p. 0481 588 862
0461 534 890
e. mail@firetechbushfireconsulting.com.au
w. www.firetechbushfireconsulting.com.au

ABN: 58676489017

Bushfire Hazard Assessment & Management Plan

Proposed Development: Construction of twelve (12) townhouses

Client:	SG Trust
Property Details:	Lot 7 RP 99638
	82 Station Road, Loganlea QLD 4131
LGA:	Logan City Council
Date of Issue:	14/01/2026

Report prepared by:

Peter Mamone
GCert (Bushfire Protection) *UWS*
BEnvSci (Resource Mgt) *SCU*
FPAA Member #56127

BPAD Bushfire Planning & Design Accredited Practitioner Level 2

Document Control

Version	Date	Description	Prepared by	Authorised by
1.0	14/01/2026	Final	PM	PM

Executive Summary

This report has been prepared to assess the Construction of twelve (12) townhouses at Lot 7 RP 99638, 82 Station Road, Loganlea QLD 4131 to determine the Bushfire Attack Level (BAL) for the site and relevant requirements under *State Planning Policy 2017 (SPP 2017)*.

The results of the site assessment undertaken on 30/12/2025 are summarised in the table below.

Bushfire Attack Level (BAL) rating (AS 3959):	*BAL-12.5 (entire development)*

Bushfire Hazard Assessment results are presented in Section 2;
Bushfire Management Plan is presented in Section 3;
Recommendations are presented in & Section 4.

Table of Contents

Table of Figures

Table of Tables

1. Introduction

1.1 Proposed Development

This bushfire management report has been prepared by Firetech Bushfire Consulting in accordance with the provisions deemed relevant within *Bushfire Resilient Communities 2019 (BRC 2019), AS3959:2018 'Construction of Buildings in Bushfire-prone Areas'* and the *Logan Planning Scheme 2015,* on behalf of SG Trust for, Construction of twelve (12) townhouses located at Lot 7 RP 99638, 82 Station Road, Loganlea QLD 4131 (Figure 1).

The subject site is in an urban area surrounded by a mix of existing lots with dwellings, newly created lots with dwellings and land slated for development. The bushfire hazard to the site is situated across Station Rd and consists of a small area (~1Ha) of natural area as part of Sturdee Park.

