



Bushfire Threat Assessment

For the Proposed Trinity Point Marina
Trinity Point NSW

Prepared for
Johnson Property Group Pty Ltd
PO Box A1308
Sydney South NSW 1235

Job Reference 20970 - November 2007



HARPER
SOMERS
O'SULLIVAN

PLANNING ► SURVEYING ► ECOLOGY

A member of **RPS** Group Plc



Prepared By:
RPS Harper Somers O'Sullivan Pty
Ltd
PO Box 428
Hamilton NSW 2303
Tel: (02) 4961 6500
Fax: (02) 4961 6794

Project: Bushfire Threat Assessment Report, Trinity Point Marina, Trinity Point	
Client:	Johnson Property Group Pty Ltd
Our Ref.	20970
Date:	November 2007
Approved by:	Emma Graham
Signature:	
Checked by:	Sarah Jones
Signature:	

CONTENTS

1	INTRODUCTION.....	1
1.1	Scope and Purpose	2
1.2	Description of Proposal.....	2
2	VEGETATION ASSESSMENT	5
3	SLOPE ASSESSMENT.....	7
4	DETERMINING APPROPRIATE SETBACKS	7
4.1	APZ's	7
4.2	IPA	7
4.3	OPA	8
4.4	Determining the Appropriate Setbacks	8
5	DWELLING DESIGN AND CONSTRUCTION	9
6	WATER SUPPLY	10
7	ACCESS / EGRESS (EVACUATION).....	10
8	EMERGENCY & EVACUATION PLANNING	11
9	ONGOING FUEL MANAGEMENT.....	11
10	CONCLUSION & RECOMMENDATIONS	12
11	BIBLIOGRAPHY	13

LIST OF FIGURES

Figure 1-1	Site Location	3
Figure 1-2	Bushfire Prone Land Map	4
Figure 2-1	Distribution of Vegetation.....	6

APPENDICES

APPENDIX A:	PROPOSED DEVELOPMENT LAYOUT	A-1
-------------	-----------------------------------	-----

1 INTRODUCTION

RPS Harper Somers O'Sullivan (RPS HSO) have been commissioned by Johnson Property Group to undertake a Bushfire Threat Assessment (BTA) for the development of land at Trinity Point hereafter referred to as the 'site' (Figure 1-1). The proposal is for development of Trinity Point Marina and a Mixed Use Resort. Refer to Appendix A for proposed layout. The development project is referred to as 'Trinity Point Marina'. This type of development is considered a Special Fire Protection Purposes (SFPP) development in accordance with Section 100B of the *Rural Fires Act 1997*. The proposal is to be assessed under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The Lake Macquarie City Council (LMCC) Bush Fire Prone Land Map (BFPLM) maps the development land as containing a small strip of Bushfire Vegetation Category 1 along the northern section of the site with a vegetation buffer extending from this (Figure 1-2). Therefore, the proposed development needs to consider the document 'Planning for Bushfire Protection' (RFS, 2006) (hereafter referred to as 'PBP 2006').

This assessment therefore aims to consider and assess the bushfire hazard and associated potential threats relevant to such a proposal, and to outline the minimum mitigative measures which would be required in accordance with the provisions of the *Environmental Planning and Assessment Amendment (Planning for Bush Fire Protection) Regulation 2007* and the *Rural Fires Amendment Regulation 2007 (RF Amendment Regulation, 2007)*. The development has been assessed under section 100B of the *Rural Fires Act 1997* that classifies 'hotel, motel or other tourist accommodation' as Special Fire Protection Purpose Developments.

This BTA addresses the six key Bush Fire Protection Measures (BFPM's) in a development assessment context being:

- The provision of clear separation of buildings and bush fire hazards, in the form of fuel-reduced Asset Protection Zone (APZ) and its components Inner Protection Areas (IPA's) and Outer Protection Areas (OPA's);
- Construction standards and design;
- Appropriate access standards for residents, fire-fighters, emergency workers and those involved in evacuation;
- Adequate water supply and pressure;
- Emergency management arrangements for fire protection and / or evacuation; and
- Suitable Landscaping, to limit fire spreading to a building.

