



Elizabeth Drive Pty Ltd
Elizabeth Drive Biodiversity Assessment
Bushfire Assessment

September 2020

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1. Introduction

1.1 Purpose of this report

This report has been prepared for Elizabeth Drive Pty Ltd to demonstrate that a proposed 11 lot industrial subdivision at 1111-1141 Elizabeth Drive, Cecil Park, NSW, 2178 meets the specific aims and objectives of Planning for Bushfire Protection 2019 for commercial and industrial uses (NSW RFS 2019) (PBP). This report further identifies bushfire constraints associated with potential future use for some lots to have Special Fire Protection Purpose uses such as short term or tourist accommodation and other purposes described under the Rural Fires Act 1997.

1.2 Scope

The subject land is designated as:

- 1111-1141 Elizabeth Drive, Cecil Park, NSW, 2178 (Lot 2, Plan No. DP 2954)

The following subdivision is proposed:

- Eleven lot industrial subdivision, with potential for Special Fire Protection Purpose (SFPP) uses – all possible future land uses are listed in Appendix A

This development has largely been assessed as 'Commercial and industrial development' as identified in PBP and in accordance with s.4.14 of the Environmental Planning and Assessment Act (EP&A Act) as the most likely intended use for these lots. These lots are not proposed for residential use.

This report is prepared to provide sufficient information to demonstrate that the development complies with the aim and objectives of PBP, including:

- i. Afford buildings and their occupants protection from exposure to a bushfire
- ii. Provision of a defensible space around buildings
- iii. Provision of appropriate separation between hazards and buildings which, in combination with other measures, will prevent the likely fire spread to buildings
- iv. Ensure appropriate operational access and egress for emergency services personnel and occupants is available;
- v. Provide for ongoing management and maintenance of bushfire protection measures
- vi. Ensure that utility services are adequate to meet the needs of firefighters.

1.2.1 Amendments

This report has been updated in response to the proposed acquisition of part of the site which will reduce the site area by 26,617 m². The acquisition of this portion of the site proposed by TfNSW has required amendments to be made to the proposed development and development footprint which require a re-assessment of the impacts and design. The proposed use for the western part of the site which is for the new M12 Motorway alignment.

In addition, GHD were requested to perform a constraints assessment to identify the potential of lots for SFPP use such as accommodation facilities, schools and childcare centres and other SFPP uses under the Rural Fires Act 1997. All potential future land uses for the proposed lots are outlined in Appendix A.

1.3 Limitations

This report has been prepared by GHD for Elizabeth Drive Pty Ltd and may only be used and relied on by Elizabeth Drive Pty Ltd for the purpose agreed between GHD and the Elizabeth Drive Pty Ltd as set out in section 1.1 of this report. GHD otherwise disclaims responsibility to any person other than Elizabeth Drive Pty Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report. The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section 1.2. of this report and throughout). GHD disclaims liability arising from any of the assumptions being incorrect. GHD has prepared this report on the basis of information provided by Elizabeth Drive Pty Ltd and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Investigations undertaken in respect of this report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this report. Site conditions (including the presence of hazardous substances and/or site contamination) may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.

2. Description of the property

2.1 Site location

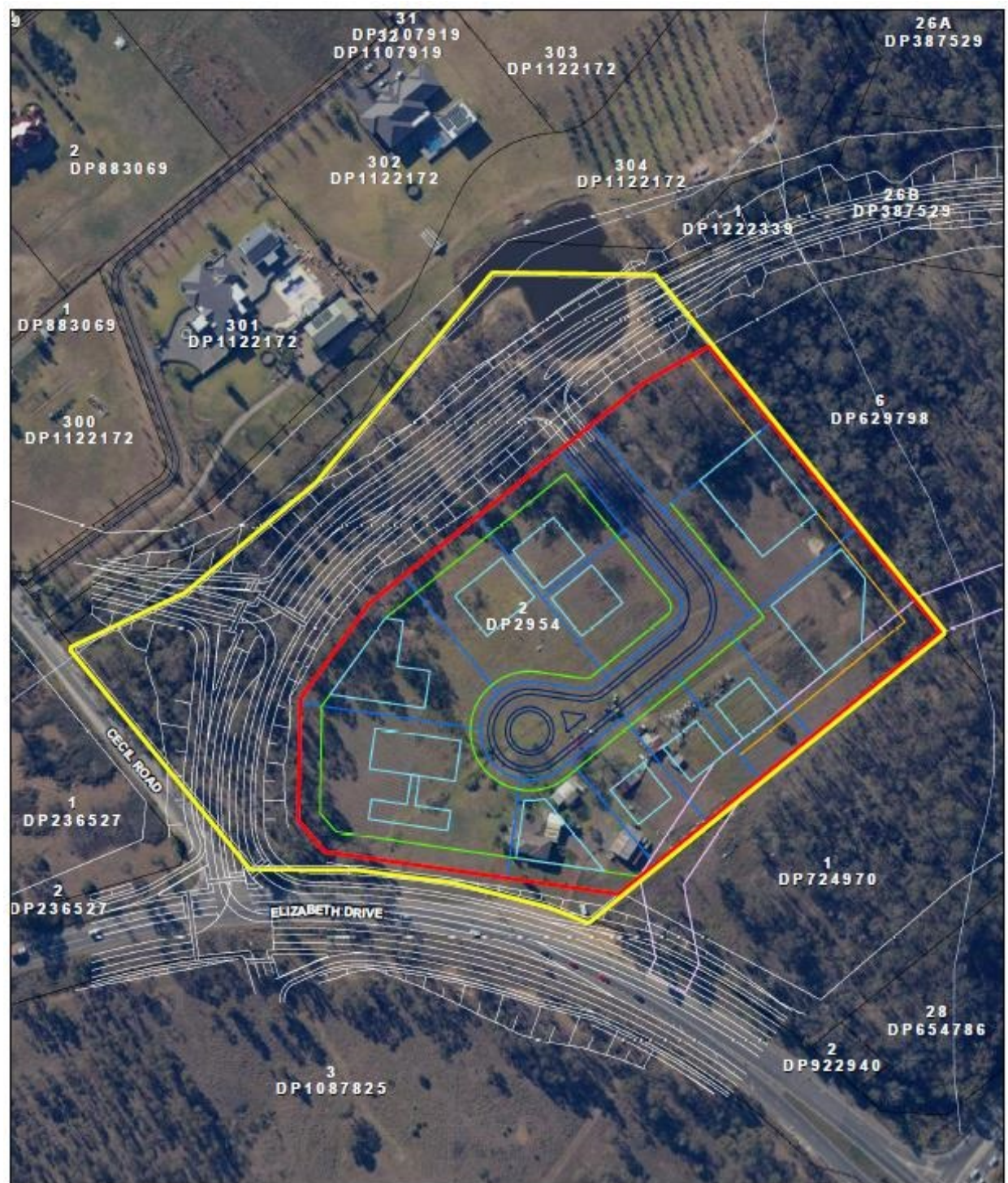
This report is prepared for 1111-1141 Elizabeth Drive, Cecil Park, 2178 (Lot 2, Plan No. DP2954) (the subject land), for a proposed eleven lot commercial/industrial subdivision, with the western portion of the site reserved for future use for the M12 alignment (Figure 1, Figure 2). The total lot is 7.37 ha in size, and the proposed subdivision covers 4.72 ha. These lots may be suitable for further development as Class 5-9 buildings under the National Construction Code.