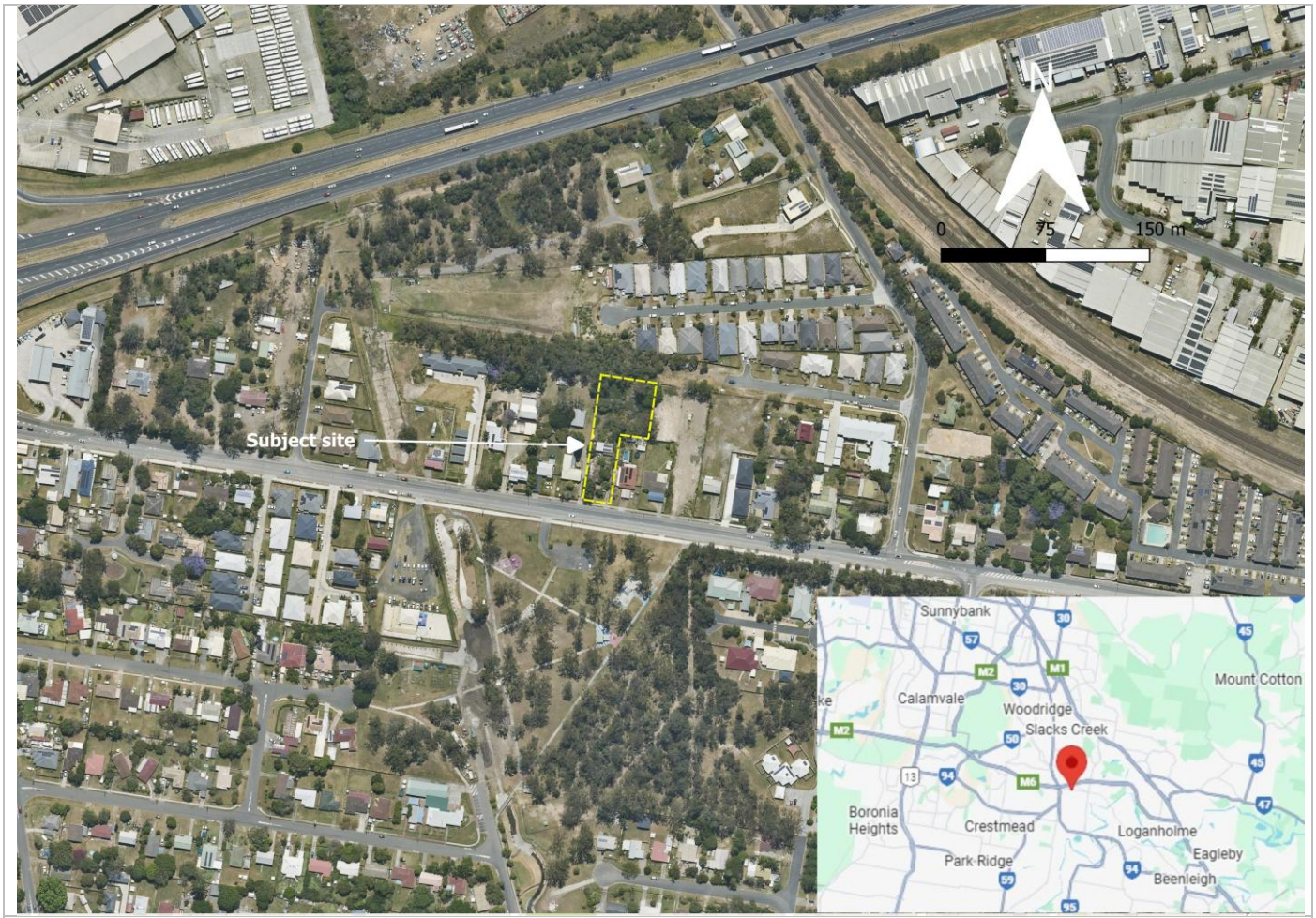


Figure 1: Aerial image of the subject site (Source: Metromap 2026; Google Maps 2026)

1.2 Bushfire Hazard Overlay

The proposed development site is mapped as 'Bush Fire Prone Land' (BFPL) under State Planning Policy Interactive Mapping System (SPP IMS) and the Logan Planning Scheme 2015 Bushfire Hazard Overlay Map, thus triggering the legislative requirements for construction on bushfire prone land (Figure 2).

The proposed development is situated entirely in Potential Impact Buffer zone, triggered from the hazard vegetation to the south (Figure 2). The bushfire hazard overlay map is slightly out of date in that the area to the northeast of the subject site is still mapped as medium potenial bushfire but has been developed and now consists entirely of dwellings (managed land).

Figure 2: BFPL Map (Source: Metromap 2026; BRC 2026)

1.3 Aim & Objectives

All development on BFPL must satisfy the aim and objectives of *State Planning Policy 2017*. The aim is where a development is situated within a natural hazard area, that development mitigates risk to people & property to an acceptable or tolerable level (SPP 2017).

1.4 METHOD

An onsite bushfire hazard assessment of the subject site was undertaken on 30/12/2025 in accordance with Section 2.2 - Simplified Procedure (Method 1) *AS3959:2018 'Construction of Buildings in Bushfire-prone Areas'*, *Section 5 – BRC 2019* & the *Logan Planning Scheme 2015* bushfire hazard overlay code.

The Forest Fire Danger Index (FFDI) for the site is 54.

