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School Infrastructure NSW
Level 8, 259 George Street
Sydney NSW 2000

Green Square Integrated Community Facility and School – BDAR Waiver Assessment

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The purpose of this letter is to assess the need for a biodiversity assessment utilising the Biodiversity Assessment Method, for a proposed State Significant Development (SSD-10381) for the Green Square Integrated Community Facility and School (hereafter referred to as the 'project') located at 3 Joynton Avenue, Zetland. This assessment considers the part of Lot 2 DP 1174641 in which the integrated community facility and school will be constructed (hereafter referred to as the 'Subject Land').

This letter is a response to Item 19 of the Secretary's Environmental Assessment Requirements (SEARs) which indicates that the SSD Application is to be accompanied by a Biodiversity Development Assessment Report (BDAR). Section 7.9 of the NSW *Biodiversity Conservation Act 2016* (BC Act) requires all development applications for SSD to be accompanied by a BDAR, unless both the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.

This letter has been prepared to provide information for the Department of Planning, Industry and Environment's (DPIE) Planning Agency Head and the Environment Agency Head to assist them in determining whether the project is likely to have any significant impact on biodiversity values and whether a BDAR is required for the project.

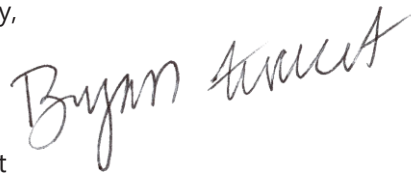
This letter includes the following:

- **Appendix A:** BDAR Waiver Request;
- **Appendix B:** Flora Species List; and
- **Appendix C:** Threatened Species BioNet Atlas Results.

On the basis of our investigations, we believe that the preparation of a BDAR is not necessary due to the low likelihood of impacts to biodiversity values.

If you have any queries regarding this assessment, please don't hesitate to contact me on (02) 9868 1933.

Yours sincerely,



Bryan Furchert
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APPENDIX A :

BDAR Waiver Assessment – 3 Joynton Avenue, Zetland

A.1. Introduction

School Infrastructure NSW (SINSW) has proposed to develop a community facility and school on land located at 3 Joynton Avenue, Zetland (hereafter referred to as the 'Subject Land'). The proposed development includes the construction of a new building known as the Green Square Integrated Community Facility and School (Green Square ICFS) (the 'project'). The project is subject to assessment as a State Significant Development (SSD) under Part 4 Division 4.7 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) (SSD-10381). The Secretary's Environmental Assessment Requirements (SEARs) issued for the project require the preparation of a Biodiversity Development Assessment Report (BDAR).

Cumberland Ecology has been commissioned by SINSW to prepare a BDAR waiver for the project. The purpose of this document is to provide the information requirements as set out in Table 1 and Table 2 of *How to apply for a biodiversity development assessment report waiver* (DPIE 2019).

A.1.1. Assessment Requirements for State Significant Development

The project is classified as SSD under Clause 15 (1) of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011*, as the proposal seeks consent for development of a new integrated community facility and school (regardless of the capital investment value).

Section 7.9 of the NSW *Biodiversity Conservation Act 2016* (BC Act) requires all development applications for SSD to be accompanied by a BDAR, unless both the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values. The BDAR is to be prepared by an accredited assessor utilising the Biodiversity Assessment Method (BAM).

A.1.2. Waiver of Requirement to Prepare a Biodiversity Development Assessment Report

Section 7.9 of the BC Act indicates that there are some circumstances in which the Planning Agency Head and the Environment Agency Head may determine that a proposed development is not likely to have a significant impact on biodiversity values and as such, a BDAR is not required to be prepared. Biodiversity values are defined under the BC Act (Clause 1.5) and the NSW *Biodiversity Conservation Regulation 2017* (BC Regulation, Clause 1.4), and include:

- Vegetation integrity—being the degree to which the composition, structure and function of vegetation at a particular site and the surrounding landscape has been altered from a near natural state;
- Habitat suitability—being the degree to which the habitat needs of threatened species are present at a particular site;
- Threatened species abundance—being the occurrence and abundance of threatened species or threatened ecological communities, or their habitat, at a particular site;
- Vegetation abundance—being the occurrence and abundance of vegetation at a particular site;
- Habitat connectivity—being the degree to which a particular site connects different areas of habitat of threatened species to facilitate the movement of those species across their range;

- Threatened species movement—being the degree to which a particular site contributes to the movement of threatened species to maintain their lifecycle;
- Flight path integrity—being the degree to which the flight paths of protected animals over a particular site are free from interference; and
- Water sustainability—being the degree to which water quality, water bodies and hydrological processes sustain threatened species and threatened ecological communities at a particular site.

For a waiver to be applied for future development at a site, it needs to be demonstrated that the above listed biodiversity values will not be significantly impacted.

BDAR waiver request information requirements are set out in **Table 1** below, as per Table 1 of *How to apply for a biodiversity development assessment report waiver* (DPIE 2019).

