

Flora and Fauna Assessment Report

Royal Prince Alfred Hospital Redevelopment – Western Medical Gas Compound

Report prepared by Narla Environmental

for TSA Management c/- Health Infrastructure

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NARLA environmental

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Report Certification

Works for this report were undertaken by:

Staff Name	Position
Luke Johnson	Narla Environmental
BSc	Project Manager/Ecologist
Jonathan Coy	Narla Environmental
BEnv	Project Manager/Ecologist

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Glossary

Acronym/ Term	Definition	
asl	Above sea level	
BAM	Biodiversity Assessment Methodology	
BC Act	New South Wales Biodiversity Conservation Act 2016	
BDAR	Biodiversity Development Assessment Report	
CEEC	Critically Endangered Ecological Community	
DCCEEW	Department of Climate Change, Energy, the Environment and Water	
DPE	Department of Planning and Environment	
DPI	Department of Primary Industries	
DPIE	Department of Planning, Industry and Environment	
EEC	Endangered Ecological Community	
EP&A Act	Environmental Planning & Assessment Act 1979	
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999	
FFA	Flora and Fauna Assessment	
ha	Hectares	
km	Kilometres	
kL	Kilolitre	
LGA	Local Government Area	
m	metres	
mm	millimetres	
NSW	New South Wales	
OEH	Office of Environment and Heritage (now known as the DPIE)	
SDCP	Sydney Development Control Plan 2012	
SEPP	State Environmental Planning Policy	
SLEP	Sydney Local Environmental Plan 2012	
SRZ	Structural Root Zone	
Subject Site	All areas associated with the proposed activity	
Subject Property	Royal Prince Alfred Hospital, West Campus, Camperdown 2050 NSW	



Acronym/ Term	Definition
TEC	Threatened Ecological Community
Threatened species, populations and ecological communities	Species, populations and ecological communities specified in Schedules 1 and 2 of the BC Act 2016
ТРΖ	Tree Protection Zone



1. Introduction

1.1 Project Background

Narla Environmental Pty Ltd (Narla) was engaged by TSA Management c/- Health Infrastructure ('the proponent') to undertake a Flora and Fauna Assessment (FFA) for the proposed redevelopment of the Royal Prince Alfred (RPA) Hospital West Campus, Camperdown NSW 2050, hereafter referred to as the 'Subject Property' (**Figure 1**). The proposed activity comprises alterations and additions to the Capital Infrastructure and Engineering (CI & E) building loading dock located off Rochester Street in the RPA Hospital West Campus. Specifically, the works are to establish a reconfigured and expanded Medical Gas Compound (MGC) comprising the following works:

Demolition:

- Existing landscape area to be demolished to 300mm below existing ground level in preparation for new works;
- Existing fences to be removed;
- Existing trees to be removed;
- Existing walls to be removed to extent required for new works;
- Existing diesel tank proposed to be removed;
- Existing fence and door to be removed to extent required for new works; and
- Existing railings to be removed to extent required for new works.

Construction:

- New Vaporisers;
- New 30kl Primary Tank;
- New Natural Finish RC Slab;
- Fire Rated Walls to be provided for compliance with Fire Rating Requirements;
- New Ramp;
- New Security Fencing & Access Gate to New Store Area;
- New Landing Flush with Existing Storage Level; and
- New Flammable Gas Cylinder Storage Bays.

All areas associated with the proposed activity (including tree removal) are hereafter referred to as the 'Subject Site' (Figure 1).

Narla have produced this report in order to assess any potential impacts associated with the proposed activity on terrestrial ecology (biodiversity), particularly threatened species, populations and ecological communities listed under the Biodiversity Conservation Act 2016 (BC Act). The report will also recommend appropriate measures to mitigate any potential impacts in line with all relevant State Environmental Planning Policies (SEPPs) and local government plans, namely the Sydney Local Environmental Plan 2012 (SLEP) and Sydney Development Control Plan 2012 (SDCP).

1.2 Site Description and Location

1.2.1 Subject Property

The Subject Property is located on the western side of Missenden Road, within the locality of Camperdown in the Sydney Local Government Area (LGA). It covers an area of approximately 3.29ha and is bordered by existing footpaths, roads, residential dwellings and parking spaces (**Figure 1**). Currently, the Subject Property contains



hospital buildings, car parks, footpaths, access roads and planted gardens. Vegetation within the Subject Property comprises urban/exotic planted vegetation.

1.2.2 Subject Site

The 'Subject Site' includes the proposed activity footprint (development footprint) and all vegetation proposed to be impacted by the activity. It is located within middle of the Subject Property, covers an area of approximately 0.03ha and is comprised of existing roads, paved footpaths, buildings and planted garden beds containing both exotic and native species (**Figure 1**).





Figure 1. Components of the Subject Property including Subject Site.



1.3 Topography, Geology and Soil

The Subject Site has a relatively flat landscape with an elevation of approximately 25m above sea level (asl). The Subject Property is situated on the 'Blacktown' soil landscape as described in the Soil Landscapes of the Penrith 1:100,000 sheets (Bannerman and Hazelton 2011). This soil landscape covers gently undulating rises on Wianamatta Group shales. The geology is underlain by Wianamatta Group—Ashfield Shale consisting of laminite and dark grey siltstone, Bringelly Shale which consists of shale with occasional calcareous claystone, laminite and infrequent coal, and Minchinbury Sandstone consisting of fine to medium-grained quartz lithic sandstone. Given the urban landscape the Subject Site is located in, it is likely that soil is disturbed and consists of cut and fill material.

1.4 Hydrology

No watercourses, dams or soaks were identified or historically mapped within or near the Subject Site.

1.5 Scope of Assessment

The objectives of this FFA were to:

- Establish the likelihood of occurrence of migratory species, threatened species, endangered populations and threatened ecological communities as listed under the BC Act and/or the EPBC Act;
- Assess any potential impacts to species and/or communities listed under the BC Act and EPBC Act;
- Identify and map the distribution of vegetation communities within the Subject Property;
- Record presence and the extent of any known or potential fauna habitat features such as nests, dreys, caves, crevices, culverts, pools, soaks, flowering trees, fruiting trees or hollow-bearing trees and provide recommendations for on-going management of these habitat features and any fauna present;
- Record presence and the extent of any Priority Weeds or weed infestations and provide recommendations for on-going management; and
- Recommend any controls or additional actions to be taken to protect or improve environmental outcomes of the proposed activity.

