

**BUSHFIRE RISK MANAGEMENT PLAN**

**FOR PROPOSED**

**COMMUNITY TITLE RESIDENTIAL SUBDIVISION**

**OF**

**LOT 100 DP 629555**

**LOT 101 DP 629555**

**LOT 2 DP 800836**

**PACIFIC HWY, COFFS HARBOUR**

**FOR**

**SAPPHIRE BEACH**

**DEVELOPMENT PTY LTD**

**PREPARED BY:**

**BUSHFIRESAFE**

**(AUST) PTY LTD**

**FRIDAY, 22 MAY 2009**

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### EXECUTIVE SUMMARY

BushfireSafe (Aust) Pty Ltd have been engaged by Sapphire Beach Development Pty Ltd to complete a bushfire risk assessment for a proposed Community Title Residential Subdivision, in DP629555, DP800836 Lots 100, 101 and 2 Pacific Highway, Coffs Harbour; in accordance with section 91A of the Environmental Planning & Assessment Act 1979, and section 100B of the NSW Rural Fires Act 1997 and based on Planning for Bushfire Protection 2006.

We have been asked to respond to the Director General Requirements (DGRs) of the Modification to the MP 06\_0148 Mod 1 and more specifically to DGR 5.3 which states;

*'Address the requirement of Planning for Bush Fire Protection 2006 (NSW Rural Fire Service)*

The subject property is located approximately 6km north of the city of Coffs Harbour, in the Coffs Harbour Local Government Area in northern New South Wales. The subject property is zoned 2(e) Tourist Residential within the Coffs Harbour LEP (2000) and has an accumulative area of approximately 4.1503ha.

The subject property is located on the eastern perimeter of the Pacific Highway and stretches east to Campbell's Beach. The subject property currently occupies a tourist resort with 114 suites in a part 3 storey and part 4 story building with facilities including dining room, bar, meeting room, outdoor pool and outdoor tennis courts. Approximately half of the site area is currently vacant and is maintained grasslands and gardens which are maintained by the resort. The resort was closed in April 2007.

BushfireSafe (Aust) Pty Ltd prepared a Bush Fire Management Plan as part of submitted documentation for the original Concept Plan 06\_0148, approved by the Minister on the 9<sup>th</sup> May 2007. The Concept Plan approval comprised a mixed tourist/residential development consisting of 122 dwellings ranging from tourist apartments, to townhouses and villa style housing.

The current proposal (MP06\_0148 Mod 1) for the redevelopment of the site is to create a Community Title subdivision which is consistent with the objectives of the zoning of the land as 2(e) Tourist/ Residential. The Community Title subdivision consists of 39 residential lots of various sizes and 3 Community Lots (lots 40, 41, 42) consisting of internal roads, vegetation rehabilitation areas and open space areas.

A small vegetated area occurs approximately in the centre of the development property which is zoned 7(a) Environmental Protection Habitat/Catchment which is not identified as bushfire vegetation through the Coffs Harbour Bushfire Prone Land Mapping and is currently infested with weeds.

The dominant bushfire vegetation was identified as an Open Forest occurring on the southern aspect of the subject property approximately 60m at the closest point from the southern property boundary; the terrain in relation to the Open Forest vegetation on the southern elevation were assessed as having an upslope of greater than 10°.

The access and egress of the internal road system has been designed with two way trafficable bitumen surface with roll top curbs and appropriate drainage.

Reticulated water is available to the proposed community title residential subdivision development.

## CONCLUSION

The Bushfire Risk Assessment was conducted through an onsite inspection and using the methodology set out in Planning for Bushfire Protection 2006, the onsite assessment included traversing the subject property and all lands within 140 metres from the proposed development sites.

The bushfire risk assessment identified an Open Forest on the southern aspect of the proposed development as the dominate bushfire vegetation. The NSW Rural Fire Services document (Guidelines for Bushfire Land Mapping) identifies all lands within 100 metres from any category 1 bushfire vegetation shall be identified as Bushfire Prone Lands; as the identified category 1 bushfire vegetation occurs at a distance of 60 metres to the development property it would be considered as bushfire prone and would be required to comply with the recommendation outlined in Planning for Bushfire Protection 2006 (PBP).

