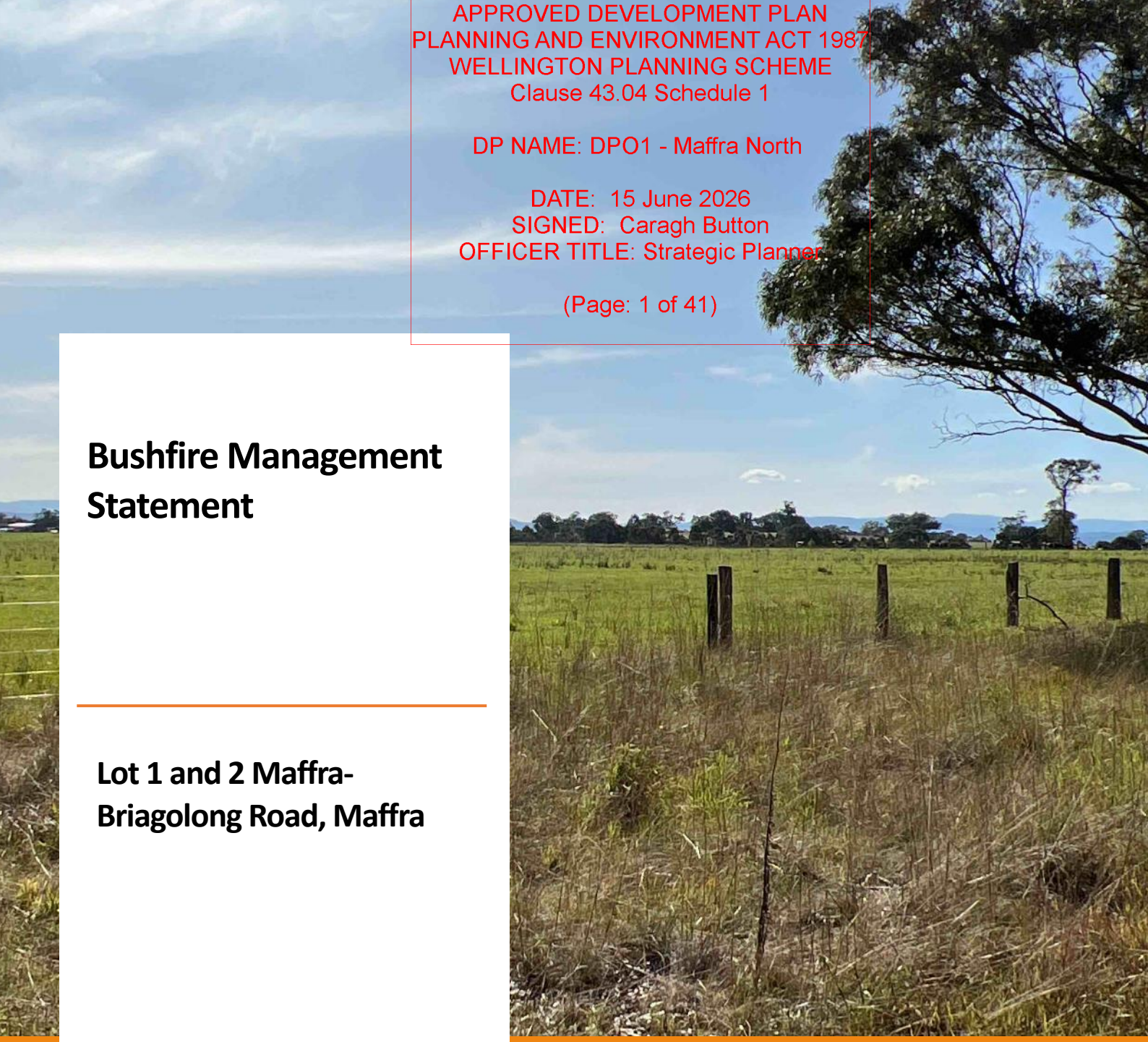

Bushfire Management Statement

Lot 1 and 2 Maffra-Briagolong Road, Maffra

June 2026

FIRE RISK Consultants

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*Where the term **"Bushfire prevention and mitigation related activities"** (or words to that effect) are used, this is to be defined as the clearance of vegetation in accordance with the Victorian State Government guidelines, including clearing and maintenance of existing fire breaks and/or fire access for fire fighters under electricity pylons and properties that have been constructed to Australian Standard AS3959 and/or the National Construction Code.*

Introduction

This report has been developed to meet the requirements of the Bushfire Management Overlay as outlined within the Victorian Planning Provisions. The report must be read in conjunction with the Clause 13.02 assessment for this development. The site located at Lot 1 and 2 Maffra-Briagolong Road, Maffra is partially within the Bushfire Management Overlay. This report outlines the required treatments to enable compliance with the Bushfire Management Overlay.