1.6 Study Limitations

This study was not intended to provide a complete inventory of all flora and fauna species with potential to occur within the Subject Property. The species list provided for the Subject Property within this report was restricted to what was observed during the site assessment by the Narla Ecologist. The timing of the survey may not have coincided with emergence times of some species of flora and fauna, such as seasonally flowering herbs, seasonal migratory fauna or nocturnal fauna. To account for those species that could not be identified during the site assessment, detailed habitat assessments were combined with desktop research and local ecological knowledge to establish an accurate prediction of the potential for such species to occur on or adjacent the Subject Property.



1.7 Relevant Legislation and Policy

The legislation and policy that are addressed in this report are listed in Table 1.

Table 1. Relevant legislation and policy addressed

Legislation/Policy	Relevant Ecological Feature on Site	Triggered	Action Required
Environmental Planning and Assessment Act 1979 (EP&A Act)	All threatened species, populations and ecological communities and their habitat that occur or are likely to occur within the Subject Site during a part of their lifecycle.	Yes	ThisFloraandFaunaAssessment and all subsequentrecommendationsrelevant tothe planning process under Part5'Infrastructureandenvironmentalimpactassessment'.
Biodiversity Conservation Act (BC Act) (New South Wales)	BC Act listed threatened species have the potential to occur within the Subject Site. No BC Act listed threatened species or communities were observed with the Subject Site during the site assessment.	Yes	This FFA, particularly the likelihood tables for threatened fauna and flora species occurring or potentially occurring within the Subject Site, as well as severity of potential impacts.
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (Commonwealth)	EPBC Act threatened species have the potential to occur within the Subject Site. No EPBC Act listed species or Threatened Ecological Communities were observed within the Subject Site during the site assessment.	Yes	This FFA, particularly the likelihood tables for threatened fauna and flora species occurring or potentially occurring within the Subject Site, as well as severity of potential impacts.
Biosecurity Act 2015 (Bio Act)	No Priority Weeds for Greater Sydney were identified within the Subject Site	No	None.
State Environmental Planning Policy (Resilience and Hazards) 2021 – Chapter 2: Coastal Management 2018	The Subject Site does not contain areas mapped as 'Coastal Wetlands', 'Littoral Rainforest', proximity to either, 'Coastal Environment Area' or 'Coastal Use Area'; therefore this SEPP does not apply to the development.	No	None.
State Environmental Planning Policy (Biodiversity and Conservation) 2021 – Chapter 4: Koala Habitat Protection2021	The Subject Property does not occur within a Local Government Area listed in Schedule 2 of the SEPP. Therefore, this SEPP does not apply to the proposed activity.	No	None.
State Environmental Planning Policy (Biodiversity and Conservation) 2021 – Chapter 2: Vegetation in Non- rural Areas	The Subject Property is located within an LGA listed in part 2.3 of this SEPP. The land which the Subject Property is zoned under is also listed within the SEPP therefore, this SEPP applies to the proposed activity.	Yes	A person must not clear vegetation in any non-rural area of the State without the authority conferred by a permit granted by the council.



1.8 Biodiversity Assessment Pathway

Activities requiring an environmental assessment under Part 5 of the EP&A Act 1979 are to consider biodiversity as part of the environmental assessment process. The test of significance (under s.7.3 of the BC Act) determines whether the proposed activity is likely to significantly affect threatened species, ecological communities or their habitats. If the activity is likely to have a significant impact, or will be carried out in a declared Area of Outstanding Biodiversity Value (AOBV), the proponent can opt in to the Biodiversity Offsets Scheme (BOS). The environmental impact of activities that will not have a significant impact on threatened species will continue to be assessed under Section 5.5 of the Environmental Planning and Assessment Act 1979.

1.9 Sydney Local Environmental Plan 2012 (SLEP)

1.9.1 Zoning

The Subject Property is zoned 'SP2: Infrastructure'. The SLEP requires that the proposed activity satisfies the zone objectives.

The zone objectives for SP2 are:

- To provide for infrastructure and related uses; and
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.

1.10 Sydney Development Control Plan 2012 (SDCP)

1.10.1 Biodiversity (Clause 3.5.1)

Clause 3.5.1 'Biodiversity' of the SDCP applies to all development that will affect existing habitat, or involves landscaping. The objectives of this clause are to:

- Protect existing habitat features within and adjacent to development sites; and
- Improve the diversity and abundance of locally indigenous flora and fauna species across the LGA.

Provisions applicable to this clause include the following:

- Development is to be consistent with the Street Tree Master Plan, Park Tree Management Plans and the Landscape Code;
- Existing habitat features including cliff lines, rocky outcrops, waterbodies, trees, shrubs and groundcover vegetation are to be retained;
- New habitat features including trees, shrubs and groundcover vegetation, waterbodies, rockeries and green roofs and walls are to be included, wherever possible;
- Link and enhance existing and potential biodiversity corridors wherever possible;
- Landscaping is to comprise a mix of locally indigenous tree, shrub and groundcover species as outlined in City's Landscape Code. Where this is not possible it is preferred that plants native to Australia are used; and
- Shrubs are to be densely planted and trees are to be well-spaced, as outlined in the City's Landscape Code.

The proposed activity will require the removal of approximately 0.01ha of urban exotic/native vegetation. The proposed activity is designed to have as minimal impact as practically possible on the existing vegetation.



1.10.2 Urban Vegetation (Clause 3.5.2)

Urban vegetation is all of the trees and other vegetation found in our commercial and residential areas, along our streets and in parks. This vegetation is one of the City's most important assets, with benefits ranging from reducing air pollution, managing stormwater, providing natural habitat for birds and other wildlife to enhancing our quality of life and reducing the heat of urban spaces. Vegetation will become increasingly valuable in the face of climate change. Maintaining and supplementing existing vegetation can help mitigate climate change, by absorbing carbon dioxide, and adapt to it, by helping to cool the City. The objective of this clause is to:

• Ensure that tree canopy cover is considered in all development and provided appropriately in each development.

