

**RYDE  
FLORA and FAUNA  
STUDY  
2007**

**Terrys Creek Reserves  
Kittys Creek Reserves  
Buffalo Creek Reserves  
Memorial Park**

Biosphere Environmental Consultants Pty Ltd

<b>Contents</b>		<b>Page</b>
<b>1.0</b>	<b>Executive Summary</b>	<b>3</b>
1.1	Rationale of the Flora and Fauna Study	3
1.2	General Findings	3
	1.2.1 Ryde Flora	4
	1.2.2 Ryde Fauna	4
	1.2.3 Impacts	5
1.3	Nature of Recommendations	6
<b>2.0</b>	<b>Introduction</b>	<b>7</b>
2.1	Background	7
2.2	Aims of the Flora and Fauna Study	8
2.3	Description of the Study Area	8
	2.3.1 Terrys Creek Catchment Reserves	10
	2.3.2 Upper Buffalo Creek Catchment Reserves	10
	2.3.3 Field of Mars Reserve	10
	2.3.4 Kittys Creek Catchment Reserves	16
	2.3.5 Parramatta River - Memorial Park	16
<b>3.0</b>	<b>Methods</b>	<b>17</b>
3.1	Selection of Survey Sites	17
3.2	Location of Survey Quadrats	17
3.3	Vegetation Survey Methods	18
3.4	Fauna Survey Methods	19
3.5	Fauna Survey Dates	21
<b>4.0</b>	<b>Flora of the Bushland Reserves</b>	<b>22</b>
4.1	Overview of the Vegetation Survey	22
4.2	Determination of Vegetation Communities	22
4.3	Endangered, Threatened or Rare Plant Species	23
4.4	Endangered Ecological Communities on Wianamatta Shale or Mittagong Formation Soils	23
	4.4.1 Parramatta River Catchment	23
	4.4.2 Terrys Creek / Lane Cove River Catchment	24
	4.4.3 Buffalo Creek / Lane Cove River Catchment	25
	4.4.4 Kittys Creek / Lane Cove River Catchment	27
4.5	Hawkesbury Sandstone Vegetation Communities	27
	4.5.1 Terrys Creek / Lane Cove River Catchment	27
	4.5.2 Buffalo Creek / Lane Cove River Catchment	30
	4.5.3 Kittys Creek / Lane Cove River Catchment	31
4.6	Native Plant Species List	32
4.7	Exotic and Non-local Native Plant Species	33
4.8	Vegetation Communities and their Assessment	33
<b>5.0</b>	<b>Ryde Fauna</b>	<b>37</b>
5.1	Terrys Creek Catchment Reserves	37
5.2	Buffalo Creek Catchment Reserves	43
5.3	Kittys Creek Catchment Reserves	48
5.4	Memorial Park	53
5.5	Comparison of Autumn and Spring Survey Results	56
5.6	Threatened Animal Species	56
<b>6.0</b>	<b>Issues and General Recommendations</b>	<b>57</b>
6.1	Conserving Biodiversity through Conserving Habitats	57
6.2	Improving the Habitat Value of Existing Reserves	58
6.3	Connectivity of Bushland Areas	58
6.4	Bush Regeneration	59

6.5	Controlled Re-planting	59
6.6	Buffer Planting to Combat Edge Effects	60
6.7	Creating Habitats	60
6.8	Feral Species Control	61
6.9	Control of domestic Animals in Reserves	61
6.10	Compost Heaps as Habitats	62
6.11	Street Lighting	62
6.12	Stormwater Overflow Areas	63
6.13	Fallen Timber and Dead Trees	63
6.14	Community Care of Bushland Areas – Public Education Campaign	63
6.15	Monitoring the Use of Reserves	63
<b>7.0</b>	<b>Recommendations</b>	<b>65</b>
7.1	Reclassification of Vegetation Communities	65
7.2	Vulnerable Native Species	65
7.3	Protection of Bushland Areas	65
	7.3.1 Parramatta River Catchment	65
	7.3.2 Terrys Creek Catchment	65
	7.3.3 Buffalo Creek Catchment	67
	7.3.4 Kittys Creek Catchment	67
7.4	Provision of Artificial Shelter Sites	68
7.5	Repeat the Flora and Fauna Study	68
7.6	Expand the Reserves Subject to the Flora and Fauna Study	68
7.7	Establish a Flora and Fauna Database	68
7.8	Acknowledgements	69
<b>8.0</b>	<b>References</b>	<b>70</b>
	<b>Appendices</b>	<b>73</b>
Appendix 1	Species Checklist of Native Plants local to Ryde Municipality	73
Appendix 2	Exotic and Non-local Native Plants in the Parramatta River, Buffalo Creek, Kittys Creek and Terrys Creek Catchments	120
Appendix 3	Native Plants in Survey Quadrats	125
Appendix 4	Fauna results in Survey Quadrats	143
Appendix 5	Vegetation Community Maps	148

## **1.0 Executive Summary**

### **1.1 Rationale of the Fauna Study**

In 2006, Ryde City Council commissioned a series of flora and fauna studies as part of a long-term assessment and management program for bushland reserves in the local government area (LGA). The surveys were carried out in four reserves: Darvall Park in Denistone, Brush Farm Park and Lambert Park in Eastwood and the Field of Mars Reserve in Ryde. An initial aim of the surveys was to provide to standardised “base-line” information about the animals and plants that occur in each reserve; the methods used to collect this information had to be standardised so that subsequent surveys could repeat the process and obtain comparable information that will assist with management decisions for these reserves. The surveys included vertebrate and invertebrate animal species, endemic plants and introduced species, either exotic to Australia or non-endemic Australian native plants. Diversity assessment of each reserve included a measure of the number of animal and plant species within a given area (the species richness) and the relative abundance of the biota present (or cover of the species within a given area).

In 2007, Ryde City Council decided to increase the number of reserves that would be surveyed for base-line data. This time, the reserves chosen were associated with particular water catchments areas in the LGA; six reserves were chosen around Terrys Creek (Forrester Park, Forsyth Park, Pembroke Park, Lucknow Park, Somerset Park and Ivanhoe Reserve), four were chosen from the Kittys Creek catchment area (Pryor Park, Portius Park, Kittys Creek Reserve and Martin Reserve), four from the Buffalo Creek catchment area (Minga Reserve, Barton Reserve, Pidding Reserve and Burrows Park), and finally, Memorial Reserve was also surveyed as one of the few reserves fronting the foreshore of the Parramatta River.

The survey techniques used in 2007 were identical to those employed in the 2006 Flora and Fauna Study (Biosphere 2006). Reference quadrats were again established in reserves that contained representative vegetation communities; these quadrats will remain the main reference sites for future fauna and flora studies in these reserves. While the surveys are intensive in nature they also have limitations; for example, the study was undertaken over two short periods (autumn and spring) and for one year only. It is probable that future follow-up studies will reveal additional species present in the reserves.

### **1.2 General Findings**

Many of the reserves in the 2007 Flora and Fauna Study are associated with water courses and so are linear in conformation. Many of the reserves have survived as bushland areas because sewer or utility easements were created to reserve these lands from other forms of development. Whatever, the reason for the retention of these bushland areas, Ryde LGA is fortunate to have native bushland but none of these areas are free from disturbance or outside impacts.

### 1.2.1 Ryde Flora

Plant lists (including weed species) were prepared for each reserve or cluster of reserves. Criterion-based testing was again used at each site to determine the correct identification of the vegetation communities in specific reserves. In some cases, vegetation communities not previously recognised were supported, and previously proposed vegetation communities failed the tests (usually because there were insufficient diagnostic species present). Blue Gum High Forest had been suggested for reserves along Terrys Creek and Burrows Park, but these classifications were not supported by the vegetation assessments carried out. Turpentine-Ironbark Forest was recognised in Pidding Park and Burrows Park. Western Sandstone Gully Forest was recognised to be present in Field of Mars Reserve, Pidding Park, Pembroke Park and Portius Park.

Many of the reserves suffered from the encroachment of a large numbers of exotic or non-native plants in them and several recommendations are proposed to help retain the vegetative features of each reserve.

Several rare plants were found, and the following three threatened species: *Epacris purpurescens* var *purpurescens*, *Pimelea curviflora* ssp *curviflora* in the Field of Mars Reserve, and *Melaleuca deanei* in Somerset Park.

### 1.2.2 Ryde Fauna

As was the case in the 2006 Flora and Fauna Study, particular animal groups that originally inhabited parts of the Ryde LGA have fared badly in the wake of urbanisation, others have survived relatively unscathed. The groups most seriously affected by urban development in the Ryde Local Government Area are:

- \* terrestrial mammals
- \* large reptiles
- \* frogs

Terrestrial native mammals (such as dasyures, native rodents, bandicoots and wombats) have almost completely disappeared from the area. No native terrestrial mammals were found in the reserves surveyed in the 2007 Flora and Fauna Study; thus, the only remaining native terrestrial mammals are those still surviving in the Field of Mars Reserve. It is possible that follow-up surveys may detect native mammals.

The main reason for the widespread loss of terrestrial mammals appears to be through predation by exotic animals, such as foxes, cats and dogs. Land clearing, particularly of native undergrowth has left the ground-dwelling mammals highly vulnerable to attack by introduced predators (Banks, 2004).

Large reptiles have been extensively eliminated. This includes goannas, large snakes, dragons (such as Bearded Dragons) and large skinks (such as Blue-tongue lizards). Many of these reptiles appear to have either been deliberately killed (mainly snakes), accidentally killed, or killed by domestic animals (White and Burgin, 2004).

The only large reptiles still remaining in the 2007 study area are:

- \* Red-bellied Black Snakes (Pembroke Park, Lucknow Park)
- \* Eastern Water Dragons (many reserves along the Terrys Creek and Buffalo Creek catchments)

Frogs have suffered a precipitous decline in Ryde. Most reserves have just one or two species. There appears to be several reasons for the decline of frogs:

- \* loss of ephemeral or still-water flooded sites
- \* extended drought over some years
- \* loss of creek catchment habitat
- \* poor water quality
- \* introduced predatory fish (notable the Plague Minnow, *Gambusia holbrooki*).

Pond-breeding species are now confined to back-yard habitats and have been lost from creek areas. Most tree frogs have disappeared despite the amount of woodland and forest that has been retained. This is a direct consequence of the loss of breeding habitat.

Most other animal groups have shown declines in diversity.

The fauna groups that are still well represented in the area are forest and woodland birds. In many bushland reserves the tall canopy has been retained and reserves are close together so that birds can move freely between bushland areas. The birds that have declined markedly are the small passerines that require mid-canopy cover for protection, and wading birds. Terrys Creek bushland reserves appear to act as an important stop-over area for migrating birds as many migratory species were detected in the reserves.

Invertebrates were well represented in most reserves where there was still a reasonably intact shrub or ground cover present. Native fish were generally absent for the reserves.

### 1.2.3. Impacts

The types of impacts on the bushland areas varied but included:

- \* weed invasion
- \* dumping of garden wastes and household rubbish
- \* planting of non-native or non-endemic plants
- \* uncontrolled fires that alter plant communities
- \* contamination of creeks and ground water
- \* changes in flow patterns of creeks through storm water control
- \* increased erosion of creek banks
- \* loss of ephemeral freshwater habitat
- \* ground compaction through foot traffic

- \* penetration of bushland by walking tracks, roads and easements
- \* feral animals, such as foxes, cats, dogs, rats and mice
- \* high density of native, predatory birds
- \* night-light pollution from street lights and house lights
- \* noise and movement disturbance
- \* edge effects

Some of these impacts are being addressed by Ryde City Council and an active bush regeneration program is currently under way. These programs are required to ameliorate the impacts experienced by the reserves, but are confined to the rehabilitation of flora. The rehabilitation of fauna is much more difficult and more contentious but is not possible without the conservation and management of bushland habitat areas. Fox-baiting programs have been operating in Field of Mars Reserve and Brush Farm Park for a number of years and appear to be partly responsible for the recovery of native fauna in these reserves (Biosphere, 2006).

### **1.3 Nature of Recommendations**

The Fauna and Flora Study assessed the animal and plant life in the bushland reserves in terms of the species and communities that have coped well with urban impacts and will survive with minimal assistance, to those species that are poorly represented and need considerable assistance. The report also considered those species or groups of species that were expected to be found but were absent.

Recommendations concerned issues such as the protection and creation of specific habitat areas and vegetation communities, the establishment of buffer strips around reserves, the enhancement of fauna corridors between bushland areas through the use of suitable street trees and encouraging residents to plant appropriate vegetation around their houses, the need for continued control of weed and feral animals (particularly foxes) and the protection of critical habitat areas for endangered or threatened species.

For the first biodiversity study in the Ryde LGA to be comprehensive, all of the bushland reserves need to be surveyed and the inventory of the plants and animals in each park determined. The 2006 and 2007 Flora and Fauna Studies have covered most of the larger bushland reserves and strategic planning and management of these reserves is now possible.

Finally, it is recommended that the flora and fauna study is repeated in five years time so that changes in the biodiversity can be assessed and planning decisions made accordingly.

## **2.0 Introduction**

### **2.1 Background**

Ryde Local Government Area (LGA) contains highly valued bushland. The retention of these bushland areas came about as the result of complicated patterns of land settlement, difficulties with site access and the establishment of public utility easements, and not because of long-term conservation planning by the early city founders. However, regardless of the mechanism for the establishment of the reserves, the bushland areas have become an important component of the Ryde landscape.

#### **Urbanisation**

Urban development did not occur at uniform rates around Sydney Harbour. Areas south of Port Jackson were inhabited first because the land on the south side of the harbour was flatter and appeared to be more fertile (Watkin Tench, 1789). Bridges between the northern and southern sides of the harbour were not constructed until the 1930s and so land clearing north of harbour was less extensive.

With the construction of the Sydney Harbour Bridge in 1933, the North Shore area became the focus of rapid urban development. Few farms had been established as fertile land was confined to a few narrow valleys. A road link to the Hawkesbury River was established along the ridge top that ran between Middle Harbour and the Lane Cove River valley. This ridge eventually became the route for the Pacific Highway.

Access to the Ryde area was difficult as it was bounded by the Lane Cove River to the east and the Parramatta River to the south. The Hornsby Plateau slopes steeply southwest into the Ryde area again making passage uncomfortable. The easiest means of entry was by boat along the Parramatta River or by land from Parramatta. Eventually punts were established to provide crossing points across the Parramatta River and it was only then that road networks were established throughout the area.

Initially only river flat areas were opened up for agriculture but orchards and other small scale farms were established in the valley areas. Agriculture was not to remain as the dominant land use for long. The demand for land for housing soon outstripped acreages required for farming and Ryde quickly adopted the heavily-urbanised features that it still retains. The surge of residential dwellings put great pressure on the supply of land and all land that was not in very rugged or inaccessible locations was converted to residential sites or roads.

#### **Remnant Bushland**

For Ryde, urbanisation has meant that all of the higher ridge areas were cleared and settled. Major roads were located at the peak of ridges and smaller, lateral roads branched from the main thoroughfares to lower levels. Very little of the original ridge-top vegetation survived land clearing (Howell and Benson, 2000). Fortunately, several areas of gully vegetation were not overtaken by the urban sprawl and these remain as green oases in a sea of bricks, tar and cement.

The bushland reserves of Ryde have become an integral part of the nature of this Local Government Area (LGA). Green spaces soften the harshness of buildings and roads and create a much more attractive setting, increasing the value of residential properties nearby and providing a retreat for those wishing to escape suburbia.

In recent years, Councils in Sydney have found that bushland reserves have changed focus in the community. Originally, they were spaces that escaped development and were pleasant places to visit. With the increasing urgency for urban consolidation, a movement towards greater protection of remnant areas has resulted (e.g. Green Web Project for Sydney). Bushland reserves are no longer areas that can be left to their own devices, they need to be managed and maintained. In short, bushland reserves are areas of conservation for both native plants and animals.

For Sydney city councils, a role in fauna and flora conservation has not existed until recently. Councils are seeking to become managers of bushland and the animals and plants that occur within. Ryde City Council has accepted this role and the current flora and fauna study is an integral part of the development of long-term management strategies for these reserves.

## **2.2 Aims of the Flora and Fauna Study**

Although some historic records exist for the flora and fauna of the four catchment areas in this study, the data does not provide a quantitative basis for the useful comparison of impacts and changes in the bushland areas. Ryde City Council commissioned Biosphere Environmental Consultants to undertake a systematic flora and fauna survey of the bushland reserves. These surveys had three primary aims:

1. to establish a series of reference quadrats in each bushland area,
2. to develop and carry out standardised and repeatable methods of flora and fauna survey in each of these quadrats that includes the identification and mapping of important vegetation areas,
3. to conduct a generalised survey of the rest of the bushland areas with the aim of cataloguing the species of plants and animals present therein, and
4. to provide recommendations that may assist Ryde City Council in the conservation and management of these bushland reserves.

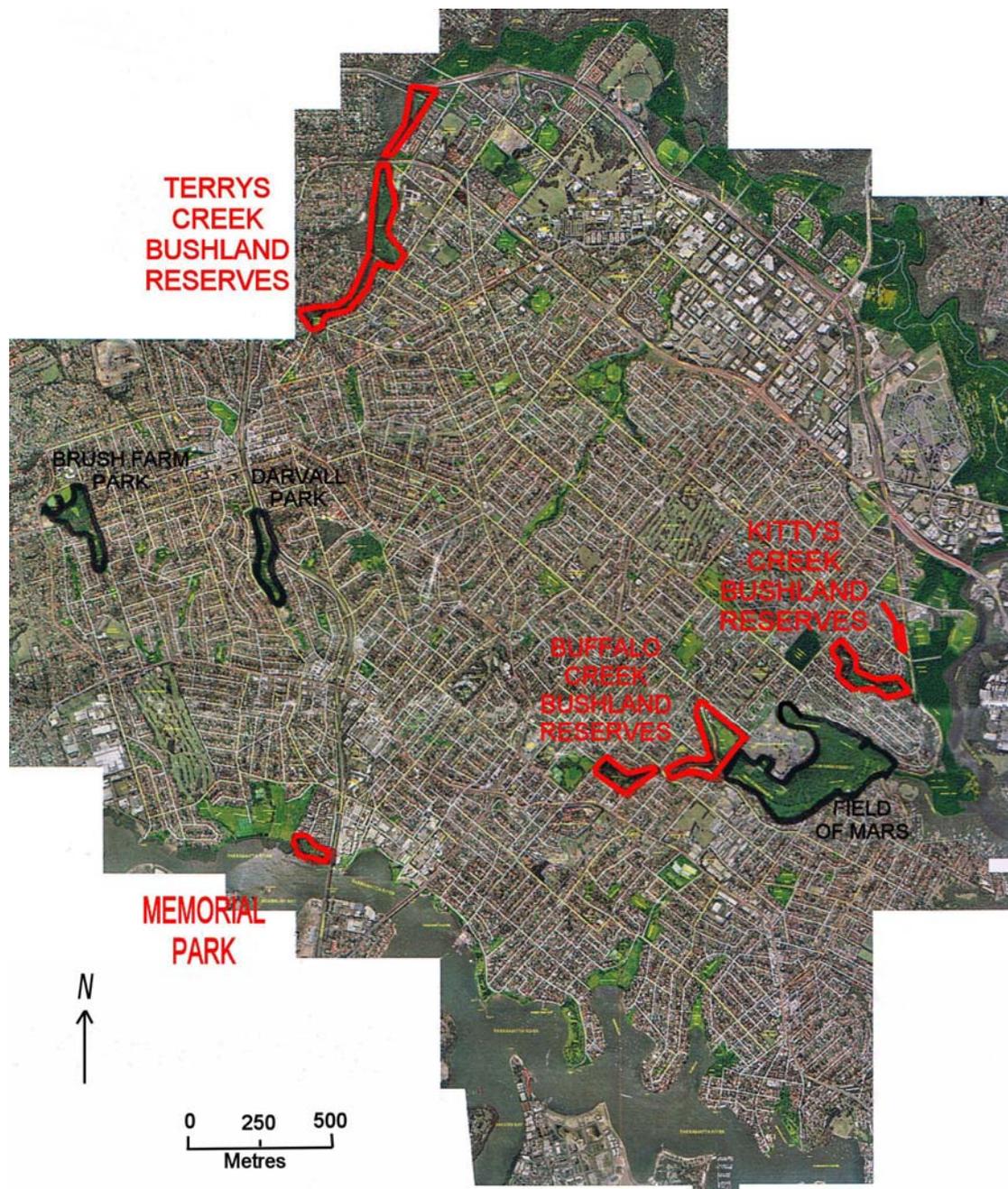
## **2.3 Description of the Study Area**

Ryde LGA is endowed with a number of parks and reserves ranging from bushland reserves with a conservation role to more altered areas that have a totally recreational focus. The management of bushland areas is a relatively new role for urban Councils and Ryde City Council is seeking to manage these areas from a position of knowledge and awareness of the many issues impacting upon these land areas.

Fifteen bushland parks were surveyed in the 2007 Flora and Fauna Study. These reserves were generally associated with major stream catchments, such as Terrys Creek, Buffalo Creek and Kittys Creek. Memorial Park at Meadowbank was also

included in the study, this reserve fronts onto the Parramatta River. Two extra survey quadrats were also established in the Field of Mars Reserve (in response to recommendations from the 2006 Flora and Fauna Study).

**Figure 1**  
**Location of the Bushland Reserves Surveyed in the Flora and Fauna Study**



### **2.3.1 Terrys Creek Catchment Reserves**

The Terrys Creek Reserves (Figure 2a, b) occupy the eastern side of the Terry Creek Catchment, beginning at the southern end with Forrester Park, Forsyth Park and Pembroke Park at Marsfield, leading northwards to Lucknow Park, Somerset Reserve and Ivanhoe Reserve. This chain of parks runs almost unbroken for 1.5 kilometres along the southern side of Terrys Creek. The breadth of the reserves varies greatly; parts of Forsyth Park are less than 50 metres wide whereas Pembroke Park is over 400 metres wide in several areas. The areas immediately alongside the creek are heavily weed infested but away from the creek the incidence of native plants greatly increases. Terrys Creek is prone to low-level inundation after heavy rain and some bank scouring has resulted.

At Pembroke Park and Lucknow Park, sandstone escarpments become evident and Sandstone Ridgetop Woodland predominates. Elsewhere, there is evidence of shale influences resulting in Western Sandstone Gully Forest and Shale-Sandstone Transition Forest becoming evident.

The chain of reserves is broken by Epping Road. However, going further north, the bushland along Terrys Creek is able to pass underneath the M2 Motorway and retain continuous canopy there.

### **2.3.2 Upper Buffalo Creek Catchment Reserves**

The Buffalo Creek reserves are tightly constrained to the immediate watercourse of Buffalo Creek at Ryde (Figure 3). These reserves line the upper catchment of Buffalo Creek and are hemmed in between roads and houses as a result they are highly impacted and have extensive weed infestations in places. In addition, the water quality in Buffalo Creek is poor. Exotic plants line the creek and water weeds are prolific.

Despite the problems with land conformation and space, the reserves have generally retained a continuous tree canopy. Most are degraded forms of Western Sandstone Gully Forest but Pidding Park also contains Turpentine-Ironbark Forest on its upper slopes.

### **2.3.3 Field of Mars Reserve**

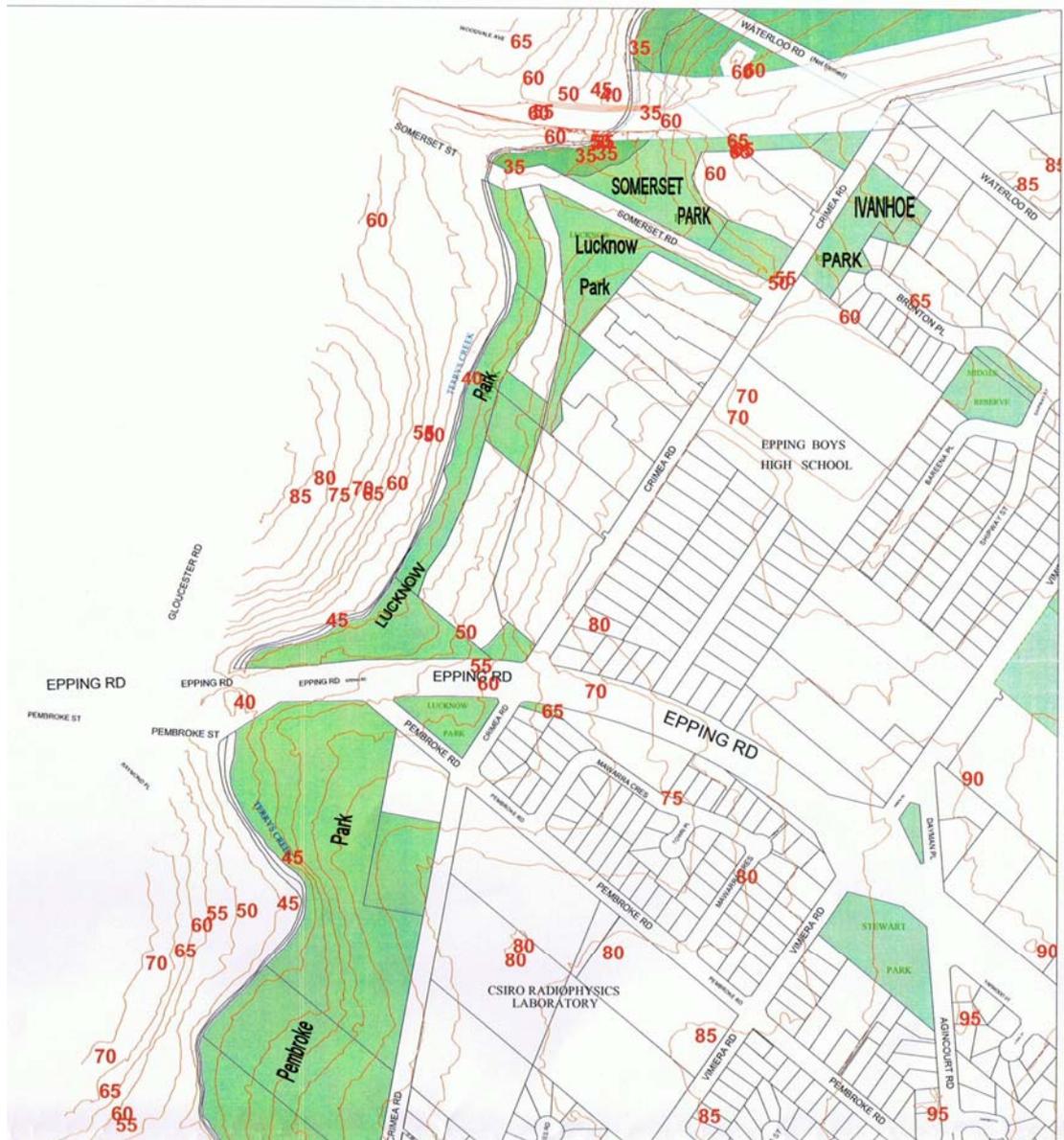
The Field of Mars Reserve is the largest bushland reserve in Ryde LGA being 51 ha in area. The reserve occupies two valleys and an intervening ridge; the valleys bear the watercourses of Strangers Creek and Buffalo Creek which converge and exit the reserve at Pittwater Road (Figure 4). The reserve is predominately bushland but areas in the south-eastern part of the reserve were used as a tip, and then filled in and have been kept cleared for passive recreation. A field study center owned by the NSW Department of Education and amenities blocks have been constructed in this area.

The north-western portion of the reserve is incised by the Field of Mars Cemetery and there is a council compound area off Wellington Road that has recently been

incorporated into the reserve. There are several well-formed but unsealed walking tracks throughout the reserve and these are used regularly. The Sydney Nature Walk track also passes through this reserve.

Various woodland types occur across the reserve including Scribbly Gum woodland, Turpentine-ironbark Forest and mixed woodland; the gullies contain mesic plants such as Coachwood (*Ceratopetalum apetalum*), Callicoma (*Callicoma serratifolia*) and ferns. The lower section of Buffalo Creek is brackish and it is here that saltmarsh and mangrove areas are present.

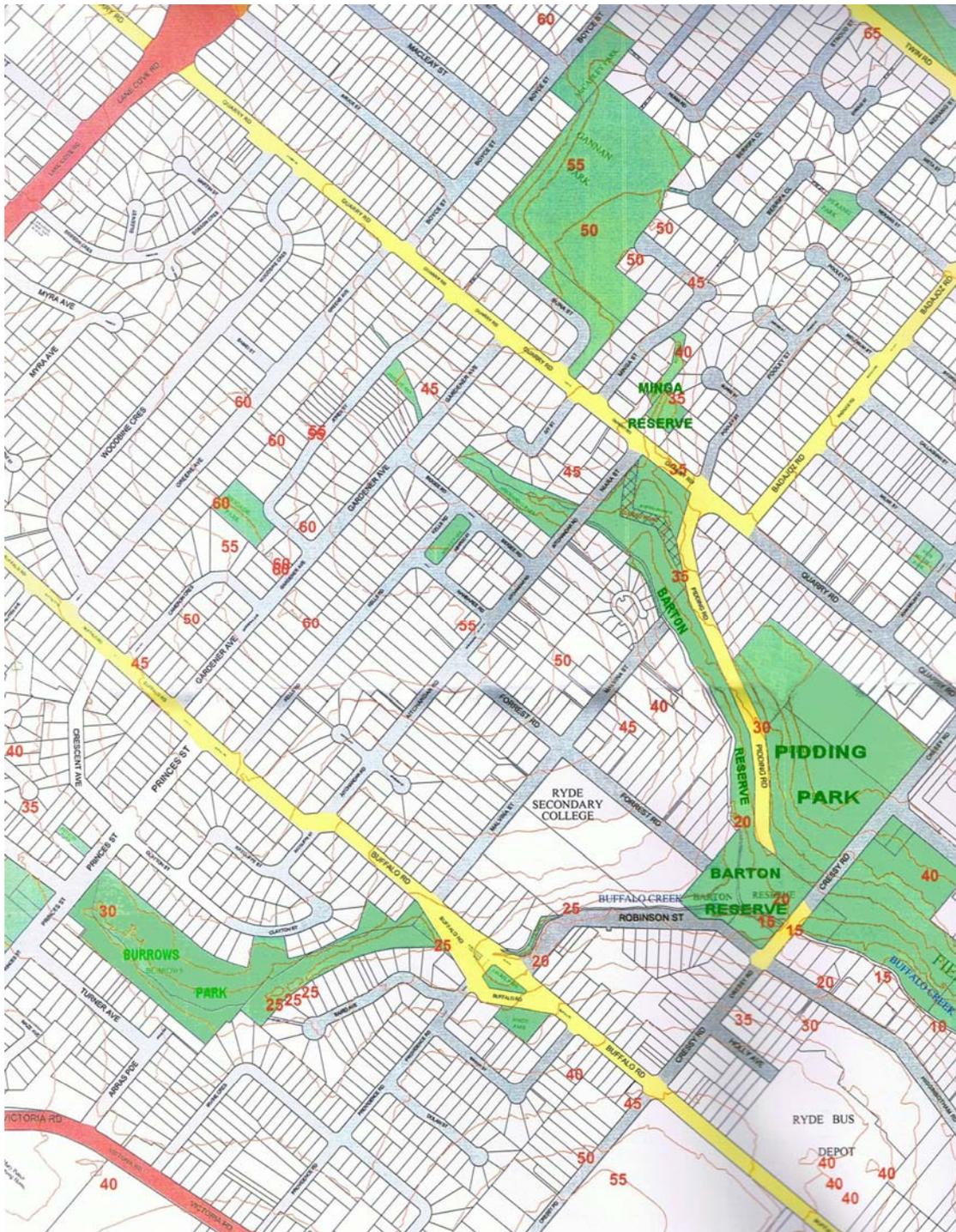
**Figure 2a**  
**Terrys Creek Catchment Bushland Reserves North**



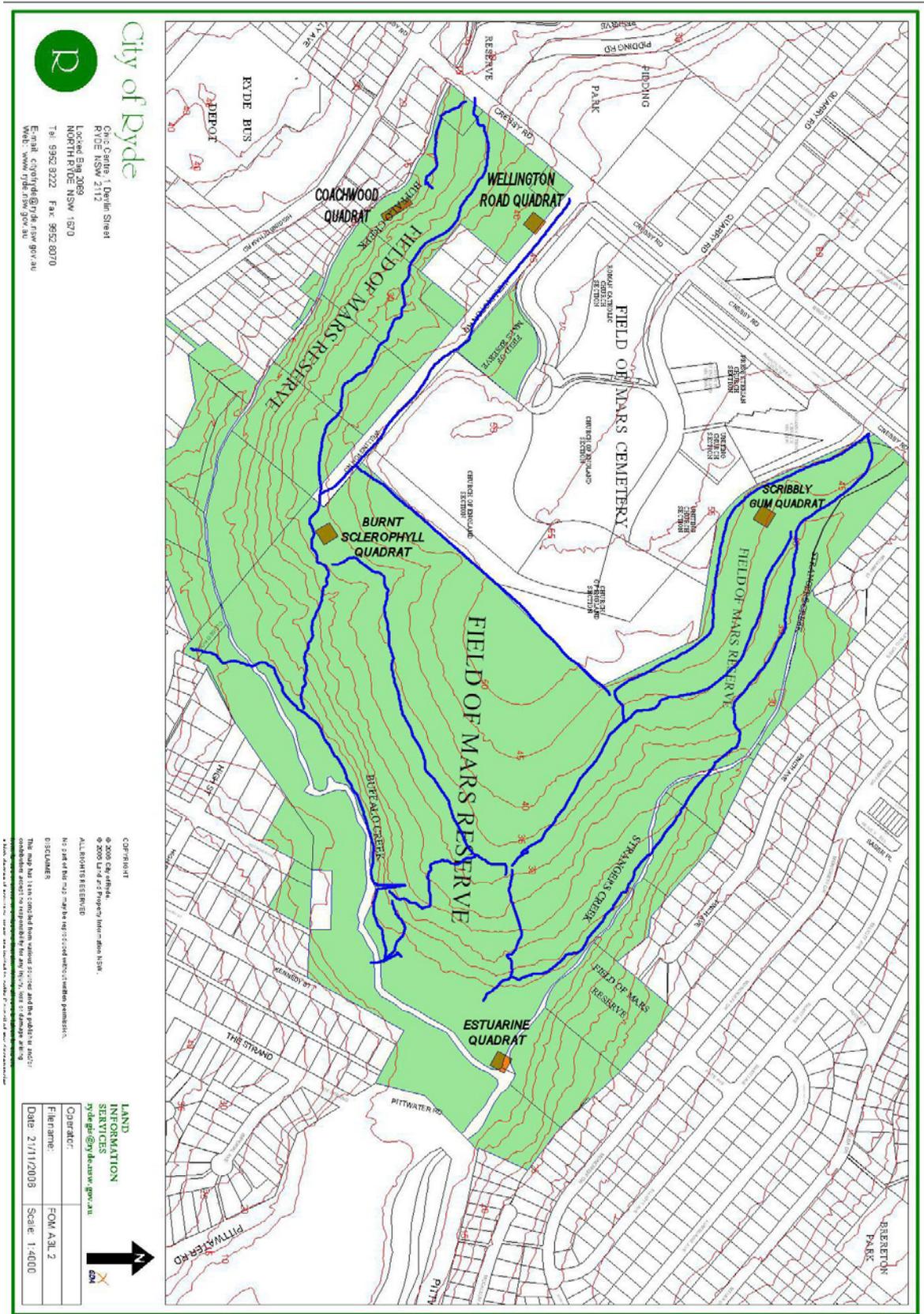
**Figure 2b**  
**Terrys Creek Catchment Bushland Reserves South**



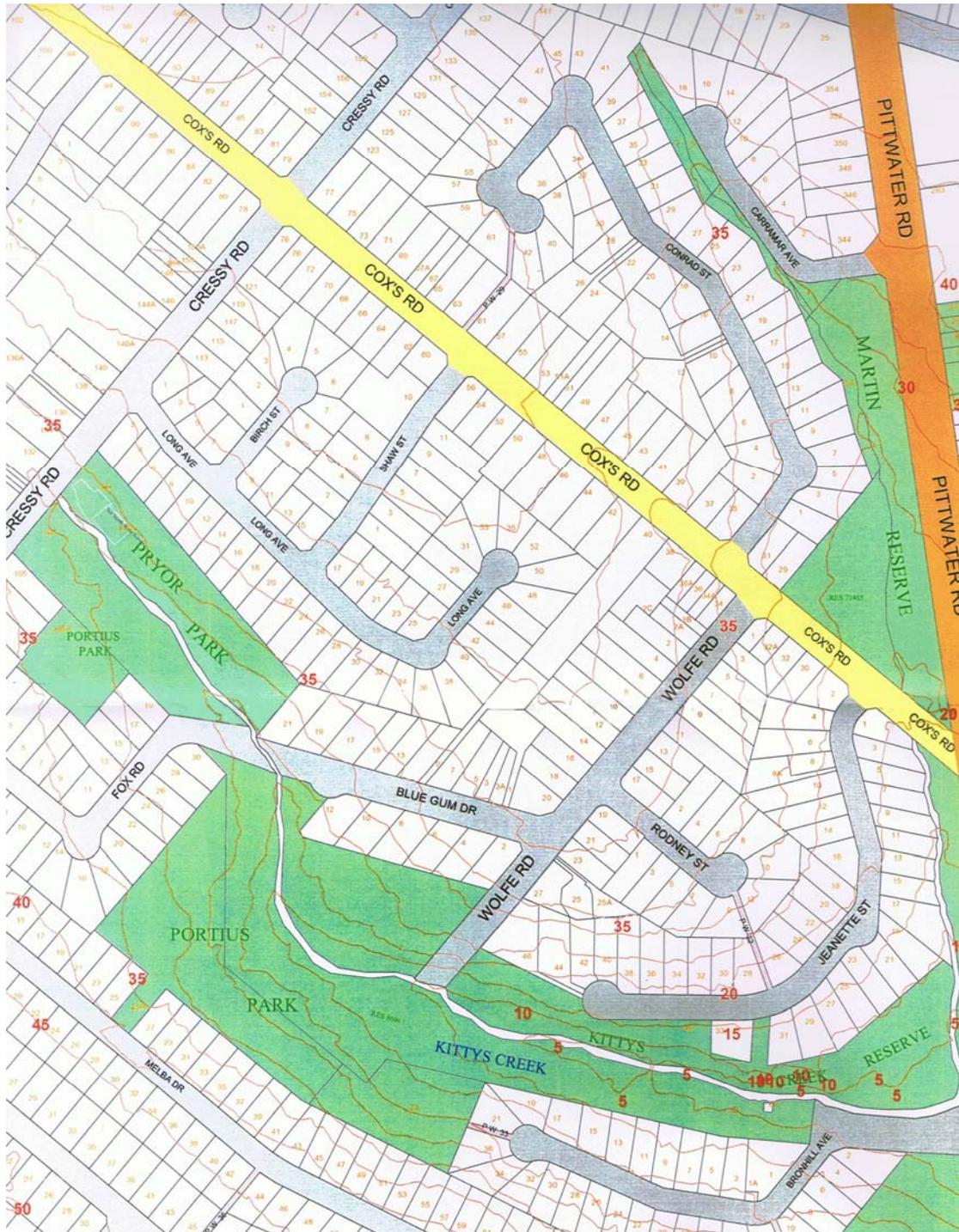
**Figure 3**  
**Buffalo Creek Upper Catchment Bushland Reserves**



**Figure 4**  
**Buffalo Creek Catchment - Field of Mars Reserve**



**Figure 5**  
**Kittys Creek Catchment Reserves**



### **2.3.4 Kittys Creek Catchment Reserves**

Kittys Creek arises from Macquarie Hospital and flows eastwards, initially in an enclosed culvert but emerges as an open watercourse in Pryor Park. From there it continues to flow as an open channel eastwards through Portius Park, into Kittys Creek reserve, under Pittwater Road into the Lane Cove River (Figure 5). A northern branch of Kittys Creek joins into the main creek just west of Pittwater Road; this northern channel runs through Martin Reserve before merging with the main channel.

The bushland along Kittys Creeks ranges from highly disturbed to increasing native cover; the eastern sections of Portius Park and Kittys Creek Reserve contain both some of the least disturbed vegetation communities and some of the most weed infested areas surveyed in the 2007 Flora and Fauna Study.

### **2.3.5 Parramatta River - Memorial Park**

Memorial Park at Meadowbank is the only reserve in the 2007 Flora and Fauna Study that faces onto the Parramatta River (Figure 6). Unlike, many of the other reserves surveyed, Memorial Park has a heavy recreational use with many walkways, viewing areas, playgrounds and open grassed areas throughout. Native bush areas are confined to less accessible parts of the park. The park is bounded by the Parramatta River to the south, Melrose Park to the west, the Northern Railway Easement to the east and Meadowbank Avenue to the north; thus it is completely isolated from other bushland areas in the study. However, its location on the Parramatta River means that many flying species are able to use the bushland as refuge areas, so many native and exotic birds are evident in the park.

There are no creeks or freshwater areas in the park. The harbor foreshore of Memorial Park is mangrove-lined and the mangroves extend both east and west beyond the park to create an extensive river woodland community.

### 3.0 Methods

#### 3.1 Selection of Survey Sites

Survey sites were selected in areas of representative vegetation communities in each reserve. For example, Pembroke Park had three identifiable vegetation communities present; one survey site was established in each of these communities in areas where there were minimal external impacts. This meant that the final location in each community was away from paths and roads where possible, contained a relatively high proportion of representative canopy, shrub and ground cover species (and correspondingly fewer invasive or non-representative species) and was unlikely to be significantly disturbed in the foreseeable future.

Some reserves did not have quadrats established within them as vegetation communities were too highly disturbed or were too small to be truly representative.

Each survey site consisted of a 20 m by 20 m square i.e. 400 square metres quadrat. Survey pegs and string lines were used to mark the boundaries of each quadrat and the location of each corner peg was plotted by GPS (in case they were interfered with or removed).

#### 3.2 Location of Survey Quadrats

Table 1 describes the location and vegetation community represented within each quadrat while Figures 2, 3 and 4 depict the location of each quadrat in each reserve.

**Table 1**  
**Location and features of the Survey Quadrats**

Catchment	Park or Reserve	Quadrat Name	Vegetation Community Represented	Area (m <sup>2</sup> )
Terrys Creek	Pembroke	‘Pembroke’	Disturbed Western Sandstone Gully Forest*	400
	Pembroke	‘Acacia binervia’	Disturbed Western Sandstone Gully Forest*	400
	Pembroke	‘Coachwood / Xmas Bush’	Disturbed Sandstone Ridgetop Woodland*	400
	Somerset	‘Somerset’	Sandstone Ridgetop Woodland	400
Kittys Creek	Portius	Wolfe Road	Western Sandstone Gully Forest	400
Buffalo Creek	Pidding	‘Pidding’	Sydney Turpentine-Ironbark Forest And Western Sandstone Gully Forest	400
	Burrows	‘Burrows’	Sydney Turpentine-Ironbark Forest	400
Strangers Creek	Field of Mars	‘Strangers Creek’	Most likely Shale / Sandstone Transition Forest (high sandstone influence)	400
		‘Pimelia curviflora’	Turpentine Ironbark Margin Forest	400

### 3.3 Vegetation Survey Methods

The flora study entailed:

1. a general survey of the plant species in each reserve
2. quadrat based survey of particular bushland areas in each reserve (using 7 stage Braun-Blanquet technique).

Initially, the reserves were explored to compile lists of local native plants and non-local native/exotic plant species and to assess the vegetation communities. A draft report *Native Plants of the Ryde District: The Conservation Significance of Ryde's Bushland Plants* (Kubiak, 2005) was used as a baseline species list on which to base observation in this study. Native Species Checklists for Parramatta River, Terrys Creek, Kittys Creek and Buffalo Creek Catchments and two quadrats from the Field of Mars Reserve are in Appendix 1. This list has been added to as new observations have been made during the survey. A Checklist of exotic and non-local native plants for those catchments was also compiled (Appendix 2). Species nomenclature follows *The Flora of NSW* (Harden, G (Ed.), 1990-1993).

Vegetation communities were determined by assessing colour aerial photographs supplied by Council and then ground-truthed. Geology and soil types were also determined. It was stipulated by Council that the methods used for this biodiversity survey were to be the same as used by the National Parks and Wildlife Service (NSW). The model for this survey was taken from Tozer (2003). Quadrats were to be 400 m<sup>2</sup> (0.04ha) in area and were placed in areas of highest diversity of local native plants. In order to assess abundance a Braun-Blanquet scale was used. While this method involves a subjective or qualitative description, it also provides for a quantitative or measurable documentation for comparison of plant community characteristics, especially species richness. Therefore, an inventory of plant species and approximate species numbers was completed for each quadrat then each species was assigned a Braun-Blanquet Cover Class. For assessment of tree cover the Specht Vegetation Structure (Table 6.1 (Specht) in Recher, Lunney & Dunn, 1986) is used.

Finally, species contained in the quadrats were compared to species listed in the map units described by Tozer (2003) for classification purposes. Tozer lists the number of native plants and the number of positive diagnostic native species required to reach a 95% confidence interval in order to fulfill the map unit classification. This information is provided in the individual quadrat descriptions (See Appendix 3).

The seven point Braun Blanquet Cover Class score (from Tozer, 2003) was assigned as follows (Table 2):

**Table 2**  
**Braun Blanquet Cover Class Scores**

Braun Blanquet Cover Class	Cover Abundance
1	Rare, few individuals (three or less) and cover <5%
2	Uncommon, (more than three but not consistently throughout the plot) and cover <5%
3	Common (consistent throughout the plot) and cover <5%
4	Very abundant and cover <5% or cover >5% but <20%
5	Cover >20% but <50%
6	Cover >50% but <75%
7	Cover >75% but < 100%

### 3.4 Fauna Survey

#### **a) Historical Data:**

Although the purpose of the study was to create a snap-shot understanding of the fauna of the Ryde LGA, efforts were made to locate historic data for the area. Ryde City Council had a partial fauna data base. These records were not the results of systematic surveys but rather they constituted opportunistic sightings by residents or council staff, bush care volunteers and local conservation groups. As a result, they can be regarded as a complete record of the fauna.

In addition, once the surveys commenced contact was made with a number of local residents and council staff working in the LGA. People were asked specific fauna questions and details were noted and later cross-checked.

