

# Bushfire Hazard Assessment Report & Bushfire Hazard Management Plan

13-15 Barr Street, Lady Barron



**Prepared for (Client)**

CBM Sustainable Design

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## Executive Summary

The proposed development at 13-15 Barr Street, Lady Barron, is subject to bushfire threat. A bushfire attack under extreme fire weather conditions is likely to subject buildings at this site to considerable radiant heat, ember attack along with wind and smoke.

The site requires bushfire protection measures to protect the buildings and people that may be on site during a bushfire.

These measures include provision of hazard management areas in close proximity to the buildings, implementation of safe egress routes, establishment of a water supply and construction of buildings as described in AS 3959-2018 Construction of Buildings in Bushfire Prone Areas.

Primary responsibilities identified within this report:

Occupier	<ul style="list-style-type: none"> <li>• <u>Establish and maintain</u> Hazard Management Areas as described in this report, including egress and access routes.</li> <li>• <u>Establish and maintain</u> adequate turning facilities for emergency vehicles, as described in this report.</li> <li>• <u>Establish and maintain</u> an independent water supply for fire fighting purposes for Unit 6.</li> <li>• <u>Design &amp; Construct</u> Unit 1 to meet <b>BAL 12.5</b> (AS3959-2018).</li> <li>• <u>Design &amp; Construct</u> Unit 2 to meet <b>BAL 29</b> (AS3959-2018).</li> <li>• <u>Design &amp; Construct</u> Unit 3 to meet <b>BAL 12.5</b> (AS3959-2018).</li> <li>• <u>Design &amp; Construct</u> Unit 4 to meet <b>BAL 12.5</b> (AS3959-2018).</li> <li>• <u>Design &amp; Construct</u> Unit 5 to meet <b>BAL 12.5</b> (AS3959-2018).</li> <li>• <u>Design &amp; Construct</u> Unit 6 to meet <b>BAL 19</b> (AS3959-2018).</li> <li>• <u>Adhere</u> all three titles prior to occupancy of any dwelling on the site.</li> </ul>
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## Schedule 1 – Bushfire Report

### 1.0 Introduction

The Bushfire Attack Level (BAL) Report and Bushfire Hazard Management Plan (BHMP) has been prepared for submission with a Building Permit Application under the *Building Act 2016 & Regulations 2016*.

The Bushfire Attack Level (BAL) is established taking into account the type and density of vegetation within 100 metres of the proposed building site and the slope of the land; using the simplified method in AS 3959-2018 Construction of Buildings in Bushfire Prone Areas; and includes:

- The type and density of vegetation on the site,
- Relationship of that vegetation to the slope and topography of the land,
- Orientation and predominant fire risk,
- Other features attributing to bushfire risk.

On completion of assessment, a Bushfire Attack Level (BAL) is established which has a direct reference to the construction methods and techniques to be undertaken on the buildings and for the preparation of a Bushfire Hazard Management Plan (BHMP).

### 1.1 Scope

This report was commissioned to identify the Bushfire Attack Level for the existing property. ALL comment, advice and fire suppression measures are in relation to compliance with the Building Code of Australia and Australian Standards, *AS 3959-2018, Construction of buildings in bushfire-prone areas*.

### 1.2 Limitations

The inspection has been undertaken and report provided on the understanding that:-

1. The report only deals with the potential bushfire risk, all other statutory assessments are outside the scope of this report.
2. The report only identifies the size, volume and status of vegetation at the time the site inspection was undertaken and cannot be relied upon for any future development.
3. Impacts of future development and vegetation growth have not been considered.

**No action or reliance is to be placed on this report; other than for which it was commissioned.**

### 1.3 Proposal

The proposal is for the construction of six dwelling units (Units 1 to 6).

## 2.0 Site Description for Proposal (Bushfire Context)

### 2.1 Locality Plan

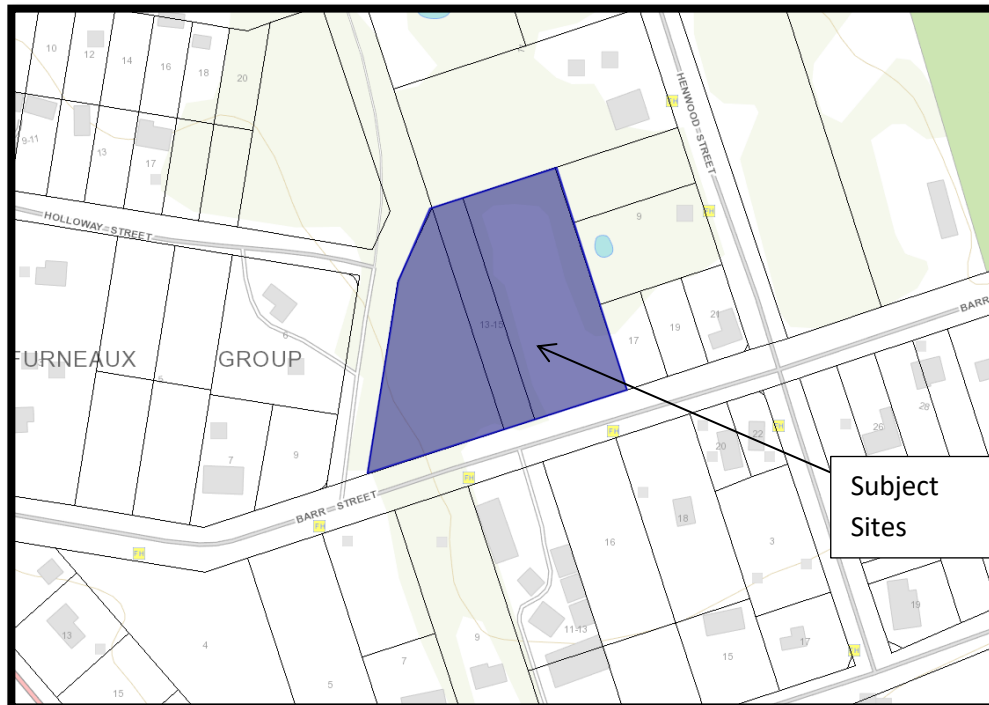


Figure 1: Location Plan of 13-15 Barr Street, Lady Barron

### 2.2 Site Details

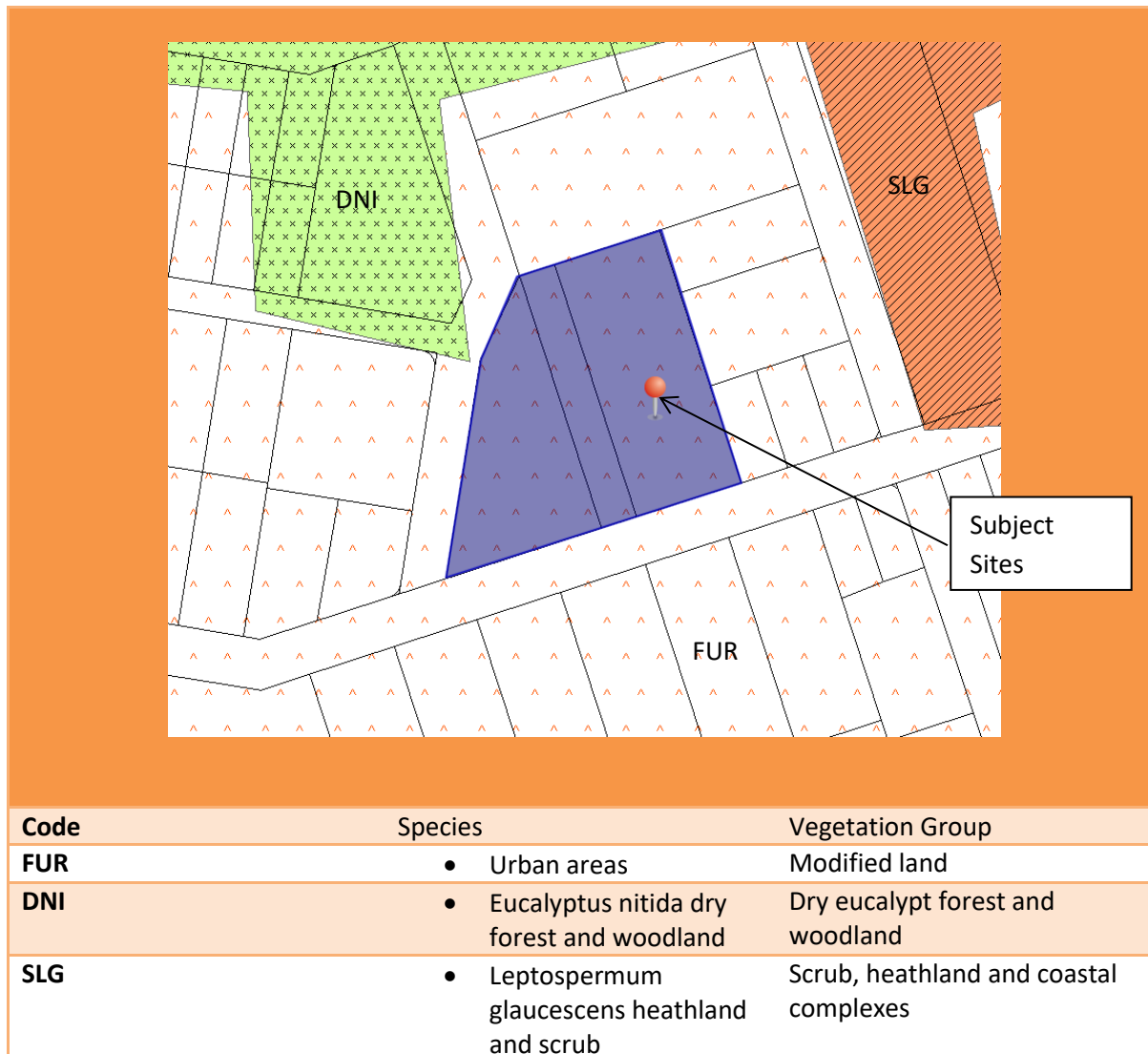
<b>Property Address</b>	13-15 Barr Street, Lady Barron
<b>Certificate of Title</b>	Volume 50142 Folio 1 & Volume 50144 Folio 1 & Volume 50143 Folio 1
<b>Owner</b>	Director of Housing
<b>Existing Use</b>	Vacant
<b>Type of Proposed Building Work</b>	Construction of 6 x dwelling units
<b>BCA Classification</b>	Dwelling – Class 1a
<b>Water Supply</b>	TasWater reticulated supply (On-site supply for fire fighting purposes – Unit 6 only)
<b>Road Access</b>	Street Frontage – Barr Street

