

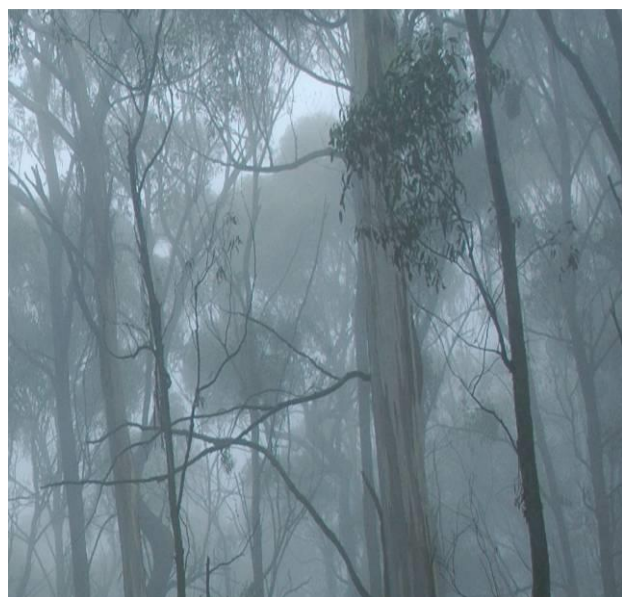


Bushfire Protection Assessment

Meriden School

10-12 Redmyre Road, Strathfield NSW

Prepared for
Tuesday, 5 March 2019



BPAD
Bushfire
Planning & Design
Accredited Practitioner
Level 3

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1 Property and proposal

Table 1: Subject site summary

Street or property name:	Meriden School (3 campuses)		
Suburb, town or locality:	Strathfield	Postcode:	2135
Lot/DP no:	Lot 1 DP 723946, Lot 1 DP 1244199, Lot 101 DP 862040		
Local Government Area:	Strathfield Council		
Zoning:	R3 Medium Density Residential		
Type of development:	Special Fire Protection Purpose (infill)		

1.1 Description of proposal

Allen Jack + Cottier Architects on behalf of Meriden School commissioned Eco Logical Australia Pty Ltd (ELA) to prepare a bushfire protection assessment (BPA) for additional buildings and sporting facilities spread across the three campuses of the Meriden School (Prep school, Junior school and Senior school). These three campuses are located at 16 Margaret Street, 4 Vernon Street and 10-12 Redmyre Road, Strathfield NSW (hereafter referred to as the 'subject land') shown in **Figure 1**.

The proposed development consists of the construction of Site 1: Senior School Campus – New centre for Music and Drama, Site 2: Lingwood Prep School – New administration and Student Centre, Site 3: Junior School – New landscaped playground. The proposal aims to improve the current school facilities to cater for the increased demand for high quality music teaching and learning spaces, additional administration and student facilities and increasing the playground area in the Junior School Campus.

This desktop assessment is based on information contained within the site plan from Allen Jack + Cottier and online information from Google Earth and Nearmap.

1.2 Assessment process

This report supports a State Significant Development Application (SSDA) submitted to the Department of Planning and Environment (DPE) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This report has been prepared having regard to the Secretary's Environmental Assessment Requirements issued for the project by DPE, ref no SEAR 9692 issued on 22 November 2018.

This assessment has been prepared in accordance with, the requirements of clauses 6 and 7 of Schedule 2 the *Environmental Planning and Assessment Regulation 2000* (the Regulation).

Assessment included a review of background documentation, design team consultation, and GIS analysis.

Table 2 identifies the bushfire protection measures assessed and whether these involved acceptable or performance solutions.

Table 2: Summary of bushfire protection measures assessed

Bushfire Protection Measure	Acceptable Solution	Performance Solution	Report Section
Asset Protection Zones	☒	☐	3.1
Construction standard	☒	☐	3.3
Access	☒	☐	3.4
Water supply	☒	☐	3.5.1
Gas and electrical supplies	☒	☐	3.5.2

1.3 Bush fire prone land status

The proposed Special Fire Protection Purpose development does not include land classified as bush fire prone on Strathfield Council's bush fire prone land (BFPL) map¹.

