

12 April 2024

Addenbrooke Pty Ltd
5 Wunulla Road
Point Piper NSW 2027
Attn: Ned O'Neil

Dear Ned,

Bushfire Assessment Report: North Harbour Marina Alterations and Additions

Addenbrooke Pty Ltd commissioned Peterson Bushfire to prepare a bushfire assessment to accompany a DA for the proposed alterations and additions to North Harbour Marina. This letter acts as the Bushfire Assessment Report in accordance with 'Planning for Bush Fire Protection 2019'.

1. Location and development proposal

North Harbour Marina is located at the end of Gourlay Avenue, Balgowlah as shown on Figure 1 (Attachment A). The marina consists of an office building with small deck on northern elevation over the water, slipway adjacent eastern elevation, and two jetties accessing a floating marina. The development consists of the inclusion of a café within the existing building, two new windows on the

northern elevation, minor extension to deck to the north, conversion of slipway into a deck with dingy racks, and additional berths in the marina. A development site plan is shown at Attachment B.

2. Assessment requirements

The subject land is identified as being 'bushfire prone land' as shown on Figure 2. Development proposals on bushfire prone land are to comply with the NSW Rural Fire Service (RFS) document *Planning for Bush Fire Protection 2019* (RFS 2019), referred to as 'PBP'.

The development does not involve a habitable dwelling (Class 1, 2 or 3) or Special Fire Protection Purpose (SFPP) use. The development is a mixture of building Class 5 (office), Class 6 (café) and Class 10a (decking). Each use attracts its own bushfire assessment requirements and protection measures. Section 8.3 of PBP prescribes the assessment methodology and bushfire protection measures for uses that do not involve a habitable dwelling or SFPP development.

As stated within Section 8.3.1 of PBP, deemed-to-satisfy provisions for bushfire protection do not apply for building classes involved. However, the following objectives are to be applied in relation to access, water supply and services, and emergency and evacuation planning:

1. *Provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation;*
2. *Provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development;*
3. *Provide adequate services of water for the protection of buildings during and after the passage of bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building; and*
4. *Provide for the storage of hazardous materials away from the hazard wherever possible.*

Section 8.3.2 of PBP states that Class 10a structures such as decks do not require any bushfire protection measures when separated from a dwelling by more than 6 m.

In summary, it is expected that a suitable package of bushfire protection measures be proposed commensurate with the level of hazard, the scale of the development and number of people likely to be occupying the building. At a minimum, it is recommended that there is safe access for fire-fighters and egress for occupants. Other protection measures such as construction standards can be applied case by case.

3. Hazard assessment

The vegetation within 140 m of the development site was assessed in accordance with PBP site assessment methodology. The hazard consists of an isolated 7 hectare bushland reserve (Wellings Reserve) consisting of Sydney Coastal Dry Sclerophyll Forest. The effective slope likely to influence bushfire behaviour is 'upslope'. The extent of the bushfire hazard is shown on Figure 3.

The risk posed by the reserve to the proposal is low due to the following risk parameters:

- a) The vegetation is an isolated patch confined by the harbour to the north and east, and residential properties to the south and west.
- b) Fire cannot spread from afar and into the patch. The closest hazard is almost 300 m to the south within Sydney Harbour National Park. A fire would have to ignite within the patch from point source ignition such as lightning. Fire development and spread from a point source is limited within the patch.
- c) The vegetation is situated on steep upslopes leading away from the subject land. Fires travel downhill at a more controllable pace.
- d) Access to the vegetation is very good, consisting of Gourlay Avenue along the northern and western boundaries and New Street East along the southern boundary.
- e) The nearest Fire & Rescue NSW station (Manly) is less than 3.0 km away by road providing excellent response times to attend to a fire within the reserve.
- f) The remnant is surrounded by public areas with high visitation therefore will benefit from a higher likelihood of detection of ignition and fire activity.

4. Bushfire protection measures

4.1 Public road access

The access to the subject land is provided by Gourlay Avenue which is connected to various other public streets within the surrounding built-up area. The adjacent street network provides adequate access in terms of operational response and evacuation for the subject land. The existing public road network is adequate for the proposed development.

4.2 Internal property roads

Gourlay Avenue culminates at the subject land where it turns into a shared accessway. The accessway can be utilised by emergency services if required. The existing internal property roads are adequate for the proposed development.

4.3 Defendable space

For habitable development types such as dwellings or SFPP development, the application of a bushfire hazard building setback (i.e. Asset Protection Zone) is related to the vulnerability of an asset typically in terms of combustibility of external materials or the nature of the occupants. The resulting Asset Protection Zone (APZ) dimension would stipulate a building construction standard (i.e. Bushfire Attack Level – BAL) under Australian Standard *AS 3959-2018 Construction of buildings in bushfire-prone areas*.

