

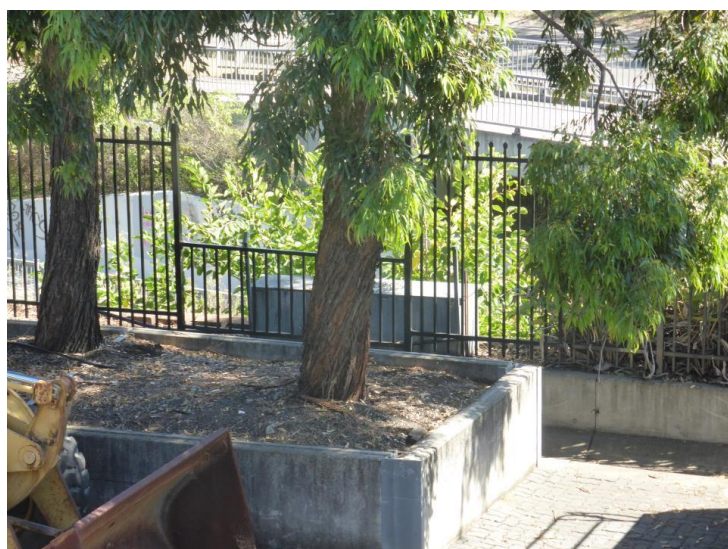


## 1 Crescent Street, Holroyd

### Ecological Assessment

Prepared for  
**Tiberius (Parramatta) Pty Ltd**

9 April 2015



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## Abbreviations

Abbreviation	Description
TSC Act	<i>Threatened Species Conservation Act 1995</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1995</i>
NW Act	<i>Noxious Weeds Act 1993</i>
FM Act	<i>Fisheries Management Act 1994</i>

# Executive summary

This ecological assessment report identified the biodiversity and riparian values of 1 Crescent Street, Holroyd. It recommends amelioration measures and measures to improve the biodiversity and riparian values of the site in relation to a proposed masterplan redevelopment.

The methodology for the assessment included a database and literature review, site inspection to validate vegetation communities and record information about flora and fauna habitat, including habitat for threatened biota.

The concrete lined channel that occurs to the north of the site (A'Becketts Creek) is not classed as "waterfront land" under the *Water Management Act 2000*, therefore, there is not a requirement to obtain a Controlled Activity Approval from the NSW Office of Water (NOW). There is therefore no requirement to revegetate a riparian corridor to the minimum widths prescribed in NOW's Riparian Guidelines. In addition, concrete lined channels are also excluded from key fish habitat under the FM Act. Therefore, approval to excavate the bank for bridge construction is not required from NSW Fisheries.

The proposal is not likely to place at risk of extinction any of the remnant native vegetation types upstream or downstream of the site because only planted and landscaped vegetation would be affected. The proposal is unlikely to impact on vegetation mapped as Shale/Sandstone Transition Forest downstream of the site. An increase in water quality may benefit this community, however it is heavily infested by exotic species and any small increase in water quality is unlikely to have an effect on it.

One threatened flora species, *Eucalyptus nicholii*, occurs on the site. However, this species does not occur naturally in the Sydney Basin Bioregion and has been planted. Therefore, there is no requirement to assess impacts to this species under the TSC Act.

No other threatened flora or fauna species occur on the site and no threatened flora species would be affected by the proposal. This is because the site has been cleared and developed in the past and consists of planted trees, landscaped areas and gardens. No soil or canopy stored seed bank of threatened flora are likely to remain on the site given the manipulation of the soil profile and previous clearing.

Therefore, the proposal is unlikely to impact on any threatened ecological communities or species listed under the New South Wales *Threatened Species Conservation Act 1995* (TSC Act) or the federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Land mapped as "Riparian Land" occurs along A'Becketts Creek to the north and south of the site. The endangered ecological community River-Flat Eucalypt Forest on Coastal Floodplains occurs upstream of the site and Shale/Sandstone Transition Forest occurs downstream of the site. A key population of *Litoria aurea* (Green and Golden Bell Frog) is located upstream of the site at Holroyd Gardens. These communities and species are unlikely to be affected by the proposal.

Amelioration measures are proposed that would protect and maintain the biodiversity values on the site as well as the riparian values that occur off-site in adjacent areas. These measures include sediment and erosion control during construction and best-practice stormwater management.

Improvement measures and options are proposed for on-site and off-site areas to protect and maintain biodiversity and riparian values along A'Becketts Creek. This includes landscaping, planting, stormwater controls and provision of potential shelter/movement habitat for *L. aurea*.

# 1 Introduction

## 1.1 Purpose of the report

This ecological assessment report was prepared to inform the pre Gateway Planning Proposal for 1 Crescent Street, Holroyd (the site) (**Figure 1**). The purpose of the report is to provide an understanding of the biodiversity and riparian values of the site and recommend amelioration measures, improvements and upgrades to these values.

This report also includes assessments of potential impacts of the proposed redevelopment on flora and fauna listed under the New South Wales (NSW) *Threatened Species and Conservation Act 1995* (TSC Act), *Fisheries Management Act 1994* (FM Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

## 1.2 Proposal description

The site is currently occupied and leased by WesTrac as a modern industrial facility providing administration offices, amenities, training facilities, workshops and machine servicing bays, spare parts warehousing, laboratory, and on-site parking for specialist heavy earthmoving equipment and motor vehicles.

The planning proposal ultimately seeks a rezoning of the site to permit high density mixed use development consisting of residential accommodation, and a mix of commercial development that would complement residential development. To facilitate this, a pre Gateway Planning Proposal will be lodged with Holroyd Council to amend the Local Environment Plan (LEP) in accordance with the requirements of Section 55 (2) of the *Environmental Planning and Assessment Act 1979*.

The proposed amendment seeks to allow for construction of residential apartments, make provision for public and private open space, new roads and infrastructure, underground car parking and the subject site's interface with the Sports Ground.

## 1.3 Key definitions

The following key terms and definitions are used in this flora and fauna assessment:

- *Proposal* – the Gateway Planning Proposal as described in **Section 1.2**
- *Site* – 1, Crescent Street, Holroyd (**Figure 1**)
- *Subject site* – the area directly affected by the planning proposal (DECC 2007)
- *Study area* – subject site and any additional areas which are likely to be affected by the proposal, either directly or indirectly (DECC 2007).





Figure 1 The site



## 2 Methodology

### 2.1 Literature review and database search

A review of databases and vegetation mapping was undertaken to map records of threatened species and/or threatened ecological communities. Reports, databases and vegetation mapping that were reviewed included:

- Office of Environment and Heritage Atlas of NSW Wildlife (10 km search radius) (Accessed 18 March 2015)
- Department of the Environment (DOE) Online search for Matters of National Significance (a 10 km buffer search) (Accessed 20 March December 2015).

Species, populations and communities from both the Wildlife Atlas and DOE online searches were combined to produce a list of threatened species, populations and communities that may occur within the study area. The likelihood of their occurrence in the study area was then determined based on location of records, the likely presence or absence of suitable habitat in the study area, and knowledge of the species' ecology. This information informed the subsequent field inspection.

After the field inspection had been completed the likelihood of occurrence of each species, population or community was determined again. This was based on the increase in knowledge about the extent and type of habitats and about which species were present on the site. The likelihood of occurrence of species, populations and communities based on the field inspection is presented within the likelihood table in **Appendix A**. However, as summarised, there is no likelihood that any species, populations and communities would occur on the site.

### 2.2 Field inspection

One field inspection was undertaken by ELA senior ecologist Will Introna on 19 March 2015 to undertake the following:

- verify the current extent and condition of vegetation communities (if any) at the site
- assess the suitability of habitat (especially for threatened species)
- observe and record significant flora and fauna – threatened and migratory species, other incidental fauna observations
- observe and record current disturbance and threats (e.g. weeds, trampling, litter)
- identify likely impacts of the proposal upon flora and fauna habitat and identify mitigation and rehabilitation opportunities, especially in regard to riparian habitat.

Notes and photographs were taken during the field inspection.

## 3 Existing environment

### 3.1 Literature review and database search

A search for threatened species using the Protected Matters Search Tool and Atlas of NSW Wildlife (within a 10 km buffer around the study area) and the review of literature identified a number of threatened flora species, threatened fungi and threatened fauna or migratory species, which are shown in **Appendix A**.

It should be noted that the results of the Protected Matters Search Tool, which have been included in **Appendix A**, is only a list of species based on habitat modelling. Therefore, not all species listed in **Appendix A** are shown on the maps in this report. The Atlas of NSW Wildlife database records of flora and fauna for the study area are shown in **Figure 2** and **Figure 3**. It should be noted that some sensitive species cannot be displayed at this resolution. These species are noted on the figures.

