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Bushfire Assessment

Angels Beach North

Lot 208 DP 851318

Contact us

Level 1, 64 Ballina Street
PO Box 9
Lennox Head NSW 2478
T 02 6687 7666

33 Gordon Street
PO Box 1446
Coffs Harbour NSW 2450
T 02 6651 7666

info@geolink.net.au

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Introduction

1.1 Scope and Purpose

GeoLINK has been engaged to prepare a bushfire risk assessment in accordance with the requirements of Planning for Bushfire Protection with regard to the proposed subdivision of Lot 208 DP 851318, known as "Angels Beach North". This assessment has been prepared to accompany a development application for the subdivision. It draws on an earlier Bushfire Risk Assessment prepared by Clyde Bain Fire Management Consultancy (2003) as part of the preparation of a Master Plan for the site under State Environmental Planning Policy No.71 - Coastal Protection, and subsequent liaison with the NSW Rural Fire Service.

Section 2 of this assessment describes the site and Section 3 provides and assessment with regard to asset protection zones, access, design, water requirements, electricity and special considerations. Section 4 sets out a summary of the issues addressed.

The assessment contained in this report has been prepared with regard to:

- Planning for Bushfire Protection (2001);
- *The Environmental Planning and Assessment Act 1979*;
- *Rural Fires Act 1997*;
- Australian Standard 3959-1999 *Construction of Buildings in Bushfire Prone Areas*; and
- The approved Master Plan for "Angels Beach North (July 2004).

1.2 Legislative Framework

The *Environmental Planning and Assessment Act 1979* institutes a framework for environmental planning and assessment to consider bushfire hazard issues. Section 79BA requires that development consent for purposes other than subdivision or development for special fire protection purposes cannot be granted unless the proposal conforms to the *Planning for Bushfire Protection* guidelines or the Rural Fire Service has been consulted.

Section 91 of the EP & A Act defines subdivision and special fire protection developments as integrated development, requiring authorisation under Section 100B of the *Rural Fires Act 1997* in the form of a Bushfire Safety Authority from the Rural Fire Service.

The PlanningNSW and Rural Fire Service publication *Planning for Bushfire Protection* provides guidance and sets out requirements in relation to the planning and development control process with regard to bushfire.

Australian Standard 3959-1999 *Construction of Buildings in Bushfire Prone Areas* also sets out requirements to be considered when building in bushfire prone areas.

Site Description

2.1 Cadastral Description and Site History

The subject site is described in Real Property terms as Lot 208 DP 851318. The site has an area of 10.52 ha. The land has frontage to Angels Beach Drive and The Coast Road of some 572.89 m. The site abuts a road reserve to the west and part of a road reserve to the north-west. The western boundary of the land is 302.3 m, with the northern boundary extending some 433.19 m. The land is known as "Angels Beach North" and is subject to an approved SEPP 71 Master Plan (July 2004).

2.2 Zoning and Land Use

Under the Ballina Local Environmental Plan 1987, the land is predominantly zoned 2(a) Living Area, with a thin strip of land along the eastern boundary, approximately 1790m² in area, zoned 7(d) Environment Protection – Scenic Escarpment. Adjoining lands to the north, south, east and west are zoned 1(d) Rural - Urban Investigation, 2(a) Living Area, 7(f) Environment Protection – Coastal Lands, and 1(b) Rural – Secondary Agricultural Land respectively.

General rural land uses occur to the north and west of the site, with open space and Coastal Heathland located to the east and residential areas bound by open space and environmental protection areas located to the south.

2.3 Ecological Overview

The site is characterised by scattered trees and open grassland across the majority of the land, with stands of vegetation located along the northern and western boundaries.

A survey of vegetation communities conducted by Peter Parker Environmental Consultants identified five vegetation communities as well as two threatened plant species. The communities identified were Open to Closed Forest, Woodland, Shrubland, Low Open Heathland with paddock trees and Grassland. The location of site vegetation is illustrated in an extract from the SEPP 71 in Appendix A.

Coastal cypress open to closed forest located along the western boundary is considered regionally significant and is to be retained under the development proposal within a 1.18 ha area to be dedicated to Council as a flora and fauna reserve. Other more isolated clumps of vegetation are also to be retained and incorporated into the landscaping of the site.

