalk between Trigg and Scarborough.

The Management Plan describes the reserve as consisting of a sandy beach which undergoes an annual cycle of erosion and replenishment, grading into vegetated primary and mobile dunes in a typical pattern of shore parallel dune ridges which have formed into knoll and depression landform. Its vegetation is typical of that found on Quindalup Dunes consisting of plants which are adapted to conditions of intense heat, salt laden winds, sand blasting and dry sandy soils. Although hardy, the plants such as *Scaevola crassifolia*, *Olearia axillaris*, *Spinifex longifolius* are also easily damaged by trampling and associated erosion.

It is therefore, extremely disturbing that the land manager in whom the care and protection of this important reserve is vested, is proposing three options for a north-south boardwalk, running the length of the reserve and linking beach car parks. The City of Stirling's favoured

Photo by R Murphy

option is 800m long and involves sections of an elevated aluminium boardwalk 1.4m – 2.4m wide modelled on the unpopular "skywalk" at Yanchep Beach. It is also proposing sections of concrete pathways "following ground contours" within a

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Editorial

UBC Call for Bush Forever Status Report

The ten year implementation period for Bush Forever has expired, so now we ask what has been achieved?

Launched in December 2000 by the Liberal Government's Graham Kierath as Planning Minister and Cheryl Edwardes as Environment Minister, the Bush Forever plan sets out a comprehensive conservation reserve system for the Swan Coastal Plain portion of the Perth Metropolitan Region. It includes 287 Bush Forever sites, ecological linkages, local biodiversity strategies, community awareness and more. The lead agency for implementation is the Department of Planning where the Bush Forever office is located.

Much has been achieved. Many sites have been acquired by the WAPC over the 11+ years, funded by the \$100m allocation from the Metropolitan Region Improvement Fund (MRIF). The table below shows 19 Lots comprising 74.85ha that have been purchased for Bush Forever since 1 June 2011 at a total contracted price of \$16.83million. Eight of the properties (marked *) have yet to finally settle but the WAPC expects this to occur by the end of September 2012.

Once sites are acquired, they are managed for conservation by the WAPC until they are transferred to an appropriate land management authority. Some sites have been transferred to DEC Swan Region, some added to Regional Parks and others to local government reserves.

From answers to questions in Parliament in early 2011, there were then 106 (out of 287) Bush Forever sites still

with only part or no management agency assigned. The concern is that there are so many sites still unfenced and/or unmanaged and that disturbance by off road vehicles, rubbish dumping, and excessive fires is degrading values of sites. This disturbance is preventable but not always reversible.

In short, while there have been many valuable and commendable additions to the conservation estate, implementation remains far from complete. More disturbing is the current government's attitude of slowing down the implementation process. The UBC is advised that expenditure of the earmarked MRIF has been 'curtailed' by instruction from Treasury - so that the government's bottom line of debt looks better. The money for acquisition and initial capital works such as fencing is there in the MRIF, but the tap has been turned off or is only dripping. This means our unique bushland assets are degrading unnecessarily - and the costs of restoration will be higher in future years.

The UBC has always been a strong supporter of Bush Forever, so has decided to focus on Bush Forever for the rest of 2012 and pre-election. The UBC call is for a Status Report on the policies and 15 planned Bush Forever 'Actions' as well as a Site Status Report for each of the 287 sites - a process which is specified in Bush Forever to be done by the lead agency the Department of Planning (Bush Forever Office). The UBC suggests that a Project officer be specially appointed to compile these reports directed and assisted by a Working Group of Department of Planning, WAPC, DEC, WALGA and UBC representatives.

Table: List of properties acquired by the State between 1 June 2011 and 30 July 2012 as part of Bush Forever initiative (Department of Planning, August 2012)

PROPERTY	SUBURB	PURCHASE PRICE	AREA	BUSH FOREVER SITE
13 Hayes Ave.	Dianella	\$4,000,000	5.7831ha	43
1614 Balfour St.	Southern River	\$1,350,000	5.9944ha	125
Lots 1799-1803inc & 1004 Holmes St.	Southern River	\$4,874,500	23.6187ha	464
40 Armadale Rd.	Forrestdale	\$1,200,000	12.7588ha	344
23 Cumming Rd.	Oakford	\$370,000	2.0500ha	348
754 Eighty Rd.	Baldivis	\$653,000	4.3901ha	275
3 Percy St.	Gosnells	\$130,000	0.6140ha	124*
4 Holmes St.	Southern River	\$475,000	2.1600ha	125*
3 Holmes St.	Southern River	\$446,440	1.9870ha	125*
787 Stakehill Rd.	Baldivis	\$760,000	6.3343ha	275*
1604 Holmes St.	Southern River	\$2,010,000	7.2843ha	125*
7,8 & 9 Sixty Eight Rd.	Baldivis	\$565,000	1.8976ha	275*
TOTAL		\$16,833,940	74.8583ha	

* Under contract yet to settle

UBC Has Changed Its Email Address – Please amend all your emailing lists

Do you still use the 'old' UBC email address ubc@inet.net.au?

After almost a year of UBC running two email addresses we have now converted to using only

ubc@bushlandperth.org.au

For only a short time email addressed to ubc@inet.net.au will be diverted to the new email after which only ubc@bushlandperth.org.au will be active.

Please check all your emailing contact lists and update the UBC email address to ubc@bushlandperth.org.au

Could you also advise your members and supporters of our new email address.

Time ticks on in our campaign, and as much as some things seem to change, much in effect stays the same.

For those of you unfamiliar with where we are, or our marathon battle against mining, please take the time to visit the Urban Bushland Council's great website which has a page dedicated to our group.

Most recently, you may be aware that the City of Wanneroo has advertised Scheme Amendment 121 Landscape Enhancement. Originally the City of Wanneroo attempted to initiate Scheme Amendment 108 Landscape Enhancement which was in direct response to Recommendation 6.4 of the Western Australian Planning Commission's (WAPC's) report titled 'The Future of East Wanneroo: Land use and water management in the context of Network City' (August 2007). It clearly stated that, "*the suitability of large areas identified by the State Planning Policy as basic raw materials require closer examination and review, and that extraction of basic raw materials resources in Carabooda and Nowergup may be a threat to the long-term landscape, lifestyle and scenic values of the area*" They are the words of the State Planning Department!

So it was frustrating to say the least that Scheme 108 which was in response to, and addressed the State's own report was rejected outright by the Minister for Planning, John Day, primarily because some of the area covered fell within the State Government's designated priority resource areas.

