Draft Reserve Action Plan
Harold Reid Reserve

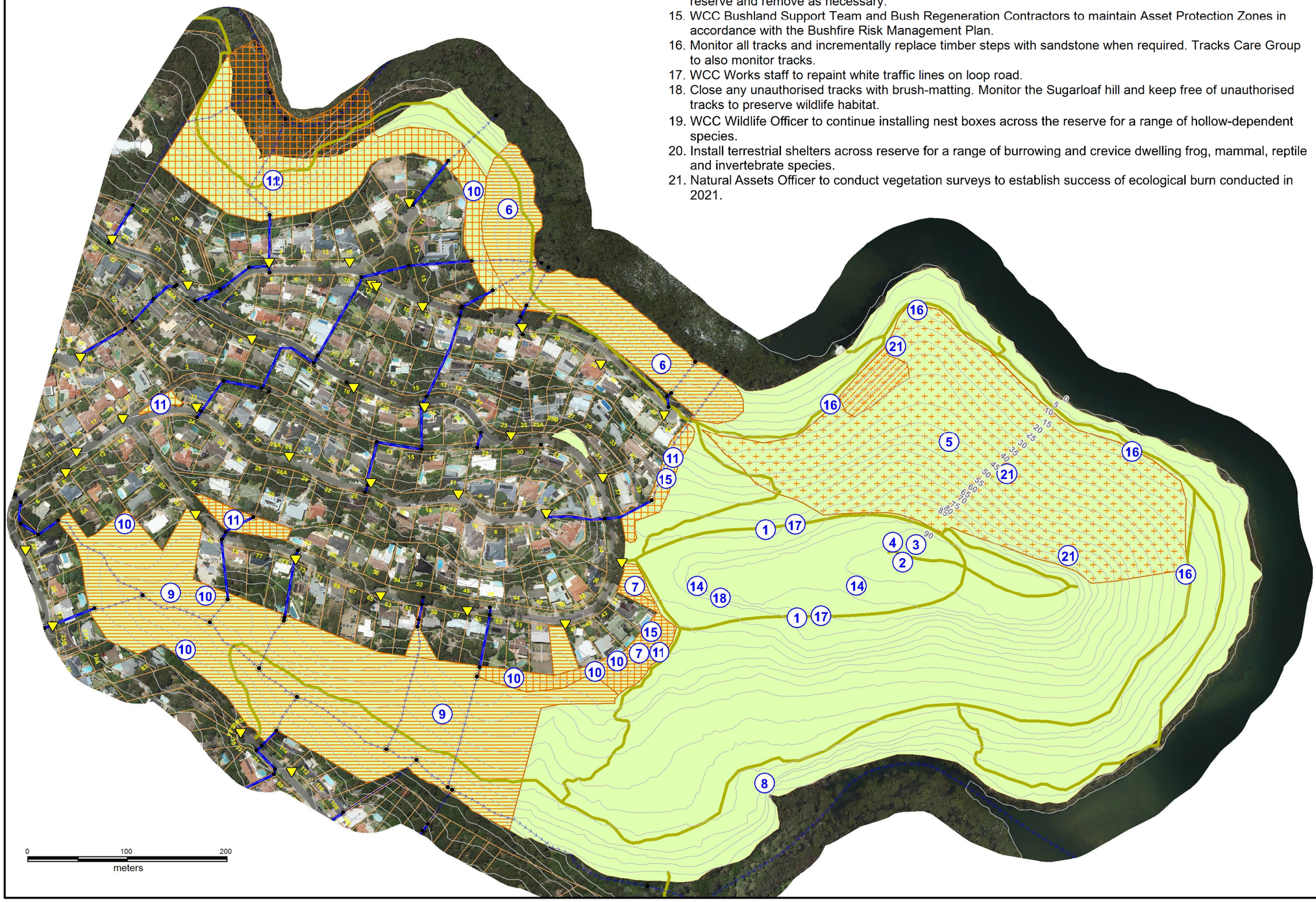
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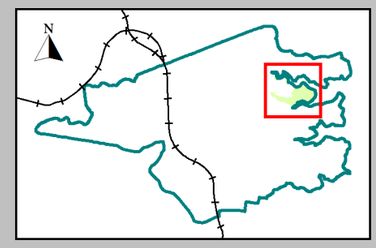
Harold Reid Reserve Actions

Priorities will be given to programs for the long term benefit to the reserve. Natural assets at greatest risk will be given priority to avert irreversible deterioration. All measures cannot be implemented simultaneously - resources may not be available or it may not be appropriate.

