Ecological Statement – Proposed redevelopment of a portion of Concord Hospital

1. Introduction and project understanding

At the request of bd infrastructure, on behalf of Health Infrastructure, Lesryk Environmental Pty Ltd (Lesryk) has conducted an ecological investigation within a portion of the grounds of Concord Hospital. The survey has been conducted within, and in proximity to, Building 29. The study was undertaken to assess the potential ecological impacts of the removal of the structures and infrastructure present. The works are required to enable the construction of a new building, this associated with the operations of the hospital. To enable the redevelopment of the site investigated, Building 29, its associated car park, footpaths and garden bed will require clearing.

To determine if there were any ecological constraints associated with the removal of these features, a site inspection has been conducted.

The area inspected is identified in Figure 1.

The objectives of the field-based investigation were to:

1) Determine the character of the vegetation community(ies) present within, and in proximity of, the proposed redevelopment site.
2) Identify the flora and fauna species present, and their State/national conservation status.
3) Determine if any species of conservation concern are present, or could occur at other times/during other seasons of the year.
4) Consider and asses the impacts associated with the proposed redevelopment of the site.

The assessment of possible impact associated with the proposed site redevelopment work is based on a field investigation of the study area, a literature review of previous studies carried out within this portion of the Canada Bay Council Local Government Area (LGA), and the consultation of standard databases and a consideration of the objectives of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), NSW *Environmental Planning and Assessment Act 1979* (EPA Act), NSW *Biodiversity Conservation Act 2016* (BC Act) and any relevant State Environmental Planning Policy (SEPP).

2. Environmental Setting

The proposed redevelopment site is located within the grounds of Concord Hospital, this present adjacent to the Parramatta River. Concord Hospital was erected in the early 1940s, the facility covering an area that is about 14 hectares in size (ha). Given the nature and history of the hospital, the site is highly disturbed, modified and heavily developed. Numerous buildings are present within the hospital grounds, as are a series of internal roads, footpaths, carparks and other modified environments.

Figure 1. Locality of proposed works

The proposed redevelopment area is in the order of 70 metres (m) long by 50 m wide and covers an area of about 3,000 square metres (m^2). Within this site is an existing 30 space car park, a building that is being used by Fire and Rescue NSW, garden beds, landscape plantings, maintained lawns and an internal road network. Services present include an underground stormwater management system and street lighting.

Concord Hospital is present within the Canada Bay LGA, in the Sydney suburb of Concord, east of Concord Road.

Land uses that occur in proximity to the proposed redevelopment site are buildings and infrastructure (such as a helicopter landing site) that are associated with the functions of the hospital. Associated within these are garden beds, manicured shrubs, maintained lawns and isolated plantings of native and exotic species. A network of hard surfaces (including internal roads, walkways and parking areas) are also present.

No conservation reserves or other protected lands are present within the area investigated. The vegetation that lines the Parramatta River is mapped as having Biodiversity Value. That stated, being in the order of 110 m distant from these areas, the development of the site investigated will not have a direct or indirect impact on any vegetation mapped as having Biodiversity Value.

Reference to the Sydney 1:1000000 Soil Landscape map sheet (Chapman and Murphy 1989) and SEED Dataset mapping (State Government of NSW and DPE 2009), identifies that the area in which the works are proposed to be undertaken are underlain by the Blacktown Soil Landscape. These soils are derived from the Wianamatta Group of shales, with limitations including low fertility, moderate erodibility and low to high erosion hazard where flows are concentrated (Chapman and Murphy 1989). The site inspected is at an elevation of about 10 m Above Sea Level.

No water bodies are present within, or in close proximity of, the proposed development site. The Parramatta River is present to the south and east of the area investigated (at distances of 180 m [south] and 270 m [east] respectively), this discharging into Sydney Harbour near the Sydney suburb of Drummoyne. Both the Parramatta River and Sydney Harbour are identified as Key Fish Habitat (DPI 2023c), though, beyond existing inputs, the proposed redevelopment of a portion of the Concord Hospital property will not have an adverse impact on the water quality and aquatic lifeforms in either of these water bodies. As no impacts will arise, a consideration of matters that pertain to the NSW *Fisheries Management Act 1994* is not required.

For reference, a photographic record of the area investigated has been provided (Attachment 1).

Through reference to the listings provided under the EPBC Act, it is noted that no gazetted areas of critical habitat for any flora or fauna species, populations or communities occur within, or in the vicinity of, the area investigated. Similarly, none of the Areas of Outstanding Biodiversity Value listed under Part 3 of the Biodiversity Conservation Regulation 2017 occur within, or in the vicinity of, the area surveyed.

3. Methods

3.1 Definitions

For the purpose of this assessment, the following definitions apply:

- **Subject site** is the area directly affected by the proposed redevelopment of the site, this including the removal of the existing car park, Building 29 and landscaped areas.
- **Study area:** is the subject site and any additional areas that are likely to be affected by the proposal, either directly or indirectly (Office of Environment and Heritage [now known as Department of Planning and Environment] 2018).
- **Study region:** is considered to include the lands that surround the subject site for a distance of 10 km (Department of Environment and Climate Change [now known as Department of Planning and Environment] 2007).

3.2 Field investigation

The proposed redevelopment area was investigated by Deryk Engel [Director and Senior Ecologist] (B.Env.Sc Hons) and Edward Langston [Botanist] (Conservation and Land Management Cert II, B.Env.Sc [currently enrolled]) on 30 May 2023, the inspection undertaken between the hours of 9:30 am and 11:30 am.