This latest attempt by the City of Wanneroo, Scheme 121, is an attempt to overcome the reasons for the Minister's refusal to accept Scheme 108. So what does it really mean?

Recently we held a public meeting that was extremely well attended by local landholders and supporters of this beautiful valley. Most encouraging was the attendance of John Quigley MLA Butler, Michael Mischin MLC North Metropolitan Region represented by Peter Ramshaw, Paul Miles MLA for Wanneroo and Rob Phillips the Greens candidate for the State seat of Wanneroo. It is clear that mining and industrial activities within the Lake Nowergup/Carabooda valley is continuing to cause considerable concern. Two officers of the City of Wanneroo also attended providing local residents with an opportunity to more clearly understand the implications of the proposed Scheme 121.

At a general level this Scheme Amendment is fantastic news. Its objectives are:

- Enable a range of activities and land uses that support the characteristics of the landscape, including rural residential development, agricultural and horticultural land uses, and small-scale tourism activities.
- Ensure that subdivision and development maintains the rural character of the locality and does not adversely affect the existing landscape and scenic values.

Facilitate subdivision and development that:

- Is compatible with the landscape amenity and rural character of the Zone;
- Will not have a detrimental impact on sensitive land uses;
- Is coordinated and compatible with surrounding land parcels; and
- Does not necessitate the provision of large scale unplanned and uncoordinated service infrastructure and community services.
- Encourage land use and management practices compatible with landscape and environmental conservation.
- Encourage the preservation of vegetation and fauna and the protection of areas of visual or landscape quality.

Sounds pretty good. And it is, depending on one's perspective.

The City of Wanneroo in designing this version, has excluded land as identified as a priority resource in SPP 2.4 Basic Raw Materials. Additionally, it has introduced a Special Control Area that will exclude sensitive land uses from being located within 300 metres of designated priority resource areas. So in effect, the City of Wanneroo now does not need the Minister's approval for this Scheme Amendment because this proposal no longer impinges on priority resource areas as defined by SPP2.4. This of course might seem a really attractive position. Local Governments are becoming increasingly frustrated by the State Government's moves to take control of planning decisions. So this action by the City of Wanneroo could be viewed as a bit of a coup.

But the consequence of this power play needs to be clearly understood. There are some who hold huge concerns about the Special Control Area of this proposed Landscape Enhancement zoning. It appears that now the buffers for any future mining proposal will fall within the land covered by those that are in the proposed Landscape Enhancement. Some might go as far as arguing that mining companies would have control over that land in the Special Control Area in perpetuity and landowners would receive no compensation for losing this control. It is interesting to note that under this proposal, it is Landscape Enhancement designated land that has to have the buffer to protect potential adjacent mining activities. Should we not be demanding that it is the priority resource designated land that should have the buffers imposed on their land to protect the landscape enhancement values of the area?

Landscape Enhancement Zoning is a step in the right direction. The original area identified by the WAPC's report which recognised the unique environmental characteristics of this area was some 1479 hectares. This revised Scheme Amendment 121 takes in 805 hectares.

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MINISTER'S ROADSIDE WEED LIST

A number of weeds that are of concern along roadsides have been added to the Minister for the Environment's weed list, which is an official weed list endorsed by the State Government.

While the UBC welcomes an identifiable list of roadside weeds, it is of little use if we cannot see the list publicly and if it has no statutory basis. Where is the regulation that 'declares' these roadside weeds alongside all the serious bushland weeds that land managers and community volunteers are spending hours and thousands of dollars in trying to control and eradicate?

We hear from the Roadside Conservation Committee (under DEC) that new weeds that have been added to the Minister's weed list include cotton bush, buffel grass, Flinder's Range Wattle (*Acacia iteaphylla*), castor oil plant, capeweed, caltrop and gazania. We are not sure if fountain grass is on the list - but it should be as this weed is escaping along the roadside to Geraldton from Perth and along Anketell Road in Beeliar Regional Park for example.

Some local governments are using some of these weeds in their landscaping. For example, the City of Stirling has gazanias in their landscaped garden at the front of their municipal offices in Hertha Road, Stirling and also in many of their roundabouts. While their nursery is propagating and planting gazanias, their bushland management crew are weeding them out along the City's coastal reserves. In another example, the City of Swan has fountain grass in their landscaped

garden area in front of their offices much to the dismay of their environmental management staff.

Surely it is time for the Minister to show some leadership at the state level by putting in place a legally binding but practical mechanism which gives status to the weed list and makes it illegal to propagate, sell and plant these weeds in specified regions - or for the whole of WA as applicable to the above listed weeds.

While local government authorities can now legally 'declare' weeds in their municipality, most are reluctant to do so. If they were legally required to declare weeds on the Minister's list, then more logical and cost effective progress could be made in our urban bushland weed control. Prevention of the initial spread of serious weeds in to bushland and along roadsides and other corridors is surely the best way.

What can you do for weeds in your bushland?

- Make a list of the weeds of concern in your area;
- Talk to your Council about invasive weeds in your area. Ask them to 'declare' these weeds under current legislation;
- Encourage your Council to produce a local weed brochure and to distribute it to every household to raise awareness - as some Councils have done already;
- Check which local nurseries are selling weedy plants and encourage them to stop selling these plants.

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Mining activities will now be legally prohibited in this area. You have to remember though, that it was highly unlikely that the land covered by this Scheme Amendment had any potential for mining in the first place. This 805 hectares was never in the priority resource area anyway! Remember, that's why the City of Wanneroo doesn't require the Minister's approval. 40 per cent of the new Landscape Enhancement Zoning, which never had any prospects of mining, will be, in effect, a buffer zone for any potential mining activity. So I don't think we will see any adverse submissions being made from landowners with mining aspirations. Why would they? Under this proposal they would now effectively have a potentially bigger footprint for mining given it is the Special Control Area that will form the buffer zones required for future mining, and not their properties.

This campaign is some 1173 days old. Overwhelming, it is the State Planning Policy 2.4 Basic Raw Materials which has triumphed over any other policy, plan or the community's aspirations. It is the State Government's unashamed support, to the detriment of all other considerations, of mining, that is at the heart of the matter.

And we fear, it is only going to get worse. The current SPP2.4 is currently under review. The Chamber of Commerce has been busy of course. Their report, Basic Raw Materials Access and Availability 1996-2008 is being used by Government to shape the new SPP2.4, which conveniently is due to be released for public comment,

next April, after the State election. I bet they get to have representation as to how that draft will look, before April. So why can't our community representatives?