Table 1 BDAR waiver request information requirements

Requirements	Responses
Admin	
Proponent name and contact details	Proponent Name: SINSW Nominated Contact for the project: Rod Stanton Director School Infrastructure NSW Rod.Stanton@det.nsw.edu.au
Project ID (Information to identify which SSD or SSI project the request relates to and where the project is up to in the assessment process)	SSD-10381
Name and ecological qualifications of person completing TABLE 2	Bryan Furchert <ul style="list-style-type: none"> • Bachelor of Biodiversity and Conservation. Macquarie University, 2012 • Diploma of Conservation and Land Management Belmont TAFE, 2009 • BAM Accredited Assessor Training. Muddy Boots, 2017 (BAAS18095) <hr/> Katrina Wolf <ul style="list-style-type: none"> • Bachelor of Science (Environmental). The University of Sydney, 2007 • BioBanking Assessors Training Course. TAFE Ryde, 2010 (Assessor # 0136)

Requirements	Responses
	<ul style="list-style-type: none"> BAM Accredited Assessor Training. Muddy Boots, 2017 (BAAS18010)
Site details	
Street address, Lot and DP, local government area	3 Joynton Avenue, Zetland, NSW Lot 2 DP 1174641 City of Sydney LGA
Description of existing development site, i.e. the area of land that is subject to the proposed development application. If any part of the land is considered 'Category 1- exempt land' information must be provided to demonstrate how the land meets the criteria that applies to Category 1 – Exempt Land.	<p>The Subject Land is an urban property comprising two buildings, paved areas and gardens (Figures 1 and 2).</p> <p>As the Subject Land comprises urban land it is not considered 'Category 1 - exempt land' under the <i>Local Land Services Act 2013</i>.</p> <p>Further details are provided in Section A.2.1.</p>
Location map showing the development site in the context of surrounding areas and landscape features. Satellite image of site in context of adjoining sites.	See Figure 1
Site Map (to scale, ideally as a spatial shapefile)	See Figure 1
Proposed development	
Project description providing enough information to enable an understanding of the nature and scale of the proposed development and any associated activities (including construction etc.)	<p>The proposed development involves the redevelopment of the Subject Land, including construction of an integrated community facility and Primary School.</p> <p>Further description is provided in Section A.2.2.</p>
Proposed Site Plan	See Figure 2
Impacts on biodiversity values	
<p>Complete TABLE 2 below on Biodiversity Values</p> <p>For each biodiversity value, the proponent must either:</p> <ul style="list-style-type: none"> explain why the value is not relevant to the proposed development; or, where a biodiversity value may be relevant, provide an explanation of how impacts have been avoided and identify the likelihood and extent of any remaining impacts of the proposed development, including impacts prescribed under clause 6.1 of the BC Regulation. 	See Table 3

Requirements	Responses
<p>A biodiversity value is not relevant to a proposed development if the value is not present on the development site AND there is no potential for direct or indirect impacts on the biodiversity value if it occurs off-site.</p>	<p>See Table 3</p>
<p>Where one or more biodiversity values may be relevant to the proposed development, TABLE 2 is to be completed by a suitably qualified person with tertiary qualifications in natural sciences including subjects that relate to the observation and description of terrestrial biodiversity and landforms, and at least three years of work experience in environmental assessment including field identification of plant and animal species and habitats The person does not need to be an accredited person under the BC Act.</p>	<p>See Table 3</p>
<p>Attach any additional information required where biodiversity values are relevant to the site. E.g. Vegetation Map (indicating plant community types), Ecology Reports, Water Quality data, BioNet Atlas, Directory of Important Wetlands (DIWA), migratory bird flyway information.</p>	<p>See Figures 1-4 and Appendix C</p>

A.2. Background

A.2.1. Description of Site

The project is to construct a new building called the Green Square ICFS on land located at 3 Joynton Avenue, Zetland, NSW (**Figure 1**). The Subject Land comprises part of Lot 2 DP 1174641. The subject site currently contains the Green Square Community Hall and a building containing hydrotherapy facilities operated by, surrounded by paved surfaces forming car parks and associated access. Vegetation within the subject site is predominately planted, with the exception of weed species.

A.2.2. Project Description

The infrastructure on the Subject Lands is to be demolished and the site excavated to remove contaminants under a separate DA prior to commencement of the Project.

The Subject Land was selected as the site for the proposed development for a range of reasons, including but not limited to:

- Space to construct school facilities to accommodate 600 students and 60 staff;
- Requirement for a school to service the Green Square Town Centre redevelopment; and

- Easy access to public transport, and local shops.

The project involves construction of a new building which will include a school and an integrated community facility. The school is proposed for a maximum of 600 children in years Kindergarten to Year 6.

The proposed site plan is shown in **Figure 2**.

A.3. Methods

A.3.1. Database Analysis

Database searches were conducted to identify threatened species, populations, that occur within the locality using the NSW Environment, Energy and Science Group (EES) BioNet Atlas database (EES 2020). The BioNet Atlas search facility was used to generate records of threatened flora and fauna species and populations listed under the BC Act within the locality. The locality is defined as the area within a 10 km radius of the Subject Land. The number, age, and location of such records were considered to provide an indication of the species that could have the potential to occur on or around the Subject Land.

A.3.2. GIS Mapping

A desktop analysis was undertaken to identify the vegetation communities were present on or nearby the Subject Land. This involved reviewing the mapping scheme the *Native Vegetation of the Sydney Metropolitan Area* (OEH 2016a) covering the Subject Land. A review of historical imagery from 1943 obtained from SixMap (NSW Government Spatial Services 2020) was undertaken to ascertain historical land uses and vegetation extent and identify changes over time. A vegetation map of the Subject Land was then produced based upon observations of vegetation during the field surveys.

A.3.3. Site Inspection

A botanist and ecologist surveyed the Subject Land on 8 September 2020. The Subject Land was inspected by traversing all vegetated areas of the Subject Land to verify existing vegetation mapping, with reference to Plant Community Types (PCTs) and potential threatened ecological communities (TECs) known to occur within the locality.

