

Hugo Hannah Assistant Development Manager Altis Property 19/60 Castlereagh St, Sydney NSW, 2000 Supplied by email.

8 September 2022

Re: Ecological Constraints Assessment, 10, 20, 30 Berwick Park Road and 25, 45, 55, 75, 85, 95 Wilton Park Road, Wilton, NSW

Dear Hugo,

Please find below the ecological constraints assessment (ECA) prepared for nine lots located at Wilton Park Road and at Berwick Park Road, Wilton, NSW, hereafter referred to as the **'study area'** (**Figure 1**). The study area contains two lots previously assessed in Ecoplanning (2022a, 2022b). A site visit to the study area was conducted on 14 July 2022. However, three lots within the study area (55, 85 and 95 Wilton Park Road) could not be accessed at the time of survey. Therefore, assessment of these three lots has been undertaken using available online resources and aerial imagery (**Figure 2**).

Study area and development area

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The study area is located within the Wollondilly Local Government Area (LGA). It is bound by Wilton Park Road and Berwick Park Road to the north, the Hume Highway to the east, other residential lots to the west and the Nepean River to the south. The study area size totals 108.25 ha. The 'development area' (53.51 ha) (Table 1) is defined as 'the area directly affected by the proposed development, and the study area includes 'the development area and any additional areas which are likely to be affected by the proposal, either directly or indirectly', in accordance with OEH (2018).

Under the Wollondilly Local Environmental Plan 2010 (WLEP 2011) all of the development area is zoned as RU2 – Rural Landscape.

The study area is subject to the Cumberland Plain Conservation Plan (CPCP) (2022) as part of the Wilton Growth Area. The CPCP has obtained biodiversity certification for land specified within the CPCP. Areas mapped as 'Certified - Urban Capable Land' under the CPCP will not require further biodiversity assessment under the BC Act, as long as the necessary development consent is obtained, prescriptions or conditions of approval are met, and any unavoidable impacts are addressed through the CPCP conservation program.

Currently the CPCP is seeking commonwealth endorsement for the plan via strategic assessment under Part 10 of the *Environment Protection and Biodiversity Conservation Act*



1999 (EPBC). Therefore, until the strategic assessment is approved, under the EPBC Act, Matters of National Environmental Significance (MNES) protected under the EPBC Act, may require an EPBC referral if adversely impacted by the proposed development.

Lot // DP	Area (ha)	Area (%)
1 // DP 609222	2.41	5%
2 // DP 609222	6.58	12%
3 // DP 233845	4.48	8%
5 // DP 233845	8.29	15%
6 // DP 233845	6.51	12%
7 // DP 233845	7.93	15%
16 // DP 251051	7.45	14%
40 // DP 749823	7.50	14%
41 // DP 749823	2.36	4%
Total	53.51	100

Table 1: Lots included in development area

*subject to rounding errors

Most of development area is dominated by a mix of native and exotic grasslands actively managed and grazed, mapped as 'Mixed native and exotic grassland'. Residential properties, unpaved access roads and several abandoned structures are scattered across the study and development areas. Areas of native vegetation within the development area are present in varying conditions, from good to scattered paddock trees (SPT). The area outside the development area is dominated by native vegetation with good habitat connectivity along the northern banks of the Nepean River.

Background and purpose of report

This report provides an assessment of ecological constraints (ecological values) of the study area, with a particular focus on ecological constraints within the development area, based on field assessment and information previously collected within the broader study area, including:

Ecoplanning (2022a). Due Diligence Report – 75 Wilton Park Road, (Lot 41 // DP 749823), Wilton, NSW. Prepared for ALTIS Property Partners Pty Ltd Ecoplanning (2022b). Due Diligence Report – 30 Berwick Park Road, (Lot 16 // DP 251051), Wilton, NSW. Prepared for ALTIS Property Partners Pty Ltd

The study area currently falls under the Cumberland Plain Conservation Plan (CPCP) (DPE 2022). The CPCP broadly divides land within the study area into three categories; 'Certified – Urban Capable Land' and 'Avoided Land' and 'Excluded Land'. The Development area falls entirely within areas mapped as 'Certified – Urban Capable Land' and 'Excluded Land'. The



proposed development aims to construct several warehouses and associated infrastructure, within areas of 'Certified – Urban Capable Land' and 'Excluded Land', by rezoning land within the development area into a IN1 – General Industrial zone for employment land use (**Figure 3**). Areas along the centre and on the north-western boundary of the study area are identified on the Biodiversity Values Map (BVM) (DPE 2022a) as a 'Threatened species or communities with potential for serious and irreversible impacts' (**Figure 4**). Although, impacts to the development area will not require biodiversity assessment under the BC Act, areas mapped under the BVM are likely to be of high ecological value, which could represent a MNES and therefore, require compliance with the EPBC Act. Lastly, native vegetation within the southern portion of the study area is mapped as 'Protected Koala Habitat' and 'Potential Restoration for Protected Koala Habitat' by the CPCP (DPE 2022) (**Figure 5**), and these areas have good connectivity with surrounding vegetation.

Methods

Literature review and database analysis

A literature and database review were undertaken to inform this report. This included desktop analysis of aerial photography and review of regional scale information from the following sources:

- Biodiversity Values Map (DPE 2022a)
- BioNet Atlas (DPE 2022b)
- NSW Planning Viewer (DPE 2022c)
- Protected Matters Search Tool (Commonwealth Department of Climate Change, Energy the Environment and Water (DCCEEW) 2022)
- SIX Maps (LPI 2022)
- Wollondilly Local Environmental Plan (WLEP) 2011
- Native vegetation Maps of the Cumberland Plain, Western Sydney (NPWS 2013)
- Cumberland Plain Conservation Plan (CPCP) (DPE 2022)

Threatened species, populations and migratory species recorded within 5 km of the study area (the locality) in a search of the Atlas of NSW Wildlife (DPE 2022b) were consolidated and their likelihood of occurrence was assessed by:

- Review of location and date of recent (<5 years) and historical (>5-20 years) records
- Review of available habitat within the study area and surrounding areas
- Review of the scientific literature pertaining to each species and population
- Applying expert knowledge of each species

The potential for each threatened species, population and/or migratory species to occur was then considered following review of available habitat within the study area. The potential for species to utilise the site and to be affected directly or indirectly by the proposed action were considered as either:

"Recent record" = species has been recorded in the study area within the past 5 years



"High" = species has previously been recorded in the study area (>5 years ago) or in close proximity (for mobile species), and/or habitat is present that is likely to utilised by a local population

"Moderate" = suitable habitat for a species is present onsite but no evidence of a species detected and relatively <u>high</u> number of recent records (5-20 years) in the locality or species is highly mobile

"Low" = suitable habitat for a species is present onsite but limited or highly degraded, no evidence of a species detected and relatively *low* number of recent records in the locality "Not present" = suitable habitat for the species is not present onsite or adequate survey has determined that the species does not occur in the study area

Field assessment

Field assessment aimed to capture all ecological values and constraints within the study area. However, efforts were focused at identifying constraints present within the development area, as this is the area to be directly impacted by the proposed development (**Figure 6**). Additionally, access was not possible at the time of survey for three lots within the study area, 55, 85 and 95 Wilton Park Road.

