

Part 2 of 2 - Reserve Chapters

Prepared under the Crown Lands Act, 1989 & Local Government Act, 1993 Adopted by Council 6 April 2010



Blank Page

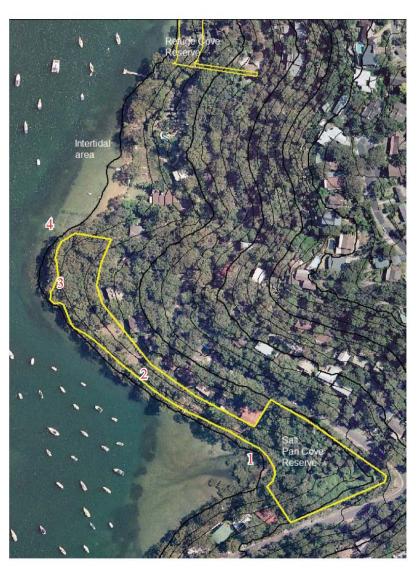
The *Pittwater Natural Areas Plan of Management* will eventually supersede the *Urban Bushland Plan of Management 1998* as each specific reserve chapters are prepared, exhibited and adopted into this document.

During the development of the reserve chapters issues raised by residents; as summarised in the Council Report dated 6 April 2010, are to be investigated.











Reserve Pro	ofile
Reserve	Salt Pan Cove Reserve
Name	
Address	146a Prince Alfred Parade, Newport
Allotments	Lot 10 DP 204399
Area	1.214 hectares
Ownership	Pittwater Council
Land	Community Land
Classification	
Proposed Categories	Natural Area - Bushland, Watercourse  SALT PAN COVE RESERVE  CATEGORISATION LEGEND
	NATURAL AREA:  BUSHLAND  A PARK
	FORESHORE A SPORTSGROUND
	WATERCOURSE GENERAL COMMUNITY USE
	WETLAND AREA OF CULTURAL SIGNIFICANCE
Catchment	Newport West
Current	6 (a) Existing Recreation A
reserve	
Adjacent	2(a) Residential "A"
zoning	