The aims of the field investigation were to:

- conduct a flora and fauna survey of all areas likely to be directly or indirectly impacted (up to 5 m beyond the limits of likely disturbance) by the redevelopment of the area investigated.
- identify all of the plants, animals, vegetation communities and fauna habitats present within, and adjacent to, the development footprint
- conduct specific searches within appropriate habitats for threatened species, vegetation communities and populations previously recorded in the region.

To achieve the objectives of the site investigation, all portions of the redevelopment site were traversed by foot. During the course of these investigation, those species, plant community and fauna habitat types present were identified, with all species being identified in the field.

The field investigation broadly followed the 'Random Meander Method' (Cropper 1993). This method is suitable for covering large areas and for locating any rare species (and their associated vegetation communities/habitat types) that may occur within a particular site.

It is acknowledged that cave-dependent Yangochiropteran (hereafter referred to as microbats) could potentially be roosting within the roof space of Building 29. To determine if any microbats were present within Building 29, the following methods were employed:

1) accessing the roof cavity
2) conducting visual inspections of both the roof cavity and building itself, a handheld torch being used to assist with this process
3) employment of an echolocation detection device (an Anabat Express™) within the roof cavity.

In regards to the above:

1) the inspection of the roof cavity lasted for a period of about 15 minutes. During this inspection, targeted surveys/visual inspection for microbats were conducted within any potential roosting sites. In addition, guano accumulations, characteristic staining and/or deceased bats were searched for. Due to the presence of a 'walkway' (secured timber boards presumably established to permit work on the air conditioning unit that is in the roof space), it was possible to traverse, and inspect, the entire roof space
2) The echolocation detector was employed for a period of 15 minutes, with any calls being recorded inhouse using Anabat 6.3 computer software.

By the completion of the field survey a total of 4 person hours of active searches had been accumulated. Considering the small extent of the works proposed, the likely disturbance footprint, the aims of the investigation, and the type of fauna habitats and vegetation stands present, this length of time is considered more than adequate.

No limitations to achieving the aims of the ecological surveys, such as reduced site visibility or access, adverse weather conditions or seasonal constraints were encountered. For reference, the weather conditions experienced during the site investigation were cool temperatures (~18 ˚C), clear skies and a slight breeze.

Considering the objectives of the investigation, the nature (and limited size) of the fauna habitats present, the predicted disturbance footprints and the expected duration of the works, combined with the outcomes of the diurnal survey and literature review process, it was not considered that any additional dedicated fauna investigations (such as conducting nocturnal surveys) were required. Within the area investigated, no habitats important for the local occurrence of any fauna species, particularly those

threatened nocturnal animals previously recorded within this portion of the Canada Bay LGA, were observed.

3.3 Database searches and literature reviews

A number of publicly available databases were consulted prior to carrying out the site inspection (Table 1).

Table 1. Database searches.

Database	Date Accessed	Search Area
Department of Climate Change, Energy the Environment and Water (DCCEW) Protected Matters Search Tool (PMST) (DCCEW 2023)	May 2023	10-kilometre buffer
Department of Primary Industries (DPI) WeedWise Database (DPI 2023a;2023b)	May 2023	Canada Bay
Department of Planning and Environment (DPE) BioNet database (Atlas of NSW Wildlife) (DPE 2023a)	May 2023	10-kilometre buffer
OEH Threatened Species website (OEH 2023)	May 2023	N/A
NSW Government BioNet Vegetation Classification database (NSW Government 2023)	May 2023	N/A
SEED NSW State Vegetation Type Map dataset (State Government of NSW and DPE 2022)	May 2023	N/A
DPI - Fisheries Spatial Data Portal	May 2023	Sydney Metro

These sources were consulted to identify the diversity of ecological communities, flora and fauna species previously recorded, or potentially occurring in, the study region. The identification of those known or potentially occurring native species and communities that have been previously recorded within this portion of the Canada Bay LGA, particularly those listed under the Schedules to the EPBC and BC Acts, thereby permits the tailoring of the field survey strategies to the detection of these plants and animals, their vegetation associations and/or necessary habitat requirements. By identifying likely species, particularly any threatened plants and animals, either the most appropriate species-specific survey techniques may be selected [should their associated vegetation communities/habitat requirements be present] or a precautionary approach to their presence adopted.

The carrying out of a literature search also ensures that the results from surveys conducted during different climatic, seasonal and date periods are considered and drawn upon as required. This approach therefore increases the probability of considering the presence of, and possible impact(s) on, all known and likely native species, particularly any plants and animals that are of State and/or national conservation concern. This approach avoids issues inherent with a one off ‘snap-shot’ study such as this.

Nomenclature used within this report follows that presented in the EPBC and BC Acts. It is noted that the current accepted scientific names for some of the threatened fauna species previously recorded in this locality are not consistent with the names used/provided under either the EPBC or BC Acts. In these instances, nomenclature used within this report follows the current accepted scientific conventions.

Where applicable, any Threatened Ecological Communities (TEC) were classified and named according to the NSW Scientific Committee's Final and Preliminary Determinations (various dates).

The conservation significance of ecological communities, plants and animals recorded is made with reference to:

- the EPBC and BC Acts
- the BioNet Vegetation Classification database (NSW Government 2023) for PCT description.