### 3.2 Vegetation

No native vegetation communities were present within the site. Vegetation on the site consisted of landscaped areas and gardens of planted exotic and native species.

Landscaped trees were present on the boundary of the site. The trees on the southern boundary were located on a raised batter; the trees on the north western boundary were located in gardens and lawns and the trees on the northern boundary were located within a number of separate raised concrete gardens. Common trees included *Eucalyptus microcorys* (Tallowwood) and *Corymbia citriodora* (Lemon-scented Gum). Both of these species are not native to Sydney and are commonly used in street planting and landscaping around Sydney. Other planted trees included *Eucalyptus tereticornis* (Forest Red Gum) which is a native species in the Sydney region and the Cumberland Plain.

Some native grasses and herbs were present on the batters or in the gardens including *Imperata cylindrica* (Blady Grass), *Dichondra repens* (Kidney Weed), *Einadia* spp. and *Dianella caerulea* var. *producta* (Blue Flax Lily). Some species such as *I. cylindrica* and *D. caerulea* var. *producta* have been planted while other species such as *Einadia* spp. may have established on the site from adjacent areas.

A narrow strip (approximately 1 metre wide) of planted exotic and native species was also located outside the northern boundary on a raised ledge above the concrete stormwater drain. This vegetation is not a native vegetation community and common species included the native *Lomandra longifolia* (Mat Rush) and the exotic *Bidens pilosa* (Cobbler's Peg) *Polygonum aviculare* and *Eragrostis curvula* (African Love Grass).

In addition, native and exotic species were present within the concrete stormwater drain that is located outside the northern boundary of the site. Common exotic species included *Tradescantia albiflora* (Trad), *Foeniculum vulgare* (Fennel), *Persicaria* spp., *Ligustrum lucidum* (Large-leaved Privet) and *Juncus* spp., *Morus alba* (White Mulberry), *Paspalum dilatatum* (Paspalum).

### 3.3 Fauna habitat

Fauna habitat within the site was of a very low quality. The entire site has been developed and fauna habitat was restricted to native and exotic plants in landscaped areas and gardens. No hollow-bearing trees were present. The site would only provide habitat for common species of birds, skinks and frogs that are able to survive in urban areas.

### 3.4 Threatened ecological communities

No threatened ecological communities were present on the site. Alluvial Woodland has been mapped along A'Becketts Creek upstream of the site and Shale/Sandstone Transition Forest has been mapped downstream of the site (**Figure 2**).

Alluvial woodland is part of Sydney Coastal River Flat Forest, which is an endangered ecological community listed under the TSC Act.

Shale/Sandstone Transition Forest is a critically endangered ecological community listed under both the TSC Act and the EPBC Act.

### 3.5 Threatened flora

No threatened flora species were recorded on the site. The site does not provide habitat for any threatened flora species as it is highly disturbed and no natural soil profiles or vegetation communities occur.

### 3.6 Threatened fauna

No threatened fauna species were recorded during the site inspection. The site is unlikely to provide any habitat for any threatened fauna species as the vegetation consisted of landscaping and no natural soil profiles are present.

However, *Litoria aurea* (Green and Golden Bell Frog) has been recorded upstream of the site at the Holroyd Gardens. A'Becketts Creek provides potential movement habitat and is considered within the *Management Plan. Green and Golden Bell Frog Parramatta Key Population* (DECC 2008a) which is part of the *Green and Golden Bell Frog Recovery Plan* (DEC 2005).

### 3.7 Noxious weeds

Five listed species, *Cardiospermum grandiflorum* (Balloon Vine), *Lantana camara* (Lantana), *Ligustrum lucidum* (Large-leaved Privet), *Ligustrum sinense* (Small-leaved privet), *Asparagus aethiopicus* (Asparagus Fern) were recorded on the site during the site inspection. These were primarily located in the northwest corner of the site or along the boundary with the open channel.

The adjacent channel along A'Becketts Creek and the area upstream and downstream contained a greater density of exotic species which included *L. camara*, *M. alba*, *C. grandiflorum*, *L. sinense*, *Salix nigra* (Black Willow), *Ricinus communis* (Castor Oil Plant), *Anredera cordifolia* (Madeira Vine) and *Ipomoea indica* (Morning Glory).

### 3.8 Riparian values

No riparian values are present within the site as there are no watercourses within the site. The adjacent open concrete channel is unlikely to provide habitat for fish listed under the *Fisheries Management Act 1994* (FM Act).

Concrete lined channels are not classed as "waterfront land" under the *Water Management Act 2000*, therefore, there is not a requirement to obtain a Controlled Activity Approval from the NSW Office of Water (NOW). There is therefore no requirement to revegetate a riparian corridor to the minimum widths prescribed in NOW's Riparian Guidelines. In addition, concrete lined channels are also excluded from key fish habitat under the FM Act. Therefore, approval to excavate the bank for bridge construction is not required from NSW Fisheries.

Clause 6.6 *Riparian land and watercourse*, in the Holroyd Local Environment Plan 2013 (HLEP) applies to land identified as “Riparian Land” on the Riparian Lands and Watercourses Map. “Riparian Land” is located upstream and downstream of the site along A’Becketts Creek. The open concrete channel immediately adjacent to the site has not been mapped as “Riparian Land”. Therefore, there is no proposed development on land mapped as “Riparian Land”. However, the objectives of this clause can be used to guide recommendations to improve riparian values.

