



Logos Estate, Prestons
Environmental Due Diligence
Preliminary Biodiversity Constraints

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1 INTRODUCTION

Logos Property Pty Ltd are proposing an industrial development, referred to as 'Logos Warehouse and Distribution Estate', on the corner of Bernera Road and Yarrunga Street at Prestons, within the local government area (LGA) of Liverpool. A project application has been submitted for State Significant Development (SSD, 7155) and this application is currently being assessed by the NSW Department of Planning and Environment.

Further to the SSD application, Logos are considering the purchase of three additional parcels of land adjoining the current development site (see **Figure 1**), as follows:

- 'Kookaburra Site' – Lot A DP 408, located on Kookaburra Road, Prestons
- 42B Kurrajong – Lot B DP 416483, located at 42B Kurrajong Road, Prestons
- '36B Kookaburra' Road, being Lot B DP408207, located at 36B Kookaburra Road, Prestons.

SLR Consulting Australia Pty Ltd (SLR) has been engaged to conduct an ecological due diligence on the above three properties, which are referred to collectively in this report as the 'study area'. The report has been prepared by Jeremy Pepper, Principal Ecologist, and is based on the following methods:

- Desktop review – review existing consultant reports for the adjoining SSD project site, regional vegetation mapping and threatened species data for the locality from the *Atlas of NSW Wildlife* ('BioNet') database and the online EPBC Act Protected Matters Search Tool (PMST); and
- Site inspection, which was conducted by the author on 27 May 2016. The survey was conducted on foot over the three properties, and involving identifying and mapping any stands of native vegetation, fauna habitats and resources, waterways and other features of potential biodiversity value. Notes and photographs were taken.

The enclosed report provides preliminary ecological constraints advice on the study area to Logos Property. This report is not a 'flora and fauna assessment' and has not been prepared for the purpose of informing a development application under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

Reference to 'threatened' biota in this report includes 'threatened species, populations and ecological communities' listed within NSW under the *Threatened Species Conservation Act 1995* (TSC Act) and 'matters of national environmental significance' listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

2 EXISTING FLORA AND FAUNA

The results of the due diligence investigation are summarised below for each site.

2.1 Desktop Results

2.1.1 Previous Biodiversity Assessment Report

The Biodiversity Assessment Report by Travers Bushfire & Ecology (April 2016) indicates that a number of low likelihood constraints occur within the land to the immediate east of the study area. Due to close proximity of these findings, these constraints are potentially relevant to the site. The previous study for the Biodiversity Assessment Report uncovered:

- Three small patches of Cumberland Plain Woodland Critically Endangered Ecological Community (CEEC) which total approximately 0.11ha.
- Possible low-quality habitat for the threatened Downy Wattle (*Acacia pubescens*)

- Possible low-quality habitat for the Green & Golden Bell Frog (*Litoria aurea*) within small water bodies and drainage channels.
- Poor quality habitat within the small woodland patches for Cumberland Plain Land Snail (*Meridolum comeovirens*).
- AnaBat recordings of threatened microchiropteran bats - Eastern Freetail-bat (*Mormopterus norfolkensis*) and Greater Broad-nosed Bat (*Scoteanax rueppellii*).

2.1.2 NSW Wildlife Atlas Threatened Biota (OEH)

The NSW Wildlife Atlas database was used to generate a list of all threatened biota, as listed on the NSW *Threatened Species Conservation Act* 1995 (TSC Act), previously recorded within the locality (see **Figure 2**). Given the disturbed nature of the majority of the site and the general locality, it is unlikely that threatened species would occur on the site other than the wide ranging and highly mobile fauna species such as microchiropteran bats or various urban tolerant birds (during foraging activities or dispersal movements). The complete list of threatened biota is included in **Appendix A**.

Threatened Species

A total of 12 threatened terrestrial mammals have been recorded within a 10 km radius of the site (eight microchiropteran bats, the Grey-headed Flying-fox, two arboreal mammals and one ground mammal), the majority of which are forest-dependent. These species are highly unlikely to occur, apart from individuals of some microchiropteran bat species or the Grey-headed Flying-Fox. There are no hollow-bearing trees on the site that could provide roosting habitat for microchiropteran bats. There is no roost or colony of Grey-headed Flying-Fox on or near to the site.

Theoretical habitat for the Green & Golden Bell Frog could be present in the small waterbody / drainage line located in the northwest corner of Kookaburra site. There is no habitat for the threatened Red-crowned Toadlet.

A total of 18 threatened bird species have been recorded within 10 km of the site. It is possible that individuals of some wide-ranging threatened species (particularly those tolerant of urban and peri-urban environments) could occur on an occasional basis, the site would not constitute a significant area of habitat for even individuals of these species due to its small size, disturbed nature and the general nature of the locality.

Endangered Populations

Two endangered populations have been recorded within a 10 km radius of the site, including the *Marsdenia viridiflora* R. Br. subsp. *viridiflora* population in the Bankstown, Blacktown, Camden, Campbelltown, Fairfield, Holroyd, Liverpool and Penrith local government areas and the White-fronted Chat population in the Sydney Metropolitan Catchment Management Area. These populations are not located in the area surrounding the site. Habitat for the White-fronted Chat is not present on or adjacent to the site. *Marsdenia viridiflora* predominately occurs in areas of native vegetation with vine thickets. The presence of this species on the site is considered highly unlikely.

Threatened Ecological Communities

Historical regional scale mapping of the vegetation of the Cumberland Plain (NPWS 2002) indicates that at 2002, no native vegetation was mapped as occurring within the three lots that comprise the study area (see **Figure 3**). Notably, a patch of Shale Plains Woodland is depicted extending onto 36B Kookaburra. The only relic of this vegetation, which has (evidently) long been removed, is a small patch of native vegetation recorded near the western boundary, which comprises a very small stand of Grey Box *Eucalyptus moluccana* (being Shale Plain Woodlands, which constitutes Cumberland Plain Woodland CEEC).

More recent regional vegetation mapping of the Sydney Metropolitan catchment (OEH 2013) shows no native vegetation patches within the study area (**Figure 4**).

In addition to this, a small patch of vegetation within the northwest corner of Kookaburra site was found to constitute Alluvial Woodland (Swamp Oak Woodland), which is likely to constitute a form of River-flat Eucalypt Forest on Coastal Floodplains Endangered Ecological Community (EEC). There are no other threatened ecological communities on or adjacent to the site.

2.1.3 EPBC Act Protected Matters

The EPBC Act requires consideration of the potential for a “significant impact” to be imposed by an activity on a matter of national environmental significance. In the event that such an impact is likely to be imposed, the activity must be referred to the Commonwealth for determination as to whether it constitutes a “controlled action”. Where a development activity does constitute a controlled action, an approval from the Commonwealth Minister of the Environment is required.

Protected matters search results indicate that a number of matters of national environmental significance (and their habitats) are predicted to occur in the locality of the site at Prestons (**Appendix B**). The search indicates that 42 listed threatened species, 14 listed migratory species and seven threatened ecological communities are predicted to occur within a 10km radius of the site. Of these, the relevant matters in relation to the site would comprise:

- Listed threatened species, with some bird and bat species possibly foraging or roosting on the site (e.g. Swift Parrot, Grey-headed Flying Fox or Large-eared Pied Bat);
- Listed migratory species, with individuals of some terrestrial migratory species possibly flying over the site on a seasonal or transient basis; and
- Listed threatened ecological communities, with nine such communities listed as occurring within the locality.