1.5 SUITABLY QUALIFIED PERSON

The bushfire hazard assessment & management plan was prepared by Peter Mamone & Kim Finlay who are both considered suitably qualified persons under Section 10.2 of *BRC 2019* & Schedule 6.2.6 Planning Scheme Policy 6 – Management of bushfire hazard (*Logan Planning Scheme 2015*).

Peter is a director of Firetech Bushfire Consulting, has degree qualifications in environmental science and in bushfire protection, and has demonstrated experience in bushfire hazard assessments utilising a variety of spatial analysis methods. Peter is recognised as a BPAD Level 2-accredited bushfire practitioner under Fire Protection Association Australia (FPAA).

Kim is a director of Firetech Bushfire Consulting. Kim has a degree qualification in environmental science and bushfire protection, and has over eight years' experience working with Queensland Parks & Wildlife Service. Kim has extensive experience in bushfire management including hazard-reduction planned burns and wildfire suppression and has undertaken Crew Leader, Level 1 Incident Controller, Aerial Incendiary Bombardier & Fire Weather 1 training.

2. Bushfire Hazard Assessment

2.1 Vegetation Analysis & Reliability Assessment

Assessment of vegetation was undertaken in accordance with *AS3959* and *BRC 2019*, out to in excess of 150m from the development site or building (Table 1; Figure 3).

The bushfire prone area map indicates that the site is situated within the potential impact buffer and within 150m of High Potential Bushfire Intensity vegetation. On-ground truthing and descriptions of the surrounding vegetation and land use provided in Table 1 confirms:

- The extent of the mapped bushfire prone area correlates with the extent of the hazardous vegetation, except that the mapped area to the northeast of the subject site is mapped as medium potenial bushfire but has been developed and now consists entirely of dwellings (managed land);
- The classification of the hazardous vegetation is consistent with the mapped VHC; and
- Site and effective slopes are consistent with the mapped slopes.

Table 1. Vegetation & Site analysis

Direction	Vegetation Hazard Class (VHC)	Site observations	Photos
South	VHC 9.2 *Moist to dry eucalypt woodland on coastal lowlands and ranges*	Immediately south is Station Road. Beyond is a large public reserve (Sturdee Park). Further is a ~1.5HA area of VHC 9.2 vegetation on level ground.	 *Photo 1: VHC 9.2 south*

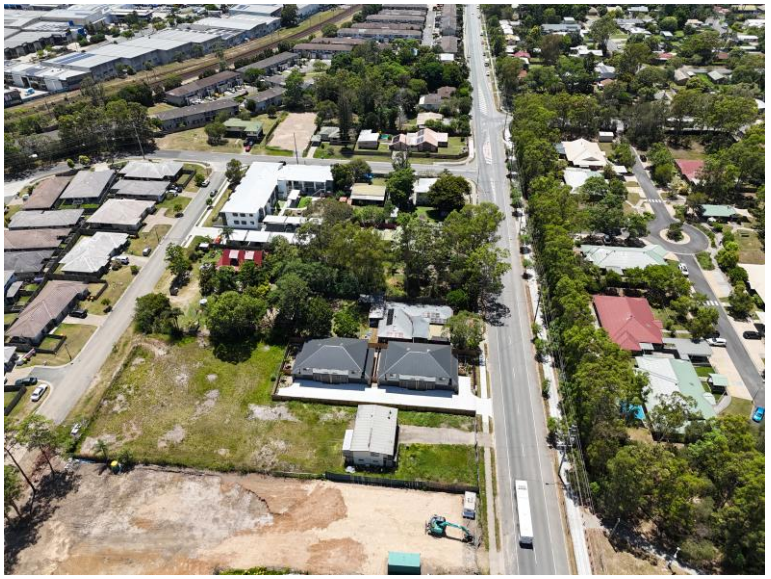
North, East, West	39.2 *Low to moderate tree cover in built-up areas*	The vegetation here is not mapped as bushfire-prone. It was found that the vegetation has the following attributes to consider it non-hazardous: discontinuous; narrower than 50m; surrounded by managed residential lots with dwellings. Therefore, based upon the ground-truthing, the vegetation found here is considered as equivalent to VHC 39.2 *Low to moderate tree cover in built up areas*.	 *Photo 2: Low threat vegetation north*  *Photo 3: Managed land east*