As the proposal does not include a dwelling or SFPP use, PBP does not prescribe an APZ dimension. However, PBP does require the consideration of a managed hazard-separation area for fire-fighting purposes referred to as ‘defendable space’. A defendable space is an area between the building and the bushfire hazard that provides an environment in which fire-fighters can undertake property protection before and after the passage of a bushfire with some level of safety. The defendable space dimension is defined by the ability to gain access around an asset and conduct defensive fire-fighting operations.

In the case of the proposal, the existing accessway will provide an acceptable amount of defendable space to the forest patch, commensurate with the bushfire risk. With a fire-appliance standing on Gourlay Avenue or the accessway, fire-fighters will be able to run hoses to the structures within the defendable space.

4.4 Vegetation management

The land to which the development proposal applies, including the defendable space, is already maintained to comply with the standard of an APZ as described by Appendix 4 of PBP. Additional vegetation removal cannot occur within the public reserve.

4.5 Construction standards (Bushfire Attack Level – BAL)

PBP and the National Construction Code (NCC) do not provide for any specific performance requirements for the type of use proposed. As such, compliance with a Bushfire Attack Level (BAL) under *AS 3959-2018 Construction of buildings in bushfire-prone areas* (AS 3959) does not apply as deemed-to-satisfy provisions for bushfire protection. Each development is to be assessed on its own individual merits and may or may not include BAL as a protection measure.

In the case of the proposed development, BAL compliance is not mandatory and is considered unwarranted as an additional measure due to the building class, low bushfire risk, low vulnerability of the proposal and occupants, and minor nature of the additions. A BAL is therefore not recommended in this instance.

4.6 Emergency management and evacuation

A 'Bushfire Emergency Management and Evacuation Plan' is typically prepared for facilities within bushfire prone areas depending on the level of bushfire risk and type and scale of the facility.

Due to the low level of bushfire risk and small scale of the facility, the preparation of a 'Bushfire Emergency Management and Evacuation Plan' is not considered to be warranted in this case. The proposal does not constitute SFPP development and would not offer refuge from a bushfire.

4.7 Water supply and utilities

Hydrants located along Gourlay Avenue (nearest at intersection with Clarence Street) will be adequate for the development. Increasing water supply for a minor infill development is not warranted.

Electrical and gas supplies are not proposed to be altered as a result of the proposal.

5. Conclusion

The bushfire risk presented to the subject land and development proposal is low. Furthermore, the building class and minor nature of the alterations and additions limits the bushfire assessment requirements and application of bushfire protection measures.

There are no recommendations arising from the assessment. The existing bushfire protection strategies will remain to be adequate for the marina including proposed alterations and additions.

The development proposal satisfies the aim and objectives of *Planning for Bush Fire Protection 2019*.

Yours sincerely,



David Peterson
Director



Attachment A – Figures



Figure 1: Location of subject land (Base image source: SIX Maps)

