



**REVIEW OF ENVIRONMENTAL FACTORS  
FOR  
NEW SINGLE STOREY MODULAR AGRICULTURE  
CLASSROOM BUILDING  
AT  
ARDELL ANGLICAN COLLEGE**



Prepared for  
**The Anglican School Corporation and  
Arndell Anglican College**

By  
**INGHAM PLANNING PTY LTD  
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**August 2022**

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## SIGNED CERTIFICATION

This Review of Environmental Factors (REF) has been prepared in accordance with the NSW Code of Practice for Part 5 Activities for registered non-government schools dated August 2017.

### Environmental Assessment prepared by:

Name(s): David Winley (Director)  
Master of Urban and Regional Planning (Sydney University)  
Registered Planner (Planning Institute of Australia)

Address: Ingham Planning Pty Ltd  
PO Box 251  
Artarmon NSW 1570

On behalf of: Anglican Schools Corporation

### Applicant and Land Details

Applicant: Anglican Schools Corporation

Applicant Address: c/- Ingham Planning Pty Ltd  
PO Box 251  
Artarmon NSW 1570

Land to be developed: 118 Wolseley Road OAKVILLE (Lot 18 DP 1252151)  
known as Arndell Anglican College

Project: Single Storey Modular Agriculture Classroom Building

### Declaration

I certify that that I have prepared the contents of this REF and, to the best of my knowledge, it is in accordance with the Code approved under Clause 244N of the Environmental Planning and Assessment Regulation 2000, and the information it contains is neither false nor misleading.

### Name:



### David Winley MURP (Syd) RPIA

Director



Date: 12 August 2022

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## 1. INTRODUCTION

### 1.1 Background

This Review of Environmental Factors (REF) has been prepared by Ingham Planning Pty Ltd on behalf of The Anglican Schools Corporation for the proposed activity being the construction of a new single storey modular classroom buildings at Arndell Anglican College. The proposed activity is described in detail in Section 2 and illustrated in the detailed drawings attached as **Appendix A**.

This report examines the characteristics of the subject property, the nature of the surrounding locality, the zoning of the property and details of the proposed school building. The report then provides a review of the environmental factors of the proposal in terms of impacts of the activity, the zoning of the land and consideration of environmental matters relevant to the activity as required by Part 5 of the Environmental Planning and Assessment Act 1979 (as amended).

### 1.2 Proponent

The proponent of the proposed works is the Anglican Schools Corporation who governs the operation of Arndell Anglican College.

### 1.3 Determining Authority

Under the provisions of the EP&A Act and Regulations and the Education SEPP, registered non-government schools are deemed to be a "determining authority" for Part 5 "*development without consent*" within the boundaries of an existing school.

Arndell Anglican College is a registered non-government school (RNS) within the meaning of the Education Act 1990. The Anglican Schools Corporation governs the operation the school. Therefore, for the purposes of the proposed activity, TASC is the determining authority.

### 1.4 Purpose of the Report

The purpose of this REF is to assist ASC to fulfil its obligations as a determining authority for the proposed activity in accordance with Part 5 of the EP& A Act and the NSW Code of Practice for Part 5 Activities for registered non-government schools dated August 2017.

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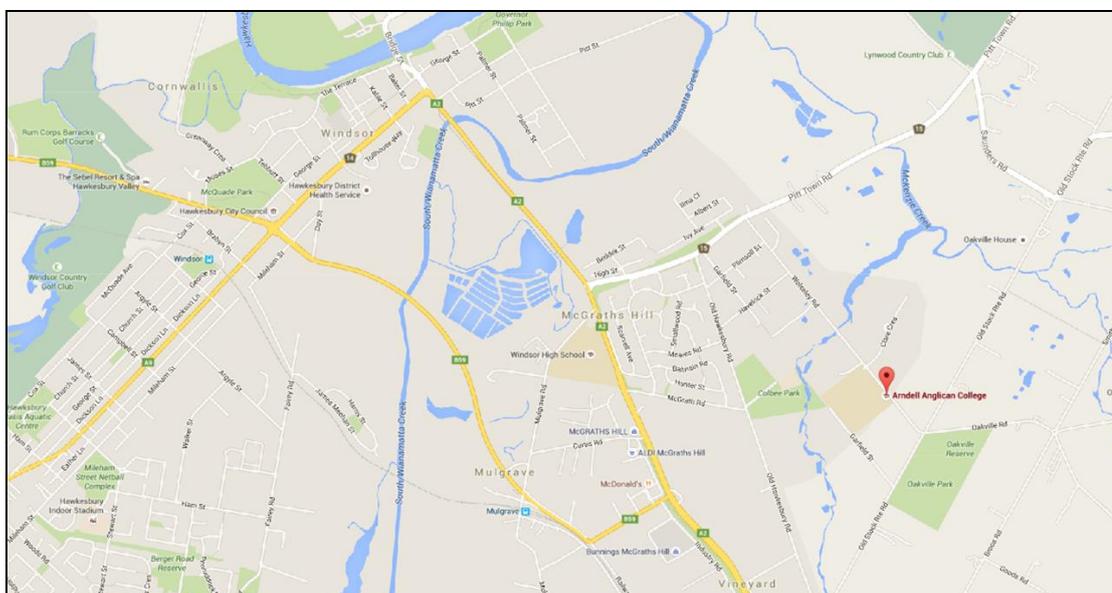
## 2. PROPOSED ACTIVITY

### 2.1 Summary of Activity

The proposed activity is for the construction of a single storey modular classroom building for the teaching of agriculture within the existing school property at the rear of the main school campus buildings. The proposed activity is described in detail in Section 2.3 and illustrated in the detailed drawings attached as **Appendix A**.

### 2.2 Location of Proposed Activity

The subject property is known as Arndell Anglican College at 118-132 Wolseley Road, Oakville. (see **Figure 1 - Location** and **Figure 2 – Surrounding Land Uses**).



**Figure 1 - Location**

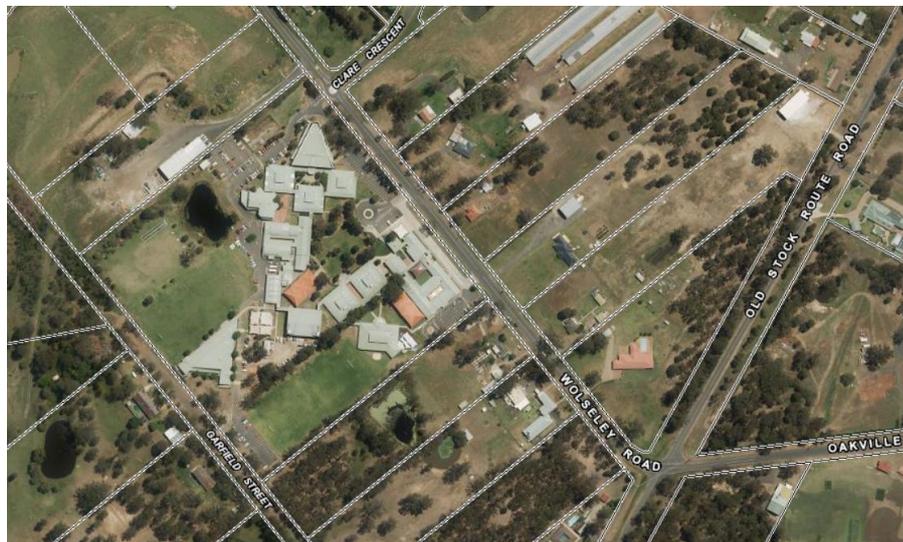
Arndell Anglican College is located approximately 1km to the east of Windsor Road between the centres of Vineyard and McGraths Hill.

The Arndell Anglican College comprising Junior and Senior School campus is the dominant land use within the Wolseley Road streetscape.

Arndell Anglican College comprising an early childhood centre, primary and secondary classroom modules, library, multi-purpose hall, sports courts and facilities, playing fields and carparking areas.

The site is adjoined by surrounding land uses comprising generally residential and rural/agricultural properties comprising single storey cottages and rural outbuildings (see **Figure 2 – Surrounding Land Uses**)

A sealed driveway to a large industrial shed extends along the boundary of the adjoining property to the north. The Garfield Street road reserve extends along the south-western boundary of the site providing access to rural residential premises opposite to the rear of the school land. There are also rural properties that are well setback from the school on the opposite side of Wolseley Road.



**Figure 2 – Surrounding Land Uses**

The location of the proposed works on the subject site is a within a generally cleared area on site that lies at the southern end of the existing main campus school building and adjacent to an existing cottage on land used for the teaching of agriculture.



**Figure 3 – Location of Proposed Works**

## 2.3 Description of the Activity

The proposed activity is for the construction of a single storey modular classroom building for the teaching of agriculture comprising a general learning area that will be fitted out with interactive whiteboards, air conditioning, electrical and data provisions, LED lighting and floor carpet tiles. The modular classroom will be accessed by a covered verandah, stairs and a DDA compliant accessibility ramp.

The proposed works are illustrated in the detailed drawings attached as **Appendix A**.

The single storey buildings are located toward the south-eastern end of the school site and well setback from surrounding public roads and adjoining rural residential properties.

The works are within a substantially cleared, level and underutilised part of the subject land.

The new classroom building comprises a general learning area, an open verandah areas with stair and ramp access. There are no changes proposed to vehicle access or approved traffic arrangements to the school site.

### Student/Staff/Personnel

The modular classroom building will accommodate additional specialty space for the teaching of agriculture to students on the subject site.

The Anglican Schools Corporation have advised that proposed works will not result in an increase in the number of students or staff at the school of greater than 10% compared to the 12 month enrolment period up to the end of June quarter 2022.

Personnel onsite during construction is anticipated to be 6-8 people including Site supervisor, architect and engineering consultants and individual contractors.

### Timing

The construction period is intended to commence in late August 2022 and extend for a works period of between 4-6 weeks (weather permitting)

### Construction Hours of Operation

Construction activities will adhere to the requirements of the Interim Noise Guidelines (DECC 2009) and the NSW Industrial Noise Policy (EPA, 2000) being

Monday – Friday:	7am – 5pm
Saturday:	8am - 1pm

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### Plant and Equipment

Construction plant and equipment anticipated to be required include a flat bed truck, 65 T crane, various utes and support vehicles along with various trade deliveries.

## **3. PLANNING LEGISLATION**

### **3.1 SEPP (Transport and Infrastructure) and Part 5 of the Environmental Planning and Assessment Act 1979.**

Part 3 of State Environmental Planning Policy (Transport and Infrastructure) 2021 gazetted in February 2022 has the previous provisions of the Educational Establishment and Child Care Facilities SEPP that are stated as making it easier for child-care providers, schools, TAFEs and universities to build new facilities and improve existing ones by streamlining approval processes to save time and money and deliver greater consistency across NSW.

Under the SEPP legislation, in order for development to be allowed within the boundaries of an existing school as development permitted without consent, the land use (ie. educational establishment) must be a permissible use (with development consent) under the provisions of the relevant environmental planning instrument.

The local environmental planning instrument is the Hawkesbury Local Environmental Plan 2012. The subject site is zoned RU4 Primary Production Small Lots. Educational establishments are identified in the land use table as permissible with development consent on the subject land.

Furthermore, the State Environmental Planning Policy (Transport and Infrastructure) 2021 is a state wide environmental planning instrument that applies to the land and provides zones where educational establishments are permissible with development consent across NSW.

Under the provisions of the EP&A Act and Regulations and the SEPP (Transport and Infrastructure), registered non-government schools are allowed to be a determining authority for Part 5 "*development without consent*" within the boundaries of an existing school.

Arndell Anglican College is a registered non-government school (RNS) within the meaning of the Education Act 1990. The Anglican Schools Corporation governs the operation the school.

Non-government schools can undertake work 'without consent' in accordance with the Education SEPP providing that they comply with the NSW Code of Conduct for Part 5 activities. An overview of the five stage assessment process for Part 5 determination is provided in **Appendix B – Part 5 Assessment Flowchart**.

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Under the provisions of Clause 3.37 of the SEPP (Transport and Infrastructure) 2021 the following development can be undertaken as development permitted without consent if it is on land within the boundaries of an existing school.

**3.37 Schools—development permitted without consent**

- (1) Development for any of the following purposes may be carried out by or on behalf of a public authority without development consent on land within the boundaries of an existing school—
  - (a) construction, operation or maintenance, more than 5 metres from any property boundary with land in a residential zone and more than 1 metre from any property boundary with land in any other zone, of—
    - (i) a library or an administration building that is not more than 2 storeys high, or
    - (ii) a portable classroom (including a modular or prefabricated classroom) that is not more than 2 storeys high, or
    - (iii) a permanent classroom that is not more than 2 storeys high to replace an existing portable classroom and that is used for substantially the same purpose as the portable classroom, or
    - (iv) a kiosk or shop selling school-related goods to students and staff, such as books, stationery or school uniforms, that is not more than 2 storeys high, or
    - (v) a cafeteria or canteen that is not more than 2 storeys high and carried out in accordance with AS 4674—2004, *Design, construction and fit-out of food premises*, published by Standards Australia on 11 February 2004, or
    - (vi) a car park that is not more than 1 storey high,

The proposed works are for the construction of a portable modular classroom that is one storey in height located within the boundaries of an existing school and is therefore can be considered for the “development without consent” pathway.

**Clause 3.37(4)** of the SEPP states that:

- (4) Nothing in this section authorises the carrying out of development in contravention of any existing condition of the development consent currently operating (other than a complying development certificate) that applies to any part of the school, relating to hours of operation, noise, car parking, vehicular movement, traffic generation, loading, waste management, landscaping or student or staff numbers.

The proposed works will not contravene any existing condition of development consent relating to the school site. The new modular buildings are in a vacant underutilised location within the existing school grounds and maintains existing hours of operation, noise, car parking, vehicular movement, traffic generation, loading, waste management and landscaping as provided for the current school operations under the existing development consent.

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It is noted that the provisions of **Clause 3.37(7)** does not allow for a prohibited increase in student and staff as development without consent. Subclause (7) defines a prohibited increase in student or staff numbers as follows:

(7) In this section—

*prohibited increase in student or staff numbers* means—

- (a) an increase in the number of students that the school can accommodate that is more than the greater of 10% or 30 students, compared with the average number of students for the 12 months immediately before the commencement of the development, or
- (b) an increase in the number of staff employed at the school that is more than 10%, compared with the average number of staff for the 12 months immediately before the commencement of the development.

We have received advice from the school that there is no increase in student numbers proposed as part of this project. The proposed classroom provides a purpose built classroom to teach existing students the agriculture curriculum within the agriculture precinct of the school.

### 3.2 NSW Code of Practice for Part 5 Activities for Registered Non-government Schools (RNS).

The NSW Code of Practice for Part 5 Activities for Registered Non-government Schools (RNS) is an approved code under Clause 244N of the Environmental Planning and Assessment Regulation 2000. Compliance with the Code is required for an RNS who intends to undertake any activities identified as 'development without consent' under the Education SEPP as follows:

#### Minor School Development works

Minor School works include minor alterations to school buildings and structures; internal works; fitouts; accessibility works; restoration, replacement and repair works; and security measures such as fencing. These works still require an REF, however, require a less detailed assessment given the likely minimal environmental impact. Due to their minor nature, these works will not require the same level of consultation than other school development works.

Minor Class 1 works require RNSs to place the REF on their website to make the proposal and relevant parts of the assessment publicly available.

#### Other School Development works

Other School works include construction, operation or maintenance of school buildings and additions to existing buildings, particularly those that are close to residential boundaries, located within bushfire zones or affecting heritage items.

It is likely that the REF for these developments will require more detailed assessment than for minor developments to determine the likely impacts of the activity and whether suitable conditions are proposed to mitigate any impacts on the environment or surrounding locality.

These works will require consultation as set out in Section 3.3.3 of the Code.

In accordance with the NSW Code of Practice for Part 5 activities for Non-government schools, the proposed works are deemed to be Class 1 works which is school development with relatively minor environmental impacts.

The assessment process of Section 3 of the NSW Code of Practice has been followed in regard to the proposed activity.

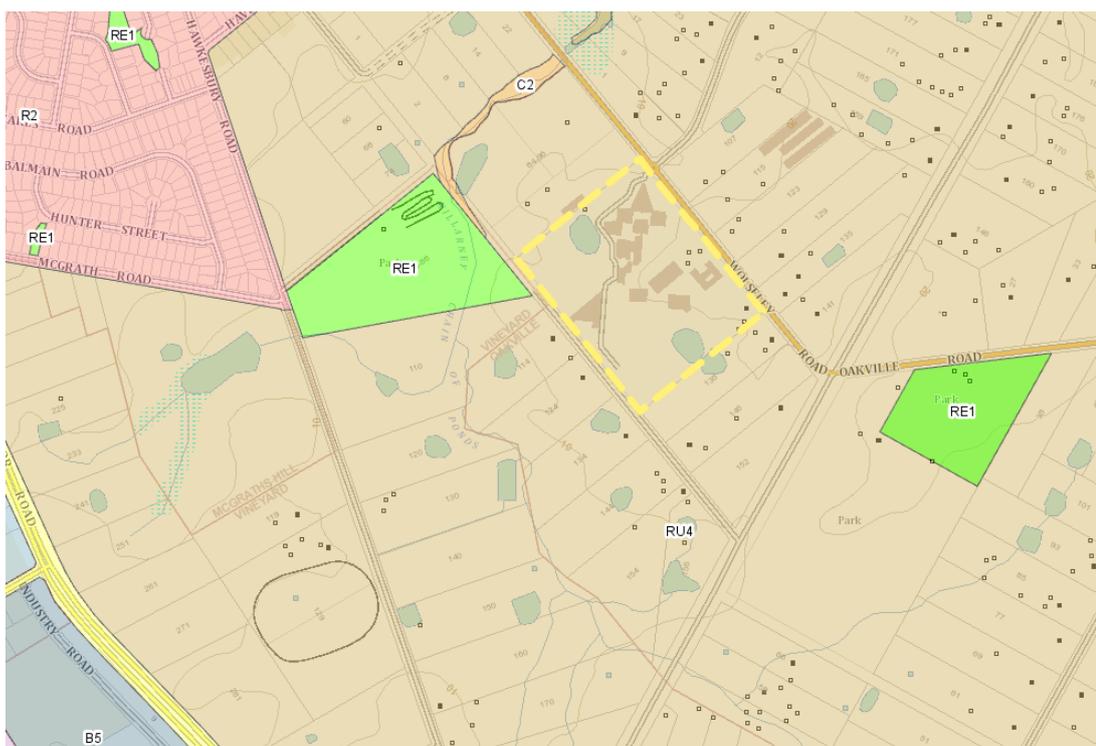
The proposed activity is considered to be Part 5 “*development without consent*” under the provisions of State Environmental Planning Policy (Educational Establishments and Child Care Centre (the Education SEPP).

The legislative and environmental triggers identified in the Code have been considered in Section 3.3 and Section 4 of this REF.

The planning principles for schools in the Education SEPP are reproduced in **Appendix C** of the REF and have been used as a reference tool in assessing the proposed activity.

### 3.2 Hawkesbury Local Environmental Plan 2012

The zoning of the subject land falls under Hawkesbury local environmental planning instrument is the Hawkesbury Local Environmental Plan 2012 (HLEP). The subject site is zoned RU4 Primary Production Small Lots.



**Figure 3 – Extract from Zoning Map (Source: NSW ePlanning Spatial Viewer)**

The zoning table of HLEP as it relates to this zone states as follows:

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**Zone RU4 Primary Production Small Lots****1 Objectives of zone**

- To enable sustainable primary industry and other compatible land uses.
- To encourage and promote diversity and employment opportunities in relation to primary industry enterprises, particularly those that require smaller lots or that are more intensive in nature.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To ensure that development occurs in a way that does not have a significant adverse effect on water catchments, including surface and groundwater quality and flows, land surface conditions and important ecosystems such as waterways.

**2 Permitted without consent**

*Bed and breakfast accommodation; Environmental protection works; Extensive agriculture; Home occupations*

**3 Permitted with consent**

*Animal boarding or training establishments; Boarding houses; Boat sheds; Building identification signs; Business identification signs; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Child care centres; Community facilities; Dual occupancies (attached); Dwelling houses; **Educational establishments**; Entertainment facilities; Environmental facilities; Farm buildings; Flood mitigation works; Food and drink premises; Home-based child care; Home industries; Intensive livestock agriculture; Intensive plant agriculture; Jetties; Landscaping material supplies; Moorings; Places of public worship; Plant nurseries; Public administration buildings; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Respite day care centres; Roads; Roadside stalls; Rural supplies; Rural workers' dwellings; Tourist and visitor accommodation; Veterinary hospitals; Water recreation structures; Water storage facilities*

**4 Prohibited**

*Any development not specified in item 2 or 3*

The proposed single storey classroom building is permissible within the zone and consistent with the character of development on the site. The activity will allow for the orderly and efficient use of land that is compatible with the existing land use within the locality.