1. WCC bushland crews to maintain vegetation and weeds along loop road edges allowing for pedestrian and vehicle access.
2. Monitor health of large trees around picnic area and protect from damage caused by vehicles and visitors. WCC Bushland Support Team to continue with staged removal of Afrocarpus sp. with to replant using appropriate indigenous species.
3. Picnic and barbeque facilities to be gradually upgraded where required.
4. Accessible toilet to be installed. All works are to retain the natural bushland character.
5. Monitor burn site area which was completed in 2021. Continue to manage unauthorised uses on the site including bike riding, new walking tracks and rock climbing activities.
6. Bushland Regeneration Contractors to continue with weed management programs along foreshore edge, stormwater lines and Road & property edge.
7. Regeneration contractors to continue removal of vines and other exotics at rear of properties 41-47 Rembrandt Drive Control over-abundant Cissus antarctica behind 41 Rembrandt Dr and remove seedlings from either side of loop road in this area.
8. Informal tracks from Camp Creek and Sugarloaf Creek to be kept for access for bushland regeneration work.
9. Bushland Regeneration Contractors to continue to work in area targeting the removal of Alocasia brisbanensis, Lantana, Camphor Laurel, Bamboo, Ochna, Fishbone Fern, Palm grass, Asparagus Fern, and Trad.
10. Monitor property encroachments known to Council. Report offences to Council's Safe City Unit for action.
11. Bushcare groups to manage sites in accordance with Bushcare Action Plans.
12. Investigate options to install new interpretive signage within the reserve.
13. WCC Bushland Regeneration team to target isolated weed patches throughout the reserve.
14. WCC Bushland Regeneration Team to continue to monitor Allocasuarina littoralis abundance throughout reserve and remove as necessary.
15. WCC Bushland Support Team and Bush Regeneration Contractors to maintain Asset Protection Zones in accordance with the Bushfire Risk Management Plan.
16. Monitor all tracks and incrementally replace timber steps with sandstone when required. Tracks Care Group to also monitor tracks.
17. WCC Works staff to repaint white traffic lines on loop road.
18. Close any unauthorised tracks with brush-matting. Monitor the Sugarloaf hill and keep free of unauthorised tracks to preserve wildlife habitat.
19. WCC Wildlife Officer to continue installing nest boxes across the reserve for a range of hollow-dependent species.
20. Install terrestrial shelters across reserve for a range of burrowing and crevice dwelling frog, mammal, reptile and invertebrate species.
21. Natural Assets Officer to conduct vegetation surveys to establish success of ecological burn conducted in 2021.



RESERVE ACTION PLAN HAROLD REID RESERVE



Plan details

Status: Draft
Prepared by: N. Yu
Drawn by: N. Prasad
Date printed: 04/08/2022
Approximate Scale: 1:4000

Legend

- Property number
- Action plan activity
- Stormwater node
- Approximate fire hydrant location
- Power pole
- 5m contours
- Stormwater network - Underground *
- Stormwater network - Overground / Unknown *
- Bush track / Path *
- Property boundary
- Reserve / bushland
- Council bush regeneration contractors
- BushCare group
- Postfire Burn Site
- Council staff regeneration site

* The accuracy of this data is not guaranteed and must be verified prior to use.

The information contained herein has been provided in good faith. Effort has been made to ensure it's accuracy and completeness.

Willoughby City Council does not take any responsibility for errors or omissions nor any loss or damage that may result from the use of this information.

References

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Harold Reid Reserve Action Plan

Reserve Profile

Harold Reid Reserve is a 42.7ha bushland reserve with large areas of intact remnant vegetation located in Middle Cove. It is Willoughby's second largest bushland reserve and connects with the largest, North Arm Reserve forming a continuous habitat link to the north and also to the south with the Castlecrag Northern Escarpment. The western boundary is made up of residential properties, while the north, south and east consist of bushland and/or the shores of Sugarloaf Bay. The reserve is very steep in sections and rises abruptly from the surrounding landscape to a height of 100 metres above sea level, forming a bluff that projects forward in an easterly direction. The northern half of the reserve is located within the Scotts Creek catchment and the southern half within the Sugarloaf Creek catchment, both form part of the larger Middle Harbour catchment.