### 3.0 Bushfire Site Assessment

#### 3.1 Vegetation Analysis

##### 3.1.1 TasVeg Classification

Reference to Tasmanian Vegetation Monitoring & Mapping Program (TASVEG) indicates the land in and around the property is generally comprising of varying vegetation types including:



3.1.2 Site & Vegetation Photos



View looking north



View looking east toward CT160737/1



View looking east toward CT160737/2





View looking east along Barr Street



View looking south



View looking west



View looking west



Existing/proposed access

### 3.2 BAL Assessment – Dwelling (Unit 1)

Vegetation classification AS3959	North <input checked="" type="checkbox"/> North-East <input checked="" type="checkbox"/>	South <input checked="" type="checkbox"/> South-West <input type="checkbox"/>	East <input checked="" type="checkbox"/> South-East <input type="checkbox"/>	West <input checked="" type="checkbox"/> North-West <input type="checkbox"/>
<b>Group A</b>	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest
<b>Group B</b>	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland
<b>Group C</b>	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land
<b>Group D</b>	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub
<b>Group E</b>	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga
<b>Group F</b>	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest
<b>Group G</b>	<input type="checkbox"/> Grassland	<input checked="" type="checkbox"/> Grassland	<input type="checkbox"/> Grassland	<input type="checkbox"/> Grassland
	<input type="checkbox"/> Managed Land	<input checked="" type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land
<b>Effective slope (degrees)</b>	<input checked="" type="checkbox"/> Up/0°	<input checked="" type="checkbox"/> Up/0°	<input checked="" type="checkbox"/> Up/0°	<input type="checkbox"/> Up/0°
	<input type="checkbox"/> >0-5°	<input type="checkbox"/> >0-5°	<input type="checkbox"/> >0-5°	<input checked="" type="checkbox"/> >0-5°
	<input type="checkbox"/> >5-10°	<input type="checkbox"/> >5-10°	<input type="checkbox"/> >5-10°	<input type="checkbox"/> >5-10°
	<input type="checkbox"/> >10-15°	<input type="checkbox"/> >10-15°	<input type="checkbox"/> >10-15°	<input type="checkbox"/> >10-15°
	<input type="checkbox"/> >15-20°	<input type="checkbox"/> >15-20°	<input type="checkbox"/> >15-20°	<input type="checkbox"/> >15-20°
<b>Distance to classified vegetation</b>	Metres Subject site – forest NE – Min. 33.6m to forest at 9 Henwood Street	Metres Subject site – forest Road – Managed Min. 27m to grassland	Metres Subject site – forest 17-21 Barr Street - Managed	Metres Subject site – forest
<b>Likely direction of bushfire attack</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Prevailing winds</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Exclusions</b>	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f
<b>BAL Value (FDI 50)</b>	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)

**BAL Assessment – Dwelling (Unit 2)**

Vegetation classification AS3959	North <input checked="" type="checkbox"/> North-East <input checked="" type="checkbox"/>	South <input checked="" type="checkbox"/> South-West <input type="checkbox"/>	East <input checked="" type="checkbox"/> South-East <input type="checkbox"/>	West <input checked="" type="checkbox"/> North-West <input type="checkbox"/>
<b>Group A</b>	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest
<b>Group B</b>	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland
<b>Group C</b>	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land
<b>Group D</b>	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub
<b>Group E</b>	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga
<b>Group F</b>	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest
<b>Group G</b>	<input type="checkbox"/> Grassland	<input checked="" type="checkbox"/> Grassland	<input type="checkbox"/> Grassland	<input type="checkbox"/> Grassland
	<input type="checkbox"/> Managed Land	<input checked="" type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land
<b>Effective slope (degrees)</b>	<input checked="" type="checkbox"/> Up/0 <sup>0</sup>	<input checked="" type="checkbox"/> Up/0 <sup>0</sup>	<input checked="" type="checkbox"/> Up/0 <sup>0</sup>	<input type="checkbox"/> Up/0 <sup>0</sup>
	<input type="checkbox"/> >0-5 <sup>0</sup>	<input type="checkbox"/> >0-5 <sup>0</sup>	<input type="checkbox"/> >0-5 <sup>0</sup>	<input checked="" type="checkbox"/> >0-5 <sup>0</sup>
	<input type="checkbox"/> >5-10 <sup>0</sup>	<input type="checkbox"/> >5-10 <sup>0</sup>	<input type="checkbox"/> >5-10 <sup>0</sup>	<input type="checkbox"/> >5-10 <sup>0</sup>
	<input type="checkbox"/> >10-15 <sup>0</sup>	<input type="checkbox"/> >10-15 <sup>0</sup>	<input type="checkbox"/> >10-15 <sup>0</sup>	<input type="checkbox"/> >10-15 <sup>0</sup>
	<input type="checkbox"/> >15-20 <sup>0</sup>	<input type="checkbox"/> >15-20 <sup>0</sup>	<input type="checkbox"/> >15-20 <sup>0</sup>	<input type="checkbox"/> >15-20 <sup>0</sup>
<b>Distance to classified vegetation</b>	Metres Subject site – forest NE – Min. 16m to forest at 9 Henwood Street	Metres Subject site – forest Road – Managed Min. 27m to grassland	Metres Subject site – forest 17-21 Barr Street - Managed	Metres Subject site – forest
<b>Likely direction of bushfire attack</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Prevailing winds</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Exclusions</b>	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f
<b>BAL Value (FDI 50)</b>	<b>BAL – FZ</b> (May be reduced to BAL-29 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-29 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-29 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-29 if Specified Hazard Management Area established and maintained)

### BAL Assessment – Dwelling (Unit 3)

Vegetation classification AS3959	North <input checked="" type="checkbox"/> North-East <input checked="" type="checkbox"/>	South <input checked="" type="checkbox"/> South-West <input type="checkbox"/>	East <input checked="" type="checkbox"/> South-East <input type="checkbox"/>	West <input checked="" type="checkbox"/> North-West <input type="checkbox"/>
<b>Group A</b>	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest
<b>Group B</b>	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland
<b>Group C</b>	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land
<b>Group D</b>	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub
<b>Group E</b>	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga
<b>Group F</b>	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest
<b>Group G</b>	<input type="checkbox"/> Grassland	<input checked="" type="checkbox"/> Grassland	<input type="checkbox"/> Grassland	<input type="checkbox"/> Grassland
	<input type="checkbox"/> Managed Land	<input checked="" type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land
<b>Effective slope (degrees)</b>	<input checked="" type="checkbox"/> Up/0°	<input checked="" type="checkbox"/> Up/0°	<input checked="" type="checkbox"/> Up/0°	<input type="checkbox"/> Up/0°
	<input type="checkbox"/> >0-5°	<input type="checkbox"/> >0-5°	<input type="checkbox"/> >0-5°	<input checked="" type="checkbox"/> >0-5°
	<input type="checkbox"/> >5-10°	<input type="checkbox"/> >5-10°	<input type="checkbox"/> >5-10°	<input type="checkbox"/> >5-10°
	<input type="checkbox"/> >10-15°	<input type="checkbox"/> >10-15°	<input type="checkbox"/> >10-15°	<input type="checkbox"/> >10-15°
	<input type="checkbox"/> >15-20°	<input type="checkbox"/> >15-20°	<input type="checkbox"/> >15-20°	<input type="checkbox"/> >15-20°
<b>Distance to classified vegetation</b>	Metres Subject site – forest NE – Min. 52.1m to forest at 9 Henwood Street	Metres Subject site – forest Road – Managed Min. 27m to grassland	Metres Subject site – forest 17-21 Barr Street - Managed	Metres Subject site – forest
<b>Likely direction of bushfire attack</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Prevailing winds</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Exclusions</b>	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f
<b>BAL Value (FDI 50)</b>	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)