The Coffs Harbour Bushfire Prone Land map identifies the vegetation to the south of the subject property as bushfire prone; after assessing the proposed site, it was found that the vegetation was an Open Forest community.

The terrain in relation to the Open Forest vegetation on the southern elevation of the proposed development was assessed as having an upslope of greater than 10° for a distance of approximately 50 metres followed by generally flat terrain.

The proposed community title residential development shall have access via the Pacific Highway which has a two-way trafficable bitumen surface, formed verges with ample room for off road parking/passing which complies with Planning for Bushfire Protection Section 4.3.1 (Access).

The designated building envelopes for the proposed Lots 1, 2, 25 – 27 & 29, 31 along the southern boundary were identified as being within a “**Medium**” bushfire attack category; the above mentioned lots has a current lateral separation (APZ) of greater than 60m but less than 100m from the open forest vegetation occurring on an upslope terrain; the remaining lots were identified as being within a **Low** a bushfire attack category as the remaining lot are greater than 100 metres from the identified bushfire vegetation.

The building envelopes for the proposed developments can achieve a lateral separation (APZ) of greater than 60 metres from the identified Open Forest which meets the minimum recommended APZ outlined in Planning for Bushfire Protection 2006 table A2.4 (Minimum Specifications for Asset Protection Zones for Residential and Rural Residential Subdivision purposes (for class 1 and 2 buildings) in FDI 80 Fire Areas).

The proposed development will comply with the minimum requirements for:

- 1). Asset Protection Zones detailed in Table A2.6 (Minimum Specifications for Asset Protection Zones for Residential and Rural Residential Subdivision Purposes (for class 1 and 2 buildings) in FDI 80 Fire Areas).
- 2) Access in accordance with section 4.1.3-2 (Property Access) in the manual for Planning for Bushfire Protection (RFS, 2006).

# **BUSH FIRE RISK MANAGEMENT PLAN**

## **1.0 SCOPE OF THE PLAN**

### **1.1 AREA**

This plan covers the proposed Community Title residential subdivision in DP629555, DP800836 of Lots 100, 101, 2, Pacific Highway, Coffs Harbour within the Coffs Harbour Council area.

#### **1.1.1 PURPOSE**

The plan is a strategic document which;

- Identifies the level of bush fire risk for human habitation.
- Identifies strategies which will be implemented to manage the identified bush fire risk.
- Identifies persons responsible for the implementation and the maintaining of the bush fire risk management plan (BFRMP).

#### **1.1.2 PERIOD OF OPERATION**

Once approved by the local authority and the NSW Rural Fire Service (if applicable) the strategies recommended within this plan will have a period of operation for the life of the development.

#### **1.1.3 AIM AND OBJECTIVES OF THE PLAN**

##### **1.1.4 AIM**

The aim of this plan is to provide for the mitigation of bush fires for;

- (a) The protection of life and the property for the occupants, visitors and emergency personnel in a bush fire situation.
- (b) The protection of environmental factors within the adjacent development.

##### **1.1.5 OBJECTIVES**

The objective of this bush fire risk management plan is too;

- Identify the area most at risk from a bush fire attack.
- Reduce the risk of bush fire damage to life and property.
- Ensure that the owner/occupier understands their bush fire management responsibilities.

- Reduce the impact of bush fire on the development.
- Develop sustainable asset protection zones.

#### **1.1.6 BUSHFIRE RISK MANAGEMENT STRATEGIES**

This plan contains a number of strategies, which are directed at addressing the risk to the proposed Community Title Residential Subdivision. This is achieved through addressing and managing the fuel loads and separation distances from the assessed dominant bushfire vegetation and the bushfire construction standards.

#### **1.2 IMPLEMENTATION**

Implementation of the strategies in this plan is the responsibility of the developer and will be implemented as part of the development infrastructure.

The ongoing maintenance of this plan will be the responsibility of the development's body corporate that shall maintain all the bushfire risk management strategies implemented in this plan.

The local Authority or their delegated Authority, for the life of the development will monitor this plan.

### **2.0 LEGISLATIVE BUSHFIRE HAZARD MANAGEMENT RESPONSIBILITIES**

#### **2.1 Clarence Valley Council**

The Coffs Harbour City 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 the council to issue bushfire hazard reduction certificates for hazard reduction to be undertaken on private lands.

