

BUSHFIRE PROTECTION ASSESSMENT

**FOR THE PROPOSED WOOLWORTHS METRO
ON**

LOT 940 in DP 1265677

**No. 260 EIGHT AVENUE,
SOUTH AUSTRAL**

FOR WOOLWORTHS LIMITED

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Assessment Number	Document	Preparation Date	Issue Date	Directors Approval
B233995 - 1	Final	05.04.2023	13.06.2023	<i>G.L. Swain</i>

EXECUTIVE SUMMARY

Australian Bushfire Protection Planners Pty Limited, at the request of *Woolworths Limited*, has undertaken the bushfire consultancy for the proposed construction of the Woolworths Metro development on Lot 940 in DP 1265677, No. 260 Eight Avenue, South Austral.

The development site contains 1.92 hectares of land located to the south of the western terminus of Eight Avenue. The development site contains existing dwellings and associated buildings which will be demolished as part of the development proposal.

The land is zoned B1 Neighbourhood Centre under the Liverpool City Council LEP. The land to the east is also zoned B1 Neighbourhood Centre.

The land to the south, west and north of the site is zoned R3 Medium Density Residential with a parcel of SP2 Infrastructure Education Establishment located to the north of Eight Avenue.

Figure 1 – Land Use Zoning Map.



The development proposal seeks approval to construct a two-level complex which contains a Woolworths Supermarket and specialty shops on the lower level and commercial development on the upper level of the complex.

An at grade carparking is in the southern portion of the site and a delivery area in the western portion of the site.

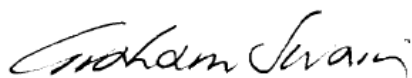
Vehicular access/egress to the complex is off a new west road, extending off Eight Avenue along the western side of the site.

The southern portion of the site is recorded, on the Liverpool Bushfire Prone Land Map, as containing an area of Category 3 Bushfire Prone Vegetation.

An area of Category 3 Bushfire Prone Vegetation is shown to occupy the land to the northwest of the site with the buffer zone to this vegetation extending into the northwest corner of the site.

The affection of the site by the Bushfire Prone Land Map triggers the provisions of Section 4.14 of the *Environmental Planning & Assessment Act 1979*.

This report examines the retail development proposal against the aim and objectives of *Planning for Bushfire Protection 2019* to address compliance with the provisions of Section 4.14 of the *Environmental Planning & Assessment Act 1979*.



Graham Swain,
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SECTION 1

INTRODUCTION

1.1 Aim of this Assessment.

The aim of this Bushfire Protection Assessment is to:

- Determine the formation of the vegetation within 140 metres of the development site;
- Undertake an assessment to determine the effective slope of the land on and surrounding the development site;
- Determine the Fire Danger Index [FDI] for the site;
- Undertake an assessment to determine bushfire protection strategies for the proposed development, including the bushfire protection measures required to be implemented in the design and construction of the retail development and the requisite bushfire protection measures required to address the safety of the staff and shoppers.
- Prepare a report that addresses the following matters:
 - (i) The provision of building setbacks (Defendable Space) from vegetated areas and the siting of building to minimize the impact of radiant heat and direct flame contact on the building;
 - (ii) Fire fighting water supplies;
 - (iii) Access requirements for emergency service vehicles;
 - (iv) Construction standards to be used for the proposed building to minimize the vulnerability of the complex to ignition from radiation and ember attack;
 - (v) Land management responsibilities; and
 - (vi) Evacuation management.

1.2 Development Proposal.

This Bushfire Protection Assessment has been prepared for the construction of two-level complex which contains a Woolworths Supermarket and specialty shops on the lower level and commercial development on the upper level of the complex.

An at grade carparking is in the southern portion of the site and a delivery area in the western portion of the site.

Public vehicular access/egress to the complex and carpark is off a new road along the western side of the site.

Figure 2 – Site Plan of Development Proposal.

