

**Shell Cove  
Boat Harbour Precinct**

**Concept Plan Application  
and Environmental Assessment  
Appendix E - Bushfire**

prepared by

LFA (Pacific) Pty Ltd

date

February 2010





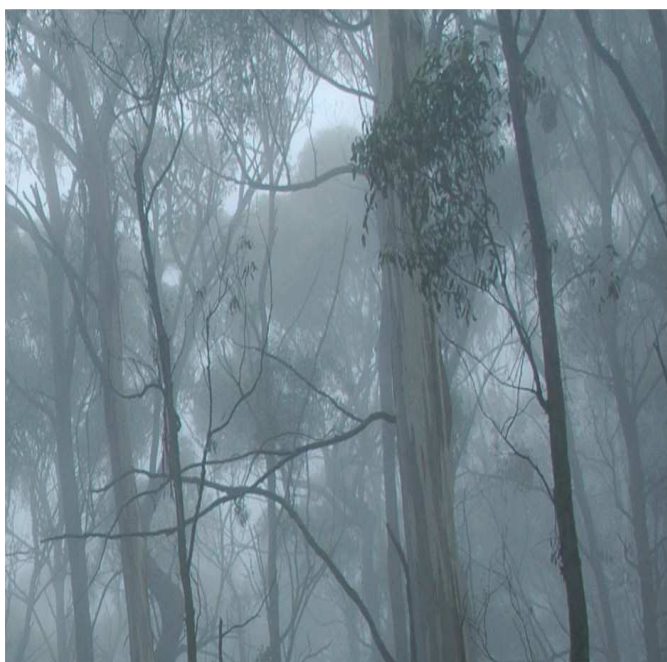
## BUSHFIRE PROTECTION ASSESSMENT

Proposed subdivision


Boatharbour Precinct Development, Shell Cove

Prepared for  
**Australand Holdings Ltd**

24 September 2009



#### Document Tracking

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## **EXECUTIVE SUMMARY**

As part of Hazard Management and Mitigation referred to in the Director-General's Environmental Assessment Requirements, this report has addressed the requirements of Planning for Bush Fire Protection 2006 (RFS) for the Concept Plan Application for the construction of residential, commercial, retail, hotel, marina facilities, public and technology park and subdivision at Boollwarroo Parade, Shell Cove, Shellharbour.

The report shows that the development is not located on bush fire prone land. However, a small potential hazard exists along the dune system and any landscaping on the site will need to be designed so as not to create a bushfire hazard as recognised by the local council in its bush fire prone land mapping. The building construction standards as per Australian Standard AS 3959 (2000) have been described, as has water, gas and electricity supplies and access requirements as per PBP.

## PART A The property and type of development

<b>Name:</b>	Australand Holdings Ltd		
<b>Postal address:</b>	PO Box A148, Shellharbour, NSW, 2529		
<b>Street or property Name:</b>	Boollwarroo Parade		
<b>Suburb, town or locality:</b>	Shell Cove	<b>Postcode:</b>	2529
<b>Lot/DP no:</b>	Lot 8032 DP 8072187, Lot Part 8100 DP 1082981, Lot Part 206 DP 857030, Lot 1168 DP 1076113, Lot 8031 DP 1072187 & Lot 30 DP 229374		
<b>Local Government Area:</b>	Shellharbour City Council		
<b>Type of area:</b>	<b>Urban</b> <input checked="" type="checkbox"/> <b>Rural Residential</b> <input type="checkbox"/>		
<b>Type of development:</b>	Construction of Residential, Commercial, Retail, Hotel, Marina Facilities, Public Parklands and Technology Park and Subdivision		

Figure 1 is an aerial photograph of the site.

Figure 2 shows the layout of the proposed subdivision.

Figure 3 shows bushfire prone land in the vicinity of the development.

Figure 4 shows proposed access to the development.

The subject land was inspected on 22 January 2008.

