

Bushfire Attack Level (BAL) Assessment Report

Site details

Address: 37 Amalfi Avenue

Suburb: Mindarie

Local Government Area: City of Wanneroo

Description of Building Works: Development of Class 1 and 6 Buildings

State: Western Australia

Report details

Project number	A25.385	Report version	0
Assessment date	1/12/2025	Report date	21/04/2026
Author	Hannah Cunningham 	Review	Daniel Panickar 

Site Assessment and Site Plan

The assessment of Lot 2401 (No 37) Amalfi Avenue Mindarie (subject site) was undertaken on 1/12/2025 for the purpose of determining the Bushfire Attack Level (BAL) in accordance with *Australian Standard AS 3959: 2018 Construction of Buildings in Bushfire Prone Areas* (AS 3959: 2018; SA, 2018) Simplified Procedure (Method 1). The subject site (Figure 1) is located within a residential development precinct. An overview of the proposed development is presented in Appendix A.

Vegetation Classification

All vegetation within 100 m of the subject site was classified in accordance with Clause 2.2.3 of AS 3959: 2018. Each distinguishable vegetation class with the potential to determine the BAL is identified in Table 1 and presented in Figure 2.

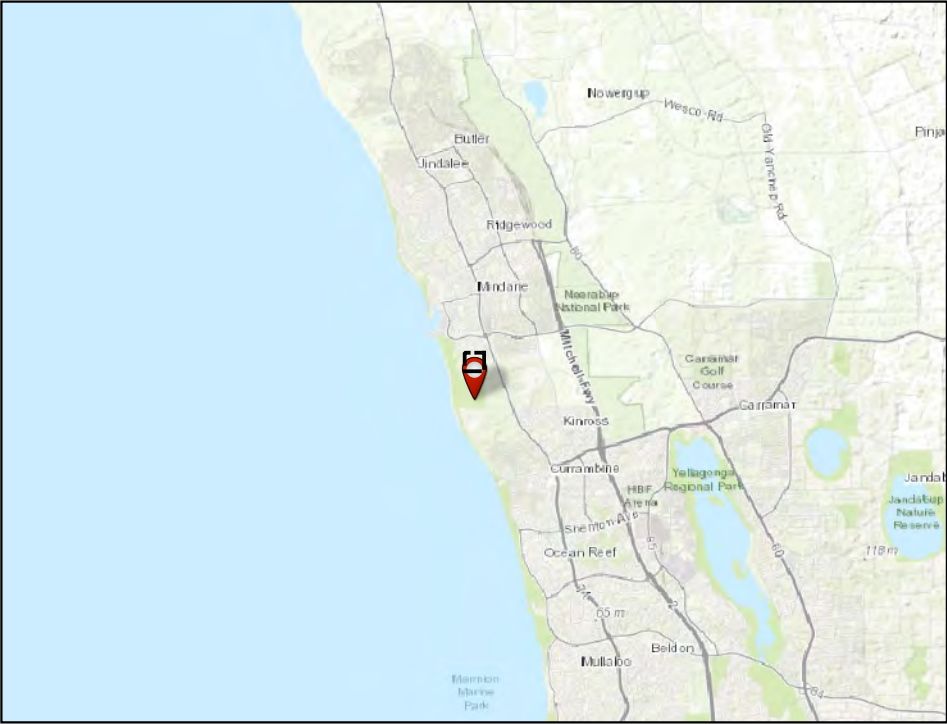
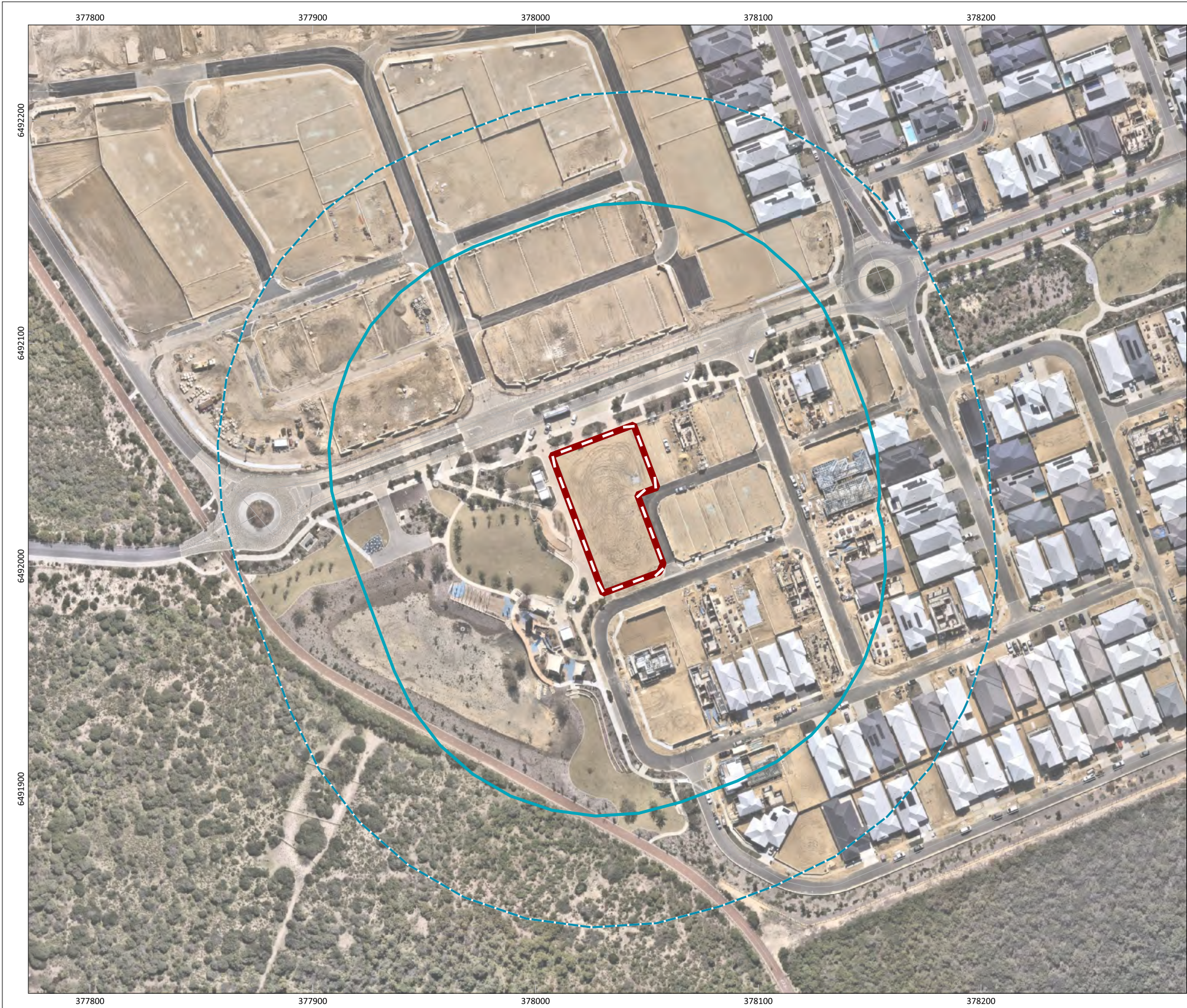