¹ <https://www.planningportal.nsw.gov.au/find-a-property>

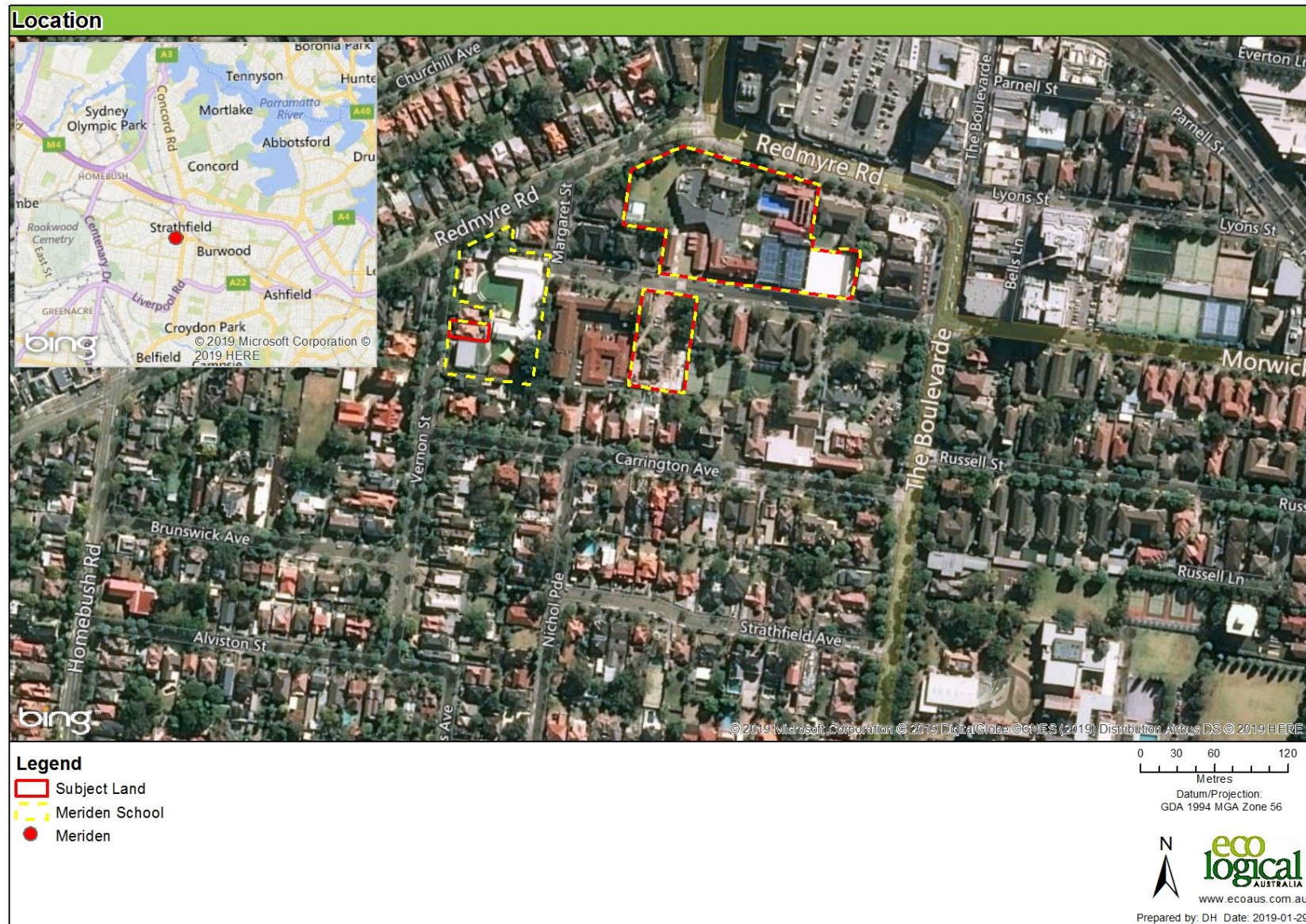


Figure 1: Subject Land Location

2 Bushfire threat assessment

The effective slope and predominant vegetation class has been assessed in accordance with PBP in all directions from the proposed development.

There is no bushfire hazard within 140 m from the proposed development as all land consists of managed residential areas, public roads and road reserves. **Figure 2** and **Table 3** shows the information assessed

The site is located within the Local Government Area (LGA) of Strathfield and has a Fire Danger Index (FDI) of 100.