There is car access to the reserve via a gated entrance and sealed road from the western end off Rembrandt Drive. A loop road leads to a BBQ picnic area and access to a lookout with stunning views overlooking Sugarloaf Bay.

VEGETATION COMMUNITY: Harold Reid Reserve contains several distinct vegetation communities. The southern section and the north-west are predominantly Coastal Sandstone Foreshores Forest [S_DSF06]. The Southern section is also comprised of small areas of Coastal Sandstone Gallery Rainforest [S_RF02] and Coastal Enriched Sandstone Moist Forest [S_WSF02]. The Northern slope and areas to the north-west contain Coastal Sandstone Gully Forest [S_DSF09]. A small area of that slope also contains Hornsby Enriched Sandstone Exposed Woodland [S_DSF10]. Smaller areas of vegetation along the North Arm walking track consists of Estuarine Swamp Oak Forest [S_FoW08] and Estuarine Mangrove Forest [S_SW01]. The north-east side of the reserve contains Coastal Enriched Sandstone Dry Forest [S_DSF04]. Vegetation on the ridge top is classified as Sydney North Exposed Sandstone Woodland [S_DSF11].

Statement of Significance

Harold Reid Reserve is classified as bushland as defined in State Environmental Planning Policy No 19 (*Vol 1, 1.4), and is protected under State and Commonwealth Legislation (*Vol 1, 1.5.2). It is zoned E2 Environmental Conservation in the Willoughby Local Environment Plan (WLEP) 2012.

ABORIGINAL CULTURAL SIGNIFICANCE: The Camaraygal people were the original inhabitants and occupied the foreshores of Middle Harbour up until the 1850's when Europeans took greater interest in the area's real estate potential. Archaeological surveys in the reserve have recorded 30 sites that range from open middens, rock shelters with deposits, potential habitation sites and isolated stone artefacts.

NATURAL HERITAGE SIGNIFICANCE: The reserve has rich plant biodiversity which forms a critical haven and corridor for native wildlife in an urban landscape. It is also an important recreational area providing solitude, environmental education, extensive walking tracks for health and fitness and access to an undisturbed shoreline. The diversity of landscapes provides significant habitat for native wildlife. There is dense canopy, shrub and ground cover layers, mangrove and estuarine habitats, south and north facing steep gully forests and sandstone woodland, rock outcrops and escarpments, fallen trees, branches and leaf litter, all important contributors to the habitat of this reserve. Forests are predominantly *Eucalyptus,* with a number of hollow bearing trees. Native wildlife include Swamp Wallabies, Echidnas and Sugar Gliders. Powerful Owls and Micro-bats are often observed. Past controlled burning in areas has contributed to a healthy density and diversity of mid-storey shrubs and grasses that support many species of invertebrates, small birds and reptiles. The estuarine and marine environments that skirt a large part of the reserve provide a protective boundary and are a link for many bird species, including Little Penguins.

HISTORIC CULTURAL SIGNIFICANCE: The hill in the reserve became known as 'The Sugarloaf' for its resemblance to handmade sugar piles of the same name.

In 1926 Walter Burley Griffin prepared a plan for residential development of the land, but this never eventuated. Around the late 1950's, Middle Cove peninsula was being developed for residential sub-division and the eastern-most portion, formerly known as Sugarloaf Reserve, was transferred to Willoughby Council in 1960 on the provision that it remain for recreational purposes only. In 1963 Willoughby Council renamed it Harold Reid Reserve in honour of Town Clerk, Harold Reid.

Reserve Impacts

As most of the reserve is a hill on a peninsula, much of it is protected from direct impacts from urbanisation. However impacts are found at boundaries with private properties and include weed infestation, increased moisture and nutrient loads, and illegal dumping of garden waste and building material.

A boatshed exists within the reserve on the northern shoreline facing northwest to Scotts Creek.

Dumping is known to occur around the loop road and in the picnic area.

Several properties encroach into the reserve.

ENCROACHMENTS: Rembrandt Drive, Sugarloaf Crescent, The Quarterdeck.

Wildlife Habitat Issues

Harold Reid is a Wildlife Protection Zone (Category 2) that strictly forbids the presence of domestic cats and limits dogs to on-leash on tracks only. A number of feral cats have been living in and around the reserve for some years.

The fox baiting program will continue in the area.