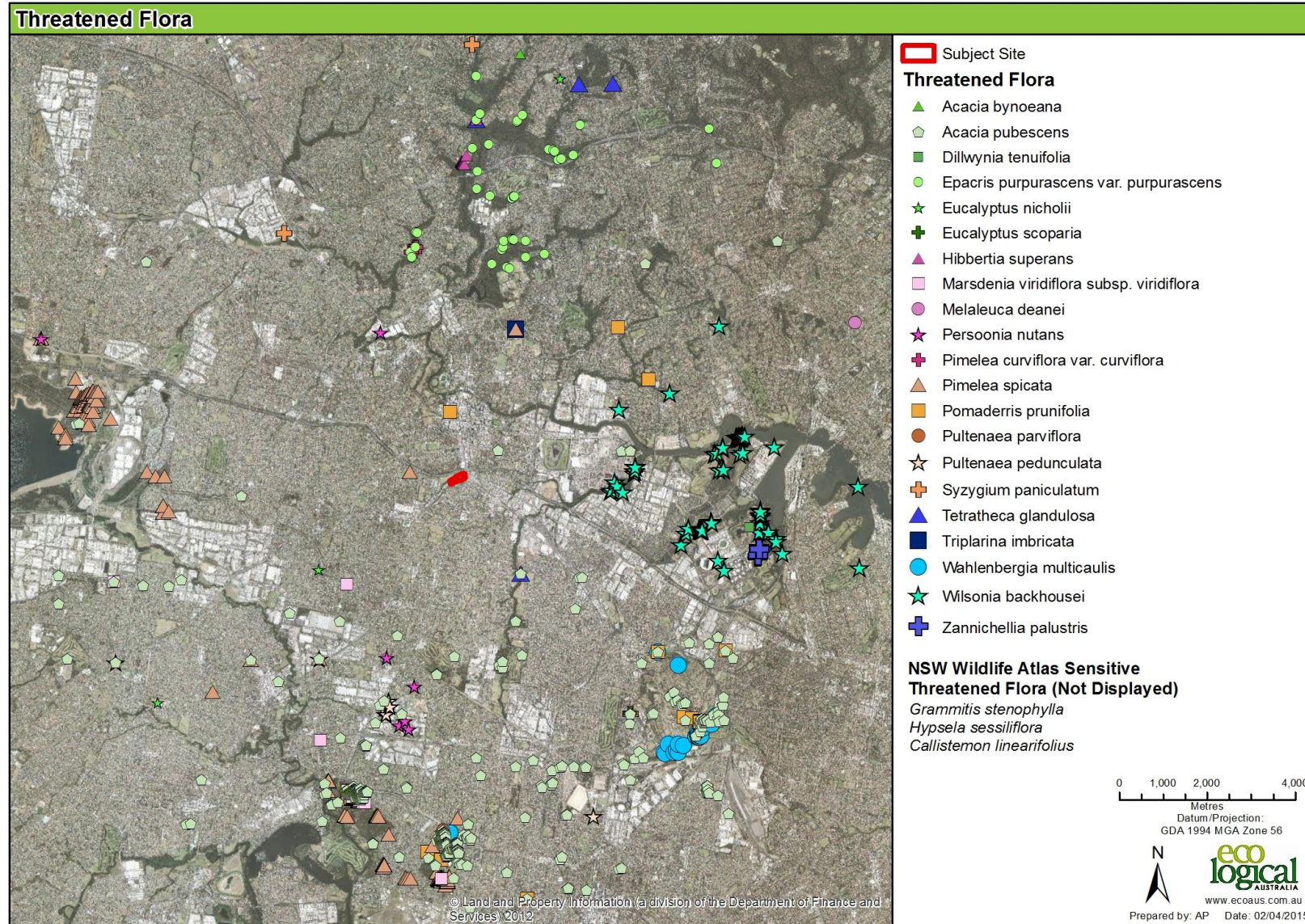


Figure 2. Threatened flora records



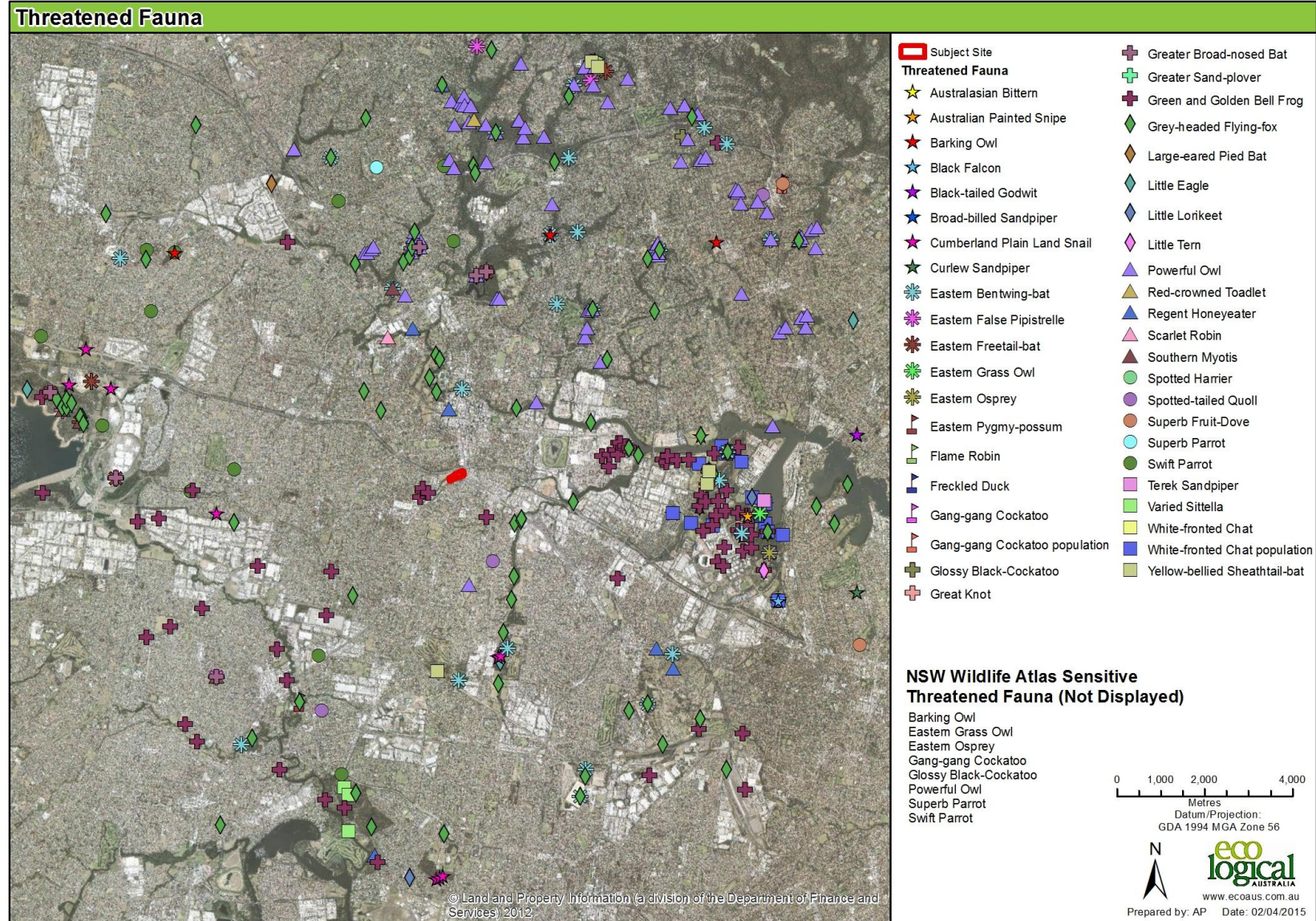


Figure 3. Threatened fauna records

## 4 Ecological Assessment

### 4.1 Introduction

The site does not contain habitat for threatened communities or for threatened flora or fauna listed under the TSC Act or EPBC Act and therefore there would be no impact on threatened communities or species (**Appendix A**).

### 4.2 Vegetation and fauna habitats

Potential impacts resulting from the proposal include:

- removal/modification of some landscaped and garden vegetation
- loss of minor fauna habitat in landscaped and garden vegetation
- soil erosion and run-off
- weed invasion.

The proposal is not likely to place at risk of extinction any of the remnant native vegetation types upstream or downstream of the site because only planted and landscaped vegetation would be affected.

In addition, the impact resulting from the loss of general fauna habitat is not likely to result in the loss or reduction in the viability of more common fauna species since the habitat values are low (landscaped and urban areas) and habitat of a similar type and quality will remain within and adjacent to the site.

### 4.3 Threatened ecological communities

No threatened ecological communities occur on the site or would be directly impacted by the proposal. The proposal is unlikely to impact on vegetation mapped as Shale/Sandstone Transition Forest downstream of the site. An increase in water quality may benefit this community, however it is heavily infested by exotic species and any small increase in water quality is unlikely to have an effect on it.

### 4.4 Threatened flora

One threatened flora species, *Eucalyptus nicholii*, occurs on the site. However, this species does not occur naturally in the Sydney Basin Bioregion and has been planted. Therefore, there is no requirement to assess impacts to this species under the TSC Act.

No threatened flora species occur on the site and no threatened flora species would be affected by the proposal. This is because the site has been cleared and developed in the past and consists of planted trees, landscaped areas and gardens. No soil or canopy stored seed bank of threatened flora are likely to remain on the site given the manipulation of the soil profile and previous clearing.

### 4.5 Threatened fauna

No threatened fauna would be affected by the proposal as no significant habitat for threatened fauna is located on the site.

#### 4.6 Riparian values

The proposal includes measures to control and increase the quality of the run off from the site into A'Becketts Creek. This is likely to have positive impacts on the low riparian and biodiversity values within the open concrete channel and downstream of the site. However, the degree of positive impact is limited by the high level of disturbance downstream and the fact that the channel is concrete-lined.

#### 4.7 Amelioration measures

A number of mitigation measures are recommended which will reduce the potential adverse impacts of construction on biodiversity and adjacent riparian values and include:

- Environmental weeds, noxious weeds and invasive plants will be removed or suppressed using appropriate bush regeneration methods prior to and during construction.
- Landscaping plants will be non-invasive and characteristic of Alluvial Woodland.
- Erosion and sediment control (i.e. geotextile sediment fence and straw bales) will be installed prior to commencement of works, be maintained during operation and until all activities have been completed and the site fully stabilised.
- Fencing will comply with *Managing Urban Stormwater. Soils and Construction* (DECC 2008b).
- Post-construction garden maintenance should include weed management, particularly along the site boundary adjacent to the bushland reserve.
- Noxious weeds on the site should be managed in accordance with the *Noxious Weeds Act 1993* (NW Act).
- Post-construction landscaping should include a high proportion of plant species indigenous to the area, including species characteristic of Alluvial Woodland. Plants should be from local provenance stock and should avoid horticultural varieties of native plants.
- Management of the introduction of weed propagules in the site through washing down of equipment prior to their use.
- The application of herbicide should be conducted by a qualified professional. Spraying of herbicide should be avoided.

## 5 Biodiversity and riparian improvements

### 5.1 Introduction

The section provides recommendations to improve the biodiversity and riparian values on the site and outlines options for off-site works to improve the biodiversity and riparian values associated with A'Becketts Creek.

Clause 6.6 *Riparian land and watercourse*, in the Holroyd Local Environment Plan 2013 (HLEP) applies to land identified as "Riparian Land" on the Riparian Lands and Watercourses Map. "Riparian Land" is located upstream and downstream of the site along A'Becketts Creek. The open concrete channel immediately adjacent to the site has not been mapped as "Riparian Land". Therefore, there is no proposed development on land mapped as "Riparian Land". However, the objectives of this clause can be used to guide recommendations to improve riparian values.