However, the site which is proposed for development activities is of little or no relevance with respect to the life cycles and habitat requirements of any such threatened or migratory species listed in the EPBC Act. The absence of native vegetation over the majority of the site, as well as the predominantly cleared and exotic ground layer means that there is unlikely to be habitat for any of the threatened flora species.

A small patch of Grey Box Woodland near the western boundary of 36B Kookaburra represents the Cumberland Plain Woodland CEEC, as listed under the TSC Act. However, as the area of the patch is less than 0.5 ha, the vegetation does not constitute Cumberland Plain Woodland CEEC as listed under the EPBC Act (DoE 2010). No other threatened ecological communities listed under the EPBC Act are present on the site.

On the basis of the above considerations, there is not likely to be a significant impact on any matters of national environmental significance listed under the EPBC Act as a result development in the central and northern areas of the site. There is, consequently, no requirement for any referral of the proposal to the Commonwealth Department of the Environment pursuant to the EPBC Act.

2.2 Kookaburra Site

The Kookaburra site is a 2.02 hectares (ha) rectangular shaped block with its long axis running east from Kookaburra Road. The site has a westerly aspect, with its lowest point in the northwestern corner at around 30 metres (m) above sea level, rising to 40 m above sea level in the southeastern corner. The land slopes gently down to a small drainage line in the northwestern parts of the site, which appears to drain off the site northward to Cabramatta Creek which lies beyond the site to the northwest. The drainage line originates to the west of the site and is piped under Kookaburra Road, discharging into the site via a stormwater headwall on the eastern side of the road (see **Photo 1**). The drainage line then bends north and continues in an open channel until it meets Yarrunga Street in the far northwestern corner of the site (where it discharges into another stormwater pipe that carries water north under Yarrunga Street further north to Cabramatta Creek).

Photo 1 Stormwater headwall and open drainage channel running off Kookaburra Road



The site is largely devoid of its original native vegetation, with the exception of a very small stand of a few Swamp Oak *Casuarina glauca* occupying a section of the drainage line in the northwestern corner of the site. This small patch is consistent with the description of 'Alluvial Woodland' of NPWS (2002), which may constitute River-flat eucalypt forest on Coastal Floodplains Endangered Ecological Community (**Figure 5**). A selection of native woodland trees, mainly Grey Box *Eucalyptus moluccana*, remain along the road verges along the western and northern boundaries of the site, but these appear to be located in the road easements for Kookaburra Road and Yarrunga Road, respectively, and therefore are not on the site. A survey of the lot boundary will be required to confirm whether these trees are located on the site.

The majority of the site is occupied by 'glass houses', some of which are disused and some are still actively being used for growing fruits and vegetables (evidently) for commercial markets (see **Photo 2**). The land within and surrounding these glasshouses is cleared and devoid of vegetation, with the exception of a range of weed species that have colonised exposed soils and/or disturbed ground.

Photo 2 Kookaburra Site – view east showing existing glasshouses and disturbed ground



2.3 36B Kookaburra Site

The 36B Kookaburra site is a 2.02 hectares (ha) rectangular shaped block with its long axis running east from Kookaburra Road (**Figure 1**). The site has a westerly aspect, with its lowest point in the northwestern corner at around 30 metres (m) above sea level, rising to 40 m above sea level in the southeastern corner. The land slopes gently down towards Kookaburra Road and has no obvious drainage features. Water runoff and stormwater discharges would likely run along Kookaburra Road edges and into the stormwater pipe that carries water north under Yarrunga Street and into Cabramatta Creek.

The site is largely devoid of its original native vegetation (**Photo 3**), with the exception of a small isolated patch of native vegetation that may be described as Grey Box Woodland, occupying a small section of land along the western boundary (**Figure 5**). The vegetation is equivalent to the Shale Plains Woodland of NPWS (2002) and Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion, (ME020) in the VIS (and BioBanking) vegetation database. The vegetation also complies with the definition of Cumberland Plain Woodland CEEC, as listed under the TSC Act. The vegetation comprises 'woodland' to 'open forest' of early mature Grey Box *Eucalyptus moluccana*, growing to around 5-8 m high, with young age (< 5 years old) seedlings to around 1-2 m high (see **Photo 4**). There is a small selection of native groundcover species present, such as *Einadia hastata*, Three-awn Speargrass *Aristida vagans*, and Couch *Cynodon dactylon*. Interspersed with the native plants is a range of common weeds including Paddy's Lucerne *Sida rhombifolia* and Cobblers Pegs *Bidens pilosa*, and there are dense swards of Kikuyu Grass *Pennisetum clandestinum* within an adjacent to the patch. The patch is surrounded on all sides by a combination of disturbed and disused ground, fill stockpiles or rubbish.

A selection of native woodland trees, mainly Grey Box *Eucalyptus moluccana*, remain along the road verges along the western boundaries of the site, but these appear to be located in the road easement for Kookaburra Road, and therefore are not on the site.

Photo 3 View west across 36B Kookaburra. Sheds, vehicles and plant in background.