**3.3 Other Statutory and Planning Approval Requirements**

**Appendix D** outlines the statutory and planning approval requirements of the activity and outlines the legislation that may be applicable to the development.

The proposed activity is not likely to have a significant impact on matters of National Environmental Significance (NES) or Commonwealth land, and therefore does not require a referral under the Commonwealth EPBC Act.

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The proposed activity is not likely to significantly affect the environment or threatened species, populations or ecological communities, or their habitats. No Species Impact Statement is required.

Environmental considerations under Section 111 of the E.P & A Act 1979 are addressed in the following section of the report and in **Appendix E**.

It is noted that the Code allows for Part 5 development to occur providing any other approval or permit required under State legislation is obtained prior to implementation of the works (see extract below).

### 3.6 Stage 5: Implementation

The object of Stage 5 is to ensure that the RNS implements the activity only after a determination in accordance with Part 5 of the EP&A Act and any conditions of that determination.

#### 3.6.1 Other approvals required

This Code operates under the EP&A Act and applies to development that does not require a planning approval. Approvals and permits may also be required under other State legislation, such as the Local Government Act 1993, the Heritage Act 1977 or the Roads Act 1993, or under any relevant Commonwealth legislation. Nothing in this Code allows an RNS to undertake an activity without first obtaining all licences and approvals required under any other legislation.

In this regard, Section 100B (3) of the [Rural Fires Act 1997](#) requires a person to obtain a bush fire safety authority (BFSA) under that Act before developing bush fire prone land for a special fire protection purpose such as a school. A Bushfire assessment has been undertaken of the proposal (see **Appendix F**) and a BFSA has been issued by the RFS for the development and is attached as **Appendix G**

## 4. REVIEW OF ENVIRONMENTAL FACTORS

### 4.1 Impacts of the Activity

In terms of the assessment of environmental impact of the proposed works, when assessing a Part 5 activity, a registered non-government school must fulfil its duty under Section 5.5 (old Section 111), 5.7 (Old Section 112) of the EP& A Act and Section 171 (old Section 228) of the Environmental Planning and Assessment Regulation 2021.

#### [Section 5.5 of the EP&A Act](#)

Section 5.5 of the EP& A Act requires that for the purpose of attaining the objects of this Act relating to the protection and enhancement of the environment, a determining authority in its consideration of an activity shall, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity. These matters have been considered in **Appendix E**.

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It is noted that the regulations also may make provision for an approved code to address the matters referred to in Section 5.5 (old Section 111). This Review of Environmental Factors has been prepared in accordance with the Code approved under Clause 244N of the Environmental Planning and Assessment Regulation 2000.

Section 5.7 (old Section 112) of the EP & A Act provides that where an activity is a prescribed activity or an activity of a prescribed kind or is likely to significantly affect the environment then an environmental impact statement (EIS) is to be prepared. The proposed activity does not trigger any of the above requirements and as such Section 112 provisions do not apply.

[Clause 171 of the EP&A Regulation 2021](#)

An assessment of various environmental and legislative triggers and the environmental factors provided in Clause 171 have been considered in the assessment process with key environmental issues identified in this report.

- a. any environmental impact on a community,*  
**Comment:** The works will have a temporary impact during construction but minimal environmental impact on the surrounding community overall. It will assist the school community in the ongoing operations of the school.
  - b. any transformation of a locality,*  
**Comment:** The proposal will not significantly transform the locality. It will be a low scale addition to the classroom facilities of the existing school.
  - c. any environmental impact on the ecosystems of the locality,*  
**Comment:** The proposal will not have any significant environmental impact on ecosystems.
  - d. any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality,*  
**Comment:** The proposal will maintain the aesthetic quality of the educational establishment in the locality. There will be no reduction in the recreational, scientific or other environmental quality or value of the locality.
  - e. any effect on a locality, place or building that has (a) having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or (b) other special value for present or future generations,*  
**Comment:** No significant impact
  - f. any impact on the habitat of protected animals (within the meaning of the Biodiversity Conservation Act 2016,*  
**Comment:** No impact
  - g. the endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air,*  
**Comment:** No impact
  - h. long-term effects on the environment,*  
**Comment:** No long term effect
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- i. *degradation of the quality of the environment,*  
**Comment:** The proposal will have minor impact during construction but will not degrade the quality of the environment
- j. *risk to the safety of the environment,*  
**Comment:** The proposal will operate as part of the existing school environment. Minor temporary risk to safety during construction that will be addressed in Construction Environmental Management Plan.
- k. *reduction in the range of beneficial uses of the environment,*  
**Comment:** No reduction in beneficial uses of the environment. The proposal provides a positive use of underutilised land within the existing school site.
- l. *pollution of the environment,*  
**Comment:** Minimal pollution during construction period. The proposal will not create any significant pollution to the environment
- m. *environmental problems associated with the disposal of waste,*  
**Comment:** Nil expected. Waste management will be undertaken in accordance with existing school waste operations. Construction waste will be dealt with in accordance with a Construction Environmental Management Plan.
- n. *increased demands on natural or other resources that are, or are likely to become, in short supply,*  
**Comment:** The proposal will not create any significant demand of resources in short supply
- o. *cumulative environmental effect with other existing or likely future activities,*  
**Comment:** There is no significant cumulative effect on existing or likely future activities. The proposal provides efficient use of existing school land for classroom purposes.
- p. *any impact on coastal processes and coastal hazards, including those under projected climate change conditions.*  
**Comment:** No impact on coastal processes or hazards.
- q. *applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1*  
**Comment:** No impact on strategic planning statements.
- r. *other relevant environmental factors.*  
**Comment:** No impact on other relevant environmental factors.

## 4.2 Other Environmental Considerations

A Section 149 Certificate has been previously provided by the project co-ordinator for the land known as Arndell Anglican College. It is noted that the part of the school land is affected by bushfire prone land and part of the school land is flood affected. The flood liable land policy provisions of Hawkesbury City Council will need to be considered and the NSW Rural Fire Service consulted in order to obtain a bushfire safety authority for the project. These matters are discussed in the following sections of this report.

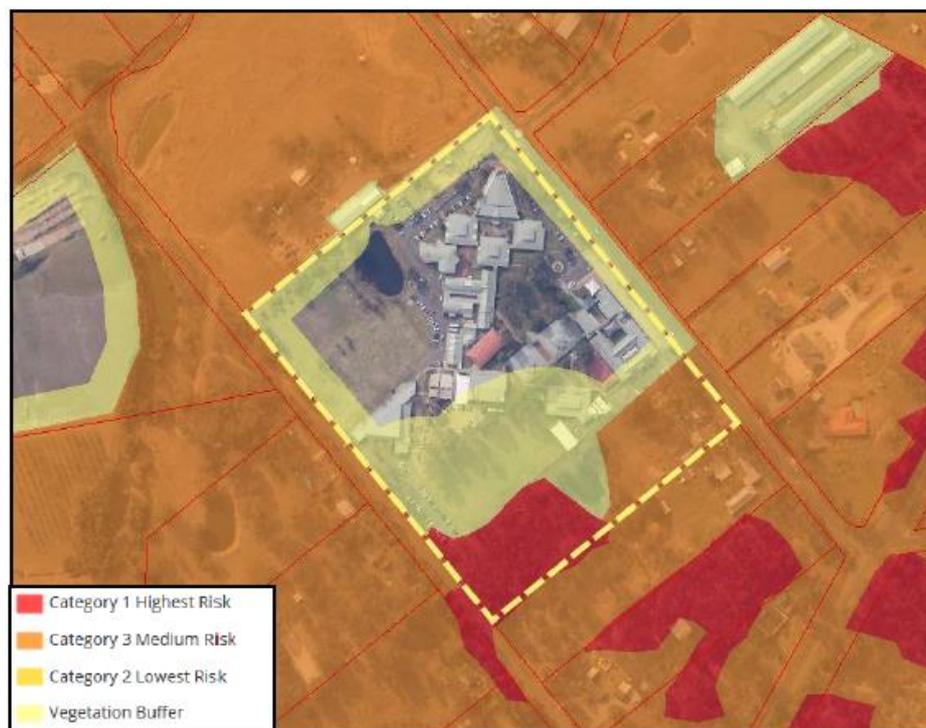
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#### 4.2.1 Bushfire Prone Land

The extract from the Hawkesbury City Council - Bushfire Prone Land Map dated December 2016 shows that the subject site is clear of Class 1, 2 or 3 vegetation under the Rural Fire Service mapping but has an element of bushfire "Vegetation Buffer" area in the southern portion of the site and along the property boundaries.

The "development without consent" provisions of Clause 36 of the Education SEPP comprise a note stating as follows:

**Note.** Section 100B (3) of the *Rural Fires Act 1997* requires a person to obtain a bush fire safety authority under that Act before developing bush fire prone land for a special fire protection purpose such as a school.



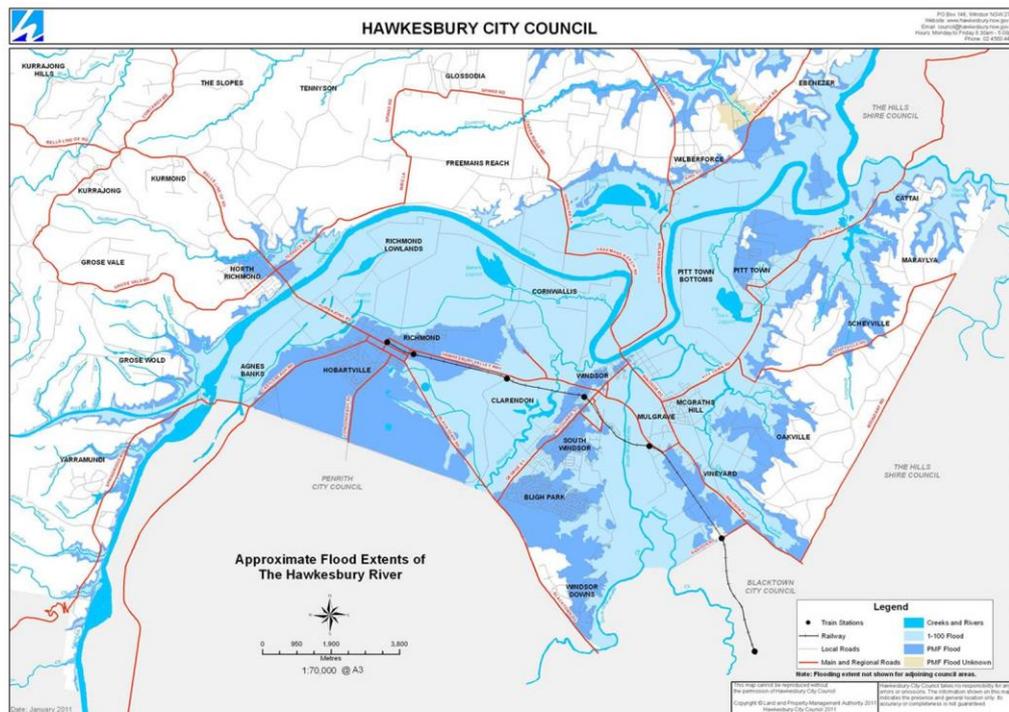
**Figure 4 – Bushfire Prone Land** (Source: Hawkesbury Bushfire Prone Land Map Dec 2016)

A Bushfire Assessment of the proposed single storey modular classroom building on the school site has been prepared by a bushfire consultant and consultation with the Rural Fire Service has also been undertaken. The Bushfire Assessment is attached as **Appendix F** and the Bushfire Safety Authority for the proposed works obtained from the Rural Fire Service is attached as **Appendix G**.

The works associated with the proposed activity will be implemented in accordance with the findings and recommendation of the Bushfire Assessment and Bushfire Safety Authority obtained for the Rural Fire Service.

**4.2.2 Flood Prone Land**

The existing school property is affected by flood prone land. Indeed from review of the Hawkesbury City Council flood mapping of approximate flood extents of the Hawkesbury River (see **Figure 5 – Hawkesbury Flood Liable Land**), it would seem as though effectively the whole of McGraths Hill and most of Oakville is flood affected land.



**Figure 5 – Hawkesbury Flood Liable Land**

Taylor Thompson Whitting (TTW) has been engaged to undertake a flood impact assessment for the proposed administration building at Arndell Anglican College (see **Appendix H**).

The proposed modular classroom building is located on flood prone land and must therefore comply with Clause 6.3 of the Hawkesbury Local Environmental Plan 2012 (LEP) and Hawkesbury Development of Flood Liable Land Policy 2012.

The Hawkesbury Development of Flood Liable Land Policy states that:

**3.0 POLICY STATEMENT**

The following matters are to be applied when assessing an application on flood affected land or to which Clause 6.3 – Flood Planning, of the Hawkesbury Local Environmental Plan 2012 applies.

1. A building shall not be erected on any land lying at a level lower than 3 metres below the 1:100 ARI (average recurrent interval) flood event level for the area in which the land is situated, except as provided by subclauses (3) and (5).
2. Each habitable room in a building situated on any land to which this Policy applies shall have a floor level no lower than the 1:100 ARI (average recurrent interval) flood event level for the area in which the land is located.

Flood advice has been obtained for the subject property from Hawkesbury City Council which states that the adopted flood planning level for the site AEP RL 17.3AHD.

The Flood Impact Assessment prepared by TTW states that:

The development site is located within the Hawkesbury-Nepean catchment and is identified as flood-prone land. Hawkesbury City Council has completed a flood study of the area (Hawkesbury Floodplain Risk Management Study and Plan, 2012). Flood mapping indicates that part of the site is impacted by the 1% Annual Exceedance Probability (AEP) storm event and part of the site is only impacted by the Probable Maximum Flood (refer to Figure 2).

Flood advice was obtained previously from Council which confirmed the flood planning level for this site is 17.30m AHD in the 1% AEP storm event. As such, the development is located wholly above the flood planning level for the site with floor levels at 19.15m AHD and 19.50m AHD. The existing ground levels at the development site are above the 1% AEP and therefore the building will not impact flood levels in the 1% AEP storm event.

It is noted that amendments to flood planning legislation have been introduced in NSW on 14<sup>th</sup> July 2021. These matters have been reviewed and compliance with Hawkesbury City Council Flood Related Development Controls is addressed within the report provide by TTW (see **Appendix H**). The report states that:

#### **4.2.3 Remediation Works**

As part of the development consent (DA05013/16) for the educational establishment use of the land (previously known as 132 Wolseley Road, Oakville) remediation work was required to be undertaken by Martens Consulting Engineers as follows:

The primary objective for remediation and validation works is to ensure that soils are suitable for the proposed future land use (school use).

To meet this objective, MA prepared a Remedial Works Plan (Ref: P1605266JC01V01, dated 22 December 2021) outlining a remediation approach, which included:

- The method for excavation and offsite disposal of soils contaminated by BaP from the subject hotspot location.
- Requirements for waste classification of remedial spoil and waste tracking.
- Validation requirements (including soil sampling and visual observation) to confirm suitability of soil for the proposed land use.

The extent of remediation required was limited to near subsurface soils within the footprint of an existing shed, located in the north-east corner of the site. Works in accordance with the Remedial Works Plan dated December 2021 prepared by Martens Consulting Engineers were undertaken in June 2022.

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Following the undertaking of these remedial works a Validation Report was required to be prepared and sent to Hawkesbury Council within 30 days of the completion of works. This report was completed in July 2022 and sent to Council. The report concluded that remediation works had been successfully completed, impacted soils have been removed, inspections undertaken and the following conclusion made:

Based on the above conclusions, the remediation goal outlined in the remediation advice has been achieved and soils at the site are considered suitable for proposed future school use.

#### 4.2.4 Other matters

The impact of the activity on the surrounding natural and built environment will be minimal. It is considered that the proposed school building will sit comfortably within the grounds of the subject property and will provide an overall appearance that is consistent with and complements the character of the locality.

##### Environmental Protection

- ❖ No significant filling of land is required as a result of this development.
- ❖ Existing site characteristics will be maintained.
- ❖ The site has no heritage significance
- ❖ The proposal will not give rise to any form of pollution.
- ❖ The proposal will not be affected by traffic noise.

##### Services

- ❖ The site is already serviced by water, electricity, telephone, gas and connected to sewerage.
- ❖ A surveyor has confirmed that there is no easement affected by the proposed modular classroom

##### Special Considerations

- ❖ The proposal will create no overshadowing of surrounding residential property.
- ❖ The new modular provides an agriculture classroom for existing students.
- ❖ There will be no changes to access and traffic arrangements. The proposal is not a significant traffic generating development.

#### 4.2.5 Public Consultation

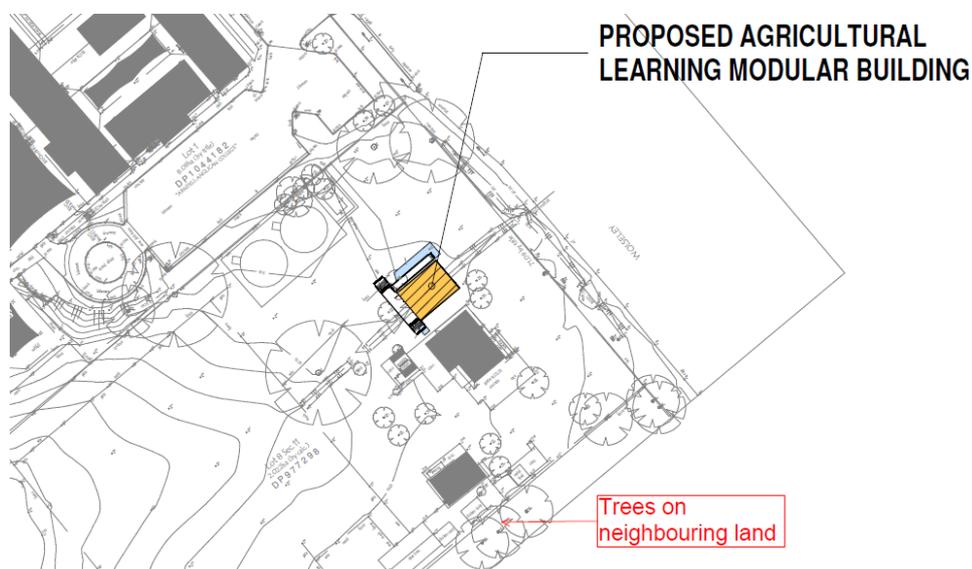
In accordance with the provisions of the Education and NSW Code of Practice for Part 5 Activities for Non-government schools prepared by NSW Planning & Environment, the Anglican Schools Corporation undertook public consultation in the form of writing to with relevant Government agencies (ie. Rural Fire Service), the Local Council

---

(ie. Hawkesbury City Council) and the owners of neighbouring properties to the school including a description of the works and copy of the proposed plan. Submissions were invited during a period of 21 business days between 27<sup>th</sup> June 2022 and 30<sup>th</sup> July 2022.

There was one email submission received during the public consultation period on the 4<sup>th</sup> July from Mrs Lil Pransnicki on behalf of the owners of 138 Wolseley Road. The issue raised is in respect to 3 to 4 large trees within their land that may pose a risk to the property.

It is noted that the subject site has already received approval as an educational establishment and the land is used for teaching agriculture. The trees on the neighbouring land have not been required to be removed for the existing use. It is also noted that the trees are on adjoining land and well removed (over 35 metres) away from the new modular classroom. They are also separated from the new works by an existing shed and the cottage on the school land. There is no proposal to remove these trees as part of the proposed works.



Arndell Anglican College has reviewed the submission and considered these trees with the school's arborist. No further action on these trees on neighbouring land is required to be undertaken for the current works. The school has provided a written response as well as contacted the representative of the owner of the adjoining land.

No other submissions were received during the consultation period. It is noted that previous submissions from Hawkesbury City Council on similar minor development on the school site highlighted the flooding and bushfire issues that should be considered for any development on the land.

The matters relating to flooding and bush fire prone land have been assessed in this REF and mitigation measures proposed in accordance with technical consultant input and bush fire safety authority issued by the RFS provided in the Appendices to the report.

In accordance with the NSW Code of Practice for Part 5 Activities for Non-government the registered non-government school (RNS) will notify Hawkesbury Council of its intention to proceed with the development and when commencement of works will start on the school land. The Decision Statement made by the RNS for the proposed activity will also be made available on the RNS's website prior to the commencement of the activity.