Clause 6.6 is provided below:

*(1) The objective of this clause is to protect and maintain the following:*

- (a) water quality within watercourses,*
- (b) the stability of the bed and banks of watercourses,*
- (c) aquatic and riparian habitats,*
- (d) ecological processes within watercourses and riparian areas.*

*(2) This clause applies to the land identified as "Riparian Land" on the Riparian Lands and Watercourses Map.*

*(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider:*

- (a) whether or not the development is likely to have any adverse impact on the following:*
  - (i) the water quality and flows within the watercourse,*
  - (ii) aquatic and riparian species, habitats and ecosystems of the watercourse,*
  - (iii) the stability of the bed and banks of the watercourse,*
  - (iv) the free passage of fish and other aquatic organisms within or along the watercourse,*
  - (v) any future rehabilitation of the watercourse and riparian areas, and*
- (b) whether or not the development is likely to increase water extraction from the watercourse, and*
- (c) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.*

*(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:*

(a) the development is designed, sited and will be managed to avoid any adverse environmental impact, or

(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or

(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

## 5.2 On-site recommendations

The following on-site recommendations aim to meet the objectives of Clause 6.6 by protecting and maintaining water quality, bank stability, habitats and ecological processes and will provide valuable functions for the downstream environment:

- Plant native vegetation adjacent to A'Becketts Creek to help with
  - uptake of nutrients
  - shading/cooling of water in A'Becketts Creek
  - provide refuge habitat for riparian birds
  - provide input of native organic matter into A'Becketts Creek
- Use deep-rooted tall native trees in landscaping next to A'Becketts Creek to penetrate into the ground water and provide some shade for the riparian channel.
- Avoid the use of exotic species in landscaping or stormwater controls as exotic vegetation breaks down faster and reduces the grazing opportunities for native macro-invertebrates that may occur in the channel.
- Plant native vegetation along the channel edge so as to provide a habitat link between the upstream and downstream areas mapped as “Riparian Land”.

## 5.3 Off-site options

Options to increase the riparian and biodiversity values along A'Becketts creek include works to the open channel itself such as bridges, pollutant traps, stormwater swales and direct management of areas mapped as “Riparian Land” that occur upstream or downstream.

In addition, a key population of the *Litoria aurea* (Green and Golden Bell Frog) as defined in the green and Golden Bell Frog Recovery Plan is the Merrylands key population, which occurs in Holroyd Gardens and Walpole Street Park along A'Becketts Creek located approximately 500 m upstream of the site.

An objective of the Parramatta GGBF Management Plan is, wherever possible, maintain or create connectivity between population elements and provide opportunity for the extent of the population to expand. Therefore, there is potential to incorporate elements in landscaping in off-site areas that support movement and shelter habitat for this species. Such elements can include planting of dense tussocks and provisions of native vegetation, logs or rocks.

Measures to enhance movement and shelter habitat should be consistent with the *Best Practice Guidelines Green and Golden Bell Frog Habitat* (DECC 2008c).



## 6 Conclusions

The biodiversity and riparian values of the site were assessed and amelioration and improvement measures were recommended to protect and improve these values. The site is currently developed and contains landscaped gardens and plantings. There is no habitat for threatened communities or flora and fauna species. One threatened flora species, *Eucalyptus nicholii*, occurs on the site. This species has been planted does not occur naturally in the Sydney Basin bioregion. Therefore, there is no requirement to assess impacts to this species under the TSC Act. No watercourses exist within the site. Therefore, the biodiversity and riparian values of the site are minimal.

Biodiversity and riparian values exist in A'Beckett's Creek which flows west to east and is located on the northern boundary of the site. The portion of the creek that adjoins the site is an open concrete channel in which exotic and native plant species occur. This provides minimal habitat for native aquatic fauna or terrestrial flora and fauna.

Land mapped as "Riparian Land" under the HLEP is located upstream and downstream of the site on A'Becketts Creek. Alluvial Woodland is mapped upstream of the site and is part of River-Flat Eucalypt Forest on Coastal Floodplains which is an endangered ecological community under the TSC Act. Shale/Sandstone Transition Forest has been mapped downstream of the site. This is a critically endangered ecological community listed under the TSC Act and EPBC Act.

Proposed amelioration measures to minimise the potential impacts of the proposal on biodiversity and riparian values include control of sediment and erosion during and weed species during construction.

Proposed measures to improve the on-site biodiversity values include use of native species in landscaping and stormwater controls.

Potential options to improve the off-site biodiversity and riparian values include protection and management of water quality that leaves the site, creation of movement/shelter habitat for *L. aurea* along A'Becketts Creek and strategic planting of native species along A'Becketts Creek to improve riparian habitat.

# References

Department of Environment and Conservation (DEC) 2005. *Green and Golden Bell Frog Recovery Plan*. Department of Environment and Conservation

Department of Environment and Climate Change (DECC) 2007. *Threatened species assessment guidelines. The assessment of significance*. Department of Environment and Climate Change.

Department of Environment and Climate Change (DECC) 2008a. *Management Plan. Green and Golden Bell Frog Parramatta Key Population*. Department of Environment and Climate Change.

Department of Environment and Climate Change (DECC) 2008b. *Managing Urban Stormwater. Soils and Construction*. Department of Environment and Climate Change.

Department of Environment and Climate Change (DECC) 2008c. *Best Practice Guidelines Green and Golden Bell Frog Habitat*. Department of Environment and Climate Change.

## Appendix A Likelihood Table

The table below provides the collated results from the 10 km database searches (buffered around the study site) of the NSW Wildlife Atlas and the EPBC Protected Matters Search Tool. An assessment of likelihood of occurrence was made for threatened and migratory species identified from the database searches. Five terms for the likelihood of occurrence of species are used in this report. This assessment was based on database or other records, presence or absence of suitable habitat, features of the proposal site, results of the field survey and professional judgement. The terms for likelihood of occurrence are defined below:

- “yes” - the species was or has been observed on the site
- “likely” - a medium to high probability that a species uses the site
- “potential” - suitable habitat for a species occurs on the site, but there is insufficient information to categorise the species as likely to occur, or unlikely to occur
- “unlikely” - a very low to low probability that a species uses the site
- “no” - habitat on site and in the vicinity is unsuitable for the species

**Table 1: Likelihood of occurrence of fauna**

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
<b>Amphibia</b>						
<i>Heleioporus australiacus</i>	Giant Burrowing Frog	V	V	South eastern NSW and Victoria, in two distinct populations: a northern population in the sandstone geology of the Sydney Basin as far south as Ulladulla, and a southern population occurring from north of Narooma through to Walhalla, Victoria.	Heath, woodland and open dry sclerophyll forest on a variety of soil types except those that are clay based.	No
<i>Litoria aurea</i>	Green and Golden Bell Frog	E1	V	Since 1990, recorded from ~50 scattered sites within its former range in NSW, from the north coast near Brunswick Heads, south along the coast to Victoria. Records exist	Marshes, dams and stream-sides, particularly those containing <i>Typha</i> spp. (bullrushes) or <i>Eleocharis</i> spp. (spikerushes). Some populations occur in highly disturbed areas.	Unlikely

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
				west to Bathurst, Tumut and the ACT region.		
<i>Mixophyes iteratus</i>	Giant Barred Frog	E1	E	Coast and ranges from Eumundi in south-east Qld to Warrimoo in the Blue Mountains.	Freshwater permanent/semi-permanent streams, generally at lower elevation. Riparian rainforest or wet sclerophyll forest is favoured.	No
<i>Pseudophryne australis</i>	Red-crowned Toadlet	V		Confined to the Sydney Basin, from Pokolbin in the north, the Nowra area to the south, and west to Mt Victoria in the Blue Mountains.	Open forests, mostly on Hawkesbury and Narrabeen Sandstones. Inhabits periodically wet drainage lines below sandstone ridges that often have shale lenses or cappings.	No
Aves						
<i>Actitis hypoleucos</i>	Common Sandpiper	P	C,J,K	Summer migrant. In NSW, widespread along coastline and also occurs in many areas inland.	Coastal wetlands and some inland wetlands, especially muddy margins or rocky shores. Also estuaries and deltas, lakes, pools, billabongs, reservoirs, dams and claypans, mangroves.	No
<i>Anthochaera phrygia</i>	Regent Honeyeater	E4A	E	Inland slopes of south-east Australia, and less frequently in coastal areas. In NSW, most records are from the North-West Plains, North-West and South-West Slopes, Northern Tablelands, Central Tablelands and Southern Tablelands regions; also recorded in the Central Coast and Hunter Valley regions.	Eucalypt woodland and open forest, wooded farmland and urban areas with mature eucalypts, and riparian forests of <i>Casuarina cunninghamiana</i> (River Oak).	No
<i>Apus pacificus</i>	Fork-tailed Swift	P	C,J,K, Mar	Recorded in all regions of NSW.	Riparian woodland., swamps, low scrub, heathland, saltmarsh, grassland, Spinifex sandplains, open farmland and inland and coastal sand-dunes.	No
<i>Ardea alba</i>	Great Egret	P	C, J, Mar	Widespread, occurring across all states/territories. Also a vagrant on Lord Howe and Norfolk Island.	Swamps and marshes, grasslands, margins of rivers and lakes, salt pans, estuarine mudflats and other wetland habitats.	No
<i>Ardea ibis</i>	Cattle Egret	P	C,J, Mar	Widespread and common across NSW.	Grasslands, wooded lands and terrestrial wetlands.	No