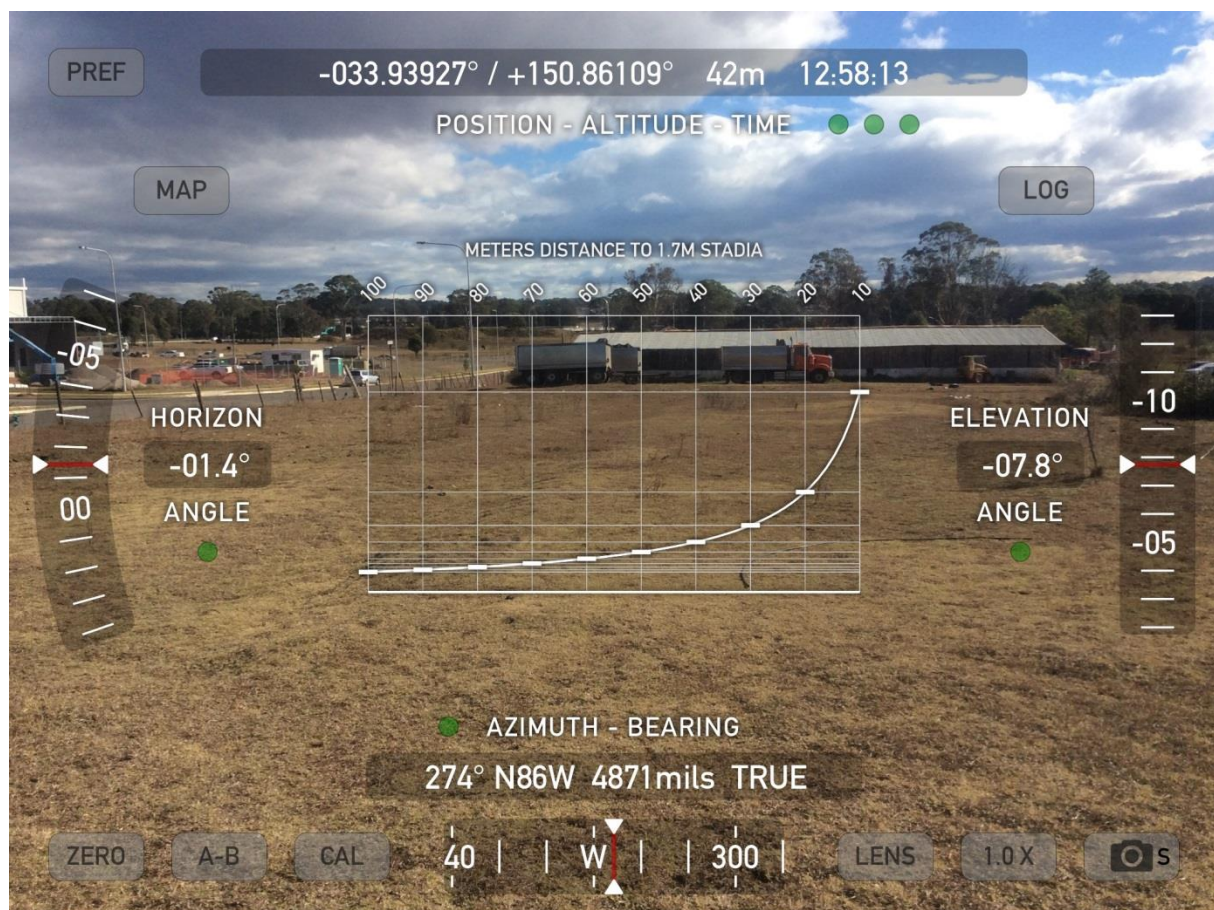
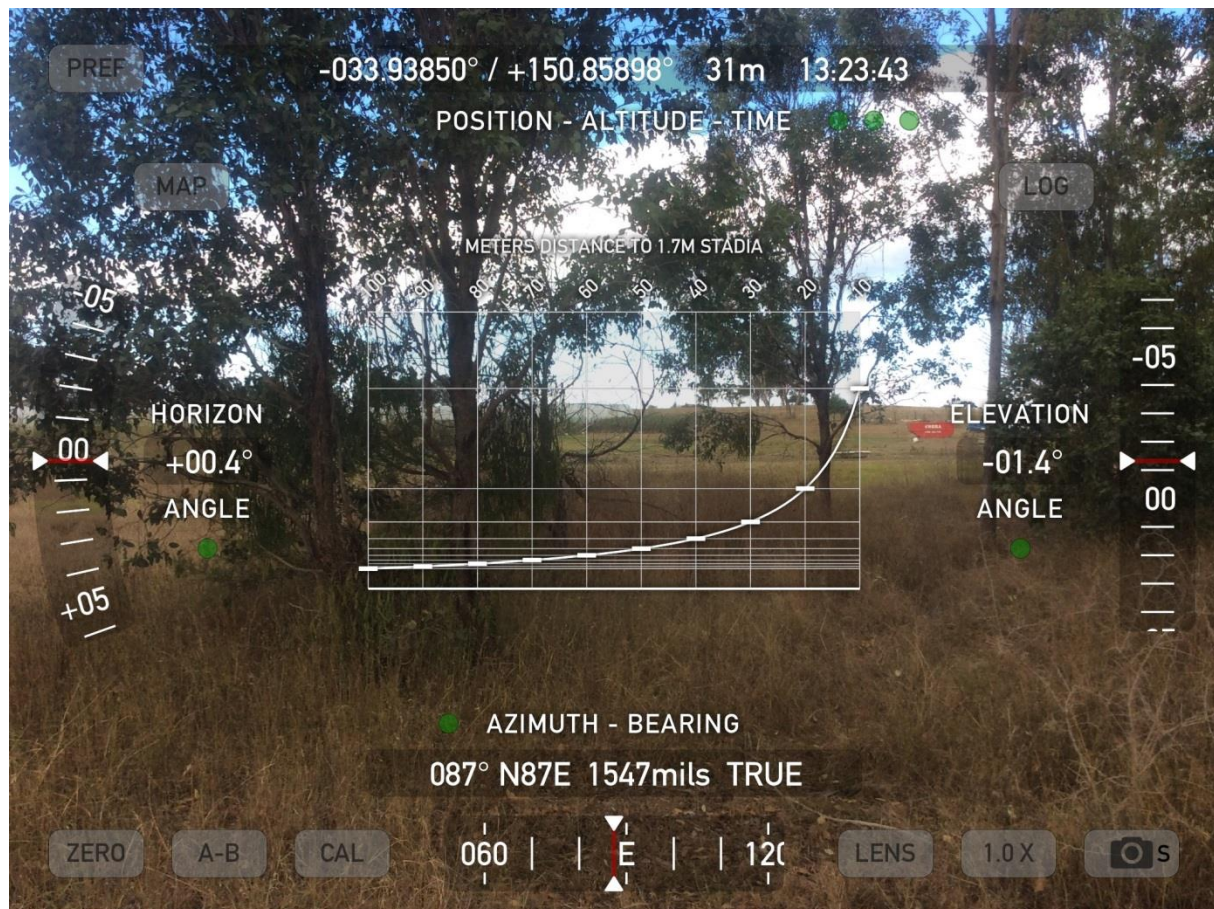


Photo 4 Small stand of Grey Box Woodland on western flank of 36B Kookaburra



The site is occupied by exotic pastures, numerous sheds and cleared areas used for waste storage, with minimal native vegetation. Regional-scale vegetation mapping by OEH (2013) shows no presence of any native vegetation community (**Figure 4**). Older mapping of the Cumberland Plain by NPWS (2002) shows that a patch of Shale Plains Woodland previously occupied the southwestern parts of the site, extending offsite to the south (**Figure 3**).

2.4 42B Kurrajong

The 42B Kurrajong site is a 2.02 hectares (ha) rectangular shaped block with its long axis running north from Kurrajong Road (**Figure 1**). The site has a south-westerly aspect, with its lowest point along the western boundary at around 42 metres (m) above sea level, rising to 48 m above sea level in the northeastern corner. The land contains no obvious drainage features.

The majority of the site is devoid of its original native vegetation with and contains only exotic pastures (see **Photo 5**). As shown in **Figure 4**, regional-scale vegetation mapping (OEH, 2013) shows no presence of any native vegetation community (see **Photo 6**).

Photo 5 Eastern portion of 42B Kurrajong. Isolated paddock tree standing in dense exotic grass layer.