Field guides and standard texts used during the course of this study included:

- Fairley and Moore (2010) [used to identify those plants present]
- Robinson (2003) [native and exotic plants]
- Cogger (2014) [reptiles and frogs]
- Simpson and Day (2019) [birds]
- Van Dyck and Strahan (2008) [mammals]
- Triggs (1996) [identification of scats, tracks and markings].

3.3.1 Vegetation mapping

Vegetation in the locality has been mapped at a broad scale in NSW State Vegetation Type Map (State Government of NSW and DPE 2022). The vegetation communities are described in terms of dominant species and understorey characteristics.

These communities are also related to the NSW vegetation formation and classes taken from Keith (2004) and the NSW Plant Community Types (PCTs) assigned to the vegetation type in the Vegetation Information System database maintained by the NSW Government.

With reference to the State Vegetation Type Map (State Government of NSW and DPE 2022), the following PCTs are mapped as encompassing the study area (Figure 2):

- PCT 0 – Not native vegetation.

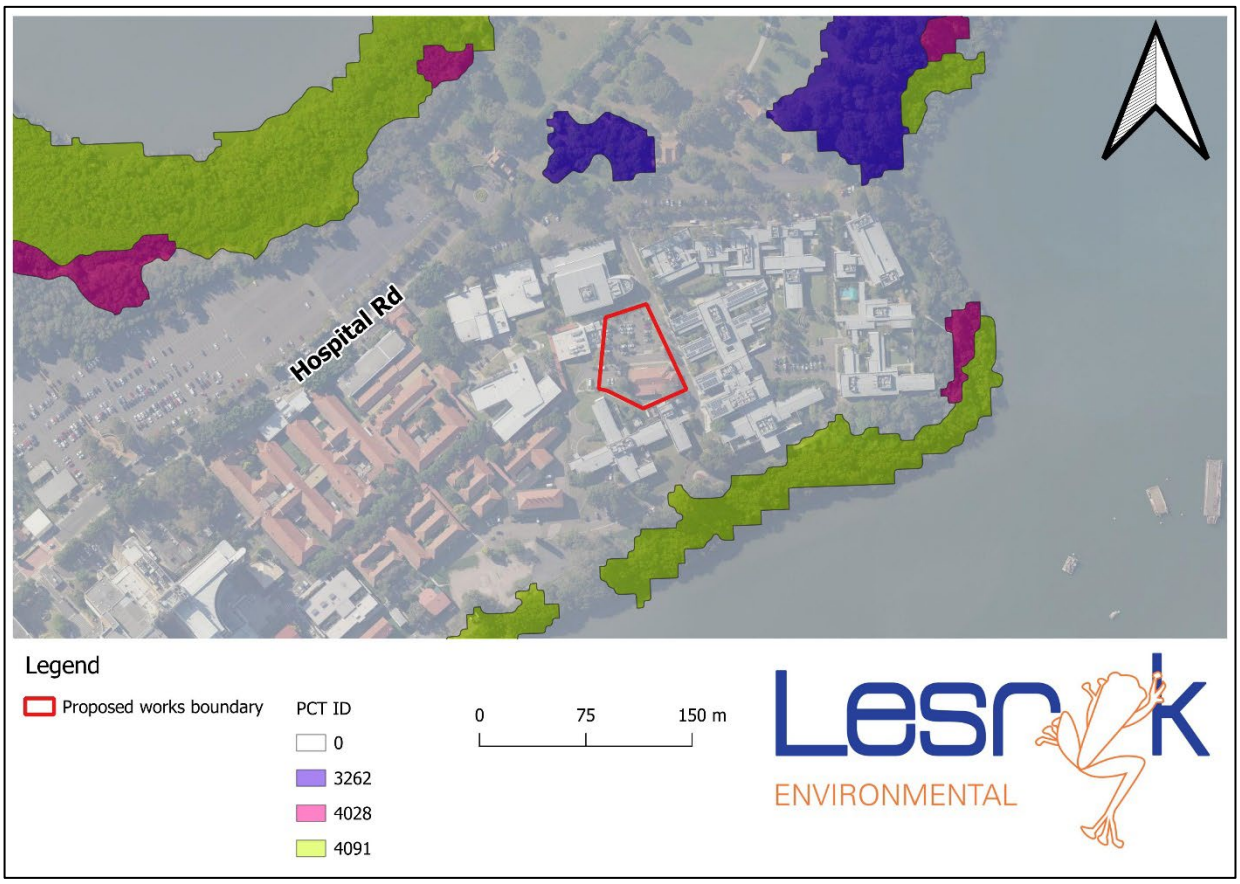

Figure 2. Vegetation mapping.

3.3.2 Threatened species

A review of the PMST (DCCEEW 2023a) and BioNet Atlas (DPE 2023a) identified 58 threatened plants and 83 threatened animals listed under the Schedules of the EPBC and BC Acts that have been previously recorded, or are considered to have habitat, within a 10 km radius of the study area (Attachment 2). For reference, those that have been recorded in proximity to the study area are identified on Figure 3.

With reference to Figure 3, it is noted that no resident populations of State of Federally listed threatened species have been previously recorded within or near to the subject site. The fauna species recorded are all highly mobile flying animals that have large home ranges. It is expected that the records of these are based on observations of transient individuals as opposed to resident animals.

Within, and in proximity of, the study area, no large stick nests (indicative of the breeding presence of the White-bellied Sea-eagle *Haliaeetus leucogaster*), Flying-fox camps or hollow-bearing trees (that would be used by the Little Lorikeet *Glossopsitta pusilla*) are present.

