

**BUSHFIRE PROTECTION ASSESSMENT
FOR THE PROPOSED SUBDIVISION OF
LOT 1 in DP 121046 & LOT 20 in DP 712018,
No. 247 ST ANDREWS ROAD,
VAROVILLE**



ABPP

Australian Bushfire
Protection Planners Pty Ltd
ABN 48 935534 462

Bushfire Mitigation Consultants

AUSTRALIAN BUSHFIRE PROTECTION PLANNERS PTY LTD
32 Old Dog Trap Road, Somersby NSW 2250
Tel. 612 43622112 / 612 43621184 Mob. 0427 622204
Email. abpp@bigpond.net.au

BUSHFIRE PROTECTION ASSESSMENT

FOR THE PROPOSED SUBDIVISION OF

LOT 1 in DP 121046

&

LOT 20 in DP 712018

**No. 247 ST ANDREWS ROAD,
VAROVILLE**

Report Number	Document	Preparation Date	Issue Date	Directors Approval
B213750	Final	05.04.2022	07.04.2022	<i>G.L.Swain</i>

EXECUTIVE SUMMARY

Australian Bushfire Protection Planners Pty Limited has been commissioned by *Innova Capital* to prepare a report to provide advice on the bushfire protection measures required for the proposed paper subdivision of land within Lot 1 in DP 121046 and Lot 20 in DP 712018, No. 247 St Andrews Road, Varoville.

The land parcel known as Lot 1 in DP 121046 and Lot 20 in DP 712018 consists of 143.36 hectares of land located to the west of St Andrews Road and contains the following existing development:

- Carmel House (MGL Sisters);
- Mount Carmel Retreat Centre;
- Our Lady of Mount Carmel Catholic Church; and
- Mount Carmel Catholic College.

The development proposal amalgamates Lot 1 in DP 121046 and Lot 20 in DP 712018 and subdivides the amalgamated parcel into:

- Lot 10, which contains the existing Carmel House (MGL Sisters);
- Lot 11, which contains the existing Our Lady of Mount Carmel Catholic Church and Preschool;
- Lot 12, which contains the existing Mount Carmel Catholic College; and
- Lot 13, which contains the existing Mount Carmel Retreat Centre.

The subdivision proposal also includes the establishment of Asset Protection Zones to the existing buildings within proposed Lot 11 (Our Lady of Mount Carmel Catholic Church and Preschool) and proposed Lot 12 (Mount Carmel Catholic College).

The subdivision proposal does not include the construction of new buildings, establishment of new roads or the provision of ancillary services such as electrical and water supplies as these are already provided.

An examination of the Campbelltown Bushfire Prone Land Map identified that the development site contains Category 3 Bushfire Prone vegetation with a small area of Category 1 Bushfire Prone Vegetation on the land occupied by Carmel House (MGL Sisters).

The Development Application to subdivide the land is therefore deemed to be integrated development pursuant to Section 4.46 & 4.47 of the *Environmental Planning & Assessment Act 1979* and requires the issue of a Bushfire Safety Authority under Section 100B of the Rural Fires Act 1997.



This report examines the potential bushfire risk to the existing buildings/complexes on the site and provides recommendations on the provision of Asset Protection Zones and fuel management measures necessary to reduce the potential bushfire risk.

Graham Swain, Managing Director

Australian Bushfire Protection Planners Pty Limited
FPA Member: 48781

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SECTION 1

INTRODUCTION

1.1 Aim of this Assessment.

The aim of this Bushfire Protection Assessment is to examine the paper subdivision of Lot 1 in DP 121046 and Lot 20 in DP 712018, No 247 St Andrews Road Varoville and provide recommendations on the provisions of bushfire protection measures to the existing buildings.

1.2 Statutory Requirements.

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

1.2.1 Legislation.

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

Planning and development within NSW is regulated by the *Environmental Planning & Assessment Act, 1997* (EPA Act).

Section 4.46 defines the subdivision of Bushfire Prone Land as integrated development, which requires, under Section 4.47 of the Act a consent authority, before granting consent, to obtain from the NSW Rural Fire Service the general terms of approval under Section 100B of the *Rural Fires Act 1997*.