It is not just the Nowergup/Carabooda community who should be concerned. The Chamber of Commerce's report clearly recommends the State Government to tighten and strengthen the powers of SPP2.4 for all Basic Raw Materials in the metropolitan area. Furthermore it recommends that the protective provisions should be strengthened, by way of Special Control Areas, in town planning schemes.

At a more fundamental and important level Bush Forever sites will be increasingly under threat.

"Policies such as Bush Forever has, however, led to inadequate attention and protection of basic raw materials resources. Bush Forever site protection has come at the expense of strategic basic raw material reserves." p63 Basic Raw Materials Access and Availability 1996-2008, Chamber of Commerce and Industry, Western Australia.

It is day 1173 of our campaign but it is only 216 days to the next State Election. We want to know what the State Government has in store for Basic Raw Materials in the Metropolitan Region. And we have a right to know before the election. Premier Colin Barnett has promised the local community that he will come out and visit the Lake Nowergup/Carabooda valley. We look forward to him keeping that promise. And we look forward to the opportunity to show him how our beautiful valley and our karst features, our Tuart stands and our precious lake are

2012 DIG CONFERENCE

“Prioritisation for Conservation” was the theme for the 2012 Dieback Information Group (DIG) conference held 27th July – the 11th annual conference organised by DIG.

Shaun Nannup started the proceedings with an informative Noongar ‘Welcome to Country’ and active participation by the audience.

Joanna Young (Joanna Young and Associates) was the key speaker in highlighting the extent of the Phytophthora pathogen – the State of the Invasion and the State of Play. Joanna put forward her ideas and suggestions and emphasised that protection and disease prevention should be the front line of defence whereas recovery of species and communities should be the last line of defence. Ensure disease-free areas are not visited (protection) – protect biodiversity through hygiene plans and strict rule sets. Joanne also spoke of the need to communicate with the public on the impacts of Dieback and showed some examples of signage on the Hillary Trail in New Zealand.

Joanne Nathan (Director, Environmental Biosecurity, SEWPAC) spoke of the *Environment Protection and Biodiversity Conservation (EPBC) Act* and a Threat Abatement Plan for *Phytophthora cinnamomi*. Joanne spoke of the likely amendments to the EPBC Act and key threatening processes and the current updates to the Threat Abatement Plan.

Giles Hardy (Director, Centre for Phytophthora Science Management, Murdoch University) also emphasised engaging the community and effective communication in stopping the disease spread. Giles gave an update on the latest research projects and findings – »121 *Phytophthora* species described worldwide with an estimated 100–300 species yet to be described; 70 new species have been described since 2000. *Phytophthora multivora* is found mainly in urban and peri-urban areas and appears to be spreading via nursery stock. Of concern are the *Phytophthora* hybrids, they are stable and widespread. *Phytophthora ramorum* (not yet in Australia) has a wide host range, some 69 Australian species have been tested. Marri is susceptible to *Phytophthora elongata*. Researchers are examining the possibility of *Phytophthora* spp. causing predisposition to Marri canker/decline.

Sandy Pate (Regional Landcare Facilitator, Perth Region NRM) gave an update on a talk a few years ago on the Nursery and Garden Industry Accreditation Scheme of Australia (NIASA). There is no legal reason to be NIASA certified although it is a requirement for some local governments whilst other government agencies ignore this requirement. Bunnings which has 45% of green-life sales in WA does not require NIASA accreditation of its suppliers, but has recently employed a national ‘Compliance Co-ordinator Biosecurity and Nursery Standards’. Improvements are being made in the industry, albeit slowly. Sandy said that nurseries alone should not be blamed for Phytophthora spread – focus should also be on weekend markets, commercial landscapers (ignoring NIASA), bobcats, backhoes, bulldozers etc.

Ian Colquhoun (Chairman, Dieback Working Group) was one of the people instrumental in the formation of the Dieback Working Group in 1996 at the City of Canning and has been its chairman since then. Ian gave a potted history of the group’s activities and achievements since then. In 1997 Natural Heritage Funding allowed a Dieback Disease management policy to be developed. In 1998 a newsletter was initiated followed by mapping in 1999 of areas in Kalamunda and Armadale to set objectives and targets. The first DIG conference was held in 2002. A plan for extractive industries (quarries etc.) was developed in 2004 followed by a style guide and communication strategy in 2005. In 2007 a study was undertaken to “market” Dieback. An environment award was received in 2008 with more Dieback mapping and the “Discovering Dieback” project at Armadale Primary School. A Dieback DVD was produced in 2011. A lot of voluntary hours with tremendous outcomes! The future will see a membership drive, corporate sponsorship, association incorporation including governance of meetings and employment of a project officer.

Michael Pez (Department of Environment and Conservation) has been working in Dieback management since 1994, but is now in a different role within DEC. Michael gave an overview of Dieback work through the State NRM and DEC’s activity in Fitzgerald River National Park and developing a Green Card (a form of certification) for different skills levels – from bushwalkers to cleanliness levels of vehicles to preparing management plans). His talk prompted a query from the audience as to “what procedures are in place to prevent the spread of the pathogen by contractors, fire control personnel etc.?”

Nathan Penny (Programme Manager, Perth Region NRM) spoke of two merging projects – Priorities for Carnaby’s Cockatoo habitat conservation and Reducing the spread and impact of Phytophthora Dieback. The first project is with Birdlife Australia where roost sites are being mapped – some 27 key roost sites with ³ 150 birds. The second project involves the Dieback Working Group and engagement with schools e.g. Whiteman Park, Wireless Hill (Applecross Primary School); a Green programme at Ken Hurst Park and Dieback training and hygiene for Birdlife Australia.

Sue Eber (Strategic Planner, WWF) based her talk on the Strategic Framework for Biodiversity Conservation as part of the Southwest Australia Ecoregion (SWAE) initiative. SWAE covers 9% of Australia and 27% of WA and has a high degree of endemism with > 5,700 native plant species. Along with Dieback, additional challenges are urbanisation, temperature changes and rainfall changes with a projected decrease up to 20% by 2030 and some 5–25 species of *Banksia* predicted to lose all bioclimatically suitable habitat range by 2080.