Figure 3. Previously recorded threatened flora and fauna within the study area.

A number of the threatened species listed may fly over (e.g. raptors, Grey-headed Flying-fox [*Pteropus poliocephalus*] and microbats), and potentially forage within/close to the area investigated, while some ground traversing native species are expected to be present in the surrounding bushland and may traverse the subject site on occasion; however, the scale of work proposed is not considered to have an adverse impact on any of these species or their lifecycle requirements. No areas of habitat relied upon by these animals for any part(s) of their lifecycle requirements are to be removed or significantly disturbed, and, considering the environment of the existing hospital, no additional barriers to their movement patterns erected.

The removal of vegetation within the boundary of the disturbance footprint will not affect the presence of any of those threatened species previously recorded, or any areas of their habitat. It is considered that the works will not significantly affect these species or their habitats thereby affecting the viability of their local populations.

It is therefore not considered necessary that any assessments that draw upon the criteria provided under either the EPBC Act (Significant Impact Guidelines) and/or Section 7.3 of the BC Act are required to be carried out in regards to the potential presence of those species previously recorded within the surrounding region.

4. Results

4.1 Vegetation Communities

The field survey found that, with reference to the communities mapped as encompassing the proposed redevelopment site (as presented in Figure 2), the State Vegetation Type Map was accurate.

The proposed works area was comprised of concrete and a maintained exotic grass lawn with planted hedges and amenity trees present. The vegetation present matches PCT-0 'Non-native vegetation' as it does not conform to a naturally occurring plant community.

The boundary of the car park is defined by a row of Forest Red Gum (*Eucalyptus tereticornis*) and Spotted Gum (*Corymbia maculata*) up to 15 m tall along the eastern and western limits, and a hedge of Ball Honey Myrtle (*Melaleuca nodosa*) up to 2 m tall along the north boundary of the proposed work site. All of these have been planted and are even age. The Ball Honey Myrtle hedge has been pruned and shaped. The remaining vegetated areas of the car park are dominated by exotic grasses including Kikuyu (*Cenchrus clandestinus*) and Couch (*Cynodon dactylon*).

Building 29 is surrounded by a mown lawn of Kikuyu and three garden beds. The garden beds were overrun with exotic species including Cobbler's Pegs (*Bidens pilosa*), Moth Vine (*Araujia sericifera*), Ochna (*Ochna serrulata*), Frangipani (*Plumeria* sp.) and planted individuals of the native Broad-leaved Paperbark (*Melaleuca quinquenervia*) that are up to 4 m tall.

4.2 Flora species recorded during the field investigation

By the completion of the field survey a number of plants, several of which are exotic species, had been recorded (Attachment 3). It is noted that Attachment 3 is not intended to be a comprehensive list of all of the species present within the study area, and only represents those plants that were recorded whilst undertaking searches for:

- Native species and ecological communities of State and/or national conservation concern that are known, or expected to occur, in the locality.
- Schedule 3 Weeds of the NSW Biosecurity Regulation 2017 that would require treatment.

In relation to the native species recorded, none are listed, or currently being considered for listing, under either the EPBC or BC Acts.

Whilst targeted searches for those threatened plants known to occur within the study region were conducted, none were recorded. Given the highly disturbed and modified nature of subject site, the area is not considered to contain habitat suitable for any of the threatened plant species previously recorded within the surrounding region.

Based on the results of the field investigation, it is considered that no listed threatened plant species would be present within the proposed redevelopment site, including within the soil seed bank.

4.3 Weeds

Under the NSW *Biosecurity Act 2015* 'all plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.'

Asparagus Fern (*Asparagus aethiopicus*) was recorded onsite and is listed under Schedule 3 of the Biosecurity Regulation, as a Priority Weed for the Greater Sydney Region (which includes Canada Bay LGA) (DPI 2023a) and a Weed of National Significance (WoNS) (DPI 2023b):

It is expected that this species will be removed as part of the vegetation clearing, as this was found to occur within the western extent of the property, appearing mostly as isolated patches below the canopy of mature trees.

4.4 Fauna

By the completion of the site inspection a number of common to abundant native and introduced animals had been recorded (Table 2), none of which are listed, or currently being considered for listing, under the Schedules to the EPBC or BC Acts.

Though considered and targeted, no microbats were observed within the roof space of Building 29 and no indirect evidence, such as guano accumulations, was noted.

Use of the echolocation detector did not record any calls characteristic of microbats.

Whilst numerous entrance points to the roof space (such as holes in the building's facia, soffit and cladding) are available, within the Building 29 roof cavity itself there are limited sites that would be suitable for the roosting requirements of microbats. The habitat within the roof space is also unlikely to encourage occupation by microbats. Building 29 supports clay roof tiles, a number of which, due to the age of the building, are not correctly interlocking. In addition, there is no sarking associated with these tiles. Due to the current nature of the roofing tiles, numerous small gap and holes are evident within the roof, these permitting a degree of light and air currents to enter into the roof space. The combination of the lack of sarking and nature of the roofing tiles is considered to produce a microclimate that would be unsuitable for use by microbats.

As the habitat is unsuitable, no microbats would be roosting or over-wintering (microbats enter periods of torpor/hibernation during the winter months) within the roof cavity of Building 29.