The subject land currently includes a residence in the south east near Elizabeth Drive and vegetation, dam and creek line running along the north western boundary. The subject land is surrounded by partly cleared, private rural residential blocks, with Cecil Road and Elizabeth Drive bounding the western and southern boundaries and the M7 Motorway and Wallgrove Road within 300 m of the eastern border.

The proposal would include the removal of the residential dwelling, around 3.56 ha of exotic vegetation and up to 1.15 ha of native vegetation.

The subject land is located within Fairfield City Council Local Government Area that is within the 'Greater Sydney Region' and has a corresponding Fire Danger Index (FDI) rating of 100 (NSW RFS 2019).

The proposed lot sizing and layout is shown in Figure 3.



LEGEND

	Study area		Lot boundary
	Subject site		APZ
	Cadastral		Indicative building envelope
	Waterways		Landscaping setback
			Gas pipe easement
			Road
			Proposed M12 Motorway alignment

Paper Size A4
0 20 40 80
Metres
Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55



1111 Elizabeth Drive Pty Ltd
Elizabeth Drive
Biodiversity Development Assessment Report

Job Number 21-27092
Revision 0
Date 05 Aug 2020

Project footprint

N:\AU\Sydney\Projects\2127092\GIS\Map\Deliverables\Revised\Layout\21_27092_2020_RL_ProjectFootprint.mxd Level 15, 133 Castlereagh Street Sydney NSW 2000 T 61 2 9238 7100 F 61 2 9238 7199 E sydney@ghd.com.au W www.ghd.com.au
© 2020. Whilst every care has been taken to prepare this map, GHD (and NSW Department of Lands, SIX Maps 2020, AE Design Partnership Pty Ltd) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.
Data sources: Aerial Imagery - SIX Maps 2020; Department of Customer Service 2020; General topo - NSW LPI DTDS 2017, 2015 & 2012; Cadastral - NSW LPI DCDs 2017; Site layout - AE Design. Created by J.Price