Site photographs are provided on page 12.







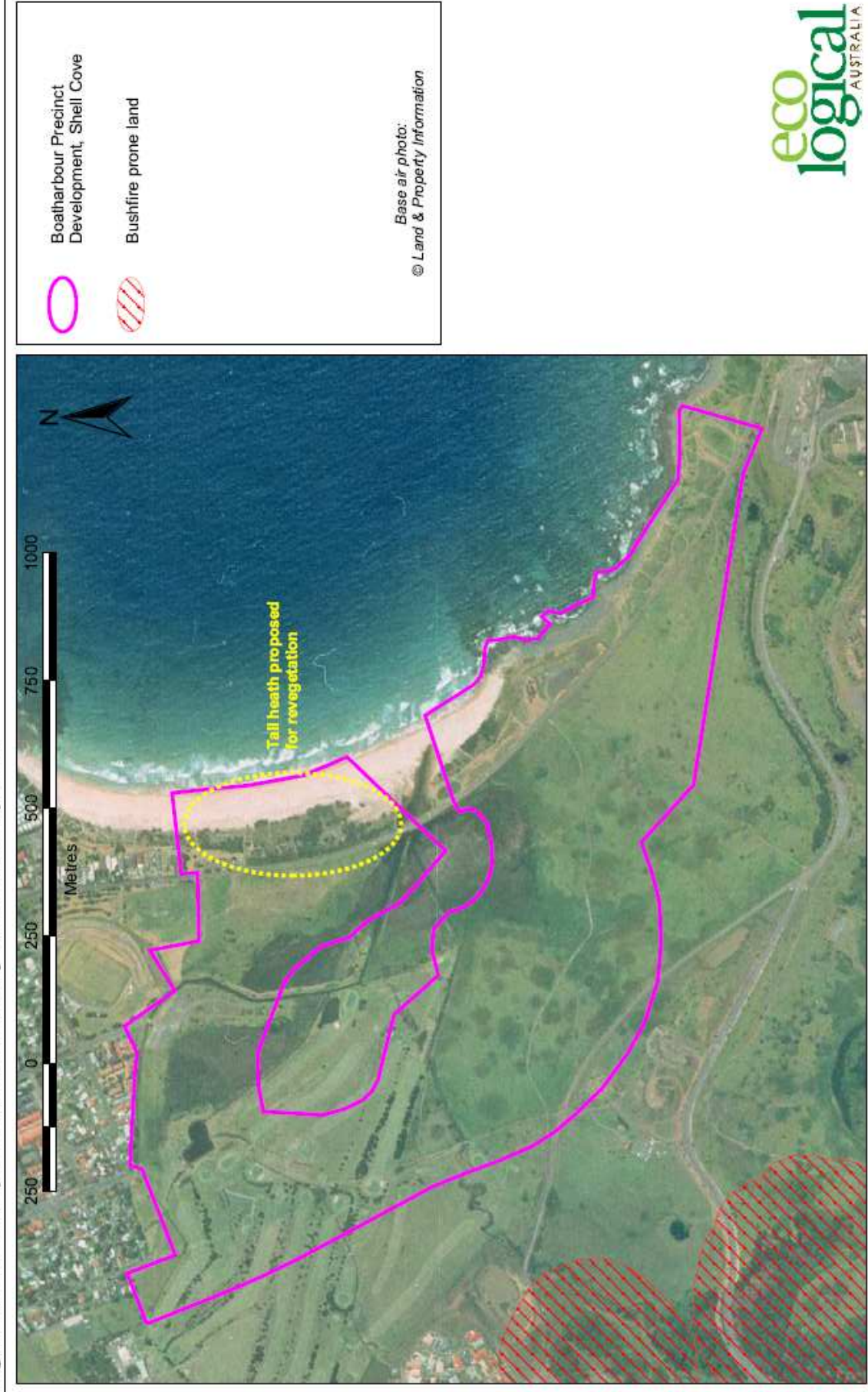
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Figure 2: Masterplan layout





