

BUSHFIRE PROTECTION ASSESSMENT

FOR THE

PROPOSED REZONING

OF THE NORTH WYONG INDUSTRIAL PRECINCT

FOR

MACROPLANDIMASI

April 2012.



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Assessment Number	Document	Preparation Date	Issue Date	Directors Approval
B121738	Final	1.4.2012	4.4.2012	<i>G.L. Swain</i>

EXECUTIVE SUMMARY

Australian Bushfire Protection Planners Pty Limited, at the request of *MacroPlanDimasi*, has undertaken the bushfire consultancy to inform the Planning Proposal to amend the Wyong Local Environment Plan [LEP] to rezone land within the North Wyong Industrial Precinct to B6 Enterprise Corridor.

The draft land use table is currently as follows:

1. Objectives of zone:

- To promote businesses along main roads and to encourage a mix of compatible uses;
- To provide a range of employment uses (including business, office, retail and light industrial uses);
- To maintain the economic strength of centres by limiting retailing activity;
- To accommodate emerging technology enterprise to provide for growth in knowledge, innovation and digital economy;
- To promote the sustainable use of public transport, compact living and working environments;
- To provide for residential uses, but only as part of a mixed use development.

Note: *Any residential development within a mixed use development to be in accordance with the Department of Planning's Guidelines for Development near Rail Corridors and Busy Roads.*

2. Permitted without consent:

Environmental Protection Works; Roads

3. Permitted with consent:

Business premises; Child care centres; Community facilities; Depots; Food and drink premises; Freight transport facilities; Garden centres; Hardware and building supplies; Highway service centres; Hotel or motel accommodation; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Neighbourhood shops; Office premises, Passenger transport facilities; Places of public worship; Plant nurseries; Residential flat buildings; Signage; Warehouse or distribution centres.

4. Prohibited:

Any development not specified in item 2 or 3.

Note:

Although certain land uses are not specified in the above draft land use table, they are however permitted under State Environmental Planning Policy Infrastructure 2007: Educational Establishment (includes schools); Emergency services facilities; Health services facilities (includes hospitals, medical centres and health consulting rooms); Waste or resource transfer station; and Sewage reticulation systems.

The NSW Planning and Infrastructure drafting requirement is not to repeat the provisions and permissibility of a SEPP in an LEP, therefore these lands uses will not be specified in the tables.

The eighty [80] lots affected by the proposed rezoning are listed below and shown on Figure No. 1 – Rezoning Precinct:

Lot	Lot	Lot	Lot
32//DP1093732	21//DP825156	35//DP1100416	//SP80668
1//DP1090455	23//DP1100416	50//DP1100416	29//DP1100416
1212//DP818944	1//DP243037	41//DP1100416	//SP57247
442//DP1008879	19//DP1100416	45//DP790290	51//DP1100416
2//DP528286	22//DP1100416	21//DP1100416	11//DP1100416
3//DP543325	3//DP1100416	12//DP1100416	46//DP1100416
1213//DP818944	2//DP1100416	38//DP1100416	34//DP1100416
3B//DP378139	5//DP1100416	18//DP1100416	33//DP1100416
1//DP372243	6//DP1100416	25//DP1100416	43//DP1100416
2//DP372243	4//DP1100416	27//DP1100416	//SP52303
44//DP883843	7//DP1100416	26//DP1100416	48//DP1100416
21//DP1006849	36//DP1100416	28//DP1100416	49//DP1100416
1//DP861782	37//DP1100416	13//DP1100416	42//DP1100416
21//DP243037	39//DP1100416	14//DP1100416	10//DP1100416
1//DP1100416	//SP63349	//SP82161	9//DP1100416
4//DP243037	441//DP1008879	32//DP1100416	45//DP1100416
3//DP243037	40//DP1100416	16//DP1100416	44//DP1100416
22//DP825156	20//DP1100416	17//DP1100416	A//DP403153
3A//DP378139	43//DP790290	31//DP1100416	1//DP415050
24//DP1100416	//SP39290	47//DP1100416	400//DP1114793

The Wyong Shire Bushfire Prone Land Map records that the land on which it is proposed undertake the rezoning contains bushfire prone vegetation or is impacted by the buffer zone to bushfire prone vegetation.

The Minister for Planning, under section 117(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) issues directions that relevant planning authorities such as local councils must follow when preparing planning proposals for new LEPs.

Direction 4.4 – Planning for Bushfire Protection applies to rezoning of land which is deemed to be bushfire prone and states:

Objectives:

- (1) The objectives of this direction are:
 - (a) to protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and
 - (b) to encourage sound management of bush fire prone areas.

Where this direction applies:

- (2) This direction applies to all local government areas in which the responsible Council is required to prepare a bush fire prone land map under section 146 of the *Environmental Planning and Assessment Act 1979* (the EP&A Act), or, until such a map has been certified by the Commissioner of the NSW Rural Fire Service, a map referred to in Schedule 6 of that Act.

When this direction applies:

- (3) This direction applies when a relevant planning authority prepares a planning proposal that will affect, or is in proximity to land mapped as bushfire prone land.

What a relevant planning authority must do if this direction applies:

- (4) In the preparation of a planning proposal the relevant planning authority must consult with the Commissioner of the NSW Rural Fire Service following receipt of a gateway determination under section 56 of the Act, and prior to undertaking community consultation in satisfaction of section 57 of the Act, and take into account any comments so made,
- (5) A planning proposal must:
 - (a) have regard to *Planning for Bushfire Protection 2006*,
 - (b) introduce controls that avoid placing inappropriate developments in hazardous areas, and
 - (c) ensure that bushfire hazard reduction is not prohibited within the APZ.
- (6) A planning proposal must, where development is proposed, comply with the following provisions, as appropriate:
 - (a) provide an Asset Protection Zone (APZ) incorporating at a minimum:
 - (i) an Inner Protection Area bounded by a perimeter road or reserve which circumscribes the hazard side of the land intended for development and has a building line consistent with the incorporation of an APZ, within the property, and
 - (ii) an Outer Protection Area managed for hazard reduction and located on the bushland side of the perimeter road,

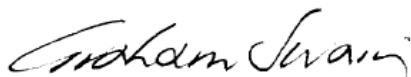
- (b) for infill development (that is development within an already subdivided area), where an appropriate APZ cannot be achieved, provide for an appropriate performance standard, in consultation with the NSW Rural Fire Service. If the provisions of the planning proposal permit Special Fire Protection Purposes (as defined under section 100B of the *Rural Fires Act 1997*), the APZ provisions must be complied with,
- (c) contain provisions for two-way access roads which links to perimeter roads and/or to fire trail networks,
- (d) contain provisions for adequate water supply for firefighting purposes,
- (e) minimise the perimeter of the area of land interfacing the hazard which may be developed,
- (f) introduce controls on the placement of combustible materials in the Inner Protection Area.

