

Bushfire

Services

Bushfire Protection Assessment

Additional short-term and tent sites

Kiola Beach Holiday Park

Kiola

City of Shoalhaven

September 2006

Our Reference: 6381



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Prepared September 2006

for

Kiola Resort Pty Ltd

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1. Introduction

This Bushfire Protection Assessment has been prepared as evidence of support for short-term and tent sites within the Kioloa Beach Holiday Park - Lot 128 DP 40869, no. 635 Murramarang Road, Kioloa, City of Shoalhaven. The location of the Caravan Park is shown in Figure 1.

The Kioloa Beach Holiday Park is an existing caravan park with an approval from Shoalhaven City Council for the provision of 220 short term sites (i.e. caravan and relocatable dwellings) and 50 camp (tent) sites. For some years however, the Holiday Park has contained more short term sites and tent sites than Council's approval. As a result, the owners are seeking to lodge a development application that would in effect seek approval to legitimise these sites.

The development proposal seeks approval to legitimise 23 short term sites (providing a total of 243 short term sites) and 93 tent sites (providing a total of 143 tent sites) that are already being used. Appendix 1 is a plan depicting the layout of the existing Holiday Park and the location of the sites subject to this assessment.

The application is one subject to Part 3A of the *Environmental Planning and Assessment Act 1979* and is deemed to be state significant development. The Director General's Environmental Assessment Requirements with respect to bushfire are "*Address the requirements of Planning for Bushfire Protection 2001*". The purpose of the report is therefore to address this requirement by;

- describing the existing bushfire protection provisions for the Holiday Park,
- assessing the application of *Planning for Bushfire Protection 2001* and addressing its requirements, and
- providing recommendations to ensure appropriate bushfire protection provisions are applied commensurate with *Planning for Bushfire Protection 2001*.

For reasons outlined in Section 3.1, this report assesses the proposed short term sites only (Appendix 1).

2. Location and description

The location of the study area and development site is shown in Figure 1 and an aerial photograph is provided below (*N.B. the aerial photo is a few years old and does not accurately depict the extent of development within the Holiday Park and surrounding areas*).

The Holiday Park is on an irregular shaped allotment situated along Murramarang Road with an area of 9.214 ha. The site is adjacent to the northern expanse of Kioloa Beach (Figure 1). A foreshore reserve, used as a day picnic area, is situated between the caravan park and the beach. The foreshore crown reserve to the east contains the beach's foredune, part of which is managed under a permissive occupancy by the owners of the Holiday Park. The extent of management (mowing and effluent disposal) is variable but generally extends from the eastern boundary of the Holiday Park to the top of the foredune and up to 50 m north of the northern boundary. Pictures depicting the extent of vegetation management are provided within Appendix 2.

A combination of residential development, general store and community facilities are located opposite (west of) the site along Murramarang Road. This development provides the Holiday Park with a greater than 140 m separation from extensive forest vegetation to the west. All open space areas are managed as mown lawn (refer to photos in Appendix 2) and as such there is minimal bushfire hazard within the internal areas of the Holiday Park.

2.1 Bushfire risk

The bushfire risk to the proposed development is considered **moderate** (NSW RFS 2001 p. vi) due to the extent of bushfire prone vegetation in the immediate vicinity of the Caravan Park (see aerial photo below).

The risk is greatest along the northern and southern boundaries where the Holiday Park adjoins open forest on crown land which is continuous with bushland to the south, southeast, north and northwest. Bushfire risk is insignificant to the east as the only unmanaged vegetation is a narrow band of foredune and beach vegetation. An exception to this is in the southeastern corner as it adjoins Casuarina forest which has linkage with extensive bushland to the south. However no short term sites associated with this proposal are located in this corner (Appendix 1).

The bushfire risk from the west is considered minor due to the separation distance provided by the residential area of Kioloa. An exception to this is in the northwestern corner where forest adjoins Murramarang Road, however no short term sites associated with this proposal are located in this area (Appendix 1).