With regard to threatened species, two Stinking cryptocarya (*Cryptocarya foetida*) specimens were recorded in the coastal cypress forest and an individual white lace-flower (*Archidendron hendersonii*) was recorded in the south western corner of the site. These threatened species, as well as the regionally significant coastal cypress forest will be conserved on the site. With regard to fauna, the area to be developed, being open grassland, is of little fauna conservation value.

Further details with regard to ecological matters are contained in the report prepared by Peter Parker Environmental Consultants which forms part of the Development Application and the approved SEPP 71 Master Plan for the site.

2.4 Topography

The site terrain ranges from being flat in the east, to gently rising in the western part of the property, with two distinct knolls located in the central northern and central western parts of the site. Site contours are contained in the subdivision plan in Appendix A.

2.5 Proposed Development

The proposed development involves the subdivision of the land to create the following:

2	Community Title (cluster housing) Sites	Lots 62 and 63
33	Conventional Lots (600-800m ²)	Lots 1-27, 56-61
27	Mews Lots (300-600m ²)	Lots 29-55
1	Duplex Lot (1100m ²)	Lot 28

Further details with regard to the proposed development are contained in the subdivision plan attached in Appendix A, and within the Development Application documentation.

Planning for Bushfire Protection Assessment

3.1 Asset Protection Zones

The following assessment is based on the requirements of Planning for Bushfire Protection (PlanningNSW and RFS 2001) and liaison with the NSW Rural Fire Service through the Department of Infrastructure, Planning and Natural Resources.

3.1.1 Vegetation

As outlined in Section 2.3, the majority of the site contains open grassland, with stands of vegetation (primarily coastal cypress open to closed forest) located along the western and northern site boundaries. Vegetation surrounding the proposed development includes Open to Closed Forest and Woodland to the west and north west, Shrubland and Grassland with scattered trees within the eastern part of the site and to the north, State protected wetlands to the south east, and Coastal Heathland east of The Coast Road. The grassland to the north is managed as part of site farming operations on that land.

An extract from the approved Master Plan is contained in Appendix A showing the location of the vegetation associations within and surrounding the site.

The vegetation to the north is classified as a Group 3 hazard, with the dominant vegetation to the west and north west, being Coastal Cypress (callitris) Forest, classed as a Group 2 hazard.

Coastal Heath vegetation to the east is located upslope and is separated from the land by The Coast Road by a minimum distance of 40 m. The wetlands to the south east are located south of Angels Beach Drive and are a minimum distance of 40 m from the closest house lot proposed in the south east corner of the site. The vegetation to the east and south of the site is not considered to pose a bushfire hazard to the development given the topography, distance between the vegetation and the proposed development, and the barrier provided by the existing roadway. Therefore, this vegetation is not considered further in the following sections.

3.1.2 Slope

Based on a survey of the site, the maximum average effective slope classifications to the Open to Closed Coastal Cypress Forest to the west and grassland to the north are shown in Table 3.1.

Table 3.1 Slope

Proposed Lot	Maximum Average Effective Slope Over 100m
North	>0-5° D
West	>10-15° D

Note: D = hazard is downslope of the proposed dwelling, U = hazard is upslope of the proposed dwelling.

3.1.3 Asset Protection Zones

The Open to Closed Coastal Cypress Forest to the west and the Grassland to the north represent potential bushfire risks to the proposed development. However, it should be noted that the area of Coastal Cypress Forest to be conserved is approximately 1.18 ha in area and represents an isolated and relatively thin strip of vegetation along the majority of the western boundary.

With regard to APZ requirements, the Department of Infrastructure, Planning and Natural Resources advised the following during the SEPP 71 master planning process:

“NSW Rural Fire Service has advised that an approximate 30 m APZ (including perimeter road) will be required on the western boundary between retained vegetation and dwellings.”

Therefore, an APZ of 30 m is proposed between vegetation and dwellings along the western, and north western boundaries of the land. The proposed 30 m APZ is shown in an extract from the SEPP 71 Master Plan contained in Appendix A. This APZ has been incorporated into a building exclusion zone shown on the subdivision plan also contained in Appendix A.

The 30 m APZ will be comprised of a 10 m Outer Protection Area and a 20 m Inner Protection Area, and includes a 3.5 m wide perimeter road between proposed lots in the central western part of the site (Lots 19-28) and vegetation along the western boundary.