Other threats to wildlife habitats include removal of dead wood, standing or otherwise, removal of bush-rock, disturbance of vegetation and illegal walking tracks from private property into the reserve.

Achievements

A prescribed burn was completed in April 2021 on the northern side of the reserve.

Three vegetation plots have been established in the burn area to conducted vegetation surveys to measure ecological success of the site. Initial pre and post-fire vegetation surveys have been completed.

Both Rembrandt Drives and The Quarterdeck Bushcare Groups have expanded their work areas. The Rembrandt Drive group now work in the reserve adjacent to 42 North Arm Road, 37 and 39 Rembrandt Drive. The Quaterdeck group now work in the reserve behind from 9, 11 13, 15 The Quarterdeck and 17 North Arm Road.

Bushland Management Goals – Harold Reid Reserve

The following aims from the Urban Bushland Plan of Management 2014 are priory objectives in Harold Reid Reserve:

4.1a Aim: Increase community understanding of bushland values and management.

5.4b Aim: To maintain the integrity of bushland reserves through the reduction of encroachments and other boundary impacts.
6.1b Aim: Maintain and, where appropriate, enhance diverse native plant communities and species across lands within the Willoughby Local Government Area.
6.3b Aim: To implement weed control programs which are based on regeneration and restoration principles and which increase the bushland resilience to further weed infestation.
7.1b Aim: To implement a strategic hazard reduction program.

General Principles and Actions – All Bushland Reserves

a. Bush regeneration is a long term process that requires staged weed removal to ensure establishment of native plant communities. Work should proceed from good to degraded areas with techniques that encourage regeneration, including flame weeding, rather than spraying herbicide.
b. If possible, all weed refuse and natural debris to be composted or retained on-site.
c. When natural regeneration is deemed inadequate, supplementary plantings to mimic local plant communities and landscapes will be used with local provenance species.
d. Standing dead trees and forest litter (including logs and branches) to be retained for wildlife habitat unless deemed a risk to public safety.
e. Monitor, maintain and enhance vegetation connectivity for wildlife habitat within the reserve and reserve networks.
f. *Phytophthera cinnamomi* (a root rot pathogen) is listed as a key threatening process in NSW and has been identified as a threat to a number of species. Bushland workers are to use hygiene protocols to minimise risk.
g. Report and record all reserve encroachments. Monitor for tree vandalism and/or removal within the reserve and report to Council Compliance for appropriate action.
h. Continue to monitor wildlife habitat requirements and supplement where necessary.
i. Monitor feral animal activity and implement appropriate management actions where necessary.
j. Bushfire management will be achieved through implementation of a strategic hazard reduction program consistent with the Bushfire Risk Management Plan.
k. Species diversity will be encouraged through an ecological burn program.
l. Monitor and protect cultural and Aboriginal heritage sites within the reserve at all times. Bushland staff to notify Aboriginal Heritage Office prior to each burn to identify sites and implement protection measures and post-fire survey.
m. This reserve has a valuable role as an educational resource. Preserve natural features used for educational purposes and continue to inform the community of bushland issues through on-site educational activities and signage. Maintain appropriate signage.
n. Formal tracks to be regularly maintained and informal tracks to be closed to prevent damage to habitat and to impede access of feral animals, unless used for access by bushland management workers.
o. Establish photo points to monitor the progress of reserve management actions.
p. Reserve Action Plan progress to be reviewed annually and updated after five years.

Animal List for Harold Reid Reserve

Harold Reid Reserve provides habitat for a number native animals. A list of these species can be found at:
https://www.willoughby.nsw.gov.au/Residents/Parks-and-recreation/Parks-reserves-and-playgrounds/Harold-Reid-Reserve