Consistency:

- (7) A planning proposal may be inconsistent with the terms of this direction only if the relevant planning authority can satisfy the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General) that the council has obtained written advice from the Commissioner of the NSW Rural Fire Service, to the effect that, notwithstanding the non-compliance, the NSW Rural Fire Service does not object to the progression of the planning proposal.

This report examines the deemed-to-satisfy bushfire protection requirements in accordance with the provisions of *Planning for Bushfire Protection 2006*, and provides recommendations on the provision of Asset Protection Zones and Defendable Spaces to the future landuses within the proposed B6 Enterprise Corridor.

This report also assesses the adequacy of fire-fighting access and water supplies; construction standards of the future buildings, the management of the Asset Protection Zones and Defendable Spaces and evacuation protocols necessary to address the bushfire risk to the future development and to address the aim and objectives of *Planning for Bushfire Protection 2006*.



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

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SECTION 1

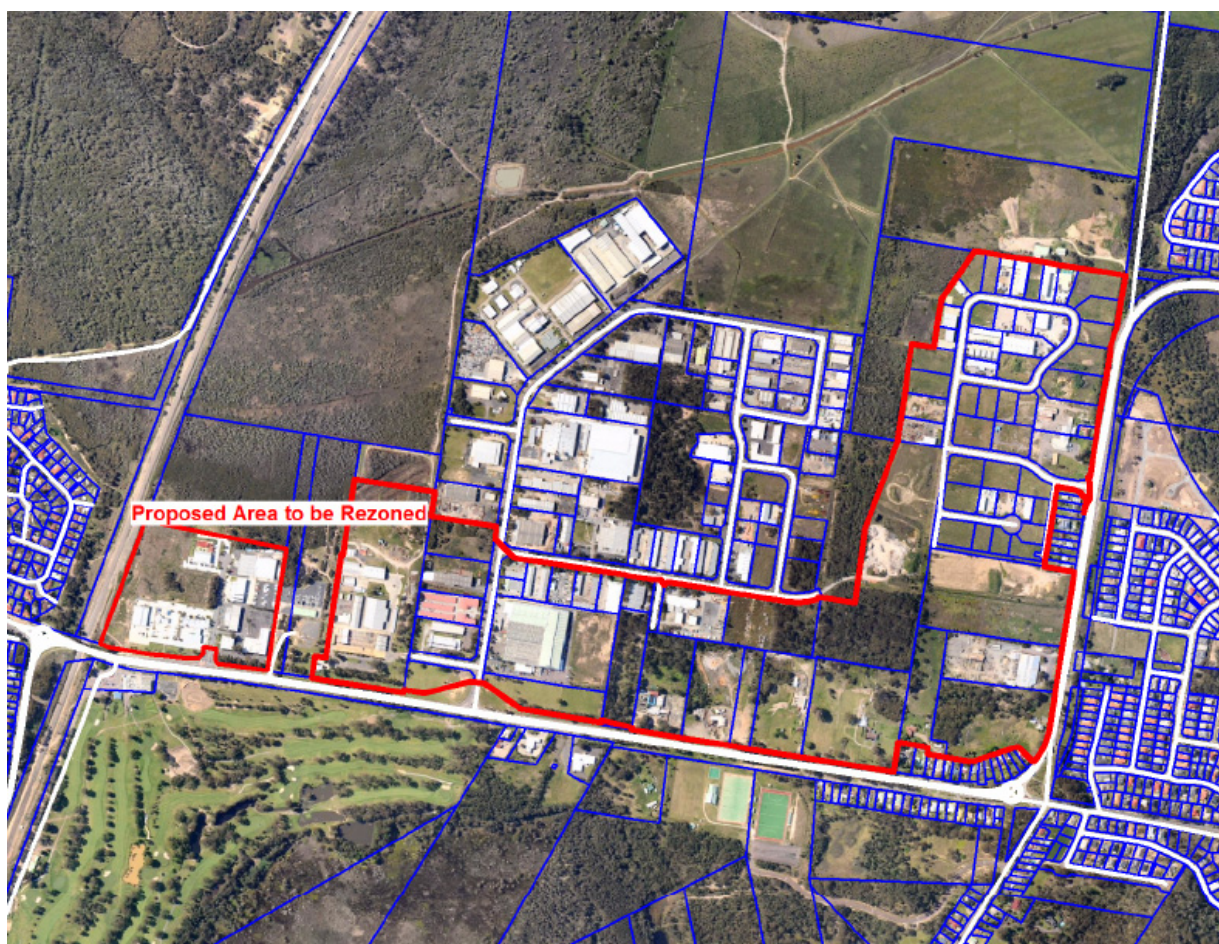
INTRODUCTION

1.1 Development Proposal.

Australian Bushfire Protection Planners Pty Limited, at the request of *MacroPlanDimasi*, has undertaken the bushfire consultancy to inform the Planning Proposal for the rezoning of the land within the North Wyong Industrial Precinct on the bushfire protection measures required to be considered to satisfy *Planning for Bushfire Protection 2006* – pursuant to Section 4.4 of the Ministerial Directions under Section 117 of the *Environmental Planning & Assessment Act 1979*.

The Planning Proposal seeks to rezone the land within eighty [80] lots which are located to the north of the Pacific Highway at North Wyong, extending east from the Northern Railway line to the intersection of the Pacific Highway and Johns Road/Pollock Avenue where the precinct turns to the north and occupies the land to the west of the Pacific Highway – refer to Figure 1 – Rezoning Precinct.

Figure 1 – Location of Rezoning Precinct.



The rezoning precinct contains existing industrial/commercial development and vacant land with the rezoning proposal seeking to change the current zoning to B6 Enterprise Corridor.

The objectives of the B6 zoning are:

- To promote businesses along main roads and to encourage a mix of compatible uses;
- To provide a range of employment uses (including business, office, retail and light industrial uses);
- To maintain the economic strength of centres by limiting retailing activity;
- To accommodate emerging technology enterprise to provide for growth in knowledge, innovation and digital economy;
- To promote the sustainable use of public transport, compact living and working environments;
- To provide for residential uses, but only as part of a mixed use development.