#### **2.2 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.

### **2.3 NSW Fire Brigade**

The NSW Fire Brigade has the responsibility for undertaking fire suppression activities, and other functions relative to emergency management, within its area of operation. Through mutual aid agreements, the NSW Fire Brigade can provide assistance to the NSW Rural Fire Service, particularly for structural fire operations within the NSW Rural Fire Brigade Districts. Furthermore, Hazmat operations within New South Wales are the responsibility of the NSW Fire Brigade.

### **2.4 Coffs Harbour City Council Bush Fire Management Committee**

The Coffs Harbour City Council 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 organisation, a fire fighting organisation 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 50** of the Act requires the Bush Fire Co-ordinating Committee to constitute a Bush Fire Management Committee for the whole of the area of any local Council area for which a rural fire district is constituted.

**Section 51(1A)** requires a Bush Fire Management Committee to report to the Bush Fire Coordinating Committee on the implementation of the requirements of the Bushfire Risk Management Plan.

**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.

### **2.5 Private Land Owners / Occupiers**

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

**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'. In this section; 'notified steps' means any steps that:

(a) a bushfire risk management plan (or the Co-ordinating Committee) advises a person to take;

(b) are included in a bush fire risk management plan that applies to that land.

**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 total fire ban (TOBAN) days. Section 10 permits are not required to adhere to Part V provisions of the Environmental Planning & Assessment Act (1979) (EP&A Act) in any 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 (see Section 100E of the Rural Fires Act (1997)).

### **3.0 INTRODUCTION**

Development applications on bush fire prone land must be accompanied by a bush fire assessment report that demonstrates compliance with the aim and objectives of the Planning for Bushfire Protection (PBP) guidelines. In particular, the following matters must be addressed:

- a) A statement that the site is bush fire prone land, where applicable;
- b) The location, extent and vegetation formation of any bushland on or within 100m of the site;
- c) The slope and aspect of the site and of any bush fire prone land within 100m of the site, which may determine the likely path of any bush fire;
- d) Any features on or adjoining the site that may mitigate the impact of a high intensity bush fire on the proposed development;
- e) A statement of the likely environmental impact of any proposed bush fire protection measures; and
- f) Whether any building complies with AS 3959/1999 in relation to the construction level for bush fire protection.

### **3.1 BACKGROUND**

BushfireSafe (Aust) Pty Ltd has been engaged by Sapphire Beach Development Pty Ltd to complete a bushfire risk assessment for the proposed community title residential subdivision of Lots 100, 101, 2 in DP629555, DP800836 Pacific Highway, Coffs Harbour; in accordance with section 91A of the Environmental Planning & Assessment

Act 1979, and section 100B of the NSW Rural Fires Act 1997 and based on Planning for Bushfire Protection 2006.

The bushfire assessment area consisted of Lots 100, 101, 2 in DP629555, DP800836 Pacific Highway, Coffs Harbour (which will be referred to as the subject property) and all lands within 140 metres from the property boundaries.

The assessment has involved the following:

- Ground verifying vegetation communities and determining their bush fire attack categories.
- Ground verifying of terrain in relation to the assessed bush fire vegetation.
- The sitting of adequate water supplies for fire fighting purposes.
- Identification of adequacy of arrangements for access and egress from the development for the purpose of an emergency response.
- Identification of construction standards to be used for building elements in the development.
- Identification of adequacy of the bushfire maintenance plans and fire emergency procedures for the development.

### **3.2 DESCRIPTION OF PROPERTY**

#### **3.2.1 LOCATION**

The property is currently known as Pelican Beach Resort and is situated between Korora and Sapphire on the eastern side of the Pacific Highway, approximately 6 km north of the city of Coffs Harbour. The subject property is zoned 2(e) Tourist/Residential within the Coffs Harbour Local Government Area with a small portion zoned 7(a) Environmental Protection under the Coffs Harbour LEP.

The majority of the subject property consists of maintained grasslands with a small area of 7(a) vegetation which is less than a hectare in size and is located approximately in the centre of the subject property; an area of Open Forest is located adjacent on the southern aspect approximately 60 metres from the subject property southern boundary.