Figure 1: Site Overview

0255075100 m 0255075100 m		PROJECT/REPORT NAME Bushfire Attack Level (BAL) Report 37 Amalfi Avenue, Mindarie 6030 WA		Legend Subject Site Buffer 100m Buffer 150m
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Table 1: Vegetation Classification

Plot 1	Class D Scrub
Photo 1 This plot contains shrubs with a grassy understory not exceeding 6 m in height. Overstorey canopy cover is greater than 30 % and the understorey vegetation structure is multi-tiered. The slope under this vegetation was assessed to be upslope/flat land.	South West ☉ 217°SW (T) ● 31°42'6"S, 115°42'45"E ±5m ▲ 26m 
Plot 1	Class D Scrub
Photo 2 This plot features a swale planted with shrub seedlings and <i>Casuarina</i> trees (Sheoaks). At the time of inspection, it was well maintained and predominantly composed of juvenile vegetation. Given its function as a swale, this section has the potential to develop into a scrub classification at maturity characterised by vegetation not exceeding 6 m in height, an overstorey canopy cover greater than 30 %, and a multi-tiered understorey structure. The slope under this vegetation was assessed to be upslope/flat land.	South West ☉ 227°SW (T) ● 31°42'4"S, 115°42'45"E ±2m ▲ 24m 
Plot 2	Excluded - clause 2.2.3.2 (e)
Photo 3 This plot contains Portofino Promenade and the other non-vegetated areas including retaining walls and footpaths. Non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018	North East ☉ 28°NE (T) ● 31°42'0"S, 115°42'45"E ±2m ▲ 27m 