2.2 Existing Bushfire Protection

The following dot points summarise the existing bushfire protection provisions for the Holiday Park.

- The Kioloa Beach Rural Fire Brigade is located on Murramarang Road directly opposite the Holiday Park and therefore the Holiday Park is very accessible to bushfire fighting resources.
- Managed vegetation to the east and north provides between 30 and 50 m APZ setback to unmanaged vegetation in these directions (refer to aerial photo and photos provided as Appendix 2).
- 2 x 750,000 L dams as well as over 300,000 L static water supply (concrete water tanks) are accessible to fire fighting appliances and are considered a sufficient supply of water for fire fighting purposes.
- Perimeter access is provided either on adjoining crown land (with permissive occupancy on the northern and eastern boundaries), within the Holiday Park (along the southern boundary) and by Murramarang Road to the west.

Photo 1: Aerial photograph of the study area and surrounds



3. Requirements of Planning for Bushfire Protection 2001

3.1 Background

Section 100B(6) of the *Rural Fires Act 1997* classifies tourist accommodation as 'special fire protection purpose'. In regard to 'special protection developments', *Planning for Bushfire Protection* (NSWRFS 2001 p.26) states;

...to reduce the impact of a bushfire event on this type of development habitable buildings must be constructed to the maximum setback identified in Table 4.2 for the relevant vegetation group and slope. This setback must be maintained regardless of the level of construction applied.

The Building Code of Australia defines 'habitable' buildings as buildings that have a normal domestic function and/or are class 1, 2, or 3 buildings under the BCA. A building is defined under s.4 of the *Environmental Planning and Assessment Act 1979* as:

...includes part of a building and any structure or part of a structure, but does not include:

- a) a manufactured home, a moveable dwelling or associated structure or part of a manufactured home, a moveable dwelling or associated structure, or*
- b) a temporary structure within the meaning of the Local Government Act 1993.*

A temporary structure is defined by the *Local Government Act 1993* as;

...includes:

- (a) a booth, tent or temporary enclosure, whether or not a part of the booth, tent or enclosure is permanent, and*
- (b) a mobile structure.*

Therefore the tent sites are not required to comply with *Planning for Bushfire Protection 2001*. This opinion has been supported by NSW Rural Fire Service's Mr. Terry O'Toole during recent discussion regarding a similar proposal at Lake Conjola Holiday Park (BES 2006). During discussions it was determined that pop-top trailers, caravans, and campervans are non-habitable buildings and tents are temporary structures and therefore are exempt from the requirements of *Planning for Bushfire Protection 2001*. Serviced relocatable dwellings, however, are regarded by NSW RFS as habitable buildings and the placing of relocatable dwellings on sites within the short term sites associated with this proposal, is considered development of bushfire prone land for special fire protection purpose pursuant to Section 100B of the *Rural Fires Act 1997* and compliance with *Planning for Bushfire Protection 2001* is required.

3.2 Planning for Bushfire Protection 2001

Planning for Bushfire Protection 2001 (NSW RFS 2001) clarifies the role and responsibilities of councils, developers and land owners and integrated and replaced the provisions of previous guidelines: *DUAP (1989)* *Circular C10: Planning in Fire Prone Areas* and *Planning for Bushfire Protection: Discussion Document*. It also provides a new site assessment and methodology, more applicable to NSW circumstances, recommended for use in place of Section 2 of AS 3959 (Standards Australia 1999). *Planning for Bushfire Protection 2001* outlines the most recent standards for bushfire protection for built assets applicable in NSW and provides standards for;

- access to and from the property for evacuation and firefighting,
- the provision of an adequate water supply for firefighting,
- building setbacks, including the provision of 'Asset Protection Zones', and
- AS 3959 – 1999 building construction standards.

Planning for Bushfire Protection 2001 is given legal effect through S.79BA “Consultation and Development Consent – Certain Bushfire Prone Land” and S.91 “What is Integrated development” of the EPA Act.