#### **b) Field Surveys:**

The following techniques were used to sample the fauna:

##### Small Ground Mammals:

Single entrance, baited hair tubes were used in all of the bushland areas. These tubes proved very successful in surveys carried out in other council areas (e.g. Kogarah Bushland Reserves: Biosphere 1997; Rockdale LGA: Biosphere 1999). The tubes are used in preference to traps as they are less stressful on fauna, do not cause undue concern with the general public and are usually not interfered with by passers-by. Hair tubes remained at each site for a minimum of five days. They were then collected and the hair samples forwarded to Dr David Read in Bathurst for hair analysis.

The number of hair tubes set out depended on the size of the reserve. Table 3 lists the number of hair tubes that were used.

**Table 3  
Hair Tube Numbers**

<b>RESERVE NAME</b>	<b>NO. of HAIR TUBES</b>	<b>LOCATION OF TUBES</b>
Forrester Park	10	Parallel with Terrys Creek
Forsyth Park	10	Parallel with Terrys Creek
Pembroke Park	75	Around the outer boundaries of the park and along the creek margins.
Ivanhoe Reserve	10	Around perimeter of park
Somerset Park	10	Through centre of reserve
Pryor Park	10	Close to creek line
Portius Park	25	Along sandstone exposure and creek line
Kittys Creek Reserve	10	Centre of reserve
Martin Reserve	5	Edges of reserve
Minga Reserve	5	Edges of reserve
Barton Reserve	10	Parallel with Buffalo Creek
Pidding Park	25	Around boundaries of reserve
Burrows Park	25	Parallel with creek line
Memorial Park	10	Parallel with river foreshore

In addition, animal tracks, burrows, diggings, shed fur or feathers and scats were searched for and collected. Scats and fur samples were collected by bush regeneration staff in the field. If these contained bone or hair samples they were forwarded to Dr Read for analysis.

#### Arboreal Mammals:

Arboreal mammals were detected mainly by spot-lighting at night. In general, all of the walking tracks in each reserve were walked slowly while panning a spotlight either side of the track. If an animal's eye shine was detected, the location of the animal was approached directly, keeping the spotlight on the animal so that it did not move away. In most cases, the animal could be identified visually. In a few instances (e.g. sugar gliders) the animals were identified by call.

Spotlighting was carried out during the first three hours after dusk. Most reserves could be adequately covered in this time; some of the larger reserves (e.g. Field of Mars Reserve) required more than one night of spotlighting to cover the length of the reserve.

In addition, an examination of trees for scratch marks and drays took place during daylight hours.

#### Bats:

Flying foxes were detected by spotlighting at night whereas insectivorous bats were detected using ultra-sonic (ANABAT) bat recorders. The recorders are hand-held and carried through the reserves at night while spotlighting was in progress. Recorded bat calls were later analysed using Anabat 5.0 software.

#### Day Birds:

Birds were surveyed in the early mornings in two ways, in the survey quadrat areas, two mornings of twenty minutes survey time (in each survey period) was devoted to recordings the birds that were seen or heard there. In addition, opportunistic bird surveys were carried out at other times throughout the reserves.

#### Owls and Night Birds:

Owl surveys were conducted at night using a small portable amplifier. Owl calls were broadcast at night for Southern Boobook Owls, Powerful Owls, Sooty Owls, Masked Owls and Barn Owls. Calls were played at suitable sites each night and the amplifier was aimed away from nearby residences before the sounds were played. A listening period of 2 minutes followed the playing of each tape. If it was possible to visually identify the responding owl, all attempts were made to do so.

Other night birds, such as Tawny Frogmouths, Owlet Nightjars and Night Herons were also spotlighted during night surveys.

#### Reptiles:

Reptiles were searched for by hand during the day. On two sunny mornings, the quadrat survey areas were walked and all potential reptile shelter sites examined. Where possible,

reptiles were caught, identified and immediately released. Other signs of reptiles were searched for, such as the presence of burrows, shed skins and droppings. Opportunistic reptiles surveys were carried out throughout the rest of the reserve.

Frogs:

Frog surveys were carried out at night under suitable (wet) weather conditions. Calling frogs were identified; non-calling frogs were caught, identified and released. Searches of the area were carried out using head lamps.

During daylight hours, hand-netting was carried out to search for tadpoles. Tadpoles were immediately returned to the water once identified. If the tadpoles were too small to be readily identified they were kept and reared in captivity until they could be confidently identified and then released.

As most of the quadrats did not include a creek or watercourse, frog searches in the quadrats was confined to two evenings of twenty minutes duration each.

Fish:

Small hand nets were used to sample for fish in Archer Creek in Brush Farm Park, the drains in Lambert Park, the channel in Darvall Park and Buffalo and Strangers Creek in the Field of Mars.

Invertebrates:

Invertebrates were also surveyed in the quadrats as well as opportunistically. Invertebrate searches were combined with the reptile searches in each quadrat (i.e. two mornings of twenty minutes search effort per season). Opportunistic searches were carried out throughout the rest of the reserve and this comprised dip-netting creeks, searching undergrowth for spiders, insects and other soft-bodied creatures and using small battery operated night lights for two evenings to collect night-flying insects.

Many of the invertebrates were only identified to order or class.

### 3.5 Fauna Survey Dates

**Table 4  
Fauna Survey dates**

Reserve	Hair Tubes	Spotlighting	Bats	Birds	Reptiles	Frogs
<b>Terrys Creek reserves</b>	27 March-1 April 9-14 September	28,29 March 11,12 September	28,29 March 11,12 September	29 April,14 May 11,12 November	29,30March 8,9 September	27 March, 7 April 12,13 September
<b>Buffalo Creek Reserves</b>	2-7 April 16-21 September	3, 4 April 22,24 September	3, 4 April 22,24 September	12, 24 May 26,27 September	5, 6 April 17,20 September	7, 8 April 20,21 September
<b>Kittys Creek Reserves</b>	8-13 April, 24-29 September	9,10 April 25,26 September	9,10 April 25,26 September	13, 25 May 19,20 September	10,11 April 25,26 September	15,16 April, 13,14 November
<b>Memorial Park</b>	2-7 April 15-20 October	5,6 April 16,17 October	5,6 April 16,17 October	14,16 May 12,13 October	5,6, April 17,18 October	7,8 April, 13,14 November

## **4.0 Flora of the Bushland Reserves**

### **4.1 Overview of the Vegetation Survey**

While biodiversity includes all forms of life in the reserves, this section of the study deals only with the diversity of vegetation. Local native Australian plants and introduced species, either exotic to Australia or non-local Australian native plants were recorded in each quadrat. Diversity specifically refers to the number of species within a given area (the species richness) and the relative abundance of the species present (or cover of the species within a given area). Since the vegetation communities contained in each reserve were to be classified, this study concentrated on the diversity of local native plants in the Ryde municipality. Exotic weeds or non-local native plants are also listed for the catchments as they provide habitat for fauna. Generally, however, weeds are competitive with local native plants and can cause a decrease in native plant diversity.

### **4.2 Determination of Vegetation Communities**

Three reserves, Forrester Park, Burrows Park and Pryor Park have been previously classified as (endangered) Blue Gum High Forest (BGHF). New criteria for this listing has recently been released by the Threatened Species Scientific Committee describing this community as being generally found on Wianamatta Shale soils at altitudes higher than 100m ASL on the Hornsby Plateau and northern suburbs of Sydney in areas of higher rainfall above 1100mm/annum (DECC, 2006). According to the City of Ryde website, Ryde has an annual rainfall of 1149 mm per annum, however none of the reserves studied this year is above 100 m ASL and so the initial classification of these vegetation communities is called into question and was tested during this survey. Testing was also used to establish the identity of the vegetation communities in the other quadrats establish in this study.

In spring 2007, Council provided resources to erect two new quadrats in the Field of Mars Reserve, following recommendations put forward in the previous study (Ryde Flora and Fauna Study, Biosphere, 2006). The vegetation and community determination results for these two quadrats are also presented below.

Descriptions of the reserves, including the number and percentage of native plants and weed species in each quadrat are presented below. After the species composition and number of plants in each quadrat had been scored, the vegetation community in each quadrat was determined using the procedure for classification developed by Tozer (2003). The outcome of this testing is presented in Table 5.

**Table 5**  
**Vegetation Classifications**

<b>Name of Quadrat</b>	<b>Location</b>	<b>Soil Type</b>	<b>Results</b>	<b>Vegetation Community</b>
'Pembroke Park'	Terrys Creek Catchment	Hawkesbury Sandstone	Natives: 44/43 Diagnostic species: 18/28 Failed	Most likely Sandstone Ridgetop Woodland (Map Unit 31)
'Coachwood / Christmas Bush'	Terrys Creek Catchment	Hawkesbury Sandstone/Alluvium	Natives: 44/39 Diagnostic species: 21/27 Failed	Most likely Western Sandstone Gully Forest (Map Unit 33)
'Acacia binervia'	Terrys Creek Catchment	Hawkesbury Sandstone/Alluvium	Natives: 51/39 Diagnostic species: 25/27 Failed	Most likely Western Sandstone Gully Forest (Map Unit 33)
'Somerset Road'	Terrys Creek Catchment	Hawkesbury Sandstone	Natives: 69/43 Diagnostic species: 36/28 PASS	Sandstone Ridgetop Woodland (Map Unit 31)
'Burrows Park'	Buffalo Creek Catchment	Wianamatta Shale	Natives: 41/33 Diagnostic species: 20/18 PASS	Turpentine Ironbark Forest (Map Unit 15)
'Pidding Park'	Buffalo Creek Catchment	Mittagong Formation	Natives: 60/38 Diagnostic species: 13/11 PASS Natives: 60/39 Diagnostic species: 27/27 PASS	Turpentine Ironbark Margin Forest (Map Unit 43)  Western Sandstone Gully Forest (Map Unit 33)
'Upper Strangers Creek'	Strangers Creek	Wianamatta Shale or Mittagong Formation	Natives: 69/38 Diagnostic species: 21/11 PASS	Turpentine Ironbark Margin Forest
'Pimelia curviflora'	Buffalo Creek Catchment	Mittagong Formation	Natives: 53/40 Diagnostic species: 16/20 FAILED	Most likely Shale / Sandstone Transition Forest (high sandstone influence) (Map Unit 2)
'Wolfe Road'	Kittys Creek Catchment	Hawkesbury Sandstone	Natives: 60/39 Diagnostic species: 40/27 PASS	Western Sandstone Gully Forest (Map Unit 33)

Natives: the number of species located in the quadrat/the minimum number required for a 95% confidence interval (the minimum number of diagnostic species expected in any sample of the community); Must pass this category to go on with the classification procedure. Positive diagnostic species: the number of species in the quadrat matching those from the Map Unit listing/the minimum number of required positive diagnostic species for a match with that Map Unit. A fail does not exclude the possibility that the test plot is a match, however, the fewer positive diagnostic species recorded, the less likely it is that the Map Unit is a match. (From Tozer, 2003)

### 4.3 Endangered, Threatened or Rare Plant Species

Two threatened plant species were found in the Field of Mars, namely *Epacris purpurascens* var *purpurascens* and *Pimelia curviflora* ssp *curviflora*. The former plant was found in several locations in the Field of Mars Reserve including the Scribbly Gum Quadrat, and the latter was found in the 'Pimelia curviflora' quadrat in the Field of Mars Reserve. A single specimen of a third threatened plant species, *Melaleuca deanei*, was found in the Somerset Park.

### 4.4 Endangered Vegetation Communities on Wianamatta Shale or Mittagong Formation soils

#### 4.4.1 Parramatta River Catchment

##### Memorial Park, West Ryde

Memorial Park, West Ryde, abuts the Parramatta River and is bordered by State Rail Land, just south of Meadowbank Station, Meadow Crescent and Charity Creek that drains the southern slopes of Meadowbank. The park is mostly cleared of native

vegetation and planted with exotics of Brushbox, Tallowwood, Spotted Gum, Turpentine and River She-Oak.

The bushland areas, upslope from the River Track and on the western edge, contains remnants of a vegetation community dominated by *Eucalyptus tereticornis* (Forest Red Gum) and *Angophora floribunda* (Rough-barked Apple), both of which are rare in the Ryde Municipality and possibly in northern Sydney (Kubiak 2005). Species within the park are listed in Toner's Map Unit 11: Alluvial Woodland, which could be considered equivalent to the endangered ecological community River-Flat Eucalypt Forest on Coastal Floodplains (DECC NSW, December 2004). Memorial Park has lost much of its understorey biodiversity as a result of changes made for human recreation and as a result of planting.

The understorey has been rehabilitated but remains mostly degraded by Common Couch and Kikuyu incursions from the surrounding turfed areas. Despite this there is regeneration of canopy species in the alluvial/shale soil. There have been dense plantings of a mixture of locally endemic species and some Hawkesbury Sandstone species such as *Acacia longifolia*, *A. suaveolens* and *Banksia ericifolia* along the perimeter. There are 52 species of native plants (including plantings) in the park. Although this community is rare in Ryde, a quadrat was not used to evaluate the biodiversity due to the fact that the area has been highly impacted upon and only contains small, scattered areas of bushland and extensive plantings have taken place in the bushland areas.

The vegetation along the intertidal zone of the Parramatta River contains the Grey Mangrove (*Avicennia marina* var. *australasica*), Swamp She-Oak (*Casuarina glauca*) and other salt-tolerant plants such as Austral Seablite (*Suaeda australis*), Warrigal Cabbage (*Tetragonia tetragonioides*) and *Einadia polygonoides*. This area is greatly affected by weed species including Pellitory (*Parietaria judaica*) due to its proximity to the stormwater drain along Charity Creek. There were more weed species than natives in the whole park, an indication that the area has been highly impacted upon. There are two Class 3 Noxious Weeds: Cape Broom (*Genista monspessulana*) and a small amount of Bitou Bush (*Chrysanthemoides monilifera* ssp. *rotundata*). The Class 4 weed, Lantana, considered a Key Threatening Process (DECC NSW, 2006) is also present in the reserve.

#### 4.4.2 Terrys Creek / Lane Cove Catchment

Terrys Creek flows north east to meet the Lane Cove River at Browns Waterhole in the Lane Cove National Park. The creek drains Wianamatta Shale soils at its headwaters, and the geology changes to Hawkesbury Sandstone around the falls at the north end of Wood Street.

##### **Forrester Park / Forsyth Park, Eastwood**

There is a large turfed open park at Forrester Park surrounded by landscaped native plantings with some regeneration of natives. The Wianamatta Shale derived soil of Forrester Park supports a Sydney Blue Gum, Turpentine and Sydney Red Gum Open Forest. Classification is difficult due to previous degradation but has been previously designated as Blue Gum High Forest. The altitude is ~60 m ASL. There were fifty-

nine (59) native species observed in the park. Privet dominates the vegetation of Forsyth Park along Terrys Creek up to Pembroke Park although bush regeneration behind houses at the southern end of Forsyth Park is showing promising signs of restoration. There are some patches of mature Water Gums and Coachwoods surviving along the creek. The soils at the beginning of the track are clay-rich, becomes sandier as one travels north past the falls at the northern end of Wood Street. Hawkesbury Sandstone outcrops dominate the landscape of the creek-line. A quadrat was not erected in these reserves due to lack of diversity and the dominance of privet.

#### **4.4.3 Buffalo Creek / Lane Cove River Catchment**

Buffalo Creek flows east to meet the Lane Cove River just beyond Sugarloaf Point in the Lane Cove National Park. It drains Wianamatta Shale soils at its headwaters then flows through Hawkesbury Sandstone to the Lane Cove River. Its upper slopes at Pidding Park and the ridge of the Field of Mars Reserve are most likely to be Mittagong Formation, with interbedded shale, laminite and sandstone (Chapman & Murphy, 1989).

##### **Burrows Park, Ryde**

Burrows Park, on Wianamatta Shale derived soil, has previously been designated as Blue Gum High Forest. Its elevation is only 30 m above sea level. The park borders Buffalo Creek, which has carved steeply into the landscape. The dominant canopy plants are *Eucalyptus pilularis* (Blackbutt), *E. saligna* (Sydney Blue Gum), *E. paniculata* (Grey Ironbark), *Syncarpia glomulifera* (Turpentine) and *Angophora floribunda* (see Burrows Park quadrat). It meets the requirements of Map Unit 15: Turpentine Ironbark Forest (Tozer, 2003). There is a diverse range of clay-loving groundcovers and vines. The park contains *Convolvulus erubescens*, considered rare in the northern suburbs of Sydney and in the Ryde district (Kubiak, 2005). *Asplenium australasicum* (Birds Nest Fern) is an uncommon plant found on rocks within the creek. Bush regeneration at the Princes Street end of the park is restoring the native vegetation and no doubt contributes to the health and diversity within the ecosystem of this relatively isolated patch of bushland.

The Buffalo Road end of the park is the weediest, being dominated by the Class 4 weeds such as Privet, African Olive, Asparagus Fern and Camphor Laurels and Class 3 weed Green Cestrum along Buffalo Creek. Other potential weed problems are Bridal Creeper and Climbing Asparagus, two Class 4 weeds that thrive on shale soils.

##### **Minga Reserve, Ryde**

Minga Reserve, Ryde is a small, degraded and extremely narrow reserve squeezed in behind houses on a drainage line that eventually flows into Buffalo Creek. Bush regeneration is improving the health of this small patch of bushland by removing weeds and planting shale-loving native species local to the area. Before residential construction, the reserve was most likely either of Turpentine Ironbark or a Turpentine Ironbark Margin vegetation community. Degradation has occurred due to stormwater runoff, the placement of the sewer line and a gas pipeline that parallels Quarry Road. Stormwater is channeled under Quarry Road to Barton Reserve where it eventually meets Buffalo Creek, flowing from Burrows Park to the west.

### Pidding Park, Ryde

Pidding Park, Ryde is a narrow reserve bordering Pidding Road. An old tip site on the upper slopes of the park has been filled in and flattened to form an oval. Fill from the oval has been pushed downslope into the park so that healthy native bushland only encompasses the lower 50 - 60 m just above Pidding Road. Barton Reserve is across the road and just to the southeast is the Field of Mars Reserve. The park is dominated by Blackbutt, *E. resinifera* (Red Mahogany), *Corymbia gummifera* (Red Bloodwood), *Angophora costata* (Sydney Red Gum) with a variety of shale loving shrubs (*Leucopogon juniperinus*) and sclerophyllous vegetation. A quadrat was situated in Pidding Park to determine boundary of the Turpentine Ironbark Margin Forest with the Western Sydney Gully Forest. There is high diversity (60 species) in the sandy-clay soil of the quadrat despite erosion and evidence of rabbits that are destroying some new plant growth. There are some sandstone outcrops within Pidding Park and the quadrat fulfils the criteria for two Map Units; Map Unit 43: Turpentine Ironbark Margin Forest and Map Unit 33: Western Sandstone Gully Forest (Tozer, 2003). The quadrat was also tested for Map Unit 2: Shale Sandstone Transition Forest (high sandstone influence) but failed as it was lacking by 6 positive diagnostic species. An environmental burn was conducted mid year in the northern end of the reserve and may have affected the overall species count for the whole reserve as there were only 68 species observed for the whole park. It did not affect the area in which the quadrat is located.

There are two weeds to note in Pidding Park: the Class 3 Noxious Weed, *Paspalum quadrifarium* (Tussock Paspalum) and *Pavonia hastata*, which are widespread, especially in the north end of the park where the environmental burn occurred.

### Field of Mars Reserve, Ryde

Two quadrats were erected in the spring, following recommendations from the previous report in 2006. Oculus (1999) mapped the upper Strangers Creek area as Sydney Turpentine Ironbark Forest. This area contains plants found within the endangered Turpentine Ironbark assemblage (DECC, 1998) and fulfils Map Unit 43: Turpentine Ironbark Margin Forest (Tozer, 2003). The soils are high in clay and laterite. The north-west corner of the reserve, is dominated by a forest of Red Mahogany, Turpentine, and Sydney Red Gum. There is a walking track through this community connecting the Sand Track with the Strangers Creek track. Arson occurred in 2002 and there has been excellent regeneration after the fire. There are numerous uncommon plants in the area: *Pultenaea villosa*, *Acacia brownii* and *Acacia stricta* (Kubiak, 2005), while *Pultenaea retusa* is listed as vulnerable in western Sydney (Benson & McDougall 1991). *Epacris purpurascens* var *purpurascens*, listed as vulnerable in Schedule 2 of the TSC Act (DECC NSW, 1999), is scattered throughout the area.

Oculus (1999) also mapped a Shale Sandstone Transition Forest area just east and another just north of the Cemetery on clay soil. Shale Sandstone Transition Forest assemblage is listed as an endangered ecological community (DECC NSW, 1998). The canopy contains Red Mahogany with a *Eucalyptus racemosa* (Scribbly Gum), Red Bloodwood and Sydney Red Gum understorey. Within this community are numerous rare plants: *Gompholobium pinnatum* and *Pultenaea paleacea* and uncommon plants: *Acacia brownii* and *Pultenaea retusa* (Kubiak, 2005). *Pimelia*

*curviflora* ssp *curviflora* is common within this very limited area, however it is listed as vulnerable in Schedule 2 of the TSC Act (DECC NSW,1998) and the EPBC Act (1999). The area to the east of the cemetery was tested and the quadrat failed the requirements for Map Unit 2: Shale/Sandstone Transition Forest with high sandstone influence (Tozer, 2003) due to lack of the required diagnostic species (see *Pimelea curviflora* quadrat). However, the vegetation immediately surrounding the quadrat would qualify this area for listing. Please note that both these quadrats have only had a spring 2007 observation of plant species. This area was previously impacted by an illegal track for mountain bikes and public access to the Sand Track. Council blocked off access this spring.

#### **4.4.4 Kittys Creek / Lane Cove River Catchment**

Kittys Creek is to the north of Buffalo Creek and flows slightly south east to meet the Lane Cove River just after it passes through Lane Cove National Park south of Boobajool Reserve. It also drains Wianamatta Shale soils at Cressy Road then flows through Hawkesbury Sandstone. As it flows eastwards it passes through Portius Park, Pryor Park, Kittys Creek Reserve and Martin Reserve.

##### **Pryor Park, East Ryde**

Pryor Park is a small park at the northwest end of a string of parks surrounding Kittys Creek in East Ryde. The natural vegetation on Wianamatta Shale soil has been designated as Blue Gum High Forest and is being restored by bush regenerators. The canopy consists of Sydney Blue Gum, Grey Ironbark, Turpentine and Blackbutt Open Forest. The altitude is 30m ASL. The park has been quite degraded but is high in diversity (62 native species) for its small size. Removal of weed species should continue to promote regeneration from the soil seed bank. Lantana is the main weed infesting the edge of bushland behind houses bordering Long Avenue while the main weed affecting the creek-line is Wandering Jew. Sporadic burn piles are located in areas where bush regeneration is occurring.

### **4.5 Hawkesbury Sandstone Vegetation Communities**

#### **4.5.1 Terrys Creek / Lane Cover River Catchment**

Terrys Creek forms the northern boundary for a chain of reserves and parks extending from Marsfield to Epping.

##### **Ivanhoe Reserve, Marsfield**

Ivanhoe Reserve is located at the northwest end of Crimea Road. It is surrounded and highly affected by housing; the northern end of the Reserve is mainly a fill slope of rubble and weeds while the southern end is a cleared Road Reserve. Some residents at the northern end have cleared bushland beyond the boundaries of their backyards. Much of the area has been planted and it is difficult to tell what vegetation is "natural". The dominant geology is Hawkesbury Sandstone, although the soil has a high clay content, no doubt because of its closeness to the boundary with Wianamatta Shale that runs along the ridge to the east. At the northern end, plantings of non-local endemic native plants such as River She-Oak, Spotted Gum, Jacaranda, Mulberry and

Tallowood occur, while on the road edge there are plantings of Sydney Blue Gums and *Banksia integrifolia*, which is a species that naturally only grows on closer to the coast. On the southeastern side, there is a small core area that contains native plants and much dead wood. Areas where piles had been burnt show regeneration of natives such as *Polyscias*, *Grevillea*, *Lomandra*, *Microlaena*, *Ozothamnus* and *Acacia longifolia*. Forty-nine (49) native species (including plantings) were observed in the reserve. Weeds in this reserve are typical garden escapes and Class 4 Noxious Weeds. A quadrat was not erected in this reserve due to lack of species diversity and the large number of plantings that have modified the vegetation community.

### **Pembroke Park, Marsfield**

This bushland reserve borders the east side of Terrys Creek from Epping Road to Abuklea Road. One hundred fifty-two (152) native species were observed in the park. Three quadrats were erected: the Pembroke Park Quadrat on the ridge behind houses in Menzies Road, which contains Sandstone Ridgetop Woodland, and two quadrats representing Western Sydney Gully Forest (see *Acacia binervia* Quadrat and Coachwood/Christmas Bush Quadrat) abutting the floodplain of Terrys Creek. The *Acacia binervia* Quadrat contains *Acacia binervia* and *Lasiopetalum parviflorum*, both of which are considered rare in the Ryde district (Kubiak, 2005). *Lasiopetalum parviflorum* is also considered vulnerable in Western Sydney (James *et al.* 1999). All three quadrats contain *Acrotriche divaricata*, also rare in the Ryde area (Kubiak, 2005). *Acrotriche* can be killed by high intensity fire (Benson & McDougall, 1995).

Other uncommon plants are *Livistona australis* and the fern *Psilotum nudum*. Both are found in the area immediately above the number 11 interpretive sign along the creek. The rock that contains the *Psilotum* is covered by *Asparagus asparagoides*, which will threaten the survival of this rare fern in the long term.

There is a sandstone-capped area behind the CSIRO, which was dominated by Rhizomatous Bamboo and bulldozed in the mid 2000s then capped with crushed sandstone (Gith Strid-Nwulaekwe, pers. comm., November 2007). There are still a few bamboo shoots resprouting on the edge of the capped area and the silt fence requires maintenance. The bush just to the south of the capped area may be an extension of a community on Pembroke Road mapped as Shale Sandstone Transition Forest by Oculus (2002). The area contains shale-loving plants such as *Acacia brownii*, *Leucopogon juniperinus*, Red Mahogany and Turpentine. *Epacris purpurascens* (listed as vulnerable in the TSC Act 1995) may also be in this area; plants will need to be inspected when in flower in the spring 2008. There may have been a fire here around 7-8 years ago.

The soils of Pembroke Park are shallow and sandy on the ridge. Soils become increasingly deeper with increased clay content, water holding capacity and nutrients in the weedy and shady environment of Terrys Creek as indicated by the presence of Turpentine, Coachwoods and NSW Christmas Bush and sporadic occurrences of *Podocarpus spinulosus*. Thick forests of Large and Small-leaf Privet, Camphor Laurel, Balloon Vine with a Trad understorey and other exotic garden escapes interspersed by small areas containing an excellent diversity of native plants dominate the vegetation along Terrys Creek.

Weed problems in Pembroke Park include many garden escapes and most of the Class 4 Noxious weeds. Of special note is Bridal Creeper (*Asparagus asparagoides*) in bushland behind houses in Menzies Avenue and in the bush below the sand-capped area below the CSIRO. The Class 3 Noxious Weed, Green Cestrum (*Cestrum parqui*) is also sporadically found along Terrys Creek. *Pavonia hastata*, near the entrance near Epping Road, is not listed as a noxious weed but does have the capability of rapid spread.

All three quadrats (including Somerset Quadrat) failed the classification procedure due to a lack of diagnostic species. The *Acacia binervia* quadrat had the highest diversity with 51 species but only 25 out of 27 positive diagnostic species. The Coachwood/Christmas Bush quadrat was lacking by 6 diagnostic species while the Pembroke Park quadrat had 10 fewer diagnostic species. The Pembroke Park quadrat was heavily impacted by its proximity to houses, mowing of the fire trail (ongoing disturbance to the edge), runoff from houses upslope and rabbits that inhibit regeneration. The Coachwood/Christmas Bush and *Acacia binervia* quads were both affected on the lower slopes by periodic flooding of Terrys Creek, which has increased the nutrient and moisture levels of the soil providing a rich environment for weed growth.

#### **Somerset / Lucknow Parks, Marsfield**

These reserves border the Somerset Road Reserve along the northwest side of Crimea Road down to Terrys Creek. The northern border of Somerset Park was taken to be adjacent to the National Parks and Wildlife sign just north of the M2 overpass while the southern border ended at Epping Road.

At Crimea Road, the soil is clay, most likely an extension from the Wianamatta Shale along the ridge. Closer to Terrys Creek the vegetation is consistent with Hawkesbury Sandstone geology. Parts of Somerset Park appear to have been affected by fire around 1994 (Adam Smith, pers. comm., November 2007); this has stimulated the seed bank and there is excellent diversity - 183 native species). Vegetation along the creek in the road reserve and on the east slopes is Western Sandstone Gully Forest but a north-facing quadrat, consistent with Map Unit 31: Sandstone Ridgetop Woodland, was set up in the reserve, 20 m above Terrys Creek (Somerset Road Quadrat). The diversity in this quadrat is high (69 native species; over 1/3 of species within the whole reserve) with a canopy of *Eucalyptus piperita* (Sydney Peppermint) in association with *Angophora hispida* (Dwarf Apple), numerous sclerophyllous shrubs and a diverse ground cover including 2 orchid species. An uncommon plant in the quadrat is *Styphelia tubiflora* (Kubiak, 2005), which is likely to be killed by fire, but has obviously regenerated from the soil seed bank as have the Sydney Boronia (*Boronia ledifolia*). There were no weeds within the quadrat. Bush regeneration work is commencing near Crimea Road to control weeds in preparation for an environmental burn behind the units on the northern cliff line (Adam Smith, pers. comm., October 2007).

Most of the vegetation on the northwest-facing ridge of Lucknow Park is Sandstone Ridgetop Woodland while the vegetation bordering Terrys Creek and adjacent to Epping Road is Western Sandstone Gully Forest.

Other rare or uncommon plants in the area are: *Hymenophyllum cupressiforme* on rocks along Terrys Creek with *Rhytidosporum procumbens*, *Rubus parvifolius* in the M2 Motorway overpass area and *Leptospermum parvifolium* (Kubiak, 2005). *Melaleuca deanii*, cited in the Oculus report (1999), was observed near the track in the area below the M2 Motorway overpass. It is listed as vulnerable under Schedule 2 of the TSC Act (1995) and the EPBC Act (1999). The Bird's Nest Ferns, *Asplenium australasicum*, found along the creek, are most likely garden escapees, as they usually inhabit gully rainforests canopies or rocks of basalt or shale (Benson & McDougall, 1993). The darker, damper and high nutrient environment of Terrys Creek is suitable for their growth and spread in the area.

The major weed problems occur behind the units above the northern cliff line, along the stormwater drain within the Road Reserve in Somerset Park, behind the houses on Crimea Road and but mainly along Terrys Creek.

There was a total of 103 weed species observed for Terrys Creek, almost double the amount for the other catchments. To note are the Class 3 weeds *Cortaderia selloana* (Pampas Grass) in Lucknow Park, *Genista monspessulana* (Cape Broom) in Somerset Park and the Class 4 weed *Asparagus asparagoides* in Pembroke Park while the majority of the creek edge is infested with Privet and Trad.

#### 4.5.2 Buffalo Creek / Lane Cove River Catchment

Tozer (2003, p3) states “the Mittagong formation and Hawkesbury Sandstone outcrop on the margins of the study area especially along watercourses where the overlying shale has eroded during the development of a streambed”. Along the Buffalo Creek corridor there is a topographical gradation from the Wianamatta clay-derived Turpentine Ironbark Forest in Burrows Park (30-25m ASL) to the sandstone-derived Western Sandstone Gully Forest in Barton Reserve (30-15m ASL). Also, there is a topographical gradation from clay dominated Minga Reserve (40-35m ASL) to the north of Barton Reserve (35m ASL). Minga Reserve, Pidding Park, the 2006 Wellington Road quadrat and the Upper Strangers Creek quadrat are all at the same altitude. Pidding Park quadrat, Wellington Road quadrat and Upper Strangers Creek quadrat all contain Turpentine Ironbark Margin Forest while the higher plateau east of the cemetery contains Shale Sandstone Transition Forest (High Sandstone Influence). The northwest corner of Barton Reserve has not been cut into by the creek and has a patch of remnant Turpentine community. However at the north end of Barton Reserve, bordering Quarry Road, the creek cuts deeply into sandstone, producing a vegetation community derived from sandy soil.

Further downstream the Sandstone Gully Forest in Barton Reserve changes to a topographically lower (10m ASL) Riparian Scrub (Tozer's Map Unit 35) on Hawkesbury Sandstone. This is the location of the Coachwood quadrat (see Ryde Flora and Fauna Study, 2006). The scrub opens onto a silty floodplain that developed because of the land-fill material deposited onto an old tip near the Field Studies Centre, blocking the natural flow of Buffalo Creek. The wetlands opposite the Field Studies Centre is not natural but has been rehabilitated with Native Reed (*Phragmites australis*) in deeper pools and Broadleaf Cumbungi (*Typha orientalis*) on the silt plugs (McLoughlin, 1993). Closer to Pittwater Road the vegetation changes again to a

Mangrove Saltmarsh Complex (see Estuarine quadrat in Ryde Flora and Fauna Study, 2006) at 5m ASL that is influenced by the tidal changes within the Lane Cove River.

Pidding Park is very interesting because it straddles both the Turpentine Ironbark community derived from Mittagong Formation geology at the top of the quadrat and Western Sydney Gully Forest derived from Hawkesbury Sandstone at the bottom of the quadrat. This explains the high diversity of vegetation in the quadrat consisting of both shale-loving and sandstone-loving species. In the Field of Mars Reserve the Turpentine Ironbark Margin communities (~40m ASL) straddle the ridge, which most likely contained Turpentine Ironbark and/or Shale Sandstone Transition Forest before the cemetery was built. The southern-facing slopes contain Western Sandstone Gully Forest while the northwest-facing slopes contain Sandstone Ridgetop Woodland.

### **Barton Reserve, Ryde**

Barton Reserve borders the north-south stormwater line flowing below Quarry & Pidding Roads to the east and residences to the west. This long linear reserve is located below a sandstone escarpment on Pidding Road and only tens of metres below the junction with the Wianamatta Shale soils found in Minga Reserve to the north. The northwest end of the park contains many Turpentine Ironbark and is probably a remnant of Turpentine Ironbark Forest. There is a closed road entering the north end at Niara Street, which has been landscaped with native plants. Below that is a fairly large regeneration area along the creek. A bush track heads south to exits at Forrest Road and the bottom of Pidding Road. Beyond that, the southern end of the park is heavily weed infested.

The vegetation of this reserve is more diverse (87 species) than the smaller Pidding Park to the north (68 species) and bush regeneration work is showing promising results. The vegetation community is Western Sandstone Gully Forest. An uncommon local species that has been planted in Barton Reserve is *Acacia stricta* (Kubiak, 2005).

A weed to note is *Isolepis prolifer*, which regenerates from plantlets at the end of the stems and can spread rapidly if not controlled. It is in the drainage line entering from Quarry Road, just south from the bridge.

### **4.5.3 Kittys Creek / Lane Cove River Catchment**

#### **Portius Park and Kittys Creek Reserve, East Ryde**

Portius Park and Kittys Creek Reserve are discussed together as the vegetation is very similar for both areas. These reserves form the core of the bushland surrounding lower Kittys Creek. The northern end of Portius Park is just on the other side of the creek from Pryor Park and would most likely have had the same vegetation (Turpentine Ironbark Forest), but much has been cleared. The area has been heavily impacted upon and some sections are being restored by planting. An assemblage of Red Mahogany in the cleared fire trail demarcates a change in soil from clay to sandy clay, just north of Fox Road. While bush regeneration has improved the creek to the north, at Fox Road the creek is dominated by Wandering Jew, Morning Glory and Balloon Vine. Further south of Fox Road the soil becomes sandier as the Hawkesbury

Sandstone geology dominates and the diversity of this vegetation is excellent (108 native species). Open Woodland of Sydney Peppermint with Sydney Red Gum dominates the canopy on the slopes while a Woodland / Forest of Blackbutt; Sydney Red Gum with Sweet Pittosporum, Coachwood and Christmas Bush grows near the creek. The south-west facing quadrat behind houses on Blue Gum Drive (Wolfe Road quadrat) is consistent with Map Unit 33: Western Sandstone Gully Forest (Tozer, 2003). There is a shale lens at the end of Bronhill Avenue that contains an assemblage of Turpentine, Christmas Bush, Narrow-leaved Apple (*Angophora bakeri*) and Blackthorn (*Bursaria spinosa*). An area just to the north of the Turpentines has most likely been previously disturbed by residential development but is being further degraded by illegal clearing of weed species which is compounding the problem.

Plants of significance are *Astroloma humifusum* in Portius Park and *Isolepis nodosa* in Kittys Creek (Kubiak, 2005). *Callistemon linearis* and *Acacia binervia* are also uncommon to the area and have been planted on various edges of Kittys Creek Reserve.

### **Martin Reserve, East Ryde**

Martin Reserve follows the drainage line paralleling Pittwater Road. It is a linear reserve that has been heavily impacted on and thus is highly degraded (74 native species). A bush regeneration site at the northern end (north from 5 Conrad Street) is restoring native vegetation and woody weeds are being left for burn piles. To the south of this area the reserve is heavily weed infested although it appears that some planting may have previously occurred. The vegetation is most likely consistent with Western Sandstone Gully Forest.

There were 58 weed species observed in Kittys Creek catchment. Many are Class 4 Noxious weeds and there is Pampas Grass (a Class 3 Noxious weed) in Martin Reserve.

## **4.6 Native Plant Species Lists**

The species lists in Appendix 1 contain observations of native plant species in each of the four catchments as well as a list for the two additional quadrats in the Field of Mars Reserve. The species names were taken from a draft report *Native Plants of the Ryde District - The Conservation Significance of Ryde's Bushland Plants* (PJ Kubiak, 2005) for Ryde City Council. Kubiak's list comprises observations from 1979-2005. The species contained in his list are given a conservation status (CS) and are those that are common (C) and scattered (S) generally in Ryde's bushland. Others are apparently uncommon in bushland of the Ryde district (U), rare in Ryde's bushland (R), or apparently uncommon to rare (U-R).

The lists have been developed as a checklist so that future observations can be entered as required. This study only involved observations over several days in the autumn (March-May) and spring (August-November) 2007 so it is likely that some species are missed due to lack of observation time.

Species observed during this study and that are not on Kubiak's list are marked with a #. Plants listed on the Threatened Species Act (1995) are marked with a + sign.

Australian native plants not endemic to the Ryde area are included on the Non-Indigenous plant list.

#### 4.7 Exotic and Non-Local Native Species

These species are listed as per catchment. The list contains many noxious weeds; common garden escapes, and inappropriately planted non-local native plants. Noxious Weeds are determined from the Noxious Weeds Act 1993 Control Order No 19 (NSW Government Gazette No 166, 2005) and are designated with a superscript number in the list. No Class 1 or 2 Noxious Weeds were observed. Class 3 Noxious Weeds in this survey are Bitou Bush, Green Cestrum, Cape Broom, Pampas Grass and Tussock Paspalum. These weeds are of Regional Significance and the plants must be fully and continuously suppressed and destroyed.

*Lantana camara* is designated a Key Threatening Process in Schedule 3 of the TSC Act (1995) (DECC NSW, 2006). It is identified as a threat to River Flat Eucalypt Forest on Coastal Floodplains (Memorial Park) and Sydney Turpentine Ironbark Forest (Burrows Park, Minga Reserve, Forsyth and Forrester Reserves and Pryor Park). It is found in all the surveyed reserves and is listed as a Class 4 weed in Ryde Council's Noxious Weeds list (City of Ryde, 2007). These weeds must not be sold, propagated or knowingly distributed and Council has prepared a management plan for this weed.

*Chrysanthemoides monilifera* ssp *rotundata* was observed in Memorial Park. It is designated a Key Threatening Process in Schedule 3 of the TSC Act (1995) (DECC NSW, 1999) and as a Class 3 Regionally Controlled Weed by Council, (Ryde City Council, May 2007). The requirement is for the plant to be fully and continuously suppressed and destroyed.

There were numerous Class 4 Noxious Weeds observed. There is a requirement that the growth and spread of these local weeds must be controlled according to the measures specified in a management plan published by Council (Ryde City Council, May 2007).

The native, *Acacia fimbriata* has been planted in Burrows Park, Memorial Park and was also found near the M2 Motorway overpass in Somerset Reserve as well as the Field of Mars Reserve (see Ryde Flora and Fauna Study, 2006). This plant is not native to the east Sydney area (Doug Benson, personal communication, 23 Oct 2007; *Cunninghamia*, 1996 p 705). In the Field of Mars Reserve it became weedy after fire.

#### 4.8 Vegetation Communities and their Assessment

Similar to last year's study, the classification procedure developed by Tozer (2003) has been useful for describing the species richness of the quadrats in the four catchments. Species richness was above average for the Somerset Road quadrat (69), the Upper Strangers Creek area in the Field of Mars (69), Pidding Park (60) and Wolfe Road (60). The *Pimelea curviflora* quadrat (53), the *Acacia binervia* quadrat (51), the Pembroke Park quadrat (44), the Coachwood/Christmas Bush quadrat (44)

and the Burrows Park quadrat (41) contained less than the average of 54.5 native plant species.

Nine quadrats were sampled in this study; five quadrats passed the classification system while four failed. Three failed quadrats were located in Pembroke Park. The other was the *Pimelea curviflora* quadrat in the Field of Mars Reserve. While they all had the required number of native species to fulfill the classification requirements, they were lacking in the required number of positive diagnostic species as summarised in the following table. This decrease in diversity is usually an indication of disturbance to the vegetation community (Ryde Flora & Fauna Study, 2006).

**Table 6**  
**Diagnostic Plant Species**

Quadrat Name	Number of native species/required number	Number of positive diagnostic species/required number
Somerset Rd	69/43	36/28 (+8)
Upper Strangers Creek	69/38	12/11 (+1)
Wolfe Rd	60/39	40/27 (+13)
Pidding Park	60/38	13/11 (+2)
<i>Pimelea curviflora</i>	53/40	16/20 (-4)
<i>Acacia binervia</i>	51/39	25/27 (-2)
Pembroke Park	44/43	18/28 (-10)
Coachwood / Christmas Bush	44/39	21/27 (-6)
Burrows Park	41/33	20/18 (+2)

Of the most diverse quadrats, Somerset Road and Wolfe Road are on sandstone-derived soil while Upper Strangers Creek and Pidding Park are on shale-derived soils. The Somerset Road quadrat contains Sandstone Ridgetop Woodland, Wolfe Road is Sandstone Gully Forest and Upper Strangers Creek and Pidding Park contain Turpentine Ironbark Margin Forest. Fire has no doubt contributed to the high diversity and the high number of positive diagnostic species found in the Somerset Road and Upper Strangers Creek quadrat areas. The understorey in both quadrats is dense with colonising species such as *Dodonaea triquetra* (Hop Bush) and *Pimelea linifolia* (Rice Flower) and plants in the FABACEAE family. The picture is similar for the Wolfe Road quadrat, but its fire history is unknown. The fact that the Pidding Road quadrat straddles the shale/sandstone ecotone may explain the high diversity of species in that park.

The *Pimelea curviflora* quadrat in the Field of Mars Reserve failed the classification but there are other positive diagnostic species immediately surrounding the quadrat. The understorey vegetation here is very different from any found in the whole reserve: containing the FABACEAE species: *Viminaria juncea*, *Mirbelia rubiifolia* and *Sphaerolobium vimineum* as well as *Dianella revoluta* var *revoluta* and the endangered *Pimelea curviflora* ssp *curviflora*. Grass species are also plentiful: *Entolasia stricta*, *Anisopogon avenaceus*, *Aristida vagans*, *Austrostipa pubescens*, *Dichelachne micrantha*, *Microlaena stipoides*, *Themeda australis* and *Eragrostis brownii*. There are also the herbs *Laxmannia gracilis*, *Burchardia umbellata*, *Hypericum gramineum* and *Veronica plebeia*. The lower than average number of positive diagnostic species is most likely due to fragmentation by trail bike riders and closeness to the tire trail surrounding the cemetery. Council has recently protected the

area from further fragmentation by erecting a fence bordering the fire trail adjacent to the cemetery and filling the area with large branches, preventing access from the Sand Track. Now that the area is protected other species can recruit into the quadrat.

Three quadrats erected in Terrys Creek catchment failed the classification due to a low number of positive diagnostic species. Terrys Creek contains almost double the number of weeds along the creek than any other catchment. The Acacia binervia and Coachwood/Christmas bush quadrats had a high number of weed species due to their close proximity to the creek (16% of the Coachwood/Christmas bush quadrat and 8% in the Acacia binervia quadrat). As a result, the Acacia binervia quadrat contained 7 more native species. The Pembroke Park quadrat had the lowest number of positive diagnostic species. It also contained 16% weed species coming from impacts above the quadrat. These are residential development, runoff from the sandstone ridge, a fire trail that is mown regularly, rabbits plus an infestation of Bridal Creeper (*Asparagus asparagoides*) that smothers the understorey.

Burrows Park, Minga Reserve and the north west end of Barton Reserve in the Buffalo Creek catchment, Forrester and Forsyth Reserves in the Terrys Creek catchment, and Pryor Park and the north end of Portius Park in the Kittys Creek catchment are all located on Wianamatta Shale derived soils. The vegetation has previously been classified as Blue Gum High Forest (Benson & Howell, 1994). The topography of all parks is below 100m ASL and the parks no longer satisfy that listing (DECC NSW, 2006). One quadrat was erected on this soil type, at Burrows Park, which fulfilled the requirements for Map Unit 15: Turpentine Ironbark Forest (Tozer, 2003). Memorial Park, located on an alluvial floodplain along the Parramatta River could be considered to be part of the Cumberland Plain Alluvial Eucalyptus Woodland community that is found nowhere else in Ryde.

The classifications contained in this survey and listed by Tozer (2003) are equivalent to the following Endangered Ecological Communities listed on Schedule 1 of the NSW TSC Act (1995).

The model developed by Tozer (2003) can be utilised by Council managers to determine native plant diversity and, as pointed out in the 2006 study, to also alert them to a gradual loss of native species richness. Loss of, or change in, the positive diagnostic species may point to a gradual degradation of the area or a change in vegetation community type.

Once diversity is noticed to be decreasing, it is important to look for the source of the disturbance and to take measures to correct it. Oculus (1999) lists the factors that contribute to the loss of native plant diversity in the Ryde municipality: lack of maintenance and weed control (all Pembroke Park quadrats), continuation of threatening processes (Memorial Park) and increased stormwater runoff into bushland with associated increase in nutrient levels and erosion (or flooding) (all Pembroke Park quadrats) as well as fragmentation by mountain bike riders (*Pimelia curviflora* quadrat). Lack of diversity may also be due to an inappropriate fire regime (a threat in the Field of Mars Reserve communities and Somerset Park).