**Figure 3: Bushfire prone land in vicinity of the development**



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Figure 4: Access



Fig. 01 - Road Network Types

## Introduction

This document has been prepared by LFA (Pacific) for Australand and Shellharbour City Council to provide design guidance for the following streets

- Avenue 1A, 1B and 1C
- Visual Corridor 2A, 2B, 2C and 2D
- Connecting Street 3A, 3A1, 3B, 3C
- Minor Streets 4A and 4B
- Main Street 5A
- Entry 5B

Type	Width (m)	Description	Name/Number	Tree Form & Character Number*	Paved Width (m)
<b>1. Avenue</b>					
1A	30	Median Separated	Cove Boulevard, Harbour Boulevard	2, 2.7	
1B	30	Non-separated		2	
1C	25	Non-separated		2	10.6
<b>2. Visual Corridor</b>					
2A	30	Median Separated		4	
2B	26	Non-separated		2, 4	10.6
2C	20	Non-separated		4	
2D	15	Non-separated		4	
<b>3. Connecting Street</b>					
3A	20	Major		2, 4, 5	9
3A1	20	Major with Parking Bays		2, 4	
3B	15	Secondary		5	8
3C	12	Minor		5	6
<b>4. Minor Street</b>					
4A		Street		5	8
4B		Lane		5, 6	4.5
<b>5. Specials</b>					
Entry	26			2, 7	
Main Street	Varied			2, 7, 8	

\* Refer Tree Form and Character

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Shell Cove Boatharbour Precinct - Street Guidelines  
March 2007 (Draft # 1 - Issued 08-03-07)

## **PART B Bush fire threat assessment**

The subject land is not identified as bush fire prone land by Shellharbour City Council. However, the Director-General's Environmental Assessment Requirements for this development, the requirements of Planning for Bush Fire Protection 2006 (PBP) must be addressed even though PBP does not technically apply to non-bush fire prone land. Notwithstanding this, the following assessment is prepared in accordance with Section 100B of the *Rural Fires Act 1997*, Clause 44 of the *Rural Fires Regulation 2008*, and the *Planning for Bushfire Protection* guidelines (RFS 2006) herein referred to as the *PBP guidelines*.

### **B.1. Vegetation types and slope**

As can be seen in Figure 3, it is over 300m to the closest mapped bush fire prone vegetation or any vegetation of consequence from a bushfire perspective. Figure 3 also shows a disturbed Tall Heath which will be revegetated and may therefore be considered a potential future fire hazard.

## **PART C Asset protection zones (APZ)**

The only APZ required for the site are adjoining the proposed revegetation of the dunal zone east of Bass Point Tourist Road. The re-vegetation will create Tall Heath located on an upslope. In the area marked in yellow within Figure 2 an APZ setback from the revegetated Tall Heath of 19 m is required for any residential, commercial or retail buildings. This APZ setback will be fully contained within the adjacent Boollwarroo Parade which will comprise a fully sealed public road within a 20m wide road reserve

## **PART D Asset protection zone maintenance plan**

Fuel management within the APZ is to be as follows:

- No tree or tree canopy is to occur within 2 m of the dwelling roofline;
- The presence of a few shrubs or trees in the APZ is acceptable provided that they:
  - are well spread out and do not form a continuous canopy;
  - are not species that retain dead material or deposit excessive quantities of ground fuel in a short period or in a danger period; and
  - are located far enough away from the building so that they will not ignite the building by direct flame contact or radiant heat emission.
- Any landscaping or plantings should preferably be local endemic mesic species or other low flammability species;
- A minimal ground fuel is to be maintained to include less than 4 tonnes per hectare of fine fuel (*fine fuel* means ANY dead or living vegetation of <6 mm in diameter e.g. twigs less than a pencil in thickness. 4 t/ha is equivalent to a 1 cm thick layer of leaf litter); and

- Any structures storing combustible materials such as firewood (e.g. sheds) must be sealed to prevent entry of burning debris.