## 5. MITIGATION MEASURES AND IMPLEMENTATION

Following review of the environmental issues and impacts on the locality, this section of the REF provides details and overview of the potential environmental impacts during the construction and operational phase of the works and mitigation measures recommended for the proposed activity. These matters are provided in a table in **Appendix I – Mitigation Measures.**

The significance criteria for impacts is described below:

- *Adverse Impact* - Impact is a major problem. The impacts of the project are likely to be important considerations due to extensive disturbance resulting in adverse environmental impacts. These impacts are of concern to the project, as it is expected that there will be permanent changes to the local topography. Depending upon the relative importance attached to the issue during the decision-making process, mitigation measures and detailed design work will not remove the impacts upon the affected project infrastructure. Residual impacts would predominate.
  - *Moderate Impact* - Impact is considered to be moderate. The impacts within the project area are likely to result in significant changes to features of the local environment. These impacts represent issues where adverse outcomes would be experienced but mitigation measures and detailed design work can ameliorate some of the consequences upon affected infrastructure. Some residual impacts would still arise.
  - *Low Impact* - Impact recognisable but acceptable. These impacts are likely to be important only on a local scale and are unlikely to be of significant importance in the decision-making process. These impacts are generally of relevance for enhancing the
-

subsequent design of the project and in the consideration of mitigation measures.

- *Negligible* - Minimal change. No impacts or those which are beneath levels of perception within normal bounds or variation or within the margin of forecasting error.

In accordance with the implementation procedures outlined in the Code, the mitigation measures include a requirement that building works cannot be commenced unless they have been certified in accordance with the National Construction Code (NCC) by a suitably qualified person demonstrating compliance with the technical provisions of the State's building laws.

It is also a requirement that a Construction Environmental Management Plan (CEMP) will be prepared addressing erosion and sediment control, waste management measures, access routes for construction vehicles, site entry and exit points and the like.

## **6. CONCLUSION**

Having inspected the subject site and the surrounding locality, we are of the opinion that the proposed activity represents an appropriate and positive use of the land.

The proposed activity will not significantly affect the environment or threatened species, populations or ecological communities, or their habitats. The proposal does not require the preparation of an Environmental Impact Statement or a Species Impact Statement.

The proposed activity is not likely to have a significant impact of matters of National Environmental Significance (NES) or Commonwealth land, and therefore does not require a referral under the Commonwealth EPBC Act.

The proposed activity will result in the further development of a quality educational establishment with minimal impact on the amenity of adjoining properties and the existing character of the area. The works are considered appropriate following this review of environmental factors.

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## **APPENDIX A**

### **Reduced Set of Drawings**

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# APPENDIX A



VIEW INDICATIVE ONLY

210425C  
ARNDPELL ANGLICAN COLLEGE  
118 - 124 WOLSELEY ROAD  
OAKVILLE, NSW 2765  
RPD:18/DP1252151  
12.0 x 6.9m SINGLE CLASSROOM

DRAWING LIST		
SHEET NUMBER	SHEET NAME	CURRENT REVISION
A000	TITLE PAGE	D
A200	PLAN	D
A300	ELEVATIONS	D
A500	SALES SCHEDULES	D

**ATCO**

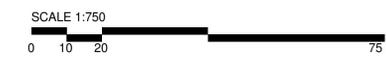
ATCO STRUCTURES & LOGISTICS PTY. LTD. PHONE: (07) 3412 8600  
55 TONKA STREET FAX: (07) 3412 8699  
LUSCOMBE, QLD 4207  
P.O. BOX 393, BEENLEIGH, QLD 4207 ABN: 71 083 902 309  
E-mail: ASI.Au.Sales@atco.com



PROPOSED AGRICULTURAL LEARNING MODULAR BUILDING



NORTH



# MASTER SITE PLAN



The  
Anglican  
Schools  
Corporation

**CAPITAL WORKS AND ASSET MANAGEMENT**

LEVEL 3 8 WOODVILLE STREET, HURSTVILLE NSW 2220  
P.O BOX 465, HURSTVILLE BC NSW 1481  
ABN 63 544 529 806

THIS DRAWING IS COPYRIGHT AND THE PROPERTY OF THE SYDNEY ANGLICAN SCHOOLS CORPORATION AND MUST NOT BE RETAINED, USED OR COPIED FOR ANY PROJECT WITHOUT WRITTEN AUTHORITY FROM THE ANGLICAN SCHOOLS CORPORATION

**NOTES:**

- ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WORK
- ALL WORKS MUST COMPLY WITH RELEVANT AUSTRALIAN BUILDING CODES AND AUSTRALIAN STANDARDS
- FINISHED FLOOR LEVEL REFERS TO INTERNAL FINISHED CONCRETE LEVEL
- WRITTEN DIMENSIONS TAKE PRECEDENCE TO SCALE

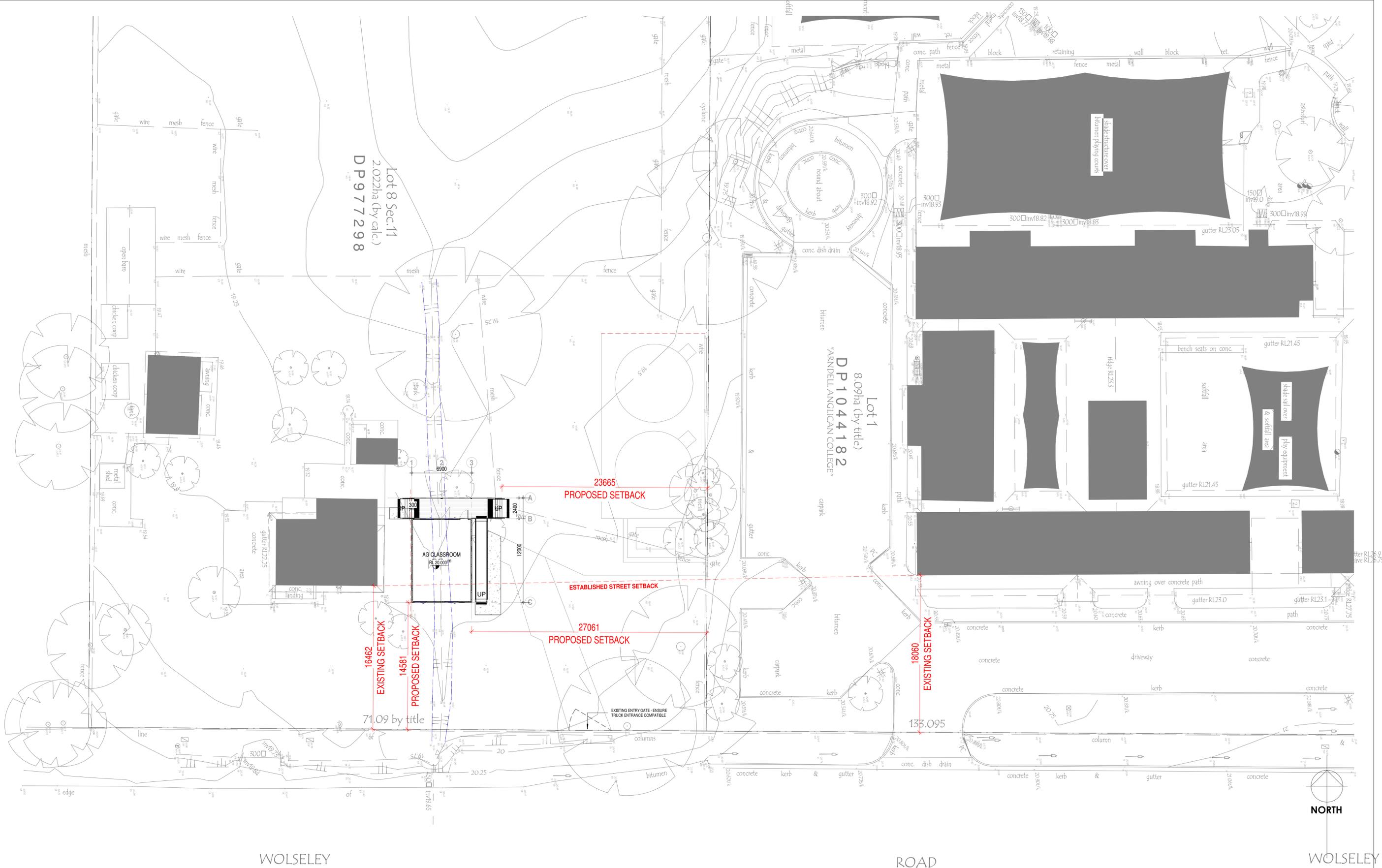
**ATCO AG TEMP MODULARS - PART 5 APPLICATION**

CLIENT  
ARNDPELL ANGLICAN COLLEGE

ADDRESS  
118 - 124 WOLSELEY ROAD, OAKVILLE NSW 2765

ISSUE	DESCRIPTION	DATE
A	ISSUED FOR TASC FOR INFORMATION	29.06.21
B	REVISED LOCATION - ISSUED FOR INFORMATION	02.07.21
C	ISSUED FOR CONSULTANT REVIEW	16.07.21
D	ISSUED FOR CONSULTANT REVIEW	30.07.21
E	ISSUED FOR CONSTRUCTION	09.06.22

STATUS	ISSUED FOR CONSTRUCTION		
DESCRIPTION	ATCO AG TEMP MODULARS - PART 5 APPLICATION		
DRAWN	JS	DRAWING No.	REVISION
DATE	30.07.21	FWD-01	E
SCALE	1 : 1000		



# LOCAL SITE PLAN



**The Anglican Schools Corporation**

## CAPITAL WORKS AND ASSET MANAGEMENT

LEVEL 3 8 WOODVILLE STREET, HURSTVILLE NSW 2220  
 P.O BOX 465, HURSTVILLE BC NSW 1481  
 ABN 63 544 529 806

THIS DRAWING IS COPYRIGHT AND THE PROPERTY OF THE SYDNEY ANGLICAN SCHOOLS CORPORATION AND MUST NOT BE RETAINED, USED OR COPIED FOR ANY PROJECT WITHOUT WRITTEN AUTHORITY FROM THE ANGLICAN SCHOOLS CORPORATION

### NOTES:

- ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WORK
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- FINISHED FLOOR LEVEL REFERS TO INTERNAL FINISHED CONCRETE LEVEL
- WRITTEN DIMENSIONS TAKE PRECEDENCE TO SCALE

ATCO AG TEMP MODULARS - PART 5 APPLICATION

CLIENT  
 ARNDELL ANGLICAN COLLEGE

ADDRESS  
 118 - 124 WOLSELEY ROAD, OAKVILLE NSW 2765

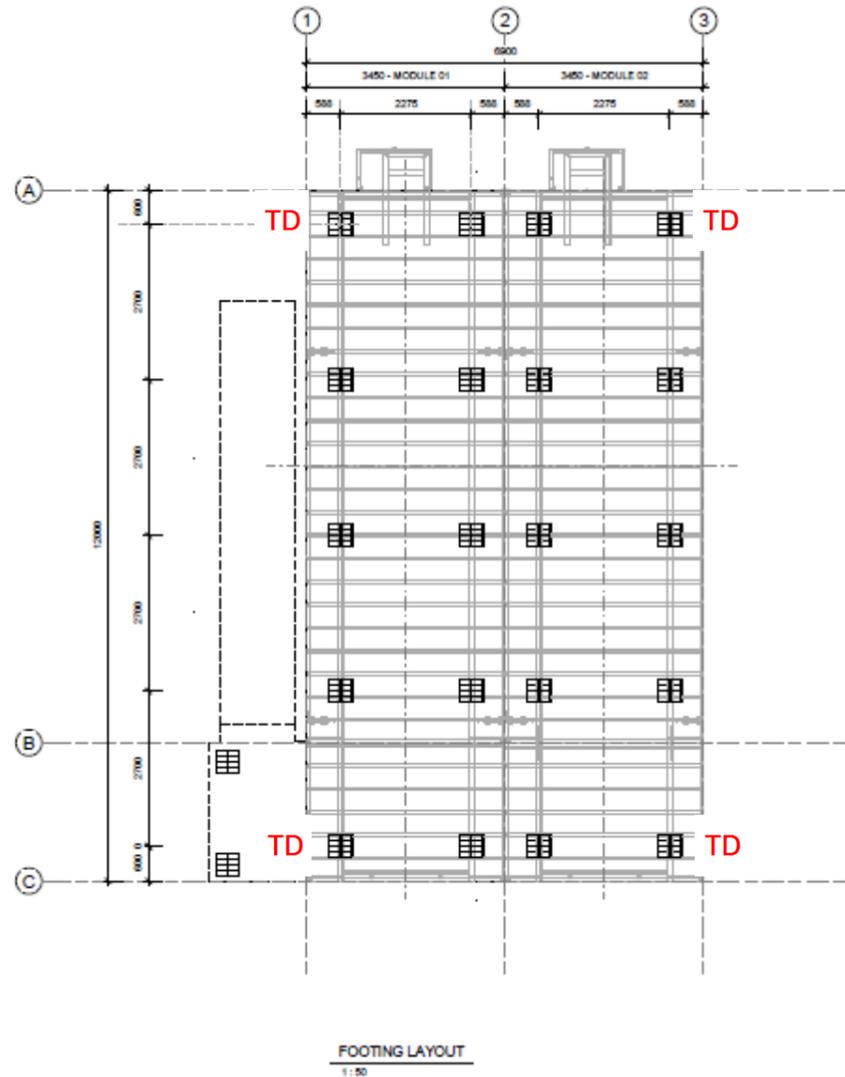
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E	ISSUED FOR CONSTRUCTION	09.06.22

STATUS	ISSUED FOR CONSTRUCTION		
DESCRIPTION	ATCO AG TEMP MODULARS - PART 5 APPLICATION		
DRAWN	JS	DRAWING No.	REVISION
DATE	30.07.21	FWD-02	E
SCALE	1 : 200		



NORTH





**■** 390x390 BONDED BLOCK PIERS TO BE SUPPORTED ON 600 DIA MASS CONCRETE FOOTINGS, 1200 DEEP. TD's TO BE INSTALLED IN ACCORDANCE WITH DETAIL ON S02.

**TD** - TIE DOWN LOCATION, 13mm 'L' GRADE GALVANISED CHAIN CAST INTO 600 DIA 1200 DEEP FOOTING (MINIMUM 1000mm EMBEDMENT), INSTALLED IN ACCORDANCE WITH STANDARD DETAIL ON S02. WRAP CHAIN TIGHT AROUND CHASSIS AND SECURE 2/M12 GRADE 8.8/s STRUCTURAL BOLTS AND/OR 1.5T JAW TO JAW TURNBUCKLE.

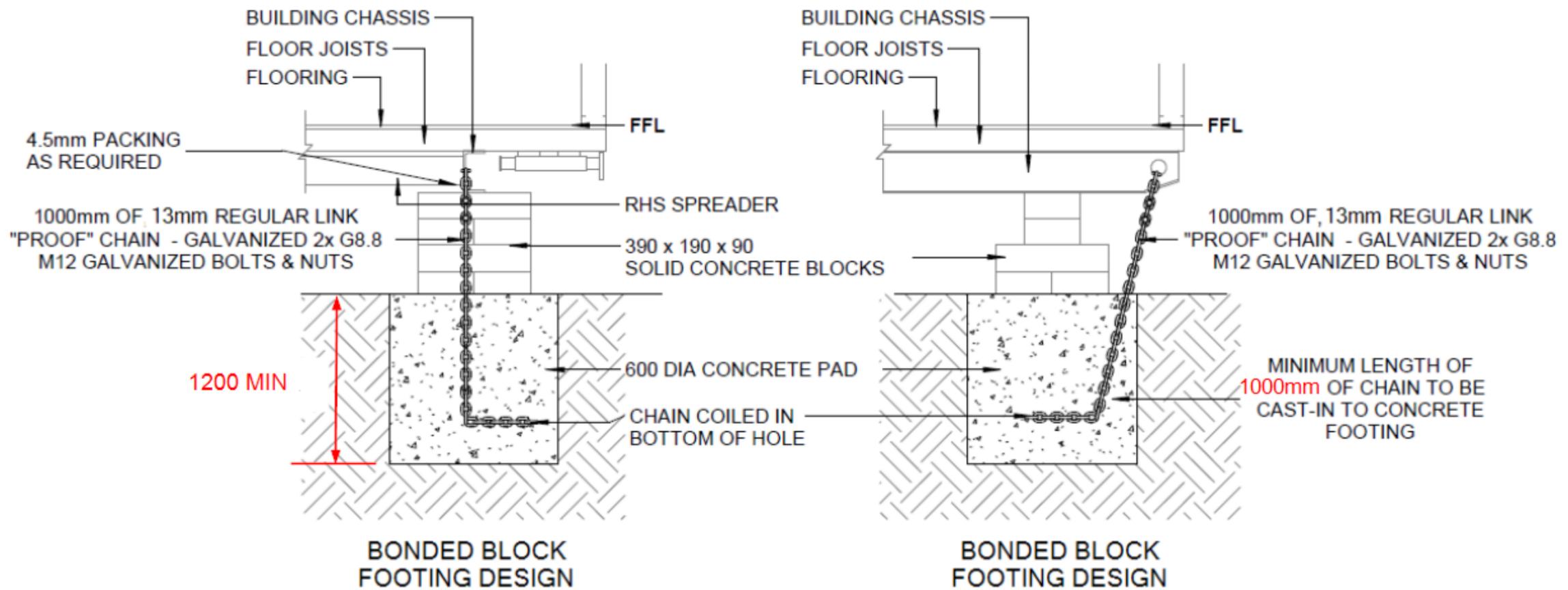
PIERS ASSUMED TO BE 800mm MAX. CONTACT ENGINEER IF PIER HEIGHT EXCEEDS ASSUMED HEIGHT.

WIRE ROPE TO BE NO FLATTER THAN A 45 DEGREE ANGLE.

DESIGNED FOR WIND LOADS IN ACCORDANCE WITH AS1170.2:2011 WIND ACTIONS, REGION A, TERRAIN CATEGORY 2.

FOOTINGS DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL PARAMETERS OUTLINED IN THE GEOTECHNICAL REPORT PREPARED BY IDEAL GEOTECH - 'LOT CLASSIFICATION REPORT - JOB NUMBER 52914' DATED 30 SEPTEMBER 2021.

C	23/03/2022	REVISED DESCRIPTION	DRAWN BY: BS	ENGINEER: KN/BS
B	28/02/2022	REVISED DETAIL	DATE: 16 FEBRUARY 2022	
A	16/02/2022	CONSTRUCTION	SCALE: AS SHOWN ON A3	SHEET No.
ISSUE	DATE	REVISIONS:	JOB NO: 220053	S01



**NOTE**  
 MIN DEPTH OF FOOTING HAS BEEN CALCULATED FOR THE REQUIRED TIE-DOWN. WE HAVE NOT TAKEN INTO CONSIDERATION THE REQUIRED DEPTH OF THE FOOTINGS TO ACHIEVE ADEQUATE BEARING CAPACITY SOIL. MIN DEPTH OF 1200mm REQUIRED FOR A 600mm DIA. PIER. ALTERNATIVELY, A MIN. VOLUME OF CONCRETE OF 0.33m<sup>3</sup> IS SUFFICIENT FOR TIE-DOWN PURPOSES.