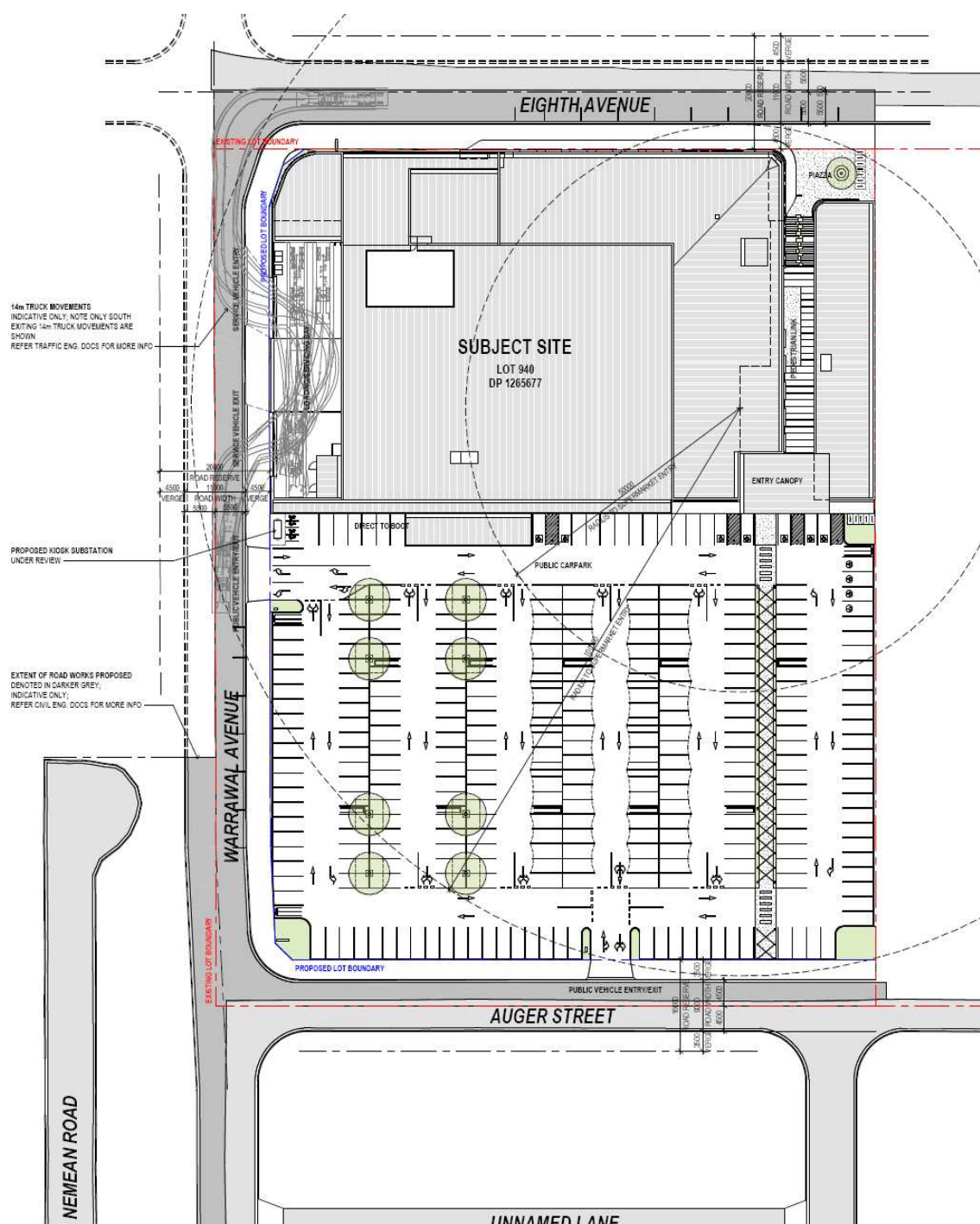


Figure 3 – Lower Ground Floor Plan of Building.