Table 2: Fauna species recorded

Key

* - indicates introduced species

Common Name	Family and Scientific Name	Detection method
Mammals		
	Pseudocheiridae	
Common Ringtail Possum	*Pseudocheirus peregrinus*	Observed in drey
	Phalangeridae	
Common Brushtail Possum	*Trichosurus vulpecula*	Characteristic scats noted
	Muridae	
* Black Rat	*Rattus rattus*	Characteristic scats noted
BIRDS		
	Laridae	
Silver Gull	*Chroicoephalus novaehollandiae*	Observed
	Ardeidae	
White-faced Heron	*Egretta novaehollandiae*	Observed
	Cacatuidae	
Sulphur-crested Cockatoo	*Cacatua galerita*	Observed
	Psittacidae	
Rainbow Lorikeet	*Trichoglossus haematodus*	Observed
	Columbidae	
* Rock Dove	*Columba livia*	Observed
Crested Pigeon	*Ocyphaps lophotes*	Observed
	Meliphagidae	
Noisy Miner	*Manorina melanocephala*	Observed
	Artamidae	
Australian Magpie	*Cracticus tibicen*	Observed
	Corvidae	
Australian Raven	*Corvus coronoides*	Observed
	Hirundinidae	
Welcome Swallow	*Hirundo neoxena*	Observed
	Sturnidae	
* Common Myna	*Sturnus tristis*	Observed

Within the roofing space, evidence of site usage by the Common Brushtail Possum (*Trichosurus vulpecula*) and introduced Black Rat (*Rattus rattus*) (in the form of each species characteristic scats) was noted. A Common Ringtail Possum (*Pseudocheirus peregrinus*) was observed within a drey (nest) in a planted paperbark (at a height of about 3 m) that is present near the entrance to Building 29.

The Common Brushtail Possum and Common Ringtail Possum are both protected native animals under the BC Act, each considered to be common to abundant animals and both are highly tolerant of, and adaptable to, urban environments.

None of the trees within the proposed disturbance footprint were observed to be hollow-bearing (no visible cavities or those vertical dead limbs/branches that could potentially be hollow were noted), and, beyond the Ringtail drey, none were noted to contain any nests.

Anecdotal evidence obtained at the time of the inspection noted that Sulphur-crested Cockatoos (*Cacatua galerita*) were nesting in a dead stag that is present 70 m west of Building 29. This dead tree occurs beyond the disturbance footprint and would not be directly or indirectly affected by the scope of works proposed. The Sulphur-crested Cockatoo is a highly tolerant and urban adaptable species, the local presence of this species at this site would not be affected by the redevelopment of Building 29 or its associated car park

The removal of the vegetation present within the area investigated would not compromise the quality or connectivity of any important local or regional fauna movement corridors. The redevelopment of the site will not further fragment or isolate any habitat areas that are currently interconnected.

No habitats were observed within the proposed redevelopment site that could be occupied by locally viable populations of those threatened animals previously recorded within this portion of the Canada Bay LGA. As such, none of these animals will be present, or reliant upon, the study area at other times of the year.

Threatened flying species (including urban tolerant microbats) that have been previously recorded in this part of the Sydney Metropolitan Area may traverse the site during their dispersal and foraging periods, as may ground-traversing fauna. That stated, the extent of redevelopment associated with the works, and the nature of the disturbance, would not have an impact on these species, their movement patterns or foraging/breeding requirements.

5. Conclusions

A flora and fauna investigation and assessment has been carried out within a portion of Concord Hospital, this encompassing, and occurring in proximity to, Building 29. The investigation has been conducted to assess the potential ecological impacts of the redevelopment of this part of the hospital grounds.

Within the area investigated, no State or Federally listed threatened species or populations were recorded. Similarly, no habitat for those threatened species previously recorded within this portion of the Canada Bay LGA were observed within, or close to, the limits of the proposed works.

The field investigation confirmed that the PCT present conformed to PCT 0 ‘Non-native vegetation’. The dominant vegetation within the area surveyed is an exotic mown lawn with plantings of native tree species that include Ball Honey Myrtle, Broad-leaved Paperbark and Spotted Gums.

Asparagus Fern was recorded and is listed under Schedule 3 of the Biosecurity Regulation, as a Priority Weed for the Greater Sydney Region (which includes Canada Bay LGA) (DPI 2023a) and a WoNS (DPI 2023b): It is worth noting that this plant occurred mostly as isolated individuals and did not present as a large-scale infestation. The occurrences of Asparagus Fern is expected to be removed and disposed of at a licenced landfill as part of the redevelopment of the site.

Though considered and targeted, no threatened fauna, including cave-associated microbats, were recorded in association with the area investigated, including Building 29.

None of the trees present were observed to be hollow-bearing. Native species were detected roosting/sheltering within the subject site, these animals noted within the roof space of Building 29 and occupying a drey (nest). Recommendations for the management of these native animals immediately prior to the clearing of the site have been provided below.

In preparing this ecological statement, consideration has been given to the purposes of the BC Act. The field survey and subsequent report has considered the biodiversity of the area investigated and the State significance of the species and plant communities present or potentially occurring. This independent and scientifically based survey has assessed the risk of extinction to a species and ecological community, and considered any key threatening processes[1]. The survey has determined that the redevelopment of Building 29, its associated car park and grounds will not have a significant effect on species, ecological communities or their habitats. The investigation has concluded that there are no ecological constraints with the proposal proceeding as planned.

