



BUSHFIRE
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BUSHFIRE ASSESSMENT REPORT

Richmond Agricultural Centre Special Fire Protection Purposes

Prepared for NSW Department of Education



Bushfire Planning Australia

Stuart Greville

Accredited Bushfire Practitioner
BPAD-26202

☎ 0400 917 792

✉ stuart@bfpa.com.au

BPA Reference: 2435 Richmond

Prepared for Department of Education c/-
Richard Crooke Constructions

Attention: Hamish Hutton

✉ huttonh@richardcrookes.com.au



Disclaimer and Limitation

This report is prepared solely for Department of Education (the 'Client') for the specific purposes of only for which it is supplied (the 'Purpose'). This report is not for the benefit of any other person; either directly or indirectly and is strictly limited to the purpose and the facts and matters stated in it and will not be used for any other application.

This report is based on the site conditions surveyed at the time the document was prepared. The assessment of the bushfire threat made in this report is made in good faith based on the information available to Bushfire Planning Australia at the time.

The recommendations contained in this report are considered to be minimum standards and they do not guarantee that a building or assets will not be damaged in a bushfire. In the making of these comments and recommendations it should be understood that the focus of this document is to minimise the threat and impact of a bushfire.

Finally, the implementation of the adopted measures and recommendations within this report will contribute to the amelioration of the potential impact of any bushfire upon the development, but they do not and cannot guarantee that the area will not be affected by bushfire at some time.

Document Status: 2435 - SFPP Agricultural Centre

Version	Status	Purpose	Author	Review Date
1	Draft	Draft for Review	Katrina Greville	14 April 2025
2	Draft	Draft for Client Review	Stuart Greville	15 April 2025
3	Final	Final for Submission	Stuart Greville	6 May 2025
4	Final	Updated per client request	Stuart Greville	26 May 2025

Certification

As the author of this Bushfire Threat Assessment (BAR), I certify this BAR provides the detailed information required by the NSW Rural Fire Service under Clause 45 of the Rural Fires Regulation 2022 and Appendix 1 of Planning for Bushfire Protection 2019 for the purposes of an application for a bush fire safety authority under section 100B(4) of the Rural Fires Act 1997.

Stuart Greville

Accredited Bushfire Practitioner

BPAD-26202

Date: 26 May 2025



In signing the above, I declare the report is true and accurate to the best of my knowledge at the time of issue.



Executive Summary

This Bushfire Assessment Report (BAR) has been prepared by Bushfire Planning Australia on behalf of the Department of Education (DoE) (the Proponent) to assess the potential environmental and bushfire impacts that could arise from the activities associated with the Richmond Agricultural Centre (RAC) at 2 College Street Richmond (Part Lot 2 DP1051798) (the site).

The assessment aligns with the NSW Rural Fire Service (RFS) guidelines, specifically Planning for Bushfire Protection 2019 (PBP 2019) and its addendums, in addition to addressing the National Construction Code (NCC) 2022 requirements for Class 9 buildings.

This report accompanies a Review of Environmental Factors (REF) that seeks approval for the construction and operation of a secondary school with a specialist agricultural curriculum at the site. The report has considered and assessed the bushfire hazard and associated potential bushfire threat relevant to the proposed development, and specific objectives for Special Fire Protection Services (SFPP).

The proposed school buildings are not located on land designated as bush fire prone, as confirmed by the certified Bush Fire Prone Land Map published by the RFS and presented in **Figure 3** of this report. While isolated areas of unmanaged vegetation exist within 140 metres of the development footprint, the site itself and the location of all proposed buildings are outside of any mapped Vegetation Category 1, 2, 3 or Buffer. As a result, the proposed development is not considered to be situated on “designated bushfire prone land” as defined in Section 10.3 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and Part G5 of the NCC 2022. Therefore, the additional provisions of Specification 43, including those related to Internal Tenability (S43C9) and Vehicular Access (S43C14), do not apply to this development.

In accordance with the Addendum (January 2025) to PBP 2019, where a proposed primary or secondary school is not located on bush fire prone land, it is exempt from the additional construction and access requirements imposed by Specification 43 of the NCC 2022. This includes exemptions from S43C9 (Internal Tenability) and S43C14 (Vehicular Access), provided that the BAL for the proposed development does not exceed BAL-12.5 and all other performance criteria of PBP 2019 continue to be met. Accordingly, this BAR confirms that the Addendum 2025 applies and the exemptions under Specification 43 are valid in this instance.

The following key recommendations have been designed to enable the proposed development to achieve Performance Criteria for SFPP developments detailed in Section 6.8 of PBP 2019 and Appendix B of the Addendum 2022 to PBP 2019:

Asset Protection Zones

1. An 42m Asset Protection Zone (APZ) shall be established to the south of the proposed buildings and managed as an Inner Protection Area (IPA) as outlined within Appendix 4 of PBP 2019 and the RFS document *Standards for asset protection zones*. The 42m APZ will ensure all new buildings are located to ensure the proposed Class 9 building will not be exposed to radiant heat levels exceeding 10kW/m².

Construction and Design

2. The new building is to be constructed in accordance with Section 3 and 6 of Australian Standard AS3959-2018 Construction of buildings in bushfire prone areas (AS3959-2018); being **BAL-19**.

Water Supply:

3. The proposed development shall be connected to a reliable water supply network and that suitable fire hydrants are located throughout the development site that are clearly marked and provided for the purposes of bushfire protection. Fire hydrant spacing, sizing and pressure shall comply with AS2419.1 2021 and section 6.8.3 of PBP 2019.

Landscaping

4. Consideration should be given to landscaping and fuel loads on site to decrease potential fire hazards on site.

Emergency Management

5. A Bushfire Emergency Management and Evacuation Plan (BEMEP) shall be prepared that is consistent with the RFS Guidelines 'Development Planning – A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan December 2014'.

This assessment has been made based on the bushfire hazards observed in and around the site at the time of inspection and production.

Should the above recommendations be implemented, the bushfire risk should be suitably mitigated to offer an acceptable level of protection to life and property for those persons and assets occupying the site but they do not and cannot guarantee that the area will not be affected by bushfire at some time.



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Terms and Abbreviations

Abbreviation	Meaning
APZ	Asset Protection Zone
AS2419-2005	Australian Standard – Fire Hydrant Installations
AS3959-2018	Australian Standard – Construction of Buildings in Bush Fire Prone Areas
BAR	Bushfire Assessment Report
BCA	Building Code of Australia
BC Act	NSW Biodiversity Act 2016
BDAR	Biodiversity Development Assessment Report
BMP	Bush Fire Management Plan
BPA	Bush Fire Prone Area (Also Bushfire Prone Land)
BPL	Bush Fire Prone Land
BPLM	Bush Fire Prone Land Map
BPM	Bush Fire Protection Measures
CDoE	Commonwealth Department of the Environment
DoE	Department of Education
DPI Water	NSW Department of Primary Industries – Water
EPA Act	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
FDI	Fire Danger Index
FMP	Fuel Management Plan
ha	hectare
HCC	Hawkesbury City Council
IPA	Inner Protection Area
LGA	Local Government Area
NCC	National Construction Code
NPWS	NSW National Parks and Wildlife Service
OPA	Outer Protection Area
OEH	NSW Office of Environment and Heritage
PBP 2019	Planning for Bushfire Protection 2019
RAC	Richmond Agricultural Centre
REF	Review of Environmental Factors
RF Act	Rural Fires Act 1997
RF Regulation	Rural Fires Regulation
RFS	NSW Rural Fire Service
SFPP	Special Fire Protection Purposes
VMP	Vegetation Management Plan
WSU	Western Sydney University

1. Introduction

This Bushfire Assessment Report (BAR) has been prepared by Bushfire Planning Australia on behalf of the Department of Education (DoE) (the Proponent) to assess the potential environmental and bushfire impacts that could arise from the activities associated with the Richmond Agricultural Centre (RAC) at 2 College Street Richmond (Part Lot 2 DP1051798) (the site).

The report has been prepared to consider and assess the bushfire hazard and associated potential bushfire threat relevant to the proposed development, and specific objectives for Special Fire Protection Services (SFPP), and to outline the minimum mitigative measures which would be required in accordance with the provisions of the New South Wales Rural Fire Service (RFS) publication *Planning for Bushfire Protection 2019* (PBP 2019) and the associated Addendum to PBP 2019 that has been released and adopted through the *Environmental Planning and Assessment Amendment* (Planning for Bushfire Protection) *Regulation 2007* and the *Rural Fires Regulation 2022*.

Additionally, this BAR will also consider the changes and implications of additional bushfire protection measures for Class 9 buildings (including schools and universities) described in G5D4 of the National Construction Code 2022 (NCC 2022). Any information provided by BPA regarding advice and assessment related to the NCC and Specification 43 is intended for general guidance only.

This report accompanies a Review of Environmental Factors (REF) that seeks approval for the construction and operation of a secondary school with a specialist agricultural curriculum at the site.

1.1. Aims and Objectives

The assessment aims to consider and assess the bushfire hazard and associated potential bushfire threat relevant to the proposed development, and to outline the minimum mitigative measures which would be required in accordance with the provisions of the New South Wales Rural Fire Service (RFS) publication *Planning for Bushfire Protection 2019* (PBP 2019) and the *Rural Fires Regulation 2022*.

This BAR also addresses the aims and objectives of PBP 2019, being:

- ☐ Afford buildings and their occupants protection from exposure to a bushfire.
- ☐ Provide a defensible space to be located around buildings.
- ☐ Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings.
- ☐ Ensure that appropriate operational access and egress for emergency service personnel and occupants is available.
- ☐ Provide for ongoing management and maintenance of bushfire protection measures (BPMs).
- ☐ Ensure that utility services are adequate to meet the needs of firefighters.

A compliance table demonstrating compliance with PBP 2019 is provided in **Appendix C**.

1.2. Specific Objectives for Special Fire Protection Purposes

The aims and objectives listed in section 1.1 of PBP 2019 remain applicable to SFPP developments, however further consideration has been given to SFPP developments due to the nature of these environments and the occupants they accommodate. Occupants of SFPP developments are generally more vulnerable to bushfire attack therefore specific objectives have been put in place to ensure greater protection is provided (section 6.2 PBP 2019). Specific objectives include:

- ☐ Minimise levels of radiant heat, localised smoke and ember attack through increased APZ, building design and siting.
- ☐ Provide for an appropriate operational environment for emergency service personnel during firefighting and emergency management.
- ☐ Ensure the capacity of existing infrastructure (such as roads and utilities) can accommodate the increase in demand during emergencies as a result of the development.
- ☐ Ensure emergency evacuation procedures and management which provides for the special characteristics and needs of occupants.

As a school is classified as a SFPP development, the specific objectives and acceptable solutions for a SFPP development have been considered.

2. Project Description

The Site is located on 2 College Street, Richmond (Part Lot 2 DP 1051798). The site is located within the Hawkesbury City Council area and is zoned SP1 Special Activities (the SP1 zone) by the *Hawkesbury Local Environmental Plan 2012* (the LEP). **Figure 2** is a site plan showing the location of the proposed Richmond Agricultural Centre within its regional context.

Table 1: Site Details

Address	2 College Street, Richmond
Title	Part of Lot 2 DP1051798
LGA	Hawkesbury City Council
Site Area	14.25 ha
Land Use Zone	SP1 Special Activities (Figure 1)
Context	<p>The proposed Richmond Agricultural Centre (RAC) will be located on an area of land leased by the Department of Education from Western Sydney University (WSU). This area comprises of 14.25ha of land with frontage to College Drive of 480 metres. The school site comprises existing agricultural land within the WSU campus bound by College Drive to the east, Londonderry Road to the west, WSU facilities to the south and vacant WSU agricultural land to the north.</p> <p>Beyond the WSU campus, there are residential dwellings to the north and west and an isolated parcel of unmanaged vegetation exists to the south-west of the proposed site.</p>
Fire History	The site lies within a local government area with a Fire Danger Index (FDI) rating of 100.

The boundary of the REF works is shown in **Figure 2** and comprises:

Leased area: This is the area of land leased by the Department of Education from Western Sydney University (WSU) for the proposed Richmond Agricultural Centre. This area comprises 14.25 ha of land with frontage to College Drive of 480 meters. The future school site comprises existing agricultural land within the WSU campus bound by College Drive to the east, Londonderry Road to the west, WSU facilities to the south and vacant WSU agricultural land to the north.

WSU Campus: This is the area of land between the leased area and College Drive.

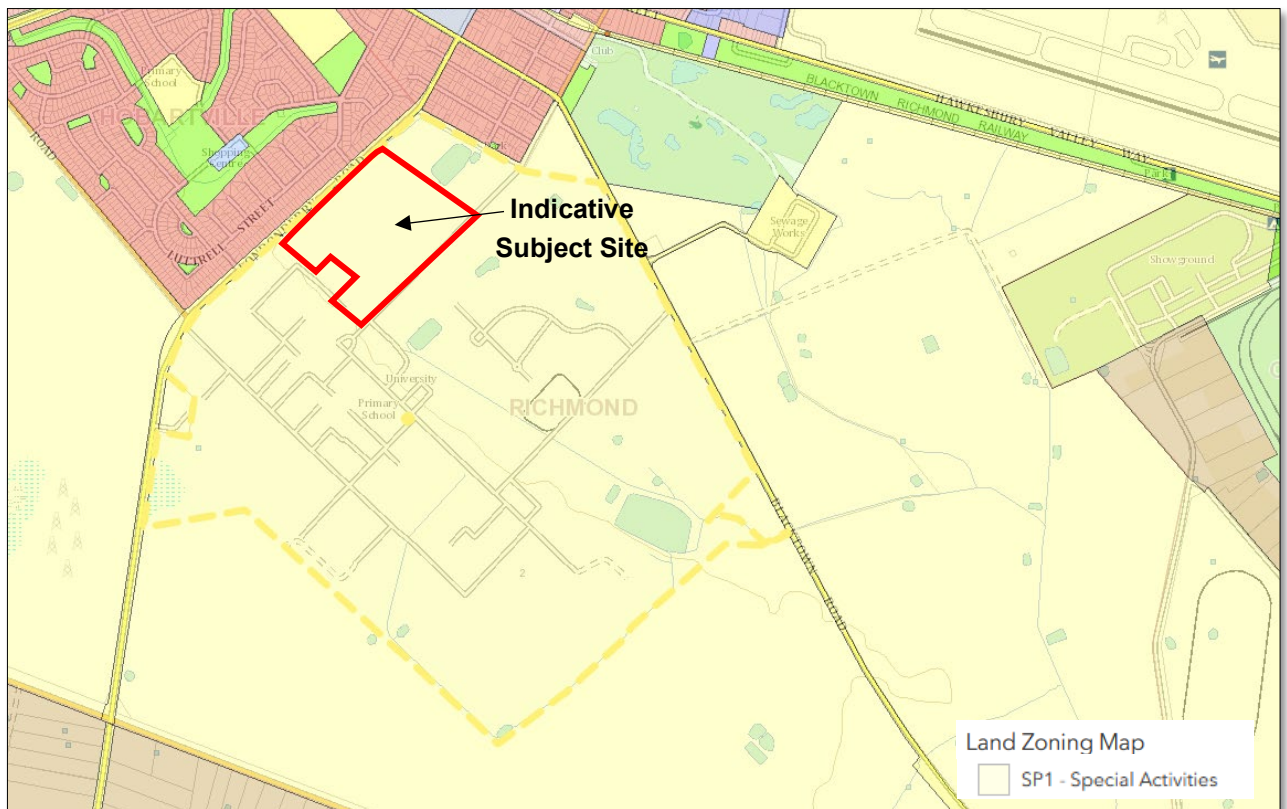
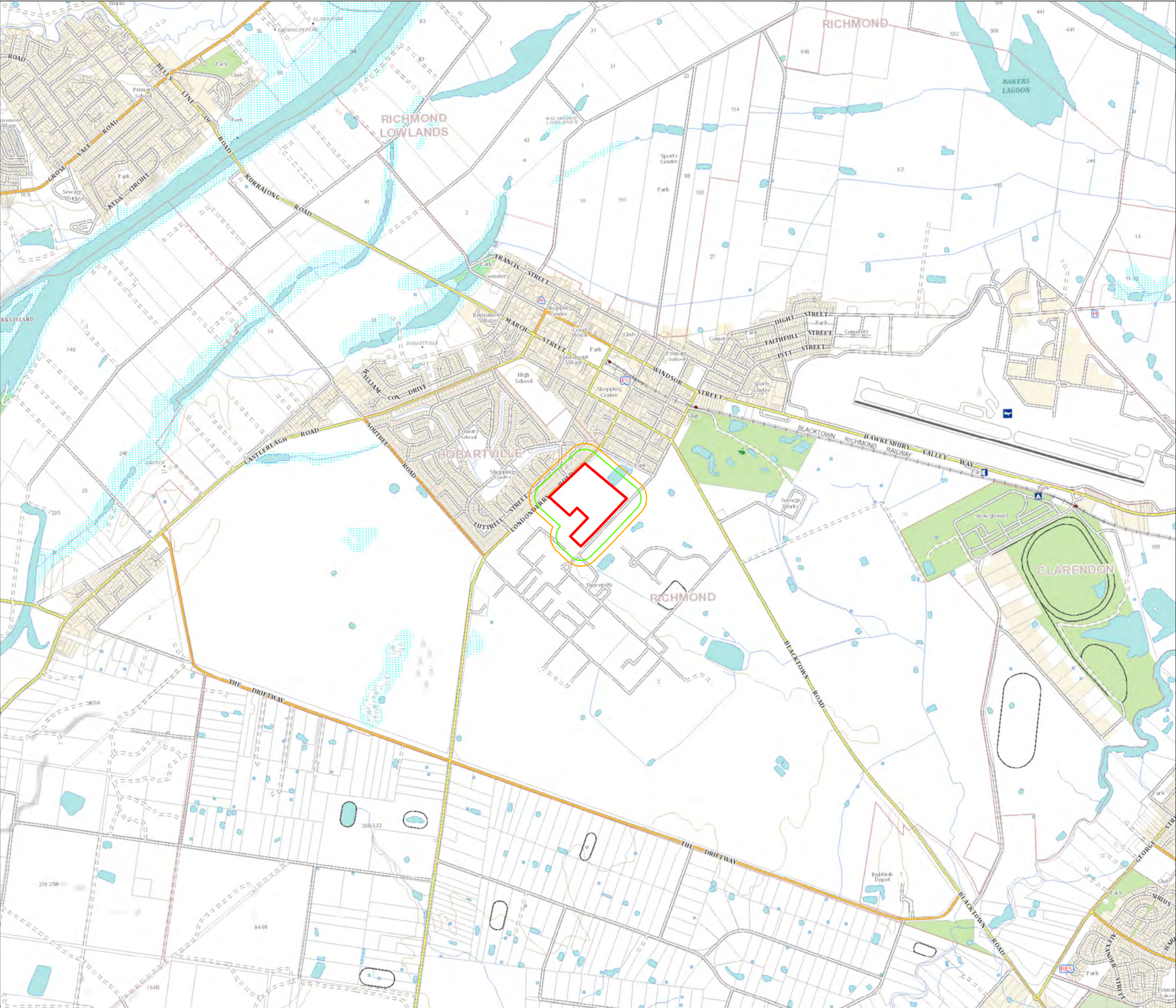


Figure 1: Hawkesbury Local Environmental Plan 2012 (Land Zoning Map Sheet)

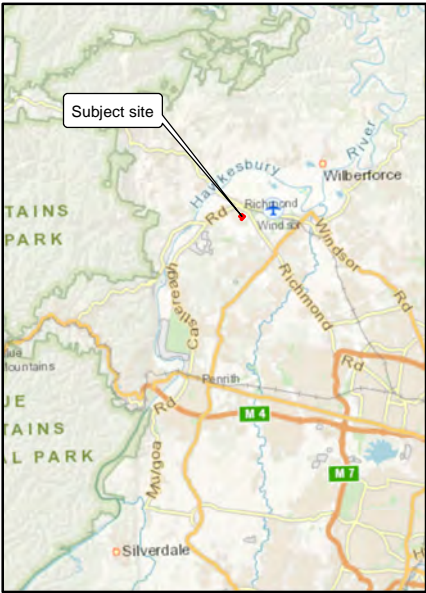





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Figure 2 Site Location



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-  Subject site
-  100m buffer
-  140m buffer

SOURCE:

Basemap: NSW Department of Customer Service
2023



0 250 500 750 1,000 1,250
Meters

A3 Scale: 1:25,000

File:2435-RichmondCoE-Fig1-SiteLocation-241125 Date: 25/11/2024

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2.1. Bushfire Prone Land

Bushfire activity is prevalent in landscapes that carry fuel and the two predominant bushfire types are grassland and forest fires. Factors such as topographic characteristics and quantity of fuel loads influence the intensity and spread of fire. The scale of a bushfire hazard is tailored to the characteristics of the hazard, the size and characteristics of the affected population, types of land use exposed to bushfire, predicted development growth pressures and other factors affecting bushfire risk.

Figure 3 demonstrates the proposed RAC site is not mapped as bushfire prone land, however, a portion of the remaining Western Sydney University subject site is mapped both Vegetation Buffer and Vegetation Category 3 bushfire prone land.

There is no bushfire prone land currently mapped within 140m of the proposed RAC site. An isolated, unmanaged parcel of vegetation does exist to the south-west of the site, and whilst this is not mapped as bushfire prone land, it remains the primary bushfire hazard for the site.



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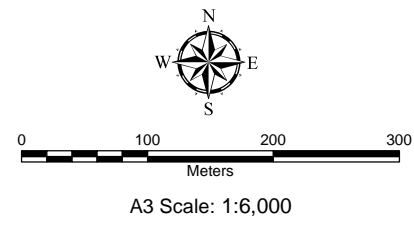
Figure 3

NSW Bush Fire Prone Land



- Subject site
- 100m buffer
- 140m buffer
- Bushfire Prone Land**
- Vegetation Category 3
- Buffer

SOURCE:
Cadastral Boundary: NSW Department of Finance,
Services and Innovation 2024
NSW Bush Fire Prone Land: NSW Rural Fire Service
2024
Aerial Photo: Nearmap 26/08/2024



File:2435-RichmondCoE-Fig2-BFPL-241125 Date: 25/11/2024

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2.2. Proposed Development

This report accompanies a Review of Environmental Factors (REF) that seeks approval for the construction and operation of the agricultural centre which will provide facilities for a specialist agricultural curriculum at the site. The activities associated with establishing the Richmond Agricultural Centre involves the following works:

- ☐ The removal of trees and fencing
- ☐ Construction of a general learning hub
- ☐ Construction of a science hub
- ☐ Construction of a multipurpose hall
- ☐ Construction of an administration building
- ☐ Construction of canteen and amenities building
- ☐ Construction of a new parking area (including accessible spaces) driveway and kiss and drop facilities

The provision of outdoor agricultural learning areas comprising:

- Agricultural plots
 - Aboriginal enterprise
 - Agricultural shed and greenhouse
 - Animal plots with associated stock yard, animal shelters, troughs and stock lane
 - Gravel access road with wash bay
- ☐ Landscaping including new trees, entry forecourt, village green and kitchen garden
- ☐ Ancillary services and infrastructure upgrades including new substation and HV Works, sewer pump station, water booster, dual carriage vehicle access and pedestrian paths
- ☐ Wayfinding and school identification signage

For a detailed project description, please refer to the Review of Environmental Factors (REF) prepared by EPM Projects.

The proposed development plan is shown in **Figure 4** and are contained in **Appendix A**.



Figure 4: Proposed Development Site Plan

2.3. National Construction Code 2022

This BAR will also consider the implications of additional bushfire protection measures for Class 9 buildings (including schools) described in G5D4 of the NCC 2022. The changes to NCC 2022 became effective on 1 May 2023. These additional measures are contained in Specification 43 and are intended to operate in conjunction with other bushfire safety measures that lie outside the scope of the NCC 2022.

However, the RAC is not on designated bushfire prone land per the certified Bush Fire Prone Land Map. As a result, Part G5 of NCC 2022, including Specification 43 (covering topics like internal tenability and vehicular access in bushfire emergencies), does not apply to the RAC buildings. Any bushfire provisions for the proposed secondary school are therefore guided instead by the existing PBP 2019 requirements, rather than the additional measures in NCC 2022's Specification 43.

2.4. Planning for Bushfire Protection - Addendum 2022

To ensure the application of PBP 2019 is consistent with NCC 2022, the RFS prepared an Addendum to PBP 2019 to align with NCC 2022. The Addendum addresses the Class 9 Provisions in NCC 2022 within the context of PBP 2019, since these classes of buildings have been previously addressed as a SFPP developments in PBP 2019.

In November 2022, the RFS published an Addendum to PBP 2019 ("Addendum 2022") to align certain SFPP provisions with the newly introduced NCC 2022 requirements. Specifically, Addendum 2022 introduced additional bushfire protection measures and clarifications for:

- ❑ Building Envelope (S43C10),
- ❑ Water Supply for Firefighting (S43C11), and
- ❑ Vehicular Access (S43C14).

For schools on designated bushfire prone land, Addendum 2022 helps ensure consistent application of both NCC 2022 and PBP 2019. It clarifies that while Specification 43 imposes some new standards, other existing performance requirements in PBP 2019 continue to control the key bushfire safety design aspects for SFPP developments.

Because the RAC site is **not** designated bushfire prone, Addendum 2022's references to Specification 43 do not trigger extra requirements here. Instead, compliance with the core tenets of PBP 2019 (e.g. APZs, building construction standards, and emergency planning) remains paramount.

2.5. Planning for Bushfire Protection - Addendum 2025

Released in January 2025, Addendum 2025 further modifies how Specification 43 of NCC 2022 applies to certain primary and secondary school buildings on bushfire prone land. Two main aspects are addressed:

- ❑ Internal Tenability (S43C9): Schools near extensive Category 1 vegetation or continuous tracts >5 ha may require additional internal refuge measures.
- ❑ Vehicular Access (S43C14): The Addendum clarifies that the performance criteria in Table 6.8b of PBP 2019 may substitute for the more prescriptive continuous-access requirements in Specification 43 for certain schools.

Again, these provisions only affect new or redeveloped schools located on designated bushfire prone land. Since the RAC site lies outside all mapped bushfire prone areas, Addendum 2025 does not impose any further obligations beyond those already satisfied under PBP 2019 for Special Fire Protection Purpose developments. The recommended APZ, BAL-19 construction, and routine vegetation management continue to address site-specific bushfire risks consistent with the PBP framework.

2.6. State Environmental Planning Policy (Transport and Infrastructure) 2021

Under State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP T&I), certain educational developments may qualify for a Complying Development Certificate (CDC) provided the land is not captured by section 100B of the Rural Fires Act 1997, which mandates a Bush Fire Safety Authority (BFSA) for developments on bush fire prone land. As confirmed by the certified Bush Fire Prone Land Map, the proposed RAC is not on bush fire prone land (i.e. not mapped as Vegetation Category 1, 2, 3, or Buffer). Consequently, it does not trigger section 100B. Since no BFSA is required in these circumstances, the proposal is required to prepare an REF to assess any potential adverse effects.

3. Bushfire Hazard Assessment

3.1. Vegetation Assessment

Vegetation classification over the site and surrounding area has been carried out as follows:

- ❑ Aerial Photograph Interpretation to map the vegetation classification (Mecone Mosaic & Nearmap).
- ❑ Reference to NSW State Vegetation Type, Department of Planning and Environment 2023 (**Figure 5**).
- ❑ Review of Flora and Fauna Assessment Report, April 2025, Narla Environmental.
- ❑ Site inspection completed on 13 September 2024 by Bushfire Planning Australia (Stuart Greville).

In accordance with PBP 2019, an assessment of the vegetation over a distance of 100m in all directions from the site was undertaken. Vegetation that may be considered a bushfire hazard was identified in all directions from the development footprint. The vegetation classification is based on the revised Table 2.3 in AS3959-2018 and Appendix 1 of PBP 2019. The unmanaged fuel loads detailed in the *RFS Comprehensive Fuel Loads Fact Sheet* (March 2019) have been adopted for the purpose of assessing the bushfire hazard. The findings of the site inspection were compared to the available vegetation mapping. The inconsistencies between the mapping sources and hazardous vegetation mapped on the NSW RFS Bushfire Prone Land maps were quantified during the site assessment.

3.1.1. Reliability Assessment

Although the bushfire prone land mapping is intended to be regularly updated, land use and vegetation cover that contribute to bushfire hazards are subject to change. A reliability assessment was undertaken for the subject site and all land within 140 metres. In this instance the bushfire prone land mapping is inconsistent with existing vegetation present within or surrounding the site.



Plate 1: Proposed school is located within a portion of UWS campus currently used for grazing livestock



Plate 2: The proposed RAC is accessible from College Drive



Plate 3: A portion of land adjoining the lease area is currently fenced and left unmanaged



Plate 4: The unmanaged vegetation secured by the fence is assessed as a *woodland*



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Figure 5
**NSW State
Vegetation
Type (Class)**

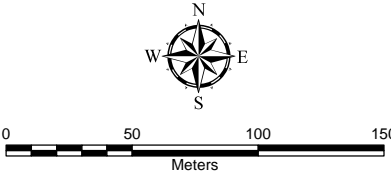


- Subject site
- 100m buffer
- 140m buffer

Vegetation Class

- Coastal Valley Grassy Woodlands
- Sydney Sand Flats Dry Sclerophyll Forests

SOURCE:
Cadastral Boundary: NSW Department of Finance,
Services and Innovation 2024
NSW Vegetation Type: NSW Department of Planning,
Industry and Environment 2024
Aerial Photo: Nearmap 26/08/2024



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3.2. Slope Assessment

The slope assessment was undertaken as follows:

- ❑ Review of LiDAR point cloud data - including DEM (NSW LPI).
- ❑ Detail survey of existing and design contours.
- ❑ Site inspection completed on 13 September 2024 by Bushfire Planning Australia (Stuart Greville).

An assessment of the slope over a distance of 140m in the hazard direction from the site boundary was undertaken. The effective slope was then calculated under the classified vegetation where there was a fire run greater than 50m. The topography of the site has been evaluated to identify both the average slope and by identifying the maximum slope present. These values help determine the level of gradient which will most significantly influence the fire behaviour of the site.

The effective slope in all directions is shown in **Figure 6, Figure 7** and **Table 2**.

The final bushfire hazard assessment defining vegetation classifications and effective slope is shown in **Figure 8**.