Ecological values and constraints within the development area were identified though a site inspection conducted by Edwin Vaca (Field Ecologist) and Gemma Gillette (Technical Assistant) on 14 July 2022, over 11 person hours.

Results

Vegetation mapping and threatened ecological communities

Four patches of native vegetation in the study area are mapped under the regional vegetation mapping of NPWS (2013) (**Figure 7**). Field survey updated this vegetation mapping, with focus on vegetation within development area (**Figure 8**). Native vegetation within the development area was identified and mapped as Plant Community Type (PCT) 849 – Cumberland shale plains woodland in a 'Thinned' and 'Scattered Paddock Tree' (SPT) condition (**Figure 9**) and PCT 1395 – Cumberland shale – sandstone Ironbark forest in four condition classes 'Good', 'Moderate', 'Low' and 'SPT' (**Figure 10**). Outside the southern border of the development area, but within the study area, other patches of PCT 1395 – Cumberland shale – sandstone Ironbark forest in a 'Low', 'Moderate' and 'Good' condition are present (**Table 2**).

PCT 849 – Cumberland shale plains woodland is a component of Cumberland Plain Woodland (CPW), a Critically Endangered Ecological Community (CEEC) under the *NSW Biodiversity Conservation Act 2016* (BC Act) and Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). PCT 1395 – Cumberland shale – sandstone Ironbark forest is a component of Shale Sandstone Transition Forest in the Sydney Basin Bioregion (SSTF), a CEEC under the EPBC Act and BC Act (**Table 2**).

Larger areas of vegetation identified within the development area are highly disturbed and consists of vegetation mapped as 'Exotic grasses and weeds', 'Mixed native and exotic



grassland' and 'Planted exotic / native trees'. Dominant exotic grasses and herbaceous weeds in the study area included *Cenchrus clandestinus** (Kikuyu Grass), *Paspalum dilatatum** (Paspalum), *Sida rhombifolia** (Paddy's Lucerne), *Eragrostis curvula** (African Lovegrass), *Andropogon virginicus** (Whisky Grass) and *Plantago Lanceolata** (Lamb's Tongues) (**Table 3**) (Appendix A).

NPWS (2013)	Plant Community Type (PCT)	Condition	Extent within study area (ha)	Extent within development area (ha)	BC Act	EPBC Act
Grey Box – Shale grassy woodland		Thinned	0.26	0.26	CEEC - Cumberland	CEEC - Cumberland Plain Shale Woodlands
Woodland C	on flats of the Cumberland Plain (PCT 849)	SPT	0.02	0.02	Plain Woodland	and Shale- Gravel Transition Forest
Shale Sandstone Transition Forest	Narrow-leaved Ironbark - Broad-leaved Ironbark - Grey Gum open forest of the edges of the Cumberland Plain, Sydney Basin Bioregion (PCT 1395)	Good	22.28	0.29	CEEC - Shale Sandstone Transition Forest in the Sydney Basin Bioregion	CEEC - Shale Sandstone Transition Forest in the Sydney Basin Bioregion
		Moderate	18.97	3.87		
		Low	4.97	0.82		
		SPT	0.16	0.16		
Total	native vegetation	-	46.67	5.42		<u>.</u>

Table 2: Native vegetation communities within the study area and within the development area

*subject to rounding errors and desktop analysis of vegetation within 55, 85 and 95 Wilton Park Road

Table 3:	Extent of exotic vegetation within study area and extent within development area

Vegetation type	Extent within study area (ha)	Extent within development area (ha)
Exotic grasses and weeds	23.45	17.48
Mixed native and exotic grassland	31.77	19.47
Planted exotic / native trees	1.97	7.63
Total	57.19	44.58

*subject to rounding errors and desktop analysis of vegetation within 55, 85 and 95 Wilton Park Road

Condition thresholds under the EPBC Act

The Conservation Advice (including Listing Advice) for Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest (DPEWHA (2009)) under the EPBC Act provides condition



thresholds for when a patch retains sufficient conservation value to be considered as a Matter of National Environmental Significance (MNES) (**Appendix B**).

It is considered that the patches of CPW in the development area would be assessed as separate patches in accordance with TSSC (2009), as the other areas of bare ground, infrastructure and vegetation such as 'exotic grasses and weeds', 'planted native /exotic trees' and 'Mixed native and exotic grassland' surrounding the patches of CPW vegetation significantly alters the overall functionality of the ecological community, including the easy movement of wildlife or dispersal of spores, seeds and other plant propagules (TSSC 2009).

Based on the degraded condition of the separate patches of PCT 849 – Cumberland shale plains woodland in the development area, this vegetation is considered unlikely to be a MNES. This is due to the small patch size and lack of midstorey and native understorey. However, vegetation integrity plot surveys should be conducted in accordance with BAM (2020) to determine the composition of CPW within the development area. Additionally, field validation of vegetation within 55, 85 and 95 Wilton Park Road should be completed to validate vegetation present within the three properties.

The Conservation Advice for the Shale Sandstone Transition Forest (DPE 2014) under the EPBC Act provides condition thresholds for when a patch can be considered a MNES (**Appendix C**). Shale Sandstone Transition Forest present within the study area is considered likely to be a MNES due to its patch size, percentage of native perennial understorey vegetation cover and connectivity to other stands of native vegetation. The understorey in areas mapped in a 'Good' and 'Moderate' condition contains predominantly native species and the patch is contiguous with other remnant native vegetation areas greater than 1 ha in size. Areas of Shale Sandstone Transition Forest in a 'Low' condition within the study area, are within 100 m of areas dominated by native vegetation species in each layer, and therefore, is likely to also be considered a MNES. Vegetation integrity plot surveys should be conducted in accordance with BAM (2020) to determine the composition of Shale Sandstone Transition Forest within the study area and vegetation within 55, 85 and 95 Wilton Park Road should be validated.