The B6 zoning permits with consent the following development:

Business premises; Child care centres; Community facilities; Depots; Food and drink premises; Freight transport facilities; Garden centres; Hardware and building supplies; Highway service centres; Hotel or motel accommodation; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Neighbourhood shops; Office premises, Passenger transport facilities; Places of public worship; Plant nurseries; Residential flat buildings; Signage; Warehouse or distribution centres.

The potential landuses permitted under the proposed B6 zoning are classified, for determining bushfire protection measures, into three groups. These are:

Group 1: Subdivision of bushfire prone land for the purpose of Rural/Residential development.

This type of development requires compliance with the prescriptions of Chapter 4, Section 4.1 of *Planning for Bushfire Protection 2006*.

Group 2: Construction of ‘Special Fire Protection Purpose Development’ on bushfire prone land.

‘Special Fire Protection Purpose Development’ is defined under Section 100B of the *Rural Fires Act 1997* and includes:

- Aged Care Facilities including Nursing Homes, Retirement Village;
- Hospitals;
- Schools and other education institutions;
- Childcare Centres;
- Some Community facilities such as Assembly Buildings;
- Churches;
- A Hotel, Motel or other tourist accommodation;
- A Group Home; or
- Any other purpose prescribed by the Regulations.

‘Special Fire Protection Purpose’ development requires compliance with Chapter 4, Section 4.2 of *Planning for Bushfire Protection 2006*.

Group 3: Construction of Class 5 – 8 and Class 10 buildings, as defined by the Building Code of Australia, on bushfire prone land.

Class 5 – 8 and Class 10 buildings require compliance with Chapter 4 Section 4.3.6(f) of *Planning for Bushfire Protection 2006*.

1.2 Aim of this Report.

The aim of this report is to provide advice on the bushfire protection measures to be included in the Project Plan Application for the three development groups listed above in accordance with the aim and objectives of *Planning for Bushfire Protection 2006*.

1.3 Statutory Requirements.

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

1.3.1 Legislation.

Environmental Planning and Assessment Act - 1979 (EPA Act)

Planning and development within NSW is regulated by the *Environmental Planning & Assessment Act, 1979* (EPA Act).

The Minister for Planning, under section 117(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) issues directions that relevant planning authorities such as local councils must follow when preparing planning proposals for new LEPs.

Under Direction 4.4 – ‘*Planning for Bushfire Protection*’ a planning proposal must, where development is proposed on bushfire prone land, comply with the following provisions, as appropriate:

- (a) Provide an Asset Protection Zone (APZ) incorporating at a minimum:
 - (i) an Inner Protection Area bounded by a perimeter road or reserve which circumscribes the hazard side of the land intended for development and has a building line consistent with the incorporation of an APZ, within the property, and
 - (ii) an Outer Protection Area managed for hazard reduction and located on the bushland side of the perimeter road,
- (b) For infill development (that is development within an already subdivided area), where an appropriate APZ cannot be achieved, provide for an appropriate performance standard, in consultation with the NSW Rural Fire Service. If the provisions of the planning proposal permit Special Fire Protection Purposes (as defined under section 100B of the *Rural Fires Act 1997*), the APZ provisions must be complied with,
- (c) Contain provisions for two-way access roads which links to perimeter roads and/or to fire trail networks,
- (d) Contain provisions for adequate water supply for firefighting purposes,
- (e) Minimise the perimeter of the area of land interfacing the hazard which may be developed,
- (f) Introduce controls on the placement of combustible materials in the Inner Protection Area.

1.3.2 Planning Policies.

Planning for Bushfire Protection – 2006. [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 Purpose Development*” and Class 5 – 8 and 10 buildings in bushfire prone areas.

The document provides deemed-to-satisfy specifications on the provision of Asset Protection Zones to residential and “*Special Fire Protection*” developments; defensible space requirements to Class 5 – 8 & 10 developments and access/water supply provisions for developments in bushfire prone areas.

Provision for the assessment of construction standards to buildings and management / maintenance of the Asset Protection Zones/defensible space to buildings is also provided.

1.4 Documentation reviewed in this Assessment.

To achieve the aim of this report, a review of information relevant to the rezoning precinct was undertaken.

Information sources reviewed included the following documents:

- Rezoning Precinct Plan prepared by MacroPlanDimasi;
- List of lots within the Rezoning Precinct prepared by MacroPlanDimasi;
- Bushfire Hazard Assessment Report for the proposed Childcare Centre – Lot 40 in DP 659928, No. 250 – 300 Pacific Highway Wyong prepared by Peak Land Management – 2005;
- Environmental Management Plan – Amy Close, Wyong prepared by Robert Paine;
- Wildlife Management Plan – Amy Close, Wyong prepared by Robert Paine;
- Water Management Strategy – Amy Close, Wyong prepared by Patterson Britton & Partners Pty Ltd – 2006;
- Flora & Fauna Assessment - Lot 40 in DP 659928, No. 250 – 300 Pacific Highway Wyong prepared by Conacher Travers – 2005
- *Planning for Bushfire Protection 2006* – NSW Rural Fire Service;
- Australian Standard AS3959 *Construction of Buildings in Bushfire Prone Areas*;
- *Rural Fires Regulation 2008*;
- Wyong Shire Council *Certified Bushfire Prone Land Map*.

1.5 Site Inspection.

Graham Swain of ***Australian Bushfire Protection Planners Pty Limited*** inspected the rezoning precinct on the 25th of March 2012 to assess the topography, gradients of the land within and external to the rezoning precinct and vegetation classification within and adjoining the precinct, existing bushfire mitigation measures and a visual assessment of bushfire threat. The land adjoining the rezoning precinct was also inspected to determine the surrounding land use / land management practices and extent of bushfire prone vegetation.

SECTION 2

DESCRIPTION OF REZONING PRECINCT

2.1 Location.

The rezoning precinct occupies land within the following lots which form a corridor of developed and vacant land which is located to the north of the Pacific Highway, extending east from the Great Northern Railway, turning to the north from the intersection of the Pacific Highway and Pollock Ave/Johns Road and occupying the land to the west of the Highway.