### 3.2.2 PROPOSAL

The proposal for the redevelopment of the site is to create a Community Title subdivision which is consistent with the objectives of the zoning of the land as 2(e) Tourist/ Residential. The community title subdivision consists of 39 residential lots of various sizes and 3 community lots (lots 40, 41, 42) consisting of internal roads, vegetation rehabilitation areas and open space areas.

It is envisaged that the project will be developed in 1 stage with the residential dwellings being progressively developed over 4-5 years after registration of the Community Plan

### 3.3 NSW RURAL FIRE DISTRICT BRMP

The NSW Rural Fire District risk management plan relating to the area, rates the Sapphire Beach area as a **Minor** bushfire risk to human settlement.

Management options;

- (a) TO REDUCE THE HAZARD, encourages the development of asset protection zones along the settlement area bush land interface.
- (b) REDUCE VUNERABILITY, maintain development and the building controls and standards appropriate to the level of hazard.

### 4.0 VEGETATION CLASSIFICATION

The vegetation of the subject property and adjacent properties up to 140m (where practicable) from the proposed and existing building envelope were assessed during a site visit on 20<sup>th</sup> of May, 2009. The vegetation communities present were identified and classified into formations as described in Keith (2004).

Appendix A2.3 of Planning for Bushfire Protection (PBP) manual (RFS, 2006) outlines the methodology for determining the predominant bushfire prone vegetation to the distance of at least 140 metres in all directions from the future development on the site. 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];                     | (g) Freshwater Wetlands;   |
| (b) Woodlands;   | (h) Saline Wetlands        |
| (c) Plantations – being pine plantations not native plantations; | (i) Alpine Complex;        |
| (d) Forested Wetlands;   | (j) Semi – arid Woodlands; |
|  | (k) Arid Woodlands; and    |

*(e) Tall Heath lands;*

*(l) Rainforests*

*(f) Short Heath lands;*

#### **4.1 SUBJECT PROPERTY**

The majority of the vegetation occurring within the subject property boundaries was identified as maintained lawns and gardens and was not assessed as bushfire vegetation when assessing the bushfire attack categories for the proposed development.

A small vegetated area occurring approximately in the centre of the development property is zoned 7(a) Environmental Protection (Habitat/Catchment) within the Coffs Harbour LEP (2000); this area is not identified as bushfire vegetation through the Coffs Harbour bushfire prone land mapping, however the area is infested with weeds and if left unmanaged could, in the near future constitute a bushfire hazard. A vegetation management plan has been prepared and will be implemented to maintain the current non-bushfire prone classification.



**FIGURE 1: Vegetation within the subject property illustrates maintained lawns and landscaped areas; existing resort building in background and landscape vegetation to be removed and/or significantly modified through construction.**

#### **4.2 LANDS NORTH & WEST OF THE SUBJECT PROPERTY**

Developed residential areas adjoin the subject property on the northern and western boundaries for a distance greater than 140 metres, the vegetation occurring within these properties was assessed as being maintained lawns and gardens which would normally be found within the curtilage of buildings;

This vegetation was not assessed as bushfire vegetation when assessing bushfire attack categories in relation to the proposed development.

#### **4.3 LANDS TO THE SOUTH OF THE SUBJECT PROPERTY**

An Open Forest vegetation community occurs adjacent to the southern boundary of the subject property and is situated approximately 60 metres (at the closes point) from the southern property boundary of the development property with most of the vegetation occurring greater than 70 metres from the boundary. The Open Forest vegetation extends for a distance greater than 140 metres to the south east and approximately 50 meters to the south which is then followed by a residential area for a distance greater than 140 metres.

This community is dominated by Brush Box, Casuarina, Tallowwood, and various Eucalyptus species; the understorey consists of regrowth, native shrubs and Lantana.



**FIGURE 2: Open forest headland vegetation greater than 60 metres from the proposed development property.**



**FIGURE 3: 7(a) Zone (Environmental Protection) located approximately centre of site; this vegetation is less than 1ha in area and greater than 100 metres from any identified bushfire prone vegetation.**



**FIGURE 4: Dune vegetation located along the eastern property boundary to be rehabilitated using species and plant spacing to accommodate the requirements of an Asset Protection Zone.**

#### **4.4 ASSESSED DOMINANT BUSHFIRE VEGETATION**

The bushfire risk assessment undertaken in relation to the proposed redevelopment of the community title residential subdivision concluded the dominant bushfire vegetation in regards to the designated building envelopes as being;

- A Group 1 Open Forest vegetation was assessed as being the dominant bushfire vegetation in relation to the proposed redevelopment.