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Figure 6

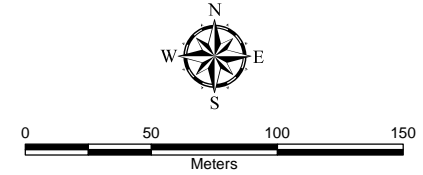
Digital Elevation Model



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- Subject site
- 100m buffer
- 140m buffer
- Contour (2m)
- Contour (0.5m)
- Elevation (AHD)
 - High : 25m
 - Low : 15m

SOURCE:
Cadastral Boundary: NSW Department of Finance,
Services and Innovation 2024
Surface analysis: Derived from PENRITH 1m
resolution LiDAR: © Department Finance, Services
and Innovation 2019

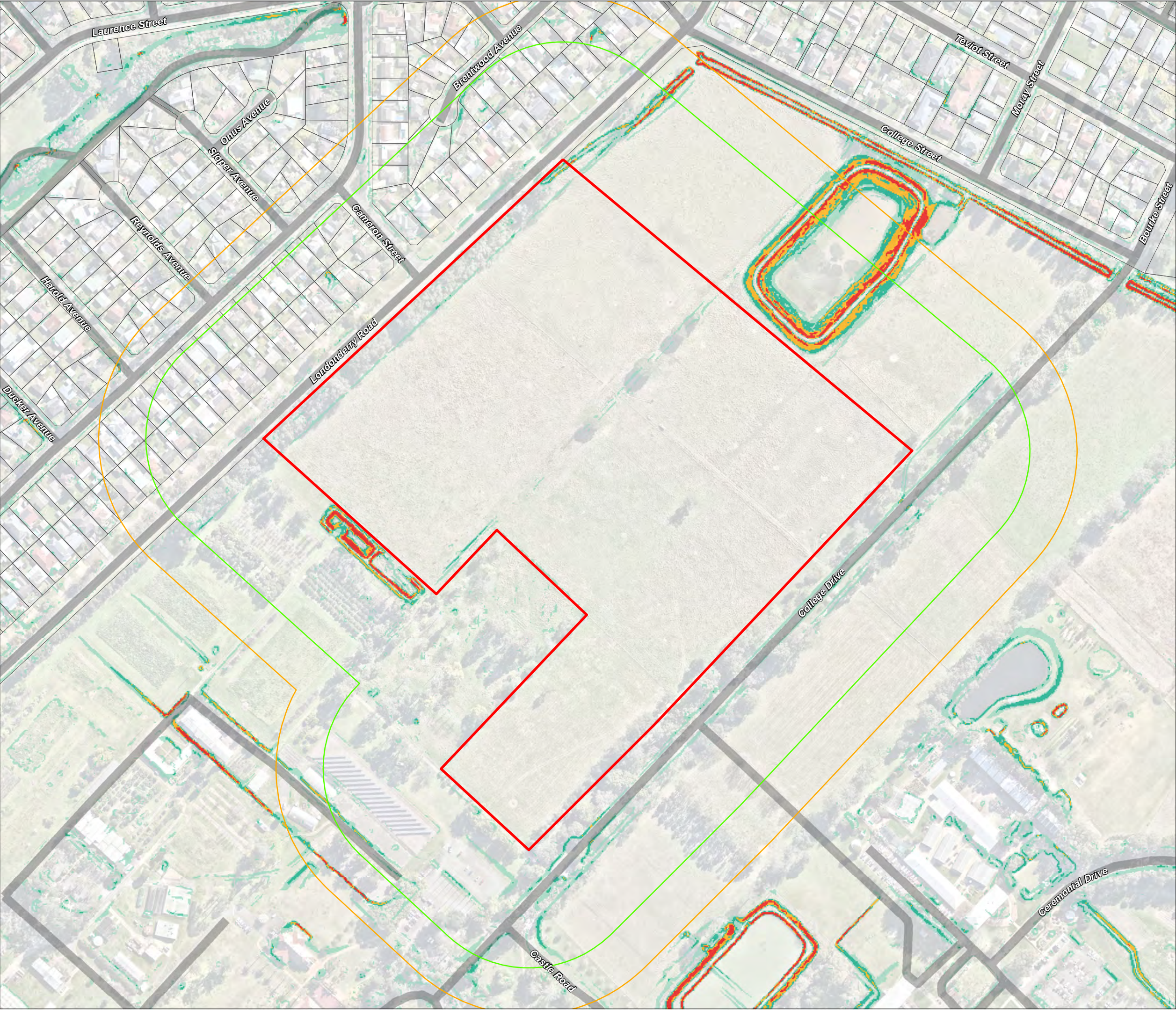


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Figure 7

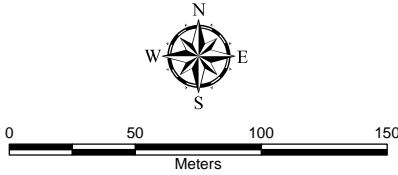
Slope Analysis: LiDAR



BUSHFIRE
PLANNING
AUSTRALIA

- Legend**
- Subject site
 - 100m buffer
 - 140m buffer
- Slope**
- 0° - 5°
 - 5° - 10°
 - 10° - 15°
 - 15° - 20°
 - >20°

SOURCE:
Cadastral Boundary: NSW Department of Finance,
Services and Innovation 2024
Surface analysis: Derived from PENRITH 1m
resolution LiDAR: © Department Finance, Services
and Innovation 2019
Aerial photo: Nearmap 26/02/2024



A3 Scale: 1:3,000

File:2435-RichmondCoE-Fig5-SlopeLiDAR-241125 Date: 25/11/2024

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3.4. Slope & Vegetation Assessment Results

All vegetation identified within the current Bush Fire Prone Land map was confirmed as part of the site assessment.

The proposed RAC will be located on a managed, vacant parcel of land, within the northern portion of the Western Sydney University site. Whilst the majority of the proposed site is a managed grassland, there is a narrow corridor of existing trees that line both Londonderry Road and College Drive.

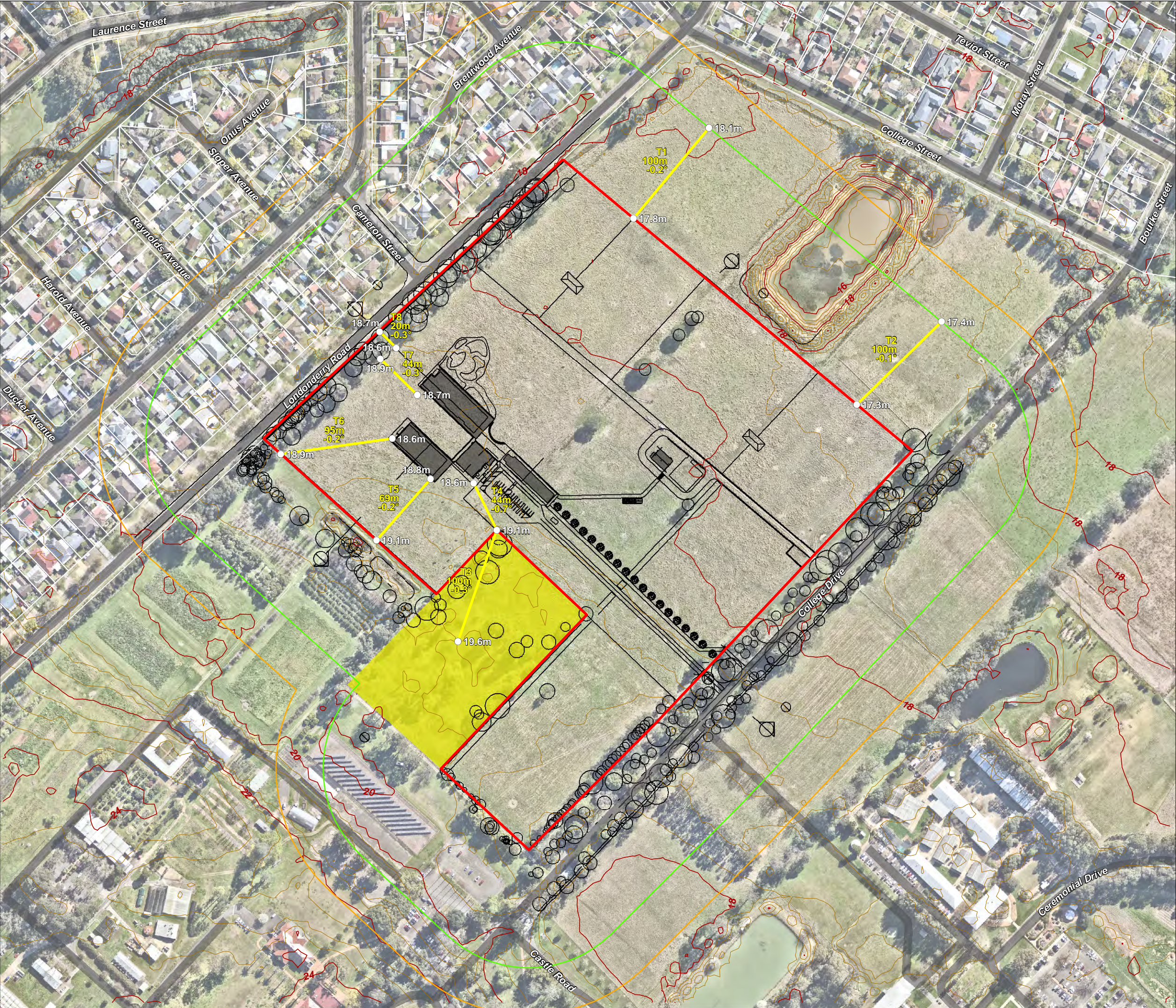
Within 140m south-west of the site is an isolated parcel (~2 hectares) of unmanaged and naturally regenerating vegetation identified as a *woodland*. This is identified as the primary bushfire hazard.

Within 140m to the immediate north-eastern site boundary, within the Western Sydney University campus, managed land surrounds a dam before reaching College Street. On the northern side of both College Street (north-east) and Londonderry Road (north-west), residential dwellings exist within and beyond 140m of the site. Whilst to the south-east and a portion of the south-west, are managed land and existing University facilities. Excluding the identified bushfire hazard, the site is surrounded by managed land and existing dwellings / buildings, all of which are not required to be considered for the purposes of PBP 2019.

The results of hazard assessment are detailed in **Table 2** and shown in **Figure 8**.

Table 2: Slope and Vegetation Assessment Results

Transect	Vegetation or Other Infrastructure	Vegetation Classification (PBP 2019)	Slope
T1 North-east	Managed land within the WSU campus grounds, north-east of the proposed Richmond Agricultural Centre	Excluded (Managed Land)	-0.2° Upslope
T2 North-east	Managed land within the WSU campus grounds, north-east of the proposed Richmond Agricultural Centre	Excluded (Managed Land)	-0.1° Upslope
T3 South-west	Unmanaged woodland vegetation, cleared understorey, immediately external to the sites southern boundary	<i>Woodland</i> (Coastal Valley Grassy Woodland)	-0.3° Upslope
T4 On-site	Managed land between the proposed building and the unmanaged vegetation within the proposed Richmond Agricultural Centre site	Excluded (Managed Land)	-0.7° Upslope
T5 On-site	Managed land between the proposed building and the sites southern boundary within the proposed Richmond Agricultural Centre site	Excluded (Managed Land)	-0.2° Upslope
T6 On-site	Managed land between the proposed building and the sites western boundary within the proposed Richmond Agricultural Centre site	Excluded (Managed Land)	-0.2° Upslope
T7 On-site	Managed land between the proposed building and the sites north-western boundary within the proposed Richmond Agricultural Centre site	Excluded (Managed Land)	-0.3° Upslope
T8 On-site	A narrow corridor (~20m) of trees lining the sites north-western boundary and Londonderry Road	Excluded (Managed Land)	-0.3° Upslope



Project: Richmond
(Agricultural Centre)
Job No: 2435

Figure 8

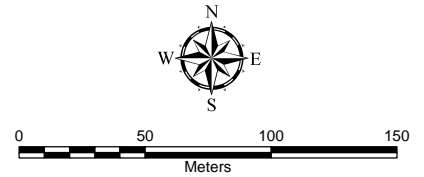
Slope & Vegetation Assessment



BUSHFIRE
PLANNING
AUSTRALIA

- Subject site
- 100m buffer
- 140m buffer
- Building
- Contour (2m)
- Contour (0.5m)
- RL
- Upslope transect
- Vegetation Class**
 - Woodland (unmanaged and naturally regenerating)

SOURCE:
Cadastral Boundary: NSW Department of Finance, Services and Innovation 2024
Vegetation: Bushfire Planning Australia 2024
Aerial Photo: Nearmap 26/08/2024
Surface analysis: Derived from PENRITH 1m resolution LIDAR: © Department Finance, Services and Innovation 2019



A3 Scale: 1:3,000

File:2435-RichmondCoE-Fig6-SlopeVeg-250414 Date: 14/04/2025

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3.5. Significant Environmental Features

The recommended bushfire protection measures have been designed to minimise any unacceptable impacts on any significant environmental features. Narla Environmental completed a Flora and Fauna Assessment Report (April 2025) and concluded the development will have minimal impact.

3.6. Threatened Species, populations or ecological communities

The area of the site to be affected by the proposed development has been identified to minimise impact on any threatened species, population or EEC. All bushfire mitigation measures, including APZs will consider the existing and potential biodiversity values to minimise impact where possible. Narla Environmental concluded the development, including the recommended APZ will have a minimal impact to any threatened flora or fauna species or ecological processes.

3.7. Aboriginal Objects

A search of the AHIMS database (results contained in **Appendix E**) revealed there are no Aboriginal sites or places recorded within 50m of the site. The proposed development will not impact on any recorded Aboriginal sites.

4. Bushfire Protection Measures

This Bushfire Assessment Report (BAR) has adopted the methodology to determine the appropriate Bushfire Protection Measures (BPMs) detailed in PBP 2019. As part of the BAR, the recommended BPMs demonstrate the aims and objectives of PBP 2019 have been satisfied; including the matters considered by the RFS necessary to protect persons, property and the environment from the danger that may arise from a bushfire. BPMs defined in PBP 2019 are:

- ☐ APZs
- ☐ Access
- ☐ Water Supply and Utilities
- ☐ Building Construction and Design
- ☐ Landscaping
- ☐ Emergency Management Arrangements

4.1. Asset Protection Zones

An Asset Protection Zone (APZ) is an area surrounding a development that is managed to reduce the bushfire hazard to an acceptable level to mitigate the risk to life and property. The required width of the APZ varies with slope and the type of hazard. An APZ can consist of both an inner protection area (IPA) and an outer protection area (OPA) as seen in **Figure 9** and **Figure 10**.

An APZ can include the following:

- ☐ Lawns
- ☐ Discontinuous gardens
- ☐ Swimming pools
- ☐ Roads, driveways and managed verges
- ☐ Unattached non-combustible garages with suitable separation from the dwelling
- ☐ Open space / parkland
- ☐ Car parking

The presence of a few shrubs or trees in the APZ is acceptable provided that they:

- ☐ Do not touch or overhang any buildings
- ☐ Are well spread out and do not form a continuous canopy
- ☐ Are not species that retain dead material or deposit excessive quantities of ground fuel in a short period or in a danger period
- ☐ Are located far enough away from any dwelling so that they will not ignite the dwelling by direct flame contact or radiant heat emission

Woodpiles, wooden sheds, combustible material storage areas, large areas / quantities of garden mulch, stacked flammable building materials etc. are not recommended in the APZ.

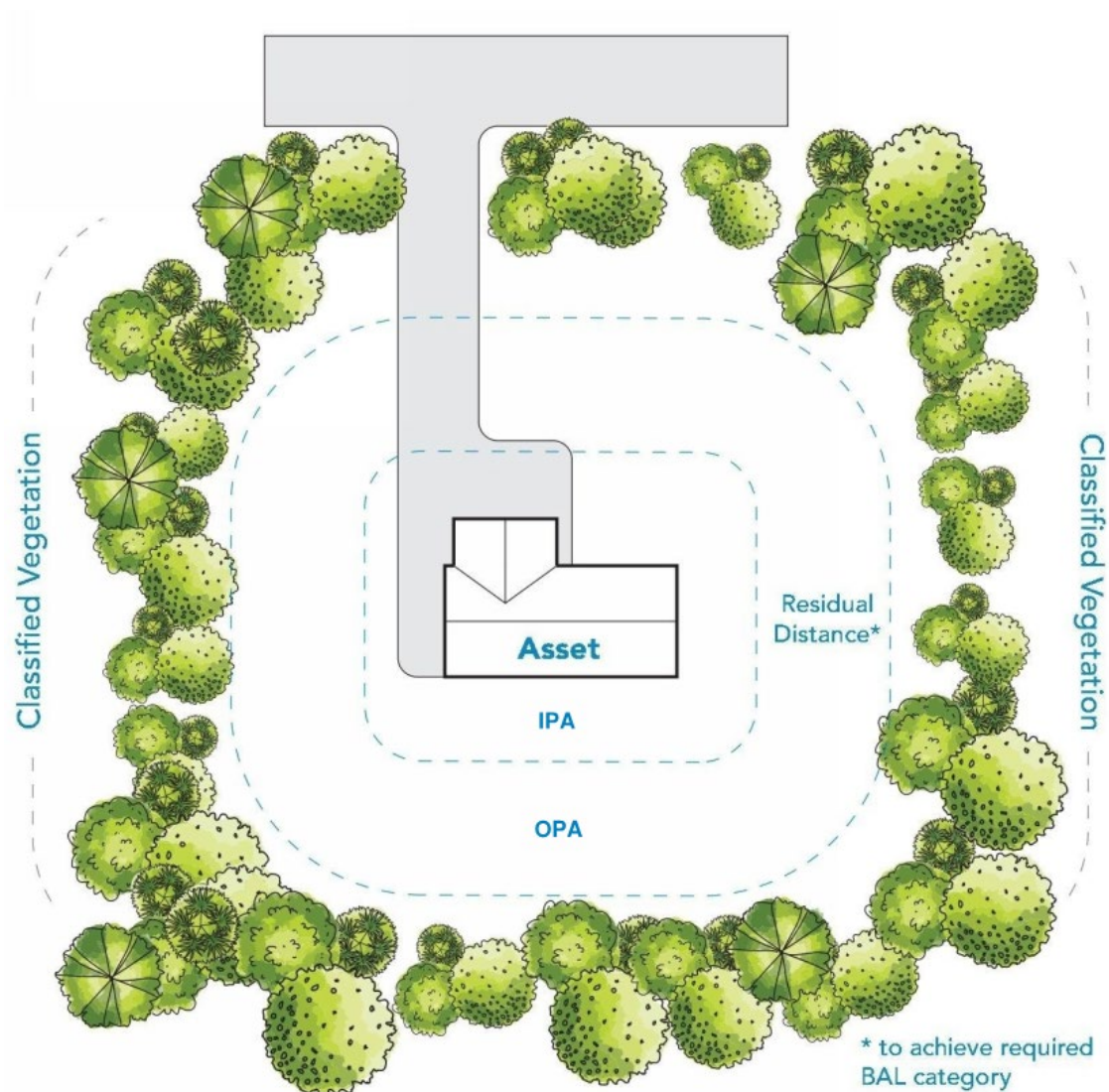


Figure 9: Inner and Outer Asset Protection Zones

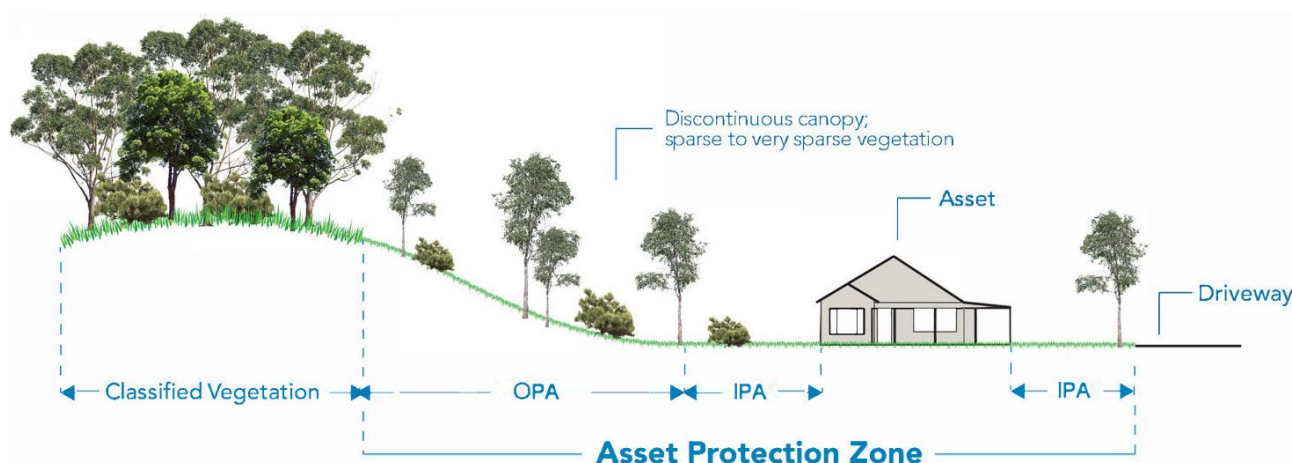


Figure 10: Example of the APZ profile

4.1.1. Special Fire Protection Purposes

Special Fire Protection Purposes (SFPP) developments mean the occupants of the proposed development may be more vulnerable to bush fire attack and therefore may require greater protection from such threats as well as assisted evacuation. SFPPs include schools and universities, childcare centres, hospitals, seniors housing and tourist accommodation.

Section 6.8 of PBP 2019 provides protection measures for SFPP developments. In comparison to a standard residential development where radiant heat levels of no greater than 29kW/m^2 are acceptable, radiant heat levels of greater than 10kW/m^2 must not be experienced by on any part of the buildings. To achieve radiant heat levels of less than 10kW/m^2 , APZs of 42 metres or greater are typically required (based on Table A1.12.1 of PBP 2019) for *woodland* vegetation formations.

Objectives for SFPP developments place emphasis on the space surrounding buildings (as defensible space and APZs) and less reliance on construction standards. SFPP developments are highly dependent on suitable emergency evacuation arrangements, which require greater separation from bush fire threats.

4.1.2. Determining the Appropriate Setbacks

To achieve compliance with the performance criteria for APZs (Table 6.8a), the Acceptable Solutions outlined in Table A1.12.1 of PBP 2019 may be adopted as a deemed-to-satisfy solution.

Alternatively, the appropriate APZ setback may be determined to achieve the Performance Criteria by adopting a performance-based solution. Based on the unique site characteristics identified by the BAR, the intensity of a bushfire event presented as the radiant heat exposure was calculated at several locations throughout the development site using the NBC Bushfire Attack Assessor V4.1 (**Appendix F**). The nominated fuel loads for the respective vegetation classifications as published by the RFS in March 2019 have been used to determine the APZs and the effective slope obtained from the Digital Elevation Model (DEM) for each transect.

As the site lies within the Hawkesbury City Council LGA, it is assessed under a FDI rating of 100. The Detailed Method (Method 2) outlined in Australian Standard *AS3959-2018 Construction of buildings in bushfire prone areas* was used to calculate the potential level of radiant heat flux generated at the nominated locations (see transects T1-T8). To ensure the APZs achieve the intent of Section 6.8 of PBP 2019, the APZs have been determined to ensure all lots are able to accommodate the proposed development will not be exposed to radiant heat levels exceeding 10kW/m^2 .

Whilst there are minor inconsistencies between the SVT mapping and the vegetation observed during the site inspection, this assessment has considered the woodland vegetation formation south-west of the site as the primary bushfire hazard. Accordingly, it is recommended the proposed Richmond Agricultural Centre is protected by an **42m** APZ to the south-west as seen in Figure .

The vegetation within the recommended APZ is currently managed as an APZ as shown in **Figure 12** and outlined in **Table 3**. **Figure 12** demonstrates all new buildings are located outside of the recommended APZ and therefore satisfy

Table 3: Required APZ setbacks

Transect	Vegetation Classification (PBP 2019)	Slope	APZ PBP2019 Table A1.12.1	APZ 29kw/m ²
T1 North-east	Excluded (Managed Land)	-0.2° Upslope	N/A	N/A
T2 North-east	Excluded (Managed Land)	-0.1° Upslope	N/A	N/A
T3 South-west	<i>Woodland</i> (Coastal Valley Grassy Woodland)	-0.3° Upslope	42m	12m
T4 On-site	Excluded (Managed Land)	-0.7° Upslope	N/A	N/A
T5 On-site	Excluded (Managed Land)	-0.2° Upslope	N/A	N/A
T6 On-site	Excluded (Managed Land)	-0.2° Upslope	N/A	N/A
T7 On-site	Excluded (Managed Land)	-0.3° Upslope	N/A	N/A
T8 On-site	Excluded (Managed Land)	-0.3° Upslope	N/A	N/A

4.2. Access

In accordance with Section 6.8.2 of PBP 2019, the proposed school must provide safe and efficient vehicular access for both occupants and emergency services. As detailed below, the RAC complies with Table 6.8b of PBP 2019:

1. **All-Weather Road:** The internal roads and driveway connections at the RAC are designed to be all-weather surfaces, enabling two-wheel-drive vehicles (including firefighting appliances) to enter and exit safely during an emergency.
2. **Road Width and Capacity:** Access routes satisfy the requirement for a minimum carriageway width capable of supporting fully loaded firefighting vehicles (23 tonnes). Both dedicated service access and general access points from College Drive are suitably constructed to accommodate these loads.
3. **Vertical Clearance:** A vertical clearance of at least four metres is maintained along all essential access pathways, ensuring that fire appliances and other emergency vehicles can pass without obstruction.
4. **Dual Access Points:** With two clearly demarcated access connections from College Drive (occupant entry and a separate service entry), the RAC affords multiple routes for ingress and egress, facilitating a safer evacuation process and more efficient emergency service access.

These access arrangements ensure the proposed development achieves compliance with Section 6.8.2 and the acceptable solutions under Table 6.8b of PBP 2019, providing adequate and reliable access for both emergency services and occupants in a bushfire event.

Refer to **Figure 11** and **Appendix A** for access related to the proposed development.

4.2.1. SFPP Development Access - PBP Addendum 2022 and 2025

PBP Addendum 2022 introduced additional access requirements for certain Class 9 SFPP buildings (including schools) to align with the National Construction Code 2022 and Specification 43. Typically, these provisions address vehicle access around the building, ensuring fire appliances can reach both occupants and hazardous vegetation areas quickly.

However, as clarified by the January 2025 Addendum and recent RFS guidance, these stricter vehicular access requirements (i.e. S43C14) only apply when the school building is located on designated bushfire prone land. In the case of the Richmond Agricultural Centre, it is not mapped as bushfire prone on the certified Bush Fire Prone Land Map. Consequently:

- ☐ The additional access measures set out in S43C14 do not apply.
- ☐ The performance criteria in Table 6.8b of PBP 2019 remain the guiding standard for the RAC's design.

In practical terms, this means the internal driveway network, which meets standard PBP 2019 access guidelines, is sufficient. The existing circulation from College Drive allows safe ingress/egress and ensures emergency responders can readily access the site in the unlikely event of a bushfire.

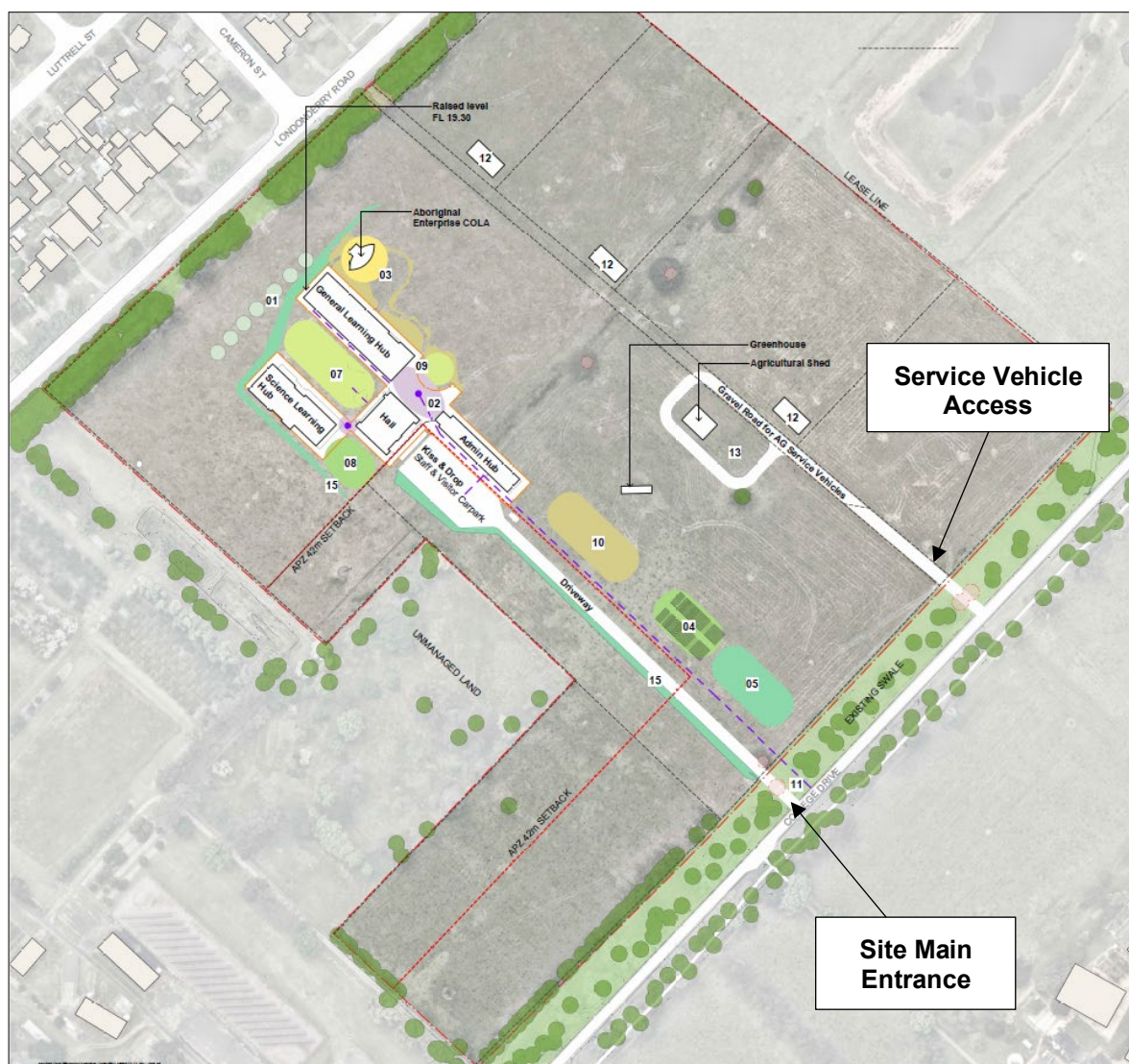


Figure 11: Vehicular Access - College Drive

4.3. Services - water, electricity and gas

4.3.1. Water

Fire hydrant spacing, sizing and pressure should comply with AS 2419.1-2021 and are not to be located within any road carriageway.

4.3.2. Water Supply - PBP Addendum 2022

Further to compliance with Table 6.8c of PBP 2019, the proposed development is able to comply with Table 4 of PBP Addendum 2022 as a reticulated water supply will be provided.

4.3.3. Electricity

All new electricity services will be located underground.

4.3.4. Gas

Any reticulated or bottled gas should be installed and maintained according to the requirements of the relevant authorities and AS 1596-2002. It is expected that the location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.

4.4. Construction Standards - Bushfire Attack Level

All buildings constructed within the site are recommended to satisfy the Performance Requirements of the National Construction Code: Building Code of Australia (BCA).

Accordingly, all forthcoming Class 9 buildings shall satisfy the requirements of Part 3.7.4 of the BCA. The *Deemed-to-Satisfy* (DTS) provision of the NCC can only be achieved if buildings in bushfire prone areas are constructed in accordance with Australian Standard *AS3959-2018 Construction of buildings in bushfire prone areas*. Alternatively, the DTS provisions can also be achieved if the habitable building is constructed in accordance with the NASH Standard 'Steel Framed Construction in Bushfire Areas'.

