

### **CHAPTER 5 – OVERLAY CODES**

#### PART 9 BUSHFIRE HAZARD AREA OVERLAY CODE

#### Division 1 Applicability of the Bushfire Hazard Area Overlay Code

- 1.1 This code applies to development:
  - (1) that is located in "high bushfire hazard areas" and "medium bushfire hazard areas" shown on Overlay Code Map 9 Bushfire Hazard Area; and
  - (2) referred to as "self assessable" or "code assessable " in Tables 5.9.1 or 5.9.2 below.

#### Division 2 Designated Bushfire Prone Areas for the Building Code of Australia

**2.1** For the purposes of Section 12 of the *Building Regulation 2006*, the areas shown on *Overlay Code Map 9 - Bushfire Hazard Area* as high or medium bushfire hazard areas outside the Urban and Village Localities, are designated bushfire prone areas.

**Note**: As the Bushfire Hazard map has been prepared at a Shire wide scale, it should be used as a trigger for the consideration of bushfire hazard issues. In each case, detailed site specific assessment will be required as part of the development process to determine the level of potential bushfire hazard on the site and, therefore, actual development requirements.

The Building Code of Australia (BCA) contains specific provisions relating to building in bushfire prone areas. They include design and construction requirements for a building's performance when subjected to burning debris, radiant heat or flame contact from a bushfire. Each of these aspects must be considered when assessing a development application for any new residential building or building extension within a designated bushfire prone area.

#### Division 3 Assessment Tables for the Bushfire Hazard Area Overlay Code

3.1 Assessment Categories for the Bushfire Hazard Area Overlay Code

The assessment categories are identified for development in Column 2 of Tables 5.9.1 or 5.9.2, as follows:-

- (1) Table 5.9.1 Material Change of Use and Associated Works<sup>2</sup> for uses listed in Column 1; or
- (2) Table 5.9.2 Other Development not associated with a Material Change of Use<sup>3</sup> listed in Column 1.

NOTE: Zones also affect assessment categories. See zone maps to determine the zone of the land. Also see Chapter 1, Part 1, Division 4, Section 4.8(3) explaining how the higher assessment category prevails.

- 3.2 Relevant Assessment Criteria for Development Affected by the Bushfire Hazard Area Overlay Code
  - (1) The relevant assessment criteria in the overlay code are referred to in Column 3 of Tables 5.9.1 and 5.9.2.
  - (2) For self assessable or code assessable development, the relevant assessment criteria are applicable codes.



Table 5.9.1: Assessment Categories and Relevant Assessment Criteria for Bushfire Hazard Area Overlay Code - Material Change of Use and Associated Works<sup>2</sup>

COLUMN 1	COLUMN 2	COLUMN 3
Use <sup>4</sup>	Assessment category	Relevant assessment criteria - applicable code for self and code assessable development
All Mapped Features		
Associated Unit Detached House Domestic Storage Duplex Dwelling involving Building Work	1. located within the Urban or Village Localities OR 2. a written assessment by a competent person (as defined in Planning Scheme Policy PSP15 Demonstrating Compliance with the Bushfire Hazard Area Overlay Code) 5 confirms that the subject site is not subject to high bushfire or medium bushfire risk.	
	Self assessable – if  1. located within the Major Employment Centres, Coast and River Lands, Rural Living, Catchment, Semi-Urban, or Mt Summit and Forests Localities  AND  2. the acceptable solutions of the Bushfire Hazard Area Overlay Code are complied with.	Bushfire Hazard Area Overlay Code
	Code assessable – if  1. located within the Major Employment Centres, Coast and River Lands, Rural Living, Catchment, Semi-Urban, or Mt Summit and Forests Localities  AND  2. the acceptable solutions of the Bushfire Hazard Area Overlay Code for self assessable development are not complied with.	Bushfire Hazard Area Overlay Code
All Other Defined and Undefined Uses involving Building Work	1. contained within an existing building and not extending the existing building  OR  2. a written assessment by a competent person (as defined in Planning Scheme Policy PSP15 Demonstrating Compliance with the Bushfire Hazard Area Overlay Code) 5 confirms that the subject site is not subject to high bushfire or medium bushfire risk  OR  3. located within the Major Employment Centres Locality.	
	Self assessable – if the acceptable solutions of the Bushfire Hazard Area Overlay Code are complied with.  Code assessable – if the acceptable solutions of the Bushfire Hazard Area Overlay Code for self assessable development	Bushfire Hazard Area Overlay Code     Bushfire Hazard Area Overlay Code
All Other Defined and Undefined Uses not involving Building Work	are not complied with.  Exempt	