**Table 7**  
**Classification of Vegetation Communities**

<b>Tozer classification (2003)</b>	<b>NSW TSC Act (1995)</b>	<b>The Natural Vegetation of the Sydney 100000 Map Sheet (Benson &amp; Howell, 1994)</b>
Turpentine-Ironbark Forest	Sydney Turpentine Ironbark Forest	Turpentine-Ironbark Forest
Turpentine-Ironbark Margin Forest	Sydney Turpentine Ironbark Forest	Turpentine-Ironbark Forest
Shale/Sandstone Transition Forest (High Sandstone Influence)	Shale/Sandstone Transition Forest	
Alluvial Woodland	River-Flat Eucalypt Forest on Coastal Floodplains	River Flat Forest

Widespread planting in areas where natural regeneration occurs is also to be avoided as species may become inadvertently weedy (eg *Acacia fimbriata*). If planting is to occur, it should only be done in areas where a natural soil profile is absent and natural regeneration cannot occur. In this case, only plants of local provenance should be used as a seed source. This will avoid problems of planting Hawkesbury Sandstone species on shale soils such as has occurred in Memorial Park. Seed should be collected according to best management practice. Permission must be obtained from NPWS (DECC NSW) as the National Parks and Wildlife Act (1974) governs various activities such as 132C Scientific Licences for seed collection within reserves containing Endangered Ecological Communities. Collection of local provenance seed avoids the introduction of possible native weeds such as *Acacia fimbriata*, which has been planted in the Field of Mars Reserve, Somerset Park and Burrows Park.

## 5.0 Ryde Fauna

The following tables of fauna are the combined findings of the quadrat and opportunistic surveys. The quadrat data only is tabulated in Appendix 4.

### 5.1 Terrys Creek Catchment Reserves

#### Mammals:

Native terrestrial mammals were not commonly encountered in any of the reserves with usually only one or two species present in each reserve. The most common mammals detected were Brush-tailed Possums, Ring-tailed Possums and Grey-headed Flying Foxes. The ground fauna was dominated by exotic mammals, such as black rats, cats, dogs and foxes (Table 8).

**Table 8**  
**Mammal Fauna of Bushland Reserves Along Terrys Creek**

Species	Common Name	Reserves Detected	How Detected	Comments
Brush-tail Possum	<i>Trichosurus vulpecula</i>	Forrester, Pembroke, Lucknow and Ivanhoe	Spotlighting Hair Tubes	Relatively common
Ring-tail Possum	<i>Pseudecheirus peregrinus</i>	Forsyth, Pembroke, Lucknow, Somerset	Spotlighting	Common closer to creek line
Sugar Glider	<i>Petaurus breviceps</i>	Pembroke, Lucknow	Spotlighting	5 gliders detected on one night
Black Rat*	<i>Rattus rattus</i>	Forrester, Forsyth, Pembroke, Lucknow and Ivanhoe	Spotlighting Hair Tubes	Very common
House Mouse*	<i>Mus musculus</i>	Forrester, Pembroke, Somerset, Ivanhoe	Hair Tubes	Relatively common
Dog*	<i>Canis lupus familiaris</i>	Pembroke, Ivanhoe	Spotlighting	
Red Fox*	<i>Vulpes vulpes</i>	Lucknow	Scats	Foxes were only detected during spring survey
Cat*	<i>Felis catus</i>	Forrester, Forsyth, Ivanhoe	Spotlighting	Cats observed in reserves during both survey sessions
Rabbit*	<i>Oryctolagus cuniculus</i>	Pembroke	Spotlighting, scats	
Grey-headed Flying Fox	<i>Pteropus poliocephalus</i>	Forrester, Forsyth, Pembroke, Lucknow, Ivanhoe	Spotlighting	Regularly sighted flying overhead
Goulds Wattled Bat	<i>Chalinolobus gouldii</i>	Pembroke, Lucknow	Anabat	Bats detected in both spring and summer

Little Forest Bat	<i>Vespadelus vulturnis</i>	Pembroke	Anabat	Bats detected in summer only.
White-striped Freetail Bat	<i>Nyctinomus australis</i>	Pembroke, Lucknow, Somerset	Anabat	Only detected in summer survey

\* denotes exotic or feral species

### Birds:

Fifty six species of day birds and three species of night birds were found in the reserves along Terrys Creek (Table 9). Many of the birds found were those commonly found in open woodland; ground-nesting or ground-frequenting birds were conspicuously absent. It is assumed that their absence is due to the high number of exotic predators in the park.

The majority of birds present were either insect-eating or nectar-feeding birds. About ten species of summer migrants were detected in the Terrys Creek Reserves, suggesting that this area may be of strategic importance for birds undertaking flights across the Sydney basin.

**Table 9**  
**Bird Fauna of Terrys Creek Catchment Reserves**

Species	Common Name	Forrester	Forsyth	Pembroke	Lucknow	Somerset	Ivanhoe
<i>Anas supercilliosis</i>	Pacific Black Duck						
<i>Ardea novaehollandiae</i>	White-faced Heron	*	*	*			
<i>Threskiornis aethiopica</i>	White Ibis						
<i>Grallina cyanoleuca</i>	Magpie-lark	*	*	*	*		
<i>Anhinga melanogaster</i>	Darter						
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant						
<i>Elanus notatus</i>	Black-shouldered Kite						
<i>Falco cenchuroides</i>	Nankeen Kestrel						
<i>Accipiter fasciatus</i>	Brown Goshawk						
<i>Accipiter cirrocephalus</i>	Collared Sparrow Hawk			*	*		*
<i>Aviceda suberistata</i>	Pacific Baza						
<i>Gallinula tenebrosa</i>	Dusky Moorhen						
<i>Vanellus miles</i>	Masked lapwing	*	*		*		
<i>Larus novaehollandiae</i>	Silver Gull		*		*		*
<i>Macropygia amboinensis</i>	Brown Cuckoo-dove						
<i>Ocyphaps lophotes</i>	Crested Pigeon	*	*	*	*	*	*
<i>Cacatua roseicapilla</i>	Galah			*	*	*	*
<i>Cacatua sanguine</i>	Little Corella				*		
<i>Calyptorhynchus funereus</i>	Yellow-tailed Black Cockatoo						
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo	*	*	*	*	*	*
<i>Platycercus eximia</i>	Eastern Rosella	*	*	*	*	*	*
<i>Platycercus elegans</i>	Crimson Rosella	*	*	*	*	*	*
<i>Trichoglossus haematodus</i>	Rainbow Lorikeet	*	*		*	*	

<i>Alisterus scapularis</i>	Australian King Parrot				*		
<i>Chrysococcyx basalus</i>	Horsfield Bronze Cuckoo	*					
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo	*	*		*		
<i>Cuculus pallidus</i>	Pallid Cuckoo						
<i>Chrysococcyx lucidus</i>	Shining Bronze Cuckoo			*	*		*
<i>Eudynamys scolopacea</i>	Koel	*	*	*	*		
<i>Scythrops novaehollandiae</i>	Channel-billed Cuckoo	*					
<i>Ninox novaeseelandiae</i>	Southern Boobook Owl			*	*		
<i>Ninox strenua</i>	Powerful Owl		*		*		
<i>Podargus strigoides</i>	Tawny Frogmouth	*	*		*		
<i>Aegotheles cristatus</i>	Australian Owlet-nightjar				*		
<i>Hirundargus caudicatus</i>	White-throated Needletail			*			
<i>Dacelo novaeguinea</i>	Laughing Kookaburra	*	*	*	*	*	
<i>Halycon sancta</i>	Sacred Kingfisher	*	*	*	*		
<i>Malurus cyaneus</i>	Superb Blue Fairy-wren		*	*	*		
<i>Malurus lamberti</i>	Variigated Fairy-wren			*	*		
<i>Pardalotus punctata</i>	Spotted Pardalote	*	*	*	*	*	
<i>Pardalotus striatus</i>	Striated Pardalote			*			
<i>Sericornis frontalis</i>	White-browed Scrub-wren						
<i>Acanthiza pusilla</i>	Brown Thornbill	*	*	*	*		
<i>Acanthiza nana</i>	Yellow Thornbill		*				
<i>Acanthiza lineata</i>	Striated Thornbill						
<i>Gerygone moueki</i>	Brown Gerygone						*
<i>Manorina melanocephalus</i>	Noisy Miner	*	*				*
<i>Phylidomyris novaehollandiae</i>	New Holland Honeyeater	*	*	*	*	*	
<i>Phylidornis nigra</i>	White-cheeked Honeyeater						*
<i>Lichenostomus penicillatus</i>	White-plumed Honeyeater		*		*		*
<i>Meliphaga lewinii</i>	Lewins Honeyeater			*			*
<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill	*	*	*	*	*	
<i>Acanthochaera carunculata</i>	Red Wattlebird	*	*		*	*	
<i>Acanthochaera lunata</i>	Little Wattlebird		*	*			
<i>Philemon corniculatus</i>	Noisy Friarbird	*					
<i>Eopsaltris australis</i>	Eastern Yellow Robin	*					
<i>Microeca fascinans</i>	Jacky Winter	*			*		
<i>Psophodes olivaceus</i>	Eastern Whipbird		*	*	*	*	
<i>Falcunculus frontalis</i>	Crested Shrike-tit			*			
<i>Pachycephala pectoralis</i>	Golden Whistler						
<i>Pachycephala rufiventris</i>	Rufous Whistler	*					
<i>Colluricincla harmonica</i>	Grey Shrike-thrush	*	*	*	*	*	*
<i>Rhipidura leucophrys</i>	Willie Wagtail	*	*	*		*	*
<i>Rhipidura fuliginosa</i>	Grey Fantail	*	*	*			
<i>Rhipidura rufifrons</i>	Rufous Fantail						*

<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike	*	*	*	*	*	
<i>Oriolus sagittatus</i>	Olive-backed Oriole			*			
<i>Sphecotheres viridis</i>	Fig Bird						
<i>Artamus cyanopterus</i>	Dusky Wood Swallow						
<i>Cracticus torquatus</i>	Grey Butcherbird	*	*	*	*	*	
<i>Gymnorhina tibicen</i>	Australian Magpie	*	*	*		*	*
<i>Strepera graculina</i>	Pied Currawong	*	*	*	*	*	*
<i>Corvus coronoides</i>	Australian Raven	*	*	*	*	*	
<i>Anthus novaeseelandiae</i>	Australian Pipit						
<i>Neochima temporalis</i>	Red-browed Firetail				*		
<i>Hirundo neoxema</i>	Welcome Swallow	*	*	*	*		
<i>Hirundo ariel</i>	Fairy Martin						
<i>Cisticola exilis</i>	Golden-headed Cisticola						*
<i>Zosterops lateralis familiaris</i>	Silver-eye		*	*			
<i>Zosterops lateralis lateralis</i>	Tasmanian Silver-eye			*			

Powerful Owls were detected in Forsyth, Pembroke and Lucknow Park but no roosting sites were found for these birds.

The Terrys Creek reserves contain a high numbers of exotic birds (Table 10). Many of these birds feed and nest inside the park. A large number of migratory species were detected in these reserves implying that these reserves are an important stop-over point for them.

**Table 10**  
**Exotic Birds of Terrys Creek Catchment Reserves**

Species	Common Name	Forrester	Forsyth	Pembroke	Lucknow	Somerset	Ivanhoe
<i>Pycnotus jocosus</i>	Red-whiskered Bulbul	*	*	*	*		
<i>Sturnus vulgaris</i>	Common Starling	*		*	*	*	*
<i>Acridotheres tristis</i>	Common Myna		*	*			*
<i>Passer domestica</i>	House Sparrow				*	*	*
<i>Lonchura castaneothorax</i>	Chestnut-breasted Mannikin						
<i>Columba livia</i>	Feral Pigeon				*		
<i>Streptopelia chinensis</i>	Spotted Turtle-dove	*	*	*	*		*

**Reptiles:**

Nine lizard species and two snakes were found in the Terrys Creek reserves (Table 11). The majority of lizards are small, ant-eating species that can hide quickly in short grass or under fallen branches. Larger lizards, such as Water Dragons, were relatively common, as were the Eastern Water Skinks. The Black-bellied Marsh Snake is a lizard-feeding snake; only two snakes were found but this species may be relatively common along Terrys Creek.

**Table 11**  
**Reptile Fauna of Terrys Creek Catchment Reserves**

Species	Common Name	Forrester Park	Forsyth Park	Pembroke Park	Lucknow Park	Somerset Park	Ivanhoe Reserve
<i>Ctenotus taeniolatus</i>	Copper-tailed Skink			*	*	*	
<i>Lampropholis delicata</i>	Garden Skink	*	*	*		*	*
<i>Lampropholis guichenoti</i>	Grass Skink		*	*	*	*	*
<i>Saproscincus mustelinus</i>	Weasel Skink			*			
<i>Eulamprus quoyii</i>	Eastern Water Skink	*	*	*	*		
<i>Eulamprus tenuis</i>	Bar-sided Skink			*			
<i>Cryptoblepharus virgata</i>	Wall Skink			*			
<i>Physignathus lesueurii</i>	Eastern Water Dragon			*	*		
<i>Phyllurus platurus</i>	Southern Leaf-tailed Gecko			*	*		
<i>Hemiaspis signata</i>	Black-bellied Marsh Snake			*			
<i>Pseudechis porphyriacus</i>	Red-bellied Black Snake			*			

### Frogs:

Five species of frogs were found in the Terrys Creek reserves (Table 12). None of the frogs were abundant. The ephemeral nature of Terrys Creek means that water is not readily available for frogs but the enclosed gullies provide shelter sites for frogs.

Red-crowned Toadlets *Pseudophryne australis* were not found in any of the above reserves in the Ryde LGA but were found in the adjoining Wood Street Reserve in the Hornsby LGA.

**Table 12**  
**Frog Fauna of Terrys Creek Catchment Reserves**

Species	Common Name	Forrester Park	Forsyth Park	Pembroke Park	Lucknow Park	Somerset Park	Ivanhoe Reserve
<i>Limnodynastes peronii</i>	Striped Marsh Frog	*	*	*	*		
<i>Limnodynastes dumerilli</i>	Eastern Banjo Frog			*			
<i>Crinia signifera</i>	Common Eastern Froglet	*	*	*	*		
<i>Litoria phyllochroa</i>	Leaf-green Tree Frog			*			
<i>Litoria peronii</i>	Perons Tree Frog			*	*		

### Fish:

Striped Gudgeon *Gobiomorphus australis* were found in Terrys Creek at Pembroke Park.

### Invertebrates:

A wide variety of invertebrates were found in the reserves along Terrys Creek (Table 13). Insects dominate the invertebrates present with 16 major taxa of insects being found. Most of the insects were leaf-eating or sap-sucking insects exploiting the young tree growth in the park. Spiders, snails, centipedes and slaters were also conspicuous throughout the reserves.

**Table 13**  
**Invertebrate Fauna of Terrys Creek Catchment Reserves**

Major Group	Order or Family	Lower Taxon (if possible)	Common Names	Habitats	
Insecta	Collembola		Springtails	Leaf Litter	
	Ephemeroptera		May Flies	Creek	
	Odonata	Zygoptera	Damselflies	Creek	
		Anisoptera	Dragonflies	Creek	
		Plecoptera		Stone Flies	Creek
		Blattodea		Cockroaches	Leaf Litter
		Isoptera		Termites	Flying
		Mantodea		Prayer Mantis	Foliage
		Dermaptera		Earwigs	Ground
		Orthoptera	Gryllacridae	Tree Crickets	Foliage
			Tettigoniidae	Katydid	Foliage
			Gryllotalpidae	Mole Crickets	Ground
			Gryllidae	Crickets	Ground
			Acrididae	Grasshoppers	Ground
		Hemiptera	Notonectidae	Backswimmers	Creek
			Gerridae	Water Striders	Creek
			Lygaeidae	Ground Bugs	Ground
			Pentatomidae	Stink Bugs	Foliage
			Reduviidae	Assassin Bugs	Foliage
		Homoptera	Cicadidae	Cicadas	Foliage
			Cicadellidae	Leaf Hoppers	Foliage
			Aphididae	Aphids	Stems
			Coccidae	Scale Bugs	Shrubs
		Coleoptera	Cincindelidae	Tiger Beetles	Ground
			Carabidae	Ground Beetles	Ground
			Dytiscidae	Diving Beetles	Creek
			Staphilinidae	Rove Beetles	Ground
			Scarabaeidae	Scarab Beetles	Foliage
			Buprestidae	Jewel Beetles	Foliage
			Elateridae	Click Beetles	Foliage
			Coccinellidae	Ladybirds	Foliage
			Cerambycidae	Long-horned Beetles	Dead Trees
				Leaf Blisters	
		Lepidoptera	Chrysomelidae	Skippers	Foliage
			Hesperidae	Swallowtail Butterflies	Flying
			Papilionidae	Milkweed Butterflies	Flying
				Ant Blue Butterflies	
			Danaidae	Hawk Moths	Flying
				Tiger Moths	
			Lycaenidae	Clearwing Moths	Flying
				Geometer Moths	
			Sphingidae	Crane Flies	Flying
			Arctidae	Mosquitos	Flying
		Sesiidae	March Flies	Flying	
	Diptera	Geometridae	Robber Flies	Flying	
		Tipulidae	Hover Flies	Creek	
		Culicidae	House Flies	Creek	
		Tabanidae	Blow Flies	Flying	
		Assilidae	Parasitic Wasps	Flying	
		Syrphidae	Vespid Wasps	Flying	
		Muscidae	Sphecid Wasps	Flying	
	Hymenoptera	Calliphoridae	Ants	Flying	
		Ichneumonidae	Bees	Flying	
		Vespidae	Lace Wings	Flying	
		Sphecidae		Flying	
		Formicidae		Ground	
	Neuroptera	Apoidea		Flying	
				Flying	
Arachnids	Acarina	Tetragnathidae	Mites, Ticks	Ground	
			Long-jawed Spiders	Foliage	
			Wolf Spiders		
		Lycosidae	Orb-Weavers	Ground	
		Nephilidae		Foliage	
Chelicerates	Chilopoda		Centipedes	Ground	
	Myriopoda		Millipedes	Ground	

Crustacea	Isopoda		Slaters	Ground
Molluscs	Gastropoda		Snails Slugs	Ground Ground
Annelida	Oligochaeta Hirunidae		Earthworms Leeches	Ground Foliage

## 5.2 Buffalo Creek Reserves

Native terrestrial mammals were not commonly encountered in any of the reserves with usually only one or two species present in each reserve. The most common mammals detected were Brush-tailed Possums, Ring-tailed Possums and Grey-headed Flying Foxes. The ground fauna was dominated by exotic mammals, such as black rats, cats, dogs and foxes (Table 14).

**Table 14**  
**Mammal Fauna of Bushland Reserves Along Buffalo Creek**

Species	Common Name	Reserves Detected	How Detected	Comments
Brush-tail Possum	<i>Trichosurus vulpecula</i>	Burrows, Barton, Pidding	Spotlighting Hair Tubes	Relatively common
Ring-tail Possum	<i>Pseudecheirus peregrinus</i>	Burrows	Spotlighting	Uncommon
Black Rat*	<i>Rattus rattus</i>	Burrows, Barton, Pidding, Minga	Spotlighting Hair Tubes	Very common
House Mouse*	<i>Mus musculus</i>	Burrows, Barton	Hair Tubes	Relatively common
Dog*	<i>Canis lupus familiaris</i>	Burrows	Spotlighting	
Cat*	<i>Felis catus</i>	Burrows	Spotlighting	Cats observed in reserves during both survey sessions
Rabbit*	<i>Oryctolagus cuniculus</i>	Pidding	Spotlighting, scats	
Grey-headed Flying Fox	<i>Pteropus poliocephalus</i>	Burrows, Barton, Pidding	Spotlighting	Regularly sighted flying overhead.

\* denotes exotic or feral species

### Birds:

Forty five species of day birds and one species of night bird were found in the reserves along Buffalo Creek (Table 15). Many of the birds found were those commonly found in open woodland; ground-nesting or ground-frequenting birds were conspicuously absent. It is assumed that their absence is due to the high number of exotic predators in the park.

The most conspicuous birds were the medium-sized birds, such as Magpies, Currawongs, Wattlebirds and Kookaburras. Smaller passerines were relatively scarce, probably due to the high number of predatory birds in the area and the relative lack of cover for smaller birds.

**Table 15**  
**Bird Fauna of Buffalo Creek Catchment Reserves**

Species	Common Name	Barton	Pidding	Burrows	Minga
<i>Anas superciliosus</i>	Pacific Black Duck				
<i>Anas castanea</i>	Chestnut-breasted Teal			*	
<i>Ardea novaehollandiae</i>	White-faced Heron		*	*	
<i>Threskiornis aethiopica</i>	White Ibis	*	*	*	
<i>Grallina cyanoleuca</i>	Magpie-lark			*	*
<i>Anhinga melanogaster</i>	Darter				
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant				
<i>Elanus notatus</i>	Black-shouldered Kite				
<i>Falco cenchuroides</i>	Nankeen Kestrel				
<i>Accipiter fasciatus</i>	Brown Goshawk				
<i>Accipiter cirrocephalus</i>	Collared Sparrow Hawk				
<i>Aviceda subcristata</i>	Pacific Baza				
<i>Gallinula tenebrosa</i>	Dusky Moorhen	*	*	*	
<i>Vanellus miles</i>	Masked lapwing			*	
<i>Larus novaehollandiae</i>	Silver Gull				
<i>Macropygia amboinensis</i>	Brown Cuckoo-dove	*	*		
<i>Ocyphaps lophotes</i>	Crested Pigeon	*	*		
<i>Cacatua roseicapilla</i>	Galah				
<i>Cacatua sanguine</i>	Little Corella				
<i>Calyptorhynchus funereus</i>	Yellow-tailed Black Cockatoo	*			
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo	*	*	*	
<i>Platycercus eximia</i>	Eastern Rosella		*		*
<i>Platycercus elegans</i>	Crimson Rosella	*	*	*	*
<i>Trichoglossus haematodus</i>	Rainbow Lorikeet			*	*
<i>Alisterus scapularis</i>	Australian King Parrot				
<i>Chrysococcyx basalis</i>	Horsfield Bronze Cuckoo				
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo				
<i>Cuculus pallidus</i>	Pallid Cuckoo				
<i>Chrysococcyx lucidus</i>	Shining Bronze Cuckoo	*	*		
<i>Eudynamis scolopacea</i>	Koel	*		*	*
<i>Scythrops novaehollandiae</i>	Channel-billed Cuckoo				
<i>Ninox novaeseelandiae</i>	Southern Boobook Owl				
<i>Ninox strenua</i>	Powerful Owl				
<i>Podargus strigoides</i>	Tawny Frogmouth		*	*	
<i>Aegotheles cristatus</i>	Australian Owlet-nightjar				
<i>Hirundargus caudicutus</i>	White-throated Needletail	*			
<i>Dacelo novaeguinea</i>	Laughing Kookaburra		*		*
<i>Halycon sancta</i>	Sacred Kingfisher		*		
<i>Malurus cyaneus</i>	Superb Blue Fairy-wren			*	
<i>Malurus lamberti</i>	Variiegated Fairy-wren				
<i>Pardalotus punctata</i>	Spotted Pardalote		*	*	
<i>Pardalotus striatus</i>	Striated Pardalote				
<i>Sericornis frontalis</i>	White-browed Scrub-wren		*	*	
<i>Acanthiza pusilla</i>	Brown Thornbill				
<i>Acanthiza nana</i>	Yellow Thornbill				

<i>Acanthiza lineata</i>	Striated Thornbill	*			
<i>Gerygone mouli</i>	Brown Gerygone				
<i>Manorina melanocephalus</i>	Noisy Miner	*		*	*
<i>Phylidomyris novaehollandiae</i>	New Holland Honeyeater		*	*	*
<i>Phylidornis nigra</i>	White-cheeked Honeyeater				
<i>Lichenostomus penicillatus</i>	White-plumed Honeyeater				
<i>Meliphaga lewinii</i>	Lewins Honeyeater				
<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill		*		*
<i>Acanthochaera carunculata</i>	Red Wattlebird		*	*	*
<i>Acanthochaera lunata</i>	Little Wattlebird				
<i>Philemon corniculatus</i>	Noisy Friarbird				
<i>Eopsaltris australis</i>	Eastern Yellow Robin		*		
<i>Microeca fascians</i>	Jacky Winter		*		
<i>Psophodes olivaceus</i>	Eastern Whipbird				
<i>Falcunculus frontalis</i>	Crested Shrike-tit				
<i>Pachycephala pectoralis</i>	Golden Whistler	*	*		
<i>Pachycephala rufiventris</i>	Rufous Whistler				
<i>Colluricincla harmonica</i>	Grey Shrike-thrush	*			
<i>Rhipidura leucophrys</i>	Willie Wagtail			*	*
<i>Rhipidura fuliginosa</i>	Grey Fantail	*		*	
<i>Rhipidura rufifrons</i>	Rufous Fantail				
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike				
<i>Oriolus sagittatus</i>	Olive-backed Oriole				
<i>Sphecotheres viridis</i>	Fig Bird				
<i>Artamus cyanopterus</i>	Dusky Woodswallow	*			
<i>Cracticus torquatus</i>	Grey Butcherbird		*		
<i>Gymnorhina tibicen</i>	Australian Magpie	*	*	*	*
<i>Strepera graculina</i>	Pied Currawong	*	*	*	*
<i>Corvus coronoides</i>	Australian Raven		*	*	*
<i>Anthus novaeseelandiae</i>	Australian Pipit		*		
<i>Neochima temporalis</i>	Red-browed Firetail		*		
<i>Hirundo neoxema</i>	Welcome Swallow		*		
<i>Hirundo ariel</i>	Fairy Martin				
<i>Cisticola exilis</i>	Golden-headed Cisticola				
<i>Zosterops lateralis familiaris</i>	Silver-eye		*		
<i>Zosterops lateralis lateralis</i>	Tasmanian Silver-eye				

The Buffalo Creek reserves contain a high numbers of exotic birds (Table 16).

**Table 16**  
**Exotic Birds of Buffalo Creek Catchment Reserves**

Species	Common Name	Barton	Pidding	Burrows	Minga
<i>Pycnotus jocosus</i>	Red-whiskered Bulbul		*		
<i>Sturnus vulgaris</i>	Common Starling		*	*	*
<i>Acridotheres tristis</i>	Common Myna	*	*	*	*
<i>Passer domestica</i>	House Sparrow			*	
<i>Lonchura castaneothorax</i>	Chestnut-breasted Mannikin				

<i>Columba livia</i>	Feral Pigeon			*	
<i>Streptopelia chinensis</i>	Spotted Turtle-dove	*		*	*

### Reptiles:

Six lizard species and two snakes were found in the Buffalo Creek reserves (Table 17). The majority of lizards are small, ant-eating species that can hide quickly in short grass or under fallen branches. Larger lizards, such as Water Dragons, were relatively scarce.

**Table 17**  
**Reptile Fauna of Buffalo Creek Catchment Reserves**

Species	Common Name	Barton Reserve	Pidding Park	Burrows Park	Minga Reserve
<i>Lampropholis delicata</i>	Garden Skink	*	*	*	*
<i>Lampropholis guichenoti</i>	Grass Skink	*	*		*
<i>Saproscincus mustelinus</i>	Weasel Skink			*	
<i>Eulamprus quoyii</i>	Eastern Water Skink	*		*	
<i>Physignathus lesueurii</i>	Eastern Water Dragon				
<i>Hemiaspis signata</i>	Black-bellied Marsh Snake			*	

### Frogs:

Three species of frogs were found in the Buffalo Creek reserves (Table 18). The Striped Marsh Frog and Common Eastern Froglet were abundant in the shallow margins of the creek.

**Table 18**  
**Frog Fauna of Buffalo Creek Catchment Reserves**

Species	Common Name	Barton Reserve	Pidding Park	Burrows Park	Minga Reserve
<i>Limnodynastes peronii</i>	Striped Marsh Frog			*	
<i>Crinia signifera</i>	Common Eastern Froglet	*	*	*	
<i>Litoria phyllochroa</i>	Leaf-green Tree Frog			*	

### Fish:

One species of fish, the Plague Minnow *Gambusia holbrooki*, was found in Buffalo Creek. This exotic fish is able to tolerate poor water quality, where many native species cannot.

### Invertebrates:

Darvall Park contained a reasonably high variety of invertebrate animals (Table 18). Insects were the most prolific with 14 major taxa being found. Most of the insects were leaf-eating or sap-sucking insects that exploit the mature eucalypt trees in the park. Spiders, slugs, snails and earthworms are also relatively common in the park.

**Table 19**  
**Invertebrate Fauna of Buffalo Creek Catchment Reserves**

Major Group	Order or Family	Lower Taxon (if possible)	Common Names	Habitats			
Insecta	Collembola		Springtails	Leaf Litter			
	Odonata	Anisoptera	Dragonflies	Creek			
	Plecoptera		Stone Flies	Creek			
	Blattodea		Cockroaches	Leaf Litter			
	Isoptera		Termites	Flying			
	Mantodea		Prayer Mantis	Foliage			
	Dermaptera		Earwigs	Ground			
	Orthoptera		Gryllacridae	Tree Crickets	Foliage		
			Gryllotalpidae	Mole Crickets	Ground		
			Gryllidae	Crickets	Ground		
			Acrididae	Grasshoppers	Ground		
			Gerridae	Water Striders	Creek		
			Hemiptera		Lygaeidae	Ground Bugs	Ground
					Pentatomidae	Stink Bugs	Foliage
					Reduviidae	Assassin Bugs	Foliage
					Cicadidae	Cicadas	Foliage
			Homoptera		Cicadellidae	Leaf Hoppers	Foliage
	Aphididae	Aphids			Stems		
	Coccidea	Scale Bugs			Shrubs		
	Coleoptera		Carabidae	Ground Beetles	Ground		
			Dytiscidae	Diving Beetles	Creek		
			Scarabaeidae	Scarab Beetles	Foliage		
			Elateridae	Click Beetles	Foliage		
			Coccinellidae	Ladybirds	Foliage		
			Cerambycidae	Long-horned Beetles	Dead Trees		
	Lepidoptera		Hesperiidae	Skippers	Flying		
			Papilionidae	Swallowtail Butterflies	Flying		
Danaidae			Milkweed Butterflies	Flying			
Diptera		Sphingidae	Hawk Moths	Flying			
		Geometridae	Geometer Moths	Flying			
		Culicidae	Mosquitos	Creek			
		Tabanidae	March Flies	Flying			
		Assilidae	Robber Flies	Flying			
		Syrphidae	Hover Flies	Flying			
		Muscidae	House Flies	Flying			
		Calliphoridae	Blow Flies	Flying			
		Hymenoptera		Ichneumonidae	Parasitic Wasps	Flying	
				Vespidae	Vespid Wasps	Flying	
Formicidae	Ants			Ground			
Apoidea			Bees	Flying			
Arachnids	Acarina	Lycosidae	Mites, Ticks	Ground			
		Nephilidae	Wolf Spiders	Ground			
Crustacea	Isopoda		Orb-Weavers	Foliage			
			Slaters	Ground			
Chelicerates	Chilopoda		Centipedes	Ground			
Molluscs	Gastropoda		Snails	Ground			
			Slugs	Ground			
Annelida	Oligochaeta		Earthworms	Ground			

### 5.3 Kittys Creek Reserves

#### Mammals:

Like many reserves that are surrounded by houses, rats and mice dominated the ground mammal fauna. No native ground mammals were found, and possums were scarce. Cats and dogs roam the reserves from the nearby houses.

**Table 20**  
**Mammal Fauna of Bushland Reserves Along Kittys Creek**

Species	Common Name	Reserves Detected	How Detected	Comments
Brush-tail Possum	<i>Trichosurus vulpecula</i>	Pryor, Portius, Kittys Creek Reserve	Spotlighting Hair Tubes	Uncommon
Ring-tail Possum	<i>Pseudecheirus peregrinus</i>	Portius	Spotlighting	Uncommon
Black Rat*	<i>Rattus rattus</i>	Pryor, Portius, Kittys Creek Reserve, Martin	Spotlighting Hair Tubes	Very common
Dog*	<i>Canis lupus familiaris</i>	Pryor	Spotlighting	
Cat*	<i>Felis catus</i>	Portius, Kittys Creek Reserve	Spotlighting	Cats observed in reserves during both survey sessions
Grey-headed Flying Fox	<i>Pteropus poliocephalus</i>	Pryor, Portius, Kittys Creek Reserve, Martin	Spotlighting	Regularly sighted flying overhead.
Goulds Wattled Bat	<i>Chalinolobus gouldii</i>	Portius, Kittys Creek Reserve	Anabat	Bats detected in both spring and summer

\* denotes exotic or feral species

#### Birds:

Forty six species of day birds and one species of night birds were found in the reserves along Kittys Creek (Table 21). The low numbers of birds found reflects the narrowness of the reserves and the large impacts that the houses and pets animals have on the reserve. Some reserves, especially Portius Reserve, still retain relatively intact vegetation communities and continuous tree canopies, but the understorey and ground cover is too easily hunted through by feral predators.

**Table 21**  
**Bird Fauna of Kittys Creek Catchment Reserves**

Species	Common Name	Pryor	Portius	Kittys Ck Reserve	Martin
<i>Anas supercilliosis</i>	Pacific Black Duck				
<i>Anas castanea</i>	Chestnut-breasted Teal				
<i>Egretta alba</i>	Great Egret				*

<i>Ardea novaehollandiae</i>	White-faced Heron				
<i>Threskiornis aethiopica</i>	White Ibis				
<i>Grallina cyanoleuca</i>	Magpie-lark	*	*		*
<i>Anhinga melanogaster</i>	Darter				*
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant				
<i>Phalacrocorax varius</i>	Pied Cormorant				*
<i>Phalacrocorax melanoleucos</i>	Little Pied Cormorant				*
<i>Pelecanus conspicillatus</i>	Australian Pelican				*
<i>Elanus notatus</i>	Black-shouldered Kite				
<i>Falco longipennis</i>	Australian Hobby				*
<i>Falco cenchuroides</i>	Nankeen Kestrel				
<i>Accipiter fasciatus</i>	Brown Goshawk				
<i>Accipiter cirrocephalus</i>	Collared Sparrowhawk				
<i>Aviceda subcristata</i>	Pacific Baza				
<i>Gallinula tenebrosa</i>	Dusky Moorhen				
<i>Vanellus miles</i>	Masked Lapwing				
<i>Larus novaehollandiae</i>	Silver Gull				*
<i>Macropygia amboinensis</i>	Brown Cuckoo-dove				
<i>Ocyphaps lophotes</i>	Crested Pigeon	*	*	*	
<i>Cacatua roseicapilla</i>	Galah	*	*	*	*
<i>Cacatua sanguine</i>	Little Corella		*	*	*
<i>Cacatua tenuirostris</i>	Long-billed Corella				*
<i>Calyptorhynchus funereus</i>	Yellow-tailed Black Cockatoo				
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo		*	*	*
<i>Platycercus eximia</i>	Eastern Rosella	*	*	*	
<i>Platycercus elegans</i>	Crimson Rosella	*	*		
<i>Trichoglossus haematodus</i>	Rainbow Lorikeet	*	*	*	*
<i>Alisterus scapularis</i>	Australian King Parrot				
<i>Chrysococcyx basalis</i>	Horsfield Bronze Cuckoo				
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo	*	*	*	
<i>Cuculus pallidus</i>	Pallid Cuckoo				
<i>Chrysococcyx lucidus</i>	Shining Bronze Cuckoo				
<i>Eudynamis scolopacea</i>	Koel	*	*	*	
<i>Scythrops novaehollandiae</i>	Channel-billed Cuckoo	*		*	
<i>Ninox novaeseelandiae</i>	Southern Boobook Owl				
<i>Ninox strenua</i>	Powerful Owl				
<i>Podargus strigoides</i>	Tawny Frogmouth		*		
<i>Aegotheles cristatus</i>	Australian Owlet-nightjar				
<i>Hirundargus caudicutus</i>	White-throated Needletail				*
<i>Dacelo novaeguinea</i>	Laughing Kookaburra	*	*	*	
<i>Halycon sancta</i>	Sacred Kingfisher		*		*
<i>Cormobates leucophaeus</i>	White-throated Tree-creeper				*
<i>Malurus cyaneus</i>	Superb Blue Fairy-wren			*	
<i>Malurus lamberti</i>	Variiegated Fairy-wren				
<i>Pardalotus punctata</i>	Spotted Pardalote			*	
<i>Pardalotus striatus</i>	Striated Pardalote				
<i>Sericornis frontalis</i>	White-browed Scrub-wren				
<i>Acanthiza pusilla</i>	Brown Thornbill		*		

<i>Acanthiza nana</i>	Yellow Thornbill				*
<i>Acanthiza lineata</i>	Striated Thornbill				
<i>Gerygone mouliki</i>	Brown Gerygone				
<i>Manorina melanocephalus</i>	Noisy Miner	*	*	*	*
<i>Phylidomyris novaehollandiae</i>	New Holland Honeyeater	*	*	*	*
<i>Phylidornis nigra</i>	White-cheeked Honeyeater				
<i>Lichenostomus penicillatus</i>	White-plumed Honeyeater	*	*		
<i>Lichenostomus chrysops</i>	Yellow-faced Honeyeater				*
<i>Meliphaga lewinii</i>	Lewins Honeyeater				
<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill		*	*	
<i>Acanthochaera carunculata</i>	Red Wattlebird	*	*	*	*
<i>Acanthochaera lunata</i>	Little Wattlebird				
<i>Philemon corniculatus</i>	Noisy Friarbird				
<i>Eopsaltris australis</i>	Eastern Yellow Robin				
<i>Microeca fascians</i>	Jacky Winter		*		
<i>Psophodes olivaceus</i>	Eastern Whipbird				
<i>Falcunculus frontalis</i>	Crested Shrike-tit				
<i>Pachycephala pectoralis</i>	Golden Whistler				
<i>Pachycephala rufiventris</i>	Rufous Whistler		*		
<i>Colluricincla harmonica</i>	Grey Shrike-thrush				
<i>Rhipidura leucophrys</i>	Willie Wagtail	*	*	*	
<i>Rhipidura fuliginosa</i>	Grey Fantail		*	*	
<i>Rhipidura rufifrons</i>	Rufous Fantail		*		
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike	*	*	*	*
<i>Oriolus sagittatus</i>	Olive-backed Oriole				*
<i>Sphecotheres viridis</i>	Fig Bird				
<i>Artamus cyanopterus</i>	Dusky Woodswallow				
<i>Cracticus torquatus</i>	Grey Butcherbird	*	*		*
<i>Gymnorhina tibicen</i>	Australian Magpie	*	*	*	
<i>Strepera graculina</i>	Pied Currawong	*	*	*	*
<i>Corvus coronoides</i>	Australian Raven		*		*
<i>Anthus novaeseelandiae</i>	Australian Pipit				
<i>Neochima temporalis</i>	Red-browed Firetail				
<i>Hirundo neoxema</i>	Welcome Swallow	*	*	*	*
<i>Hirundo ariel</i>	Fairy Martin				
<i>Cisticola exilis</i>	Golden-headed Cisticola				
<i>Zosterops lateralis familiaris</i>	Silver-eye		*		
<i>Zosterops lateralis lateralis</i>	Tasmanian Silver-eye				

The Kittys Creek catchment reserves contained relatively low numbers of exotic birds (Table 22). This is probably due to the relatively undisturbed nature of the canopy and the presence of mature trees.

**Table 22**  
**Exotic Birds of Kittys Creek Catchment Reserves**

Species	Common Name	Pryor	Portius	Kittys Ck Reserve	Martin
<i>Pycnotus jocosus</i>	Red-whiskered Bulbul		*		
<i>Sturnus vulgaris</i>	Common Starling				*
<i>Acridotheres tristis</i>	Common Myna				*
<i>Passer domestica</i>	House Sparrow				
<i>Lonchura castaneothorax</i>	Chestnut-breasted Mannikin				
<i>Columba livia</i>	Feral Pigeon		*	*	*
<i>Streptopelia chinensis</i>	Spotted Turtle-dove	*	*		

**Reptiles:**

Seven lizard species and one snake were found in the Kittys Creek reserves (Table 23). Many of the lizards were utilising the bushland edges where they were able to locate insect prey easily.

**Table 23**  
**Reptile Fauna of Kittys Creek Catchment Reserves**

Species	Common Name	Pryor Park	Portius Park	Kittys Creek Reserve	Martin Reserve
<i>Lampropholis delicata</i>	Garden Skink	*		*	*
<i>Lampropholis guichenoti</i>	Grass Skink	*	*	*	
<i>Eulamprus quoyii</i>	Eastern Water Skink	*	*	*	
<i>Eulamprus tenuis</i>	Bar-sided Skink				
<i>Cryptoblepharus virgata</i>	Wall Skink			*	*
<i>Physignathus lesueurii</i>	Eastern Water Dragon		*		
<i>Phyllurus platurus</i>	Southern Leaf-tailed Gecko		*		
<i>Hemiaspis signata</i>	Black-bellied Marsh Snake		*		

**Frogs:**

Three species of frogs were found in the Kittys Creek reserves (Table 24). None of the frogs were abundant.

**Table 24**  
**Frog Fauna of Kittys Creek Catchment Reserves**

Species	Common Name	Pryor Park	Portius Park	Kittys Creek Reserve	Martin Reserve
<i>Limnodynastes peronii</i>	Striped Marsh Frog	*	*	*	
<i>Crinia signifera</i>	Common Eastern Froglet	*	*	*	*
<i>Litoria phyllochroa</i>	Leaf-green Tree Frog		*		

**Fish:**

Striped Gudgeon *Gobiomorphius australis* were found in Kittys Creek in the Kittys Creek Reserve. *Gambusia* was also present.

**Invertebrates:**

A surprisingly wide variety of invertebrates were found in the reserves along Kittys Creek (Table 25). Insects typically dominated the invertebrates present with 15 major taxa of insects being found. Most of the insects were leaf-eating or sap-sucking insects exploiting the young tree growth in the park. Spiders, snails, centipedes and slaters were also conspicuous throughout the reserves.

**Table 25  
Invertebrate Fauna of Kittys Creek Catchment Reserves**

Major Group	Order or Family	Lower Taxon (if possible)	Common Names	Habitats	
Insecta	Collembola		Springtails	Leaf Litter	
	Ephemeroptera		May Flies	Creek	
	Odonata	Zygoptera	Damselflies	Creek	
		Anisoptera	Dragonflies	Creek	
		Blattodea		Cockroaches	Leaf Litter
		Isoptera		Termites	Flying
		Mantodea		Prayer Mantis	Foliage
		Dermaptera		Earwigs	Ground
		Orthoptera		Tree Crickets	Foliage
			Gryllacridae	Katyids	Foliage
			Tettigoniidae	Mole Crickets	Ground
			Gryllotalpidae	Crickets	Ground
			Gryllidae	Grasshoppers	Ground
		Hemiptera	Acrididae	Backswimmers	Creek
			Notonectidae	Water Striders	Creek
			Gerridae	Ground Bugs	Ground
			Lygaeidae	Stink Bugs	Foliage
			Pentatomidae	Assassin Bugs	Foliage
		Homoptera	Reduviidae	Cicadas	Foliage
			Cicadidae	Leaf Hoppers	Foliage
			Cicadellidae	Aphids	Stems
			Aphididae	Scale Bugs	Shrubs
		Coleoptera	Coccidea	Tiger Beetles	Ground
			Cincindelidae	Ground Beetles	Ground
			Carabidae	Diving Beetles	Creek
			Dytiscidae	Rove Beetles	Ground
			Staphlinidae	Scarab Beetles	Foliage
			Scarabaeidae	Jewel Beetles	Foliage
			Buprestidae	Click Beetles	Foliage
			Elateridae	Labybirds	Foliage
			Coccinellidae	Long-horned Beetles	Dead Trees
			Cerambycidae	Leaf Blisters	
				Skippers	Foliage
		Lepidoptera	Chrysomelidae	Swallowtail Butterflies	Flying
			Hesperidae	Milkweed Butterflies	Flying
			Papilionidae	Ant Blue Butterflies	
				Hawk Moths	Flying
			Danaidae	Tiger Moths	
				Clearwing Moths	Flying
			Lycaenidae	Geometer Moths	
				Crane Flies	Flying
			Sphingigae	Mosquitos	Flying
			Arctidae	March Flies	Flying
			Sesiidae	Robber Flies	Flying
		Diptera	Geometridae	Hover Flies	Creek
		Tipulidae	House Flies	Creek	
		Culicidae	Blow Flies	Flying	
		Tabanidae	Parasitic Wasps	Flying	
		Assilidae	Vespid Wasps	Flying	
		Syrphidae	Sphecid Wasps	Flying	
		Muscidae	Ants	Flying	
	Hymenoptera	Calliphoridae	Bees	Flying	
		Ichneumonidae	Lace Wings	Flying	
		Vespidae		Flying	
		Sphecidae		Ground	

	Neuroptera	Formicidae Apoidea		Flying Flying
Arachnids	Acarina	Tetragnathidae	Mites, Ticks Long-jawed Spiders Wolf Spiders	Ground Foliage
		Lycosidae Nephilidae	Orb-Weavers	Ground Foliage
Chelicerates	Chilopoda Myriopoda		Centipedes Millipedes	Ground Ground
Crustacea	Isopoda		Slaters	Ground
Molluscs	Gastropoda		Snails Slugs	Ground Ground
Annelida	Oligochaeta Hirunidae		Earthworms Leeches	Ground Foliage

## 5.4 Memorial Park

### Mammals:

The only native mammals found were Brush-tailed Possums and bats (Table 26). The disturbance to the bushland and the isolation of Memorial Park from other bushland areas has prevented recolonisation of the site by native animals from elsewhere.

**Table 26**  
**Mammal Fauna of Memorial Park**

<b>Species</b>	<b>Common Name</b>	<b>How Detected</b>	<b>Comments</b>
Brush-tail Possum	<i>Trichosurus vulpecula</i>	Spotlighting Hair Tubes	Relatively common
Black Rat	<i>Rattus rattus</i>	Spotlighting Hair Tubes	Very common
Dog	<i>Canis lupus familiaris</i>	Spotlighting	
Cat	<i>Felis catus</i>	Spotlighting	Cats were observed in the reserves during both survey sessions
Grey-headed Flying Fox	<i>Pteropus poliocephalus</i>	Spotlighting	Regularly sighted flying overhead

### Birds:

Thirty seven species of day birds and no night birds were found in Memorial Park (Table 27). The birds comprised a mixture of medium sized canopy birds and shorebirds.