Building design and the materials used for construction of future dwellings should be chosen based on the information contained within AS3959-2018, and accordingly the designer/architect should be made aware of this recommendation.

The determinations of the appropriate bushfire attack level (BAL) is based on the maximum potential radiant heat exposure. BALs are based upon parameters such as weather modelling, fire-line intensity, flame length calculations, as well as vegetation and fuel load analysis. The determination of the BAL is derived by assessing the:

- ☐ Relevant FDI = 100
- ☐ Flame temperature = 1200K
- ☐ Slope = upslope
- ☐ Vegetation classification = woodland
- ☐ Building location.

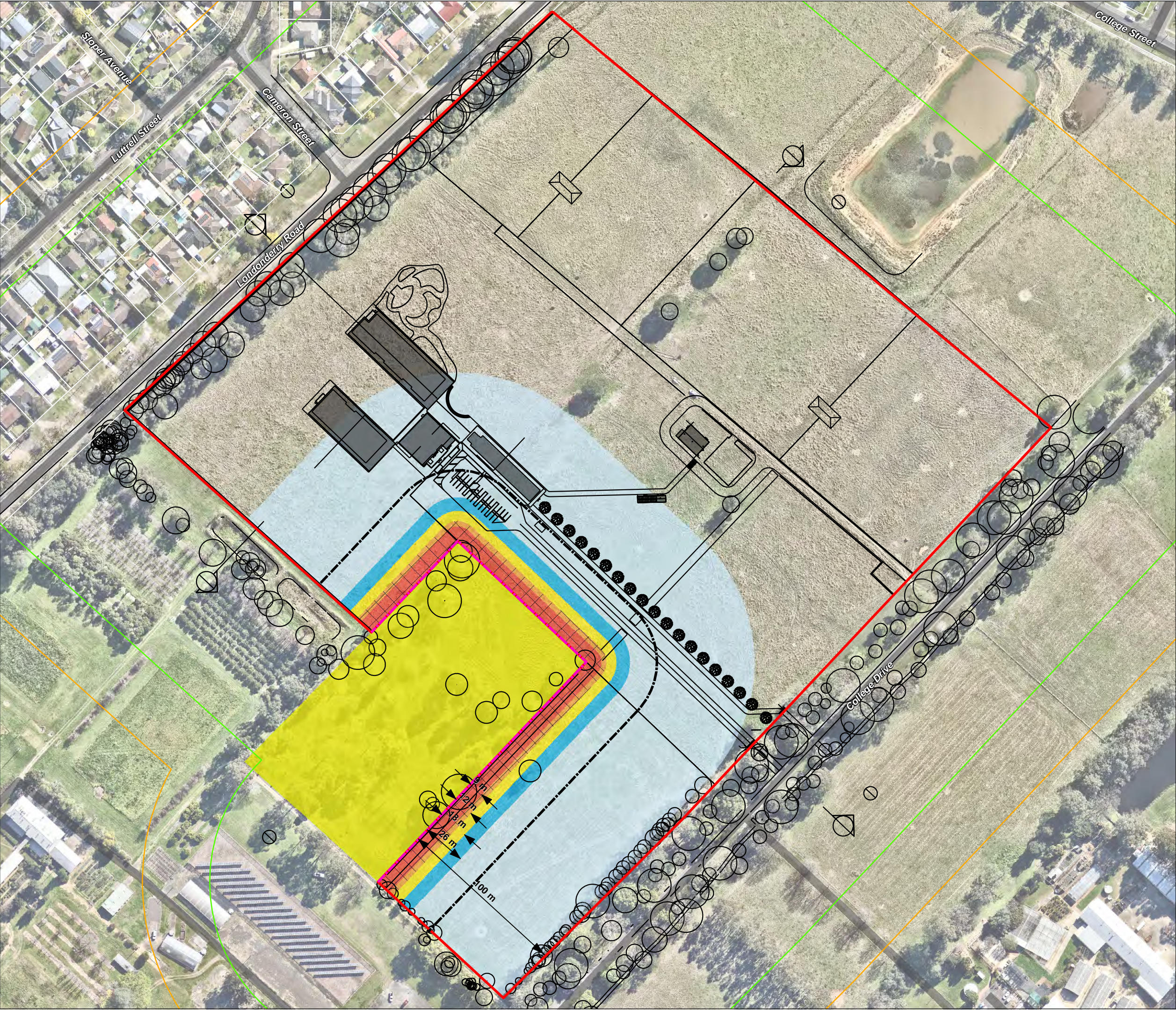
4.4.1. Construction Standards - PBP Addendum 2022

In accordance with Table 2 of the PBP Addendum 2022, a construction level of **BAL-19** is applied to all schools and universities. Accordingly, the proposed development would be required to be constructed in accordance with Sections 3 and 6 of AS3959-2018.

Nevertheless, the BAL ratings have been calculated for the proposed development and are detailed in **Table 4** and shown in **Figure 12**.

Table 4: Bushfire Attack Level Assessment

Transect	Vegetation Classification (PBP 2019)	Slope	APZ (Table A1.12.1 -SFPP <10kW/m ²)	Distance from Hazard	Bushfire Attack Level (BAL)
T3	Woodland (Coastal Valley Grassy Woodland)	-0.3° Upslope	42m	0m-<10m	BAL-FZ
				10m-<11m	BAL-40
				11m-<17m	BAL-29
				17m-<24m	BAL-19
				24m-<100m	BAL-12.5
				39m	10kW/m²
T1-T2 & T4-T8	Excluded (Managed Land)	Upslope	N/A	N/A	BAL-LOW



Project: Richmond
(Agricultural Centre)
Job No: 2435

Figure 12

Subdivision BAL Plan



BUSHFIRE
PLANNING
AUSTRALIA

- Subject site
- 100m buffer
- 140m buffer
- Building
- Asset Protection Zone

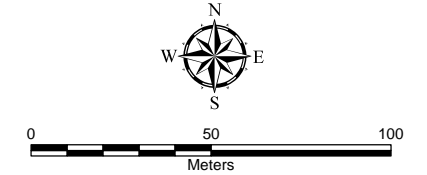
Required Bushfire Attack
Levels (PBP 2019 Table
A1.12.5)

- BAL - FZ
- BAL - 40
- BAL - 29
- BAL - 19
- BAL - 12.5

Vegetation Class

- Woodland (unmanaged and naturally regenerating)

SOURCE:
Cadastral Boundary: NSW Department of Finance,
Services and Innovation 2024
Vegetation: Bushfire Planning Australia 2024
Aerial Photo: Nearmap 26/08/2024



A3 Scale: 1:2,100

File:2435-RichmondCoE-Fig7-BALs-250414 Date: 14/04/2025

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4.5. Landscaping and Vegetation Management

In APZs and IPAs, the design and management of the landscaped areas in the vicinity of buildings have the potential to improve the chances of survival of people and buildings. Reduction of fuel does not require the removal of all vegetation. Trees and plants can provide some bushfire protection from strong winds, intense heat and flying embers (by filtering embers) and changing wind patterns.

Generally landscaping in and around a bushfire hazard should consider the following:

- ☐ Priority given to retaining species that have a low flammability
- ☐ Priority given to retaining species which do not drop much litter in the bushfire season and which do not drop litter that persists as ground fuel in the bush fire season
- ☐ Priority given to retaining smooth barked species over stringy bark
- ☐ Create discontinuous or gaps in the vegetation to slow down or break the progress of fire towards the dwellings

Landscaping within APZs and IPAs should give due regard to fire retardant plants and ensure that fuel loads do not accumulate as a result of the selected plant varieties.

The principles of landscaping for bushfire protection aim to:

- ☐ Prevent flame impingement on dwellings
- ☐ Provide a defendable space for property protection and shelter from radiant heat
- ☐ Reduce fire spread
- ☐ Deflect and filter embers
- ☐ Reduce wind speed

Plants that are less flammable have the following features:

- ☐ High moisture content and high levels of salt
- ☐ Low volatile oil content of leaves
- ☐ Smooth barks without 'ribbons' hanging from branches or trunks
- ☐ Dense crown and elevated branches

Avoiding understorey planting and regular trimming of the lower limbs of trees also assists in reducing fire penetration into the canopy. Rainforest species such as *Syzygium* and figs are preferred to species with high fine fuel and/or oil content. Trees with loose, fibrous or stringy bark should be avoided. These trees can easily ignite and encourage ground fire to spread up to, and then through the crown of trees.

Consideration should be given to vegetation fuel loads present on site with particular attention to APZs. Careful thought must be given to the type and physical location of any proposed site landscaping. Inappropriately selected and positioned vegetation has the potential to 'replace' any previously removed fuel load.

Bearing in mind the desired aesthetic and environment sought by site landscaping, some basic principles have been recommended to help minimise the chance of such works contributing to the potential hazard on site.

It is reiterated again that it is essential that any landscaped areas and surrounds are subject to ongoing fuel management and reduction to ensure that fine fuels do not build up.

BPA have reviewed the Landscape Masterplan prepared by NBRS Issue 1 dated 1 May 2025 (**Appendix B**) and confirms the design, layout and planting schedule satisfies the requirements of PBP 2019.

4.6. Emergency Services

There is a NSW Fire & Rescue Service station located at 43 March Street, Richmond, approximately 900m (2 mins) drive away from the site (**Figure 13**). In an emergency, it is likely that this will be the first emergency response.

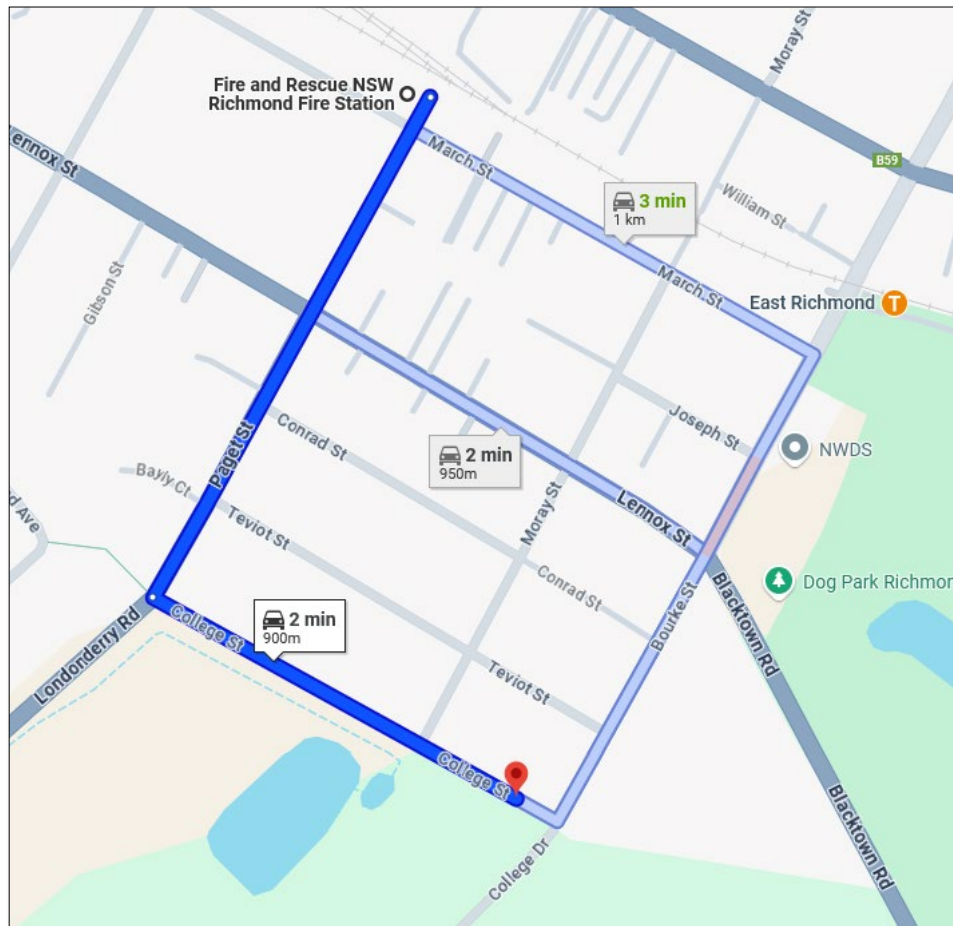


Figure 13: NSW Fire & Rescue Service - Richmond

5. Conclusion

This Bushfire Assessment Report (BAR) has been prepared by Bushfire Planning Australia on behalf of the Department of Education (DoE) (the Proponent) to assess the potential environmental and bushfire impacts that could arise from the activities associated with the Richmond Agricultural Centre (RAC) at 2 College Street Richmond (Part Lot 2 DP1051798) (the site).

The findings confirm that the site is not mapped as bush fire prone, thereby exempt from additional bushfire requirements under Section 100B of the Rural Fires Act 1997, as well as from Specification 43 of the NCC 2022 per the January 2025 Addendum to *Planning for Bush Fire Protection 2019* (PBP 2019).

Despite not being on designated bushfire prone land, the RAC must still address SFPP performance objectives and compliance pathways outlined in PBP 2019 (including Chapter 6). Bushfire modelling has identified a moderate bushfire hazard from an isolated *woodland* area within 140 m of the site, which is readily addressed by establishing a 42 m Asset Protection Zone (APZ) and constructing new buildings to BAL-19. Implementing these measures will ensure the development will not be exposed to radiant heat above 10 kW/m² and will satisfy relevant Special Fire Protection Purpose (SFPP) requirements.

6. Mitigation Measures & Recommendations

Table 5: Consolidated Summary of Mitigation Measures

Project Stage Design (D) Construction (C) Operation (O)	Mitigation Measure & Recommendations	Relevant Section of Report
D/O	<p>Asset Protection Zones (Defendable Space)</p> <ol style="list-style-type: none"> 1. All buildings to be used for a Special Fire Protection Purpose (SFPP) or associated uses are located to ensure they will not be exposed to radiant heat levels greater than 10kW/m² 2. An Asset Protection Zone (APZ) a minimum 42m should be provided within the site and managed as an Inner Protection Area; as shown in Figure 8. The APZs shall be managed in perpetuity as follows: <ol style="list-style-type: none"> a. Tree canopy cover shall be less than 15% at maturity b. Trees at maturity shall not touch or overhang buildings c. Lower limbs shall be removed up to a height of 4m above the ground d. Tree canopies shall be separated by 2m to 5m e. Shrubs should not form more than 10% ground cover f. Shrubs shall not be located under trees g. Grass/ ground covers shall be kept mown and be no more than 100mm in height h. Leaves and debris shall be removed regularly 3. The APZ needs to be established before any buildings are occupied. Surface fuel needs to be maintained frequently (< monthly) and an inspection of all trees within the APZ shall be carried out annually in August and April (pre and post bushfire season) to ensure vegetation remains in accordance with the requirements for APZs 4. Any required water quality and stormwater detention basins are to be replanted using species type and density commensurate with a <i>freshwater wetland</i> (<i>Coastal Freshwater Lagoon</i>), as described by PBP 2019 <p>Note: the APZ is measured from the surface fuel and not the tree canopy drip line.</p>	Section 3.1
D/O	<p>Access</p> <ol style="list-style-type: none"> 5. The proposed internal roads are to be constructed in accordance with Table 6.8b of PBP 2019. 	Section 3.2

Project Stage <i>Design (D)</i> <i>Construction (C)</i> <i>Operation (O)</i>	Mitigation Measure & Recommendations	Relevant Section of Report
D/C/O	Water and Services 6. The proposed additions to the existing building are to be connected to a reliable water supply network and that suitable fire hydrants are located throughout the development site that are clearly marked and provided for the purposes of bushfire protection. Fire hydrant spacing, sizing and pressure shall comply with AS2419.1 2005 and section 6.8.3 of PBP 2019 and Table 4 of Appendix B of the PBP Addendum 2022	Section 3.3
D/C/O	Construction (BAL-19) 7. The new facility shall be constructed in accordance with Section 3 and 6 of Australian Standard AS3959-2018 Construction of buildings in bushfire prone areas; being to a BAL-19 standard. New construction must also comply with the construction requirements in Section 7.5 of PBP 2019 8. The development shall comply with the National Construction Code; including the additional bushfire protection measures for Class 9 buildings including Part G5 (NCC 2022) where applicable.	Section 3.4
D/O	Landscaping 9. Landscaping shall be in accordance with Appendix 4 of PBP 2019.	Section 3.5
O	Emergency Management 10. No hazardous or flammable materials are to be stored between any buildings and the bushfire hazards without being suitably enclosed to prevent air borne embers from direct contact 11. A new or updated Bushfire Survival Plan and Emergency Management Plan shall be prepared in accordance with the RFS Guide to development a Bush Fire Emergency Management and Evacuation Plan	Section 3.6

This assessment has been made based on the bushfire hazards observed in and around the site at the time of inspection (September 2024) and production (May 2025).

Should the above recommendations be implemented, the proposed development will offer an acceptable level of protection to life and property for those persons and assets occupying the site, but they do not and cannot guarantee that the area will not be affected by bushfire at some time.

7. References

- ❑ Keith (2004). Ocean Shores to Desert Dunes - The Native Vegetation of New South Wales and the ACT.
- ❑ NSW Rural Fire Service (2005). Standards for Asset Protection Zones. NSW Rural Fire Service.
- ❑ NSW Rural Fire Service (2019). Planning for Bushfire Protection - A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners.
- ❑ Ramsay, GC and Dawkins, D (1993). Building in Bushfire-prone Areas - Information and Advice. CSIRO and Standards Australia.
- ❑ Rural Fires and Environmental Assessment Legislation Amendment Act 2002.
- ❑ Standards Australia (2018). AS3959-2018: Construction of Buildings in Bushfire-prone Areas.

Appendix A: Proposed Architectural Drawings

RICHMOND AGRICULTURAL CENTRE

COLLEGE DRIVE, RICHMOND NSW

NSW DEPARTMENT OF EDUCATION

REVIEW OF ENVIRONMENTAL FACTORS (REF)



REF ISSUE

Issue			
No.	Date	Description	Chkd
1	27.02.2025	DRAFT REF	SJF
2	21.03.2025	DRAFT REF	SJF
3	04.04.2025	ISSUED FOR COORDINATION	SJF
4	10.04.2025	ISSUED FOR COORDINATION	SJF
5	16.04.2025	REF ISSUE	SJF

+61 2 9922 2344

nbrs.com.au

Nominated Architects:
Andrew Duffin NSW 5602
Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197

ABN 16 002 247 565

24127

RICHMOND AGRICULTURAL CENTRE

COVER PAGE

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Drawing ReferenceRevision

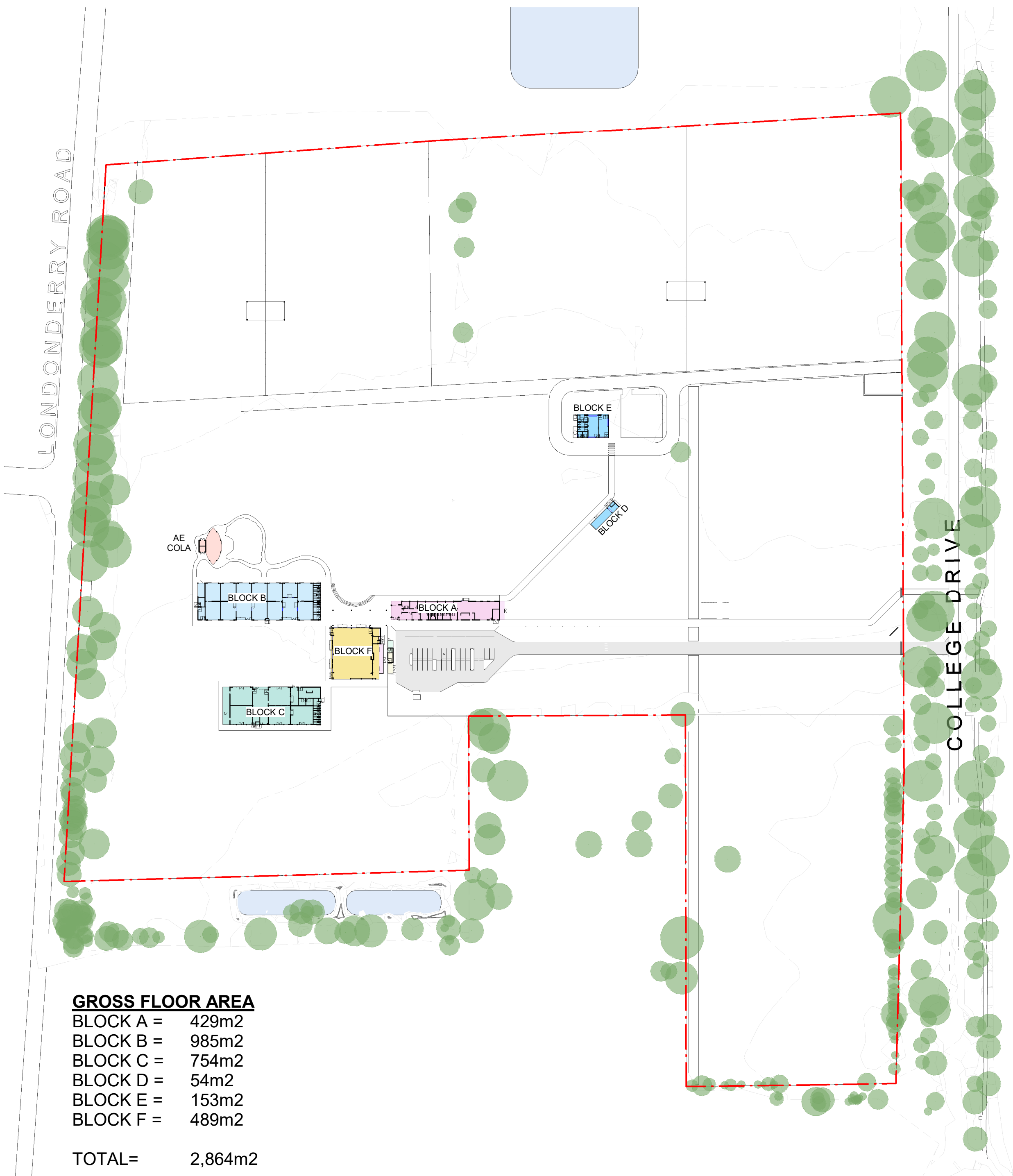
RAC-NBRS-ZZ-ZZ-DR-A-000005

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Drawing No.	Drawing Name	Issue	Date
00000	COVER PAGE	5	16.04.2025
00001	DRAWING LIST & SCHEDULE OF ACCOMODATION	5	16.04.2025
00017	SITE OBSERVATIONS	4	16.04.2025
00019	SITE ANALYSIS	5	16.04.2025
00100	EXISTING SITE PLAN	6	16.04.2025
00101	PROPOSED SITE PLAN	8	16.04.2025
00102	STACKING PLAN	6	16.04.2025
00104	3D AXONOMETRIC DIAGRAM	6	16.04.2025
00105	SHADOW DIAGRAMS	5	16.04.2025
01000	OVERALL GROUND FLOOR PLAN	7	16.04.2025
01020	OVERALL ROOF LEVEL PLAN	6	16.04.2025
01050	1-200 GROUND FLOOR PLAN	3	16.04.2025
03000	SITE ELEVATIONS	5	16.04.2025
04000	SITE SECTIONS	5	16.04.2025
08500	SITE SIGNAGE	5	16.04.2025
08600	EXTERNAL FINISHES SCHEDULE	5	16.04.2025
09000	PERSPECTIVES	5	16.04.2025

Schedule of Accomodation		
Room No.	Room Name	Room Area
ABORIGINAL ENTERPRISE		
AE.01	COLA	98 m²
AE.02	GARDEN SHED	8 m²
AE.03	GARDEN SHED	8 m²
		114 m²
BLOCK A		
BA.01	RECEPTION	26 m²
BA.02	ADMIN CLERICAL	23 m²
BA.03	CLINIC - BOYS	14 m²
BA.04	CLINIC - GIRLS	13 m²
BA.05	INTERVIEW	13 m²
BA.06	INTERVIEW	13 m²
BA.07	INTERVIEW	13 m²
BA.08	PRINCIPAL	21 m²
BA.09	UNISEX STUDENT AMB WC	4 m²
BA.10	CLN D. ST	6 m²
BA.11	UNISEX STAFF AMB WC	4 m²
BA.12	STAFF ACC WC/SHW	8 m²
BA.13	DEPUTY PRINCIPAL	13 m²
BA.14	BUSINESS MANAGER OFFICER	13 m²
BA.15	STORE	11 m²
BA.16	PSYCHOLOGIST/ COUNSELLOR	12 m²
BA.17	STAFF LOUNGE	50 m²
BA.18	STAFF STUDY	87 m²
BA.19	PRINT	26 m²
BA.20	CIRCULATION	44 m²
BA.21	MAIN COMMS	17 m²
BA.22	PLANT	21 m²
BA.23	TEA ROOM	2 m²
BA.24	EDB	1 m²
		456 m²
BLOCK B		
BB.01	GLS 1	64 m²
BB.02	GLS 2	64 m²
BB.03	GLS 3	65 m²
BB.04	GLS 4	64 m²
BB.05	GLS 5	64 m²
BB.06	GLS 6	65 m²
BB.07	GLS 7	65 m²
BB.08	GLS 8	65 m²
BB.09	GLS 9	65 m²
BB.10	GLS 10	65 m²
BB.11	MULTI PURPOSE SPACE	51 m²
BB.12	MULTI PURPOSE SPACE	51 m²
BB.13	PRACTICAL ACTIVITIES	72 m²
BB.14	PRACTICAL ACTIVITIES	72 m²
BB.15	BCR	13 m²
BB.16	CIRCULATION	2 m²
BB.17	MSB	20 m²
BB.18	STAFF ACC. WC	8 m²
BB.19	CLN	4 m²
BB.20	STUDENT ACC. WC	8 m²
BB.21	M.WC	3 m²
BB.22	M.WC	3 m²
BB.23	M.WC	3 m²
BB.24	M.WC	3 m²
BB.25	M.AMB	4 m²
BB.26	F.AMB	4 m²
BB.27	F.WC	3 m²
BB.28	F.WC	3 m²
BB.29	F.WC	3 m²
BB.30	F.WC	3 m²
BB.31	EDB	1 m²
BB.32	PLANT	23 m²
		1003 m²
BLOCK C		
BC.01	CANTEEN	55 m²
BC.02	OFFICE	12 m²
BC.03	STORE	12 m²
BC.04	SCIENCE LABORATORY	96 m²
BC.05	SCIENCE LABORATORY	96 m²
BC.06	BOTANY / ZOOLOGY	31 m²
BC.07	SCIENCE LABORATORY	96 m²
BC.08	SCIENCE PREP	92 m²
BC.09	CHEMICAL STORE	17 m²
BC.10	SCIENCE LABORATORY	96 m²
BC.11	SCIENCE LABORATORY	96 m²
BC.12	BUILDING COMMS	10 m²
BC.13	EDB	2 m²
BC.14	PLANT	17 m²
BC.15	ACC. WC	10 m²
BC.16	EDB	1 m²
BC.17	F WC	4 m²
BC.18	F WC	4 m²
BC.19	F.AMB. WC	4 m²
BC.20	M.AMB. WC	4 m²
BC.21	M WC	4 m²
BC.22	M WC	4 m²
BC.23	M WC	3 m²
		763 m²
BLOCK D		
BD.01	GREEN HOUSE	39 m²
BD.02	POTTING	12 m²
BD.03	EDB	3 m²
		54 m²
BLOCK E		
BE.01	TEACHING SPACE	50 m²
BE.02	AGRICULTURE TOOLS STORAGE	0 m²
BE.03	TRACTORS AND WORKSHOP TOOL STORAGE	53 m²
BE.04	ANIMAL SPACE	0 m²
BE.05	BCR	1 m²
BE.06	EDB	2 m²
BE.07	STUDENT ACC WC	6 m²
BE.08	COA	0 m²
BE.09	STAFF WC/SHW	7 m²
BE.10	AG. OFFICE	12 m²
BE.11	SECURE CHEM. STORE	11 m²
BE.12	SECURE STORE	11 m²
		152 m²
BLOCK F		
BF.01	DINING / CONFERENCE HALL	464 m²
BF.02	STORE	14 m²
BF.03	BCR	9 m²
BF.04	PLANT AREA	71 m²
BF.05	EDB	1 m²
BF.06	CIRCULATION	2 m²
BF.07	TEA CABINET	1 m²
		561 m²
OUTDOOR		
BF.08	BIKE STORE	9 m²
BF.09	END OF TRIP FACILITIES	4 m²
BF.10	BULK STORE	11 m²
BF.11	BIN STORE	13 m²
		38 m²
Grand total:		3141 m²



GROSS FLOOR AREA

BLOCK A = 429m2
BLOCK B = 985m2
BLOCK C = 754m2
BLOCK D = 54m2
BLOCK E = 153m2
BLOCK F = 489m2

TOTAL= 2,864m2

1 GROSS FLOOR AREA PLAN

1 : 1500

LEGEND:

VEGETATION / TREE CANOPY

BLOCK A
ADMIN / STAFF HUB

BLOCK B
GLS HUB

BLOCK C
SCIENCE LEARNING HUB

BLOCK F
MULTIPURPOSE HALL

BLOCK D & E
FARMING FACILITIES

ABORIGINAL ENTERPRISE

REF ISSUE

Issue No.	Date	Description	Chkd
1	27.02.2025	DRAFT REF	SJF
2	21.03.2025	DRAFT REF	SJF
3	04.04.2025	ISSUED FOR COORDINATION	SJF
4	10.04.2025	ISSUED FOR COORDINATION	SJF
5	16.04.2025	REF ISSUE	SJF

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DRAWING LIST & SCHEDULE OF ACCOMODATION