Figure 2 Proposed development layout

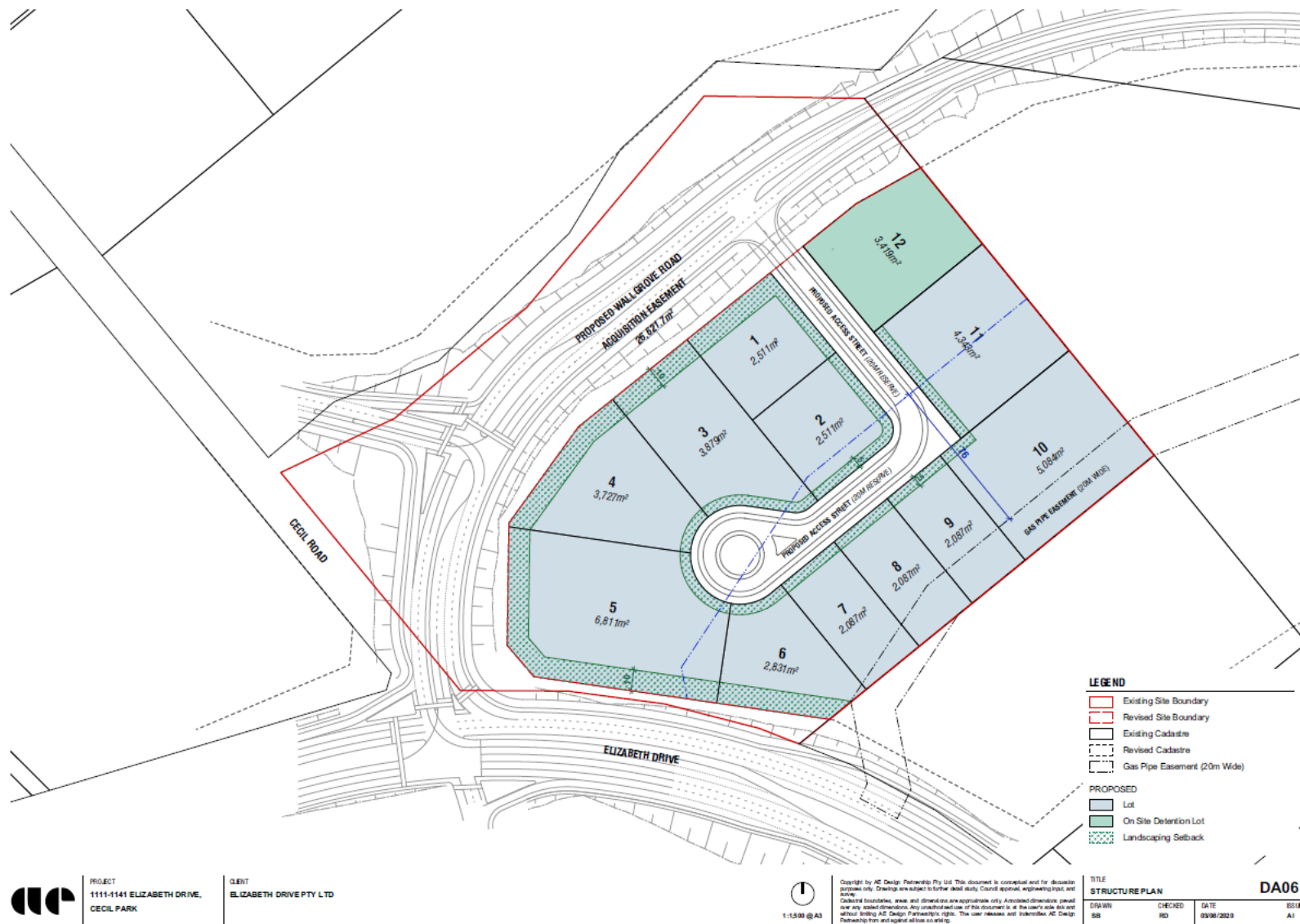


Figure 3 Proposed lot design (AE Design Partnership 2020)

2.2 Vegetation classification

The identification of bush fire prone areas is required under Part 10.3 of the Environmental Planning and Assessment Act (1979). The subject land is designated as bushfire prone (as per Fairfield City Council mapping - see Figure 4) due to the presence of bushfire prone land within and adjoining the site. A site-based hazard assessment was used to confirm bushfire prone vegetation adjoining the subject land.

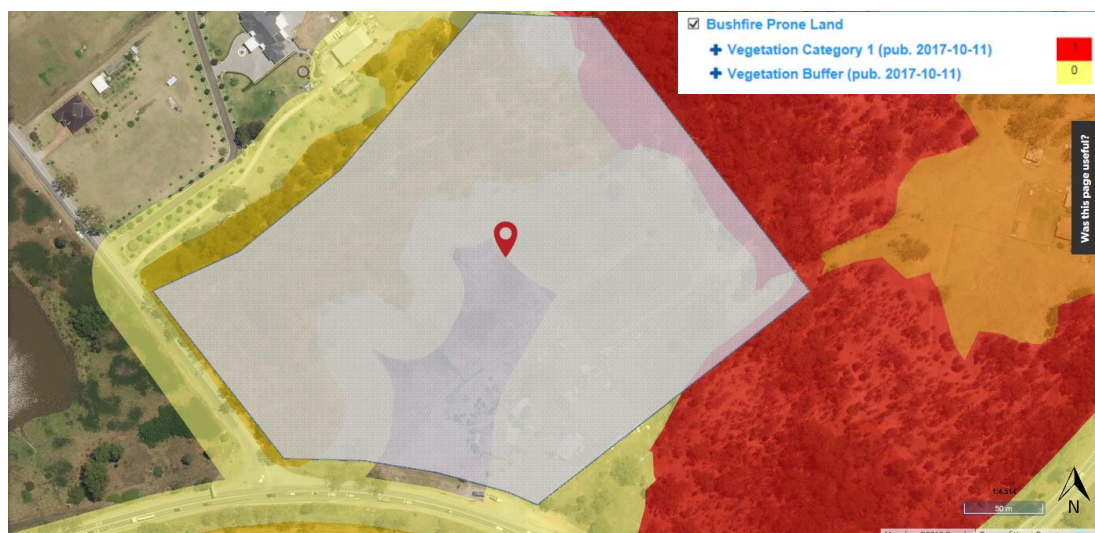


Figure 4 Bushfire prone lands mapping

Site assessment on 18 January 2018 confirmed the presence of bushfire prone vegetation within and adjoining the subject land (to the east). The predominant vegetation class formation from PBP (NSW RFS 2019) is given in Table 1 below with photos presented in Figure 5.

Table 1 Vegetation type, formation and classification

Vegetation type	Vegetation formation (Keith 2004)	AS3959:2018 classification
Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 849)	Grassy Woodlands	Woodland

The vegetation identified as *Grey Box- Forest Red Gum grassy woodlands* matches the description of Woodland vegetation formation (NSW RFS 2019) for the following reasons:

- Dominated by sparse layer of eucalypts, typically boxes and red gums, 15-35 m
- Diverse ground cover with long lived perennial tussock grasses
- Shrubs sparsely distributed



Figure 5 Vegetation photographs

These grassy woodland vegetation formations are located on the eastern boundary of the site, with a narrow strip on the northern boundary of the site. While these vegetation communities can support high intensity bushfires, most likely burning as a faster moving surface fire in open woodland communities without a shrubby understorey, potential bushfire impacts to the site are constrained by:

- Managed vegetation to the north (mown rural residential properties and horticultural enterprises) reducing the potential for a fire to develop and spread from the north;
- A strip of land to the north which is identified for future M12 alignment;
- A large quarry, grazed land and water retention dam located to the west reducing potential fire runs;
- Elizabeth Drive to the south, providing separation from a currently grazed and planted area, which is identified for future subdivision; and
- The small patch of woodland vegetation to the east adjoins the M7 motorway.

