

Bush Fire Assessment Report

in relation to the proposed
replacement of fuel tanks
at:



**Lot 100 DP 628909
940 Pittwater Road Dee Why
(subject site)**

Document Tracking

Item	Detail
Project Name	Bush Fire Assessment Report, proposed replacement of fuel tanks
Project Address	Lot 100 DP 628909, 940 Pittwater Road Dee Why
Client Name	7 Eleven Stores Pty Ltd
Project Number	19/0909
Plan Reference	Plans by 7 Eleven Stores Pty Ltd, numbered 2212-DGP, revision B dated 21/11/2019
Prepared by	Warwick Fear
Approved by	Catherine Gorrie
BAL	AS35959-2009 Not a Deemed to Satisfy Solution for this building class

Bushfire Consulting Services Pty Ltd Contact Details	
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Document Control

Version	Primary Author	Description	Date Completed
1	Warwick Fear	Draft	20/12/2019
2	Catherine Gorrie	Final	21/01/2020

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It should be borne in mind that the measures recommended in this report cannot guarantee that a building will survive a bushfire event on every occasion. This is due to the degree of vegetation management, the unpredictable behaviour of bushfires and extreme weather conditions. As such, the author is not liable to any person for any damage or loss whatsoever which has occurred or may occur in relation to the person taking action or not taking action based on the recommendations of this report.

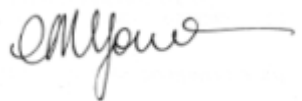
NOTE: This bush fire assessment shall remain valid for 12 months from the date of issue.

Executive Summary

Bushfire Consulting Services was commissioned by 7 Eleven Stores Pty Ltd to provide a bush fire assessment for the proposed replacement of fuel tanks at Lot 100 DP 628909, 940 Pittwater Road Dee Why. The subject site is mapped as designated bush fire prone land by Northern Beaches Council and is located within 100 metres of bush fire prone (hazardous) vegetation.

This proposal falls outside the requirements for specific bushfire safety construction standards as outlined in the NCC and requires only that the general fire safety provisions of the NCC be incorporated. *Planning for Bush Fire Protection* requires only that the proposal complies with the aim and objectives of that document. It is shown in this report that the proposal can comply with the aim and objectives of *Planning for Bush Fire Protection*.

Compliance Summary

This Assessment has been Certified by: Catherine Gorrie BPAD-Level 3 Accredited Practitioner FPAA Cert No: BPAD20751	
What is the recommended level of compliance with AS3959-2009?	Compliance with AS3959-2009 is not required
Does this development comply with the aim and objectives of PBP?	Yes
Is referral to the NSW Rural Fire Service (RFS) required?	No

List of Abbreviations

APZ	Asset Protection Zone
AS3959	Australian Standard 3959 – 2009 including Amendment 3
BAL	Bushfire Attack Level
BPAD	Bushfire Planning and Design (Accreditation Scheme)
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Northern Beaches Council
CDC	Complying Development Certificate
DA	Development Application
<i>EP&A Act</i>	<i>Environmental Planning and Assessment Act – 1979</i>
FPAA	Fire Protection Association of Australia
LPMA	Land & Property Management Authority
NCC	National Construction Code
PBP	Planning for Bush Fire Protection 2018
<i>RF Act</i>	<i>Rural Fires Act – 1997</i>
RFS	NSW Rural Fire Service
SIX	Spatial Information Exchange

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1. Introduction

The report has been commissioned by 7 Eleven Stores Pty Ltd to provide a bush fire assessment for the proposed replacement of fuel tanks at Lot 100 DP 628909, 940 Pittwater Road Dee Why.

The subject property is “bushfire prone land” per the local Council bushfire prone land map as defined by Section 10.3 (s10.3) of the *Environmental Planning & Assessment Act (EP&A) 1979* and therefore the requirements stipulated by legislation apply. *Planning for Bush Fire Protection 2006* describes this type of development as “infill development” and therefore the requirements of section 4.14 (s4.14) of the *EP&A Act* are applicable. The bush fire assessment and recommendations are derived from the NSW *EP&A Act*, the Rural Fire Service document *Planning for Bush Fire Protection 2006*.