(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 subdivision of bushfire prone land Section 100B of the Act applies and provides for the issue, by the Commissioner of the NSW Rural Fire Service, of a Bushfire Safety Authority.

Application for a Bushfire Safety Authority [for the proposed subdivision of the land] must be lodged as part of the development application process and must demonstrate compliance with *Planning for Bushfire Protection 2019* and other matters which are considered necessary, by the Commissioner, to protect persons, property and the environment from the impact of bushfire.

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.

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.

(c) Rural Fires Regulation 2013.

Section 44 of the *Rural Fires Regulation 2013* relates to planning for new residential, rural residential and special fire protection developments in bushfire prone areas in NSW and provides details of the matters that are required to be addressed for the issue of a *Bushfire Safety Authority* under Section 100B of the *Rural Fires Act*.

1.2.2 Planning Policies.

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

This document provides guidance on the planning and development control processes in relation to bushfire protection measures for rural residential and residential subdivision, “*Special Fire Protection*” and Class 5 – 8 and 10 buildings in bushfire prone areas.

1.3 Documentation Reviewed.

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

- Plans of proposed subdivision of Lot 1 in DP 121046 and Lot 20 in DP 712018 prepared by Premise – Project No. 321387, Sheets DS01, DS02 & DS03 Dated 18.11.2021;
- *Planning for Bushfire Protection 2019* prepared by the NSW Rural Fire Service;
- Australian Standard A.S. 3959 – 2018 – ‘*Construction of Buildings in Bushfire Prone Areas*’

1.4 Site Inspection.

Graham Swain of ***Australian Bushfire Protection Planners Pty Limited*** inspected the development site on the 15th of September 2021 to assess the topography, gradients of the land within and external to the site and vegetation classification within and adjoining the development property, existing bushfire mitigation measures and a visual assessment of bushfire threat.

The land adjoining the development site was also inspected to determine the surrounding land use / land management practices and extent of bushfire prone vegetation.

1.5 Development Proposal.

This report has been prepared to support a four lot paper subdivision of Lot 1 in DP 121046 and Lot 20 in DP 712018, No. 247 St Andrews Road, Varoville.

Figure 1 – Plan of proposed four lot paper subdivision of Lot 1 in DP 121046 and Lot 20 in DP 712018.



- | | |
|---|--|
| (A) EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE (DP117936) | (E) EASEMENT FOR ENERGY TRANSMISSION LINE 60 WIDE (VIDE A08075321) |
| (B) RESTRICTION ON USE OF LAND (DP117936) | (F) EASEMENT FOR WATER PIPELINE 2.44 WIDE (VIDE H95297) MWS&DB |
| (C) EASEMENT FOR UNDERGROUND CABLES 1 WIDE (DP117936) | (G) EASEMENT 6.095 WIDE (VIDE DP222267) |
| (D) EASEMENT FOR OVERHEAD POWERLINES 9 WIDE (DP117936) | (H) RESTRICTION ON THE USED OF LAND 50 WIDE & VARIABLE |

1.6 Location & Description of Development Site.

Lot 1 in DP 121046 and Lot 20 in DP 712018 consists of 143.36 hectares of land located to the west of St Andrews Road and contains the following existing development - Carmel House (MGL Sisters); Mount Carmel Retreat Centre; Our Lady of Mount Carmel Catholic Church and the Mount Carmel Catholic College.

Figure 2 – Aerial Photograph showing the location of Development Site.