Plot 2	Excluded - clause 2.2.3.2 (e)
Photo 4 Areas cleared of vegetation for development. Non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018	West 249°W (T) 31°42'2"S, 115°42'49"E ±4m ▲ 26m  01 Dec 2025, 11:23:06
Plot 2	Excluded - clause 2.2.3.2 (e)
Photo 5 Areas cleared for residential development. Non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018	South East 156°SE (T) 31°42'0"S, 115°42'50"E ±3m ▲ 29m  01 Dec 2025, 11:40:34
Plot 2	Excluded - clause 2.2.3.2 (e)
Photo 6 Bike path running north to south adjacent to the South Mindarie Foreshore Reserve and Napoli Park. Non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018	West 291°W (T) 31°42'6"S, 115°42'45"E ±3m ▲ 24m  01 Dec 2025, 11:30:45



Plot 3	Excluded - clause 2.2.3.2 (f)
Photo 7 Napoli Park terraced gardens and maintained lawns. Low threat vegetation has been excluded in accordance with Clause 2.2.3.2 (f) of AS 3959: 2018.	South East ☼ 156°SE (T) 📍 31°42'4"S, 115°42'46"E ±5m ▲ 25m 
Plot 3	Excluded - clause 2.2.3.2 (f)
Photo 8 Napoli Park containing landscaped garden beds and maintained lawns. Low threat vegetation has been excluded in accordance with Clause 2.2.3.2 (f) of AS 3959: 2018.	West ☼ 252°W (T) 📍 31°42'1"S, 115°42'43"E ±3m ▲ 26m 
Plot 3	Excluded - clause 2.2.3.2 (f)
Photo 9 Portofino Promenade verges and traffic islands containing maintained vegetation. Low threat vegetation has been excluded in accordance with Clause 2.2.3.2 (f) of AS 3959: 2018.	North East ☼ 56°NE (T) 📍 31°42'0"S, 115°42'48"E ±2m ▲ 27m 