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
<i>Arenaria interpres</i>	Ruddy Turnstone	P	C,J,K	Summer migrant to most coastal regions, with occasional records inland, including in NSW.	Tidal reefs and pools; pebbly, shelly and sandy shores; mudflats; inland shallow waters; sewage ponds, saltfields; ploughed ground.	No
<i>Botaurus poiciloptilus</i>	Australasian Bittern	E1	E	Found over most of NSW except for the far north-west.	Permanent freshwater wetlands with tall, dense vegetation, particularly <i>Typha</i> spp. (bullrushes) and <i>Eleocharis</i> spp. (spikerushes).	No
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	P	C,J,K	Summer migrant. Widespread in most regions of NSW, especially in coastal areas, but sparse in the south-central Western Plain and east Lower Western Regions.	Shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation.	No
<i>Calidris canutus</i>	Red Knot	P	C,J,K	Summer migrant to Australia. In NSW, widespread in suitable habitat along the coast. Occasionally recorded inland in all regions.	Intertidal mudflats, sandflats sheltered sandy beaches, estuaries, bays, inlets, lagoons, harbours, sandy ocean beaches, rock platforms, coral reefs, terrestrial saline wetlands near the coast, sewage ponds and saltworks. Rarely inland lakes or swamps.	No
<i>Calidris ferruginea</i>	Curlew Sandpiper	E1	C,J,K	Occurs along the entire coast of NSW, and sometimes in freshwater wetlands in the Murray-Darling Basin.	Littoral and estuarine habitats, including intertidal mudflats, non-tidal swamps, lakes and lagoons on the coast and sometimes inland.	No
<i>Calidris mauri</i>	Western Sandpiper	P	J	Vagrant. Four unconfirmed reports in Australia, including Homebush Bay (1978) and West Byron (2000) in NSW.	Tidal mudflats and sandflats in sheltered lagoons, river deltas and estuaries; salt-evaporation ponds; terrestrial wetlands, such as the margins of lakes and ponds.	No
<i>Calidris melanotos</i>	Pectoral Sandpiper	P	J,K	Summer migrant to Australia. Widespread but scattered in NSW. East of the Great Divide, recorded from Casino and Ballina, south to Ulladulla. West of the Great Divide, widespread in the Riverina and Lower Western regions.	Shallow fresh to saline wetlands, including coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands.	No
<i>Calidris ruficollis</i>	Red-necked	P	C,J,K	Summer migrant to Australia,	Tidal mudflats, saltmarshes, sandy and	No



Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
	Stint			widespread coastal and inland NSW.	shelly beaches, saline and freshwater wetlands, saltfields, sewage ponds.	
<i>Calidris tenuirostris</i>	Great Knot	V	C,J,K	In NSW, recorded at scattered sites along the coast down to about Narooma. It has also been observed inland at Tullakool, Armidale, Gilgandra and Griffith.	Intertidal mudflats or sandflats, including inlets, bays, harbours, estuaries and lagoons.	No
<i>Calyptorhynchus lathamii</i>	Glossy Black-Cockatoo	V		In NSW, widespread along coast and inland to the southern tablelands and central western plains, with a small population in the Riverina.	Open forest and woodlands of the coast and the Great Dividing Range where stands of sheoak occur.	No
<i>Charadrius leschenaultii</i>	Greater Sand-plover	V	C,J,K	In NSW, recorded between the northern rivers and the Illawarra, with most records coming from the Clarence and Richmond estuaries.	Almost entirely restricted to coastal areas in NSW, mainly on sheltered sandy, shelly or muddy beaches or estuaries with large intertidal mudflats or sandbanks.	No
<i>Charadrius mongolus</i>	Lesser Sand-plover	V	C,J,K	Summer migrant to Australia. Found around the entire coast but in NSW most common on north coast. Rarely recorded south of the Shoalhaven estuary, and there are few inland records.	Almost entirely coastal in NSW, using sheltered bays, harbours and estuaries with large intertidal sandflats or mudflats, sandy beaches, coral reefs and rock platforms.	No
<i>Chlidonias leucopterus</i>	White-winged Black Tern	P	C,J,K	Summer migrant. Found in coastal and sub-coastal NSW, and at times well inland.	Large coastal and inland wetlands, saltfields, tidal estuaries, lagoons, grassy swamps, and sewage ponds.	No
<i>Circus assimilis</i>	Spotted Harrier	V		Found throughout the Australian mainland, except in densely forested or wooded habitats, and rarely in Tasmania.	Grassy open woodland, inland riparian woodland, grassland, shrub steppe, agricultural land and edges of inland wetlands.	No
<i>Daphoenositta chrysoptera</i>	Varied Sittella	V		Distribution in NSW is nearly continuous from the coast to the far west.	Inhabits eucalypt forests and woodlands, mallee and <i>Acacia</i> woodland.	No
<i>Dasyornis brachypterus</i>	Eastern Bristlebird	E1	E	There are three main populations: Northern - southern Qld/northern NSW, Central - Barren Ground NR, Budderoo NR, Woronora Plateau, Jervis Bay NP, Booderee NP and	Central and southern populations inhabit heath and open woodland with a heathy understorey. In northern NSW, habitat comprises open forest with dense tussocky grass understorey.	No

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
				Beecroft Peninsula and Southern - Nadgee NR and Croajingalong NP in the vicinity of the NSW/Victorian border.		
<i>Falco subniger</i>	Black Falcon	V		Sparsely distributed in NSW, occurring mostly in inland regions.	Woodland, shrubland and grassland, especially riparian woodland and agricultural land. Often associated with streams or wetlands.	No
<i>Gallinago hardwickii</i>	Latham's Snipe	P	C,J,R, Mar	Migrant to east coast of Australia, extending inland west of the Great Dividing Range in NSW.	Freshwater, saline or brackish wetlands up to 2000 m above sea-level; usually freshwater swamps, flooded grasslands or heathlands.	No
<i>Glossopsitta pusilla</i>	Little Lorikeet	V		In NSW, found from the coast westward as far as Dubbo and Albury.	Dry, open eucalypt forests and woodlands, including remnant woodland patches and roadside vegetation.	No
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	P	C	Distributed along the coastline of mainland Australia and Tasmania, extending inland along some of the larger waterways, especially in eastern Australia.	Freshwater swamps, rivers, lakes, reservoirs, billabongs, saltmarsh and sewage ponds and coastal waters. Terrestrial habitats include coastal dunes, tidal flats, grassland, heathland, woodland, forest and urban areas.	No
<i>Hieraaetus morphnoides</i>	Little Eagle	V		Throughout the Australian mainland, with the exception of the most densely-forested parts of the Dividing Range escarpment.	Open eucalypt forest, woodland or open woodland, including sheoak or <i>Acacia</i> woodlands and riparian woodlands of interior NSW.	No
<i>Hirundapus caudacutus</i>	White-throated Needletail	P	C,J,K	All coastal regions of NSW, inland to the western slopes and inland plains of the Great Divide.	Occur most often over open forest and rainforest, as well as heathland, and remnant vegetation in farmland.	No
<i>Hydroprogne caspia</i>	Caspian Tern	P	C,J	Widespread in coastal and inland NSW.	Coastal offshore waters, beaches, mudflats, estuaries, rivers, lakes.	No
<i>Lathamus discolor</i>	Swift Parrot	E1	E	Migrates from Tasmania to mainland in Autumn-Winter. In NSW, the species mostly occurs on the coast and south west slopes.	Box-ironbark forests and woodlands.	No
<i>Limicola falcinellus</i>	Broad-billed Sandpiper	V	C,J,K	Occur occasionally on the southern Australian coast. In NSW, mainly	Sheltered parts of the coast such as estuarine sandflats and mudflats, harbours,	No