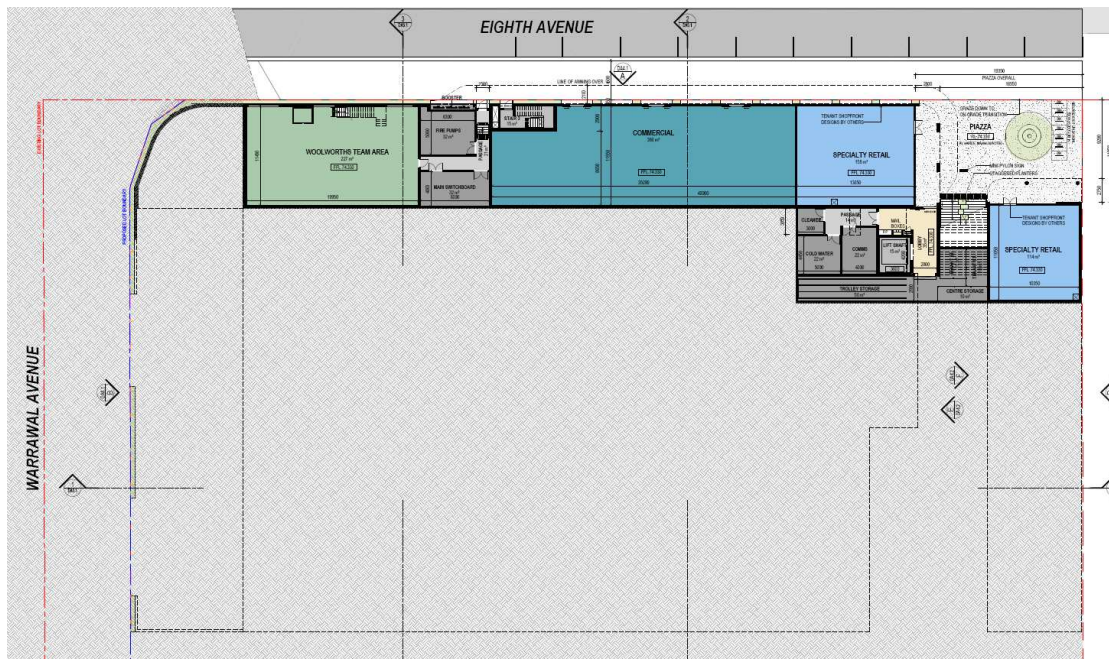
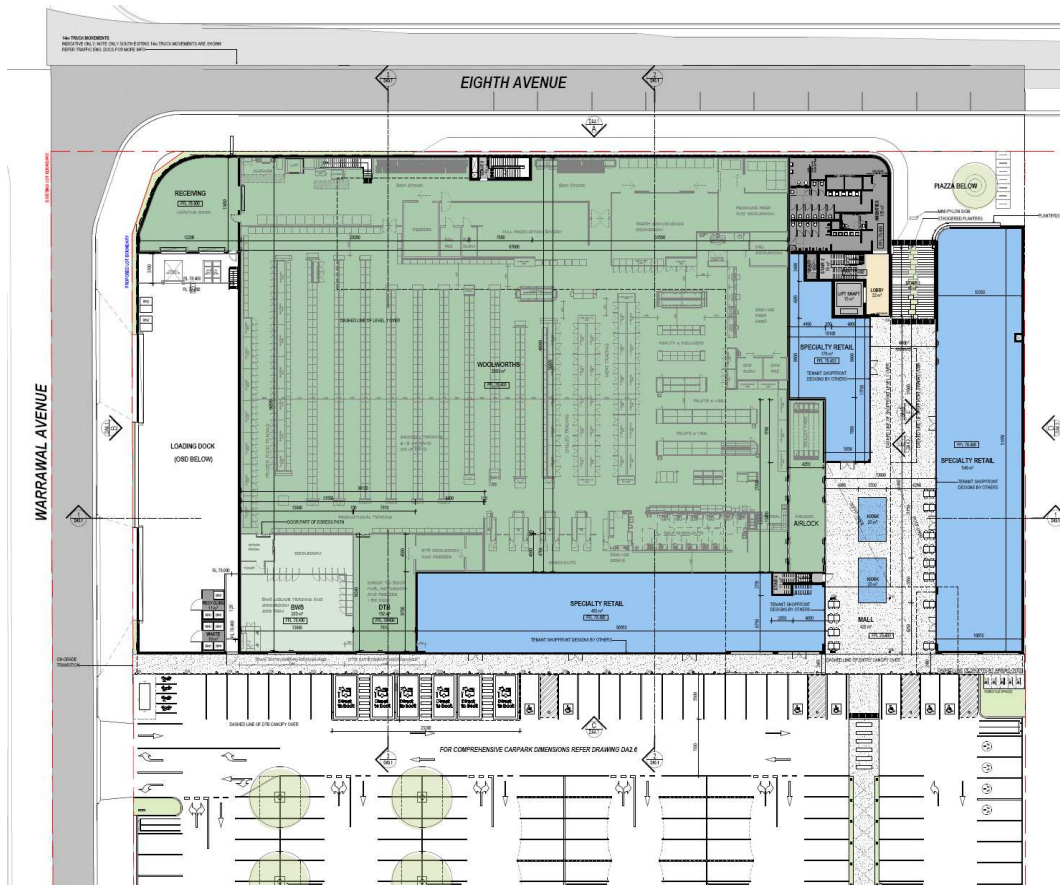


Figure 4 – Upper Ground Floor Plan of Building.