### BAL Assessment – Dwelling (Unit 4)

Vegetation classification AS3959	North <input checked="" type="checkbox"/> North-East <input checked="" type="checkbox"/>	South <input checked="" type="checkbox"/> South-West <input type="checkbox"/>	East <input checked="" type="checkbox"/> South-East <input type="checkbox"/>	West <input checked="" type="checkbox"/> North-West <input type="checkbox"/>
<b>Group A</b>	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest
<b>Group B</b>	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland
<b>Group C</b>	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land
<b>Group D</b>	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub
<b>Group E</b>	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga
<b>Group F</b>	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest
<b>Group G</b>	<input type="checkbox"/> Grassland	<input checked="" type="checkbox"/> Grassland	<input type="checkbox"/> Grassland	<input type="checkbox"/> Grassland
	<input type="checkbox"/> Managed Land	<input checked="" type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land
<b>Effective slope (degrees)</b>	<input checked="" type="checkbox"/> Up/0 <sup>0</sup>	<input checked="" type="checkbox"/> Up/0 <sup>0</sup>	<input checked="" type="checkbox"/> Up/0 <sup>0</sup>	<input type="checkbox"/> Up/0 <sup>0</sup>
	<input type="checkbox"/> >0-5 <sup>0</sup>	<input type="checkbox"/> >0-5 <sup>0</sup>	<input type="checkbox"/> >0-5 <sup>0</sup>	<input checked="" type="checkbox"/> >0-5 <sup>0</sup>
	<input type="checkbox"/> >5-10 <sup>0</sup>	<input type="checkbox"/> >5-10 <sup>0</sup>	<input type="checkbox"/> >5-10 <sup>0</sup>	<input type="checkbox"/> >5-10 <sup>0</sup>
	<input type="checkbox"/> >10-15 <sup>0</sup>	<input type="checkbox"/> >10-15 <sup>0</sup>	<input type="checkbox"/> >10-15 <sup>0</sup>	<input type="checkbox"/> >10-15 <sup>0</sup>
	<input type="checkbox"/> >15-20 <sup>0</sup>	<input type="checkbox"/> >15-20 <sup>0</sup>	<input type="checkbox"/> >15-20 <sup>0</sup>	<input type="checkbox"/> >15-20 <sup>0</sup>
<b>Distance to classified vegetation</b>	Metres Subject site – forest NE – Min. 42.1m to forest at 9 Henwood Street	Metres Subject site – forest Road – Managed Min. 27m to grassland	Metres Subject site – forest 17-21 Barr Street - Managed	Metres Subject site – forest
<b>Likely direction of bushfire attack</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Prevailing winds</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Exclusions</b>	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f
<b>BAL Value (FDI 50)</b>	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)

### BAL Assessment – Dwelling (Unit 5)

Vegetation classification AS3959	North <input checked="" type="checkbox"/> North-East <input type="checkbox"/>	South <input checked="" type="checkbox"/> South-West <input type="checkbox"/>	East <input checked="" type="checkbox"/> South-East <input type="checkbox"/>	West <input checked="" type="checkbox"/> North-West <input type="checkbox"/>
<b>Group A</b>	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest
<b>Group B</b>	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland
<b>Group C</b>	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land
<b>Group D</b>	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub
<b>Group E</b>	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga
<b>Group F</b>	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest
<b>Group G</b>	<input type="checkbox"/> Grassland	<input checked="" type="checkbox"/> Grassland	<input type="checkbox"/> Grassland	<input type="checkbox"/> Grassland
	<input type="checkbox"/> Managed Land	<input checked="" type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land
<b>Effective slope (degrees)</b>	<input checked="" type="checkbox"/> Up/0°	<input checked="" type="checkbox"/> Up/0°	<input checked="" type="checkbox"/> Up/0°	<input type="checkbox"/> Up/0°
	<input type="checkbox"/> >0-5°	<input type="checkbox"/> >0-5°	<input type="checkbox"/> >0-5°	<input checked="" type="checkbox"/> >0-5°
	<input type="checkbox"/> >5-10°	<input type="checkbox"/> >5-10°	<input type="checkbox"/> >5-10°	<input type="checkbox"/> >5-10°
	<input type="checkbox"/> >10-15°	<input type="checkbox"/> >10-15°	<input type="checkbox"/> >10-15°	<input type="checkbox"/> >10-15°
	<input type="checkbox"/> >15-20°	<input type="checkbox"/> >15-20°	<input type="checkbox"/> >15-20°	<input type="checkbox"/> >15-20°
<b>Distance to classified vegetation</b>	Metres Subject site – forest	Metres Subject site – forest Road – Managed Min. 27m to grassland	Metres Subject site – forest NE – Min. 40.8m to forest at 9 Henwood Street	Metres Subject site – forest
<b>Likely direction of bushfire attack</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Prevailing winds</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Exclusions</b>	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f
<b>BAL Value (FDI 50)</b>	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-12.5 if Specified Hazard Management Area established and maintained)

### BAL Assessment – Dwelling (Unit 6)

Vegetation classification AS3959	North <input checked="" type="checkbox"/> North-East <input type="checkbox"/>	South <input checked="" type="checkbox"/> South-West <input type="checkbox"/>	East <input checked="" type="checkbox"/> South-East <input type="checkbox"/>	West <input checked="" type="checkbox"/> North-West <input type="checkbox"/>
<b>Group A</b>	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest	<input checked="" type="checkbox"/> Forest
<b>Group B</b>	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland	<input type="checkbox"/> Woodland
<b>Group C</b>	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land	<input type="checkbox"/> Shrub-land
<b>Group D</b>	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub	<input type="checkbox"/> Scrub
<b>Group E</b>	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga	<input type="checkbox"/> Mallee-Mulga
<b>Group F</b>	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest	<input type="checkbox"/> Rainforest
<b>Group G</b>	<input type="checkbox"/> Grassland	<input checked="" type="checkbox"/> Grassland	<input type="checkbox"/> Grassland	<input type="checkbox"/> Grassland
	<input type="checkbox"/> Managed Land	<input checked="" type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land	<input type="checkbox"/> Managed Land
<b>Effective slope (degrees)</b>	<input checked="" type="checkbox"/> Up/0 <sup>0</sup>	<input checked="" type="checkbox"/> Up/0 <sup>0</sup>	<input checked="" type="checkbox"/> Up/0 <sup>0</sup>	<input type="checkbox"/> Up/0 <sup>0</sup>
	<input type="checkbox"/> >0-5 <sup>0</sup>	<input type="checkbox"/> >0-5 <sup>0</sup>	<input type="checkbox"/> >0-5 <sup>0</sup>	<input checked="" type="checkbox"/> >0-5 <sup>0</sup>
	<input type="checkbox"/> >5-10 <sup>0</sup>	<input type="checkbox"/> >5-10 <sup>0</sup>	<input type="checkbox"/> >5-10 <sup>0</sup>	<input type="checkbox"/> >5-10 <sup>0</sup>
	<input type="checkbox"/> >10-15 <sup>0</sup>	<input type="checkbox"/> >10-15 <sup>0</sup>	<input type="checkbox"/> >10-15 <sup>0</sup>	<input type="checkbox"/> >10-15 <sup>0</sup>
	<input type="checkbox"/> >15-20 <sup>0</sup>	<input type="checkbox"/> >15-20 <sup>0</sup>	<input type="checkbox"/> >15-20 <sup>0</sup>	<input type="checkbox"/> >15-20 <sup>0</sup>
<b>Distance to classified vegetation</b>	Metres Subject site – forest (min. 35m to boundary)	Metres Subject site – forest Road – Managed Min. 27m to grassland	Metres Subject site – forest NE – Min. 40.6m to forest at 9 Henwood Street	Metres Subject site – forest (min. 31.5m to boundary)
<b>Likely direction of bushfire attack</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Prevailing winds</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Exclusions</b>	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f	<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f
<b>BAL Value (FDI 50)</b>	<b>BAL – FZ</b> (May be reduced to BAL-19 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-19 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-19 if Specified Hazard Management Area established and maintained)	<b>BAL – FZ</b> (May be reduced to BAL-19 if Specified Hazard Management Area established and maintained)

The Bushfire Attack Level shall be classified BAL-LOW where the vegetation is one or a combination of any of the following:



- (a) Vegetation of any type that is more than 100 metres from the site.
- (b) Single areas of vegetation less than 1 hectare in area and not within 100m of other areas of vegetation being classified.
- (c) Multiple areas of vegetation less than 0.25 hectare in area and not within 20 metres of the site, or each other.
- (d) Strips of vegetation less than 20 metres in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 metres of the site or each other, or other areas of vegetation being classified.
- (e) Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.
- (f) Low threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks.

NOTE: Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognisable as short-cropped grass for example, to a nominal height of 100mm).

### 3.2 Specified Hazard Management Areas

Hazard management areas are to be established and maintained between the bushfire prone vegetation and the building at a distance equal to, or greater than the separation distance specified for the Bushfire Attack Levels (BAL) in table 2.6 of *Australian Standard 3959-2018 Construction of Buildings in Bushfire Prone Areas*.

Where the Hazard Management Areas can be increased around the building and the classified vegetation in accordance with table 2.6 of Australian Standard 3959, the risk from bushfire attack can reduce.