Zoe-Joy Newby (PhD candidate, University of Sydney) began her PhD project in 2010 on the potential impact of Phytophthora Dieback in the Greater Blue Mountains

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World Heritage Area which ranges from sea level to 1,350 m with rainfall conducive to *Phytophthora* infection. The only heritage area in the world having a city within it, the area is an internationally recognised tourist spot with high visitation. *Phytophthora* is widespread in the park, even in the remote “wilderness” areas. Protocols are in place for the Wollemi Pine site. Education and training is taking place to raise community awareness and acceptance of the management protocols. Because of the difficulty (and time involved) to access the remote areas, multi-spectral imagery is being used to monitor the pathogen.

Oliver Berkowitz (Adjunct Senior Lecturer, CPSM, Murdoch University) has been studying the effects of the phosphorus-based chemical Phosphite which is marketed as a fungicide – but it’s not, it is also marketed elsewhere as a fertiliser. Phosphite is applied at high rates (compared to fertiliser in crops) into our native ecosystem which has adapted to low phosphorus levels in the soil i.e. it is phosphorous sensitive. The biostatic effect on oomycetes, bacteria and fungi is unknown and studies by CPSM are attempting to understand the genetic and metabolic changes to find alternative protective and/or control agents.

Indriss Ahmedi (Honours graduate, Murdoch University) also spoke of the long-term application of Phosphite and its deleterious affect on a Banksia woodland community at Gull Rock National Park, a priority TEC, near Albany. Monitoring plots have been set up in the park which have been annually sprayed with Phosphite between 1996 and 2010. The application has significantly increased soil P levels and plant communities favouring perennial herbaceous species to woody ones. A study is underway to examine what happens when Phosphite oxidises to phosphate toxic levels after fire.

Chris Dunne (Senior Research Scientist, DEC) gave an update on current research – (i) Containment and eradication – prevent human- and animal-vectored spread, prevent water-associated spread, prevent root-to-root spread and reduce/eliminate *Phytophthora* inoculum. This can be achieved through hygiene management, fencing, hydrological modelling (root barriers, geotextiles), Phosphite treatment, host destruction (herbicide) and future fumigation of infected areas, (ii) Novel control techniques – Geotextiles, Ethanedinitrile soil fumigation, fire retardants and Phosphite research, (iii) New *Phytophthora* species, (iv) Hygiene – boot cleaning – brushes, foot-bath, Phytoglycorrhizal 1000 and Ethanol. Don’t just rely on Ethanol (Methylated Spirit) – clean boots/equipment is just as important as chemical control.

Michael Crone (PhD candidate, Murdoch University) statement that *Phytophthora cinnamomi* can survive more than 50 years in the Jarrah forest despite the death of susceptible species is frightening. His study has shown the importance of annuals and herbaceous perennials as new hosts for *Phytophthora cinnamomi*. Michael showed microscope images of the oospores in Blue Squill *Chamaescilla* roots. Further studies have shown that it is

possible to eradicate *Phytophthora cinnamomi* from black gravel graveyard sites in the Jarrah forest by removing all living vegetation, including annuals and herbaceous perennials, for at least three years.

Kellie Motteram (Environmental Officer, City of Melville) has been working with the City to raise awareness of the dieback pathogen. Three known *Phytophthora* species are known in the city’s reserves which range from 1 ha to 50 ha in area. The city has an annual Dieback treatment programme which involves assessment mapping and treated area mapping. Dieback-focussed restoration has been undertaken in 4 ha at Piney Lakes for Black Cockatoo habitat. On Attadale foreshore, a tree decline survey has been completed. A dieback-affected area of bushland has been fenced off resulting in a public backlash because of limiting the access. Sedge replanting trials are underway. Other activities include installation of boot cleaning stations and a raised boardwalk next to high-quality bushland; portable Dieback kits (for staff, contractors & Friends groups) and community involvement at Wireless Hill.

Bonny Dunlop-Heague (NRM officer, Chittering Landcare Centre) stated the main focus of the landcare centre is at Ellenbrook, 20 km NE of Perth, but its coverage area extends to Mogumber. The centre conducts field workshops on Dieback education and tree stem injection treatment – syringe kits are available for use from the centre. Dieback is appearing along gravel driveways of new subdivision blocks on certain roads – obviously the gravel was sourced by a contractor from an infected site.

Sue Dempster (Dempster Local Plant Strategies) gave a thought-provoking monologue on the purported 5 stages or emotional responses to grief (denial, anger, bargaining, depression & acceptance) and expanded this to include tragedies, disaster and changes to environment. Sue also spoke of “stakeholder” involvement in local planning issues – Conservation vs Development.

Liz Edmonds (Project Dieback Officer, South Coast NRM) spoke of her Project Dieback efforts in reconnecting/building wildlife corridors. The western areas of the NRM include Walpole and Mt Lindsey National Park, the eastern areas include Alexander Bay and Kennedy Beach reserves, Cape Arid NP and priorities on private property. The Boxthorn weed project (control spraying) involves a Dieback awareness component as does the southern incentive of fencing on private properties. Hygiene guidelines are an adaptation of DEC hygiene protocol. Liz has also trialled the Dieback Information Delivery and Management System and taking it out to community groups.

Elaine Davison (Adjunct Associate Professor, Curtin University) talk was entitled “Geriatric Reflections” – a misnomer given her still-active involvement in academia and conservation movement. Covering her 40-year experience in plant pathology and mycology, Elaine reflected on organisational changes in Dieback research and on management issues.

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Friends of Star Swamp Bushland

A Spring Fling festival will be held in the Star Swamp Bushland at the Henderson Centre, Groat St North Beach, on the weekend of 7-9 September. The weekend will feature a demonstration on "Managing Your Native Garden – pruning, planting, potting and propagating" by David Pike at 2pm on the Saturday, plus a guided Spring Wildflower Walk through Star Swamp Bushland at 2pm on the Sunday. There'll be kids' activities, displays by local groups and native plants and books for sale all weekend. To see the full program, visit the Friends' website at www.friendsofstarswamp.org

Christine Curry

Bungendore Park Management Committee welcomed some 30 volunteers joining forces on National Tree Day on Sunday 29th July to plant nearly 1,200 seedlings raised from seed stock collected from within Bungendore Park. The focus of this year's plantings was to continue with the revegetation of Pit 5, a former gravel pit within the park. This area had previously been planted with seedlings, but most had failed to thrive due to a lack of topsoil and large areas of caprock hindering good root development. Committee had previously tried fracturing the



Photo by M. Stanborough

Hand-held auger is effective in preparing holes ready for planting.

caprock with explosives and ripping, with limited success. Following an article published in "Bushland News" earlier this year about the Helena River Catchment Group's success with the use of an auger to prepare planting holes, the Bungendore Park Management Committee elected to trial this technique in Pit 5.