With regard to the Holiday Park proposal, *Planning for Bushfire Protection 2001* (NSW RFS 2001 p.24) considers class 3 buildings under the Building Code of Australia as Special Protection Developments (clause 4.12.3 of *Planning for Bushfire Protection 2001*). Relocatable dwellings or relocatable homes proposed within the short term sites are likely to constitute class 3 buildings and are affected by clause 4.12 of *Planning for Bushfire Protection 2001* (NSW RFS 2001 p.26);

...to reduce the impact of a bushfire event on this type of development habitable buildings must be constructed to the maximum setback identified in Table 4.2 for the relevant vegetation group and slope class.”

However, as the original consent for the caravan park was granted by Shoalhaven City Council (SCC) prior to the commencement of the *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, bushfire protection provisions applied to the development may not be consistent with *Planning for Bushfire Protection 2001*. In recognition of the difficulties of applying the guidelines to redevelopment proposals, *Planning for Bushfire Protection 2001* describes these types of proposals as ‘infill development’ and are subject to clause 4.6 of *Planning for Bushfire Protection 2001*.

Infill development is redevelopment in existing areas which may not readily allow for asset protection zones or access provisions to be applied consistent with *Planning for Bushfire Protection 2001*. These areas may require greater emphasis on construction standards, landscaping, siting and vegetation management practices to ensure improved levels of protection are afforded to the development, its occupants and firefighters. The sites associated with this application are considered ‘infill’ for the following reasons;

- They do not require extension of services;
- They are located amongst other approved sites;
- They will not extend beyond existing approved sites; and
- There is already consent to provide tourist accommodation (camping sites and short-term sites) within the Holiday Park;

As such, a performance based approach should be applied that provides protection for any relocatable dwellings placed within the short term sites as well as;

- ensuring that the bushfire risk to adjoining land is not increased,
- providing a minimum defendable space and an appropriately sized Asset Protection Zone,
- ensuring cabins are exposed to greater risk than that of existing structures,

- ensuring the footprint of the proposed sites do not extend beyond existing sites, and
- avoiding an increased bush fire management and maintenance responsibility on adjoining land owners (without their agreement).

4. Bushfire Protection

4.1 Access

Chapter 4.3 of *Planning for Bushfire Protection 2001* relates to access, in particular to design criteria for public roads, property access roads, and fire trails.

Although these standards do not apply to the proposal (*i.e.* additional access is not required), the internal access roads to the sites comply with property access road design criteria (clause 4.3.2 of *Planning for Bushfire Protection 2001*); Murramarang Road with public road design criteria (clause 4.3.1); and the managed areas on the adjoining crown land to the north and east (under permissive occupancy) generally comply with the design criteria for fire trails (although no formal track exists the area is trafficable and required clearances exist).

All short term sites associated with this proposal are located in an area where occupants are unlikely to be cut off by a fire as they travel through the internal areas of the Holiday Park where there is minimal fire hazard and/or there are alternative routes available to the exit point on Murramarang Road. The exit point at Murramarang Road is unlikely to be blocked by fire as it is also in an area with minimal fire hazard (refer to aerial photos or photos in Appendix 2). The road system therefore provides access and egress at a standard that complies with the general road design guidelines outlined in *Planning for Bushfire Protection 2001* (NSW RFS 2001 p.21).

4.2 Services

4.2.1 Water

Planning for Bushfire Protection 2001 specifies water supply quantities for urban subdivisions and rural residential developments only and requirements for caravan parks are not specifically defined. The Holiday Park is not on reticulated water supply but as stated in Section 2.2 of this report, the capacity of water supply provided as concrete water tanks and dams is considered sufficient.

To ensure availability of water supply for firefighting purposes, access should be maintained at a site immediately adjacent to each dam to enable draughting of water by fire suppression appliances.