Site description	SPCR is a western facing linear foreshore bushland reserve with a gully area containing a permanent watercourse.				
	Aboriginal heritage including several undisclosed middens are recorded on the site.				
	The reserve contains Pittwater Spotted Gum Forest which is listed as an Endangered Ecological Community in the Sydney Basin under the Threatened Species Conservation Act, 1995 (TSC)				
	The tidal foreshore is rocky with the exception of mangroves and mudflats at the southern end where the creekline flows from a steep gully.				
Land use/ purpose	The primary function of the reserve is for environmental conservation and passive public recreation for activities such as walking and relaxing. (Refer to Appendix A for extended walking tracks in the Newport area)				
<del>-</del>	The reserve provides public access to the foreshore, particularly for local residents and provides good views to Scotland Island and the western foreshores of Pittwater.				
Topography and soils	SPCR is situated along Pittwater Estuary's eastern tidal foreshore.				
	The foreshore extends from a cove and mudflats at the southern end and proceeds north along a rocky shore to a gently sloping spur that extends towards Pittwater estuary to form the cove. The southern area of the site is composed of steeply sloping Narrabeen Shale soils, cut by a deep gully with a watercourse that runs directly onto saltmarsh vegetation, mangroves and the tidal mudflat. The gradient diminishes along the linear foreshore area towards the northern point.				
	The underlying geology consists of shales and sandstones of the Newport Formation of the Narrabeen Group. The shale derived soils are the moderately deep brown, red and gleyed colluvial podzols of the Watagan				
	soil landscapes. These soils are prone to mass movement and present a severe soil erosion hazard when disturbed.				
Vegetation	• SPCR contains a number of plant communities due to the varied site conditions. The shale slopes are dominated by Pittwater Spotted Gum Forest with either a wet or dry understorey mix dependent upon aspect and soil moisture content. Saltmarsh and Mangrove communities are located along areas of the foreshore. Seagrass beds lie on the outer edge of the tidal area within the cove itself. Spotted Gums ( <i>Corymbia maculata</i> ) are the dominant canopy species in the drier ridges and slopes in association with Grey Ironbark ( <i>Eucalyptus paniculata</i> ), Rough-barked Apple ( <i>Angophora floribunda</i> ), Broad Leaf White Mahogany ( <i>Eucalyptus umbra</i> ), Grey Gum ( <i>Eucalyptus punctata</i> ) with Forest Oak (Allocasuarina torulosa) and the occasional Sydney Red Gum ( <i>Angophora costata</i> . Understorey species include Kangaroo Grass ( <i>Themeda australis</i> ), Burrawong ( <i>Macrozamia communis</i> ), Native Holly ( <i>Oxylobium ilicifolium</i> ), Hop Goodenia ( <i>Goodenia ovata</i> ), Prickly Moses ( <i>Acacia ulicifolia</i> ) and Narrow leaved Geebung ( <i>Persoonia linearis</i> ).				
	• The creekline gully is dominated by Pittwater Spotted Gums in association with Cabbage Tree Palms ( <i>Livistona australis</i> ), Lillypily ( <i>Acmena smithii</i> ). Corkwood ( <i>Endiandra seiberi</i> ; Sandpaper Fig ( <i>Ficus coronata</i> ), Muttonwood ( <i>Rapanea species</i> ; Sweet Pittosporum ( <i>Pittosporum undulatum</i> ) and Guoia ( <i>Guoia semiglauca</i> ). Beneath the canopy there is a diversity of rainforest understorey species includes Scrub Turpentine ( <i>Rhodamnia rubescens</i> ), ( <i>Citrriobatus pauciflorus</i> , Smooth Mock Olive ( <i>Notelaea longifolia</i> ) and Bolwarra ( <i>Eupomatia laurina</i> ). Groundlayers and vines species include Rasp Fern ( <i>Doodia aspera</i> ), Maidenhari Fern ( <i>Adiantum formosum</i> ), Tender Brake ( <i>Pteris tremula</i> ) and Water Vine ( <i>Cissus hypoglauca</i> ).				
	• The mudflats along the foreshore edge have clumps of remnant Swamp Oak (Casuarina glauca) and species from the Ecological Endangered Saltmarsh Vegetation Community. This is dominated by Coast Couch (Zoysia macrantha) with Mangroves vegetation in the tidal area (Grey Mangroves (Avicennia marina var. australasica). Both of these communities are limited in area, but would have continued in the more protected tidal areas along the foreshore in the past. (Refer to Appendix B Vegetation List for a more complete list of vegetation)				
Vegetation condition	The local indigenous vegetation of SPCR has been impacted by a variety of pressures. This has resulted in significant degradation. Dense weed infestations are associated with drainage lines and adjacent residentia				
(includes Weed	development. Weed species, such as Lantana, <i>Tradescantia albiflora</i> along with a variety of other weed species have invaded the gully areas. The higher drier areas have been heavily invaded by substantial dense				
infestation)	cover of Asparagus Fern, exotic garden escapees and lawn grasses.				
Fauna	Sightings include Glossy Black-cockatoo, Whip birds, smaller Insectivorous Bats (probable), Bandicoots; the Endangered Squirrel Gliders have been recorded in the area, Flying Foxes; (probable) frogs in the creek area.				
Habitat and Wildlife	Corridor - CO1. This linear bushland corridor is classified as containing habitat value. This is due to the good canopy cover and some understorey. SPCR provides an important link both north and south to other				
Corridor conservation	bushland reserves and bushland that is currently still present on private properties within the catchment.				
Heritage sites	SPCR contains the following known Aboriginal sites (locations undisclosed):				
S	open midden consisting mainly of oyster shells and located above South Beach;				
	• open midden consisting of 70% shells. The shell types include oyster, mussel, cockle and mud oyster and the midden is located to the north of the Reserve;				
	open midden severely eroded by wave action, consisting of oyster, mud oyster, mussels and cockle shell types; and				
	open midden, similar to the above site, severely eroded by wave action. Oyster, mud oyster, periwinkle and mussel shell types make up 50% of the midden contents.				
	Potential for additional Aboriginal heritage sites such as axe grinding grooves and engravings may become evident on site with further weed control management				

#### Reserve Profile - continued

Key threats
(Schedule 3.