1.7 Topography of the Land within the Development Site.

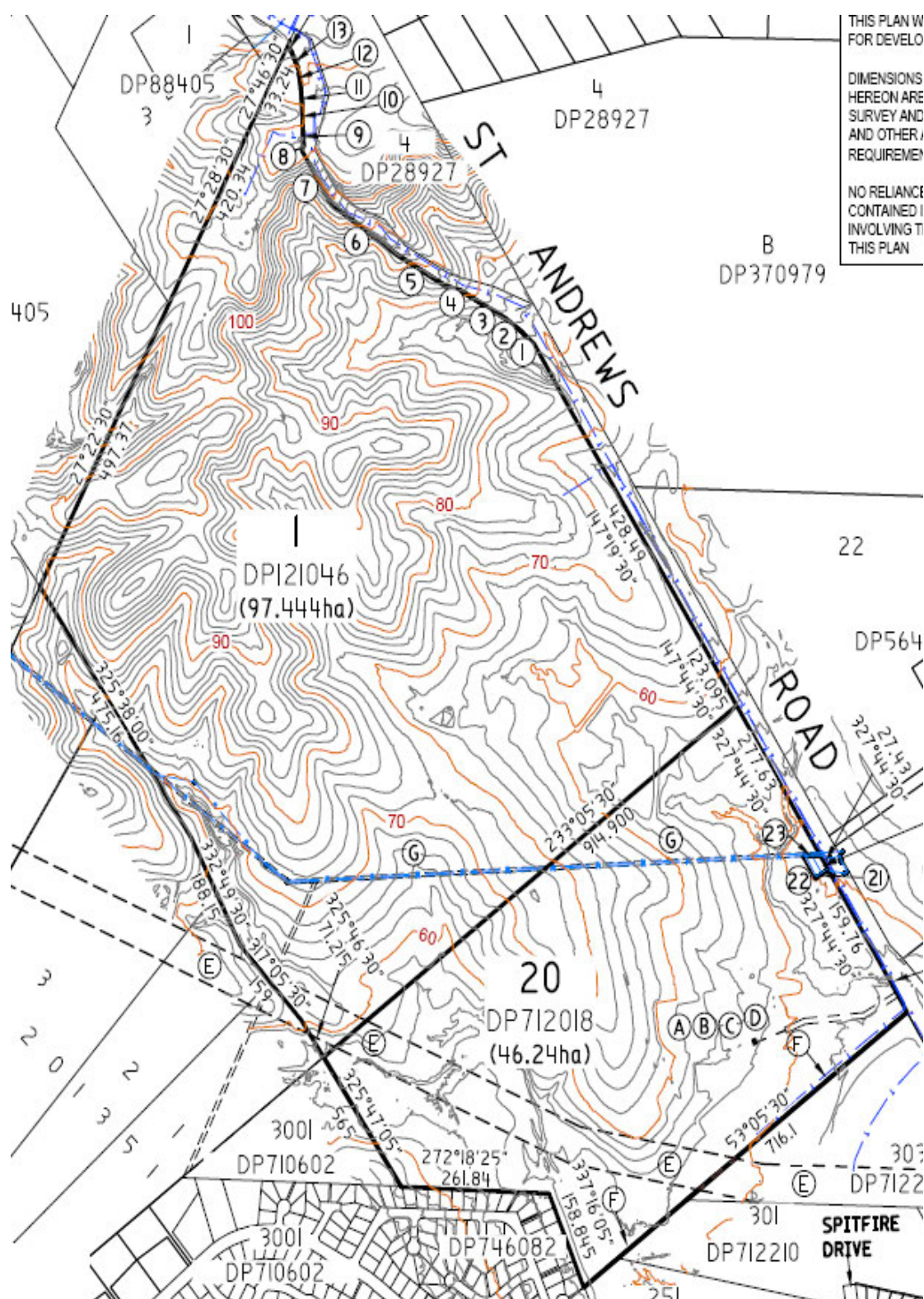
The land within the development site forms the eastern face of a ridgeline that rises to the northwest from RL 40 metres AHD at the eastern portion of the site to RL 130 metres AHD at the northern corner of the site.

A number of watercourses form the undulating landform within the site

Figure 3 – Topographic Map of the Development Site.



Figure 4 – Survey Contour Plan of the Development Site.



1.8 Vegetation Communities on the land within the Development Site.

Vegetation is classified using Figure A1.2 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 predominantly consists of grassland with areas of woodland. The northern corner of the site contains forest vegetation along the site boundary, extending to the west and south of the existing Carmel House (MGL) development precinct.

Figure 5 – Aerial Photograph of Site.