No BAM plots were undertaken as there were no adequately sized areas of native vegetation. Native vegetation within the site is limited to sporadic plantings in garden beds, isolated by paved surfaces.

A.3.3.1. Random Meander Surveys

A random meander survey was undertaken across the entirety of the Subject Land, and all flora species present were recorded. The random meander survey also included targeted threatened species surveys for threatened flora species previously recorded within 10 km of the Subject Land (the 'locality'). Notes and photographs were taken documenting vegetation and habitat features throughout the Subject Land. All flora species for the Subject Land encountered during the surveys are included in **Appendix B**.

A.3.3.2. Fauna Habitat Assessment

A fauna habitat assessment was conducted within the Subject Land, which included consideration of important indicators of habitat condition and complexity, including the occurrence of microhabitats such as tree hollows, human-made structures, and the nature and extent of the understorey, ground stratum and canopy of vegetation.

A.4. Key Findings

A.4.1. Vegetation of the Subject Land

Based on review of historical imagery from 1943 (see **Figure 4**) of the Subject Land, it appears the only trees present at that time were rows of planted trees, and original native vegetation had already been cleared, with the area wholly landscaped. No large trees are present currently within the Subject Land, and planted vegetation in the 1943 aerial is mostly in the area occupied by a building currently utilised by Spinal Cord Injuries Australia to provide physiotherapy/hydrotherapy services.

The Subject Land is an artificial landscape comprising buildings, planted garden beds, and paved surfaces. The vegetation within the Subject Land consists entirely of landscape plantings and exotic weed species.

Although the woody vegetation within the Subject Land, when categorised using vegetation communities from the mapping scheme *Native Vegetation of the Sydney Metropolitan Area* (OEH 2016b) forms a single mapping unit of 'Urban Exotic/Native vegetation', due to the presence of clusters of woody native species which would be considered as native vegetation under the BAM, the vegetation has been divided into two vegetation communities as described below and shown in **Figure 3**.

A.4.1.1. Planted Natives

This community consists of planted native, woody vegetation, mostly of small trees and shrubs. A planted small trees in the northern half of the Subject Land is of the native species *Melia azedarach* (White Cedar) (**Photograph 1**), which also occurs as shrub sized individuals which have grown in unmanaged areas of garden beds from seed from planted individuals. The community in the south (**Photograph 2**) consists of several juvenile *Melaleuca quinquenervia* (Broad-leaved Paperbark) in garden beds with planted native ground layer species underneath, including *Dianella caerulea* subsp. *producta* (Blue Flax-lily), *Hibbertia scandens* (Climbing Guinea Flower), and *Ficinia nodosa* (Knobby Club-rush).

Photograph 1 Planted *Melia azedarach* within the north of the Subject Land



Photograph 2 Planted *Melaleuca quinquenervia* in the south of the Subject Land



A.4.1.2. Exotic Vegetation

This vegetation consists of plantings of exotic garden species, exotic woody and herbaceous weeds in unmaintained areas of the Subject Land, and lawn areas comprised of exotic grasses (**Photograph 3**). There are no large trees within the Subject Land. Small trees include *Celtis sinensis* (Chinese Celtis), *Syagrus romanzoffiana* (Cocos Palm), and *Ulmus glabra*. A number of *Fraxinus angustifolia* (Desert Ash) are planted in the nature strip along the Portman Street frontage of the Subject Land. Exotic shrubs within the Subject Land include *Cestrum parqui* (Green Cestrum), *Olea europaea* subsp. *cuspidata* (African Olive), and *Viburnum tinus*. The majority of individuals of these shrub species occur in overgrown garden beds at the rear entrance to the central building within the Subject Land (**Photograph 4**).

Herbaceous species are also present, in unmaintained and lawn areas and include the non-indigenous native fern *Nephrolepis cordifolia* (Fishbone Fern), the forbs *Hypochaeris radicata* (Catsear), *Asparagus aethiopicus* (Ground Asparagus), and *Cyclospermum leptophyllum*, the grasses *Ehrharta erecta* (Panic Veldtgrass), *Stenotaphrum secundatum* (Buffalo Grass), and *Cenchrus setaceus* (Fountain Grass), and the climber *Araujia sericifera* (Moth Vine).

Photograph 3 Exotic vegetation in the north of the Subject Land



Photograph 4 Exotic Vegetation in unmaintained garden beds in the south of the Subject Land



A.4.2. Fauna Habitat

The primary habitat for native fauna within the Subject Land is the native and exotic vegetation. This vegetation may fall within the foraging range of a range of native fauna species, including threatened species. The foraging resources of the Subject Land would be expected to be utilised occasionally and opportunistically by birds, bats and arboreal mammals.

Nectivorous and frugivorous species may utilise the native and exotic vegetation within the Subject Land to feed on blooms and fruit, whilst insectivorous species such as microchiropteran bats may forage for insects throughout the canopy layer. No hollow-bearing trees were observed within the Subject Land, ruling out the possibility of breeding habitat for hollow nesting and roosting species.

The existing buildings contains access to roof cavities, through holes and cracks, and a broken second story window roof cavity and may provide potential roosting habitat for microchiropteran bats (**Photograph 5**). Features recorded from the external façade of the building include cracks in concrete, gaps between wooden boards, a broken window, and gaps between bricks (**Photograph 6**). No indications of use of the roof cavity, such as scratches or droppings near potential entry points were observed during the surveys.

In addition gardens present provide some habitat for small reptile species such as the Common Garden Skink (*Lampropholis guichenoti*), which was observed in gardens, and invertebrate species. These species may also utilise areas underneath the building accessible through concrete cracks at low heights on the buildings within the Subject Land.