4.2.2 Gas

If bottled or reticulated gas is installed to any relocatable dwelling on the short term sites associated with this proposal, it should be installed and maintained in accordance with AS1596 and the requirements of relevant authorities. Release valve should also be directed away from the building and away from any combustible material. These recommendations are consistent with clause 6.4.2 of *Planning for Bushfire Protection 2001*.

4.2.3 Electricity

Electricity supply to the short term sites associated with this proposal is/will be underground. This is consistent with clause 6.4.1 of *Planning for Bushfire Protection 2001*.

4.3 Asset Protection Zones

Appendix 2 of *Planning for Bushfire Protection 2001* sets out the methodology to determine the minimum Asset Protection Zones for new habitable buildings within bushfire prone areas.

Sites 8, 5, 19, 24, 54, 56, 44, 109, 97, 98, 99, 100, 102, 103, 104, and 134 (refer to Appendix 1) are located greater than 80 m from unmanaged vegetation. The APZs required by *Planning for Bushfire Protection 2001* have therefore been satisfied. The setbacks for these sites will continue to be managed to APZ standards as the area comprises the Holiday Park and residential areas (Murramarang Road and Kioloa) to the west and the Holiday Park and internal mown recreation areas in other directions. No additional APZ requirements for these sites are considered necessary.

Sites P1, P2, P3, 46, 47, and 48 are located closer to the bushfire hazard and require further examination. Table 1 provides the results of an assessment of APZs conducted in accordance with Appendix 2 of *Planning for Bushfire Protection 2001*. Table 1 demonstrates that APZs consistent with *Planning for Bushfire Protection 2001*, are already provided for P1, P2, and P3, however, existing APZ setbacks for sites 46, 47, and 48 fall short of the APZ required for Special Protection Developments (Table A2.3 of *Planning for Bushfire Protection 2001*). In consideration of the “infill development” status of the proposal (refer to Section 3.2) the existing setback distances are regarded as adequate for the following reasons:

- Existing APZ setbacks are substantially more than that required for residential developments (*i.e.* 30 m would be required for residential developments at this location);
- The existing setbacks are substantially greater than commonly cited defendable space distance (20 m);
- The sites are located well within the Holiday Park and do not extend beyond the current building lines (*i.e.* there are at least 9 cabins closer to the hazard);
- The sites are on flat land and are located close to the Holiday Park entrance/exit which will facilitate access and egress; and
- The short term sites will be subject to the requirements of the BCA and AS3959 – 1999 (refer to Section 4.5 below).

In consideration of the above, all short term sites associated with this application comply with either the full APZ requirements or the infill development considerations of *Planning for Bushfire Protection 2001*. Although the existing vegetation management arrangements should continue, additional APZ provisions for the proposal are not warranted.

Table 1: Asset Protection Zones

Site and direction of hazard	Vegetation group	Slope class	APZ required*	Existing setback
46 south	1 (Open Forest)	Flat (5-0° upslope)	75	Approximately 40 m
47 south	1 (Open Forest)	Flat (5-0° upslope)	75	Approximately 50 m
48 south	1 (Open Forest)	Flat (5-0° upslope)	75	Approximately 55 m
P1, P2, and P3 east	3 (Low Woodland)	5-0° upslope	20	>20 (including crown land currently managed under permissive occupancy)

* APZ required in accordance with A2.3 (Minimum Specifications of Asset Protection Zones for Special Protection Developments in Bushfire Prone Areas) of *Planning for Bushfire Protection 2001*.

4.4 AS 3959 – 1999 Building Construction Standards

The construction requirements of AS 3959 – 1999 *Construction of buildings in bushfire-prone areas* is recognised by *Planning for Bushfire Protection 2001* as the Deemed-To-Satisfy construction standard for buildings in designated bushfire prone areas. The BCA has been amended with a NSW variation such that Appendix 3 of *Planning for Bushfire Protection 2001* provides the appropriate site assessment methodology and replaces Section 2 of the AS 3959 – 1999 when determining bushfire attack and the construction levels required to comply with the BCA. Appendix 3 of *Planning for Bushfire Protection 2001* was therefore followed to determine the construction standards that may be applicable to any class 1, 2, or 3 buildings on the short term sites associated with this proposal. Determinations are provided as Table 2.