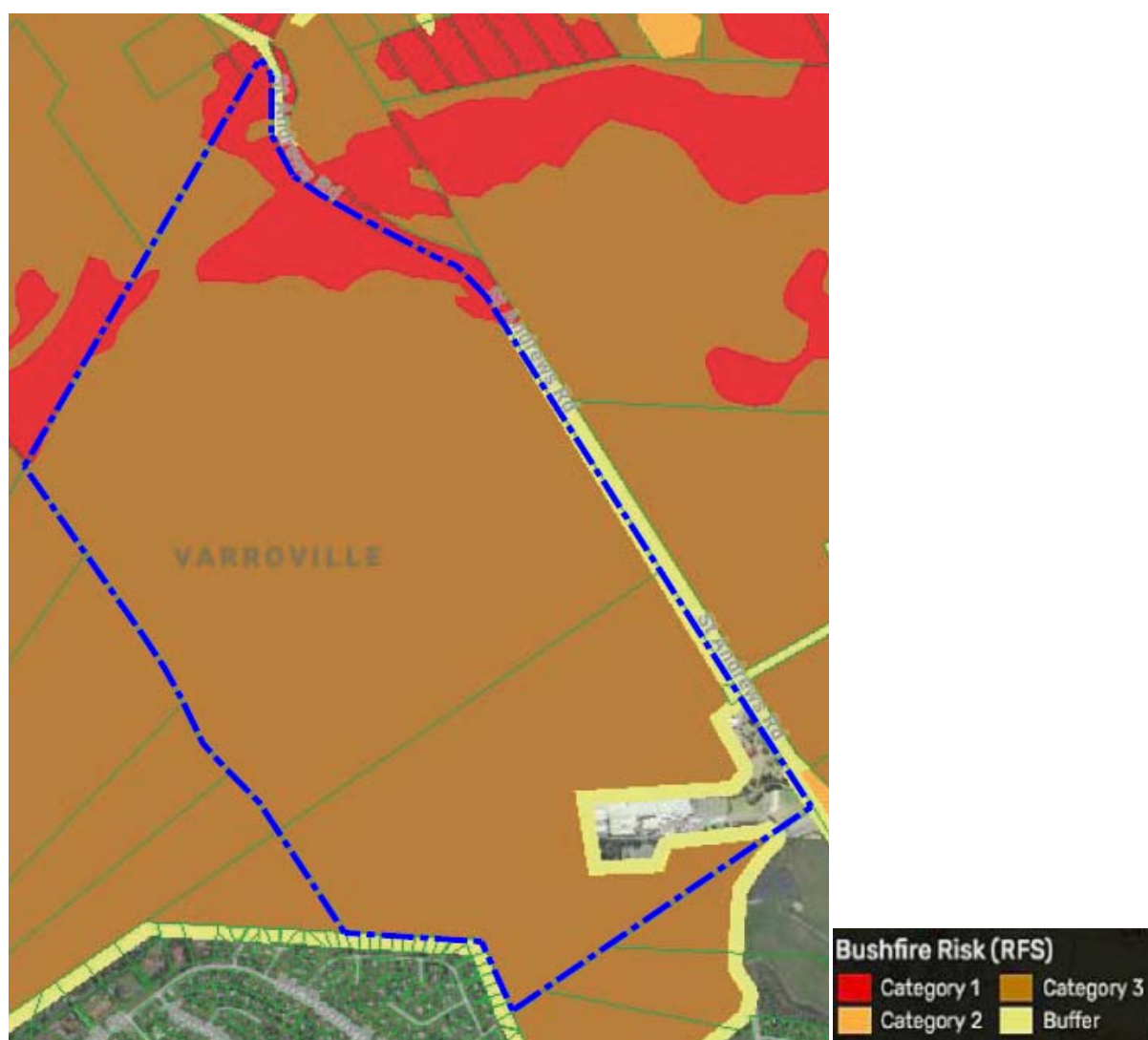
SECTION 2

BUSHFIRE HAZARD ASSESSMENT

2.1 Certified Bushfire Prone Land Map.

Section 10.3 of the *Environmental Planning & Assessment Act 1979* requires councils, where a Bushfire Risk Management Plan applies, to prepare a Bushfire Prone Land Map in consultation with the Commissioner of the NSW Rural Fire Service. The Commissioner will designate lands to be Bushfire Prone within an area and, when satisfied that the lands have been recorded on a map, will certify the map as a Bushfire Prone Land Map for the purposes of this or any other Act.