This assessment adheres to Chapter 4.2.7 of PBP (RFS, 2006) 'Standards for Bushfire Protection Measures for Special Fire Protection Purpose Developments'.

1.1 Scope and Purpose

The scope and purpose of this BTA is to review the overall bushfire threat to the Mixed Use Resort and to review the capability of the site to provide a safe development. This assessment will include information on ability of the site to comply with PBP (RFS, 2006). This will be achieved by providing/undertaking:

- An assessment of all vegetation on and adjacent to the subject property within 140 metres from all elevations from the site boundary;
- An assessment of topography (slope) on and adjacent to the subject property to a distance of 140 metres from the site boundary;
- Adequacy of public roads in the vicinity to handle increased traffic in a bushfire emergency;
- Recommendations for appropriate setback (APZ) distances from the identified bushfire hazards; and
- Information on water supply for fire fighting purposes.

1.2 Description of Proposal

The Trinity Point Marina proposal consists of the breakwater, marina, associated boat maintenance facilities (travel lift, hardstand and workshop), helipad and other associated infrastructure such as cafe, restaurant and function facilities. A six level tower is also proposed for tourist accommodation.

WARNING

No part of this plan should be used for critical design dimensions. Confirmation of critical positions should be obtained from Harper Somers O'Sullivan Pty Ltd.

LEGEND

 Site Location

Morrisset Park

Lake Macquarie SCA



0

250

500

TITLE:

Figure 1-1
Site Location

CLIENT:

Johnson Property Group Pty Ltd

PLANNING SURVEYING ECOLOGY



**HARPER
SOMERS
O'SULLIVAN**

Copyright

"This document & the information shown shall remain the property of Harper Somers O'Sullivan Pty Ltd. The document may only be used for the purpose for which it was supplied and in accordance with the terms of engagement for the commission. Unauthorised use of this document in any way is prohibited."

241 DENISON STREET BROADMEADOW PO BOX 428 HAMILTON NSW 2303
T: 02 4961 6500 F: 02 4961 6794 E: survey@hso.com.au W: www.hso.com.au ABN 11 093 343 858

SCALE: 1: 9400 at A4 Size

DRAWN: E.Graham

APPROVED: S. Jones

DATUM: MGA Zone 56 (GDA 94) **DATE:** 12/11/2007

LAYOUT REF: J:\JOBS\20K\20970 - Trinity Point\Mar ... Resort - 2007
MapInfo\20970 BTA FIG 1-1 SiteLocation.121107.wor

CONTOUR INTERVAL: N/A

JOB REF: 20970

WARNING

Information on this map was derived from the Lake Macquarie City Council Bush Fire Prone Land Map.
Caution should therefore be exercised when using this data for purposes requiring high levels of accuracy. Furthermore, no account for intergrading areas between delineated vegetation communities has been made.

Bardens
Bay

Legend

- Bushfire Vegetation Category 1
- Bush Fire Vegetation Buffer (100m and 30m)
- Bush Fire Vegetation Category 2



TITLE: Figure 2-1
Lake Macquarie City Council
Bush Fire Prone Land Map

CLIENT:
Johnson Property Group Pty Ltd



HARPER
SOMERS
O'SULLIVAN

PLANNING SURVEYING ECOLOGY

SCALE: N/A

DRAWN: SJ

APPROVED:

DATUM: Non-Earth (feet)

DATE: 12/11/2007

LAYOUT REF: J:\JOBS\20K\20970 - Trinity Point\Mar Resort - 2007\Bushfire\

CONTOUR INTERVAL: N/A

JOB REF: 20970

Copyright
This document & the information shown shall remain the property of Harper Somers O'Sullivan Pty Ltd. The document may only be used for the purpose for which it was supplied and in accordance with the terms of engagement for the commission. Unauthorised use of this document in any way is prohibited.

241 DENISON STREET BROADMEADOW PO BOX 428 HAMILTON NSW 2303
T: 02 4961 6500 F: 02 4961 6794 E: survey@hso.com.au W: www.hso.com.au ABN 11 093 343 858

2 VEGETATION ASSESSMENT

The vegetation in and around the site boundary, to a distance of 140m, has been assessed in accordance with PBP (RFS, 2006). This assessment has been made via a combination of aerial photo interpretation and ground truthing exercises.