			 *Photo 4: Managed land west*

Figure 3: Vegetation analysis for 82 Station Rd (Source: Metromap 2026)

2.2 Separation & Radiant Heat Exposure

The radiant heat profile of the bushfire attack scenario for the proposed development was assessed using the Queensland Fire Department (QFD) '*Bushfire APZ Width Calculator*', which is the preferred method under BRC 2019. Inputs used in the BAL calculator and results are provided in Appendix B, summarised in Table 2.

Results from the calculator determined that the proposed development is separated from the hazardous vegetation by min. 70m with a radiant heat flux level 3.69kW/m^2, and therefore achieve BAL-12.5 construction.

Long-term management of landscaping within bushfire asset protection zones (APZs) shall comply with Section 8.5 *Bushfire Resilient Communities 2019* (Ref. Appendix C) to minimise the level of bushfire risk or mechanisms of bushfire attack.

Table 2. Summary Bushfire Attack Level (BAL) Assessment

Direction	Vegetation hazard class	Distance to hazard (m)	Effective slope	APZ required (m)	Highest BAL rating
North	Non-hazard	-	-	-	-
South	VHC 9.2	70	Level	To boundary	BAL-12.5
East & West	Managed Land	-	-	-	-

3. Bushfire Management Plan

3.1 Construction Level

The BAL rating/s for the proposed development is as follows: BAL-12.5 (entire development).

To be constructed as per s.3 – Construction General and s.5 – Construction Requirements for BAL-12.5 (entire development), detailed in *AS 3959:2018 'Construction of Buildings in Bushfire-prone Areas'*.

3.2 Bushfire Overlay Code Compliance

Table 3. Logan Bushfire Hazard Overlay Code – accepted development (subject to requirements) and assessable development

Performance Outcomes	Acceptable Outcomes	Compliance
PO1 Development is designed to: a. minimise risk of bushfire hazard; b. provide safe premises; c. create efficient emergency access for fire-fighting and other emergency vehicles. **Note -** *Planning scheme policy 6 - Management of bushfire hazard provides guidelines on how to achieve this outcome.*	**AO1** Development: a. does not increase the number of persons living in, or lots in, the Bushfire hazard area identified on Bushfire hazard overlay map OM-03.00; or b. is on a site that a bushfire hazard assessment prepared in accordance with the methodology in Planning scheme policy 6 - Management of bushfire hazard determines is of low bushfire hazard.	YES – this Bushfire Hazard Assessment & Management Plan has been prepared to provide evidence that the proposed development can comply with PO1.
PO2 Development is sited and constructed to minimise the bushfire hazard and maximise the protection of life and property from bushfire.	**AO2** Development is located and constructed: a. where there is no bushfire management plan approved by an existing development approval: i. such that the bushfire attack level is less than or equal to BAL-29; ii. away from the most likely direction of a fire front; iii. so that elements of the development least susceptible to fire are sited closest to the bushfire hazard; iv. such that asset protection zones are sited on land with a slope less than 18 degrees; v. such that asset protection zones are entirely within the boundaries of the private property of the development site; or b. where an approved bushfire management plan directs	YES – complies with PO2 & AO2. The development is designed that risk to life and property is minimised to acceptable levels. The development is rated as BAL-12.5.