## **PART E Construction Standards**

The level of bushfire attack and required building construction standard (under Australian Standard AS 3959 (2000)) for any residential, commercial or retail buildings adjacent the 19 m APZ setback to the dunal Tall Heath is Level 2. No other buildings in the development need comply with AS 3959.

## **PART F Water supply**

The subject land is serviced by reticulated water. The distance from a hydrant to the furthest point of any potential dwellings adjoining the Tall heath APZ will be less than 70 m.

## **PART G Gas and electricity supplies**

In accordance with *PBP 2006*, electricity should be underground wherever practicable. Where overhead electrical transmission lines are installed;

- lines are to be installed with short pole spacing, unless crossing gullies, and
- no part of a tree should be closer to a powerline than the distance set out in Appendix 4 of *PBP 2006* (Appendix 2).

Any gas services are to be installed and maintained in accordance with AS 1596. The relief valves of any gas cylinder located near the dwelling will be directed away from buildings and away from combustible materials.

## **PART H Property access roads and public road system capacity**

### **H.1. Capacity of public roads**

In the event of a bush fire emergency the public road servicing the subject land adjoining the hazard shown in Figure 3 has the capacity to handle the increased volume of traffic associated with the development.

### **H.2. Access and egress**

The masterplan access and egress system is shown in Figure 2. Details of the design standards required for the road adjoining the Tall Heath hazard are shown in Table 1. Note: this access standard is achieved by the existing Bass Point Tourist Road.



## PART I Assessment of environmental issues

At the time of assessment, there were no known significant environmental features, threatened species or Aboriginal relics identified under the *Threatened Species Conservation Act 1995* or the *National Parks Act 1974* that will affect or be affected by the bushfire protection proposals in this report. A separate flora and fauna assessment will be provided as part of the concept plan application.

The NSW Government Department of Planning is the determining authority for this development; they will assess more thoroughly any potential environmental and heritage issues.

## PART J Summary of protection provisions and conformity with PBP

Table 2 summarises the bushfire protection proposed and its conformity with the PBP guidelines.

**Table 2: Assessment of conformity with PBP guidelines**

Bushfire protection provision	Proposal	Conformity with PBP guidelines
Asset Protection Zones	An APZ is proposed adjoining the Tall Heath on the northern dunes	Complies with PBP
Construction Standards	A Level 2 standard of APZ is required for buildings within 30 m of the Tall Heath hazard (east of Bass Point Tourist Road). No other buildings within the total area covered by the masterplan require a building construction standard under AS3959 as they are not located on bushfire prone land, nor affected by a potential bushfire attack.	Complies with PBP
Access	Only one (existing) road adjoins the potential Tall heath hazard	Complies with PBP
Water supply	Reticulated water is provided, see p. 8.	Complies with PBP

### J.1. Conclusion

In the author's professional opinion the bushfire protection requirements listed in this assessment provide an adequate standard of bushfire protection for the proposed development, a standard that is consistent with the *Planning for Bushfire Protection* guidelines (RFS 2006).



Rod Rose  
**Director**

**References**

NSW Rural Fire Service (RFS). 2006. *Planning for Bushfire Protection: A Guide for Councils, Planners, Fire Authorities and Developers*. Australian Government Publishing Service, Canberra.

NSW Rural Fire Service (RFS). 2004. *Building in Bush Fire Prone Areas: Guidelines for Subdivision Applications*. Australian Government Publishing Service, Canberra.

Standards Australia 2000, *Construction of buildings in bushfire-prone areas, AS 3959*, Second edition 1999 and Amendment 1, 2000, Standards Australia International Ltd, Sydney

## **PART K Photographs of area of proposed Tall heath revegetation**

**Photo 1**



**Photo 2**



**Photo 3**



**Photo 4**