Six weeks prior to the planting date, the committee hired a rubber-tracked Kanga with a 150 mm auger attachment. Using this machine, approximately 400 holes were dug in one day, many to a depth of a metre. Holes were loosely backfilled with earth (to prevent creatures becoming trapped) and marked with survey tape. Two colours of survey tape were used – to identify holes dug to a depth of a metre compared to shallower holes. The tape was left in place following planting so that committee can follow the progress of seedling growth in the future and determine if the hole depth has a significant effect on seedling growth rates.

Initial conclusions about the use of the Kanga was that it was quite manoeuvrable, did minimal damage to existing vegetation, and was effective in digging holes much deeper than could be dug by hand. However, the machine was quite slow to drill and it also took quite a bit of time to position it for each hole.

On the day of planting, a smaller, hand-held auger was trialled and was found to be much quicker, yet still able to penetrate to similar depths. The use of this machine was physically demanding, however, so the rotation of operators was required to avoid fatigue. This would be Committee's preferred method for planting site preparation in the future.

Many thanks go to Kim Sarti for his organisation of the tree planting day, and to all the volunteers who gave their time to assist the Committee with this activity. Students from the nearby Southern Hills Christian College will be planting the seedlings remaining from the community planting day.

Committee has also been active in other habitat enhancement activities and recently two pamphlets – "Fighting *Phytophthora Dieback* in Bungendore Park" and "Control of Weeds in Bungendore Park and Surrounding Parkland" – were posted to park neighbours and residents in Bedforddale.

Miriam Stanborough

Friends of the Cockburn Wetlands Education Centre

On the 10th March 2012 a group of "Friends of the Cockburn Wetlands Education Centre", were doing the March count of water birds at Bibra Lake. It was going to be a very hot day, already hot at 8 am. A group of us were on the west side of the lake, near the picnic ground and after counting a large group of various ducks, we realised that in the middle of the group were two Freckled Ducks. It was very exciting as we had never seen that species of

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duck there before, although we had heard that one had been seen nearby.

On the 12th May a group of "Friends" were on the "Boardwalk" on the east side of Bibra Lake and observed 17 Glossy Ibis close by and counted over a hundred Black Swans on the lake. The recent rains are starting to fill the lake again.

Pat Smith

The Friends of Ken Hurst Park (Bush Forever site 245), in association with the City of Melville, were successful in gaining a \$14,410 DEC Environmental Community Grant in 2011 for re-vegetation of degraded areas, primarily tracks and edges, on both the northern and southern sides of the park which is bisected by the Kewdale-Fremantle railway line.

The first component of the project was to spread topsoil from the 3rd 40 ha instalment of clearing of banksia woodland being undertaken at the adjacent Jandakot Airport for commercial development. With the assistance of DEC officers who are managing the transfer of this topsoil to a variety of sites such as Forrestdale Lake, a total of approximately 300 m³ of topsoil was delivered to strategic placed temporary stockpiles on the northern and southern sides of Ken Hurst Park. The topsoil on the southern side of Ken Hurst Park was simply tipped over the fence between Ken Hurst Park and Jandakot Airport, while the topsoil on the northern side was delivered to the Southern Metropolitan Regional Council's (SMRC) Regional Resource Recovery Centre (RRRC), adjacent to Ken Hurst Park at the end of Bannister Road.



Bringing in topsoil on track to Roe Highway.

The Friends of Ken Hurst Park engaged Natural Area Management and Services to rip the areas where the topsoil was to be placed on 16 May 2012 in order to loosen the compacted soil and enhance the success of seed germination from the topsoil and the survival of tubestock planted into the topsoil. A 2.2 m wide tractor was used so that narrow tracks and small degraded areas could be accessed without damaging adjacent vegetation. The tractor pulled a ripping bar with 4 tines set at 0.6 m intervals which ripped the soil to a depth of 300 mm.

The Friends of Ken Hurst Park also engaged Natural Area Management and Services to move the topsoil from the temporary stockpiles on 17 and 18 May 2012 using a 3 m³ front end loader. The front end loader carefully distributed the topsoil over the pre-ripped area, and a 1.5 m wide positrack bobcat supplemented by shovels was used to spread the topsoil uniformly to a depth of 50 – 100 mm.

On a wet, stormy, windy Sunday morning on 10 June 2012, 49 volunteers from the Friends of Ken Hurst Park, the WA Native Orchid Study and Conservation Group, Emerson Stewart Consulting, the Southern Metropolitan Regional Council and the Bullcreek Scout Group planted about 1300 dryland plants in the northern and southern sides of Ken Hurst Park. Twenty four different species of plants, including *Banksia menziesii*, *Eucalyptus todia-na*, *Gompholobium confertum* and *Petrophile linearis*, supplied by Natural Area Management and Services as tubestock were planted. Every plant was protected by a plastic tree guard with 4 stakes. After planting 900 plants on the northern side, the volunteers were treated to a sumptuous late morning tea prepared by the Friends of Ken Hurst Park in the RCCC's educational area. Because of the wet, stormy weather, only a small number of volunteers continued planting on the southern side of Ken Hurst Park after the morning tea, but they managed to plant another 400 plants.

A second round of planting was undertaken on the afternoon of 16 June 2012 focussing on an un-ripped area wetland in on the southern side of Ken Hurst Park which



At work at the orchid triangle.

had not received any topsoil. About 600 wetland plants of nine species including *Banksia littoralis*, *Melaleuca lateritia*, *Melaleuca preissiana* and *Regelia inops*, also supplied by Natural Area Management and Services, were planted by 17 volunteers from the Friends of Ken Hurst Park, the WA Native Orchid Study and Conservation Group and Emerson Stewart Consulting in about 3 hours in wet, drizzly conditions. Each planting hole was disturbed to a depth of 300 mm using a narrow spade specially fabricated for the purpose by Ron Bailey from

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Lesmurdie. This made a significant difference to the soil compaction in areas that were not ripped, and allowed the tubestock and tree guard stakes to be installed much more easily. Following the completion of planting, the volunteers were rewarded with an afternoon tea served on the back of a 4WD.

All the tubestock were lightly watered after sowing using a water trailer supplied by the City of Melville. Following the sowing, the area also received soaking rains. This, combined with a contract to water the plants at least monthly between October 2012 and April 2013, plus the pre-ripping of the soil, is expected to result in a high plant survival rate and very good germination of the seed contained in the topsoil spread over the planted areas. Hopefully this will allow the area to recover from several years of drought and decades of human disturbance.