This report addresses the phased development of land located on Briagolong Road, Maffra, which will proceed in stages. The land identified within the Maffra Structure Plan as appropriate for increased density rural living development, subject to further investigation and preparation of technical reports.

The Site is currently zoned to facilitate subdivision into 23 rural living zoned lots with a nominated schedule of 2.0 hectares and is proposed to be developed through a coordinated three phase planning process (staged):

- **Phase 1**: Preparation and approval of a Development Plan to establish the overall subdivision and servicing framework to address the requirements of the Development Plan Overlay Schedule 1.
- **Phase 2:** A planning permit application for the creation of 22 lots generally 6,000 m² in size, together with a balance lot, addressing the current requirements of the Rural Living Zone (Schedule 2).
- **Phase 3:** A Planning Scheme Amendment to the Wellington Planning Scheme to change the Zone Schedule and planning permit application to facilitate the subdivision of the balance land into 40 additional lots, also generally 6,000 m² in size. The stage proposes to delete the Development Plan Overlay applying to the land.

This report addresses all three phases (stages) of the development and considers both interim and ultimate development outcomes for the subject land.

The report has been developed following an extensive assessment of the landscape and local bushfire risk along with access, egress and topography.

The report addresses the following provisions of the Victorian Planning Scheme:

> **Clause 44.06-3** – Bushfire Hazard Site Assessment, Bushfire Hazard Landscape Assessment and Bushfire Management Statement.

To ensure sufficient information is provided to both CFA and Council to enable a detailed understanding of bushfire risk, this assessment addresses the Clause 53.02-4.4 and 53.02-4.6, as required under Clause 53.02-1. For detailed plans, please refer to the *Urban Design Package Maffra-Briagolong Road, Maffra* prepared by Beveridge Williams and the Bushfire Management Plan.

This report only addresses those parts of the Victorian Planning Provisions that relate to Bushfire. This report should be read in conjunction with the Clause 13.02-1S report.

Application Details

Municipality:	Wellington
Title description:	Lot 1 TP533434 and Lot 2 TP533434
Overlays:	Bushfire Management Overlay (BMO) and Development Plan Overlay (DPO)
Zoning:	Rural Living Zone (RLZ)

Site Description

Existing use and siting of buildings and works on and near the land:	The property is currently used for farming purposes. It is approximately 48 hectares in size. To the south are developed properties and to the north are farming properties. To the east and west are existing roads.
Existing vehicle arrangements:	The property is accessible from either Maffra-Briagolong Road or Three Chain Road. Both roads are sealed and provide effective access to the site.
Location of the nearest fire hydrant:	There are street fire hydrants along Maffra-Briagolong Road with a street fire hydrant located to the south of the property along Three Chain Road.