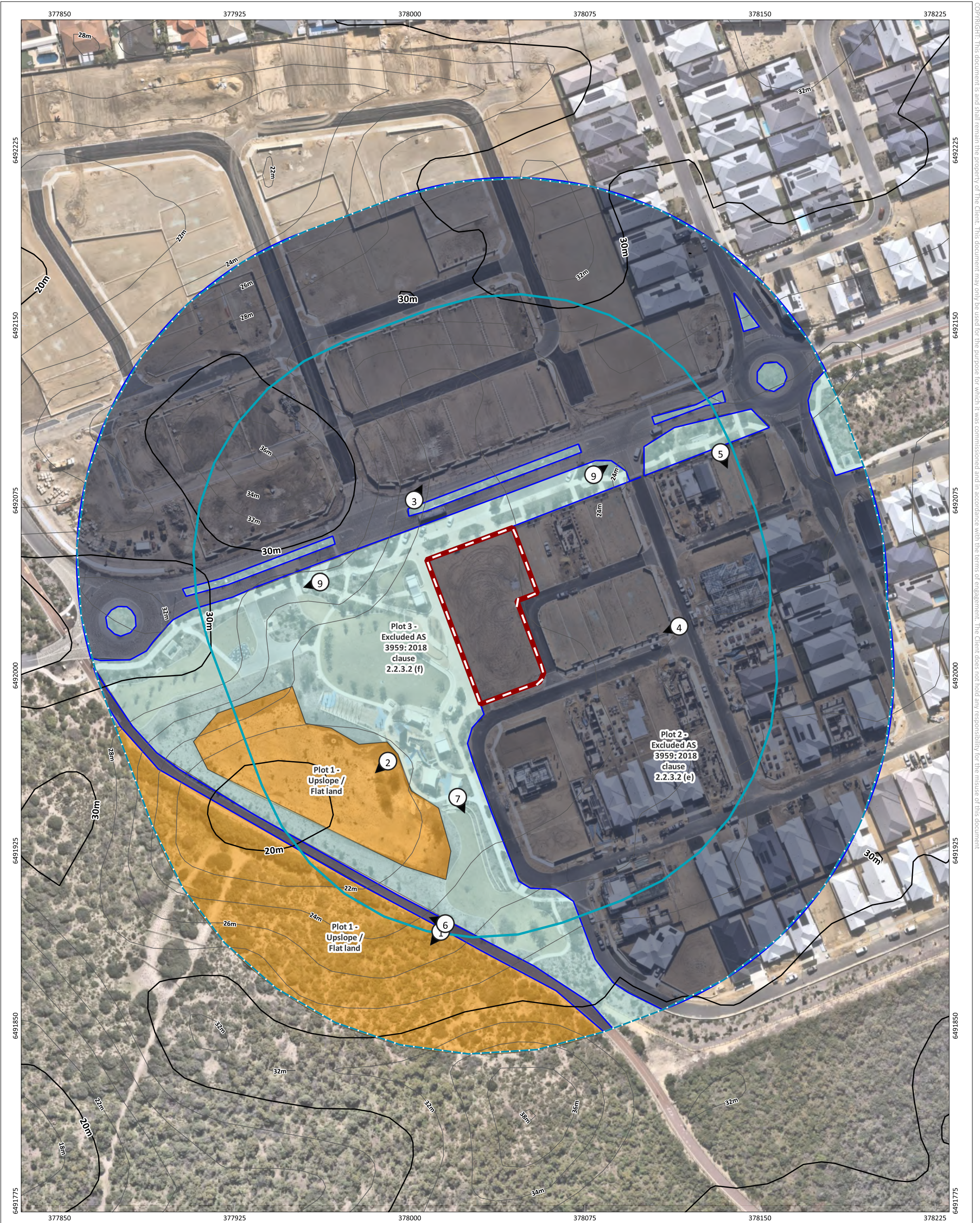


Figure 2: Vegetation Classification

		PROJECT/REPORT NAME Bushfire Attack Level (BAL) Report 37 Amalfi Avenue, Mindarie 6030 WA		Legend Subject Site Buffer 100m Buffer 150m		Photos 2 metre contours (DPIRD-072) — 2m — 10m		Vegetation Classification Class D - Scrub Excluded AS 3959: 2018 2.2.3.2 (e) Excluded AS 3959: 2018 2.2.3.2 (f)		 Western Environmental Pty Ltd 08 6244 2310 enquiries@westernenv.com.au Level 3/25 Prowse St, West Perth WA 6005 westernenv.com.au	
SCALE 1:1,500		SHEET SIZE A3 COLOUR		CLIENT Client Name		PROJECT NUMBER A25.385		VERSION 0			
COORDINATE REFERENCE SYSTEM GDA2020 / MGA zone 50		DRAWN BY / REVIEWED BY SM/HC		DATE 21/4/2026							
DATA SOURCE Nearmap (30th August 2025)											

Relevant Fire Danger Index

The Fire Danger Index for this site has been determined in accordance with Table 2.1 of AS 3959: 2018 and is presented in Table 2.

Table 2: Fire Danger Index (FDI)

Relevant Fire Danger Index			
FDI 40 ☐ <i>Table 2.4.5</i>	FDI 50 ☐ <i>Table 2.4.4</i>	FDI 80 ☒ <i>Table 2.4.3</i>	FDI 100 ☐ <i>Table 2.4.2</i>

Potential Bushfire Impacts

The potential bushfire impact to the subject site / proposed development from each of the identified vegetation plots are identified below in Table 3.

Table 3: Method 1 BAL Calculation (BAL Contours)

Plot	Vegetation classification	Effective slope	Separation distances required (m)				
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
1	Class D Scrub	All upslopes and flat land (0 degrees)	<10	10-<13	13-<19	19-<27	27-<100
2	Excluded - clause 2.2.3.2 (e)	-	No separation distances required - BAL-LOW				
3	Excluded - clause 2.2.3.2 (f)	-	No separation distances required - BAL-LOW				

Determined Bushfire Attack Level (BAL)

The determined Bushfire Attack Level (highest BAL) for the proposed works has been determined in accordance with Clause 2.2.6 of AS 3959: 2018. Relevant data from the subject site assessment is shown in Figure 3 and Table 4.