This proposal falls outside the requirements for specific bushfire safety construction standards as outlined in the NCC and requires only that the general fire safety provisions of the NCC be incorporated. *Planning for Bush Fire Protection* requires only that this proposal complies with the aim and objectives of that document. This report has considered the elements of bushfire attack and finds that the development satisfies the aim and objectives of *Planning for Bush Fire Protection*.

2. Purpose of this Report

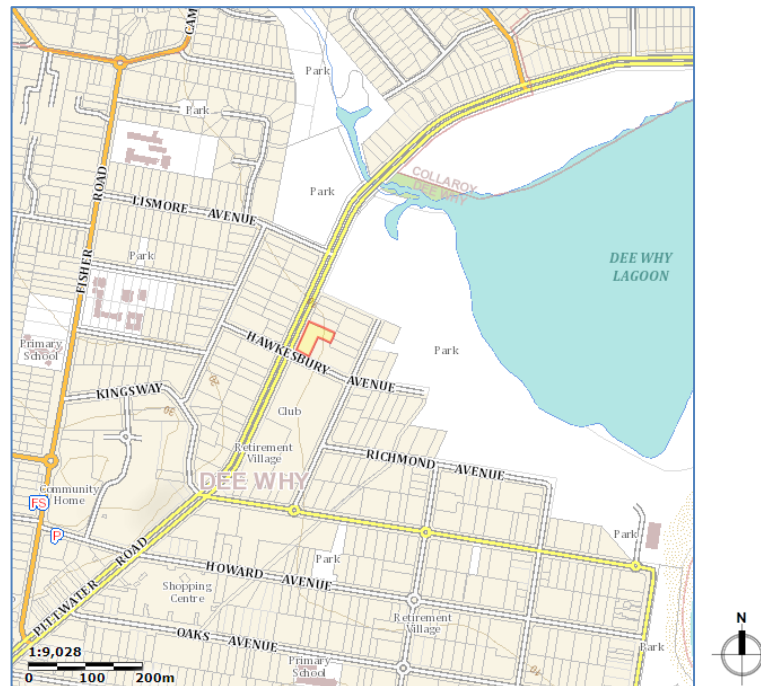
The purpose of this report is to provide the owners, the Consent Authority, the Certifier and the Rural Fire Service with a description of the proposed development as well as the vegetation type, slope and any other factors influencing the likely bushfire behaviour, sufficient to show that the development will be protected from the likely bushfire threat as outlined in the current legislation.

This independent report is submitted as part of the development application to Council to assist the Council in determining the conditions of consent appropriate to the development.

3. Location

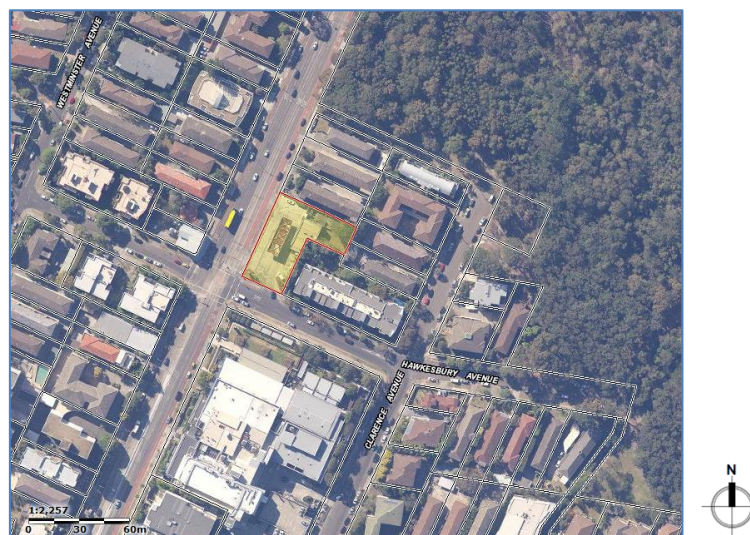
The site is located and known as Lot 100 DP 628909, 940 Pittwater Road Dee Why. The property is part of the Northern Beaches Council local government area.