1.3 Statutory Requirements.

This report has been prepared having regard to the following legislative and planning requirements:

1.3.1 Legislation.

(a) Environmental Planning and Assessment Act (EPA Act)

Section 4.14 of the *Environmental Planning & Assessment Act 1979* states that development consent cannot be granted for the carrying out of development for any purpose on bushfire prone land unless the consent authority is satisfied that the development conforms to the specifications and requirements of *Planning for Bushfire Protection 2019* that are relevant to the development.

(b) Rural Fires Act 1997

The objectives of the *Rural Fires Act* are to provide:

- The prevention, mitigation and suppression of fires;
- Coordination of bushfire fighting and prevention
- Protection of people and property from fires; and
- Protection of the environment.

In relation to the management of bushfire fuels on public and private lands within NSW, Sections 63(1) and 63(2) require public authorities and owners / occupiers of land to take all practicable steps to prevent the occurrence of bushfires on, and to minimize the danger of the spread of bushfires.

1.3.2 Planning Policies.

Planning for Bushfire Protection – 2019 (Rural Fire Service).

Planning for Bushfire Protection 2019 provides specific deemed-to-satisfy provisions on the bushfire protection measures necessary for rural & residential subdivisions and the construction of “*Special Fire Protection Purpose Developments*” and the construction of Class 1, 2 and 3 buildings in Bushfire Prone areas.

Section 8.3.10 of *Planning for Bushfire Protection 2019* states that the bushfire protection measures for commercial and industrial development is addressed through the aim and objectives of PBP (Chapter 1) and a suitable package of bushfire protection measures should be provided commensurate with the assessed level of risk.

The provisions within Chapter 7 of *Planning for Bushfire Protection 2019* should be used as a base for the development of a package of measures.

The objectives of *Planning for Bushfire Protection 2019* are:

- (i) Afford occupants of any building adequate protection from exposure to a bushfire;
- (ii) Provide for a defensible space to be located around buildings;
- (iii) Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;
- (iv) Ensure that appropriate operational access and egress for emergency service personnel and residents is available;
- (v) Provide for ongoing management and maintenance of bushfire protection measures; and
- (vi) Ensure that utility services are adequate to meet the needs of fire-fighters.

Liverpool City Council, upon receipt of an application for the construction of the proposed retail development, will consider if the development complies with *Planning for Bushfire Protection 2019* or refer the matter to the NSW Rural Fire Service for advice.

1.4 Documentation reviewed in the preparation of this Assessment.

The following documents were reviewed in the preparation of this report:

- Site Plan of proposed Woolworth Metro development prepared by Clarke Hopkins Clark;
- Aerial Photograph of the development site and surrounding lands;
- Liverpool City Council Bushfire Prone Land Map;
- *Planning for Bushfire Protection 2019* prepared by the NSW Rural Fire Service;
- Australian Standard AS3959 - 2018 '*Construction of Buildings in Bushfire Prone Areas*'.

1.5 Site Review.

Graham Swain of *Australian Bushfire Protection Planners Pty Limited* undertook an inspection the site and surrounding areas on the 5th March 2023.

SECTION 2

PROPERTY DESCRIPTION

2.1 Location.

The property over which the proposed retail development is planned is known as Lot 940 in DP 1265677, No. 260 Eight Avenue, South Austral.

The development site occupies the rectangular shaped parcel of land on the southern side of the western terminus of Eight Avenue.

Figure 5 – Site Location Plan – Lot 940 in DP 126567, No. 260 Eight Avenue, Austral.



Figure 6 – Aerial Photograph showing location of Lot 940 in DP 1265677 in local context.



2.2 Existing Land Use.

The development site contains existing dwellings and associated buildings which will be demolished as part of the development proposal.

2.3 Surrounding Land Use.

(a) Northeast

The land to the northeast of Eight Avenue contains land which is being developed for Medium Density Residential Development and land that contains an existing rural residential landuse on land that is zoned for the establishment of the future school.