C	23/03/2022	REVISED DESCRIPTION	DRAWN BY: BS	ENGINEER: KN/BS
B	28/02/2022	REVISED DETAIL	DATE: 16 FEBRUARY 2022	
A	16/02/2022	CONSTRUCTION	SCALE: AS SHOWN ON A3	SHEET No.
ISSUE	DATE	REVISIONS:	JOB NO: 220053	S02

## **APPENDIX B**

### **NSW Code of Practice Flowchart**

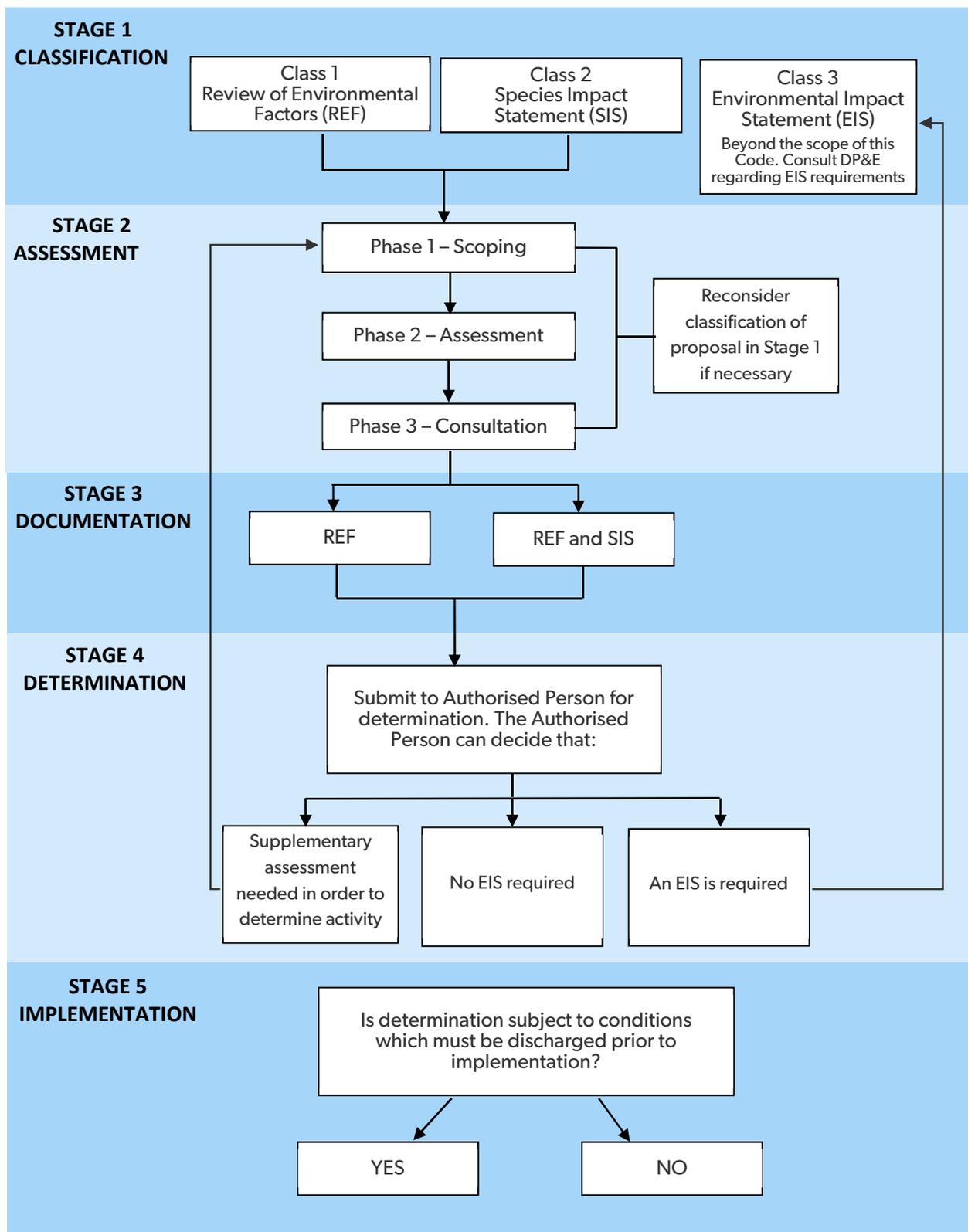


Figure 3. Five stage assessment process for Part 5 determination

## **APPENDIX C**

### **Education SEPP Planning Principles**

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## Appendix B: Education SEPP Planning Principles

Creating and maintaining safe, functional and well- designed schools has been an important consideration in the location and design of the proposed modular agriculture classroom building at Arndell Anglican College. The NSW Code provides the following seven planning principles to guide RNSs in their assessment of new school development proposals as follows:

### Principle 1—context, built form and landscape

**Comment:** The location of the proposed modular classroom building has considered the spatial organization of the school campus and located the buildings in an unutilized area adjacent to the existing school classrooms and school carpark area. The proposal forms a logical extension to the built form on the site. The single storey building is located on relatively level land and well setback from adjoining property boundaries and the street frontage of the site. There is no significant removal of vegetation required for the proposed activity. The proposal recognizes and protects the visual setting and natural environment.

### Principle 2—sustainable, efficient and durable

**Comment:** Good design combines positive environmental, social and economic outcomes. The proposed building is built form materials that seek to minimize waste, energy loss, water and natural resources. The school buildings will be durable, resilient and adaptable to meet the ongoing administration needs of the school into the future.

### Principle 3—accessible and inclusive

**Comment:** School buildings and their ground should provide wayfinding and be welcoming, accessible and inclusive to people with differing needs and capabilities. The proposed classroom building cater for the needs of agriculture staff and students being located within the agriculture precinct with easy level access via a ramp into the single storey building.

### Principle 4—health and safety

**Comment:** Good school development optimises health, safety and security within its boundaries and the surrounding public domain, and balances this with the need to create a welcoming and accessible environment. The proposed development satisfies this principle as it provides an accessible and welcoming building within a safe and secure location.

### Principle 5—amenity

**Comment:** Schools should provide pleasant and engaging spaces that are accessible for a wide range of educational, informal and community activities, while also considering the amenity of adjacent development and the local neighbourhood. The proposal is well setback and protects the amenity of neighbouring properties.

#### Principle 6—whole of life, flexible and adaptive

**Comment:** The school building design has considered future needs and taken a whole-of-life-cycle approach underpinned by site wide strategic and spatial planning. The proposed buildings provide environmental performance, ease of adaptation and maximises multi-use facilities.

#### Principle 7—aesthetics

**Comment:** The proposed school building and it's setting is aesthetically pleasing and achieves a built form that has good proportions and a balanced composition of elements. It is considered to have a positive impact on the quality and character of the locality and the quality and sense of identity of the school within the surrounding neighbourhood.

## **APPENDIX D**

### **Statutory Planning Framework**

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# Appendix D - Statutory and Planning Context

## 1.1 Commonwealth legislation

### 1.1.1 *Environment Protection & Biodiversity Conservation Act 1999 (EPBC Act)*

The EPBC Act protects matters of National Environmental Significance (NES), such as threatened species and ecological communities, migratory species (protected under international agreements), and National Heritage places (among others).

Any actions that will, or are likely to have a significant impact on the matters of NES require referral and approval from the Australian Government Environment Minister. Significant impacts are defined by the Commonwealth (reference <http://www.environment.gov.au/epbc/guidelines-policies.html>) for matters of NES.

No matters of NES have been identified at or near the site of the proposed activity. A referral to the Commonwealth Department of Environment is not required.

## 1.2 State Legislation

### 1.2.1 *Environmental Planning and Assessment Act 1979 (EP&A Act)*

The EP&A Act is the principal planning legislation for NSW. It provides a framework for the overall environmental planning and assessment of proposals.

As ASC is the proponent, the works are to be assessed as 'development permissible without consent' under Part 5 of the EP&A Act. Accordingly ASC must satisfy Sections 111 and 112 of that Act by examining, and taking into account to the fullest extent possible, all matters which are likely to affect the environment. This REF is intended to assist, and ensure ASC compliance, with the EP&A Act including Sections 111 and 112.

This report addresses the requirements of s228 of the EP&A Regulation 2000.

### 1.2.2 *Threatened Species Conservation Act 1995 (TSC Act)*

The TSC Act lists and protects threatened species, populations and ecological communities that are under threat of extinction in NSW. NSW Office of Environment and Heritage (OEH) is responsible for administering the TSC Act.

Impacts to species, populations, or endangered communities listed under the TSC Act must be assessed using the '7-Part Test' under Section 5A of the EP&A Act. If the assessment determines that a significant impact to a particular species, population or community is likely to result, a Species Impact Statement (SIS) may be required.

Threatened species and communities listed under this Act will not be impacted by the works and therefore a Species Impact Statement is not required.

### 1.2.3 *Fisheries Management Act 1995 (FM Act)*

FM Act provides for the protection, conservation, and recovery of threatened species defined under the Act. It also makes provision for the management of threats to threatened species, populations, and ecological communities defined under the Act, as well as the protection of fish and fish habitat in general.

The development does not involve harm to mangroves or other protected marine vegetation, dredging or reclamation, blocking of fish passage and does not involve impact to a Key Fish Habitat waterway. Therefore the works will not require a Part 7 Fisheries permit under the FM Act.

#### **1.2.4 Native Vegetation Act 2003 (NV Act)**

The NV Act regulates the clearing of native vegetation on all land in NSW, except for land listed in Schedule 1 of the Act and biodiversity certified land (within the meaning of Part 7AA of the *Threatened Species Conservation Act 1995*).

Section 25(g) provides a legislative exclusion to 'any clearing that is, or is part of, an activity carried out by a determining authority' within the meaning of Part 5 of the EPA Act if the determining authority has complied with that part.

There is no clearing of native vegetation proposed.

#### **1.2.5 National Parks and Wildlife Act 1974 (NPW ACT)**

The NPW Act is administered by the Director-General of the National Parks and Wildlife Services, who is responsible for the control and management of all national parks, historic sites, nature reserves, and Aboriginal areas (among others). The main aim of the Act is to conserve the natural and cultural heritage of NSW.

The Act aims to conserve the natural and cultural heritage of NSW. Where works will disturb Aboriginal objects, an Aboriginal Heritage Impact Permit (AHIP) is required.

The proposed development is unlikely to harm Aboriginal objects and therefore a permit under the NP&W Act is not required.

#### **1.2.6 Heritage Act 1977**

The proposed development does not involve an item or place listed on the NSW State Heritage Register. Approval of works on the site is therefore not under s57 of the Heritage Act.

#### **1.2.7 Protection of the Environment Operations Act 1997 (POEO ACT)**

The POEO Act is the key environmental protection and pollution statute. The POEO Act is administered by the EPA and establishes a licensing regime for waste, air, water and pollution. Relevant sections of the Act are listed below:

- Part 5.3 Water Pollution
- Part 5.4 Air Pollution
- Part 5.5 Noise Pollution
- Part 5.6 Land Pollution and Waste.

Any work potentially resulting in pollution must comply with the POEO Act. Relevant licences must be obtained if required.

No licenses have been identified as being required including an Environmental Protection Licence (EPL).

#### **1.2.8 Water Management Act 2000 (WM Act)**

The WM Act's main objective is to manage NSW water in a sustainable and integrated manner that will benefit today's generations without compromising future generations' ability to meet their needs. The WM Act is administered by NSW Department of Primary Industries Water (DPI – Water) (previously NSW Office of Water) and establishes an approval regime for activities within waterfront land.

Controlled activity approval is typically required for work within 40 m of the highest bank of a river, lake or estuary. Section 91E of the Act creates an offence for carrying out a controlled activity within waterfront land without approval.

There are no works proposed within 40 metres of a river, lake or estuary. A controlled activity permit is not required.

### **1.2.9 Roads Act 1993**

The proposed development does not involve carrying out work on a public road or connection to a classified road and therefore does not require approval under s138 of the Roads Act.

### **1.2.10 State Environmental Planning Policy (Educational Establishments and Child Care Centre) 2017 (Education SEPP)**

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 (the Education SEPP) gazetted in September 2017 has provisions that are stated as making it easier for child-care providers, schools, TAFEs and universities to build new facilities and improve existing ones by streamlining approval processes to save time and money and deliver greater consistency across NSW. Clause 36 of the Education SEPP sets out the range of activities that can be undertaken by Government schools and registered non-government schools under the “development without consent” pathway.

The proposed activity is the subject of a Part 5 ‘development without consent’ pathway of assessment in accordance with the NSW Code of Practice for Part 5 Activities for registered non-government schools.

### **1.2.11 State Environmental Planning Policy No 14 (Coastal Wetlands)**

The proposed development is located on land subject to SEPP 14 and involves clearing, filling, draining or constructing a levee. The proposed development is not located on land subject to SEPP 14. In accordance with s7 of the SEPP, the concurrence of the Director-General of the Department of Planning and Infrastructure is not required.

### **1.2.12 State Environmental Planning Policy No 26 (Littoral Rainforests)**

The proposed development is located on land subject to SEPP 26 and involves disturbance of littoral rainforest. The proposed development is not located on land subject to SEPP 2. The concurrence of the Director-General of the Department of Planning and Infrastructure is not required.

### **1.2.13 State Environmental Planning Policy No 44 (Koala Habitat)**

SEPP 44 aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for *Phascolarctos cinereus* (Koala) to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline.

The project is being assessed under Part 5 of the EP&A Act and is not a development application, and therefore SEPP44 does not apply.

### **1.2.14 State Environmental Planning Policy No 71 (Coastal Protection)**

The Coastal Protection SEPP aims to protect and manage the values of coastal areas by ensuring appropriate access and developments within this area.

According to Clause 7 as the proposed works are not subject to a Development Application SEPP 71 does not apply to these works.



## **APPENDIX E**

### **Environmental Considerations under Sec 5.5 (Old Section 111) of EP&A Act**

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## APPENDIX E - Section 5.5 (Old Section 111) of the EP&A Act Considerations

For the purpose of attaining the objects of this Act relating to the protection and enhancement of the environment, a determining authority in its consideration of an activity shall, notwithstanding any other provisions of this Act or the provisions of any other Act or of any instrument made under this or any other Act, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity.

- Principles of Ecological Sustainable Development
- Proximity to items of national environmental significance
- Precautionary Principle
- Potentially effects on threatened species, populations or ecological communities, or their habitats, including fish and marine vegetation
- Working near marine vegetation (mangroves, seagrass beds, etc.) or dredging a water body
- Impacting State, Local or section 170 register (Non-Aboriginal) heritage
- Potential impacts on Aboriginal cultural heritage including Aboriginal objects or Aboriginal places declared under the *National Parks and Wildlife Act 1974*, a Potential Aboriginal Deposit (PAD) or native title
- Working near protected wetlands and rainforests
- Working within a drinking water catchment area
- Working within State forests/area subject to forest agreement
- Altering ground water, water bodies, etc
- Discharging to stormwater or sewer
- Siting oil filled equipment within 40m of a sensitive area or within 5m upstream of a drain
- Working within areas with potential or actual contaminated land
- Impacting hollow bearing trees
- Impacting high value Habitat
- Koala Habitat
- Clearing native vegetation
- Electric and Magnetic Fields (EMF) and Prudent Avoidance
- Bushfire risk and vegetation management.

The above matters have been considered in the assessment of the potential environmental impact of the activity. The proposed activity will have little to no impact on the matters identified above.

The flood liable land policy provisions of Hawkesbury City Council will need to be considered and the NSW Rural Fire Service consulted in order to obtain a bushfire safety authority for the project. Other environmental protection matters have been discussed and mitigation measures recommended in the in the Review of Environmental Factors.

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It is noted that the regulations may also make provision for an approved code to address the above matters. The Review of Environmental Factors has been prepared in accordance with the Code approved under Clause 244N of the Environmental Planning and Assessment Regulation 2000.

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## **APPENDIX F**

### **Bushfire Assessment Report**

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# AUSTRALIAN BUSHFIRE CONSULTING SERVICES



0438 668 203



wayne@australianbushfire.com.au

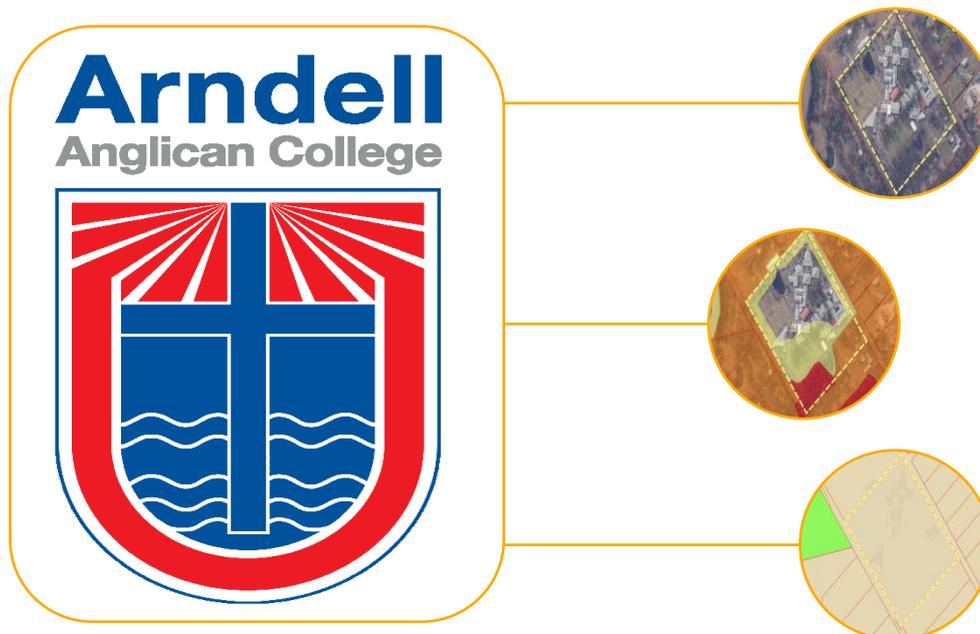


australianbushfire.com.au



ABN 23 622 676 493  
PO Box 212 Berowra Heights 2082

## Bush Fire Assessment Report



Proposed new demountable classrooms (3):

**Arndell Anglican College,  
Oakville NSW**

24<sup>th</sup> July 2021  
Reference 20-455-3

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9.0 Recommendations	18
10.0 Conclusion	19
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## Abbreviations:

ABCS	Australian Bushfire Consulting Services Pty Ltd
APZ	Asset protection zone
AS 2419	AS 2419 – 2017 Fire hydrant installations System design, installation and commissioning
AS3959-2018	Australian Standard 3959 – 2018 Construction of buildings in bushfire prone areas
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
BFSA	Bush Fire Safety Authority
Council	Hawkesbury City Council
DA	Development Application
EP&A Act	Environmental Planning and Assessment Act - 1979
ESD	Ecologically Sustainable Development
FR NSW	Fire & Rescue NSW
IPA	Inner protection area
LGA	Local Government Area
NCC	National Construction Codes
NP	National Park
NSP	Neighbourhood Safer Place
OPA	Outer protection area
PBP	Planning for Bush Fire Protection – 2019
ROW	Right of Way
RF Act	Rural Fires Act - 1997
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SWS	Static Water Supply

## 1.0 Introduction.

The development seeks approval for installation of three new demountable buildings to be used as a general learning areas within an existing school known as Arndell Anglican College at Oakville, NSW.

The subject site is mapped as bushfire prone land and therefore the application of *Planning for Bush Fire Protection 2019* (PBP 2019) is relevant to the development proposal. The aims of PBP 2019 is to *provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment.*

This is achieved by determining and applying the required asset protection zones, where applicable applying the relevant construction requirements, ensuring satisfactory access and egress has been incorporated into the design and providing safe service supply and adequate water provisions for occupants and attending emergency services.

The development is alterations and additions to an existing education establishment that was established prior to the commencement of *Planning for Bush Fire Protection* (in August 2002). In terms of PBP 2019 the development is considered to be infill Special Fire Protection Purpose Development under section 100b of the Rural Fires Act 1997.

*The intention for any building work occurring within an existing SFPP development is to achieve a better bush fire outcome than if the development did not proceed. Achieving this may require a combination of measures including improved construction standards, APZs and evacuation management. This may result in a level of retrofitting of existing buildings and managing other portions of the site (i.e. APZs) to ensure an improved level of bush fire protection.*

*Intensification of the use or increase in occupancy must consider the risk to occupants and firefighters. Where practically achievable, full compliance should be provided before variations to the required BPMs are considered.*

The proposed development does not seek to discount the requirements of PBP 2019 and will comply with the policy necessities as if it was a greenfield site. The subject site has recently been assessed and approved for additional development under PBP 2019. That previous application sought to provide a better bushfire outcome than the existing development offered, including;

- The existing Bush Fire Emergency Management Plan will be reviewed and upgraded to comply with the NSW RFS document *A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*.
- Formal asset protection zones have been applied.
- Where required existing buildings are in the process of being upgraded to improve their resilience against ember ignition.
- A review of access and services has been undertaken and found the existing site arrangements satisfactory including ongoing and unimpeded access to the static water supply.

No additional better outcome recommendations are required for this application as they have already been reviewed and endorsed by the NSW RFS as part of their conditional approval and Bush Fire Safety Authority issued for the previous application (NSW RF Ref DA20201119004329).

## 2.0 Property details.

Address: 118-124 Wolseley Road Oakville NSW 2756  
Lot/DP: Lot 18 DP 1252151  
Zoned: RU4 Primary Production Small Lots  
LGA: Hawkesbury City Council

The site has street frontage to Oakville Road to the northeast and Garfield Street to the southwest and abuts rural allotments to the remaining northwest and southeast aspects. Councils bushfire prone land map depicts the subject site as containing Category 1 and 3 Vegetation and the 100 and 30 metres buffer zones from Category 1 & 3 Vegetation.