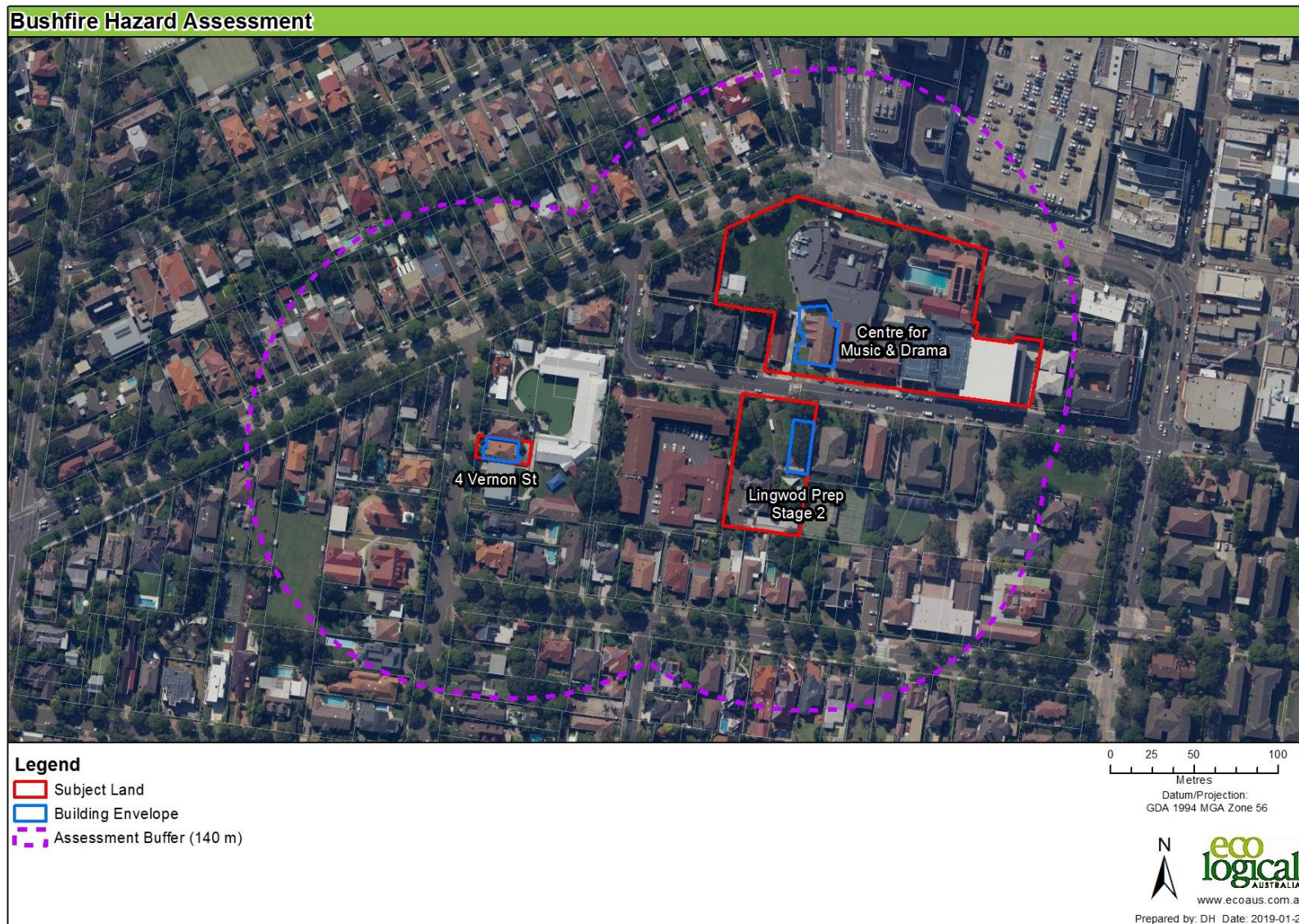


Figure 2: Bushfire hazard assessment

3 Bushfire protection measures

3.1 Asset Protection Zones (APZ)

Special Fire Protection Purpose (SFPP) developments are required to achieve the APZ performance criteria of *'radiant heat levels not greater than 10kW/m² to be experienced by occupants or emergency services workers entering or exiting the building'*.

As there is no bushfire hazard within 140 m from the proposed development no APZ is required (see **Table 3**).

3.2 APZ maintenance plan

No APZ is required to be established.

Any future landscaping should be considered in accordance with Appendix 5 of PBP.

3.3 Construction standard

The building construction standard is based on the determination of the Bushfire Attack Level (BAL) in accordance with Method 1 of AS 3959-2009 'Construction of buildings in bushfire-prone areas'. The BAL is based on known vegetation type, effective slope and managed separation distance between the development and the bushfire hazard.

As demonstrated in **Table 3** a maximum of **BAL-LOW** is attained for the proposed development. BAL-LOW is based on insufficient risk to warrant specific bushfire construction standards.

3.4 Access

The subject land will be accessed via Margaret Street, Vernon Street and Redmyre Road. These roads are existing public through roads.

The proposed development does not include any proposed roads.