Threatened Species
Conservation Act
1995)

- Clearing of native vegetation unauthorised clearing of canopy species and native understorey mowing or whipper-snipping regenerating native grasses.
- Habitat loss and degradation.
- Altered soil nutrient levels runoff from adjoining urban developments; inappropriate drainage measures.
- Altered fire regimes lack of fire on high drier locations.
- Invasion by exotic plants and weeds.
- Physical damage from illegal access, dumping, tree removal and encroachments.
- Removal of deadwood, dead trees and logs.

Encroachments

Dumping, clearing, and inappropriate landscaping.

Unauthorised structures include timber and concrete pathways and steps, jetties, walls, structures, etc.

Erosion

The site is designated as a slip area within Pittwater LGA due to the slope of the land and the shale soils.

Erosion is minimal, though some areas along the foreshore show evidence of erosion and undercutting. This is possibly due to boat backwash and exacerbated by the loss of protective foreshore vegetation e.g. loss of Mangroves and Saltmarsh communities which tend to buffer and protect inter-tidal areas.

Some erosion is evident due to the location and steepness of the access from the main pathway off Prince Alfred Parade. Further erosion is evident in some areas of the creekline gully due to storm water run-off being directed into the main creek line gully. Increasing hard surfacing of urban areas has the potential to further impact to this gully erosion.

Erosion is also increasing due to the inappropriate location of illegal access tracks from private properties.

It is important to retain the natural leaf mulch, natural logs and native vegetation to protect the soil profile from further potential erosion issues.











Access steps

Current boat storage

Disturbed soil, debris and erosion

Weeds

Encroachment- stairs

### Major Works Table

#### Major Items

Establish a track rationalisation network based on one clearly defined path as delineation between the reserve and private properties. Provide two access points to the foreshore. This will eliminate duplication of pathways and thereby reduce impacts on the Reserve.