The following provisions are detailed to achieve the objective of this clause:

- Development applications are to include a Landscape Plan, except where they are for single dwellings, terraces and dual occupancies;
- Provide at least 15% canopy coverage of a site within 10 years from the completion of development;
- Appropriate plant species are to be selected for the site conditions with consideration given to trees providing shade in summer and allowing sunlight in winter, or to provide habitat. Appropriate tree species include any tree (excluding noxious weed trees) that are not prone to drop fruit, seedpods, gumnuts, branches, sap and or bark;
- Locally indigenous species are to be used where possible and in accordance with the City's Landscape Code;
- Understorey plantings comprising locally-indigenous shrubs and groundcovers are encouraged;
- Provide soft landscaping between 1.5m and 3m in plan depth to the perimeter of ground level car parking areas to screen the car parking area from the street and integrate with streetscape planting;
- One tree per 4 car spaces is to be provided within ground level parking areas in addition to perimeter planting. This planting is to:
 - be planted in bays with a minimum dimension of 2m and soil depth of 1m unencumbered deep soil. The bays are to be provided with a raised kerb barrier and native ground cover planting;
 - be planted in soil with a suitable rooting volume for the required number of trees;
 - use trees that develop a clean trunk height greater than 4.5m and a crown canopy of at least 50sqm to provide adequate shade and vehicle clearance;
 - improve pedestrian amenity;
 - not to hinder the visibility of either drivers or pedestrians, with open sightlines maintained between parking areas, public streets and paths;
 - not conflict with lighting and services; and
 - break up large areas of impervious surfaces.
- Car parking areas and access aisles should be designed, surfaced and graded to reduce run-off, allow stormwater to be controlled within the site, and provide for natural infiltration of stormwater runoff through landscaping.

The reduction of 0.01ha of urban native/exotic vegetation is unlikely to significantly reduce canopy cover across Sydney City.



2. Methodology

2.1 Desktop Assessment and Literature Review

A thorough literature review of local information relevant to the Sydney LGA was undertaken. Searches using NSW Wildlife Atlas (BioNet; DPE 2023a) and the Commonwealth Protected Matters Search Tool (DCCEEW 2023) were conducted to identify all current threatened flora and fauna, as well as migratory fauna records within a 10km x 10km cell search area centred on the Subject Site. These data were used to assist in establishing the presence or likelihood of any ecological values as occurring on or adjacent the Subject Site and helped inform our Ecologist on what to look for during the site assessment.

Soil landscape and geological mapping was examined to gain an understanding of the environment on the Subject Site and assist in determining whether any threatened flora or ecological communities may occur there (Bannerman and Hazelton 2011).

2.2 Ecological Site Assessment

2.2.1 General Survey

A site assessment was undertaken by experienced Narla Ecologist, Jonathan Coy, on the 16th of August 2022. During the site assessment, the following activities were undertaken:

- Identifying and recording the vegetation communities present within the Subject Site, with focus on identifying any threatened ecological communities;
- Recording a detailed list of flora species encountered within the Subject Site, with a focus on threatened species, species diagnostic of threatened ecological communities and Priority Weeds;
- Recording opportunistic sightings of any fauna species seen or heard on or within the immediate surrounds of the Subject Site;
- Targeted surveys for threatened flora;
- Identifying and recording the locations of notable fauna habitat such as important nesting, roosting or foraging microhabitats;
- Assessing the connectivity and quality of the vegetation within the Subject Site and surrounding area; and
- Targeting the habitat of any threatened and regionally significant fauna including:
 - Tree hollows (habitat for threatened large forest owls, parrots and arboreal mammals);
 - Caves and crevices (habitat for threatened reptiles, small mammals and microbats);
 - Termite mounds (habitat for threatened reptiles);
 - Soaks (habitat for threatened frogs);
 - Wetlands (habitat for threatened fish, frogs and water birds);
 - Drainage lines (habitat for threatened fish and frogs);
 - Fruiting trees (food for threatened frugivorous birds and mammals);
 - Flowering trees (food for threatened nectarivorous birds and mammals);
 - Trees and shrubs supporting nest structures (habitat for threatened birds and arboreal mammals); and
 - Any other habitat features that may support fauna (particularly threatened) species.



2.2.2 Targeted Threatened Flora Surveys

Targeted surveys were undertaken to identify locations of the threatened flora species known or predicted to occur within the locality. Narla Environmental undertook targeted surveys for all threatened flora with potential to occur within the Subject Site.

Targeted surveys were undertaken in accordance with the 'Surveying threatened plants and their habitats' (DPIE 2020) with maximum effort directed toward sampling areas with suitable habitat.

Any tentative threatened species would be photographed and specimens would be taken for identification utilising formal keys. Any confirmed or plausible specimens identified would be GPS tagged for future reference.

2.2.3 Weather Conditions

Weather conditions recorded at the nearest weather station (Observatory Hill, Sydney, NSW) prior to and during the site assessment are provided in **Table 2** (BOM 2023). The data revealed minor rainfall and moderate temperatures leading up to the survey. These weather conditions may be conducive to the emergence of annual herbs.

Table 2. Weather conditions recorded at Observatory Hill	ill, Sydney, NSW (station 066214) preceding and during
the site assessment (site assessment date in bold)	

Survey date	Day	Minimum Temp. (°C)	Maximum Temp. (°C)	Rainfall (mm)
09/08/2022	Tuesday	8.5	16.9	0.6
10/08/2022	Wednesday	8.5	17.3	13.0
11/08/2022	Thursday	9.3	17.2	0.2
12/08/2022	Friday	1.5	16.4	0.6
13/08/2022	Saturday	11.0	20.0	5.8
14/08/2022	Sunday	10.2	18.3	0
15/08/2022	Monday	9.9	18.8	0
16/08/2022	Tuesday	8.4	20.4	0

2.2.4 Mapping and Analysis of Vegetation Communities

Narla examined local satellite imagery, geological mapping, soil landscape mapping and topographic mapping, in addition to existing vegetation mapping (OEH 2016a) in order to stratify the Subject Site and guide the site assessment survey efforts. The following resources were consulted during the site assessment to assist with the identification of vegetation communities present within the Subject Site:

- eSPADE v2.2 (DPE 2023c);
- Soil Landscapes of the Penrith 1:100,000 sheet (Bannerman and Hazelton 2011);
- The Native Vegetation of the Sydney Metropolitan Area Version 3.1, VIS_ID 4489 (OEH 2016a); and
- The Native Vegetation of the Sydney Metropolitan Area. Volume 2: Vegetation Community Profiles (OEH 2016b).



3. Native Vegetation

3.1 Vegetation Community

3.1.1 Historically Mapped Vegetation Communities (OEH 2016b)

No vegetation has been mapped within the Subject Property, however the nearest mapped vegetation type is:

• Urban Exotic/Native.

3.1.2 Field-validated Vegetation Communities

The field survey conducted by the Narla Ecologist identified the vegetation within the Subject Property best conforms to the following vegetation community (**Figure 2**):

• Urban Exotic/Native.