Figure 6 – Extract from the Campbelltown Bushfire Prone Land Map.



The Campbelltown BFPLM map records the site as containing Category 3 Bushfire Prone Vegetation with a small area of Category 1 Bushfire Prone Vegetation located in the northern corner of the site.

SECTION 3

BUSHFIRE PROTECTION ASSESSMENT

3.1 Introduction.

The development proposal seeks approval for the three lot paper subdivision of Lot 1 in DP 121046 and Lot 20 in DP 712018.

Proposed Lot 10 is located in the northern portion of the site and contains the existing Carmel House (MGL) complex – refer to Figure 7 – Aerial Photograph of Carmel House (MGL) complex.

Figure 7 – Aerial Photograph of proposed Lot 10 and the Carmel House (MGL) complex.



Proposed Lot 13 is located in the central portion of the site and contains the existing Mount Carmel Retreat Centre complex – refer to Figure 8 – Aerial Photograph of Carmel House (MGL) complex.

Figure 8 – Aerial Photograph of proposed Lot 13 and the Mount Carmel Retreat Centre complex.



Proposed Lot 11 is located in the southeast corner of the site and contains the existing Our Lady of Mount Carmel Catholic Church and Childcare Centre – refer to Figure 9 – Aerial Photograph of proposed Lot 11 and the Mount Carmel Catholic Church and Childcare Centre.

Figure 9 – Aerial Photograph of proposed Lot 11 and the Mount Carmel Catholic Church and Childcare Centre.



Proposed Lot 12 is located in the southeast corner of the site and contains the existing Mount Carmel Catholic College – refer to Figure 10 – Aerial Photograph of proposed Lot 12 and the Mount Carmel Catholic College.

Figure 10 – Aerial Photograph of proposed Lot 12 and the Mount Carmel Catholic College.



3.2 The provision of Bushfire Protection Measures to the existing Buildings.

The subdivision proposal does not include modification to the existing buildings or the erection of new assets.

An assessment of the bushfire risk to the existing buildings on the site was undertaken during the site inspection and recommendations made on the establishment and management of bushfire protection zones (BPZs) to the existing buildings. These recommendations are shown on the following figures.

3.2.1 Bushfire Protection Measures to the existing Carmel House Buildings on proposed Lot 10.

The subdivision proposal for proposed Lot 10 includes the establishment and management of the land within the lot as an Asset Protection Zone – refer to Figure 11.

Figure 11 – Aerial Photograph of proposed Lot 10 and the Asset Protection Zones to the Carmel House (MGL) complex.



The Asset Protection Zone shall be managed as an Inner Protection Area (IPA) in accordance with Appendix 4 of *Planning for Bushfire Protection 2019*.

An Easement is to be establishment on the title of proposed Lot 10 for the establishment and management of the Asset Protection Zone.

A draft copy of the Terms of the Easement is provided below.

Instrument setting out terms of Easements or Profits à Prendre intended to be created or released and of Restrictions on the Use of Land or Positive Covenants intended to be created pursuant to Sections 88B and 88E Conveyancing Act 1919

(Sheet 1 of 4)

Plan

Plan of Subdivision of Lot 1 in Deposited Plan 121046 and Lot 20 in Deposited Plan 712018 covered by Subdivision Certificate No. Dated:

Full name and address of the owners of the land

The Trustees of the Discalced Carmelite Fathers
247 St Andrews Road
Varroville NSW 2566

Part 1 (Creation)

Number of item shown in the intention panel on the plan.	Identity of easement, profit à prendre, restriction or positive covenant to be created and referred to in the plan.	Burdened lot(s) or parcel(s).	Benefited lot(s), road(s), bodies or Prescribed Authorities.
1	Restriction on the Use of Land	Lot 10	Campbelltown City Council
2	Restriction on the Use of Land	Part of Lot 13 designated 'H' on the Plan	Lots 11 & 12

Part 2 (Terms)

1. Terms of the Restriction on the Use of Land numbered 1 in the plan.

Lot 10 shall be managed as an inner protection area as set out in 'Planning for Bush Fire Protection 2019'.

Name of authority empowered to release, vary or modify the restriction numbered 1 in the plan.