Photograph 5 Cracked concrete proving potential bat entry point



Photograph 6 Broken second floor window providing potential fauna entry point



A.4.3. Threatened Communities and Species

A.4.3.1. Threatened Ecological Communities

The vegetation within the Subject Land is comprised of a combination of exotic and native species of planted origin within a highly artificial context. Due to the planted nature of the native vegetation there is no closely matching PCT for the vegetation, which includes several native species which could occur in a variety of different PCTs. The vegetation within the Subject Land is not considered to conform to a TEC listed under either the BC Act or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

A.4.3.2. Threatened Flora

The database analysis determined that no existing records of threatened flora species are present within the Subject Land. No threatened flora species were located within the Subject Land during surveys.

Although threatened flora species are known to occur within the locality (see **Appendix C**), due to the highly developed and artificial nature of the Subject Land as well as the lack of threatened species, or naturally occurring native species found during surveys in general, it is considered unlikely that any threatened flora species would occur within the Subject Land.

A.4.3.3. Threatened Fauna

A limited number of threatened fauna species are known to occur within the locality of the Subject Land (see **Appendix C**), although none have been recorded within the Subject Land. Threatened fauna that would be expected to utilise the foraging resources within the Subject Land and immediate surrounds include highly mobile, aerial species such as the Grey-headed Flying-fox (*Pteropus poliocephalus*) and microchiropteran bats.

Although the Grey-headed Flying-fox may use the Subject Land occasionally, especially when planted trees and shrubs are in flower (DPIE 2020a), the extent of foraging resources on site is fairly low.

Microchiropteran bats are highly mobile species that access resources from a large area and are known to fly over disturbed areas while foraging. While these species may still pass through the Subject Land as part of a larger foraging range, they are unlikely to be dependent on the habitat present in the Subject Land.

Microchiropteran bats are also known to forage for insects in urban areas and would be expected to occasionally and opportunistically access the foraging resources within the Subject Land (DPIE 2020d, b, e, c). Species anticipated to frequent the Subject Land based on local records include but are not limited to the following:

- Large Bent-winged Bat (*Miniopterus orianae oceanensis*);
- Large-eared Pied Bat (*Chalinolobus dwyeri*);
- Yellow-bellied Sheath-tail-bat (*Saccolaimus flaviventris*); and
- Southern Myotis (*Myotis macropus*).

The Subject Land contains very limited suitable breeding or refuge habitat for these species as the Subject Land lacks hollow-bearing trees considered suitable for roosting. The Subject Land does not contain foraging habitat for the Southern Myotis which requires open water bodies to forage. The existing buildings within the Subject Land may provide roosting habitat for some species that are known to use artificial structures (DPIE 2020c, d, e).

A.5. Impact Assessment

A.5.1. Impacts to Vegetation and Habitat

The proposed development will require removal of all vegetation within the Subject Land. **Table 2** below details areas of vegetation to be removed. It is anticipated that the project will result in the impact of approximately 0.039 ha of vegetation comprising a mix of planted natives and exotic vegetation.

Table 2 Areas of vegetation and land to be impacted within the Subject Land

Vegetation Community	Area (ha)
Planted Natives	0.005
Exotic Vegetation	0.034
Total	0.039

This vegetation provides foraging habitat for some urban tolerant threatened species such as microchiropteran bat species and the Grey-headed Flying-fox. Some roosting habitat for microchiropteran bats is also present in the form of existing buildings in the Subject Land. These buildings are approved to be removed under a separate DA.

A.5.2. Biodiversity Values Assessment

The BC Act and the BC Regulation list a suite of biodiversity values that are relevant to assessments that must take place under the BC Act, as outlined in Table 2 of *How to apply for a biodiversity development assessment report waiver* (DPIE 2019). To demonstrate that the project will not impact upon biodiversity, **Table 3** systematically comments upon the relevance of each value.

Table 3 Biodiversity values assessment

Biodiversity Value	Assessment for the Project
BC Act - Part 1 Section 1.5 (2)	
(a) vegetation integrity - being the degree to which the composition, structure and function of vegetation at a particular site and the surrounding landscape has been altered from a near natural state.	<p>Based on a review of historical aerial imagery from 1943, trees were present in the central area of the Subject Land, though vegetation appeared at this time to already consist of planted trees in rows, and lawn areas only. These trees were located in areas in which a building and hard stand areas now exist.</p> <p>Based upon the results of floristic surveys, it has been concluded that the existing vegetation of the Subject Land is comprised of Planted Natives and Exotic Vegetation within isolated garden beds, and exotic weeds. Vegetation does not conform to any naturally occurring PCT.</p> <p>With consideration of the above, the composition, structure and function of vegetation within the Subject Land and the surrounding</p>