A 20 m APZ is also proposed along the northern boundary of the site between dwellings and the vegetation and managed grassland to the north. This will be incorporated into the detailed planning of the proposed cluster housing precinct along that boundary (Lot 62). Correspondence from DIPNR during the Master Planning process did not indicate any objection to the 20 m APZ. This area should be maintained as an Inner Protection Area.

The Outer Protection Area should be maintained such that vegetation is not continuous, fine fuel loadings are kept to <8 tonnes per hectare and grasslands are maintained below 10 cm in height.

The 20 m Inner Protection Areas should be maintained such that they consist of cleared areas where there is minimal fine fuel at ground level that could be set alight by bushfire and vegetation within the area must not provide a path for fire to transfer to the development (i.e. tree canopies must be discontinuous and not overhang the house). In addition, no combustible materials (e.g. wood piles, flammable building materials) should be kept in the inner protection area.

3.2 Access

The site will be accessed via a 22 m wide primary access road corridor off Angels Beach Drive. Internally, there will be two secondary access roads with

a road reserve width of 16 m running in a loop to the south west of the primary access road. A 16 m wide laneway corridor will link the two secondary access roads. Each of these roads will have a pavement width of 6 m. A minor access road will be constructed in the south western corner of the site between the central western area of dwellings (Lots 19-28) and vegetation along the western boundary. This road will have a pavement width of 3.5 m and will include passing bays at approximately 200 m intervals. The location of the proposed roads are shown in the subdivision plan contained in Appendix A.

The proposed road arrangement provides appropriate passage for residents to leave the site in the event of a bushfire emergency.

3.3 Design and Siting

A range of construction standards between No Requirement and Level 2 may be required for dwellings on the site, depending on the location of dwellings in relation to potential bushfire hazards affecting the site. Given this, construction standards should be confirmed with regard to AS3959 prior to commencement of building on site.

3.4 Water Supply

The subdivision will be serviced by a reticulated water supply, with fire hydrants to be located at appropriate locations throughout the site to service fire fighting vehicles.

3.5 Electricity Supply

Each of the proposed dwelling sites will be serviced by underground power.

3.6 Special Considerations

Items of Aboriginal Heritage significance are known to occur within the site. In response to this, a strip of land along the western site boundary and the north western corner of the site will be reserved and dedicated into public ownership. APZs are to be established outside this reserved area. Further details with regard to Aboriginal Heritage is contained in the Archaeological report prepared by Davies Heritage Consultants (2003), included as part of the Development Application documentation.

With regard to threatened species, two Stinking cryptocarya (*Cryptocarya foetida*) specimens were recorded in the coastal cypress forest and an individual white lace-flower (*Archidendron hendersonii*) was recorded in the south western corner of the site. These threatened species, as well as the regionally significant coastal cypress forest will be conserved on the site. These individuals will not be adversely impacted upon by the maintenance of APZs on the site.

Flora and fauna matters, including threatened species are addressed in detail in the ecological report prepared by Peter Parker Environmental Consultants which forms part of the Development Application documentation.

4

Summary

Asset Protection Zones of 30 m along the western boundary and 20 m along the northern boundary can be provided on the site in conformance with the requirements of the Rural Fire Service.

Each dwelling site will be serviced by reticulated water and underground electricity, with fire hydrants to be located throughout the subdivision to service fire fighting vehicles. Further, the proposed road network provides adequate passage for residents to leave the site in the event of a bushfire emergency.

In terms of dwelling construction, the required standard may range between No Requirement and Level 2 under AS3959 depending on the location of dwellings. Therefore, construction standards should be confirmed with regard to AS3959 prior to commencement of building on site.

Given the above, adequate and appropriate bushfire hazard protection measures are available, and can be implemented on the site.

Matthew Wood
Environmental Planner
GeoLINK

References

Clyde Bain Fire Management Consultancy (2003) *Bush Fire Risk Assessment for Lot 208, Angles Beach*. Prepared by Ian Fox for Clyde Bain Fire Management Consultancy, Ormeau:QLD.

NSW Rural Fire Service and PlanningNSW (2001) *Planning for Bushfire Protection*. NSW Rural Fire Service: Sydney.

Standards Australia (1999) *AS3959-1999 Construction of Buildings in Bushfire Prone Areas*. Standards Australia International Ltd: Sydney.