# Table 5.9.2: Assessment Categories and Relevant Assessment Criteria for the Bushfire Hazard Area Overlay Code – Other Development not Associated with Material Change of Use<sup>3</sup>

COLUMN 1 Type of development	COLUMN 2 Assessment category	COLUMN 3 Relevant assessment criteria - applicable code for code assessable development
All Mapped Features		
Reconfiguring a Lot	Code Assessable – if there is an increase in the number of lots.	Bushfire Hazard Area Overlay Code
All Other Development	Exempt	

#### Division 4 Compliance with the Bushfire Hazard Area Overlay Code

- 4.1 Self assessable development that complies with the acceptable solutions contained in Division 6, Table 5.9.3 complies with the Bushfire Hazard Area Overlay Code.
- 4.2 Assessable development that is consistent with the specific outcomes contained in Division 6, Table 5.9.4 complies with the Bushfire Hazard Area Overlay Code.

#### Division 5 Overall Outcomes for the Bushfire Hazard Area Overlay Code

- 5.1 The overall outcomes are the purpose of this code.
- 5.2 The overall outcomes sought by the Bushfire Hazard Area Overlay Code are the following:-
  - (1) Life and property are protected by limiting, where possible, the number of people living and working in a high or medium bushfire hazard area;
  - (2) The cost of a bushfire event to the community, including the cost of providing emergency services, is minimised by the siting and design of buildings and structures and the provision of road access, fire trails and water supply for fire fighting; and
  - (3) The design limits the reliance on assistance from emergency services in a bushfire and assists in the response by emergency services to a bushfire threat.

## Division 6 Acceptable Solutions and Specific Outcomes for the Bushfire Hazard Area Overlay Code

6.1 The acceptable solutions for self assessable development for the Bushfire Hazard Area Overlay Code are contained in Table 5.9.3.

#### Table 5.9.3: Acceptable Solutions for Self Assessable Development

#### Acceptable Solutions for Self Assessable Development

#### **Development Location**

**AS 1** Buildings and *structures* are located in accordance with an existing bushfire management plan previously accepted by Council<sup>6</sup>.

OR

AS 2 Buildings and structures established on lots greater than 2500m2 in area are:-

- (1) located in areas of least risk on the site;
- (2) setback from hazardous vegetation 1.5 times the predominant mature canopy tree height or 20m, whichever is the greater;
- (3) located on part of the site with a slope:
  - (a) less than 15%; and
  - (b) only facing downhill between north through east to south-west, preferably between east and south (see Figure 2a and 2b); and
- (4) surrounded by a 20m wide asset protection zone wholly located on the site (measured from the outermost projection of the building or structure). An asset protection zone in this context includes a constructed road or an asset protection zone on an adjoining site.

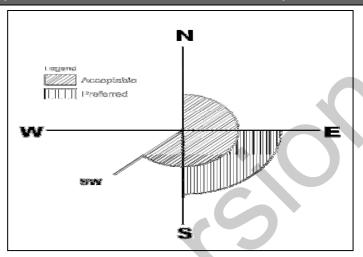
**Note:** "Located in areas of least risk" means locating in the area that has the lowest bushfire risk or hazard on the site ie for a site that has both high and medium hazard areas, locate in the medium hazard area or if the site has high, medium and low hazard areas, locate in the low hazard area.



#### **Acceptable Solutions for Self Assessable Development**

#### Figure 2a

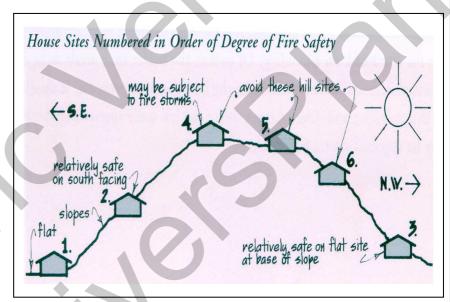
Preferred site is a slope facing between east and south.