6. Recommendations

In line with the principles of ecologically sustainable development (as described in Division 5, item 193 of the Environmental Planning and Assessment Regulation 2021), the following recommendations are presented:

1) An ecologist, or similar qualified wildlife handler, should be present to collect and relocate locally the Common Ringtail Possum. This should be undertaken at least 1 hour (or there abouts) prior to the removal of the paperbark trees. Once collected:
    a. The paperbark trees should be removed to prevent reoccupation
    b. The Ringtail Possum should be kept in a covered and darkened container and released locally, on or as near to as practical to dusk.

2) An ecologist, or similar qualified wildlife handler, should be present to collect and relocate locally any Common Brushtail Possums exposed during the course of the roof removal. Alternatively:
    a. Animals could be collected prior to the demolition works commencing, with all trees and other avenues that permit access to the roof space by possums being removed/cleared/blocked.

3) To off-set the loss of arboreal native mammals sheltering sites, 6 purpose-built habitat boxes (3 suitable for Common Brushtail Possums and 3 for Common Ringtail Possums) should be erected within an area of the hospital that supports native vegetation and is not ear-marked for future development. These boxes should be:
    a. Erected on the north to north-west side of a suitable tree, at a height of about 5 m
    b. Monitored (quarterly) for a period of 12 months, then six monthly for another year (i.e. two year monitoring period) with any damaged boxes, or those occupied by exotic species (e.g. European Bees [*Apis mellifera*]) being replaced/repaired.

[1] None of the Key Threatening Process listed under the EPBC or BC Act would be applicable to the proposed redevelopment of the subject site.

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1	8 June 2023	Deryk Engel (Director) Lesryk Environmental Pty Ltd) and Edward Langston (Botanist)	D.Engel 8/6/23
Final	29 June 2023		D.Engel 29/6/23

Attachment 1. Photographic record of the subject site (photographs taken 30/05/23)

	Character of vegetation along the eastern boundary of the proposed redevelopment site. Photograph taken from the north-east corner, facing south. Building 29 evident rear picture (yellow wallbuilding)
	Character of vegetation along the northern boundary of the proposed works. Photograph taken from the north-west corner, facing east.

	Character of vegetation along the southern boundary of the proposed works. Photograph taken from the south-east corner facing west. Building 29 right of picture.
	Character of vegetation within the garden bed outside of Building 29. Photograph taken facing north-east.

	Character of vegetation within the existing car park with the proposed works. Photograph taken facing north.
	Character of the roof cavity of Building 29.

Attachment 2. PMST and BioNet Atlas search results

Data from the BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°C; ^^ rounded to 0.01°C. Copyright the State of NSW through the Department of Planning, Industry and Environment. Search criteria: Public Report of all Valid Records of Threatened (listed on BC Act 2016) or Commonwealth listed Entities in selected area [North: -33.80 West: 151.04 East: 151.17 South: -33.91] returned a total of 20,273 records of 84 species. Report generated on 30/05/2023

Kingdom	Class	Family	Species Code	Scientific Name	Common Name	NSW status	Comm. status	Records
Animalia	Amphibia	Myobatrachidae	3116	*Pseudophryne australis*	Red-crowned Toadlet	V,P		7
Animalia	Amphibia	Hylidae	3166	*Litoria aurea*	Green and Golden Bell Frog	E1,P	V	16678
Animalia	Reptilia	Cheloniidae	2004	*Caretta caretta*	Loggerhead Turtle	E1,P	E	1
Animalia	Aves	Anatidae	0214	*Stictonetta naevosa*	Freckled Duck	V,P		2
Animalia	Aves	Columbidae	0023	*Ptilinopus superbus*	Superb Fruit-Dove	V,P		4
Animalia	Aves	Apodidae	0334	*Hirundapus caudacutus*	White-throated Needletail	P	V,C,J,K	20
Animalia	Aves	Ardeidae	0197	*Botaurus poiciloptilus*	Australasian Bittern	E1,P	E	9
Animalia	Aves	Ardeidae	0196	*Ixobrychus flavicollis*	Black Bittern	V,P		5
Animalia	Aves	Accipitridae	0218	*Circus assimilis*	Spotted Harrier	V,P		4
Animalia	Aves	Accipitridae	0226	*Haliaeetus leucogaster*	White-bellied Sea-Eagle	V,P		360
Animalia	Aves	Accipitridae	0225	*Hieraaetus morphnoides*	Little Eagle	V,P		5
Animalia	Aves	Accipitridae	8739	*^^Pandion cristatus*	Eastern Osprey	V,P,3		9

Kingdom	Class	Family	Species Code	Scientific Name	Common Name	NSW status	Comm. status	Records
Animalia	Aves	Falconidae	0238	*Falco subniger*	Black Falcon	V,P		1
Animalia	Aves	Burhinidae	0174	*Burhinus grallarius*	Bush Stone-curlew	E1,P		3
Animalia	Aves	Haematopodidae	0130	*Haematopus longirostris*	Pied Oystercatcher	E1,P		1
Animalia	Aves	Charadriidae	0141	*Charadrius leschenaultii*	Greater Sand-plover	V,P	V,C,J,K	1
Animalia	Aves	Rostratulidae	0170	*Rostratula australis*	Australian Painted Snipe	E1,P	E	3
Animalia	Aves	Scolopacidae	0164	*Calidris canutus*	Red Knot	P	E,C,J,K	17
Animalia	Aves	Scolopacidae	0161	*Calidris ferruginea*	Curlew Sandpiper	E1,P	CE,C,J,K	362
Animalia	Aves	Scolopacidae	0165	*Calidris tenuirostris*	Great Knot	V,P	CE,C,J,K	2
Animalia	Aves	Scolopacidae	0167	*Limicola falcinellus*	Broad-billed Sandpiper	V,P	C,J,K	2
Animalia	Aves	Scolopacidae	0152	*Limosa limosa*	Black-tailed Godwit	V,P	C,J,K	14
Animalia	Aves	Scolopacidae	0149	*Numenius madagascariensis*	Eastern Curlew	P	CE,C,J,K	30
Animalia	Aves	Scolopacidae	0160	*Xenus cinereus*	Terek Sandpiper	V,P	C,J,K	1
Animalia	Aves	Laridae	0117	*Sternula albifrons*	Little Tern	E1,P	C,J,K	8
Animalia	Aves	Cacatuidae	0265	*^Calyptorhynchus lathami*	Glossy Black-Cockatoo	V,P,2	V	3
Animalia	Aves	Psittacidae	0260	*Glossopsitta pusilla*	Little Lorikeet	V,P		5
Animalia	Aves	Psittacidae	0309	*Lathamus discolor*	Swift Parrot	E1,P	CE	11