**Table 27**  
**Bird Fauna of Memorial Park**

Species	Common Name
<i>Anas superciliosus</i>	Pacific Black Duck
<i>Anas castanea</i>	Chestnut-breasted Teal
<i>Egretta alba</i>	Great Egret
<i>Ardea novaehollandiae</i>	White-faced Heron
<i>Threskiornis aethiopica</i>	White Ibis
<i>Grallina cyanoleuca</i>	Magpie-lark
<i>Anhinga melanogaster</i>	Darter
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant
<i>Phalacrocorax varius</i>	Pied Cormorant
<i>Phalacrocorax melanoleucos</i>	Little Pied Cormorant
<i>Pelecanus conspicillatus</i>	Australian Pelican
<i>Vanellus miles</i>	Masked Lapwing
<i>Larus novaehollandiae</i>	Silver Gull
<i>Ocyphaps lophotes</i>	Crested Pigeon
<i>Cacatua roseicapilla</i>	Galah
<i>Calyptorhynchus funereus</i>	Yellow-tailed Black Cockatoo
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo
<i>Platycercus eximia</i>	Eastern Rosella
<i>Trichoglossus haematodus</i>	Rainbow Lorikeet
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo
<i>Eudynamis scolopacea</i>	Koel
<i>Scythrops novaehollandiae</i>	Channel-billed Cuckoo
<i>Podargus strigoides</i>	Tawny Frogmouth
<i>Dacelo novaeguinea</i>	Laughing Kookaburra
<i>Manorina melanocephalus</i>	Noisy Miner
<i>Phylidomyris novaehollandiae</i>	New Holland Honeyeater
<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill
<i>Acanthochaera carunculata</i>	Red Wattlebird
<i>Rhipidura leucophrys</i>	Willie Wagtail
<i>Rhipidura fuliginosa</i>	Grey Fantail
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike
<i>Oriolus sagittatus</i>	Olive-backed Oriole
<i>Cracticus torquatus</i>	Grey Butcherbird
<i>Gymnorhina tibicen</i>	Australian Magpie
<i>Strepera graculina</i>	Pied Currawong
<i>Corvus coronoides</i>	Australian Raven
<i>Hirundo neoxema</i>	Welcome Swallow

Memorial Park contained four species of exotic birds (Table 28).

**Table 28**  
**Exotic Birds of Memorial Park**

Species	Common Name
<i>Sturnus vulgaris</i>	Common Starling
<i>Acridotheres tristis</i>	Common Myna
<i>Columba livia</i>	Feral Pigeon
<i>Streptopelia chinensis</i>	Spotted Turtle-dove

Reptiles:

Only two lizard species were found in Memorial Park (Table 29).

**Table 29**  
**Reptile Fauna of Memorial Park**

Species	Common Name	Memorial Park
<i>Lampropholis delicata</i>	Garden Skink	*
<i>Eulamprus quoyii</i>	Eastern Water Skink	*

Frogs:

No frogs were detected at Memorial Park.

Fish:

No freshwater fish are present at Memorial Park.

Invertebrates:

Memorial Park had the least diverse group of invertebrates in the reserves surveyed. Insects dominated with 9 major taxa being present. Also common in the park were slaters, snails, slugs, earthworms, centipedes and spiders.

**Table 25**  
**Invertebrate Fauna of Memorial Park**

Major Group	Order or Family	Lower Taxon (if possible)	Common Names	Habitats		
Insecta	Odonata		Dragonflies	Creek		
	Blattodea		Cockroaches	Leaf Litter		
	Mantodea		Prayer Mantis	Foliage		
	Orthoptera			Tree Crickets	Foliage	
				Mole Crickets	Ground	
				Crickets	Ground	
	Hemiptera			Grasshoppers	Ground	
			Acrididae	Ground Bugs	Ground	
			Lygaeidae	Stink Bugs	Foliage	
			Pentatomidae	Cicadas	Foliage	
	Coleoptera		Cicadidae	Weevils	Foliage	
			Cerambycidae	Scarab Beetles	StemsShrubs	
			Scarabaeidae	Click Beetles	Shrubs	
			Elateridae	Labybirds	Foliage	
			Coccinellidae	Long-horned Beetles	Dead Trees	
		Lepidoptera		Cerambycidae	Beetles	
				Papillionidae	Swallowtail Butterflies	Flying
			Danaidae	Milkweed Butterflies	Flying	
			Lycaenidae	Ant Blue Butterflies	Flying	
	Diptera		Culicidae	Mosquitos	Flying	
			Tabanidae	March Flies	Flying	
			Syrphidae	Hover Flies	Flying	
			Muscidae	House Flies	Flying	
			Calliphoridae	Blow Flies	Flying	
			Ichneumonidae	Parasitic Wasps	Flying	
			Vespidae	Vespid Wasps	Flying	
Hymenoptera			Formicidae	Ants	Ground	
		Apoidea	Bees	Flying		

Arachnids	Acarina	Lycosidae Nephilidae	Mites, Ticks Wolf Spiders Orb-Weavers	Ground Ground Foliage
Chelicerates	Chilopoda Myriopoda		Centipedes Millipedes	Ground Ground
Molluscs	Gastropoda		Snails Slugs	Ground Ground
Annelida	Oligochaeta		Earthworms	Ground

### 5.5 Comparison of the Autumn and Spring Survey Results

The detection rate of species increased in the spring survey period, particularly for birds as a number of summer migrants are detected in the reserves. All reserves showed an increase in species detected in the spring (Table 30). Bats and some reptiles were conspicuously absent in the autumn survey.

**Table 30**  
Comparison of Species Numbers in Autumn and Spring Surveys

Group	Terrys Creek Reserves		Buffalo Creek Reserves		Kittys Creek Reserves		Memorial Park	
	Autumn	Spring	Autumn	Spring	Autumn	Spring	Autumn	Spring
Arboreal Mammals	2	3	2	2	1	2	1	1
Terrestrial Mammals*	3	5	2	6	1	3	2	3
Bats	1	4	3	4	1	2	1	1
Day Birds	56	69	30	40	28	45	31	33
Night Birds	2	3	1	1	0	1	0	0
Skinks	6	7	4	6	3	5	3	3
Geckoes	1	1	0	0	0	1	0	0
Dragons	1	1	1	1	0	0	0	0
Turtles	0	0	0	0	0	0	0	0
Snakes	0	2	1	1	0	1	0	0
Frogs	3	5	2	3	2	3	0	0
Fish	1	3	2	2	0	1	0	0

\* Note: the Echidna sighting in the Field of Mars reserve has not been included in this table of results.

### 5.6 Threatened Animal Species

One animal species listed under the Threatened Species Conservation Act 1995 were detected during the study; namely:

Powerful Owl *Ninox strenua*

Powerful Owls were found in Pembroke Park and Lucknow Park. There was no indication of a permanent roosting site in either of these parks.

## 6.0 Issues and General Recommendations

Many of these conservation issues were identified in the 2006 Flora and Fauna Study (Biosphere). As these issues equally apply to the reserves studied in 2007, it is worth reiterating these points.

### 6.1 Conserving Biodiversity through Conserving Habitats

The bushland reserves of the Ryde LGA serve a dual role; they provide green enclaves that break up an otherwise continuous urban landscape, and they provide a conservation area for remnant flora and fauna. If conservation is a prime aim of these reserves, what should they be conserving?

There are two main arguments to consider, are the bushland reserves conserving the original flora and fauna (i.e. are they historical reminders of how the area was before European settlement), or are they an attempt to conserve as many native species as possible? Conserving existing habitats is easier to do but is often unsatisfying because so few habitats are represented. For example, in Ryde, most reserves are based around sandstone slopes that were unsuitable for residential development. Thus, Turpentine Ironbark Woodland is the major habitat present in many reserves. Many habitats are not present as sandstone gullies, plains or headlands were not conserved by this approach. In addition, creeks and waterways have been badly impacted by untreated road runoff and polluted stormwater loads.

Trying to conserve the maximum number of species is a fine ideal but it is also fraught with hazards. The amount of land available for conservation purposes is limited. If a reserve is to be altered to create a new habitat, the existing habitat will be lost (and not replaced elsewhere). The decision about which species to conserve is also a difficult decision as the conservation of one is often done at the expense of another.

Often these decisions are made on purely pragmatic grounds. It is often easier and cheaper to conserve existing habitat. The creation of specific habitats does not guarantee that the target species will survive as often we are not aware of all of the habitat requirements for each species.

The vegetation communities that are contained within the four Ryde reserves are listed in Table 5.

Usually, if new habitats are created, they are created in areas of bushland that have become so badly degraded that they no longer represent the original habitat. If habitats are to be recreated in Ryde, the habitats that could be recreated are:

- \* mid-canopy shrublands
- \* ephemeral freshwater habitats

None of these habitats are alien to the Ryde area, and some would require the procurement of seed stock from nearby bushland areas as parent plants no longer exist in the Ryde LGA.

Finally, with so much information now available about the flora and fauna of the bushland reserves, a structure needs to be developed so that this information can be overviewed and a co-ordinated response achieved. Ryde City Council already has a "Parks on Track" Plan for its reserves and the new information needs to be assimilated so that planning decisions can be made with all of the available information at hand.

## **6.2 Improving the Habitat Value of Existing Reserves**

The existing bushland reserves suffer from a loss of terrestrial fauna. In many cases this is due to predation by foxes, cats, dogs, black rats or native birds. The bushland reserves that are established along watercourses tend to be long and narrow, making them even more prone to feral animal entry. Predation has taken a heavy toll because there is a lack of shelter sites in the reserves. Dead trees, fallen logs and branches and rocks usually provide the best shelter habitat along with understorey plants. In many reserves the understorey is still present (albeit not completely intact) but there is a shortage of logs and fallen timber. In other instances they have been removed because they look messy or block tracks. Dead trees are only felled where they are considered a danger to walkers close to tracks and private property.

The lack of ground shelter is a major impediment for the survival of many native terrestrial species. This situation does not prevent the use of artificial shelters for terrestrial animals. Although this is not a widely accepted practice, animal shelters in trees have been used for parrots and possums. These tree shelters replace the dead tree hollows that are lost from reserve habitats.

## **6.3 Connectivity of Bushland Areas**

As the residential areas in Ryde were developed, bushland pockets became smaller and more isolated. The isolation of bushland area makes them even more susceptible to urban impacts and biota loss. An aim in the conservation of remnant bushland area should be to try to increase the connectivity of these sites.

Some of the bushland reserves e.g Memorial Park, are totally isolated from other bushland areas. This isolation diminishes the survival prospects of various animals and limits the capacity of migratory species to use the reserves while moving across Sydney. To create corridors between reserves will require the creation of suitable habitat outside of the reserves. There appears to be two ways that this can be done:

1. *Sympathetic street planting.* Instead of using ornamental or totally decorative street trees, trees that provide habitat value (either as dense canopy, food or nesting sites) should be utilised. As most of the reserves contain woodland, the types of tree that would serve this purpose include Turpentine *Syncarpia glomulifera*,

Sydney Red Apple *Angophora costata*, Grey Gum *Eucalyptus punctata* and Scribbly Gum *E. haemastoma*.

2. *Sympathetic backyard planting*. Residents who live in areas between reserves could be encouraged by Council to plant suitable trees and shrubs to assist with the creation of green corridors between reserves. Council could provide the seedlings for these residents or offer some other incentive for residents who actively convert their backyard flora into sympathetic habitat.

In each of these examples, the seedlings should come from seeds collected from local plants.

## 6.4 Bush Regeneration

Ryde Council has undertaken an active bush regeneration program in the LGA and the positive impact of this work is obvious in a number of reserves. Bush regeneration is preferred to replanting in areas where there is sufficient seed bank to allow the locally endemic plants to grow and develop under the prevailing conditions. Plant communities that establish by themselves, after the removal of weeds and introduced plants, are more capable of surviving in the long term than deliberately planted species. The disadvantage of bush regeneration practices is that it is a slow and time-consuming process. The gradual replacement of unwanted plants by native species is a sequential process and the results of this change are not immediately obvious.

With all bush regeneration work, the impact of weed removal on the existing flora cannot be understated. Weed removal (and the associated disturbance to soil, leaf litter and plant roots) causes some stress in the bushland. For this reason, and to allow for the development and strengthening of native plants in areas previously touched by bush regeneration, bush regeneration should be staggered and only affect relatively small areas at a time.

These principles require that Council has a plan of what areas are to be regenerated, how long they should be left to recover and what follow-up works are likely to be required. Bush regeneration teams therefore need to be constantly moving between and within reserves and not focus on only a few reserves to be most effective.

The only time that clearing of a site should occur is when the weed density is so great that native plants have no opportunity to recover. In these instances, site clearing should be partial and not absolute. Many native animals are forced to use weeds as alternate shelter areas when the native equivalent is absent. The removal of large areas of weeds can easily dislocate the fauna within.

## 6.5 Controlled Re-planting

As indicated above replanting is not the preferred option in bush regeneration but there are times when it is necessary. This approach has been adopted by necessity at Brush Farm Park and the results of the replanting there have been spectacular. In

general, however, replanting should be considered only when native plants cannot naturally re-establish themselves. Replanting is most often used:

- i) to quickly cover an area that is bare or has been cleared
- ii) to create a buffer zone around bushland areas
- iii) to create habitats that have been lost from an area
- iv) to replace non-breeding or diseased endemic plants (through seed collection and propagation)

The use of controlled planting to create buffer zones will be discussed below (in 6.6) while their use in creating habitats will be discussed in 6.7.

## **6.6 Buffer Planting to Combat Edge Effects**

One of the problems that all bushland reserves suffer from is “edge effect”. This term describes a variety of impacts that are experienced by bushland that is in contact with non-bushland areas. In Ryde, this usually means contact with residential areas, streets and recreational parkland. The bushland areas that follow creek catchments are more susceptible to edge effect because of their narrowness.

The plants along the boundary of reserves are subject to much more physical damage and changes than the plants deeper in the reserve. Damage is caused by greater exposure to strong winds, sun and rain, and by regular contact with walkers who accidentally knock leaves and small branches or deliberately break off projecting shoots or stems. In addition, the fringes of reserves are constantly bombarded with exotic seeds (borne by wind or storm water) and are further assaulted by mowing and slashing of regrowth. Garden wastes and rubbish is also deposited along the edges of the reserves. The combined effects of these pressures are to eliminate the more sensitive native plants and create gaps in the vegetation (that are later exploited by fast-growing weeds).

Disturbance to the plants along the edges of reserves is a problem that will not end. Ideally, bushland reserves need to be shielded from these impacts by a wall of more resilient, native plants that can tolerate greater physical damage and exposure. Such plants can create a buffer between the natural bushland and the urban interface. Buffer plants must be hardy, native, non-invasive and easy to maintain. In short, they must not have the potential to become a pest in themselves.

Many of the bushland reserves in Ryde contain woodland with an open understorey. The wide spacing of the ground plants makes it easy for weeds to become established and to eventually become the dominant ground cover. A buffer comprising tall, dense shrubs and other understorey plants that are locally endemic to the area would greatly reduce the seed load entering the reserves and block off areas containing sensitive plants.

## **6.7 Creating Habitats**

Open and semi-closed woodlands were a feature of the Ryde landscape (Howell and Benson, 2000). While these woodlands were widespread in the area in pre-European

time, they were not the only habitats present. A number of habitats are missing and their absence is reflected by the absence of particular groups of native birds. The two prime habitats that are not represented in bushland reserves are:

- tall heath (21 g; Benson and Howell 1994)
- native grasslands (21 a; Benson and Howell 1994)

These two habitats could be restored in Ryde. Tall heath could be established along the top side of Pembroke Park, but this would mean reducing the area of mowed grass behind the residences nearby.

In general, low scale planting of insect-attracting plants in the buffer area of each reserve would help boost the biomass of insects in the reserves.

## **6.8 Feral Species Control**

A conspicuous component of the fauna of Ryde that is missing are the native terrestrial mammals. Bandicoots appear to be completely absent while native rodents are reduced to only a small area of Field of Mars Reserve. With their absence, the introduced Black Rat and House Mouse numbers have expanded to become the dominant terrestrial mammals. The main reason for the demise of native ground-dwelling mammals appears to be past heavy predation by foxes, cats and dogs. More recent fox-baiting work has reduced the number of predators in specific reserves but the native ground mammals have not recovered. Foxes will never be eradicated from the bushland reserves but their numbers can be culled.

## **6.9 Control of Domestic Animals in Reserves**

Cats and dogs are a problem in bushland reserves. Cats are a particular problem at night as they are able to hunt birds and mammals under cover of darkness. Many of the cats seen in the reserves at night appear to be domestic cats. Residents who live close to bushland reserves must be encouraged to keep cats inside at night.

Dogs are also a problem. Dogs roaming throughout bushland areas disturb a lot of wildlife and their constant presence in the reserves is sufficient to cause native animals to abandon the reserves. Dogs also kill some animals; more dead Blue-tongue lizards were seen than live Blue-tongue lizards during this survey. Almost all of the Blue-tongue lizards had been mauled by dogs and left to die. Possums were also found that had been savaged.

Some bushland reserves should be no-domestic animal reserves (like the Field of Mars Reserve). People do take their dogs for walks through bushland reserves, and this generally does little damage if the dogs stay to the tracks. Unfortunately, some dog owners do not control their dogs and the dogs are allowed to venture into the bush, out of their owner's sight.

A scheme whereby dog-owners can take dogs into reserves needs to be prepared and advertised to residents. Some bushland reserves and parts of reserves should be

excluded. These areas include places where dogs (controlled or uncontrolled) will cause fauna dislocation. The areas where dogs should be excluded include:

- i) All of Pembroke and Lucknow Parks
- ii) All of Portius and Kittys Creek Reserve
- iii) All of the bushland areas in Burrows Park
- iv) All of the bushland areas in Pidding Park

## **6.10 Compost Heaps as Habitats**

Human-made habitats sometimes prove to be successful for animal use. While doing this survey, it became clear that one human-made habitat that was used regularly by reptiles were the compost heaps (covered by black plastic sheeting) that were left by bush regeneration teams. The green waste in the mounds would normally be taken away and disposed of. However, the mounds were serving a very useful purpose of their own.

Instead of removing the green wastes, it may be more beneficial to ensure that there are always a few compost mounds in each reserve, particularly over winter. These mounds should not be placed in public areas as they may encourage the dumping of garden wastes as well, including weed propagules. The mounds produce their own internal heat and are easily accessed by ground animals.

## **6.11 Street Lighting**

As many of the bushland animals are nocturnal species, street lighting can be a problem. For creatures such as Ring-tail Possums and owls, light pollution can force these animals out of reserves. Indeed, most nocturnal animals avoid street lit areas, the only exception being Tawny Frogmouths which have learned to sit above street lights and be concealed in the shadow while waiting for moths to be drawn towards the light.

Street lighting does not need to be aimed into reserves. Shielding on the back of street lights greatly reduces the amount of light entering bushland area. Where pathways cross reserves, lighting should be directed downwards to minimise the light penetration into the rest of the reserve. Lights may also be brought lower to the ground, rather than being high above the ground.

Residences that back onto bushland areas do not need to have back yard spot lights pointing into the reserves. A single back yard spotlight can dislocate fauna for 50 metres either side of the light source. If spotlights are required, these need to be directed into the target area and not across a large area nearby. Council may need to inform residents of this requirement.

## **6.12 Stormwater Overflow Areas**

Many stormwater systems overflow into bushland reserves; the bushland reserves along Terrys Creek, Kittys Creek and Buffalo Creek exist because of the stormwater discharge function of these watercourses. Often the discharge from these systems is short-lived but dynamic. To reduce the erosional effects of these rapid discharges of stormwater, concrete troughs and basins have been created to disrupt the energy of the water. These structures could easily be modified to also provide frog habitat.

A concrete basin, off-centre to the main flow, would cater for the more generalist frog species. After heavy rain, the basin would fill and retain water for many weeks. If the ponds are capable of holding water for longer periods, a community of plants and animals will become established and reduce mosquito breeding. Fringing plants need to be established around the ponds to help frogs avoid predators. The ponds would also serve as drinking stations for other native species.

## **6.13 Fallen Timber and Dead Trees**

A concern in urban bushland is that of fire. For this reason, fallen timber and dead trees are often removed from bushland areas. This practice deprives many animal species of a place to live and may explain the lack of some hollow-nesting species in the Ryde LGA.

Fallen timber could still be removed from around the edges of reserves but not taken out of the reserve. Instead, they could be used to create timber stacks or wood rows in areas where they do not constitute a fire hazard.

## **6.14 Community Care of Bushland Areas – Public Education Campaign**

The health and longevity of bushland reserves is often dependent on community interest. Without it, Council money will be redirected to other purposes. Accordingly, low-level education campaigns need to be maintained to make residents aware of the conservation value of the bushland (and how it increases the retail value of their own land). Local conservation groups need to be encouraged to work with Council in protecting bushland areas. Community awareness programs need to be developed.

## **6.15 Monitoring the Use of Reserves**

It is difficult to get information about the level of use of each reserve. This information would be useful as it will provide a quantitative measure for assessing the resilience of bushland areas. Such information will become increasingly important as the population density of Ryde increases in the future. A census of the public use of reserves would consist of monitoring pedestrian traffic across bushland tracks, and the

use of rest and picnic areas. Knowledge of the level of visitation of reserves will help planners rationalise the use of these public lands.

The 2006 and 2007 Ryde Flora and Fauna Studies have provided a snap-shot look at the state of the fauna in the LGA. It is likely that the fauna will change as years go by, and the changes may not be predictable. However, this study has provided a set of base figures against which subsequent fauna studies may be based. As the methods used in this study are repeatable, any changes in the fauna detected by future studies should reflect real changes in the biota and not merely sampling bias in the survey.

The flora and fauna survey should be repeated in five years time. The follow-up survey may need to be brought forward if there are believed to be significant changes to the fauna (e.g. as a result of bush fires or other impacts).

## 7.0 Specific Recommendations

### 7.1 Reclassification of Vegetation Communities

It is recommended to reclassify the following vegetation communities:

- Forrester Park, Forsyth Park, Burrows Park, upper Strangers Creek in the Field of Mars Reserve and parts of Pidding Park reclassified as Turpentine Ironbark Margin Forest ecological communities.
- The *Pimelia curviflora* ssp *curviflora* area in the Field of Mars Reserve contains Shale Sandstone Transition Woodland.
- The mid-slopes of Pembroke Park, Lucknow Park, Minga Park and Barton Park contain Western Sydney Gully Forest (albeit disturbed in the latter reserves).

### 7.2 Vulnerable Native Species

Recommendations to alleviate threats to native plants are contained in documents produced and available on the internet by the DECC. There were three listed plants observed: *Melaleuca deanei* in Somerset Park, *Pimelea curviflora* ssp *curviflora*, and *Epacris purpurascens* var *purpurascens* in both the Field of Mars Reserve and in Pembroke Park. Generally, these recommendations include: document and record plant locations, protect the habitat from physical disturbance, inappropriate fire regimes, fragmentation of the community, and weed encroachment.

### 7.3 Protection of Bushland Areas

#### 7.3.1 Parramatta River Catchment

##### Memorial Park, West Ryde

- Maintain as a River Flat Eucalyptus vegetation community and if further plantings are undertaken in areas where natural regeneration is not expected, then only plants sourced from that community should be planted.
- Control the Class 3 weeds Cape Broom and Bitou Bush and the Class 4 weed *Lantana camara*.

#### 7.3.2 Terrys Creek Catchment

##### Ivanhoe Park

- Since previous pile burns have been so successful conduct a small-scale burn to remove dead wood and further stimulate the soil seed bank.
- Encourage residents to form a Bushcare group.
- Council should take responsibility to clear and plant the fill slope at the northern end since this area will be extremely unstable.

### **Forrester / Forsyth Parks**

- Reclassify and maintain these parks as Turpentine Ironbark Forest vegetation communities and continue the bush regeneration work that is successfully restoring the community.
- When primary and follow-up bush regeneration resources for Forsyth Park are available, strive to protect the Water Gums, Coachwoods and *Podocarpus* plants along the creek by removing several metres of privet surrounding the natives, gradually enlarging the core areas while protecting animal habitat.

### **Pembroke Park**

- Maintain the ridge as a Sandstone Ridgetop Woodland vegetation community.
- Discourage mowing into the bushland by maintaining log barriers.
- Control rabbits.
- Control *Asparagus asparagoides* and remove from the rock containing the rare *Psilotum nudum*.
- The mid to lower slopes should be maintained as Western Sandstone Gully Forest.
- Avoid the key threatening process of high frequency fire from affecting uncommon species such as *Acrotriche* and *Asplenium australasicum*, which can be killed by fire.
- Control the Class 3 weed *Cestrum parqui* along Terrys Creek.
- Control *Pavonia hastata* at Park entrance (near Epping Road) by cut and paint method.
- Maintain silt fence in sandstone-capped area and re-treat Rhizomatous Bamboo as required.
- Erect a quadrat and delineate the boundaries of the Sandstone Shale Transition vegetation community behind the CSIRO. In October (flowering time), investigate the plants thought to be *Epacris purpurascens* var *purpurascens*.

### **Somerset / Lucknow Reserves**

- Avoid the key threatening process of high frequency fire from affecting uncommon species such as *Styphelia*, which can be killed by fire. An inter-fire period around 20 years should be maintained for the heath areas as some plants, such as *Banksia oblongifolia* take a many years to flower and fruit after fire.
- Conduct a small-scale burn with follow-up weed control along the drainage line within the Somerset Road reserve, as planned.
- Control Class 3 weeds *Cortaderia selloana* (Pampas Grass) in Lucknow Park and *Genista monspessulana* (Cape Broom) in Somerset Park.
- Remove *Acacia fimbriata* next to track near M2 Motorway overpass as it has the potential to spread after fire as it did in the Field of Mars Reserve (see Ryde Flora and Fauna Study 2006).

### Liaison with Sydney Water Corporation

Terrys Creek is highly polluted and is malodorous. Council should request that Sydney Water assess all pop-tops and the sewer line along the entire creek in order to repair leaks. The creek should be kept free from debris to allow a free flow of water.

### 7.3.3 Buffalo Creek Catchment

#### Burrows Park

- Reclassify as a Turpentine Ironbark Forest vegetation community.
- Care must be taken with weed removal on steep side slopes and the slopes of the creek, as there is a high potential for erosion. Also, weeds should be removed in stages in a mosaic pattern as they are excellent habitat for small birds such as Fairy Wrens and the thick privets provide shelter and protection for larger birds and possums.
- Control the Class 3 weed *Cestrum parqui* along Buffalo Creek.
- Control *Asparagus asparagoides* and *A. plumosus* to prevent spread.
- Remove *Acacia fimbriata* plantings.

#### Minga Reserve

- Continue bush regeneration as a Turpentine Ironbark Forest or Turpentine Ironbark Margin Forest vegetation community.

#### Barton Reserve

- Maintain north-west corner as Turpentine Ironbark Margin Forest.
- Maintain gully as Western Sandstone Gully Forest.

#### Pidding Park

- Reclassify and maintain as Turpentine Ironbark Margin Forest.
- Control the Class 3 noxious weed *Paspalum quadrifarium*.
- While *Pavonia hastata* is not listed as an environmental weed, it has the potential to spread and should be controlled.
- Control rabbits in Pidding Park as they are inhibiting regeneration.
- Control areas of erosion in Pidding Park.

#### Field of Mars Reserve

- Maintain the upper Strangers Creek area as a Turpentine Ironbark Margin vegetation community
- Maintain and continue to protect the plateau containing the *Pimelea curviflora* quadrat as a Shale/Sandstone Transition Forest (high sandstone influence) vegetation community.
- Remove *Acacia fimbriata* from the edge of the Shale/Sandstone area.
- Reclassify and maintain the Coachwood quadrat area (2006 study) as Map Unit 35: Riparian Scrub.

### 7.3.4 Kittys Creek Catchment

#### Pryor Park

- Reclassify as a Turpentine Ironbark Forest vegetation community.
- Conduct small-scale environmental burns to stimulate the soil seed bank.

#### Kittys Creek Reserve

- Reclassify and maintain areas as Western Sandstone Gully Forest.
- Conduct a small-scale environmental burn under the Turpentine canopy near the end of Bronhill Avenue to stimulate the soil seed bank.

### **Martin Reserve**

- Continue bush regeneration.
- Control the Class 3 noxious weed Pampas Grass.

Every study area had dense weed species along the creeks. In order to prevent deterioration of fauna habitat, all such areas need to be restored in small mosaics over long periods of time to prevent harm to animal species.

## **7.4 Provision of Artificial Shelter Sites**

- Nest boxes for parrots, possums and bats are required in many of the smaller reserves. These boxes are to replace tree hollows lost during fires or through attrition of mature trees.
- Ground cover items such as logs and timber stacks could be created in areas in areas where they are not likely to become a target for arsonists or become an undesirable feature in the park.
- Covered compost heaps are recommended to be retained in all reserves in areas away from regular public use.
- Sandstone rock piles could also be established where ground cover is scarce.

## **7.5 Repeat the Flora and Fauna Study**

- The Flora and Fauna Study should be repeated in five years time (or earlier if changes or impacts have occurred to bushland areas).

## **7.6 Expand the Reserves Subject to the Flora and Fauna Study**

- The Flora and Fauna Study should be expanded to include all bushland areas in the Ryde LGA. This information will then allow the BMP to develop local conservation strategies.

## **7.7 Establish a Flora and Fauna Database**

- Ryde Council needs to develop a flora and fauna data base that will allow the Council to make informed decisions for future management issues in the bushland reserves.
- The data base should have two components:
  - a general data base that records all opportunistic sightings made by resident and Council staff
  - a quadrat-based file that is designed to specifically compare data derived from quadrat surveys of communities with each reserve. The quadrat data should be entered so that statistically-valid comparisons can be made between sites and between years.

## **7.8 Acknowledgements**

I wish to thank Gith Strid-Nwulaekwe from Ryde City Council for her assistance in obtaining Council reports, maps and aerial photographs and for her hard work in assisting Chris Melrose to set up several quadrats. I would also like to thank Pat Thomas and Diane Picone from the National Trust of Australia (NSW) for assisting Chris with quadrats and habitat mapping.

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**APPENDIX ONE:**  
**SPECIES CHECKLIST OF NATIVE PLANTS  
LOCAL TO RYDE MUNICIPALITY**

## SPECIES CHECKLIST OF NATIVE PLANTS LOCAL TO RYDE MUNICIPALITY

This species list is compiled from a draft report *Native Plants of the Ryde District - The Conservation Significance of Ryde's Bushland Plants* (PJ Kubiak, 2005) for Ryde City Council. Kubiak's list comprises observations from 1979-2005. The species contained in this list are given a conservation status (CS) by Kubiak and are those that are common (C) and scattered (S) generally in Ryde's bushland. Others are apparently uncommon in bushland of the Ryde district (U), rare in Ryde's bushland (R), or apparently uncommon to rare (U-R).

Species observed during this study and that are not on Kubiak's list are marked with a #. Plants listed on the Threatened Species Act 1995 are marked with a + sign. Several orchids have been observed in previous years by Bev Debrincat and are marked with a BD. Several Australian native plants not endemic to the Ryde area are included on the Non-Indigenous plant list because they are not indigenous to the Ryde municipality or the Sydney Basin. These plants include *Cyathea cooperi*, *Acacia fimbriata*, *Acacia buxifolia* ssp *buxifolia*, *A. elata*, *A. fimbriata*, *Brachychiton acerifolius*, *Casuarina cunninghamiana* ssp *cunninghamiana*, *Grevillea robusta*, *Melia azedarach* var *australasica*, *Toona ciliata* and *Solanum aviculare*. The rationale for not including them is discussed in this report.

### BUFFALO CREEK CATCHMENT NATIVE PLANT LIST

			Burrows Park	Minga Reserve	Barton Reserve	Pidding Park
FAMILY	SPECIES NAME	CS				
<b>Pteridiophytes</b>						
<b>ADIANTACEAE</b>	<i>Adiantum aethiopicum</i>	C	√		√	
	<i>Adiantum hispidulum</i>	S				
<b>ASPENIACEAE</b>	<i>Asplenium australasicum</i>	U	√			
	<i>Asplenium flabellifolium</i>	S				
<b>ATHYRIACEAE</b>	<i>Diplazium australe</i>	R				
<b>BLECHNACEAE</b>	<i>Blechnum ambiguum</i>	S			√	
	<i>Blechnum cartilagineum</i>	C		√		
	<i>Doodia aspera</i>	S			√	
	<i>Doodia australis</i>	R				
	<i>Doodia caudata</i> var <i>caudata</i>	S	√			
<b>CYATHEACEAE</b>	<i>Cyathea australis</i>	C				
<b>DENNSTAEDTIACEAE</b>	<i>Histiopteris incisa</i>	S				
	<i>Hypolepis muelleri</i>	S	√		√	
	<i>Pteridium esculentum</i>	C	√		√	√
<b>DICKSONIACEAE</b>	<i>Calochlaena dubia</i>	C	√	√		
<b>DRYOPTERIDACEAE</b>	# <i>Lastreopsis decomposita</i>	C				
<b>GLEICHENIACEAE</b>	<i>Gleichenia dicarpa</i>	C				

	<i>Gleichenia microphylla</i>	S				
	<i>Sticherus flabellatus</i>	S				
<b>GRAMMITACEAE</b>	# <i>Grammitis billardieri</i>				√	
<b>HYMENOPHYLLACEAE</b>	<i>Hymenophyllum cupressiforme</i>	R				
<b>LINDSAEACEAE</b>	<i>Lindsaea linearis</i>	C	√			
	<i>Lindsaea microphylla</i>	C				
<b>OSMUNDCEAE</b>	<i>Todea barbata</i>	S				
<b>POLYPODIACEAE</b>	<i>Platynerium bifurcatum</i> ssp <i>bifurcatum</i>	S				
	<i>Pyrrhosia rupestris</i>	U				
<b>PSILOACEAE</b>	<i>Psilotum nudum</i>	R				
<b>PTERIDIACEAE</b>	<i>Pteris tremula</i>	U				
	# <i>Pteris vittata</i>				√	√
<b>SHIZAEACEAE</b>	<i>Schizaea asperula</i>					
	<i>Schizaea bifida</i> (s.str.)	S				
<b>SINIPTERIDACEAE</b>	<i>Cheilanthes distans</i>	R				
	<i>Cheilanthes sieberi</i> ssp <i>sieberi</i>	C	√			
	<i>Pellaea falcata</i> var <i>falcata</i>	S	√		√	
<b>THELYPTERIDACEAE</b>	<i>Christella dentata</i>	S			√	√

		CS	Burrows Park	Minga Reserve	Barton Reserve	Pidding Park
<b>Angiosperms-Dicotyledons</b>						
<b>ACANTHACEAE</b>	<i>Brunoniella australis</i>	R				
	<i>Brunoniella pumilio</i>	S				
	<i>Pseuderanthemum</i> <i>variabile</i>	C	√	√	√	
<b>AIZOACEAE</b>	<i>Tetragonia</i> <i>tetragonioides</i>	S			√	
<b>AMARANTHACEAE</b>	<i>Alternanthera</i> <i>denticulata</i>	C				
<b>APIACEAE</b>	<i>Actinotus helianthi</i>	C			√	
	<i>Actinotus minor</i>	C			√	
	<i>Centella asiatica</i>	S	√		√	√
	<i>Hydrocotyle</i> <i>peduncularis</i>	C				√
	<i>Hydrocotyle tripartita</i>	R				
	<i>Platysace lanceolata</i>	C				√
	<i>Platysace linearifolia</i>	C				
	<i>Trachymene incisa</i> ssp <i>incisa</i>	R				
	<i>Xanthosia pilosa</i>	C				
	<i>Xanthosia tridentata</i>	C				

<b>APOCYNACEAE</b>	<i>Parsonsia straminea</i>	U				
<b>ARACEAE</b>	# <i>Alocasia brisbanensis</i>					
<b>ARALIACEAE</b>	<i>Astrotricha longifolia</i>	S				
	<i>Polyscias sambucifolia</i>	C	√		√	√
<b>ASCLEPIADACEAE</b>	<i>Marsdenia suaveolens</i>	S				
	<i>Tylophora barbata</i>	S	√			
<b>ASTERACEAE</b>	<i>Cassinia aculeata</i>	U				√
	<i>Epaltes australis</i>	R				
	<i>Euchiton gymnocephalus</i>	R				
	<i>Helichrysum scorpioides</i>	U-R				
	<i>Olearia microphylla</i>	S				
	<i>Olearia viscidula</i>	R				
	<i>Ozothamnus adnatus</i>	R				
	<i>Ozothamnus diosmifolius</i>	C	√		√	√
	<i>Senecio hispidulus</i> var. <i>hispidulus</i>		√		√	√
	<i>Sigesbeckia orientalis</i> ssp <i>orientalis</i>	S	√	√	√	
<b>AVICENNIACEAE</b>	<i>Avicennia marina</i> var <i>australasica</i>	C				
<b>BAUERACEAE</b>	<i>Bauera rubioides</i>	S				
<b>BIGNONIACEAE</b>	<i>Pandorea pandorana</i>	C	√	√	√	√
<b>CAMPANULACEAE</b>	<i>Wahlenbergia communis</i> (s. lat.)					
	<i>Wahlenbergia gracilis</i>	C	√		√	
	<i>Wahlenbergia stricta</i>	R				
<b>CASSYTHACEAE</b>	<i>Cassytha glabella</i>				√	√
	<i>Cassytha pubescens</i>					√
<b>CASUARINACEAE</b>	<i>Allocasuarina littoralis</i>	C		√	√	√
	<i>Allocasuarina torulosa</i>	C				
	<i>Casuarina glauca</i>	C				
<b>CELASTRACEAE</b>	<i>Cassine australis</i> var <i>australis</i>	R				
	<i>Celastrus subspicata</i>	R				
	<i>Maytenis silvestris</i>	U				
<b>CHENOPODIACEAE</b>	<i>Einadia hastata</i>	S	√	√	√	√
	<i>Sarcocornia</i> <i>quinqueflora</i> ssp <i>quinqueflora</i>	S				
	<i>Suaeda australis</i>		√			
<b>CLUSIACEAE</b>	<i>Hypericum gramineum</i>	S				
<b>CONVOLVULACEAE</b>	<i>Calystegia marginata</i>	R	? juvenile			
	<i>Calystegia sepium</i>	R?				
	<i>Convolvulus erubescens</i>	R	√			
	<i>Dichondra repens</i> (s.lat.)	S	√		√	√
	<i>Polymeria calycina</i>		? juvenile			
<b>CUNONIACEAE</b>	<i>Aphanopetalum</i> <i>resinosum</i>	R				
	<i>Callicoma serratifolia</i>	C		√p	√	√

	<i>Ceratopetalum apetalum</i>	S		√ <sub>p</sub>	√	
	<i>Ceratopetalum gummiferum</i>	C				
	<i>Schizomeria ovata</i>	R				
<b>DILLENIACEAE</b>	<i>Hibbertia aspera</i>	C				
	<i>Hibbertia dentata</i>	S				
	<i>Hibbertia fasciculata</i>	S				
	<i>Hibbertia linearis</i>	C				
	# <i>Hibbertia obtusifolia</i>					√
	<i>Hibbertia riparia</i> (s.lat.)	U				
	<i>Hibbertia scandens</i>	R				
<b>DROSERACEAE</b>	<i>Drosera auriculata</i>	C				
	<i>Drosera peltata</i>	C				
<b>ELAEOCARPACEAE</b>	<i>Elaeocarpus reticulatus</i>	C		√	√	√
<b>EPACRIDACEAE</b>	<i>Brachyloma daphnoides</i>	S				
	<i>Dracophyllum secundum</i>	U				
	<i>Epacris microphylla</i>	S				
	<i>Epacris pulchella</i>	C				
	+ <i>Epacris purpurascens</i> var <i>purpurascens</i>	S				
	<i>Leucopogon ericoides</i>	S				
	<i>Leucopogon juniperinus</i>	S	√			√
	<i>Leucopogon lanceolatus</i>	S				
	<i>Leucopogon microphyllus</i>	C				
	<i>Melichrus procumbens</i>	U				
	<i>Monotoca elliptica</i>	S				
	<i>Monotoca scoparia</i>	C				
	<i>Styphelia longifolia</i>	U-R				
	<i>Styphelia triflora</i>	U				
	<i>Styphelia tubiflora</i>	U				
	<i>Trococarpa laurina</i>	R				
	<i>Woolsia pungens</i>	C				
<b>EUPHORBIACEAE</b>	<i>Amperea xiphioclada</i> var <i>papillata</i>	C				
	<i>Breynia oblongifolia</i>	C		√	√	
	<i>Glochidion ferdinandi</i>	C	√		√	√
	<i>Micrantheum ericoides</i>	C				√
	<i>Omаланthus nutans</i>	S	√	√	√	√
	# <i>Phyllanthus gasstroemii</i>					
	<i>Phyllanthus hirtellus</i> (ex <i>P thymoides</i> )	C				√
	<i>Poranthera ericifolia</i>	U				
	<i>Poranthera microphylla</i>	S	√		√	
	<i>Ricinocarpos pinifolius</i>	S				
<b>EUPOMATIACEAE</b>	<i>Eupomatia laurina</i>	R				
<b>FABACEAE</b>	<i>Acacia brownii</i>	U				

	<i>Acacia decurrens</i>					
	<i>Acacia falcata</i>	S	√	√p	√p	√
	<i>Acacia fimbriata</i>		√			
	<i>Acacia floribunda</i>		√	√p	√p	
	<i>Acacia implexa</i>		√p?			
	<i>Acacia linifolia</i>	C			√	
	<i>Acacia longifolia</i>	C	√	√	√p	√
	<i>Acacia myrtifolia</i>	C				
	<i>Acacia parramattensis</i>	C	√	√	√p	
	<i>Acacia stricta</i>	U			√p	
	<i>Acacia suaveolens</i>	C			√	
	<i>Acacia terminalis</i>	C				√
	<i>Acacia ulicifolia</i>	C			√	
	<i>Bossiaea heterophylla</i>	C				
	<i>Bossiaea obcordata</i>	C				
	<i>Bossiaea scolopendria</i>	S				
	<i>Daviesia ulicifolia</i>	S				
	# <i>Desmodium varians</i>		√			
	<i>Dillwynia retorta</i>	C				
	<i>Glycine clandestina</i>	C	√		√	
	<i>Glycine microphylla</i>		√		√	√
	<i>Glycine tabacina</i> species complex	S				
	<i>Gompholobium glabratum</i>	S				
	<i>Gompholobium latifolium</i>	S				
	<i>Gompholobium pinnatum</i>	R				
	<i>Hardenbergia violacea</i>	C	√		√p	
	<i>Hovea linearis</i> (s.str.)	S				
	<i>Indigofera australis</i>	R				
	<i>Kennedia rubicunda</i>	C	√	√	√p	
	<i>Mirbelia rubiifolia</i>	S				
	<i>Phyllota phyllicoides</i>	C				
	<i>Platylobium formosum</i> ssp <i>formosum</i>	C			√	√
	<i>Pultenaea daphnoides</i>	C				
	<i>Pultenaea flexilis</i>	C	√		√	
	<i>Pultenaea mollis</i>	R				
	<i>Pultenaea paleacea</i>	R				
	<i>Pultenaea retusa</i>					
	<i>Pultenaea stipularis</i>	C				
	<i>Pultenaea villosa</i>	U				
	# <i>Sphaerolobium vimineum</i>					
	<i>Viminaria juncea</i>	S				
<b>GERANIACEAE</b>	<i>Geranium homeanum</i>	S	√	√	√	√

	<i>Pelargonium inodorum</i>	U				
<b>GOODENIACEAE</b>	<i>Dampiera stricta</i>	C				
	<i>Goodenia bellidifolia</i>	S				
	<i>Goodenia hederacea</i> ssp <i>hederacea</i>	C				√
	<i>Goodenia heterophylla</i> ssp <i>heterophylla</i>	S				
	<i>Goodenia ovata</i>	U				
	<i>Scaevola ramosissima</i>	S				
<b>HALORAGACEAE</b>	<i>Gonocarpus micranthus</i> ssp. <i>micranthus</i>					
	<i>Gonocarpus tetragynus</i>					
	<i>Gonocarpus teucrioides</i>	C				
<b>LAMIACEAE</b>	<i>Plectranthus parviflorus</i>	U				
<b>LAURACEAE</b>	<i>Cryptocarya glaucescens</i>	R				
	# <i>Cryptocarya</i> <i>microneura</i>					
<b>LOBELIACEAE</b>	<i>Lobelia alata</i>	S				
	<i>Lobelia dentata</i>	C				
	<i>Lobelia gracilis</i>	C				
	<i>Pratia purpurascens</i>	C	√		√	√
<b>LOGANIACEAE</b>	<i>Logania albiflora</i>	S				
	<i>Mitrasacme polymorpha</i>	C				
<b>LORANTHACEAE</b>	<i>Amyema congener</i> ssp <i>congener</i>					
	<i>Dendrophthoe vitellina</i>					
<b>MELIACEAE</b>	<i>Synoum glandulosum</i>	R				
<b>MENISPERMACEAE</b>	<i>Sarcopetalum</i> <i>harveyanum</i>	U				
	<i>Stephania japonica</i> var <i>discolor</i>	S				
<b>MORACEAE</b>	<i>Ficus coronata</i>	R				
	<i>Ficus rubiginosa</i>	S	√			
<b>MYRSINACEAE</b>	<i>Aegiceras corniculatum</i>					
	<i>Rapanea variabilis</i>	S		√		
<b>MYRTACEAE</b>	<i>Acmena smithii</i>	U	√	√ <sub>p</sub>	√ <sub>p</sub>	
	<i>Angophora bakeri</i>	S				
	<i>Angophora costata</i>	C	√	√	√	√
	<i>Angophora floribunda</i>	S	√			
	<i>Angophora hispida</i>					
	<i>Austromyrtus tenuifolia</i>	U				
	<i>Backhousia myrtifolia</i>	S				
	<i>Baeckea diosmifolia</i>	S				
	<i>Baeckea linifolia</i>	S				
	<i>Callistemon citrinus</i>	U			√	√
	<i>Callistemon linearifolius</i>	S	√ <sub>p?</sub>			
	<i>Callistemon pinifolius</i>	R				
	<i>Callistemon salignus</i>	U				
	<i>Calytrix tetragona</i>	S				

