Bushfire Update

Seniors Housing

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08055.2

April 2009

DOCUMENT TRACKING	
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Version No.	Status	Date	File Name
1	Draft	17/2/09	08055.2 Bushfire Update
2	Final	3/4/09	08055.2 Bushfire Update FINAL

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INTRODUCTION 1

1.1 Background

A seniors housing development is proposed on Lots 155 and 188 DP 755537. The proposal was initially designed in 2004, but did not proceed. No development application was lodged. The proposal has been re-designed, and an application for a site compatibility certificate under the SEPP (Housing for Seniors or People with a Disability) 2004 is being made.

An issue for consideration in the site compatibility certificate application is bushfire threat. A draft bushfire risk assessment was prepared in 2004 by Steven Ellis, Bushfire Risk Assessor, in accordance with *Planning for Bushfire Protection 2001* (*PBP 2001*). *PBP 2001* has been superseded by *Planning for Bushfire Protection 2006* (*PBP 2006*), and the site compatibility certificate application must consider the more recent document.

Much of the information in the original bushfire risk assessment is still valid and relevant. This short report serves to address the requirements of *PBP 2006* where they differ from *PBP 2001,* for the purpose of showing that the site is suitable for the proposed development in terms of bushfire safety.

1.2 Legal Framework

Section 91 of the *EPAA* classes 'Special Fire Protection Purposes' (SFPP) as Integrated Development, requiring a section 100B Bush Fire Safety Authority from the Rural Fire Service under the *Rural Fires Act.* SFPPs include seniors housing within the meaning of *State Environmental Planning Policy (Housing for Seniors or People with a Disability* (2004). The proposed development is thus a SFPP.

This report, together with the original bushfire risk assessment, does not comprise an application for a Bush Fire Safety Authority. These documents are for the purpose of site compatibility assessment. A fully updated bushfire risk assessment, in accordance with clause 46 of the *Rural Fires Regulation,* will be prepared at the development application stage.

2.1 General Description of the Land

A general description of the land is provided in the original bushfire risk assessment undertaken by Steven Ellis (p.1), which accompanies this report.

2.2 Vegetation Description and Classification

A description of the vegetation on the site, and classification of the predominant vegetation type in each direction, was undertaken in the original bushfire risk assessment undertaken by Steven Ellis (pp.2-3), which accompanies this report.

The vegetation classifications determined were:

North: Tall heath/closed scrub

East: Non-vegetated

South: Grassland

West: Woodland

2.3 Slope

A slope assessment was carried out and reported in the original bushfire risk assessment undertaken by Steven Ellis (p.4), which accompanies this report.

The gradients that would most significantly influence fire behaviour were summarised as follows:

North: >0° - 5° upslope

East: >0° - 5° downslope

South: >5° - 10° downslope

West: >5° upslope

2.4 Asset Protection Zones

The Asset Protection Zones (APZs) required by *PBP 2001* differ from those required by *PBP 2006*. The table below outlines the APZs required by *PBP 2006* for special fire protection purposes (derived from Table A2.6 of *PBP 2006*).

Performance Criteria	Acceptable solutions
The intent may be achieved where:	
• internal road widths and design enable safe access for emergency services and allow crews to work with equipment about the vehicle.	• internal roads are two-wheel drive, sealed, all-weather roads; • internal perimeter roads are provided with at least two traffic lane widths (carriageway 8 metres minimum kerb to kerb) and shoulders on each side, allowing traffic to pass in opposite directions; • roads are through roads. Dead end roads are not more than 100 metres in length from a through road, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end; • traffic management devices are constructed to facilitate access by emergency services vehicles. • a minimum vertical clearance of four metres to any overhanging obstructions, including tree branches, is provided. • curves have a minimum inner radius of six metres and are minimal in number to allow for rapid access and egress. • the minimum distance between inner and outer curves is six metres. • maximum grades do not exceed 15 degrees and average grades are not more than 10 degrees. • crossfall of the pavement is not more than 10 degrees. • roads do not traverse through a wetland or other land potentially subject to periodic inundation (other than flood or storm surge). • roads are clearly sign-posted and bridges clearly indicate load ratings. • the internal road surfaces and bridges have a capacity to carry fully-loaded firefighting vehicles (15 tonnes).

Access and Egress During an Emergency Response
As described in the original bushfire risk assessment undertaken by Steven Ellis (p.8), arrangements for access and egress from the site will be suitable for an emergency response. The driveway access road will comply with the relevant performance criteria and acceptable solutions of *PBP 2006* (refer above).