### 3.0 Legislative context.

The development approval pathway is being progressed under Clause 36 of the Education State Environmental Planning Policy noting that as a Registered Non Government School, the Anglican Schools Corp is regarded as a Public Authority as per *NSW Code of Practice for Part 5 activities for registered non government schools*.

The development is classified as integrated development under s100B of the Rural Fires Act 1997 and the applicant must refer the application to the NSW RFS seeking a Bush Fire Safety Authority from them as part of the development approval process.

### 4.0 Copyright, scope and disclaimer.

This assessment of possible bushfire impact (including smoke, ember, radiant heat and flame contact) and compliance with matters such as asset protection zones, construction, access and service supply is pertinent to the subject site only. Where reference has been made to the surrounding lands, this report does not assess impact to those lands rather it is an assessment of possible bushfire progression and impact on or from those lands towards the subject site.

Apart from any use permitted under the Copyright Act 1968 no part of this document, including any wording, images, or graphics, can be modified, changed or altered in any way without written permission from Australian Bushfire Consulting Services Pty Ltd. This report may only be referenced, distributed or forwarded to other parties in its original format.

The statements and opinions contained in this report are given in good faith and in the belief that such statements and opinions are correct and not misleading. AS3959 – 2009 states that “...*there can be no guarantee that a building will survive a bushfire event of every occasion. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather conditions*”. The NSW RFS state “*Homes are not designed to withstand fires in catastrophic conditions*”. Correspondingly any representation, statement of opinion, or advice expressed or implied in this document is made on the basis that Australian Bushfire Consulting Services Pty Ltd is not liable to any person for any damage or loss whatsoever which has occurred or may occur in relation to that person taking or not taking (as the case may be) action in respect of any representation, statement or advice made by Australian Bushfire Consulting Services Pty Ltd.

### 5.0 Referenced documents and people.

The following documents have been referenced in the preparation of this report;

- Hawkesbury City Council’s Bushfire Prone Land Map,
- AS3959 – 2018 Construction of buildings in bushfire prone areas,
- AS 2419 – 2017 Fire hydrant installations System design, installation and commissioning,
- Planning for Bush Fire Protection 2019,
- Rural Fires Act 1997,
- Rural Fires Regulation 2013,
- 10/50 Vegetation Clearing Code of Practice,
- NSW RFS Guide for bush fire prone land mapping V5b Nov 2015,
- Ocean Shores to Desert Dunes – David Andrew Keith 2004.

I undertook and inspection of the subject site and surrounding area on 15<sup>th</sup> October 2020, at that time free access was provided around the subject site and clear views available of the vegetated areas within and surrounding the subject site.

The Master Site Plan, Local Site Plan & Floor Plans by TASC Capital Works and Asset Management Ref CD01-1 to 3 Issue C have been reviewed and relied upon for this assessment.

## 6.0 Assessment summary table.

### Buildings 1 & 2

Aspect	Northwest	Southeast	Southwest	Northeast
Vegetation Structure	Managed land	Cumberland Dry Sclerophyll Forest	Grassland	Managed land
NSW RFS Comprehensive fuel loads	n/a	14/24.97 t/ha Surface / total	6 t/ha	n/a
Forest Fire Danger Index	n/a	100	100	n/a
Flame Temp	n/a	1200 K	1200 K	n/a
Hazard slope	n/a	3.5° downslope	0 – 5° downslope	n/a
Site Slope	n/a	0° level slope	n/a	n/a
Minimum 10 kW/m <sup>2</sup> threshold APZ	n/a	57 metres	40 metres	n/a
Available Asset Protection Zone BUILDING 1	n/a	≥70 metres	≥60 metres	n/a
Radiant heat Impact BUILDING 1	n/a	7.17 kW/m <sup>2</sup>	≤ 10 kW/m <sup>2</sup>	n/a
Available Asset Protection Zone BUILDING 2	n/a	≥73 metres	≥90 metres	n/a
Radiant heat Impact BUILDING 2	n/a	6.68 kW/m <sup>2</sup>	≤10 kW/m <sup>2</sup>	n/a
Features that may mitigate the impact of bush fire on the development.	The separation from the hazard interface includes maintained land within the subject site and land considered to be equivalent to an APZ being managed land within Garfield Street road reserve to the southwest.			
Noteworthy landform & environmental features.	Sports Oval	Sports Oval	Garfield Street	Wolseley Road
Table A1.12.5 Bushfire Attack Level	n/a	BAL 12.5	BAL Low	n/a

Note: The radiant heat impact thresholds and determinations to the southeast have been undertaken using design fire modelling and fire modelling reports are attached to this assessment

## Building 3

Aspect	Northwest Northeast	Southwest	South	Southeast
<b>Vegetation Structure</b>	Managed land	Cumberland Dry Sclerophyll Forest	Coastal Valley Grassy Woodlands	Cumberland Dry Sclerophyll Forest
<b>NSW RFS Comprehensive fuel loads</b>	n/a	14/24.97 t/ha Surface / total	10/18.07 t/ha Surface / total	14/24.97 t/ha Surface / total
<b>Forest Fire Danger Index</b>	n/a	100	100	100
<b>Flame Temp</b>	n/a	1200 K	1200 K	1200 K
<b>Hazard slope</b>	n/a	2.3° downslope	0-5° downslope	0-5° downslope
<b>Site Slope</b>	n/a	1° downslope	0° level slope	0° level slope
<b>Minimum 10 kW/m<sup>2</sup> threshold APZ</b>	n/a	54.5 metres	50 metres	70 metres
<b>Available Asset Protection Zone BUILDING 1</b>	n/a	≥77 metres	≥80 metres	≥113 metres
<b>Radiant heat Impact</b>	n/a	5.7 kW/m <sup>2</sup>	≤ 10 kW/m <sup>2</sup>	≤ 10 kW/m <sup>2</sup>
<b>Features that may mitigate the impact of bush fire on the development.</b>	The separation from the hazard interface includes maintained land within the subject site and land considered to be equivalent to an APZ being managed land within neighbouring private allotments.			
<b>Noteworthy landform &amp; environmental features.</b>	Existing School	Dam	Subject site	Maintained curtilage
<b>Table A1.12.5 Bushfire Attack Level</b>	n/a	BAL 12.5	BAL 12.5	BAL Low

Note: The radiant heat impact thresholds and determinations to the southwest have been undertaken using design fire modelling and fire modelling reports are attached to this assessment

<p><b>AS3959 – 2019</b></p> <p><b>Proposed construction level</b></p>	<p>The highest Bushfire Attack Level to the proposed buildings was determined from Table A1.12.5 of PBP 2019 to be 'BAL 12.5'. The proposed new demountable classrooms are required to comply with section 3 and 5 BAL 12.5 of AS 3959 – 2018 <i>Construction of buildings in bushfire prone areas</i>.</p> <p>The additional construction requirements detailed within section 7.5.2 of PBP 2019 are also applicable.</p>
<p><b>Enforced by prior development approval conditions</b></p>	<p>The school has undertaken to upgrade the existing school buildings to improve their resilience against ember protection. This is being applied to any classroom that is within an area of BAL 12.5 or above. This will be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes any sub floor areas, openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.</p> <p>Where buildings have been assessed as BAL Low (i.e. where they are greater than 50 metres from a grassland and greater than 100 metres from forest) there are no upgrade requirements imposed, as these structures do not attract any construction requirements under AS3959 – 2018.</p> <p><i>AS3959 – 2018: This Standard does not provide construction requirements for buildings assessed in bushfire-prone areas in accordance with Section 2 as being BAL—LOW. The Bushfire Attack Level BAL—LOW is based on insufficient risk to warrant specific bushfire construction requirements.</i></p> <p><i>Table A1.7 PBP 2019: BAL Low - Minimal attack from radiant heat and flame due to the distance of the building from the vegetation, although some attack by burning debris is possible. There is insufficient threat to warrant specific construction requirements.</i></p> <p>There are no specific construction requirements applicable to the existing development assessed as BAL Low.</p> <p>These conditions are already enforced by prior development approval and no additional recommendations are required as part of this development.</p>

Guideline Ref.	Proposed Development Determinations
Property Access	<p>The existing school has a formal entry and exit bay for busses parallel to Wolseley Road. Car parking stems of this access and is located at various areas around the school. The location of carparking is such that two way access is provided from the northeast corner of the site through to the southwest corner around and past the proposed buildings 1 &amp; 2.</p> <p>The access width is generally 5.5 metres wide and only narrows to 3.5 – 4.0 metres for a very short distance of approx. 10 metres where it passes the oval. This narrowing is considered inconsequential as, at this point, there are cleared verges and a fire appliance could pass over the verges or cross the school oval.</p> <p>Turning opportunities compliant with the dimensions indicated within Appendix 3 of PBP 2019 are available over grassed areas adjacent to the internal access in many locations. This also includes free access for fire appliances onto both sporting ovals. From the northern oval an exit gate is provided onto Garfield Street to the west, enabling through access from Wolseley Road to Garfield Street over the schools oval.</p> <p>Additionally, an internal service trail is provided parallel to the hazard within the subject site between Garfield Street and Wolseley Road. This service track is located within the agricultural section that occupies the south-eastern section of the school campus.</p> <p>Proposed building 3 is located where the most disadvantage point of the structure is within 70 metres of Wolseley Road.</p> <p>Free pedestrian access will remain available around the proposed new work and the existing building envelopes. Fire services will also retain unimpeded access to the hazard interface for fire suppression and hazard reduction activities.</p> <p>It is considered that the existing access meets the performance requirements of PBP 2019, and no further recommendations are considered necessary.</p>
Water Supply	<p>Reticulated water supply is available in this area and two static water supply (SWS) tanks providing greater than 288,000 litres are provided and dedicated for firefighting purposes.</p> <p>The static water tanks supply a boosted hydrant system throughout the school grounds. A diesel pumpset is installed to the hydrant system. An outlet from the water tanks is provided at the hydrant booster valve set which is located adjacent to Wolseley Road. The system is installed and maintained in accordance with AS2419 and therefore is compliant with the requirements of Table 6.8c of PBP 2019.</p> <p>An existing pillar hydrant is located within the grounds approximately 10 metres west of the proposed building footprint and fire truck access to the hydrant is available. The most disadvantaged point of the building is within 70 metres of this hydrant.</p> <p>The water supply is suitable for firefighting purposes and no further recommendations are necessary as part of this development.</p>
Electrical & Gas Supply	<p>The existing electrical supply to the site is overhead and underground services are provided internally within the property. No reticulated gas is provided in this area and no new bottled gas is proposed as part of this application. Recommendations will be included to ensure that any new electrical services is provided in accordance with Table 6.8c of PBP 2019.</p>
Evacuation	<p>It is recommended that existing Bush Fire Emergency Management Plan be reviewed and, where necessary upgraded to include these three new structures and comply with the NSW RFS document <i>A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan</i>.</p>

## 7.0 Images and maps.

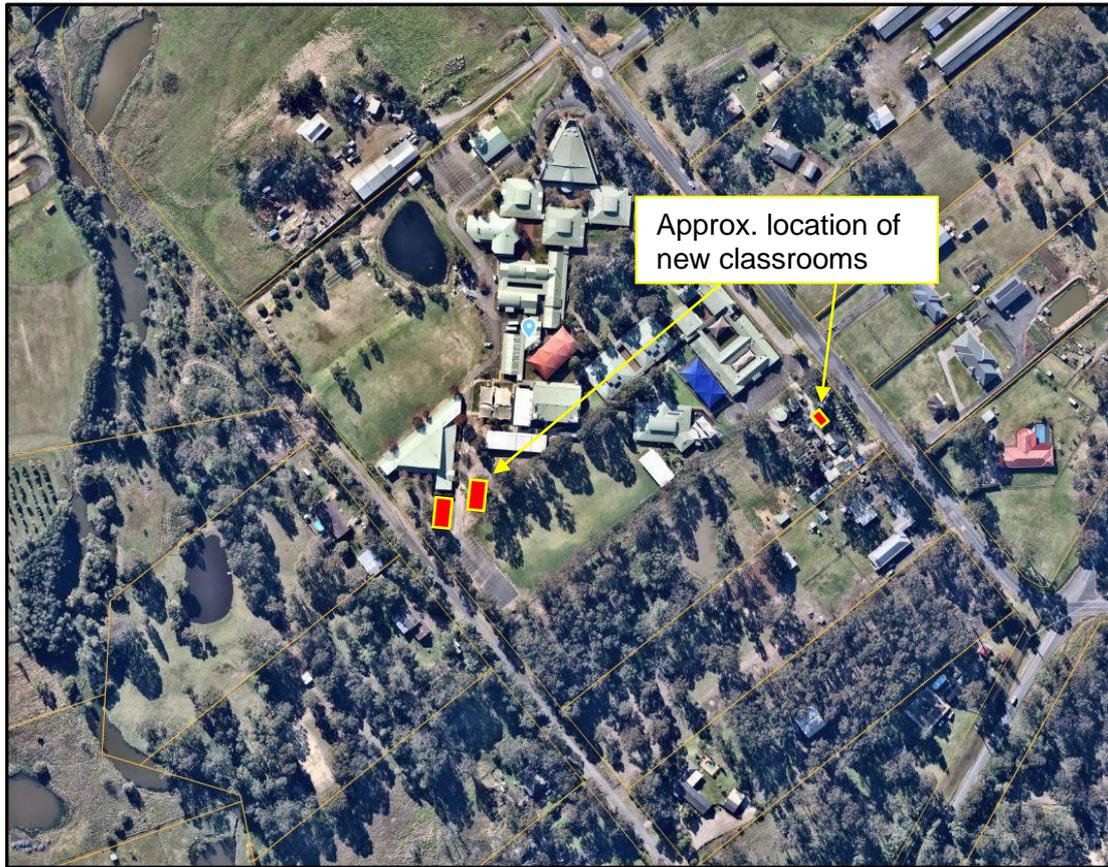


Image 01: Aerial image from Nearmaps database

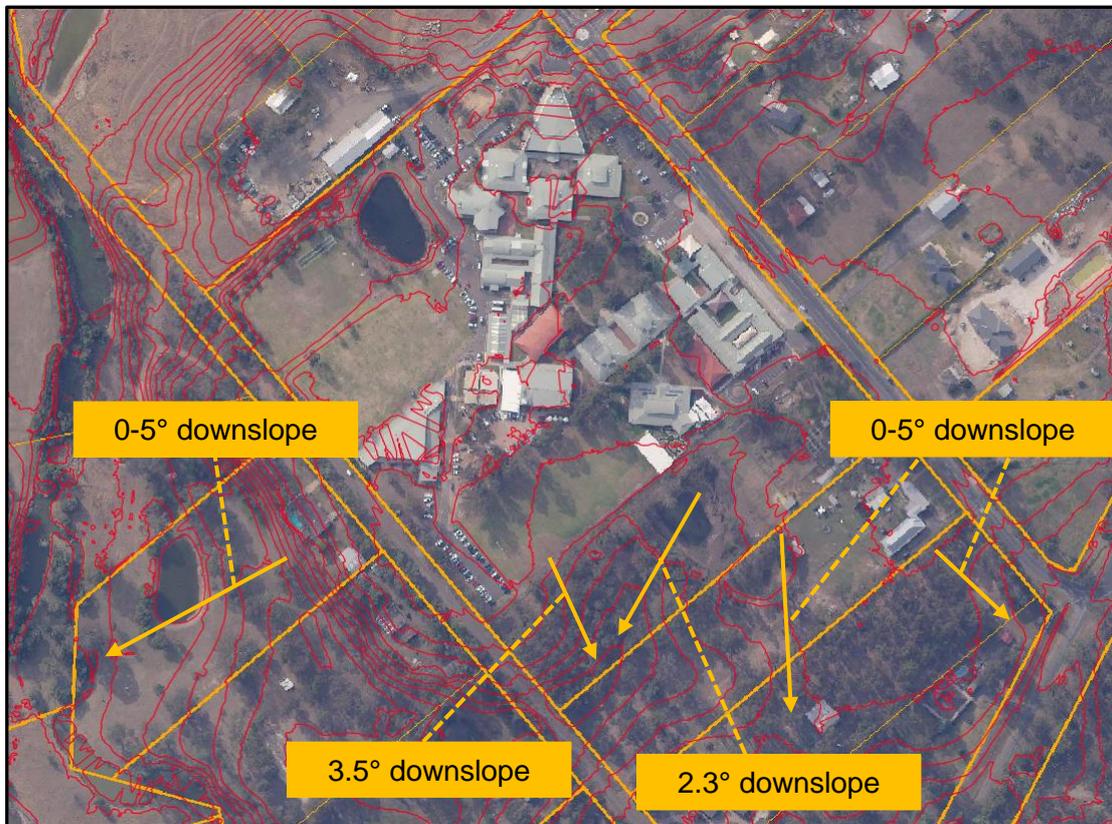


Image 02: 1 m Topographic Detail from NSW Gov Elevation Foundation Data.

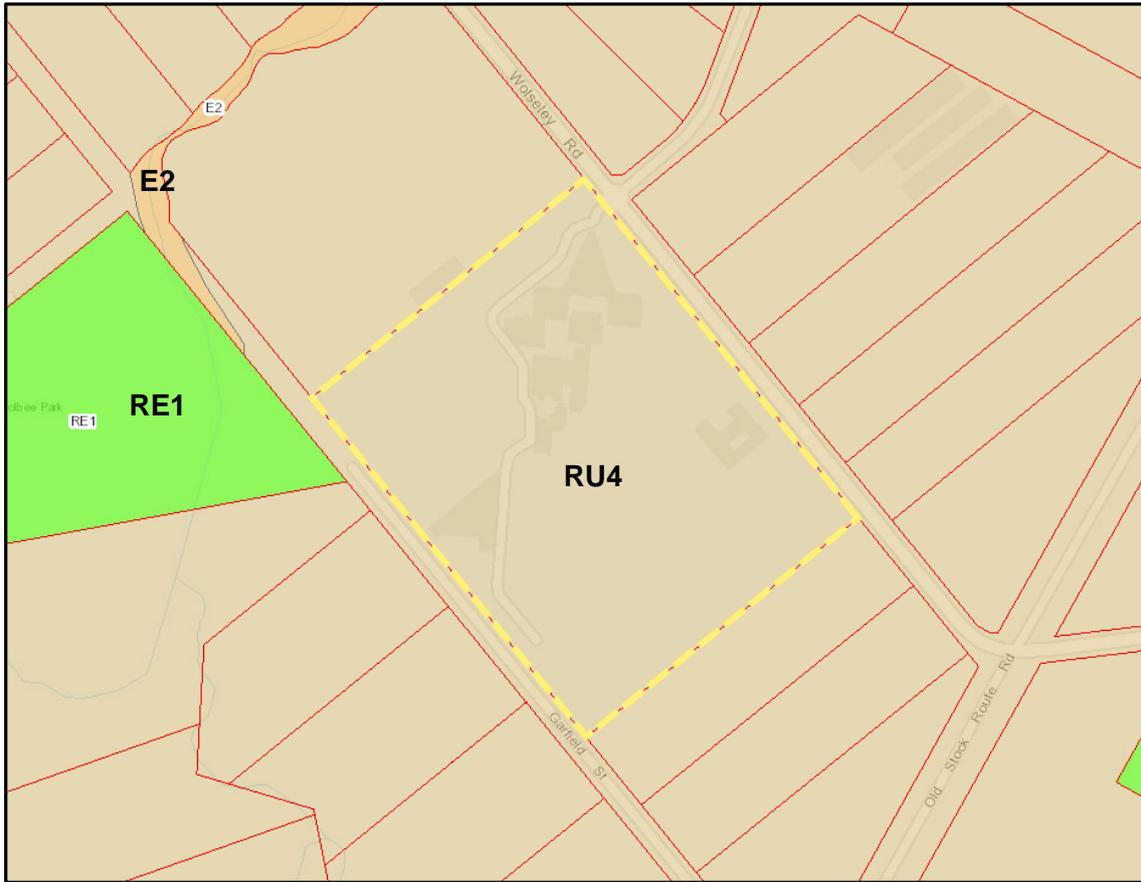


Image 03: LEP Zones extract from NSW Dept Planning property information mapping

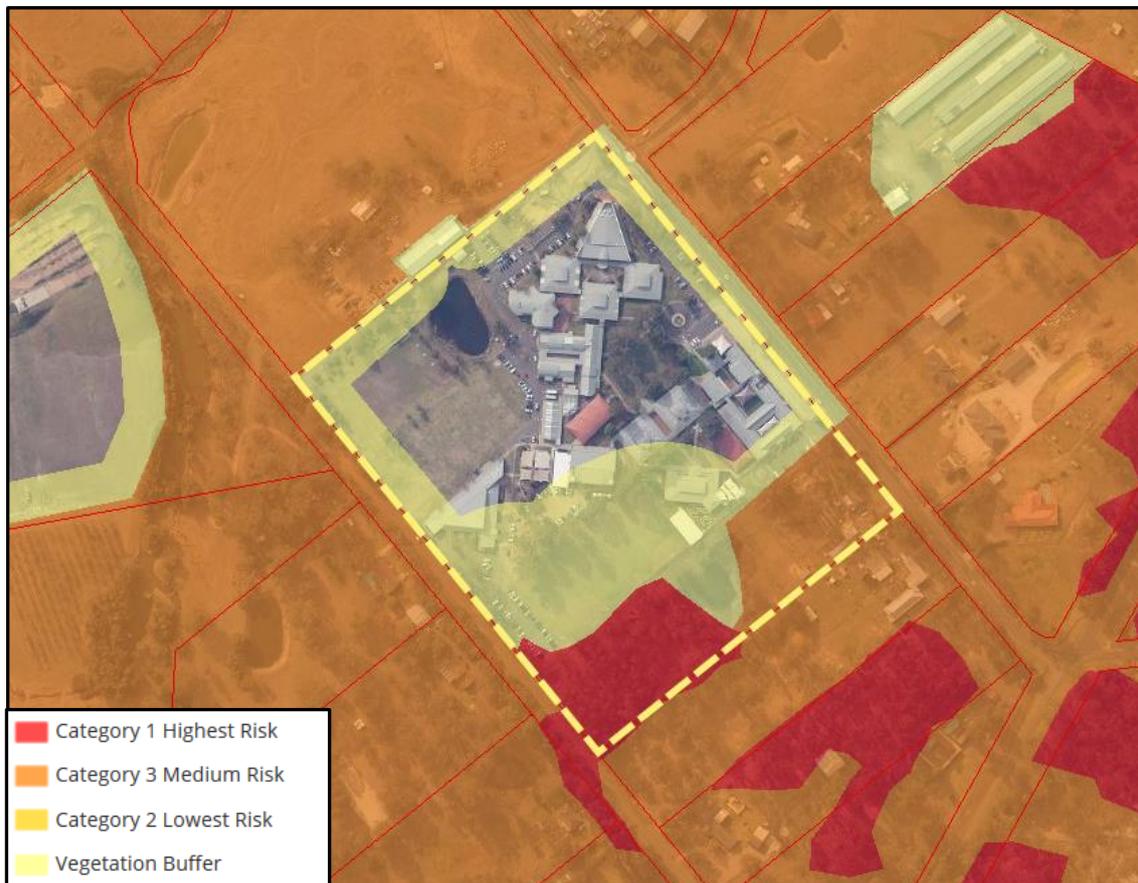


Image 04: Extract of Councils Bushfire Prone Land Map from NSW Dept Planning property information