	<i>Corymbia gummifera</i>	C		√		√
	<i>Eucalyptus acmenoides</i>	R				
	<i>Eucalyptus haemastoma</i>					
	<i>Eucalyptus oblonga</i>					
	<i>Eucalyptus paniculata</i>	S	√			
	<i>Eucalyptus pilularis</i>	S	√		√	√
	<i>Eucalyptus piperita</i>	C			√	
	<i>Eucalyptus punctata</i>	U				
	<i>Eucalyptus racemosa</i>	S				
	<i>Eucalyptus resinifera</i> ssp <i>resinifera</i>	S				√
	<i>Eucalyptus saligna</i>	S	√			
	<i>Eucalyptus tereticornis</i>					
	<i>Kunzea ambigua</i>	C	√		√	√
	<i>Leptospermum arachnoides</i>	S				
	<i>Leptospermum parvifolium</i>	U				
	<i>Leptospermum polygalifolium</i> ssp <i>polygalifolium</i>	C			√p	√
	<i>Leptospermum suarrosum</i>	S				
	<i>Leptospermum trinervium</i>	C				√
	<i>Melaleuca decora</i>	R				
	<i>Melaleuca ericifolia</i>	R				
	<i>Melaleuca linariifolia</i>	S	√p?		√p	
	<i>Melaleuca nodosa</i>					
	<i>Melaleuca quinquenervia</i>					
	<i>Melaleuca stypheloides</i>	U				
	<i>Melaleuca thymifolia</i>	U-R				
	<i>Rhodamnia rubescens</i>	R				
	<i>Syncarpia glomulifera</i>	S	√	√	√	√
	# <i>Syzygium australe</i>					
	<i>Tristaniopsis collina</i>	U				
	<i>Tristaniopsis laurina</i>	C		√p		
<b>OLEACEAE</b>	<i>Notelaea longifolia</i>	C	√	√	√	√
<b>OXALIDACEAE</b>	<i>Oxalis perennans</i>					√
<b>PASSIFLORACEAE</b>	<i>Passiflora herbertiana</i> ssp <i>herbertiana</i>	R				
<b>PITTOSPORACEAE</b>	<i>Billardiera scandens</i>	C	√		√	√
	<i>Bursaria spinosa</i>	C	√		√p	
	<i>Citriobatus pauciflorus</i>	R				
	<i>Pittosporum revolutum</i>	S		√		
	<i>Pittosporum undulatum</i>	C	√	√	√	√
<b>PLANTAGINACEAE</b>	<i>Plantago debilis</i>	R				
<b>POLYGALACEAE</b>	<i>Comesperma ericineium</i>					

	<i>Comesperma sphaerocarpum</i>	U-R				
	<i>Comesperma volubile</i>	R				
<b>POLYGONACEAE</b>	<i>Muehlenbeckia gracillima</i>	R				
	<i>Persicaria decipiens</i>					
	# <i>Persicaria hydropiper</i>			√	√	
	# <i>Persicaria lapathifolia</i>				√	
	# <i>Persicaria strigosa</i>					
	<i>Persicaria subsessilis</i>					
	<i>Rumex brownii</i>	S				
<b>PRIMULACEAE</b>	<i>Samolus repens</i>	C				
<b>PROTEACEAE</b>	<i>Banksia ericifolia</i> var <i>ericifolia</i>	C			√p	
	<i>Banksia integrifolia</i>					
	<i>Banksia marginata</i>					
	<i>Banksia oblongifolia</i>	C				
	<i>Banksia serrata</i>	C				
	<i>Banksia spinulosa</i> var <i>spinulosa</i>	C			√p	√
	<i>Grevillea buxifolia</i>	C				√
	<i>Grevillea linifolia</i>					√
	# <i>Grevillea mucronulata</i>					
	<i>Grevillea sericea</i>	C				√
	<i>Hakea dactyloides</i> (s.str.)	S			√	
	<i>Hakea salicifolia</i> ssp <i>salicifolia</i>	S		√	√p	
	<i>Hakea sericea</i>	C			√p	√
	<i>Isopogon anemonifolius</i>	S				√
	<i>Lambertia formosa</i>	C				√
	<i>Lomatia silaifolia</i>	C			√	√
	<i>Persoonia lanceolata</i>	C				
	<i>Persoonia laurina</i>	S				
	<i>Persoonia levis</i>	C				√
	<i>Persoonia linearis</i>	C			√	√
	<i>Persoonia pinifolia</i>	S			√	
	<i>Petrophile pulchella</i>	S				
	<i>Telopea speciosissima</i>	R				
	<i>Xylomelum pyriforme</i>	S				
<b>RANUNCULACEAE</b>	<i>Clematis aristata</i>	C	√			√
	<i>Clematis glycinoides</i>	C	√		√	√
	<i>Ranunculus plebeius</i>	R				
<b>RHAMNACEAE</b>	<i>Pomaderris discolor</i>		√			√
	<i>Pomaderris elliptica</i>					
	<i>Pomaderris lanigera</i>	U				√
<b>ROSACEAE</b>	<i>Rubus parvifolius</i>	R				
	<i>Rubus rosifolius</i>	R				

<b>RUBIACEAE</b>	<i>Morinda jasminoides</i>	S				
	<i>Opercularia aspera</i>	C				√
	<i>Opercularia varia</i>	S	√			
	<i>Pomax umbellata</i>	C				
	<i>Psychotria ioniceroides</i>	R				
<b>RUTACEAE</b>	<i>Boronia ledifolia</i>	S				
	<i>Boronia polygalifolia</i> (FMR 1993)	R				
	<i>Correa reflexa</i> var <i>reflexa</i> (pale yellow flowered)	S				
	<i>Leionema dentatum</i>	U				
	<i>Melicope micrococca</i>	R				
	<i>Zieria laevigata</i>	R				
	<i>Zieria pilosa</i>	C				
	<i>Zieria smithii</i>	C	√	√	√	√
<b>SANTALACEAE</b>	<i>Exocarpos cupressiformis</i>	S				
	<i>Leptomeria acida</i>	S				
<b>SAPINDACEAE</b>	<i>Alectryon subcinereus</i>	R				
	<i>Dodonaea triquetra</i>	C	√	√	√	√
	<i>Guioa semiglauca</i>	R				
<b>SCROPHULARIACEAE</b>	<i>Veronica plebeia</i>	C	√	√	√	√
<b>SOLANACEAE</b>	<i>Solanum prinophyllum</i>	R				
	<i>Solanum aviculare</i>		√	√		√
<b>STERCULIACEAE</b>	<i>Lasiopetalum ferrugineum</i> var <i>ferrugineum</i>	C				√
<b>STYLIDIACEAE</b>	<i>Stylidium graminifolium</i>	S				
	<i>Stylidium productum</i>	S				
<b>THYMELAEACEAE</b>	+ <i>Pimelea curviflora</i> var <i>curviflora</i>					
	<i>Pimelea linifolia</i>	C				√
<b>ULMACEAE</b>	<i>Trema tomentosa</i> var <i>viridis</i>		√		√p?	
<b>VERBENACEAE</b>	<i>Cleodendrum tomentosum</i>					
<b>VIOLACEAE</b>	<i>Viola hederacea</i>	C				
<b>VITACEAE</b>	<i>Cayratia clematidea</i>					√
	<i>Cissus antarctica</i>					
	<i>Cissus hypoglauca</i>					

Angiosperms-Monocotyledons		CS	Burrows Park	Minga Reserve	Barton Reserve	Pidding Park
<b>ARACEAE</b>	<i>Gymnostachys anceps</i>	R				
<b>ARECACEAE</b>	<i>Livistona australis</i>	R				
<b>CENTROLEPIDACEAE</b>	<i>Centrolepis strigosa</i> var <i>strigosa</i>					

<b>COMMELINACEAE</b>	# <i>Aneilema acuminatum</i>					
	<i>Commelina cyanea</i>	S	√	√	√	√
<b>CYPERACEAE</b>	<i>Baumea juncea</i>	S				
	<i>Carex inversa</i>	S				
	<i>Caustis flexuosa</i>	C				
	<i>Cyathochaeta diandra</i>	C				
	# <i>Cyperus gracilis</i>					
	# <i>Cyperus exaltatus</i>					
	# <i>Cyperus imbecillis</i>		√			
	# <i>Cyperus polystachyos</i>				√	
	# <i>Cyperus sphaeroides</i>					
	<i>Cyperus tetraphyllus</i>	R				
	<i>Fimbristylis dichotoma</i>	R				
	<i>Gahnia clarkei</i>	S				√
	<i>Gahnia erythrocarpa</i>	C				
	<i>Gahnia melanocarpa</i>	U				
	# <i>Gahnia sieberiana</i>					
	<i>Isolepis cernua</i>	R				
	# <i>Isolepis inundata</i>	R				
	<i>Lepidosperma filiforme</i>					
	<i>Lepidosperma gunni</i>	S				
	<i>Lepidosperma laterale</i>	C				√
	<i>Lepidosperma neesii</i>	S				
	<i>Lepidosperma urophorum</i>	U				
	<i>Ptilothrix deusta</i>	C				
	<i>Schoenus apogon</i>	S				
	<i>Schoenus ericetorum</i>	S				
	<i>Schoenus imberbis</i>	S				
	<i>Schoenus melanostachys</i>	C			√	
	<i>Tetraria capillaris</i>	C				
<b>HAEMODORACEAE</b>	<i>Haemodorum corymbosum</i>	U				
	<i>Haemodorum planifolium</i>	C				
<b>IRIDACEAE</b>	<i>Patersonia glabrata</i>	C				
	<i>Patersonia sericea</i>	C				
<b>JUNCACEAE</b>	<i>Juncus continuous</i>					
	<i>Juncus kraussii</i>	S				
	<i>Juncus planifolius</i>					
	# <i>Juncus usitatus</i>		√		√	
<b>JUNCAGINACEAE</b>	<i>Triglochin striata</i>	U				
<b>LILIACEAE</b>	<i>Arthropodium milleflorum</i> (s.lat.)	U-R				
	<i>Blandfordia nobilis</i>	S				
	<i>Burchardia umbellata</i>	C				
	<i>Caesia parviflora</i>	S				
	<i>Dianella caerulea</i>	C	√	√	√	√
	<i>Dianella revoluta</i>	S			√	√
	<i>Laxmannia gracilis</i> (s.str.)	C				

	<i>Thysanotus tuberosus</i>	C				
	<i>Tricoryne simplex</i>	C				√
<b>LOMANDRACEAE</b>	<i>Lomandra cylindrica</i>	S				√
	# <i>Lomandra filiformis</i> ssp. <i>correacea</i>					√
	<i>Lomandra filiformis</i> ssp. <i>filiformis</i>	S	√			
	<i>Lomandra glauca</i>	S				
	<i>Lomandra gracilis</i>	S			√	√
	<i>Lomandra longifolia</i>	C	√	√	√	√
	<i>Lomandra micrantha</i>	S				
	<i>Lomandra multiflora</i> ssp <i>multiflora</i>	C				
	<i>Lomandra obliqua</i>	C				√
<b>ORCHIDACEAE</b>	<i>Acianthus fornicatus</i>	C			√	
	<i>Cryptostylis erecta</i>	C				√
	<i>Cryptostylis subulata</i>	S				
	<i>Glossodia minor</i>					
	<i>Microtis unifolia</i> (s.lat.)					
	<i>Prasophyllum</i> sp					
	<i>Prasophyllum brevilabre</i>	R				
	<i>Pterostylis acuminata</i>	S				
	<i>Pterostylis concinna</i>	S				
	<i>Pterostylis longifolia</i>	U				
	<i>Pterostylis nutans</i>	C				
<b>PHILESIACEAE</b>	# <i>Eustrephus latifolius</i>		√	√	√	
	# <i>Geitonoplesium cymosum</i>					
<b>POACEAE</b>	<i>Anisopogon avenaceus</i>	C				√
	<i>Aristida ramosa</i> var <i>ramosa</i>					
	<i>Aristida vagans</i>	C				
	<i>Austrodanthonia pilosa</i>					
	<i>Austrodanthonia racemosa</i>					
	<i>Austrostipa pubescens</i>	C	√		√	√
	<i>Austrostipa ramosissima</i>					
	<i>Austrostipa rudis</i> ssp <i>nervosa</i>	S				
	# <i>Bothriochloa macra</i>					
	<i>Cymbopogon refractus</i>	S				
	<i>Deyeuxia quadriseta</i>	S				
	<i>Dichelachne crinita</i>	U				
	<i>Dichelachne micrantha</i>					
	<i>Dichelachne rara</i>				√	
	# <i>Digitaria parviflora</i>		√	√	√	√
	<i>Echinopogon caespitosus</i>	C	√		√	
	# <i>Echinopogon ovata</i>					
	<i>Entolasia marginata</i>	S	√	√	√	√
	<i>Entolasia stricta</i>	C	√		√	√
	<i>Eragrostis brownii</i>					

	# <i>Eragrostis lephostachya</i>					
	<i>Imperata cylindrica</i> var <i>major</i>	C	√			√
	<i>Lachnagrostis filiformis</i>	S				
	<i>Microlaena stipoides</i> var. <i>stipoides</i>	C	√	√	√	√
	<i>Oplismenus aemulus</i>	S		√	√	√
	<i>Oplismenus imbecillis</i>	S	√			√
	<i>Panicum simile</i>	S	√			√
	# <i>Paspalidium distans</i>			√	√	
	<i>Phragmites australis</i>					
	<i>Poa affinis</i>				√	
	# <i>Poa labillardieri</i>					
	<i>Sporobolus virginicus</i> var <i>virginicus</i>	S				
	<i>Stipa ramossissima</i>				√	
	<i>Tetrarrhena juncea</i>					
	<i>Themeda australis</i>	C	√			√
<b>RESTIONACEAE</b>	<i>Lepyrodia scariosa</i>	C				
	<i>Leptocarpus tenax</i>					
<b>SMILACACEAE</b>	<i>Ripogonum album</i>	R				
	<i>Smilax australis</i>					
	<i>Smilax glycyphylla</i>	C			√	
<b>SPARGANIACEAE</b>	# <i>Sparganium subglobosum</i>					
<b>TYPHACEAE</b>	<i>Typha orientalis</i>					
<b>XANTHORRHOEACEAE</b>	<i>Xanthorrhoea arborea</i>	C			√	
	<i>Xanthorrhoea media</i> ssp. <i>media</i>	C				
	<i>Xanthorrhoea minor</i>					√?
	<i>Xanthorrhoea resinifera</i>	U-R				
<b>XYRIDACEAE</b>	<i>Xyris gracilis</i> spp <i>gracilis</i>	R				

**FIELD OF MARS RESERVE  
BUFFALO CREEK CATCHMENT  
NATIVE PLANTS 2007**

<b>FAMILY</b>	<b>SPECIES NAME</b>	<b>CS</b>	<b>Turpentine- Ironbark Margin Forest</b>	<b>Shale-Sandstone Transition Forest</b>
<b>Pteridiophytes</b>				
<b>ADIANTACEAE</b>	<i>Adiantum aethiopicum</i>	C		
	<i>Adiantum hispidulum</i>	S		
<b>ASPLENACEAE</b>	<i>Asplenium australasicum</i>	U		
	<i>Asplenium flabellifolium</i>	S		
<b>ATHYRIACEAE</b>	<i>Diplazium australe</i>	R		
<b>BLECHNACEAE</b>	<i>Blechnum ambiguum</i>	S		
	<i>Blechnum cartilagineum</i>	C		

	<i>Doodia aspera</i>	S		
	<i>Doodia australis</i>	R		
	<i>Doodia caudata</i> var <i>caudata</i>	S		
CYATHEACEAE	<i>Cyathea australis</i>	C		
DENNSTAEDTIACEAE	<i>Histiopteris incisa</i>	S		
	<i>Hypolepis muelleri</i>	S		
	<i>Pteridium esculentum</i>	C	√	√
DICKSONIACEAE	<i>Calochlaena dubia</i>	C		
DRYOPTERIDACEAE	# <i>Lastreopsis decomposita</i>	C		
GLEICHENIACEAE	<i>Gleichenia dicarpa</i>	C		
	<i>Gleichenia microphylla</i>	S		
	<i>Sticherus flabellatus</i>	S		
HYMENOPHYLLACEAE	<i>Hymenophyllum cupressiforme</i>	R		
LINDSAEACEAE	<i>Lindsaea linearis</i>	C	√	
	<i>Lindsaea microphylla</i>	C		
OSMUNDCEAE	<i>Todea barbata</i>	S		
POLYPODIACEAE	<i>Platynerium bifurcatum</i> ssp <i>bifurcatum</i>	S		
	<i>Pyrrosia rupestris</i>	U		
PSILOACEAE	<i>Psilotum nudum</i>	R		
PTERIDIACEAE	<i>Pteris tremula</i>	U		
	# <i>Pteris umbrosa</i>			
SHIZAEACEAE	<i>Schizaea asperula</i>			
	<i>Schizaea bifida</i> (s.str.)	S		
SINIPTERIDACEAE	<i>Cheilanthes distans</i>	R		
	<i>Cheilanthes sieberi</i> ssp <i>sieberi</i>	C	√	
	<i>Pellaea falcata</i> var <i>falcata</i>	S		
THELYPTERIDACEAE	<i>Christella dentata</i>	S		

Angiosperms-Dicotyledons			Turpentine- Ironbark Margin Forest	Shale- Sandstone Transition Forest	Other areas
ACANTHACEAE	<i>Brunoniella australis</i>	R			
	<i>Brunoniella pumilio</i>	S	√		
	<i>Pseuderanthemum variabile</i>	C	√		
AIZOACEAE	<i>Tetragonia tetragonoides</i>	S			
AMARANTHACEAE	<i>Alternanthera denticulata</i>	C			
APIACEAE	<i>Actinotus helianthi</i>	C			
	<i>Actinotus minor</i>	C			
	<i>Centella asiatica</i>	S		√	
	<i>Hydrocotyle peduncularis</i>	C			
	<i>Hydrocotyle tripartita</i>	R			
	<i>Platysace lanceolata</i>	C			
	<i>Platysace linearifolia</i>	C			
	<i>Trachymene incisa</i> ssp <i>incisa</i>	R			
	<i>Xanthosia pilosa</i>	C			
	<i>Xanthosia tridentata</i>	C	√	√	
APOCYNACEAE	<i>Parsonsia straminea</i>	U			
ARACEAE	# <i>Alocasia brisbanensis</i>				

<b>ARALIACEAE</b>	<i>Astrotricha longifolia</i>	S			
	<i>Polyscias sambucifolia</i>	C	√	√	
<b>ASCLEPIADACEAE</b>	<i>Marsdenia suaveolens</i>	S			
	<i>Tylophora barbata</i>	S			
<b>ASTERACEAE</b>	<i>Cassinia aculeata</i>	U	√		
	<i>Epaltes australis</i>	R			
	<i>Euchiton gymnocephalus</i>	R			
	<i>Helichrysum scorpioides</i>	U-R			
	<i>Olearia microphylla</i>	S	√	√	
	<i>Olearia viscidula</i>	R			
	<i>Ozothamnus adnatus</i>	R			
	<i>Ozothamnus diosmifolius</i>	C	√	√	
	<i>Senecio hispidulus</i> var. <i>hispidulus</i>				
	<i>Sigesbeckia orientalis</i> ssp <i>orientalis</i>	S		√	
<b>AVICENNIACEAE</b>	<i>Avicennia marina</i> var <i>australasica</i>	C			
<b>BAUERACEAE</b>	<i>Bauera rubioides</i>	S			
<b>BIGNONIACEAE</b>	<i>Pandorea pandorana</i>	C		√	
<b>CAMPANULACEAE</b>	<i>Wahlenbergia communis</i> (s. lat.)				
	<i>Wahlenbergia gracilis</i>	C		√	
	<i>Wahlenbergia stricta</i>	R			
<b>CASSYTHACEAE</b>	<i>Cassytha glabella</i>				
	<i>Cassytha pubescens</i>		√	√	
<b>CASUARINACEAE</b>	<i>Allocasuarina littoralis</i>	C	√	√	
	<i>Allocasuarina torulosa</i>	C			
	<i>Casuarina glauca</i>	C			
<b>CELASTRACEAE</b>	<i>Cassine australis</i> var <i>australis</i>	R			
	<i>Celastrus subspicata</i>	R			
	<i>Maytenis silvestris</i>	U			
<b>CHENOPODIACEAE</b>	<i>Einadia hastata</i>	S		√	
	<i>Sarcocornia quinqueflora</i> ssp <i>quinqueflora</i>	S			
<b>CLUSIACEAE</b>	<i>Hypericum gramineum</i>	S		√	
<b>CONVOLVULACEAE</b>	<i>Calystegia marginata</i>	R			
	<i>Calystegia sepium</i>	R?			
	<i>Convolvulus erubescens</i>	R			
	<i>Dichondra repens</i> (s.lat.)	S	√		
	<i>Polymeria calycina</i>				
<b>CUNONIACEAE</b>	<i>Aphanopetalum resinosum</i>	R			
	<i>Callicoma serratifolia</i>	C			
	<i>Ceratopetalum apetalum</i>	S			
	<i>Ceratopetalum gummiferum</i>	C			
	<i>Schizomeria ovata</i>	R			
<b>DILLENACEAE</b>	<i>Hibbertia aspera</i>	C			
	<i>Hibbertia dentata</i>	S			
	<i>Hibbertia empetrifolia</i>		√		
	<i>Hibbertia fasciculata</i>	S			

	<i>Hibbertia linearis</i>	C			
	<i>Hibbertia riparia</i> (s.lat.)	U		√	
	<i>Hibbertia scandens</i>	R			
<b>DROSERACEAE</b>	<i>Drosera auriculata</i>	C			
	<i>Drosera peltata</i>	C		√	
<b>ELAEOCARPACEAE</b>	<i>Elaeocarpus reticulatus</i>	C	√	√	
<b>EPACRIDACEAE</b>	<i>Brachyloma daphnoides</i>	S			
	<i>Dracophyllum secundum</i>	U			
	<i>Epacris microphylla</i>	S		√	
	<i>Epacris pulchella</i>	C			
	+ <i>Epacris purpurascens</i> var. <i>purpurascens</i>	S	√		
	<i>Leucopogon ericoides</i>	S			
	<i>Leucopogon juniperinus</i>	S	√	√	
	<i>Leucopogon lanceolatus</i>	S			
	<i>Leucopogon microphyllus</i>	C			
	<i>Melichrus procumbens</i>	U			
	<i>Monotoca elliptica</i>	S			
	<i>Monotoca scoparia</i>	C			
	<i>Styphelia longifolia</i>	U-R			
	<i>Styphelia triflora</i>	U			
	<i>Styphelia tubiflora</i>	U			
	<i>Trococarpa laurina</i>	R			
	<i>Woolsia pungens</i>	C			
<b>EUPHORBIACEAE</b>	<i>Amperea xiphoclada</i> var <i>papillata</i>	C			
	<i>Breynia oblongifolia</i>	C	√		
	<i>Glochidion ferdinandi</i>	C		√	
	<i>Micrantheum ericoides</i>	C	√	√	
	<i>Omalanthus nutans</i>	S			
	# <i>Phyllanthus gasstroemii</i>				
	<i>Phyllanthus hirtellus</i> (ex <i>P thymoides</i> )	C	√	√	
	<i>Poranthera ericifolia</i>	U			
	<i>Poranthera microphylla</i>	S	√		
	<i>Ricinocarpos pinifolius</i>	S			
<b>EUPOMATIACEAE</b>	<i>Eupomatia laurina</i>	R			
<b>FABACEAE</b>	<i>Acacia brownii</i>	U	√	√	Also in ridgetop woodland
	<i>Acacia decurrens</i>				
	<i>Acacia falcata</i>	S	√	√	
	<i>Acacia floribunda</i>				
	<i>Acacia linifolia</i>	C	√	√	
	<i>Acacia longifolia</i>	C	√	√	
	<i>Acacia myrtifolia</i>	C	√	√	
	<i>Acacia parramattensis</i>	C		√	
	<i>Acacia stricta</i>	U	√		
	<i>Acacia suaveolens</i>	C	√	√	
	<i>Acacia terminalis</i>	C		√	

	<i>Acacia ulicifolia</i>	C			
	<i>Bossiaea heterophylla</i>	C			
	<i>Bossiaea obcordata</i>	C	√	√	
	<i>Bossiaea scolopendria</i>	S			
	<i>Daviesia ulicifolia</i>	S	√	√	
	# <i>Desmodium varians</i>				
	<i>Dillwynia retorta</i>	C	√	√	
	<i>Glycine clandestina</i>	C	√	√	
	<i>Glycine microphylla</i>		√		
	<i>Glycine tabacina</i> species complex	S			
	<i>Gompholobium glabratum</i>	S			
	<i>Gompholobium latifolium</i>	S			
	<i>Gompholobium pinnatum</i>	R		√	
	<i>Hardenbergia violacea</i>	C	√	√	
	<i>Hovea linearis</i> (s.str.)	S		√	
	<i>Indigofera australis</i>	R			
	<i>Kennedia rubicunda</i>	C			
	<i>Mirbelia rubiifolia</i>	S		√	
	<i>Phyllota phyllicoides</i>	C			
	<i>Platylobium formosum</i> ssp <i>formosum</i>	C	√		
	<i>Pultenaea daphnoides</i>	C			
	<i>Pultenaea elliptica</i>		√	√	
	<i>Pultenaea flexilis</i>	C			
	<i>Pultenaea mollis</i>	R			
	<i>Pultenaea paleacea</i>	R		√	
	<i>Pultenaea retusa</i>		√	√	
	<i>Pultenaea stipularis</i>	C			
	<i>Pultenaea villosa</i>	U	√		
	# <i>Sphaerolobium vimineum</i>			√	
	<i>Viminaria juncea</i>	S		√	
<b>GERANIACEAE</b>	<i>Geranium homeanum</i>	S			
	<i>Pelargonium inodorum</i>	U			
<b>GOODENIACEAE</b>	<i>Dampiera stricta</i>	C		√	
	<i>Goodenia bellidifolia</i>	S			
	<i>Goodenia hederacea</i> ssp <i>hederacea</i>	C	√	√	
	<i>Goodenia heterophylla</i> ssp <i>heterophylla</i>	S			
	<i>Goodenia ovata</i>	U			
	<i>Scaevola ramosissima</i>	S			
<b>HALORAGACEAE</b>	<i>Gonocarpus micranthus</i> ssp. <i>micranthus</i>				
	<i>Gonocarpus tetragynus</i>				
	<i>Gonocarpus teucroides</i>	C	√	√	
<b>LAMIACEAE</b>	<i>Plectranthus parviflorus</i>	U			
<b>LAURACEAE</b>	<i>Cryptocarya glaucescens</i>	R			
	# <i>Cryptocarya microneura</i>				

LOBELIACEAE	<i>Lobelia alata</i>	S			
	<i>Lobelia dentata</i>	C			
	<i>Lobelia gracilis</i>	C			
	<i>Pratia purpurascens</i>	C	√	√	
LOGANIACEAE	<i>Logania albiflora</i>	S			
	<i>Mitrasacme polymorpha</i>	C			
LORANTHACEAE	<i>Amyema congener ssp congener</i>				
	<i>Dendrophthoe vitellina</i>				
MELIACEAE	<i>Synoum glandulosum</i>	R			
MENISPERMACEAE	<i>Sarcopetalum harveyanum</i>	U			
	<i>Stephania japonica var discolor</i>	S			
MORACEAE	<i>Ficus coronata</i>	R			
	<i>Ficus rubiginosa</i>	S			
MYRSINACEAE	<i>Aegiceras corniculatum</i>				
	<i>Rapanea variabilis</i>	S			
MYRTACEAE	<i>Acmena smithii</i>	U			
	<i>Angophora bakeri</i>	S			
	<i>Angophora costata</i>	C	√	√	
	<i>Angophora floribunda</i>	S			
	<i>Austromyrtus tenuifolia</i>	U			
	<i>Backhousia myrtifolia</i>	S			
	<i>Baeckea diosmifolia</i>	S			
	<i>Baeckea linifolia</i>	S			
	<i>Callistemon citrinus</i>	U			
	<i>Callistemon linearis</i>	S			
	<i>Callistemon pinifolius</i>	R			
	<i>Callistemon salignus</i>	U			
	<i>Calytrix tetragona</i>	S			
	<i>Corymbia gummifera</i>	C		√	
	<i>Eucalyptus acmenoides</i>	R			
	<i>Eucalyptus haemastoma</i>				
	<i>Eucalyptus oblonga</i>		√		
	<i>Eucalyptus paniculata</i>	S			
	<i>Eucalyptus pilularis</i>	S			
	<i>Eucalyptus piperita</i>	C			
	<i>Eucalyptus punctata</i>	U			
	<i>Eucalyptus racemosa</i>	S		√	
	<i>Eucalyptus resinifera</i>	S	√	√	
	<i>Eucalyptus saligna</i>	S			
	<i>Kunzea ambigua</i>	C		√	
	<i>Leptospermum arachnoides</i>	S			
	<i>Leptospermum parvifolium</i>	U			
	<i>Leptospermum polygalifolium ssp polygalifolium</i>	C			
	<i>Leptospermum squarrosus</i>	S			
	<i>Leptospermum trinervium</i>	C	√	√	
	<i>Melaleuca decora</i>	R			
	<i>Melaleuca ericifolia</i>	R			

	<i>Melaleuca linariifolia</i>	S			
	<i>Melaleuca nodosa</i>				
	<i>Melaleuca stypheloides</i>	U			
	<i>Melaleuca thymifolia</i>	U-R			
	<i>Rhodamnia rubescens</i>	R			
	<i>Syncarpia glomulifera</i>	S	√		
	# <i>Syzygium australe</i>				
	<i>Tristaniopsis collina</i>	U			
	<i>Tristaniopsis laurina</i>	C			
<b>OLEACEAE</b>	<i>Notelaea longifolia</i>	C		√	
<b>OXALIDACEAE</b>	<i>Oxalis perennans</i>		√		
<b>PASSIFLORACEAE</b>	<i>Passiflora herbertiana</i> ssp <i>herbertiana</i>	R			
<b>PITTOSPORACEAE</b>	<i>Billardiera scandens</i>	C	√	√	
	<i>Bursaria spinosa</i>	C	√	√	
	<i>Citriobatus pauciflorus</i>	R			
	<i>Pittosporum revolutum</i>	S	√		
	<i>Pittosporum undulatum</i>	C	√	√	
<b>PLANTAGINACEAE</b>	<i>Plantago debilis</i>	R			
<b>POLYGALACEAE</b>	<i>Comesperma sphaerocarpum</i>	U-R			
	<i>Comesperma volubile</i>	R			
<b>POLYGONACEAE</b>	<i>Muehlenbeckia gracillima</i>	R			
	<i>Persicaria decipiens</i>				
	# <i>Persicaria hydropiper</i>				
	# <i>Persicaria lapathifolia</i>				
	# <i>Persicaria strigosa</i>				
	<i>Persicaria subsessilis</i>				
	<i>Rumex brownii</i>	S			
<b>PRIMULACEAE</b>	<i>Samolus repens</i>	C			
<b>PROTEACEAE</b>	<i>Banksia ericifolia</i> var <i>ericifolia</i>	C			
	<i>Banksia marginata</i>				
	<i>Banksia oblongifolia</i>	C			
	<i>Banksia serrata</i>	C			
	<i>Banksia spinulosa</i> var <i>spinulosa</i>	C		√	
	<i>Grevillea buxifolia</i>	C			
	# <i>Grevillea mucronulata</i>				
	<i>Grevillea sericea</i>	C	√	√	
	<i>Hakea dactyloides</i> (s.str.)	S	√	√	
	<i>Hakea salicifolia</i> ssp <i>salicifolia</i>	S			
	<i>Hakea sericea</i>	C	√		
	<i>Isopogon anemonifolius</i>	S			
	<i>Lambertia formosa</i>	C		√	
	<i>Lomatia silaifolia</i>	C	√	√	
	<i>Persoonia lanceolata</i>	C		√	
	<i>Persoonia laurina</i> ssp <i>laurina</i>	S		√	
	<i>Persoonia levis</i>	C	√	√	
	<i>Persoonia linearis</i>	C			
	<i>Persoonia pinifolia</i>	S			

	<i>Petrophile pulchella</i>	S		√	
	<i>Telopea speciosissima</i>	R			
	<i>Xylomelum pyriforme</i>	S		√	
<b>RANUNCULACEAE</b>	<i>Clematis aristata</i>	C			
	<i>Clematis glycinoides</i>	C	√		
	<i>Ranunculus plebeius</i>	R			
<b>RHAMNACEAE</b>	<i>Pomaderris discolor</i>		√		
	<i>Pomaderris elliptica</i>		√		
	<i>Pomaderris lanigera</i>	U			
<b>ROSACEAE</b>	<i>Rubus parvifolius</i>	R			
	<i>Rubus rosifolius</i>	R			
<b>RUBIACEAE</b>	<i>Morinda jasminoides</i>	S			
	<i>Opercularia aspera</i>	C			
	<i>Opercularia varia</i>	S		√	
	<i>Pomax umbellata</i>	C	√	√	
	<i>Psychotria ioniceroides</i>	R			
<b>RUTACEAE</b>	<i>Boronia ledifolia</i>	S			
	<i>Boronia polygalifolia</i> (FMR 1993)	R			
	<i>Correa reflexa</i> var <i>reflexa</i> (pale yellow flowered)	S			
	<i>Leionema dentatum</i>	U			
	<i>Melicope micrococca</i>	R			
	<i>Zieria laevigata</i>	R			
	<i>Zieria pilosa</i>	C			
	<i>Zieria smithii</i>	C	√		
<b>SANTALACEAE</b>	<i>Exocarpos cupressiformis</i>	S			
	<i>Leptomeria acida</i>	S			
<b>SAPINDACEAE</b>	<i>Alectryon subcinereus</i>	R			
	<i>Dodonaea triquetra</i>	C	√	√	
	<i>Guioa semiglauc</i>	R			
<b>SCROPHULARIACEAE</b>	<i>Veronica plebeia</i>	C		√	
<b>SOLANACEAE</b>	<i>Solanum prinophyllum</i>	R			
	<i>Solanum vescum</i>				
<b>STERCULIACEAE</b>	<i>Lasiopetalum ferrugineum</i> var. <i>ferrugineum</i>	C	√		
<b>STYLIDIACEAE</b>	<i>Stylidium graminifolium</i>	S	√		
	<i>Stylidium productum</i>	S			
<b>THYMELAEACEAE</b>	+ <i>Pimelea curviflora</i> ssp <i>curviflora</i>			√	
	<i>Pimelea linifolia</i>	C	√	√	
<b>ULMACEAE</b>	<i>Trema tomentosa</i> var. <i>viridis</i>				
<b>VERBENACEAE</b>	<i>Cleodendrum tomentosum</i>	U			
<b>VIOLACEAE</b>	<i>Viola hederacea</i>	C			
<b>VITACEAE</b>	<i>Cayratia clematidea</i>				
	<i>Cissus antarctica</i>				
	<i>Cissus hypoglauc</i>				

Angiosperms-Monocotyledons		CS	Turpentine- Ironbark Margin Forest	Shale- Sandstone Transition Forest	Sand Track/Rid- getop Woodland
ARACEAE	<i>Gymnostachys anceps</i>	R			
ARECACEAE	<i>Livistona australis</i>	R			
CENTROLEPIDACEAE	<i>Centrolepis strigosa</i> var <i>strigosa</i>				
COMMELINACEAE	# <i>Aneilema acuminatum</i>				
	<i>Commelina cyanea</i>	S			
CYPERACEAE	<i>Baumea juncea</i>	S			
	<i>Carex inversa</i>	S			
	<i>Caustis flexuosa</i>	C			
	<i>Cyathochaeta diandra</i>	C			
	# <i>Cyperus gracilis</i>				
	# <i>Cyperus exaltatus</i>				
	# <i>Cyperus imbecillis</i>				
	# <i>Cyperus polystachyos</i>				
	# <i>Cyperus sphaeroides</i>				
	<i>Cyperus tetraphyllus</i>	R			
	<i>Fimbristylis dichotoma</i>	R			
	<i>Gahnia clarkei</i>	S			
	<i>Gahnia erythrocarpa</i>	C			
	<i>Gahnia melanocarpa</i>	U			
	# <i>Gahnia sieberiana</i>				
	<i>Isolepis cernua</i>	R			
	# <i>Isolepis inundata</i>	R			
	<i>Lepidosperma filiforme</i>				
	<i>Lepidosperma gunni</i>	S			
	<i>Lepidosperma laterale</i>	C	√	√	
	<i>Lepidosperma neesii</i>	S			
	<i>Lepidosperma urophorum</i>	U			
	<i>Ptilothrix deusta</i>	C			
	<i>Schoenus apogon</i>	S			
	<i>Schoenus ericetorum</i>	S			
	<i>Schoenus imberbis</i>	S			
	<i>Schoenus melanostachys</i>	C			
	<i>Tetraria capillaris</i>	C			
HAEMODORACEAE	<i>Haemodorum corymbosum</i>	U			
	<i>Haemodorum planifolium</i>	C			
IRIDACEAE	<i>Patersonia glabrata</i>	C			
	<i>Patersonia sericea</i>	C			
JUNCACEAE	<i>Juncus continuous</i>				
	<i>Juncus kraussii</i>	S			
	<i>Juncus planifolius</i>				
	# <i>Juncus usitatus</i>				
JUNCAGINACEAE	<i>Triglochin striata</i>	U			
LILIACEAE	<i>Arthropodium milleflorum</i> (s.lat.)	U-R			
	<i>Blandfordia nobilis</i>	S			

	<i>Burchardia umbellata</i>	C		√	
	<i>Caesia parviflora</i>	S	?		
	<i>Dianella caerulea</i>	C	√	√	
	<i>Dianella revoluta</i>	S		√	
	<i>Laxmannia gracilis</i> (s.str.)	C		√	
	<i>Thysanotus tuberosus</i>	C			
	<i>Tricoryne simplex</i>	C			
<b>LOMANDRACEAE</b>	<i>Lomandra cylindrica</i>	S		√	
	# <i>Lomandra filiformis</i> ssp. <i>correacea</i>			√	
	<i>Lomandra filiformis</i> ssp. <i>filiformis</i>	S	√	√	
	<i>Lomandra glauca</i>	S			
	<i>Lomandra gracilis</i>	S	√		
	<i>Lomandra longifolia</i>	C	√	√	
	<i>Lomandra micrantha</i>	S			
	<i>Lomandra multiflora</i> ssp <i>multiflora</i>	C	√		
	<i>Lomandra obliqua</i>	C	√	√	
<b>ORCHIDACEAE</b>	<i>Acianthus caudatus</i> var. <i>caudatus</i>	U			
	<i>Acianthus fornicatus</i>	C			
	<i>Acianthus pusillus</i>				
	<i>Caladenia caerulea</i> (late 1980 FMR)				
	<i>Caladenia carnea</i>	U			
	<i>Caladenia catenata</i>	C		√	√
	<i>Caladenia testacea</i> (FMR 1993)	R			
	<i>Caleana major</i>	S			
	<i>Calochilus</i> sp				
	<i>Calochilus campestris</i>	U			
	<i>Calochilus gracillimus</i>	U-R			
	<i>Calochilus paludosus</i>	S			
	<i>Calochilus robertsonii</i>	C			√
	<i>Corybas aconitiflorus</i>	U			
	<i>Cryptostylis erecta</i>	C			
	<i>Cryptostylis subulata</i>	S			
	<i>Dendrobium linguiforme</i>	U			
	<i>Dipodium variegatum</i>	C			
	<i>Diuris aurea</i> (FMR 2003)	R			
	<i>Diuris maculata</i>	R			
	<i>Genoplesium fimbriatum</i>	U-R			
	<i>Genoplesium rufum</i>	U-R			
	<i>Glossodia major</i>	R			
	<i>Glossodia minor</i>				
	<i>Microtis unifolia</i> (s.lat.)				
	<i>Prasophyllum</i> sp				
	<i>Prasophyllum brevilabre</i>	R			
	<i>Pterostylis acuminata</i>	S			

	<i>Pterostylis concinna</i>	S			
	<i>Pterostylis longifolia</i>	U			
	<i>Pterostylis nutans</i>	C			
	<i>Thelymitra ixioides</i> var <i>ixioides</i>	S			
	<i>Thelymitra pauciflora</i> (FMR 1993)	U-R			
<b>PHILESIACEAE</b>	# <i>Eustrephus latifolius</i>				
	# <i>Geitonoplesium cymosum</i>				
<b>POACEAE</b>	<i>Anisopogon avenaceus</i>	C		√	
	<i>Aristida ramosa</i> var <i>ramosa</i>		?		
	<i>Aristida vagans</i>	C	√	√	
	<i>Aristida warburgii</i> (FMR)				
	<i>Austrodanthonia fulva</i> (FMR)				
	<i>Austrodanthonia pilosa</i>				
	<i>Austrodanthonia racemosa</i>				
	<i>Austrostipa pubescens</i>	C		√	
	<i>Austrostipa ramossissima</i>				
	<i>Austrostipa rudis</i> ssp <i>nervosa</i>	S			
	# <i>Bothriochloa macra</i>				
	<i>Cymbopogon refractus</i>	S			
	<i>Deyeuxia quadriseta</i>	S			
	<i>Dichelachne crinita</i>	U			
	<i>Dichelachne micrantha</i>			√	
	<i>Dichelachne rara</i>				
	# <i>Digitaria parviflora</i>				
	<i>Echinopogon caespitosus</i>	C	√	√	
	# <i>Echinopogon ovata</i>				
	<i>Entolasia marginata</i>	S			
	<i>Entolasia stricta</i>	C	√	√	
	<i>Eragrostis brownii</i>			√	
	# <i>Eragrostis lephostachya</i>				
	<i>Imperata cylindrica</i> var <i>major</i>	C	√		
	<i>Lachnagrostis filiformis</i>	S		√	
	<i>Microlaena stipoides</i> var. <i>stipoides</i>	C	√	√	
	<i>Oplismenus aemulus</i>	S			
	<i>Oplismenus imbecillis</i>	S			
	<i>Panicum simile</i>	S		√	
	# <i>Paspalidium distans</i>				
	<i>Phragmites australis</i>				
	<i>Poa affinis</i>				
	# <i>Poa labillardieri</i>				
	<i>Sporobolus virginicus</i> var <i>virginicus</i>	S			
	<i>Tetrarrhena juncea</i>				
	<i>Themeda australis</i>	C	√	√	
<b>RESTIONACEAE</b>	<i>Lepyrodia scariosa</i>	C			
	<i>Leptocarpus tenax</i>				
<b>SMILACACEAE</b>	<i>Ripogonum album</i>	R			

	<i>Smilax australis</i>				
	<i>Smilax glycyphylla</i>	C			
SPARGANIACEAE	# <i>Sparganium subglobosum</i>				
TYPHACEAE	<i>Typha orientalis</i>				
XANTHORRHOEACEAE	<i>Xanthorrhoea arborea</i>	C			
	<i>Xanthorrhoea media ssp. media</i>	C			
	<i>Xanthorrhoea minor</i>		√	√	
	<i>Xanthorrhoea resinifera</i>	U-R			
XYRIDACEAE	<i>Xyris gracilis ssp gracilis</i>	R			

### KITTYS CREEK CATCHMENT NATIVE PLANTS

		CS	Pryor Park	Portius Park/Kittys Creek Reserve	Martin Reserve
FAMILY	SPECIES NAME				
<b>Pteridiophytes</b>					
ADIANTACEAE	<i>Adiantum aethiopicum</i>	C	√		√
	<i>Adiantum hispidulum</i>	S			
ASPLENIACEAE	<i>Asplenium australasicum</i>	U			
	<i>Asplenium flabellifolium</i>	S		√	
ATHYRIACEAE	<i>Diplazium australe</i>	R			
BLECHNACEAE	<i>Blechnum ambiguum</i>	S			
	<i>Blechnum cartilagineum</i>	C		√	
	<i>Doodia aspera</i>	S	√		
	<i>Doodia australis</i>	R			
	<i>Doodia caudata</i> var <i>caudata</i>	S			
CYATHEACEAE	<i>Cyathea australis</i>	C			
DENNSTAEDTIACEAE	<i>Histiopteris incisa</i>	S			
	<i>Hypolepis muelleri</i>	S	√	√	√
	<i>Pteridium esculentum</i>	C	√	√	√
	<i>Calochlaena dubia</i>	C	√	√	√
DRYOPTERIDACEAE	# <i>Lastreopsis decomposita</i>	C			
GLEICHENIACEAE	<i>Gleichenia dicarpa</i>	C			√
	<i>Gleichenia microphylla</i>	S			
	<i>Sticherus flabellatus</i>	S			
HYMENOPHYLLACEAE	<i>Hymenophyllum cupressiforme</i>	R			
LINDSAEACEAE	<i>Lindsaea linearis</i>	C		√	
	<i>Lindsaea microphylla</i>	C	√	√	
OSMUNDCEAE	<i>Todea barbata</i>	S			
POLYPODIACEAE	<i>Platynerium bifurcatum ssp bifurcatum</i>	S		√	
	<i>Pyrrhosia rupestris</i>	U			
PSILOACEAE	<i>Psilotum nudum</i>	R			

PTERIDIACEAE	<i>Pteris tremula</i>	U			√
	# <i>Pteris umbrosa</i>				
SHIZAEACEAE	<i>Schizaea asperula</i>				
	<i>Schizaea bifida</i> (s.str.)	S			
SINIPTERIDACEAE	<i>Cheilanthes distans</i>	R			
	<i>Cheilanthes sieberi</i>	C			
	<i>Pellaea falcata</i> var <i>falcata</i>	S			√
THELYPTERIDACEAE	<i>Christella dentata</i>	S			√