Lot	Lot	Lot	Lot
32//DP1093732	21//DP825156	35//DP1100416	//SP80668
1//DP1090455	23//DP1100416	50//DP1100416	29//DP1100416
1212//DP818944	1//DP243037	41//DP1100416	//SP57247
442//DP1008879	19//DP1100416	45//DP790290	51//DP1100416
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3//DP243037	40//DP1100416	16//DP1100416	44//DP1100416
22//DP825156	20//DP1100416	17//DP1100416	A//DP403153
3A//DP378139	43//DP790290	31//DP1100416	1//DP415050
24//DP1100416	//SP39290	47//DP1100416	400//DP1114793

Figures 2 – 4 below show the location of the rezoning precinct, overlaid on the Cadastre Plan.

For clarity, the precinct has been divided into west of Lucca Road to the Great Northern Railway; east of Lucca Road to the intersection of the Pacific Highway and Pollock Avenue/ Johns Road and north along the western side of the Pacific Highway.

The land to the north of Lots 14 – 19 in DP 1100416, being the lots along the northern boundary of the eastern leg of the rezoning precinct, consists of a rural residential development with a dwelling house and associated farm sheds.

The land to the west of the eastern leg of the rezoning precinct, within Lot 8 in DP 1100416 and within the western portion of Lot 32 in DP 1093732 is vacant land that contains bushfire prone vegetation [Swamp Forest]. Beyond this corridor of vegetation the land contains existing industrial development on Pavitt Crescent and Willow Tree Road.

The land to the north of Donaldson Street, north of the lots located to the north of the Pacific Highway within the central portion of the rezoning precinct contains existing industrial development.

The land to the north of the western rezoning precinct, west of Lucca Road, consists of existing industrial development north of Lot 4 in DP 243037. The land within the northern portion of Lot 1 in DP 1090455 and Lot 400 in DP 1114792, beyond the rezoning precinct boundary is vacant land which contains bushfire prone vegetation [Swamp Forest].

Refer to Figure 1 – Location of Rezoning Precinct.

2.4 Topography.

Appendix 2 of *Planning for Bushfire Protection 2006* states that slopes should be assessed, over a distance of at least 100m from a rezoning precinct and that the gradient of the land should be determined which will most significantly influence the fire behaviour on the site.

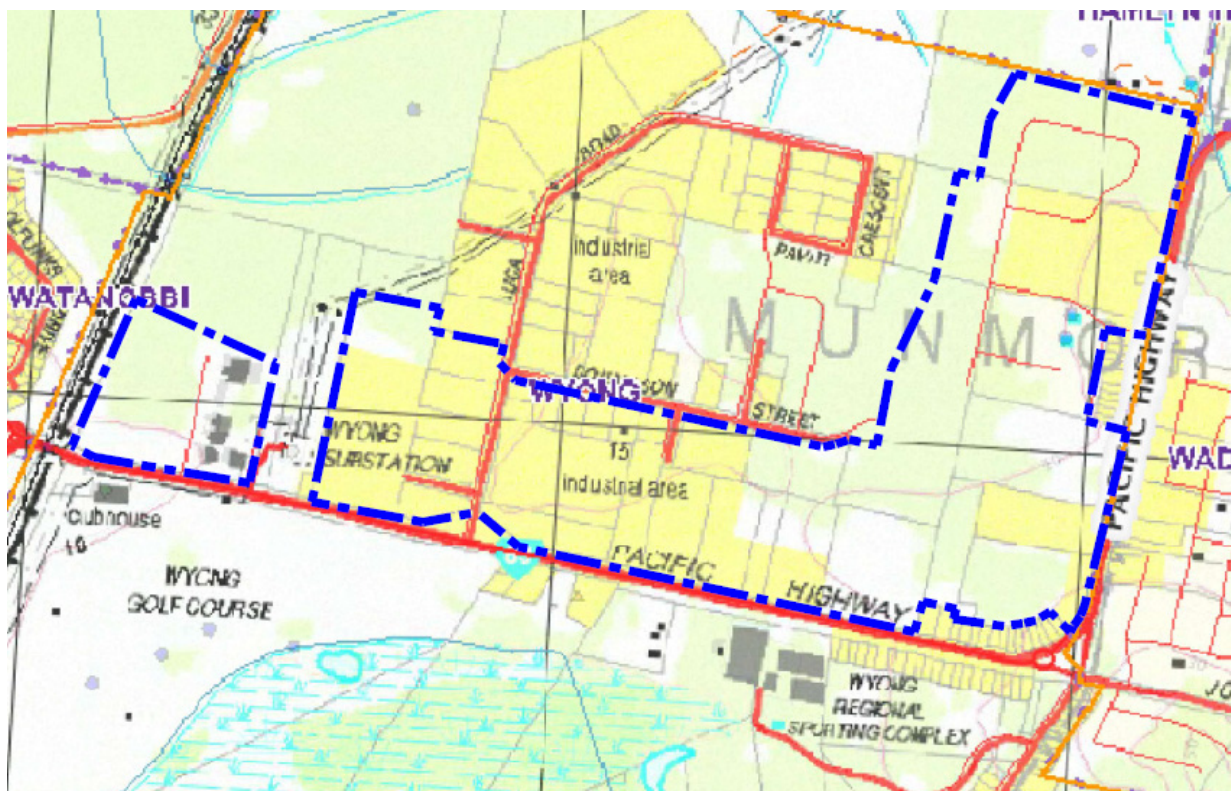
The landform within the rezoning precinct is undulating and generally not more than 10 metres AHD.

A broad ridgeline rises from the Pacific Highway to the north across the central portion of the rezoning precinct, extending along Lucca Road and falling to the northwest and northeast from Lucca Road.

The vacant vegetated land to the north of the western precinct falls to the north across the swampland at 1 – 2 degrees. The vegetated corridor to the west of the northern leg of the rezoning precinct falls to the north at 1 – 2 degrees whilst the land within the Wadalba Wildlife Corridor to the east of the northern section of the eastern leg of the rezoning precinct falls to the northeast at 2 – 3 degrees.

The land to the south of the rezoning precinct, south of the Pacific Highway, falls to the south at 1 – 2 degrees into the Swampland south and east of the Wyong Golf Course and Race Track.

Figure 5 – Topographic Map of rezoning precinct.