Date 16/04/2025 4:13:41 PM

Scale As indicated @ A1

Drawing Reference

Revision

RAC-NBRSt-ZZ-ZZ-DR-A-00001

5



1



16



15



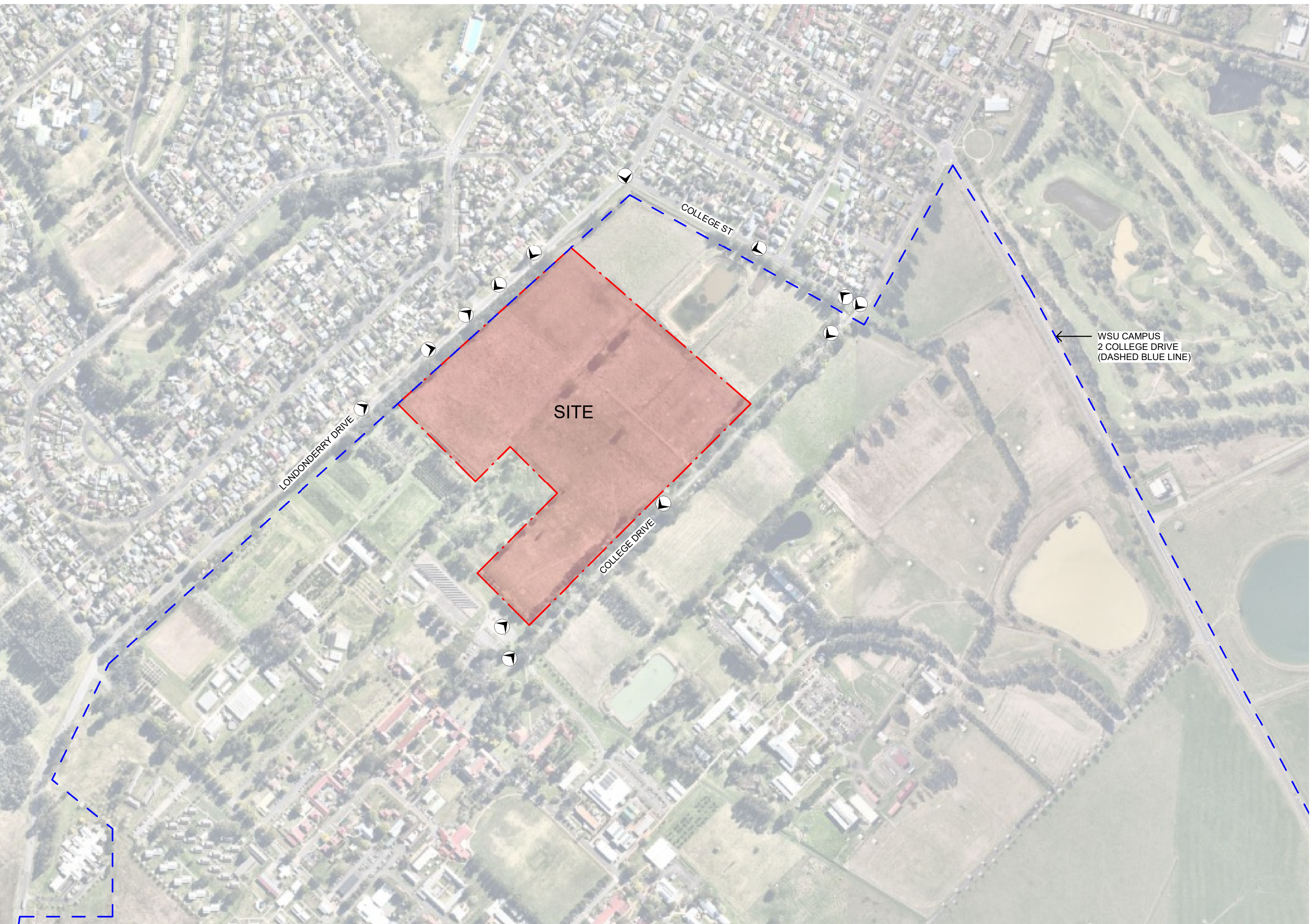
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13



2



12



3



11



4



10



5



6



7



8



9

REF ISSUE


Issue		Description	Chkd
No.	Date		
1	21.03.2025	DRAFT REF	SJF
2	04.04.2025	ISSUED FOR COORDINATION	SJF
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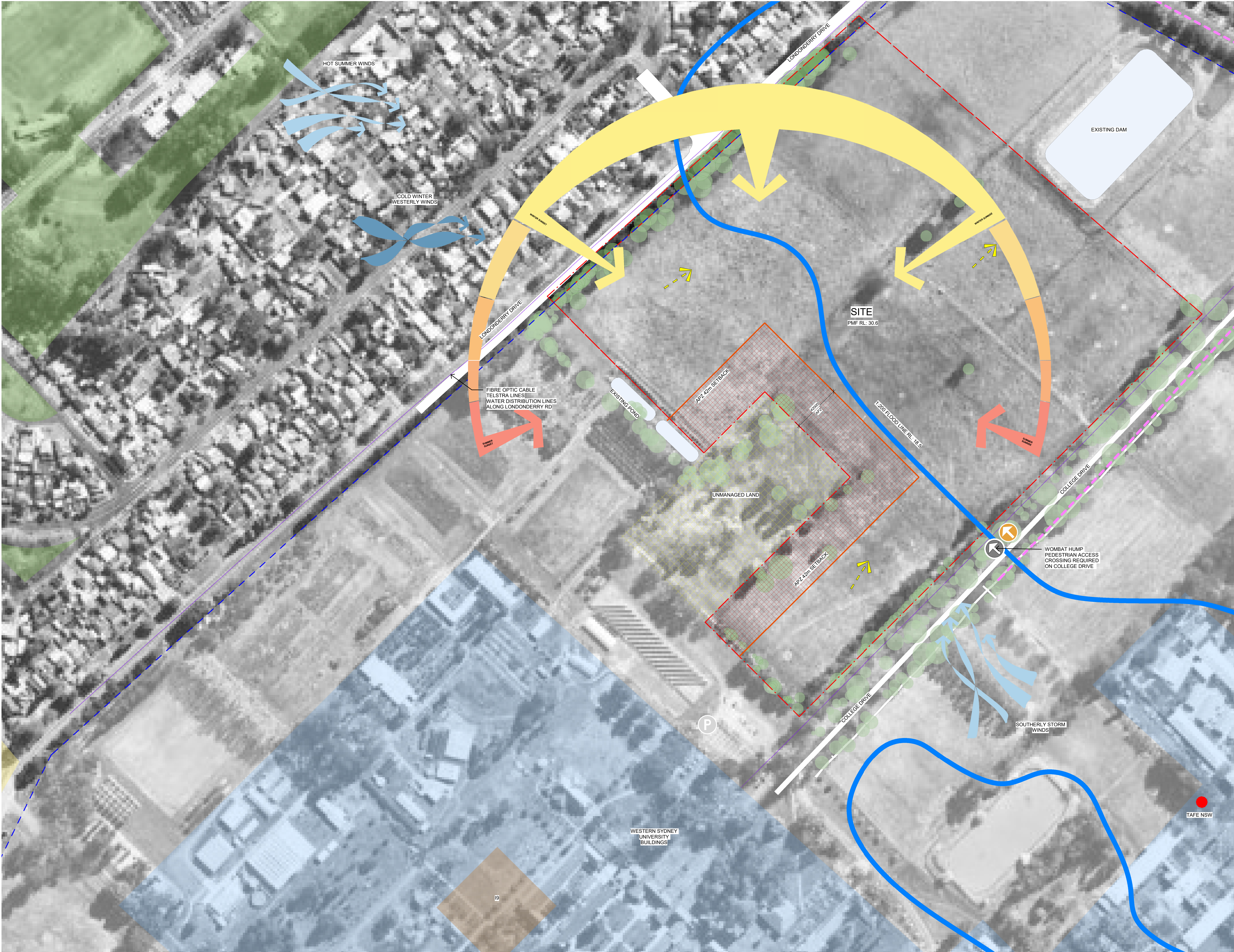
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SITE OBSERVATIONS

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Scale	As indicated @ A1	
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RAC-NBRS-ZZ-ZZ-DR-A-00017		4

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LEGEND:

- P

CAR PARKS
- B

BUS DROP
- ⬅

VEHICLE ACCESS
- ⬅

PEDESTRIAN ACCESS
- ↔

WIND DIRECTIONS
- ↘

SITE SLOPE
- HERITAGE ITEMS
- EDUCATION FACILITIES
- GREEN SPACES
- POTENTIAL PEDESTRIAN ACCESS
- 1:200 FLOOD LINE
- 42m APZ

PLANNING REQUIREMENTS:	
Local Environmental Plans	Hawkesbury Local Environmental Plan 2012 (pub. 28-2-2019)
Land Zoning	C2 - Environmental Conservation: (pub. 7-7-2023) RU2 - Rural Landscape: (pub. 7-7-2023) SP1 - Special Activities: (pub. 7-7-2023) SP2 - Infrastructure: (pub. 7-7-2023)
Height Of Building	10 m
Floor Space Ratio	NA
Minimum Lot Size	10 ha 40 ha
Heritage	Administrative block, blacksmith shop and stable square Significance: Local Grandstand Significance: Local Hawkesbury Agricultural College River Farm Significance: Local
Land Reservation Acquisition	Classified Road (SP2)
Foreshore Building Line	NA
Acid Sulfate Soils	Class 3 Class 4 Class 5
Local Provisions	30 km
Scenic Protection Land	Regional significance

REF ISSUE

Issue No.	Date	Description	Chkd
1	27.02.2025	DRAFT REF	SJF
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4	10.04.2025	ISSUED FOR COORDINATION	SJF
5	16.04.2025	REF ISSUE	SJF

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SITE ANALYSIS

Date 16/04/2025 4:14:23 PM

Scale As indicated @ A1

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Revision

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LEGEND FROM SURVEY - EXISTING SERVICES:

LEGEND 2: (SEE NOTES 2)

PLOTTED FROM BEFORE YOU DIG AUSTRALIA (BYDA) PLANS

- Ab+ = AARNET FIBRE OPTIC CABLE (UNDERGROUND) QUALITY D
- Elu+ = ELECTRICITY LINE (UNDERGROUND) QUALITY D
- Nb+ = NBN CO LINE (UNDERGROUND) QUALITY D
- S+ = SEWER LINE (UNDERGROUND) QUALITY D
- T+ = TELSTRA LINES (UNDERGROUND) QUALITY D
- W+ = WATER DISTRIBUTION LINE (UNDERGROUND) QUALITY D

--- EXISTING FENCES



REF ISSUE

Issue				
No.	Date	Description	Chkd	
2	14.03.2025	DRAFT REF FOR COORDINATION	SJF	
3	21.03.2025	DRAFT REF	SJF	
4	04.04.2025	ISSUED FOR COORDINATION	SJF	
5	10.04.2025	ISSUED FOR COORDINATION	SJF	
6	16.04.2025	REF ISSUE	SJF	

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EXISTING SITE PLAN

Date 16/04/2025 4:14:49 PM

Scale 1 : 1000 @ A1

Drawing Reference

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Revision


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LEGEND:

P

CAR PARKS



VEHICLE ACCESS



PEDESTRIAN ACCESS

VEGETATION / TREE CANOPY

ACCOMODATION

BLOCK A
ADMIN / STAFF HUB

BLOCK B
GLS HUB

BLOCK C
SCIENCE LEARNING HUB

BLOCK F
MULTIPURPOSE HALL

BLOCK D & E
FARMING FACILITIES

ABORIGINAL ENTERPRISE

REF ISSUE

Issue		Description	Chkd
No.	Date		
4	25.03.2025	AG. SHED & LOOP ROAD UPDATED	SJF
5	27.03.2025	ISSUED FOR COORDINATION	SJF
6	04.04.2025	ISSUED FOR COORDINATION	SJF
7	10.04.2025	ISSUED FOR COORDINATION	SJF
8	16.04.2025	REF ISSUE	SJF

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RICHMOND AGRICULTURAL CENTRE

PROPOSED SITE PLAN

Date16/04/2025 4:15:10 PM

Scale1 : 1000 @ A1

Drawing Reference

Revision

8

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LEGEND:

P

CAR PARKS

←

VEHICLE ACCESS

↪

PEDESTRIAN ACCESS

●

VEGETATION / TREE CANOPY

■

ACCOMODATION

■

BLOCK A
ADMIN / STAFF HUB

■

BLOCK B
GLS HUB

■

BLOCK C
SCIENCE LEARNING HUB

■

BLOCK F
MULTIPURPOSE HALL

■

BLOCK D & E
FARMING FACILITIES

■

ABORIGINAL ENTERPRISE

REF ISSUE

Issue		Description	Chkd
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2	21.03.2025	DRAFT REF	SJF
3	25.03.2025	AG. SHED & LOOP ROAD UPDATED	SJF
4	04.04.2025	ISSUED FOR COORDINATION	SJF
5	10.04.2025	ISSUED FOR COORDINATION	SJF
6	16.04.2025	REF ISSUE	SJF

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STACKING PLAN

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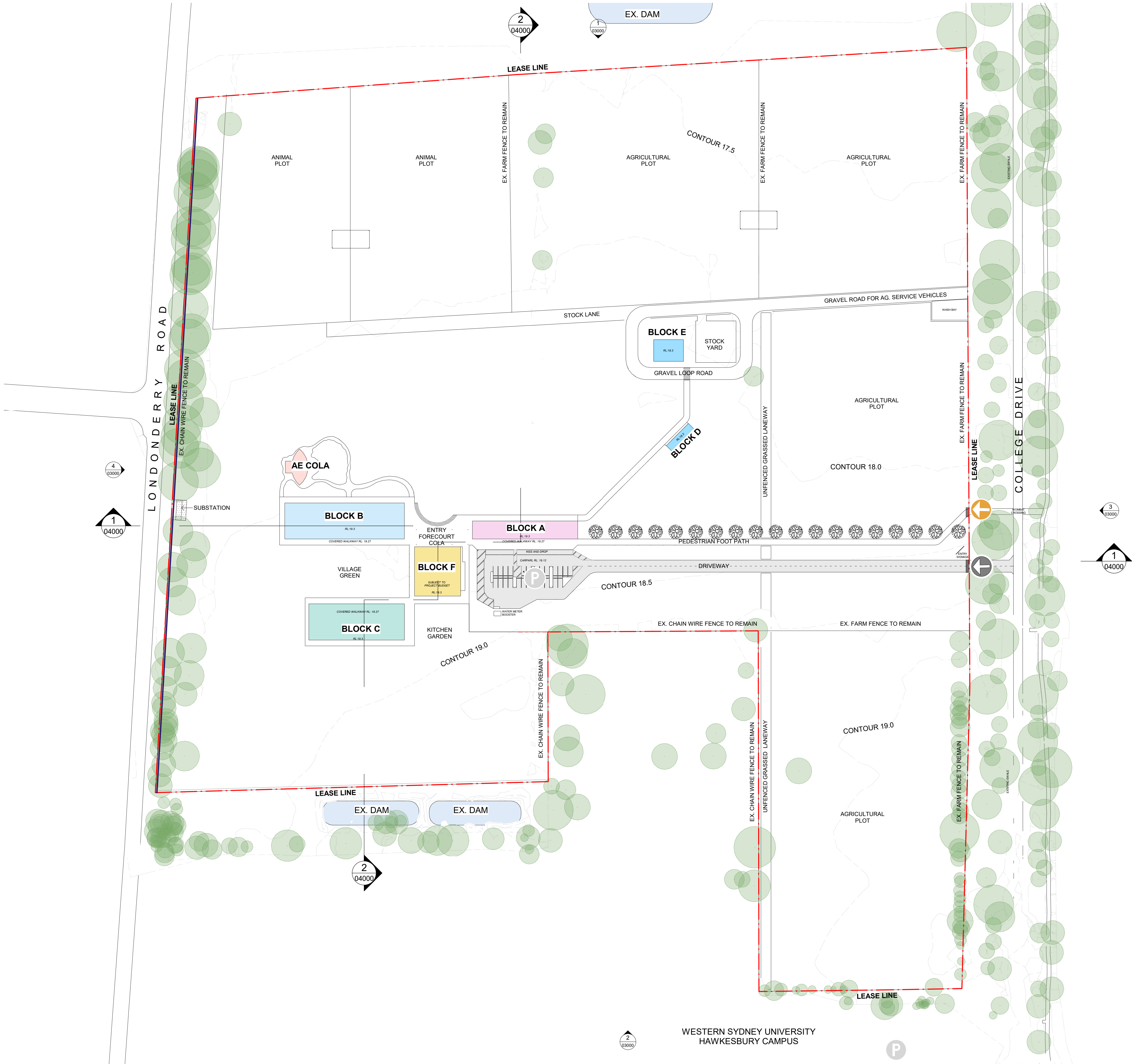
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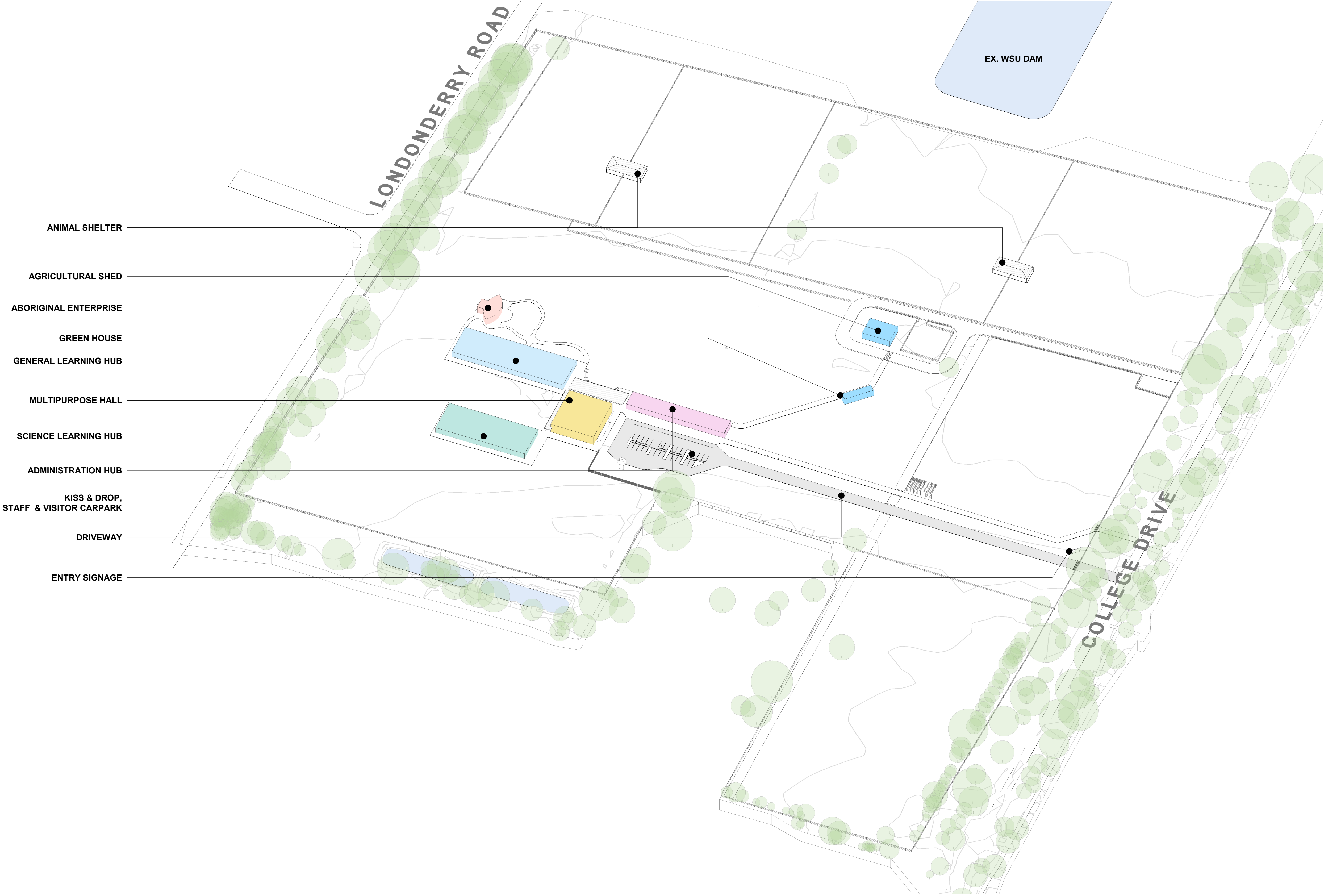
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Revision

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No.	Date		
2	14.03.2025	DRAFT REF FOR COORDINATION	SJF
3	21.03.2025	DRAFT REF	SJF
4	04.04.2025	ISSUED FOR COORDINATION	SJF
5	10.04.2025	ISSUED FOR COORDINATION	SJF
6	16.04.2025	REF ISSUE	SJF

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3D AXONOMETRIC DIAGRAM

Date16/04/2025 4:15:47 PM

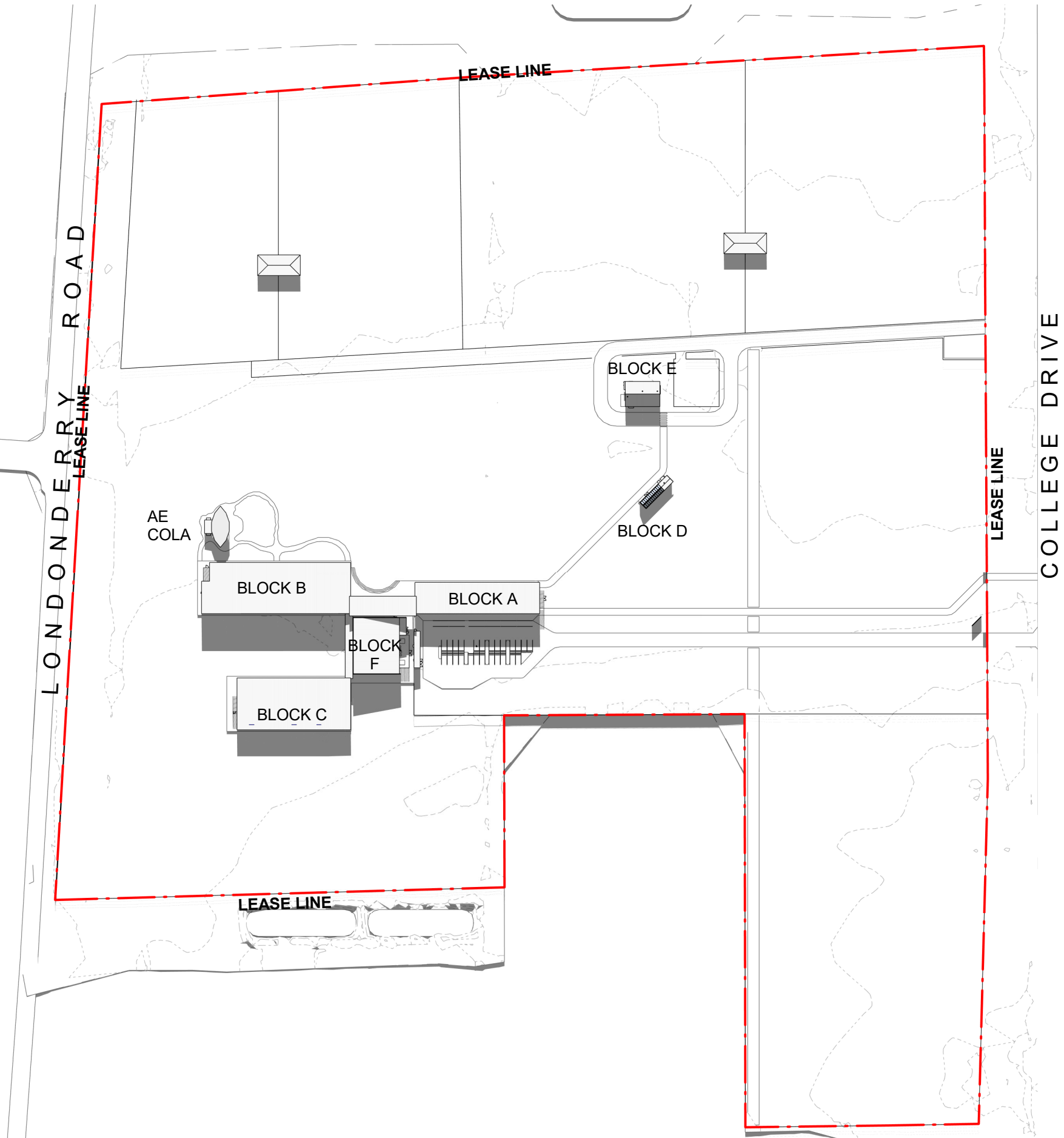
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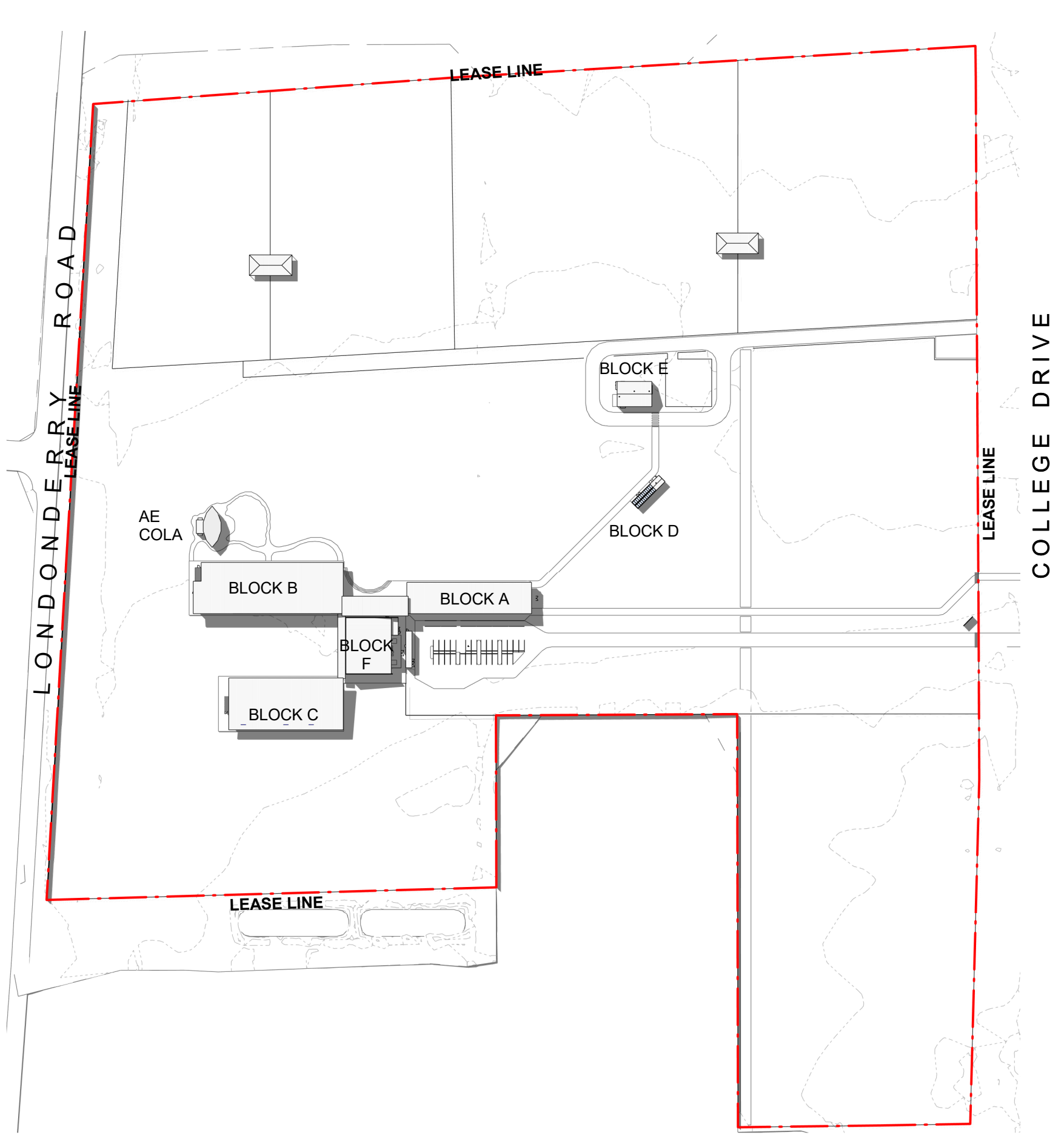
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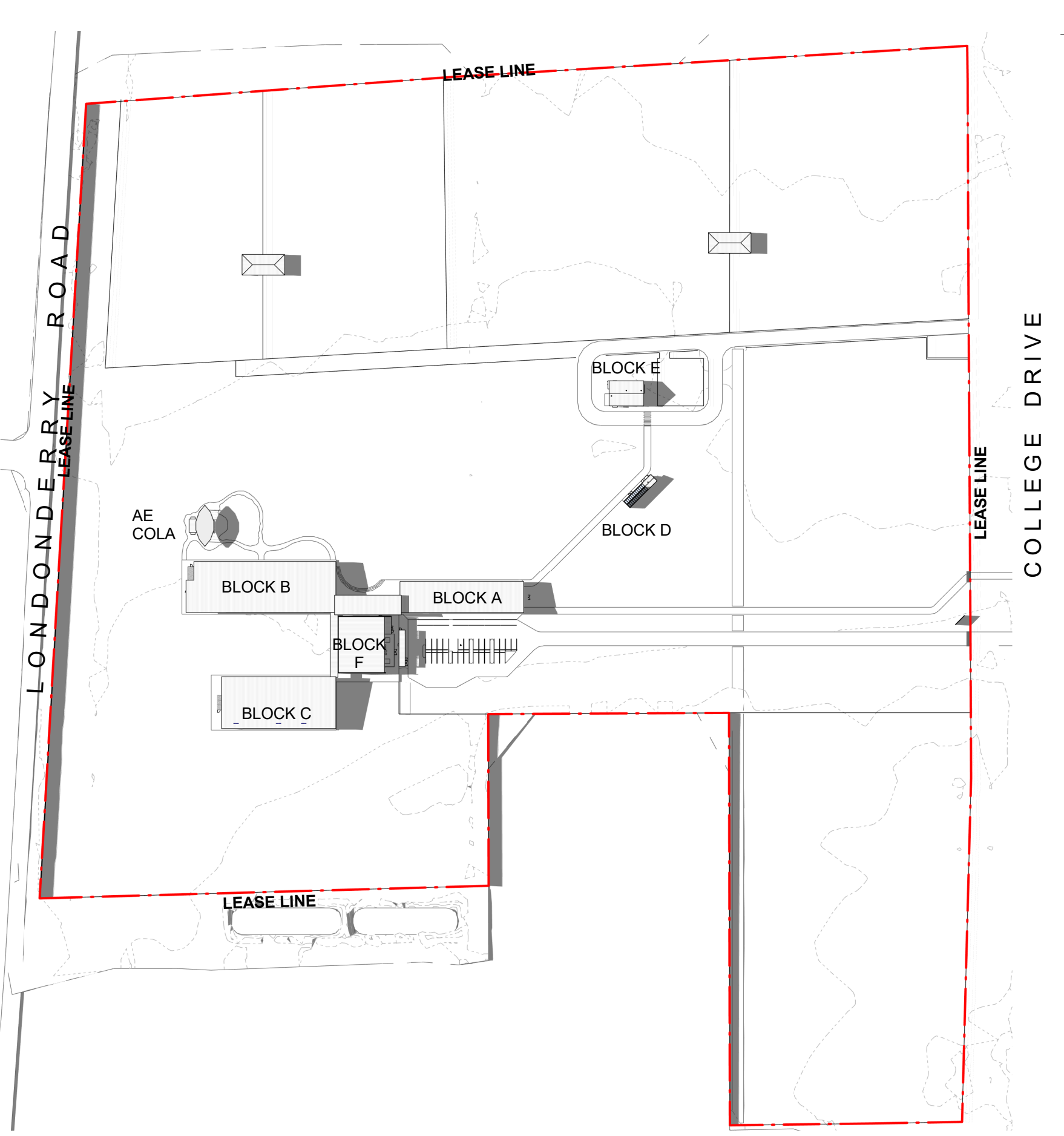
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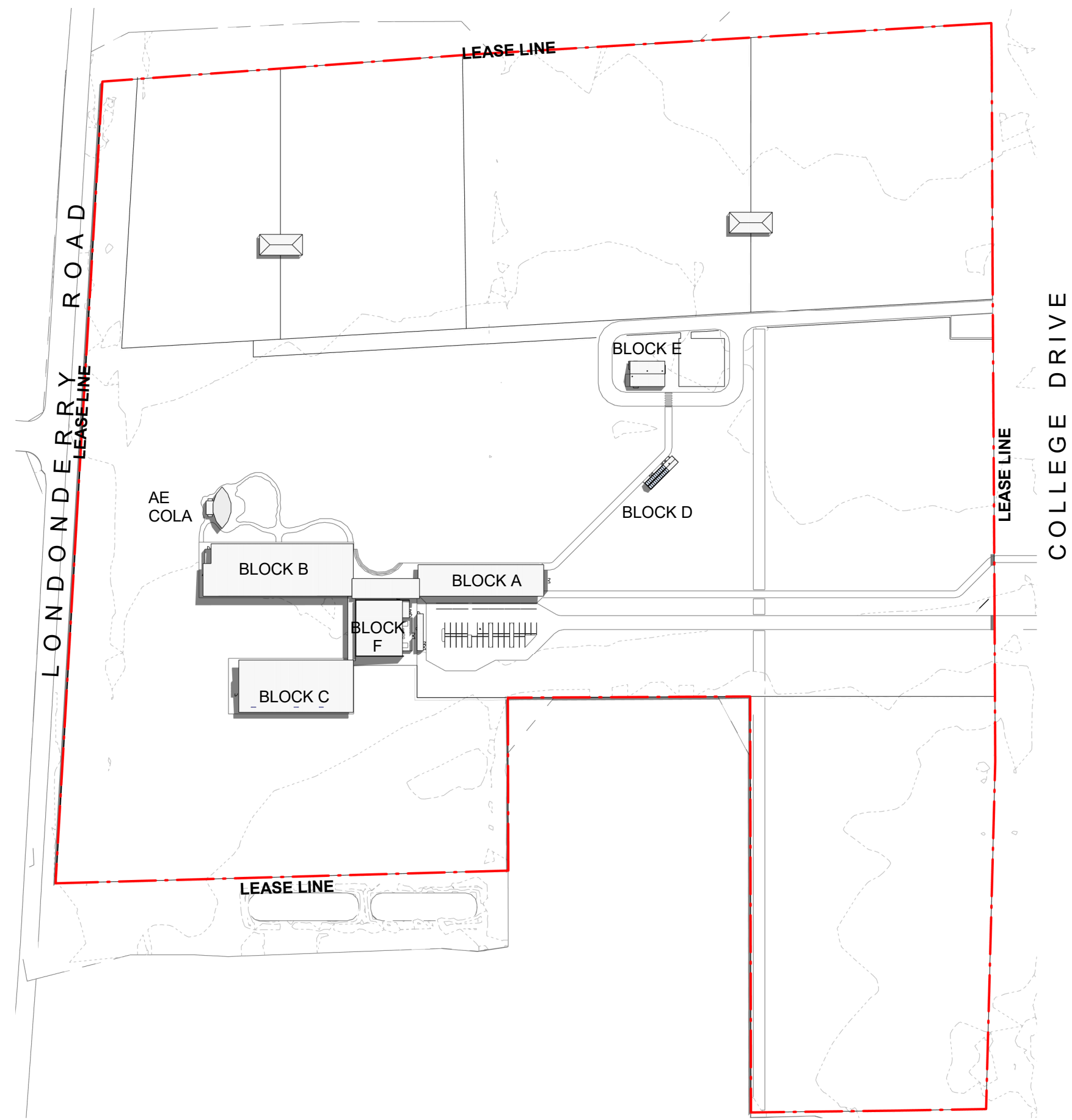
1 WINTER - JUNE 21st - 9am
1 : 2000