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
				recorded in Hunter River estuary, with birds occasionally reaching the Shoalhaven estuary. There are few records for inland NSW.	embayments, lagoons, saltmarshes and reefs.	
<i>Limosa lapponica</i>	Bar-tailed Godwit	P	C,J,K	Summer migrant to Australia. Widespread along the coast of NSW, including the offshore islands. Also numerous scattered inland records.	Intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons, bays, seagrass beds, saltmarsh, sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats. Rarely inland wetlands, paddocks and airstrips.	No
<i>Limosa limosa</i>	Black-tailed Godwit	V	C,J,K	Arrives in August and leaves in March. In NSW, most frequently recorded at Kooragang Island, with occasional records elsewhere along the coast, and inland in the Murray-Darling Basin, on the western slopes of the Northern Tablelands and in the far north-western corner of the state.	Usually sheltered bays, estuaries and lagoons with large intertidal mudflats and/or sandflats. Further inland, it can also be found around muddy lakes and swamps.	No
<i>Merops ornatus</i>	Rainbow Bee-eater	P	J	Distributed across much of mainland Australia, including NSW.	Open forests and woodlands, shrublands, farmland, areas of human habitation, inland and coastal sand dune systems, heathland, sedgeland, vine forest and vine thicket.	No
<i>Monarcha melanopsis</i>	Black-faced Monarch	P	Bonn, Mar	In NSW, occurs around the eastern slopes and tablelands of the Great Divide, inland to Coutts Crossing, Armidale, Widden Valley, Wollemi National Park and Wombeyan Caves. It is rarely recorded farther inland.	Rainforest, open eucalypt forests, dry sclerophyll forests and woodlands, gullies in mountain areas or coastal foothills, Brigalow scrub, coastal scrub, mangroves, parks and gardens.	No
<i>Monarcha trivirgatus</i>	Spectacled Monarch	P	Bonn, Mar	Coastal eastern Australia south to Port Stephens in NSW.	Mountain/lowland rainforest, wooded gullies, riparian vegetation including mangroves.	No
<i>Myiagra cyanoleuca</i>	Satin Flycatcher	P	Bonn, Mar	In NSW, widespread on and east of the Great Divide and sparsely	Eucalypt-dominated forests, especially near wetlands, watercourses, and heavily-	No

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
				scattered on the western slopes, with very occasional records on the western plains.	vegetated gullies.	
<i>Ninox connivens</i>	Barking Owl	V		Wide but sparse distribution in NSW, avoiding the most central arid regions. Core populations exist on the western slopes and plains and in some northeast coastal and escarpment forests.	Woodland and open forest, including fragmented remnants and partly cleared farmland, wetland and riverine forest.	No
<i>Ninox strenua</i>	Powerful Owl	V		In NSW, it is widely distributed throughout the eastern forests from the coast inland to tablelands, with scattered records on the western slopes and plains.	Woodland, open sclerophyll forest, tall open wet forest and rainforest.	No
<i>Numenius madagascariensis</i>	Eastern Curlew	P	C,J,K	Summer migrant to Australia. Primarily coastal distribution in NSW, with some scattered inland records.	Estuaries, bays, harbours, inlets and coastal lagoons, intertidal mudflats or sandflats, ocean beaches, coral reefs, rock platforms, saltmarsh, mangroves, freshwater/brackish lakes, saltworks and sewage farms.	No
<i>Numenius minutus</i>	Little Curlew	P	C,J,K	Summer migrant to Australia. In NSW, most records scattered east of the Great Dividing Range, from Casino, south to Greenwell Point with a few scattered records west of the Great Dividing Range.	Dry grasslands, open woodlands, floodplains, margins of drying swamps, tidal mudflats, airfields, playing fields, crops, saltfields, sewage ponds.	No
<i>Numenius phaeopus</i>	Whimbrel	P	C,J,K	Summer migrant to Australia. Found along almost the entire coast of NSW; scattered inland records.	Estuaries, mangroves, tidal flats, coral cays, exposed reefs, flooded paddocks, sewage ponds, grasslands, sports fields, lawns.	No
<i>Pandion cristatus</i>	Eastern Osprey	V		Common around the northern NSW coast, and uncommon to rare from coast further south. Some records from inland areas.	Rocky shorelines, islands, reefs, mouths of large rivers, lagoons and lakes.	No
<i>Petroica boodang</i>	Scarlet Robin	V		In NSW, it occurs from the coast to the inland slopes.	Dry eucalypt forests and woodlands, and occasionally in mallee, wet forest,	No

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
<i>Petroica phoenicea</i>	Flame Robin	V		In NSW, breeds in upland areas, and in winter many birds move to the inland slopes and plains, or occasionally to coastal areas. Likely that there are two separate populations in NSW, one in the Northern Tablelands, and another ranging from the Central to Southern Tablelands.	wetlands and tea-tree swamps. Breeds in upland tall moist eucalypt forests and woodlands. In winter uses dry forests, open woodlands, heathlands, pastures and native grasslands. Occasionally occurs in temperate rainforest, herbfields, heathlands, shrublands and sedgeland at high altitudes.	No
<i>Philomachus pugnax</i>	Ruff	P	C,J,K	Regular but rare summer migrant to Australia. In NSW, recorded at Kurnell, Tomki, Casino, Ballina, Kooragang Island, Broadwater Lagoon and Little Cattai Creek. Also found around the Riverina, including Windouran Swamp, Wanganella, Fivebough Swamo and the Tullakool Saltworks.	Terrestrial wetlands including lakes, swamps, pools, lagoons, tidal rivers, swampy fields and floodlands. Occasionally harbours, estuaries, seashores, sewage farms and saltworks.	No
<i>Plegadis falcinellus</i>	Glossy Ibis	P	C	Recorded over much of NSW. Spring/summer breeding migrant to southern Murray-Darling region and Macquarie Marshes.	Edges of lakes and rivers, lagoons, flood-plains, wet meadows, swamps, reservoirs, sewage ponds, rice-fields and cultivated areas under irrigation. Occasionally estuaries, deltas, saltmarshes and coastal lagoons.	No
<i>Pluvialis fulva</i>	Pacific Golden Plover	P	C,J,K	Regular widespread summer migrant to Australia, including coastal NSW, Lord Howe and Norfolk Island.	Estuaries, mudflats, saltmarshes, mangroves, rocky reefs, inland swamps, ocean shores, paddocks, sewage ponds, ploughed land, airfields, playing fields.	No
<i>Pluvialis squatarola</i>	Grey Plover	P	C,J,K	Regular summer migrant to coastal Australia, including NSW. Rarely inland, on passage.	Mudflats, saltmarsh, tidal reefs and estuaries.	No
<i>Polytelis swainsonii</i>	Superb Parrot	V	V	In NSW, occurs on inland slopes of the Great Divide and on adjacent plains, especially along the major river-systems.	Box-gum woodland, Box-Cypress-pine and Boree Woodlands and River Red Gum Forest.	No

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
<i>Ptilinopus superbus</i>	Superb Fruit-Dove	V		Principally from north-eastern Qld to north-eastern NSW. Further south, it is confined to pockets of suitable habitat, and occurs as far south as Moruya.	Rainforest and closed forests. May also forage in eucalypt or acacia woodland where there are fruit-bearing trees.	No
<i>Rhipidura rufifrons</i>	Rufous Fantail	P	Bonn, Mar	Coastal and near coastal districts of northern and eastern Australia, including on and east of the Great Divide in NSW.	Wet sclerophyll forests, subtropical and temperate rainforests. Sometimes drier sclerophyll forests and woodlands.	No
<i>Rostratula australis</i>	Australian Painted Snipe	E1	E, Mar	In NSW most records are from the Murray-Darling Basin. Other recent records include wetlands on the Hawkesbury River and the Clarence and lower Hunter Valleys.	Swamps, dams and nearby marshy areas.	No
<i>Sterna hirundo</i>	Common Tern	P	C,J,K	Regular summer migrant to northern and eastern coastal Australia, including coastal NSW. Also scattered inland records.	Offshore waters, ocean beaches, estuaries, large lakes. Less commonly freshwater swamps, floodwaters, sewage farms and brackish and saline lakes.	No
<i>Sternula albifrons</i>	Little Tern	E1	C,J,K	In NSW, it arrives from September to November, occurring mainly north of Sydney, with smaller numbers found south to Victoria.	Sheltered coastal environments, harbours, inlets and rivers.	No
<i>Stictonetta naevosa</i>	Freckled Duck	V		Inland river systems, occurring as far as coastal NSW in times of drought.	Freshwater swamps and creeks, lakes, reservoirs, farm dams and sewage ponds.	No
<i>Tringa glareola</i>	Wood Sandpiper	P	C,J,K	Summer migrant to Australia. In NSW, recorded east of the Great Divide, from Stratheden and Casino, south to Nowra and elsewhere, mostly from the Riverina, but also from the Upper and Lower Western Regions.	Well-vegetated, shallow, freshwater wetlands, such as swamps, billabongs, lakes, pools and waterholes; inundated grasslands; floodplains; irrigated crops; sewage ponds; reservoirs; large farm dams; bore drains; rarely brackish wetlands and saltmarsh.	No
<i>Tringa nebularia</i>	Common Greenshank	P	C,J,K	Summer migrant to Australia. Recorded in most coastal regions of NSW; also widespread west of the Great Dividing Range, especially between the Lachlan and Murray	Terrestrial wetlands (swamps, lakes, dams, rivers, creeks, billabongs, waterholes and inundated floodplains, claypans, saltflats, sewage farms and saltworks dams, inundated rice crops and bores) and	No