This vegetation community is detailed within **Table 3** and displayed in **Figure 2**.



Table 3. Description of Urban Exotic/Native Vegetation identified within the Subject Property



Extent to be impacted (approximate) within the 0.01ha Subject Site

Description of the Vegetation within the Subject Site

The vegetation within this zone was comprised predominantly of planted exotics and natives across the hospital grounds, with minimal diversity. The canopy was predominantly *Cupressus sempervirens* (Italian Cypress). The mid-storey contained planted *Callistemon citrinus* (Crimson Bottlebrush) and *Photinia sp.*

The ground layer was mostly absent as it was actively managed. Sporadic native ground layer species include *Dianella revoluta* (Blue Flax-lily), *Lomandra longifolia* (Spiky-headed Mat-rush) and *Dichondra repens* (Kidney Weed). Exotic species included *Bidens pilosa* (Black Jack), *Cenchrus clandestinus* (Kikuyu), *Taraxacum officinale* (Dandelion), *Trifolium repens* (White clover), *Poa annua* (Winter Grass), *Ehrharta erecta* (Panic Veldtgrass) and *Stellaria media* (Chickweed).

Justification of Vegetation Assignment	The vegetation within this area consisted primarily of exotic vegetation with a number of planted native species present. As the vegetation in this area contained exotic and native species that did not conform to any locally occurring native vegetation communities, it has been classified as Urban Exotic/Native.
BC Act 2016 Status	N/A
EPBC Act 1999 Status	N/A





Figure 2. Narla field-validated vegetation communities within the Subject Property.



4. Threatened Entities

4.1 Threatened Ecological Communities

No threatened ecological communities (TEC's) were identified within the Subject Site.

4.2 Threatened Flora

Desktop analysis revealed a range of threatened flora as occurring or having the potential to occur on or within a 10km x 10km cell centred on the Subject Site. Thorough targeted surveys were undertaken throughout the Subject Site for potentially occurring threatened flora. No threatened flora were identified at the time of the site assessment.

A comprehensive list of flora species identified within the Subject Property during the site assessment is presented in **Appendix B**. The following locally occurring species were assessed for their potential to occur within the Subject Site (**Table 4**).

Species	BC Act*	EPBC Act*	Likelihood of occurrence within the Subject Site	Further Impact Assessment Required?
<i>Acacia terminalis</i> subsp. Eastern Sydney (Sunshine Wattle)	E	E	Absent. Occurs in coastal scrub and dry sclerophyll woodland on sandy soils. Such geology was not identified within the Subject Site. No remnant vegetation was present within the Subject Site due to the surrounding urban environment. A targeted survey was undertaken outside the survey period, however no <i>Acacia</i> spp. were identified.	No
<i>Caladenia tessellata</i> (Thick Lip Spider Orchid)	E	V	Low. Generally found in grassy sclerophyll woodland on clay loam or sandy soils. No such habitat was identified within the Subject Site.	No
Hibbertia puberula	E	-	Low. Occurs on sandy soil often associated with sandstone, or on clay. Habitats are typically dry sclerophyll woodland communities, although heaths are also occupied. No such habitat was identified within the Subject Site.	No
<i>Melaleuca deanei</i> (Deane's Paperbark)	V	V	Absent. The species occurs mostly in ridgetop woodland, with only 5% of sites in heath on sandstone. No such habitat was identified within the Subject Site. A targeted survey was undertaken within the DPE approve survey period and no individuals were identified.	No
<i>Persoonia hirsuta</i> (Hairy Geebung)	E	E	Absent. The Hairy Geebung is found in clayey and sandy soils in dry sclerophyll open forest, woodland and heath, primarily on the Mittagong Formation and on the upper Hawkesbury Sandstone. It is usually present as isolated individuals or very small populations. No such habitat was identified within the Subject Site. A targeted survey was undertaken within the DPE approve survey period and no individuals were identified.	No

Table 4. Assessment of likely occurrence of threatened flora species within the Subject Site



Species	BC Act*	EPBC Act*	Likelihood of occurrence within the Subject Site	Further Impact Assessment Required?
Prostanthera marifolia (Seaforth Mintbush)	CE	CE	Absent. Occurs in localised patches in or in close proximity to the endangered Duffys Forest ecological community. Located on deeply weathered clay-loam soils associated with ironstone and scattered shale lenses, a soil type which only occurs on ridge tops and has been extensively urbanised. Duffys Forest ecological community is not present within, or in proximity to the Subject Site. A targeted survey was undertaken within the DPE approve survey period and no individuals were identified.	No
<i>Rhodamnia rubescens</i> (Scrub Turpentine)	CE	-	Absent. Found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest usually on volcanic and sedimentary soils. No such habitat was identified within the Subject Site. A targeted survey was undertaken within the DPE approve survey period and no individuals were identified.	No
Syzygium paniculatum (Magenta Lilly Pilly)	E	V	Absent. On the south coast the Magenta Lilly Pilly occurs on grey soils over sandstone, restricted mainly to remnant stands of littoral (coastal) rainforest. On the central coast, Magenta Lilly Pilly occurs on gravels, sands, silts and clays in riverside gallery rainforests and remnant littoral rainforest communities. No such habitat was identified within the Subject Site. A targeted survey was undertaken outside the survey period, however no <i>Szygium</i> spp. were identified.	No
Tetratheca glandulosa	V	-	Absent. Associated with shale-sandstone transition habitat where shale-cappings occur over sandstone, with associated soil landscapes such as Lucas Heights, Gymea, Lambert and Faulconbridge. Topographically, the plant occupies ridgetops, upper-slopes and to a lesser extent mid-slope sandstone benches. Soils are generally shallow, consisting of a yellow, clayey/sandy loam. Vegetation structure varies from heaths and scrub to woodlands/open woodlands, and open forest. No such habitat was identified within the Subject Site. A targeted survey was undertaken within the DPE approve survey period and no individuals were identified.	No
<i>Tetratheca juncea</i> (Black-eyed Susan)	V	V	Low. It is usually found in low open forest/woodland with a mixed shrub understorey and grassy groundcover. However, it has also been recorded in heathland and moist forest. The majority of populations occur on low nutrient soils associated with the Awaba Soil Landscape. The preferred substrates are sandy skeletal soil on sandstone, sandy- loam soils, low nutrients; and clayey soil from conglomerates, pH neutral. A targeted survey was undertaken outside the survey period, however no Tetratheca spp. were identified.	No

*Vulnerable = V, Endangered = E, Endangered Population = EP, Critically Endangered = CE



4.3 Threatened Fauna

Details of the threatened fauna habitat recorded within the Subject Site are included in **Table 5**. The likelihood of occurrence of threatened fauna species within the Subject Site is presented in **Table 6**.

