



LAKE WOLLUMBOOLA BUSHCARE ACTION PLAN REVIEW 2015

Document Number: D15/194704 • **Adopted:** 22/01/2016 • **Minute Number:** MIN16.15 • **File:** 26279E • **Produced By:** Planning & Development Services Group • **Review Date**:

22/01/2019

CONTACT INFORMATION

Group Name: Lake Wollumboola Bushcare Group

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Reserve Name: Lakeside Park, East Crescent, Sheepwash Creek

Reserve Number: CCU388 and CCU271 Land Tenure: SCC and Crown TM Comm. Land Type: Natural Area Foreshore

1. BUSHCARE GROUP GOALS

The aims of the Lake Wollumboola Bushcare Action Plan are as follows:

- 1. Contribute to conserving and restoring the good health and natural and cultural values of the northern shore of Lake Wollumboola, adjacent to East Crescent and Sheepwash Creek. *These values include State Significant SEPP 14 Wetland 365 and Endangered Ecological Communities, Coastal Salt Marsh and Swamp Oak Flood Plain Forest both on the NSW North Coast, Sydney Basin and South East Corner Bio-Regions and Bangalay Sand Forest Endangered Ecological Community of the Sydney Basin and South East Corner Bioregions.
- 2. Contribute to maintaining and improving the water quality of Lake Wollumboola and Sheepwash Creek by improving the health of remnant native vegetation of the surrounding area and thus reducing erosion.
- 3. Contribute to maintaining and improving habitat for the Green and Golden Bell Frog (Litoria aurea) listed as Endangered in NSW and Vulnerable in Commonwealth legislation as well as other native fauna.
- 4. Assist Shoalhaven City Council in developing a strategic approach to managing the existing and proposed natural area public reserve on the northern shore of Lake Wollumboola. (ie possible addition of site known as Lot 1 East Crescent.)

(This goal covers integration of Bushcare activities with other natural resource

- management issues in the area e.g. advice from the Bushcare Group as requested by Council staff regarding flood mitigation and management of Sheepwash Creek catchment vegetation as well as the Halloran offer to SCC of Lot 1 East Crescent for a Public Reserve, zoned E 2 Environment Conservation.)
- 5. Foster understanding and awareness of the natural and cultural values of Lake Wollumboola particularly the northern shore by engaging with Jerrinja Local Aboriginal Land Council, neighbours and visitors.
- 6. Explore establishing a partnership with Culburra Public School to utilise the Bushcare site as an environmental education resource for teachers and students.
- 7. Seek to increase membership of the Lake Wollumboola Bushcare Group.
- 8. Seek grant funding assistance for strategic control of pest plant and animal species in the area and for interpretive signage.

2. BUSHCARE GROUP ACHIEVEMENTS TO DATE – (What successes has your Bushcare Group achieved in relation to your achieving the goals and actions in your current Bushcare Group Action Plan and what lessons or new skills/knowledge have you learnt from these achievements?)

Successes/Goals/Actions achieved to date-Total site	Lessons learnt	
Substantial overall improvement in the ecological condition of both the Lake wetland and Sheepwash Creek area, as a result of the combined effort of the Bushcare Group volunteers and Council staff/contractors.	dedicated core membership since 1999 combined with	
Return of Green and Golden Bell Frogs to the area in 2015, reflecting good habitat conditions in the Lake wetland and Creek area, with records included in the NSW National Park and Wildlife Atlas.	•	

Overall long term strategic approach to environmental management of the area as reflected in Council staff's request to the Group for advice on vegetation in relation to flood mitigation and the Grant via Local Land Services for bush regeneration and management of access issues to Lake shore.

Increased public awareness of Bushcare at Culburra Beach due to Lake Wollumboola Bushcare Group:

- Initiating and participating with other Groups in the SCC Culburra Beach Bushcare stall at the Love Culburra Festival in 2012.
- Preparing a Brochure "Caring for the northern shore of Lake Wollumboola" and circulating it to nearby residents.

Significant reduction in vandalism of both the Sheepwash Creek areas and Lake wetland, likely helped by extensive Lomandra planting along East Crescent, to delineate the wetland from the road reserve and supportive action by SCC staff including Rangers Services.

Membership numbers have remained small. Whilst additional members have been recruited, they could not continue for a range of reasons, including illness and moving away from the area, all beyond the Group's control.