Eddy Wajon

Waterbird Conservation Group

The Group continued its management and restoration efforts at Folly and Maramanup Pools in Baldivis this winter. We had a successful planting season with over 4500 seedlings planted at both reserves. The eastern sides of the reserves are now starting to really take off with small birds already working the new plants after only 12 months or more. Thanks to the support from City of Rockingham for planting equipment loans, Commonwealth's Caring for our Country Community Action Grants and our ever-reliable members and volunteers. Members will continue to weed and water the areas to establish the seedlings.

Over the next 12 months we hope to continue our work on establishing all weather management tracks at Folly and Maramanup Pools, with funding support so far from Western Australian Planning Commission and Water Corporation. Our contractor has been working very hard tackling this tough terrain of sinking mud to give us a positive conservation outcome.

Water Corporation has recently upgraded the barrages at Folly and Maramanup Pools to provide peak flow rock riffles. The Group is looking forward to monitoring the diversity of macro-invertebrates as a result of the upgrade and further Water Corporation sponsored weed control and planting.

Some interesting recent sightings within the Baldivis reserves include Tawny frogmouth, Nankeen night heron, Barking Owl, Carnaby's Black Cockatoo, Golden Whistler, Splendid Fairy Wren, Elegant Parrot and long necked tortoise just to name a few. The fungi are just starting to come out too and provide a show for us.

Ten years ago the Group developed an area, the Canning River seed orchard, for the preservation of species found in the vicinity (within 10 km) - that is by seed, cutting or local species identification. Originally it was degraded



Photo by R Clarke

remnant bushland but with many years of weed control and planting it is now starting to improve with an increased variety of plant species. The seed orchard is composed of wetland and dryland vegetation and is an important refuge for many frog species as well as migratory bird species, which nest there. It is an important linkage to existing corridors within the Canning River Regional Park.

This year at the Canning River seed orchard the Group coordinated spraying for Lotus weed, hand sprayed other weeds, watered seedlings and planted 1280 native seedlings with support from the Commonwealth's Caring for our Country Community Action Grants, Department of Environment and Conservation's Environmental Community Grants and with the loan of planting equipment from the South East Regional Centre for Urban Landcare. After the fire last year many Kunzea seedlings are germinating from our original plantings.

It is pleasing to announce that our restoration works will continue over the next year with weed control planned at Canning River and weed control, planting and rabbit control at Folly and Maramanup thanks to funding from Department of Environment and Conservation's Environmental Community Grants, Commonwealth's Caring for our Country Community Action Grants and City of Rockingham Grants.

If anyone wants more information or to help please contact Ruth on 9339 5501 or email waterbirds@mac.com.

Ruth Clarke

The Friends of North Ocean Reef - Iluka Foreshore (FONORIF) are carrying out a campaign to eradicate the invasive bulbs One Leaf Cape Tulip (*Moraea flaccida*) and Pink Gladiolus (*Gladiolus caryophyllaceus*) from the coastal heathland of Bush Forever Site 325 at Iluka. These weeds have invaded an area of over 50 ha in the eastern half of the reserve, stretching from Burns Beach at the northern end almost to the southern end of Iluka. The invasion front of these bulbs has been mapped using GPS, and maps of bulb density prepared. Grants from

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Photo by M Apthorpe

Cape Tulip densities in reserve section before (above) and after (below) targeted weeding by Friends of North Ocean Reef-Iluka.



Photo by M Apthorpe

SALP (Swan Alcoa Landcare Program) over several years, and from the City of Joondalup and Caring for Our Country, have funded a contractor to undertake hand weeding. This method of eradication is necessary because bulbs are inter-grown under and through low shrubs and groundcover plants, and herbicide spraying has been found to cause more off-target damage to native vegetation than to the bulbs themselves. Volunteers have been hand-weeding the same areas for three years, and a notable reduction in weed density is visible after this time. Contractor hand-weeding along the weed invasion front has removed invasive fingers of the bulbs along tracks; and has pushed back the main invasion front by 5 to 10 metres in the dense bush, over a north-south distance of 800 metres.

We intend to continue this eradication program during our joint event with Joondalup Community Coastcare Forum on Sunday 9th September. Bushcare's Major Day Out is being promoted nationally as an event to bring bushcare groups together to work on a site involving major degradation, and to get to know each other. We invite all bushcare groups to join us in the northern coastal suburb of Iluka for a Cape Tulip pull in the bush, on Sunday

9th September at 9am. A short talk on the wildflowers at the site will be given at 10.20am, followed by morning tea at 10.30am. More weeding from 11.15am onwards for enthusiasts. More details on our website at: www.joondalupcoastcare.com. If coming, please RSVP for catering purposes to Marjorie at aptpal@ozemail.com.au.

Marjorie Apthorpe

Early flowering orchids in Underwood Avenue Bushland.

Cyanicula deformis (pictured below) or blue fairy orchid is an early flowerer in the bushland. Being lowly in stature and not abundant, it is a delight to find this orchid, particularly in view of all the weeds proliferating. The orchid may flower as early as May.



Photo by M Owen

It is no wonder that the flowers of *Leporella fimbriata* (pictured following page) or hare orchids are easily overlooked. They do not have outstanding colour like the blue fairy orchid but they do not need colour to attract a pollinator. They use a pheromone to attract male flying ants.

It is rare for ants to pollinate flowers, as special ant glands secrete antibiotics that affect pollen as well as bacteria and fungi. The male flying ants, who are attracted to this orchid thinking it is a female ant, attempt to mate with the labellum of the orchid. In doing this, pollen is deposited on the ant and then deposited on the next flower the ant visits.

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Photo by M Owen

Of course male flying ants have to be around at the right time. Such complex associations should be held in awe and venerated.

The hare orchid may start flowering in March but the flowers may persist for months.

Quite remarkable.

Carnaby's cockatoos are not aggressive birds. They defer to other birds by flying away when threats are made. Early one morning, a flock of around 150 cockatoos in Bold Park was chased by two corellas.

In Underwood Avenue Bushland corellas regularly launch attacks at cockatoos who are investigating tree hollows.



Photo by M Owen

At the East Lake of Perry Lakes corellas often deny the cockatoos the chance to drink by flying at them when they are trying to come down to the water. It is alarming when cockatoos are denied a drink by corellas. However, there is some control over corella numbers in operation.