#### Dwelling (Unit 1)

Distance from Predominant vegetation for BAL 12.5	North/ North-East	South/ South-West	East/ South-East	West/ North-West
	32-<100	To property boundary	To property boundary	38-<100
	Metres	Metres	Metres	Metres

#### Dwelling (Unit 2)

Distance from Predominant vegetation for BAL 29	North/ North-East	South/ South-West	East/ South-East	West/ North-West
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16-<23	To property boundary	To property boundary (min. 16m to boundary with 9 Henwood St)	19-<27m
Metres	Metres	Metres	Metres

#### Dwelling (Unit 3)

Distance from Predominant vegetation for BAL 12.5	North/ North-East	South/ South-West	East/ South-East	West/ North-West
32-<100	To property boundary	To property boundary	38-<100	
Metres	Metres	Metres	Metres	

#### Dwelling (Unit 4)

Distance from Predominant vegetation for BAL 12.5	North/ North-East	South/ South-West	East/ South-East	West/ North-West
32-<100	To property boundary	To property boundary	38-<100	
Metres	Metres	Metres	Metres	

#### Dwelling (Unit 5)

Distance from Predominant vegetation for BAL 12.5	North/ North-East	South/ South-West	East/ South-East	West/ North-West
32-<100	To property boundary	To property boundary	38-<100	
Metres	Metres	Metres	Metres	

#### Dwelling (Unit 6)

Distance from Predominant vegetation for BAL 19	North/ North-East	South/ South-West	East/ South-East	West/ North-West
23-<32	To property boundary	To property boundary	27-<38	
Metres	Metres	Metres	Metres	

The separation distance for the SPECIFIED Hazard Management Area is to be shown on the attached Bushfire Hazard Management Plan measured from the external walls (Façade) of the building in metres along the ground to the bushfire hazard vegetation (if applicable).

### 3.3 Outbuildings

Not applicable.

### 3.4 Road Access

Roads are to be constructed to provide vehicle access to the site to assist firefighting and emergency personnel to defend the building or evacuate occupants; and provide access at all times to the water supply for firefighting purposes on the building site.

Private access roads are to be constructed from the entrance to the property cross over with the public road through to the dwelling ( Unit 6) and water storage area on the site. Private access roads are to be designed, constructed and maintained to a standard not less than Table 2.

<p><b>New / Existing</b> Road Access and Driveways</p>	<p>Private access driveway / roads are to be <u>constructed/maintained</u> from the entrance of the property cross over at the public road (Barr Street) through to the buildings and on-site dedicated fire fighting water. Private access roads are to be maintained to a standard not less than specified in Table 2 B.</p>
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**Table 2: Requirements for Property Access**

The following design and construction requirements apply to property access length is 30 metres or greater or access for a fire appliance to a fire fighting water point:


- (i) All weather construction;
- (ii) Load capacity of at least 20 tonnes, including for bridges and culverts;
- (iii) Minimum carriageway width of 4 metres;
- (iv) Minimum vertical clearance of 4 metres;
- (v) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway;
- (vi) Cross falls of less than 3 degrees (1:20 or 5%);
- (vii) Dips less than 7 degrees (1:8 or 12.5%) entry and exit angle;
- (viii) Curves with a minimum inner radius of 10 metres;
- (ix) Maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; and
- (x) Terminate with a turning area for fire appliances provided by one of the following:
  - a) A turning circle with a minimum inner radius of 10 metres;
  - b) A property access encircling the building; or
  - c) A hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long.

### 3.5 Water Supply

A building that is constructed in a designated bushfire prone area must provide access at all times to a sufficient supply of water for firefighting purposes on the building site.

The exterior elements of a habitable building in a designated Bushfire prone area must be within reach of a 120m long hose (reticulated) or 90m long hose (static) (lay) connected to –

- (i) A fire hydrant system designed and constructed in accordance with TasWater Supplement to Water Supply Code of Australia WSA 03-2011-3.1 MRWA Edition 2.0; or
- (ii) A stored water supply in a water tank, swimming pool, dam or lake available for fire fighting at all times which has the capacity of at least 10,000L for each separate building.

<p><b>Existing</b> Reticulated Water Supply</p>	<p>Fire hydrants are provided within the road reserve and within 120m hose lay of the new dwellings (Units 1 – 5) from Barr Street. On site water supply is not required for Units 1-5.</p> 
<p><b>New</b> On-site Dedicated Fire Fighting Water Supply (Unit 6)</p>	<p>On-site water supply is to be <u>established and maintained</u>, no fire hydrant was sited during site inspection within 120m of the furthest part of Unit 6.</p> <p>A <u>water tank</u> of at least 10,000 litres per building area to be protected and above ground pipes and fittings used for a stored water supply must be of non-rusting, non-combustible, non-heat-deforming materials and must be situated more than 6m from a building area to be protected.</p>

**Table 3B: Requirements for Static Water Supply for Fire Fighting**

Column 1		Column 2
Element		Requirement
<b>A.</b>	Distance between building area to be protected and water supply	<p>The following requirements apply:</p> <ol style="list-style-type: none"> <li>(1) The building area to be protected must be located within 90 metres of the fire fighting water point of a static water supply; and</li> <li>(2) The distance must be measured as a hose lay, between the fire fighting water point and the furthest part of the building area.</li> </ol>
<b>B.</b>	Static Water Supplies	<p>A static water supply:</p> <ol style="list-style-type: none"> <li>(1) May have a remotely located offtake connected to the static water supply;</li> <li>(2) May be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times;</li> <li>(3) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems;</li> <li>(4) Must be metal, concrete or lagged by non-combustible materials if above ground; and</li> <li>(5) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS 3959-2018 the tank may be constructed of any material provided that the lowest 400mm of the tank exterior is protected by:               <ol style="list-style-type: none"> <li>(a) Metal;</li> <li>(b) Non-combustible material; or</li> <li>(c) Fibre-cement a minimum 6mm thickness.</li> </ol> </li> </ol>
<b>C.</b>	Fittings, pipework and accessories (including stands and tank supports)	<p>Fittings and pipework associated with a fire fighting water point for a static water supply must:</p> <ol style="list-style-type: none"> <li>(a) Have a minimum nominal internal diameter of 50mm;</li> <li>(b) Be fitted with a valve with a minimum nominal diameter of 50mm;</li> <li>(c) Be metal or lagged by non-combustible materials if above ground;</li> <li>(d) Where buried, have a minimum depth of 300mm;</li> <li>(e) Provide a DIN or NEN standard forged Storz 65mm coupling fitted with a suction washer for connection to fire fighting equipment;</li> <li>(f) Ensure the coupling is accessible and available for connection at all times;</li> <li>(g) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220mm length);</li> </ol>

		<ul style="list-style-type: none"> <li>(h) Ensure underground tanks have either an opening at the top of not less than 250mm diameter or a coupling compliant with this Table; and</li> <li>(i) Where a remote offtake is installed, ensure the offtake is in a position that is: <ul style="list-style-type: none"> <li>(a) Visible;</li> <li>(b) Accessible to allow connection by fire fighting equipment;</li> <li>(c) At a working height of 450-600mm above ground level; and</li> <li>(d) Protected from possible damage, including damage from vehicles.</li> </ul> </li> </ul>
<b>D.</b>	Signage for static water connections	<p>The fire fighting water point for a static supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must:</p> <ul style="list-style-type: none"> <li>(a) Comply with water tank signage requirements within AS 2304:2019; or</li> <li>(b) Comply with the Tasmania Fire Service Water Supply Signage Guideline published by the Tasmania Fire Service.</li> </ul>
<b>E.</b>	Hardstand	<p>A hardstand area for fire appliances must be provided:</p> <ul style="list-style-type: none"> <li>(a) No more than three metres from the fire fighting water point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like);</li> <li>(b) No closer than six metres from the building area to be protected;</li> <li>(c) With a minimum width of three metres constructed to the same standard as the carriageway; and</li> <li>(d) Connected to the property access by a carriageway equivalent to the standard of the property access.</li> </ul>

It should be recognised that although water supply as specified above may be in compliance with the requirements of the Building Code of Australia, the supply may not be adequate for all firefighting situations.

#### 4.0 Layout Options

Not relevant to this proposal.

#### 5.0 Other Planning Provisions

Not relevant to this proposal.

## 6.0 Conclusions and Recommendations

Mitigation from bushfire is dependent on the careful management of the site by maintaining reduced fuel loads within the hazard management areas and within the site.

**The site has been assessed as requiring buildings (Units 1, 3, 4 and 5) to conform to or exceed BAL 12.5 requirements and (Unit 6) to conform to or exceed BAL 19 and (Unit 2) to conform to or exceed BAL 29 requirements based on AS 3959 – 2018 Construction of Buildings in Bushfire Prone Areas.**

### Access

The driveway is to be upgraded/maintained to meet Table 2B. Requirements for Property Access, Director's Determination – Bushfire Hazard Areas, Version 1.1.