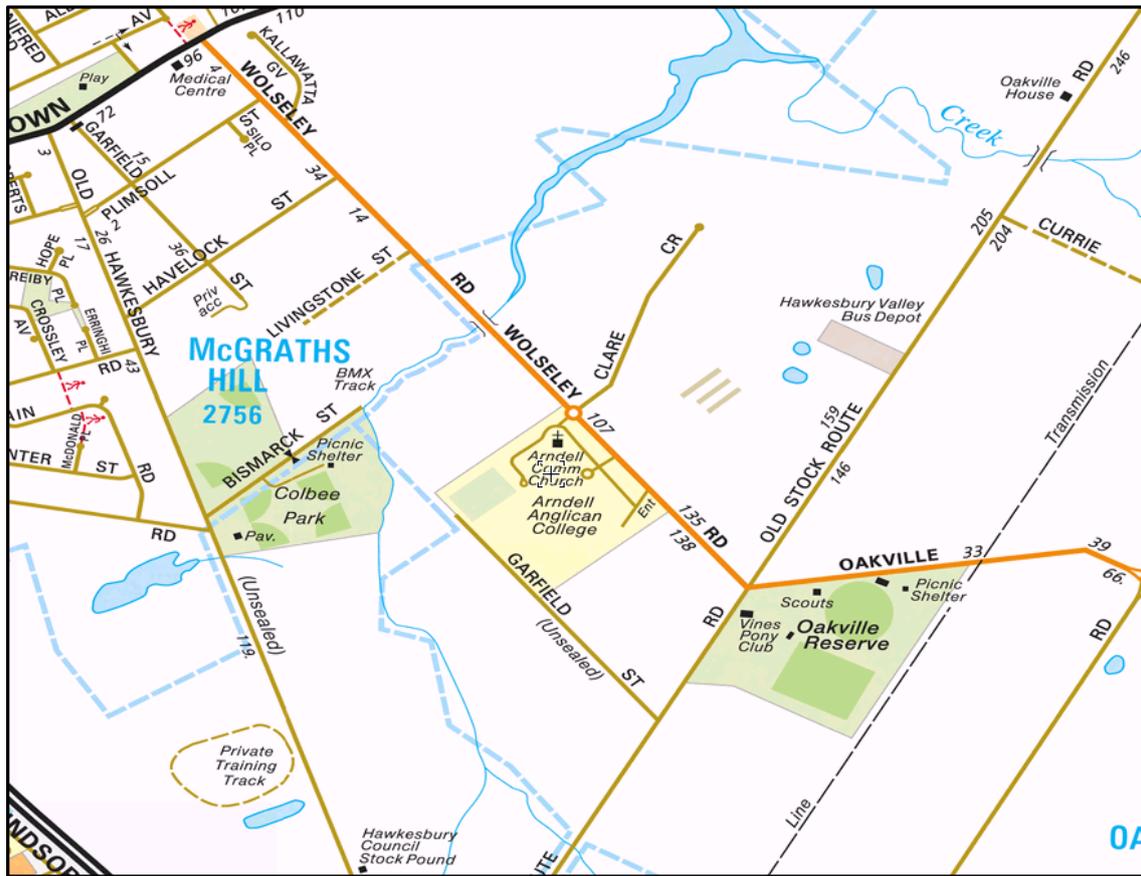


Image 05: Extract from streetdirectory.com.au

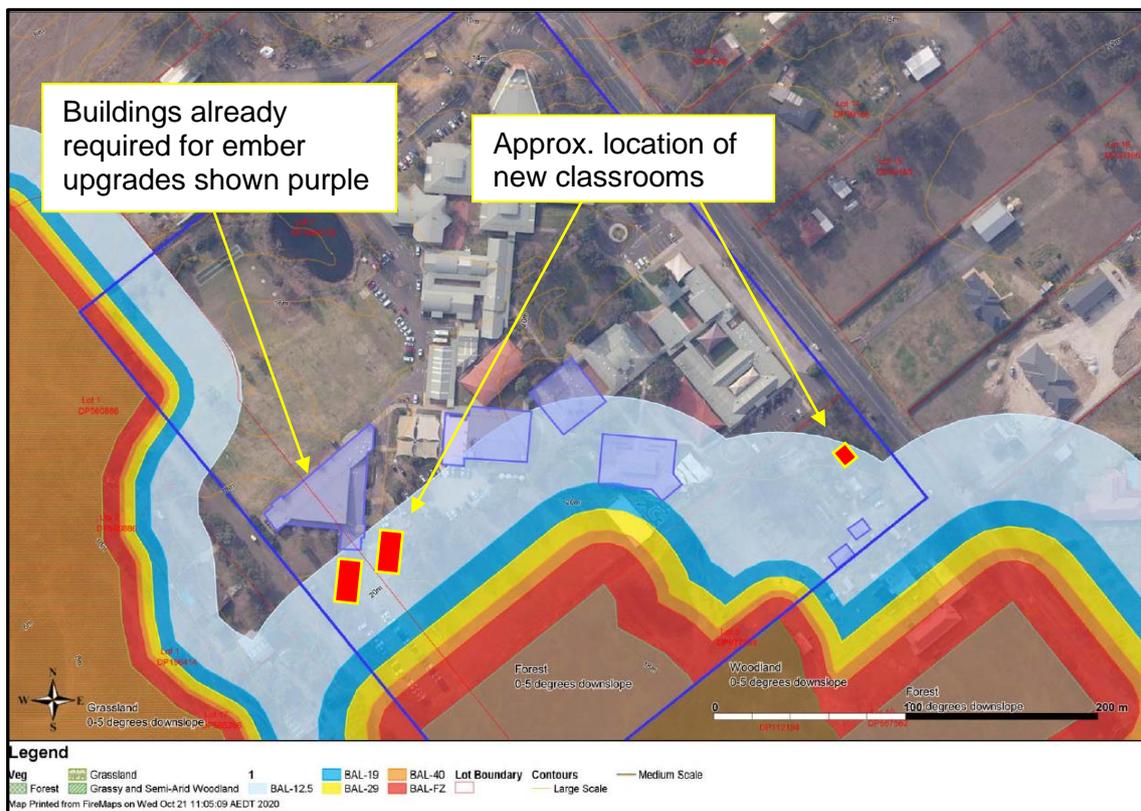


Image 06: BAL Ribbon overlay on the subject site

## 8.0 Bushfire hazard assessment

Properties considered to be bushfire prone land are identified on Councils Bush Fire Prone Land Map as being:

- *within or within 100 m of Category 1 (high) hazards or,*
- *within or within 30 m of Category 2 (low) hazards or,*
- *within or within 30 m of Category 3 (medium) hazards.*

The NSW RFS document PBP – 2019 is applicable to all development on bushfire prone land, this includes an assessment of the proposals adequacy in providing an appropriate combination of bushfire protection measures in terms of asset protection zones, landscaping, access and service supply. This document also provides a means of determining the necessary level of building construction under AS3959 - 2018. All integrated development on bushfire prone land must be accompanied with a bushfire hazard assessment that includes;

- (a) a description (including the address) of the property on which the development the subject of the application is proposed to be carried out;*
- (b) a classification of the vegetation on and surrounding the property (out to a distance of 140 metres from the boundaries of the property) in accordance with the system for classification of vegetation contained in Planning for Bush Fire Protection;*
- (c) an assessment of the slope of the land on and surrounding the property (out to a distance of 100 metres from the boundaries of the property);*
- (d) identification of any significant environmental features on the property;*
- (e) the details of any threatened species, population or ecological community identified under the Threatened Species Conservation Act 1995 that is known to the applicant to exist on the property;*
- (f) the details and location of any Aboriginal object (within the meaning of the National Parks and Wildlife Act 1974) or Aboriginal place (within the meaning of that Act) that is known to the applicant to be situated on the property;*
- (g) a bush fire assessment for the proposed development (including the methodology used in the assessment) that addresses the following matters:*
  - (i) the extent to which the development is to provide for setbacks, including Asset Protection Zones;*
  - (ii) the siting and adequacy of water supplies for firefighting;*
  - (iii) the capacity of public roads in the vicinity to handle increased volumes of traffic in the event of a bush fire emergency;*
  - (iv) whether or not public roads in the vicinity that link with the fire trail network have two-way access;*
  - (v) the adequacy of arrangements for access to and egress from the development site for the purposes of an emergency response;*
  - (vi) the adequacy of bush fire maintenance plans and fire emergency procedures for the development site;*
  - (vii) the construction standards to be used for building elements in the development;*
  - (viii) the adequacy of sprinkler systems and other fire protection measures to be incorporated into the development;*
  - (h) an assessment of the extent to which the proposed development conforms with or deviates from the standards, specific objectives, performance criteria and acceptable solutions set out in Chapters 5-8 of PBP; and*
- (i) identify any fire trails that exist on the property that are on the Register of Certified Fire Trails under RF Acts.*

By incorporating bush fire protection measures into a development, the six objectives of PBP 2019 are addressed:

1. *afford buildings and their occupants protection from exposure to a bush fire;*
2. *provide for a defensible space to be located around buildings;*
3. *provide appropriate separation between a hazard and buildings which, in combination with other measures,*
4. *prevent the likely fire spread to buildings;*
5. *ensure that appropriate operational access and egress for emergency service personnel and occupants is available;*
6. *provide for ongoing management and maintenance of BPMs; and ensure that utility services are adequate to meet the needs of firefighters.*

**FORMS OF BUSHFIRE ATTACK**

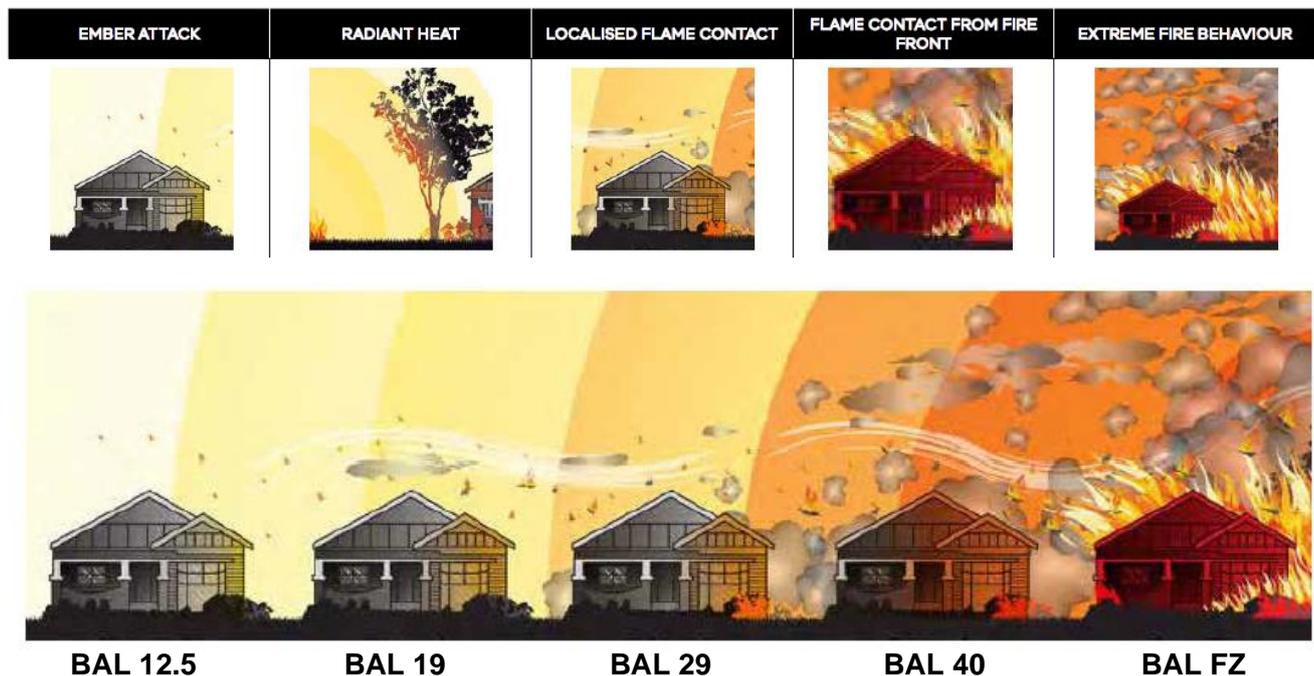


Image 7 & 8: Extract from *Planning Permit Applications, Bushfire Management Overlay. Technical Guide*, September 2017. Department of Environment Land Water and Planning, Victoria.

## 8.1 Site

The site has street frontage to Oakville Road to the northeast and Garfield Street to the southwest and abuts rural allotments to the remaining northwest and southeast aspects.

## 8.2 Vegetation

In accordance with Planning for Bush Fire Protection 2019 the vegetation structure must be determined under Keith 2004 for a distance out to 140 metres from the proposed development and, where a mix of vegetation classes are found, that representing the highest hazard is said to predominate.

Councils bushfire prone land map depicts the subject site as containing Category 1 and 3 Vegetation and the 100 and 30 metres buffer zones from Category 1 & 3 Vegetation. The bushfire hazardous vegetation identified on Councils bushfire prone land map is located to the southeast within the subject site and surrounding the site to all aspects.

The vegetation within the subject property and neighbouring private allotments to the northwest and northeast was found to consist of built upon areas surrounded by maintained lawns and gardens and urban landscaping around the existing assets. Many occupants are slashing or mowing pastures in this area where no grazing occurs.

Within the 140 metre assessment area to the northwest and northeast there was found to consist managed land in all directions. The NSW RFS have recently published a new definition of managed land to include “actively grazed pastures” within their Building in Bush Fire Prone Areas Single Dwelling Application Kit;

### ***Managed Land***

*Non-vegetated or reduced vegetation areas such as: actively grazed pastures, maintained urban yards, maintained lawns, crops, orchards, vineyards, commercial nurseries, playing fields, golf course fairways, cleared parks, non-vegetated areas, formed roads and footpaths including cleared verges, waterways, etc.*

The vegetation within the southwest corner of the subject site and southeast of building 3 was found to consist of trees 15 - 25 metres in height with a managed grassy understorey almost devoid of shrubs. Within the subject site the vegetation had a canopy cover of approximately 70%. Further southeast within the neighbouring property the understorey was managed by mowing and the canopy cover was sparser at approx. 30% cover.

This area is mapped as a mixture of:

Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion, PCT Code: 849, Class: Coastal Valley Grassy Woodlands &

Broad-leaved Ironbark - Grey Box - Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion, PCT Code: 724, Class: Cumberland Dry Sclerophyll Forests

As the canopy cover is at its densest within the subject site the vegetation within the subject site closest to Buildings 1 & 2 and southeast of Building 3 has been assessed as Cumberland Dry Sclerophyll Forests. Where design fire modelling has been used fuel loads published within the NSW RFS Guideline Comprehensive Vegetation Fuels of 14/24.97 t/ha Surface / total have been applied.

The area due south of Building 3 has been assessed as a woodland hazard.

The vegetation within neighbouring private allotments to the southwest was also found to consist of built upon areas surrounded by maintained lawns and gardens and urban landscaping around the existing assets adjacent to Garfield Street. As a conservative measure, areas further to the southwest that are more predominately rural farming and were not obviously managed by mowing and slashing have been assessed as a possible grassland hazard.



Photograph 01: View northeast into the vegetation within the subject site from Garfield Street



Photograph 02: View northeast into the vegetation within the subject site from Garfield Street



Photograph 03: View northwest from the hazard interface showing existing asset protection zone

### 8.3 Topography

The slope must be assessed over a distance of at least 100 m from the building footprint towards the various vegetation communities constituting the hazard. In assessing the slope, it may be found that there are a variety of slopes covering different distances. The gradient within the hazard (vegetation) which will most significantly influence the fire behaviour must be determined.

The slope was determined onsite using an inclinometer and verified by topographic mapping to be;

Building 1 & 2

- 3.5 degrees downslope within the hazard to the southeast (hazard slope)
- 0 degrees level land within the APZ to the southeast (site slope)
- 0 – 5 degrees downslope within the hazard to the southwest

Building 1 & 2

- 2.3 degrees downslope within the hazard to the southwest (hazard slope)
- 1 degree downslope within the APZ to the southeast (site slope)
- 0 – 5 degrees downslope within the hazard to the south and southeast

### 8.4 Asset Protection Zones

An APZ is a buffer zone between a bush fire hazard and buildings, which is managed progressively to minimise fuel loads and reduce potential radiant heat levels, flame, ember and smoke attack. A fuel-reduced, physical separation between buildings and bush fire hazards is the key element in the suite of bushfire protection measures.

Minimum APZs for schools classrooms (Special Fire Protection Purpose development) are normally determined under under Table A1.12.1 within PBP 2019 and are such that, during a bushfire event, a building footprint is not exposed to greater than 10 k/Wm<sup>2</sup> expected radiant heat impact.