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
				Rivers and the Darling River drainage basin, including the Macquarie Marshes, and north-west regions.	sheltered coastal habitats (mudflats, saltmarsh, mangroves, embayments, harbours, river estuaries, deltas, lagoons, tidal pools, rock-flats and rock platforms).	
<i>Tringa stagnatilis</i>	Marsh Sandpiper	P	C,J,K	Summer migrant to Australia. Recorded in all regions of NSW but especially the central and south coasts and (inland) on the western slopes of Great Divide and western plains.	Swamps, lagoons, billabongs, salt pans, saltmarshes, estuaries, pools on inundated floodplains, intertidal mudflats, sewage farms and saltworks, reservoirs, waterholes, soaks, bore-drain swamps and flooded inland lakes.	No
<i>Tyto longimembris</i>	Eastern Grass Owl	V		Recorded occasionally in all mainland states. In NSW they are more likely to be resident in the north-east.	Areas of tall grass, including grass tussocks, swampy areas, grassy plains, swampy heath, and in cane grass or sedges on flood plains.	No
<i>Xenus cinereus</i>	Terek Sandpiper	V	C,J,K	A rare migrant to the eastern and southern Australian coasts. The two main sites in NSW are the Richmond River estuary and the Hunter River estuary.	Mudbanks and sandbanks near mangroves, rocky pools and reefs, and occasionally up to 10 km inland around brackish pools.	No
<b>Gastropoda</b>						
<i>Meridolum corneovirens</i>	Cumberland Plain Land Snail	E1		Areas of the Cumberland Plain west of Sydney, from Richmond and Windsor south to Picton and from Liverpool, west to the Hawkesbury and Nepean Rivers at the base of the Blue Mountains.	Primarily inhabits Cumberland Plain Woodland. Also known from Shale Gravel Transition Forests, Castlereagh Swamp Woodlands and the margins of River-flat Eucalypt Forest.	No
<b>Mammalia</b>						
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	V		In NSW it extends from the coast inland as far as the Pilliga, Dubbo, Parkes and Wagga Wagga on the western slopes.	Rainforest, sclerophyll forest (including Box-Ironbark), woodland and heath.	No
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	V	V	Recorded from Rockhampton in Qld south to Ulladulla in NSW. Largest concentrations of populations occur in the sandstone escarpments of the Sydney basin and the NSW north-	Wet and dry sclerophyll forests, Cyprus Pine dominated forest, woodland, sub-alpine woodland, edges of rainforests and sandstone outcrop country.	Unlikely



Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
				west slopes.		
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V	E	Found on the east coast of NSW, Tasmania, eastern Victoria and north-eastern Qld.	Rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline.	No
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V		South-east coast and ranges of Australia, from southern Qld to Victoria and Tasmania. In NSW, records extend to the western slopes of the Great Dividing Range.	Tall (greater than 20m) moist habitats.	Unlikely
<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat	V		In NSW it occurs on both sides of the Great Dividing Range, from the coast inland to Moree, Dubbo and Wagga Wagga.	Rainforest, wet and dry sclerophyll forest, monsoon forest, open woodland, paperbark forests and open grassland.	Unlikely
<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat	V		Found along the east coast from south Qld to southern NSW.	Dry sclerophyll forest, woodland, swamp forests and mangrove forests east of the Great Dividing Range.	Unlikely
<i>Myotis macropus</i>	Southern Myotis	V		In NSW, found in the coastal band. It is rarely found more than 100 km inland, except along major rivers.	Foraging habitat is waterbodies (including streams, or lakes or reservoirs) and fringing areas of vegetation up to 20m.	Unlikely
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	E1	V	In NSW they occur from the Qld border in the north to the Shoalhaven in the south, with the population in the Warrumbungle Ranges being the western limit.	Rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges.	No
<i>Phascolarctos cinereus</i>	Koala	V	V	In NSW it mainly occurs on the central and north coasts with some populations in the west of the Great Dividing Range. There are sparse and possibly disjunct populations in the Bega District, and at several sites on the southern tablelands.	Eucalypt woodlands and forests.	No
<i>Pseudomys novaehollandiae</i>	New Holland Mouse	P	V	Fragmented distribution across eastern NSW.	Open heathlands, woodlands and forests with a heathland understorey, vegetated sand dunes.	No
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V	Along the eastern coast of Australia, from Bundaberg in Qld to Melbourne	Subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths	Unlikely

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
				in Victoria.	and swamps as well as urban gardens and cultivated fruit crops.	
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheathtail-bat	V		There are scattered records of this species across the New England Tablelands and North West Slopes. Rare visitor in late summer and autumn to south-western NSW.	Almost all habitats, including wet and dry sclerophyll forest, open woodland, open country, mallee, rainforests, heathland and waterbodies.	Unlikely
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V		Both sides of the great divide, from the Atherton Tableland in Qld to north-eastern Victoria, mainly along river systems and gullies. In NSW it is widespread on the New England Tablelands.	Woodland, moist and dry eucalypt forest and rainforest.	Unlikely

Table 2: Likelihood of occurrence of flora

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
<i>Acacia bynoeana</i>	Bynoe's Wattle	E1	V	Found in central eastern NSW, from the Hunter District (Morisset) south to the Southern Highlands and west to the Blue Mountains.	Heath or dry sclerophyll forest on sandy soils.	No
<i>Acacia pubescens</i>	Downy Wattle	V	V	Restricted to the Sydney region around the Bankstown-Fairfield-Rookwood and Pitt Town area, with outliers occurring at Barden Ridge, Oakdale and Mountain Lagoon.	Open woodland and forest, including Cooks River/Castlereagh Ironbark Forest, Shale/Gravel Transition Forest and Cumberland Plain Woodland. Occurs on alluviums, shales and at the intergrade between shales and sandstones.	No
<i>Allocasuarina glareicola</i>		E1	E	Primarily restricted to the Richmond (NW Cumberland Plain) district, but with an outlier population found at Voyager Point, Liverpool.	Castlereagh woodland on lateritic soil. Found in open woodland with <i>Eucalyptus parramattensis</i> , <i>Eucalyptus fibrosa</i> , <i>Angophora bakeri</i> , <i>Eucalyptus sclerophylla</i> and <i>Melaleuca decora</i> .	No
<i>Asterolasia elegans</i>		E1	E	Occurs north of Sydney, in the Baulkham Hills, Hawkesbury and Hornsby local government areas. Also likely to occur in the western part of Gosford local government area.	Hawkesbury sandstone. Found in sheltered forests on mid-to lower slopes and valleys.	No
<i>Caladenia tessellata</i>	Thick Lip Spider Orchid	E1	V	Currently known from two disjunct areas; one population near Braidwood on the Southern Tablelands and three populations in the Wyong area on the Central Coast.	Grassy sclerophyll woodland on clay loam or sandy soils, or low woodland with stony soil.	No
<i>Callistemon linearifolius</i>	Netted Bottle Brush	V		Georges River to Hawkesbury River in the Sydney area (limited to the Hornsby Plateau area), and north to the Nelson Bay area of NSW. Also Coalcliff in the northern Illawarra.	Dry sclerophyll forest.	No