Biodiversity Value	Assessment for the Project
	<p>landscape are considered to have been altered significantly from a natural state, with no naturally occurring native vegetation or habitats occurring.</p>
<p>(b) habitat suitability - being the degree to which habitat needs of threatened species are present at a particular site.</p>	<p>The Subject Land has little potential to provide habitat for threatened species other than highly mobile, aerial species. Threatened species with the highest likelihood to utilise the Subject Land include the Grey-headed Flying-fox and microchiropteran bats. These highly mobile species may occasionally and opportunistically utilise the limited foraging resources of the Subject Land as part of a larger foraging range.</p> <p>Buildings present could also potentially contain roosting habitat for some threatened microchiropteran bats species as entry points are present. These buildings are approved to be removed under a separate DA.</p>
<p>(c) biodiversity values, or biodiversity-related values, prescribed by the regulations.</p>	<p>See below.</p>
<p>BC Regulation - Part 1 Clause 1.4</p>	
<p>(a) threatened species abundance - being the occurrence and abundance of threatened species or threatened ecological communities, or their habitat, at a particular site.</p>	<p>No TECs or threatened species were observed during the site inspection. Only highly mobile, aerial threatened fauna species would be expected to utilise the foraging resources of the Subject Land occasionally and opportunistically.</p> <p>The existing buildings may provide potential roosting habitat for microchiropteran bats due to the presence of roof cavities. These buildings are approved to be removed under a separate DA. These habitats are common throughout the urban landscape in the locality, and any individuals, if present, will self-relocate following removal of building rooves.</p>
<p>(b) vegetation abundance - being the occurrence and abundance of vegetation at a particular site.</p>	<p>The Subject Land has been entirely cleared of naturally occurring vegetation, at some point prior to 1943, and contains only plantings of native and exotic species, and weeds limited to isolated occurrences in garden beds. The Subject Land is located in a highly modified/urbanised area.</p> <p>It is anticipated that the project will result in the impact of approximately 0.039 ha of vegetation comprising a mix 0.005 ha of Planted Natives, 0.034 ha of exotic vegetation.</p>

Biodiversity Value	Assessment for the Project
(c) habitat connectivity - being the degree to which a particular site connects different areas of habitat of threatened species to facilitate the movement of those species across their range.	The existing vegetation within the Subject Land is unlikely to contribute to habitat connectivity throughout the largely cleared and artificial landscape that dominates the locality. Trees within the Subject Land are not large and its surroundings are highly isolated from areas of naturally occurring native vegetation and as such are unlikely to function as stepping stone habitat. Highly mobile fauna, capable of utilising habitats within the site, are not likely to have movement inhibited by urban areas and do not require vegetation to provide habitat connectivity.
(d) threatened species movement - being the degree to which a particular site contributes to the movement of threatened species to maintain their lifecycle.	As above, the Subject Land does not contribute to the movement of threatened species other than highly mobile, aerial species, which do not require vegetation to move through the landscape. Impacts associated with the project would not be expected to have any impact on the lifecycle of such species.
(e) flight path integrity - being the degree to which the flight paths of protected animals over a particular site are free from interference.	The project will result in construction of a building mostly in areas where existing buildings are currently. Open adjacent areas between buildings within the Subject land and adjacent buildings will be retained. The project is not anticipated to significantly exceed the height of existing structures throughout the Subject Land. Subsequently the project is not expected to impact upon free-flying animals (threatened or otherwise) by interfering with flight paths.
(f) water sustainability - being the degree to which water quality, water bodies and hydrological processes sustain threatened species and threatened ecological communities at a particular site.	No natural or artificial water watercourse exists within the Subject Land. All vegetation within the Subject Land would rely on rain or artificial watering as its occurs within isolated, landscaped garden beds. The project is consequently not expected to have any impacts on water sustainability.

A.6. Conclusion

The project is considered highly unlikely to have significant impacts upon defined biodiversity values as impacts are limited to highly modified areas, containing planted native vegetation only. The project is anticipated to impact ~0.034 ha area of exotic vegetation, and 0.005 ha of planted native vegetation that does not match the structural/compositional features of a naturally occurring PCT. This area of vegetation may comprise potential and marginal foraging habitat within the broad habitat ranges of highly mobile native fauna including threatened species such as the Grey-headed Flying Fox and microchiropteran bats.

When assessing impacts to potentially occurring threatened species from the project, there is limited justification for considering impacts to threatened species with the detail required under the BAM. The project may result in a small reduction of marginal foraging habitat for highly mobile, aerial threatened species, and removal of some potential roosting habitat for threatened microchiropteran bat species in the form of roof cavities in existing buildings. These buildings are approved to removed under a separate DA. It is noted that

the project would qualify for the streamlined assessment module – small area development under the BAM which would result in some of the potentially occurring species not being assessed further because the area of impact to foraging habitat is considered negligible. Nevertheless, when assessing impacts likely from the project in its current form, there is very little likelihood of significant impacts to threatened species.

On the basis of our investigations, we believe that the preparation of a BDAR is not necessary due to the low likelihood of impacts to biodiversity values.

A.7. References

- DPIE. 2019. How to apply for a biodiversity development assessment report waiver for a Major Project Application. Environment, Energy and Science, Sydney.
- DPIE. 2020a. Grey-headed Flying-fox - profile. NSW Office of Environment and Heritage., Hurstville.
- DPIE. 2020b. Large-eared Pied Bat - Profile. NSW Office of the Environment and Heritage, Hurstville.
- DPIE. 2020c. Large Bent-winged Bat - profile. Office of Environment and Heritage, Hurstville.
- DPIE. 2020d. Southern Myotis - Profile. NSW Office of the Environment and Heritage, Hurstville.
- DPIE. 2020e. Yellow-bellied Sheathtail-bat - profile. Department of Planning, Industry and Environment, Hurstville.
- EES. 2020. BioNet Atlas. Environment, Energy and Science.
- NSW Government Spatial Services. 2020. SIX Maps.
- OEH. 2016a. The Native Vegetation of the Sydney Metropolitan Area - VIS_ID 4489. Office of Environment and Heritage, Sydney.
- OEH. 2016b. The Native Vegetation of the Sydney Metropolitan Area - Volume 2: Vegetation Community Profiles. Office of Environment and Heritage Sydney.