2.5 Vegetation within the Rezoning precinct.

Appendix A2.3 of *Planning for Bushfire Protection 2006* provides a methodology for determining the predominant bushfire prone vegetation for at least 140 metres in all directions from the buildings. Vegetation is classified using Table A2.1 of *Planning for Bushfire Protection 2006*, which classifies vegetation types into the following groups:

- (a) Forests [wet & dry sclerophyll forests];
- (b) Woodlands;
- (c) Plantations – being pine plantations not native plantations;
- (d) Forested Wetlands;
- (e) Tall Heaths;
- (f) Freshwater Heaths;
- (g) Short Heaths;
- (h) Alpine Complex;
- (i) Semi – arid Woodlands;
- (j) Arid Woodlands; and
- (k) Rainforests.

The existing developed land within the rezoning precinct contains vegetation which is not bushfire prone.

However, the western and southern portion of Lot 32 in DP 109373 and the eastern portion of Lot 44 in DP 883843, which adjoins the latter lot, contain unmanaged vegetation which links to the bushfire prone Swamp Forest vegetation in the corridor which extends along the western side of the northern leg of the rezoning precinct.

Lot 1 in DP 372243 and the northern portion of adjoining Lot 2 in DP 372243 contain unmanaged Low Open Forest vegetation. Similarly, the north-western corner of Lot 3 in DP 543325 contains an area of unmanaged Low Open Forest vegetation.

These areas of unmanaged vegetation, if retained within the site on ecological grounds, could present a bushfire hazard to adjoining development.

The land to the north of Lot 400 in DP 1114792, west of Amy Close, contains of Swamp Forest which extends to the north to form part of the Porters Creek Wetland. This vegetation is listed as an Endangered Ecological Community.

2.6 Vegetation within 140 metres of the Rezoning precinct.

The land to the north of Lot 400 in DP 1114792, west of Amy Close, contains of Swamp Forest which extends to the north to form part of the Porters Creek Wetland. This vegetation is listed as an Endangered Ecological Community.

The Swamp Forest in the vegetated corridor to the west the northern leg of the rezoning precinct is listed as an Endangered Ecological Community and presents a bushfire hazard to the adjoining development to the east.

The Wadalba Wildlife Corridor to the east of the northern portion of the eastern leg of the rezoning precinct contains Swamp Forest and Low Open Forest.

To the south of the rezoning precinct the Golf Club lands, the service station, Masonic Club, Regional Sports Complex and residential development along the southern side of the Pacific Highway separate the Swamp Forest and Low Open Forest vegetation on the land further to the south from the rezoning precinct by more than 140 metres. This removes the bushfire hazard to the south of the rezoning precinct.

2.8 Significant Environmental Features within the Rezoning precinct.

The rezoning precinct does not contain significant environmental features such as SEPP 44 Koala Habitat; SEPP 14 Wetlands; SEPP 26 Littoral Rainforests; land slip areas or National Parks Estate, areas of geological interest or riparian corridors.

2.9 Known Threatened Species, Population or Ecological Community on the Site.

There are no known threatened species within the rezoning precinct.

2.10 Details and location of Aboriginal Relics or Aboriginal Place.

There are no known Aboriginal relics or Aboriginal places on the rezoning precinct.

SECTION 3

FIRE MANAGEMENT RESPONSIBILITIES

Fire management within the rezoning precinct is the responsibility of:

3.1 Wyong Shire Council.

Wyong Shire Council has responsibility, under Section 66 of the *Rural Fires Act*, to issue a notice in writing requiring an owner / occupier of any land within the LGA to carry out bushfire hazard reduction works on that land. Section 100E of the *Rural Fires Act* requires Council to issue bushfire hazard Reduction certificates for hazard reduction to be undertaken on private lands.

3.2 New South Wales Rural Fire Service.

The NSW Rural Fire Service (RFS) has the responsibility for undertaking fire suppression activities, hazard management activities and other functions relative to emergency management, within its areas of operation. *Section 73* of the *Rural Fires Act (1997)* enables the Commissioner to carry out bush fire hazard reduction works on any land as required by a bush fire risk management plan if the work has not been carried out satisfactorily. Incurred costs can be recovered as a debt owed to the Crown.

3.3 Fire & Rescue New South Wales.

Fire & Rescue NSW has the responsibility for undertaking fire suppression activities, and other functions relative to emergency management, within its area of operation and through Mutual Aid Agreements, provide assistance to the NSW Rural Fire Service, particularly for structural fire operations within the NSW Rural Fire Brigade Districts. Hazmat management within New South Wales is the responsibility of Fire & Rescue NSW.

3.4 Wyong Bush Fire Management Committee.

The Wyong Bushfire Management Committee has the responsibility for planning for co-ordinated fire fighting activities / hazard management activities on a local government level. It is not an operational organization, a fire fighting organization or a funding source for fire management activities.

The Bush Fire Management Committee is supported by the following provisions of the Rural Fires Act 1997:

- **Section 52** requires each Bush Fire Management Committee to prepare a draft bush fire management plan for their local areas which includes a plan of operations and a bush fire risk management plan.
- **Section 54** of the Act specifies that a draft bush fire risk management plan is to 'set out schemes for the reduction of bush fire hazards in the rural fire district or other part of the State'.

A draft bush fire risk management plan may also restrict or prohibit the use of fire or other fire hazard reduction activities in all or specified circumstances or places to which the plan applies.

3.5 Public Authorities & owners/occupiers of land.

The Rural Fires Act, 1997 provides several legislative opportunities to require Public Authorities, land owners and occupiers to manage hazardous fuels. These are listed below:

- **Section 63(1)** states that it is the duty of a public authority to take any practicable steps to prevent the occurrence of bushfires on, and to minimise the danger of the spread of a bushfire on or from:
 - (a) any land vested in or under its control or management, or*
 - (b) any highway, road, street, land or thoroughfare, the maintenance of which is charged on the authority.*
- **Section 63(2)** states that *'it is the duty of the owner or occupier of land to take the notified steps (if any) and any other practicable steps to prevent the occurrence of fires on, and to minimise the danger of the spread of fires on or from that land'.*
- **Section 65A** states that the *'Commissioner may nominate a member of the Service as a hazard management officer'.*
- **Section 65(2)** states that *'an authorised person may, with the permission of the fire fighting authority or other authority responsible for unoccupied Crown land or managed land or a person nominated by the authority to give such permission, enter the land and carry out bushfire hazard reduction work with the assistance of such other persons as the authorised person considers to be necessary for the purpose'.*
- **Section 65(3)** states that *'the authority responsible for unoccupied Crown land or managed land is to be taken to have given the permission under this section to the extent necessary to give effect to a bushfire risk management plan'.*
- **Section 65(4)** states that *'if permission under this section is given subject to conditions, the conditions must be complied with'.*
- **Section 66(1)** states that *'a hazard management officer may, by notice in writing, require the owner or occupier [not being a public authority] of any land to carry out bushfire hazard reduction work specified in the notice on the land'.*