A small suite of avian native fauna species were identified within and surrounding the Subject Site during the site assessment. All native fauna species encountered are listed as 'protected' under the BC Act. The list of fauna recorded during the site visit was produced opportunistically (**Appendix C**).

Habitat component	Status in the Subject Site
Coarse woody debris	Absent.
Rock outcrops and bush rock	Absent.
Caves, crevices and overhangs	Absent.
Culverts, bridges, mine shafts, or abandoned structures	Absent.
Nectar/lerp-bearing Trees	Absent.
Nectar-bearing shrubs	<i>Callistemon citrinus</i> . (Crimson Bottle-brush) identified within the Subject Site may provide intermittent nectar sources for similar nectivores.
Koala Use Trees	Absent.
Nests	Absent.
Sap and gum sources	Absent.
She-oak fruit (Glossy Black Cockatoo feed)	Absent.
Seed-bearing trees and shrubs	Absent.
Soft-fruit-bearing trees/shrubs	Absent.
Dense shrubbery and leaf litter	Absent.
Tree hollows	Absent.
Decorticating bark	Absent.
Wetlands, soaks, and streams	Absent.
Open water bodies	Absent.
Estuarine, beach, mudflats, and rocky foreshores	Absent.

Table 5. Fauna habitat values identified within the Subject Site



4.3.1 Migratory Fauna Species

The following EPBC Act listed migratory fauna species were considered to occasionally use habitat within or around the Subject Site for foraging or passage:

- Cuculus optatus (Oriental Cuckoo);
- *Hirundapus caudacutus* (White-throated Needletail);
- Monarcha melanopsis (Black-faced Monarch);
- Monarcha trivirgatus (Spectacled Monarch);
- Motacilla flava (Yellow Wagtail);
- Myiagra cyanoleuca (Satin Flycatcher); and
- Rhipidura rufifrons (Rufous Fantail).

The proposed activity will have low impacts to potential foraging habitat and negligible impacts to potential breeding habitat for these species given their migratory nature. In the unlikely event that these species forage within the Subject Site, the proposed removal of vegetation will have low impacts to foraging habitat given the large areas of suitable foraging habitat in their migratory range. No anticipated net loss of breeding habitat is expected as these species do not breed within or in close proximity of the Subject Site. As such, the proposed activity is unlikely to have a significant impact on these species; therefore, a Referral to Commonwealth pursuant to the EPBC Act is not required.



Table 6. Assessment of likely occurrence of threatened fauna species within the Subject Site

Species	BC Act	EPBC Act	Likelihood of Occurrence	Foraging Habitat Present Within the Subject Site	Breeding Habitat Present Within the Subject Site	Anticipated Impact	Further Impact Assessment Required?
<i>Anthochaera Phrygia</i> (Regent Honeyeater)	CE	CE	Low	The species inhabits dry open forest and woodland, particularly Box- Ironbark woodland, and riparian forests of River Sheoak. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes. No such habitat was identified within the Subject Site.	There are three known key breeding areas, two of them in NSW - Capertee Valley and Bundarra-Barraba regions. The species breeds between July and January in Box-Ironbark and other temperate woodlands and riparian gallery forest dominated by River Sheoak. No suitable breeding habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat. The Subject Site is not mapped on the Important Area map for this species. Site assessment in August 2022 did not detect this species.	No
Artamus cyanopterus cyanopterus (Dusky Woodswallow)	V	_	Low	This species often inhabits dry, open eucalypt forests and woodlands with an open or sparse understorey of eucalypt saplings, acacias and other shrubs, and ground-cover of grasses or sedges and fallen woody debris. Feeds on insects. Potential prey items may occur within the Subject Site, however this would provide suboptimal habitat given its highly urbanised nature.	This species nests in dry open Eucalypt Forest. No suitable nests were identified within the Subject Site. Additionally, the highly urbanised nature of the Subject Site is unlikely to provide suitable breeding habitat for this species.	Low anticipated impact to suboptimal potential foraging habitat for this mobile species. No net loss of breeding habitat is anticipated. Site assessment in August 2022 did not detect this species.	No
<i>Botaurus poiciloptilus</i> (Australasian Bittern)	E	E	Low	Favours permanent freshwater wetlands with tall, dense vegetation, particularly <i>Typha</i> spp. (Bullrushes) and <i>Eleocharis</i> spp. (Spikerushes). No such habitat was identified within the Subject Site.	Nests are built in secluded places in densely-vegetated wetlands on a platform of reeds. There are usually six olive-brown eggs to a clutch. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
Burhinus grallarius	E	-	Low	Inhabits open forests and woodlands with a sparse grassy ground layer and fallen timber. Feed	Nest on the ground in a scrape or small bare patch. No suitable nests were identified within the Subject	Low anticipated impact to suboptimal potential foraging habitat for this mobile species.	No



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Species	BC Act	EPBC Act	Likelihood of Occurrence	Foraging Habitat Present Within the Subject Site	Breeding Habitat Present Within the Subject Site	Anticipated Impact	Further Impact Assessment Required?
(Bush Stone- curlew)				on insects and small vertebrates, such as frogs, lizards and snakes. Potential prey items may occur within the Subject Site, however this would provide suboptimal habitat given its highly urbanised nature.	Site. Additionally, the highly urbanised nature of the Subject Site is unlikely to provide suitable breeding habitat for this species.	No anticipated net loss of breeding habitat. Site assessment in August 2022 did not detect this species.	
<i>Calidris ferruginea</i> (Curlew Sandpiper)	E	CE	Low	It generally occupies littoral and estuarine habitats, and in New South Wales is mainly found in intertidal mudflats of sheltered coasts. No such habitat was identified within the Subject Site.	It roosts on shingle, shell or sand beaches; spits or islets on the coast or in wetlands; or sometimes in salt marsh, among beach-cast seaweed, or on rocky shores. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
Calyptorhynchus lathami (Glossy Black- Cockatoo)	v	V	Low	Feeds almost exclusively on the seeds of several species of she-oak (<i>Casuarina</i> and <i>Allocasuarina</i> species). No such habitat was identified within the Subject Site.	Dependent on large hollow- bearing eucalypts for nest sites. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
<i>Chalinolobus dwyeri</i> (Large-eared Pied Bat)	V	V	Low	Found in well-timbered areas containing gullies. This species probably forages for small, flying insects below the forest canopy. No such habitat was identified within the Subject Site.	Roosts in caves (near their entrances), crevices in cliffs, old mine workings and in the disused, bottle-shaped mud nests of the <i>Petrochelidon ariel</i> (Fairy Martin), frequenting low to mid-elevation dry open forest and woodland close to these features. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
Erythrotriorchis radiatus (Red Goshawk)	CE	V	Low	Red Goshawks inhabit open woodland and forest, preferring a mosaic of vegetation types, a large population of birds as a source of food, and permanent water. They	Breeding is likely to be in spring and summer in southern Queensland and NSW. The birds lay clutches of 1-2 eggs between July and September, in a stick nest	Negligible, no anticipated net loss of foraging or breeding habitat.	No