Table 2: AS3959 – 1999 building construction standards for relocatable dwellings provided on the short term sites associated with this proposal

Site no(s)	Summary of assessment	Bushfire Attack Category	AS3959-1999 construction standard
8, 15, 5, 19, 44, 54, 56, 109, 104, 102, 103, 100, 99, 97, 98, and 134	Open woodland on 0-5 degree slopes to the east at distances greater than 80 m. Open Forest on 0-5 degree slopes to the west at distances greater than 100 m	Low	Nil
P2, P3, and P4	Low Woodland to the east on 0-5 degree slopes at distances greater than 20 m but not greater than 30 m.	Medium	Level 1
46 and 47	Open Forest to the south on 0-5 degree slopes at distances greater than 40 m but not greater than 50 m.	High	Level 2
48	Open Forest to the south on 0-5 degree slopes at distances greater than 40 m but not greater than 50 m.	Medium	Level 1

5. Conclusion

As demonstrated in Section 3.1 of this report, the tent/camp sites associated with this proposal do not require compliance with *Planning for Bushfire Protection 2001*. Therefore this report has only assessed the bushfire protection requirements for the short term sites as these sites potentially allow for relocatable dwellings which are likely to be defined as 'Special Protection Developments' by *Planning for Bushfire Protection 2001*.

APZ setbacks for sites 46, 47, and 48 do not comply with Table A2.3 (Minimum Specifications for APZs for Special Protection Developments) of *Planning for Bushfire Protection 2001*. However, the placement of serviced relocatable dwellings on these sites are considered 'infill development' and as demonstrated in Section 4.4, the existing APZ setbacks are considered acceptable and meet the bushfire protection objectives for infill development (refer to Section 3.2). Other bushfire protection provisions (APZs, perimeter access, and services) for the short term sites comply with the remaining requirements of *Planning for Bushfire Protection 2001*. With regard to bushfire protection, the proposal is therefore considered appropriate for development approval.

Summary of recommendations

1. The internal areas of the Holiday Park should continue to be managed to Inner Protection Area (IPA) specifications as described by *Planning for Bushfire Protection 2001* (NSW RFS 2001 p.16).
2. Relocatable dwellings located within the short-term sites associated with this proposal should be constructed to appropriate AS3959 - 1999 construction standards (

Table 2).

3. The existing vegetation management (mowing) on the crown land managed under a permissive occupancy to the east and north should continue.
4. The existing perimeter access should continue to be maintained.
5. Existing access to dams for fire suppression appliances should continue to be maintained.
6. Bottled or reticulated gas supplies should be installed and maintained in accordance with AS1596 and release valves should be located away from combustible materials.
7. Electricity supply should be underground.