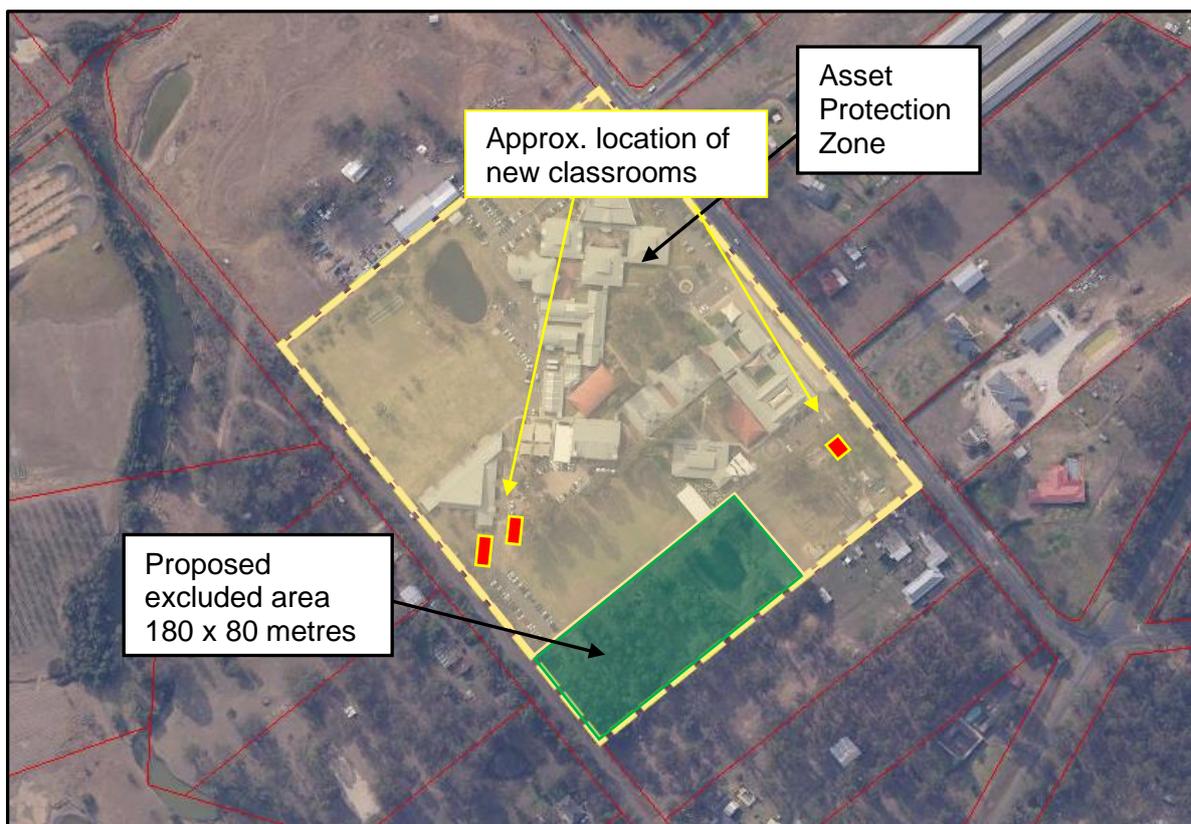


Image 10: Aerial image showing proposed APZ areas and retained native vegetation

In this circumstance the minimum required APZ determined for a greenfield site from either Table A1.12.1 within PBP 2019 or by design fire modelling is exceeded to all aspects. The separation from the hazard interface includes maintained land within the subject site and land considered to be equivalent to an APZ being managed land within equivalent to an APZ being managed land within Garfield Street road reserve to the southwest of Buildings 1 & 2 and a neighboring private allotment to the southeast of Building 3.

Recommendations will be included within this report that all grounds within the subject site and outside of the Cumberland Dry Sclerophyll Forest and agricultural campus area are continued to be maintained as an Asset Protection Zone / Inner Protection Area (IPA). The Asset Protection Zone shall be in accordance with Appendix 4 of PBP 2019 and the NSW RFS document Standards for Asset Protection Zones. The APZ area therefore excludes an area of approximately 180 x 80 metres as shown on Image 10 within this report.

## 8.5 Access & egress

The existing school has a formal entry and exit bay for busses parallel to Wolseley Road. Car parking stems of this access and is located at various areas around the school. The location of carparking is such that two way access is provided from the northeast corner of the site through to the southwest corner around and past the proposed buildings 1 & 2.

The access width is generally 5.5 metres wide and only narrows to 3.5 – 4.0 metres for a very short distance of approx. 10 metres where it passes the oval. This narrowing is considered inconsequential as, at this point, there are cleared verges and a fire appliance could pass over the verges or cross the school oval.

Turning opportunities compliant with the dimensions indicated within Appendix 3 of PBP 2019 are available over grassed areas adjacent to the internal access in many locations. This also includes free access for fire appliances onto both sporting ovals. From the northern oval an exit gate is provided onto Garfield Street to the west, enabling through access from Wolseley Road to Garfield Street over the schools oval.

Additionally, an internal service trail is provided parallel to the hazard within the subject site between Garfield Street and Wolseley Road. This service track is located within the agricultural section that occupies the south-eastern section of the school campus.

Proposed building 3 is located where the most disadvantage point of the structure is within 70 metres of Wolseley Road.

Free pedestrian access will remain available around the proposed new work and the existing building envelopes. Fire services will also retain unimpeded access to the hazard interface for fire suppression and hazard reduction activities.

It is considered that the existing access meets the performance requirements of PBP 2019, and no further recommendations are considered necessary.

## 8.6 Services

Reticulated water supply is available in this area and two static water supply (SWS) tanks providing greater than 288,000 litres are provided and dedicated for firefighting purposes.

The static water tanks supply a boosted hydrant system throughout the school grounds. A diesel pumpset is installed to the hydrant system. An outlet from the water tanks is provided at the hydrant booster valve set which is located adjacent to Wolseley Road. The system is installed and maintained in accordance with AS2419 and therefore is compliant with the requirements of Table 6.8c of PBP 2019.

An existing pillar hydrant is located within the grounds approximately 10 metres west of the proposed building footprint and fire truck access to the hydrant is available. The most disadvantaged point of the building is within 70 metres of this hydrant.

The water supply is suitable for firefighting purposes and no further recommendations are necessary as part of this development.

The existing electrical supply to the site is overhead and underground services are provided internally within the property. No reticulated gas is provided in this area and no new bottled gas is proposed as part of this application. Recommendations will be included to ensure that any new electrical services supply is provided in accordance with Table 6.8c of PBP 2019.

## 8.7 Emergency management

The subject site has direct access to Wolseley Road to the northeast and secondary access is available from Garfield Street to the southwest. Occupants wishing to relocate from this site can do so in either direction via existing two way public road infrastructure.

It is recommended that existing Bush Fire Emergency Management Plan be reviewed and, where necessary upgraded to include these new buildings and comply with the NSW RFS document *A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*.

## 8.8 Construction

Australian Standard 3959 – 2018 'Construction of buildings in bushfire-prone areas' provides for six (6) levels of building construction these being BAL - Low, BAL - 12.5, BAL - 19, BAL - 29, BAL - 40 and BAL - FZ. The Australian Standard 3959 specifies construction standards for buildings within various Bushfire Attack Levels as determined by the Planning for Bushfire Protection – 2019 document. The NSW Rural Fire Service will not accept deemed to satisfy provisions for BAL Flame Zone and therefore have a NSW variation to the listed standard provisions of BAL FZ under AS3959 - 2018.

The highest Bushfire Attack Level to the proposed building footprints was determined from Table A1.12.5 of PBP 2019 to be 'BAL 12.5'. The proposed new demountable classrooms are required to comply with section 3 and 5 BAL 12.5 of AS 3959 – 2018 *Construction of buildings in bushfire prone areas*.

The school has undertaken to upgrade the existing school buildings to improve their resilience against ember protection. This is being applied to any classroom that is within an area of BAL 12.5 or above. This will be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes any sub floor areas, openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.

Where buildings have been assessed as BAL Low (i.e. where they are greater than 50 metres from a grassland and greater than 100 metres from forest) there are no upgrade requirements imposed, as these structures do not attract any construction requirements under AS3959 – 2018.

*AS3959 – 2018: This Standard does not provide construction requirements for buildings assessed in bushfire-prone areas in accordance with Section 2 as being BAL—LOW. The Bushfire Attack Level BAL—LOW is based on insufficient risk to warrant specific bushfire construction requirements.*

*Table A1.7 PBP 2019: BAL Low - Minimal attack from radiant heat and flame due to the distance of the building from the vegetation, although some attack by burning debris is possible. There is insufficient threat to warrant specific construction requirements.*

There are no specific construction requirements applicable to the existing development assessed as BAL Low.

These conditions are already enforced by prior development approval and no additional recommendations are required as part of this development.

PBP 2019 Fences and Gates:

*Fences and gates in bush fire prone areas may play a significant role in the vulnerability of structures during bush fires. In this regard, all fences in bush fire prone areas should be made of either hardwood or non-combustible material. However, in circumstances where the fence is within 6m of a building or in areas of BAL-29 or greater, they should be made of non-combustible material only.*

In this instance any new fencing is required to be of hardwoods or non-combustible materials, except where it is within 6 metres of a building where it should be made from non-combustible materials only.

## 9.0 Recommendations

### 9.1 Asset Protection Zones / landscaping

1. That all grounds within the subject property and outside of the 180 x 80 metres retained forest in the southwestern corner of the site are to be continued to be maintained as an asset protection zone / inner protection area as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of Planning for Bush Fire Protection 2019.

### 9.2 Emergency management plan.

2. That the existing Bush Fire Emergency Management Plan be reviewed and, where necessary upgraded to include these new buildings and comply with the NSW RFS document *A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*.

### 9.3 Construction

3. That the proposed new demountable buildings are to be constructed in accordance with section 3 and 5 BAL 12.5 of *AS 3959 – 2018 Construction of buildings in bushfire prone areas* and the additional requirements detailed within section 7.5.2 of *Planning for Bush Fire Protection 2019*.
4. That any new fencing is required to be of hardwoods or non-combustible materials, except where it is within 6 metres of a building where it should be made from non-combustible materials only.

### 9.4 Services

#### Electricity

5. That electricity supply to the new demountable buildings is to comply with Table 6.8c of Planning for Bush Fire Protection 2019, in particular;
  - where practicable, electrical transmission lines are underground;
  - where overhead, electrical transmission lines are proposed as follow:
    - lines are installed with short pole spacing (30m), 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*.

## 10.0 Conclusion

The subject property is determined to be bushfire prone land and the development is classified as integrated development under s100B of the Rural Fires Act 1997. The development proposal must receive a Bush Fire Safety Authority (BFSA) from the NSW RFS as part of the development approval process.

To receive a BFSA a development must, to the degree necessary, meet the intent of measures and performance requirements of PBP 2019. In special fire protection purpose development such as a school this is achieved with an appropriate combination of bushfire protection measures, especially an APZ, to ensure in a bushfire event no building will be exposed to radiant heat levels greater than 10 kW/m<sup>2</sup>. In addition to an APZ suitable access, services supply and means of maintaining the bushfire protection measures for the life of the development are applied. Where necessary construction measures are also included.

This bushfire hazard and determination has been made on a site-specific basis which includes an assessment of the local bushland area and its possible impact to the subject property. Inclusive of the recommendations made herein the proposal meets the aims and objectives of PBP 2019 by compliance with the intent of measures and performance requirements of that document. I am satisfied these recommendations will provide a reasonable and satisfactory level of bushfire protection to the proposed development.

I am therefore in support of the development application.

Australian Bushfire Consulting Services Pty Ltd



### **Wayne Tucker**

Managing Director  
G. D. Design in Bushfire Prone Areas.  
Certificate IV Fire Technology  
Ass Dip Applied Science  
FPA Australia BPAD Level 3 Accredited Practitioner  
BPAD Accreditation No. BPAD9399



## List of attachments

Attachment 01: Design fire modelling reports

**APPENDIX G**

**Bush Fire Safety Authority  
by Rural Fire Service**

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## NSW RURAL FIRE SERVICE

Wayne Tucker  
P.O Box 212  
Berowra Heights  
NSW 2082

Our reference: DA20210802003181-Original-1

**ATTENTION:** Wayne Tucker

Date: Thursday 16 September 2021

Dear Sir/Madam,

**Integrated Development Application**  
**s100B – SFPP – School**  
**118-124 Wolseley Road Oakville NSW 2765, 18//DP1252151**

I refer to your correspondence dated 30/07/2021 seeking general terms of approval for the above Integrated Development Application.

The New South Wales Rural Fire Service (NSW RFS) has considered the information submitted. General Terms of Approval, under Division 4.8 of the *Environmental Planning and Assessment Act 1979*, and a Bush Fire Safety Authority, under section 100B of the *Rural Fires Act 1997*, are now issued subject to the following conditions:

### Asset Protection Zones

***The intent of measures is to provide sufficient space for fire fighters and other emergency services personnel, ensuring radiant heat levels permit operations under critical conditions of radiant heat, smoke and embers, while supporting or evacuating occupants. To achieve this, the following conditions shall apply:***

1. From the start of building works, and in perpetuity to ensure ongoing protection from the impact of bush fires, asset protection zones must be provided as shown on Image 10 of the Bush Fire Assessment Report (Reference 20-455-3, dated 24th July 2021, prepared by Australian Bushfire Consulting Services) as an inner protection area (IPA), in accordance with the requirements of Appendix 4 of *Planning for Bush Fire Protection 2019*.

When establishing and maintaining an inner protection area (IPA) the following requirements apply in accordance with the requirements of Appendix 4 of *Planning for Bush Fire Protection 2019*:

- tree canopy cover should be less than 15% at maturity;
- trees at maturity should not touch or overhang the building;
- lower limbs should be removed up to a height of 2 metres above the ground;
- tree canopies should be separated by 2 to 5 metres;
- preference should be given to smooth barked and evergreen trees;
- large discontinuities or gaps in vegetation should be provided to slow down or break the progress of fire towards buildings;
- shrubs should not be located under trees;

#### Postal address

NSW Rural Fire Service  
Locked Bag 17  
GRANVILLE NSW 2142

#### Street address

NSW Rural Fire Service  
4 Murray Rose Ave  
SYDNEY OLYMPIC PARK NSW 2127

T (02) 8741 5555  
F (02) 8741 5550  
[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)

- shrubs should not form more than 10% ground cover; and
- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.
- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
- leaves and vegetation debris should be removed.

### **Construction Standards**

***The intent of measures is to provide suitable building design, construction and sufficient space to ensure that radiant heat levels do not exceed critical limits for firefighters and other emergency services personnel undertaking operations, including supporting or evacuating occupants . To achieve this, the following conditions shall apply:***

2. New construction must comply with Sections 3 and 5 (BAL 12.5) Australian Standard AS3959-2018 *Construction of buildings in bush fire-prone areas* or NASH Standard (1.7.14 updated) *National Standard Steel Framed Construction in Bushfire Areas – 2014* as appropriate and Section 7.5 of *Planning for Bush Fire Protection 2019*.

### **Water and Utility Services**

***The intent of measures is to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building. To achieve this, the following conditions shall apply:***

3. Any new provision of water, electricity and gas must comply with the following in accordance with Table 6.8c of *Planning for Bush Fire Protection 2019*:

- reticulated water is to be provided to the development where available;
- fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1:2005;
- hydrants are not located within any road carriageway;
- reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads;
- fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005;
- all above-ground water service pipes are metal, including and up to any taps;
- 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*.
- reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is used;
- reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 - *The storage and handling of LP Gas*, the requirements of relevant authorities, and metal piping is used;
- all fixed gas cylinders are kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side;
- connections to and from gas cylinders are metal; polymer-sheathed flexible gas supply lines are not used; and
- above-ground gas service pipes are metal, including and up to any outlets.

### **Landscaping Assessment**

***The intent of measures is for landscaping. To achieve this, the following conditions shall apply:***

4. Landscaping within the required asset protection zone must comply with Appendix 4 of *Planning for Bush Fire Protection 2019*. In this regard, the following principles are to be incorporated:

- A minimum 1 metre wide area, suitable for pedestrian traffic, must be provided around the immediate curtilage of the building;
- Planting is limited in the immediate vicinity of the building;

- Planting does not provide a continuous canopy to the building (i.e. trees or shrubs are isolated or located in small clusters);
- Landscape species are chosen to ensure tree canopy cover is less than 15% (IPA), and less than 30% (OPA) at maturity and trees do not touch or overhang buildings;
- Avoid species with rough fibrous bark, or which retain/shed bark in long strips or retain dead material in their canopies;
- Use smooth bark species of trees species which generally do not carry a fire up the bark into the crown;
- Avoid planting of deciduous species that may increase fuel at surface/ ground level (i.e. leaf litter);
- Avoid climbing species to walls and pergolas;
- Locate combustible materials such as woodchips/mulch, flammable fuel stores away from the building;
- Locate combustible structures such as garden sheds, pergolas and materials such as timber garden furniture away from the building; and
- Low flammability vegetation species are used.

### **Emergency and Evacuation Planning Assessment**

***The intent of measures is to provide suitable emergency and evacuation (and relocation) arrangements for occupants of special fire protection purpose developments. To achieve this, the following conditions shall apply:***

5. The existing Bush Fire Emergency Management and Evacuation Plan is updated to include the proposed demountable buildings and prepared consistent with the:

- The NSW RFS document: *A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*; and,
- NSW RFS Schools Program Guide and/or Australian Standard AS 3745:2010 *Planning for emergencies in facilities*.

The Bush Fire Emergency Management and Evacuation Plan should include planning for the early relocation of occupants.

Note: A copy of the Bush Fire Emergency Management and Evacuation Plan should be provided to the Local Emergency Management Committee for its information prior to occupation of the development. An Emergency Planning Committee needs to be established to consult with residents (and their families in the case of schools) and staff in developing and implementing an Emergency Procedures Manual. Detailed plans of all emergency assembly areas including on-site and off-site arrangements as stated in AS 3745:2010 are to be clearly displayed, and an annual emergency evacuation exercise is to be conducted.

For any queries regarding this correspondence, please contact Rohini Belapurkar on 1300 NSW RFS.

Yours sincerely,

Nika Fomin  
**Manager Planning & Environment Services**  
**Built & Natural Environment**



NSW RURAL FIRE SERVICE

# BUSH FIRE SAFETY AUTHORITY

SFPP – School

118-124 Wolseley Road Oakville NSW 2765, 18//DP1252151

RFS Reference: DA20210802003181-Original-1

This Bush Fire Safety Authority is issued on behalf of the Commissioner of the NSW Rural Fire Service under s100b of the Rural Fires Act (1997) subject to the attached General Terms of Approval.

This authority confirms that, subject to the General Terms of Approval being met, the proposed development will meet the NSW Rural Fire Service requirements for Bush Fire Safety under *s100b of the Rural Fires Act 1997*.

**Nika Fomin**

**Manager Planning & Environment Services  
Built & Natural Environment**

Thursday 16 September 2021

**APPENDIX H**

**Flood Impact Assessment**

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23 July 2021

201863 CAAA

The Anglican Schools Corporation  
Level 3  
8 Woodville Street  
Hurstville NSW 2220

Attention: Matthew Earl

## **Arndell Anglican College - Art Temporary Modular Development Flood Impact Statement**

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Dear Matthew,

Taylor Thomson Whitting (TTW) has been engaged by The Anglican Schools Corporation to complete a Flood Impact Statement (FIS) for the proposed three (two art learning and one agricultural learning) temporary modular classrooms at Arndell Anglican College. The proposed development includes three one-storey high classrooms and is classified as development permitted without consent.

### **Proposed Development**

The proposed development includes the implementation of three modular classrooms in addition to associated access stairs and ramps. The three buildings are separate structures, with two art learning buildings located to the south-west boundary of the site and one agricultural learning building to the site's east boundary. The ground floor levels of the Modular Art Learning Buildings 1 and 2 are to be at RL 19.07m and 18.74m respectively, with the Agricultural building at RL 20.00m. Reference site plan and architectural drawings are attached in Appendix A.

### **Site Location**

The development site is located at 118-124 Wolseley Road, Oakville (Lot 1/DP 1044182) and lies within the Hawkesbury City Council Local Government Area (LGA). The site is bounded by Garfield Street to the south-west and by Wolseley Road to the north-east, and rural lots to the North-West and South-East. The site is bisected by a private roadway that allows access to on-site parking and facilities.

The site is currently occupied by the Arndell Anglican College. The site contains a ridge line in a south-west to north-east direction, with two site catchments draining to two existing dams located within the site on both the north-western boundary and south-eastern boundary. Refer to Figure 1 for the location of the proposed buildings in relation to the existing ridge line.

The location of the proposed Art Learning Modular Buildings is North of the existing ridge line and has existing surface levels sloping North from 18.75m to 19.75m for building 1 and 18.06m to 19.26m for building 2. Both developments will include the implementation of earth batters to promote integration to existing landscaped areas. The Agricultural Learning Building is located south of the ridge line and east of the southern dam, lying between existing surface levels 19.35m and 19.44m.