Two vegetation communities have been identified these being:

- Riparian Vegetation; and
- Open Pasture.

Riparian Vegetation occurs along the foreshore of Lake Macquarie along the northern, eastern and southern boundaries of the site. An embayment in the northern section is fringed by a natural succession from the water's edge of Mangroves, Salt Marsh and ultimately Casuarina Forest. The Mangroves are comprised of *Avicennia marina* var. *australasica* (Grey Mangrove) and the Salt Marsh is dominated by *Sarcocornia quinqueflora* (Samphire), *Suaeda australis* (Austral Seablite) and *Sporobolus virginicus* (Sand Couch). The fringing Casuarina Forest is dominated by *Casuarina glauca* (Swamp She-oak). Vegetation from the northern point along the foreshore to a central point along the southern shoreline is largely the terminating intergrade of the prevailing *E. tereticornis* / *A. floribunda* community with the lakeside fringing *C. glauca*, *Juncus kraussii* (Sea Rush) and associated species. A large portion of the southern shoreline contains little native vegetation of significance due to either past clearing and establishment of introduced plants, or due to the abrupt interface created by steep faced drop-offs of up to eight metres to the water.

The **Open Pasture** community is composed almost entirely of a mixture of largely introduced grasses and herbaceous weeds. This community contains no vegetation of any relative significance aside from some very isolated and scattered remnant trees. **Landscaped / Mainly Cleared Areas** occur within neighbouring properties to the immediate west and north-west and are dominated by planted trees and shrubs.

According to Figure A2.2 and Table A2.1 (PBP, 2006), the extant vegetation communities on the site and within 140m of the boundary have been classified for bushfire assessment purposes. The **Open Pasture** and **Landscaped / Mainly Cleared Areas** are not considered a hazard and may be included within an Asset Protection Zone. Due to the extremely linear shape of the **Riparian Vegetation**, its largely non-combustible nature and given the tidal influences it is also not considered a hazard. This classification has been confirmed by NSW Rural Fire Service (RFS) officers, as detailed in the original BTA (Harper Somers O'Sullivan, 2004).

Please refer to Figure 2-1 that maps vegetation within the site to a distance of 140m.

WARNING

No part of this plan should be used for critical design dimensions. Confirmation of critical positions should be obtained from Harper Somers O'Sullivan Pty Ltd.

Note that this Vegetation Community Map depicts clearly defined boundaries between vegetation communities that are the product of individual interpretation and are not distinguished by clearly defined boundaries 'on the ground'.

Therefore, this map should only be treated as an indication of approximate perimeters between delineated vegetation communities.

Caution should therefore be exercised when using this data for purposes requiring high levels of accuracy. Furthermore, no account for intergrading across between delineated vegetation communities has been made.

LEGEND

- Site Location
- 140m Buffer
- Riparian Vegetation



0 150 300

metres

TITLE:
Figure 2-1
Vegetation Map

CLIENT:
Johnson Property Group Pty Ltd

PLANNING SURVEYING ECOLOGY



HARPER
SOMERS
O'SULLIVAN

SCALE: 1: 5000 at A4 Size

DRAWN: E. Graham

APPROVED: S. Jones

DATUM: MGA Zone 56 (GDA 94) DATE: 12/11/2007

LAYOUT REF: J:\OBS\204\20970 - Trinity Point Mar... Resort
- 2007\MapInfo\20970 BTA FIG 2-1 VegMap.121107.wor

CONTOUR INTERVAL: N/A

JOB REF: 20970

Copyright

"This document & the information shown shall remain the property of Harper Somers O'Sullivan Pty Ltd. The document may only be used for the purpose for which it was supplied and in accordance with the terms of engagement for the commission. Unauthorised use of this document in any way is prohibited."

241 DENISON STREET BROADMEADOW PO BOX 428 HAMILTON NSW 2303
T: 02 4961 6500 F: 02 4961 6794 E: survey@hso.com.au W: www.hso.com.au ABN 11 093 343 858