Remove encroachments

Ongoing bush revegetation and regeneration

Promote Bushcare program

	Cross Reference	e to Part		
Issue	1.		Further issues relating to Salt Pan Cove Reserve	Further actions relating to Salt Pan Cove Reserve
	Statutory and/or Management Issues	Action Table		
Sustainability	5.1	5.1	Pittwater Spotted Gum Forest is listed as an Endangered Ecological Community in the Sydney Basin under the Threatened Species Conservation Act (TSC) (1995). This foreshore vegetation should be managed to ensure the long term sustainability of this vegetation community. Due to the linear nature of the reserve and storm water discharge down the creekline gully, regular ongoing maintenance will be required to control weed invasion. Urban impacts such as storm water runoff, weed invasion and potential encroachment will need to be monitored to minimise negative impacts.	Regular bush regeneration maintenance to control the invasion of weed species.  Potential impacts from the urban interface will need to be monitored and controlled to ensure no detrimental impacts on the adjoining bushland.  The current Pittwater DCP 21 control for Pittwater Spotted Gum Forest (C4.12) is to ensure that buffer zones are retained (natural bushland) or created by any DA's triggered in this area. Refer to DCP Land Adjoining Bushland Reserves.
Research, Education and Community Participation	5.2	5.2	Engage the local community to encourage best management practises for properties adjoining this bushland reserve. See 5.3 below.  Encourage community participation through Bushcare volunteer activities.  Promote awareness of the significance of the biodiversity through information and appropriate interpretive signage at track entrances and along the foreshore track in suitable locations.  Monitor the health and diversity of the biodiversity.	See 5.3 below. Install interpretive signage in appropriate locations. Provide educational and technical support for weed control and management of remnant bushland on adjoining private properties. Encourage formation of local Bushcare group and wildlife watch volunteers. Record and monitor wildlife activity and record flora diversity and update on a yearly basis.
Encroachments	5.3	5.3	The main impacts on SPCR are related to the urban interface. Impacts include stormwater and urban runoff, mowing, clearing, vegetation dumping, weed invasion and inappropriate landscaping on adjacent properties and the reserve border. Structures include retaining walls, paths, steps and jetties. Many of the structures do not comply with the relevant Australian Standards and therefore pose additional risks to the public.	Remove structures with the assistance of adjoining residents.  Ensure full compliance with DA requirements to minimise potential impacts to the reserve from new developments.  Monitor and act on any illegal activities such as vegetation dumping, inappropriate stormwater drainage runoff and structures.
View Conservation and Management	5.4	5.4	Salt Pan Cove Reserve provides filtered water views through the Spotted Gum Forest.	Protect the integrity of the biodiversity and ensure sustainability of the site while, where possible, retaining filtered water views.  Any revegetation planting required will allow 'view windows' to be retained where possible.
Bushland on Private Property	5.5	5.5	Remnant bushland exists in pockets on adjoining residential properties with substantial mature native canopy species in particular Pittwater Spotted Gum evident on most adjoining private properties.  Protection of understorey native species is critical to retaining health of existing native trees and to inhibit soil erosion. All bushland in PSGF is protected under the Threatened Species Conservation Act.	Identify noxious weeds on private property. Council will provide information to property owner on the best removal and management methods to control noxious and environmental weeds Technical and practical advice on retaining native bushland management on private property by Council officers.  Landscaping where required or appropriate to comply with DCP Land Adjoining Bushland Reserves
Lands Managed by Other Authorities	5.6	5.6	Nil.	N/A
Water Catchment	5.7	5.7	Water from the steep surrounds enters the reserve from an outlet in Prince Alfred Parade. Water is contaminated by residential and road runoff resulting in a decline in water quality.	The creekline flow should be monitored; possible gross pollution trap installed and the main drainage outlet at the head of the creekline (this will need further assessment) and the stormwater outlets lined with rocks to dissipate water velocity if scouring becomes a problem. Planting of sedges and other creekline species to protect the riparian area of creekline that has been degraded and minimise impact of scouring.
Geotechnical Risk Management	5.8	5.8	Designated slip area – care must be taken to control weeds in an appropriate manner; keep slope stable and control erosion potential.  Soil disturbance should be minimised where possible.	Control of woody weeds by using appropriate herbicide using either, cut and paint method or treat in situ to retain root structure.  Soil profile must retain natural leaf mulch and not expose bare soils.  Retain all logs and other natural timber to help stabilise slope.  Retain all natural boulders.  Retain all native vegetation to hold soil profile and slope intact.