Existing vegetation is shown in Figure 6 below. Plot/transect arrows refer to the assessment undertaken as part of the Biodiversity Development Assessment Report (refer GHD 2020).

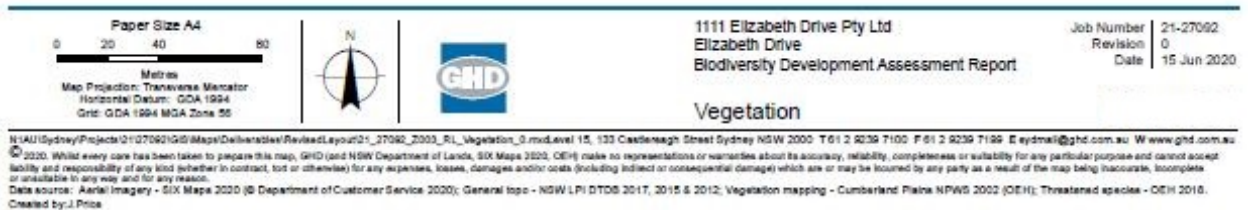
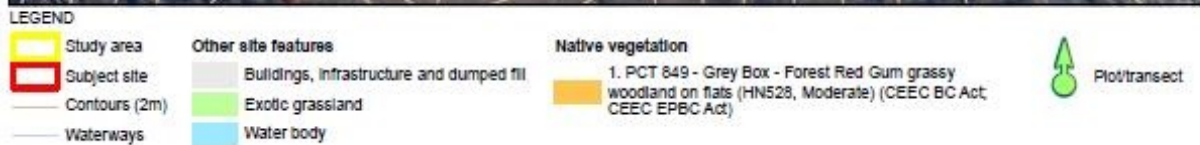
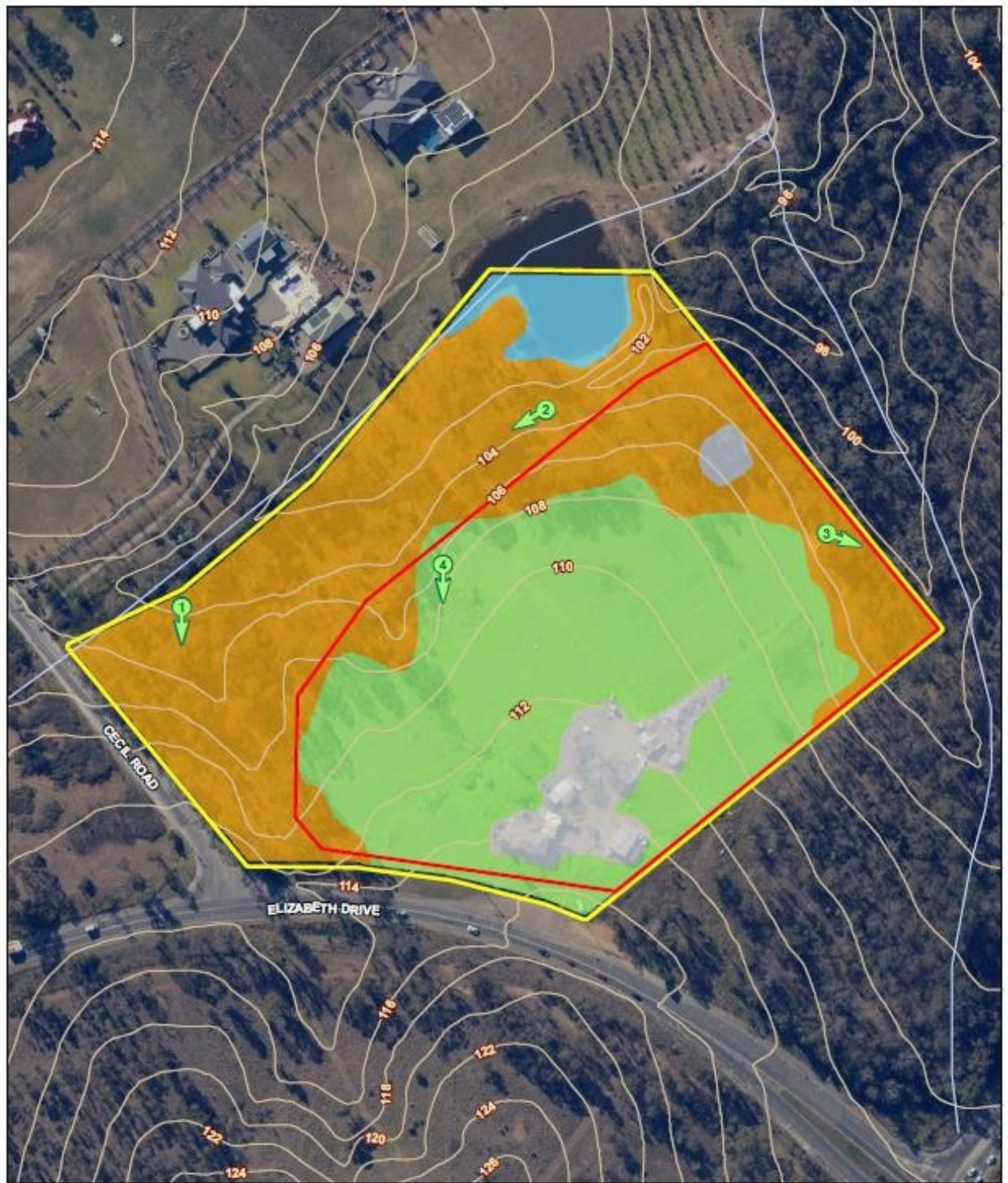


Figure 6 Existing vegetation and slope

2.3 Slope description

Site assessment confirmed slope class within the vegetation hazard is:

- Predominately >0-5 degrees downslope on the eastern parts of the subdivision where the hazardous vegetation occurs. As a conservative approach, the slope along the eastern boundary is classed as >0-5 degrees downslope (see Table 3).
- Lots along the new northern boundary for the development site are also predominantly >0-5 degrees which may include areas of hazardous vegetation until clearing for the M12 alignment.