#### Figure 2b

Preferred House Site Location – 1 and 2.

From "Bushfire Prone Areas: Siting and Design of Residential Buildings" (1997), Queensland Department of Local Government and Planning, and Queensland Fire & Rescue Service.



#### OR

AS 3 Buildings and structures established on lots having an area of 2500m² or less are:-

- (1) located in areas of least risk on the site;
- (2) located so that setbacks from hazardous vegetation are maximised; and
- (3) surrounded by a 20m wide asset protection zone wholly located on the site (measured from the outermost projection of the building or structure). An asset protection zone in this context includes a constructed road or an asset protection zone on an adjoining site.

#### **Water Supply**

AS 4.1 The site is connected to a reticulated water supply.

#### OR

AS 4.2 If the site is not connected to a reticulated water supply,

- (1) an on-site water supply of at least 22,500 litres (provided solely for fire fighting purposes) is available on each **site** in the **asset protection zone** and is directly accessible by fire fighting appliances, and
- (2) Tanks used for fire fighting water storage are fitted with a 50mm female camlock coupling and a 50mm gate or ball valve to enable connection by the rural fire brigade, and
- (3) Above ground devices for the storage and supply of fire fighting water have a fire resistant level (FRL) for purposes of structural adequacy and integrity of no less than 60 minutes, or are protected by construction having an equivalent FRL, and
- (4) Non-reticulated on-site fire fighting water supply is supported by petrol or diesel powered pump or pumps.



#### **Acceptable Solutions for Self Assessable Development**

#### Revegetation

AS 5.1 Where revegetation is undertaken, the species used in the revegetation have one or more of the following attributes:-

- (1) high salt content in the leaves;
- (2) high moisture content in the leaves;
- (3) low volatile oil content in the leaves;
- (4) smooth bark protecting conductive tissue and dormant buds;
- (5) seeds enclosed in woody capsules:
- (6) dense crown: and
- (7) lowest branches out of reach of ground fires.

#### AND

AS 5.2 Revegetation around buildings and structures is undertaken to meet the requirements of the asset protection zone.

- 6.2 The specific outcomes and probable solutions for the Bushfire Hazard Area Overlay Code are contained in Table 5.9.4. The elements covered by the specific outcomes are:-
  - (1) Development Location All Development;
  - (2) Water supply Development Other Than Reconfiguring a Lot;
  - (3) Water supply Reconfiguring a Lot;
  - (4) Access and Fire Trails All Development;
  - (5) Revegetation All Development;
  - (6) Reconfiguring a Lot
  - (7) Uses Involving Bulk Hazardous Materials All Development
  - (8) Vital community infrastructure All Development

#### Table 5.9.4: Specific Outcomes and Probable Solutions for Assessable Development

Specific Outcomes for Assessable Development	Probable Solutions

**Note** - Information to be provided with an application for development on a **site** subject to the Bushfire Hazard Areas Overlay is contained in *Planning Scheme Policy PSP15 Demonstrating Compliance with the Bushfire Hazard Area Overlay Code*. Such information may include a bushfire hazard assessment and/or a bushfire management plan.