- **Section 66(2)** states that *‘a hazard management officer must serve a notice under this section if required to do so by a bushfire risk management plan applicable to the land that is in force’.*
- **Section 66(3)** states that *‘a hazard management officer must issue a bushfire hazard reduction certificate in respect of any bushfire hazard reduction work required by a notice issued in accordance within section (2)’.*
- **Section 66(6)** states that *‘the requirements and conditions so specified must include any requirements in a bushfire risk management plan that is applicable to the land and is in force and may include a requirement or condition that the burning of fire breaks or of combustible material;*
(a) must in fire district constituted under the Fire Brigades Act 1989 be carried out by or under the supervision of the fire brigade or an officer in charge of the fire brigade;
(b) must outside a fire district, be carried out by or under the supervision of the rural fire brigade specified in the notice or an appropriate officer of the rural fire brigade or any hazard management officer.
- **Section 66(7)** states that *‘a notice requiring the establishment of a firebreak cannot require an occupier or owner to kill or remove any trees that are reasonably necessary for shade, shelter, windbreak or fodder purposes or the protection of threatened species, populations, ecological communities or critical habitats within the meaning of the ‘Threatened Species Conservation Act 1995’.*
- **Section 66(8)** states that *‘an occupier or owner to whom a bushfire hazard reduction notice is given must, despite the fact that a fire permit has not been granted under Division 5, comply with the requirements specified in the notice’.*
- **Section 70(2)** states that *‘if within the time specified in the relevant notice the owner or occupier to whom it is given fails to comply with any requirement of the notice, the Commissioner may, without prejudice to liability of the owner or occupier, enter on the land and carry out the bushfire hazard reduction work the owner or occupier was required to do under the notice’.*
- **Section 70(3)** states that *‘any costs incurred by the Commissioner in carrying out such work may be recovered from the owner or occupier of the land as a debt due to the Crown in a court of competent jurisdiction’.*
- **Section 87** allows the removal of hazards in the bush fire danger period by the provision of a permit system. The permits are valid for 21 days, excluding TOBAN [Total Fire Ban] days.

Section 10 permits are not required to adhere to *Part V* provisions of the EPA Act 1979 in the assessment of impact, except for public authorities. An owner/occupier of private land must obtain from the NSW Rural Fire Service, a bushfire hazard reduction certificate before undertaking hazard reduction works on that land (Section 100E of the *Rural Fires Act 1997*).

3.6 Bushfire Hazard Management within the Rezoning precinct.

The management of the landscaped gardens and the vegetation within the rezoning precinct will remain the responsibility of the individual property owner.

A Positive Covenant, created under the provisions of the *Conveyancing Act of 1919*, shall be placed on the title of the lots located adjacent to the bushfire hazard to ensure compliance with the management prescriptions for the Asset Protection Zones/Defendable Spaces detailed in this report - *[Refer to Section 5]*.

SECTION 4

PRECINCT LEVEL ASSESSMENT

4.1 Certified Bushfire Prone Land Map.

Section 146 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 Wyong Bushfire Prone Land Map



The Wyong Bushfire Prone Land Map accurately shows that the rezoning precinct contains bushfire prone vegetation and is impacted by the buffer zone to bushfire prone vegetation on adjoining lands.

SECTION 5

BUSHFIRE PROTECTION ASSESSMENT

5.1 Introduction.

Planning for Bushfire Protection 2006 provides deemed-to-satisfy fire protection measures for residential development [Class 1, 2 & 3 buildings]; “Special Fire Protection Purpose Developments” [Hospitals, Nursing Homes / Retirement Villages / Schools / Childcare Centres & Tourist Accommodation]; Industrial / Commercial Development and residential and Special Fire Protection “infill” development.

In reference to the proposed rezoning of the land to B6 Enterprise Corridor, this zoning permits residential development [as part of a mixed development landuse]; Class 5 – 8 and Class 10 type buildings and development which is classified under Section 100B of the *Rural Fires Act 1997* as ‘*Special Fire Protection Purpose Development*’. This development includes tourist accommodation, hotels/motels, aged care and nursing home facilities, school/childcare facilities, churches and places of assembly.

Section 1.1 of this report identifies three groups of development permissible under the B6 which have varying requirements for the provision of bushfire protection measures. The following sections of this report examine the bushfire protection measures which should be implemented to the identified development groups.

5.2 Group 1: Subdivision of bushfire prone land for the purpose of Rural / Residential development, including the Strata Subdivision of the residential component of a mixed use development.

(a) Asset Protection Zones:

Asset Protection Zones for residential development adjoining and within 100 metres of bushfire prone vegetation shall comply with Table A2.4 of *Planning for Bushfire Protection 2006*.

For residential development within 100 metres of the Swamp Forest vegetation on the land adjoining the rezoning precinct the requisite minimum Asset Protection Zone width is 25 metres, measured between the unmanaged bushfire prone vegetation and the asset [building].

(b) Access for Fire-fighting Operations:

Public Road access for fire-fighting operations shall comply with Section 4.1.3(1) of *Planning for Bushfire Protection 2006*.

This includes the provision of an 8.0 metre wide road to the perimeter of residential development which is located adjacent to a bushfire hazard.

Internal roads shall have a minimum pavement width of 6.5 metres with 'No Parking' to one side and services [Hydrants] located on this side.

General access provisions of the NSW Rural Fire Service and Fire & Rescue NSW shall be applied including a minimum 6.3 metre inner radius and 12.0 metre outer radius to corners and pavement carrying capacity of 15 tonnes GVM for Category 1 Bushfire Tankers and Fire & Rescue Urban Pumper.

(c) Water Supply for Fire-fighting operations:

Water supplies for fire-fighting operations shall be provided in accordance with A.S. 2419.1 – 2005.

(d) Bushfire construction Standard to Buildings:

Bushfire construction standards shall apply to all residential buildings located within 100 metres of bushfire prone vegetation.

Construction standards shall be determined using Appendix 3 [amended] of *Planning for Bushfire Protection 2006* and A.S. 3959 – 2009 – '*Construction of Buildings in Bushfire Prone Areas*'.

(e) Landscape Management:

The provision and maintenance of the required Asset Protection Zones to future residential development shall comply with the prescriptions provided by Appendix 5 of *Planning for Bushfire Protection 2006* and the NSW Rural Fire Service's document '*Specifications for Asset Protection Zones*'.