Table 4: BAL Assessment Summary

Proposed Building/Asset	Plot Most Affecting BAL Rating	Separation Distance	BAL Rating	Construction sections to be consulted in AS 3959: 2018
Building One (Tenancy 1-5) Class 6 Building	Plot 1	73.5 m	BAL-12.5	3 and 5
Building Two (Townhouses) Class 1 Building	Plot 1	44.7 m	BAL-12.5	3 and 5

Note: This BAL rating is based on the information current at the date of this document and is valid for 12 months.



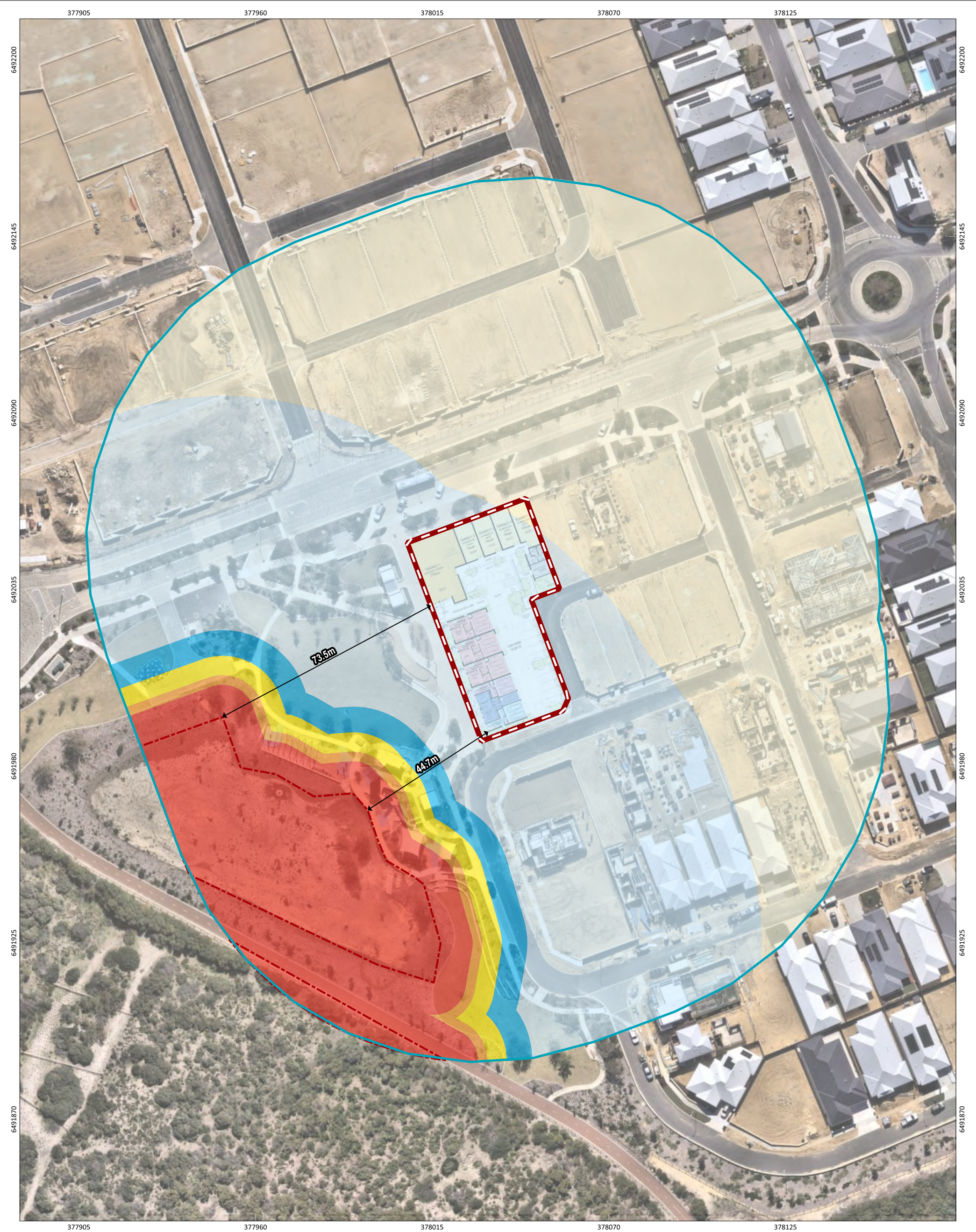


Figure 3: Bushfire Attack Level (BAL) Contours

0

10

20

30

40 m

N

SCALE

1:1,100

SHEET SIZE

A3 COLOUR

COORDINATE REFERENCE SYSTEM

GDA2020 / MGA zone 50

DATA SOURCE

Nearmap (30th August 2025)