Figure 1. Location Map. Source: LPMA SIX Viewer (NSW Government 2019a)



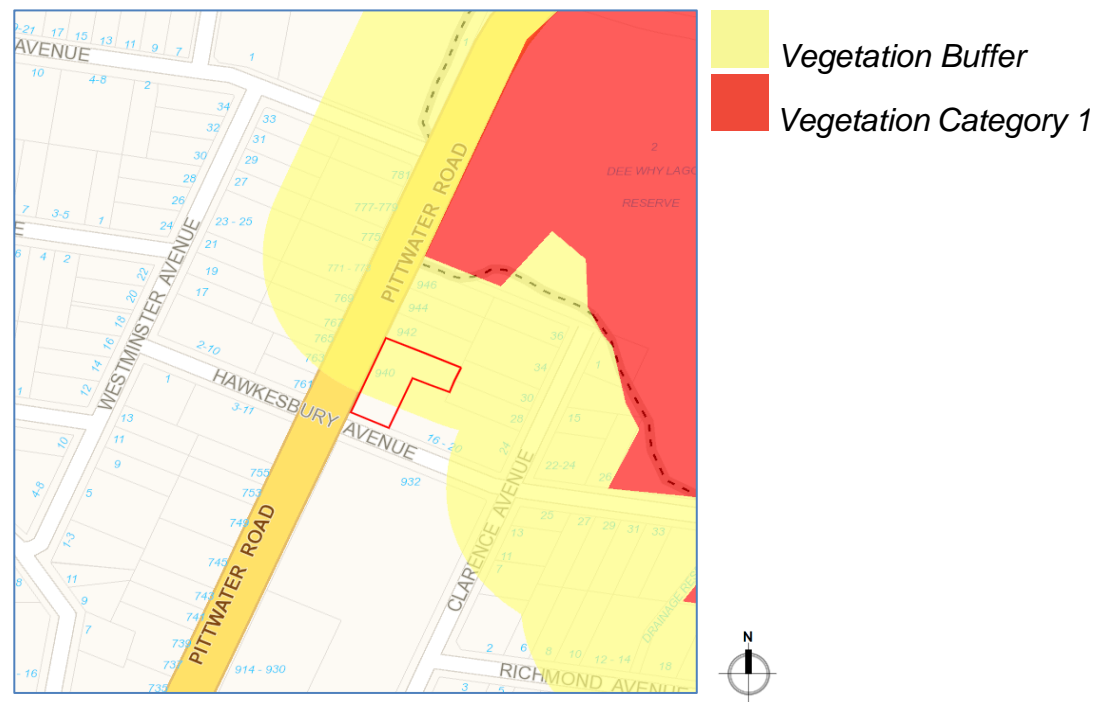
Site location outlined in red

Figure 2. Aerial Map. Source: LPMA SIX Viewer (NSW Government 2019a)