		CS	Pryor Park	Portius Park/ Kittys Creek Reserve	Martin Reserve
<b>Angiosperms-Dicotyledons</b>					
ACANTHACEAE	<i>Brunoniella australis</i>	R			
	<i>Brunoniella pumilio</i>	S			
	<i>Pseuderanthemum variabile</i>	C	√		
AIZOACEAE	<i>Tetragonia tetragonoides</i>	S			
AMARANTHACEAE	<i>Alternanthera denticulata</i>	C			
APIACEAE	<i>Actinotus helianthi</i>	C		√	
	<i>Actinotus minor</i>	C			
	<i>Centella asiatica</i>	S		√	√
	<i>Hydrocotyle peduncularis</i>	C		√	√
	<i>Hydrocotyle tripartita</i>	R			
	<i>Platysace lanceolata</i>	C			
	<i>Platysace linearifolia</i>	C			
	<i>Trachymene incisa</i> ssp <i>incisa</i>	R			
	<i>Xanthosia pilosa</i>	C	√	√	
	<i>Xanthosia tridentata</i>	C			
APOCYNACEAE	<i>Parsonsia straminea</i>	U			
ARACEAE	# <i>Alocasia brisbanensis</i>				
ARALIACEAE	<i>Astrotricha longifolia</i>	S		√	
	<i>Polyscias sambucifolia</i>	C	√	√	√
ASCLEPIADACEAE	<i>Marsdenia suaveolens</i>	S			
	<i>Tylophora barbata</i>	S			
ASTERACEAE	<i>Cassinia aculeata</i>	U			
	<i>Epaltes australis</i>	R			
	<i>Euchiton gymnocephalus</i>	R			
	<i>Helichrysum scorpioides</i>	U-R			
	<i>Olearia microphylla</i>	S		√	
	<i>Olearia viscidula</i>	R			
	<i>Ozothamnus adnatus</i>	R			
	<i>Ozothamnus diosmifolius</i>	C		√	√
	<i>Senecio hispidulus</i> var. <i>hispidulus</i>				
	<i>Sigesbeckia orientalis</i> ssp <i>orientalis</i>	S	√		√

AVICENNIACEAE	<i>Avicennia marina</i> var <i>australasica</i>	C			
BAUERACEAE	<i>Bauera rubioides</i>	S		√	
BIGNONIACEAE	<i>Pandorea pandorana</i>	C		√	
CAMPANULACEAE	<i>Wahlenbergia communis</i> (s. lat.)				
	<i>Wahlenbergia gracilis</i>	C		√	√
	<i>Wahlenbergia stricta</i>	R			
CASSYTHACEAE	<i>Cassytha glabella</i>				
	<i>Cassytha pubescens</i>			√	
CASUARINACEAE	<i>Allocasuarina littoralis</i>	C	√	√	√
	<i>Allocasuarina torulosa</i>	C			
	<i>Casuarina glauca</i>	C		√	
CELASTRACEAE	<i>Cassine australis</i> var <i>australis</i>	R			
	<i>Celastrus subspicata</i>	R			
	<i>Maytenis silvestris</i>	U			
CHENOPODIACEAE	<i>Einadia hastata</i>	S			
	# <i>Einadia polygonoides</i> ?				
	<i>Sarcocornia quinqueflora</i> ssp <i>quinqueflora</i>	S			
	<i>Suaeda australis</i>				
CLUSIACEAE	<i>Hypericum gramineum</i>	S			
CONVOLVULACEAE	<i>Calystegia marginata</i>	R			
	<i>Calystegia sepium</i>	R?			
	<i>Convolvulus erubescens</i>	R			
	<i>Dichondra repens</i> (s.lat.)	S		√	√
	<i>Polymeria calycina</i>				
CUNONIACEAE	<i>Aphanopetalum resinosum</i>	R			
	<i>Callicoma serratifolia</i>	C	√	√	√
	<i>Ceratopetalum apetalum</i>	S		√	
	<i>Ceratopetalum</i> <i>gummiferum</i>	C	√	√	√
	<i>Schizomeria ovata</i>	R			
DILLENIACEAE	<i>Hibbertia aspera</i>	C			
	<i>Hibbertia dentata</i>	S			
	<i>Hibbertia fasciculata</i>	S			
	<i>Hibbertia linearis</i>	C		√	
	<i>Hibbertia riparia</i> (s.lat.)	U			
	<i>Hibbertia scandens</i>	R			
DROSERACEAE	<i>Drosera auriculata</i>	C			
	<i>Drosera peltata</i>	C			
ELAEOCARPACEAE	<i>Elaeocarpus reticulatus</i>	C	√	√	√
EPACRIDACEAE	<i>Astroloma humifusum</i>	R		√Portius	
	<i>Brachyloma daphnoides</i>	S			
	<i>Dracophyllum secundum</i>	U			
	<i>Epacris microphylla</i>	S			
	<i>Epacris pulchella</i>	C			

	+ <i>Epacris purpurascens</i> var <i>purpurascens</i>	S			
	<i>Leucopogon ericoides</i>	S		√	
	<i>Leucopogon juniperinus</i>	S	√		
	<i>Leucopogon lanceolatus</i>	S			
	<i>Leucopogon microphyllus</i>	C			
	<i>Melichrus procumbens</i>	U			
	<i>Monotoca elliptica</i>	S			
	<i>Monotoca scoparia</i>	C			
	<i>Styphelia longifolia</i>	U-R			
	<i>Styphelia triflora</i>	U			
	<i>Styphelia tubiflora</i>	U			
	<i>Trococarpa laurina</i>	R			
	<i>Woolsia pungens</i>	C		√	
<b>EUPHORBIACEAE</b>	<i>Amperea xiphioclada</i> var <i>papillata</i>	C			
	<i>Breynia oblongifolia</i>	C			√
	<i>Glochidion ferdinandi</i>	C	√	√	√
	<i>Micrantheum ericoides</i>	C		√	
	<i>Omalanthus nutans</i>	S	√	√	√
	# <i>Phyllanthus gasstroemii</i>				
	<i>Phyllanthus hirtellus</i> (ex <i>P</i> <i>thymoides</i> )	C			
	<i>Poranthera ericifolia</i>	U			
	<i>Poranthera microphylla</i>	S			√
	<i>Ricinocarpos pinifolius</i>	S			
<b>EUPOMATIACEAE</b>	<i>Eupomatia laurina</i>	R			
<b>FABACEAE</b>	<i>Acacia binervia</i>	R		√ p Kittys Creek	
	<i>Acacia brownii</i>				
	<i>Acacia decurrens</i>				
	<i>Acacia falcata</i>	S		√p	√p
	<i>Acacia floribunda</i>				√
	<i>Acacia linifolia</i>	C	√	√	√p
	<i>Acacia longifolia</i>	C	√	√	√
	<i>Acacia myrtifolia</i>	C			
	<i>Acacia parramattensis</i>	C		√	√
	<i>Acacia stricta</i>	U			
	<i>Acacia suaveolens</i>	C	√	√	√p
	<i>Acacia terminalis</i>	C		√	√p
	<i>Acacia ulicifolia</i>	C		√	
	<i>Bossiaea heterophylla</i>	C		√	
	<i>Bossiaea obcordata</i>	C			
	<i>Bossiaea scolopendria</i>	S			
	<i>Daviesia ulicifolia</i>	S			
	# <i>Desmodium varians</i>				
	<i>Dillwynia retorta</i>	C		√	
	<i>Glycine clandestina</i>	C		√	
	<i>Glycine microphylla</i>			√	

	<i>Glycine tabacina</i> species complex	S			
	<i>Gompholobium glabratum</i>	S			
	<i>Gompholobium latifolium</i>	S		√	
	<i>Gompholobium pinnatum</i>	R			
	<i>Hardenbergia violacea</i>	C		√	
	<i>Hovea linearis</i> (s.str.)	S			
	<i>Indigofera australis</i>	R			
	<i>Kennedia rubicunda</i>	C	√	√	√ <sub>p</sub>
	<i>Mirbelia rubiifolia</i>	S			
	<i>Phyllota phyllicoides</i>	C			
	<i>Platylobium formosum</i> ssp <i>formosum</i>	C	√		
	<i>Pultenaea daphnoides</i>	C			
	<i>Pultenaea flexilis</i>	C			
	<i>Pultenaea mollis</i>	R			
	<i>Pultenaea paleacea</i>	R			
	<i>Pultenaea retusa</i>				
	<i>Pultenaea stipularis</i>	C			
	<i>Pultenaea villosa</i>	U			
	# <i>Sphaerolobium vimineum</i>				
	<i>Viminaria juncea</i>	S			
<b>GERANIACEAE</b>	<i>Geranium homeanum</i>	S		√	√
	<i>Pelargonium inodorum</i>	U			
<b>GOODENIACEAE</b>	<i>Dampiera stricta</i>	C			
	<i>Goodenia bellidifolia</i>	S			
	<i>Goodenia hederacea</i> ssp <i>hederacea</i>	C			
	<i>Goodenia heterophylla</i> ssp <i>heterophylla</i>	S			
	<i>Goodenia ovata</i>	U			
	<i>Scaevola ramosissima</i>	S			
<b>HALORAGACEAE</b>	<i>Gonocarpus micranthus</i> ssp. <i>micranthus</i>				
	<i>Gonocarpus tetragynus</i>				
	<i>Gonocarpus teucrioides</i>	C		√	√
<b>LAMIACEAE</b>	<i>Plectranthus parviflorus</i>	U			
<b>LAURACEAE</b>	<i>Cryptocarya glaucescens</i>	R			
	# <i>Cryptocarya microneura</i>				
<b>LOBELIACEAE</b>	<i>Lobelia alata</i>	S			
	<i>Lobelia dentata</i>	C			
	<i>Lobelia gracilis</i>	C		√	
	<i>Pratia purpurascens</i>	C	√		√
<b>LOGANIACEAE</b>	<i>Logania albiflora</i>	S			
	<i>Mitrasacme polymorpha</i>	C		√	
<b>LORANTHACEAE</b>	<i>Amyema congener</i> ssp <i>congener</i>				
	<i>Dendrophthoe vitellina</i>				

MELIACEAE	<i>Synoum glandulosum</i>	R			
MENISPERMACEAE	<i>Sarcopetalum harveyanum</i>	U			
	<i>Stephania japonica</i> var <i>discolor</i>	S			
MORACEAE	<i>Ficus coronata</i>	R			
	<i>Ficus rubiginosa</i>	S			
MYRSINACEAE	<i>Aegiceras corniculatum</i>				
	<i>Rapanea variabilis</i>	S			
MYRTACEAE	<i>Acmena smithii</i>	U		√	
	<i>Angophora bakeri</i>	S		√ Kittys Creek	
	<i>Angophora costata</i>	C	√	√	√
	<i>Angophora floribunda</i>	S			
	<i>Angophora hispida</i>				
	<i>Austromyrtus tenuifolia</i>	U			
	<i>Backhousia myrtifolia</i>	S			
	<i>Baeckea diosmifolia</i>	S			
	<i>Baeckea linifolia</i>	S			
	<i>Callistemon citrinus</i>	U	√ p?	√	√ p
	<i>Callistemon linearis</i>	S	√	√ p	
	<i>Callistemon pinifolius</i>	R			
	<i>Callistemon salignus</i>	U			
	<i>Calytrix tetragona</i>	S			
	<i>Corymbia gummifera</i>	C		√	
	<i>Eucalyptus acmenoides</i>	R			
	<i>Eucalyptus haemastoma</i>			√	
	<i>Eucalyptus oblonga</i>				
	<i>Eucalyptus paniculata</i>	S	√		
	<i>Eucalyptus pilularis</i>	S	√	√	√
	<i>Eucalyptus piperita</i>	C		√	
	<i>Eucalyptus punctata</i>	U			
	<i>Eucalyptus racemosa</i>	S			
	<i>Eucalyptus resinifera</i> ssp <i>resinifera</i>	S	√	√	√
	<i>Eucalyptus saligna</i>	S	√		√?
	<i>Eucalyptus tereticornis</i>				
	<i>Kunzea ambigua</i>	C	√		√
	<i>Leptospermum arachnoides</i>	S			
	<i>Leptospermum parvifolium</i>	U			
	<i>Leptospermum polygalifolium</i> ssp <i>polygalifolium</i>	C			
	<i>Leptospermum squarrosum</i>	S			
	<i>Leptospermum trinervium</i>	C		√	
	<i>Melaleuca decora</i>	R			
	<i>Melaleuca ericifolia</i>	R			
	<i>Melaleuca linariifolia</i>	S			√
	<i>Melaleuca nodosa</i>				

	<i>Melaleuca quinquenervia</i>			√p Kittys Creek	√p
	<i>Melaleuca stypheloides</i>	U			
	<i>Melaleuca thymifolia</i>	U-R			
	<i>Rhodamnia rubescens</i>	R			
	<i>Syncarpia glomulifera</i>	S	√	√	√
	# <i>Syzygium australe</i>				
	<i>Tristaniopsis collina</i>	U			
	<i>Tristaniopsis laurina</i>	C	√p	√	√p
<b>OLEACEAE</b>	<i>Notelaea longifolia</i>	C	√		
<b>OXALIDACEAE</b>	# <i>Oxalis perennans</i>				√
<b>PASSIFLORACEAE</b>	<i>Passiflora herbertiana</i> ssp <i>herbertiana</i>	R			
<b>PITTIOSPORACEAE</b>	<i>Billardiera scandens</i>	C	√	√	
	<i>Bursaria spinosa</i>	C		√	√
	<i>Citriobatus pauciflorus</i>	R			
	<i>Pittosporum revolutum</i>	S			
	<i>Pittosporum undulatum</i>	C	√	√	√
<b>PLANTAGINACEAE</b>	<i>Plantago debilis</i>	R			
<b>POLYGALACEAE</b>	<i>Comesperma ericineium</i>				
	<i>Comesperma</i> <i>sphaerocarpum</i>	U-R			
	<i>Comesperma volubile</i>	R			
<b>POLYGONACEAE</b>	<i>Muehlenbeckia gracillima</i>	R			
	<i>Persicaria decipiens</i>				
	# <i>Persicaria hydropiper</i>		√		√
	# <i>Persicaria lapathifolia</i>		√		
	# <i>Persicaria strigosa</i>				
	<i>Persicaria subsessilis</i>				
	<i>Rumex brownii</i>	S			
<b>PRIMULACEAE</b>	<i>Samolus repens</i>	C			
<b>PROTEACEAE</b>	<i>Banksia ericifolia</i> var <i>ericifolia</i>	C			
	<i>Banksia integrifolia</i>				√p
	<i>Banksia marginata</i>				
	<i>Banksia oblongifolia</i>	C			
	<i>Banksia serrata</i>	C	√	√	
	<i>Banksia spinulosa</i> var <i>spinulosa</i>	C	√	√	
	<i>Grevillea buxifolia</i>	C		√	
	<i>Grevillea linifolia</i>				
	# <i>Grevillea mucronulata</i>				
	<i>Grevillea sericea</i>	C		√	√
	<i>Hakea dactyloides</i> (s.str.)	S			
	<i>Hakea salicifolia</i> ssp <i>salicifolia</i>	S			√
	<i>Hakea sericea</i>	C	√	√	
	<i>Isopogon anemonifolius</i>	S			
	<i>Lambertia formosa</i>	C		√	

	<i>Lomatia silaifolia</i>	C	√	√	
	<i>Persoonia lanceolata</i>	C			
	<i>Persoonia laurina</i>	S			
	<i>Persoonia levis</i>	C		√	
	<i>Persoonia linearis</i>	C			
	<i>Persoonia pinifolia</i>	S			
	<i>Petrophile pulchella</i>	S		√	
	<i>Telopea speciosissima</i>	R			
	<i>Xylomelum pyriforme</i>	S			
<b>RANUNCULACEAE</b>	<i>Clematis aristata</i>	C			√
	<i>Clematis glycinoides</i>	C			√
	<i>Ranunculus plebeius</i>	R			
<b>RHAMNACEAE</b>	<i>Pomaderris discolor</i>				√ <sub>p</sub>
	<i>Pomaderris elliptica</i>				
	<i>Pomaderris lanigera</i>	U	√ <sub>p</sub>		√ <sub>p</sub>
<b>ROSACEAE</b>	<i>Rubus parvifolius</i>	R			
	<i>Rubus rosifolius</i>	R			
<b>RUBIACEAE</b>	<i>Morinda jasminoides</i>	S			
	<i>Opercularia aspera</i>	C	√	√	
	<i>Opercularia varia</i>	S			
	<i>Pomax umbellata</i>	C		√	
	<i>Psychotria ioniceroides</i>	R			
<b>RUTACEAE</b>	<i>Boronia ledifolia</i>	S			
	<i>Boronia polygalifolia</i> (FMR 1993)	R			
	<i>Correa reflexa</i> var <i>reflexa</i> (pale yellow flowered)	S			
	<i>Leionema dentatum</i>	U			
	<i>Melicope micrococca</i>	R			
	<i>Zieria laevigata</i>	R			
	<i>Zieria pilosa</i>	C		√ Kitty's Creek	
	<i>Zieria smithii</i>	C	√	√	
<b>SANTALACEAE</b>	<i>Exocarpos cupressiformis</i>	S			
	<i>Leptomeria acida</i>	S			
<b>SAPINDACEAE</b>	<i>Alectryon subcinereus</i>	R			
	<i>Dodonaea triquetra</i>	C	√	√	√
	<i>Guioa semiglauca</i>	R			
<b>SCROPHULARIACEAE</b>	<i>Veronica plebeia</i>	C		√	
<b>SOLANACEAE</b>	<i>Solanum aviculare</i>	S	√		√
	<i>Solanum prinophyllum</i>	R			
<b>STERCULIACEAE</b>	<i>Lasiopetalum ferrugineum</i> var. <i>ferrugineum</i>	C			
<b>STYLIDIACEAE</b>	<i>Stylidium graminifolium</i>	S			
	<i>Stylidium productum</i>	S			
<b>THYMELAEACEAE</b>	+ <i>Pimelea curviflora</i> ssp <i>curviflora</i>				
	<i>Pimelea linifolia</i>	C		√	
<b>ULMACEAE</b>	<i>Trema tomentosa</i> var <i>viridis</i>				

VERBENACEAE	<i>Cleodendrum tomentosum</i>				
VIOLACEAE	<i>Viola hederacea</i>	C			
VITACEAE	<i>Cayratia clematidea</i>				√
	<i>Cissus antarctica</i>				
	<i>Cissus hypoglauca</i>				

Angiosperms-Monocotyledons		CS	Pryor Park	Portius Park/ Kittys creek Reserve	Martin Reserve
ARACEAE	<i>Gymnostachys anceps</i>	R			
ARECACEAE	<i>Livistona australis</i>	R			
CENTROLEPIDACEAE	<i>Centrolepis strigosa</i> var <i>strigosa</i>				
COMMELINACEAE	# <i>Aneilema acuminatum</i>				
	<i>Commelina cyanea</i>	S		√	√
CYPERACEAE	<i>Baumea juncea</i>	S			
	<i>Carex inversa</i>	S			
	<i>Caustis flexuosa</i>	C	√	√	
	<i>Cyathochaeta diandra</i>	C			
	# <i>Cyperus gracilis</i>				
	# <i>Cyperus exaltatus</i>				
	# <i>Cyperus imbecillis</i>				√
	# <i>Cyperus polystachyos</i>				
	# <i>Cyperus sphaeroides</i>				
	<i>Cyperus tetraphyllus</i>	R			
	<i>Fimbristylis dichotoma</i>	R			
	<i>Gahnia clarkei</i>	S			
	<i>Gahnia erythrocarpa</i>	C		√	
	<i>Gahnia melanocarpa</i>	U			
	# <i>Gahnia sieberiana</i>				
	<i>Isolepis cernua</i>	R			
	# <i>Isolepis inundata</i>	R			√
	<i>Isolepis nodosa</i>	U		√	
	<i>Lepidosperma filiforme</i>				
	<i>Lepidosperma gunni</i>	S		√	
	<i>Lepidosperma laterale</i>	C	√		
	<i>Lepidosperma neesii</i>	S			
	<i>Lepidosperma urophorum</i>	U			
	<i>Ptilothrix deusta</i>	C			
	<i>Schoenus apogon</i>	S			
	<i>Schoenus ericetorum</i>	S			
	<i>Schoenus imberbis</i>	S			
	<i>Schoenus melanostachys</i>	C	√		
	<i>Tetraria capillaris</i>	C	√		
HAEMODORACEAE	<i>Haemodorum corymbosum</i>	U			
	<i>Haemodorum planifolium</i>	C			
IRIDACEAE	<i>Patersonia glabrata</i>	C			

	<i>Patersonia sericea</i>	C			
<b>JUNCACEAE</b>	<i>Juncus continuous</i>				
	<i>Juncus kraussii</i>	S			
	<i>Juncus planifolius</i>				
	# <i>Juncus usitatus</i>			√p	
<b>JUNCAGINACEAE</b>	<i>Triglochin striata</i>	U			
<b>LILIACEAE</b>	<i>Arthropodium milleflorum</i> (s.lat.)	U-R			
	<i>Blandfordia nobilis</i>	S			
	<i>Burchardia umbellata</i>	C			
	<i>Caesia parviflora</i>	S			
	<i>Dianella caerulea</i>	C	√	√	√
	<i>Dianella revoluta</i>	S		√ Kittys Creek	
	<i>Laxmannia gracilis</i> (s.str.)	C			
	<i>Thysanotus tuberosus</i>	C			
	<i>Tricoryne simplex</i>	C			
<b>LOMANDRACEAE</b>	<i>Lomandra cylindrica</i>	S			
	# <i>Lomandra filiformis</i> ssp. <i>correacea</i>				
	<i>Lomandra filiformis</i> ssp. <i>filiformis</i>	S		√	
	<i>Lomandra glauca</i>	S			
	<i>Lomandra gracilis</i>	S			
	<i>Lomandra longifolia</i>	C	√	√	√
	<i>Lomandra micrantha</i>	S			
	<i>Lomandra multiflora</i> ssp <i>multiflora</i>	C			
	<i>Lomandra obliqua</i>	C	√	√	
<b>ORCHIDACEAE</b>	<i>Acianthus caudatus</i> var. <i>caudatus</i>	U			
	<i>Acianthus fornicatus</i>	C			
	<i>Acianthus pusillus</i>				
	<i>Cryptostylis erecta</i>	C		√	
	<i>Cryptostylis subulata</i>	S			
	<i>Pterostylis acuminata</i>	S			
	<i>Pterostylis concinna</i>	S			
	<i>Pterostylis longifolia</i>	U			
	<i>Pterostylis nutans</i>	C			
<b>PHILESIACEAE</b>	# <i>Eustrephus latifolius</i>				
	# <i>Geitonoplesium</i> <i>cymosum</i>				
<b>POACEAE</b>	<i>Anisopogon avenaceus</i>	C		√	
	<i>Aristida ramosa</i> var <i>ramosa</i>				
	<i>Aristida vagans</i>	C			
	<i>Austrodanthonia tenuior</i>			√	
	<i>Austrodanthonia pilosa</i>				
	<i>Austrodanthonia</i> <i>racemosa</i>				

	<i>Austrostipa pubescens</i>	C		√	
	<i>Austrostipa ramossissima</i>				
	<i>Austrostipa rudis</i> ssp <i>nervosa</i>	S			
	# <i>Bothriochloa macra</i>				√ corner Pittwater & Bronhill Roads
	<i>Cymbopogon refractus</i>	S			
	<i>Deyeuxia quadriseta</i>	S			
	<i>Dichelachne crinita</i>	U			
	<i>Dichelachne micrantha</i>				
	<i>Dichelachne rara</i>				
	# <i>Digitaria parviflora</i>			√	
	<i>Echinopogon caespitosus</i>	C			√
	# <i>Echinopogon ovata</i>				√
	<i>Entolasia marginata</i>	S	√		√
	<i>Entolasia stricta</i>	C	√	√	
	<i>Eragrostis brownii</i>				
	# <i>Eragrostis lephostachya</i>				
	<i>Imperata cylindrica</i> var <i>major</i>	C			√
	<i>Lachnagrostis filiformis</i>	S			
	<i>Microlaena stipoides</i> var. <i>stipoides</i>	C	√	√	√
	<i>Oplismenus aemulus</i>	S	√		√
	<i>Oplismenus imbecillis</i>	S			√
	<i>Panicum simile</i>	S			
	# <i>Paspalidium distans</i>		√		
	<i>Phragmites australis</i>				
	<i>Poa affinis</i>		√	√	
	# <i>Poa labillardieri</i>				
	<i>Sporobolus virginicus</i> var <i>virginicus</i>	S			
	<i>Tetrarrhena juncea</i>				
	<i>Themeda australis</i>	C		√	
<b>RESTIONACEAE</b>	<i>Lepyrodia scariosa</i>	C			√
	<i>Leptocarpus tenax</i>				
<b>SMILACACEAE</b>	<i>Ripogonum album</i>	R			
	<i>Smilax australis</i>				
	<i>Smilax glyciophylla</i>	C	√	√	√
<b>SPARGANIACEAE</b>	# <i>Sparganium subglobosum</i>				
<b>TYPHACEAE</b>	<i>Typha orientalis</i>				√
<b>XANTHORRHOEACEAE</b>	<i>Xanthorrhoea arborea</i>	C	√	√	
	<i>Xanthorrhoea media</i> ssp. <i>media</i>	C			
	<i>Xanthorrhoea minor</i>				
	<i>Xanthorrhoea resinifera</i>	U-R			
<b>XYRIDACEAE</b>	<i>Xyris gracilis</i> ssp <i>gracilis</i>	R			

## PARRAMATTA RIVER AND TERRYS CREEK NATIVE PLANT LISTS

		CS	P'MATTA RIVER CATCH- MENT	TERRYS CREEK CATCHMENT			
				Memorial Park	Somerset/ Lucknow Reserves	Pembroke Park	Ivanhoe Reserve
FAMILY	SPECIES NAME						
<b>Pteridiophytes</b>							
ADIANTACEAE	<i>Adiantum aethiopicum</i>	C	√	√	√		
	<i>Adiantum hispidulum</i>	S	√	√			
ASPLENIACEAE	<i>Asplenium australasicum</i>	U		√	√		√
	<i>Asplenium flabellifolium</i>	S					
ATHYRIACEAE	<i>Diplazium australe</i>	R					
BLECHNACEAE	<i>Blechnum ambiguum</i>	S					
	<i>Blechnum cartilagineum</i>	C					
	<i>Doodia aspera</i>	S		√			√
	<i>Doodia caudata</i> var <i>caudata</i>	S		√	√		
CYATHEACEAE	<i>Cyathea australis</i>	C		√	√		
DENNSTAEDTIACEAE	<i>Histiopteris incisa</i>	S					
	<i>Hypolepis muelleri</i>	S		√	√		√
	<i>Pteridium esculentum</i>	C		√	√	√	√
DICKSONIACEAE	<i>Calochlaena dubia</i>	C		√	√	√	√
DRYOPTERIDACEAE	# <i>Lastreopsis decomposita</i>	C					
GLEICHENIACEAE	<i>Gleichenia dicarpa</i>	C		√			
	<i>Gleichenia microphylla</i>	S					
	<i>Sticherus flabellatus</i>	S					
HYMENOPHYLLACEAE	<i>Hymenophyllum cupressiforme</i>	R		√			
LINDSAEACEAE	<i>Lindsaea linearis</i>	C		√	√	√	
	<i>Lindsaea microphylla</i>	C		√	√		
OSMUNDCEAE	<i>Todea barbata</i>	S					
POLYPODIACEAE	<i>Platynerium bifurcatum</i> ssp <i>bifurcatum</i>	S					
	<i>Pyrrosia rupestris</i>	U					
PSILOTACEAE	<i>Psilotum nudum</i>	R			√		
PTERIDIACEAE	<i>Pteris tremula</i>	U					
	# <i>Pteris umbrosa</i>						
SHIZAEACEAE	<i>Schizaea asperula</i>						
	<i>Schizaea bifida</i> (s.str.)	S					
SINIPTERIDACEAE	<i>Cheilanthes distans</i>	R					

	<i>Cheilanthes sieberi</i>	C					
	<i>Pellaea falcata</i> var <i>falcata</i>	S		√	√		

<b>THELYPTERIDACEAE</b>	<i>Christella dentata</i>	S		√	√		
Gymnosperms							
<b>PODOCARPACEAE</b>	<i>Podocarpus spinulosus</i>			√	√		√

		CS	Memorial Park	Somerset/ Lucknow	Pembroke	Ivanhoe	Forrester / Forsyth
<b>Angiosperms- Dicotyledons</b>							
<b>ACANTHACEAE</b>	<i>Brunoniella australis</i>	R					
	<i>Brunoniella pumilio</i>	S					
	<i>Pseuderanthemum variabile</i>	C		√	√		
<b>AIZOACEAE</b>	<i>Tetragonia tetragonoides</i>	S	√				
<b>AMARANTHACEAE</b>	<i>Alternanthera denticulata</i>	C					
	# <i>Parsonsia straminea</i> var <i>straminea</i>				√		
<b>APIACEAE</b>	<i>Actinotus helianthi</i>	C		√			
	<i>Actinotus minor</i>	C		√	√		
	<i>Centella asiatica</i>	S	√	√	√		√
	<i>Hydrocotyle peduncularis</i>	C		√	√		
	<i>Hydrocotyle tripartita</i>	R					
	<i>Platysace lanceolata</i>	C					
	<i>Platysace linearifolia</i>	C		√			
	<i>Trachymene incisa</i> ssp <i>incisa</i>	R					
	<i>Xanthosia pilosa</i>	C		√		√	
	<i>Xanthosia tridentata</i>	C		√			
<b>APOCYNACEAE</b>	<i>Parsonsia straminea</i>	U					
<b>ARACEAE</b>	# <i>Alocasia brisbanensis</i>						
<b>ARALIACEAE</b>	<i>Astrotricha longifolia</i>	S		√	√		
	<i>Polyscias sambucifolia</i>	C	√	√	√	√	√
<b>ASCLEPIADACEAE</b>	<i>Marsdenia suaveolens</i>	S					
	<i>Tylophora barbata</i>	S					
<b>ASTERACEAE</b>	<i>Cassinia aculeata</i>	U					
	<i>Epaltes australis</i>	R					
	<i>Euchiton gymnocephalus</i>	R					
	<i>Helichrysum scorpioides</i>	U- R					
	<i>Olearia microphylla</i>	S			√	√	

	<i>Olearia viscidula</i>	R					
	<i>Ozothamnus adnatus</i>	R					
	<i>Ozothamnus diosmifolius</i>	C	√	√	√	√	√
	<i>Senecio hispidulus</i> var. <i>hispidulus</i>		√	√			√
	<i>Sigesbeckia orientalis</i> ssp <i>orientalis</i>	S		√	√		√
AVICENNIACEAE	<i>Avicennia marina</i> var <i>australasica</i>	C	√				
BAUERACEAE	<i>Bauera rubioides</i>	S		√			
BIGNONIACEAE	<i>Pandorea pandorana</i>	C	√	√	√		
CAMPANULACEAE	<i>Wahlenbergia communis</i> (s. lat.)						
	<i>Wahlenbergia gracilis</i>	C	√				
	<i>Wahlenbergia stricta</i>	R					
CASSYTHACEAE	<i>Cassytha glabella</i>			√			
	<i>Cassytha pubescens</i>				√		
CASUARINACEAE	<i>Allocasuarina littoralis</i>	C		√	√		√
	<i>Allocasuarina torulosa</i>	C					
	<i>Casuarina glauca</i>	C	√				
CELASTRACEAE	<i>Cassine australis</i> var <i>australis</i>	R					
	<i>Celastrus subspicata</i>	R					
	<i>Maytenis silvestris</i>	U					
CHENOPODIACEAE	<i>Einadia hastata</i>	S					√
	<i>#Einadia polygonoides</i>		√				
	<i>Sarcocornia quinqueflora</i> ssp <i>quinqueflora</i>	S					
	<i>Suaeda australis</i>		√				
CLUSIACEAE	<i>Hypericum gramineum</i>	S					
CONVOLVULACEAE	<i>Calystegia marginata</i>	R					
	<i>Calystegia sepium</i>	R?					
	<i>Convolvulus erubescens</i>	R					
	<i>Dichondra repens</i> (s.lat.)	S	√	√	√	√	√
	<i>Polymeria calycina</i>						
CUNONIACEAE	<i>Aphanopetalum resinum</i>	R					
	<i>Bauera rubioides</i>			√			
	<i>Callicoma serratifolia</i>	C		√	√		√
	<i>Ceratopetalum apetalum</i>	S		√	√		√
	<i>Ceratopetalum gummiferum</i>	C		√	√		
	<i>Schizomeria ovata</i>	R					
DILLENIAACEAE	<i>Hibbertia aspera</i>	C		√	√		
	<i>Hibbertia bracteata</i>	C		√			
	<i>Hibbertia dentata</i>	S					

	<i>Hibbertia fasciculata</i>	S					
	<i>Hibbertia linearis</i>	C					
	<i>Hibbertia riparia</i> (s.lat.)	U					
	<i>Hibbertia scandens</i>	R				p?	
<b>DROSERACEAE</b>	<i>Drosera auriculata</i>	C					
	<i>Drosera peltata</i>	C					
<b>ELAEOCARPACEAE</b>	<i>Elaeocarpus reticulatus</i>	C		√	√	√	
<b>EPACRIDACEAE</b>	<i>Acrotriche divaricata</i>	R			√		
	<i>Brachyloma daphnoides</i>	S					
	<i>Dracophyllum secundum</i>	U					
	<i>Epacris microphylla</i>	S		√			
	<i>Epacris pulchella</i>	C		√	√		
	+ <i>Epacris purpurascens</i> var <i>purpurascens</i>	S				? behind CSIRO	
	<i>Leucopogon ericoides</i>	S		√	√		
	<i>Leucopogon juniperinus</i>	S		√	√		
	<i>Leucopogon lanceolatus</i>	S		√	√		
	<i>Leucopogon microphyllus</i> var <i>microphyllus</i>	C		√	√		
	<i>Melichrus procumbens</i>	U					
	<i>Monotoca elliptica</i>	S					
	<i>Monotoca scoparia</i>	C					
	<i>Styphelia longifolia</i>	U- R					
	<i>Styphelia triflora</i>	U					
	<i>Styphelia tubiflora</i>	U		√			
	<i>Trococarpa laurina</i>	R					
	<i>Woolsia pungens</i>	C		√	√	√	
<b>EUPHORBIACEAE</b>	<i>Amperea xiphoclada</i> var <i>papillata</i>	C		√			
	<i>Breynia oblongifolia</i>	C		√	√		√
	<i>Glochidion ferdinandi</i>	C	√	√	√	√	
	<i>Micrantheum ericoides</i>	C		√	√		
	<i>Omalanthus nutans</i>	S		√	√		√
	# <i>Phyllanthus gastroemii</i>						
	<i>Phyllanthus hirtellus</i> (ex <i>P thymoides</i> )	C		√	√		
	<i>Poranthera ericifolia</i>	U					
	<i>Poranthera microphylla</i>	S					√
	<i>Ricinocarpos pinifolius</i>	S		√	√		
<b>EUPOMATIACEAE</b>	<i>Eupomatia laurina</i>	R					
<b>FABACEAE</b>	<i>Acacia binervia</i>	R			√		
	<i>Acacia brownii</i>	U				Behind CSIRO	
	<i>Acacia decurrens</i>						
	<i>Acacia falcata</i>	S	p		√		

	<i>Acacia floribunda</i>		<i>p</i>	√		√ <i>p</i>	√ <i>p</i>
	<i>Acacia linifolia</i>	C		√	√		
	<i>Acacia longifolia</i>	C	<i>p</i>	√	√	√ <i>p</i>	√ <i>p</i>
	<i>Acacia myrtifolia</i>	C					
	<i>Acacia parramattensis</i>	C	<i>p</i>	√	√	√	
	<i>Acacia stricta</i>	U					
	<i>Acacia suaveolens</i>	C	<i>p</i>	√	√		
	<i>Acacia terminalis</i>	C		√	√		
	<i>Acacia ulicifolia</i>	C		√	√		
	# <i>Aotus ericoides</i>			√			
	<i>Bossiaea heterophylla</i>	C		√			
	<i>Bossiaea obcordata</i>	C		√	√		
	<i>Bossiaea scolopendria</i>	S					
	<i>Daviesia ulicifolia</i>	S					
	# <i>Desmodium varians</i>						
	<i>Dillwynia retorta</i>	C		√	√		
	<i>Glycine clandestina</i>	C					
	<i>Glycine microphylla</i>			√	√		√
	<i>Glycine tabacina</i> species complex	S	√				
	<i>Gompholobium glabratum</i>	S					
	<i>Gompholobium latifolium</i>	S					
	<i>Gompholobium pinnatum</i>	R					
	<i>Hardenbergia violacea</i>	C	<i>p</i>	√	√		√ <i>p</i>
	<i>Hovea longifolia</i>	S					
	<i>Indigofera australis</i>	R					
	<i>Kennedia rubicunda</i>	C	√	√	√	√ <i>p</i> ?	√ <i>p</i>
	<i>Mirbelia rubrifolia</i>	S					
	<i>Phyllota phyllicoides</i>	C		√			
	<i>Platylobium formosum</i> ssp <i>formosum</i>	C		√	√		
	<i>Pultenaea daphnoides</i>	C					
	<i>Pultenaea elliptica</i>			√		√	
	<i>Pultenaea flexilis</i>	C			√		√
	<i>Pultenaea mollis</i>	R					
	<i>Pultenaea paleacea</i>	R					
	<i>Pultenaea retusa</i>						
	<i>Pultenaea stipularis</i>	C		√			
	<i>Pultenaea villosa</i>	U					
	# <i>Sphaerolobium vimineum</i>						
	<i>Viminaria juncea</i>	S					
GERANIACEAE	<i>Geranium homeanum</i>	S	√		√		√
	<i>Pelargonium inodorum</i>	U					
GOODENIACEAE	<i>Dampiera stricta</i>	C					

	<i>Goodenia bellidifolia</i>	S					
	<i>Goodenia hederacea</i> ssp <i>hederacea</i>	C					
	<i>Goodenia heterophylla</i> ssp <i>heterophylla</i>	S					
	<i>Goodenia ovata</i>	U					
	<i>Scaevola ramosissima</i>	S					
	<i>Velleia lyrata</i>	U					
HALORAGACEAE	<i>Gonocarpus micranthus</i> ssp. <i>micranthus</i>						
	<i>Gonocarpus tetragynus</i>						
	<i>Gonocarpus teucrioides</i>	C		√			
LAMIACEAE	# <i>Plectranthus</i> <i>parviflorus</i>						√
LAURACEAE	<i>Cryptocarya</i> <i>glaucescens</i>	R					
	# <i>Cryptocarya</i> <i>microneura</i>						
LOBELIACEAE	<i>Lobelia alata</i>	S					
	<i>Lobelia dentata</i>	C					
	<i>Lobelia gracilis</i>	C					
	<i>Pratia purpurascens</i>	C		√	√	√	√
LOGANIACEAE	<i>Logania albiflora</i>	S		√			
	<i>Mitrasacme polymorpha</i>	C					
LORANTHACEAE	<i>Amyema congener</i> ssp <i>congener</i>						
	<i>Dendrophthoe vitellina</i>						
MELIACEAE	<i>Synoum glandulosum</i>	R					
MENISPERMACEAE	<i>Sarcopetalum</i> <i>harveyanum</i>	U					
	<i>Stephania japonica</i> var <i>discolor</i>	S					
MORACEAE	<i>Ficus coronata</i>	R					
	<i>Ficus rubiginosa</i>	S	√				
MYRSINACEAE	<i>Aegiceras corniculatum</i>						
	<i>Rapanea variabilis</i>	S	√				
MYRTACEAE	<i>Acmena smithii</i>	U					
	<i>Angophora bakeri</i>	S			√		
	<i>Angophora costata</i>	C		√	√	√	√
	<i>Angophora floribunda</i>	S	√				
	<i>Angophora hispida</i>			√		√p?	
	<i>Austromyrtus tenuifolia</i>	U					
	<i>Backhousia myrtifolia</i>	S					
	<i>Baeckea diosmifolia</i>	S					
	<i>Baeckea linifolia</i>	S					
	<i>Callistemon citrinus</i>	U	p	√p	√p	√p	
	<i>Callistemon pinifolius</i>	R					
	<i>Callistemon salignus</i>	U		√	√p		√p
	<i>Calytrix tetragona</i>	S					

	<i>Corymbia gummifera</i>	C		√			
	<i>Eucalyptus acmenoides</i>	R					
	<i>Eucalyptus haemastoma</i>			√	√	?	
	<i>Eucalyptus oblonga</i>						
	<i>Eucalyptus paniculata</i>	S					
	<i>Eucalyptus pilularis</i>	S		√	√	√	√
	<i>Eucalyptus piperita</i>	C		√	√	√	
	<i>Eucalyptus punctata</i>	U					
	<i>Eucalyptus racemosa</i>	S		√		√	
	<i>Eucalyptus resinifera</i> ssp <i>resinifera</i>	S					
	<i>Eucalyptus saligna</i>	S				√p	√
				1 plant in Somerset Reserve stormwater drain			
	<i>Eucalyptus tereticornis</i>	R	√				
	<i>Kunzea ambigua</i>	C	p	√	√	√	√
	<i>Leptospermum arachnoides</i>	S					
	<i>Leptospermum parvifolium</i>	U		√			
	<i>Leptospermum polygalifolium</i> ssp <i>polygalifolium</i>	C		√	√		
	<i>Leptospermum squarrosus</i>	S					
	<i>Leptospermum trinervium</i>	C		√			
	+ <i>Melaleuca deanei</i>	R		√			
				Under M2 overpass			
	<i>Melaleuca ericifolia</i>	R					
	<i>Melaleuca linariifolia</i>	S	√p		√		
	<i>Melaleuca nodosa</i>						
	<i>Melaleuca quinquenervia</i>		p				
	<i>Melaleuca stypheloides</i>	U	p				
	<i>Melaleuca thymifolia</i>	U-R					
	<i>Rhodamnia rubescens</i>	R					
	<i>Syncarpia glomulifera</i>	S	p	√	√		√
	# <i>Syzygium australe</i>						
	<i>Tristaniopsis collina</i>	U					
	<i>Tristaniopsis laurina</i>	C			√		√
<b>OLEACEAE</b>	<i>Notelaea longifolia</i>	C		√			
<b>OXALIDACEAE</b>	<i>Oxalis perennans</i>			√	√		
<b>PASSIFLORACEAE</b>	<i>Passiflora herbertiana</i> ssp <i>herbertiana</i>	R					
<b>PITTOSPORACEAE</b>	<i>Billardiera scandens</i>	C		√	√		
	<i>Bursaria spinosa</i>	C	√	√	√		
	<i>Citriobatus pauciflorus</i>	R					

	<i>Pittosporum revolutum</i>	S		√			√
	<i>Pittosporum undulatum</i>	C	√	√	√	√	√
	<i>Rhytidosporum procumbens</i>			Somerset			
<b>PLANTAGINACEAE</b>	<i>Plantago debilis</i>	R					
<b>POLYGALACEAE</b>	<i>Comesperma ericineium</i>			√			
	<i>Comesperma sphaerocarpum</i>	U-R					
	<i>Comesperma volubile</i>	R					
<b>POLYGONACEAE</b>	<i>Muehlenbeckia gracillima</i>	R					
	<i>Persicaria decipiens</i>						
	# <i>Persicaria hydropiper</i>						
	# <i>Persicaria lapathifolia</i>			√			
	# <i>Persicaria strigosa</i>						
	<i>Persicaria subsessilis</i>						
	<i>Rumex brownii</i>	S					
<b>PRIMULACEAE</b>	<i>Samolus repens</i>	C					
<b>PROTEACEAE</b>	<i>Banksia ericifolia</i> var <i>ericifolia</i>	C	p	√		√p	
	<i>Banksia integrifolia</i>					√p	
	<i>Banksia marginata</i>			√			
	<i>Banksia oblongifolia</i>	C		√	√		
	<i>Banksia serrata</i>	C		√	√		
	<i>Banksia spinulosa</i> var <i>spinulosa</i>	C		√	√		
	<i>Grevillea buxifolia</i>	C		√	√	√	
	<i>Grevillea linearifolia</i>			√	√		
	# <i>Grevillea mucronulata</i>			√			
	<i>Grevillea sericea</i>	C		√	√	√	
	<i>Grevillea speciosa</i>			Somerset			
	<i>Hakea dactyloides</i> (s.str.)	S		√			
	<i>Hakea salicifolia</i> ssp <i>salicifolia</i>	S	p	√	√	√	√p
	<i>Hakea sericea</i>	C		√	√	√	√
	<i>Isopogon anemonifolius</i>	S		√	√		
	<i>Isopogon anethifolius</i>	U		√			
	<i>Lambertia formosa</i>	C		√	√		
	<i>Lomatia silaifolia</i>	C		√	√		
	<i>Persoonia lanceolata</i>	C		√			
	<i>Persoonia laurina</i>	S					
	<i>Persoonia levis</i>	C		√			
	<i>Persoonia linearis</i>	C					
	<i>Persoonia pinifolia</i>	S		√	√	√	
	<i>Petrophile pulchella</i>	S					
	<i>Telopea speciosissima</i>	R					
	<i>Xylomelum pyriforme</i>	S					

<b>RANUNCULACEAE</b>	<i>Clematis aristata</i>	C		√			
	<i>Clematis glycinoides</i>	C					√p
	<i>Ranunculus plebeius</i>	R					
<b>RHAMNACEAE</b>	<i>Pomaderris discolor</i>						
	<i>Pomaderris elliptica</i>						
	<i>Pomaderris lanigera</i>	U					
<b>ROSACEAE</b>	<i>Rubus parvifolius</i>	R	√				
	<i>Rubus rosifolius</i>	R					
<b>RUBIACEAE</b>	<i>Morinda jasminoides</i>	S		√	√		√
	<i>Opercularia aspera</i>	C					
	<i>Opercularia varia</i>	S					
	<i>Pomax umbellata</i>	C		√	√		
	<i>Psychotria ioniceroides</i>	R					
<b>RUTACEAE</b>	<i>Boronia ledifolia</i>	S		√			
	<i>Boronia pinnata</i>			Somerset			
	<i>Correa reflexa</i> var. <i>reflexa</i> (pale yellow flowered)	S					
	<i>Leionema dentatum</i>	U					
	<i>Melicope micrococca</i>	R					
	<i>Phebalium squamulosum</i> ssp <i>squamulosum</i>			√?			
	<i>Zieria laevigata</i>	R					
	<i>Zieria pilosa</i>	C		√			
	<i>Zieria smithii</i>	C		√	√	√	√
<b>SANTALACEAE</b>	<i>Exocarpos</i> <i>cupressiformis</i>	S	√				
	<i>Leptomeria acida</i>	S			√		
<b>SAPINDACEAE</b>	<i>Alectryon subcinereus</i>	R					
	<i>Dodonaea triquetra</i>	C	√	√	√	√	
	<i>Guioa semiglauca</i>	R					
<b>SCROPHULARIACEAE</b>	<i>Veronica plebeia</i>	C	√	√	√		
<b>SOLANACEAE</b>	<i>Solanum prinophyllum</i>	R					
	<i>Solanum vescum</i>						
<b>STERCULIACEAE</b>	<i>Lasiopetalum</i> <i>ferrugineum</i> var. <i>ferrugineum</i>	C		√	√		
	<i>Lasiopetalum</i> <i>parviflorum</i>	R			√		
<b>STYLIDIACEAE</b>	<i>Stylidium graminifolium</i>	S					
	<i>Stylidium productum</i>	S		√			
<b>THYMELAEACEAE</b>	+ <i>Pimelea curviflora</i> var <i>curviflora</i>						
	<i>Pimelea linifolia</i>	C		√	√		
<b>ULMACEAE</b>	<i>Trema tomentosa</i> var. <i>viridis</i>						√
<b>VERBENACEAE</b>	<i>Cleodendrum</i> <i>tomentosum</i>						
<b>VIOLACEAE</b>	<i>Viola hederacea</i>	C					√
<b>VITACEAE</b>	<i>Cayratia clematidea</i>		√				√