Contours across the site and neighbouring lots are shown in Figure 6.

2.4 Significant environmental values

A Biodiversity Development Assessment Report has been commissioned to quantify impacts of the development to significant environmental values. Impacts have been minimised as far as practicable. Refer to the Biodiversity Development Assessment Report for additional information (GHD 2020).

2.5 Threatened flora and fauna

The vegetation community within and adjoining the subject land includes:

- PCT 849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion
- Southern Myotis (*Myotis macropus*) habitat

Refer to the Biodiversity Development Assessment Report for additional information (GHD 2020).

2.6 Aboriginal cultural heritage

There is no Aboriginal object (within the meaning of the National Parks and Wildlife Act 1974) or Aboriginal place (within the meaning of that Act) that is known to the applicant situated on the property.

3. Assessment of the proposed development

As the proposed subdivision is most likely intended as a 'commercial and industrial development' under PBP section 8.3.10 (and is neither a residential infill development nor residential subdivision) it must demonstrate it can satisfy the aim and objectives of PBP (as identified in Chapter 1 of PBP) as per the Sections referenced below.

Additional considerations if lots are to be used for SFPP development are described in Chapter 5.

Table 2 Aim and objectives of PBP

Objective	Objective Description from PBP	Report section
i	Afford buildings and their occupants protection from exposure to a bush fire	Section 3.1
ii	Provide for a defensible space to be located around buildings	Section 3.1
iii	Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings	Section 3.1
iv	Ensure that appropriate operational access and egress for emergency service personnel and occupants is available	Section 3.2
v	Provide for ongoing management and maintenance of bush fire protection measures	Section 3.3
vi	Ensure that utility services are adequate to meet the needs of firefighters	Section 3.4

3.1 The extent to which the development is to provide for protection from exposure, defensible space and separation (Objective (i), (ii) and (iii))

Asset Protection Zones (APZs) provide protection from exposure, defensible space and hazard separation. APZs are not specifically required for commercial or industrial development as is proposed in this subdivision, but they have been applied to meet the objectives of PBP (NSW RFS 2019). APZs are established between a building and vegetation hazard, and their calculation is based on vegetation and slope in accordance with Appendix 1 of the PBP (NSW RFS 2019). Deemed-to-satisfy APZs, determined in accordance Table A1.12.2 of PBP 2019, are shown in Table 3 and on Figure 2.

Table 3 APZ defensible space dimensions

Vegetation	Slope Class	APZ	Lots
Woodland	Upslope/Flat	12 m	11 (north-eastern boundary) 10 (eastern boundary)

Vegetation	Slope Class	APZ	Lots
Woodland	>0-5 degrees	16 m	6, 7, 8, 9 and 10 (southern-eastern boundary)
Woodland (interim, to be developed)	Upslope/Flat	12 m	1, 3, 4 and 5* (north-western boundary)

*Lots 1, 3, 4 and 5 have a landscaping setback of 12 m which would provide an interim asset protection zone under the AS 3959:2018 definition of managed vegetation (including landscaped areas and parks) as low threat vegetation. This landscaped area would provide sufficient protection for these lots to the strip of vegetation along the north-western boundary of the block until such time that it is completely cleared and developed for the future M12 alignment. Should any of Lots 1, 3, 4, and 4 be developed after clearing of vegetation for the future M12 is completed, the APZ will no longer be required. This is shown on Figure 3.

Occupants and site managers should complete a Bush Fire Survival Plan as formulated by the NSW Rural Fire Service and the NSW Fire and Rescue. An emergency evacuation plan is not recommended as a condition of consent.

Summary

- ✓ The PBP objectives for building exposure protection, defensible space and hazard separation are met through the provision of APZs applied in accordance with the dimensions identified in Table 3 for the subject land, extending from the building wall outwards and accommodated entirely within each lot (or adjoining roadways, pathways and managed vegetation areas).

3.2 Operational access and egress for emergency services personnel and residents is available

In line with PBP (NSW RFS 2019), any new subdivision should design public roads and property access roads to ensure safe access, egress and defensible space for emergency services.

The subject land is currently accessed from Elizabeth Drive and Cecil Road. These existing public roads are two way, two wheel drive, all weather roads and are of sufficient width to allow fire fighting vehicles to work. The entrance to the M7 motorway is within 500m of the development.

There will be public roads within the development (see Figure 3). In future, access to the lots will be via the M12 to be developed on the northern and western borders of the block.

This road is to be constructed to meet the width specifications set out in the PBP (Table A3.2, NSW RFS 2019), and be a two-wheel drive, all weather road. Additionally, the following requirements are to be met:

- Cross fall shall not exceed 3 degrees, maximum grades for sealed roads do not exceed 15 degrees
- Curves are a minimum inner radius of 6 metres and minimum distance between inner and outer curves is 6 metres
- Minimum vertical clearance of 4 metres above the road
- The capacity of road surfaces is sufficient to carry fully loaded firefighting vehicles
- Hydrants are located outside of parking reserves/bays to ensure accessibility to reticulated water for fire suppression

The public road network provides suitable access for, and egress for, fire management and emergency response purposes.