Magpies do launch determined attacks on cockatoos at times, and this cockatoo in McGillivray Road was very alarmed as the magpie hung on to her tail feather (photo below).



Photo by M Owen

Every Friday morning from 7.30am to 8.30am, people concerned about the state of our environment gather outside the Premier's office in Cottesloe to have 'Breakfast with Barnett' (photo below). The people have been doing this every Friday for over a year and will continue up to the next election. Various car, truck and bus drivers smile, honk or give a thumbs up. The photograph shows the preparation for a presence on the first Friday in August.

Margaret Owen



Photo by M Owen

HEIDI NEEDS YOUR VOTE

Heidi Hardisty, coordinator of the **Friends of Lake Claremont**, is in the running for the 2012 national award of Australian Government Individual Landcarer. She is also nominated for the 2012 National Landcare People's Choice Award. But she needs your vote to win.

Please go to www.landcareonline.com.au/nationalawards and click on the voting button pictured below to vote!



Heidi has been instrumental in a project that is transforming the old golf course around Lake Claremont in western Perth into an "urban biodiversity hotspot". This winter she continued her work leading hundreds of other volunteers to plant nearly 50,000 native seedlings.

A fulltime volunteer, she has started and leads many programs and events like Celebrate Lake Claremont, the Year 10 Community Service Program with local high school students, Walking Weeders, National Tree Day, and Clean Up Australia Day. She is well known in the local community for her work around Lake Claremont and her efforts to highlight the plight of the endangered black cockatoos and protect their remaining habitat. She dedicates her time to protecting and enhancing nature and making the world a better place.

She will attend the 2012 National Landcare Conference in Sydney Sept. 3-5 when the award winners will be announced.

Group News Group News Group News

The **Mullaloo Beach Community Group** and **Joondalup Community Coast Care Forum** would like to invite anybody who enjoys Mullaloo Beach to join them in protecting the biodiversity of the dunes at scheduled planting and weeding days:

Friday, 17 August, planting and weeding, meet at the Northern Tom Simpson parking station at 9am
Sunday, 19 August, weeding, meet at the Korella Street Beach access path at 2pm
Sunday, 26 August, weeding, meet at the Korella Street Beach access path at 2pm.

These coastcare restoration activities are supported Coastwest.

Please bring a pair of gardening gloves, covered footwear, sun protection (hats, sunscreen etc.) and water.

For more information or to RSVP please contact: Sharon McArthur Phone: 0422224849 Email: mullaloo-coastcare@gmail.com

Wildflower Society WA Spring Fling Flyer

7-9 SEPTEMBER 10am-4.30pm

At the Henderson Environment Centre, Groat St, North Beach, just behind North Beach Primary School.

Three days of displays, **FREE sausage sizzle**, fun activities for the kids, **FREE SESSIONS** on growing and pruning native plants,

NATIVE ANIMALS, nature walks, plant sales and lots more.

The plants are very cheap.

(Continued from page 1)

4m fenced corridor. The City supports the boardwalk in order to "...bring pedestrians into intimate...proximity to the dune system", and claims tourism and pedestrian safety as other "benefits".

What the City has failed to take into account in its report recommending a boardwalk is the irreversible environmental damage that would be caused by such a structure within this relatively small, fragile, mobile coastal dune reserve. It has ignored its responsibility to protect the Bush Forever area from development. Instead it has brought back a previously rejected boardwalk proposal that would fragment the reserve, cause erosion and irreversible damage to this important near pristine dune reserve.

It is worth quoting Kingsley Dixon writing for Cambridge Coastcare in 2011: "Perth metropolitan coastlines have been some of the most affected and degraded coastline ecosystems in Australia as a result of urban development, coastal recreation and human impacts such as weeds and soil erosion...best practice in coastal weed management, restoration techniques, stabilisation methods and biodiversity conservation...involve botanists, ecologists and restoration professionals." The City of Stirling's responsibility is to implement best practice to protect and enhance this important coastal reserve and to involve experts.

To date, the boardwalk proposal, which has come from the City's Engineering Design section has not been subject to advice from its Natural Areas section or from independent experts, despite many requests from our group for this to occur. The City has chosen instead to proceed

to public consultation with three boardwalk options, all of which are environmentally unacceptable.

Neither the City looked at the alternative of upgrading the existing shared path which runs the length of the reserve, and which continues to be below the width and standard of other shared paths in the City. Since pedestrian safety was raised in 2005, the City has not improved this path. Despite this neglect, it now claims the condition and location of this path as one of the justifications for constructing a boardwalk.

The Stop the Boardwalk Action Group was formed in 2011 when a group of local environmentalists and residents became aware that the boardwalk proposal soundly rejected in 2005, was back on the Council's agenda. We have members and supporters from the Friends of Trigg Bushland, the Friends of Star Swamp, Stirling Natural Environment Coastcare, the Urban Bushland Council as well as many local residents.

The "Proposed Coastal Boardwalk Report" is still being considered by Council before it goes to a period of public consultation. Our group is working to raise public awareness, is lobbying local MPs and writing letters to relevant State authorities. We have launched a Facebook page <http://www.facebook.com/pages/Stop-the-Boardwalk/109335379209323> and are circulating a petition. We are encouraging people to send an email to the City of Stirling Councillors at councillors@stirling.wa.gov.au with a copy to stirling@stirling.wa.gov.au and to us at stoptheboardwalk@gmail.com, voicing your opposition to a boardwalk through the South Trigg Beach Reserve.

Robyn Murphy

Spring flowering bulb threat to agriculture

The Department of Agriculture and Food has urged people buying spring flowering bulbs from the internet or from catalogues to ensure they are not bulbs that could pose threats to Western Australian agriculture.

Biosecurity officer Graham Blacklock from the department's Katanning office said bulb plants escaping into agricultural areas was a long-term problem, particularly in the Great Southern and South West.

"Many spring flowering bulbs are toxic for livestock, and are a concern when they escape into paddocks," he said. "They are also an environmental problem.

"It is now bulb planting time, and we urge the public to be aware of the need to buy bulbs that are not a potential weed, or toxic for animals that chew on them."

Mr Blacklock said most local nurseries were aware of many of the problem bulbs and did not sell them.

"However, the public can still access bulbs of concern on the internet or through catalogues without appreciating what a danger they pose for our agriculture," Mr Blacklock said.

"Because of our climate, many plants from the Mediterranean and South Africa flourish here, and have become weeds that easily escape from gardens.