PROJECT/REPORT NAME

Bushfire Attack Level (BAL) Report
37 Amalfi Avenue, Mindarie 6030 WA

CLIENT

Client Name

PROJECT NUMBER

A25.385

VERSION

0

DRAWN BY / REVIEWED BY

SM/HC

DATE

21/4/2026

Legend

Subject Site

Buffer 100m

Bushfire Hazard Interface

Bushfire Attack Level (BAL)

BAL-FZ

BAL-40

BAL-29

BAL-19

BAL-12.5

BAL-LOW

WESTERN ENVIRONMENTAL

Western Environmental Pty Ltd

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westernv.com.au

Appendix A

Site Plan



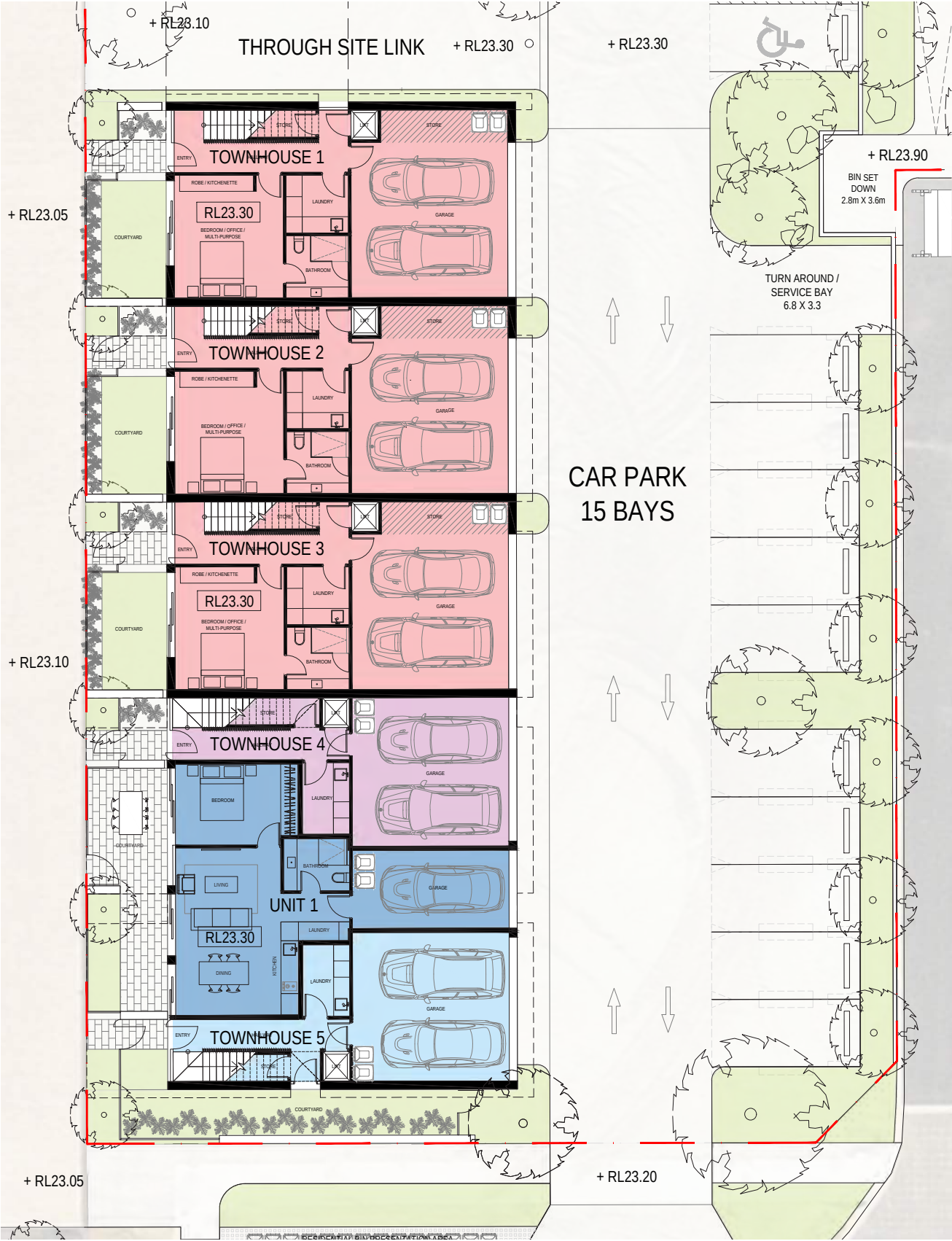
4 FUNCTIONALITY AND BUILD QUALITY

MIXED-USE DEVELOPMENT SITE PLAN



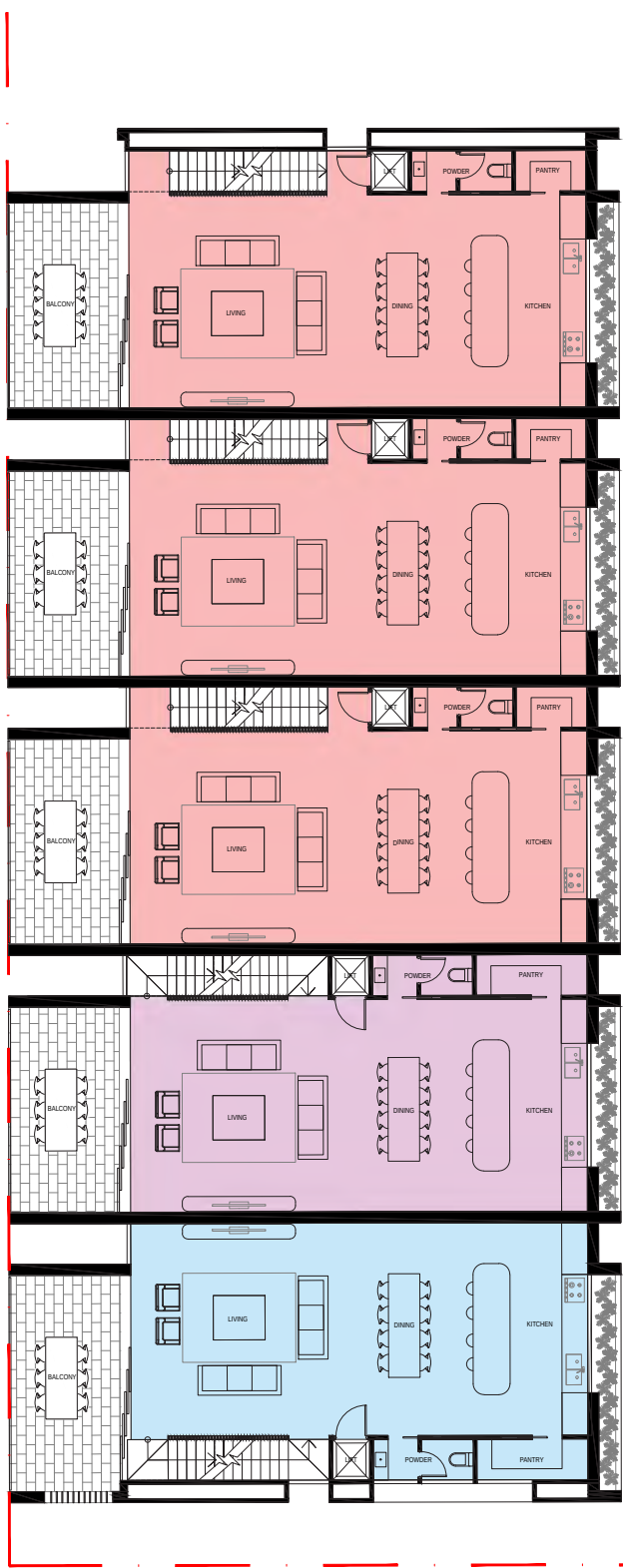
4 FUNCTIONALITY AND BUILD QUALITY

TOWNHOUSE FLOOR PLANS

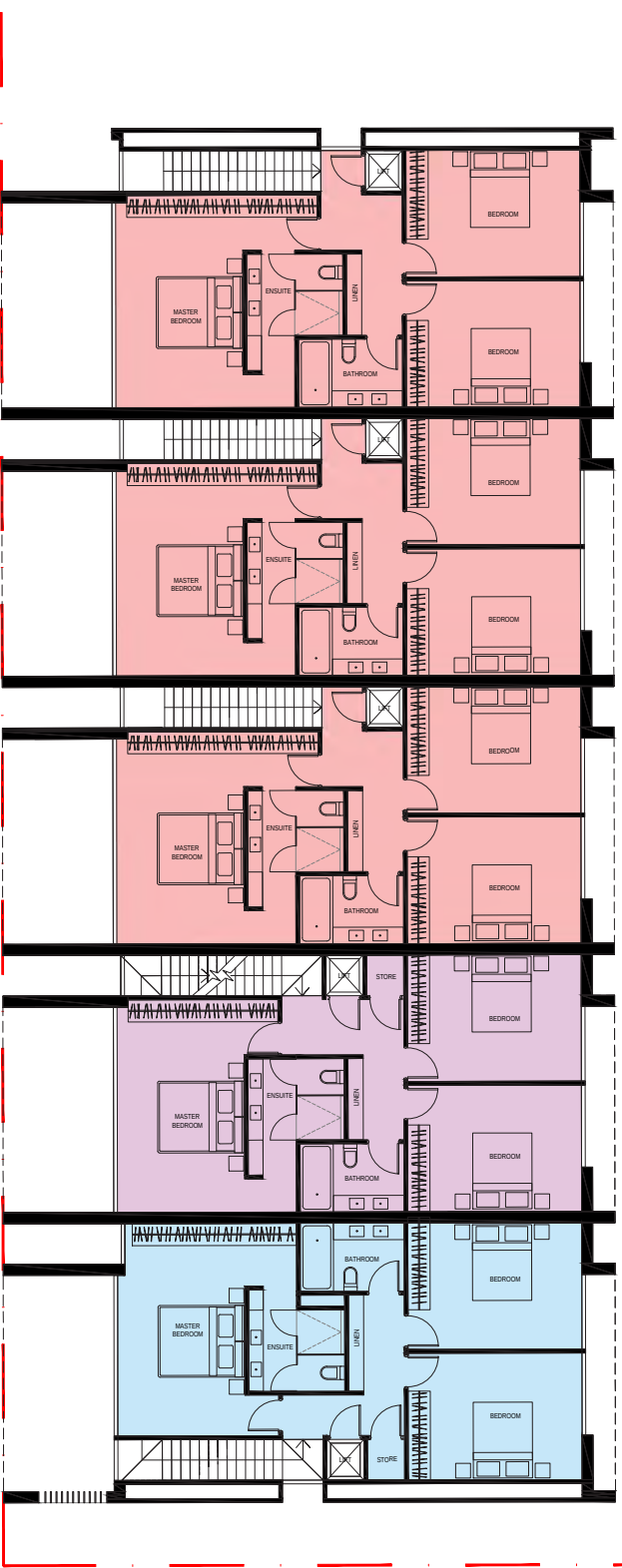


Portofino DRP Concept Package

T&Z Pty Ltd