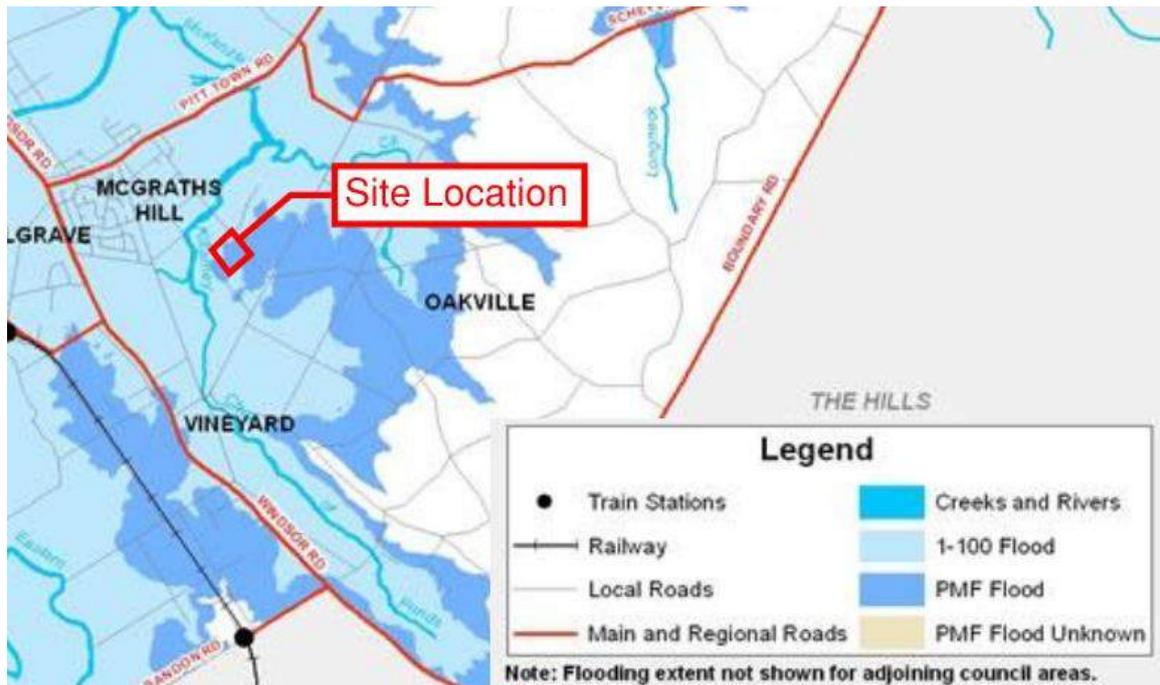


**Figure 1: Site Plan**  
Source: Hawkesbury City Council

### Flood Impact

TTW acknowledges the amendments made to flood planning introduced to NSW on July 14th, 2021. These impact development of the site as follows:

- Flood Development Controls within NSW can now be considered at the Peak Maximum Flood (PMF) as opposed to the 1% Annual Exceedance Probability (AEP). Hawkesbury City Council has performed a flood study of the surrounding areas (Hawkesbury Floodplain Risk Management Study and Plan, July 2012), which indicates that while only the north-west boundary of site is subject to the 1% AEP, all regions are susceptible to a PMF event. A comparison of the PMF and 1% flood extents is shown in Figure 2.
- Implementation to the site of the Hawkesbury City Council Schedule of Flood Related Development Controls (July 2021) to land developments subject to Clause 5.21 of the Hawkesbury Local Environmental Plan 2012 and in accordance with Hawkesbury City Council Flood Policy 2020.



**Figure 2: Flood Extent of the Hawkesbury River**  
 Source: Hawkesbury City Council

Flood advice obtained for previous modular building developments located on site and developed by TTW for The Anglican Schools Corporation confirmed a Flood Planning Level (FPL) for the development site lies at 17.30m AHD for the 1% AEP. As such, the development sites are located wholly above the FPL with floor levels at RL19.07m, RL18.74m, and RL20.00m.

Hawkesbury City Council’s updated Schedule of Flood Related Development Controls maintains the FPL at the 1% AEP and does not increase this to the PMF level. As such, the previous FPL is still relevant.

TTW note compliance to the Hawkesbury City Council’s Schedule of Flood Related Development Controls to project design and development as pertains to clause 7A (2). The location of development sites between the 1% AEP and PMF levels require that a minimum hazard factor of H1 be applied in determining the necessary flood development controls. These requirements are outlined in the table below:

**Table 1: Clauses of the Hawkesbury City Council Schedule of Flood Related Development Controls (July 2021)**

Clause	Requirements	Compliance
<b>H1.2</b>	A new building (including any non-habitable buildings ancillary to a Compatible Development, such as garages, carports, animal shelters and other outbuildings) must not be erected on any land within Hazard Category H1 that lies at a level lower than 0.3 metres below the Flood Planning Level (1:100 ARI flood level for the land).	<b>Yes</b>
<b>H1.3</b>	All floor levels, including habitable floor levels, must be no lower than the Flood Planning Level (1:100 ARI flood level for the land) for all new buildings, including non-habitable ancillary buildings, located on land within Hazard Category H1.	<b>Yes</b>
<b>H1.4</b>	Where the lowest floor area is elevated above ground level (where raised building construction is used), the undercroft area must not be enclosed. No walls, doors, blockwork, cladding or the like is to be affixed around or within the undercroft area. Decorative features will be considered on merit.	<b>Yes</b>

<b>H1.5</b>	Undercroft areas are not to be used for parking within Hazard Category H1 and therefore shall not exceed 1 metre above ground level	<b>NA</b>
<b>H1.6</b>	Importation of fill to the land/property and/or excavation works are not permitted, other than: <ul style="list-style-type: none"> <li>• A balance of cut and fill to create a level building platform or driveway access on land. Cut and fill must not exceed a depth of 1 metre of cut or 1 metre of fill in these situations, or</li> <li>• for the purposes of permitting fill to a maximum depth of 0.3 metres to provide for slab on ground construction within a drop edge beam at a level at or above the Flood Planning Level (1:100 ARI flood level for the land), or</li> <li>• to facilitate development for the purposes of:                     <ul style="list-style-type: none"> <li>• environmental protection works;</li> <li>• bank restoration/stabilisation works; or</li> <li>• boat ramps.</li> </ul> </li> </ul>	<b>Yes</b>
<b>H1.7</b>	All buildings and structures must be constructed using flood compatible building materials.	<b>Yes</b>
<b>H1.8</b>	An Evacuation Capability Assessment must be provided for all new development or additions, alterations or redevelopment that results in an intensification of the occupancy of the site (See Section E – Information Required of this Schedule).	<b>To be Included</b>
<b>H1.9</b>	A Site Flood Emergency Response Plan must be provided when elements of the development, including vehicular and pedestrian access are below the Flood Planning Level (See Section E – Information Required of this Schedule).	<b>NA</b>
<b>H1.13</b>	Additions to, or the redevelopment of, existing lawful Incompatible Development must not be located on any land lying at a level lower than 0.3 metres below the Flood Planning Level (1:100 ARI flood level for the land).	<b>Yes</b>
<b>H1.14</b>	Non-habitable buildings (such as garages, carports, animal shelters and other outbuildings) ancillary to existing lawful Incompatible Development must not be erected on any land within Hazard Category H1 that lies at a level lower than 0.3 metres below the Flood Planning Level (1:100 ARI flood level for the land).	<b>Yes</b>
<b>H1.15</b>	All floor levels, including habitable floor levels, must be no lower than the Flood Planning Level (1:100 ARI flood level for the land) for all new buildings, including non-habitable ancillary buildings, located on land within Hazard Category H1.	<b>Yes</b>
<b>H1.16</b>	Where the lowest floor area is elevated above ground level (where raised building construction is used), the undercroft area must not be enclosed. No walls, doors, blockwork, cladding or the like is to be affixed around or within the undercroft area. Decorative features will be considered on merit.	<b>Yes</b>
<b>H1.18</b>	Importation of fill to the land/property and/or excavation works are not permitted, other than: <ul style="list-style-type: none"> <li>• A balance of cut and fill to create a level building platform or driveway access on land. Cut and fill must not exceed a depth of 1 metre of cut or 1 metre of fill in these situations, or</li> <li>• for the purposes of permitting fill to a maximum depth of 0.3 metres to provide for slab on ground construction within a drop edge beam at a level at or above the Flood Planning Level (1:100 ARI flood level for the land).</li> </ul>	<b>Yes</b>
<b>H1.19</b>	All additions, alterations or new buildings must be constructed using flood compatible building materials.	<b>Yes</b>

<b>H1.20</b>	A Site Flood Emergency Response Plan must be provided when elements of the development, including vehicular and pedestrian access are below the Flood Planning Level (See Section E – Information Required of this Schedule).	<b>Vehicular and pedestrian access are not below the FPL.</b>
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**On Site Stormwater Detention**

Hawkesbury City Council’s Development Control Plan Appendix E Civil Works Specification stipulates locations where on site detention infrastructure is required. As per the Hawkesbury City Council suburb mapping, the site is located within the Oakville suburb and is therefore not required to house an on site detention system.

**TABLE 8.10 DEVELOPMENTS REQUIRING ON-SITE DETENTION**

Location	Type of Development			
	Industrial	Commercial	Medium Density & Dual Occupancy	Residential (where increase in impervious area > 50 sq.m)
McGraths Hill	Yes	Yes	Yes	Yes
Mulgrave industrial area	No	N/A	N/A	N/A
Windsor, South Windsor	Yes	Yes	Yes	Yes
Wilberforce	Yes	Yes	Yes	Yes
East Richmond				
▪ Residential areas	Yes	Yes	Yes	Yes
▪ Bowman Street industrial area	Yes	Yes	N/A	N/A
▪ Lukis Avenue industrial area	Yes	Yes	N/A	N/A
Richmond				
▪ within S94 Catchment No. 1	No	No	No	No
▪ outside S94 Catchment No. 1	Yes	Yes	Yes	Yes
North Richmond				
▪ within S94 Catchment No. 6	No	No	No	No
▪ outside S94 Catchment No. 6	Yes	Yes	Yes	Yes

Should you require anything further please contact the undersigned.

Yours faithfully,  
**TAYLOR THOMSON WHITTING (NSW) PTY LTD**  
 in its capacity as trustee for the  
**TAYLOR THOMSON WHITTING NSW TRUST**

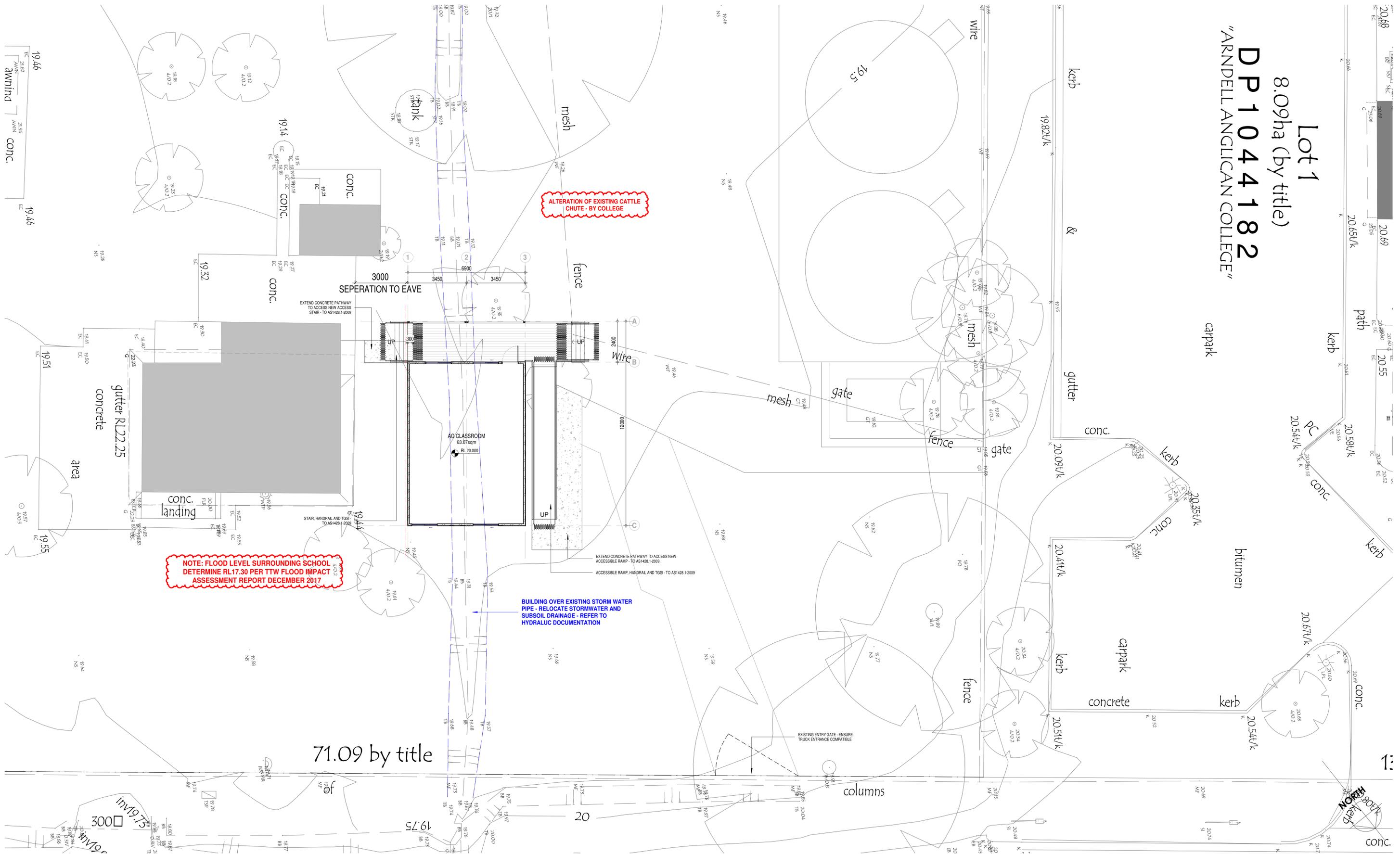


**GRACE CARPP**  
**Associate**

P:\2020\2018\201863\Reports\TTW\210720\_Flood Impact Statement.docx

## Appendix A – Architectural Layout

Lot 1  
8.09ha (by title)  
**DP 1044182**  
"ARNDELL ANGLICAN COLLEGE"



**PROPOSED GROUND FLOOR PLANS**



**CAPITAL WORKS AND ASSET MANAGEMENT**  
LEVEL 3 8 WOODVILLE STREET, HURSTVILLE NSW 2220  
P.O BOX 465, HURSTVILLE BC NSW 1481  
ABN 63 544 529 806

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**NOTES:**  
- ALL DIMENSIONS ARE TO BE VERIFIED ON SITE BY THE BUILDER BEFORE COMMENCING WORK  
- ALL WORKS MUST COMPLY WITH RELEVANT AUSTRALIAN BUILDING CODES AND AUSTRALIAN STANDARDS  
- FINISHED FLOOR LEVEL PREFERRED TO INTERNAL FINISHED CONCRETE LEVEL  
- WRITTEN DIMENSIONS TAKE PRECEDENCE TO SCALE

**ATCO AG TEMP MODULARS - PART 5 APPLICATION**

CLIENT  
ARNDELL ANGLICAN COLLEGE

ADDRESS  
118 - 124 WOLSELEY ROAD, OAKVILLE NSW 2765

ISSUE	DESCRIPTION	DATE
A	ISSUED FOR TASC FOR INFORMATION	29.06.21
B	REVISED LOCATION - ISSUED FOR INFORMATION	02.07.21
C	ISSUED FOR CONSULTANT REVIEW	16.07.21

STATUS	ISSUED FOR CONSULTANT REVIEW		
DESCRIPTION	ATCO AG TEMP MODULARS - PART 5 APPLICATION		
DRAWN	JS	DRAWING No.	REVISION
DATE	16.07.21		
SCALE	1 : 100	CD1-03	C

## **APPENDIX I**

### **Mitigation Measures**

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## Appendix I Mitigation Measures

Impact On	Impact Level (Construction Phase)	Impact Level (Operational Phase)	Safeguards/Mitigation Measures	Responsibility
<b>General</b>				
All environmental factors	Low	Low	<ul style="list-style-type: none"> <li>• A CEMP shall be prepared prior to any construction works commencing. The CEMP should include relevant REF safeguards summarised in Section 4.</li> <li>• All works are to be certified to be in accordance with provisions of National Construction Code by a qualified certifier.</li> </ul>	Project Manager Contractor
<b>Air Quality</b>				
	Low	Negligible	<ul style="list-style-type: none"> <li>• Measures to minimise or prevent air pollution or dust are to be used including watering or covering exposed areas.</li> <li>• Works are not to be carried out during strong winds or in weather conditions where high levels of dust or air borne particulates are likely.</li> <li>• Vegetation or other materials are not to be burnt on site.</li> <li>• Vehicles and vessels transporting waste or other materials that may produce odours or dust are to be covered during transportation.</li> <li>• Stockpiles or areas that may generate dust are to be managed to suppress dust emissions.</li> </ul>	Project Manager Contractor

APPENDIX I Review of Environmental Factors for Agriculture Modular Classroom Building at Arndell Anglican College

Impact On	Impact Level (Construction Phase)	Impact Level (Operational Phase)	Safeguards/Mitigation Measures	Responsibility
<b>Noise</b>				
	Low	Negligible	<ul style="list-style-type: none"> <li>• General noise from construction works must comply with the requirements with applicable Australian Standards or legislation</li> <li>• Works to be carried out during normal work hours (i.e. 7am to 6pm Monday to Friday; 8am to 1pm Saturdays). Any work that is performed outside normal work hours or on Sundays or public holidays may not be permitted and, if permitted, works are to minimise noise impacts.</li> </ul>	Project Manager Contractor
<b>Soil and Erosion</b>				
	Low	Negligible	<ul style="list-style-type: none"> <li>• Site management will incorporate best management erosion and sediment control practices such as those found in the Department of Housing's "Blue Book (4th Edition) on erosion and sediment control.</li> <li>• All erosion and silt control devices will be visually inspected weekly to ensure effectiveness as well as after each rainfall event.</li> </ul>	Project Manager Contractor
<b>Water</b>				
	Low	Negligible	<ul style="list-style-type: none"> <li>• No dirty water may be released into drainage lines and/or waterways.</li> <li>• Visual monitoring of local water quality (ie turbidity, hydrocarbon spills/slicks) is to be undertaken on a regular basis to identify any potential spills or deficient erosion and sediment controls.</li> </ul>	Project Manager Contractor

APPENDIX I Review of Environmental Factors for Agriculture Modular Classroom Building at Arndell Anglican College

Impact On	Impact Level (Construction Phase)	Impact Level (Operational Phase)	Safeguards/Mitigation Measures	Responsibility
			<ul style="list-style-type: none"> <li>Water quality control measures are to be used to prevent any materials (eg. concrete, grout, sediment etc) entering drain inlets or waterways.</li> <li>Wash down should use potable water and excess debris removed using hand tools. Wash down waste must be filtered before release.</li> </ul>	
<b>Flood Impact</b>				
	Low	Low	<ul style="list-style-type: none"> <li>Works to be undertaken in accordance with the conclusions and recommendations of the Flood Impact Assessment prepared by TTW Consulting Engineers – see <b>Appendix H</b></li> </ul>	Project Manager Contractor Flood Engineer
<b>Waste Management and Minimisation</b>				
	Low	Low	<ul style="list-style-type: none"> <li>All surplus material, off cuts, and other debris resulting from the work shall be removed from site and disposed of by a licensed contractor to a licensed waste management facility</li> <li>Waste material, other than vegetation and tree mulch, is not to be left on site once the works have been completed.</li> <li>Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each working day.</li> </ul>	Project Manager Contractor
<b>Bushfire</b>				
	Low	Low	Works to be undertaken in accordance with the Bushfire Assessment and the conclusions and recommendations of the Bushfire Safety Authority from Rural Fire Service (RFS) – <b>Appendices F &amp; G</b>	Project Manager Contractor Bushfire Advisor

APPENDIX I Review of Environmental Factors for Agriculture Modular Classroom Building at Arndell Anglican College

Impact On	Impact Level (Construction Phase)	Impact Level (Operational Phase)	Safeguards/Mitigation Measures	Responsibility
<b>Traffic</b>				
	Low	Low	<ul style="list-style-type: none"> <li>• Current traffic movements and property accesses are to be maintained during the works. Any disturbance is to be minimised to prevent unnecessary traffic delays.</li> <li>• Where possible, current vessel movements and public accesses to the waterway and foreshore are to be maintained during works. Any disturbance is to be minimised as much as practicable.</li> </ul>	Project Manager Contractor
<b>Hazardous Waste</b>				
	Low	Low	<ul style="list-style-type: none"> <li>• No bulk storage of hazardous substances or dangerous goods on site</li> <li>• Minimise fuel volumes stored on site</li> <li>• Emergency procedures shall be displayed in prominent position</li> <li>• Spillage of chemicals will be cleaned up immediately</li> </ul>	Project Manager Contractor