#### **Development Location – All Development**

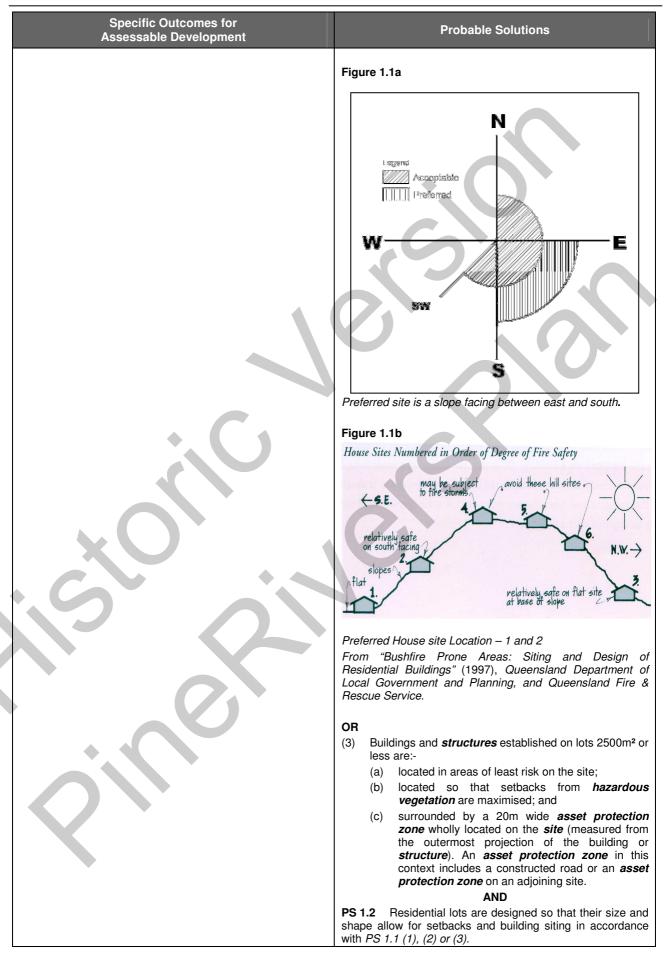
- **SO 1** Development maintains the safety of people and property by:-
- minimising the number of people and properties that are subject to bushfire risk;
- (2) siting buildings to increase the survivability of buildings and protection of people during a bushfire; and
- (3) minimising the cost and potential threats to emergency
- **PS 1.1** (1) Buildings and *structures* are located in accordance with an existing bushfire management plan previously accepted by Council<sup>6</sup>.

#### . OR

- (2) Buildings and  $\it structures$  established on lots greater than  $2500 \, \rm m^2 \, are$ :
  - (a) located in areas of least risk on the site;
  - setback from *hazardous vegetation* 1.5 times the predominant mature canopy tree height or 20m whichever is the greater;
  - (c) located on a site with a slope:
    - (i) less than 15%; and
    - (ii) only facing downhill between north through east to south-west, preferably between east and south (see Figure 1.1a and 1.1b); and
  - (d) surrounded by a 20m wide asset protection zone wholly located on the site (measured from the outermost projection of the building or structure). An asset protection zone in this context includes a constructed road or an asset protection zone on an adjoining site.

**Note:** "Located in areas of least risk" means locating in the area that has the lowest bushfire risk or hazard on the site ie for a site that has both high and medium hazard areas, locate in the medium hazard area or if the site has high, medium and low hazard areas, locate in the low hazard area.