Recognition that a long-term strategic approach to management by Council and the Bushcare Group is beneficial to both habitat connectivity and community enjoyment of the area e.g. via complementary activities such as the Lake Wollumboola Flood Study and Plan and possible future acquisition by Council of the adjacent Lot 1 East Crescent for a public reserve, zoned E 2 as previously offered by the Halloran Trust.

Potential opportunities for community engagement are worth pursuing including a proposed Field Day and activities with Culburra Public School.

Continue to promote the Group's work and attempt to recruit new members e.g. by letter boxing the Group's brochure.

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Restoration of 3.6 hectares of SEPP 14 state significant wetland along the Northern foreshore of Lake Wollumboola.

Primary and secondary control of pest plants, including Lantana, Bitou Bush and Asparagus Fern, which are listed as Weeds Of National Significance (WONS) across 4.6 hectares of remnant vegetation along the foreshore of Lake Wollumboola. Which includes Eastern Bristlebird habitat, Coastal Saltmarsh EEC and SEPP 14 Wetland.

Planting of 550 low growing native species along the boundary of East Crescent road reserve and the wetland to act as a natural buffer.

Regular monitoring by the Group to identify re-infestations of

problem weeds and periodic removal by Council's Indigenous

Bushcare Workers have maintained the improved condition of

the wetland vegetation

Residents responded positively to the Lomandra planting as it provided clear definition between the wetland and mowed road

reserve area.

Zones 2a & 2b - Sheepwash Creek Reserve

Restoration of 3.3 hectares of Endangered Ecological Community, Bangalay Sand Forest along the Sheepwash Creek and Lake shore corridor.

Primary control of pest plants, in including Asparagus species, which are listed as Weeds Of National Significance (WONS), from 3.3 hectares of Bangalay Sand Forest which is listed as Endangered Ecological Community (E.E.C) in NSW.

Secondary control of pest plants from 1.8 hectares of Bangalay Sand Forest which is listed as an E.E.C in NSW.

Careful, systematic long term, strategic efforts of this small group with a dedicated core membership since 1999 combined with contributions of Council staff and contractors has been effective in improving ecological condition and habitat connectivity.

Council staff and experienced Bush regenerators have recognised and praised this approach.

In the existing plan, the Bushcare Group was responsible for

Designs, production and installation of 2 interpretive signs highlighting the environmental values of the Bangalay Sand Forest flora and fauna that call it home.

Design, production and installation, in cooperation with the Jerrinja Aboriginal Land Council, of interpretive signage depicting the Aboriginal connections to Lake Wollumboola and its catchment.

Bushcare Group provided comment in response to a request from Council to provide input and then comment on the Review of Environmental Factors for Flood Mitigation activities in the Sheepwash Creek Area.

Increased public use and appreciation of the Sheepwash Creek walking track.

weed removal within 5 metres of the western creek bank and a narrow band along the eastern creek bank below the walking track bridge. The Group has substantially extended its work to approximately 20 metres from the western creek bank, thus exceeding its commitment.

The strategic approach adopted is effective and should be continued via clear identification of work areas for Group members, Council staff and contractors to ensure that clear communications between volunteers and staff are maintained, whilst pursuing realistic expectations.

The Bushcare Group will provide advice and comment as appropriate in further stages of the Lake Wollumboola Flood Plain Plan of Management.

Interpretive signage of the natural and Aboriginal cultural values of the Lake and Creek area has led to increased public use and appreciation of the Sheepwash Creek walking track and surrounding area.

3. SHOALHAVEN BUSHCARE GROUP ACTIVITIES TABLE (to be in conjunction with attached site map) NOTE: Priority should be rated as H = High (within 12 months); M = Medium (1-3 years); L = Low

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
Zone 1 – East Crescent Foreshore Reserve (Lakeside Park to Western end of East Crescent – adjacent to Lot 1 East Crescent see map 1 for details)		EXISTING AND CURRENT ACTIONS	
EXISTING AND CURRENT ACTIONS 1. Council and Bushcare Group to undertake secondary	1. H	Various control techniques	1. As
weed control of noxious and environmental weeds across site in the following priority order: a. Chrysanthemoides monilifera ssp rotunda (Bitou Bush)		including manual and chemical (insure that no use of herbicides between the Months Sept – April to reduce	required
 b. Lantana camara (Lantana) c. Asparagus aethiopicus (Ground Asparagus) d. Senna pendula spp pendula (Cassia) 		possible harm to GGB Frog)	
e. Araujia sericifera (Moth Vine) f. Lonicera japonica (Japanese Honeysuckle) g. Ipomea cairica (Coastal Morning Glory)			
 Bushcare Group to regularly review major weed re- emergence in the Lake wetland between Broadview Lane drainage line and Lot 1 East Crescent and 		Monitor and take action as required	2. As required
undertake spot weed control, particularly along East Crescent for Lantana, Bitou and Moth Vine and report to Council major re-infestations for action by e.g.			
Council staff contractors.			3. Needs be
3. Bushcare Group to work with Council to seek further	3. H	3. Source various grants and	basis