Summary

- ✓ Fire fighters are provided with two-way all weather access to each lot
- ✓ Public road width allows safe access for fire fighters and evacuating site occupants
- ✓ Road capacity is sufficient to carry a fully loaded fire vehicle
- ✓ Existing roads and roads within the new development will be clearly signposted
- ✓ Parking does not obstruct the paved width.

3.3 Provide for ongoing management and maintenance of bushfire protection measures

APZs within the proposed development will largely comprise of landscaped areas (to the north) and hardstand areas surrounding commercial/industrial buildings. As such there is little opportunity for fuel hazards to accumulate. Therefore management of APZs will meet and largely exceed the requirements of Standards for Asset Protection Zones (Appendix 4 NSW RFS 2019).

3.4 Utility services are adequate to meet the needs of fire fighting

3.4.1 Water Supply

The subject land has reticulated water supply, currently located on Elizabeth Drive, which can be extended throughout the subdivision, with a ring main system for all internal roads.

Fire hydrant spacing sizing and pressures must comply with AS 2419.1 – 2005.

Hydrants must be accessible (ie outside parking bays or within the access road) and suitably spaced.

3.4.2 Electricity

Electricity lines are, where practicable, underground. Where overhead electrical transmission lines are proposed:

- lines are installed with short pole spacing (30 metres) unless crossing gullies, gorges or riparian areas
- no part of a tree is closer to a power line than the distance set out in accordance with the specifications in 'Vegetation Safety Clearances' issued by Energy Australia (NS179, April 2002)

3.4.3 Gas

In order to comply with the Rural Fires Regulation, all gas supplies are to be installed and maintained in accordance with AS/NZS 1596–2014. All fixed gas cylinders are kept clear of flammable materials, close to the building with release valves pointing away from the building.

Summary

- ✓ For each lot, a dedicated accessible water supply is to be located onsite in compliance with the conditions set out in Section 3.4.1. Gas and electricity can be installed to limit the potential for ignition to bushland.

4. Assessment of compliance

The bushfire protection measures that apply to the subject land comply with the aim and objectives of PBP (NSW RFS 2019). As a result, compliance with the objectives of PBP has been achieved, as summarised in the table below. The development including the bushfire protection measures outlined in Section 2 of this report is therefore appropriate for the issuance of bush fire safety certificate.

Table 4 Compliance with Planning for Bushfire Protection 2019

Objective	Assessment of compliance with acceptable solutions	Meets Objective?
(i) Afford buildings and their occupants protection from exposure to a bush fire	The proposed development has achieved the objectives by providing an APZ in accordance with PBP, i.e.	Yes
(ii) Provide for a defensible space to be located around buildings	<ul style="list-style-type: none"> APZs are provided in accordance with Tables A1.12.2 of Planning for Bushfire Protection 2019 based on the FFDI 	
(iii) Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings	<ul style="list-style-type: none"> APZs are managed in accordance with the requirements of Appendix 4 in Planning for Bushfire Protection 2019. APZs are wholly within the boundaries of the development site APZs are located on lands with a slope less than 18 degrees. 	
(iv) Ensure that appropriate operational access and egress for emergency service personnel and occupants is available	<p>The proposed development has achieved the objective by providing appropriate access solutions, i.e.;</p> <ul style="list-style-type: none"> Existing and proposed public roads are two-wheel drive Traffic calming devices are not proposed Public roads will have a crossfall not exceeding 3 degrees and grades not exceeding 15 degrees. A minimum vertical distance of >4 m will be maintained. Curves will be minimal and have the required dimensions. Existing public roads have a capacity of greater than 15 tonnes and there are no bridges with load restrictions. Parking will be within driveways and will not obstruct minimum paved width 	Yes
(v) Provide for ongoing management and maintenance of bush fire protection measures	The proposed development has achieved the objective through the location of APZs within existing roadways and pathways, as well as landscaped and hardstand areas of commercial/industrial development.	Yes
(vi) Ensure that utility services are adequate to meet the needs of firefighters	<p>The proposed development has achieved the objective by complying with the acceptable solutions, i.e.;</p> <ul style="list-style-type: none"> Reticulated supplies will be provided within the required specifications and capacity (refer to section 3.4.1) Hydrants will not be located within parking areas and will comply with AS 2419.1 (2005). Electricity will be supplied via overhead powerlines with 30 m pole spacing and in 	Yes

Objective	Assessment of compliance with acceptable solutions	Meets Objective?
	<p>accordance with Energy Australia specifications (NS179, 2002) and maintained according to National distribution network standards.</p> <ul style="list-style-type: none"> Gas supplies, where installed, will be in accordance with AS/NZS 1596 (2014). 	

5. Considerations for SFPP development

In addition to commercial and industrial uses for the lots, GHD was asked to consider the potential for the lots to be used for SFPP development as listed in Appendix A.

SFPP represents uses that are typically more vulnerable to bushfire risk as they are occupied by at-risk people (such as a childcare facilities, aged care facilities, or tourist accommodation). As such, SFPP requires greater bushfire protection measures to be in place in accordance with PBP. The objectives and acceptable solutions for development specified by PBP depends on the particular use that is proposed, therefore more detailed assessment at the time of development of each lot would be required.

Individual lots developed for SFPP will require development approval which in turn will require referral of the DA to the NSW Rural Fire Service for the issue of a Bush Fire Safety Authority. At DA stage for development of individual lots, bushfire risk considerations applicable for SFPP development will require assessment if SFPP development is being proposed.

The following constraints would apply to SFPP development for the proposed lots in addition to the requirements already detailed throughout this report which are recommended for commercial or industrial uses.