Threatened species

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Searches of the Atlas of NSW Wildlife (DPE 2022b) did not identify any previous records of threatened flora or fauna species within the study area. Within a 5 km radius of the study area, forty-two (42) threatened species have been previously recorded. This comprised 35 fauna species (19 birds, one snail, eight microbats, one megabat, five arboreal mammals and one land mammal) and seven flora species (**Figure 11; Appendix D**).

No threatened flora and fauna listed under the EPBC Act were recorded during the site inspection. It should be noted that site inspection did not include 55, 85 and 95 Wilton Park Road, Wilton. Inspection of these properties may identify threatened flora or fauna within the study area.

Fauna habitat values identified during field survey were those associated with woodland, such as mature canopy trees, hollow bearing trees and those associated with open grassland. Field survey identified 13 hollow bearing trees (HBT) and one bird nest within the study area. A pair of *Cacatua sanguinea* (Little Corella) were utilising a HBT within the north western corner of the development area, and it is likely that this species was breeding at the time of survey.



Based on the habitat values within the development area, a suite of fauna species is likely to use the development area for foraging, roosting and nesting purposes. The habitat features relevant to each fauna group likely to use the development area are provided in **Table 4**.

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Habitat features	Fauna species
Native woodland	Mammals, birds, reptiles, amphibians, gastropod
Open grassland	Terrestrial mammals, birds, amphibians and reptiles
HBTs	Hollow dependent birds, reptiles and microbats
Abandoned structures	Microbats
Dams	Amphibians, birds, microbats

 Table 4:
 Key fauna habitat features present across the study area

The native vegetation communities mapped within the development area are predicted to provide potential nesting and foraging habitat for species which are common in disturbed, woodland and grassland environments and for highly mobile species that rely on large areas for food resources.

Several species were assessed as having a 'low' likelihood of occurring in the study area, given the degraded condition of some native vegetation within the development area and the presence of exotic and weed species. However, due to the presence of HBTs and connectivity to patches of native vegetation in good to moderate condition, as well as abandoned structures, threatened microchiropteran species, hollow-dependent species, arboreal and terrestrial mammals are considered to have 'moderate' potential to use native vegetation within the development area for foraging and breeding purposes.

Four threatened flora species have been determined as having a 'moderate' likelihood of occurrence within the study area, due to number of records, recent records within a 5 km radius of the study area, and potential suitable habitat within the study area.

All other records of threatened species are considered unlikely to occur within the development area. Any future development applications will need an assessment of potential impact to any threatened species with a 'moderate' or 'high' likelihood of occurrence within the study area (**Appendix D**), in accordance with the CPCP (2022) Conservation program. It is noted that the assessment of species likely to occur may change following any targeted surveys.

Riparian corridors

Desktop assessment identified four 1st order streams, within the western and centre areas of the study area, and two 2nd order streams along the north western and south eastern corners of the study area (**Figure 12**). The NSW *Water Management Act 2000* (WM Act) defines all land within 40 m of a watercourse as waterfront land. Any activities within waterfront land require a controlled activity approval (CAA). The Department of Primary Industry (DPI) Water (2012) recommends a Vegetated Riparian Zone (VRZ) either side of the mapped watercourses, measured 10 m from the top on bank (ToB) for 1st order streams and 20 m for 2nd order streams.



Additionally, *Clause 7.3 Water Protection* of the WLEP (2011), which aims to maintain the hydrological functions of riparian land, waterways and aquifers, including protecting water quality, natural water flows, the stability of the bed and banks of waterways and ground water systems, maps areas along the southern and eastern boundaries of the study area, and a small area within the north western corner of the development area, under the WLEP (2011) – Natural Resources – Water Map as 'Sensitive Land' (**Figure 12**). In determining a development application, the consent authority must consider any adverse impact of the proposed development on the following:

- The water quality of receiving waterways
- The natural flow regime
- The natural flow path of waterways
- The stability of the bed, shore and banks of waterways
- The flows, capacity and quality of groundwater systems

Field assessment identified that the 2nd order stream present within the eastern portion of the study area has been modified. A large section of the streams' bed, which boarders the eastern boundary of the study area, has been covered with concrete, which was perhaps the result of hydrological management practices attempting to avoid meanders of the stream as a result of the excess runoff from the Hume Highway, east of the study area. The concrete bed alters the ecological function of the stream, however, at the time of field assessment, vegetation along the banks of the stream had not been impacted. This vegetation provides potential flora and fauna habitat.

During field assessment, the two mapped 1st order streams within 75 Wilton Park Road (Lot 41 // DP 749823), did not present any defined bed and bank, which could be due to erosion caused by historical clearing of native vegetation, grazing or the artificial dams present. The 1st order stream within the centre of the study area, located at 45 Wilton Park Road (Lot 6 // DP 233845) did not present any evidence of a bed and bank along parts of the stream located within the development area. However, areas of this stream within the study area contained evidence of the existence of bed and bank features, with vegetation along the stream largely unimpacted. Areas of this stream, which are located within 55 Wilton Park Road (Lot 5 // DP 233845) could not be assessed at the time of survey due to lack of access.

The remaining mapped streams (one 1st order and one 2nd order) within 85 and 95 Wilton Park Road (Lot 40 // DP 749823 and Lot 3 // DP 233845), could not be assessed at the time of field assessment due to lack of access. Assessment of these mapped streams should be conducted to determine the ecological values and/or presence of these streams.

The *Guidelines for Riparian Corridors on Waterfront Land* (NRAR 2018) outlines the requirements for maintaining, establishing or rehabilitating a riparian corridor, or VRZ, as part of an application for a CAA. Consistent with NRAR (2018) the riparian corridors required for the drainage lines within the study area have been determined based on the centre line and Strahler Stream Order (**Figure 12**). Riparian buffers intersect the development area along the centre and north eastern corner. Therefore, any proposed work along these areas will require a CAA. Additionally, an application can be made to the NRAR to review mapped streams which do not present a discernible bed and/or bank.



State Environmental Planning Policy (SEEP) – Biodiversity and Conservation 2021 – Chapter 4 Koala habitat protection 2021

Within NSW, the state government has developed state environmental planning policies (SEPPs) to address development which may impact certain environmental or ecological values. SEPPs give guidance on how a development may minimise its impacts on the respective environmental or ecological feature. The SEPP Biodiversity and Conservation (2021) – Chapter 4 - Koala Habitat Protection 2021 applies to the proposed development.