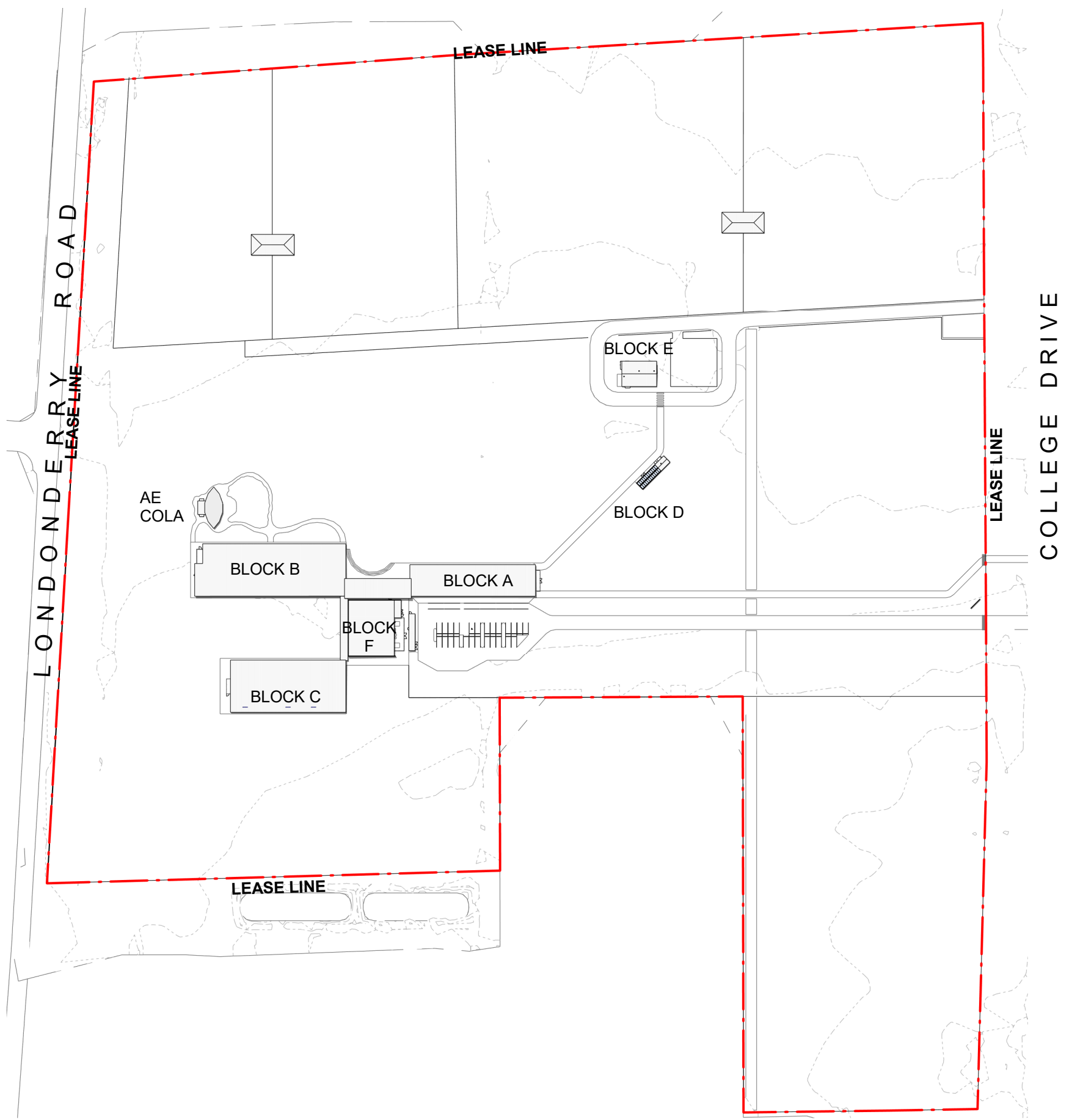
2 WINTER - JUNE 21st - 12pm
1 : 2000



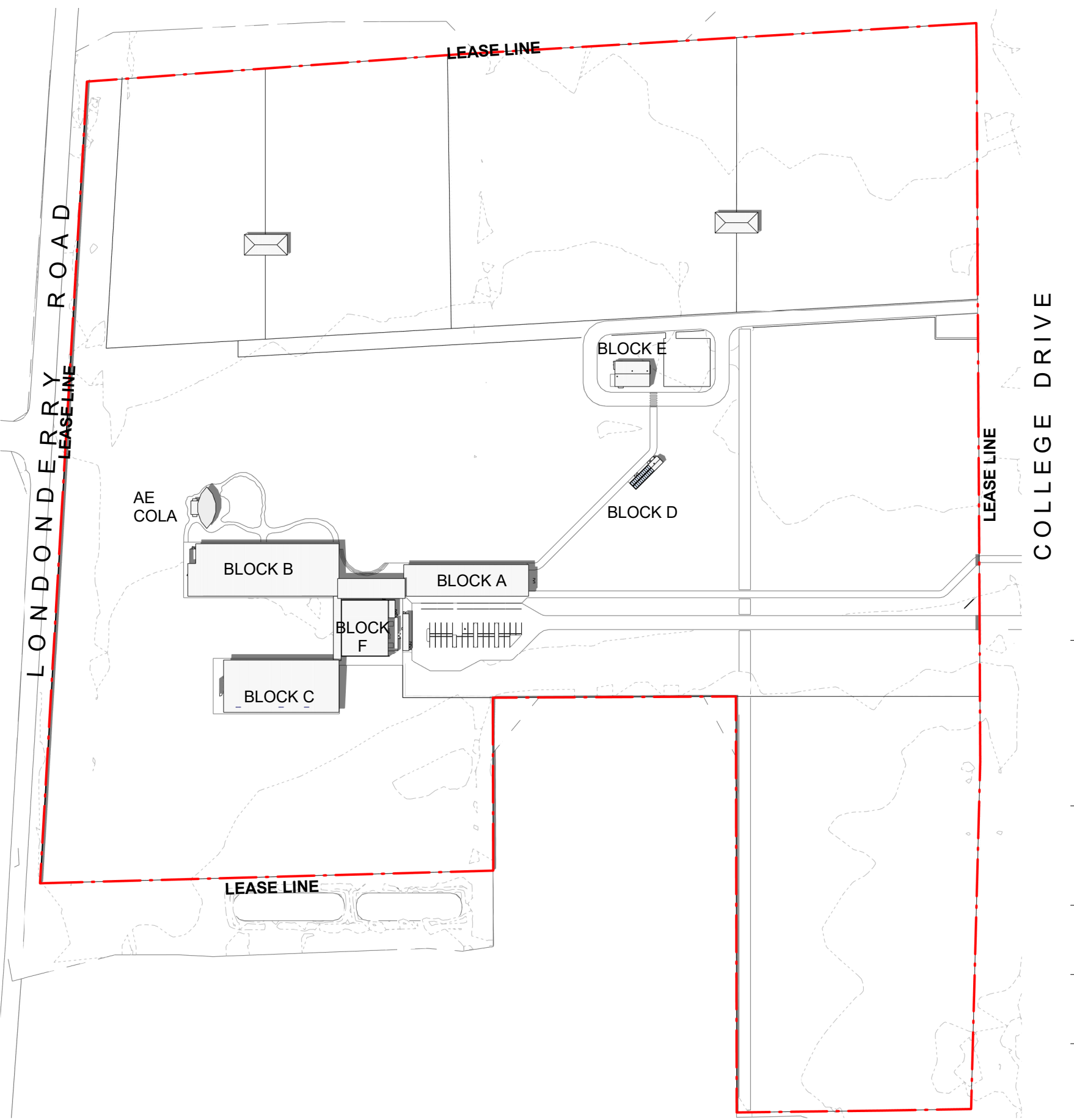
3 WINTER - JUNE 21st - 3pm
1 : 2000



4 SUMMER - JAN 21st - 9am
1 : 2000



5 SUMMER - JAN 21st - 12pm
1 : 2000



6 SUMMER - JAN 21st - 3pm
1 : 2000

REF ISSUE

Issue No.	Date	Description	Chkd
1	27.02.2025	DRAFT REF	SJF
2	21.03.2025	DRAFT REF	SJF
3	04.04.2025	ISSUED FOR COORDINATION	SJF
4	10.04.2025	ISSUED FOR COORDINATION	SJF
5	16.04.2025	REF ISSUE	SJF

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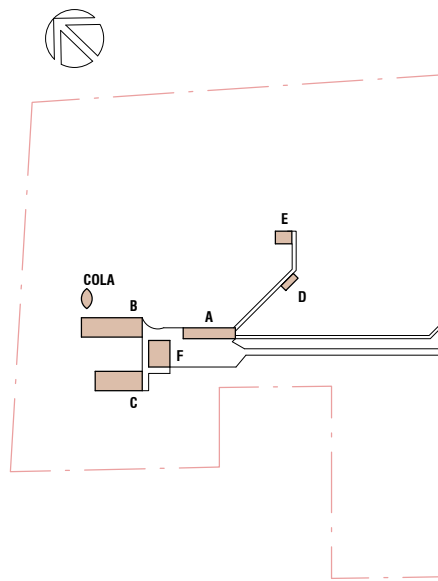
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SHADOW DIAGRAMS

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Drawing Reference
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Revision 5

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LOCATION PLAN



- 01 - GENERAL LEARNING SPACES
- 05 - ADMINISTRATION HUB
- 06 - GYMNASIUM + CANTEN HUB
- 08 - SCIENCE LEARNING HUB
- 14 - STAFF AMENITIES
- 15 - STUDENT AMENITIES
- 16 - OTHER STORAGE
- 17 - SERVICES
- 18 - SERVICES COMMS
- 20 - CIRCULATION
- 22 - OUTDOOR AREAS
- 23 - SLC
- 24 - NLC

REFER TO GRID SETOUT ON
RAC-NBRS-ZZ-ZZ-A-0105

REF ISSUE

Issue		Description	Chkd
No.	Date		
3	25.03.2025	AG. SHED & LOOP ROAD UPDATED	SJF
4	27.03.2025	ISSUED FOR COORDINATION	SJF
5	04.04.2025	ISSUED FOR COORDINATION	SJF
6	10.04.2025	ISSUED FOR COORDINATION	SJF
7	16.04.2025	REF ISSUE	SJF

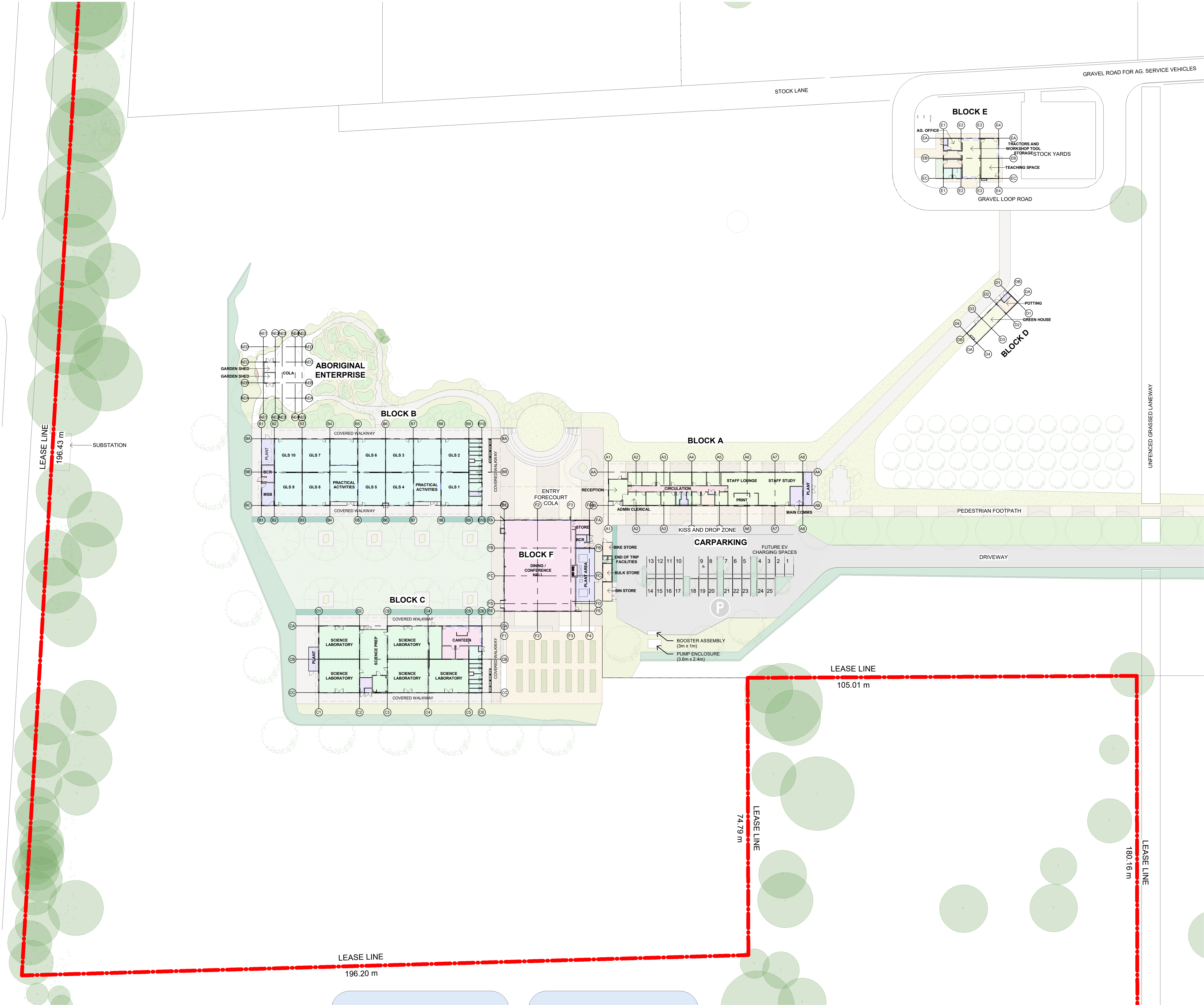
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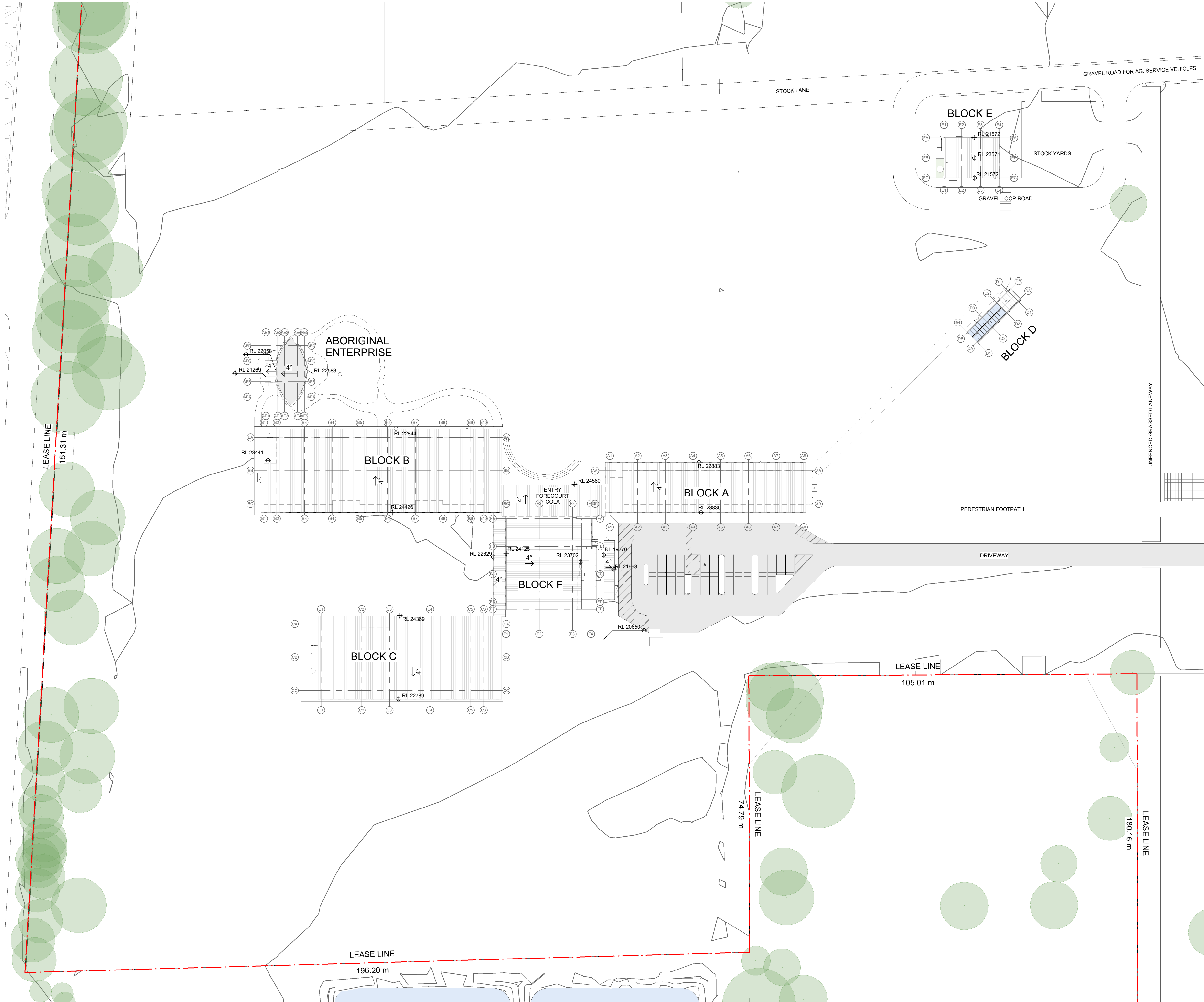
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OVERALL GROUND FLOOR PLAN

Date 16/04/2025 4:16:41 PM
Scale 1 : 500 @ A1
Drawing Reference
Revision
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REF ISSUE

Issue		Description	Chkd
No.	Date		
2	21.03.2025	DRAFT REF	SJF
3	27.03.2025	ISSUED FOR COORDINATION	SJF
4	04.04.2025	ISSUED FOR COORDINATION	SJF
5	10.04.2025	ISSUED FOR COORDINATION	SJF
6	16.04.2025	REF ISSUE	SJF

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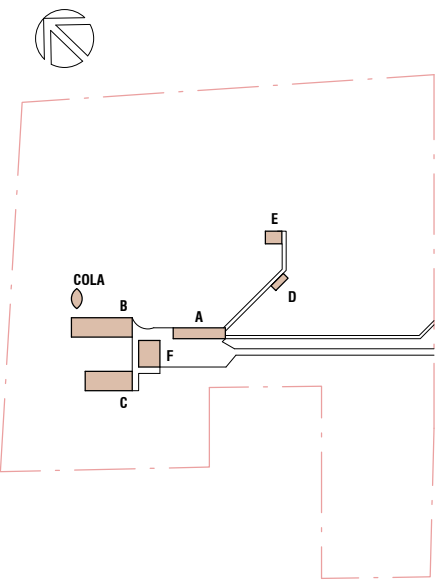
OVERALL ROOF LEVEL PLAN

Date 16/04/2025 4:17:02 PM
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Drawing Reference
RAC-NBRS-ZZ-RF-DR-A-01020

Revision

6

LOCATION PLAN



REFER TO GRID SETOUT ON
RAC-NBRS-ZZ-ZZ-A-0105

REF ISSUE

Issue No.	Date	Description	Chkd
1	04.04.2025	ISSUED FOR COORDINATION	SJF
2	10.04.2025	ISSUED FOR COORDINATION	SJF
3	16.04.2025	REF ISSUE	SJF

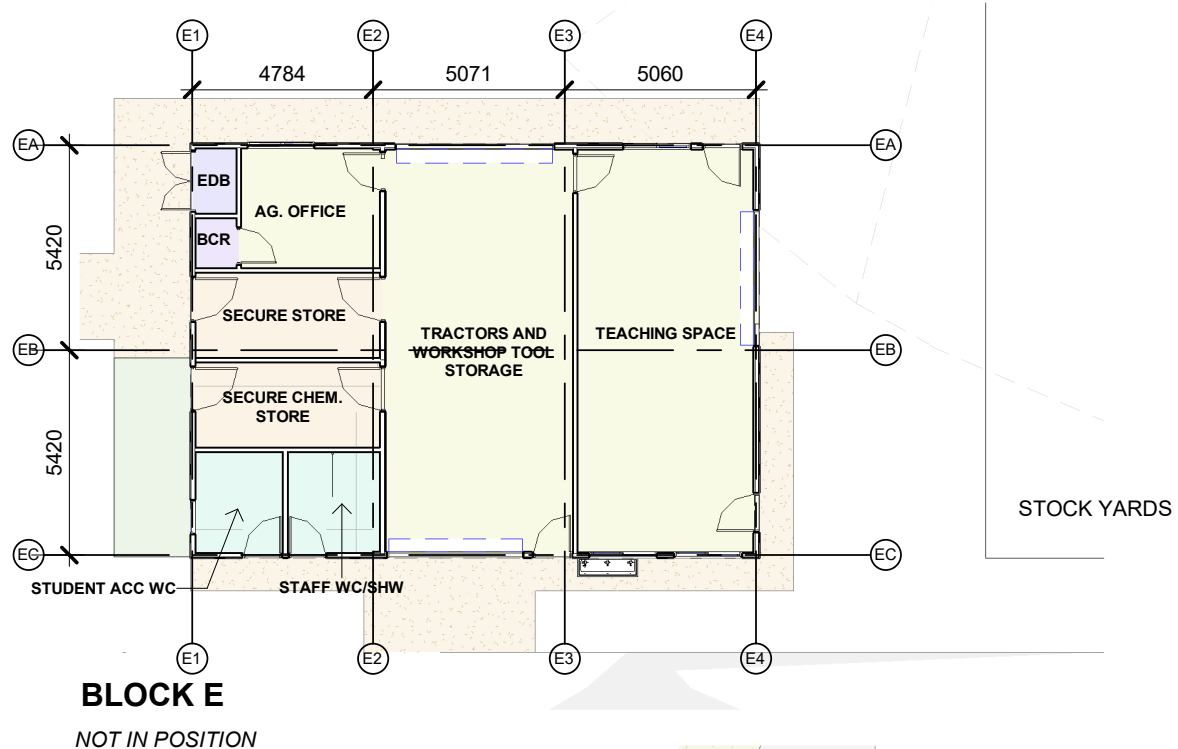
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1-200 GROUND FLOOR PLAN

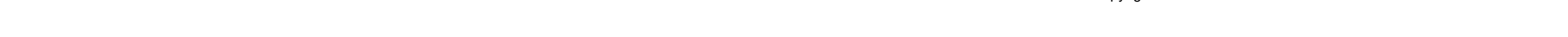
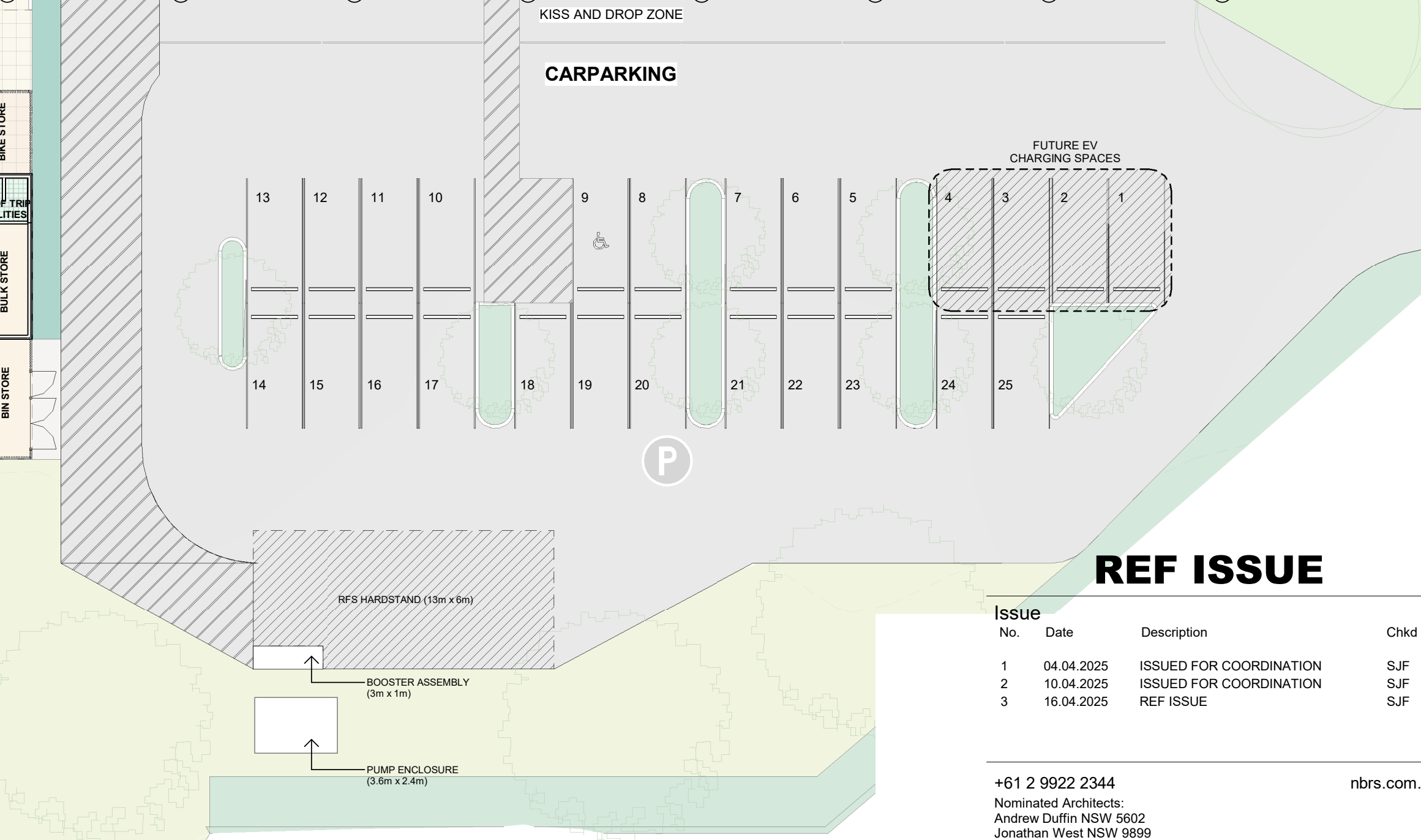
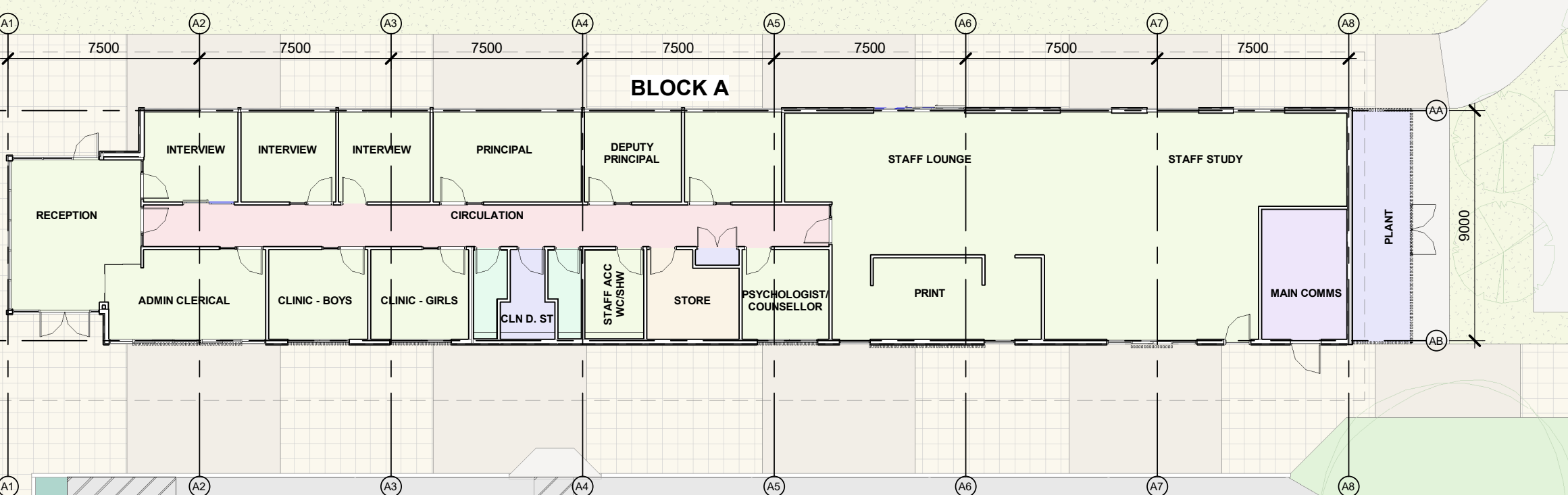
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Revision
3