(b) Southeast

The land adjoining the south-eastern boundary of the development site is zoned B1 Neighbourhood Centre and contains an existing rural residential dwelling.

(c) Southwest

The land adjoining the south-western boundary of the development site forms part of a new residential subdivision.

(d) Northwest

The land adjoining the north-western boundary of the development site forms part of a new residential subdivision and an existing Market Garden.

(e) Northwest of the Northwest corner of the Development Site.

The land to the northwest of the western terminus of Eight Avenue contains a dwelling set amongst unmanaged woodland vegetation.

Most of this land is zoned for future Medium Density Residential Development – except for a small area of RE1 zoned land immediately adjacent to the terminus of Eight Avenue.

Refer to Figure 6 – Aerial photograph showing development site and surrounding land use on Page 12.

2.4 Topography.

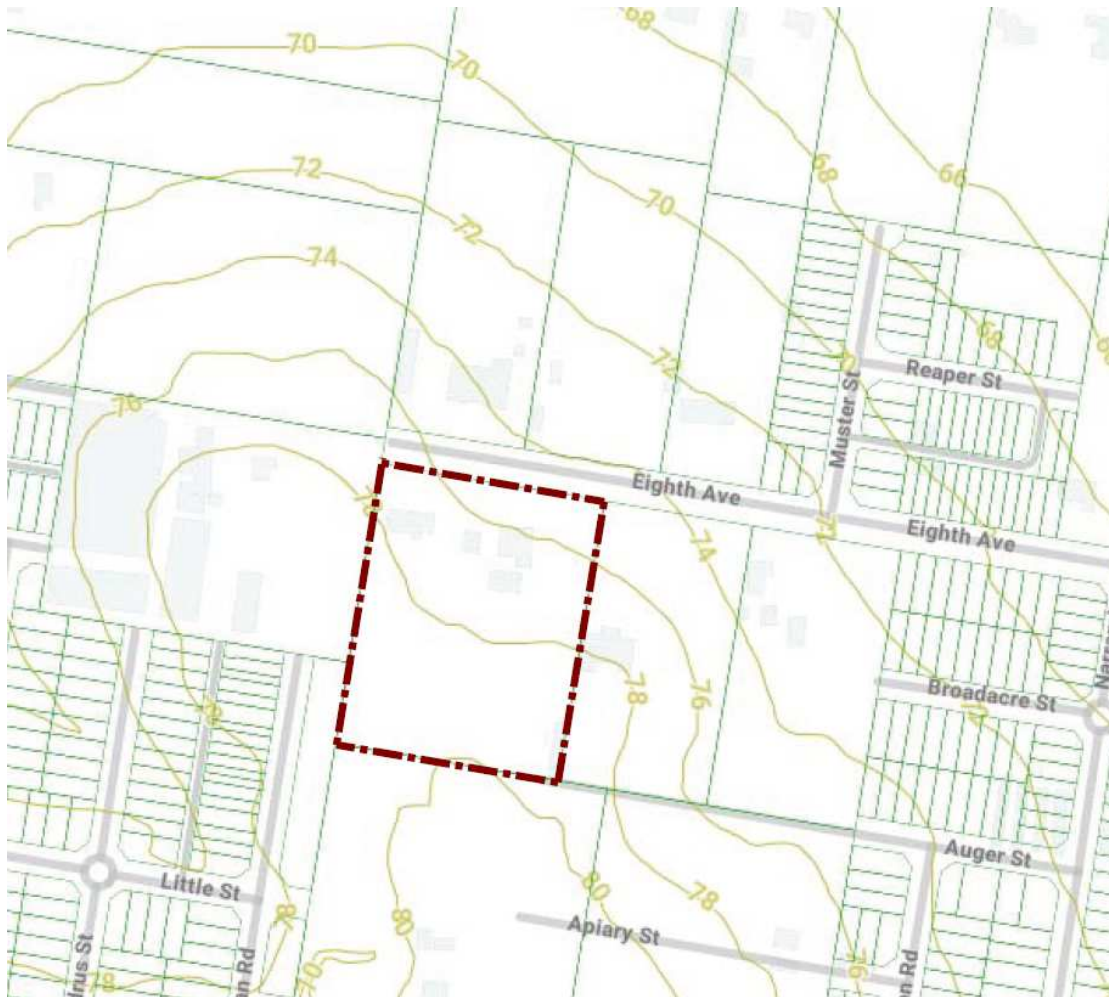
Appendix 2 of *Planning for Bushfire Protection 2019* states that slopes should be assessed, over a distance of at least 100m from a development site and that the gradient of the land should be determined which will most significantly influence the fire behaviour to the site.