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
<i>Cryptostylis hunteriana</i>	Leafless Tongue Orchid	V	V	In NSW, recorded mainly on coastal and near coastal ranges north from Victoria to near Forster, with two isolated occurrences inland north-west of Grafton.	Coastal heathlands, margins of coastal swamps and sedgeland, coastal forest, dry woodland, and lowland forest.	No
<i>Darwinia biflora</i>		V	V	Recorded in Ku-ring-gai, Hornsby, Baulkham Hills and Ryde local government areas, in an area bounded by Maroota, North Ryde, Cowan and Kellyville.	Woodland, open forest or scrub-heath on the edges of weathered shale-capped ridges, where these intergrade with Hawkesbury Sandstone.	No
<i>Deyeuxia appressa</i>		E1	E	NSW endemic known only from two pre-1942 records in the Sydney area: Herne Bay south of Bankstown and Killara, near Hornsby.	Moist conditions.	No
<i>Dillwynia tenuifolia</i>		V		Mainly on the Cumberland Plain, but also Bulga Mountains at Yengo in the north, and Kurrajong Heights and Woodford in the Lower Blue Mountains.	Scrubby/dry heath areas within Castlereagh Ironbark Forest and Shale Gravel Transition Forest, transitional areas where these communities adjoin Castlereagh Scribbly Gum Woodland, and disturbed escarpment woodland on Narrabeen sandstone.	No
<i>Epacris purpurascens</i> var. <i>purpurascens</i>		V		Recorded from Gosford in the north, to Narrabeen in the east, Silverdale in the west and Avon Dam vicinity in the South.	Sclerophyll forest, scrubs and swamps. Most habitats have a strong shale soil influence.	No
<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	V	V	New England Tablelands from Nundle to north of Tenterfield.	Dry grassy woodland, on shallow soils of slopes and ridges.	Yes
<i>Eucalyptus scoparia</i>	Wallangarra White Gum	E1	V	In NSW it is known from only three locations near Tenterfield.	Open eucalypt forest, woodland and heaths on well-drained granite/rhyolite hilltops, slopes and rocky outcrops, typically at high altitudes.	No
<i>Genoplesium baueri</i>	Bauer's Midge Orchid	E1	E	Has been recorded from locations between Nowra and Pittwater and may occur as far north as Port	Dry sclerophyll forest and moss gardens over sandstone.	No

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<i>Grammitis stenophylla</i>	Narrow-leaf Finger Fern	E1		Stephens. In NSW it has been found on the south, central and north coasts and as far west as Mount Kaputar National Park near Narrabri.	Rainforest and moist eucalypt forest, usually near streams, on rocks or in trees.	No
<i>Grevillea parviflora</i> subsp. <i>parviflora</i>	Small-flower Grevillea	V	V	Sporadically distributed throughout the Sydney Basin and in the Hunter in the Cessnock - Kurri Kurri area. Also known from Putty to Wyong and Lake Macquarie on the Central Coast.	Heath and shrubby woodland to open forest on sandy or light clay soils usually over thin shales.	No
<i>Hibbertia superans</i>		E1		From Baulkham Hills to South Maroota in the northern outskirts of Sydney, and at one locality at Mount Boss, inland from Kempsey.	Open woodland and heathland, and appears to prefer open disturbed areas.	No
<i>Hypsela sessiliflora</i>		E1	X	Currently known from only one property at Erskine Park in the Penrith LGA. Previously sighted at Homebush and at Agnes Banks.	Damp places on the Cumberland Plain, including freshwater wetland, grassland/alluvial woodland, and alluvial woodland/shale plains woodland.	No
<i>Leptospermum deanei</i>		V	V	Hornsby, Warringah, Ku-ring-gai and Ryde LGAs in the Sydney region.	Woodland, riparian scrub and open forest on lower hill slopes or near creeks, on sand or sandy alluvial soil.	No
<i>Marsdenia viridiflora</i> subsp. <i>viridiflora</i>	Marsdenia viridiflora R. Br. subsp. viridiflora population in the Bankstown, Blacktown, Camden, Campbelltown, Fairfield, Holroyd, Liverpool and Penrith local government areas	E2		Razorback Range, also recorded at Prospect, Bankstown, Smithfield, Cabramatta Creek and St Marys.	Vine thickets and open shale woodland.	No

Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
<i>Melaleuca biconvexa</i>	Biconvex Paperbark	V	V	Only found in NSW, populations found in the Jervis Bay area in the south and the Gosford-Wyong area in the north.	Damp places, often near streams or low-lying areas on alluvial soils.	No
<i>Melaleuca deanei</i>	Deane's Paperbark	V	V	Ku-ring-gai/Berowra area, Holsworthy/Wedderburn area, Springwood (in the Blue Mountains), Wollemi National Park, Yalwal (west of Nowra) and Central Coast (Hawkesbury River) areas.	Heath on sandstone.	No
<i>Persoonia nutans</i>	Nodding Geebung	E1	E	Restricted to the Cumberland Plain in western Sydney, between Richmond in the north and Macquarie Fields in the south.	Northern populations: sclerophyll forest and woodland (Agnes Banks Woodland, Castlereagh Scribbly Gum Woodland and Cooks River / Castlereagh Ironbark Forest) on aeolian and alluvial sediments. Southern populations: tertiary alluvium, shale sandstone transition communities and Cooks River / Castlereagh Ironbark Forest.	No
<i>Pimelea curviflora</i> var. <i>curviflora</i>		V	V	Confined to the coastal area of the Sydney and Illawarra regions between northern Sydney and Maroota in the north-west and Croom Reserve near Albion Park in the south.	Woodland, mostly on shaley/lateritic soils over sandstone and shale/sandstone transition soils on ridgetops and upper slopes.	No
<i>Pimelea spicata</i>	Spiked Rice-flower	E1	E	Two disjunct areas; the Cumberland Plain (Marayong and Prospect Reservoir south to Narellan and Douglas Park) and the Illawarra (Landsdowne to Shellharbour to northern Kiama).	Well-structured clay soils. <i>Eucalyptus moluccana</i> (Grey Box) communities and in areas of ironbark on the Cumberland Plain. Coast Banksia open woodland or coastal grassland in the Illawarra.	No
<i>Pterostylis gibbosa</i>	Illawarra Greenhood	E1	E	Known from a small number of populations in the Hunter region (Milbrodale), the Illawarra region (Albion Park and Yallah) and the	Open forest or woodland, on flat or gently sloping land with poor drainage.	No

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<i>Pterostylis saxicola</i>	Sydney Plains Greenhood	E1	E	Shoalhaven region (near Nowra). Restricted to western Sydney between Freemans Reach in the north and Picton in the south.	Small pockets of shallow soil in depressions on sandstone rock shelves above cliff lines, adjacent to sclerophyll forest or woodland on shale/sandstone transition soils or shale soils.	No
<i>Pultenaea parviflora</i>		E1	V	Endemic to the Cumberland Plain. Mainly from Windsor to Penrith and east to Dean Park, with outlier populations at Kemps Creek and Wilberforce.	Dry sclerophyll forest, especially Castlereagh Ironbark Forest, Shale Gravel Transition Forest and transitional areas where these communities adjoin Castlereagh Scribbly Gum Woodland.	No
<i>Pultenaea pedunculata</i>	Matted Bush-pea	E1		In NSW it is represented by just three disjunct populations, in the Cumberland Plains in Sydney, the coast between Tathra and Bermagui and the Windellama area south of Goulburn.	Woodland, sclerophyll forest, road batters and coastal cliffs.	No
<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	E1	V	Only in NSW, in a narrow, linear coastal strip from Upper Lansdowne to Conjola State Forest.	Subtropical and littoral rainforest on gravels, sands, silts and clays.	No
<i>Tetradlea glandulosa</i>		V		Found from Sampons Pass (Yengo NP) in the north to West Pymble (Lane Cove NP) in the south. The eastern limit is at Ingleside (Pittwater LGA) and the western limit is at East Kurrajong (Wollemi NP).	Heath, scrub, woodlands and open forest on upper-slopes and mid-slope sandstone benches. Soils generally shallow, consisting of a yellow, clayey/sandy loam.	No
<i>Thesium australe</i>	Austral Toadflax	V	V	In eastern NSW it is found in very small populations scattered along the coast, and from the Northern to Southern Tablelands.	Grassland on coastal headlands or grassland and grassy woodland away from the coast.	No
<i>Triplarina imbricata</i>	Creek Triplarina	E1	E	A few locations in the ranges south-west of Glenreagh and near Tabulam in north-east NSW.	Along watercourses in low open forest with <i>Tristaniopsis laurina</i> (Water Gum).	No
<i>Wilsonia backhousei</i>	Narrow-leafed	V		In NSW, found on the coast between	Margins of salt marshes and lakes.	No



Scientific Name	Common Name	TSC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood
	Wilsonia			Mimosa Rocks National Park and Wamberal north of Sydney (Nelson's Lake, Potato Point, Sussex Inlet, Wowly Gully, Parramatta River at Ermington, Clovelly, Voyager Point, Wollongong and Royal National Park).		
<i>Zannichellia palustris</i>		E1		In NSW, known from the lower Hunter and in Sydney Olympic Park.	Fresh or slightly saline stationary or slowly flowing water.	No

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