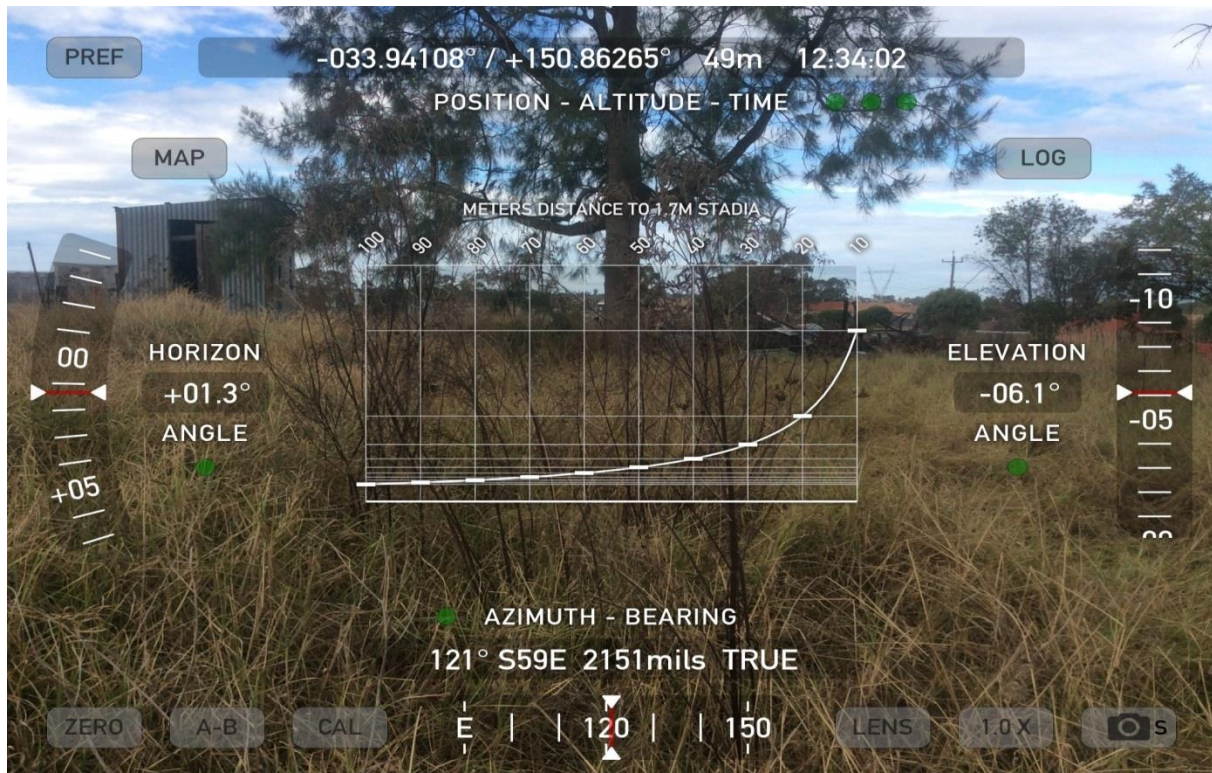


Photo 6 View south across open exotic grassland. Blackberry thicket at left; houses lining Kurrajong Road in background.



3 SUMMARY OF CONSTRAINTS

The following ecological constraints are considered relevant to future development proposals on the land at Prestons. Key biodiversity features recorded on the site are displayed in **Figure 5**.

3.1 Threatened Ecological Communities

A small patch of native vegetation near the western boundary of 36B Kookaburra is consistent with the description of Shale Plain Woodlands (NPWS 2002), which constitutes a form Cumberland Plain Woodland CEEC. In addition to this, a small patch of vegetation within the northwest corner of Kookaburra site was found to constitute Alluvial Woodland (Swamp Oak Woodland), which constitutes River-flat Eucalypt Forest on Coastal Floodplains Endangered Ecological Community. Both patches are small in size and are highly disturbed, particularly within the ground layer vegetation. Furthermore, there is no connectivity of these patches to other native vegetation within the locality. The patch of Cumberland Plain Woodland CEEC on 36B Kookaburra is less than 0.1ha in size and therefore does not constitute EPBC Act listed Cumberland Plain Woodland CEEC. There are no other threatened ecological communities on or adjacent to the site.

3.2 Threatened Species

The site does not contain any substantial native vegetation or favourable habitat for any of the threatened species recorded within a 10km radius of the site. It is possible that some of the highly mobile, wide ranging species such as microchiropteran bats and woodland birds might frequent the site on an occasional basis during foraging. There are no suitable hollow-bearing trees for roosting or nesting of such species. The small watercourse in Kookaburra contains marginal Green & Golden Bell-frog habitat. Given the high occurrence of better aquatic and riparian habitats in areas to the north and within Cabramatta Creek, the small watercourse on the site is not considered important for this species.

None of the EPBC Act listed threatened or migratory species which were recorded as potentially occurring within 10km radius of the site are considered likely to occur. Again, favourable habitat for these species is largely absent and only the highly mobile, wide ranging species such as microchiropteran bats and woodland birds are considered possible to occur (on an occasional basis or during foraging activity).

3.3 Endangered Populations

Two endangered populations have been recorded within a 10 km radius of the site, including the *Marsdenia viridiflora* R. Br. subsp. *viridiflora* population in the Bankstown, Blacktown, Camden, Campbelltown, Fairfield, Holroyd, Liverpool and Penrith local government areas and the White-fronted Chat population in the Sydney Metropolitan Catchment Management Area. These populations are not located in the area surrounding the site. Habitat for the White-fronted Chat is not present on or adjacent to the site. *Marsdenia viridiflora* predominately occurs in areas of native vegetation with vine thickets. The presence of both species on the site is considered highly unlikely.

3.4 Waterbodies

The small artificial drainage line in the northwest corner of Kookaburra site is likely to form a 1st order stream (see **Figure 5**). According to the NSW *Water Management Act 2000*, any works within 40 m of a watercourse (termed 'waterfront land') require approval from the NSW Department of Primary Industries (Water). For 'waterfront developments' within 40 m of first order watercourses, NSW Office of Water (2012) guidelines recommend a 10 m 'vegetated riparian zone' (VRZ) be established and maintained on either side of the watercourse (as measured from the top-of-bank). Under this scenario, which applies to local development applications made under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act), this would mean future development of the site would have to allow a riparian corridor to be retained within the site, which would be 20 m wide (plus the width of the bed of the stream). Consequently, application of the *Water Management Act* on local developments can significantly constrain proposed development layouts and the total area of developable land.

However, under Section 89J of the EP&A Act, the *Water Management Act* does not apply to State Significant Development (SSD) that is being determined under Part 4.1 of the EP&A Act. Notwithstanding this fact, the Department of Planning & Environment (or the Minister, as applicable), may choose to consult with the Department of Primary Industries (Water) on matters relating to impacts on watercourses and riparian zones. In this scenario, the role of DPI (Water) is purely as an advisor, and DPI do not have jurisdiction over any approvals under the SSD process.

In relation to the drainage line that traverses the Kookaburra site, it is also noted that the drainage line is to be converted into a subsurface pipeline beneath Kookaburra Road in the *Liverpool Contributions Plan 2009* (refer Infrastructure Map No.8). Under this future scenario, the *Water Management Act* would no longer apply to the drainage line. Consequently, the drainage line is not likely to constrain future development of the Kookaburra site, regardless of the applicability of the Act.

3.5 Tree Protection

The study area, being in Liverpool LGA, is subject to the tree protection provisions of the Liverpool *Tree Management Policy* (Liverpool City Council 2016), which states that "a person must not ringbark, cut down, top, lop, remove, injure or wilfully destroy any tree or other vegetation to which a development control plan applies without a development consent or authorisation permit issued by Council".