### Water Supplies

The property has access to a reticulated water supply and is within 120 metres of the existing fire plug, meeting the requirements for Reticulated Water Supply for Fire Fighting, Table 3A, Director's Determination – Bushfire Hazard Areas, Version 1.1 – **Units 1 to 5.**

Water supply tank **at least** 10,000 litres (10,000l per building area to be protected) is to be established and maintained, with a fitting suitable for TFS access, meeting the requirements for Reticulated Water Supply for Fire Fighting, Table 3B, Director's Determination – Bushfire Hazard Areas, Version 1.1 – **Unit 6 only.**

### Fuel Managed Areas

Hazard Management Areas as detailed within the plan shall be constructed and maintained as detailed in Section 2 of Schedule 2 (where applicable).

## Schedule 2 – Bushfire Hazard Management Plan

### 1.0 Introduction

The Bushfire Hazard Management Plan (BHMP) is developed from the results of a Bushfire Attack Level (BAL) Assessment Report prepared for the site in accordance with Australian Standard 3959. The BHMP provides reference and information to existing and subsequent owners on their responsibilities for the establishment, maintenance and future management of their property to reduce the risk of bushfire attack and includes: -

- Establishment of a Hazard Management Area in and around the existing and/or proposed buildings,
- Specifications of Private access road construction,
- Provision on firefighting water supply,
- Construction requirements in relation to the Building Code of Australia, dependent on the Bushfire Attack Level and requirements of Australian Standard 3959.
- Reduction and removal of vegetation and fuel loads in and around the property, buildings and Hazard Management Areas,
- Ongoing maintenance responsibilities by successive owners for perpetuity.

*A copy of the plan MUST also be provided to ALL current and successive owners to make them aware of their continuing obligations to maintain the plan and protection measures attributed to their property in to the future.*

### 2.0 Hazard Management Areas

The Hazard Management Area (defendable space) is provided between the vegetation and the buildings subject to bushfire risk. The space provides for management of vegetation and reduction in fuel loads in an attempt to:

- Prevent flame impingement on the dwelling;
- Provide a defendable space for property protection;
- Reduce fire spread;
- Deflect and filter embers;
- Provide shelter from radiant heat; and
- Reduce wind speed.

The *Building Act 2016*, requires a hazard management area to be established and maintained between the bushfire prone vegetation and the building at a distance equal to, or greater than the separation distance specified for the Bushfire Attack Levels (BAL) in *AS 3959-2018 Construction of Buildings in Bushfire Prone Areas*.

Refer to the attached BHMP Site Plan in Section 6 of this management plan for specific details on the Hazard Management Area.



## 2.1 Vegetation (Fuel) Management

Managing an area in a minimum fuel condition generally means a reduction in the amount and altering the arrangement of fuels. Most fine fuels are at or close to the ground, often as part of a grass, litter or shrub layer. If there is enough fuel, when a fire comes these fuels will ignite the trees above or set the bark alight which will burn up into the tree canopy causing the most dangerous of bushfire situation; a crown fire.

To prevent crown fires occurring it is necessary to remove the “ladder of fuel” between the ground and the tree crowns and to make sure the amount of ground fuel is not sufficient to set the crowns alight. Without fire burning below, a crown fire should not be sustained. Further removing continuity and separation of the vegetation canopies both horizontally and vertically will assist.

All vegetation will burn under the influence of bushfire; shrub layers need to be modified to remove tall continuous walls of vegetation and establish clear separation between the ground and the bottom of the tree canopy. Further minimisation of flammable ground litter such as leaves, twigs, bark, ferns and debris will further reduce fuel load with potential to burn or contribute to the growth of a bushfire.

Fuels do not need to be totally removed however fuels close to the building and inside the Hazard Management Area are to be kept to a minimum. As a general practice 5 tonnes per hectare is accepted as being controllable with normal firefighting resources. This can be visualised as grass cut to about 10 centimetres in height or ground litter about 2 centimetres thick. This is considered to be a low fuel level.

## 2.2 Other Risk Management Actions

Other actions that can be implemented to reduce the bushfire risk in the Hazard Management Areas include:

1. Establishing non-combustible paths and driveways around buildings.
2. Establish plantings of low flammability shrub species.
3. Ensure garden beds and shrubs are established well away from buildings.
4. Tree planting to be located at the outer edge of the Hazard Management Area and spaced well apart to ensure canopy separation.
5. Cut lawns short and maintain.
6. Remove fallen limbs, leaf and bark litter.
7. Avoid using pine bark and other flammable mulch in gardens.
8. Prune trees to ensure canopy separation horizontally and vertically, remove low hanging branches to ensure separation from ground litter.
9. Where the amount of land permits extend the vegetation management in to a secondary hazard management zone.

### 3.0 On-going Site Management and Maintenance

On-going maintenance is required to the buildings and landscaping within the hazard management area to ensure the continued performance of the bushfire mitigation measures which have been designed into the development for occupant and community protection.

Specified Hazard Management Areas are only a minimum distance required; owners are encouraged to establish a greater management area where land area and opportunity permits. An additional fuel modified buffer zone between the Hazard Management Area and the bushfire vegetation will only improve the protection level and reduce the risk to the property during a bushfire event.

Preparedness comes down to diligent annual maintenance in and around the buildings and Hazard Management Areas particularly during the period of greatest risk; August to February of each year.

#### Recommendation:

1. Locate wood piles or other flammable storage well away from the dwelling.
2. Solid non-combustible fencing such as steel provides a fire and heat radiation shield to the dwelling.
3. Metal flywire screens prevent sparks and embers from entering the building.
4. Seal gaps under floor spaces, roof space, under eaves, external vents, skylights, chimneys and wall cladding.
5. Remove ladder fuels from the under storey of larger trees. Prune canopies to provide separation.
6. Rake up leaf litter and vegetation debris. Cut grass and maintain to less than 10cm.
7. Keep garden beds well away from the dwelling and use non-combustible garden mulches including rock or stones.
8. Establish plantings of low flammability shrub species.
9. Seal all gaps in external claddings.
10. Keep roof gutters clear of leaf litter, bark and similar debris, remove and maintain. Install gutter guards to assist.
11. Flammable fuels such as gas bottles should be located on the opposite side of the house to the likely direction of a bushfire.
12. Seal gaps in roofing to prevent the entry of embers.
13. Surround the dwelling with non-combustible paths.
14. Outbuildings to be at least 6m from the main dwelling.
15. Ensure hoses provide coverage to the whole site. Use metal hose fittings.
16. Flammable fuels and the like to be stored in minimum volumes well away from the dwelling.

### 4.0 Vehicular Access

Roads are to be constructed to provide vehicle access to the site to assist firefighting and emergency personnel to defend the building or evacuate occupants; and provide access at all times to the water supply for firefighting purposes on the building site.

Private access roads are to be constructed from the entrance to the property cross over with the public road through to the dwelling and water storage area on the site (if applicable). Private access roads are to be designed, constructed and maintained to a standard as recommended below:

**Recommendations:**

The following design and construction requirements apply to property access length is 30 metres or greater or access for a fire appliance to a fire fighting water point:

- (i) All weather construction;
- (ii) Load capacity of at least 20 tonnes, including for bridges and culverts;
- (iii) Minimum carriageway width of 4 metres;
- (iv) Minimum vertical clearance of 4 metres;
- (v) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway;
- (vi) Cross falls of less than 3 degrees (1:20 or 5%);
- (vii) Dips less than 7 degrees (1:8 or 12.5%) entry and exit angle;
- (viii) Curves with a minimum inner radius of 10 metres;
- (ix) Maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; and
- (x) Terminate with a turning area for fire appliances provided by one of the following:
  - a) A turning circle with a minimum inner radius of 10 metres;
  - b) A property access encircling the building; or
  - c) A hammerhead “T” or “Y” turning head 4 metres wide and 8 metres long.

## 5.0 Water Supply

A building that is constructed in a designated bushfire prone area must provide access at all times to a sufficient supply of water for firefighting purposes on the building site.

**Recommendations:**

The exterior elements of a habitable building in a designated Bushfire prone area must be within reach of a 120m long hose (reticulated) or 90m long hose (static) (lay) connected to –

- (i) A fire hydrant system designed and constructed in accordance with TasWater Supplement to Water Supply Code of Australia WSA 03-2011-3.1 MRWA Edition 2.0; or
- (ii) A stored water supply in a water tank, swimming pool, dam or lake available for fire fighting at all times which has the capacity of at least 10,000L for each separate building.

### 5.1 Reticulated Water Supply – Units 1-5

A fire hydrant system designed and constructed in accordance with TasWater Supplement to Water Supply Code of Australia WSA 03-2011-3.1 MRWA Edition 2.0 is available within 120m to the building area to be protected.