Kingdom	Class	Family	Species Code	Scientific Name	Common Name	NSW status	Comm. status	Records
Animalia	Aves	Psittacidae	0302	^^*Neophema pulchella*	Turquoise Parrot	V,P,3		2
Animalia	Aves	Strigidae	0246	^^*Ninox connivens*	Barking Owl	V,P,3		1
Animalia	Aves	Strigidae	0248	^^*Ninox strenua*	Powerful Owl	V,P,3		242
Animalia	Aves	Tytonidae	0252	^^*Tyto longimembris*	Eastern Grass Owl	V,P,3		2
Animalia	Aves	Meliphagidae	0603	*Anthochaera phrygia*	Regent Honeyeater	E4A,P	CE	5
Animalia	Aves	Meliphagidae	0448	*Epthianura albifrons*	White-fronted Chat	V,P		254
Animalia	Aves	Meliphagidae	0448	*Epthianura albifrons*	White-fronted Chat population in the Sydney Metropolitan Catchment Management Area	E2,V,P		254
Animalia	Aves	Neosittidae	0549	*Daphoenositta chrysoptera*	Varied Sittella	V,P		1
Animalia	Aves	Artamidae	8519	*Artamus cyanopterus cyanopterus*	Dusky Woodswallow	V,P		18
Animalia	Aves	Petroicidae	0380	*Petroica boodang*	Scarlet Robin	V,P		3
Animalia	Aves	Petroicidae	0382	*Petroica phoenicea*	Flame Robin	V,P		2
Animalia	Mammalia	Peramelidae	1097	*Perameles nasuta*	Long-nosed Bandicoot population in inner western Sydney	E2,P		26
Animalia	Mammalia	Phascolarctidae	1162	*Phascolarctos cinereus*	Koala	E1,P	E	2
Animalia	Mammalia	Burramyidae	1150	*Cercartetus nanus*	Eastern Pygmy-possum	V,P		2

Kingdom	Class	Family	Species Code	Scientific Name	Common Name	NSW status	Comm. status	Records
Animalia	Mammalia	Pseudocheiridae	1133	*Petauroides volans*	Southern Greater Glider	E1,P	E	1
Animalia	Mammalia	Pteropodidae	1280	*Pteropus poliocephalus*	Grey-headed Flying-fox	V,P	V	776
Animalia	Mammalia	Emballonuridae	1321	*Saccolaimus flaviventris*	Yellow-bellied Sheathtail-bat	V,P		11
Animalia	Mammalia	Molossidae	1329	*Micronomus norfolkensis*	Eastern Coastal Free-tailed Bat	V,P		3
Animalia	Mammalia	Vespertilionidae	1353	*Chalinolobus dwyeri*	Large-eared Pied Bat	V,P	V	1
Animalia	Mammalia	Vespertilionidae	1372	*Falsistrellus tasmaniensis*	Eastern False Pipistrelle	V,P		1
Animalia	Mammalia	Vespertilionidae	1357	*Myotis macropus*	Southern Myotis	V,P		50
Animalia	Mammalia	Vespertilionidae	1361	*Scoteanax rueppellii*	Greater Broad-nosed Bat	V,P		5
Animalia	Mammalia	Miniopteridae	1346	*Miniopterus australis*	Little Bent-winged Bat	V,P		7
Animalia	Mammalia	Miniopteridae	3330	*Miniopterus orianae oceanensis*	Large Bent-winged Bat	V,P		98
Animalia	Mammalia	Muridae	1466	*Pseudomys gracilicaudatus*	Eastern Chestnut Mouse	V,P		1
Plantae	Flora	Campanulaceae	7963	*^^Isotoma fluviatilis subsp. fluviatilis*		3	X	1