The land within the south-western portion of the site forms the apex of a low ridgeline that extends from the southeast through to the northwest.

The north-eastern portion of the site falls to the northeast, extending to the northeast across Eight Avenue.

The land to the northwest and west of the site falls to the northwest and southwest.

Figure 7 – Contour Plan.



2.5 Vegetation within the Development Site.

Appendix A1.2 of *Planning for Bushfire Protection 2019* provides a methodology for determining the predominant bushfire prone vegetation for at least 140 metres in all directions from the development site.

Vegetation is classified using Figure A2.1 of *Planning for Bushfire Protection 2019*, which classifies vegetation types into the following groups:

- (a) Rainforest;
- (b) Wet Sclerophyll Forest;
- (c) Dry sclerophyll forest;
- (d) Woodland;
- (e) Tall Heath;
- (f) Short Heath; and
- (g) Grassland.

The vegetation within the development site consists of managed landscaped gardens and mown grass on the southern portion of the site.

2.6 Vegetation within 140 metres of Development Site.

Exception for the unmanaged woodland on the land to the northwest of the terminus of Eight Avenue, the surrounding properties do not contain unmanaged vegetation.

2.7 Significant Environmental Features within the Development Site.

The land within the development site does not contain Littoral Rainforests under SEPP Coastal Management 2018; land slip areas; National Parks Estate; areas of geological interest and steep lands [>18 degrees]; SEPP Koala Habitat Protection 2019 or riparian corridors.

2.8 Known Threatened Species, Population or Ecological Community within the Development Site.

There are no known threatened species, population or ecological communities within the development site.

2.9 Details and location of Aboriginal Relics or Aboriginal Place.

No Aboriginal relics or Aboriginal places are known to be located within the development site.

PRECINCT LEVEL ASSESSMENT

Figure 6 is a copy of an extract of the Certified Liverpool City Council Bushfire Prone Land Map showing the extent of the Bushfire Prone Vegetation on the development site and adjoining land.

The Category 3 Bushfire Prone Vegetation within the site has been removed leaving the only Bushfire Prone Vegetation on the land to the northwest of the terminus of Eight Avenue.

Future development of this land will remove most of the woodland vegetation on this land with the RE1 zoned land retaining a small area of woodland vegetation within 100 metres of the northwest corner of the site.

SECTION 4

BUSHFIRE PROTECTION ASSESSMENT

4.1 Introduction.

Chapter 1 of *Planning for Bushfire Protection 2019* states that the aim of the document is to provide for the protection of human life and minimise impacts on property from the threat of bushfire, while having regard to development potential, site characteristics and protection of the environment.

The objectives of the document are:

- (1) *Afford occupants of any building adequate protection from exposure to the impacts of a bushfire;*
- (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, prevent the likely fire spread to buildings;*
- (4) *Ensure that safe operational access/egress for emergency service personnel and occupants is available;*
- (5) *Provide for ongoing management and maintenance of bushfire protection measures;*
- (6) *Ensure that utility services are adequate to meet the needs of fire-fighters;*

Section 8.3.10 of *Planning for Bushfire Protection 2019* states that the bushfire protection measures for commercial and industrial development is addressed through the aim and objectives of PBP (Chapter 1) and a suitable package of bushfire protection measures should be provided commensurate with the assessed level of risk.

The provisions within Chapter 7 of *Planning for Bushfire Protection 2019* should be used as a base for the development of a package of measures

A review of compliance with objectives of *Planning for Bushfire Protection 2019* is provided in the following sections.

4.2 Afford occupants of any building adequate protection from exposure to the impacts of a bushfire.

The bushfire hazard to the proposed retail building is from the woodland vegetation on the land to the northwest of the terminus of Eight Avenue.

The width of the woodland vegetation within the RE1 zoned land is 30 metres, with the land under the vegetation falling to the northwest at less than three (3) degrees.