This SEPP applies to the site given that the study area occurs in Wollondilly LGA, which is listed in Schedule 2 of the SEPP. Known Koala use trees, as per schedule 3 of the SEPP, have been identified within the study area and development area (*Allocasuarina littoralis, Angophora floribunda, Eucalyptus crebra, Eucalyptus fibrosa, Eucalyptus punctata, Eucalyptus racemosa* and *Eucalyptus tereticornis*). There are recent records (within the past 18 years) of Koalas within a 5 km radius of the study area. Lastly, vegetation connectivity within the study area is good, with uninterrupted stands of vegetation running along the Nepean River, south of the study area. Therefore, the study area is considered core Koala habitat, and further consideration of the SEPP will be required.

Cumberland Plain Conservation Plan (2022)

The CPCP has been developed to meet requirements for strategic biodiversity certification for development under Part 8 of the BC Act and strategic assessment under Part 10 of the EPBC Act. On 20 July 2022, the Minister for Environment and Heritage conferred biodiversity certification on the land specified within the CPCP. The effect of this Biodiversity Certification is that development within areas mapped as 'Certified - Urban Capable Land' will not require further biodiversity assessment under the BC Act, as long as the necessary development consent is obtained, prescriptions or conditions of approval are met, and any unavoidable impacts are addressed through the CPCP conservation program. Additionally, development would also need to meet any additional considerations set out by the SEPP – Biodiversity and Conservation (2021).

If the CPCP is endorsed by DCCEEW, the CPCP will require potential developments to be limited to areas mapped as 'Certified - Urban Capable Land', except for certain essential infrastructure. Essential infrastructure must be consistent with the requirements detailed in Appendix A of the CPCP (2022) to be covered by the CPCP approval (if approval successful). Note that land mapped as 'Excluded Land' by the CPCP (2022) is excluded from the strategic assessment and Part 10 approval (EPBC Act).

As endorsement for the strategic biodiversity certification under Part 10 of the EPBC Act is still under consideration, this report provides advice on further development pathways for the proposed development based on current and approved legislation for matters protected under the EPBC Act.

Conservation values within the study area

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The native vegetation present in the study area comprises two native vegetation communities. The development area contains 0.28 ha of Cumberland Plain Woodland CEEC, which is listed under the EPBC Act and the BC Act and 5.14 ha of Shale Sandstone Transition Forest which is listed under the BC Act and EPBC Act as a CEEC.



Patches of CPW are scatted across the development area. The understorey in these patches is disturbed, but the patches themselves contain HBTs, which at the time of survey showed evidence of having been used as nesting sites. Therefore, these patches of CPW retain high ecological value. CPW supports a wide range of animal species, such as small mammals (particularly micro-bats), larger grazing mammals, insectivorous and seed-foraging ground-dwelling birds and birds of prey. The structure and species composition of this ecological community provides shelter, food and nesting material for these animals, providing a key role in the ongoing function of the surrounding ecosystem.

Patches of Shale Sandstone Transition Forest within the development area were identified as being in varying conditions from 'SPT' to 'Good' and retain good connectivity with undisturbed patches of vegetation along northern banks of the Nepean River. Canopy species which often dominate areas of Shale Sandstone Transition Forest, such as *Eucalyptus crebra* (Narrow-leaved ironbark) and *Eucalyptus fibrosa* (*Broad-leaved ironbark*), which have been identified with the study area, can provide a significant food source for a suite of nectarivores particularly during period when nectar is scarce. Additionally, grassy forms of Shale Sandstone Transition Forest support populations of macropods that browse and graze on the grassy understorey and shrub layer.

Given the canopy tree species that occur within the study area and its connectivity, the study area is determined to be 'core' koala habitat (SEPP 2021). Even though Koala use trees that occur within the development area are scattered and the understory is subject to disturbance, the lack of physical barries (such as major roads or urban areas between patches of remnant vegetation), mean that vegetation along the southern portion of the development area can still provide valuable Koala habitat.

Streams within the southern portion of the study area presented discernible bed and bank evidence with riparian vegetation in good condition. These streams can provide valuable habitat for threatened flora and fauna. However, mapped streams within the development area did not present evidence of a discernible bed and bank and their ecological value is limited. The presence of several dams across the study areas can provide foraging and nesting habitat for threatened fauna species, such as microbats and frogs.

Ecological constraints

Desktop analysis and field assessment found that the development area predominantly consists of land of low ecological value (**Figure 13**). The ecological constraints criteria are summarised in **Table 5**. Patches of land mapped on the BVM present a high constraint. Additionally, mapped and validated native vegetation, HBTs and mapped streams with VRZs associated with waterfront land are considered to present a 'high' ecological constraint. Areas of 'high' ecological constraint make up 8.91 ha of the total development area. The remainder of the development area is considered to have a 'low' or 'moderate' constraint and contains minimal foraging habitat. However, vegetation assessment of 55, 85 and 95 Wilton Park Road, and vegetation integrity plots within areas mapped as 'mixed native and exotic grassland' could alter the constraint rating.



Ecological Constraint	Criteria	Extent within study area	Extent within development area
High	Areas of mapped and validated native vegetation listed as threatened ecological communities (TECs) under the BC Act and EPBC Act. Hollow bearing trees. Areas on the Biodiversity Values Map (BVM). Mapped streams.	54.85 ha	8.91 ha
Moderate	Areas requiring validated vegetation within 55 and 85 Wilton Park Road. Ares of mixed native and exotic grassland. Dams	29.26 ha	24.06 ha
Low	Areas of exotic grasses and weeds. Planted exotic/native trees. Areas of bare ground and infrastructure.	24.14 ha	20.55 ha

Table 5: Ecological constraints criteria

Further development pathway

As the development area is located within an area mapped as 'Certified - Urban Capable Land', biodiversity assessment of matters protected under the BC Act will require assessment via the CPCP Conservation Program. Any required bushfire Asset Protection Zone (APZ) requirements from the proposed development, will have to be entirely located within the 'Certified - Urban Capable Land' within the study area.

The CPCP (22) Sub Plan B: Koalas, outlines the conservation program to protect Koalas within the CPCP area. Land mapped as Protected Koala Habitat and Potential Restoration for Protected Koala Habitat within the southern end of the study area (**Figure 5**) will be subject to the conditions of CPCP Sub Plan B: Koala (2022). As such, given the close proximity of areas mapped as Protected Koala Habitat and Potential Restoration for Protected Koala Habitat, to the development area, a Koala habitat protection fence will be required along the southern boundary of land mapped as 'Certified - Urban Capable Land' within the study area.