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
funding assistance to undertake pest plant and animal control in this zone. NEW ACTIONS 1. Review existing and establish new monitoring photo points and quadrats to assess changes in vegetation. 2. Undertake periodic surveys for Green and Golden Bell Frogs (<i>Litoria aurea</i>) and report to NSW Office of Environment and Heritage via the NSW Wildlife Atlas		partnerships NEW ACTIONS 1. As per the "Guidelines for Monitoring a Bushcare Project" Hawkesbury-Nepean Catchment Management Trust 2. As required	 2016 onwards As required
 ZONE 2a – 20 metre zone either side of Sheepwash Creek and adjacent Lake shore. (see plans maps 5 for details) This are is where the Lake Wollumboola Bushcare Group will be responsible for follow up restoration works. EXISTING AND CURRENT ACTIONS 1. Bushcare Group to undertake secondary weed in the Bangalay Sand Forest within area 2A is section 5 of this plan targeting the following weed species: a. Asparagus aethiopicus (Ground Asparagus Fern) b. Senna pendula spp pendula (Winter Senna) c. Lantana camara (Lantana) d. Passiflora edulis (Passionfruit) 		EXISTING AND CURRENT ACTIONS 1. Various control techniques including manual and chemical (insure that no use of herbicides between the Months Sept – April to reduce possible harm to GGB Frog)	1. As required

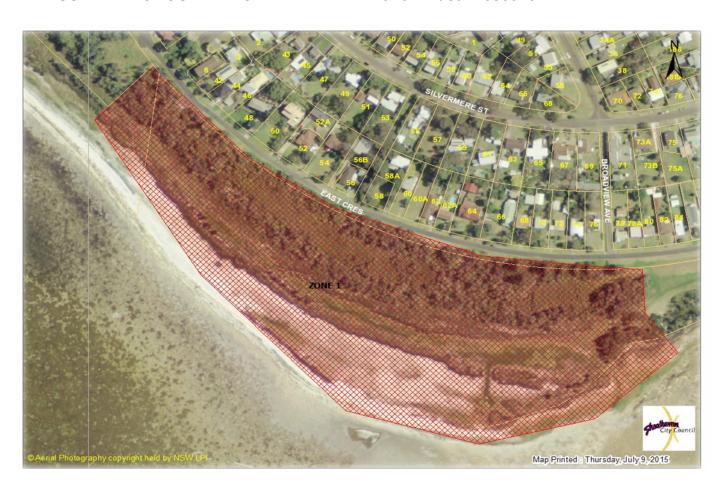
GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
e. Chrysanthemoides monilifera ssp rotunda (Bitou Bush) f. Ochna serrulata (Micky Mouse Plant) g. Araujia sericifera (Moth Vine) h. Other weed species as detected ZONE 2B Southern section of Sheepwash Creek (see attached map 5)			
EXISTING AND CURRENT ACTIONS		EXISTING AND CURRENT ACTIONS	
 Bushcare Group to regularly review major weed reemergence in the remaining parts of zone 2B and undertake spot weed control, and report to Council major infestations for action. Council to follow up crowning out of the Ground Asparagus Fern (Asparagus aethiopicus) ensuring that the plant underground tubers are bagged and removed from other section of site as resources permit. Council and Bushcare Group to undertake follow up control of other environmental weeds as resources permit including: Senna pendula spp pendula (Winter Senna) Lantana camara Passiflora edulis (Passionfruit) 		 Bushcare Group to regularly review major weed reemergence in zone 2 B and undertake spot weed control. Report to Council major reinfestations for action. Various control techniques including manual and chemical (insure that no use of herbicides between the Months Sept – April to reduce possible harm to GGB Frog) Various control techniques including manual and chemical (insure that no use of herbicides between the 	 As require As require As require