Site location outlined in red

Figure 3. Bushfire Prone Land Map. Source: services.northernbeaches.nsw.gov.au



Site location outlined in red

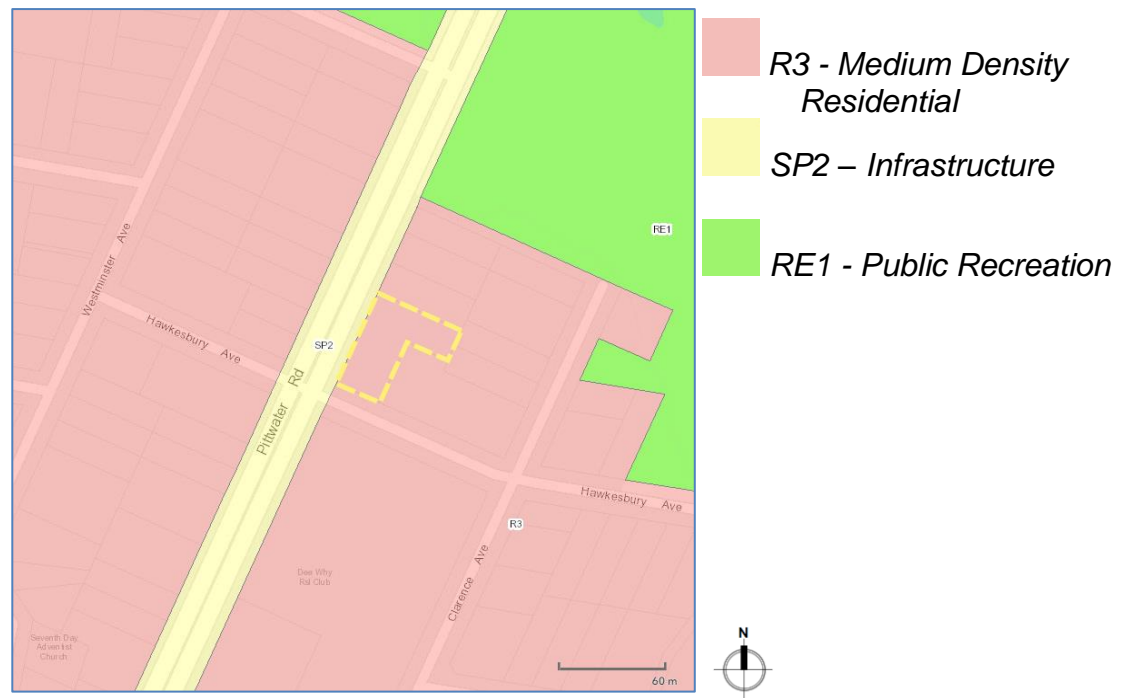
3.1 Property Description

The property is comprised of Lot 100 DP 628909, 940 Pittwater Road Dee Why covering approximately 1880m² in area (Figure 2). The lot is bounded by private allotments to the approximate northeast and southeast, Hawkesbury Avenue to the approximate southwest and Pittwater Road to the approximate northwest. It currently contains a convenience store, fuel canopy, vehicle fuels pumps, diesel, petrol and LPG underground tanks, vent stacks, fire hose reel, and an air & water point. All are to be retained with the exception of the underground diesel and petrol tanks.

3.2 Zoning

The land is zoned R3 - Medium Density Residential under Warringah Local Environmental Plan 2011. Adjacent lands to the northeast, southeast and southwest are similarly zoned. Adjacent lands to the northwest are zoned SP2 – Infrastructure (Figure 4).

Figure 4. Zoning Map. Source: NSW Government Planning Viewer (NSW Government 2019b)



Site location outlined in yellow

4. The Proposal

The proposal is for the replacement of the existing diesel and petrol fuel tanks, which are located underground. All other existing facilities and structures are to be retained. In terms of the National Construction Code of Australia (NCC), the classification of the proposed development is Class 10b.

A **Class 10b** is described as a structure being a fence, mast, antenna, retaining or free-standing wall, swimming pool, or the like.

The NCC does not provide for any bushfire specific performance requirements for these classes of building and, as such, AS3959-2009 does not apply as a deemed to satisfy provision. The proposal needs only to comply with the general fire safety provisions of the NCC.

5. Site Assessment

Bushfire Consulting Services Pty Ltd attended the site on 19 December 2019. The assessment relates to site plan (Appendix 1). Hazardous vegetation was classified for a distance of 140m from the subject structures according to the methodology of PBP Appendix 2 and PBP Addendum: Appendix 3 section A3.5. Vegetation was classified according to formation (Keith 2004) with conversion to Specht classification. Effective slopes under the classified vegetation were estimated at inspection and confirmed using LiDAR data from NSW Spatial Services (NSW Government 2019a).

Site inspection indicated that the nearest hazardous vegetation to the site of the proposed development was Forest, located approximately 95m to the northeast with an effective downslope of $>0-5^{\circ}$, relative to the site (Figure 5). The vegetation lies between the residential developments surrounding the subject site and Dee Why Lagoon to the east and northeast. Hydrants were located at regular intervals along Pittwater Road, the nearest being approximately 3m to the north of the subject site, with a fire hose reel located within the southeast section of the site itself. Electricity appeared to be supplied underground to the subject site. Propane gas cylinders for retail sale are stored in a cage above-ground onsite, associated with the existing convenience store. Liquid petroleum gas to supply vehicles is stored in an existing underground tank onsite.

Figure 5. Actual Site Conditions. Source: NearMap and LiDAR (NSW Government 2019a) with BFCs P/L overlays. Aerial photography date: 22/10/2019



Subject site outlined in red. Vegetation was assessed to a distance of 140m from the proposed development. 1m contours under vegetation shown. The nearest street hydrant is identified as a blue circle and an onsite fire hose reel as a red star.

Although the NCC and AS3959-2009 do not apply specifically in this instance the proposed development is subject to the general aim and objectives of PBP 2006 as it is located within bush fire prone land.