The Policy aims to protect trees on private land. Where tree removal is proposed as part of a development application (made to Council under Part 4 of the EP&A Act), tree removal is assessed by Council according to the matters listed under Section 79C of the EP&A Act, as well as any relevant clauses of the Local Environmental Plan and Development Control Plan. For such development applications, tree impacts are typically assessed by a qualified arborist and presented in an arboricultural assessment report. Trees can constrain a development where they are numerous, form part of a threatened ecological community and/or are large and/or significant (i.e. listed under a register of significant trees) or of some other local aesthetic value.

For the three new sites at Prestons, future development of these sites would most likely be under an amendment to the existing State Significant Development application. Under SSD, the provisions of local planning instruments do not apply. Hence, the tree protection provisions of Council's Tree Management Policy would not apply.

3.6 SSD Offsetting Requirement

Future development of the three lots that comprise the study area is likely to be as a modification to the existing SSD (No.7155) application. Consequently, impacts on flora and fauna and biodiversity values will be according to the *NSW Biodiversity Offsets Policy for Major Projects* (OEH 2014a) and the associated methods outlined in the *Framework for Biodiversity Assessment* (FBA, OEH 2014b). The FBA requires that all impacts on native vegetation are quantified according to biodiversity credits and sets out the methods for completing the assessment of impacts on biodiversity values and subsequent offsetting requirements. The results of the assessment are documented in a *Biodiversity Assessment Report* (BAR), which includes all of the credits required to offset the project impacts.

In relation to the findings of the current study, the following offsetting costs are likely to apply:

- *36B Kookaburra* - 1 credit of Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion, (ME020). This credit type has traded for around \$18,000 per credit; and
- *Kookaburra* - 1 credit of Swamp Oak open forest on river flats of the Cumberland Plain and Hunter valley (ME79) (nearest equivalent : ME018/Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion). The latter credit type has traded for \$13,000 per credit.

The total cost of credit purchases for development of the entire study area is therefore approximately **\$31,000** (Note: this does not include consultant fees, the BAR, OEH application fees, etc.). It is recommended that a contingency of 10 % be added to this budget to allow for increases in credit value over the intervening period between the date of this report and the date at which the above credits would be purchased to offset any future development.

4 CONCLUSIONS

The majority of the study area contains no significant ecological constraints. The vast majority of the study area contains a mix of exotic grass pastures, buildings or glasshouses, or disturbed ground. . The only native vegetation occurs in two small patches in the western edges of the Kookaburra and 36B Kookaburra sites. A small patch of Cumberland Plain Woodland CEEC lies in the western parts of 36B Kookaburra and a smaller patch of River-flat Eucalypt Forest on Coastal Floodplains EEC lies in the northwestern corner of 36 Kookaburra. However, due to the small size, isolation and poor condition of each patch, they are assessed as of low conservation value. The patch of Cumberland Plain Woodland CEEC within 36B Kookaburra is less than 0.5 ha in size and therefore does not constitute the nationally listed Cumberland Plain Woodland CEEC under the EPBC Act.

Clearing of the native vegetation patches, despite their small size and poor condition, will likely require offsetting under any future SSD application, in accordance with methods set out in the FBA. An indicative biodiversity offsetting budget of \$35,000 has been recommended to allow for purchase of biodiversity credits to offset the removal of the native vegetation described on Kookaburra and 36B Kookaburra.

It is possible that some highly mobile and wide ranging threatened fauna species such as microchiropteran bats or woodland birds could frequent the site on an occasional basis, however, there are no significant habitat features available for such species.

No threatened flora species known to occur in the locality were observed on the site and potential habitat for any such species on all three sites is negligible.

The small artificial drainage line in the northwest corner of Kookaburra site contains potentially suitable habitat for the Green & Golden Bell Frog, although the presence of this species is highly unlikely.

Any future development within the northwestern corner of the Kookaburra site will require consideration of the intent and applicability of the NSW *Water Management Act 2000*. According to the Act, any works within 40 m of the top-of-bank of a watercourse require approval from the NSW Department of Primary Industries (Water)¹. However, such an approval does not apply to SSD applications. The applicability of the *Water Management Act* to this drainage line would be assessed further into the development process. Furthermore, any development adjacent to this drainage line should include appropriate stormwater treatment and management measures to reduce impacts to sensitive ecosystems downstream.