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
 d. Chrysanthemoides monilifera ssp rotunda (Bitou Bush) e. Ochna serrulata (Micky Mouse Plant) f. Araujia sericifera (Moth Vine) g. Xanthium strumarium (Noogoora Burr) h. Other weed species as detected 		Months Sept – April to reduce possible harm to GGB Frog)	4. 2016
NEW ACTIONS 4. Review existing and establish new monitoring photo points and quadrats to assess changes in vegetation.		NEW ACTIONS 4. As per the "Guidelines for Monitoring a Bushcare Project" Hawkesbury-Nepean Catchment Management Trust	
ZONE 2C Northern section of Sheepwash Creek (see plans map 5 for details)			
This section of the site will not be actively worked on by the Lake Wollumboola Bushcare Group. It will be the responsibility of Council staff and/or contractors for which grant funding will continue to be sought.			
EXISTING AND PROPOSED ACTIONS			
Council and Bushcare Group to continue to seek assistance through external grants, biodiversity banking, partnerships and labour market programs to continue with follow up weed control targeting the	1. H	Bushcare Group to regularly review major weed re- emergence in Zone 2C. Report to Council major re-	1. As require

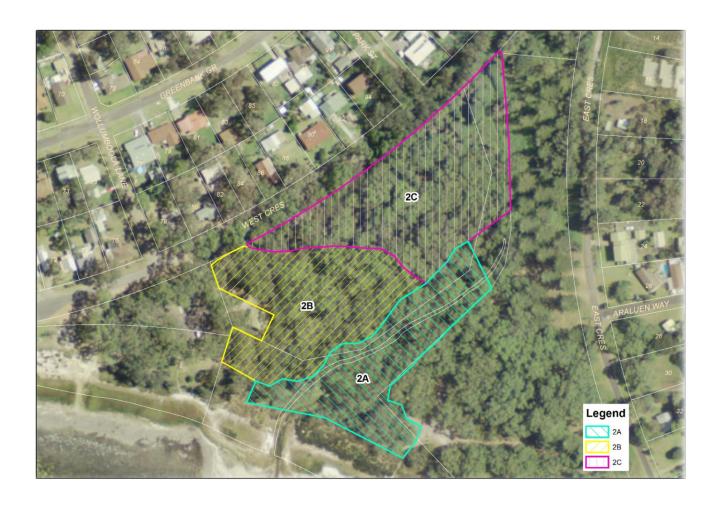
GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
following species in priority order: a. Asparagus aethiopicus (Ground Asparagus Fern) b. Lantana camara c. Chrysanthemoides monilifera ssp rotunda (Bitou Bush) d. Lagunaria patersonia (Norfolk Island Hibiscus) e. Ochna serrulata (Micky Mouse Plant) f. Araujia sericifera (Moth Vine) g. Passiflora edulis (Passionfruit) h. Other as weeds species as detected		infestations for action. Various control techniques including manual and chemical (ensure that no use of herbicides between the Months Sept – April to reduce possible harm to GGB Frog)	
NEW ACTIONS 1. Review existing and establish new monitoring photo points and quadrats to assess changes in vegetation.	1. M	NEW ACTIONS 1. As per the "Guidelines for Monitoring a Bushcare Project" Hawkesbury- Nepean Catchment Management Trust	1. 2016
EDUCATION & AWARENESS RAISING NEW ACTIONS			
 Invite the community to a field day to experience what the Lake Wollumboola Bushcare Group and Council have achieved. 	1. H	Council and LWBG to organise	1. 2016
Consult with Jerrinja Local Aboriginal Land Council to seek funding to design and produce interpretive	2. M	Seek funding and commence consultations with Jerrinja	2. As require

GROUP ACTION (these should relate to your project description)	PRIORITY	METHOD	TIME
signage and a brochure featuring traditional Aboriginal uses of local plants. 3. Explore establishing a partnership with Culburra Public School and the Culburra Beach – Orient Point Men's Shed to build nesting boxes for various fauna species and install motion sensor camera's to monitor wildlife presence and use of nesting boxes.	3. L	elders and community members. 3. Bushcare Group and Council staff to approach the school and men's shed	3. 2016 - 17

4. BUSHCARE GROUP ACTION PLAN MAP – Zone 1 East Crescent



5. BUSHCARE GROUP ACTION PLAN MAP - Zone 2a & 2b Sheepwash Creek



BUSHCARE GROUP WHS & EQUIPMENT REQUIREMENTS

Type of Activity	Yes	SWMS name included
Manual weed control (cut & paint, scrape and paint etc.)	V	SMWSNR030
Chemical control (spraying of herbicides)		SWMSNR040
Planting	V	SWMSNR030
Minor construction (walking track, fencing, outdoor furniture)		
Propagation & seed collection	V	SWMSNR030
Education (school groups, field days etc.)	*	
Other		