Species	BC Act	EPBC Act	Likelihood of Occurrence	Foraging Habitat Present Within the Subject Site	Breeding Habitat Present Within the Subject Site	Anticipated Impact	Further Impact Assessment Required?
				are often found in riparian habitats along or near watercourses or wetlands. Feed on medium to large birds, but they also take mammals, reptiles and insects. No such habitat was identified within the Subject Site, it is highly urbanised.	in a tall tree (>20 m tall) within 1 km of a watercourse or wetland. No such habitat was identified within the Subject Site.		
<i>Haematopus longirostris</i> (Pied Oystercatcher)	E	_	Low	Favours intertidal flats of inlets and bays, open beaches and sandbanks. Forages on exposed sand, mud and rock at low tide, for molluscs, worms, crabs and small fish. The chisel-like bill is used to pry open or break into shells of oysters and other shellfish. No such habitat was identified within the Subject Site.	Nests mostly on coastal or estuarine beaches although occasionally they use saltmarsh or grassy areas. Nests are shallow scrapes in sand above the high tide mark, often amongst seaweed, shells and small stones. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
<i>Haliaeetus leucogaster</i> (White-bellied Sea-Eagle)	V	-	Low	Foraging habitats are characterised by the presence of large areas of open water including larger rivers, swamps, lakes, and the sea. No such habitat was identified within, or in close proximity to the Subject Site.	Breeding habitat is live large old trees within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines. No suitable nests were identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
Hirundapus caudacutus (White-throated Needletail)	-	V	Low	Feeds on flying insects, such as termites, ants, beetles and flies. Prey items may occur within the Subject Site.	N/A. This species does not breed in Australia.	Low anticipated impact to suboptimal potential foraging habitat for this mobile species. No anticipated net loss of breeding habitat. Site assessment in August 2022 did not detect this species.	No
<i>Lathamus discolor</i> (Swift Parrot)	E	CE	Low	Although potential feed trees occur on the Subject Site which may attract this species if they are flowering profusely or if lerp is	The Swift Parrot only breeds in Tasmania.	Low anticipated impact to suboptimal potential foraging habitat for this highly mobile	No



Species	BC Act	EPBC Act	Likelihood of Occurrence	Foraging Habitat Present Within the Subject Site	Breeding Habitat Present Within the Subject Site	Anticipated Impact	Further Impact Assessment Required?
				abundant, this is considered suboptimal foraging habitat as it is located in a highly fragmented and urbanised area. Furthermore, The Subject Site is not mapped on the Important Area map for this species.		species. No impact to breeding habitat.	
<i>Litoria aurea</i> (Green and Golden Bell Frog)	E	V	Low	This species inhabits marshes, dams and stream-sides, particularly those containing <i>Typha</i> spp. (Bullrushes) and <i>Eleocharis</i> spp. (Spikerushes). No such habitat was identified within the Subject Site.	This species inhabits marshes, dams and stream-sides, particularly those containing Typha spp. (Bullrushes) and Eleocharis spp. (Spikerushes). No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
<i>Lophoictinia isura</i> (Square-tailed Kite)	V	_	Low	Found in a variety of dry woodlands. Shows a particular preference for timbered watercourses. Is a specialist hunter of passerines, especially honeyeaters, and most particularly nestlings, and insects in the tree canopy, picking most prey items from the outer foliage. Potential prey items may occur within the Subject Site, however this is considered suboptimal foraging habitat as it is located in a highly fragmented and urbanised area.	Breeding is from July to February, with nest sites generally located along or near watercourses, in a fork or on large horizontal limbs. No suitable nests were identified within the Subject Site.	Low anticipated impact to suboptimal potential foraging habitat for this highly mobile species. No loss to breeding habitat is anticipated as there are no watercourses in close proximity to the Subject Site.	No
<i>Micronomus norfolkensis</i> (Eastern Coastal Free-tailed Bat)	V	-	Low	Occur in dry sclerophyll forest, swamp forests and mangrove forests east of the Great Dividing Range, feeding on insects. Potential prey items may occur within the Subject Site, however this is considered suboptimal foraging	Roost mainly in tree hollows but will also roost under bark or in man-made structures. No such habitat is present in the Subject Site. All relevant man-made structures are being retained.	Low anticipated impact to suboptimal potential foraging habitat for this highly mobile species. No loss to breeding habitat is anticipated.	No



Species	BC Act	EPBC Act	Likelihood of Occurrence	Foraging Habitat Present Within the Subject Site	Breeding Habitat Present Within the Subject Site	Anticipated Impact	Further Impact Assessment Required?
				habitat as it is located in a highly fragmented and urbanised area.			
<i>Miniopterus australis</i> (Little Bent- winged Bat)	V	-	Low	This species prefers moist eucalypt forest, rainforest, vine thicket, wet and dry sclerophyll forest, Melaleuca swamps, dense coastal forests and banksia scrub. Generally found in well-timbered areas, at night forage for small insects beneath the canopy of densely vegetated habitats. No such habitat was identified within the Subject Site.	Little Bent-winged Bats roost in caves, tunnels, tree hollows, abandoned mines, stormwater drains, culverts, bridges and sometimes buildings during the day. Buildings are present however they will be retained as part of the works	Negligible, no anticipated net loss of foraging or breeding habitat. No hollow-bearing trees or buildings will be impacted by the proposed activity.	No
Miniopterus orianae oceanensis (Large Bent- winged Bat)	v	-	Low	Hunt in forested areas, catching moths and other flying insects above the tree tops. No such habitat was identified within the Subject Site.	This species only breeds in caves. No such habitat was identified within, or in close proximity to, the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
<i>Myotis macropus</i> (Southern Myotis)	V	-	Low	This species forages over streams and pools catching insects and small fish by raking their feet across the water surface. No such habitat was identified within the Subject Site.	Generally, roost in groups of 10 - 15 close to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, under bridges and in dense foliage. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
<i>Ninox connivens</i> (Barking Owl)	V	-	Low	This species requires intact woodland for foraging, but extend their home range to hunt for potential prey. The highly fragmented and urbanised Subject Site is unlikely to provide adequate foraging habitat.	This species breeds in large hollows. No large hollows were identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No