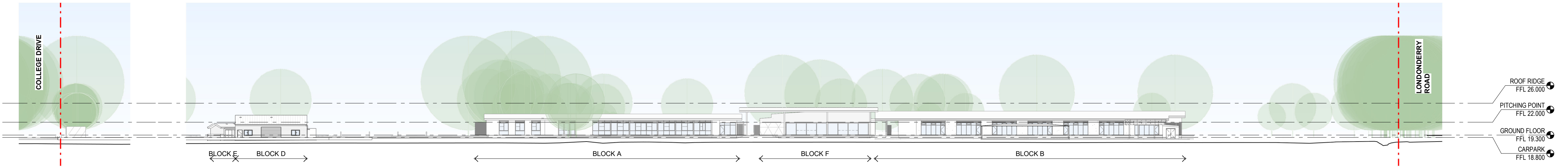
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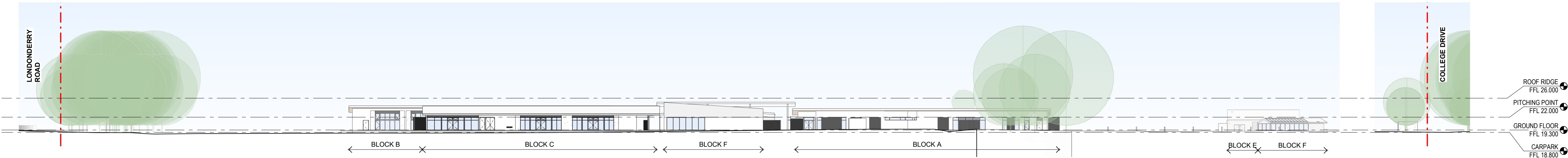
BLOCK E
NOT IN POSITION

BLOCK D
NOT IN POSITION

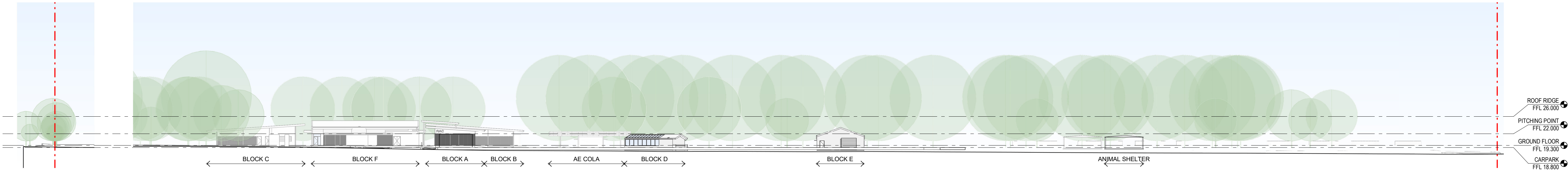




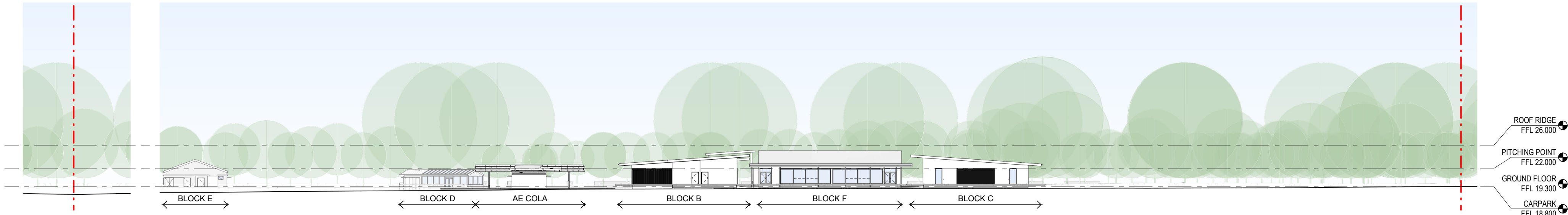
1 Site Elevation - North
1 : 500



2 Site Elevation - South
1 : 500



3 Site Elevation - East
1 : 500



4 Site Elevation - West
1 : 500

REF ISSUE

Issue		Description	Chkd
No.	Date		
1	27.02.2025	DRAFT REF	SJF
2	21.03.2025	DRAFT REF	SJF
3	04.04.2025	ISSUED FOR COORDINATION	SJF
4	10.04.2025	ISSUED FOR COORDINATION	SJF
5	16.04.2025	REF ISSUE	SJF

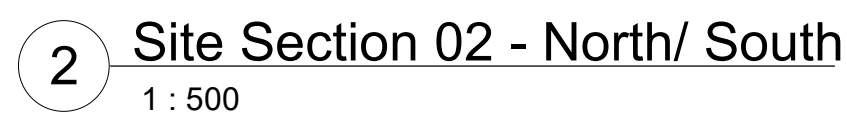
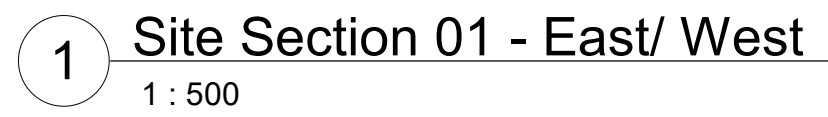
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Nominated Architects:
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Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197 ABN 16 002 247 565

24127
RICHMOND AGRICULTURAL CENTRE

SITE ELEVATIONS

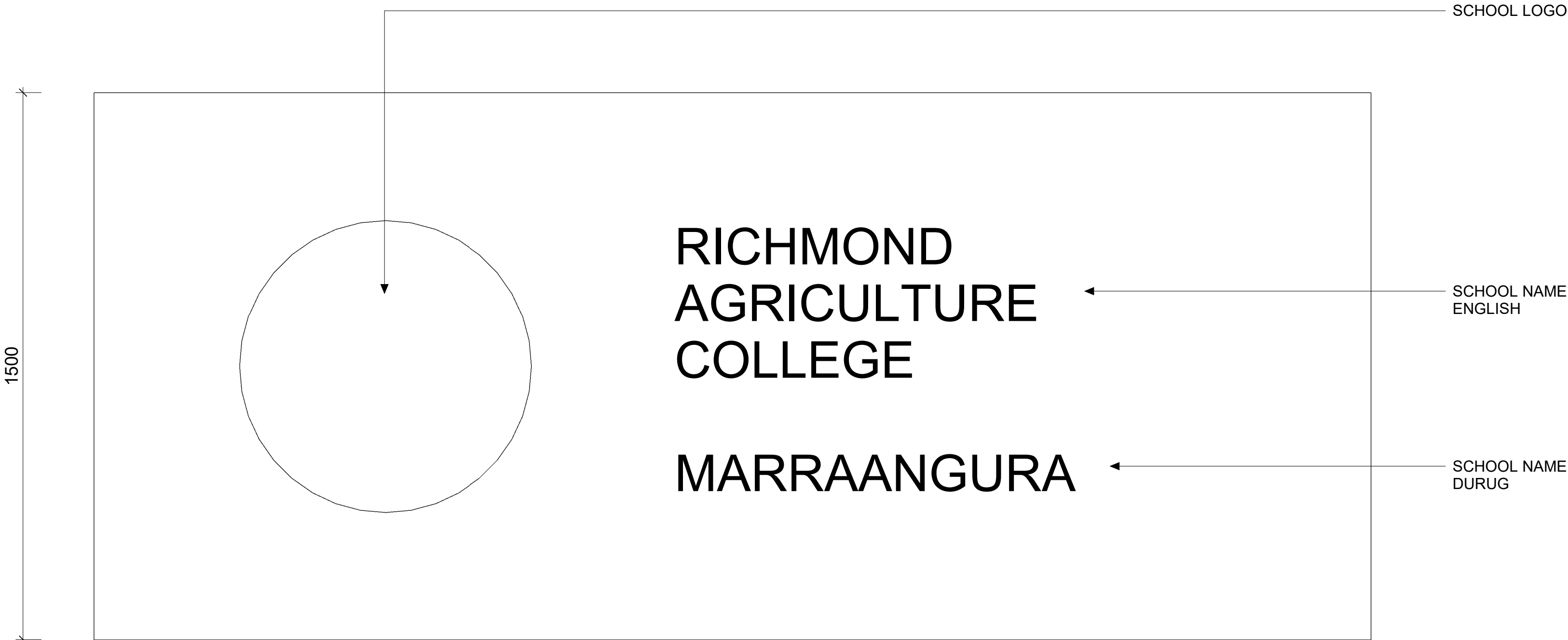
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Revision
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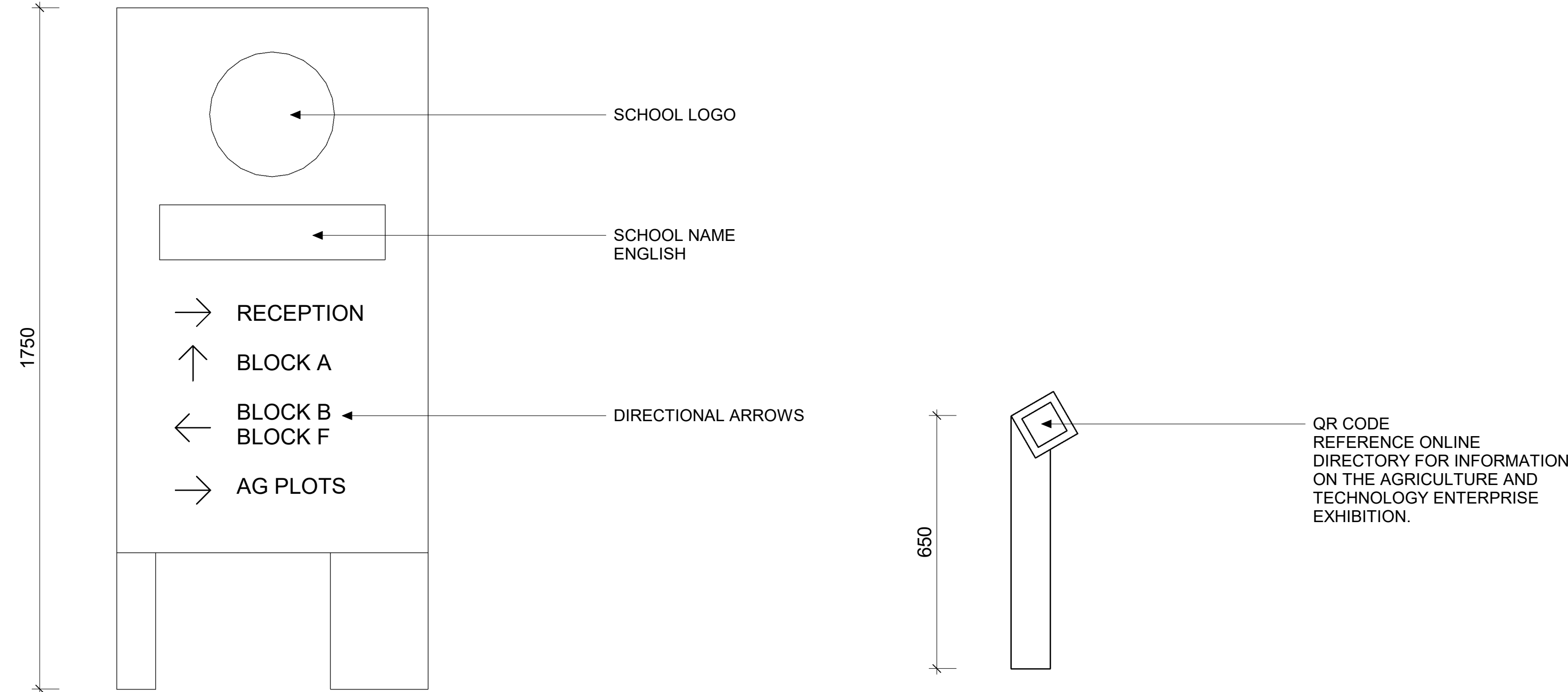


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Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197 ABN 16 002 247 565

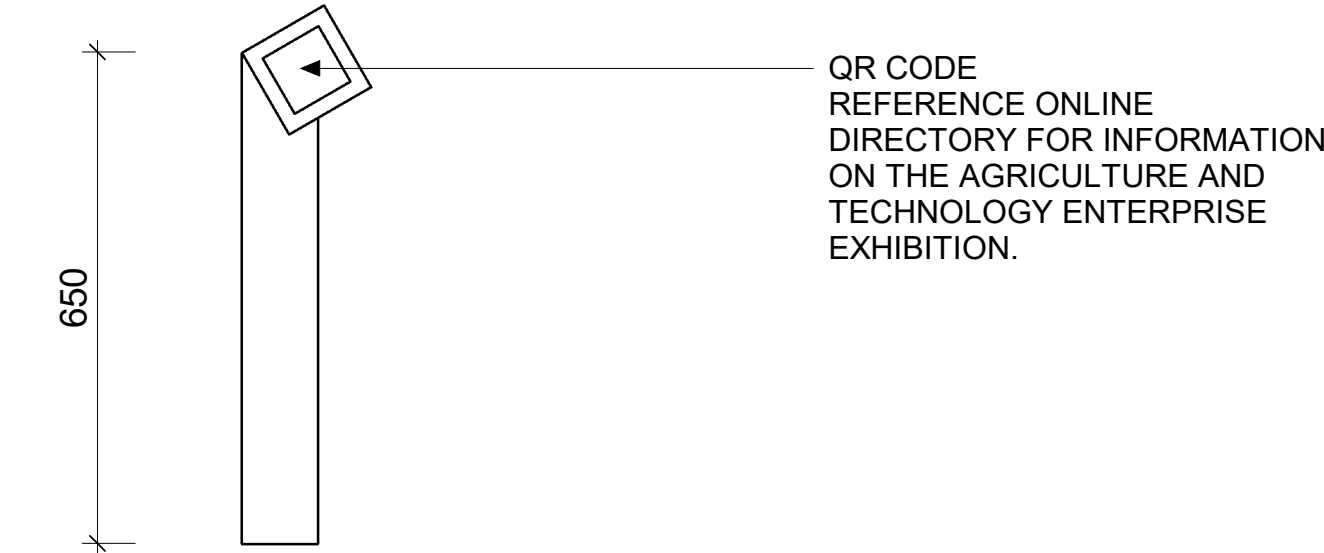
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Drawing Reference Revision
RAC-NBRS-ZZ-ZZ-DR-A-04000 5



1 ENTRY SIGNAGE TYPE 1
1 : 10



2 ENTRY SIGNAGE TYPE 2
1 : 10



3 ENTRY SIGNAGE TYPE 8
1 : 10

CODE	NAME	DESCRIPTION
SGN01	Main Entry SIGNAGE Wall (Dual language sign)	Signage Wall (Dual language sign) Location: College Drive Engage Consultant: Design to completed by SIGNAGE designer Guidelines: EFSG, WSU signage guide Stakeholder sign off: School, AECG and AECG Logo: School logo EnglishText: "Richmond Agricultural College" Darug Languages text: TBA
SGN02	Totem Entry Signage	Totem Signage (Dual language sign) Location: Entry (gates near block A) Engage Consultant: Design to completed by signage designer Guidelines: EFSG, WSU signage guide Stakeholder sign off: School, AECG and Architect Logo: School logo EnglishText: "Richmond Agricultural College" School information text: TBA Darug Languages text: TBA
SGN03	Graphic Decal to Glass	Colour Graphic Vinyl decal Location: Block A Admin Engage Consultant: Design to completed by local Aboriginal Artist and printed and installed by SIGNAGE contractor Stakeholder sign off: School, AECG and Architect Requirement: must meet AS1428.1 visual indicator requirements
SGN04	Graphic Vinyl Artwork print to wall	Colour Graphic Vinyl decal artwork print on wall (Dual language if required) Location: Block F north elevation (adjacent COLA) Engage Consultant: Design to completed by local Aboriginal Artist and printed and installed by signage contractor Stakeholder sign off: School, AECG and Architect Graphic Theme: Aboriginal + Small signage section talking About Architecture project concept food bowl and weave, building design and ESD initiatives as learning aid. Darug Language text: TBA English text if required: TBA
SGN05	Graphic Vinyl Artwork print to wall	Colour Graphic Vinyl decal artwork print on wall (Dual language if required) Location: Block C north elevation Engage Consultant: Design to completed by local Aboriginal Artist and printed and installed by signage contractor Stakeholder sign off: School, AECG and Architect Graphic Theme: TBA Darug Language text: TBA English text if required: TBA
SGN06	Graphic Decal to Glass	Colour Graphic Vinyl decal to glass Location: Internal glazing to learning spaces Engage Consultant: Design to completed by local Aboriginal Artist and local Artist and printed and installed by signage contractor Stakeholder sign off: School, AECG and Architect Requirement: must meet AS1428.1 visual indicator requirements Size: Full width of glass panel to 1000mm AFFL minimum Themes: Themed to tie into Ag and Ag Stem School reflecting the Aboriginal culture and the role of the first people of Australia as the first conversationalists, scientists and land managers of this country and western Ag & Ag Stem history. Content may include:- Eel dreaming storey, Vine yam, Sydney bees, Aboriginal foods, Dark Emu and Emu carvings, Coolamon, Fish traps, Canoe building, battle of Richmond hill, Info Graphics around farming produce in Hawkesbury area, history farming in Hawkesbury, Western farmed foods, and Ag Stem research.
SGN07	Graphic Vinyl Artwork print to wall	Colour Graphic Vinyl decal artwork print on wall (Dual language if required) Location: Aboriginal Enterprise Engage Consultant: Design to completed by local Aboriginal Artist or Artist (if content is not Aboriginal) printed and installed by signage contractor Stakeholder sign off: School, AECG and Architect Graphic Theme: TBA Darug Language text: TBA English text if required: TBA
SGN08	Post mounted Info Signage	Post mounted information signage about Ag plots Location: Technology Enterprise Number of posts: x1 per plot Engage Consultant: Design to completed by signage designer Guidelines: EFSG, WSU signage guide Stakeholder sign off: School Post: Folded 100x6mm solid coreten post with top folded back to form 100x100mm zone to mount changeable signage plaque. Round exposed edges to prevent injury Post height: 1000mm high above FL Signage Plaque English title text: Title Darug title text: If required Body Text: Information about plot or instillation QR code: Additional information online
SGN09	Wall and post mounted wayfinding signage (Dual language sign)	Wall and post mounted wayfinding signage (Some in dual language if required) Location: throughout school Items: All buildings, Aboriginal enterprise, Technology enterprise, village green, Green house, Maintenance shed, Agriculture plots, toilets, showers and drinking fountains Signage colours: TBC
SGN10	Asset Management Signage	Asset management signage to EFSG requirements
SGN11	Statutory and Safety Signage	Statutory signage and safety signage to EFSG, NCC and Australian Standards
SGN12	Totem Signage (Dual language sign)	Totem Signage (Dual language sign) Location: Carpark Entry (Maintenance Lane) Engage Consultant: Design to completed by signage designer Guidelines: EFSG, WSU signage guide Stakeholder sign off: School and Architect Logo: School logo EnglishText: "Richmond Agricultural College" School information text: TBA Darug Languages text: TBA
SGN13	Signage (Dual language sign)	Signage to Service Entry Gate Location: Agriculture plot service road entry (Maintenance Lane) Engage Consultant: Design to completed by signage designer Guidelines: EFSG, WSU signage guide Stakeholder sign off: School and Architect Logo: School logo EnglishText: "Richmond Agricultural College" School information text: TBA
SGN14	Post or Wall mounted Info Signage	Signage for Non-Potable water Location: Above all taps that connect to the sites harvested water (non-drinking). Place on wall or post. Engage Consultant: Design to completed by signage designer

REF ISSUE

Issue		Description	Chkd
No.	Date		
1	27.02.2025	DRAFT REF	SJF
2	21.03.2025	DRAFT REF	SJF
3	04.04.2025	ISSUED FOR COORDINATION	SJF
4	10.04.2025	ISSUED FOR COORDINATION	SJF
5	16.04.2025	REF ISSUE	SJF

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Nominated Architects:
Andrew Duffin NSW 5602
Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197 ABN 16 002 247 565

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SITE SIGNAGE

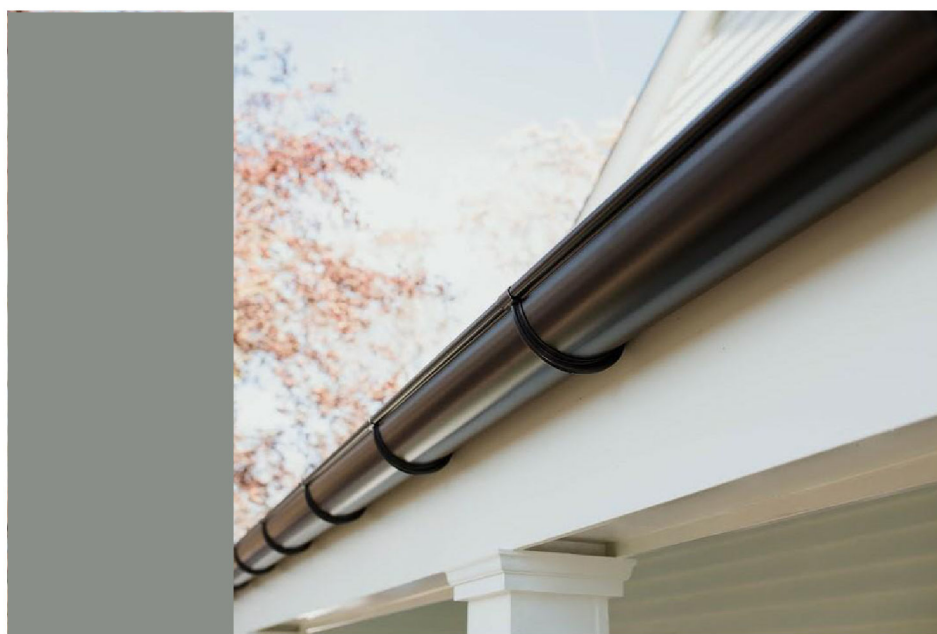
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Drawing Reference Revision
RAC-NBRS-ZZ-ZZ-DR-A-08500 5

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LYSAGHT KLIPLOK ROOFING,
COLORBOND SURFMIST

MR01



HALF ROUND GUTTER,
COLORBOND WINDSPRAY

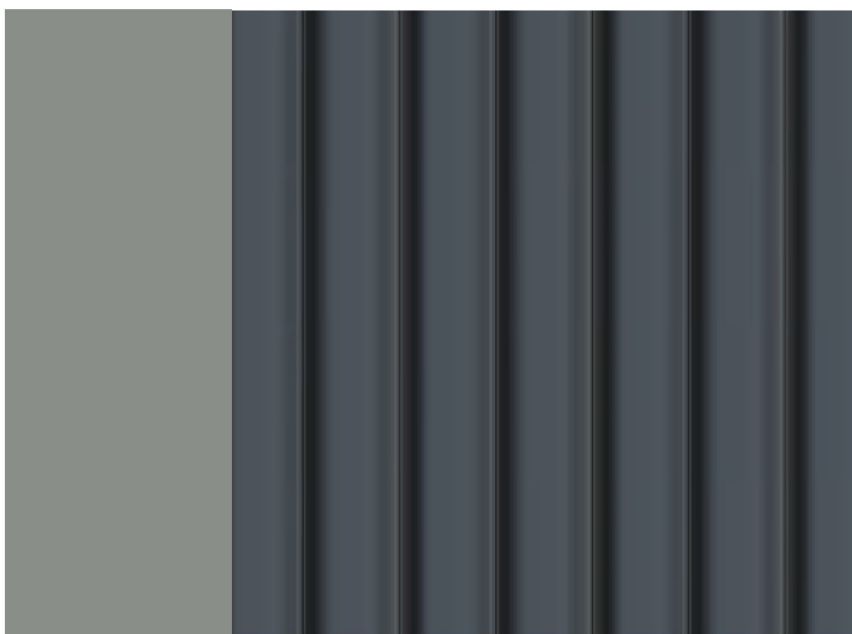
GUT02

DOWNPIPE
COLORBOND WINDSPRAY

DP01-A

METAL FASCIA
COLORBOND WINDSPRAY

FAS01



LYSAGHT LONGLINE 305 METAL CLADDING,
COLORBOND WINDSPRAY

MC01



BROOMED CONCRETE FINISH.
REFER TO LANDSCAPE

CF01

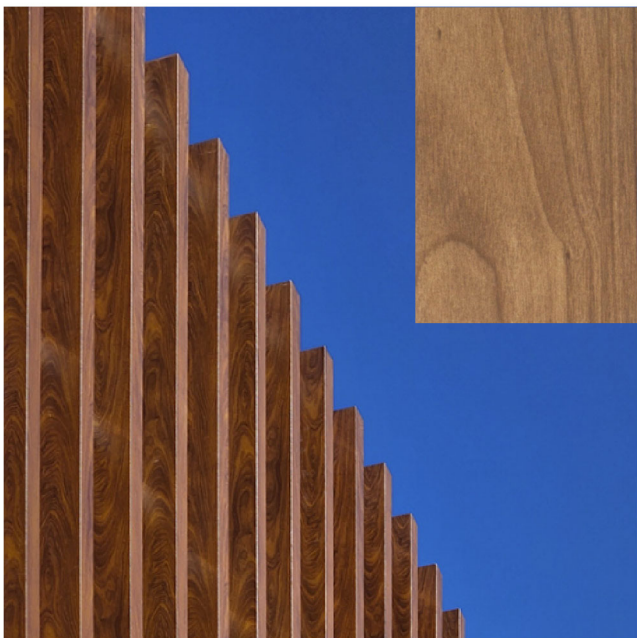


FC SOFFIT - MAIN ROOF WALKWAYS
PAINTED DULUX 'CEILING WHITE'

CLG05



*LANDSCAPE HIDDEN FOR CLARITY



ALUMINIUM BATTEN SCREEN,
TIMBER LOOK FOR PLANT AREAS

BAT01

CLOUR MATERIAL SWITCH,
SIM. TO SPOTTED GUM / BROWN

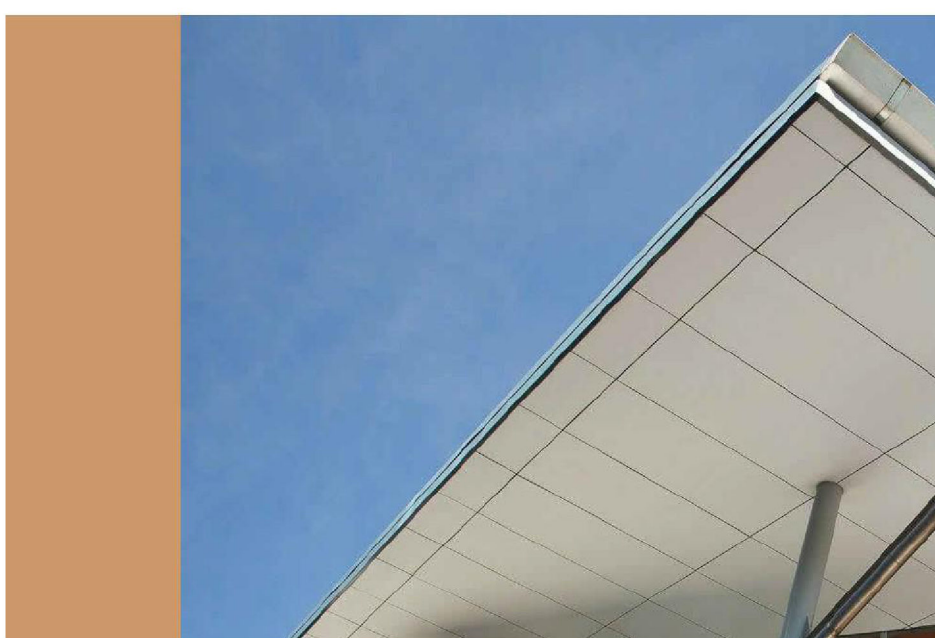


POWDERCOATED ALUMINIUM WINDOW
FRAMES, BLACK (MONUMENT)

WAT01

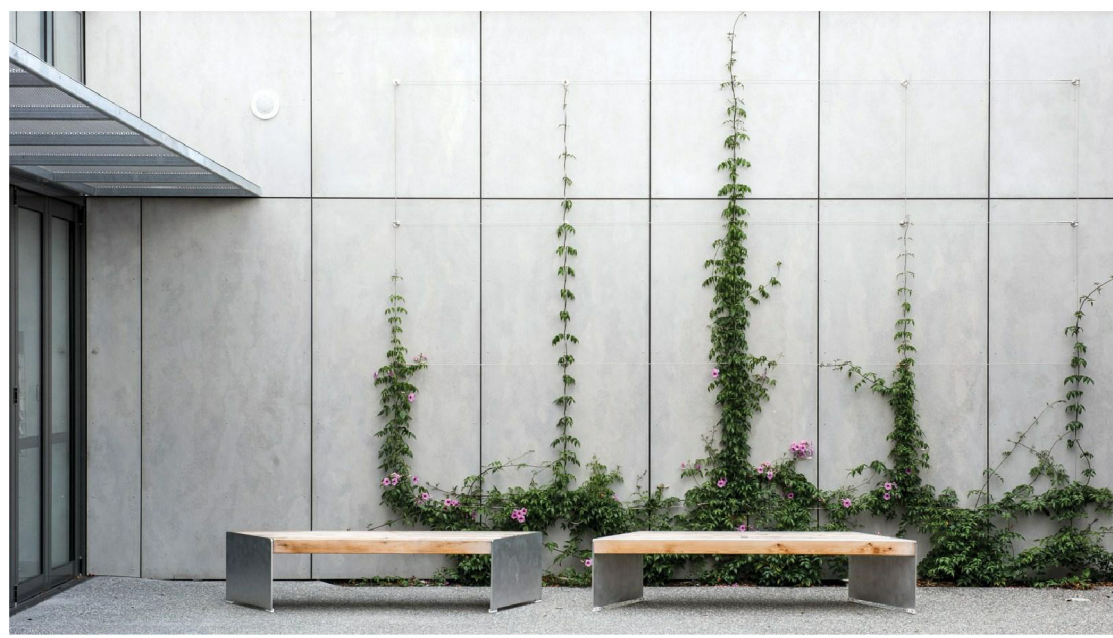
POWDERCOAT ALUMINIUM WINDOW
FRAMES, BLACK (MONUMENT)

WAT02



FC SOFFIT - COLA
PAINTED DULUX 'RAW UMBER'

CLG05



'GREY' CFC CLADDING

CF01



'RUST' CFC CLADDING

CF02

← WALL PANEL CLADDING COMBINATION →

*ALL FINAL MATERIALS SELECTED FOR THE PROJECT ARE
TO BE CONSISTENT WITH DESIGN QUALITY PRINCIPLES
FOR SCHOOLS IDENTIFIED BY SCHEDULE 8 OF THE T&I
SEPP AND SUBJECT TO AVAILABILITY.