#### **5.0 SLOPE ASSESSMENT**

A desktop assessment of the slope using a land based mapping program and an onsite assessment using a hand held clinometer verified the following;

##### **5.1 ASSESSED DOMINANT SLOPE IN RELATION TO THE IDENTIFIED BUSHFIRE VEGETATION FOR PROPOSED REDEVELOPMENT**

The terrain in relation to the Open Forest vegetation on the southern elevation of the proposed redevelopment was assessed as having an upslope of greater than 10° for approximately 50m followed by generally flat for a distance greater than 140m.

Table 1 summarises the slope assessments for each vegetation community observed over the subject land. This information will be used as the basis for determining those aspects of the proposed development that may require provisions for, and implementation of appropriate Asset Protection Zones.

**Table 1 Site Assessment Summary – vegetation communities**

<b>Aspect</b>	<b>Vegetation</b>	<b>Classification (PBP)</b>	<b>Slope</b>	<b>Comments</b>
W	Residential Lots	NA	NA	Property adjoins Pacific Highway followed by residential properties
S	Forest	Open Forest	Upslope	Residential properties followed by Headland vegetation > 60m
N	Residential Lots	NA	NA	Developed residential lots for a distance > 140m
E	Coastal Dune	NA	NA	Campbell Beach

## **6.0 ENVIRONMENTAL CONSIDERATIONS**

Bushfiresafe (Aust) P/I environmental services has undertaken a Flora & Fauna Survey for the subject property, no threatened or endangered species, or significant environmental features were identified within the development site; however the F&F Survey identified the coastal and hind dune area will require rehabilitation/revegetation.

It is a recommendation from the bushfire risk assessment that preferably local endemic non-fire prone species be used for the rehabilitation/revegetation area and plant spacing are designed to accommodate canopy spacing required for an Asset Protection Zone.

## **7.0 BUSHFIRE ASSESSMENT FOR PROPOSED REDEVELOPMENT**

A bushfire assessment using the methodology set out in planning for bushfire protection (2006) was carried out on the proposed redevelopment, to ascertain the viability of the development in the protection of life in a bushfire emergency.

### **7.1 ASSET PROTECTION ZONES (APZ)**

Based on the vegetation communities and slopes present on and adjacent to the subject property, and in accordance with the methodology detailed in planning for bushfire protection (NSW RFS 2006) (Table A2.4 Minimum Specifications for Asset Protection Zones for Residential and Rural Residential subdivision purposes (for class 1 and 2 buildings) in FDI 80 Fire Areas), it is recommended that Asset Protection Zones (APZ) should be established around the proposed designated building envelopes/footprints as follows;

The 7(a) portion of the development property is not identified as bushfire prone vegetation due to the size less than 1ha and >100m separation from any identified bushfire vegetation. It is a recommendation of this report that a minimum of 5 metre separation from the foliage drip line and any proposed structures would be required on all elevations of the 7(a) area.

The 7(a) portion is well less than 1ha in area and has a current lateral separation of greater than 100 metres from any identified bushfire vegetation, the Bush Fire Prone Land Mapping Guidelines, (Version 1.1), section 5.2 D, indicates areas of vegetation groups 1, 2 and 3 that are less than 1 hectare and not less than 100m lateral separation



from a Bushfire Vegetation Category 1 are excluded from being categorised as a Bushfire Category 1 vegetation.

The assessed Open Forest bushfire vegetation has a current minimum separation of 60 metres from the development property consisting of well maintained lawns and landscaped areas of the adjoining residential properties; therefore an APZ will not be required within the development property.

The proposed redevelopment has a current lateral separation of greater than 60 m from the identified Open Forest vegetation occurring adjacent to the southern; which complies and in most cases exceeds the minimum recommendations of Planning for Bushfire Protection 2006 table A2.4 (Minimum Specifications for Asset Protection Zones for Residential and Rural Residential Subdivisions in FDI 80 Bushfire Prone Areas).