	Cross Reference	io Pari I.		
Issue			Further issues relating to Salt Pan Cove Reserve	Further actions relating to Salt Pan Cove Reserve
	Statutory and/or Management Issues	Action Table		
Biodiversity Plant communities Bushland Restoration Weed Management Local Fauna and Introduced Animals	5.9 5.9.1 5.9.2 5.9.3 5.9.4	5.9 5.9.1 5.9.2 5.9.3 5.9.4	Most weed infestations occur on the interface between the reserve and adjacent residential properties where illegal plantings, mower creep and dumping has created significant weed problems. Sites at lower elevations, where soils are wetter due to drainage, also have higher weed densities. The Eucalypts in the gully section of the reserve are being affected by urban runoff, changes to water quality and landfill associated with road construction and stormwater lines, resulting in eucalypt dieback.  Weeds in the upper catchment are also impacting the bushland and foreshore areas. Propagules are moved downslope by water runoff, wind or spread by birds. It is important that weeds on private properties within the catchment are managed to minimise their future impacts on the surrounding bushland reserves.  Control of domestic animals in particular dogs, cats and rabbits is essential to ensure the impact on the native fauna and flora is minimal. As yet there does not appear to be a rabbit problem.	Manual weeding by appropriately qualified bush regeneration professionals.  Education - provide information to adjoining property owners on how to best manage weeds on their properties.  Control of companion animals to lessen impacts etc.  Assessment of fauna and potential habitat needs to be undertaken.  Encourage natural regeneration through weed control and best management practises.  Define property boundary and delineate access areas to stop fragmentation of bushland by tracks and encroachments.  Identify priority areas for habitat management.  Monitor fauna activities and record their use of the site.  Dogs must be on leash at all times and only walk along access track.  Consider listing the site as a 'Wildlife Protection Area'.  Provide a buffer of vegetation or zone between new developments and the reserve to protect foreshore reserve from urban impacts.
Fire Management	5.10	5.10	Fire needs to be managed for both biodiversity and asset protection within the constraints of time frames for ecological requirements and the Rural Fire Service assessments periods.  Lack of fire in the dry Pittwater Spotted Gum Forest will limit the potential flora biodiversity.	Protect both the reserve and surrounding residential areas from the threat of bushfire by fuel reduction and/or ecological burning as required and in accordance with the current fire management practises.
			Fire needs to be limited and controlled in the wet Pittwater Spotted Gum Forest gully and rainforest areas  The linear nature, size of reserve and vegetation types will limit the capacity for an area burn.	Fire regimes need to comply with the ecological and threatened species management requirements for Pittwater Spotted Gum Forest for both wet and dry understorey. Manual hazard reduction through a weed control program is to be undertaken. Some pile burns can be located in appropriate areas where it will enhance the biodiversity with the support of the Rural Fire Service to undertake pile burns when applicable. Post-fire management of weed propagation will be required. Limit access by pedestrians to areas that have recently been burnt to avoid soil
			Select areas for pile burns and manual fuel reduction through weed control as required.	compaction, minimise erosion and allow natural regeneration. Assess habitats prior to carrying out fire management practices.
Recreational Uses	5.11	5.11	Watercrafts are stored along the foreshore in an uncontrolled and illegal manner causing erosion and damage to the foreshore native vegetation.  Numerous unplanned and inappropriate walking tracks have been installed fragmenting the bushland foreshore area – refer to Item 5.12 below	Consider installing boat racks in designated area, however, the reserve has limited capacity or the appropriate topography for watercraft storage. Florence Park should be considered as an alternate location. Refer to Council Policy 26 Storage of craft – dinghie / boats.  Define and upgrade the main access track.  Reinstate natural vegetation along illegal access tracks.
Walking Tracks, Vehicle Access and Parking	5.13	5.13	SPCR is one of only several reserves that provide the general public with foreshore access to the eastern shores of Pittwater Estuary. It is proposed to provide a formalised walking track extending to the foreshore and, at a later date when funding allows, upgrade the stairs off Prince Alfred Parade. Vehicular access would be inappropriate.	Identify and locate the access track to protect the biodiversity of this Ecological Endangered Community and to also provide an Asset Protection Zone (APZ) for the adjoining properties.  The track must comply with the Australian Standards to ensure O.H. & S. issues are complied with, and placed in a manner to minimise potential erosion, reduce fragmentation of the bushland and to provide APZ. Provide regular maintenance of the track.  Consolidate foreshore access and remove inappropriate access. Rehabilitate with local native species either through regeneration or revegetation.
Heritage	5.14	5.14	Salt Pan Cove Reserve contains four known Aboriginal middens (location undisclosed.)	Before commencing construction works at SPCR, the Aboriginal Heritage Office (ABO) is to be notified and all bush regenerators working at the Reserve shall have completed an Aboriginal sites Awareness course. Middens are not to be disturbed. If further Aboriginal heritage is identified works are to cease and the AHO contacted.
Risk Management and Public Safety	5.15	5.15	Identify risks related to encroachments and access. (Refer to Appendix C for proposed signage.)	Remove encroachments and illegal tracks. Ensure that the upgraded track complies with the Australian Standards. Install appropriate signage at access to track
Permissible Land Uses	Chapter 3	n/a	Refer to Chapter 3 Part 1	
Major Works Program	6.2	n/a	Install and upgrade walking track Continue weed control and bush regeneration	Refer to Vehicle Access and Walking Track above 5.12. Refer to Sustainability 5.1 above