	<i>Cissus antarctica</i>			√			
	<i>Cissus hypoglauca</i>			√			

Angiosperms-Monocotyledons		CS	Memorial Pk	Somerset/Lucknow	Pembroke Park	Ivanhoe Reserve	Forrester / Forsyth
ARACEAE	<i>Gymnostachys anceps</i>	R					
ARECACEAE	<i>Livistona australis</i>	R			√		√
CENTROLEPIDACEAE	<i>Centrolepis strigosa</i> var <i>strigosa</i>						
COMMELINACEAE	# <i>Aneilema acuminatum</i>						
	<i>Commelina cyanea</i>	S	√		√		
CYPERACEAE	<i>Baumea juncea</i>	S					
	<i>Carex inversa</i>	S					
	<i>Caustis flexuosa</i>	C		√			
	<i>Cyathochaeta diandra</i>	C					
	# <i>Cyperus gracilis</i>						
	# <i>Cyperus exaltatus</i>						
	# <i>Cyperus imbecillis</i>			√			
	# <i>Cyperus polystachyos</i>		√		√		
	# <i>Cyperus sphaeroides</i>						
	<i>Cyperus tetraphyllus</i>	R					
	<i>Fimbristylis dichotoma</i>	R					
	<i>Gahnia clarkei</i>	S		√	√	?	
	<i>Gahnia erythrocarpa</i>	C		√	√		
	<i>Gahnia melanocarpa</i>	U					
	# <i>Gahnia sieberiana</i>			√	√	√	
	<i>Isolepis cernua</i>	R					
	# <i>Isolepis inundata</i>	R					
	<i>Lepidosperma filiforme</i>			√	?		
	<i>Lepidosperma gunni</i>	S		√	√		
	<i>Lepidosperma laterale</i>	C		√	√		√
	<i>Lepidosperma neesii</i>	S					
	<i>Lepidosperma urophorum</i>	U					
	<i>Ptilothrix deusta</i>	C					
	<i>Schoenus apogon</i>	S					
	<i>Schoenus ericetorum</i>	S					
	<i>Schoenus imberbis</i>	S					
	<i>Schoenus melanostachys</i>	C		√	√	√	√
	<i>Tetraria capillaris</i>	C			√		
HAEMODORACEAE	<i>Haemodorum corymbosum</i>	U					
	<i>Haemodorum planifolium</i>	C					
IRIDACEAE	<i>Patersonia glabrata</i>	C		√	√		
	# <i>Patersonia longifolia</i>				√		

<b>JUNCACEAE</b>	<i>Juncus continuus</i>				√		
	<i>Juncus kraussii</i>	S					
	<i>Juncus planifolius</i>						
	# <i>Juncus usitatus</i>			√	√		
<b>JUNCAGINACEAE</b>	<i>Triglochin striata</i>	U					
<b>LILIACEAE</b>	<i>Arthropodium milleflorum</i> (s.lat.)	U-R					
	<i>Blandfordia nobilis</i>	S					
	<i>Burchardia umbellata</i>	C					
	<i>Caesia parviflora</i>	S					
	<i>Dianella caerulea</i>	C	√	√	√	√	√
	<i>Dianella prunina</i>			√			
	<i>Dianella revoluta</i>	S			√		
	<i>Laxmannia gracilis</i> (s.str.)	C					
	<i>Thysanotus tuberosus</i>	C					
	<i>Tricoryne simplex</i>	C			√		
<b>LOMANDRACEAE</b>	<i>Lomandra cylindrica</i>	S		√	√		
	# <i>Lomandra filiformis</i> ssp. <i>correacea</i>			√			
	<i>Lomandra filiformis</i> ssp. <i>filiformis</i>	S					
	<i>Lomandra glauca</i>	S					
	<i>Lomandra gracilis</i>	S		√	√		
	<i>Lomandra longifolia</i>	C	√	√	√	√	√
	<i>Lomandra micrantha</i> ssp. <i>tuberculata</i>	S		√	√		
	<i>Lomandra multiflora</i> ssp. <i>multiflora</i>	C					
	<i>Lomandra obliqua</i>	C		√	√	√	
<b>ORCHIDACEAE</b>	<i>Acianthus caudatus</i> var. <i>caudatus</i>	U					
	<i>Acianthus fornicatus</i>	C		?	√		
	<i>Acianthus pusillus</i>						
	<i>Caladenia catenata</i>					Behind CSIRO	
	<i>Calochilus campestris</i>	U			√		
	<i>Cryptostylis erecta</i>	C		√	√		
	<i>Cryptostylis subulata</i>	S		√	√		
	<i>Prasophyllum</i> sp						
	<i>Prasophyllum brevilabre</i>	R					
	<i>Pterostylis acuminata</i>	S		√			
	<i>Pterostylis concinna</i>	S					
	<i>Pterostylis longifolia</i>	U					
	<i>Pterostylis nutans</i>	C			√		
<b>PHILESIACEAE</b>	# <i>Eustrephus latifolius</i>			√	√		√
	# <i>Geitonoplesium cymosum</i>			√	√		

POACEAE	<i>Anisopogon avenaceus</i>	C		√	√	√	
	<i>Aristida ramosa</i> var <i>ramosa</i>				√		
	<i>Aristida vagans</i>	C			√		
	<i>Aristida warburgii</i> (FMR)						
	<i>Austrodanthonia fulva</i> (FMR)						
	<i>Austrodanthonia pilosa</i>						
	<i>Austrodanthonia racemosa</i>						
	<i>Austrostipa pubescens</i>	C		√	√		
	<i>Austrostipa ramossissima</i>						√
	<i>Austrostipa rudis</i> ssp <i>nervosa</i>	S					
	# <i>Bothriochloa macra</i>						
	<i>Cymbopogon refractus</i>	S	√p	√p	√p?		
	<i>Deyeuxia quadriseta</i>	S					
	<i>Dichelachne crinita</i>	U			√p		
	<i>Dichelachne micrantha</i>		√				
	<i>Dichelachne rara</i>			√			
	# <i>Digitaria parviflora</i>			√			√
	<i>Echinopogon caespitosus</i>	C		√	√		
	# <i>Echinopogon ovata</i>						
	<i>Entolasia marginata</i>	S	√	√	√		√
	<i>Entolasia stricta</i>	C		√	√	√	√
	<i>Eragrostis brownii</i>			√	√		
	# <i>Eragrostis lephostachya</i>						
	<i>Imperata cylindrica</i> var <i>major</i>	C	√	√	√		
	<i>Lachnagrostis filiformis</i>	S					
	<i>Microlaena stipoides</i> var. <i>stipoides</i>	C	√	√	√	√	√
	<i>Oplismenus aemulus</i>	S	√	√	√	√	√
	<i>Oplismenus imbecillis</i>	S		√	√	√	√
	<i>Panicum simile</i>	S		√	√		
	# <i>Paspalidium distans</i>			√	√		
	<i>Phragmites australis</i>						
	<i>Poa affinis</i>			√	√		
	<i>Sporobolus creber</i>				√		
	<i>Sporobolus virginicus</i> var <i>virginicus</i>	S					
	<i>Tetrarrhena juncea</i>						
	<i>Themeda australis</i>	C	√	√	√		√
RESTIONACEAE	<i>Lepyrodia muelleri</i>			√			
	<i>Lepyrodia scariosa</i>	C		√			

	<i>Leptocarpus tenax</i>						
SMILACACEAE	<i>Ripogonum album</i>	R					
	<i>Smilax australis</i>						
	<i>Smilax glycyphylla</i>	C		√	√	√	
SPARGANIACEAE	# <i>Sparganium subglobosum</i>						
TYPHACEAE	<i>Typha orientalis</i>						
XANTHORRHOEACEAE	<i>Xanthorrhoea arborea</i>	C		√	√		
	<i>Xanthorrhoea media</i> ssp. <i>media</i>	C					
	<i>Xanthorrhoea minor</i>						
	<i>Xanthorrhoea resinifera</i>	U- R					
XYRIDACEAE	<i>Xyris gracilis</i> ssp <i>gracilis</i>	R					
<b>GRAND TOTAL OF ALL SPECIES (INCLUDING PLANTINGS)</b>			<b>51</b>	<b>183</b>	<b>152</b>	<b>49</b>	<b>59</b>

## **APPENDIX 2:**

### **EXOTIC AND NON-LOCAL NATIVE PLANTS FOR PARRAMATTA RIVER, TERRY'S CREEK, KITTYS CREEK AND BUFFALO CREEK CATCHMENTS**

**EXOTIC AND NON-LOCAL NATIVE PLANTS FOR PARRAMATTA  
RIVER, TERRY'S CREEK, KITTY'S CREEK AND BUFFALO CREEK  
CATCHMENTS**

FAMILY	SPECIES NAME	Memorial Park (Parramatta River Catchment)	Terrys Creek Catchment	Buffalo Creek Catchment	Kittys Creek Catchment
<b>Pteridiophytes</b>					
CYATHEACEAE	* <i>Cyathea cooperi</i>		√	√	√
DAVALLIACEAE	* <i>Nephrolepis cordifolia</i>	√	√		√ Pryor, Martin
SINOPTERIDACEAE	<i>Pellaea viridis</i>		Along Terrys Creek & Forrester Park	Burrows	
<b>Angiosperms- Dicotyledons</b>					
ACANTHACEAE	<i>Odontonema strictum</i>		√		
ACERACEAE	<i>Acer negundo</i>		√		
ALSTROEMERiaceae	<i>Alstroemeria pulchella</i>		√		
ANACARDIACEAE	<i>Pistachia vera</i>		√		
	<i>Toxicodendron succedaneum</i>		√		√Below Jeanette St
APIACEAE	<i>Foeniculum vulgare</i>		√		
	<i>Hydrocotyle bonariensis</i>	√	√		
APOCYNACEAE	<i>Vinca major</i>		√		
ARACEAE	<i>Calocasia esculenta</i>				√ Martin
	<i>Monstera deliciosa</i>		√		√
ARALIACEAE	<i>Hedera helix</i>		√		√
ARECACEAE	<i>Phoenix canariensis</i>	√	√	√	
ASCLEPIADACEAE	<i>Araujia sericiflora</i>	√	√	√	
ASTERACEAE	<i>Ageratina adenophora</i>	√	√	√	√
	<i>Ageratina riparia</i>		√		
	<i>Bidens pilosa</i>	√	√	√	√
	<i>Cirsium vulgare</i>		√	√	
	<i>Conyza</i> sp.	√	√	√	√
	<i>Crassocephalum crepidioides</i>			√	√
	<i>Chrysanthemoides monilifera</i> ssp <i>rotundata</i> <sup>3</sup>	√			
	<i>Delairea odorata</i> <sup>4</sup>			√	
	<i>Erigeron karvinskianus</i>	√			
	<i>Galinsoga parviflora</i>			√	
	<i>Gnaphalium</i> sp.	√	√	√	√
	<i>Hypochaeris radicata</i>	√	√	√	√
	<i>Senecio madagascariensis</i>	√	√	√	
	<i>Taraxacum officiale</i>	√	√	√	
	<i>Sonchus oleraceus</i>	√	√	√	√
BASELLACEAE	<i>Anredera cordifolia</i> <sup>4</sup>		√	√	√ Martin
BIGNONIACEAE	<i>Jacaranda mimosifolia</i>		√	√ Minga	√ Martin
BRASSICACEAE	<i>Brassica fruticulosa</i>				√
	<i>Capsella bursapastoris</i>			√	
	<i>Rorippa nasturtium- aquaticum</i>		√		
CAPRIFOLIACEAE	<i>Lonicera japonica</i>		√	√Barton	√

<b>CARYOPHYLLACEAE</b>	<i>Stellaria media</i>	√	√	√	√
<b>CASUARINACEAE</b>	* <i>Casuarina cunninghamiana</i> ssp <i>cunninghamiana</i>	√p	√ p Ivanhoe		√ Martin
<b>CONVOLVULACEAE</b>	<i>Ipomoea indica</i> <sup>4</sup>		√		√
<b>CRASSULACEAE</b>	<i>Bryophyllum delagoense</i>		√		
<b>EUPHOBIACEAE</b>	<i>Euphorbia peplus</i>	√		√	
	<i>Phyllanthus tenellus</i>			√ Minga	
	<i>Ricinus communis</i> <sup>4</sup>		Ivanhoe	Barton	√ Martin
<b>FABACEAE subfamily CAESALPINOIDEAE</b>	<i>Senna pendula</i> var <i>glabrata</i> <sup>4</sup>	√	√	√	√
<b>FABACEAE subfamily FABOIDEAE</b>	<i>Genista monspessulana</i> <sup>3</sup>	√	Somerset		
	<i>Erythrina x sykesii</i>	√	√		
	<i>Trifolium repens</i>	√			
	<i>Vicia sativa</i>	√	√	√	
<b>FABACEAE subfamily MIMOSOIDEAE</b>					
	* <i>Acacia elata</i>				√ Pryor
	* <i>Acacia fimbriata</i>	√p	Planted near M2	√ p Burrows. Field of Mars	
<b>FUMARIACEAE</b>	<i>Fumaria</i> sp	√		√	
<b>GENTIANACEAE</b>	<i>Centaurium</i> sp				Pidding Park
<b>LAMIACEAE</b>	<i>Plectranthus ciliatus</i>		Somerset Reserve behind units		
<b>LAURACEAE</b>	<i>Cinnamomum camphora</i> <sup>4</sup>	√	√	√	√
<b>MALACEAE</b>	<i>Cotoneaster glaucophyllus</i>		√		√ Martin
	<i>Rhaphiolepis indica</i>				Pembroke Park
<b>MALVACEAE</b>	<i>Malva parviflora</i>	√		√	√
	<i>Pavonia hastata</i>		√ Pembroke Park	√ Pidding	
	<i>Sida rhombifolia</i>	√	√	√	√
<b>MELIACEAE</b>	* <i>Melia azedarach</i> var <i>australasica</i>			√ Minga	
<b>MORACEAE</b>	<i>Morus albus</i>		√		√
<b>MUSACEAE</b>	<i>Musa</i> sp				Pembroke Park
<b>MYRTACEAE</b>	<i>Corymbia maculata</i>	√	√ p Ivanhoe	√ p Barton	
	* <i>E. microcorys</i>	√	√		
	<i>Lophostemon confertis</i>	√	√		
<b>OCHNACEAE</b>	<i>Ochna serrulata</i> <sup>4</sup>	√	√	√	√
<b>OLEACEAE</b>	<i>Jasminium polyanthum</i>				√ Pryor
	<i>Ligustrum lucidum</i> <sup>4</sup>		√	√	
	<i>Ligustrum sinense</i> <sup>4</sup>	√	√	√	√
	<i>Olea europaea</i> ssp <i>africana</i> <sup>4</sup>	√	√	√	√ Martin
<b>OXALIDACEAE</b>	<i>Oxalis corniculata</i>	√	√	√	√
	<i>Oxalis pes-caprae</i>	√	√		
	<i>Oxalis purpurea</i>	√	√	√	√
<b>PHYTOLACCACEAE</b>	<i>Phytolacca octandra</i>		√		
<b>PINACEAE</b>	<i>Pinus radiata</i>				Pembroke
<b>PLANTAGINACEAE</b>	<i>Plantago lanceolata</i>	√	√	√	√
<b>POLYGONACEAE</b>	<i>Acetosa sagittata</i>	√	√	√ Minga	√
<b>PROTEACEAE</b>	<i>Grevillea poorinda</i> sp.	Near M2			
	* <i>Grevillea robusta</i>		√	√ Minga	
<b>RANUNCULACEAE</b>	<i>Ranunculus repens</i>			√ Barton	√
<b>ROSACEAE</b>	<i>Prunus</i> sp.				Pembroke
	<i>Rubus fruticosus</i> species aggregate <sup>4</sup>	√	√		√

<b>RUBIACEAE</b>	<i>Galium aparine</i>			Burrows	
<b>SALICEAE</b>	<i>Salix babylonica</i>		√	Burrows	√ Pryor
<b>SAPINDACEAE</b>	<i>Cardiospermum grandiflorum</i> <sup>4</sup>		√	√	√
<b>SIMAROUBACEAE</b>	<i>Ailanthus altissima</i>		√		
<b>SOLANACEAE</b>	<i>Cestrum parqui</i> <sup>3</sup>			Along Terrys Creek, Pembroke	√ Pryor
	<i>Solanum mauritianum</i>	√		√	√
	<i>Solanum nigrum</i>	√	√	√	√
<b>STERCULACEAE</b>	* <i>Brachychiton acerifolius</i>		√		
<b>URTICACEAE</b>	<i>Parietaria judaica</i> <sup>4</sup>	√		√	√ Pryor
<b>VERBENACEAE</b>	<i>Lantana camara</i> <sup>4</sup>	√	√	√	√
	<i>Verbena</i> sp	√	√	√	√
<b>ZINGIBERACEAE</b>	<i>Hedychium gardnerianum</i>		√		√
<b>Angiosperms-Monocotyledons</b>					
<b>ALLIACEAE</b>	<i>Allium triquetrum</i>			Pembroke	
	<i>Nothoscordum gracile</i>	√	√		
<b>ASPARAGACEAE</b>	<i>Asparagus aethiopicus</i> <sup>4</sup>	√	√	√	√
	<i>Asparagus asparagoides</i> <sup>4,5</sup>			Pembroke Park, Ivanhoe	√ Burrows
	<i>Asparagus plumosus</i> <sup>4</sup>		√	√	√ Burrows
<b>COMMELINACEAE</b>	<i>Tradescantia fluminensis</i> <sup>4</sup>		√	√	√
<b>CYPERACEAE</b>	<i>Cyperus brevifolius</i>			√	
	<i>Cyperus congestus</i>		√		
	<i>Cyperus eragrostis</i>		√	Barton	
	<i>Isolepis prolifer</i>			√	Barton
<b>IRIDACEAE</b>	<i>Crococsmia x crocosmiiflora</i>		√	√	√
	<i>Dietes</i> sp.		√	√	√ Pryor
	<i>Watsonia bulbifera</i>		√	√	√
<b>LILIACEAE</b>	<i>Aspidistra elatior</i>			Somerset	
	<i>Chlorophytum comosum</i>		√	√	√ Barton
<b>POACEAE</b>	<i>Andropogon virginicus</i>		√	√	√
	<i>Arundo donax</i> <sup>4</sup>			Forsyth	
	<i>Avena sativa</i>	√		√	√
	<i>Axonopus affinis</i>		√		
	<i>Briza minor</i>			√	
	<i>Bromus catharticus</i>		√	√	
	<i>Chloris virgata</i>	√			
	<i>Cortaderia selloana</i> <sup>3</sup>			Lucknow	Martin
	<i>Cynodon dactylon</i>	√	√		
	<i>Digitaria didactyla</i>	√	√		
	<i>Digitaria sanguinalis</i>		√		
	<i>Echinochloa crus-galli</i>		√		
	<i>Ehrharta erecta</i>	√	√	√	√
	<i>Eleusine indica</i>				√
	<i>Eleusine tristachya</i>	√			
	<i>Eragrostis curvula</i>	√	√		
	<i>Eragrostis tenuifolia</i>	√			
	<i>Melinis repens</i>		√		
	<i>Paspalum dilatatum</i>		√	√	√
	<i>Paspalum quadrifarium</i> <sup>3</sup>			√	Pidding
	<i>Paspalum urvillei</i>		√	√	√

	<i>Pennisetum clandestinum</i>	√	√	√	√
	<i>Phyllostachys</i> spp.		<i>Pembroke behind CSIRO</i>		
	<i>Setaria geniculata</i>	√	√	√	√
	<i>Setaria palmifolia</i>		√	√ <sup>Barton</sup>	
	<i>Setaria pumila</i>		√		
	<i>Sorghum halepense</i>	√			
	<i>Sporobolus indicus</i> var <i>capensis</i>	√	√	√	√
	<i>Stenotaphrum secundatum</i>		√		
	<i>Vulpia bromoides</i>	√			

- Indicates an Australian native plant that is not indigenous to Ryde municipality.

Superscript numbers (e.g. *Lantana camara*<sup>4</sup>) designates the Noxious Weed Class according to City of Ryde Council policy.

## APPENDIX 3:

### NATIVE PLANTS IN SURVEY QUADRATS

#### Pembroke Park Quadrat

This quadrat is located approximately 30m behind houses on Menzies Road. The geology is Hawkesbury Sandstone and the soils are shallow and sandy. There is evidence of fire within the last 5 years. The vegetation is dominated by an Open Woodland of Scribbly gum (*Eucalyptus racemosa*) and Peppermint (*E. piperita*), with a localised understory of *Melaleuca linearifolia* and *Angophora bakeri*. This quadrat is representative of, but does not fulfill all requirements for Map Unit 31: Sandstone Ridgetop Woodland (Tozer, 2003). It contains 44 native species [43 required] but only 18 of the required 28 positive diagnostic species. Bridal Creeper, *Asparagus asparagoides* is a noxious weed within the area and rabbits inhabit the area.

Native Plant Species in 400 <sup>2</sup> m Quadrat	
Scientific name	Braun-Blanquet Cover Scale
<i>Acacia linifolia</i>	1
<i>Acacia longifolia</i>	3
<i>Acacia suaveolens</i>	1
<i>Acrotriche divaricata</i>	1
<i>Actinotus minor</i>	1
<i>Anisopogon avenaceus</i>	1
<i>Angophora bakeri</i>	2
<i>Aristida vagans</i>	1
<i>Banksia serrata</i>	1
<i>Banksia spinulosa</i> var <i>spinulosa</i>	2
<i>Billardiera scandens</i>	1
<i>Calochilus campestris</i>	1
<i>Dianella caerulea</i>	3
<i>Dichondra repens</i>	1
<i>Elaeocarpus reticulatus</i>	2
<i>Entolasia stricta</i>	4
<i>Eucalyptus racemosa</i>	1
<i>Eucalyptus piperita</i>	1
<i>Glochidion ferdinandi</i>	1
<i>Grevillea sericea</i>	2
<i>Hakea sericea</i>	2

<i>Imperata cylindrica</i>	5
<i>Isopogon anemonifolius</i>	1
<i>Kunzea ambigua</i>	4
<i>Leucopogon ericoides</i>	1
<i>Leucopogon juniperinus</i>	4
<i>Lomandra gracilis</i>	3
<i>Lomandra longifolia</i>	3
<i>Lomandra obliqua</i>	3
<i>Lomatia silaifolia</i>	1
<i>Melaleuca linearifolia</i>	3
<i>Micrantheum ericoides</i>	3
<i>Microlaena stipoides</i> var <i>stipoides</i>	3
<i>Ozothamnus diosmifolius</i>	1
<i>Paspalidium distans</i>	1
<i>Patersonia glabrata</i>	1
<i>Persoonia pinifolia</i>	2
<i>Phyllanthus hirtellus</i>	2
<i>Pittosporum undulatum</i>	2
<i>Polyscias sambucifolia</i>	3
<i>Pomax umbellata</i>	2
<i>Pratia purpurascens</i>	3
<i>Smilax glyciphylla</i>	1
<i>Veronica plebeia</i>	3

<b>Weed Species in 400<sup>2</sup> m Quadrat</b>	
<b>Scientific name</b>	<b>Braun-Blanquet Cover Scale</b>
<i>Ageratina adenophora</i>	1
<i>Asparagus asparagoides</i>	3
<i>Digitaria didactyla</i>	2
<i>Ehrharta erecta</i>	1
<i>Ligustrum sinense</i>	2
<i>Ochna serrulata</i>	1
<i>Stellaria media</i>	2

**Acacia binervia Quadrat**

This quadrat is located just above Terrys Creek on a southwest-facing slope. It is representative of Map Unit 33: Western Sandstone Gully Forest but falls short by two positive diagnostic species to achieve a 95% confidence interval (51 native species of the required 39; 25 positive diagnostic species of the required 27). The dominant species are *Eucalyptus piperita* with an understory of *Angophora costata* and *Acacia binervia* with *Syncarpia glomulifera* closer to the creek. Within the quadrat is *Lasiopetalum parviflorum*, considered rare in the Ryde district. It is possible that this site has previously been used for farming or a residence due to the presence of an old Radiata Pine and Banana. The weeds are located in the nutrient rich soil closer to the creek.

Native Plant Species in 400 <sup>2</sup> m Quadrat	
Scientific name	Braun-Blanquet Cover Scale
<i>Acacia binervia</i>	3
<i>Acacia longifolia</i>	2
<i>Acacia terminalis</i>	1
<i>Acrotriche divaricata</i>	1
<i>Angophora costata</i>	1
<i>Anisopogon avenaceus</i>	3 / 4
<i>Astrotricha longifolia</i>	3
<i>Billardiera scandens</i>	1
<i>Bossiaea obcordata</i>	1
<i>Bursaria spinosa</i>	2
<i>Cassytha pubescens</i>	3
<i>Dianella caerulea</i>	3
<i>Dodonaea triquetra</i>	1
<i>Elaeocarpus reticulatus</i>	3
<i>Entolasia stricta</i>	3
<i>Eucalyptus piperita</i>	1
<i>Glochidion ferdinandi</i>	1
<i>Grevillea buxifolia</i>	2
<i>Grevillea linearifolia</i>	3
<i>Hakea sericea</i>	1
<i>Hibbertia aspera</i>	3
<i>Lasiopetalum ferrugineum</i> ssp <i>ferrugineum</i>	3
<i>Lasiopetalum parviflorum</i>	1
<i>Leucopogon juniperinus</i>	1
<i>Lepidosperma gunni</i>	3
<i>Lepidosperma laterale</i>	1
<i>Leptospermum polygalifolium</i> ssp <i>polygalifolium</i>	1
<i>Lindsaea linearis</i>	3
<i>Lomandra longifolia</i>	6
<i>Lomandra micrantha</i> ssp <i>tuberculata</i>	2
<i>Lomandra obliqua</i>	3

<i>Lomatia silaifolia</i>	2
<i>Micranthemum ericoides</i>	3
<i>Microlaena stipoides</i> var <i>stipoides</i>	4
<i>Morinda jasminoides</i>	3
<i>Notelaea longifolia</i>	1
<i>Oplismenus aemulus</i>	2
<i>Persoonia pinifolia</i>	2
<i>Pittosporum undulatum</i>	4
<i>Poa affinis</i>	1
<i>Polyscias sambucifolia</i>	2
<i>Pratia purpurascens</i>	3
<i>Pseuderanthemum variabile</i>	2
<i>Pultenaea flexilis</i>	3
<i>Smilax glycyphylla</i>	3
<i>Syncarpia glomulifera</i>	1
<i>Xanthosia tridentata</i>	1
<i>Zieria smithii</i>	1
Unknown sedge (no inflorescence)	2
Unknown blue-green grass (no inflorescence)	2

<b>Weed Species in 400m<sup>2</sup> Quadrat</b>	
<b>Scientific name</b>	<b>Braun-Blanquet Cover Scale</b>
<i>Lantana camara</i>	2
<i>Ligustrum sinense</i>	2
<i>Ochna serrulata</i>	2
<i>Pinus radiata</i>	1

**Coachwood/Christmas Bush Quadrat**

This quadrat is located along the 45m contour on a sheltered westerly slope above Terrys Creek. The geology is Hawkesbury Sandstone with deeper clay-rich soils along the creek. The community in the quadrat is dominated by *Angophora costata*/*Eucalyptus piperita* Forest with an understory of *Ceratopetalum apetalum*, *Ceratopetalum gummiferum* and *Syncarpia glomulifera*. Four species of orchid occur in the quadrat. The quadrat is representative of Map Unit 33: Western Sydney Gully Forest but does not meet the diagnostic species requirement to achieve a 95% confidence interval (44 native species, 39 required; 21 positive diagnostic species of 27). Weed problems are most notable in the more nutrient rich and damper soils near the shady creek with *Ochna* (common) & Small-leaf Privet being the dominant weeds.

Native Plant Species in 400 <sup>2</sup> m Quadrat	
Scientific name	Braun-Blanquet Cover Scale
<i>Acrotriche divaricata</i>	3
<i>Allocasuarina littoralis</i>	1
<i>Angophora costata</i>	1
<i>Breynia oblongifolia</i>	3
<i>Callicoma serratifolia</i>	2
<i>Ceratopetalum apetalum</i>	4
<i>Ceratopetalum gummiferum</i>	4
<i>Cryptostylis erecta</i>	2
<i>Cryptostylis subulata</i>	2
<i>Dianella caerulea</i>	1
<i>Dodonaea triquetra</i>	1
<i>Elaeocarpus reticulatus</i>	3
<i>Entolasia marginata</i>	2
<i>Entolasia stricta</i>	2
<i>Eucalyptus piperita</i>	1
<i>Eustrephus latifolius</i>	3
<i>Glycine clandestina</i>	1
<i>Imperata cylindrica</i>	3
<i>Lambertia formosa</i>	1
<i>Lepidosperma laterale</i>	3
<i>Leucopogon juniperinus</i>	2
<i>Leucopogon lanceolatus</i> var <i>lanceolatus</i>	1
<i>Lomandra cylindrica</i>	1
<i>Lomandra gracilis</i>	2
<i>Lomandra longifolia</i>	1
<i>Lomandra obliqua</i>	1
<i>Lomatia silaifolia</i>	3
<i>Morinda jasminoides</i>	3
<i>Notelaea longifolia</i>	1
<i>Oplismenus aemulus</i>	3
<i>Pandorea pandorana</i>	3
<i>Paspalidium distans</i>	1
<i>Pittosporum undulatum</i>	5
<i>Poa affinis</i>	1

<i>Polyscias sambucifolia</i>	2
<i>Pratia purpurascens</i>	2
<i>Pseuderanthemum variabile</i>	2
<i>Pteridium esculentum</i>	1
<i>Pterostylis nutans</i>	2
<i>Pultenaea flexilis</i>	1
<i>Smilax glycyphylla</i>	3
<i>Xanthosia tridentata</i>	1
<i>Zieria smithii</i>	1

<b>Weed Species in 400<sup>2</sup>m Quadrat</b>	
<b>Scientific Name</b>	<b>Braun-Blanquet Cover Scale</b>
<i>Cinnamomum camphora</i>	3
<i>Lantana camara</i>	3
<i>Ligustrum lucidum</i>	1
<i>Ligustrum sinense</i>	4
<i>Ochna serratifolia</i>	5
<i>Oxalis corniculata</i>	1
<i>Rhaphiolepis indica</i>	1

**Somerset Reserve Quadrat**

This quadrat, on Hawkesbury Sandstone, contains a *Eucalyptus piperita* Open Woodland in association with *Angophora hispida* and sclerophyllous understory with a sedge and *Entolasia* ground cover. This community fulfils all requirements for Map Unit 31: Sandstone Ridgetop Woodland (69 native species [43 required], 36 positive diagnostic species [28 required]). This quadrat falls across the 45-50m (ASL) contour on a dry north-facing platform 10m above Terrys Creek.

Native Plant Species in 400 <sup>2</sup> m Quadrat	
Scientific name	Braun-Blanquet Cover Scale
<i>Acacia longifolia</i>	3
<i>Acacia ulicifolia</i>	1
<i>Actinotus minor</i>	3
<i>Angophora hispida</i>	2
<i>Anisopogon avenaceus</i>	3
<i>Aotus ericoides</i>	1
<i>Astrotricha longifolia</i>	3
<i>Banksia ericifolia</i>	2
<i>Banksia marginata</i>	1
<i>Banksia oblongifolia</i>	1
<i>Banksia spinulosa</i> var <i>spinulosa</i>	2/3
<i>Billardiera scandens</i>	1
<i>Boronia ledifolia</i>	3
<i>Boronia pinnata</i>	1
<i>Bossiaea heterophylla</i>	3
<i>Bossiaea obcordata</i>	3
<i>Cassutha glabella</i>	3
<i>Cryptostylis erecta</i>	3
<i>Dampiera stricta</i>	1
<i>Dianella caerulea</i> var <i>producta</i>	2
<i>Dianella prunina</i>	1
<i>Dillwynia retorta</i>	3
<i>Dodonaea triquetra</i>	3
<i>Elaeocarpus reticulatus</i>	1/2
<i>Entolasia stricta</i>	5
<i>Epacris pulchella</i>	1
<i>Eucalyptus piperita</i>	1
<i>Gahnia erythrocarpa</i>	1
<i>Glochidion ferdinandi</i>	1
<i>Goodenia</i> sp	1
<i>Grevillea buxifolia</i>	3

<i>Grevillea linearifolia</i>	2
<i>Hakea dactyloides</i>	1
<i>Hakea sericea</i>	3
<i>Hibbertia aspera</i>	½
<i>Hibbertia bracteata</i>	1
<i>Isopogon anemonifolius</i>	1
<i>Kunzea ambigua</i>	3
<i>Lambertia formosa</i>	1
<i>Lasiopetalum ferrugineum</i> var. <i>ferrugineum</i>	1
<i>Lepidosperma gunni</i>	1
<i>Lepidosperma laterale</i>	1
<i>Leptospermum trinervium</i>	1
<i>Leptospermum polygalifolium</i>	4
<i>Lepyrodia scariosa</i>	4/5
<i>Leucopogon ericoides</i>	1
<i>Leucopogon microphyllus</i> var. <i>microphyllus</i>	1
<i>Lindsaea microphylla</i>	1
<i>Lomandra filiformis</i> ssp <i>coriacea</i>	1
<i>Lomandra cylindrica</i>	3
<i>Lomandra gracilis</i>	3
<i>Lomandra longifolia</i>	3
<i>Lomandra obliqua</i>	1
<i>Lomatia silaifolia</i>	1
<i>Micrantheum ericoides</i>	2
<i>Microlaena stipoides</i> var <i>stipoides</i>	3
<i>Patersonia glabrata</i>	3
<i>Persoonia lanceolata</i>	1
<i>Persoonia levis</i>	3
<i>Persoonia pinifolia</i>	3
<i>Phyllanthus hirtellus</i>	2/3
<i>Pultenaea elliptica</i>	2
<i>Phyllota phyllicoides</i>	3
<i>Platysace linearifolia</i>	1
<i>Pterostylis acuminata</i>	1
<i>Smilax glycyphylla</i>	1
<i>Styphelia tubiflora</i>	3
<i>Xanthorrhoea</i> sp	3
<i>Xanthosia tridentata</i>	4

### Wolfe Road Quadrat

This quadrat is located immediately behind houses on Blue Gum Drive. It contains a *Eucalyptus piperita* (Sydney Peppermint) / *Angophora costata* (Sydney Red Gum) Open Woodland on Hawkesbury Sandstone with a diverse range of understory species. The quadrat contains 60 native species and 40 positive diagnostic species. It fulfils the requirements of Map Unit 33: Western Sandstone Gully Forest (Tozer, 2003).

Native Plant Species in 400 <sup>2</sup> m Quadrat	
Scientific name	Braun-Blanquet Cover Scale
<i>Acacia linifolia</i>	2
<i>Acacia longifolia</i>	1
<i>Acacia suaveolens</i>	1
<i>Acacia terminalis</i>	1
<i>Acacia ulicifolia</i>	3
<i>Actinotus helianthi</i>	2
<i>Allocasuarina littoralis</i>	1
<i>Amperea xiphoclada</i>	1
<i>Angophora costata</i>	1
<i>Astroloma humifisum</i>	1
<i>Astrotricha longifolia</i>	3
<i>Banksia serrata</i>	3
<i>Banksia spinulosa</i> var <i>spinulosa</i>	2
<i>Billardiera scandens</i>	2
<i>Bossiaea heterophylla</i>	1
<i>Caustis flexuosa</i>	2
<i>Cassytha pubescens</i>	3
<i>Corymbia gummifera</i>	1
<i>Cryptostylis erecta</i>	2
<i>Dianella caerulea</i>	3
<i>Dichondra repens</i>	1
<i>Dillwynia retorta</i>	3
<i>Dodonaea triquetra</i>	2
<i>Elaeocarpus reticulatus</i>	3
<i>Entolasia stricta</i>	3
<i>Eucalyptus piperita</i>	3
<i>Gahnia erythrocarpa</i>	1
<i>Glochidion ferdinandi</i>	1
<i>Gonocarpus teucrioides</i>	3
<i>Grevillea buxifolia</i>	1
<i>Hakea sericea</i>	1
<i>Hibbertia linearis</i>	2
<i>Lepidosperma gunnii</i>	1

<i>Leptospermum trinervium</i>	1
<i>Leucopogon ericoides</i>	3
<i>Lobelia gracilis</i>	1
<i>Lomandra cylindrica</i>	1
<i>Lomandra filiformis</i> ssp <i>filiformis</i>	1
<i>Lomandra longifolia</i>	5
<i>Lomandra obliqua</i>	1
<i>Lomatia silaifolia</i>	3
<i>Micrantheum ericoides</i>	2
<i>Microlaena stipoides</i> var <i>stipoides</i>	2
<i>Mitrasacme polymorpha</i>	1
<i>Olearia microphylla</i>	1
<i>Omalanthus nutans</i>	1
<i>Opercularia aspera</i>	1
<i>Ozothamnus diosmifolius</i>	2
<i>Persoonia levis</i>	1
<i>Petrophile pulchella</i>	3
<i>Pimelia linifolia</i>	4
<i>Pittosporum undulatum</i>	1
<i>Platysace lanceolata</i>	1
<i>Polyscias sambucifolia</i>	1
<i>Pomax umbellata</i>	3
<i>Pteridium esculentum</i>	3
<i>Smilax glyciphylla</i>	3
<i>Woolsia pungens</i>	3
<i>Xanthorrhoea arborea</i>	4
<i>Xanthosia pilosa</i>	3

<b>Weed Species in 400<sup>2</sup> m Quadrat</b>	
<b>Braun-Blanquet Cover Scale</b>	<b>Braun-Blanquet Cover Scale</b>
<i>Asparagus aethiopicus</i>	1

### **Burrows Park Quadrat**

This quadrat is located in Blackbutt/Sydney Blue Gum Open Forest vegetation between Buffalo Road and Princes Street, Ryde. Rough-barked Apple and Sweet Pittosporum dominate the understory and there is a wide range of clay loving ground covers. Burrows Park fulfils the requirements for Map 15: Turpentine Ironbark Vegetation Community with 41 native plants (33 required) and 20 positive diagnostic species (18 required). One Bridal Creeper, a noxious weed, was found in the quadrat.

<b>Native Plant Species in 400<sup>2</sup>m Quadrat</b>	
<b>Scientific name</b>	<b>Braun-Blanquet Cover Scale</b>
<i>Acacia parramattensis</i>	3
<i>Angophora floribunda</i>	3
<i>Bursaria spinosa</i>	4
<i>Cheilanthes sieberi</i> ssp <i>sieberi</i>	2
<i>Clematis aristata</i>	1
<i>Clematis glycinoides</i> var <i>glycinoides</i>	4
<i>Dianella caerulea</i>	3
<i>Dichondra repens</i>	2
<i>Digitaria parviflora</i>	4
<i>Dodonaea triquetra</i>	4
<i>Echinopogon caespitosus</i>	1
<i>Einadia hastata</i>	3
<i>Entolasia marginata</i>	2
<i>Entolasia stricta</i>	2
<i>Eucalyptus pilularis</i>	1
<i>Eucalyptus saligna</i>	1
<i>Eustrephus latifolius</i>	2
<i>Glycine clandestina</i>	1
<i>Glycine microphylla</i>	1
<i>Imperata cylindrica</i> var <i>major</i>	2
<i>Kennedia rubicunda</i>	1
<i>Leucopogon juniperinus</i>	3
<i>Lomandra filiformis</i> ssp <i>filiformis</i>	1
<i>Lomandra longifolia</i>	4
<i>Microlaena stipoides</i> var <i>stipoides</i>	4
<i>Oplismenus imbecillis</i>	1
<i>Oxalis perennans</i>	1
<i>Ozothamnus diosmifolius</i>	1
<i>Pandorea pandorana</i>	2
<i>Pittosporum undulatum</i>	1
<i>Poa affinis</i>	1
<i>Polyscias sambucifolia</i>	2
<i>Poranthera microphylla</i>	1
<i>Pratia purpurascens</i>	2
<i>Pseuderanthemum variabile</i>	4
<i>Sigesbeckia orientalis</i>	3
<i>Themeda australis</i>	4
<i>Tylophora barbata</i>	3

<i>Veronica plebeia</i>	3
<i>Wahlenbergia gracilis</i>	1
<i>Zieria smithii</i>	4

<b>Weed Species in 400<sup>2</sup>m Quadrat</b>	
<b>Scientific name</b>	<b>Braun-Blanquet Cover Scale</b>
<i>Asparagus aethiopicus</i>	1
<i>Asparagus asparagoides</i>	1
<i>Bidens pilosa</i>	1
<i>Cardiospermum grandiflorum</i>	1
<i>Cinnamomum camphora</i>	1
<i>Conyza</i> sp.	2
<i>Ehrharta erecta</i>	3
<i>Freesia</i> sp	1
<i>Fumaria</i> sp	1
<i>Gnaphalium</i> sp	1
<i>Ligustrum lucidum</i>	1
<i>Ochna serrulata</i>	1
<i>Olea europaea</i> ssp <i>africana</i>	1
<i>Oxalis</i> sp	1
<i>Phoenix canariensis</i>	1
<i>Tradescantia fluminensis</i>	2
<i>Sida rhombifolia</i>	1
<i>Sonchus</i> sp.	1

### Pidding Reserve Quadrat

This quadrat is located within a reserve dominated by *Eucalyptus pilularis* and *Angophora costata* with an understory of *Glochidion ferdinandi* and *Allocasuarina littoralis* with *E. resinifera* within the quadrat. This Open Woodland occurs on Mittagong Formation above Hawkesbury Sandstone geology and the soil is sandy but with a high clay content. The area in which the quadrat is located has been damaged by erosion but despite this the number of native plant species within the quadrat is unusually high (60 species). The quadrat qualifies for both Map Unit 43: Turpentine Ironbark Margin Forest (13/11 positive diagnostic species) as well as Map Unit 33: Western Sandstone Gully Forest (27/27 diagnostic species). Rabbits are a major threat to the regeneration of vegetation as well as the erosion.

Native Plant Species in 400 <sup>2</sup> m Quadrat	
Scientific name	Braun-Blanquet Cover Scale
<i>Acacia terminalis</i>	1
<i>Allocasuarina littoralis</i>	3
<i>Anisopogon avenaceus</i>	1
<i>Banksia spinulosa</i> ssp <i>spinulosa</i>	1
<i>Billardiera scandens</i>	1
<i>Cassytha glabella</i>	3
<i>Cassytha pubescens</i>	1
<i>Cayratia clematidea</i>	2
<i>Clematis aristata</i>	1
<i>Clematis glycinoides</i> var <i>glycinoides</i>	3
<i>Cryptostylis erecta</i>	2
<i>Dianella caerulea</i>	3
<i>Dianella revoluta</i> var <i>revoluta</i>	2
<i>Dichondra repens</i>	1
<i>Dodonaea triquetra</i>	3
<i>Elaeocarpus reticulatus</i>	1
<i>Entolasia stricta</i>	3
<i>Eucalyptus pilularis</i>	1
<i>Eucalyptus resinifera</i> ssp <i>resinifera</i>	1
<i>Gahnia clarkei</i>	4
<i>Glochidion ferdinandi</i>	3
<i>Goodenia hederacea</i> ssp <i>hederacea</i>	1
<i>Grevillea sericea</i>	1
<i>Hakea sericea</i>	3
<i>Hibbertia obtusifolia</i>	1
<i>Hydrocotyle peduncularis</i>	1
<i>Kunzea ambigua</i>	1
<i>Lambertia formosa</i>	1
<i>Lasiopetalum ferrugineum</i> var <i>ferrugineum</i>	1
<i>Lepidosperma laterale</i>	4
<i>Leptospermum trinervium</i>	1
<i>Leucopogon juniperinus</i>	1
<i>Lomandra cylindrica</i>	1

<i>Lomandra filiformis</i> ssp <i>coriacea</i>	1
<i>Lomandra gracilis</i>	1
<i>Lomandra longifolia</i>	4
<i>Lomandra obliqua</i>	1
<i>Lomatia silaifolia</i>	1
<i>Micrantheum ericoides</i>	3
<i>Microlaena stipoides</i> var <i>stipoides</i>	3
<i>Notelaea longifolia</i>	2
<i>Omalanthus nutans</i>	1
<i>Oplismenus imbecillis</i>	3
<i>Ozothamnus diosmifolius</i>	1
<i>Pandorea pandorana</i>	1
<i>Persoonia linearis</i>	1
<i>Phyllanthus hirtellus</i>	1
<i>Pimelia linifolia</i>	1
<i>Pittosporum undulatum</i>	1
<i>Platylobium formosum</i> ssp <i>formosum</i>	1
<i>Platysace lanceolata</i>	1
<i>Polyscias sambucifolia</i>	3
<i>Pomaderris lanigera</i>	1
<i>Pratia purpurascens</i>	3
<i>Pteridium esculentum</i>	3
<i>Pteris vittata</i>	1
<i>Senecio hispidulus</i> var <i>hispidulus</i>	1
<i>Veronica plebeia</i>	1
<i>Zieria smithii</i>	3
<i>Xanthorrhoea</i> sp ( <i>minor</i> ?)	1

<b>Weed Species in 400<sup>2</sup>m Quadrat</b>	
<b>Scientific name</b>	<b>Braun-Blanquet Cover Scale</b>
<i>Centaurium</i> sp	3
<i>Conyza</i> sp	3
<i>Ehrharta erecta</i>	3
<i>Gnaphalium</i> sp	3
<i>Lantana camara</i>	1
<i>Ligustrum lucidum</i>	3
<i>Ligustrum sinense</i>	1
<i>Lonicera japonica</i>	1
<i>Ochna serrulata</i>	1
<i>Oxalis</i> sp	3
<i>Rubus fruticosus</i> species aggregate	1
<i>Paspalum dilatatum</i>	1
<i>Paspalum quadrifarium</i>	1
<i>Phoenix canariensis</i>	1

**Pimelia curviflora Quadrat**

This quadrat borders a fire trail on the east side of the Field of Mars Cemetery. The canopy contains *Eucalyptus resinifera* with a *Corymbia gummifera*, *Angophora costata* and *Allocasuarina littoralis* understory. Two rare plants inhabit this quadrat: *Gompholobium pinnatum* and *Pultenaea paleacea*. An uncommon plant is *Acacia brownii* and *Pimelia curviflora* ssp *curviflora* is listed as vulnerable in Schedule 2 of the TSC Act (1995). This quadrat is 4 positive diagnostic species short of fulfilling Map Unit 2: Shale Sandstone Transition Forest (high sandstone influence). There are 53 native plants (of the required 40) but only 16 positive diagnostic species (20 required). There are at least 4 other positive diagnostic species within metres of the quadrat.