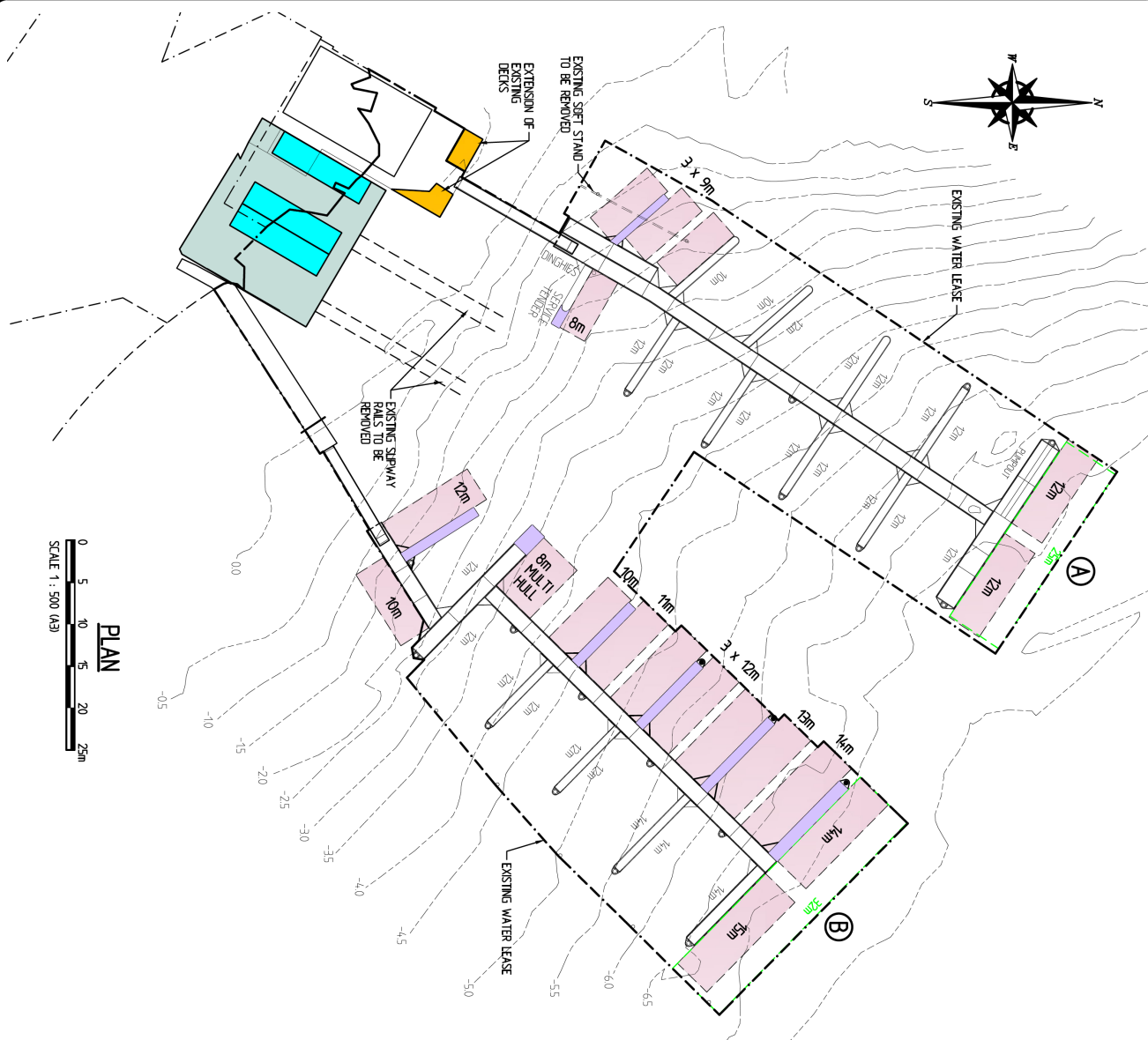


Figure 2: Bushfire prone land mapping (Source: NSW Planning Portal Spatial Viewer)



Figure 3: Extent of bushfire hazard (Source: Nearmap)

Attachment B – Development site plan



PLAN
SCALE 1: 500 (A3)

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNDO.
2. ALL LENGTHS ARE IN METRES AND REDUCED TO ZERO POINT DIRECTION TIDE GAUGE (271100).
3. MARINA STRUCTURAL COMPONENTS AND PILES ARE SUBJECT TO DETAILED DESIGN.
4. HYDROGRAPHIC INFORMATION IS BASED ON HARVEY DAVIS/DAWG.
5. ON SHORE LAYOUT, EXISTING STRUCTURE AND EXISTING WATER LEASE ARE BASED ON SURVEYOR DRAWING FILE: 3564-100mg.
6. GEO-REFERENCE TO GDA2020 MGA ZONE 56 COORDINATES IS BASED ON SURVEYOR DRAWING FILE: 3564-100mg.

LEGEND:

- 12m NEW PONTON
- 25m BERTH LENGTH IN METRES
- OPTIONAL BERTH
- NEW BERTH
- EXTENSION OF EXISTING DECK
- 3 LEVEL DUNEY / KAYAK STORAGE
- NEW DECK

EXISTING BERTH SCHEDULE

BERTH SIZE	ARM A (WESTERN ARM)	ARM B (EASTERN ARM)	TOTAL
10m	4	0	4
12m	2	0	2
14m	15	9	24
16m	0	4	4
PUMP-OUT	1	0	1
TOTAL	22	13	35

PROPOSED BERTH SCHEDULE

BERTH SIZE	ARM A (WESTERN ARM)	ARM B (EASTERN ARM)	TOTAL
8m	1	1	2
9m	3	0	3
10m	2	2	4
11m	0	1	1
12m	16	10	26
13m	0	1	1
14m	0	5	5
15m	0	1	1
PUMP-OUT	1	0	1
TOTAL	23	21	44

NOTE : ARM A 1-HEAD BERTHS WILL BE EITHER 2 BERTHS OR 1 BERTH WITH A MAXIMUM COMBINED VESSEL LENGTH OF 25m
ARM B 1-HEAD BERTHS WILL BE EITHER 2 BERTHS OR 1 BERTH WITH A MAXIMUM COMBINED VESSEL LENGTH OF 32m

PRELIMINARY

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CLIENT:
ADDENBROOKE PTY. LTD.

PROJECT:
NORTH HARBOUR MARINA

TITLE:
PRELIMINARY LAYOUT

Date: 11/08/2023
Drawing No.: 6318-01/H
Scale: AS SHOWN
Drawn By: JLC Checked By:
Approved By:

H 22/01/24 SLIPWAY NOTE REVISED
G 15/01/24 DUNEY/KAYAK STORAGE ADDED
F 12/12/23 GEO-REFERENCE APPLIED
E 24/11/23 REVISED AS PER CLIENT'S COMMENT
D 5/09/23 SLIPWAY RETAINED, ARM A 11m BERTH REDUCED TO 9m BERTH
C 22/08/23 1-HEAD BERTH SIZE CHANGED
B 21/08/23 REVISED AS PER CLIENT'S COMMENT
Revisions