The available 25 metre wide separation of the building, from the woodland vegetation within the RE1 zoned land, affords the staff and shoppers adequate protection from exposure to a bushfire which may occur in the low hazard vegetation on the land to the northwest of the site.

No other aspects to the site contain vegetation which presents a bushfire hazard to the proposed complex.

4.3 Provide for a defensible space to be located around buildings.

A Defendable Space [Asset Protection Zone] of 25 metres is provided between the bushfire hazard on the RE1 zoned land to the northwest of the site and the proposed building.

4.4 Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition.

A Defendable Space of more than 25 metres is provided between the building and the low-level hazard on the land within the RE1 zoned land to the northwest of the site.

This separation removes the likelihood of flame contact on the building from the northwest.

Due to the low level of risk from a bushfire occurrence in the RE1 zoned parcel of land the application of bushfire construction standards to satisfy the requirements of A.S. 3959 – 2018 – ‘*Construction of Building in Bushfire Prone Areas*’ is not required.

4.5 Ensure that safe operational access/egress for emergency service personnel is available.

4.5.1 Public Roads:

The development site has frontage to Eight Avenue with vehicular access to the building and carpark via the new ‘west road’.

Eight Avenue is constructed to a standard which conforms to the deemed-to-satisfy specifications for Public Roads as defined by Appendix 3 of *Planning for Bushfire Protection 2019*.

The new west road will be constructed to provide a two-way pavement width of 12 metres, therefore complying with the access requirements of *Planning for Bushfire Protection 2019*.

4.5.2 Fire Trail Access.

There are no fire trails provided or required within the development proposal.

4.5.3 Emergency Response Access / Egress.

The development proposal provides for vehicular access/egress off the new west road into the open Carparking area in the southern portion of the site.

The carpark and loading area will not be subject to bushfire risk.

The truck access to the loading Dock is also provided off the new west road.

The emergency access/egress within the development provides safe operational access for emergency service personnel and customers/staff of the retail development and satisfies item (iv) of the Objectives of *Planning for Bushfire Protection 2019*.

4.6 Provide for ongoing management and maintenance of bushfire protection measures.

There are no bushfire protection measures required to be applied to the proposed development.

4.7 Ensure that utility services are adequate to meet the needs of fire-fighters.

The proposed retail development will have a reticulated water supply connected to the Sydney Water Supply mains, located in Eight Avenue.

The fire fighting system to the development will include a fire main with Booster Valves and sprinklers/hydrants installed in compliance with A.S. 2419.1 – 2021.

4.8 Emergency Management for Bushfire Fire Protection / Evacuation.

There is no requirement for the preparation of a Bushfire and Emergency Evacuation Plan for the development.

SECTION 5

RECOMMENDATIONS

Recommendation 1:

Management of Landscaped Gardens:

The landscape gardens within the development site shall be maintained as an Inner Protection Area in accordance with Appendix 4 of *Planning for Bushfire Protection 2019* and the NSW Rural Fire Service's "*Standards for Asset Protection Zones*".

SECTION 6

CONCLUSION

Australian Bushfire Protection Planners Pty Limited, at the request of *Woolworths Limited*, has undertaken the bushfire consultancy on the proposed retail development on Lot 940 in DP 1265677, No. 260 Eight Avenue, South Austral.

The development proposal seeks approval to construct a two-storey building which contains a Woolworths Supermarket, specialty retail shops and Commercial space.

This report examines the extent of the bushfire prone vegetation adjacent to and within the development site and confirms that the proposed retail development has exposure to a low level of risk from a bushfire that may occur in the RE1 zoned land to the northwest of the site.

This exposure does not trigger the need to apply bushfire protection measures to the proposed building.

The safety of the staff and customers will not be compromised by the low level of bushfire risk.



Graham Swain,
Managing Director,
Australian Bushfire Protection Planners Pty Limited.

Fire Protection Association Australia Member No 48781

REFERENCES:

- N.S.W Rural Fire Service – *Planning for Bushfire Protection 2019*;
- *Environmental Planning & Assessment Act – 1979*;
- *Rural Fires Act – 1997*;
- NSW Rural Fire Service – *Guideline for Bushfire Prone Land Mapping 2006*;
- Building Code of Australia;
- Australian Standard A.S 3959-2018 “*Construction of Buildings in Bushfire Prone Areas*”;
- *Liverpool City Bushfire Prone Land Map*.