Campbelltown City Council. The cost and expense of any release, variation or modification shall be borne by the person or corporation requesting the release, variation or modification.

The restriction may be released, varied or modified upon the removal of the hazard as part of any future development of Lot 13.

Note: The site inspection confirmed that works are required to address ember protection to the existing buildings.

3.2.2 Bushfire Protection Measures to the existing Mount Carmel Retreat Centre Buildings on proposed Lot 13.

The subdivision proposal for proposed Lot 13 includes the establishment and management of the land surrounding the existing complex as a Defendable.

Figure 12 – Aerial Photograph of proposed Lot 13 and the Defendable Space to the Mount Carmel Retreat Centre.



The Defendable Space within the immediate curtilage to the buildings shall be maintained by mowing or slashing.

The Fuel Managed Zone shall be slashed and/or grazed to maintain a maximum 100mm grass height during the Bushfire Danger Period.

The site inspection confirmed that works are required to address ember protection to the existing buildings.

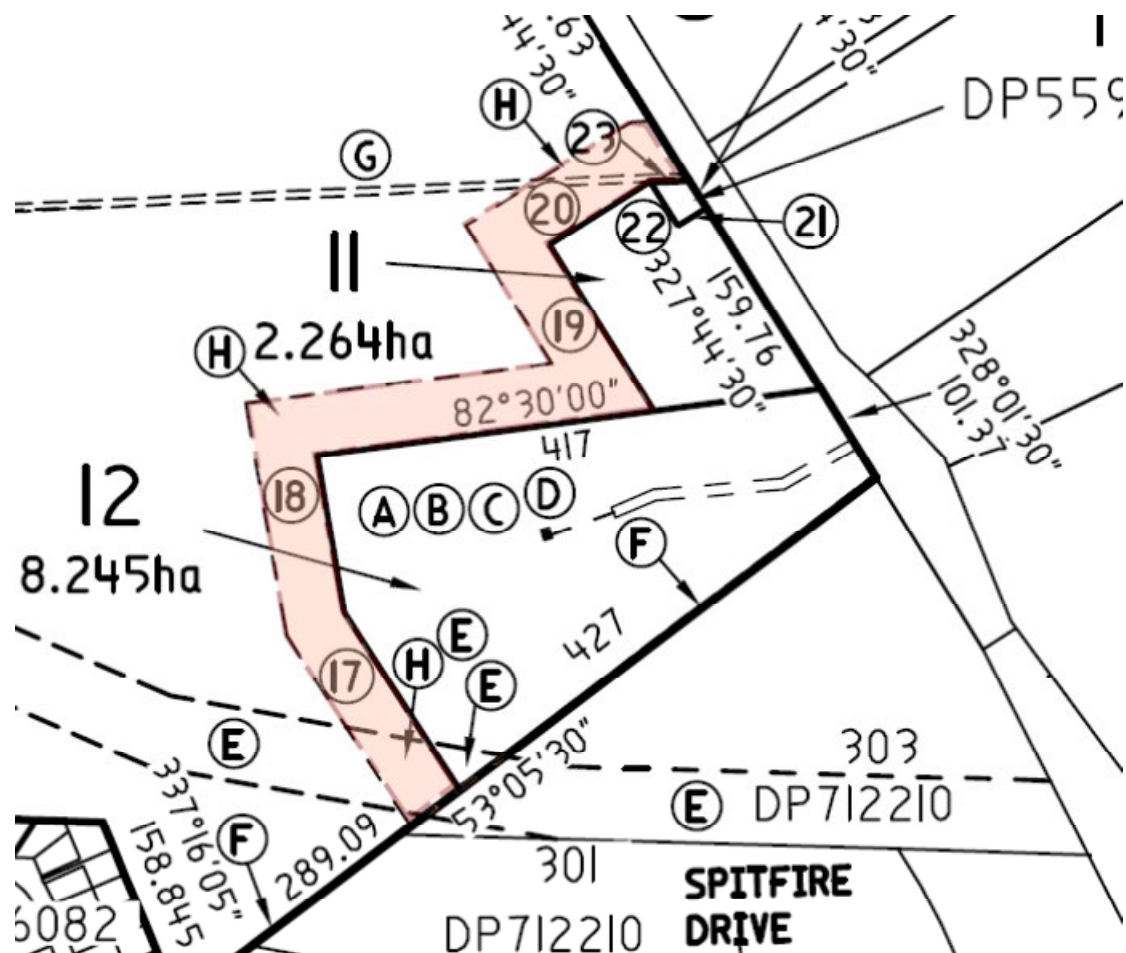
3.2.3 Bushfire Protection Measures to the existing Mount Carmel Retreat Centre Buildings on proposed Lot 13.