6. COUNCIL SUPPORT

Shoalhaven Council will provide the following support:

- Materials and equipment within budget constraints
- Grant application and management support
- Printing and graphic design services
- One Bushcare Support Trainer to assist the group on site 3 hours per month for 11 months per year
- Some assistance with pest plant control as resources permit

7.	HAS A SITE HAZARD AND RISK ASSESSMENT BEEN COMPLETED
	FOR THE BUSHCARE SITE?

	1		
Yes	$\sqrt{}$	No	

8. LIST THE PERSONAL PROTECTION EQUIPMENT REQUIRED FOR VOLUNTEERS WHILST WORKING ON THE SITE

PPE Equipment Required	Date issued
First Aid Kit	2015
Gloves	2015
Sunscreen	2015
Insect repellent	2015

9. POSSIBLE FUTURE FUNDING

Project	Funding source
Pest plant and animal control and restoration of high conservation value vegetation along the Northern foreshore of Lake Wollumboola.	Various grants
Aboriginal traditional plant use Interpretive signage	Various grants

10. PLAN WILL BE REVIEWED EVERY THREE YEARS

Next review due:

22/01/2019

11. PLEASE LIST OTHER LOCAL OR REGIONAL MANAGEMENT PLANS OR STRATEGIES THAT THIS PLAN RELATES TO

Name of document	Year it was produced	Produced by
Draft Green and Golden Bell Frog Plan and Management for Culburra Beach	2001	Shoalhaven City Council
Management Plan – The Green and Golden Bell Frog Key Population within the Crookhaven River Floodplain	2007	Southern Rivers Catchment Management Authority
Lake Wollumboola Estuary Management Plan	2000	Shoalhaven City Council
Generic Community Land – Plan of Management – Natural Areas	2001	Shoalhaven City Council
Shoalhaven Foreshore Reserves Policy	2015	Shoalhaven City Council

Lake Wollumboola Flood Study	2015	Shoalhaven City Council
Sheepwash Creek-Proposed Flood mitigation works and Review of Environmental Factors	2011	Shoalhaven City Council
Jervis Bay National Park and Woollamia Nature Reserve Plan of Management	2000	NSW department of Environment, Climate Change and Water. National Parks and Wildlife Service.
Management Plan for Sheepwash Creek, Culburra	2001	Wiecek Daniel School of Environmental Sciences University of Wollongong for SCC
Follow-up Environmental Assessment of Sheepwash Creek Culburra		Wiecek Daniel School of Environmental Sciences University of Wollongong for SCC

12. BUSHCARE SITE RECOMMENDED PLANTING/REVEGETATION SPECIES LIST

Note: The following species are for supplementary planting in the Sheepwash Creek site to replace understory species – Some mid story species such as shrubs could be used where larger sections of Lantana have been control further upstream.

SHRUBS		
Botanical	Common	
Acacia longifolia ssp. longifolia	Sydney Golden Wattle	
Homalanthus populifolius	Bleeding Heart	
Pittosporum revolutum	Rough Fruited Pittosporum	
UNDERSTOREY (grasses, herbs, climbers)		
Botanical	Common	
Dianella caerulea	Blue Flax Lilly	
Eustrephus latifolius	Wombat Berry	
Geranium homeanum	Northern Cransbill	
Hibbertia scandens	Native Guinea Flower	
Lomandra longifolia	Spiny Matt Rush	
Oplismenus aemulus	Basket Grass	
Rhagodia candolleana	Sea Berry	
Rubus parviflorus	Native Raspberry	
Zieria arborescens	Stinkwood	

13. BUSHCARE SITE WEED LIST (The following weeds have been recorded on the site)

Noxious	Environmental	Control Method
Cortaderia selloana (Pampass Grass)	Araujia sericifera (Moth Vine)	Manual or chemical control (dispose of Moth Vine seeds prior to control)
Chrysanthemoides monilifera ssp rotunda (Bitou Bush)	Asparagus aethiopicus (Ground Asparagus)	Manual crowning or chemical control
,	Ehrharta erecta (Panic Grass)	Manual and chemical
Rubus fruticosa (Blackberry	<i>Ipomea cairica</i> ((Mile a Minute)	Manual and chemical control
	Lagunaria patersonia (Norfolk Island Hibiscus)	Manual and chemical
	Ochna serrulata (Micky Mouse Plant)	Cut and paint manual control
	Passiflora edulis	Manual control