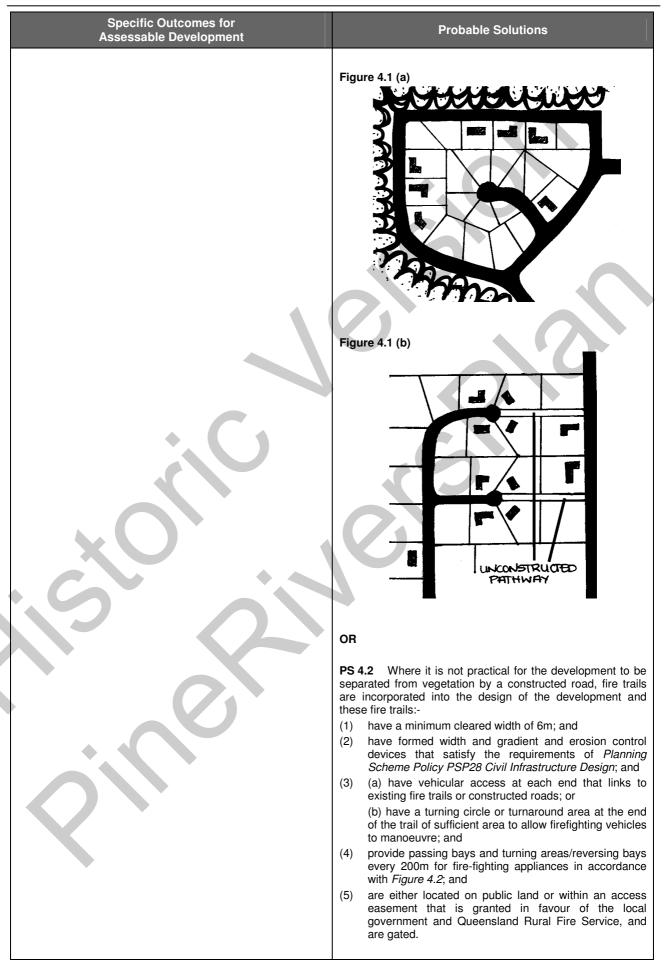






Specific Outcomes for Assessable Development	Probable Solutions
Water Supply – Development other than Reconfiguring	a Lot
SO 2 Development incorporates an accessible water supply of sufficient quantity, constructed to an adequate standard and located in such a manner as to ensure the effective and efficient use of this water supply for fire fighting purposes.	PS 2.1 The <i>site</i> is connected to a reticulated water supply.  OR  PS 2.2 (1) Where the <i>site</i> is not connected to a reticulated water supply, an on-site water supply of at least 22,500 litres (provided solely for fire fighting purposes) is available on each <i>site</i> in the <i>asset protection zone</i> and is directly accessible by fire fighting appliances.  AND  (2) Tanks used for fire fighting water storage are fitted with a 50mm female camlock coupling and a 50mm gate or ball valve to enable connection by the rural fire brigade.  AND  (3) Above ground devices for the storage and supply of fire
	<ul> <li>(3) Above ground devices for the storage and supply of fire fighting water have a fire resistant level (FRL) for purposes of structural adequacy and integrity of no less than 60 minutes, or are protected by construction having an equivalent FRL.         AND     </li> <li>(4) Non-reticulated on-site fire fighting water storage is supported by petrol or diesel powered pump or pumps.</li> </ul>
Water Supply – Reconfiguring a Lot	
SO 3 Development incorporates an accessible water supply of sufficient quantity, constructed to an adequate standard and located in such a manner as to ensure the effective and efficient use of this water supply for fire fighting purposes.	PS 3.1 In urban and park residential areas the development is connected to a reticulated water supply.  OR PS 3.2 (1) Where PS 3.1 does not apply, a communal water supply storage system is provided in the road reserve.  AND  (2) Communal water supply storage systems have:—  (a) sufficient volume to cater for the development;  (b) concrete construction;  (c) a 50mm female camlock coupling and a 50mm gate or ball valve;  (d) a Queensland Round thread 100mm male coupling;  (e) an anti-vortex device;  (f) a vent to accommodate the volume of water being drawn out; and
	(g) a <i>Council</i> approved lock.
Access and Fire Trails – All Development	
SO 4 Development maintains the safety of people and property and the efficient and effective use of fire fighting facilities by providing adequate access routes for:  (1) safe evacuation; and (2) fire fighting purposes.	PS 4.1 Development has direct access to roads designed and constructed to:-  (1) separate the development from hazardous vegetation on adjacent lots; and  (2) remove hazardous vegetation up to 10m either side of the centre line of the access route, within the road reserve; and  (3) a standard that satisfies the requirements of the Planning Scheme Policy PSP28 Civil Infrastructure Design; and  (4) have a maximum gradient of 12.5%; and  (5) (a) exclude cul-de-sacs, except where a perimeter road having a cleared width of 20m separates the development from vegetation (see Figure 4.1(a)); or  (b) ensure cul-de-sacs are provided with an alternative access that links the cul-de-sac to other through roads (see Figure 4.1(b)) and the alternate access has a cleared width of no less than 6m.