APPENDIX B :

Flora Species Recorded



Table 4 Flora species list

BAM Group	Growth Form	Family	Scientific Name	Common Name	Native	Exotic	High Threat Weed
	Tree (TG)	Meliaceae	<i>Melia azedarach</i>	White Cedar	YES		
	Tree (TG)	Myrtaceae	<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark	YES		
	Shrub (SG)	Fabaceae (Mimosoideae)	<i>Acacia floribunda</i>	White Sally	YES		
	Other (OG)	Dilleniaceae	<i>Hibbertia scandens</i>	Climbing Guinea Flower	YES		
	Grass & grasslike (GG)	Cyperaceae	<i>Ficinia nodosa</i>	Knobby Club-rush	YES		
	Grass & grasslike (GG)	Juncaceae	<i>Juncus usitatus</i>		YES		
	Grass & grasslike (GG)	Poaceae	<i>Cynodon dactylon</i>	Common Couch	YES		
	Forb (FG)	Phormiaceae	<i>Dianella caerulea var. producta</i>		YES		
	Fern (EG)	Davalliaceae	<i>Nephrolepis cordifolia</i>	Fishbone Fern	YES		
Exotic		Adoxaceae	<i>Viburnum tinus</i>			YES	
Exotic		Alliaceae	<i>Agapanthus praecox</i> subsp. <i>orientalis</i>			YES	
Exotic		Amaryllidaceae	<i>Clivia miniata</i>			YES	
Exotic		Amygdalaceae	<i>Prunus serrulata</i>	Japanese Cherry		YES	
Exotic		Apiaceae	<i>Cyclosporum leptophyllum</i>	Slender Celery		YES	
Exotic		Apocynaceae	<i>Araujia sericifera</i>	Moth Vine		YES	
Exotic		Araliaceae	<i>Hedera helix</i>	English Ivy		YES	YES
Exotic		Arecaceae	<i>Dypsis lutescens</i>	Yellow Butterfly Palm		YES	
Exotic		Arecaceae	<i>Syagrus romanzoffiana</i>	Cocos Palm		YES	

BAM Group	Growth Form	Family	Scientific Name	Common Name	Native	Exotic	High Threat Weed
Exotic		Asparagaceae	<i>Asparagus aethiopicus</i>	Asparagus Fern		YES	YES
Exotic		Asteraceae	<i>Arctotheca calendula</i>	Capeweed		YES	
Exotic		Asteraceae	<i>Aster subulatus</i>	Wild Aster		YES	
Exotic		Asteraceae	<i>Bidens pilosa</i>	Cobbler's Pegs		YES	YES
Exotic		Asteraceae	<i>Cirsium vulgare</i>	Spear Thistle		YES	
Exotic		Asteraceae	<i>Conyza bonariensis</i>	Flaxleaf Fleabane		YES	
Exotic		Asteraceae	<i>Conyza sumatrensis</i>	Tall fleabane		YES	
Exotic		Asteraceae	<i>Hypochaeris radicata</i>	Catsear		YES	
Exotic		Asteraceae	<i>Lactuca serriola</i>	Prickly Lettuce		YES	
Exotic		Asteraceae	<i>Senecio madagascariensis</i>	Fireweed		YES	YES
Exotic		Asteraceae	<i>Soliva sessilis</i>	Bindyi		YES	
Exotic		Asteraceae	<i>Sonchus asper</i>	Prickly Sowthistle		YES	
Exotic		Asteraceae	<i>Sonchus oleraceus</i>	Common Sowthistle		YES	
Exotic		Brassicaceae	<i>Capsella bursa-pastoris</i>	Shepherd's Purse		YES	
Exotic		Brassicaceae	<i>Cardamine hirsuta</i>	Common Bittercress		YES	
Exotic		Brassicaceae	<i>Lepidium didymum</i>	Lesser Swinecress		YES	
Exotic		Caryophyllaceae	<i>Paronychia brasiliiana</i>	Chilean Whitlow Wort, Brazilian Whitlow		YES	
Exotic		Caryophyllaceae	<i>Polycarpon tetraphyllum</i>	Four-leaved Allseed		YES	
Exotic		Crassulaceae	<i>Bryophyllum pinnatum</i>	Resurrection Plant		YES	

BAM Group	Growth Form	Family	Scientific Name	Common Name	Native	Exotic	High Threat Weed
Exotic		Fabaceae (Faboideae)	<i>Medicago polymorpha</i>	Burr Medic		YES	
Exotic		Fabaceae (Faboideae)	<i>Trifolium repens</i>	White Clover		YES	
Exotic		Malvaceae	<i>Malva parviflora</i>	Small-flowered Mallow		YES	
Exotic		Malvaceae	<i>Modiola caroliniana</i>	Red-flowered Mallow		YES	
Exotic		Nandinaceae	<i>Nandina domestica</i>	Japanese Sacred Bamboo		YES	
Exotic		Oleaceae	<i>Fraxinus angustifolia</i>	Narrow-leafed Ash		YES	
Exotic		Oleaceae	<i>Olea europaea</i> subsp. <i>cuspidata</i>	African Olive		YES	
Exotic		Poaceae	<i>Bromus catharticus</i>	Praire Grass		YES	
Exotic		Poaceae	<i>Cenchrus clandestinus</i>	Kikuyu Grass		YES	YES
Exotic		Poaceae	<i>Cenchrus setaceus</i>	Fountain Grass		YES	
Exotic		Poaceae	<i>Ehrharta erecta</i>	Panic Veldtgrass		YES	YES
Exotic		Poaceae	<i>Lolium perenne</i>	Perennial Ryegrass		YES	
Exotic		Poaceae	<i>Megathyrsus maximus</i>			YES	
Exotic		Poaceae	<i>Melinis repens</i>	Red Natal Grass		YES	
Exotic		Poaceae	<i>Poa annua</i>	Winter Grass		YES	
Exotic		Poaceae	<i>Sporobolus africanus</i>	Parramatta Grass		YES	
Exotic		Poaceae	<i>Stenotaphrum secundatum</i>	Buffalo Grass		YES	YES
Exotic		Rutaceae	<i>Murraya paniculata</i>			YES	
Exotic		Solanaceae	<i>Cestrum parqui</i>	Green Cestrum		YES	YES
Exotic		Solanaceae	<i>Solanum nigrum</i>	Black-berry Nightshade		YES	