REF ISSUE

Issue		Description	Chkd
No.	Date		
1	27.02.2025	DRAFT REF	SJF
2	21.03.2025	DRAFT REF	SJF
3	04.04.2025	ISSUED FOR COORDINATION	SJF
4	10.04.2025	ISSUED FOR COORDINATION	SJF
5	16.04.2025	REF ISSUE	SJF

+61 2 9922 2344
Nominated Architects:
Andrew Duffin NSW 5602
Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197
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ABN 16 002 247 565

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EXTERNAL FINISHES SCHEDULE

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Scale 1 : 1 @ A1
Drawing Reference
RAC-NBRS-ZZ-ZZ-DR-A-08600
Revision
5

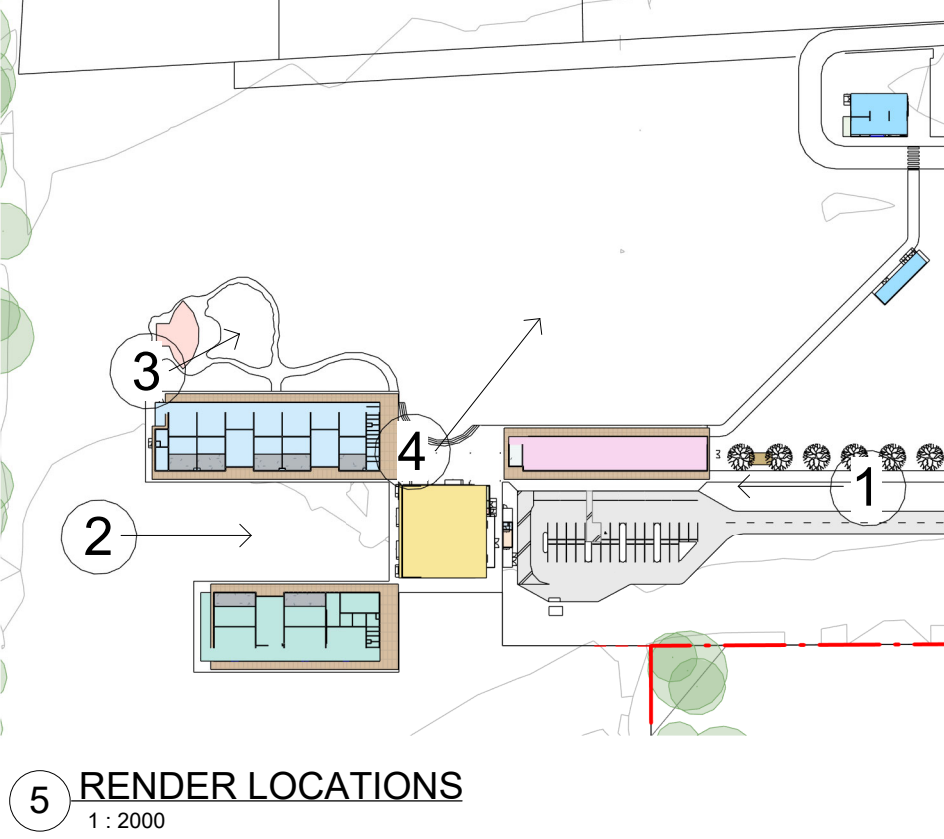
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1. FRONT ENTRY



2. VILLAGE GREEN



3. ABORIGINAL ENTERPRISE COLA



4. AGRICULTURE PLOTS, AG. SHED AND GREENHOUSE

REF ISSUE

Issue No.	Date	Description	Chkd
1	27.02.2025	DRAFT REF	SJF
2	21.03.2025	DRAFT REF	SJF
3	04.04.2025	ISSUED FOR COORDINATION	SJF
4	10.04.2025	ISSUED FOR COORDINATION	SJF
5	16.04.2025	REF ISSUE	SJF

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Nominated Architects:
Andrew Duffin NSW 5602
Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197

ABN 16 002 247 565

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RICHMOND AGRICULTURAL CENTRE

PERSPECTIVES

Date16/04/2025 4:20:11 PM

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Drawing ReferenceRevision

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Appendix B: Proposed Landscape Masterplan

RICHMOND AGRICULTURAL CENTRE

COLLEGE DRIVE, RICHMOND, NSW 2753

REF LANDSCAPE DRAWING PACKAGE

Sheet List - REF			
Sheet Number	Drawing Name	Issue	Date
RAC-NBRS-ZZ-XX-DR-L-0001	COVER SHEET	3	01.05.2025
RAC-NBRS-ZZ-XX-DR-L-0010	FRAMEWORK PLAN	3	01.05.2025
RAC-NBRS-ZZ-XX-DR-L-0020	LEGEND AND MATERIALS	3	01.05.2025
RAC-NBRS-ZZ-XX-DR-L-1000	LANDSCAPE MASTERPLAN	3	01.05.2025
RAC-NBRS-ZZ-XX-DR-L-1001	DETAIL PLAN 1	3	01.05.2025
RAC-NBRS-ZZ-XX-DR-L-1002	DETAIL PLAN 2	3	01.05.2025
RAC-NBRS-ZZ-XX-DR-L-4001	PROPOSED TREE PLAN & SCHEDULE	3	01.05.2025
RAC-NBRS-ZZ-XX-DR-L-4002	PLANTING ZONE PLAN & SCHEDULE	3	01.05.2025

Issue			
No.	Date	Description	Chkd
1	27.03.2025	DRAFT REF	IR
2	16.04.2025	FINAL REF	IR
3	01.05.2025	FINAL REF	IR

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Jonathan West NSW 9899
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COVER SHEET

Date1/05/2025 2:46:15 PM

Scale@ A1

Drawing Reference

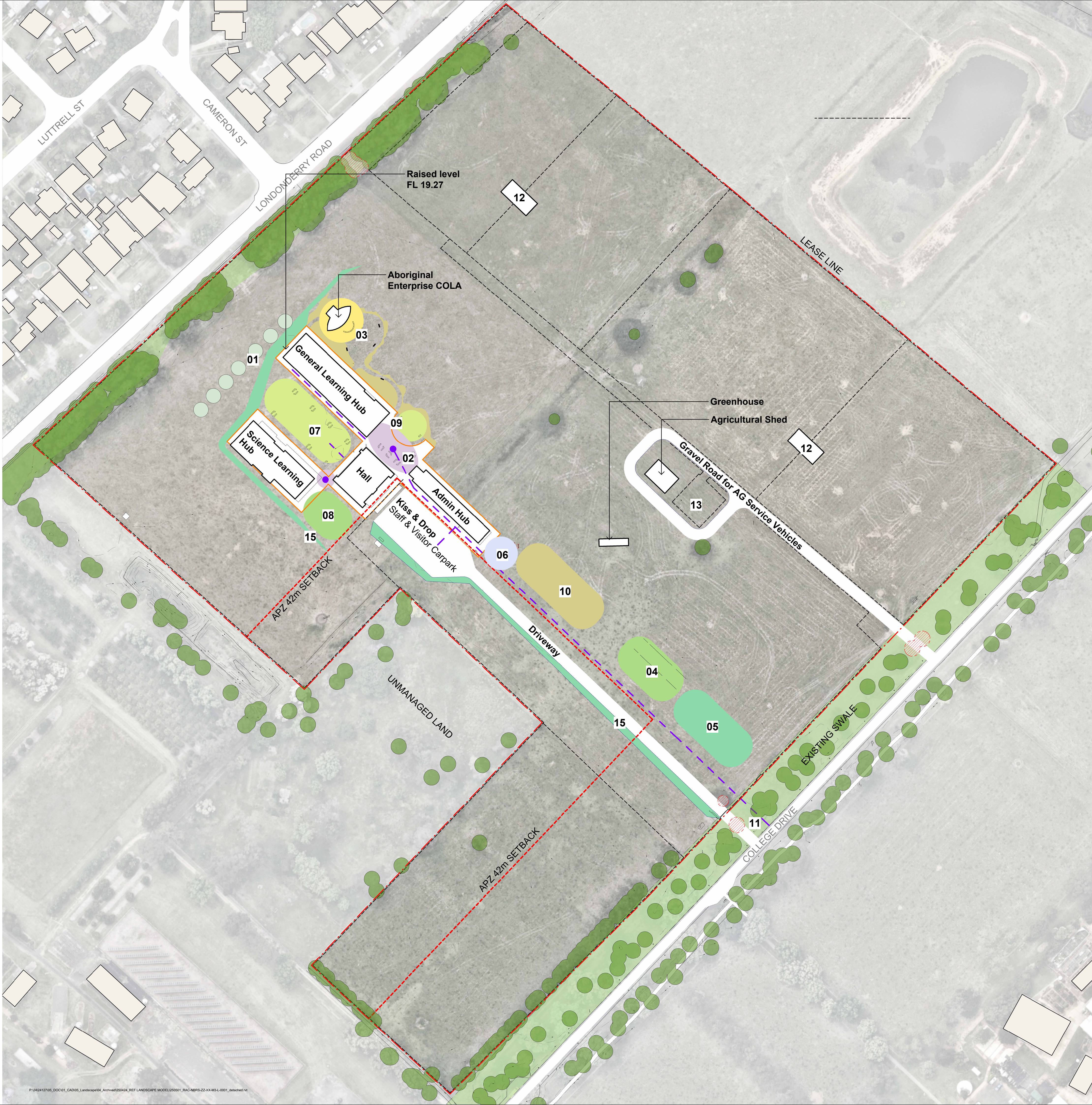
RAC-NBRS-ZZ-XX-DR-L-0001

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- LEGEND
- 01

AVENUE TREE PLANTING
TO ASSIST AS A WIND BREAK FROM THE COOL
WESTLY WINDS WITH EUCALYPTUS MOLUCCANA
(GREY BOX) TREES, A LOCAL NATIVE SPECIES
- 02

ENTRY FORECOURT
CONNECTING FOOT TRAFFIC TO THE BLOCK A -
ADMINISTRATION
- 03

INDIGENOUS ENTERPRISE
INFORMAL PROPGATION / CULTIVATION OF
NATIVE AND HISTORIC FOOD SOURCES
- 04

AGRICULTURAL ENTERPRISE
GARDEN BEDS, PERGOLA SHADE STRUCTURE,
VINE TRELLIS SYSTEM PROVIDED BY THE
CONTRACTOR. GARDENS AND PLANTS PROVIDED
BY SCHOOL
- 05

TECHNOLOGY ENTERPRISE
PAVING PROVIDED BY CONTRACTOR.
HISTORIC MACHINERY AND EDUCATIONAL
PLAQUES PROVIDED BY SCHOOL
- 06

BICYCLE AND SCOOTER PARKING
24 x BICYCLE PARKING + 30 x SCOOTER PARKING
- 07

VILLAGE GREEN
TREE LINED BORDER BY LEARNING BLOCKS WITH
TURF AND INFORMAL LEARNING SPACES.
- 08

KITCHEN GARDEN
CONNECTING DINING HALL AND PADDOCK TO
PLATE EXPERIENCE.
- 09


AMPHITHEATRE STEPS
OUTDOOR LEARNING SPACE
- 10


ORCHARDS
- 11

PERMEABLE PAVING ON DRIVEWAY ACROSS
EXISTING SWALE
- 12

ANIMAL SHELTER
- 13

STOCK YARD
- 15

SWALE PLANTING
- 

EXISTING TREES (REFER TO ARBORIST REPORT)
- 

TREES TO BE REMOVED

Issue				
No.	Date	Description	Chkd	
1	27.03.2025	DRAFT REF	IR	
2	16.04.2025	FINAL REF	IR	
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FRAMEWORK PLAN

Date

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Scale

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LANDSCAPE LEGEND AND MATERIALS

FURNITURE & FIXTURES (LOCATION TBC)

- FX01 CONCRETE BENCH
- FX02 BENCH SEAT
- FX03 SANDSTONE LOG SEATING
- FX04 HOOPED BIKE RACK
- FX05 SCOOTER BIKE RACK
- FX06 FEET WASH
- FX07 BINS (TBC)
- FX08 TIMBER POST AND WIRE FOR GRAPEVINE
- FX09 LANDSCAPE SANDSTONE BOULDERS (TBC)
- FX10 CUSTOM TIMBER PERGOLA
- FX11 WELCOME TO COUNTRY FEATURE BOULDER
- FX12 CUSTOM RAISED HARDWOOD TIMBER GARDEN BEDS
- FX13 FIXED BOLLARD

PAVING

- PAV01 GREY CONCRETE
- PAV02A COLOURED CONCRETE (WALNUT BY CCS)
- PAV02B COLOURED CONCRETE (GOLDEN BRONZE BY CCS)
- PV03 BRICK PAVING STAGGERED
- PV04 POROUS PAVERS (ECOTIHEX - Oatmeal)
- PV05A DECOMPOSED GRANITE (GOLD)
- PV05B DECOMPOSED GRANITE (RED / BROWN)
- PV06 UNIT PAVERS

HARDSCAPE (LOCATION TBC)

- ST01 CONCRETE STAIRS (INCLUDING HANDRAILS, NOSING AND TACTILES)
- SS01 CONCRETE CURVED SEATING STEPS
- SS02 CONCRETE SEATING STEPS

FENCES (REFER TO ARCHITECT'S DRAWINGS)

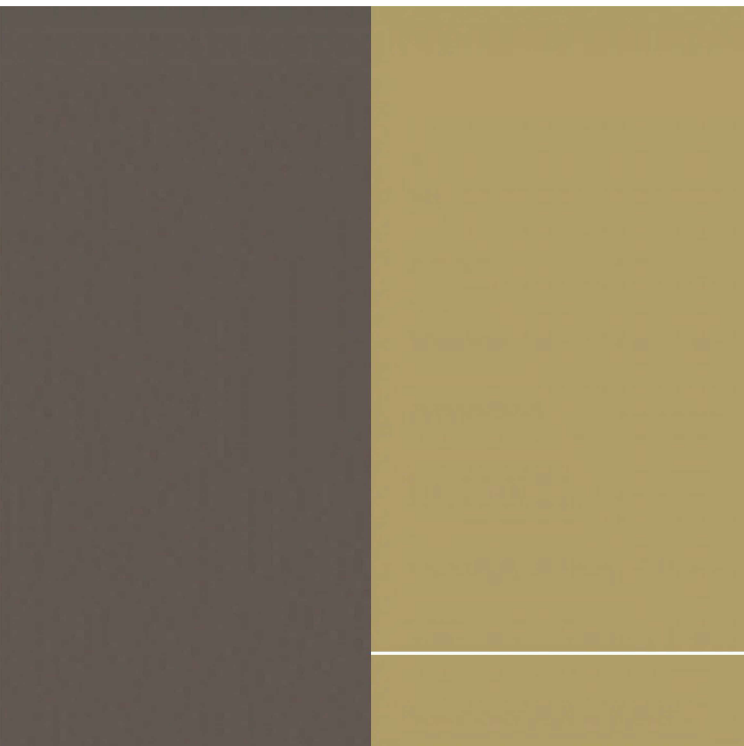
- MC01 SECURITY TUBULAR
- MC02 SECURITY CORROMESH
- FN01 WIRE FARM FENCE

GATES (REFER TO ARCHITECT'S DRAWINGS)

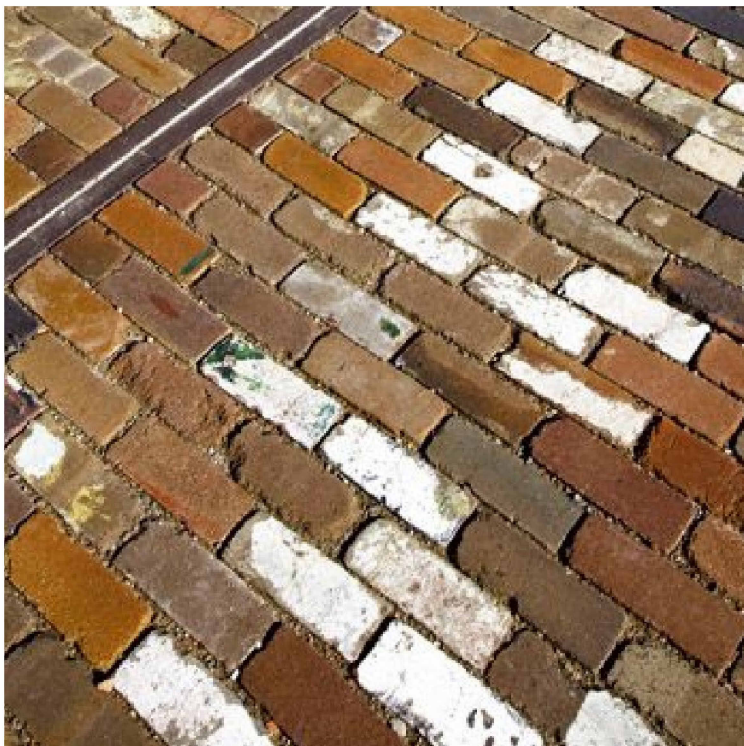
- GT01 SLIDING GATE
- GT02 DOUBLE LEAF SWING
- GT03 PEDESTRIAN SINGLE LEAF

SOFTSCAPE

- MP01 GARDEN PLANTING MIX (5/m²)
- MP02 NATIVE PLANTING MIX (4/m²)
- MP03 ENDEMIC INDIGENOUS PLANTING MIX (6/m²)
- MP04 RAIN GARDEN MIX (5/m²)
- TF01 DROUGHT TOLERANT TURF
- TF02 AMENITY TURF (SIR WALTER BUFFALO GRASS)



PV02A/B: Coloured Concrete
L: Walnut and R: Golden Bronze



PV03: Staggered Brick Paving
(recycled units)



PV04: Porous Paving in Tri-Hex shape



PV05A/B: Decomposed Granite
L: Gold and R: Red/Brown



MP02: Native Mass Planting



TP01: Indicative custom timber
pergola structure intergrated with
vineyard trellis system

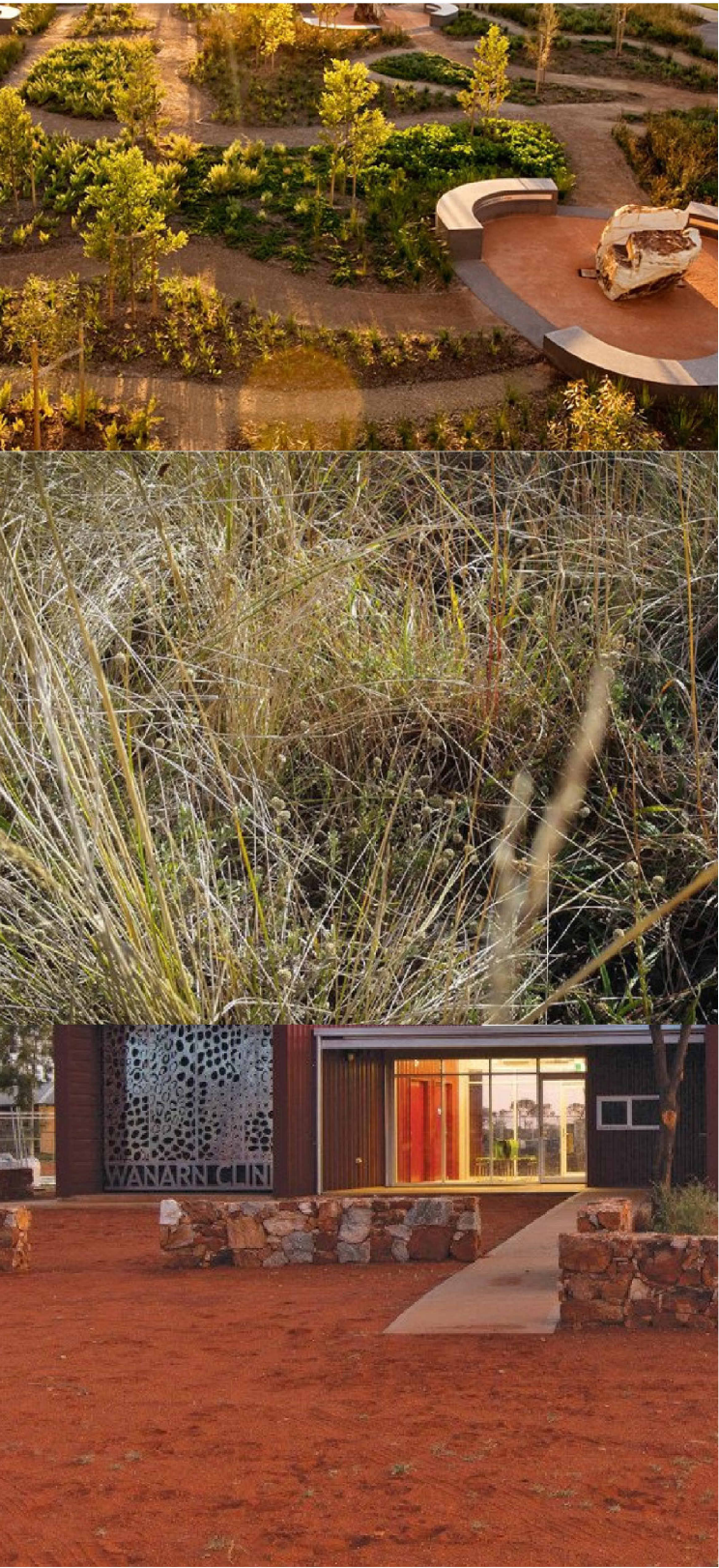


FX01: Proprietary Concrete Bench



FX02: Proprietary Bench Seat

LANDSCAPE DESIGN AND CHARACTER



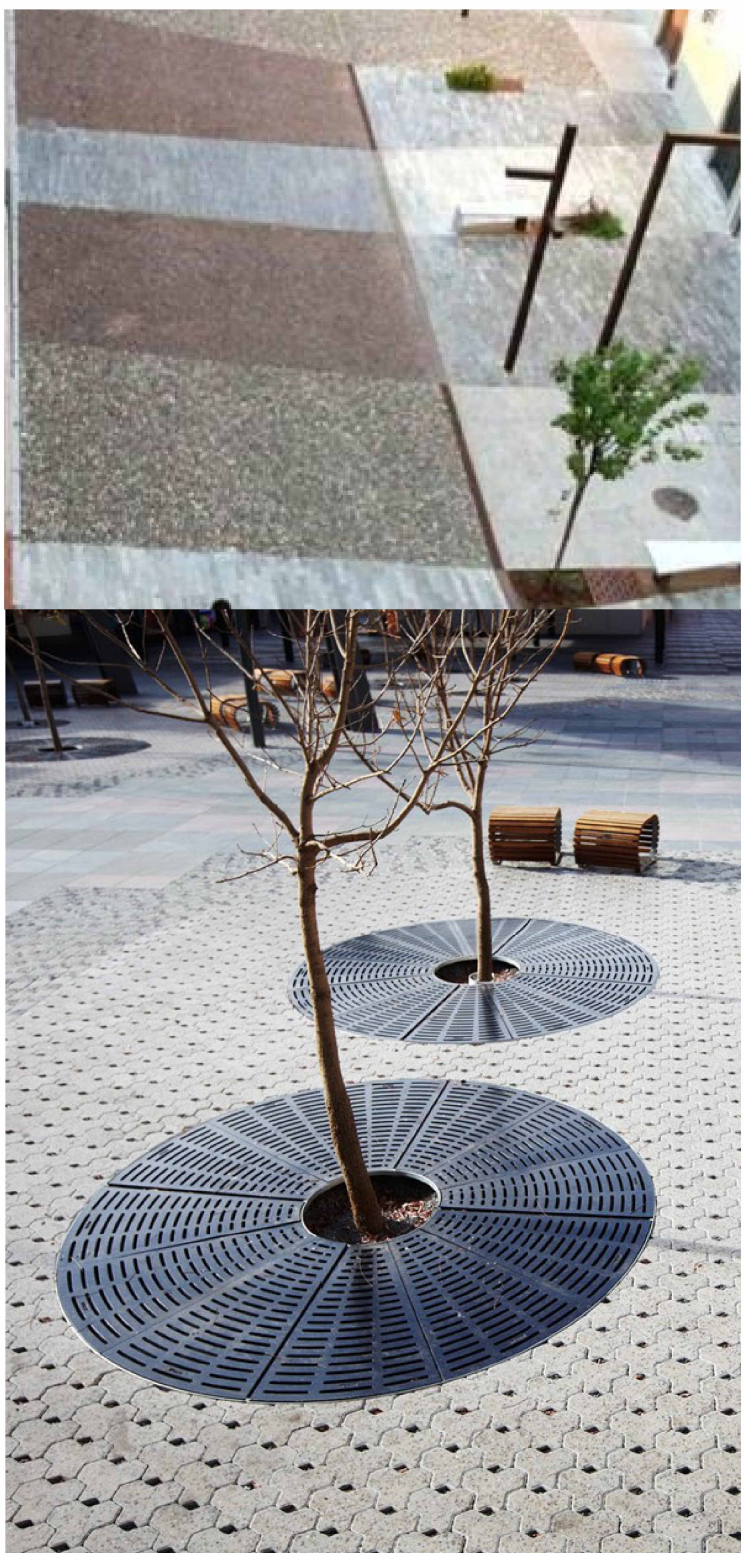
Indigenous Enterprise



Agriculture + Technology Enterprise



Village Green





Materiality

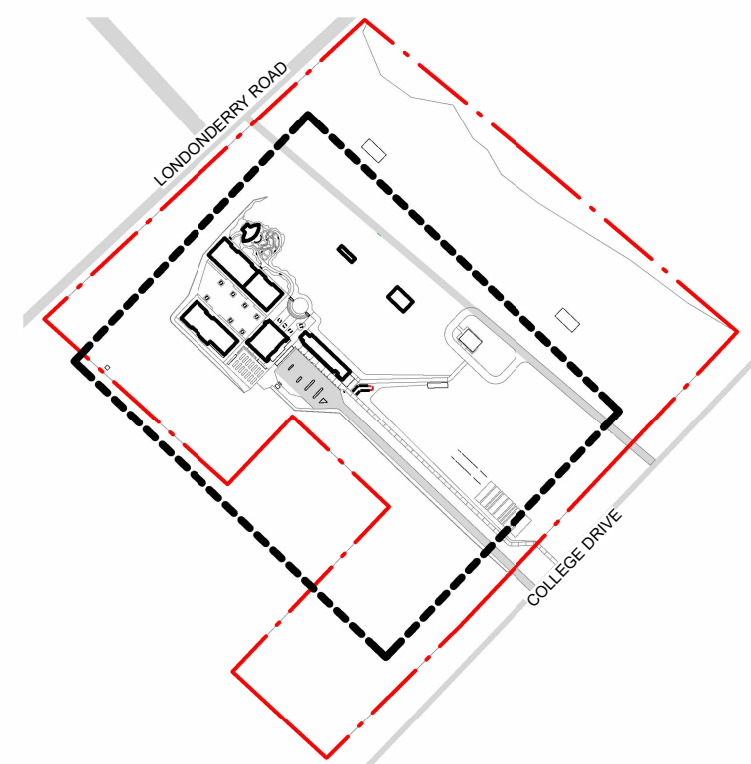
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2	16.04.2025	FINAL REF	IR	
3	01.05.2025	FINAL REF	IR	

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Nominated Architects:
Andrew Duffin NSW 5602
Jonathan West NSW 9899
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LEGEND AND MATERIALS

Date	1/05/2025 2:46:43 PM	
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Revision		
		3
		
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2 KEYPLAN 1000

1 : 6000

- LANDSCAPE ELEMENTS
- 01 **PERGOLA**
TIMBER STRUCTURE WITH CABLES TO ALLOW GRAPE VINE TO GROW OVER. AUSTRALIAN HARDWOOD. PLANTING TO BE INSTALLED BY SCHOOL
 - 02 **VINEYARD TRELLIS**
TIMBER POSTS AND CABLING. IRRIGATION INFRASTRUCTURE REQUIRED. PLANTING TO BE INSTALLED BY SCHOOL
 - 03 **ORCHARD**
PROVIDE SOIL, GROUND PREPARATION AND WATER SUPPLY POINTS. TREE SPECIMENS INSTALLED BY SCHOOL
 - 04 **KITCHEN GARDENS**
RAISED GARDEN BEDS CONSTRUCTED FROM AUSTRALIAN HARDWOOD (400m H). WATER SUPPLY POINTS, MULCH, SOIL, COMPOST BINS AND TRELLIS STRUCTURES REQUIRED. PLANTING TO BE INSTALLED BY SCHOOL
 - 05 **OUTDOOR SEATING ELEMENTS**
BESPOKE/PROPRIETARY OUTDOOR SEATING FURNITURE. CONCRETE AND MOD WOOD MATERIALS TO BE USED
 - 06 **SEATING STEPS**
CONCRETE SEATING STEPS
 - 07 **PLAQUES/ EDUCATIONAL INSTALLATION**
ALLOW COSTING TO SUPPLY/INSTALL ELEMENTS INSET INTO PAVEMENT TBC BY SCHOOL



1 GENERAL ARRANGEMENT PLAN

1 : 500

- EXISTING TREES**
(REFER TO ARBORIST REPORT)
- TREES TO BE REMOVED**
(REFER TO ARBORIST REPORT)
- EXISTING PASTURE**
- PROPAGATION FIELDS BY SCHOOL**
SOIL, IRRIGATION AND OTHER INFRASTRUCTURE NEEDED
- PLANTING**
SOIL, IRRIGATION (DRIP) AND PLANTS (4 m2)
- HARDSCAPE**
 - COLOURED CONCRETE
 - DECOMPOSED GRANITE
 - POROUS PAVING
 - BRICK PAVING
 - UNIT PAVERS
 - GREY CONCRETE
- TURF**
 - HIGH QUALITY IRRIGATED LAWN
 - LOW MAINTENANCE LAWN (ESTABLISHED IRRIGATION)
- FENCES**
REFER TO FENCE PLANS IN ARCHITECTURE SET

Issue				
No.	Date	Description	Chkd	
1	27.03.2025	DRAFT REF	IR	
2	16.04.2025	FINAL REF	IR	
3	01.05.2025	FINAL REF	IR	

+61 2 9922 2344
Nominated Architects
Andrew Duffin NSW 5602
Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197
ABN 16 002 247 565

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LANDSCAPE MASTERPLAN

Date 1/05/2025 2:48:52 PM
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Drawing Reference
RAC-NBRS-ZZ-XX-DR-L-1000