	development to be located.	
PO3 Reconfiguring a lot ensures that lots are designed to minimise bushfire hazard and provide safe sites for people, property and buildings.	**AO3** Lots: a. are suitable for people, property and buildings by: i. having a bushfire attack level less than or equal to BAL-29; or ii. containing a development envelope area that has a bushfire attack level less than or equal to BAL-29; b. provide asset protection zones that: i. are located on land with a slope less than 18 degrees; ii. are located on the same lot.	YES – complies with AO3. The development is designed that risk to life and property is minimised to acceptable levels. The development is rated as BAL-12.5.
PO4 Access for fire management and evacuation is provided by access that: a. separates premises from adjoining vegetation; b. is safely accessible by fire fighting vehicles; c. has regular vehicular access points for bushfire management, response and evacuation; d. has regular vehicle passing and turning areas for bushfire management, response and evacuation; e. allows access at all times for fire fighting vehicles; f. allows for maintenance, burning off and bushfire response; g. has vehicular links to an alternative through road; h. is readily maintained.	**AO4** Access for fire management and evacuation is provided by vehicular access in the form of a perimeter road: a. with a minimum reserve width of 20 metres; b. located between the premises and adjoining vegetation; c. with a maximum gradient of 12.5 percent; d. constructed to otherwise comply with section 3.4 - Movement infrastructure standards of Planning scheme policy 5 - Infrastructure; e. that has a layout that does not include a cul-de-sac.	YES – complies with AO4. The development is situated whereby Station Road provides for an existing perimeter road between the site and the hazard vegetation. The development design ensures safe vehicle access to all dwellings.
PO5 Development has access to adequate water supply for fire fighting purposes.	**AO5** Development: a. is connected to a reticulated water supply scheme that has sufficient flow and pressure characteristics for firefighting purposes at all times with a minimum pressure and flow of 10 litres	YES – complies with AO5a. The site is within a reticulated water area and is surrounded with hydrants.

	per second at 200kPa; or b. has an on-site water storage in accordance with Table 8.2.3.3.2 - Water storage for firefighting, dedicated or retained for fire fighting purposes that is made of fire resistant materials and is: i. a separate tank; or ii. a reserve section in the bottom part of the main water supply tank.	
PO6 Community infrastructure is not located in a bushfire hazard area or is able to function effectively during and immediately after a bushfire event.	**AO6** Community infrastructure is: a. not located in a Bushfire hazard area identified on Bushfire hazard overlay map OM-03.00; or b. located to ensure that: i. the core services provided by the community infrastructure is able to function effectively during bushfire events; ii. access to the community infrastructure is not compromised by bushfire events; iii. the safe storage of valuable records, public records and items of cultural or historic significance is able to be maintained during a bushfire event.	N/A – community infrastructure is not proposed.
PO7 Public safety and the environment are not adversely affected by the adverse impacts of bushfire on hazardous materials including fuels, explosives and flammable chemicals manufactured or stored in bulk on premises.	**AO7** Hazardous materials: a. storage is in compliance with AS1940 - The storage and handling of flammable and combustible liquids; b. manufacturing does not occur in a Bushfire hazard area on Bushfire hazard overlay map OM-03.00.	N/A - the storage, handling or manufacture of hazardous materials is not proposed.

4. Recommendations

APZ

- Management of an APZ to the boundary shall be maintained in perpetuity.
- Landscaping shall be designed to minimise the level of bushfire risk or mechanisms of bushfire attack.
- For advice, refer to Section 8.5 '*Bushfire Resilient Communities: Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience - Bushfire'* 2019, or visit https://www.fire.qld.gov.au/prepare/bushfire/prepare-for-bushfires (QFD 2026) and 'Part 5: Bushfire Resilient Landscaping' *Bushfire Resilient Guidance for Queensland Homes 2020.*

Construction Level

- To be constructed as per s.3 – Construction General and s.5 – Construction Requirements for BAL-12.5 (entire development), in addition to any QLD variations detailed in the National Construction Code.

Access

- A proposed, sealed driveway shall provide adequate access within the site.