6. Aim and objectives of PBP 2006

The aim of PBP 2006 is “to provide for the protection of human life and minimise the impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment”.

PBP states that the general fire safety construction provisions (NCC) are taken as acceptable solutions but the aim and objectives of PBP apply in relation to other

matters such as access, water and services, emergency planning and landscaping/vegetation management.

Given the above, the aim and objectives of PBP are as follows:

- Afford occupants of any building adequate protection from exposure to a bushfire.
- Provide for a defensible space to be located around buildings.
- Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition.
- Ensure that safe operational access and egress for emergency service personnel and residents is available.
- Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in the asset protection zone (APZ).
- Ensure that utility services are adequate to meet the needs of fire fighters (and others assisting in bushfire fighting).

The following table outlines the relevant items and their compliance:

PBP Aim and Objectives	Comment	Compliance
Afford occupants of any building adequate protection from exposure to a bushfire	Suitable setbacks and shielding will limit exposure to a bushfire. There are no occupants for the proposed non-habitable structures	Complies as the nearest bushland is located approximately 95m to the northeast
Provide for a defensible space to be located around buildings	The structures are located underground with a hardstand apron above. There is adequate pedestrian defensible space around the proposed structures in all directions	Complies

PBP Aim and Objectives	Comment	Compliance
Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition	At least 95m separation distance from the offsite vegetation forming a hazard is provided	Complies, no direct flame contact is anticipated
Ensure that safe operational access and egress for emergency service personnel is available	Access is available and considered adequate, and is not changed from the existing situation	Complies, vehicular access is available directly to Pittwater Road and Hawkesbury Avenue
Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in the asset protection zone (APZ)	Normal building and landscaping maintenance will provide this	Complies as the management of the site is already consistent with an APZ
Ensure that utility services are adequate to meet the needs of fire fighters (and others assisting in bushfire fighting)	Electricity is supplied underground and the nearest hydrant is located approximately 3m to the north of the site. A fire hose reel is located within the southeast section of the site	Complies

7. Recommendations

As the proposal fully complies with the aim and objective of PBP 2006, this report makes no specific recommendations.


8. Summary

This report consists of a bush fire assessment for the proposed development of the replacement of fuel tanks at Lot 100 DP 628909, 940 Pittwater Road Dee Why. The report concludes that the proposed development is on designated bushfire prone land and the legislative requirements for development in bushfire prone areas are applicable. This proposal falls outside the requirements for specific bushfire safety construction standards as outlined in the NCC and requires only the general fire safety provisions of the NCC and the general aim and objectives of 'Planning for Bush Fire Protection' 2006. This report has considered all the elements of bushfire attack and finds that the development satisfies the general aim and objectives of 'Planning for Bush Fire Protection' 2006.

Notwithstanding the precautions adopted, it should always be remembered that bushfires burn under a wide range of conditions and an element of risk, no matter how small, always remains and there can be no guarantee because of the variable nature of bushfires that any one building will withstand bushfire attack on every occasion.

This report is a bush fire assessment report that provides the required information to assist local Council and the Rural Fire Service in determining compliance in accordance with Planning for Bushfire Protection. The local Council is the final consenting authority and the construction of the building must comply with the requirements included in the Council's conditions of consent.

If any further clarification is required for this report, please contact me using the details below.



Catherine Gorrie

Bushfire Consulting Services Pty Ltd Report No. 19/0909



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Accredited Bushfire Consultant

Fire Protection Association Australia BPAD- LEVEL 3 (BPAD20751)

Grad Dip Bushfire Protection (UWS 2010)

Diploma Environmental Health & Building Surveying (TAFE 2005)

Corporate Bronze Member Fire Protection Association Australia

Bushfire Consulting Services Pty Ltd

Mob: 0425 833 893

9. References

Keith D 2004, *Ocean Shores to Desert Dunes, the Native Vegetation of NSW and the ACT*, Department of Environment and Conservation, Sydney

NearMap 2019, *NearMap Photomap Aerial Imagery*, NearMap Australia, Barrangaroo, NSW

NSW Government 2019a, *NSW Spatial Services*, NSW Department of Finance, Services and Innovation.

NSW RFS 2006, *Planning for Bush Fire Protection*, NSW Rural Fire Service, Sydney.