Specific Outcomes for Assessable Development	Probable Solutions	
	Figure 4.2	
	VECETATION  VECETATION  III  Lam  VECETATION  TESSEVE  TE	
	REVERSING BAY  VEGETATION  PASSING BAY	
Revegetation – All Development		
SO 5 Revegetation maintains the safety of people and property by using vegetation species that are of a low flammable nature.	PS 5.1 Where revegetation is undertaken, the species used in the revegetation have one or more of the following attributes:—  (1) high salt content in the leaves;	
	(2) high moisture content in the leaves;	
	(3) low volatile oil content in the leaves;	
	(4) smooth bark protecting conductive tissue and dormant buds;	
	(5) seeds enclosed in woody capsules;	
	<ul><li>(6) dense crown; and</li><li>(7) lowest branches out of reach of ground fires.</li></ul>	
	AND	
<b>*</b> . <b>C 1</b>	<b>PS5.2</b> Revegetation around buildings and structures is undertaken to meet the requirements of the <b>asset protection zone.</b>	
Reconfiguring a Lot		
SO 6 All lots (urban and park residential areas) or all certified building areas (rural residential and rural areas) have an adequate buffer provided between residential lots and State Forests, National Parks and other bush reserves.	PS 6.1 A road (buffer) is provided between residential lots and state forests, national parks and other bush reserves, in urban residential and park residential areas.  OR	
	<b>PS 6.2</b> A 50m buffer or a distance determined by a bushfire hazard assessment and bushfire management plan, whichever is the greater is provided between certified building areas in residential lots and State forests, National Parks and other bush reserves.	
Uses Involving Bulk Hazardous Materials – All Develop	ment	
SO7 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on the manufacture or storage of <i>bulk hazardous materials</i> .	PS 7.1 The manufacture or storage of <b>bulk hazardous materials</b> does not occur on land located in a high bushfire hazard area.	
	AND  DC 7.2 Where the manufacture or storage of bulk	
	<b>PS 7.2</b> Where the manufacture or storage of <b>bulk hazardous materials</b> occurs on land in a medium bushfire hazard area, it meets the requirements of this code.	
Vital Community Infrastructure – All Development		
SO 8 Vital community infrastructure is able to function effectively during and immediately after bushfire events.	PS 8.1 Vital community infrastructure is not located on land in a high bushfire hazard area.  AND	
	<b>PS 8.2</b> Where <i>vital community infrastructure</i> is located on land in a medium bushfire hazard area, it meets the requirements of this code.	



#### Schedule A to the Bushfire Hazard Area Overlay Code - Additional Defined Terms

For purposes of this code, the following meanings apply to critical terms used in the code:-

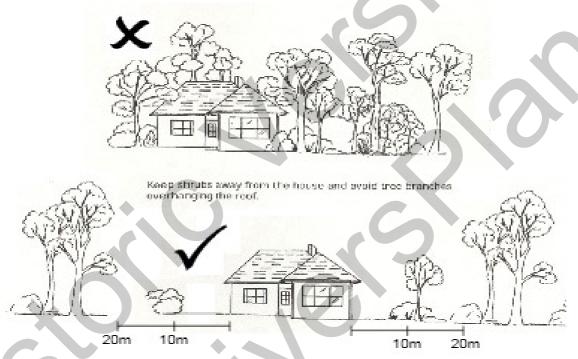
#### **Bulk Hazardous Materials**

Defined in the Dangerous Goods Safety Management Act 2001 in quantities that:-

- (a) would be equivalent to or exceed the minimum quantities set out to determine a large dangerous goods location in the *Dangerous Goods Safety Management Regulation 2001*; or
- (b) would require a licence for a magazine for the storage of an explosive under the Explosives Regulation 1955.

#### Asset Protection Zone

An area around buildings and structures that is a 20m fuel free and fuel reduced area. The inner 10m of this area directly adjacent to any building or structure is kept free of litter and may be paved or concreted, gravel or lawn. In the outer 10m of the asset protection zone, shrubs may be planted but not under trees and trees may be retained or planted if sparsely planted to avoid a continuous canopy across or into a **site**. See illustration below.



#### Hazardous Vegetation

Is vegetation with a hazard score of 6 or more in the list below.