Species	BC Act	EPBC Act	Likelihood of Occurrence	Foraging Habitat Present Within the Subject Site	Breeding Habitat Present Within the Subject Site	Anticipated Impact	Further Impact Assessment Required?
<i>Ninox strenua</i> (Powerful Owl)	V	-	Low	The Powerful Owl inhabits a range of vegetation types, from woodland and open sclerophyll forest to tall open wet forest and rainforest. The Powerful Owl requires large tracts of forest or woodland habitat but can occur in fragmented landscapes as well. The highly fragmented and urbanised Subject Site is unlikely to provide adequate foraging habitat.	Powerful Owls nest in large tree hollows (at least 0.5 m deep), in large eucalypts (diameter at breast height of 80-240 cm) that are at least 150 years old. No large hollows were identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
Perameles nasuta (Long-nosed Bandicoot population in inner western Sydney)	EP	_	Low- moderate	Shelter mostly under older houses and buildings. Forage in parkland and back-yards. Forages mainly at or after dusk, digging for invertebrates, fungi and tubers. Potential foraging habitat was identified within the Subject Site.	Shelters during the day in a well- concealed nest based on a shallow hole lined with leaves and grass, sometimes under debris, sometimes hidden with soil and with the entrance closed for greater concealment. Suitable habitat may be present within the Subject Site, however no nests were identified during the site assessment.	Low anticipated impact to foraging and breeding habitat for this highly mobile species.	No
Petalura gigantea (Giant Dragonfly)	E	_	Low	Live in permanent swamps and bogs with some free water and open vegetation. Adults spend most of their time settled on low vegetation on or adjacent to the swamp. They hunt for flying insects over the swamp and along its margins. No such habitat was identified within the Subject Site.	Females lay eggs into moss, under other soft ground layer vegetation, and into moist litter and humic soils, often associated with groundwater seepage areas within appropriate swamp and bog habitats. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
Petroica boodang (Scarlet Robin)	V	-	Low	This species lives in dry eucalypt forests and woodlands. The understorey is usually open and	The Scarlet Robin breeds on ridges, hills and foothills of the western slopes, the Great Dividing	Negligible, no anticipated net loss of foraging or breeding habitat.	No



Species	BC Act	EPBC Act	Likelihood of Occurrence	Foraging Habitat Present Within the Subject Site	Breeding Habitat Present Within the Subject Site	Anticipated Impact	Further Impact Assessment Required?
				grassy with few scattered shrubs. Scarlet Robin habitat usually contains abundant logs and fallen timber: these are important components of its habitat. Forage on invertebrates. No such habitat was identified within the Subject Site.	Range and eastern coastal regions; this species is occasionally found up to 1000 metres in altitude. No such habitat was identified within the Subject Site.		
Phascolarctos cinereus (Koala)	V	V	Low	Inhabit eucalypt woodlands and forests. Feed on the foliage of more than 70 eucalypt species and 30 non-eucalypt species, but in any one area will select preferred browse species. No such habitat was present in the Subject Site.	Inhabit eucalypt woodlands and forests. Feed on the foliage of more than 70 eucalypt species and 30 non-eucalypt species, but in any one area will select preferred browse species. No such habitat was present in the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
<i>Pseudomys gracilicaudatus</i> (Eastern Chestnut Mouse)	V	-	Low	In NSW the Eastern Chestnut Mouse is mostly found, in low numbers, in heathland and is most common in dense, wet heath and swamps. Optimal habitat appears to be in vigorously regenerating heathland burnt from 18-months to four years previously. No such habitat was identified within the Subject Site.	Optimal habitat appears to be in vigorously regenerating heathland burnt from 18 months to four years previously. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
<i>Pteropus poliocephalus</i> (Grey-headed Flying-fox)	V	V	Moderate	Occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. Feed on the nectar and pollen of native trees, in particular Eucalyptus, Melaleuca and Banksia, and fruits of rainforest trees and vines. Potential foraging	No breeding camps were identified within or surrounding the Subject Site.	Low anticipated impact to potential foraging habitat for this highly mobile species. Large areas of potential foraging habitat are proposed for retention and will continue to exist within the surrounding area. No anticipated net loss of breeding habitat.	No



Species	BC Act	EPBC Act	Likelihood of Occurrence	Foraging Habitat Present Within the Subject Site	Breeding Habitat Present Within the Subject Site	Anticipated Impact	Further Impact Assessment Required?
				habitat was identified with the Subject Site.			
<i>Ptilinopus superbus</i> (Superb Fruit- dove)	V	-	Low	Inhabits rainforest and similar closed forests where it forages high in the canopy, eating the fruits of many tree species such as figs and palms. It may also forage in eucalypt or acacia woodland where there are fruit-bearing trees. No such habitat was identified within the Subject Site.	Breeding takes place from September to January. The nest is a structure of fine interlocked forked twigs, giving a stronger structure than its flimsy appearance would suggest, and is usually 5-30 metres up in rainforest and rainforest edge tree and shrub species. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
<i>Saccolaimus flaviventris</i> (Yellow-bellied Sheathtail-bat)	V	-	Low	Forages in most habitats across its very wide range, with and without trees; appears to defend an aerial territory. When foraging for insects, flies high and fast over the forest canopy, but lower in more open country. Such habitat is not present within the Subject Site.	Roosts singly or in groups of up to six, in tree hollows and buildings; in treeless areas they are known to utilise mammal burrows. Buildings are present however they will be retained as part of the works	Negligible, no anticipated net loss of foraging or breeding habitat.	No
<i>Stagonopleura guttata</i> (Diamond Firetail)	V	-	Low	Found in grassy eucalypt woodlands, including Box-Gum Woodlands and Snow Gum <i>Eucalyptus pauciflora</i> Woodlands. Also occurs in open forest, mallee, Natural Temperate Grassland, and in secondary grassland derived from other communities. Feeds exclusively on the ground, on ripe and partly-ripe grass and herb seeds and green leaves, and on insects (especially in the breeding season). No such	Nests are globular structures built either in the shrubby understorey, or higher up, especially under hawk's or raven's nests. No suitable nests were identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No