Note: The Hind Dune area along the eastern property boundary and the 7(a) zone located approximately centre of the property are to be rehabilitated/revegetated and landscaping of the open space portions of the facility will be undertaken as part of the development. Local native species will be utilised for the rehabilitation areas and within the landscaped portions of the property with all trees planted to accommodate the requirements of an asset protection zone with a minimum 2m canopy separation at maturity.

The Asset Protection Zones (APZ) must be established and maintained such that:

- There is minimal fine fuel at ground level that could be set alight by a bushfire (e.g. long grass, tree branches etc).
- Vegetation does not provide a path for the transfer of fire to the development.
- Trees are a minimum of 5 metres away from any building, measured from the edge of the foliage to the roof line or any open balconies.
- Bark chips and the like are not present within 2 metres of any building.
- Trees present have a minimum canopy separation of 2 metres.
- Trees present are not species that retain dead material or deposit excessive amounts of ground fuel in a short time.

## 7.2 ASSESSED BUSHFIRE ATTACK CATEGORY

A bushfire assessment using the methodology set out in Planning for Bushfire Protection (2006) was carried out on the proposed development, to ascertain the viability of the development in the protection of life and property in a bush fire emergency.

The assessment qualified the bushfire attack category as “**Medium**” for the proposed Lots 1, 2, 25 – 27 & 29, 31 along the southern boundary from the following aspects:

- The bushfire risk assessment identified an Open Forest, as the dominant bushfire vegetation.
- The terrain in relation to the identified dominant vegetation southern elevation occurs on an upslope of greater than 10° for a distance greater than 50 metres followed by generally flat.
- The proposed building envelopes have a current lateral separation of >60m but <100m from the identified bushfire vegetation as outlined in Planning for Bushfire Protection 2006 table A3.4 (Determination of Bush Fire Attack FDI 80).

The remaining residential lots within the community title development were identified as being within a **Low** bushfire attack category from the following aspects:

- The bushfire risk assessment identified an Open Forest, as the dominant bushfire vegetation.
- The terrain in relation to the identified dominant vegetation southern elevation occurs on an upslope of greater than 10° for a distance greater than 50 metres followed by generally flat.
- The proposed building envelopes can achieve a lateral separation of >100m from the identified bushfire vegetation as outlined in Planning for Bushfire Protection 2006 table A3.4 (Determination of Bush Fire Attack FDI 80).

## 7.3 ELECTRICITY SUPPLY

The electricity supply is currently connected to the existing resort by an underground easement.

#### **7.4 ADEQUATE SITTING OF WATER SUPPLY**

Reticulated water is available to the development and will be supplied through the town mains system in accordance with local water authority, council development control plans (DCPs) or any other relevant policies and procedures.

- a) External fire hydrants will be installed and located in accordance with Australian Standard 2419-1, the hydrants shall be installed so as a clear unobstructed path to each designated building envelope, and
- b) The fire hydrants shall be installed at a maximum distance of 80m from the furthest extremity of the building/s, and
- c) The location of fire hydrants shall be delineated by blue pavement markers in the centre of the road, and
- d) All delivery water lines shall be installed underground to a minimum depth of three hundred millimetres (300mm), with all points above ground using metal pipes or raisers with a minimum internal diameter of nineteen millimetres (19mm).

#### **7.5 PROPERTY ACCESS ROAD/S AND EGRESS**

The proposed community title residential subdivision shall have the main access via the Pacific Highway which has a two-way trafficable maintained bitumen surface, formed verges with room for off road parking/passing; the property access roads for the proposed redevelopment shall be constructed and maintained to the following standard and complies with Planning for Bushfire Protection section 4.1.3-2 (Property Access);

- Roads should be two-wheel drive, all weather roads.
- Roads should be two-way to allow at least two traffic lane widths (6m minimum reserve) with shoulders on each side, allowing traffic to pass in opposite directions.
- Where possible the access road should be designed as a perimeter road allowing access to the bushfire prone elevation should be linked to the internal road system at an interval of no greater than 500 metres in urban areas.
- Restrict the use of speed humps and chicanes to control traffic.
- Roads should not be through roads. Dead end roads are not recommended, but if unavoidable, dead ends should not be more than 2300m in length, incorporate

a minimum 12m radius turning circle, and should be clearly sign posted as dead ends.