	DESCRIPTION OF VEGETATION COMMUNITY	HAZARD SCORE
12.11.2	Wet sclerophyll forest of flooded gum/tallowwood/brush box	10
12.12.2	Wet or moist sclerophyll forest of blackbutt/tallowwood/grey ironbark	10
12.3.5	Paperbark swamp, usually in pure stands	8
12.3.6	Paperbark swamp, with blue gum and swamp box	8
12.9 – 10.4	Scribbly gum/pink bloodwood/smooth-barked apple woodland on coastal lowlands	8
12.5.3	Queensland white stringybark/pink bloodwood/grey ironbark open-forest	8
12.12.15 & 12.11.3	Small-fruited grey gum/grey ironbark open-forest	8
12.12.14	Scribbly gum/red bloodwood/Queensland white stringybark woodland	8
	Notophyll vine forest with Sydney bluegum emergents	7
12.11.18	Gum-topped box communities	6
12.3.11	Blue gum flats, often with grey ironbark, in near-coastal areas	6
12.3.3	Blue gum flats, without grey ironbark, away from the coast	6
	Blue gum/yellow box/grey gum open-forest	6
12.5.2	Blue gum/pink bloodwood woodland	6
12.9/10.17 & 12.11.6	Spotted gum/narrow-leaved ironbark woodland	6
12.11.19	Broad-leaved ironbark woodland	6



	DESCRIPTION OF VEGETATION COMMUNITY	HAZARD SCORE
12.11.5	Eucalypt woodlands	6
12.12.12	Narrow-leaved ironbark/blue gum woodland on lower hill slopes	6
	Queensland ash woodland	6
	Regrowth scrub and un-grazed grass	5
	Degraded and weed invaded rainforest	4
12.3.7	River oak/blue gum on creeks and rivers	4
	Grassland, pasture	2
	Swamp she-oak woodland	1
12.1.1	Swamp she-oak open-forest in swamps	1
12.3.1	Complex notophyll and araucarian notophyll vine forests of white booyong, giant water gum, silky oak, with black bean/weeping lilly pilly locally dominant.	1
12.8.3	Complex notophyll vine forest of booyong, rose marara	1
12.12.16 & 12.11.10	Araucarian notophyll and notophyll/microphyll vine forests of booyong, rose marara and/or giant ironwood and/or hauer. Emergents of hoop and bunya pine	1
12.1.3	Mangrove	0
12.1.2	Salt marsh	0
	Water	0
	Clear ground	0
	Urban development	0

Note: Vegetation descriptions follow those used by Queensland Herbarium.

#### Natural Hazard Management Area (bushfire)

(NHMA) (bushfire) is an area identified by a local government in its planning scheme consistent with the conclusions of a bushfire hazard assessment prepared in accordance with the SPP1/03 Mitigating the Adverse Impacts of Flood, Bushfire and Landslide. In this instance, the NHMA (bushfire) for this planning scheme is shown on the Bushfire Hazard Area Overlay Map.

#### Vital Community Infrastructure

Any of the following:-

- (a) aeronautical facilities;
- (b) communication network facilities;
- (c) facilities for the storage of valuable records or items of cultural or historical significance (including facilities for the storage of public records under the Public Records Act 2002);
- (d) hospitals and associated institutions;
- (e) police and emergency services facilities including emergency shelters;
- (f) railway lines, stations and associated facilities;
- (g) State-controlled roads;
- (h) water cycle management infrastructure; and
- (i) works of an electricity entity under the Electrical Safety Act 2002.

<sup>&</sup>lt;sup>1</sup> This overlay code does not apply if the proposed development is outside the mapped areas.

<sup>&</sup>lt;sup>2</sup> Table 5.9.1 refers to material change of use and associated works undertaken at the same time as the material change of use. Also, see planning scheme explanatory notes giving examples that explain the type of development involved in different proposals.

<sup>&</sup>lt;sup>3</sup> Table 5.9.2 refers to other development including works not undertaken at the same time as the material change of use. Also, see planning scheme explanatory notes giving examples that explain the type of development involved in different proposals.

<sup>&</sup>lt;sup>4</sup> For defined uses see Chapter 7, Part 2, Use Definitions Schedule.

<sup>&</sup>lt;sup>5</sup> Planning Scheme Policy PSP15 Demonstrating Compliance with the Bushfire Hazard Area Overlay Code contains a definition of a competent person and outlines what they must demonstrate to satisfy this provision.

<sup>&</sup>lt;sup>6</sup> The approved bushfire management plan must cover the use being applied for.