Species	BC Act	EPBC Act	Likelihood of Occurrence	Foraging Habitat Present Within the Subject Site	Breeding Habitat Present Within the Subject Site	Anticipated Impact	Further Impact Assessment Required?
				habitat was identified within the Subject Site.			
<i>Stictonetta naevosa</i> (Freckled Duck)	V	_	Low	Prefer permanent freshwater swamps and creeks with heavy growth of Cumbungi, Lignum or Tea- tree. During drier times they move from ephemeral breeding swamps to more permanent waters such as lakes, reservoirs, farm dams and sewage ponds. Feed at dawn and dusk and at night on algae, seeds and vegetative parts of aquatic grasses and sedges and small invertebrates. No such habitat was identified within the Subject Site.	. Nests are usually located in dense vegetation at or near water level. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No
<i>Xenus cinereus</i> (Terek Sandpiper)	V	-	Low	In Australia, has been recorded on coastal mudflats, lagoons, creeks and estuaries. The diet includes worms, crabs and other crustaceans, small shellfish and the adults and larvae of various flies, beetles and water-bugs. No such habitat was identified within the Subject Site.	Generally roosts communally amongst mangroves or dead trees, often with related wader species. No such habitat was identified within the Subject Site.	Negligible, no anticipated net loss of foraging or breeding habitat.	No

* Vulnerable = V, Endangered = E, Endangered Population = EP, Critically Endangered = CE



5. Impact Summary

5.1 Vegetation

Approximately 0.01ha of urban exotic/native vegetation is proposed to impacted to accommodate the proposed activity. No threatened ecological communities or habitat trees will be impacted by the proposed activity.

5.2 Threatened Species

The proposed activity is not expected to impact on any BC Act or EPBC Act listed species. Any potential impacts will be mitigated by the actions detailed in **Section 6**.



6. Recommendations

6.1 Impact Mitigation and Minimisation Recommendations

This section of the report details recommended efforts to avoid and minimise impacts on biodiversity values associated with the proposed activity. Measures to be implemented before, during, and post construction are detailed in **Table 7**.

Table 7. Measures to be implemented before, during, and after construction to avoid and minimise the impacts of the proposed activity

Action	Outcome	Timing	Responsibility
Project Location, Design and Planning	The proponent has designed the proposed activity will have as minimal impact on vegetation as possible. Approximately 0.01ha of urban exotic/native vegetation is proposed to be removed as part of the proposed activity.	Pre- construction phase	Proponent
Tree Protections	Australian Standard 4970 (2009) Protection of Trees on Development Sites (AS-4970) outlines that a Tree Protection Zone (TPZ) is the principal means of protecting trees on construction sites. It is an area isolated from construction disturbance so that the tree remains viable. Ideally, works should be avoided within the TPZ. A Minor Encroachment is less than 10% of the TPZ and is outside the structural root zone (SRZ). A Minor Encroachment is considered acceptable by AS-4970 when it is compensated for elsewhere and contiguous within the TPZ. A Major Encroachment is greater than 10% of the TPZ or inside the SRZ. Major Encroachments generally require root investigations undertaken by non-destructive methods or the use of tree sensitive construction methods.	Pre- construction phase	Proponent Arborist
Landscaping	Any future landscaping of the Subject Property should involve the planting of native shrub and groundcover species where possible in accordance with Clause 3.5.1 and Clause 3.5.2 of the SDCP.	Pre- construction phase	Proponent Arborist Project Ecologist
Erosion and Sedimentation	Appropriate erosion and sediment control should be erected and maintained at all times during construction in order to avoid the potential of incurring indirect impacts on biodiversity.	Construction phase	Proponent Construction Contractor
Storage and Stockpiling (Soil and Materials)	Allocate all storage, stockpile, and laydown sites away from any vegetation that is planned to be retained. Avoid importing any soil from outside the site in order to avoid the potential of incurring indirect impacts on biodiversity values as this can introduce weeds and pathogens to the site. If materials are required to be imported for landscaping works, they are to be sterilised according to industry standards prior to importation to site.	Construction phase	Construction Contractors



7. Conclusion

This assessment indicates that the relevant provisions of the Environmental Planning and Assessment Act 1979, Biodiversity Conservation Act 2016, the Sydney Local Environmental Plan 2012 and the Sydney Development Control Plan 2012 have been satisfied.

In summary, the proposed activity will require the clearing of:

• Approximately 0.01ha of Urban Exotic/Native vegetation.

Due to the minor area of impact and low value of the vegetation to native biodiversity, the proposed activity is not expected to impact on any BC Act or EPBC Act listed species.



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9. Appendices

Appendix A. Proposed sitework plans (Jacobs 2024).

Appendix B. Flora species identified within and immediately surrounding the Subject

Appendix C. Fauna species identified within and surrounding the Subject Property.





Appendix A. Proposed sitework plans (Jacobs 2024).



Appendix B. Flora species identified within and immediately surrounding the Subject Site

Scientific Name	Canopy	Mid-Story	Ground
Bidens pilosa *			x
Callistemon citrinus		x	
Camelia japonica *		x	
Cenchrus clandestinus*			
Ceratopetalum gummiferum		x	
Cupressus sempervirens*	x		
Dianella revoluta			х
Dichondra repens			х
Ehrharta erecta*			x
Lagerstroemia indica*		x	
Lomandra longifolia			x
Pelargonium hortorum*			
Pennisetum clandestinum *		x	x
Photinia sp.*		x	
Poa annua*			x
Stellaria media*			x
Taraxacum officinale *			x
Trifolium repens *			x



Class	Scientific Name	Common Name	Status	
	Corvus coronoides	Australian Raven	Protected	
	Cracticus tibicen	Australian Magpie		
	Manorina melanocephala	Noisy Miner		
Aves	Threskiornis molucca	Australian White Ibis		
	Trichoglossus haematodus	Rainbow Lorikeet		
	Acridotheres tristis	Indian Myna	Introduced	
	Columba livia	Rock Dove	Introduced	

Appendix C. Fauna species identified within and surrounding the Subject Property.







environmental

Eastern Sydney Office 201/4-10 Bridge Street Pymble NSW 2073 Ph: 02 9986 1295

Western Sydney Office 7 Twentyfifth Avenue West Hoxton NSW 2171

Hunter Valley Office 10/103 Glenwood Drive Thornton NSW 2322

www.narla.com.au