Table 5 Additional requirements for SFPP development

	Objective	Additional requirements for SFPP	Suitability of lots for SFPP development
i	Afford buildings and their occupants protection from exposure to a bush fire	Asset Protection Zone requirements for SFPP are required in accordance with Table 6.8a and Table A1.12.1 of PBP (NSW RFS 2019). APZs are required to provide protection to BAL10 level, requiring widths as shown in Table 6. Landscaping and fencing minimise radiant heat impacts and likelihood of ignition.	(Refer Figure 3 for lot layout) Lot 2 will be unconstrained by SFPP APZ requirements due to being an internal lot (not adjoining the property boundary).
ii	Provide for a defensible space to be located around buildings		Lots 1, 3, 4 and 5 would be highly constrained by SFPP APZ requirements if they were proposed to be developed for SFPP before vegetation clearing associated with future M12 development is undertaken. The constraints would be temporary until vegetation clearance has occurred. However, these same lots would be unconstrained by SFPP APZ requirements once vegetation clearance associated with M12 construction has been completed. Lots 6, 7, 8, 9, 10 and 11 are likely to be highly constrained by the extensive spatial requirements for BAL10 level APZs if proposed for SFPP.
iii	Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings		

	Objective	Additional requirements for SFPP	Suitability of lots for SFPP development
iv	Ensure that appropriate operational access and egress for emergency service personnel and occupants is available	<p>Access requirements are in accordance with Table 6.8b of PBP (NSW RFS 2019).</p> <p>Non-perimeter access roads allow safe access and egress for emergency services as well as evacuation.</p>	The proposed access road into the subdivision is not through road (it is a cul-de-sac design)- acceptable solutions for SFPP access roads call for through roads, and thus a performance-based solution may be required if SFPP development is proposed.
v	Provide for ongoing management and maintenance of bush fire protection measures	Nil additional	
vi	Ensure that utility services are adequate to meet the needs of firefighters	<p>Requirements for utilities are in accordance with Table 6.8c of PBP (NSW RFS 2019).</p> <p>An adequate water supply for fire fighting is installed and maintained, additional requirements exist for SPFF water reticulation.</p> <p>Electricity and gas requirements are generally as described for commercial/industrial development.</p>	Some additional specificity in the requirements of water reticulation would need to be accommodated.
	Emergency evacuation	<p>Emergency management planning must be performed in accordance with Table 6.8d of PBP (NSW RFS 2019).</p> <p>A Bush Fire Emergency Management and Evacuation Plan is prepared (incorporating community consultation).</p>	This is an additional requirement.

The APZs as described for commercial and industrial development would need to be modified to provide adequate protection for SFPP development as shown in Table 6.

Table 6 APZ defensible space dimensions for SFPP

Vegetation	Slope Class	APZ	Lots
Woodland	Upslope/Flat	42 m	11 (north-eastern boundary) 10 (eastern boundary)
Woodland	>0-5 degrees	50 m	6, 7, 8, 9 and 10 (southern boundary)
Woodland	Upslope/Flat	42 m	1, 3, 4 and 5* (north-eastern boundary) (interim APZ, to be extinguished following M12 development)

Lots 1, 2, 3, 4 and 5 would be suitable for SFPP development once vegetation clearance works for the future M12 development has been completed, however, in the interim, these lots (except Lot 2) will require a temporary APZ of 42 metres (to achieve BAL 10) and therefore SFPP development would be highly constrained. Lot 2 has no APZ requirements under commercial and industrial or SFPP developments.

6. Recommendations

The following bushfire protection measures are made for the proposed 11 lot industrial subdivision of the subject land at 1111-1141 Elizabeth Drive, Cecil Park, 2178 (Lot 2, Plan No. DP2954). Application of these recommendations allows the development to conform with the aim and objectives of Planning for Bush Fire Protection (NSW RFS 2019) (PBP), as detailed in Section 3 of this report.

Table 7 Recommendations

Performance criteria	Description
(i) Protection from exposure to bushfire	For development other than SFPP, from the commencement of construction and in perpetuity, APZs conforming to acceptable solutions can be accommodated within lots adjoining bushfire hazard in accordance with the dimensions identified in Table A1.12.2 in Appendix 1 of PBP. Note: AS 3959:2018 'Construction of Buildings in Bushfire Prone Areas' does not apply to industrial developments.
(ii) Defendable space	
(iii) Appropriate hazard separation	
(iv) Operational access and egress	<p>The proposed road network within the subdivision is:</p> <ul style="list-style-type: none"> • Is two-wheel drive. • Do not include traffic calming devices. • Public roads with a crossfall not exceeding 3 degrees and grades not exceeding 15 degrees. • Have a minimum vertical distance of >4 m maintained from vegetation. • Public roads have a capacity of greater than 15 tonnes and there are no bridges with load restrictions. • Parking will be within driveways and/or parking will not obstruct minimum paved width. <p>It is advised that occupants and site managers should complete a Bush Fire Survival Plan as formulated by the NSW Rural Fire Service and the NSW Fire and Rescue. An emergency evacuation plan is not recommended as a condition of consent.</p>
(v) Ongoing management of APZs	From the commencement of construction and in perpetuity, APZs are maintained in accordance with the NSW RFS requirements (Appendix 4, Planning for Bushfire Protection).
(vi) Utility services	<p>For each lot, a dedicated accessible water supply must be located on each lot which must meet the requirements outlined in Section 3.4.1.</p> <p>Electricity, unless supplied underground, will be supplied via overhead powerlines with 30 m pole spacing and in accordance with Energy Australia specifications (NS179,2002) and maintained according to National distribution network standards.</p> <p>Gas supplies, where installed, will be in accordance with AS/NZS 1596 (2014).</p>

Proposed use for SFPP is not recommended due to the temporary APZ constraints discussed in section 5 of this report. SFPP development would require BAL10 compliant Asset Protection Zones to be accommodated within each lot, which would severely constrain possible building envelopes. SFPP development would be viable for Lots 1, 3, 4 and 5 once vegetation clearance associated with future development of the M12 has been completed.