2.7 Services

Reticulated water is not currently available to the site, however it is intended that supply will be extended to service the development. Likewise, electricity and gas (if installed) services are to be located appropriately so as not to contribute to the risk of fire to buildings.

It is considered that the installation of water, electricity and gas services can be in accordance with the performance criteria and acceptable solutions in section 4.2.7 of *PBP 2006* (refer table below).

Performance Criteria	Acceptable solutions
The intent may be achieved where:	
Reticulated water supplies • water supplies are easily accessible and located at regular intervals.	• access points for reticulated water supply to SFPP developments incorporate a ring main system for all internal roads. • fire hydrant spacing, sizing and pressures comply with AS 2419.1 – 2005. Where this cannot be met, the RFS will require a test report of the water pressures anticipated by the relevant water supply authority, once development has been completed. In such cases, the location, number and sizing of hydrants shall be determined using fire engineering principles. • the provisions of public roads in section 4.1.3 in relation to parking are met.
Non-reticulated water supply area. • a water supply reserve dedicated to firefighting purposes is installed and maintained. The supply of water can be an amalgam of minimum quantities for each lot in the development and be reticulated within dedicated firefighting lines.	• 10,000 litres is the minimum dedicated water supply required for firefighting purposes for each occupied building, excluding drenching systems. • the provision for suitable connection for RFS and/or NSW Fire Brigades purposes in section 4.1.3 in relation to water supplies is made available.
Electricity • location of electricity services will not lead to ignition of surrounding bushland or the fabric of buildings or risk to life from damaged electrical infrastructure.	• electrical transmission lines are underground.
Gas • location of gas services will not lead to ignition of surrounding bush land or the fabric of buildings.	• reticulated or bottled gas is installed and maintained in accordance with AS 1596 - 2002 and the requirements of relevant authorities. Metal piping is to be used. • all fixed LPG tanks are kept clear of all flammable materials and located on the non hazard side of the development. • If gas cylinders need to be kept close to the building, the release valves must be directed away from the building and away from any combustible material, so that they do not act as catalysts to combustion. • polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not to be used.

2.8 Emergency and Evacuation Arrangements

A preliminary bushfire evacuation plan was prepared as part of the original bushfire risk assessment undertaken by Steven Ellis (Appendix C), which accompanies this report. This plan can be updated to suit the new development design, and to satisfy the performance criteria and acceptable solutions in section 4.2.7 of *PBP 2006* (refer table below).

Performance Criteria	Acceptable solutions
The intent may be achieved where:	
• an Emergency and Evacuation Management Plan is approved by the relevant fire authority for the area.	• an emergency/evacuation plan is prepared consistent with the RFS Guidelines for the *Preparation of Emergency/Evacuation Plan.* • compliance with AS 3745-2002 'Emergency control organisation and procedures for buildings, structures and workplaces' for residential accommodation'. • compliance with AS 4083-1997 'Planning for emergencies - for health care facilities'. *Note: The developer should provide a copy of the above document to the local Bush Fire Management Committee for their information prior to the occupation of any accommodation of a special fire protection purpose or community title subdivision.*
• suitable management arrangements are established for consultation and implementation of the emergency and evacuation plan.	• an Emergency Planning Committee is established to consult with residents (and their families in the case of aged care accommodation and schools) and staff in developing and implementing an Emergency Procedures Manual. • detailed plans of all Emergency Assembly Areas including "onsite" and "offsite" arrangements as stated in AS 3745-2002 are clearly displayed, and an annual (as a minimum) trial emergency evacuation is conducted.
In relation to eco-tourist accommodation: • suitable refuge areas and evacuation/management arrangements are in place commensurate with the bush fire risk.	• at least one building should be used as a local refuge area and comply with the APZ's and construction requirements for residential buildings. • cabins are within 50 metres of a refuge building and are clearly signposted. • the paths from cabins to the refuge area are safe, with management of surface fuels to ≤ 4 tonnes/ha. • the overall accommodation for tourists does not exceed 12 persons. • a mechanism for the relocation of occupants on days of a total fire ban or adverse fire activity is provided in the local area in which the development operates.

CONCLUSION

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The original bushfire risk assessment undertaken for the subject site by Steven Ellis, together with this review of the requirements of *PBP 2006* indicates that the proposed seniors housing development will be able to satisfy all relevant *PBP 2006* objectives, performance criteria and acceptable solutions applicable to SFPPs. It is thus considered that the site is compatible with the development of seniors housing in terms of bushfire safety.

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