Water Supply

- Reticulated water services the development. Numerous hydrants surround the development (Ref. Figure 3).
- Where a reticulated water supply is available, fire hydrants are designed, sited and installed in accordance with *Queensland Fire and Emergency Services Fire Hydrant and Vehicle Access Guidelines*.

Emergency Management

- It is highly recommended that a bushfire survival plan is created for all developments situated on BFPL. A plan can be downloaded via https://www.fire.qld.gov.au/prepare/bushfire/prepare-for-bushfires (QFD 2026).

5. Conclusion

This report has demonstrated that the proposed development shall comply with all requirements as set out in *State Planning Policy 2017, Bushfire Resilient Communities 2019, AS 3959:2018 'Construction of Buildings in Bushfire-prone Areas'*, and *Logan Planning Scheme 2015* based upon the recommendations contained within this report.

Disclaimer

This report has been prepared exclusively for the client and their purposes stated in the opening page above. The report is valid for twelve (12) months from the date of issue, however, where there have been significant alterations to the site, this report will become invalid, and a new site assessment may be required.

Recommendations made within this report are made in good faith and are based on requirements set out in *State Planning Policy 2017, Bushfire Resilient Communities 2019, AS 3959:2018 'Construction of Buildings in Bushfire-prone Areas'* to reduce the risk to life and property. However, it is noted that bushfires are by nature unpredictable therefore the recommendations contained within this report does not guarantee against adverse impacts created by bushfire.

References

Logan City Council. (2015). *Logan Planning Scheme*. Logan: Logan City Council.

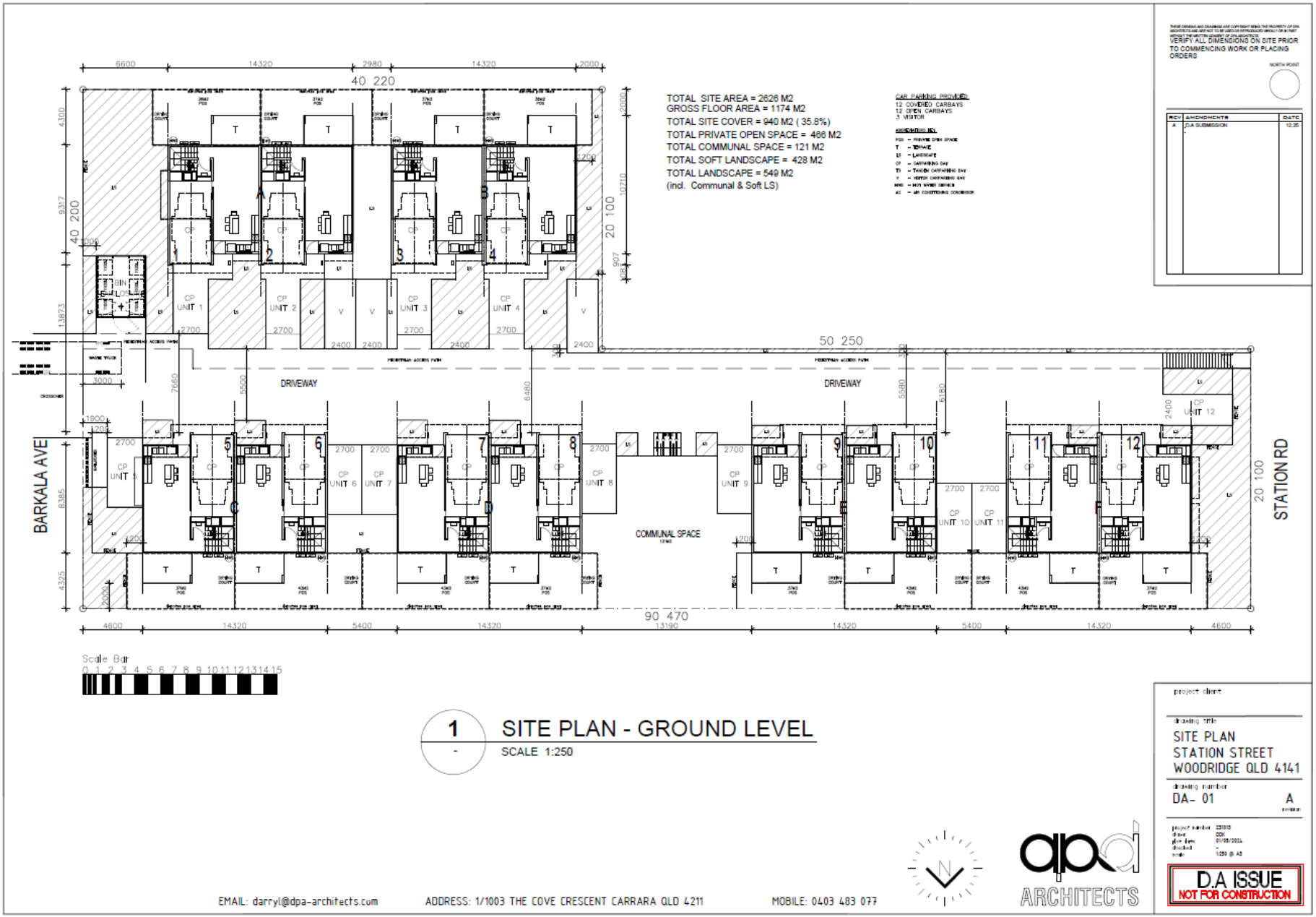
Qld Government & CSIRO. (2020). *Bushfire Resilient Guidance for Queensland Homes* . Brisbane: Queensland Reconstruction Authority.