As the strategic assessment under Part 10 of the EPBC Act for the CPCP is yet to be approved, matters protected under the EPBC Act must be assessed by the current EPBC Act regulations. A total of 5.14 ha of Shale Sandstone Transition Forest present within the study area is considered likely to be a MNES, therefore, impacts to this CEEC will require a EPBC referral.

Additionally, the proposed development must comply with conditions set out by the SEPP – Biodiversity and Conservation (2021), which are applicable to development within the development area.

Serious and Irreversible Impacts (SAII)

The *Guidance to assist a decision-maker to determine a SAII* (DPE 2019) and the Threatened Biodiversity Data Collection are used to identify potential SAII entities. CPW and SSTF in the Sydney Basin Bioregion are listed as potential SAII entities, as they are currently in a rapid



rate of decline. As such, an assessment in accordance the CPCP Conservation Program must be conducted for ant proposed impacts to these areas in the study area. Impacts to a potential SAII entity are required to be taken into consideration by the decision maker, and if significant impacts are considered likely, it is the role of the decision maker to refuse to grant development consent. Therefore, it may be necessary for substantial avoidance and minimisation measures to be implemented to reduce impacts to CPW and SSTF within the study area. Sufficient avoidance and minimisation measures would reduce the potential for a SAII to occur to CPW and SSTF.

Conclusions

Field survey confirmed two native vegetation communities, Shale Plains Woodland (a component of CPW) and Shale Sandstone Transition Forest, within the study area. These vegetation communities form part of Critically Endangered Ecological Communities under the BC and EPBC act.

A total of 13 HBTs were identified within the study area, two of which were located within the development area. At the time of field assessment, a pair of *Cacatua sanguinea* (Little Corella) were utilising a HBT within the north western corner of the development area, a suitably qualified should be engaged, prior to the removal of any HBTs within the study area, to ensure HBTs are not inhabited at the time of removal, additionally, soft felling techniques should be used when removing the HBTs and removed hollows relocated to suitable areas outside the development area.

Areas of 'high' ecological value and constraint within the development area include areas of CPW, SSTF, mapped streams and HBTs. Impacts to areas of 'high' conservation value should be avoided or minimised to the fullest extent practicable as part of any future developments. Areas of exotic grasses and weeds as well as areas of bare ground have been considered to be a 'low' ecological constraint.

Mitigation measures, such as the protection of CPW and SSTF areas within the development area and areas of 'high' ecological value outside the development area will help minimise the risk of any potential damage to the remainder of these CEECs within the study area.

Field validation of all constraints present within 55, 85 and 95 Wilton Park Road, should be conducted to fully understand the constraints present within these three properties. The results of such a field assessment will be used to update total areas of validated vegetation, constraints and potential fauna habitat within the study area.

First order streams within the north western corner and along the centre of the development area did not present evidence of a discernible bed and bank. Conducting riparian assessments for all mapped streams within the development area could help validate the ecological values of these streams. Furthermore, establishing erosion and sediment control measures to avoid impacts to waterways and surrounding habitats should be implemented prior to development. In particular impacts should be avoided to areas mapped as 'Sensitive Land' under the WLEP (2011) – Natural Resources – Water map.

Of the 42 threatened and migratory species within 5 km of the study area, the majority of species were identified as having a 'moderate' likelihood of occurrence, due to suitable habitat present within the study area. No threatened flora or fauna species were found during field



assessment. Assessment in accordance with the CPCP Conservation Program may be required for threatened species, such as those with a 'moderate' likelihood of occurrence within the study area.

If you would like to discuss any of the above comments and recommendations further, please contact me on the below details.

Yours sincerely

Edwin Vaca

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References

Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2022). Protected Matters Search Tool. Accessed at: <u>http://www.environment.gov.au/epbc/protected-matters-search-tool</u>

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Figure 3: Cumberland Plain Conservation Plan – (DPE 2022): Land category: Certified – Urban Capable, Avoided land and Excluded land within study area







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Figure 5: Cumberland Plain Conservation Plan (DPE 2022): Protected Koala Habitat and Potential Restoration – Protected Koala habitat, within the study area





Figure 6: Survey effort, HBTs and nests within study area





Figure 7:Regional Vegetation within study area (NPWS 2013)





Figure 8: Validated vegetation within the study area (EP 2022) including desktop vegetation assessment only for 55, 85 and 95 Wilton Park Road





Figure 9: Shale Plains Woodland in an 'thinned' condition within the development area



Figure 10: Shale Sandstone Transition Forest in an 'low' condition within the development area





Figure 11: Threatened species in the locality (DPE 2022)





Figure 12: Riparian corridors, including required riparian buffers within study area and Natural Resources – Water Map (WLEP 2011)







Appendix A: Flora and fauna species list

Flora

Family	Scientific Name	Common name	Native / Exotic
Apocynaceae	Gomphocarpus fruticosus	Narrow-leaved Cotton Bush	Exotic
Arecaceae	Archontophoenix cunninghamiana	Bangalow Palm	Native
	Ageratina adenophora	Crofton Weed	Exotic
	Bidens pilosa	Cobbler's Pegs	Exotic
	Cirsium vulgare	Spear Thistle	Exotic
	Conyza bonariensis	Flaxleaf Fleabane	Exotic
	Conyza sumatrensis	Tall fleabane	Exotic
	Erigeron spp.		Native
Asteraceae	Hypochaeris radicata	Catsear	Exotic
	Leontodon taraxacoides subsp. taraxacoides	Lesser Hawkbit	Exotic
	Ozothamnus diosmifolius	White Dogwood	Native
	Senecio madagascariensis	Fireweed	Exotic
	Tagetes minuta	Stinking Roger	Exotic
	Xanthium orientale	Californian Burr	Exotic
Brassiassas	Brassica spp.	Brassica	Exotic
Brassicaceae	Diplotaxis tenuifolia	Sand Rocket	Exotic
Cactaceae	Opuntia stricta	Common Prickly Pear	Exotic
Campanulaceae	Lobelia pedunculata	Matted Pratia, Trailing Pratia	Native
Capparaceae	Cleome viscosa	Tickweed	Native
	Allocasuarina littoralis	Black She-Oak	Native
Casuarinaceae	Casuarina cunninghamiana subsp. cunninghamiana	River Oak	Native
Clusiaceae	Hypericum perforatum	St. John's Wort	Exotic
Convolvulaceae	Dichondra repens	Kidney Weed	Native
Cupressaceae	Cupressus sempervirens	Italian Cypress	Exotic
Curporação	Cyperus eragrostis	Umbrella Sedge	Exotic
Cyperaceae	Lepidosperma laterale	Variable Sword-sedge	Native
Dennstaedtiaceae	Pteridium esculentum	Bracken	Native
	Glycine clandestina	Twining glycine	Native
Fabaceae (Faboideae)	Hardenbergia violacea	False Sarsaparilla	Native
(i aboldeae)	Trifolium repens	White Clover	Exotic
Fabaceae (Mimosoideae)	Acacia mearnsii	Black Wattle	Native
	Juncus cognatus		Exotic
Juncaceae	Juncus effusus		Exotic
	Juncus spp.	A Rush	Native
Lomandraceae	Lomandra longifolia	Spiny-headed Mat-rush	Native
Malaceae	Malus spp.		Exotic