Native Plant Species in 400 <sup>2</sup> m Quadrat	
Scientific name	Braun-Blanquet Cover Scale
<i>Acacia brownii</i>	1
* <i>Acacia fimbriata</i> (non-local native)	1
<i>Acacia linifolia</i>	1
<i>Acacia myrtifolia</i>	4
<i>Acacia terminalis</i>	1
<i>Allocasuarina littoralis</i>	3
<i>Angophora costata</i>	1
<i>Anisopogon avenaceus</i>	2
<i>Aristida vagans</i>	2
<i>Austrostipa pubescens</i>	6
<i>Banksia spinulosa</i> var <i>spinulosa</i>	2
<i>Billardiera scandens</i>	2
<i>Bossiaea obcordata</i>	3
<i>Cassytha pubescens</i>	4
<i>Corymbia gummifera</i>	3
<i>Dianella caerulea</i>	3
<i>Dianella revoluta</i> var <i>revoluta</i>	2
<i>Dichelachne micrantha</i>	1
<i>Dillwynia retorta</i>	1
<i>Entolasia stricta</i>	4
<i>Epacris microphylla</i>	2
<i>Eucalyptus resinifera</i>	2
<i>Glochidion ferdinandi</i>	1
<i>Glycine clandestina</i>	2
<i>Gompholobium pinnatum</i>	1
<i>Gonocarpus teucrioides</i>	3
<i>Goodenia hederacea</i> ssp <i>hederacea</i>	2
<i>Grevillea sericea</i>	3
<i>Hardenbergia violacea</i>	2
<i>Hibbertia</i> sp aff <i>riparia</i>	3
<i>Hovea linearis</i>	2
<i>Lepidosperma laterale</i>	2
<i>Leptospermum trinervium</i>	1
<i>Lomandra filiformis</i> ssp <i>coriacea</i>	1

<i>Lomandra multiflora</i>	1
<i>Lomandra obliqua</i>	1
<i>Lomatia silaifolia</i>	2
<i>Micrantheum ericoides</i>	3
<i>Microlaena stipoides</i> var <i>stipoides</i>	1
<i>Mirbelia rubiifolia</i>	2
<i>Notelaea longifolia</i>	1
<i>Opercularia aspera</i>	3
<i>Persoonia lanceolata</i>	1
<i>Persoonia laurina</i>	3
<i>Petrophile pulchella</i>	1
<i>Phyllanthus hirtellus</i>	4
<i>Pimelia curviflora</i> ssp <i>curviflora</i>	3
<i>Pimelia linifolia</i> ssp <i>linifolia</i>	4
<i>Pomax umbellata</i>	1
<i>Pultenaea paleacea</i>	2
<i>Themeda australis</i>	4
<i>Xanthorrhoea minor</i>	3
<i>Xylomelum pyriforme</i>	2

**Upper Strangers Creek Quadrat**

The forest canopy, on the north-west corner of the reserve, is dominated by Red Mahogany (*Eucalyptus resinifera*), Turpentine (*Syncarpia glomulifera*) and Sydney Red Gum (*Angophora costata*). Arson occurred in 2002 and there has been excellent regeneration after the fire. There are numerous uncommon plants in the quadrat: *Pultenaea villosa*, *Acacia brownii* (Kubiak, 2005) while *Pultenaea retusa* is listed as vulnerable in Western Sydney (Benson & McDougall, 1991). This quadrat fulfils the requirements of Map Unit 43: Turpentine Ironbark Margin Forest with 69 native species of the required 38 and 12 of the 11 positive diagnostic species.

Native Plant Species in 400 <sup>2</sup> m Quadrat	
Scientific name	Braun-Blanquet Cover Scale
<i>Acacia brownii</i>	1
<i>Acacia falcata</i>	3
<i>Acacia linifolia</i>	4
<i>Acacia myrtifolia</i>	2
<i>Acacia suaveolens</i>	3
<i>Acacia terminalis</i>	1
<i>Allocasuarina littoralis</i>	1
<i>Angophora costata</i>	3
<i>Aristida ramosa</i> ?	1
<i>Aristida vagans</i>	3
<i>Austrostipa pubescens</i>	4
<i>Billardiera scandens</i>	2
<i>Bossiaea obcordata</i>	2
<i>Brunoniella pumilio</i>	2
<i>Bursaria spinosa</i>	1
<i>Caesia</i> sp ?	1
<i>Cassinia aculeata</i>	3
<i>Cassytha pubescens</i>	2
<i>Cheilanthes sieberi</i> ssp <i>sieberi</i>	2
<i>Clematis glycinoides</i>	1
<i>Daviesia ulicifolia</i>	1
<i>Dianella caerulea</i>	2
<i>Dillwynia retorta</i>	2
<i>Dodonaea triquetra</i>	4
<i>Echinopogon caespitosus</i>	1
<i>Elaeocarpus reticularis</i>	1
<i>Entolasia stricta</i>	2
<i>Eucalyptus resinifera</i>	2
<i>Glycine clandestina</i>	1
<i>Glycine microphylla</i>	2
<i>Gonocarpus teucrioides</i>	1
<i>Goodenia hederacea</i> ssp <i>hederacea</i>	2
<i>Grevillea sericea</i>	3

<i>Hakea dactyloides</i>	1
<i>Hakea sericea</i>	1
<i>Hardenbergia violacea</i>	1
<i>Hibbertia empetrifolia</i>	3
<i>Imperata cylindrica</i>	1
<i>Lepidosperma laterale</i>	3
<i>Leptospermum trinervium</i>	1
<i>Leucopogon juniperinus</i>	2
<i>Lindsaea linearis</i>	2
<i>Lomandra filiformis</i> ssp <i>filiformis</i>	3
<i>Lomandra gracilis</i>	1
<i>Lomandra longifolia</i>	4
<i>Lomandra multiflora</i>	1
<i>Lomandra obliqua</i>	1
<i>Lomatia silaifolia</i>	1
<i>Microlaena stipoides</i> ssp <i>stipoides</i>	5
<i>Olearia microphylla</i>	1
<i>Oxalis perennans</i>	2
<i>Persoonia levis</i>	1
<i>Phyllanthus hirtellus</i>	3
<i>Pimelea linifolia</i> ssp <i>linifolia</i>	3
<i>Platylobium formosum</i> ssp <i>formosum</i>	1
<i>Platysace lanceolata</i>	3
<i>Polyscias sambucifolia</i>	2
<i>Pomax umbellata</i>	1
<i>Pratia purpurascens</i>	3
<i>Pseuderanthemum variabile</i>	1
<i>Pteridium esculentum</i>	1
<i>Pultenaea elliptica</i>	1
<i>Pultenaea retusa</i>	1
<i>Pultenaea villosa</i>	2
<i>Stylidium graminifolium</i>	1
<i>Themeda australis</i>	4
<i>Xanthorrhoea minor</i>	3
<i>Xanthosia tridentata</i>	2
<i>Zieria smithii</i>	2

<b>Weed Species in 400m<sup>2</sup> Quadrat</b>	
<b>Scientific Name</b>	<b>Braun Blanquet Cover Scale</b>
<i>Asparagus aethiopicus</i>	1
<i>Freesia</i> sp	2
<i>Lantana camara</i>	1
<i>Ligustrum sinense</i>	1
<i>Pavonia hastata</i>	3
<i>Ochna serrulata</i>	1
<i>Setaria</i> sp	1

## APPENDIX 4:

# FAUNA RECORDED IN SURVEY QUADRATS

### PEMBROKE QUADRAT

Survey Type	Survey Dates	Date 1	Date 2	Date 3	Date 4
Hair tube	27 Mar-1 Apr 9-14 Sept	<i>R. rattus</i> (3) <i>M. musculus</i> (1)	<i>R. rattus</i> (2) <i>M. musculus</i> (1)		
Spotlight	28 March 29 March 11 September 12 September	<i>T. vulpecula</i> (1)	<i>T. vulpecula</i> (2) <i>P.peregrinus</i> (2) <i>Felis catus</i> (1)	<i>T.vulpecula</i> (1) <i>P.peregrinus</i> (3)	<i>T.vulpecula</i> (1) <i>Canis lupus</i> (2)
Anabat	28 March 29 March 11 September 12 September	<i>V. vult urnis</i> (1) <i>P. poliocephalis</i> (6)	<i>C. gouldii</i> (1) <i>P. poliocephalus</i> (2)	<i>N. geoffroyi</i> (1) <i>C. gouldii</i> (1)	<i>C. gouldii</i> (2) <i>P. poliocephalus</i> (5)
Birds	29 April 14 May 9 October 12 November	R Lorikeet 14 SC Cockatoo 5 Kookaburra 2 Grey Fantail 3 E Y Robin 1 E Whipbird 2 Sup B Wren 4 Brown Thbill 1 Yell Thbill 1 Noisy Minor 5 Spot Pardal 1 Red-brow Fin 4 Silvereye Tas 8 Magpie 1 Pied Curra 1	SC Cockatoo 4 R Lorikeet 20 Wel Swallow 1 Wh-br S Wren2 B Fac Cuck Sh1 Grey Fantail 2 E Y Robin 1 Gold Whistler 1 E Whipbird 1 Sup B Wren 8 Brown Thbill 1 Yellow Thbill 2 Noisy Minor 7 Spot Pardalot 1 Silvereye (Tas 3) Magpie 1 Grey Butchbd 1 Aust raven 2 Pied Currawg 1 Spot Turt-Dov1	Crest Pigeon 2 Galah 1 S Cr Cockatoo 3 Rainb Lorikeet 11 Crim Rosella 1 Koel 1 Kookaburra 3 East Yell Robin 1 Willie Wagtail 1 E Whipbird 1 Sup fairy Wren 6 Brown Thornb 1 Noisy Minor 8 White-plum HE 1 White-cheek HE 2 East Spinebill 1 Spot Pardalote 1 Olive-b Oriole 1 Magpie 3 Pied Currawg 10 Aust Raven 2	Collar Sp Hawk 1 S Sc Cockatoo 4 R Lorikeet 15 Koel 1 Kookaburra 2 Wel Swallow 5 East Yell Robin 1 Sup fairy Wren 3 Little Wattle Bd 1 Noisy Minor 8 Spot Pardalote 1 Grey Butcher B 1 Magpie 1 Pied Currawong 5
Reptiles	29 March 30 March 8. September 9 September	<i>E quoyi</i> 1 <i>L guichenoti</i> 2	<i>E. quoyi</i> 4 <i>L. guichenoti</i> 2 <i>L delicata</i> 1	<i>E. quoyi</i> 1 <i>E. tenuis</i> 1 <i>L. guichenoti</i> 4 <i>L. delicata</i> 2 <i>P. platurus</i> 1	<i>E. quoyi</i> 2 <i>L. guichenoti</i> 2
Frogs	27 March 7 April 12 September 13 September	<i>Limno. peroni</i> 2 <i>C. signifera</i> 5	<i>Li mno. peroni</i> 2 <i>L. phylloch roa</i> 1	<i>Limno. peroni</i> 1 <i>C. signifera</i> 2	<i>Limno. peronii</i> 1 <i>C. signifera</i> 5

**COACHWOOD/CHRISTMAS BUSH SITE (PEMBROKE)**

Survey Type	Survey Dates	Date 1	Date 2	Date 3	Date 4
Hair tube	27 Mar-1 Apr 9-14 Septemb	<i>R. rattus</i> (1)	<i>R. rattus</i> (1) <i>M. musculus</i> (1)		
Spotlight	28 March 29 March 11 September 12 September	<i>T. vulpecula</i> (1)	<i>T. vulpecula</i> (1) <i>P. peregrinus</i> (2)	<i>T. vulpecula</i> (1) <i>P. peregrinus</i> (1)	Nil
Anabat	28 March 29 March 11 September 12 September	<i>P. poliocephalis</i> (6)	<i>C. gouldii</i> (1) <i>P. poliocephalus</i> (10)	<i>C. gouldii</i> (1)	<i>P. poliocephalus</i> (2)
Birds	29 April 14 May 9 October 10 November	Crim Rosella 1 R. Lorikeet 14 S.C. Cockatoos 13 Wel Swallow 5 Rufous Whistler 1 East Whipbird 1 B Gerygone 1 East Spinebill 1 Noisy Miner 8 Spot Pardalote 1 Pied Currawong 1 Aust Raven 2	R. Lorikeets 12 S.C. Cockatoos 6 WhiteBrow SW 3 Grey Fantail 1 East Whipbird 1 Noisy Miner 5 Spot Pardalote 1 Pied Currawong 1	S.C. Cockatoo 1 R. Lorikeet 10 C. Rosella 2 East Rosella 1 Sac Kingfisher 1 Wel Swallow 3 Black Face CS 1 East yellow Rob 1 Rufous Whistler 1 East whipbirds 1 Var Fairy Wren 1 Brown gerygone 1 Brown Thornbill 1 Noisy Miner 8 East Spinebill 1 Spot Pardalote 1 Striat Pardalote 3 Pied Currawong 2 Aust Raven 2	Spot turtle dove 1 Galah 6 Little corella 10 S.C. Cockatoo 2 R. Lorikeet 12 Aus King parrot 1 C. Rosella 4 Red whisk bulbu 1 East yellow rob 1 Rufous whistler 1 East Whipbirds 1 Brown gerygone 1 Noisy Miner 8 Spot Pardalot 1 Grey Butch Bird 1 Pied Currawong 1 Aust Raven 1
Reptiles	29 March 30 March 8. September 9 September	<i>L. delicata</i> 2 <i>L. guichenoti</i> 2	<i>L. guichenoti</i> 2 <i>L. delicata</i> 1	<i>L. guichenoti</i> 4 <i>L. delicata</i> 2	<i>E. quoyi</i> 1 <i>L. guichenoti</i> 2
Frogs	27 March 7 April 12 September 13 September	<i>C. signifera</i> 2	Nil	<i>C. signifera</i> 2	Nil

**ACACIA BINERVIA SITE (PEMBROKE)**

Survey Type	Survey Dates	Date 1	Date 2	Date 3	Date 4
Hair tube	27 Mar-1 Apr 9-14 Septemb	<i>M. musculus</i> 2	<i>M. musculus</i> (1)		
Spotlight	28 March 29 March 11 September 12 September	<i>T. vulpecula</i> (1)	Nil	<i>P. peregrinus</i> (1)	Nil
Anabat	28 March 29 March 11 September 12 September	<i>P. poliocephalis</i> (8)	<i>P. poliocephalus</i> (6)	<i>P. poliocephalus</i> 3	<i>P. poliocephalus</i> (5)

Birds	29 April 14 May 9 October 10 November	R. Lorikeets 20 C. Rosella 2 Kookaburra 1 Red whisk bulb 1 Spot Pardalote 1 Noisy Miner 5 Indian Mynah 2 Grey Butch bird 1 Currawong 1 Aust Raven 1	Crest Pigeon 2 S.C. Cockatoo 1 R. Lorikeets 12 East Whipbirds 1 Noisy Miner 6 Spot Pardalote 1 Currawong 2 Grey Butch bird 1 Aust Raven 2	Galah 2 S.C. Cockatoo 1 R. Lorikeet 16 Chan-bil cuckoo 1 Kookaburra 1 East yellow rob 1 East Whipbirds 1 Noisy Miner 8 Spot Pardalote 1 Red brow finch 2 Grey Butchbird 2 Aust Magpie 1	S.C. Cockatoo 2 Common Koel 1 East yellow rob 1 Rufous Whistler 1 East Whipbirds 1 White brow S.W 2 Noisy Miner 12 Spot Pardalote 1 Grey Butchbird 1 Aust Magpie 2 Pied Currawong 3
Reptiles	29 March 30 March 8. September 9 September	<i>L.delicata</i> 6 <i>L guichenoti</i> 1	<i>L. guichenoti</i> 2 <i>L delicata</i> 3	<i>L. guichenoti</i> 4 <i>L. delicata</i> 3	<i>L. guichenoti</i> 1
Frogs	27 March 7 April 12 September 13 September	Nil	Nil	Nil	Nil

### SOMERSET ROAD RESERVE QUADRAT

Survey Type	Survey Dates	Date 1	Date 2	Date 3	Date 4
Hair tube	27 Mar-1 Apr 9-14 Septemb	<i>M. musculus</i> (3)	<i>R. rattus</i> (1) <i>M. musculus</i> (1)		
Spotlight	28 March 29 March 11 September 12 September	<i>T. vulpecula</i> (1)	Nil	<i>T. vulpecula</i> (1)	Nil
Anabat	28 March 29 March 11 September 12 September	<i>P. poliocephalis</i> (3)	<i>P. poliocephalus</i> (2)	<i>P. poliocephalus</i> (6)	<i>P. poliocephalus</i> (5)
Birds	29 April 14 May 9 October 10 November	C. Rosella 3 R. Lorikeets 7 S.C. Cockatoo 3 East. Rosella 2 Kookaburra 1 Brown gerygone 1 East yellow rob 1 Rufous Whistler 1 East Whipbirds 3 Brown Thornbill 2 Noisy Miner 3 East Spinebill 1 Spot Pardalote 1 Grey butchbird 1	R. Lorikeets 20 S.C. Cockatoos 5 Black Face C.S. 1 White brow S.W 2 Golden Whistler 1 Varig fairy wren 2 Noisy Miner 3 Spot Pardalote 1 Red Brow Finch 3 Grey butchbird 1 Aust Magpie 2 Pied Currawong 1	S.C. Cockatoo 2 R. Lorikeet 8 C. Rosella 1 Rufous Whistler 1 East Whipbird 1 Noisy Miner 5 Spot Pardalote 1 Grey Butchbird 1 Aust Magpie 1 Aust Raven 1	S.C. Cockatoo 8 R. Lorikeet 10 Rufous Whistler 1 East Whipbirds 1 Brown gerygone 1 Noisy Miner 10 Spot Pardalote 1 Redbrow finch 3 Grey Butchbird 1
Reptiles	29 March 30 March 8. September 9 September	<i>L.delicata</i> 4 <i>L guichenoti</i> 2	<i>L. guichenoti</i> 4 <i>L delicata</i> 1	<i>L. guichenoti</i> 1 <i>L. delicata</i> 4	<i>L. guichenoti</i> 3 <i>L.delicata</i> 2
Frogs	27 March 7 April 12 September 13 September	Nil	Nil	Nil	Nil

**BURROWS PARK QUADRAT**

Survey Type	Survey Dates	Date 1	Date 2	Date 3	Date 4
Hair tube	2-7 April 16-21 September	<i>R. rattus</i> (2) <i>M. musculus</i> (2)	<i>R. rattus</i> (1) <i>M. musculus</i> 1	<i>R. rattus</i> (2) <i>M. musculus</i> (2)	<i>R. rattus</i> (1) <i>M. musculus</i> 1
Spotlight	3 April 4 April 22 September 23 September	Nil	Nil	<i>T. vulpecula</i> (1)	Nil
Anabat	3 April 4 April 22 September 23 September	<i>P. poliocephalis</i> (5)	<i>P. poliocephalus</i> (2)	<i>P. poliocephalus</i> (2)	<i>P. poliocephalus</i> (8)
Birds	12 May 24 May 10 October 10 November	Feral Pigeon 2 R. Lorikeet 25 S.C. Cockatoo 2 Pacific Baza 1 Kookaburra 1 White brow S.W 3 Red whisk bulb 1 Wel Swallow 3 Brown Thornbill 3 Noisy Miner 24 Grey Butchbird 1 Aust Magpie 2 Pied Currawong 2 Aust Raven 2	R. Lorikeets 18 Galah 2 C. Rosella 1 King Parrot 1 Kookaburra 3 Noisy Miner 15 Whitebrow S.W 1 Grey Butchbird 1 Aust Magpie 1 Aust Raven 1	Aust White Ibis 1 Chestnut Teal 2 Feral Pigeon 2 S.C. Cockatoo 5 R. Lorikeet 12 C. Rosella 2 Common Koel 1 TawnyFrogmouth1 Kookaburra 1 Dollarbird 2 Superb Fairy Wr 2 Whitebrow S.W 2 Noisy Miner 15 House Sparrow 5 Aust MagpieLark2 Aust Magpie 2 Aust Raven 4 Pied Currawong 4	Aust white Ibis 7 Feral Pigeon 2 Spot TurtleDove 1 Crested Pigeon 2 S.C. Cockatoo 1 R. Lorikeet 10 King Parrot 3 Dollarbird 1 Superb FairyWr 1 White brow S.W4 Noisy Miner 12 Pied Currawong 3 Aust Raven 1
Reptiles	5 April 6 April 17 September 20 September	<i>E. quoyi</i> 2 <i>L. guichenoti</i> 2 <i>L. delicata</i> 3	<i>E. quoyi</i> 1 <i>L. guichenoti</i> 1 <i>L. delicata</i> 1	<i>E. quoyi</i> 1 <i>L. guichenoti</i> 4	<i>E. quoyi</i> 2 <i>L. guichenoti</i> 1
Frogs	7 April 8 April 20 September 21 September	<i>Limno. peroni</i> 2 <i>C. signifera</i> 5	<i>Li mno peroni</i> 2 <i>L. phylloch roa</i> 1	<i>Limno peroni</i> 1 <i>C. signifera</i> 2	<i>Limno peronii</i> 1 <i>C. signifera</i> 5

**PIDDING PARK QUADRAT**

Survey Type	Survey Dates	Date 1	Date 2	Date 3	Date 4
Hair tube	2-7 April 16-21 September	<i>M. musculus</i> (2)	Nil	<i>M. musculus</i> (2)	<i>R. rattus</i> 1 <i>M. musculus</i> 1
Spotlight	3 April 4 April 22 September 23 September	Rabbit 2	Nil	<i>T. vulpecula</i> (1)	Nil
Anabat	3 April 4 April 22 September 23 September	<i>P. poliocephalis</i> (5)	<i>P. poliocephalus</i> (2)	<i>P. poliocephalus</i> (2)	<i>P. poliocephalus</i> (8)
Birds	12 May 24 May 10 October 10 November	Darter 1 R. Lorikeets 10 S.C. Cockatoos 1 Kookaburra 2 Wel Swallow 5 Willie Wagtail 4 Grey shrikethrus 1	WhitefacedHeron1 R. Lorikeets 7 Galahs 3 Wel Swallow 2 Noisy Miner 4 Superb bluewren5 Willie Wagtail 6	Masked Lapwing2 Crested Pigeon 1 Galah 1 S.C. Cockatoo 1 R. Lorikeet 5 E. Rosella 1 Kookaburra 3	R. Lorikeet 6 Kookaburra 1 SacredKingfisher1 Wel Swallow 3 Red Whisk bulb 2 East yellow rob 1 Willie Wagtail 2

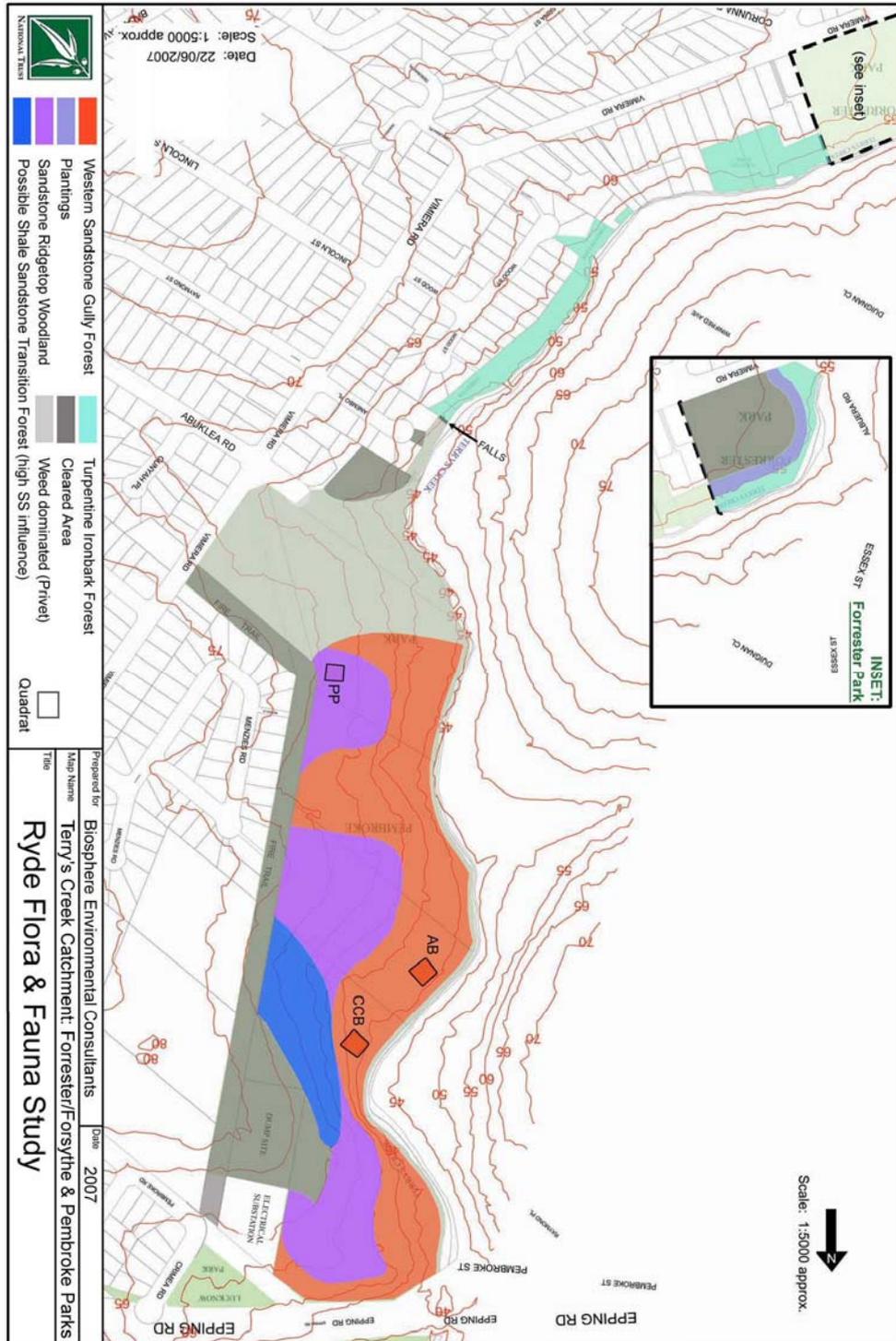
		Gold Whistler 1 Superb bluewren5 Red Wattlebird 1 Spot Pardalote 2 Silver eyes 8 Aust Magpie 3 Aust Raven 1	White Plum HE 1 Spot Pardalote 1 Silver eyes 8 Aust Magpie 1	Blackface C.S. 1 East yellow rob 1 Superb fairy wr 5 Whitebrow S.W 2 Brown Thornbill 1 East Spinebill 1 Red Wattlebird 1 Silver eyes 5 Redbrow finch 4 AustMagpieLark1 Pied Currawong 4 Aust Raven 8	Superb fairy wr 1 Noisy Miner 5 East Spinebill 1 Spot Pardalote 1 Redbrow finch 1 CommonMynah 2 Aust Magpielark1 Grey Butcbird 1 Aust Magpie 2 Pied Currawong 1 Aust Raven 1
Reptiles	5 April 6 April 17 September 20 September	<i>L. guichenoti</i> 3	<i>L. guichenoti</i> 2 <i>L. delicata</i> 3	<i>L. guichenoti</i> 6 <i>L. delicata</i> 2	<i>E. quoyi</i> 2 <i>L. guichenoti</i> 2
Frogs	7 April 8 April 20 September 21 September	<i>Limno. peroni</i> 2 <i>C. signifera</i> 5	<i>Li mno peroni</i> 2 <i>L. phylloch roa</i> 1	<i>Limno peroni</i> 1 <i>C. signifera</i> 2	<i>Limno peronii</i> 1 <i>C. signifera</i> 5

### WOLFE ROAD QUADRAT (PORTIUS PARK)

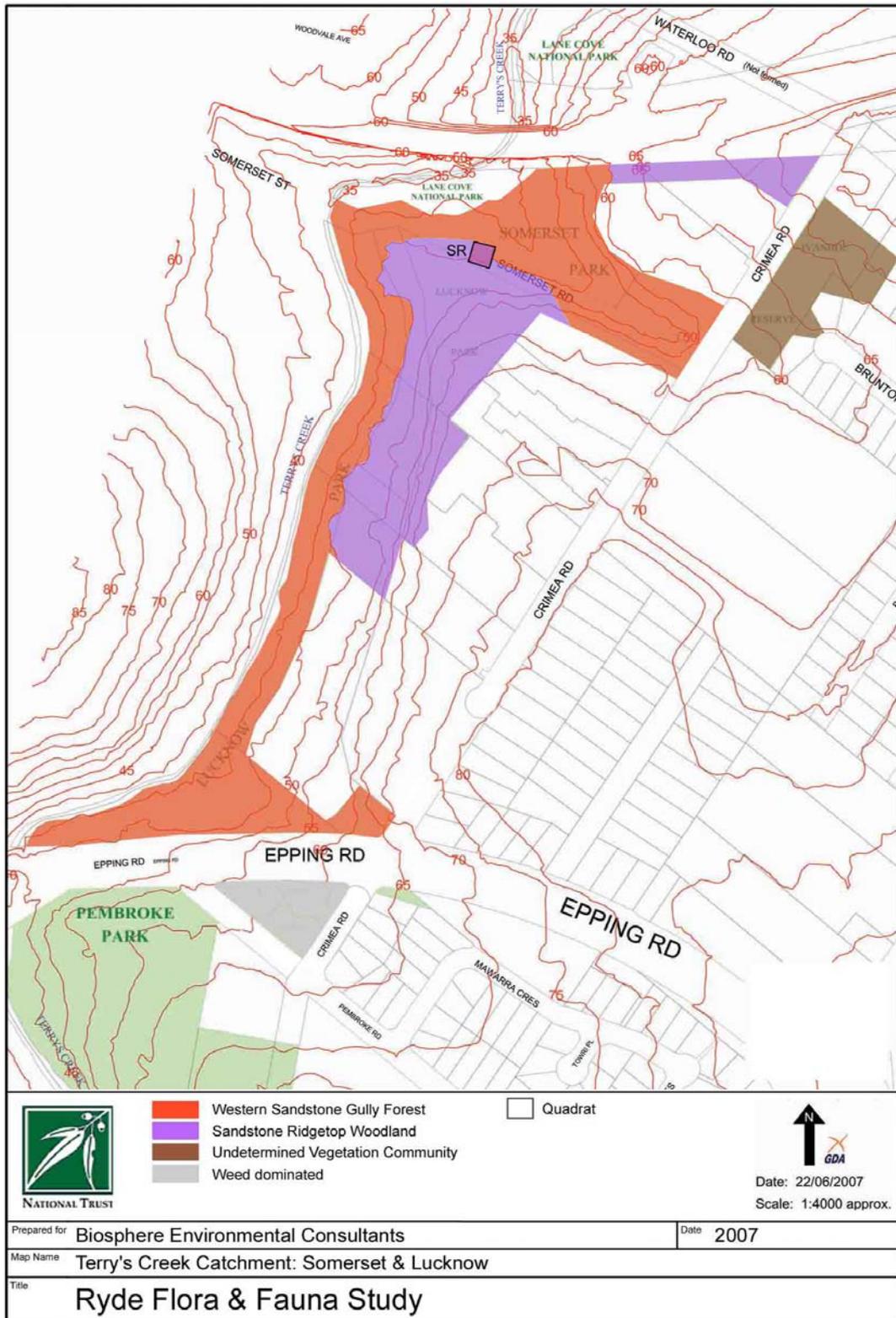
Survey Type	Survey Dates	Date 1	Date 2	Date 3	Date 4
Hair tube	8-13 April 24-29 September	<i>R. rattus</i> 1	<i>R. rattus</i> 2 <i>M. musculus</i> 1	<i>R. rattus</i> 1 <i>M. musculus</i> 1	<i>R. rattus</i> 1 <i>M. musculus</i> 1
Spotlight	9 April 10 April 25 September 26 September	Nil	Nil	<i>T. vulpecula</i> (1)	Nil
Anabat	9 April 10 April 25 September 26 September	<i>P.poliocephalis</i> (5)	<i>P.poliocephalus</i> (2)	<i>P.poliocephalus</i> (2)	<i>P.poliocephalus</i> (8)
Birds	12 May 24 May 10 October 10 November	Aust Pelican 1 Wh-faced heron 1 Spot TurDove 1 R. Lorikeet 6 East Rosella 2 Yell Tail B Cock1 Wbrow ScrubW 1 Spot Pardalote 1 Noisy Minor 10 Ind Myna 2 Grey ButcherB 1 Magpie 2 Pied Currawg 6	R. Lorrikeet 10 Crim Rosella 1 Yell Tail B Cock2 Crest Pigeon 2 Spot TurtDve 1 Spot Pardalote 1 Noisy Minor 15 Grey ButcherB 8 Pied Currawg 14 Aust Raven 3	Feral Pigeon 7 Crest Pigeon 2 R Lorikeet 10 Crim Rosella 1 Sup fairyWren 1 Noisy Minor 20 Spt Pardalote 1 Grey ButcherB 1 Pied Currawg 4 Aust Raven 1	R Lorikeet 8 Crim Rosella 1 East Rosella 2 Kookaburra 2 WBrow ScWren6 Gery BurcherB 1 Pied Currawg 1
Reptiles	10 April 11 April 25 September 26 September	<i>E quoyi</i> 1	<i>L. guichenoti</i> 2 <i>L. delicata</i> 2	<i>E. quoyi</i> 1 <i>L. delicata</i> 3	<i>E. quoyi</i> 1 <i>L. guichenoti</i> 3
Frogs	15 April 16 April 13 September 14 September	<i>Limno. peroni</i> 2 <i>C. signifera</i> 5	<i>Li mno peroni</i> 2 <i>L. phylloch roa</i> 1	<i>Limno peroni</i> 1 <i>C. signifera</i> 2	<i>Limno peronii</i> 1 <i>C. signifera</i> 5

# APPENDIX 5: VEGETATION MAPS

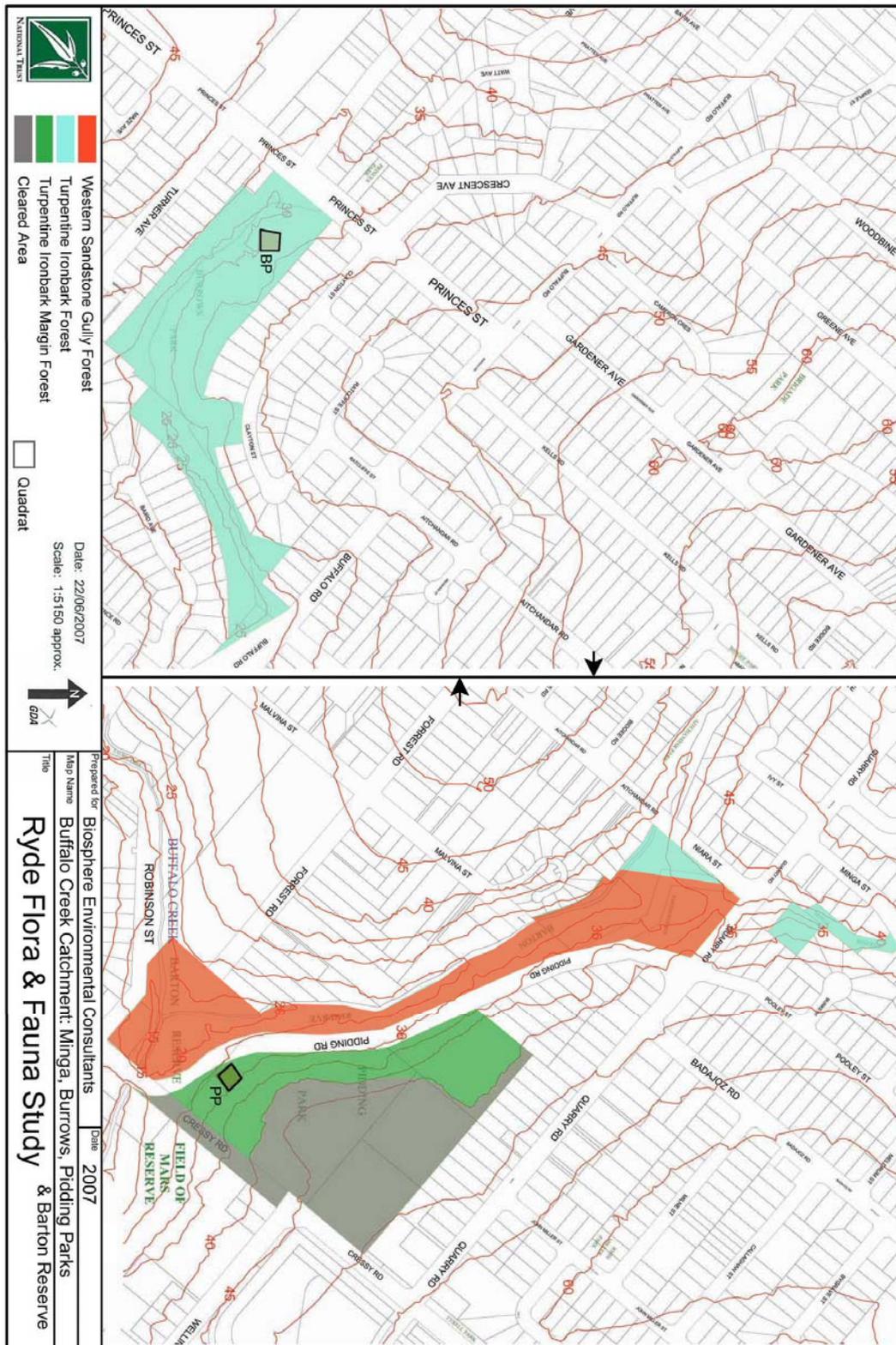
Map 5A-1: Terrys Creek Bushland Reserves (South)



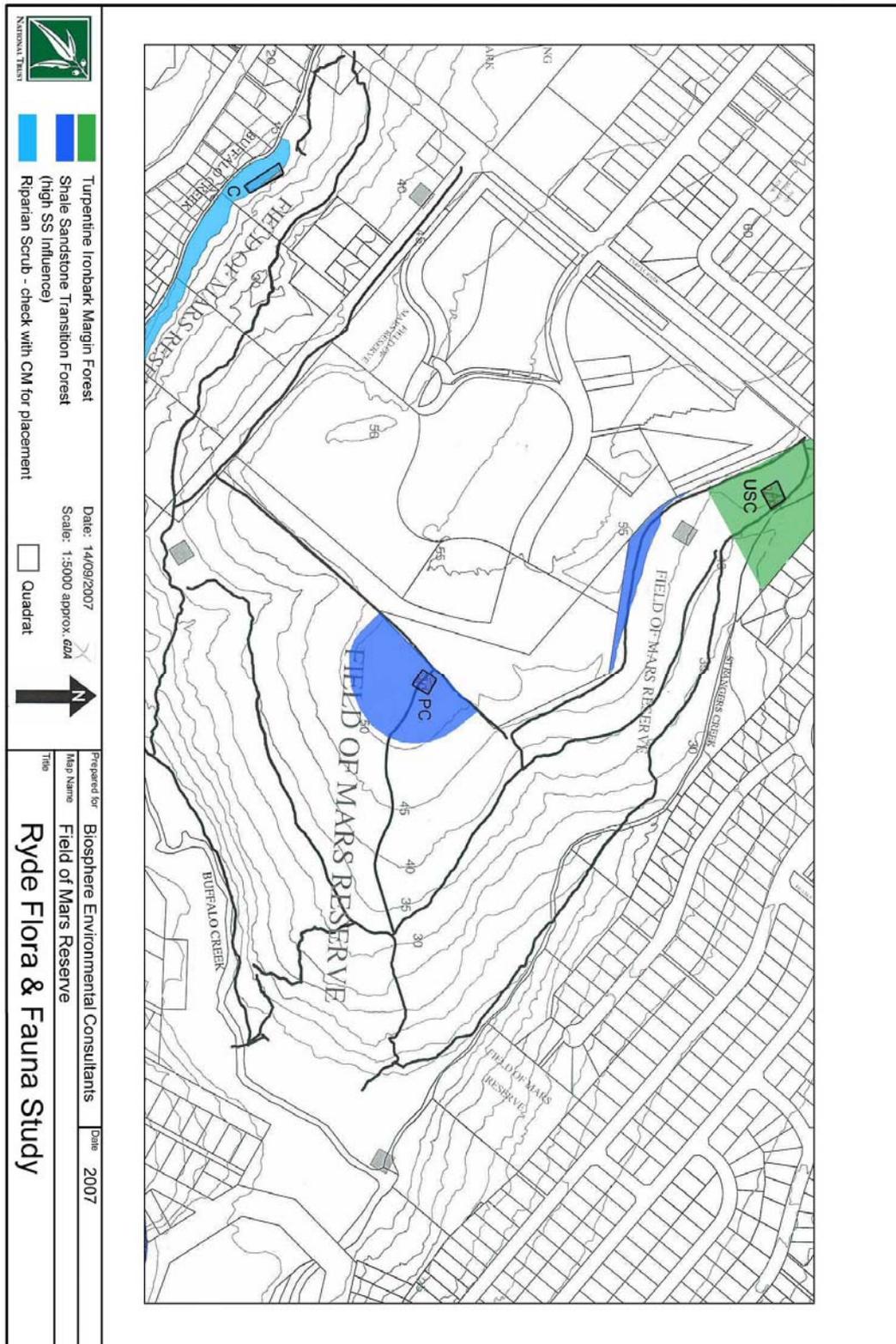
### Map 5A-2: Terrys Creek Bushland Reserves (North)



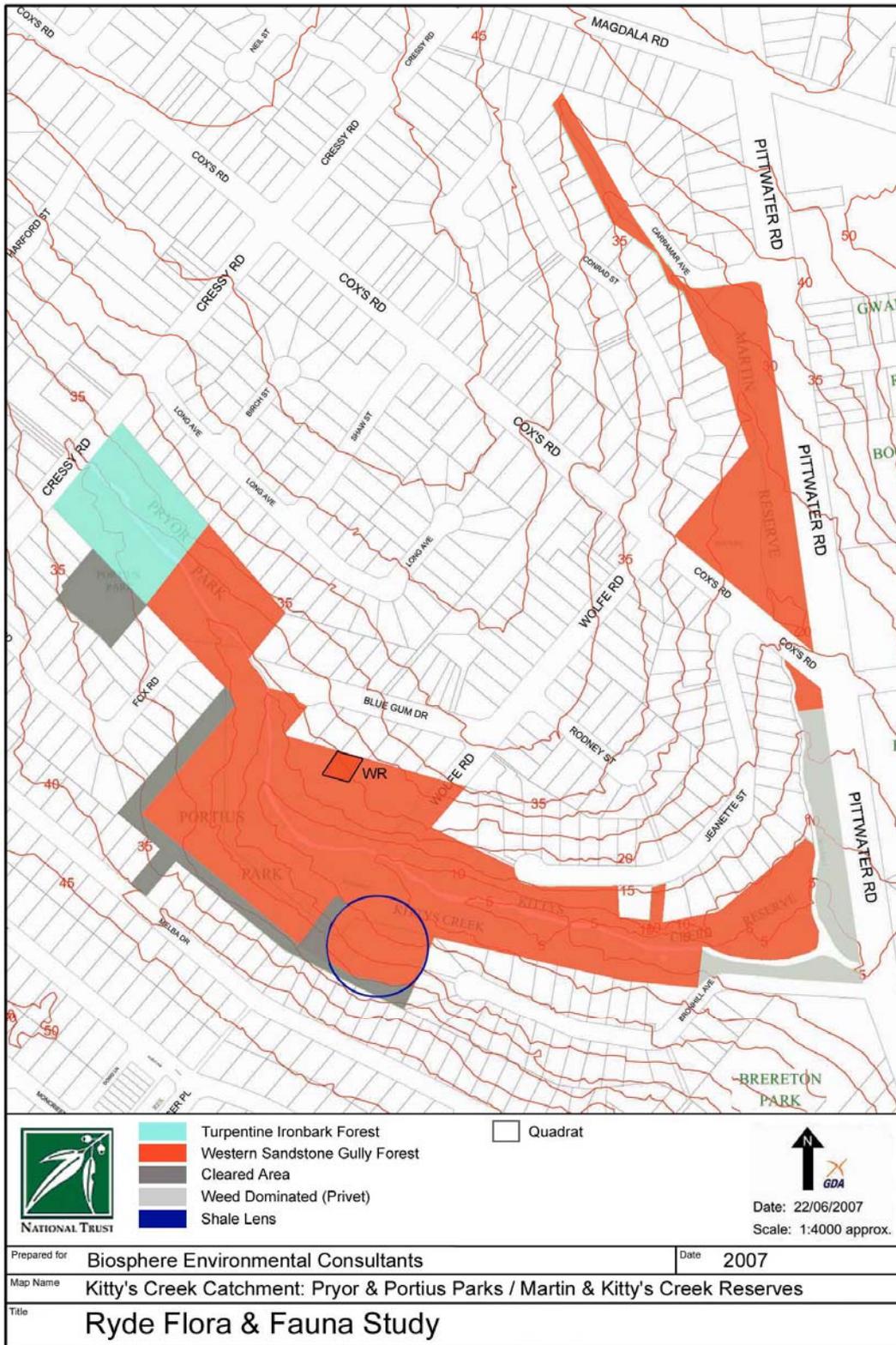
# MAP 5B: Buffalo Creek Bushland Reserves



# MAP 5C: Field of Mars Vegetation Communities



# MAP 5D: Kittys Creek Bushland Reserves



# MAP 5E: Memorial Park Vegetation Communities