NSW RFS undated, *Standards for Asset Protection Zones*, NSW Rural Fire Service, Sydney.

Standards Australia 2009, *Australian Standard AS 3959-2009 'Construction of Buildings in Bushfire Prone Areas'*, SAI Global, Australia.

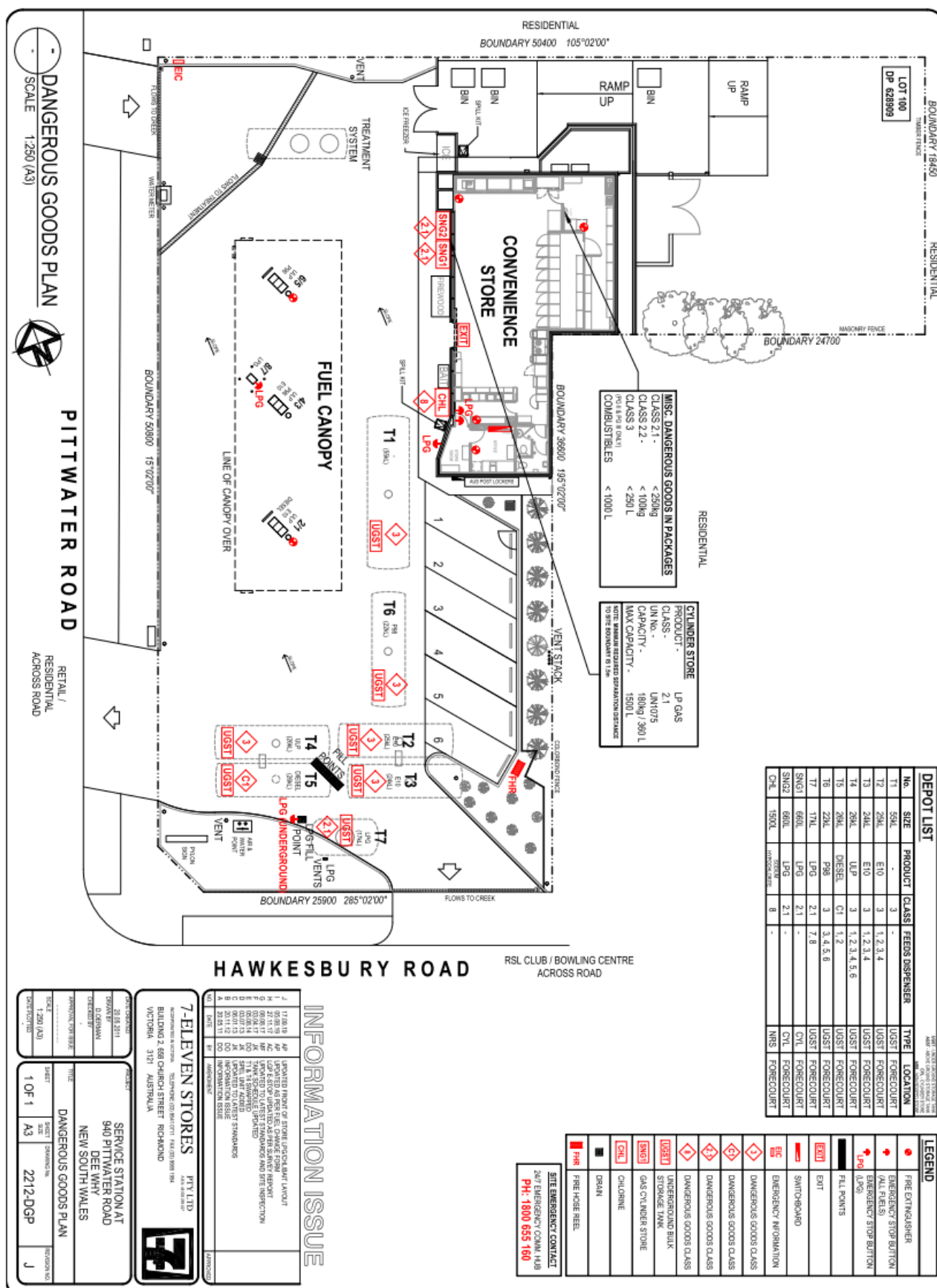
10. Legislation

Environmental Planning & Assessment Act 1979

Rural Fires Act 1997

Rural Fires Regulation 2013

Bushfire Consulting Services Pty Ltd Report No. 19/0909



Appendix 2 – Photos of Site and Surrounds

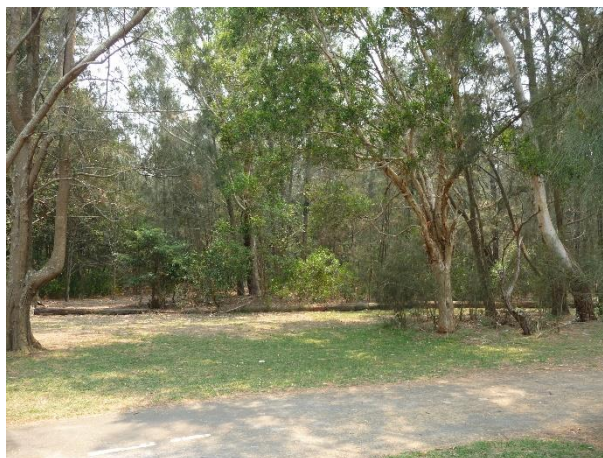
Source: BFCS P/L 18/12/2019



View to approximately east from Pittwater Road showing the subject site



View to the northeast from Pittwater Road showing hazard vegetation located approximately 95m to the northeast of the proposed development site



Typical vegetation to the northeast of the subject site



Typical vegetation located less than 140m but greater than 100m to the east and southeast of the proposed development site

Appendix 3 - Bushfire Risk Assessment Certificate

THIS FORM IS TO BE COMPLETED BY A RECOGNISED CONSULTANT IN BUSHFIRE RISK ASSESSMENT IN ACCORDANCE WITH SECTION 79BA 1(b) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 NO 203

PROPERTY ADDRESS:	100 DP 628909, 940 Pittwater Road Dee Why
DESCRIPTION OF PROPOSAL:	the replacement of fuel tanks
PLAN REFERENCE: (relied upon in report preparation)	Plans by 7 Eleven Stores Pty Ltd, numbered 2212-DGP, revision B dated 21/11/2019
BAL RATING	N/A (If the BAL rating is FZ the application is to be referred to NSW RFS for assessment.)
DOES THE PROPOSAL RELY ON ALTERNATE SOLUTIONS:	YES NO (Circle the relevant response) If YES the application is to be referred to NSW RFS for assessment.)