The subdivision proposal creates proposed Lot 11 and Lot 12, located in the southeast corner of the site.

Proposed Lot 11 contains the existing Our Lady of Carmel Catholic Church and proposed Lot 12 contains the existing Mount Carmel Catholic College.

The subdivision proposal includes the provision of designated 50 metre wide Asset Protection Zone within proposed Lot 13 so as to provide protection to the existing assets within proposed Lot 11 & 12 – refer to Figure 13.

Figure 13 – Subdivision Plan of proposed Lot 11 & 12 showing the proposed 50 metre wide Asset Protection Zone to the existing Church and Childcare Centre on proposed Lot 11 and the existing Mount Carmel Catholic College on proposed Lot 12.



The Asset Protection Zone shall be managed as an Inner Protection Area (IPA) in accordance with Appendix 4 of *Planning for Bushfire Protection 2019*.

An Easement is to be establishment on the title of proposed Lot 13 for the establishment and management of the Asset Protection Zone.

A draft copy of the Terms of the Easement is provided below.

Instrument setting out terms of Easements or Profits à Prendre intended to be created or released and of Restrictions on the Use of Land or Positive Covenants intended to be created pursuant to Sections 88B and 88E Conveyancing Act 1919

(Sheet 1 of 4)

Plan

Plan of Subdivision of Lot 1 in Deposited Plan 121046 and Lot 20 in Deposited Plan 712018 covered by Subdivision Certificate No. Dated:

Full name and address of the owners of the land

The Trustees of the Discaiced Carmelite Fathers
247 St Andrews Road
Varroville NSW 2566

Part 1 (Creation)

Number of item shown in the intention panel on the plan.	Identity of easement, profit à prendre, restriction or positive covenant to be created and referred to in the plan.	Burdened lot(s) or parcel(s).	Benefited lot(s), road(s), bodies or Prescribed Authorities.
1	Restriction on the Use of Land	Lot 10	Campbelltown City Council
2	Restriction on the Use of Land	Part of Lot 13 designated 'H' on the Plan	Lots 11 & 12

Part 2 (Terms)

1. Terms of the Restriction on the Use of Land numbered 1 in the plan.

Lot 10 shall be managed as an inner protection area as set out in 'Planning for Bush Fire Protection 2019'.

Name of authority empowered to release, vary or modify the restriction numbered 1 in the plan.

Campbelltown City Council. The cost and expense of any release, variation or modification shall be borne by the person or corporation requesting the release, variation or modification.

The restriction may be released, varied or modified upon the removal of the hazard as part of any future development of Lot 13.

2. Terms of the Restriction on the Use of Land numbered 2 in the plan.

The land within an area designated 'H' be managed as an inner protection area as set out in 'Planning for Bush Fire Protection 2019'.

Instrument setting out terms of Easements or Profits à Prendre intended to be created or released and of Restrictions on the Use of Land or Positive Covenants intended to be created pursuant to Sections 88B and 88E Conveyancing Act 1919

(Sheet 2 of 4)

Plan	Plan of Subdivision of Lot 1 in Deposited Plan 121046 and Lot 20 in Deposited Plan 712018 covered by Subdivision Certificate No. _____ Dated: _____
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The owners of the lots benefited may:

- (a) at the expiration of at least one week's notice served on the owner or occupier of the lot burdened, access the area designated "H" for the purpose of maintaining that area as an inner protection area as set out in 'Planning for Bush Fire Protection 2019',
- (b) do anything reasonably necessary for that purpose, including:
 - entering the lot burdened, and
 - taking anything on to the lot burdened.