Kingdom	Class	Family	Species Code	Scientific Name	Common Name	NSW status	Comm. status	Records
Plantae	Flora	Campanulaceae	1937	*Wahlenbergia multicaulis*	Tadgell's Bluebell in the local government areas of Auburn, Bankstown, Baulkham Hills, Canterbury, Hornsby, Parramatta and Strathfield	E2		141
Plantae	Flora	Convolvulaceae	2234	*Wilsonia backhousei*	Narrow-leafed Wilsonia	V		133
Plantae	Flora	Elaeocarpaceae	6206	*Tetratheca juncea*	Black-eyed Susan	V	V	3
Plantae	Flora	Ericaceae	7752	*Epacris purpurascens var. purpurascens*		V		29
Plantae	Flora	Fabaceae (Faboideae)	2853	*Dillwynia tenuifolia*		V		2
Plantae	Flora	Fabaceae (Mimosoideae)	3860	*Acacia pubescens*	Downy Wattle	V	V	541
Plantae	Flora	Fabaceae (Mimosoideae)	15210	*Acacia terminalis subsp. Eastern Sydney*	Sunshine wattle	E1	E	1
Fungi	Flora	Hygrophoraceae	F006	*Camarophyllopsis kearneyi*		E1		1
Fungi	Flora	Hygrophoraceae	F003	*Hygrocybe anomala var. ianthinomarginata*		V		1
Fungi	Flora	Hygrophoraceae	F004	*Hygrocybe aurantipes*		V		1

Kingdom	Class	Family	Species Code	Scientific Name	Common Name	NSW status	Comm. status	Records
Fungi	Flora	Hygrophoraceae	F001	*Hygrocybe austropratensis*		E1		1
Fungi	Flora	Hygrophoraceae	F005	*Hygrocybe lanecovensis*		E1		1
Fungi	Flora	Hygrophoraceae	F002	*Hygrocybe reesiae*		V		1
Fungi	Flora	Hygrophoraceae	F015	*Hygrocybe rubronivea*		V		1
Plantae	Flora	Lamiaceae	3418	*^^Prostanthera marifolia*	Seaforth Mintbush	E4A,3	CE	2
Plantae	Flora	Myrtaceae	4007	*^^Callistemon linearifolius*	Netted Bottle Brush	V,3		9
Plantae	Flora	Myrtaceae	4024	*Darwinia biflora*		V	V	2
Plantae	Flora	Myrtaceae	4134	*Eucalyptus nicholii*	Narrow-leaved Black Peppermint	V	V	4
Plantae	Flora	Myrtaceae	8907	*Eucalyptus scoparia*	Wallangarra White Gum	E1	V	1
Plantae	Flora	Myrtaceae	8314	*Leptospermum deanei*		V	V	2
Plantae	Flora	Myrtaceae	4248	*Melaleuca deanei*	Deane's Paperbark	V	V	6
Plantae	Flora	Myrtaceae	4283	*Rhodamnia rubescens*	Scrub Turpentine	E4A	CE	1
Plantae	Flora	Myrtaceae	4293	*Syzygium paniculatum*	Magenta Lilly Pilly	E1	V	6
Plantae	Flora	Orchidaceae	4464	*^Genoplesium baueri*	Bauer's Midge Orchid	E1,P,2	E	10
Plantae	Flora	Potamogetonaceae	6339	*Zannichellia palustris*		E1		6

Kingdom	Class	Family	Species Code	Scientific Name	Common Name	NSW status	Comm. status	Records
Plantae	Flora	Proteaceae	8293	^^*Grevillea beadleana*	Beadle's Grevillea	E1,3	E	1
Plantae	Flora	Proteaceae	9680	*Macadamia integrifolia*	Macadamia Nut		V	2
Plantae	Flora	Proteaceae	5458	^^*Persoonia hirsuta*	Hairy Geebung	E1,P,3	E	1
Plantae	Flora	Rhamnaceae	5591	*Pomaderris prunifolia*	P. prunifolia in the Parramatta, Auburn, Strathfield and Bankstown Local Government Areas	E2		19
Plantae	Flora	Thymelaeaceae	6965	*Pimelea curviflora var. curviflora*		V	V	7

Attachment 3. Flora species recorded

Key
Exotic species - *
Weeds of National Significance - #

FAMILY	Scientific Name	Common Name
MAGNOLIOPSIDA - DICOTYLEDONS		
Apocynaceae	*Plumeria sp.* *	Frangipani
	*Araujia sericifera**	Moth vine
Asteraceae	*Bidens pilosa* *	Farmers Friend
Campanulaceae	*Wahlenbergia gracilis*	Native Bluebell
Cannabaceae	*Celtis sinensis**	Chinese Celtis
Euphorbiaceae	*Triadica sebifera**	Chinese Tallow
Fabaceae: Caesalpiniaceae	*Bauhinia galpinii**	African Orchid Bush
Geraniaceae	*Pelargonium × hortorum* *	Garden Geranium
Myrtaceae	*Callistemon viminalis*	Weeping Bottlebrush
	Corymbia maculata	Spotted Gum
	Eucalyptus tereticornis	Forest Red Gum
	Melaleuca nodosa	Ball Honey Myrtle
	Melaleuca quinquenervia	Broad-leaved Paperbark
	Melaleuca styphelioides	Prickly-leaved Tea Tree
Ochnaceae	*Ochna serrulata* *	Ochna
Plantaginaceae	*Plantago lanceolata* *	Lamb's Tongue
Sapindaceae	*Cupaniopsis anacardioides*	Tuckeroo
MAGNOLIOPSIDA - MONOCOTYLEDONS		
Asparagaceae	*# Asparagus aethiopicus* *	Asparagus Fern
	Liriope muscari *	Lilyturf
Iridaceae	*Dietes grandiflora* *	African Iris
Poaceae	*Bromus catharticus* *	Prairie Grass
	Cenchrus clandestinus *	Kikuyu Grass
	Cynodon dactylon	Couch
	Ehrharta erecta *	Panic Veldt Grass
	Eleusine indica *	Crowsfoot Grass
	Paspalum dilatatum *	Paspalum