Native Plant List for Harold Reid Reserve

SPIKEMOSSES	CONVOLVULACEAE	*Angophora bakeri*	
SELAGINELLACEAE	*Dichondra repens*	*Angophora costata subsp. costata*	*Zieria smithii*
Selaginella uliginosa	CUNONIACEAE	*Angophora hispida*	SAPINDACEAE
CONIFERS	*Bauera rubioides*	*Backhousia myrtifolia*	*Dodonaea triquetra*
CUPRESSACEAE	*Callicoma serratifolia*	*Corymbia gummifera*	STERCULIACEAE
Callitris rhomboidea	*Ceratopetalum gummiferum*	*Eucalyptus haemastoma*	*Lasiopetalum ferrugineum var. ferrugineum*
PODOCARPACEAE	DILLENIACEAE	*Eucalyptus piperita*	*Stylidium laricifolium*
Podocarpus elatus	*Hibbertia empetrifolia subsp. empetrifolia*	*Eucalyptus punctata*	*Stylidium lineare*
Podocarpus spinulosus	*Hibbertia linearis*	*Eucalyptus resinifera subsp. resinifera*	*Stylidium productum*
FORK FERNS	ELAEOCARPACEAE	*Eucalyptus sieberi*	THYMELIACEAE
PSILOTACEAE	*Elaeocarpus reticulatus*	*Kunzea ambigua*	*Pimelea linifolia subsp. linifolia*
Psilotum nudum	*Tetratheca ericifolia*	*Leptospermum arachnoides*	VIOLACEAE
FERNS	ERICACEAE-EPACRIDOIDEAE	*Leptospermum polygalifolium subsp. polygalifolium*	*Viola hederacea*
ASPLENIACEAE	*Epacris longiflora*	*Leptospermum trinervium*	VITACEAE
Asplenium australasicum	*Epacris microphylla*	OLEACEAE	*Cayratia clematidea*
Asplenium flabellifolium	*Epacris pulchella*	*Tristaniopsis laurina*	*Cissus hypoglauca*
BLECHNACEAE	*Leucopogon amplexicaulis*	*Notelaea longifolia f. longifolia*	**MONOCOTS**
Blechnum ambiguum	*Leucopogon ericoides*	*Notelaea venosa*	ASPARAGACEAE
Blechnum cartilagineum	*Leucopogon microphyllus var. microphyllus*	PHYLLANTHACEAE	*Thysanotus tuberosus subsp. tuberosus*
CYATHEACEAE	*Monotoca scoparia*	*Breynia oblongifolia*	*Lomandra glauca*
Cyathea australis	*Styphelia longifolia*	*Glochidion ferdinandi var. ferdinandi*	*Lomandra gracilis*
Cyathea cooperi	*Styphelia tubiflora*	*Poranthera microphylla*	*Lomandra longifolia*
DAVALLIACEAE	*Woollsia pungens*	*Phyllanthus hirtellus*	*Lomandra obliqua*
Davallia solida var. pyxidata	EUPHORBIACEAE	PICRODENDRACEAE	ORCHIDACEAE
DENNSTAEDTIACEAE	*Homalanthus populifolius*	*Micrantheum ericoides*	*Acianthus fornicatus*
Histiopteris incisa	*Ricinocarpos pinifolius*	PITTOSPORACEAE	*Cryptostylis erecta*
Hypolepis muelleri	FABACEAE-FABOIDEAE	*Billardiera scandens*	*Dipodium punctatum*
Pteridium esculentum	*Bossiaea ensata*	*Pittosporum undulatum*	*Pterostylis nutans*
DICKSONIACEAE	*Bossiaea heterophylla*	PLANTAGINACEAE	ASPHODELACEAE
Calochlaena dubia	*Bossiaea scolopendria*	*Veronica plebeia*	*Dianella caerulea var. caerulea*
GLEICHENIACEAE	*Grona varians*	POLYGALACEAE	*Tricoryne elatior*
Gleichenia dicarpa	*Dillwynia retorta*	*Comesperma ericinum*	*Xanthorrhoea arborea*
Gleichenia microphylla	*Glycine clandestina*	PRIMULACEAE	*Xanthorrhoea media*
Gleichenia rupestris	*Gompholobium glabratum*	*Myrsine variabilis*	BLANDFORIACEAE
LINDSAEACEAE	*Gompholobium latifolium*	*Samolus repens*	*Blandfordia nobilis*
Lindsaea linearis	*Hardenbergia violacea*	PROTEACEAE	COLCHIACEAE
Lindsaea microphylla	*Hovea linearis*	*Banksia ericifolia subsp. ericifolia*	*Burchardia umbellata*
POLYPODIACEAE	*Hovea purpurea*	*Banksia integrifolia subsp. integrifolia*	COMMELINACEAE