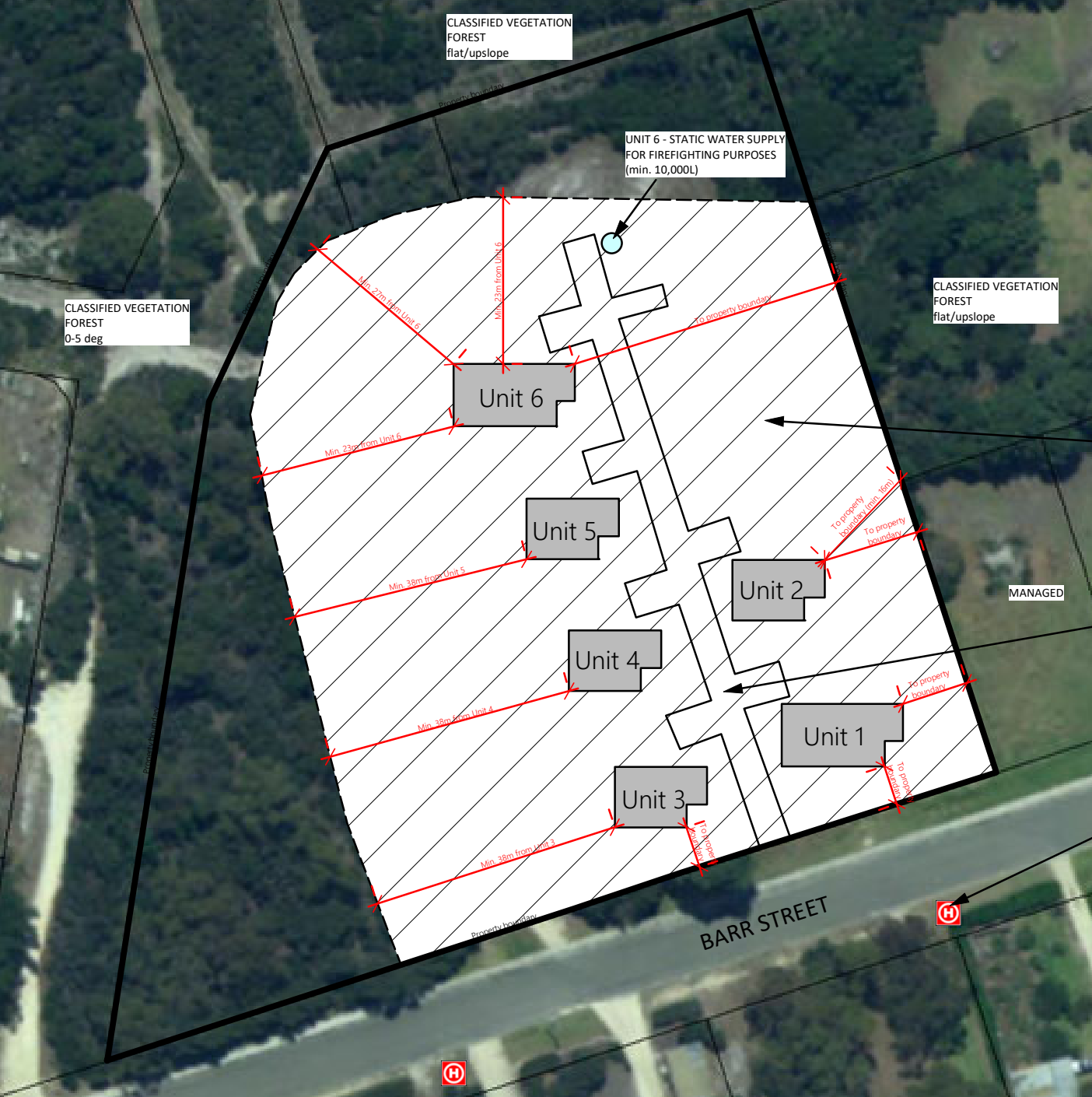
## 5.2 On-Site Dedicated Fire Fighting Water Supply – Unit 6

A water tank of at least 10,000 litres per building area to be protected and above ground pipes and fittings used for a stored water supply must be made of non-rusting, non-combustible, non-heat-deforming materials and must be situated more than 6m from a building, but within 90m of the building area (water connection point). Hardstanding must be provided within 3m of a static water supply/water connection point.

The water tank must be fitted with a 65mm outlet and DIN or NEN Standard compliant forged Storz 65mm adaptor fitted with a standard (delivery) washer rated to 1800kPa working pressure and 2400kPa burst pressure.

It should be recognised that although water supply as specified above may be in compliance with the requirements of the Building Code of Australia the supply may not be adequate for all fire fighting situations.

## Bushfire Hazard Management Site Plan



DWELLINGS (UNITS 1, 3, 4 & 5) MUST BE DESIGNED AND CONSTRUCTED TO BAL - 12.5 MINIMUM STANDARD UNDER AS3959-2018

DWELLING (UNIT 6) MUST BE DESIGNED AND CONSTRUCTED TO BAL - 19 MINIMUM STANDARD UNDER AS3959-2018

DWELLING (UNIT 2) MUST BE DESIGNED AND CONSTRUCTED TO BAL - 29 MINIMUM STANDARD UNDER AS3959-2018

HAZARD MANAGEMENT AREA TO BE MAINTAINED IN A MINIMUM FUEL CONDITION - REFER TO SECTION 3.3 (SCHEDULE 1) & SECTION 2.0 (SCHEDULE 2) OF BUSHFIRE HAZARD ASSESSMENT REPORT

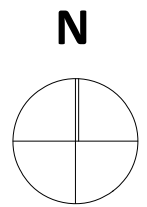
PROPERTY ACCESS REQUIREMENTS - REFER TO SECTION 3.5 (SCHEDULE 1) OF BUSHFIRE HAZARD ASSESSMENT REPORT

FIREFIGHTING WATER SUPPLY - REFER TO SECTION 3.6 (SCHEDULE 1) OF BUSHFIRE HAZARD ASSESSMENT REPORT (STATIC WATER SUPPLY FOR UNIT 6 ONLY - min. 10,000L as >120m hose lay from fire hydrant)

\* ALL THREE TITLES MUST BE ADHERED PRIOR TO OCCUPANCY OF ANY DWELLING ON SITE

\* THIS BHMP MUST BE READ IN CONJUNCTION WITH BUSHFIRE HAZARD ASSESSMENT REPORT REF: RGA-B2365C, R. GREEN, 27 SEPTEMBER 2023

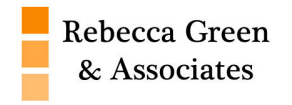
\* THIS BHMP HAS BEEN PREPARED TO SATISFY THE REQUIREMENTS OF THE DIRECTORS DETERMINATION - BUSHFIRE HAZARD AREAS (V1.1)



**BUSHFIRE HAZARD MANAGEMENT PLAN**  
 BUSHFIRE ATTACK LEVEL (BAL) - 12.5 (UNITS 1, 3, 4 & 5)  
 BUSHFIRE ATTACK LEVEL (BAL) - 19 (UNIT 6)  
 BUSHFIRE ATTACK LEVEL (BAL) - 29 (UNIT 2)

13-15 BARR STREET, LADY BARRON  
 VOLUME 50142 FOLIO 1,  
 VOLUME 50144 FOLIO 1,  
 VOLUME 50143 FOLIO 1  
 PROPERTY ID 7778982

DATE: 27 SEPTEMBER 2023  
 VERSION: 1  
 DRAWN: REBECCA GREEN  
 PHONE: 0409 284 422  
 EMAIL: ADMIN@RGASSOCIATES.COM.AU  
 BFP - 116, SCOPE - 1, 2, 3A, 3B, 3C



**Form 55**

# CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To:  *Owner /Agent*  
 *Address*  
  *Suburb/postcode*

## Qualified person details:

Qualified person:   
 Address:    *Phone No:*   
*Fax No:*   
*Licence No:*  *Email address:*

Qualifications and Insurance details:  *(description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)*

Speciality area of expertise:  *(description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)*

## Details of work:

Address:    *Lot No:*   
*Certificate of title No:*

The assessable item related to this certificate:  *(description of the assessable item being certified)*  
*Assessable item includes –*  
 - a material;  
 - a design  
 - a form of construction  
 - a document  
 - testing of a component, building system or plumbing system  
 - an inspection, or assessment, performed

## Certificate details:

Certificate type:  *(description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)*

This certificate is in relation to the above assessable item, at any stage, as part of - (tick one)

building work, plumbing work or plumbing installation or demolition work:

or

a building, temporary structure or plumbing installation:



In issuing this certificate the following matters are relevant –

Documents:	Bushfire Hazard Assessment Report & Bushfire Hazard Management Plan (Rebecca Green & Associates, 27 September 2023, Job No. RGA-B2365C)
Relevant	N/A
References:	<i>Australian Standard 3959-2018</i>

*Substance of Certificate: (what it is that is being certified)*

1. Assessment of the site Bushfire Attack Level (BAL – 12.5 for Unit 1, Unit 3, Unit 4 and Unit 5) and (BAL-19 for Unit 6) and (BAL-29 for Unit 2) to Australian Standard 3959-2018
2. Bushfire Hazard Management Plan showing BAL-12.5 and BAL-19 and BAL-29 solutions.

*Scope and/or Limitations*

**Scope**

This report and certification was commissioned to identify the Bushfire Attack Level for the existing property. All comment, advice and fire suppression measures are in relation to compliance with the *Building Act 2016 & Regulations 2016, National Construction Code and Australian Standard 3959-2018, Construction of buildings in bushfire-prone areas.*


**Limitations**

The assessment has been undertaken and report provided on the understanding that:-

1. The report only deals with the potential bushfire risk all other statutory assessments are outside the scope of this certificate.
2. The report only identifies the size, volume and status of vegetation at the time the inspection was undertaken and cannot be relied upon for any future development.
3. Impacts of future development and vegetation growth have not been considered.
4. No assurance is given or inferred for the health, safety or amenity of the general public, individuals or occupants in the event of a Bushfire.
5. No warranty is offered or inferred for any buildings constructed on the property in the event of a Bushfire.