In exercising those powers, the owners of the lots benefited must:

- (a) ensure all work on the area designated "H" is done properly and carried out as quickly as is practicable, and
- (b) cause as little inconvenience as is practicable to the owner and any occupier of the lot burdened, and
- (c) cause as little damage as is practicable to the lot burdened and any improvement on it,
- (d) restore the lot burdened as nearly as is practicable to its former condition, and
- (e) make good any collateral damage.

Name of authority empowered to release, vary or modify the restriction numbered 2 in the plan.

Campbelltown City Council. The cost and expense of any release, variation or modification shall be borne by the person or corporation requesting the release, variation or modification.

The restriction may be released, varied or modified upon the removal of the hazard as part of any future development of Lot 13.

3.3 Construction Measures to the existing buildings.

An inspection of the buildings within the Carmel House (MGL) and the Mount Carmel Retreat Centre confirmed that most of the existing buildings were constructed prior to the requirement to protect against ember attack.

It is recommended that measures should be undertaken to provide ember protection to the buildings. Some of the measures identified include:

1. Protection of openings in the wall vents and eaves to Carmel House;
2. Ember protection to the roller doors to the new garages within the Mount Carmel Retreat Centre;
3. Ember protection to the weep-holes and weather seals to the external doors within the Mount Carmel Retreat Centre;
4. Fitting of ember mesh flyscreens to windows to Carmel House and the Mount Carmel Retreat Centre.

The bushfire risk to the buildings on Proposed Lot 11 and Lot 12 is from a fire in the surrounding grassland vegetation.

The provision of the recommended 50 metre wide Asset Protection Zone on proposed Lot 13 mitigates the hazard and therefore no additional ember protection is required to these buildings.

3.4 Access Standards for Firefighting Operations.

The existing road network to the facilities on the site, combined with farm tracks within the grazing paddocks, provides suitable access for fire-fighting operations.

Consideration to the addition of a 4m wide compacted gravel fire access link from the Carmel House driveway, extending to the east of the buildings to the southern corner of proposed Lot 10, complete with a 'Y' turning head adjacent to the Meditation Hut.

3.5 Water Supplies for Firefighting Operations.

A reticulated water supply is provided to each of the facilities within the site.

No additional fire-fighting water supplies are required.

3.6 Emergency Management for Fire Protection / Evacuation.

Each of the facilities shall prepare a specific Bushfire Evacuation Plan.

The Evacuation Plan shall address the protocols for the timely relocation of occupants in the event that an emergency occurs, both within the site or within the local area.

The Evacuation Plan shall comply with AS 3745:2010 *"Planning for Emergencies in Facilities"*.

A copy of the Evacuation Plan shall be provided to the Local Emergency Management Committee/Police, Fire & Rescue NSW and NSW Rural Fire Service.

SECTION 4

CONCLUSION

The proposed development seeks approval for the four lot paper subdivision of Lot 1 in DP121046 and Lot 20 in DP 712018, No. 247 St Andrews Road, Varoville.

The subdivision proposal separates the four individual landuses on the site into four separate lots.

This report examines the hazard to the existing facilities and provides recommendations on the application of a suite of bushfire protection measures including Asset Protection Zones and the provision of ember protection to the existing buildings.

This report has examined:

- The provision of Asset Protection Zones to the existing buildings;
- Ember protection to the existing buildings on proposed Lot 10 and Lot 13;
- Access and water supply provisions for fire-fighting operations;
- Management of the fire protection measures, including the Asset Protection Zones; and
- Emergency management [evacuation] planning.

Graham Swain, Managing Director,
Australian Bushfire Protection Planners Pty Limited.
Fire Protection Association Australia Member No 4878



REFERENCES:

- N.S.W Rural Fire Service – *Planning for Bushfire Protection 2019*;
- *Environmental Planning & Assessment Act – 1979*;
- *Rural Fires Act – 1997*;
- *Rural Fires Regulation 2013*;
- NSW Rural Fire Service – *Guideline for Bushfire Prone Land Mapping 2015*;
- *Bushfire Environmental Assessment Code 2019*;
- Building Code of Australia;
- Australian Standard A.S. 3959-2018 “*Construction of Buildings in Bushfire Prone Areas*”;
- *Campbelltown Bushfire Prone Land Map*.