BAM Group	Growth Form	Family	Scientific Name	Common Name	Native	Exotic	High Threat Weed
Exotic		Ulmaceae	<i>Celtis sinensis</i>	Japanese Hackberry		YES	
Exotic		Ulmaceae	<i>Ulmus glabra</i>			YES	
Exotic		Urticaceae	<i>Parietaria judaica</i>	Pellitory		YES	
Exotic		Verbenaceae	<i>Lantana montevidensis</i>	Trailing Lantana		YES	

APPENDIX C :

Threatened Species – BioNet Atlas Search Results

Table 5 BioNet Atlas Search Results (10km radius of Subject Land)

Scientific Name	Common Name
Flora	
<i>Caladenia tessellata</i>	Thick Lip Spider Orchid
<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Sunshine Wattle
<i>Amperea xiphoclada</i> var. <i>pedicellata</i>	
<i>Dichanthium setosum</i>	Bluegrass
<i>Doryanthes palmeri</i>	Giant Spear Lily
<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint
<i>Eucalyptus pulverulenta</i>	Silver-leafed Gum
<i>Eucalyptus scoparia</i>	Wallangarra White Gum
<i>Hibbertia puberula</i>	
<i>Melaleuca deanei</i>	Deane's Paperbark
<i>Persoonia hirsuta</i>	Hairy Geebung
<i>Prostanthera marifolia</i>	Seaforth Mintbush
<i>Rhodamnia rubescens</i>	Scrub Turpentine
<i>Syzygium paniculatum</i>	Magenta Lilly Pilly
<i>Tetradlea juncea</i>	Black-eyed Susan
Fauna	
<i>Anseranas semipalmata</i>	Magpie Goose
<i>Anthochaera phrygia</i>	Regent Honeyeater
<i>Arctocephalus forsteri</i>	New Zealand Fur-seal
<i>Arctocephalus pusillus doriferus</i>	Australian Fur-seal
<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow
<i>Botaurus poiciloptilus</i>	Australasian Bittern
<i>Burhinus grallarius</i>	Bush Stone-curlew
<i>Calidris alba</i>	Sanderling
<i>Calidris canutus</i>	Red Knot
<i>Calidris ferruginea</i>	Curlew Sandpiper
<i>Calidris tenuirostris</i>	Great Knot
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo
<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo

<i>Caretta caretta</i>	Loggerhead Turtle
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat
<i>Charadrius leschenaultii</i>	Greater Sand-plover
<i>Charadrius mongolus</i>	Lesser Sand-plover
<i>Dermochelys coriacea</i>	Leatherback Turtle
<i>Dugong dugon</i>	Dugong
<i>Epthianura albifrons</i>	White-fronted Chat
<i>Erythrotriorchis radiatus</i>	Red Goshawk
<i>Eubalaena australis</i>	Southern Right Whale
<i>Glossopsitta pusilla</i>	Little Lorikeet
<i>Haematopus longirostris</i>	Pied Oystercatcher
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle
<i>Hieraetus morphnoides</i>	Little Eagle
<i>Hirundapus caudacutus</i>	White-throated Needletail
<i>Lathamus discolor</i>	Swift Parrot
<i>Limosa limosa</i>	Black-tailed Godwit
<i>Litoria aurea</i>	Green and Golden Bell Frog
<i>Lophoictinia isura</i>	Square-tailed Kite
<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat
<i>Myotis macropus</i>	Southern Myotis
<i>Neophema pulchella</i>	Turquoise Parrot
<i>Ninox strenua</i>	Powerful Owl
<i>Numenius madagascariensis</i>	Eastern Curlew
<i>Pandion cristatus</i>	Eastern Osprey
<i>Petroica boodang</i>	Scarlet Robin
<i>Phascolarctos cinereus</i>	Koala
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox
<i>Ptilinopus superbus</i>	Superb Fruit-Dove
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat
<i>Stagonopleura guttata</i>	Diamond Firetail
<i>Sternula albifrons</i>	Little Tern
<i>Stictonetta naevosa</i>	Freckled Duck
<i>Tyto novaehollandiae</i>	Masked Owl
<i>Xenus cinereus</i>	Terek Sandpiper

FIGURES





Legend

 Subject Land

Coordinate System: MGA Zone 56 (GDA 94)