Standards Australia. (2020). Australian Standard 3959-2018 – Construction of buildings in bush fire prone areas. Sydney: SAI Global.

The State of Queensland, Department of Infrastructure, Local Government and Planning. (2017). *State Planning Policy*. Brisbane: DILGP.

The State of Queensland, Queensland Fire and Emergency Services (QFES was renamed QFD 01/07/2024). (2019). *Bushfire Resilient Communities: Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience - Bushfire'*. Brisbane: QFES.

Appendix A – Site Plans



Appendix B – Bushfire Asset Protection Zone Width Calculations

SPP Bushfire Asset Protection Zone Width Calculator			
VARIABLE DESCRIPTION	**VARIABLE**	**UNITS**	**VALUE**
Input Values			
FIRE WEATHER SEVERITY	**FDI**		54.00
VEGETATION HAZARD CLASS	**VHC**	-	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
REMNANT STATUS	**-**	-	Non-Remnant
SLOPE TYPE (UPSLOPE OR DOWNSLOPE)	**ST**	-	Downslope
EFFECTIVE SLOPE UNDER THE HAZARDOUS VEGETATION	**eSlope**	degrees	1.00
SLOPE BETWEEN SITE AND HAZARDOUS VEGETATION	**θ**	degrees	1.00
DISTANCE OF THE SITE FROM HAZARDOUS VEGETATION	**d**	m	70.00
Output Values			
SURFACE FUEL LOAD	**-**	t/ha	11.40
NEAR SURFACE FUEL LOAD	**-**	t/ha	3.50
BARK FUEL LOAD	**-**	t/ha	1.30
ELEVATED FUEL LOAD	**-**	t/ha	1.00
TOTAL OVERALL FUEL LOAD	**W**	t/ha	17.20
TOTAL SURFACE FUEL LOAD	**w**	t/ha	14.90
POTENTIAL FIRE LINE INTENSITY	**I**	kW/m	9193
RADIANT HEAT FLUX	**q**	kW/m^2	3.69
BUSHFIRE ATTACK LEVEL (AS 3959-2018)	**BAL**	-	BAL 12.5

Appendix C – Landscaping within Bushfire Asset Protection Zones

Management of landscaping within bushfire asset protection zones (APZs) aims to minimise the level of bushfire risk or mechanisms of bushfire attack, providing a reduced fuel area which is compatible with the asset protection zone. These measures may include:

- landscape design that reduces vulnerability to bushfire attack;
- plant selection that avoids or minimises opportunities for ignition of landscaping features;
- long-term landscape management arrangements that reduce exposure to bushfire attack.