5.3 Group 2: Construction of 'Special Fire Protection Purpose Development' within 100 metres of bushfire prone vegetation:

(a) Asset Protection Zones:

Asset Protection Zones for '*Special Fire Protection Purpose Developments*' adjoining and within 100 metres of bushfire prone vegetation shall comply with Table A2.56 of *Planning for Bushfire Protection 2006*.

For '*Special Fire Protection Purpose Developments*' within 100 metres of the Swamp Forest vegetation on the land adjoining the rezoning precinct the requisite minimum Asset Protection Zone width is 60 metres, measured between the unmanaged bushfire prone vegetation and the assets [buildings].

(b) Access for Fire-fighting Operations:

Public Road access for fire-fighting operations shall comply with Section 4.1.3(1) and 2.4.7 of *Planning for Bushfire Protection 2006*.

This includes the provision of an 8.0 metre wide road to the perimeter of development which is located adjacent to a bushfire hazard.

Internal roads shall have a minimum pavement width of 6.5 metres with 'No Parking' to one side and services [Hydrants] located on this side.

General access provisions of the NSW Rural Fire Service and Fire & Rescue NSW shall be applied including a minimum 6.3 metre inner radius and 12.0 metre outer radius to corners and pavement carrying capacity of 15 tonnes GVM for Category 1 Bushfire Tankers and Fire & Rescue Urban Pumper.

(c) Water Supply for Fire-fighting operations:

Water supplies for fire-fighting operations shall be provided in accordance with the Building Code of Australia and A.S. 2419.1 – 2005.

(d) Bushfire construction Standard to Buildings:

Bushfire construction standards shall apply to all buildings located within 100 metres of bushfire prone vegetation.

Construction standards shall be determined using Appendix 3 [amended] of *Planning for Bushfire Protection 2006* and A.S. 3959 – 2009 – '*Construction of Buildings in Bushfire Prone Areas*'.

(e) Landscape Management:

The provision and maintenance of the required Asset Protection Zones to future '*Special Fire Protection Purpose Development*' shall comply with the prescriptions provided by Appendix 5 of *Planning for Bushfire Protection 2006* and the NSW Rural Fire Service's document '*Specifications for Asset Protection Zones*'.

(f) Emergency Planning:

Emergency planning for '*Special Fire Protection Purpose*' development located within 100 metres of bushfire prone vegetation shall be addressed in the preparation of a site specific Emergency Management Plan which includes protocols for the management of residents, staff and visitors during bushfire and other emergencies.

5.4 Group 3: Construction of Class 5 – 8 and Class 10 buildings within 100 metres of bushfire prone vegetation:

(a) Asset Protection Zones/Defendable Space:

Chapter 1, Section 1.3 of *Planning for Bushfire Protection 2006* states that the construction of Class 5 – 8 and Class 10 buildings erected on bushfire prone land, or land impacted by bushfire prone vegetation, must meet the aim and objectives of the document.

Chapter 4, Section 4.3.6(f) discusses the bushfire protection to buildings of Class 5 to 8 and 10b of the Building Code of Australia and states:

“The Building Code of Australia does not provide for any bushfire specific performance requirements and as such AS 3959 -1999 does not apply as a set of “deemed-to-satisfy” provisions.

The general fire safety construction provisions [of the BCA] are taken as acceptable solutions, but the aim and objectives of Planning for Bushfire Protection 2006 apply in relation to other matters such as access, water and services, emergency planning and landscaping/vegetation management”.

“Where the aim and objectives of PfPFP [Section 1.1] are not met, then the construction requirements for bushfire protection will need to be considered on a case-by-case basis”.

“In many cases, these types of developments will require on-site parking and loading areas. In such cases, it is prudent to place these facilities in the most appropriate location in order to establish defensible space for fire-fighting purpose”.

The objectives of *Planning for Bushfire Protection 2006* 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 direct flame contact and material ignition;
 - (iv) Ensure that safe operational access and egress for emergency service personnel and residents is available;
 - (v) Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in the asset protection zones;
- and
- (vi) Ensure that utility services are adequate to meet the needs of fire-fighters and others assisting in bushfire fighting.

The document identifies six core bushfire protection requirements. These are:

- (1) Provision of Asset Protection Zones / Defendable Spaces in accordance with the specific landuse, the predominant bushfire prone vegetation type within 140 metres of the development and the topography of the land containing the bushfire prone vegetation;
- (2) Access for fire fighting operations;
- (3) Water Supplies for fire fighting operations;
- (4) Construction standards of buildings located within 100 metres of the bushfire hazard interface, dependant on specification landuse, the predominant bushfire prone vegetation type within 140 metres of the development and the topography of the land containing the bushfire prone vegetation;
- (5) Emergency Planning; and
- (6) Landscape Management – in particular the management of the Asset Protection Zones / Defendable Spaces and residual bushfire prone vegetation.

Planning for Bushfire Protection 2006 provides a methodology to determine the Asset Protection Zones [defendable space] and Bushfire Attack [Construction Standards] required for **habitable buildings** in development for **residential purposes** that are designated as bushfire prone.

The document does not provide deemed to satisfy bushfire protection measures for Class 5 – 8 and Class 10 buildings constructed in bushfire prone areas. However, one of the objectives *Planning for Bushfire Protection 2006* is to provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition.

Therefore it is recommended that Class 5 – 8 and Class 10 buildings should be located at a distance from the bushfire prone vegetation which prevents direct flame contact with the buildings.

For the Forested Wetland vegetation adjoining the rezoning precinct this separation width is greater than 24 metres.

(b) Access for Fire-fighting Operations:

Public Road access for fire-fighting operations shall comply with Section 4.1.3(1) of *Planning for Bushfire Protection 2006*.

This includes the provision of an 8.0 metre wide road to the perimeter of development which is located adjacent to a bushfire hazard.

Internal roads shall have a minimum pavement width of 6.5 metres with 'No Parking' to one side and services [Hydrants] located on this side.

General access provisions of the NSW Rural Fire Service and Fire & Rescue NSW shall be applied including a minimum 6.3 metre inner radius and 12.0 metre outer radius to corners and pavement carrying capacity of 15 tonnes GVM for Category 1 Bushfire Tankers and Fire & Rescue Urban Pumper.