3

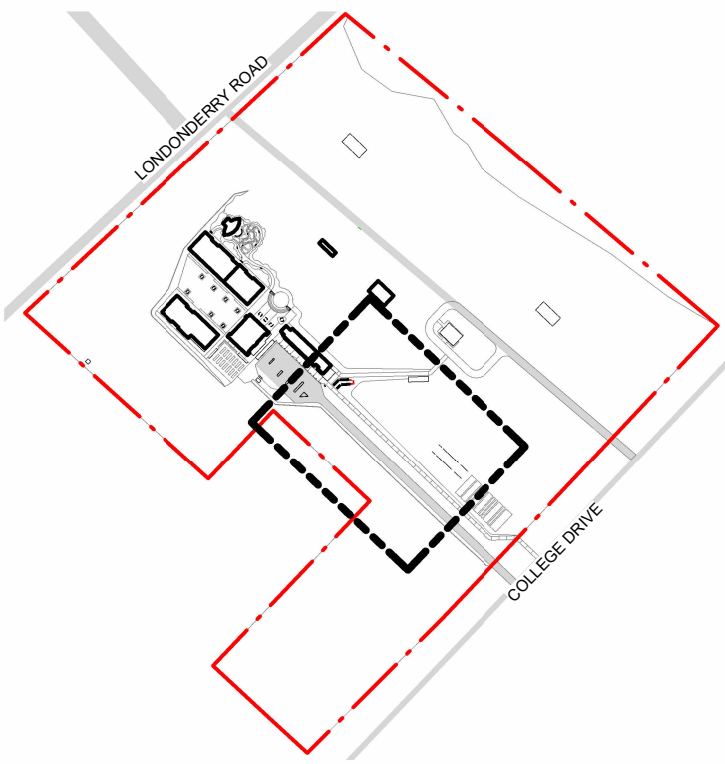
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0 5m 10m 15m 20m 25m 30m 35m 40m 45m 50m

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1 DETAIL PLAN 2
1 : 250



2 KEY PLAN - 1002
1 : 6000

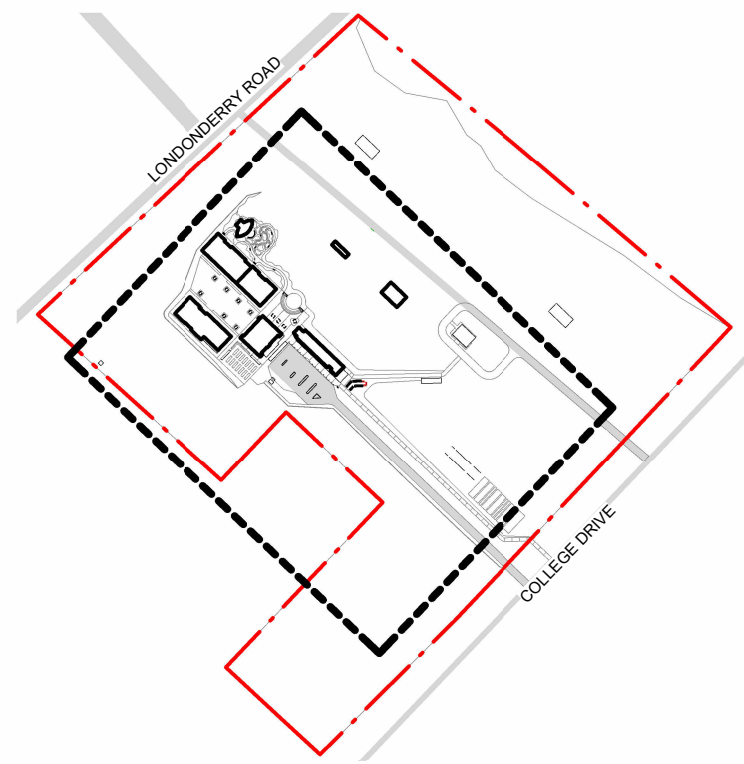
Issue				
No.	Date	Description	Chkd	
1	27.03.2025	DRAFT REF	IR	
2	16.04.2025	FINAL REF	IR	
3	01.05.2025	FINAL REF	IR	

+61 2 9922 2344
Nominated Architects
Andrew Duffin NSW 5602
Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197
24127
nbrs.com.au
ABN 16 002 247 565

DETAIL PLAN 2

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Revision
3

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2

KEY PLAN - 4001

1 : 6000



PROPOSED TREES		
	EUCter Eucalyptus tereticornis - 200L	16
	EUCmol Eucalyptus moluccana - 200L	22
	ANGflo Angophora floribunda - 100L	9
	PISchi Pistachia chinensis - 100L	
	MELsty Melaleuca stypheloides - 100L	7
	EUSspp Eucalyptus spp. - 75L	34
	ORCHARD TREES Installed by School	

Issue				
No.	Date	Description	Chkd	
1	27.03.2025	DRAFT REF	IR	
2	16.04.2025	FINAL REF	IR	
3	01.05.2025	FINAL REF	IR	

+61 2 9922 2344

Nominated Architects
Andrew Duffin NSW 5602
Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197

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ABN 16 002 247 565

24127

PROPOSED TREE PLAN & SCHEDULE

Date 1/05/2025 2:49:51 PM

Scale 1:500 @ A1

Drawing Reference

RAC-NBRS-ZZ-XX-DR-L-4001

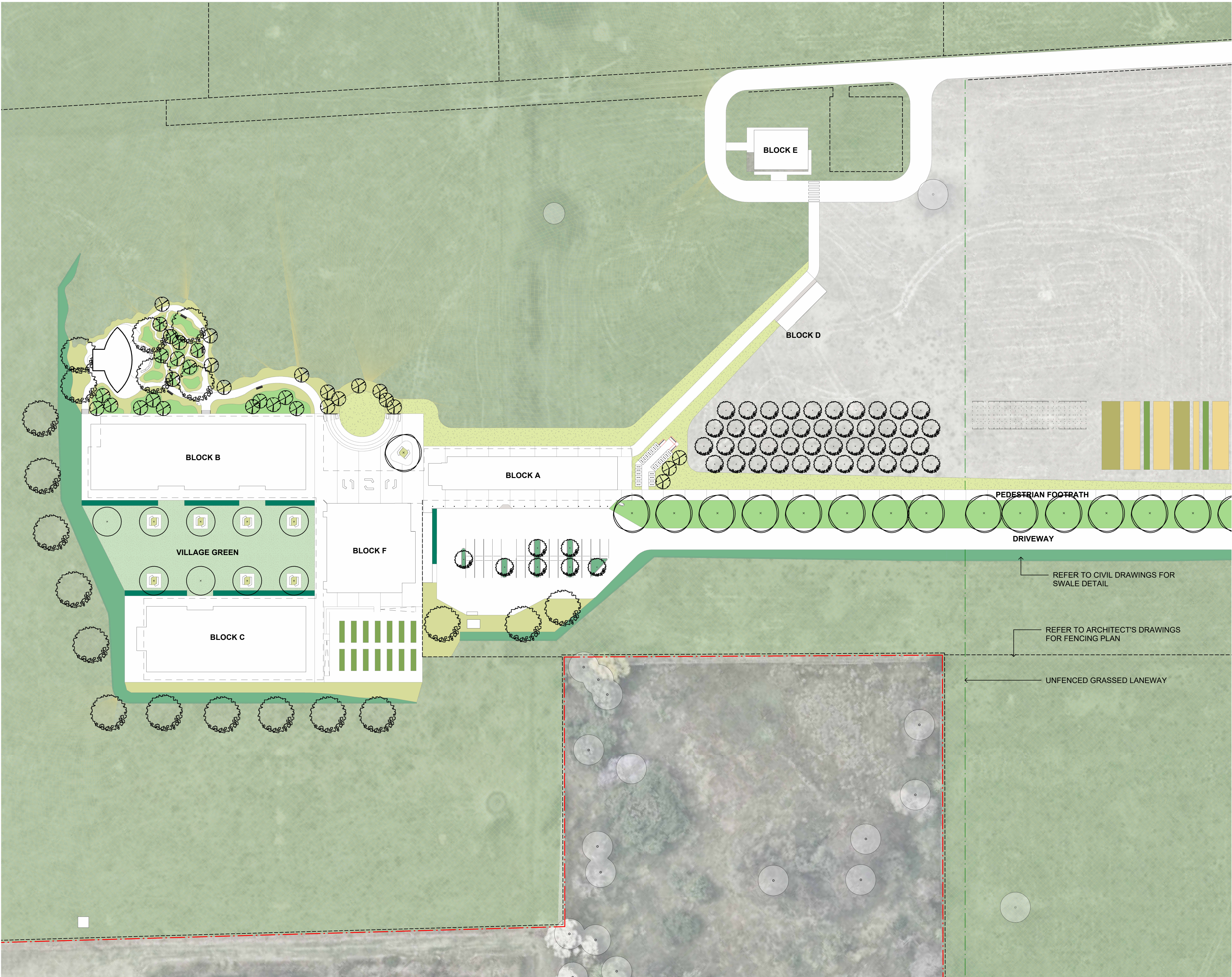
Revision

3

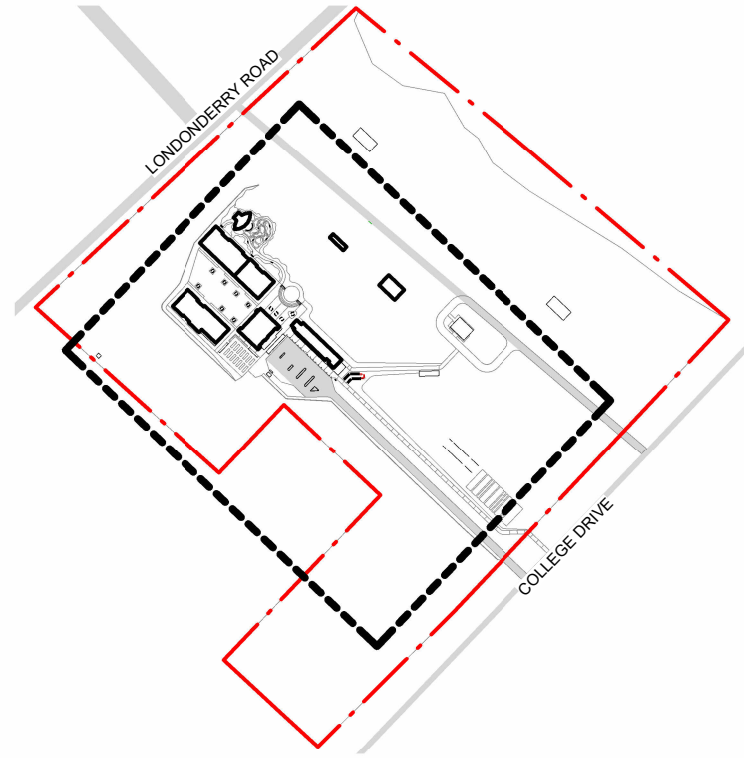
1

PROPOSED TREE PLAN & SCHEDULE

1 : 500



1 PLANTING ZONE PLAN & SCHEDULE
1 : 500



2 KEY PLAN - 4002
1 : 6000

- PLANTING**
- MP01** GARDEN PLANTING MIX (5/m²)
Hardenbergia violacea - 150mm
Lomandra 'Tanika' - 150mm
Poa labillardieri 'Eskerdale' - 150mm
Pennisetum alopecuroides - 150mm
Themeda australis - 150mm
- MP02** NATIVE PLANTING MIX (4/m²)
Acacia falcata - 5L
Microlaena stipoides - 150mm
Lomandra multiflora - 150mm
Themeda australis - 150mm
- MP03** ENDEMIC INDIGENOUS PLANTING MIX (6/m²)
Daniella revoluta - 150mm
Lomandra 'Tanika' - 150mm
Pennisetum setaceum 'Rubrum' - 150mm
Philodendron 'Kanasu' - 200mm
Trachospermum jasmynoides - 150mm
Xanthorrhoea arborea - 25L
- MP04** RAIN GARDEN MIX (5/m²)
Carex appressa - 150mm
Ficinia nodosa - 150mm
Juncus usitatus - 150mm
Lomandra longifolia 0- 150mm
- TF01** DROUGHT TOLERANT TURF
- TF02** AMENITY TURF (SIR WALTER BUFFALO GRASS)
- AGRICULTURE PLOTS** (INSTALLED BY SCHOOL)
- EXISTING PASTURE**

Issue				
No.	Date	Description	Chkd	
1	27.03.2025	DRAFT REF	IR	
2	16.04.2025	FINAL REF	IR	
3	01.05.2025	FINAL REF	IR	

+61 2 9922 2344
Nominated Architects
Andrew Duffin NSW 5602
Jonathan West NSW 9899
NBRS & Partners Pty Ltd VIC 51197
24127

nbrs.com.au
ABN 16 002 247 565

PLANTING ZONE PLAN & SCHEDULE

Date 1/05/2025 2:50:11 PM
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Drawing Reference
RAC-NBRS-ZZ-XX-DR-L-4002

Revision
3

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Appendix C: Planning for Bushfire Protection 2019 Compliance Tables - Special Fire Protection Purposes (SFPP)

Table 1: Aims and Objectives of Planning for Bushfire Protection 2019

Objectives	Satisfied	Comment
➤ Afford buildings and their occupants protection from exposure to a bush fire	✓	It is unlikely that any occupants of the building will be directly exposed to a prolonged bushfire due to the considerable distance and additional bushfire protection measures including the APZ and emergency evacuation procedures.
➤ Provide for a defensible space to be located around buildings	✓	All vegetation within 44m of the school is able to be managed in a low fuel state (APZ) and the proposed building/s are separated by the bushfire hazard to the south by a minimum 44m wide APZ.
➤ Provide appropriate separation between a hazard and buildings, which, in combination with other measures, prevent the likely fire spread to buildings	✓	An 44m APZ to the south of the building ensures radiant heat levels experienced at the building will not exceed 10kW/m ² .
➤ Ensure that safe operational access and egress for emergency service personnel and residents is available	✓	Direct vehicular and pedestrian access for emergency vehicles is available to the east of the site. Any occupants of the building are able to evacuate the building in the opposite direction from the hazard (i.e. to the east).
➤ Provide for ongoing management and maintenance of BPMs	✓	Ongoing maintenance of the property will be required to ensure the APZ remains consistent with the requirements of PBP 2019.
➤ Ensure that utility services are adequate to meet the needs of firefighters	✓	The development includes all essential utility services to meet the needs of firefighters; including a reliable water supply.

Table 2: Performance Criteria and Acceptable Solutions for SFPP (Chapter 6 PBP 2019)

PERFORMANCE CRITERIA		ACCEPTABLE SOLUTIONS	COMPLIES	COMMENT
<div>✓ - Acceptable Solution</div> <div>AS - Alternative Solution</div>				
6.8.1 APZs				
Table 6.8a				
Intent of Measure: To provide suitable building design, construction and sufficient space to ensure radiant heat levels do not exceed critical limits for firefighters and other emergency services personnel undertaking operations, including supporting or evacuating occupants.				
ASSET PROTECTION ZONES	Radiant heat levels of greater than 10kW/m ² (1200K) are not experienced at any part of the building.	The building is provided with an APZ in accordance with Table A1.12.1. in Appendix 1.	✓	The school is provided with a minimum 44m setback from the small, isolated forest (~2 hectares) to the south. No part of any building will be exposed to radiant heat levels greater than 10kW/m ² . The APZs were calculated using Method 2 (AS39590-2018) to demonstrate the minimum required APZ.
	APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is negated.	The APZ is not located on lands with a slope exceeding 18°	✓	The maximum slope of the site is 1.0° downslope or less.
	APZs are managed and maintained to prevent the spread of a fire towards the building.	The APZ is managed in accordance with the requirements of Appendix 4	✓	The operator of the school will be required to manage the property as an IPA.
	The APZ is provided in perpetuity.	APZs are wholly within the boundaries of the development site.	✓	There are no exceptional circumstances that would require an APZ to be located external to the development site.
LANDSCAPING	Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	Landscaping is in accordance with APZ standards (see Appendix 4). Fencing is constructed in accordance with section 7.6.	✓	Any new landscaping has considered the requirements of APZs per Appendix 4. All new fencing will be colorbond or similar non-combustible material.
CONSTRUCTION STANDARDS	The proposed building can withstand bushfire attack in the form of wind, embers, radiant heat and flame contact.	A construction level of BAL-12.5 under AS3959 or NASH and Table 7.5 is applied	✓	The school building has been designed to comply with BAL-19 in accordance with Table 2 of Appendix B of the Addendum 2022 to PBP 2019.

PERFORMANCE CRITERIA		ACCEPTABLE SOLUTIONS	COMPLIES	COMMENT
✓ - Acceptable Solution AS - Alternative Solution				
6.8.2 Access Table 6.8b <i>To provide safe operational access for emergency services personnel in suppressing a bush fire, while residents are accessing or egressing an area.</i>				
ACCESS	Fire fighters are provided with safe all-weather access to structures.	SFPP access roads are two-wheel drive, all-weather roads	✓	Vehicular access is provided from the east of the site via College Drive, within the University of Western Sydney campus. The internal driveway is no greater than 100m from the front property boundary.
		Access is provided to all structures and hazard vegetation.	✓	
		Traffic management devices are constructed to not prohibit access by emergency services vehicles.	✓	
		Access roads must provide suitable turning areas in accordance with Appendix 3.	✓	
		Access roads must provide suitable turning areas in accordance with Appendix 3	✓	
	The capacity of access roads is adequate for firefighting vehicles.	The capacity of road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges and causeways are to clearly indicate load rating.	✓	All new driveways are designed in accordance with the relevant engineering specifications. The proposed property access roads/ driveways will have sufficient load capacity for all firefighting vehicles.
	There is appropriate access to water supply.	Hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression.	✓	Two fire hydrants are located on the western site boundary and can provide water coverage to the proposed building. An additional existing hydrant within the site provides further coverage to the existing buildings which will be augmented by a new hydrant system required to provide coverage around the entire building.
		Hydrants are provided in accordance with AS2419.1:2005	✓	
		There is suitable access for Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.	✓	

PERFORMANCE CRITERIA		ACCEPTABLE SOLUTIONS	COMPLIES	COMMENT
✓ - Acceptable Solution AS - Alternative Solution				
PERIMETER ROADS	Perimeter access roads are designed to allow safe access and egress for medium rigid firefighting vehicles while occupants are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface.	There are two-way sealed roads.	N/A	
		8m carriageway width kerb to kerb.	N/A	
		Hydrants are to be located clear of parking areas.	N/A	
		There are through roads, and these are linked to the internal road system at an interval of no greater than 500m.	N/A	
		Curves of roads have a minimum inner radius of 6m.	N/A	
		The maximum grade road is 15° and average grade is 10°.	N/A	
		The road crossfall does not exceed 3°.	N/A	
		A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches; and	N/A	
NON-PERIMETER ROADS	Non-perimeter access roads are designed to allow safe access and egress for medium rigid firefighting vehicles while occupants are evacuating.	Minimum 5.5m width kerb to kerb.	N/A	
		Parking is provided outside of the carriageway.	N/A	
		Hydrants are to be located clear of parking areas.	N/A	
		There are through roads, and these are linked to the internal road system at an interval of no greater than 500m.	N/A	
		Curves of roads have a minimum inner radius of 6m.	N/A	
		The maximum grade road is 15° and average grade is 10°.	N/A	
		The road crossfall does not exceed 3°.	N/A	
		A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches is provided.	N/A	

PERFORMANCE CRITERIA		ACCEPTABLE SOLUTIONS	COMPLIES	COMMENT
✓ - Acceptable Solution AS - Alternative Solution				
6.8.3 Services – Water, electricity and gas Table 6.8c <i>To provide adequate services for water for the protection of buildings during and after the passage of a bushfire, and not to locate gas and electricity so as not to contribute to the risk of fire to a building.</i>				
WATER	An adequate water supply for firefighting purposes is installed and maintained.	Reticulated water is to be provided to the development, where available.	✓	A reticulated water supply is provided.
		A 10,000 litres minimum static water supply for firefighting purposes is provided for each occupied building where no reticulated water is available.	N/A	
	Water supplies are located at regular intervals.	Fire hydrant spacing, design and sizing comply with AS2419.1:2005;	✓	A reticulated water supply is provided.
		Hydrants are not located within any road carriageway;	✓	
	The water supply is accessible and reliable for firefighting operations.	Reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.	✓	A reticulated water supply is provided.
	Flows and pressures are appropriate.	Fire hydrant flows and pressures comply with AS2419.1:2005.	✓	
ELECTRICITY	Location of electricity services limits the possibility of ignition of surrounding bushland or the fabric of buildings.	All above ground water service pipes are metal, including and up to any taps.	✓	The school building will be connected to the existing underground electricity service.
		Where practicable, electrical transmission lines are underground. Where overhead electrical transmission lines are proposed as follows: - lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and - no part of a tree is closer to a power line than the distance set out in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines	N/A	

PERFORMANCE CRITERIA		ACCEPTABLE SOLUTIONS	COMPLIES	COMMENT
✓ - Acceptable Solution AS - Alternative Solution				
GAS	Location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	<p>Reticulated or bottled gas is installed and maintained in accordance with AS 1596:2014 and the requirements of relevant authorities, metal piping is to be used.</p> <p>All fixed gas cylinders are kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side;</p> <p>Connections to and from gas cylinders are metal;</p> <p>Polymer-sheathed flexible gas supply lines are not used; and</p> <p>Above-ground gas service pipes are metal, including and up to any outlets.</p>	✓	Any new gas connections will be underground and will be unlikely to create an additional hazard risk to surrounding bushland.
6.8.4 Emergency Management Planning Table 6.8d <i>To provide suitable emergency and evacuation arrangements for occupants of SFPP developments</i>				
EMERGENCY MANAGEMENT	A bush fire emergency and evacuation management plan is prepared.	<p>Bush fire emergency management and evacuation plan is prepared consistent with the:</p> <ul style="list-style-type: none"> ❑ the NSW RFS document: A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan; and ❑ AS3745:2010 Planning for emergencies in facilities. 	✓	A Bushfire Management Plan will be prepared prior to the occupation of the building.

Appendix D: Addendum 2022 to PBP 2019 Compliance Table

Table 1: Addendum PBP 2022 - Rural Fire Service

Intent of Measure	Performance Criteria	Acceptable Solution	Complies	Comment
			✓ - Acceptable Solution PS - Performance Solution	
Table 2: Construction Standards	The proposed building can withstand bushfire attack in the form of wind, embers, radiant heat and flame contact.	A construction level of BAL-19 or greater under AS3959 and section 7.5 of PBP is applied.	✓	The school buildings will be constructed in accordance with Sections 3 and 6 of AS3959-2018, as a BAL-19 rated building.
Table 3: Access	Firefighting vehicles are provided with safe all weather access to structures and hazardous vegetation.	<p>Vehicular access must be capable of providing continuous access for emergency vehicles to enable travel in a forward direction from a public road around the entire building; and</p> <p>Must have a minimum unobstructed width of 6m with no part of its furthest boundary more than 18m from the building and is no part of the 6m width be built upon or used for any purpose other than vehicular or pedestrian movement; and</p> <p>Must provide reasonable pedestrian access from the vehicular access to the building; and</p> <p>Must have a load bearing capacity and unobstructed height to permit the operation and passage of fire fighting vehicles; and</p> <p>Must be wholly within the allotment except that a public road complying with above may serve as the vehicular access or part thereof.</p>	N/A	Under Addendum 2025, the requirements of Table 3 have been removed for primary and secondary schools.

Intent of Measure	Performance Criteria	Acceptable Solution	Complies	Comment
			✓ - Acceptable Solution PS - Performance Solution	
Table 4: Water Supply	An adequate water supply for firefighting purposes is installed and maintained.	Reticulated water is to be provided to the development, where available; and	✓	The school will be connected to the existing reticulated water supply.
		Water for fire fighting purposed must be made available and consist of: <ul style="list-style-type: none"> ➤ a fire hydrant system installed in accordance with AS2419.1; or ➤ where no reticulated water is available, a static water supply consisting of tanks, swimming pools, dams or the like, or a combination of these, together with suitable pumps, hoses and fittings, determined in consultation with NSW RFS that – <ul style="list-style-type: none"> ○ is capable of providing the required flow rate for a period of not less than 4 hours or ○ has a volume of 10,000 litres for each occupied building 	✓	

Appendix E: AHIMS Report

Katrina Greville

Date: 14 April 2025

21 Costata Crescent

Adamstown New South Wales 2289

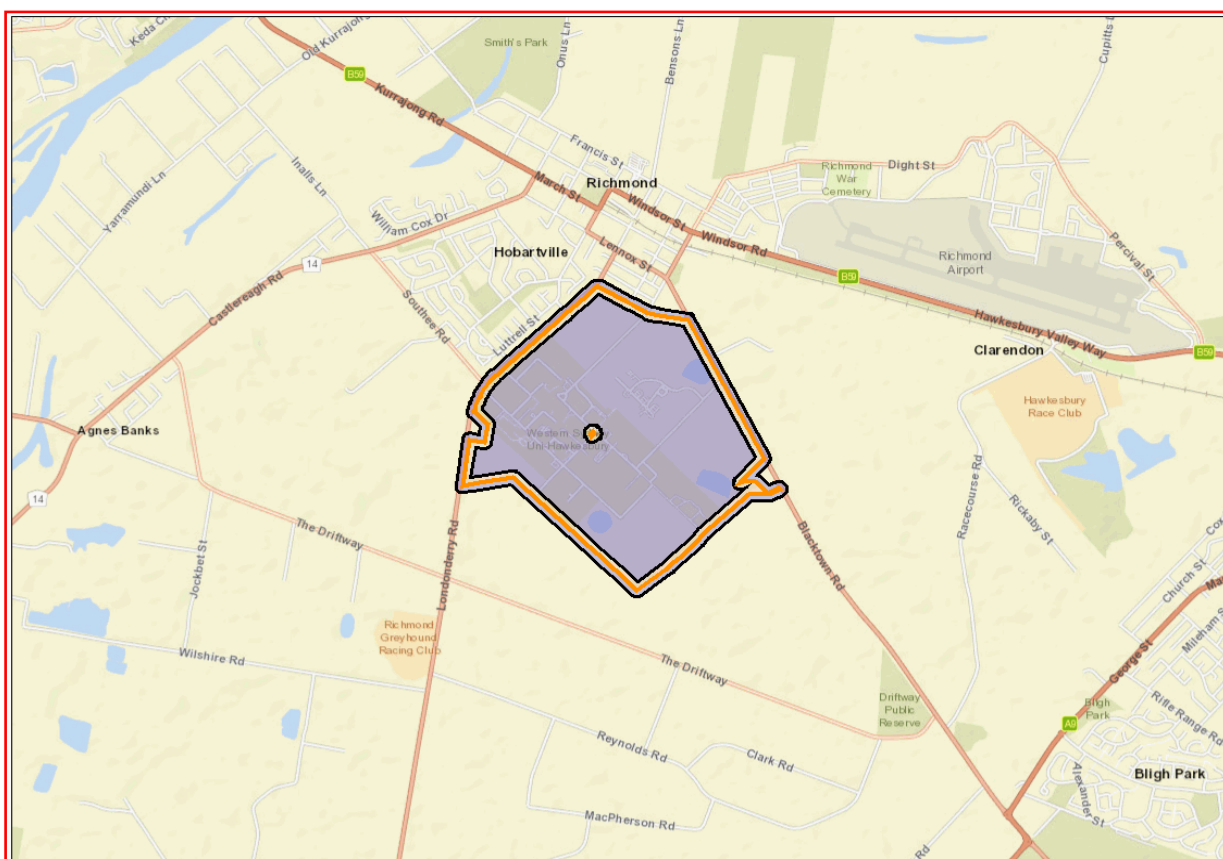
Attention: Katrina Greville

Email: klmukevski@bigpond.com

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 2, DP:DP1051798, Section : - with a Buffer of 50 meters, conducted by Katrina Greville on 14 April 2025.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(https://www.legislation.nsw.gov.au/gazette\)](https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Appendix F: NBC Modelling Report



NBC Bushfire Attack Assessment Report V4.1

AS3959 (2018) Appendix B - Detailed Method 2

Print Date:

14/04/2025

Assessment Date:

14/04/2025

Site Street Address: 2435 RoC - 2 College Road, Richmond

Assessor: Stuart Greville; Bushfire Planning Australia

Local Government Area: Hawkesbury

Alpine Area: No

Equations Used

Transmissivity: Fuss and Hammins, 2002

Flame Length: RFS PBP, 2001/Vesta/Catchpole

Rate of Fire Spread: Noble et al., 1980

Radiant Heat: Drysdale, 1985; Sullivan et al., 2003; Tan et al., 2005

Peak Elevation of Receiver: Tan et al., 2005

Peak Flame Angle: Tan et al., 2005

Run Description: T1-T2 & T4-T8 Managed Land

Vegetation Information

Vegetation Type: Non-Hazard

Vegetation Group: Non-Hazard

Vegetation Slope: 0.3 Degrees

Vegetation Slope Type: Upslope

Surface Fuel Load(t/ha): 0

Overall Fuel Load(t/ha): 0

Vegetation Height(m): 0

Only Applicable to Shrub/Scrub and Vesta

Site Information

Site Slope: 0 Degrees

Site Slope Type: Downslope

Elevation of Receiver(m): Default

APZ/Separation(m): 1

Fire Inputs

Veg./Flame Width(m): 100

Flame Temp(K): 1090

Calculation Parameters

Flame Emissivity: 95

Relative Humidity(%): 25

Heat of Combustion(kJ/kg) 18600

Ambient Temp(K): 308

Moisture Factor: 5

FDI: 100

Program Outputs

Level of Construction: BAL 29

Peak Elevation of Receiver(m): 0

Radiant Heat(kW/m2): 29

Flame Angle (degrees): 0

Flame Length(m): 0

Maximum View Factor: 0

Rate Of Spread (km/h): 0

Inner Protection Area(m): 1

Transmissivity: 0.905

Outer Protection Area(m): 0

Fire Intensity(kW/m): 0

BAL Thresholds

BAL-40: BAL-29: BAL-19: BAL-12.5: 10 kw/m2: Elevation of Receiver:

Asset Protection Zone(m): 0 0 0 0 0 6

Run Description:	T3 South-west isolated veg				
<u>Vegetation Information</u>					
Vegetation Type:	Coastal Valley Grassy Woodland				
Vegetation Group:	Woodlands				
Vegetation Slope:	0.3 Degrees	Vegetation Slope Type:		Upslope	
Surface Fuel Load(t/ha):	10	Overall Fuel Load(t/ha):		18.07	
Vegetation Height(m):	0.9	Only Applicable to Shrub/Scrub and Vesta			
<u>Site Information</u>					
Site Slope:	0 Degrees	Site Slope Type:		Downslope	
Elevation of Receiver(m):	Default	APZ/Separation(m):		12	
<u>Fire Inputs</u>					
Veg./Flame Width(m):	100	Flame Temp(K):		1090	
<u>Calculation Parameters</u>					
Flame Emissivity:	95	Relative Humidity(%):		25	
Heat of Combustion(kJ/kg)	18600	Ambient Temp(K):		308	
Moisture Factor:	5	FDI:		100	
<u>Program Outputs</u>					
Level of Construction:	BAL 29	Peak Elevation of Receiver(m):		4.42	
Radiant Heat(kW/m2):	29	Flame Angle (degrees):		64	
Flame Length(m):	9.84	Maximum View Factor:		0.44	
Rate Of Spread (km/h):	1.18	Inner Protection Area(m):		0	
Transmissivity:	0.868	Outer Protection Area(m):		0	
Fire Intensity(kW/m):	10974				
<u>BAL Thresholds</u>					
BAL-40: BAL-29: BAL-19: BAL-12.5: 10 kw/m2: Elevation of Receiver:					
Asset Protection Zone(m):	8	11	17	24	39
					6