Copyright and Usage Note

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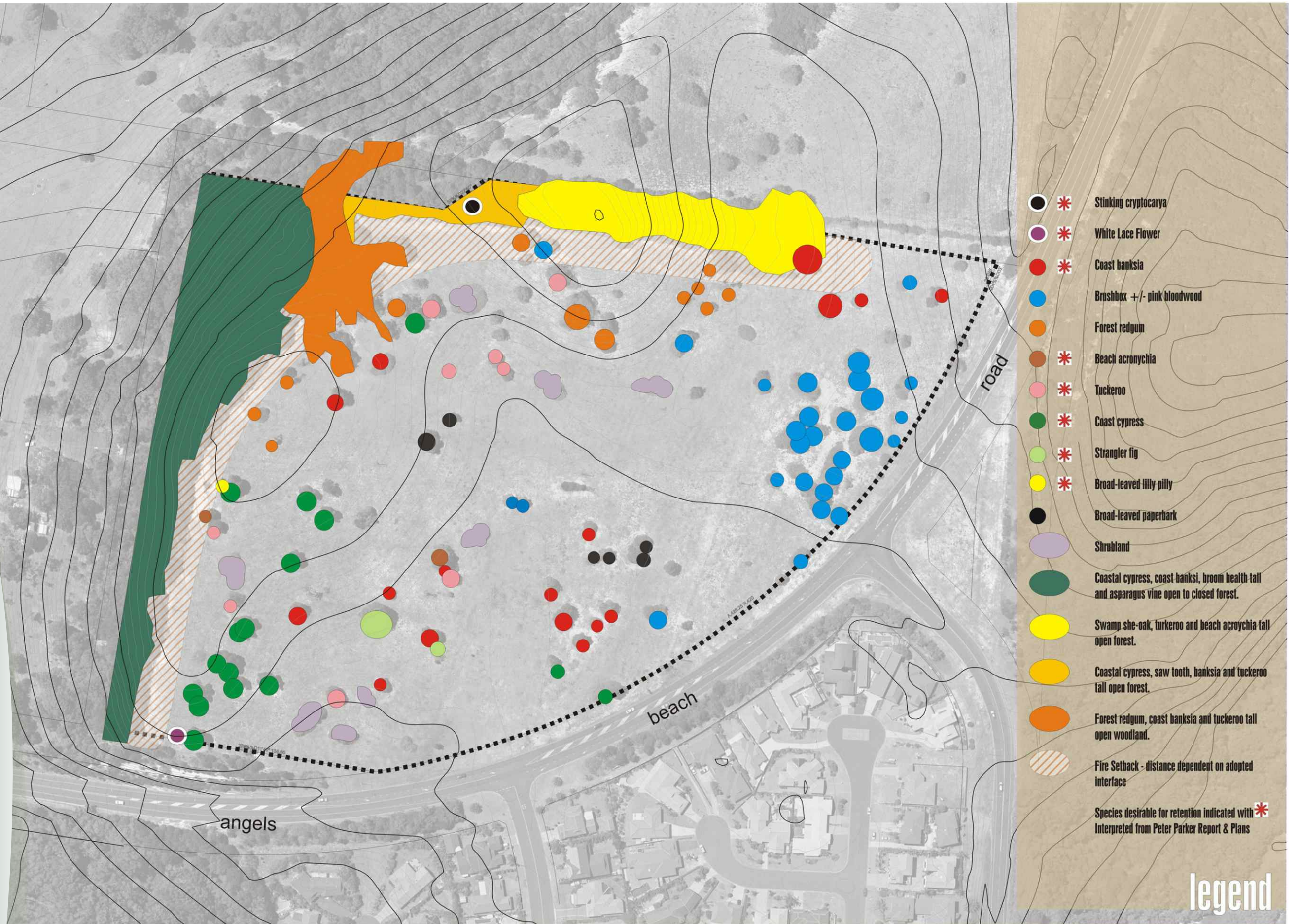
Every effort has been made to ensure that the information presented in this report is accurate. However, this report in no way guarantees bushfire safety.

Appendix A

Site Plans



angels beach north - east ballina



Species desirable for retention indicated with *
Interpreted from Peter Parker Report & Plans

legend

angels beach north - east ballina

1:2000 @ A3



GeoLINK
environmental management and design

01102923



- Legend**
- Bushfire APZ
 - Forest vegetation drip line

plan 3.18- bushfire management