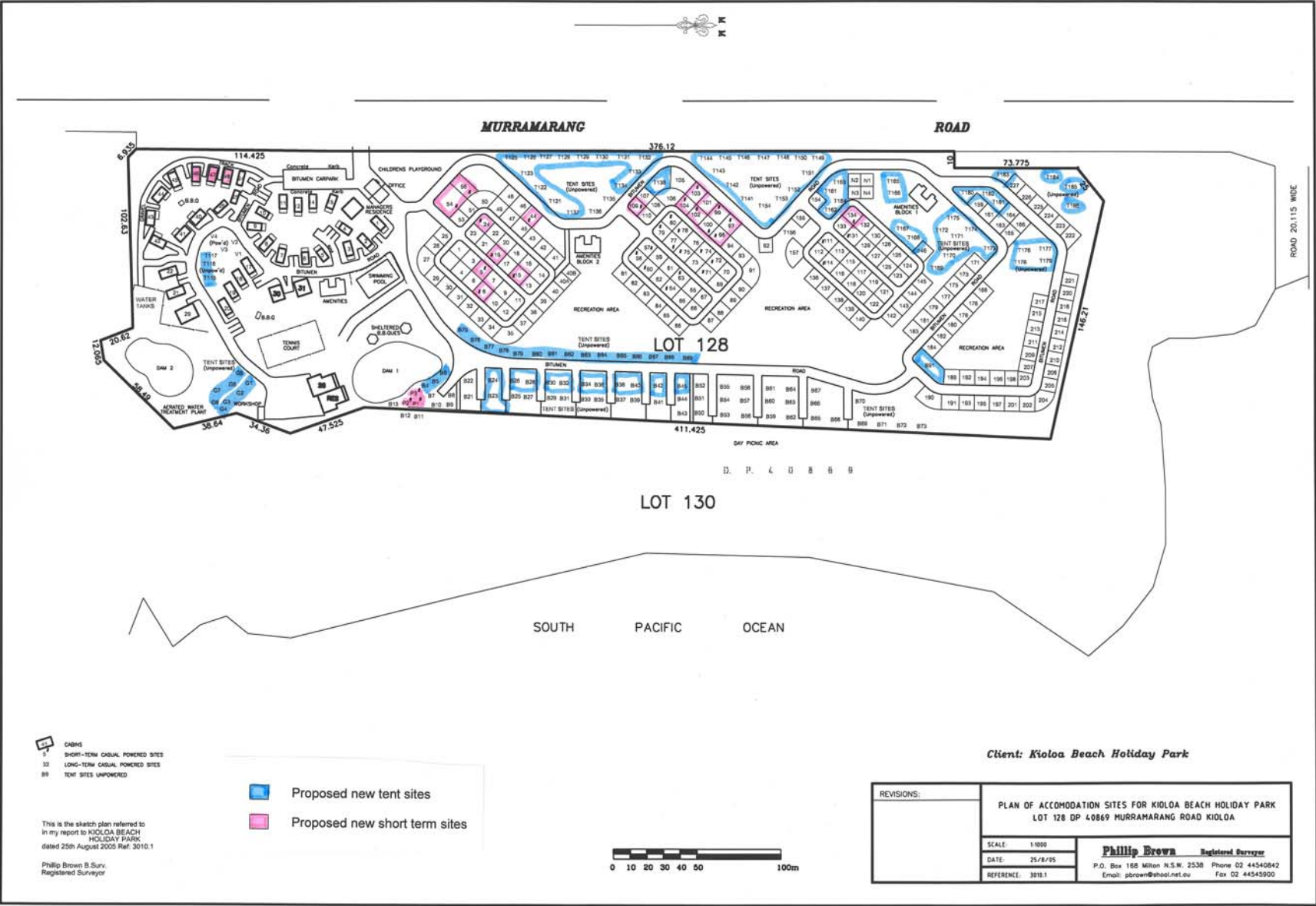
6. References

BES (Bushfire & Environmental Services) 2006. *Bushfire Assessment Proposed change to site usage at Lake Conjola Tourist Park, City of Shoalhaven*. Report prepared for Shoalhaven City Council.

NSW RFS (NSW Rural Fire Service) 2001. *Planning for Bushfire Protection: A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners*. Australian Government Publishing Service, Canberra.

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

Appendix 1: Site Plan – Kiola Beach Holiday Park



Appendix 2: Photographs



Photo 1: Perimeter access and extent of vegetation maintenance on crown land to the north,



Photo 2: Perimeter access and extent of vegetation maintenance on crown land to the northeast.



Photo 3: Low Woodland vegetation on crown land to the east which is managed consistent with an APZ.



Photo 4: Extent of vegetation management on crown land to the east looking north.



Photo 5: Low woodland to the east.



Photo 6: Low woodland and extent of vegetation management to the east.

Figure 1: Location