7. Summary

This report consists of a bushfire risk assessment to support a proposed rezoning to facilitate a proposed eleven lot industrial subdivision (with a vegetation reserve), at 1111-1141 Elizabeth Drive, Cecil Park, 2178 (Lot 2, Plan No. DP2954).

The report concludes that the development is on bushfire prone land and the legislative requirements for development in bushfire prone areas are applicable.

This report has considered all of the elements of bushfire attack and provided the proposed development is constructed in accordance with the recommendations included in Section 6 of this report, the development is considered to satisfy the aim and objectives of Planning for Bushfire Protection 2019 for commercial or industrial development.

Proposed use for SFPP development may require additional assessment and modification to the design including additional provision for APZs, modification to roads and water supply design and development of a Bush Fire Emergency Management and Evacuation Plan. The current design does not comply with all acceptable solutions for SFPP, however future assessment of individual lots may demonstrate that these are appropriate for SPFF development. Proposed use for SFPP is not recommended due to the permanent and temporary APZ constraints discussed in section 5 of this report.

8. References

GHD (2020) Elizabeth Drive Biodiversity Development Assessment Report, report for 1111 Elizabeth Drive Pty Ltd

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Standards Australia 2018. AS3959 – 2018 Construction of Buildings in Bushfire-prone areas. Standards Australia and the Australian Building Codes Board, Sydney.

Standards Australia 2014. AS/NZS 1596 The Storage and Handling of LP Gas.

Standards Australia 2005. AS2419.1 – 2005 Fire Hydrant installations – System design, installation and commissioning

Appendix A – Intended future land uses



INTENDED FUTURE LAND USES

1111-1141 ELIZABETH DRIVE, CECIL PARK

August 2020

DEFINITIONS

Eco-tourist facility means a building or place that:

- a) provides temporary or short-term accommodation to visitors on a commercial basis, and
- b) is located in or adjacent to an area with special ecological or cultural features, and
- c) is sensitively designed and located so as to minimise bulk, scale and overall physical footprint and any ecological or visual impact.

It may include facilities that are used to provide information or education to visitors and to exhibit or display items.

Food and drink premises means premises that are used for the preparation and retail sale of food or drink (or both) for immediate consumption on or off the premises, and includes any of the following:

- (a) a restaurant or cafe,
- (b) take away food and drink premises,
- (c) a pub,
- (d) a small bar.

Highway service centre means a building or place used to provide refreshments and vehicle services to highway users. It may include any one or more of the following:

- a) A restaurant or café,
- b) Take away food and drink premise,
- c) Service stations and facilities for emergency vehicle towing and repairs,
- d) Parking for vehicles,
- e) Rest areas and public amenities.

Information and education facility means a building or place used for providing information or education to visitors, and the exhibition or display of items, and includes an art gallery, museum, library, visitor information centre and the like.

Recreation area means a place used for outdoor recreation that is normally open to the public, and includes:

- (a) a children's playground, or
- (b) an area used for community sporting activities, or
- (c) a public park, reserve or garden or the like,

and any ancillary buildings, but does not include a recreation facility (indoor), recreation facility (major) or recreation facility (outdoor).

Recreation facility (indoor) means a building or place used predominantly for indoor recreation, whether or not operated for the purposes of gain, including a squash court, indoor swimming pool, gymnasium, table tennis centre, health studio, bowling alley, ice rink or any other building or place of a like character used for indoor recreation, but does not include an entertainment facility, a recreation facility (major) or a registered club.

Recreation facility (major) means a building or place used for large-scale sporting or recreation activities that are attended by large numbers of people whether regularly or periodically, and includes theme parks, sports stadiums, showgrounds, racecourses and motor racing tracks.

Recreation facility (outdoor) means a building or place (other than a recreation area) used predominantly for outdoor recreation, whether or not operated for the purposes of gain, including a golf course, golf driving range, mini-golf centre, tennis court, paint-ball centre, lawn bowling green, outdoor swimming pool, equestrian centre, skate board ramp, go-kart track, rifle range, water-ski centre or any other building or place of a like character used for outdoor recreation (including any ancillary buildings), but does not include an entertainment facility or a recreation facility (major).

Special Fire Protection Purpose
(Under Rural Fires Act 1997) means the purpose of the following:

- (a) a school,
- (b) a child care centre,
- (c) a hospital (including a hospital for the mentally ill or mentally disordered),
- (d) a hotel, motel or other tourist accommodation,*
- (e) a building wholly or principally used as a home or other establishment for mentally incapacitated persons,
- (f) seniors housing within the meaning of [State Environmental Planning Policy \(Housing for Seniors or People with a Disability\) 2004](#),
- (g) a group home within the meaning of [State Environmental Planning Policy No 9—Group Homes](#),
- (h) a retirement village,
- (i) any other purpose prescribed by the regulations.

*Under RFS's Planning for Bush Fire Protection Guidelines, the following uses are considered a SFPP:

- Caravan parks
- Camping
- Primitive camping
- Bed and breakfast and farm stay accommodation
- Ecotourism,
- Manufactured home estates
- Home based child care and short term holiday rental accommodation

Tourist and visitor accommodation means a building or place that provides temporary or short-term accommodation on a commercial basis, and includes any of the following:

- a) backpacker's accommodation,
- b) bed and breakfast accommodation,
- c) farm stay accommodation, hotel or motel accommodation, serviced apartments...

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2	I. Lyons H. Urwin	P. de Mar		P. de Mar		18 Sept 2020

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