## master plan





Stormwater and Urban Runoff install a GPT (or equivelant) and dissapator at the stormwater outlet at the top of the reserve (off Prince Alfred Pde) to reduce rubbish from entering reserve and decline in water quality.

Sait Pan Cove Entrance Replace Steps and handralls.

Plant sedges and erect natural barriers to dissipate water velocity to reduce

Construct a boardwalk (or similar) where the track meets the creekline (boggy

Remove rubbish from the creek and beach. Remove encroachments. Protect and restore mangroves and saltmarsh. Consider a rubbish bin, TAngier bin and bench.

Consider dingy storage racks for limited boat storage for immediate neighbourhood use (Refer Council Policy 26), Location to be determined.

Stormwater Runoff investigate stormwater runoff to prevent ioss of top soil. Awater dissipater or equivelant is to be connected to all stormwater pipes that discharge into the reserve.

Maintain the path having regard to public safety issues. Repair path and steps to prevent trip hazards, clean out and/or reconstruct cross-fall drains as required.

Engroachments - Built Structures and Landscaping Owners of adjoining properties are to remove exotic plantings and built structures

Including: paths and steps from the reserve. Aim to remove encroachments prior to construction of walking track 2 - 3 metres from the rear of the property boundaries encroachments may not comply with 'Australian Standards'.

Restore existing structure on the foreshore as a viewing platform and consider Installing benches. Provide pathway access that compiles with the relevant Australian

At low tide it is possible to walk along the foreshore from Algona Reserve to Refuge Cove. The path at Salt Pan Cove Reserve forms part of this walk.

Construct path 2-3 metres from property boundaries to: delineate and define the asset protection zone; and

provide access for the general public and emergency services, particularly fire.

Plant the area between the path and adjoining property boundaries with low growing plants (generally up to two metres) following assessment of privacy issues.

Allow natural regeneration. Note: Council does not prune naturally occurring native vegetation that may impede on views.

The path will be constructed of crushed sandstone or crushed granite and its location is subject to detailed design work.

Protect, rehabilitate and restorate foreshores, Pittwater Spotted Gum Forest Endangered Ecological Community, mangroves and saltmarsh through well

Enoroachments - Illegal clearing of an endangered ecological community Prevent clearing of native tree canopy (Pittwater Spotted Gum Forest), clearing of understorey and native grassland (Themeda australis).

Engroaphments - Weeds Weeds occur adjacent to residential boundaries, where plantings, mowing and dumping has promoted weed growth. Active bush regeneration to slowly lessen

Remove all non-native plantings. Re-plant heavily disturbed areas with local native species. Regenerate all mown areas.

install signage with map outlining the extent of the reserve (location of boundaries) and the location of paths and foreshore access points. Also install signage for cultural and heritage information and management.