In addition, the use of barriers that limit the impact of direct flame contact, radiant heat, ember attack and wind can supplement measures targeting vegetation and fuel management.

Strategies that support each of these measures are detailed below.

8.5.1 Landscape design

- Establishing a minimal fuel around buildings of a nominal 10 metres.
- Ensuring flammable materials are not touching or close to vulnerable parts of buildings such as windows, decks and eaves. These materials include:
    - flammable shrubs and trees;
    - flammable mulches or fences;
    - trees where the canopy overhangs the building ;
    - climbing plants or vines in contact with external timber fascia, pergolas, posts, beams and/or trellis.
- Establishing non-flammable features such as tennis courts, swimming pools, dams, maintained lawns, driveways or paths.
- Using paths and driveways made of non-combustible materials such as clay, concrete, gravel and pebbles.
- Ensuring potential hazardous features and out-buildings such as sheds, coops and machinery storages are sited well away from the development and preferably shielded from bushfire attack by other buildings so they are not consumed and contribute to hazard.
- Ensuring the layout of garden beds, lawns and driveways or paths are configured to avert the continuity of fuel loads within APZs. Continuous vegetation within APZs assists the spread of fire. By separating garden beds and clumps of trees or shrubs with areas of low fuel, fuel continuity is broken up, reducing the potential rate of spread and fire intensity. Examples include placing maintained lawns, pathways or ponds between clumps of trees or shrubs and garden beds.
- Creating gaps in canopy trees through selective clearing of existing vegetation or planting layout or ensuring tree canopies do not overlap. This measure reduces the potential spread of crown fires.
- Establishing lawn substitutes including non-flammable ground covers such as decorative stone or gravel.

8.5.2 Plant selection

- Planting or maintaining plant species which minimise leaf litter drop to reduce the accumulation of surface fuel (e.g. persistent leaf litter).
- Planting or maintaining low-flammability species (e.g. appropriate local natives) that are also adapted to local conditions and enhance habitat values for wildlife.

- Note – Environmental weeds are often garden escapees and contribute to fuel loads, increasing bushfire hazard. Examples of this include, lantana (Lantana camara) and gamba grass (Andropogon gayanus).
- Planting or maintaining species with attributes (such as avoiding species with fibrous bark) which reduce the ease of combustion, minimise contribution to potential fuel load or act as a potential barrier, reducing the rate of fire spread.

8.5.3 Landscape management

- Ensuring street and road verges and nature strips containing hazardous vegetation are regularly pruned, mown or grazed.
- Removing accumulated leaf litter and woody debris at regular intervals.
- Keeping areas beneath retained or planted trees and shrub cleared of fuel. This may include vegetation management measures such as:
    - canopy lifting to reduce near-surface or ladder fuel loads and reduce flame heights
    - clearing of understorey vegetation
    - removal of accumulated litter and woody debris
    - removal of loose bark and dead limbs from standing trees.
- Regular mowing or slashing of grass to less than 10 centimetres in height.
- Availability of reliable and sufficient water and installation of irrigation and sprinkler systems to create a well-watered landscape.

8.5.4 Barriers

- Selection of low-flammability trees and shrubs with good barrier-forming attributes, such as rainforest species.
- Use of non-combustible fences and retaining walls, such as stone walls.
- Positioning non-combustible water tanks at key locations to act as radiant heat barriers.
- Positioning barrier plantings where they are likely to be most effective. Vegetation barriers should be located at a suitable distance from buildings or flammable objects (such as fences) so that, if ignited, the flames cannot come into contact with these elements.