**No action or reliance is to be placed on this certificate or report; other than for which it was commissioned.**

**I certify the matters described in this certificate.**

Qualified person:	<i>Signed:</i> 	<i>Certificate No:</i> RG-178/2023	<i>Date:</i> 27 September 2023
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**Attachment 1 – AS3959-2018 Construction Requirements**

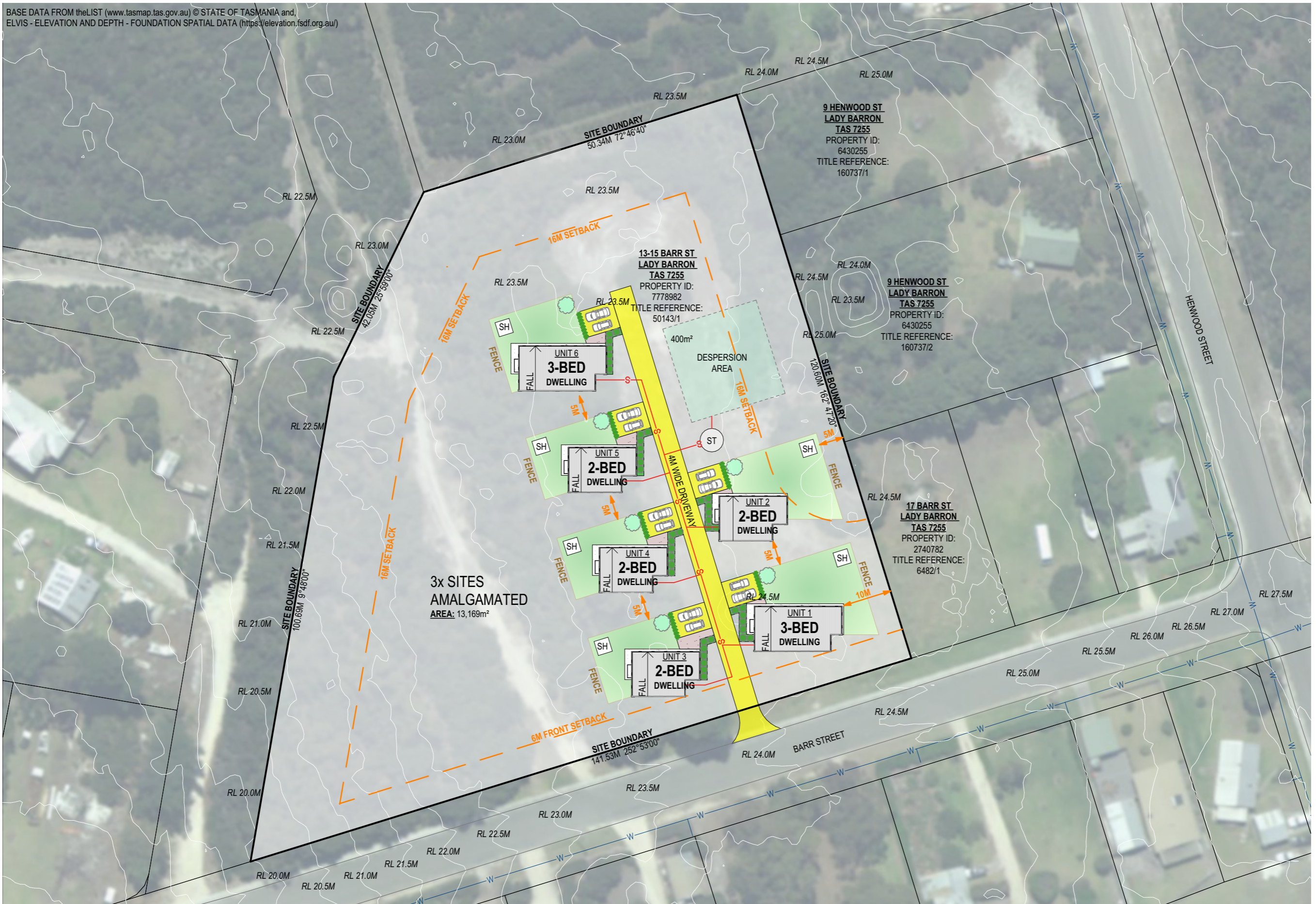
# BAL Assessments

Revised for 2018 edition

	BAL—LOW	BAL-12.5	BAL-19	BAL-29	BAL-40	BAL –FZ (FLAMEZONE)
SUBFLOOR SUPPORTS	No special construction requirements	No special construction requirements	Enclosure by external wall or by steel, bronze or aluminium mesh	Enclosure by external wall or by steel, bronze or aluminium mesh. Non-combustible or naturally fire resistant timber supports where the subfloor is unenclosed	If enclosed by external wall refer below “External Walls” section in table or non-combustible sub-floor supports, or tested for bushfire resistance to AS1530.8.1	Enclosure by external wall or non-combustible with an FRL of 30/-/- or to be tested for bushfire resistance to AS1530.8.2
FLOORS	No special construction requirements	No special construction requirements	Concrete slab on ground or enclosure by external wall, metal mesh as above or flooring less than 400mm above ground level to be non-combustible, naturally fire resistant timber or protected on the underside with sarking or mineral wool insulation	Concrete slab on ground or enclosure by external wall, metal mesh as above or flooring less than 400mm above ground level to be non-combustible, naturally fire resistant timber or protected on the underside with sarking or mineral wool insulation	Concrete slab on ground or enclosure by external wall or protection of underside with a non-combustible material such as fibre cement sheet or be non-combustible or to be tested for bushfire resistance to AS1530.8.1	Concrete slab on ground or enclosure by external wall or an FRL of 30/30/30 or protection of underside 30 minute incipient spread of fire system or to be tested for bushfire resistance to AS1530.8.2
EXTERNAL WALLS	No special construction requirements	As for BAL-19	Parts less than 400mm above ground or decks etc to be of non-combustible material, 6mm fibre cement clad or bushfire resistant/ naturally fire resistant timber	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) or timber framed, or steel framed walls sarked on the outside and clad with 6mm fibre cement sheeting or steel sheeting or bushfire resistant timber	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) or timber framed, or steel framed walls sarked on the outside and clad with 9mm fibre cement sheeting or steel or to be tested for bushfire resistance to AS1530.8.1	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) with a minimum thickness of 90mm or a FRL of -/30/30 when tested from outside or to be tested for bushfire resistance to AS1530.8.2
EXTERNAL WINDOWS	No special construction requirements	4mm grade A Safety Glass of glass blocks within 400m of ground, deck etc with Openable portion metal screened with frame of metal or metal reinforced PVC-U or bushfire resisting timber	5mm toughened glass or glass bricks within 400mm of the ground, deck etc with openable portion metal screened with frame of metal or metal reinforced PVC-U or bushfire resisting timber. Above 400mm annealed glass can be used with all glass screened	5mm toughened glass with openable portion screened and frame of metal or metal reinforced PVC-U, or bushfire resistant timber and portion within 400mm of ground, deck, screen etc screened	6mm toughened glass. Fixed and openable portion screened with steel or bronze mesh	Protected by bushfire shutter or FRL of -/30/- and openable portion screened with steel or bronze mesh or be tested for bushfire resistance to AS1530.8.2
EXTERNAL DOORS	No special construction requirements	As for BAL-19 except that door framing can be naturally fire resistant (high density) timber	Screened with steel, bronze or aluminium mesh or glazed with 5mm toughened glass, non-combustible or 35mm solid timber for 400mm above threshold, metal or bushfire resistant timber framed for 400mm above ground, decking etc. tight-fitting with weather strips at base	Screened with steel, bronze or aluminium mesh or non-combustible, or 35mm solid timber for 400mm above threshold. Metal or bushfire resistant timber framed tight-fitting with weather strips at base	Non-combustible or 35mm solid timber, screened with steel or bronze mesh, metal framed, tight-fitting with weather strips at base	Protected by bushfire shutter or tight-fitting with weather strips at base and a FRL of -/30/-
ROOFS	No special construction requirements	As for BAL-19 (including roof to be fully sarked)	Non-combustible covering, roof/wall junctions sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked.	Non-combustible covering. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked	Non-combustible covering. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked and no roof mounted evaporative coolers	Roof with FRL of 30/30/30 or tested for bushfire resistance to AS1530.8.2. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. No roof mounted evaporative coolers
VERANDAS DECKS ETC.	No special construction requirements	As for BAL-19	Enclosed sub floor space—no special requirements for materials except within 400mm of ground. No special requirements for supports or framing. Decking to be non-combustible or bushfire resistant within 300mm horizontally and 400mm vertically from a glazed element	Enclosed sub floor space or non-combustible or bushfire resistant timber supports. Decking to be non-combustible or bushfire resistant timbers	Enclosed sub-floor space or non-combustible supports. Decking to be non-combustible	Enclosed sub floor space or non-combustible supports. Decking to have no gaps and be non-combustible

Please note: The information in the table is a summary of the construction requirements in the AS3959-2018 standard and is not intended as a design or construction guide. You should consult the standard for the full technical details.