Platycerium bifurcatum	*Kennedia rubicunda*	*Banksia marginata*	*Commelina cyanea*
Pyrrosia rupestris	*Mirbelia rubifolia*	*Banksia oblongifolia*	CYPERACEAE
PTERIDACEAE	*Phyllota phylicoides*	*Banksia serrata*	*Caustis flexuosa*
Adiantum aethiopicum	*Platylobium formosum*	*Banksia spinulosa*	*Caustis pentandra*
Pteris tremula	*Pultenaea daphnoides*	*Conospermum longifolium subsp. longifolium*	*Gahnia melanocarpa*
SCHIZAEACEAE	*Pultenaea tuberculata*	*Grevillea buxifolia subsp. buxifolia*	*Lepidosperma elatius*
Schizaea bifida	*Pultenaea flexilis*	*Grevillea linearifolia*	*Lepidosperma laterale*
Schizaea dichotoma	*Pultenaea polifolia*	*Grevillea sericea subsp. sericea*	*Lepidosperma limicola*
DICOTS	*Pultenaea stipularis*	*Grevillea speciosa*	*Schoenus melanostachys*
ACANTHACEAE	*Viminaria juncea*	*Hakea dactyloides*	*Chaetospora turbinata*
Avicennia marina	FABACEAE-MIMOSOIDEAE	*Hakea gibbosa*	IRIDACEAE
Pseuderanthemum variabile	*Acacia ulicifolia*	*Hakea sericea*	*Patersonia glabrata*
AMARANTHACEAE	*Acacia linifolia*	*Hakea teretifolia subsp. teretifolia*	*Patersonia sericea*
Alternanthera denticulata	*Acacia longifolia subsp. longifolia*	*Isopogon anethifolius*	JUNCACEAE
APIACEAE	*Acacia myrtifolia*	*Lambertia formosa*	*Juncus kraussii subsp. australiensis*
Actinotus helianthi	*Acacia parramattensis*	*Lomatia myricoides*	POACEAE
Actinotus minor	*Acacia suaveolens*	*Lomatia silaifolia*	*Aristida vagans*
Centella asiatica	*Acacia terminalis subsp. Glabrous form*	*Persoonia lanceolata*	*Echinopogon caespitosus var. caespitosus*
Platysace linearifolia	GERANIACEAE	*Persoonia levis*	*Entolasia marginata*
Xanthosia pilosa	*Geranium homeanum*	*Persoonia pinifolia*	*Entolasia stricta*
Xanthosia tridentata	GOODENIACEAE	*Petrophile pulchella*	*Eragrostis trachycarpa*
APOCYNACEAE	*Dampiera stricta*	*Telopea speciosissima*	*Imperata cylindrica*
Marsdenia suaveolens	*Goodenia bellidifolia subsp. bellidifolia*	*Xylomelum pyriforme*	*Microlaena stipoides var. stipoides*
ARALIACEAE	*Goodenia heterophylla subsp. heterophylla*	RANUNICULACEAE	*Rytidosperma longifolium*
Polyscias sambucifolia subsp. Long leaflets	*Scaevola ramosissima*	*Clematis aristata*	*Oplismenus imbecillis*
ASTERACEAE	HALORAGACEAE	RHAMNACEAE	*Oplismenus aemulus*
Cassinia denticulata	*Gonocarpus teucrioides*	*Pomaderris ferruginea*	*Panicum effusum*
Ozothamnus diosmifolius	*Haloragis heterophylla*	*Pomaderris intermedia*	*Panicum simile*
BIGNONIACEAE	LAMIACEAE	*Pomaderris lanigera*	*Sporobolus virginicus var. virginicus*
Pandorea pandorana	*Chloanthes stoechadis*	RUBIACEAE	*Austrostipa pubescens*
CAMPANULACEAE	*Hemigenia purpurea*	*Opercularia aspera*	*Tetrarrhena juncea*
Wahlenbergia gracilis	*Hybanthus vernonii subsp. vernonii*	*Pomax umbellata*	*Themeda triandra*
Lobelia purpurascens	LOGANIACEAE	RUTACEAE	RESTIONACEAE
CASSYTHACEAE	*Logania albiflora*	*Boronia ledifolia*	*Empodisma minus*
Cassytha glabella f. glabella	*Mitrasacme polymorpha*	*Boronia pinnata*	*Lepyrodia scariosa*
CASUARINACEAE	MORACEAE	*Crowea saligna*	SMILACACEAE
Allocasuarina distyla	*Ficus rubiginosa*	*Leionema dentatum*	*Smilax australis*
Allocasuarina littoralis	MYRTACEAE	*Phebalium squamulosum subsp. squamulosum*	*Smilax glyciphylla*
Casuarina glauca	*Acmena smithii*		