Table 3: Bushfire hazard assessment and APZ requirements

Lot # OR direction from development boundary	Slope ¹	Vegetation ²	Existing APZ	AS 3959-2009 Bushfire Attack Level (BAL) ³	Comments
All Directions	All upslopes and flat land	No Vegetation	≥140 m	BAL-LOW	APZ is existing.

¹ Slope most significantly influencing the fire behaviour of the site having regard to vegetation found. Slope classes are according to PBP.

² Predominant vegetation is identified, according to PBP and "Where a mix of vegetation types exist the type providing the greater hazard is said to be predominate".

³ Assessment according to AS 3959-2009 Table 2.4.2

3.5 Services – Water, electricity and gas

3.5.1 Water

The proposal is serviced by a reticulated water supply. There are no proposed upgrades to existing water supplies.

3.5.2 Electricity services

Electricity supply is above ground and complies with PBP subject to no part of a tree being closer to a powerline than the distance specified in 'ISSC3 Guideline for the Management of Vegetation in the Vicinity of Electricity Assets' (Industry Safety Steering Committee 2016).

3.5.3 Gas services

Gas services (reticulated or bottle gas) are compliant with Section 4.2.7 of PBP, subject to the following specifications:

- Any gas services are to be installed and maintained in accordance with Australian Standard AS/NZS 1596 *The storage and handling of LP Gas* (SA 2014). Metal piping is to be used;
- All fixed gas cylinders are kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side of the installation;
- If gas cylinders need to be kept close to the building, the release valves are directed away from the building and at least 2 metres away from any combustible material, so that they do not act as a catalyst to combustion. Connections to and from gas cylinders are metal; and
- Polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not used.

4 Assessment of environmental issues

At the time of assessment, there were no known significant environmental features, threatened species or Aboriginal relics identified under the *Biodiversity Conservation Act 2016* or the *National Parks Act 1974* that will affect or be affected by the bushfire protection proposals in this report.

Department of Planning and Environment is the determining authority for this development; they will assess more thoroughly any potential environmental and heritage issues.

5 Conclusion

The proposed infill SFPP development complies with all the relevant acceptable solutions within 'Planning for Bush Fire Protection 2006', where applicable (see **Table 2**).

Table 4: Summary of bushfire protection measures assessed

Bushfire Protection Measures	Complies	Requirements	Acceptable Solution	Performance Solution	Report Section
Asset Protection Zones	☒	No Asset Protection Zone required.	☒	☐	3.1
APZ Maintenance plan	☒	Subject Land maintenance to be provided in accordance with PBP Appendix 5.	☒	☐	3.2
Construction standard	☒	A maximum of BAL-LOW is achievable.	☒	☐	3.3
Access	☒	No proposed access.	☒	☐	3.4
Water supply	☒	No proposed water upgrades.	☒	☐	3.5.1
Electricity service	☒	Electricity supply located above ground.	☒	☐	3.5.2
Gas service	☒	Gas services are to be installed and maintained in accordance with AS/NZS 1596:2014.	☒	☐	3.5.3



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References

Industry Safety Steering Committee, 2016, *ISSC3 Guideline for the Management of Vegetation in the Vicinity of Electricity Assets*

NSW Rural Fire Service (RFS). 2006. *Planning for Bush Fire Protection: A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners*. Australian Government Publishing Service, Canberra.

Standards Australia. 2009 (Amendment 3). *Construction of buildings in bushfire-prone areas*, AS 3959, Third edition 2009, Standards Australia International Ltd, Sydney.

Standards Australia 2014. *The storage and handling of LP Gas*, AS/NZS 1596:2014, Eighth edition 2014, SAI Global, Sydney.

Standards Australia (SA). 2017. *Fire hydrant installations - System design, installation and commissioning*, AS 2419.1, Fifth edition 2017, SAI Global, Sydney.

Appendix A – Assessment process

Vegetation types

In accord with PBP the predominant vegetation class has been assessed for a distance of at least 140 m from the subject land in all directions.

Effective slope

In accord with PBP, the slope that would most significantly influence fire behaviour was determined over a distance of 100 m from the boundary of the proposed development where the vegetation was found.

Asset Protection Zone determination

Table A2.6 (FDI 100) of PBP has been used to determine the width of required Asset Protection Zone (APZ) for the proposed development using the vegetation and slope data identified in **Section 3**.

Special Fire Protection Purpose

In accord with PBP, the proposed SFPP has been assessed in accordance with section 4.2.7 for Special Fire Protection Purpose (SFPP) developments.

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