Family	Scientific Name	Common name	Native / Exotic
	Pyrus spp.		Exotic
Malvaceae	Sida rhombifolia	Paddy's Lucerne	Exotic
	Angophora floribunda	Rough-barked Apple	Native
	Callistemon spp.		Native
	Corymbia torelliana	Cadaghi	Exotic
	Eucalyptus crebra	Narrow-leaved Ironbark	Native
	Eucalyptus fibrosa	Red Ironbark	Native
Myrtaceae	Eucalyptus punctata	Grey Gum	Native
	Eucalyptus racemosa	Narrow-leaved Scribbly Gum	Native
	Eucalyptus tereticornis	Forest Red Gum	Native
	Kunzea ambigua	Tick Bush	Native
	Leptospermum spp.	Tea-tree	Native
Oleaceae	Fraxinus angustifolia subsp. angustifolia	Desert Ash	Exotic
Oxalidaceae	Oxalis spp.		Native
Phormiaceae	Dianella caerulea	Blue Flax-lily	Native
Phytolaccaceae	Phytolacca octandra	Inkweed	Exotic
Pinaceae	Pinus spp.		Exotic
Pittosporaceae	Bursaria spinosa	Native Blackthorn	Native
Plantaginaceae	Plantago lanceolata	Lamb's Tongues	Exotic
Platanaceae	Platanus spp.		Exotic
	Andropogon virginicus	Whisky Grass	Exotic
	Avena barbata	Bearded Oats	Exotic
	Bambusa spp.	Unidentified bamboo	Exotic
	Bothriochloa macra	Red Grass	Native
	Briza subaristata		Exotic
	Cenchrus clandestinus	Kikuyu Grass	Exotic
	Chloris gayana	Rhodes Grass	Exotic
	Cynodon dactylon	Common Couch	Native
	Eleusine tristachya	Goose Grass	Exotic
	Entolasia stricta	Wiry Panic	Native
Desses	Eragrostis curvula	African Lovegrass	Exotic
Poaceae	Eragrostis leptostachya	Paddock Lovegrass	Native
	Holcus lanatus	Yorkshire Fog	Exotic
	Microlaena stipoides	Weeping Grass	Native
	Paspalum dilatatum	Paspalum	Exotic
	Paspalum notatum	Bahia Grass	Exotic
	Setaria parviflora		Exotic
	Setaria pumila	Pale Pigeon Grass	Exotic
	Setaria verticillata	Whorled Pigeon Grass	Exotic
	Sporobolus africanus	Parramatta Grass	Exotic
	Sporobolus fertilis	Giant Parramatta Grass	Exotic
	Themeda triandra	Kangaroo Grass	Native



Family	Scientific Name	Common name	Native / Exotic
Polygalaceae	Polygala virgata		Exotic
Polygonaceae	Rumex spp.	Dock	Native
Portulacaceae	Portulaca oleracea	Pigweed	Native
Drotococo	Grevillea robusta	Silky Oak	Native
Proleaceae	Persoonia linearis	Narrow-leaved Geebung	Native
Pteridaceae	Cheilanthes sieberi	Rock Fern	Native
Donungulagooo	Clematis aristata	Old Man's Beard	Native
Ranunculaceae	Ranunculus flammula	Lesser Spearwort	Exotic
Rosaceae	Rubus fruticosus spp. agg.	Blackberry complex	Exotic
Rubiaceae	Pomax umbellata	Pomax	Native
Scrophulariaceae	Verbascum spp.		Exotic
Solanaceae	Solanum sisymbriifolium		Exotic
Typhaceae	Typha spp.		Native
Verbenaceae	Verbena bonariensis	Purpletop	Exotic

Fauna

Family	Scientific Name	Common name	Native/Exotic
Accipitridae	Aquila audax	Wedge-tailed Eagle	Native
Alcedinidae	Dacelo novaeguineae	Laughing Kookaburra	Native
Anatidae	Chenonetta jubata	Australian Wood Duck	Native
Artamidae	Cracticus tibicen	Australian Magpie	Native
Cacatuidae	Cacatua galerita	Sulphur-crested Cockatoo	Native
Cacatuidae	Cacatua sanguinea	Little Corella	Native
Cacatuidae	Calyptorhynchus funereus	Yellow-tailed Black-Cockatoo	Native
Camaenidae	Meridolum sheai		Native
Campephagidae	Coracina novaehollandiae	Black-faced Cuckoo-shrike	Native
Columbidae	Ocyphaps lophotes	Crested Pigeon	Native
Corvidae	Corvus coronoides	Australian Raven	Native
Estrildidae	Neochmia temporalis	Red-browed Finch	Native
Hirundinidae	Hirundo neoxena	Welcome Swallow	Native
Leporidae	Oryctolagus cuniculus	Rabbit	Exotic
Meliphagidae	Anthochaera chrysoptera	Little Wattlebird	Native
Meliphagidae	Manorina melanocephala	Noisy Miner	Native
Monarchidae	Grallina cyanoleuca	Magpie-lark	Native
Myobatrachidae	Crinia signifera	Common Eastern Froglet	Native
Psittacidae	Platycercus eximius	Eastern Rosella	Native
Psittacidae	Trichoglossus haematodus	Rainbow Lorikeet	Native
Rallidae	Porphyrio	Purple Swamphen	Native
Rhipiduridae	Rhipidura leucophrys	Willie Wagtail	Native
Sturnidae	Sturnus tristis	Common Myna	Exotic
Vombatidae	Vombatus ursinus	Common Wombat	Native