¹ Formerly the NSW Office of Water

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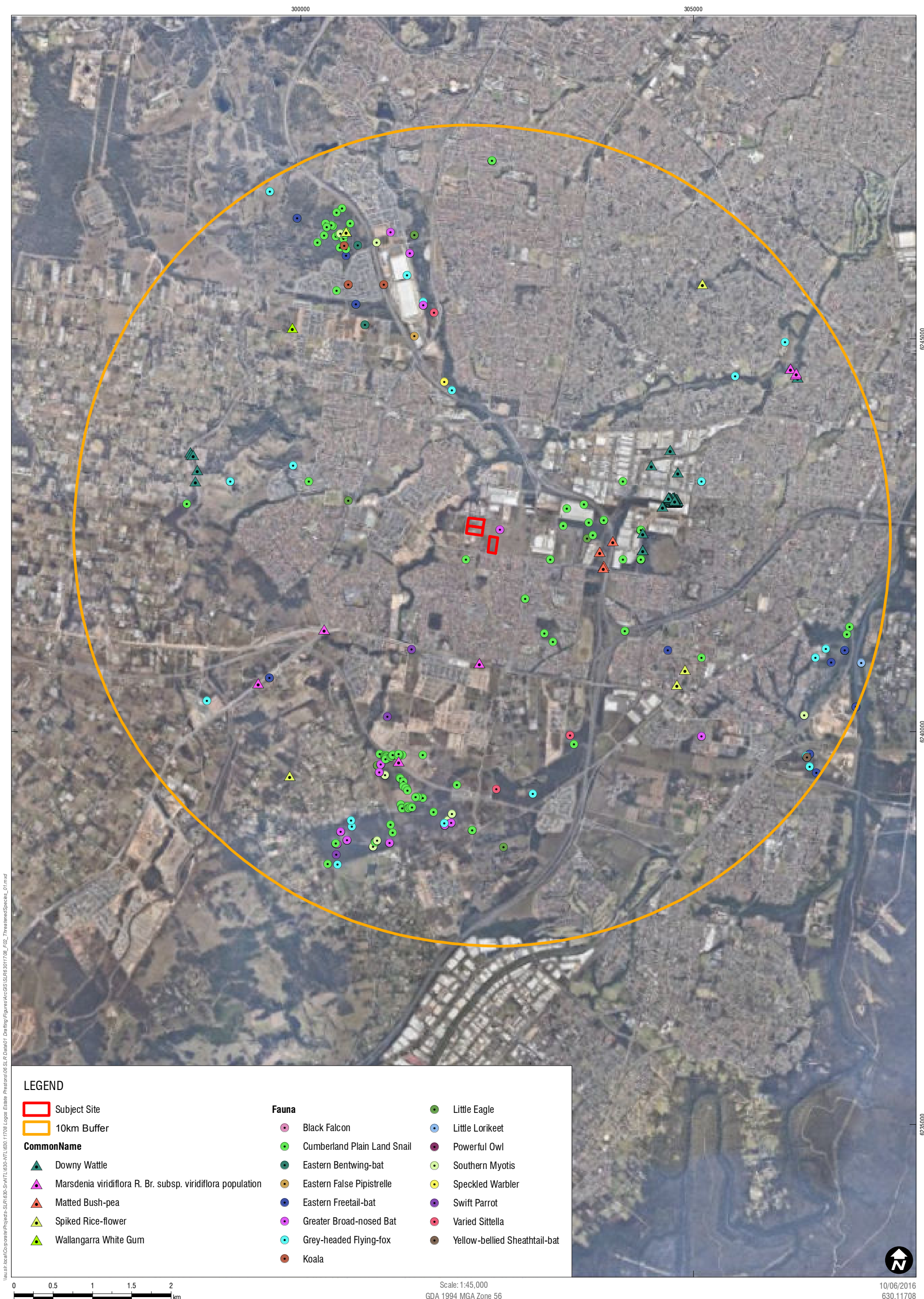
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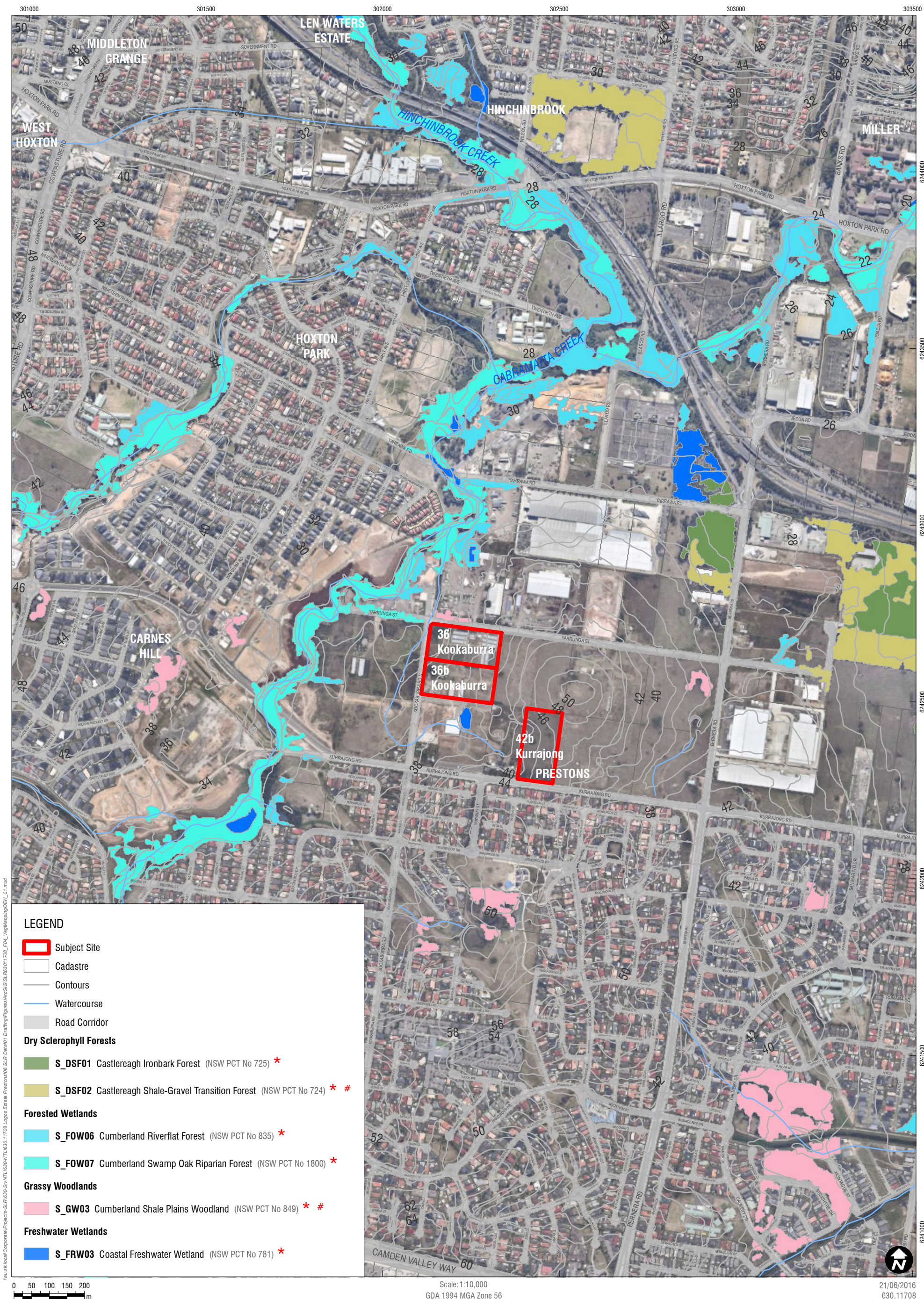
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Data from the BioNet Atlas of NSW Wildlife website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1Å°, ^^ rounded to 0.01Å°). Copyright the State of NSW through the Office of Environment and Heritage. Search criteria : Licensed Report of all Valid Records of Threatened (listed on TSC Act 1995) or Commonwealth listed Entities in selected area [North: -33.83 West: 150.76 East: 150.96 South: -34.03] returned a total of 1,396 records of 55 species.