"One example is chinchinchee (*Ornithogalum thyrsoides*), a native of South Africa that has adapted well to our conditions, and is already a problem for farmers in the Kojonup to Albany region, particularly in the Tambellup area. It's a pretty plant, but may be deadly for stock, cause blindness in cattle, and foetid haemorrhagic diarrhoea in sheep.



Chinchinchee (Ornithogalum thyrsoides) lovely to look at, but a risk for Western Australia's agriculture and environment.

"To date, it has only been known to cause problems for sheep in Western Australia, but in South Africa it has affected goats, horses, cattle, rabbits, guinea pigs and dogs who have chewed on the bulbs."

Mr Blacklock said gardeners should be very careful about where they disposed of plant rubbish from their properties.

"They should never dump bulb plants or other garden rubbish in the bush or along road verges. In the last year, we have found 36 chinchinchee plants along Albany Highway between Kojonup and Albany," he said.

Mr Blacklock said even dumping bulbs at community tips presented the potential for spread.

"All plant material capable of producing new plants should be destroyed. Bulbs can be placed in black plastic bags until they rot, soaked in diesel or burnt," Mr Blacklock said.

OBITUARY BRUCE ARTHUR

I first met Bruce as a member of the Bennet Brook Catchment Group. He worked on plant identification projects in a small office in a demountable building. He spent his time identifying wetland plants and invasive weeds, using his books and microscope. It was his delight to find a name for a plant and share it with others.

Bruce got started into botany after many years in business, when, one day, he saw an acquaintance name several plants in a swamp. This opened up a new world for Bruce. All those plants, some of which looked the same and some were clearly different, each had a distinctive name. Plants were named in families and some were local natives while some were introduced weeds and all had names and all could be identified.

This led Bruce into study of aquatic animals and he rapidly developed the skills of identifying dragon flies. He was delighted to be able to show visitors, local, interstate and overseas, the local giant dragonfly in its habitat.

When his car came unserviceable, Bruce took to riding his bicycle. He needed heart bypass surgery, so to allow him continue to ride his bike, the veins were taken from his arms instead of his legs. Around this time, he met a university research student, Elizabeth Fox, who had an extensive knowledge of birds. This opened up another new world for Bruce. Not only were there ducks, there were bush birds as well and they all had names to be learned. Often I would get

a phone call with the vaguest description of bird colours, call, flight pattern or activity. Bruce would have his bird book open and I would do my best, with a few precise questions to direct him to its identity. Often the response was, "I've found it, I've found it!" as Bruce checked out his bird book.

A cataract operation improved Bruce's eyesight and his ability to see colours clearly, enhancing his enjoyment of bird identification.

He joined the committee of EWAN (Environmental Weeds Action Network) and made a valuable contribution to their work. He found and identified the weeds *Ludwigia repens* and *Salvinia molesta* in the drain through Lightning Swamp and said, "Phylis, go and look." He reported his findings to the City of Bayswater as well as the Friends Group.

Bruce made many friends and helped many students with his sedge and rush identification skills. He mentored many younger people and has left an amazing environmental legacy. At the time of his death, he was saving to go to England to visit one of his daughters and her family.

He loved his children and grandchildren. I will miss seeing Bruce when I go to the shops to clear the mail box and he will be missed by the many people he inspired with his enthusiasm and joy of discovery of the world around us.

Phylis Robertson

SUPPORT THE URBAN BUSHLAND COUNCIL

Join or renew your membership

Groups:

Membership with voting rights is available to groups committed to the protection of urban bushland for \$35 a year (GST included). A growing membership strengthens the cause and groups benefit from the network.

Individuals:

Supporter membership is only \$25 per year (GST included). Supporters can attend meetings and receive copies of the "Urban Bush Telegraph"

Groups and supporters are reminded that annual membership fees include one printed copy of the *Urban Bush Telegraph* (currently published quarterly). Additional printed copies can be ordered at a cost of \$5.00 per copy per annum.

Send your name, address and cheque or postal order to: Treasurer, Urban Bushland Council WA Inc, PO Box 326, West Perth WA 6872

Urban Bushland Council Activities

Bush Forever Site Visit

Sunday 30th September 10am

The Perth branch of the Wildflower Society kindly invites UBC members to join them on a guided walk led by Bronwen and Greg Keighery in the Activ Foundation Bush Forever site

Meet on Lambertia Crescent near corner of Hawkevale Road, High Wycombe

This site boasts some of the most floristically diverse woodland in the Perth region, is most threatened (is a TEC), and will display a rich array of plants in flower.

'Role of invasive plants in facilitating human parasites'

Guest speaker Prof Richard Mack, visiting Perth from Washington

Tuesday 16th October 6pm drinks & nibbles for 6.30pm start

Followed by a brief presentation by Sandy Lloyd (DAFWA) describing how the new Biosecurity & Agriculture Management Act could be used for environmental weed control.

Venue: Citywest Lotteries House, 2 Delhi Street, West Perth

For more information contact the UBC office on 9420 7207

Check the Events page on the UBC website www.bushlandperth.org.au for other activities

UBC PUBLICATIONS

Perth's Banksia Woodlands - Precious and Under Threat
Proceedings of a symposium (2011)

Available from the UBC for \$25 plus \$3 postage.

Endangered Black Cockatoos in Western Australia
proceedings of a symposium about their biology, status, threats and efforts to restore their habitat and populations.

Available from the UBC for \$25 plus \$3 postage.

Wetlands to Wastelands? - proceedings of a seminar about the future of bushland at Perth Airport (2004) Available at UBC's website
<http://www.bushlandperth.org.au/html/infosheets.htm>

Burning Issues—proceedings of a workshop about fire management in urban bushland. (2002) Available from the UBC for \$11, postage included.

Building Partnerships between Community Groups and Local Government for Our Bushland—proceedings of a seminar (2000)
Available from the UBC for \$5.50, postage included

Managing our Bushland - proceedings of a conference about the protection and management of urban bushland (1998)
Out of print; available in libraries.

Burning our Bushland - proceedings of a conference about fire and urban bushland (1995) Out of print; available in libraries.

NEWSLETTER ITEMS

Compiled by: Renata Zelinova

PLEASE SEND CONTRIBUTIONS TO: ubc@bushlandperth.org.au

Copy deadline - 15 October 2012

PERTH'S BUSHLAND BIRTHDAY & PERPETUAL CALENDAR

\$15 plus \$2 postage

Available by mail order from the UBC office.

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