- The capacity of the road surfaces and bridges should be sufficient to carry fully loaded fire fighting vehicles (approx 28 tonnes or 9 tonnes per axle).
- Curves should have a minimum inner radius of 6m and be minimal in number to allow for rapid access and escape.
- The minimum distance between inner and outer curves should be 6m.
- Maximum grades should not exceed 15° and preferably not more than 10° or gradient specified by road design standards, whichever is the lesser gradient.
- A minimum vertical clearance of 6m to any over hanging obstacles, including tree branches.
- Roads should be clearly sign-posted (with easily distinguished names) and buildings should be clearly numbered. Bridges should clearly indicate load ratings.
- Roads should not traverse through a wetland or other land potentially subject to periodic inundation.

PBP identifies lots greater than 200 metres from a public road requires a secondary emergency access and egress road. An existing service road, which runs along the development property's northern boundary shall be utilised for the secondary emergency access and egress road once linked to the development's proposed internal roads. The service road is in an easement in favour of CHCC and is currently used by Council's maintenance trucks and vehicles for access to a sewer pumping station and has a bitumen surface, which creates a connection from the eastern portion of the property to the Pacific Hwy to the west.

## **8.0 CONSTRUCTION STANDARDS**

The bushfire risk management assessment undertaken in relation to the proposed subdivision concluded that the construction standard in accordance with AS 3959 (1999) Construction of Buildings in Bushfire Prone Areas (Standards Australia, 2001) will be assessed and nominated when development applications are submitted for the construction of dwellings on the approved allotments.

## **9.0 ADDITIONAL RECOMMENDATIONS**

1. The proposed development will be a Community Title subdivision with areas of open space recreation and landscaped areas (Community Lots 40,41 & 42 ).The bushfire risk assessment concluded that prior to the release of the linen plan for the Community Title , a Bushfire Management Plan is prepared and included as part of the Community Management Statement to address the ongoing maintenance of the open space recreation and landscaped areas.
2. All areas within the proposed development not utilised for the construction of buildings and associated infrastructure, shall be maintained to the standard of an Inner Protection Area (IPA).

## **10.0 LANDSCAPING AND PROPERTY MAINTENANCE – BUSHFIRE PROVISIONS**

According to the PBP manual, the principles of landscaping for bush fire protection are to: prevent flame impingement on the dwelling; provide a defensible space for property protection; reduce fire spread; deflect and filter embers; provide shelter from radiant heat; and reduce wind speed. Careful consideration of the species selection, their location relative to their flammability, and on-going maintenance to readily remove flammable fuels (leaf litter, twigs and debris) is critical to providing for bushfire protection (RFS, 2006).

## **11.0 EXTENT OF COMPLIANCE AND/OR DEVIATION FROM SPECIFICATIONS**

The proposed development will comply with the minimum requirements for:

- 1). Asset Protection Zones detailed in Table A2.5 (Minimum Specifications for Asset Protection Zones (APZ) for Residential and Rural Residential Subdivision Purposes (for class 1 & 2 buildings) in FDI 80 Fire Areas); and
- 2) Access in accordance with section 4.1.3-2 (Property Access) in the manual for Planning for Bushfire Protection (RFS, 2006).

#### **REFERENCES**

NSW RFS (2001). *Planning for Bushfire Protection*, New South Wales Rural Fire Service and Planning NSW, Sydney.

NSW RFS (2004). *Guidelines: Bushfire Prone Land Mapping (Version 2.1)*, New South Wales Rural Fire Service, Sydney.

NSW RFS, *Coffs Harbour Rural Fire District Bushfire Risk Management Plan*, Coffs Harbour Local Environmental Plan, Coffs Harbour.

PTW Planning (2000). *Sapphire Beach Development Coffs Harbour*, Peddle Thorp & Walker P/L, Sydney.

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Project:  
Bushfire Risk  
Management  
Assessment for  
proposed redevelopment  
of Pelican Beach Resort  
Coffs Harbour

Client:  
Sapphire Beach  
Development Pty Ltd  
North Sydney

[Appendix 1  
Aerial](#)