## Attachment 2 – Proposal Plans



**BAL ASSESSMENT:** BAL 29 (AS3959-2018)

**SITE AREA:** 13,169m<sup>2</sup>  
**NEW FOOTPRINT:** GFAm<sup>2</sup>  
**SITE COVERAGE:** ####%

SOME ITEMS LISTED BELOW MAY NOT BE APPLICABLE

REFER MATERIALS & FINISHES SCHEDULE FOR FURTHER DETAIL

**BOL:** BOLLARD  
**EX:** EXISTING  
**FH:** FIRE HYDRANT  
**FL:** FLOOR LEVEL  
**MH:** MANHOLE  
**RL:** RELATIVE LEVEL  
**SH:** SHED / OUTBUILDING  
**ST:** SEPTIC TANK  
**WHT:** WATER HARVESTING TANK

**AG:** AG-DRAIN  
**COM:** COMMS LINE  
**G:** GAS LINE  
**HV:** HV POWER LINE  
**LV:** LV POWER LINE  
**S:** SEWER LINE  
**SW:** STORMWATER  
**W:** WATER LINE

LEVELS AND DIMENSIONS TO BE CONFIRMED ON SITE

UTILITY CONNECTION LOCATIONS TO BE CONFIRMED ON SITE

SITE ACCESS TO BE PROVIDED WITH APPLICABLE TURNING AND TRANSITION REQUIREMENTS

VEHICLES TO ONLY BE PARKED IN DESIGNATED AREAS

CUT-OFF AND AG-DRAINS TO BE INSTALLED PRIOR TO EXCAVATION OF FOOTINGS

EXCAVATED MATERIAL TO BE PLACED UP-SLOPE OF DRAINS AND SEDIMENT FENCES INSTALLED DOWN-SLOPE OF MATERIAL

EXCAVATED MATERIAL TO BE USED WHERE SITE WORKS REQUIRE FILL, BEFORE EXCESS MATERIAL IS PROPERLY REMOVED FROM SITE

DOWNPIPES TO BE CONNECTED TO RELEVANT SYSTEM AS SOON AS ROOF IS INSTALLED

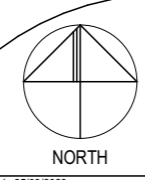
PRODUCTS AND SYSTEMS TO BE INSTALLED AND / OR USED AS PER MANUFACTURER'S INSTRUCTIONS

**IMPORTANT**  
 WORKS ARE TO BE IN ACCORDANCE WITH THE APPLICABLE AUSTRALIAN STANDARDS, CONSTRUCTION CODES (NCC) & REQUIREMENTS OF ANY RELEVANT LOCAL AUTHORITIES

**PROPOSED SITE PLAN**  
 1:750

**CBM Sustainable Design**  
 LTN: 51 York Street, PO Box 1971, Launceston TAS 7250  
 HBT: 1 Kyeema Place, Cambridge TAS 7170  
 VIC: Level 14, 390 St Kilda Road, Melbourne VIC 3004  
 NSW: Impact Centre, 19 Chetwynd Road, Erina NSW 2250

P: +613 6332 6988 E: info@cbmgroup.com.au A: CC1113Z



**FIAAI 2-BED AND 3-BED HOUSING**  
 13 -15 BARR STREET LADY BARRON  
 FLINDERS ISLAND TAS 7255  
 FLINDERS ISLAND ABORIGINAL ASSOCIATION INC. (FIAAI) SCALE: 1:750 (A3)

REV	AMENDMENT	DATE
01	SKETCH DESIGN	18/09/2023

ISSUED BY:  
**dstanford**

DRAWN BY:  
**dstanford**

APPROVED BY:  
**jdjengemane**

**PROPOSED SITE PLAN**

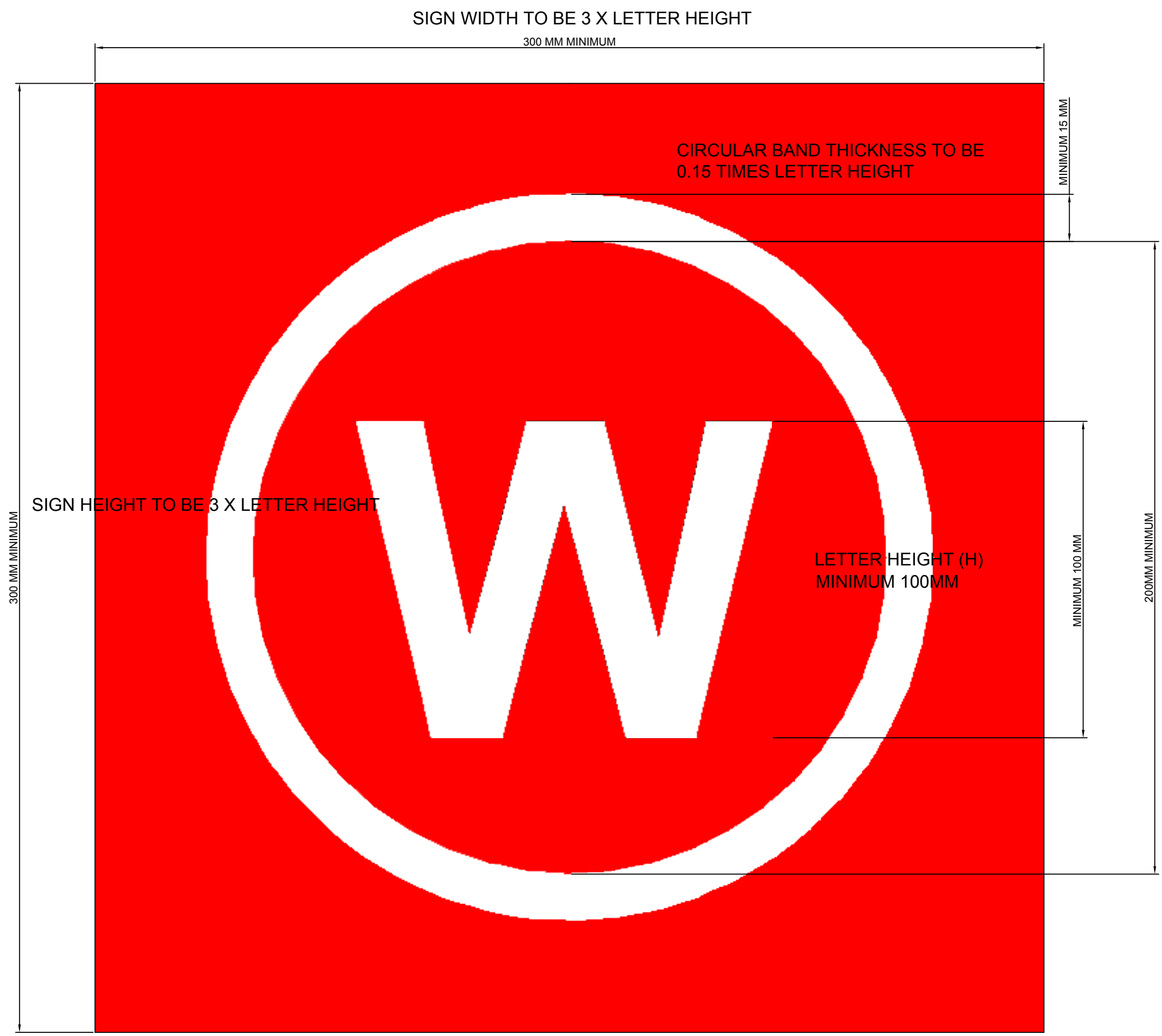
DWG: **A102** REV: **01**

PROJECT: **P23030 / 04**



## **Attachment 3 – Tasmania Fire Service Water Supply Signage Guideline**

# 10,000 LITRE DOMESTIC FIREFIGHTING STATIC WATER INDICATOR SIGN



LETTERING TO BE UPPERCASE AND NOT LESS THAN 100MM IN HEIGHT

INSIDE DIAMETER OF CIRCULAR BAND TO BE 2 TIMES LETTER HEIGHT

SIGN SIZE DIMENSIONS  
3 X LETTER HEIGHT HIGH AND 3 X LETTER HEIGHT WIDE.

THICKNESS OF CIRCULAR BAND TO BE 0.15 TIMES LETTER HEIGHT

TEXT STYLE TO BE IN ACCORDANCE WITH AS1744.2015, SERIES F

SIGN TO BE IN FADE RESISTING MATERIAL WITH WHITE REFLECTIVE LETTERING AND CIRCLE ON A RED BACKGROUND

RED TO BE R-13 SIGNAL RED COLOUR CODE 1795U

WHITE SUBSTRATE COLOUR TO BE PMS 186C

SIGN TO BE CONSTRUCTED FROM UV STABILIZED, NON FLAMMABLE AND NON HEAT DEFORMING MATERIAL

SIGN TO BE PERMANENTLY FIXED

CIRCLE INNER DIAMETER  
2 X LETTER HEIGHT



## References

- (a) Australian Standards, AS 3959-2018, *Construction of buildings in bushfire-prone areas*, Standards Australia, Sydney NSW.
- (b) Resource Management & Conservation Division of the Department Primary Industry & Water September 2006, TASVEG, *Tasmanian Vegetation Map*, Tasmania.
- (c) Tasmanian Government, Land Information System Tasmania, [www.thelist.tas.gov.au](http://www.thelist.tas.gov.au)