Appendix B: EPBC Act condition categories, rationale and thresholds for Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest

Category and Rationale	Thresholds
A. Core thresholds that apply under most circumstances: patches with an understorey dominated by natives and a minimum size that is functional and consistent with the minimum mapping unit size applied in NSW.	Minimum patch ³ size is ≥0.5ha AND ≥50% of the perennial understorey vegetation cover ⁴ is made up of native species.
	OR
B. Larger patches which are inherently	The patch size is ≥5 ha
valuable due to their rarity.	AND
	≥30 % of the perennial understorey vegetation cover is made up of native species.
	OR
C. Patches with connectivity to other	The patch size is ≥0.5 ha
large native vegetation remnants in the	AND
landscape.	≥30 % of the perennial understorey vegetation cover is made up of native species
	AND
	The patch is contiguous⁵ with a native vegetation remnant (any native vegetation where cover in each layer present is dominated by native species) that is ≥5 ha in area.
	OR
D. Patches that have large mature trees	The patch size is ≥0.5 ha in size
or trees with hollow (habitat) that are	AND
very scarce on the Cumperland Plain.	≥30 % of the perennial understorey vegetation cover is made up of native species.
	AND
	The patch has at least one tree with hollows per hectare or at least one large tree (≥80 cm dbh) per hectare from the upper tree layer species outlined in the Description and Appendix A.
³ A patch is defined as a discrete and continuous are should be assessed at a scale of 0.04 ha or equivale	a that comprises the ecological community, outlined in the Description. Patches ant (e.g., 20m x 20m plot). The number of plots (or quadrats or survey

transects) per patch must take into consideration the size, shape and condition across the site. Permanent man-made structures, such as roads and buildings, are typically excluded from a patch but a patch may include small-scale disturbances, such as tracks or breaks or other small-scale variations in native vegetation that do not significantly alter the overall functionality of the ecological community, for instance the easy movement of wildlife or dispersal of spores, seeds and other plant propagules.

⁴*Perennial understorey vegetation cover* includes vascular plant species of the ground and shrub layers (as outlined in the Description and Appendix A) with a life-cycle of more than two growing seasons (Australian Biological Resources Study, 2007). Measurements of perennial understorey vegetation cover exclude annuals, cryptogams, leaf litter or exposed soil (although these are included in a patch of the ecological community when they do not alter functionality as per footnote 3 and the Description and Condition Thresholds are met).

⁵*Contiguous* means the woodland patch is continuous with, or in close proximity (within 100 m), of another patch of vegetation that is dominated by native species in each vegetation layer present.



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Appendix C: Condition classes and thresholds for Shale Sandstone Transition Forest of the Sydney Basin Bioregion

Category and Rationale	Three	shold	S
	Patch size >0.5ha And >30% of the perennial understorey vegetation cover is made up of native species. And		
A. Moderate condition class Represented by medium to large-size patch as part of a larger native vegetation remnant and/or with mature trees	The patch is contiguous with a native vegetation remnant (any native vegetation where cover in each layer present is dominated by native species) >1ha in area	Or	The patch has at least one tree with hollows or at least one large locally indigenous tree (>80cm dbh).
B. Moderate condition class Represented by medium to large size patch with high quality native understorey	Patch size >0.5ha And >50% of the perennial understorey vegetation cover is made up of native species.		
C. High condition class Represented by medium to large size patch with very high-quality native understorey	Patch size >0.5ha And >70% of the perennial understorey vegetation cover is made up of native species.		.5ha rey vegetation cover is species.
D. High condition class Represented by larger size patch with high quality native understorey	Patch size >2ha And >50% of the perennial understorey vegetation cover is made up of native species.		
Perennial understorey vegetation cover includes vascular plant species of both the ground layer and mid/shrub layer (where present) with a lifecycle of more than two growing seasons. Measurements of perennial understorey vegetation cover exclude annuals, cryptogams, leaf litter or exposed soil. Contiguous means the patch of the ecological community is continuous with, or in close proximity (within 100 m) to another area of vegetation that is dominated by native species in each vegetation layer present.			



Appendix D: Likelihood of occurrence

Scientific Name Common Name	Legal Status	Number Closest records and	Most recent and	Likelihood of occurrence				
		Of records	date	proximity	Prior to field	Post field		
KINGDOM: Animalia, CLASS: AVES								
Artamus cyanopterus cyanopterus (Dusky Woodswallow)	BC Act = V	14	0.9 km (21/02/2006)	4.6 km (06/04/2018)	Moderate	Moderate		
Callocephalon fimbriatum (Gang-gang Cockatoo)	BC Act = V,3 EPBC Act = E	4	1.6 km (20/07/2017)	3.6 km (20/11/2017)	Moderate	Moderate		
Calyptorhynchus lathami (Glossy Black-Cockatoo)	BC Act = V	6	4.4 km (07/09/2018)	4.4 km (07/09/2018)	Moderate	Moderate		
Chthonicola sagittata (Speckled Warbler)	BC Act = V	1	1.2 km (01/03/2004)	1.2 km (01/03/2004)	Low	Low		
Climacteris picumnus victoriae (Brown Treecreeper (eastern subspecies))	BC Act = V	9	2.3 km (22/10/2015)	4.9 km (04/12/2020)	Moderate	Moderate		
Daphoenositta chrysoptera (Varied Sittella)	BC Act = V	11	1.2 km (19/07/2017)	3.4 km (06/11/2017)	Moderate	Moderate		
Glossopsitta pusilla (Little Lorikeet)	BC Act = V	36	2.2 km (05/09/2018)	4.8 km (03/10/2019)	Moderate	Moderate		
Haliaeetus leucogaster (White-bellied Sea-Eagle)	BC Act = V	1	4.9 km (17/10/2019)	4.9 km (17/10/2019)	Low	Low		
Hieraaetus morphnoides (Little Eagle)	BC Act = V	6	0.4 km (19/07/2017)	3.6 km (01/09/2018)	Moderate	Moderate		
Hirundapus caudacutus (White-throated Needletail)	EPBC Act = V,C,J,K	1	4.7 km (05/11/2017)	4.7 km (05/11/2017)	Low	Low		
Lathamus discolor (Swift Parrot)	BC Act = E1,3 EPBC Act = CE	2	3 km (11/05/2006)	3.1 km (27/06/2019)	Low	Low		
Lophoictinia isura (Square-tailed Kite)	BC Act = V	8	1.3 km (27/02/2021)	1.3 km (27/02/2021)	Moderate	Moderate		
Melithreptus gularis gularis (Black-chinned Honeyeater (eastern subspecies))	BC Act = V	2	3.5 km (14/02/2009)	3.5 km (14/02/2009)	Low	Low		
Neophema pulchella (Turquoise Parrot)	BC Act = V	2	2.4 km (22/10/2015)	2.4 km (22/10/2015)	Low	Low		
Ninox connivens (Barking Owl)	BC Act = V	1	2.2 km (11/04/2002)	2.2 km (11/04/2002)	Low	Moderate		
Ninox strenua (Powerful Owl)	BC Act = V	3	3.1 km (15/05/2019)	3.1 km (15/05/2019)	Low	Moderate		
Petroica boodang	BC Act = V	10	1.7 km	4.9 km	Low	Moderate		