Aboriginal Heritage

Four middens occur in Salt Pan Cove Reserve. Sites should be protected by mulching over and allowing natural regeneration ffexposed. Direct paths well away from these sites or if appropriate planting to direct flow of access. Planting should be limited if regeneration can occur and should not be undertaken anywhere near Aboriginal heritage sites.



legend

Contract bush regeneration area

Volunteer bush regeneration are

Private land encroaching onto Ci

Existing walking track

Unofficial walking track

Illegal structures

















salt pan cove reserve

Trees	Shrubs	Ground	
Acmena smithii	Acacia longifolia	Acianthus sp.	
Allocasuarina torulosa	A. longissima	Agrostis avanacea	
Angophora costata	A. falcate	Centella asiatia	
A. floribunda	A. implexa	Commelina cyanea	
A. vicennial marina v. Aust.	A. ulicifolia	Carex pumilla	
Backhousia myrtifolia	Acrotricha divaricate	Carex appressa	
Banksia integrifolia	Aegiceras corniculatum	Caesia parvifolora	
Brachychilton populneus	Breynia oblongifolia	Cumbopogon refractus	
Cryptocaria (or Endiandra)?	Bursaria spinosa	Cyperus laevis	
Casuarina glauca	Citiobatus pauciflorus	Dicondra repens	
Eucalyptus maculata	Clerodendron tomentosum	Dichelachne rara	
E. punctata	Dodonea triquetra	Danthonia sp.	
E. paniculata	Eupomatia laurina	Dendrobium linguiforme	
E. umbra	Goodenia ovata	Digitaria parviflora	
Eleocarpus reticulatus	Gahnia melanocarpa	Dianella caerulea	
Ficus coronata	Hibertia sp.	Echinopogon sp.	
F. rubiginosa	Maytenus silvestrus	Entolasia sp.	
Guoia semiglauca	Macrozamia communis	Geranium homeanum	
Glochideon ferdinandi	Notolea sp.	Gonocarpus teucroides	
Pittosporum undulatum	Omalanthus populifolius	Gymnostachys anceps	
Raphanea variabilis	Oxylobium ilicifolium	Hydrocotyle peduncularis	
Rapanea howitteana	Oxothamnus diomifolius	Imperata cylindrica	
Livistona australis	Persoonia linearis	Juncus Kraussii	
	Pultanea daphnioides	Leptospermum laterale	
Vines	Prostanthera denticulata	Lobelia alata	
Billardiera scandens	Pomaderris ferruginea	Lomandra longifolia	
Cayratia clematidea	Plyscias sambucifolia	Lomandra filiformis sp.	
Cissus hypoglauca	Pittosporum revolutum	Microlaena stipoides	
C. antarctica	Rhodamnia rubescens	Opercalaria tomentose	
Desmodium rhytidophyllum	Synoum glandulosum	Oplismenus sp.	
Eustrephys latifolius	Trema aspera	Panicum simile	
Glycine sp.	Trococarpa laurina	Paspalum vaginatum?	
Geitenoplesium cymosum	Wilkea heugeliana	Poa sp.	
Hardenbergia violacea	Zieria smithii	Persicaria decipiens	
Hibbertia dentata		Pratia purpurscens	
Hibbertia scandens	Ferns	Pomax umbellate	
Kenedia rubicunda	Adiantum aethiopicum	Plectranthus parviflorus	
Merinda jasminoides	A. hispidulum	Pseuderanthum	
Pandorea pandorana	Blechnum carteligeneum	Rubus parviflorus	
Passiflora herbertiana	Caloclaena dubia	Senecio hispidulus	
Sarcopetalum harveyanum	Christella dentata	Senecio sp. (quadrid tatus?)	
Stephania japonica	Davalia pixidata	Sigesbeckia orientalis	
Smilax glyciphylla	Doodia aspera	Sporobilis virginicus	
Smilax australis	Lastriopsis sp.	Tetragonia tetragonioides	
Tylophora barbata	Pepperomia tetraphylla	Themeda triandra	
Tyrophora barbata	Pellea falcate	Typha orientalis	
	Pteris tremula	Urtica incisa	
	Pteridium esculentum	Veronica plebia	
	Temarin escalentarii	Vernonia cincerea	
		Veinonia cincerea  Voilacea hederaceae	
		Walhenbergia gracilis	
		Xanthhorea arborea	