I, Catherine Gorrie, of Bushfire Consulting Services Pty Ltd, have carried out a bushfire risk assessment on the above mentioned proposal and property. A detailed Bushfire Assessment Report is attached which includes the submission requirements set out in Appendix 4 of Planning for Bushfire Protection 2006 together with recommendations as to how the relevant specifications and requirements are to be achieved.

REPORT REFERENCE:	19/0909
REPORT DATE:	21/01/2020
CERTIFICATION NO/ACCREDITED SCHEME:	BPAD-Level 3 Certified Practitioner FPAA Cert No: BPAD20751

Note: this certificate must be completed and signed by a person recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment in accordance with 79BA of the EP&A Act 1979 No 203.

I hereby certify, in accordance with Section 79BA of the Environmental Planning and Assessment Act 1979 No 203:

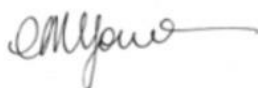
1. That I am a person recognised by the NSW Rural Fire Service as a qualified consultant in bushfire risk assessment; and
2. That subject to the recommendations contained in the attached Bushfire Risk Assessment Report the proposed development conforms to the relevant specifications and requirements*.

* The relevant specifications and requirements being; specifications and requirements of the document entitled Planning for Bush Fire Protection prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and any other document as prescribed by Section 79 BA(1)(a) of the Environmental Planning and Assessment Act 1979 No 203.

I am aware that the Bushfire Assessment Report, prepared for the above mentioned site is to be submitted in support of a development application for this site and will be relied upon by Council as the basis for ensuring that the bushfire risk management aspects of the proposed development have been addressed in accordance with Planning for Bushfire Protection 2006.

Attachments:

- ☒ Bushfire Risk Assessment Report
- ☒ Recommendations
- ☒ Statement of vegetation impact in relation to APZ



SIGNATURE:

DATE: 21/01/2020