Solontifia Nama	Legal Status	Number of records	Closest records and date	Most recent and proximity	Likelihood of occurrence			
Common Name					Prior to field assessment	Post field assessment		
(Scarlet Robin)			(11/05/2006)	(06/10/2017)				
Petroica phoenicea (Flame Robin)	BC Act = V	1	3.6 km (19/07/2017)	3.6 km (19/07/2017)	Low	Low		
Stagonopleura guttata (Diamond Firetail)	BC Act = V	7	2.2 km (26/01/2016)	2.2 km (26/01/2016)	Low	Low		
KINGDOM: Animalia, CLASS: Gastropoda								
Meridolum corneovirens (Cumberland Plain Land Snail)	BC Act = E1	10	3.8 km (01/10/2009)	4.9 km (17/10/2019)	Moderate	Low		
KINGDOM: Animalia, CLASS: Mammalia								
Cercartetus nanus (Eastern Pygmy-possum)	BC Act = V	1	3.6 km (15/08/2015)	3.6 km (15/08/2015)	Low	Low		
Chalinolobus dwyeri (Large-eared Pied Bat)	BC Act = V EPBC Act = V	16	1.9 km (10/04/2016)	4.9 km (17/10/2019)	Moderate	Moderate		
Dasyurus maculatus (Spotted-tailed Quoll)	BC Act = V EPBC Act = E	8	1.3 km (20/07/2017)	1.3 km (20/07/2017)	Moderate	Moderate		
Falsistrellus tasmaniensis (Eastern False Pipistrelle)	BC Act = V	5	2.5 km (30/10/2015)	4.9 km (17/10/2019)	Moderate	Moderate		
Micronomus norfolkensis (Eastern Coastal Free-tailed Bat)	BC Act = V	16	1.9 km (10/04/2016)	4.9 km (17/10/2019)	Moderate	Moderate		
Miniopterus australis (Little Bent-winged Bat)	BC Act = V	8	1.9 km (10/04/2016)	4.9 km (17/10/2019)	Moderate	Moderate		
Miniopterus orianae oceanensis (Large Bent-winged Bat)	BC Act = V	12	1.8 km (29/10/2011)	4.9 km (17/10/2019)	Moderate	Moderate		
Myotis macropus (Southern Myotis)	BC Act = V	17	1.5 km (21/09/2017)	4.9 km (17/10/2019)	Moderate	Moderate		
Petauroides volans (Greater Glider)	EPBC Act = V	2	1.2 km (29/11/2005)	4.5 km (13/10/2017)	Low	Low		
Petaurus australis (Yellow-bellied Glider)	BC Act = V EPBC Act = V	1	3 km (01/10/2009)	3 km (01/10/2009)	Low	Low		
Petaurus norfolcensis (Squirrel Glider)	BC Act = V	2	2.2 km (05/04/2017)	2.2 km (05/04/2017)	Low	Low		
Phascolarctos cinereus (Koala)	BC Act = E1 EPBC Act = E	108	0 km (30/07/2017)	0.2 km (02/11/2019)	High	High		
Pteropus poliocephalus (Grey-headed Flying-fox)	BC Act = V EPBC Act = V	16	0.1 km (26/11/2016)	2.2 km (15/01/2021)	Moderate	Low		
Saccolaimus flaviventris (Yellow-bellied Sheathtail-bat)	BC Act = V	4	2.3 km (01/04/2016)	4.9 km (17/10/2019)	Moderate	Moderate		



Scientific Name Common Name	Legal Status	Number of records	Closest records and date	Most recent and proximity	Likelihood of occurrence		
					Prior to field assessment	Post field assessment	
Scoteanax rueppellii (Greater Broad-nosed Bat)	BC Act = V	6	2.8 km (30/10/2015)	4.5 km (06/11/2017)	Moderate	Moderate	
KINGDOM: Plantae							
<i>Acacia bynoeana</i> (Bynoe's Wattle)	BC Act = E1 EPBC Act = V	25	1 km (29/10/2016)	1 km (29/10/2016)	Moderate	Low	
Epacris purpurascens var. purpurascens	BC Act = V	175	1.8 km (30/10/2014)	4.7 km (17/03/2016)	High	Moderate	
Grevillea parviflora subsp. parviflora (Small-flower Grevillea)	BC Act = V EPBC Act = V	122	0.7 km (28/02/2006)	1.4 km (16/10/2020)	High	Moderate	
Leucopogon exolasius (Woronora Beard-heath)	BC Act = V EPBC Act = V	1	4.7 km (24/10/2007)	4.7 km (24/10/2007)	Low	Low	
<i>Melaleuca deanei</i> (Deane's Paperbark)	BC Act = V EPBC Act = V	41	1.8 km (30/10/2014)	3.4 km (02/02/2016)	Moderate	Moderate	
Persoonia bargoensis (Bargo Geebung)	BC Act = E1 EPBC Act = V	107	0.8 km (08/12/2005)	3.2 km (25/07/2019)	High	Moderate	
Pomaderris brunnea (Brown Pomaderris)	BC Act = E1 EPBC Act = V	2	3.4 km (11/04/2016)	4.8 km (30/10/2018)	Low	Low	

Unless other stated, text is taken from the OEH Threatened Species (<u>http://www.environment.nsw.gov.au/threatenedspecies</u>/); Legal Status codes from the Atlas of NSW Wildlife: V = Vulnerable, E1 = Endangered Population, CE = Critically Endangered, C = China and Australia Migratory Bird Agreement (CAMBA), J = Japan and Australia Migratory Bird Agreement (JAMBA); K = Republic of Korea and Australia Migratory Bird Agreement (ROKAMBA), BC Act = *NSW Biodiversity Conservation Act 2016*, EPBC Act = *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.