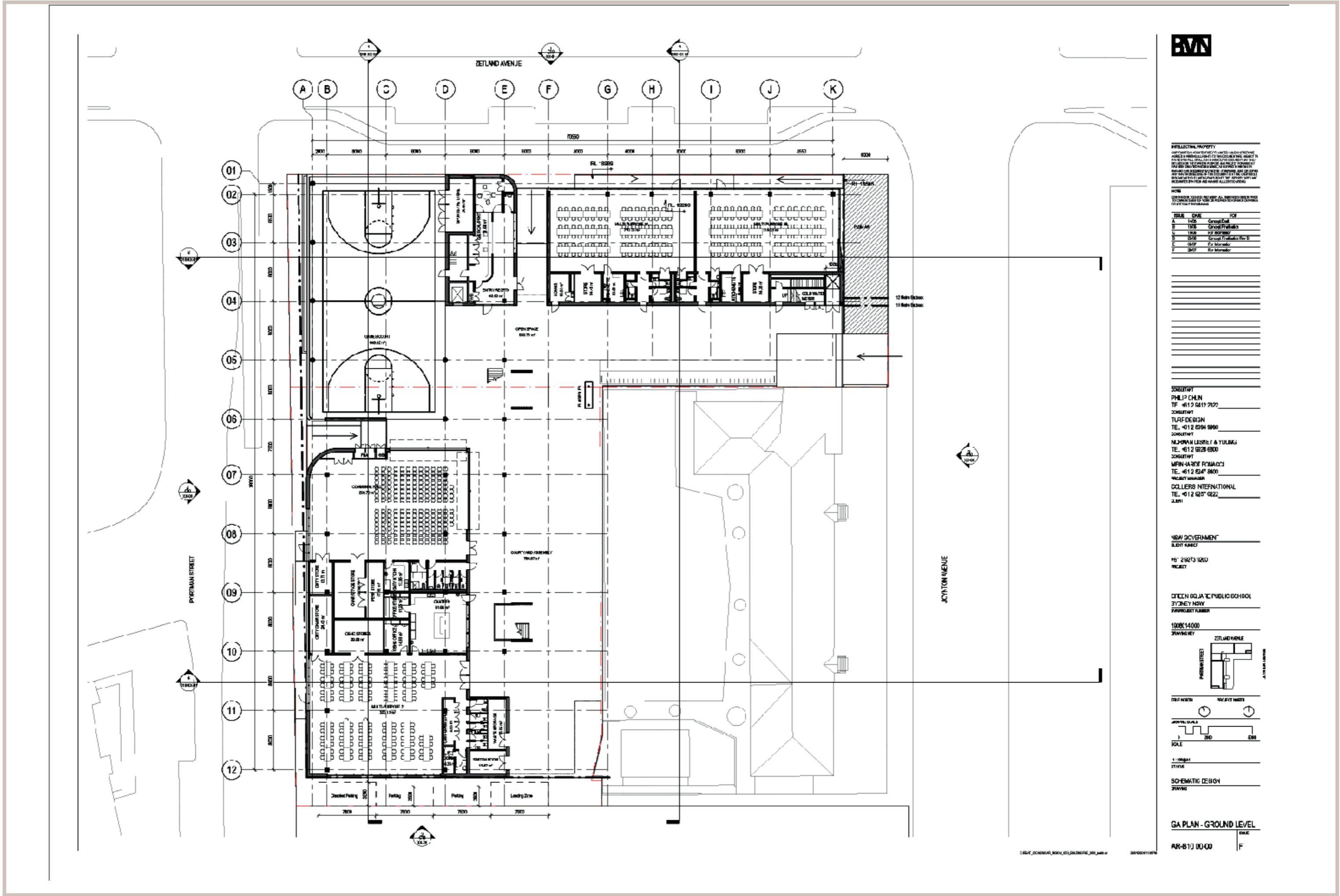


Image Source:
Image © NearMap 2020
Dated: 28/2/2020



Figure 1. The subject land

0 30 m



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REVISIONS

NO	DATE	DESCRIPTION
A	14/05	Ground Level
B	15/05	Ground Floor
C	16/05	Ground Floor
D	17/05	Ground Floor
E	18/05	Ground Floor
F	19/05	Ground Floor

CONTRACTORS

NO	NAME	CONTACT
1	CONTRACTOR 1	1234 5678
2	CONTRACTOR 2	2345 6789
3	CONTRACTOR 3	3456 7890
4	CONTRACTOR 4	4567 8901
5	CONTRACTOR 5	5678 9012
6	CONTRACTOR 6	6789 0123
7	CONTRACTOR 7	7890 1234
8	CONTRACTOR 8	8901 2345
9	CONTRACTOR 9	9012 3456
10	CONTRACTOR 10	0123 4567
11	CONTRACTOR 11	1234 5678
12	CONTRACTOR 12	2345 6789

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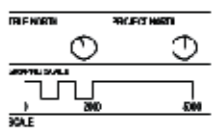
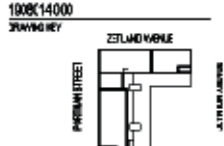
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NSW GOVERNMENT
 SLIGHT SUBJECT

16/29273/2020
 PROJECT

GREEN GOUGH PUBLIC SCHOOL
 SYDNEY NSW



SCHEMATIC DESIGN
 DRAWING

GA PLAN - GROUND LEVEL

AR-B11 00-00

Figure 2. Proposed site plan



Legend

- Subject Land
- Vegetation Community**
- Planted Natives
- Exotic Vegetation

Coordinate System: MGA Zone 56 (GDA 94)

Image Source:
Image © NearMap 2020
Dated: 28/2/2020



Figure 3. Vegetation mapping of the subject land

0 20 m



Legend

 Subject Land

Coordinate System: MGA Zone 56 (GDA 94)



Image Source:
Image © NearMap 2020
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Figure 4. Historical aerial Imagery (1943) of the subject land

0 30 m