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Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Animalia	Amphibia	Myobatrachidae	3116	<i>Pseudophryne australis</i>		Red-crowned Toadlet	V,P		3	
Animalia	Amphibia	Hylidae	3166	<i>Litoria aurea</i>		Green and Golden Bell Frog	E1,P	V	22	
Animalia	Aves	Accipitridae	0218	<i>Circus assimilis</i>		Spotted Harrier	V,P		1	
Animalia	Aves	Accipitridae	0225	<i>Hieraaetus morphnoides</i>		Little Eagle	V,P		26	
Animalia	Aves	Accipitridae	0230	<i>Lophoictinia isura</i>		Square-tailed Kite	V,P,3		2	
Animalia	Aves	Falconidae	0238	<i>Falco subniger</i>		Black Falcon	V,P		2	
Animalia	Aves	Burhinidae	0174	<i>Burhinus grallarius</i>		Bush Stone-curlew	E1,P		2	
Animalia	Aves	Cacatuidae	0268	<i>Callocephalon fimbriatum</i>		Gang-gang Cockatoo	V,P,3		2	
Animalia	Aves	Cacatuidae	0265	^^ <i>Calyptorhynchus lathami</i>		Glossy Black-Cockatoo	V,P,2		6	
Animalia	Aves	Psittacidae	0260	<i>Glossopsitta pusilla</i>		Little Lorikeet	V,P		26	
Animalia	Aves	Psittacidae	0309	<i>Lathamus discolor</i>		Swift Parrot	E1,P,3	E	12	
Animalia	Aves	Strigidae	0246	<i>Ninox connivens</i>		Barking Owl	V,P,3		1	
Animalia	Aves	Strigidae	0248	<i>Ninox strenua</i>		Powerful Owl	V,P,3		5	
Animalia	Aves	Acanthizidae	0504	<i>Chthonicola sagittata</i>		Speckled Warbler	V,P		2	
Animalia	Aves	Meliphagidae	0603	<i>Anthochaera phrygia</i>		Regent Honeyeater	E4A,P	CE	3	
Animalia	Aves	Meliphagidae	0448	<i>Epthianura albifrons</i>		White-fronted Chat	V,P		1	
Animalia	Aves	Meliphagidae	0448	<i>Epthianura albifrons</i>		White-fronted Chat	E2,V,P		1	
						population in the Sydney Metropolitan Catchment Management Area				
Animalia	Aves	Meliphagidae	8303	<i>Melithreptus gularis gularis</i>		Black-chinned Honeyeater (eastern subspecies)	V,P		4	
Animalia	Aves	Neosittidae	0549	<i>Daphoenositta chrysoptera</i>		Varied Sittella	V,P		33	
Animalia	Aves	Petroicidae	0380	<i>Petroica boodang</i>		Scarlet Robin	V,P		5	
Animalia	Aves	Petroicidae	0382	<i>Petroica phoenicea</i>		Flame Robin	V,P		7	
Animalia	Mammalia	Dasyuridae	1008	<i>Dasyurus maculatus</i>		Spotted-tailed Quoll	V,P	E	2	
Animalia	Mammalia	Phascolarctidae	1162	<i>Phascolarctos cinereus</i>		Koala	V,P	V	42	
Animalia	Mammalia	Petauridae	1137	<i>Petaurus norfolcensis</i>		Squirrel Glider	V,P		1	
Animalia	Mammalia	Pteropodidae	1280	<i>Pteropus poliocephalus</i>		Grey-headed Flying-fox	V,P	V	108	
Animalia	Mammalia	Emballonuridae	1321	<i>Saccolaimus flaviventris</i>		Yellow-bellied Sheath-tail-bat	V,P		12	
Animalia	Mammalia	Molossidae	1329	<i>Mormopterus norfolkensis</i>		Eastern Freetail-bat	V,P		53	
Animalia	Mammalia	Vespertilionidae	1353	<i>Chalinolobus dwyeri</i>		Large-eared Pied Bat	V,P	V	1	
Animalia	Mammalia	Vespertilionidae	1372	<i>Falsistrellus tasmaniensis</i>		Eastern False Pipistrelle	V,P		27	
Animalia	Mammalia	Vespertilionidae	1834	<i>Miniopterus schreibersii oceanensis</i>		Eastern Bentwing-bat	V,P		45	
Animalia	Mammalia	Vespertilionidae	1357	<i>Myotis macropus</i>		Southern Myotis	V,P		42	
Animalia	Mammalia	Vespertilionidae	1361	<i>Scoteanax rueppellii</i>		Greater Broad-nosed Bat	V,P		43	
Animalia	Gastropoda	Camaenidae	1006	<i>Meridolum corneovirens</i>		Cumberland Plain Land Snail	E1		347	
Plantae	Flora	Apocynaceae	1226	<i>Cynanchum elegans</i>		White-flowered Wax Plant	E1,P	E	2	

Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Plantae	Flora	Apocynaceae	10896	<i>Marsdenia viridiflora</i> <i>subsp. viridiflora</i>		Marsdenia viridiflora R. Br. subsp. viridiflora population in the Bankstown, Blacktown, Camden, Campbelltown, Fairfield, Holroyd, Liverpool and Penrith local government areas	E2		15	
Plantae	Flora	Ericaceae	2618	<i>Leucopogon exolasius</i>		Woronora Beard-heath	V,P	V	2	
Plantae	Flora	Fabaceae (Faboideae)	2853	<i>Dillwynia tenuifolia</i>		Dillwynia tenuifolia, Kemps Creek	E2,V,P		43	
Plantae	Flora	Fabaceae (Faboideae)	2853	<i>Dillwynia tenuifolia</i>			V,P		55	
Plantae	Flora	Fabaceae (Faboideae)	3007	<i>Pultenaea parviflora</i>			E1,P	V	16	
Plantae	Flora	Fabaceae (Faboideae)	3008	<i>Pultenaea pedunculata</i>		Matted Bush-pea	E1,P		16	
Plantae	Flora	Fabaceae (Mimosoideae)	3860	<i>Acacia pubescens</i>		Downy Wattle	V,P	V	184	
Plantae	Flora	Gyrostemonaceae	9411	<i>Gyrostemon thesioides</i>			E1,P,3		31	
Plantae	Flora	Myrtaceae	4007	<i>Callistemon linearifolius</i>		Netted Bottle Brush	V,P,3		2	
Plantae	Flora	Myrtaceae	4134	<i>Eucalyptus nicholii</i>		Narrow-leaved Black Peppermint	V,P	V	2	
Plantae	Flora	Myrtaceae	8907	<i>Eucalyptus scoparia</i>		Wallangarra White Gum	E1,P	V	2	
Plantae	Flora	Myrtaceae	4248	<i>Melaleuca deanei</i>		Deane's Paperbark	V,P	V	2	
Plantae	Flora	Myrtaceae	4293	<i>Syzygium paniculatum</i>		Magenta Lilly Pilly	E1,P	V	1	
Plantae	Flora	Orchidaceae	4439	<i>Diuris aequalis</i>		Buttercup Doubletail	E1,P,2	V	1	
Plantae	Flora	Orchidaceae	7324	<i>Pterostylis nigricans</i>		Dark Greenhood	V,P,2		1	
Plantae	Flora	Orchidaceae	9615	<i>Pterostylis saxicola</i>		Sydney Plains Greenhood	E1,P,2	E	13	
Plantae	Flora	Proteaceae	10917	<i>Grevillea juniperina</i> <i>subsp. juniperina</i>		Juniper-leaved Grevillea	V,P		2	
Plantae	Flora	Proteaceae	10009	<i>Grevillea parviflora</i> <i>subsp. parviflora</i>		Small-flower Grevillea	V,P	V	25	
Plantae	Flora	Proteaceae	5458	<i>Persoonia hirsuta</i>		Hairy Geebung	E1,P,3	E	1	
Plantae	Flora	Proteaceae	5467	<i>Persoonia nutans</i>		Nodding Geebung	E1,P	E	54	
Plantae	Flora	Thymelaeaceae	6190	<i>Pimelea spicata</i>		Spiked Rice-flower	E1,P	E	37	



Australian Government
Department of the Environment

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 19/05/16 13:08:56

[Summary](#)

[Details](#)

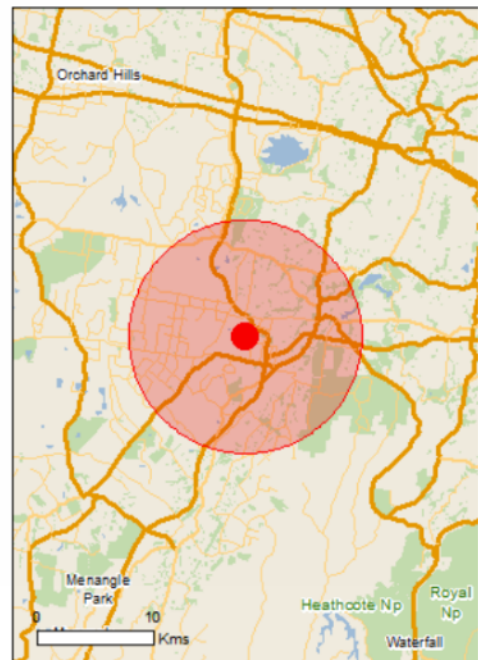
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

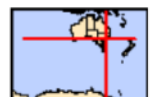
[Acknowledgements](#)