	(Passionfruit)	
Lantana camara (Lantana)	Senna pendula spp pendula (Cassia)	Cut and paint or chemical control
	Xanthium strumarium (Noogoora Burr)	Manual and chemical

14. ZONE 1 EAST CRESCENT BUSHCARE SITE SPECIES LIST (The following species have been recorded on the site)

OVERSTOREY TREES		
Botanical	Common	
Acacia implexa	Hickory Wattle	
Banksia integrifolia	Coastal Banksia	
Casuarina glauca	Swamp She Oak	
Eucalyptus punctata	Grey Gum	
Melaleuca ericifolia	Swamp Paperbark	
SHRUBS		
Botanical	Common	
Acacia maidenii	Maidens Blush	
Breynia oblongifolia	Native Breynia	
Cyathea australis	Rough Tree Fern	
Pittosporum undulatum	Sweet Daphne	
Solanum stelligerum	Devils Needles	
UNDERSTOREY (grasses, herbs, orchids)		
Botanical	Common	
Baumea articulata	Jointed Twig Rush	
Baumea stricta	Slender Rush	
Calochlaena dubia	False Bracken Fern	
Dichondra repens	Kidney Weed	
Lomandra longifolia	Spiny Matt Rush	
Pteridium esculentum	Bracken Fern	
Zieria arborescens	Stinkwood	
UNDERSTOREY	(vines & climbers)	
Botanical	Common	
Hibbertia scandens	Native Guinea Flower	
Parsonsia straminea	Silkpod Vine	

15. ZONE 2A, 2B & 2B SHEEPWASH CREEK BUSHCARE SITE SPECIES LIST (The following species were recorded on site)

OVERSTOREY TREES		
Botanical	Common	
Banksia integrifolia	Coastal Banksia	
Eucalyptus botryoides	Bangalay Gum	
	RUBS	
Botanical	Common	
Acacia implexa	Hickory Wattle	
Acacia longifolia ssp. longifolia	Sydney Golden Wattle	
Acacia maidenii	Maidens Blush	
Acacia obtusifolia	Blunt Leaf Wattle	
Breynia oblongifolia	Native Breynia	
Homalanthus populifolius	Bleeding Heart	
Monotoca elliptica	Pigeon Berry Ash	
Pittosporum undulatum	Sweet Daphne	
Pittosporum revolutum	Rough Fruited Pittosporum	
Rapanea howittiana	Turnipwood	
•	rasses, herbs, orchids)	
Botanical	Common	
Calochlaena dubia	False Bracken Fern	
Commelina cyanea	Scurvy Weed	
Dianella caerulea	Blue Flax Lilly	
Dichondra repens	Kidney Weed	
Geranium homeanum	Northern Cranesbill	
Hydrocotyle peduncularis		
Isolepis prolifer		
Lomandra longifolia	Spiny Matt Rush	
Oplismenus aemulus	Basket Grass	
Pteridium esculentum	Bracken Fern	
i terididiri escaleritarri	Diackeri Citi	
Ranunculus sessiliflorus		
Ranunculus sessiliflorus	Buttercups Sea Berry	
	Buttercups	
Ranunculus sessiliflorus Rhagodia candolleana Zieria arborescens	Buttercups Sea Berry	
Ranunculus sessiliflorus Rhagodia candolleana Zieria arborescens	Buttercups Sea Berry Stinkwood	
Ranunculus sessiliflorus Rhagodia candolleana Zieria arborescens UNDERSTOREY	Buttercups Sea Berry Stinkwood (vines & climbers) Common	
Ranunculus sessiliflorus Rhagodia candolleana Zieria arborescens UNDERSTOREY Botanical Cissus antarctica	Buttercups Sea Berry Stinkwood (vines & climbers)	
Ranunculus sessiliflorus Rhagodia candolleana Zieria arborescens UNDERSTOREY Botanical Cissus antarctica Cissus hypoglauca	Buttercups Sea Berry Stinkwood (vines & climbers) Common Kangaroo Grape Water Vine	
Ranunculus sessiliflorus Rhagodia candolleana Zieria arborescens UNDERSTOREY Botanical Cissus antarctica Cissus hypoglauca Eustrephus latifolius	Buttercups Sea Berry Stinkwood (vines & climbers) Common Kangaroo Grape	
Ranunculus sessiliflorus Rhagodia candolleana Zieria arborescens UNDERSTOREY Botanical Cissus antarctica Cissus hypoglauca	Buttercups Sea Berry Stinkwood (vines & climbers) Common Kangaroo Grape Water Vine Wombat Berry	