(c) Water Supply for Fire-fighting operations:

Water supplies for fire-fighting operations shall be provided in accordance with the Building Code of Australia and A.S. 2419.1 – 2005.

(d) Bushfire construction Standard to Buildings:

Bushfire construction standards shall apply to all buildings located within 100 metres of bushfire prone vegetation.

Should the minimum defensible space widths recommended prevail [24 metres from Forested Wetland vegetation], that portion of the Class 5 – 8 and Class 10 building exposed to the hazard shall be constructed to the specifications of BAL 40, as defined by A.S. 3959 – 2009.

In addition, there is the possibility that burning embers may impact upon the buildings therefore the following additional construction standards are recommended:

- Any operable windows shall be fitted with aluminium/stainless steel mesh flyscreens having a maximum mesh aperture size of 2mm;
- Access doors [PA and Vehicle] to the buildings shall be fitted with seals that seal the bottom, stiles and head of the door against the opening/frame to prevent the entry of embers into the building. Particular attention shall be paid to the gap at the head of the curtain of the roller doors, where mohair type seals can be used;
- Any external vents, grilles and ventilation louvres shall have stainless steel mesh with a maximum aperture of 2mm square fitted to prevent the entry of embers into the building or be fitted with a louvre system which can be closed in order to maintain a maximum aperture or gap of no more than 2mm.
- Roof ventilators shall be fitted with stainless steel flymesh [2mm aperture] to prevent the entry of embers into the building or be fitted with a louvre system which can be closed in order to maintain a maximum aperture or gap of no more than 2mm.

(e) Landscape Management:

The intention of landscape hazard management is to prevent flame contact with a structure, reduce radiant heat to below the ignition thresholds for various elements of a building, to minimize the potential for wind driven embers to cause ignition and to reduce the effects of smoke on occupants and fire-fighters.

The management of the Defendable Spaces, and the sites within 100 metres of the bushfire prone vegetation, shall comply with the recommendations of Appendix A5.4 & Appendix A5.5 of *Planning for Bushfire Protection 2006* and the Rural Fire Service's document '*Standards for Asset Protection Zones*'.

Management of the Defendable Spaces shall comply with the following:

- Maintain a clear area of low cut lawn or pavement adjacent to the buildings; Utilise non-flammable materials such as Scoria, pebbles and recycled crushed bricks as ground cover to landscaped gardens in close proximity to the buildings;
- Keep areas under shrubs and trees raked and clear of combustible fuels;
- Trees and shrubs should be maintained in such a manner that tree canopies are separated by 2 metres and understorey vegetation is not continuous [retained as clumps].

(f) Emergency Planning:

Bushfire emergency planning for Class 5 – 8 and Class 10 buildings located within 100 metres of bushfire prone vegetation shall be addressed in the preparation of a site specific Emergency Management Plan which includes protocols for the management of residents, staff and visitors during bushfire and other emergencies.

SECTION 6

CONCLUSION

A Planning Proposal to amend the Wyong Local Environmental Plan [LEP] to rezone land at North Wyong Industrial Precinct.

The land is proposed to be rezoned B6 Enterprise Corridor.

The Wyong Bushfire Prone Land Map records the site as containing bushfire prone vegetation and therefore under the requirements of Section 117(2) of the *Environmental Planning & Assessment Act 1979* the Director General's directive is that the impact of natural hazards be considered.

Under Direction 4.4 – '*Planning for Bushfire Protection*' a planning proposal must, where development is proposed on bushfire prone land, comply with the following provisions, as appropriate:

- (a) Provide an Asset Protection Zone (APZ) incorporating at a minimum:
 - (i) an Inner Protection Area bounded by a perimeter road or reserve which circumscribes the hazard side of the land intended for development and has a building line consistent with the incorporation of an APZ, within the property, and
 - (ii) an Outer Protection Area managed for hazard reduction and located on the bushland side of the perimeter road,
- (b) For infill development (that is development within an already subdivided area), where an appropriate APZ cannot be achieved, provide for an appropriate performance standard, in consultation with the NSW Rural Fire Service. If the provisions of the planning proposal permit Special Fire Protection Purposes (as defined under section 100B of the *Rural Fires Act 1997*), the APZ provisions must be complied with,
- (c) Contain provisions for two-way access roads which links to perimeter roads and/or to fire trail networks,
- (d) Contain provisions for adequate water supply for firefighting purposes,
- (e) Minimise the perimeter of the area of land interfacing the hazard which may be developed,
- (f) Introduce controls on the placement of combustible materials in the Inner Protection Area.

These matters have been reviewed and recommendations provided on the provision of Asset Protection Zones/Defendable Spaces; access and water supplies for fire-fighting operations; construction standards to buildings, management of bushfire hazards and emergency management to the development permitted with consent within a B6 Enterprise Zone.

This development may include, but be not limited to business premises; Child care centres; Community facilities; Depots; Food and drink premises; Freight transport facilities; Garden centres; Hardware and building supplies; Highway service centres; Hotel or motel accommodation; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Neighbourhood shops; Office premises, Passenger transport facilities; Places of public worship; Plant nurseries; Residential flat buildings; Signage; Warehouse or distribution centres.

Educational establishments; emergency service facilities; health services facilities [includes hospitals, medical centres and health consulting rooms]; waste or resource transfer station and sewerage reticulation systems are also permissible within the B6 zone.

This report identifies, for the purpose of recommending bushfire protection measures, three types of development that may occur in the rezoning precinct. These are;

Group 1 – subdivision of bushfire prone land for rural residential or residential development, including strata subdivision of residential components of mixed use developments;

Group 2 – construction of ‘*Special Fire Protection Purpose Development*’ on bushfire prone land; and

Group 3 – construction of Class 5 – 8 and Class 10 buildings on bushfire prone land.

The recommendations provided in this report are derived from the deemed-to-satisfy provisions of *Planning for Bushfire Protection 2006* for each of the development groups identified.



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REFERENCES:

- N.S.W Rural Fire Service – *Planning for Bushfire Protection 2006*;
- *Environmental Planning & Assessment Act – 1979*;
- *Rural Fires Act – 1997*;
- *Rural Fires Regulation 2008*;
- NSW Rural Fire Service – *Guideline for Bushfire Prone Land Mapping 2006*;
- *Bushfire Environmental Assessment Code 2006*;
- Building Code of Australia;
- Australian Standard A.S 3959-2009 “*Construction of Buildings in Bushfire Prone Areas*”;
- *Wyong Shire Council Bushfire Prone Land Map*.