This map may contain data which are
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[Coordinates](#)

Buffer: 10.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	7
Listed Threatened Species:	42
Listed Migratory Species:	14

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	14
Commonwealth Heritage Places:	2
Listed Marine Species:	17
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	2
Regional Forest Agreements:	None
Invasive Species:	52
Nationally Important Wetlands:	None
Key Ecological Features (Marine):	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion	Endangered	Community likely to occur within area
Coastal Upland Swamps in the Sydney Basin Bioregion	Endangered	Community may occur within area
Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion	Critically Endangered	Community likely to occur within area
Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest	Critically Endangered	Community likely to occur within area
Shale Sandstone Transition Forest of the Sydney Basin Bioregion	Critically Endangered	Community likely to occur within area
Upland Basalt Eucalypt Forests of the Sydney Basin Bioregion	Endangered	Community may occur within area
Western Sydney Dry Rainforest and Moist Woodland on Shale	Critically Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Fish		
Macquaria australasica Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species

Appendix B EPBC Act website search within 10km of the site

Name	Status	Type of Presence habitat may occur within area
Frogs		
Heleioporus australiacus Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat likely to occur within area
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat known to occur within area
Litoria littlejohni Littlejohn's Tree Frog, Heath Frog [64733]	Vulnerable	Species or species habitat may occur within area
Litoria raniformis Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog [1828]	Vulnerable	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat may occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area
Plants		
Acacia bynoeana Bynoe's Wattle, Tiny Wattle [8575]	Vulnerable	Species or species habitat may occur within area
Acacia pubescens Downy Wattle, Hairy Stemmed Wattle [18800]	Vulnerable	Species or species habitat likely to occur within area
Allocasuarina glareicola [21932]	Endangered	Species or species habitat may occur within area
Asterolasia elegans [56780]	Endangered	Species or species habitat likely to occur within area
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat likely to occur within area
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area

Appendix B

EPBC Act website search within 10km of the site

Name	Status	Type of Presence
Cynanchum elegans White-flowered Wax Plant [12533]	Endangered	Species or species habitat likely to occur within area
Genoplesium baueri Yellow Gnat-orchid [7528]	Endangered	Species or species habitat likely to occur within area
Grevillea parviflora subsp. parviflora Small-flower Grevillea [64910]	Vulnerable	Species or species habitat known to occur within area
Haloragis exalata subsp. exalata Wingless Raspwort, Square Raspwort [24636]	Vulnerable	Species or species habitat may occur within area
Leucopogon exolasius Woronora Beard-heath [14251]	Vulnerable	Species or species habitat likely to occur within area
Melaleuca deanei Deane's Melaleuca [5818]	Vulnerable	Species or species habitat likely to occur within area
Pelargonium sp. Striatellum (G.W.Carr 10345) Omeo Stork's-bill [84065]	Endangered	Species or species habitat may occur within area
Persoonia nutans Nodding Geebung [18119]	Endangered	Species or species habitat likely to occur within area
Pimelea curviflora var. curviflora [4182]	Vulnerable	Species or species habitat likely to occur within area
Pimelea spicata Spiked Rice-flower [20834]	Endangered	Species or species habitat known to occur within area
Pomaderris brunnea Rufous Pomaderris [16845]	Vulnerable	Species or species habitat likely to occur within area
Pterostylis gibbosa Illawarra Greenhood, Rufa Greenhood, Pouched Greenhood [4562]	Endangered	Species or species habitat may occur within area
Pterostylis saxicola Sydney Plains Greenhood [64537]	Endangered	Species or species habitat known to occur within area
Pultenaea parviflora [19380]	Vulnerable	Species or species habitat likely to occur within area
Thelymitra kangaloonica Kangaloon Sun Orchid [81861]	Critically Endangered	Species or species habitat may occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area
Reptiles		
Hoplocephalus bungaroides Broad-headed Snake [1182]	Vulnerable	Species or species habitat likely to occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus		
White-throated Needletail [682]		Species or species habitat known to occur within area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis		
Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus		
Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat likely to occur within area
Myiagra cyanoleuca		
Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons		
Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Pandion haliaetus		
Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name

Commonwealth Land -
 Commonwealth Land - Australian Postal Commission
 Commonwealth Land - Australian Postal Corporation
 Commonwealth Land - Australian Telecommunications Commission
 Commonwealth Land - Australian Telecommunications Corporation
 Commonwealth Land - Commonwealth Trading Bank of Australia
 Commonwealth Land - Defence Housing Authority
 Commonwealth Land - Defence Service Homes Corporation
 Commonwealth Land - Director of War Service Homes
 Commonwealth Land - Telstra Corporation Limited
 Defence - INGLEBURN AREA (Bardia Barracks)
 Defence - MOOREBANK AREA INC SME
 Defence - Suite 8, Library Plaza
 Defence - WET BRIDGING SITE - CASULA

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Indigenous		
Cubbitch Barta National Estate Area	NSW	Listed place
Historic		
Defence National Storage and Distribution Centre	NSW	Listed place

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat may occur within area
Cuculus saturatus		
Oriental Cuckoo, Himalayan Cuckoo [710]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus		
White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor		
Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Kemps Creek	NSW
Leacock	NSW

Invasive Species	[Resource Information]
Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.	

Name	Status	Type of Presence
Birds		
<i>Acridotheres tristis</i> Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
<i>Alauda arvensis</i> Skylark [656]		Species or species habitat likely to occur within area
<i>Anas platyrhynchos</i> Mallard [974]		Species or species habitat likely to occur within area

Appendix B EPBC Act website search within 10km of the site

Name	Status	Type of Presence
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Carduelis chloris European Greenfinch [404]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Pycnonotus jocosus Red-whiskered Bulbul [631]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur

Appendix B

EPBC Act website search within 10km of the site

Name	Status	Type of Presence
		within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Alternanthera philoxeroides Alligator Weed [11620]		Species or species habitat likely to occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332]		Species or species habitat likely to occur within area
Cytisus scoparius Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934]		Species or species habitat likely to occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species

Name	Status	Type of Presence
Nassella neesiana Chilean Needle grass [67699]		habitat likely to occur within area Species or species habitat likely to occur within area
Nassella trichotoma Serrated Tussock, Yass River Tussock, Yass Tussock, Nassella Tussock (NZ) [18884]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Protasparagus densiflorus Asparagus Fern, Plume Asparagus [5015]		Species or species habitat likely to occur within area
Protasparagus plumosus Climbing Asparagus-fern, Ferny Asparagus [11747]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-33.93915 150.86147

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [Office of Environment and Heritage, New South Wales](#)
- [Department of Environment and Primary Industries, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment, Water and Natural Resources, South Australia](#)
- [Parks and Wildlife Commission NT, Northern Territory Government](#)
- [Department of Environmental and Heritage Protection, Queensland](#)
- [Department of Parks and Wildlife, Western Australia](#)
- [Environment and Planning Directorate, ACT](#)
- [Birdlife Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [Museum Victoria](#)
- [Australian Museum](#)
- [South Australian Museum](#)
- [Queensland Museum](#)
- [Online Zoological Collections of Australian Museums](#)
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Atherton and Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [Geoscience Australia](#)
- [CSIRO](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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