LEVEL 1



LEVEL 2

Appendix B

Additional Information / Advisory Notes



This assessment was undertaken as per AS 3959: 2018. It is important that the current version of AS 3959, is consulted for construction purposes.

This BAL rating is based on the information current at the date of this letter and is valid for 12 months from the date of this letter.

Bushfire Attack Level (BAL) as set out in the Australian Standard 3959 Construction of Buildings in Bushfire-Prone Areas (AS 3959), as referenced in the Building Code of Australia.

Bushfire Attack Level (BAL)	Classified vegetation within 100 m of the subject site and radiant heat flux exposure thresholds	Description of predicted bush fire attack and levels of exposure	Construction Section as per AS 3959
BAL-LOW		There is insufficient risk to warrant specific construction requirements.	4
BAL-12.5	$\leq 12.5 \text{ kW/m}^2$	Ember attack	3 and 5
BAL-19	$>12.5 \text{ kW/m}^2 \leq 19 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing radiant heat flux.	3 and 6
BAL-29	$>19 \text{ kW/m}^2 \leq 29 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing radiant heat flux	3 and 7
BAL-40	$>29 \text{ kW/m}^2 \leq 40 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing radiant heat flux with the increased likelihood of exposure to flames.	3 and 8
BAL-FZ	$>40 \text{ kW/m}^2$	Direct exposure to flames from fire front in addition to radiant heat flux and ember attack	3 and 9

Source: "AS 3959: 2018 Construction of buildings in bushfire-prone areas" published by Standards Australia, Sydney.