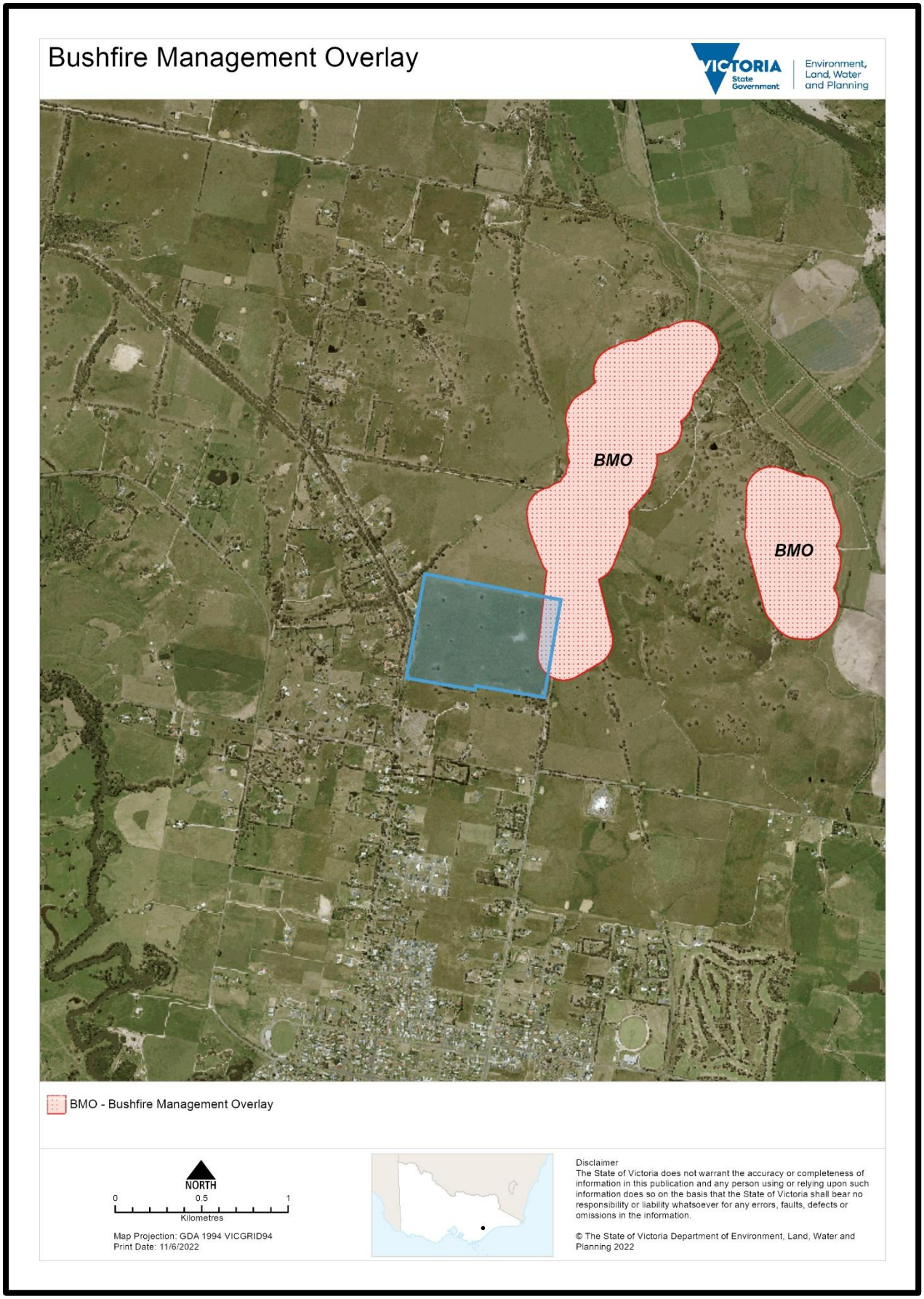


Figure 1 - Overview of the site with the BMO shaded

Access and egress

The site is currently accessible from either Maffra-Briagolong Road or Three Chain Road. The future development will provide access to the development from Three Chain Road to the southwest of the site. Three Chain Road provides direct access to the central business area of Maffra via Boisdale Road.

Access or egress for the subdivision will also be available via the northeastern corner of the site. This will enable access to Maffra-Briagolong Road from the subdivision.

In general, the development is located in an area that provides effective access into the central areas of Maffra. This can be via Boisdale Road or Maffra-Briagolong Road. During a bushfire event, it would be highly likely for the safest option being travel towards Maffra.

Topography

The topography on and surrounding the property includes flat terrain (assessed as 0-5°). It is unlikely for the topography on the property or in the surrounding landscape to influence bushfire behaviour close to the development location.

It is acknowledged that to the north (approximately 10-12 kilometres) the topography is heavily influenced by steep slopes associated with ridgelines and gullies within Public Land reserves.

Vegetation

The predominant vegetation on and around the property is grassland when assessed against AS3959. To the south where residential development has occurred, several areas would be considered excluded as per Clause 2.2.3.2 of AS3959.

The area to the north of the development is dominated by farming properties. There are areas of plantation to the east of Maffra-Briagolong Road that in conjunction with patches of trees, has triggered a Bushfire Management Overlay declaration that covers a small part of the development on the eastern side. These trees are Blue Gums that are associated with small plantings that occurred in the early 1990's. The areas have been conservatively assessed as Class A – Forest but would exhibit bushfire behaviour similar to Class B – Woodland.

Bushfire risk in south east Australia

The south east of Australia is one of the most fire prone areas in the world.

The rate a bushfire can spread is a direct result of the weather, fuel hazard (including dryness, quantity and arrangement) and the topography in which the fire is burning. Bushfire fuel is the only one of these three factors that it is possible to modify.

Extreme fire conditions can occur in south eastern Australia when dry winters and springs are followed by summers where bushfire fuels become very dry.

When these conditions combine, fires can be expected to move quickly under the influence of strong, gusty north westerly winds. These fires can then move rapidly in a different direction when the subsequent south–westerly wind change arrives. Fires that start under these conditions can reach a very high intensity, even in

areas of relatively low fuel loads and can be difficult to control until the weather conditions abate.

The height of a bushfire's intensity is directly linked to its destructiveness and the more difficult it is to control. As the intensity increases so does the difficulty of containment and effective suppression. Very high intensity fires with flame heights greater than 10 metres are generally uncontrollable.

Bushfire intensity is a function of the heat content of the fuel, the quantity of fuel and the rate of spread of the bushfire. The heat content of vegetation fuels is roughly constant. It has been found that the quantity and distribution of fine fuels are the main factor influencing bushfire behaviour. Larger fuels burning during a bushfire do not contribute significantly to the spread of a bushfire.

Fine fuels available to a bushfire are fuels such as grass, leaves, dead pine needles and twigs that ignite readily and are consumed rapidly when dry. They are often defined as those dead fuels less than 6mm in thickness. Fine fuel load (measured in tonnes per hectare) has therefore been used as a convenient measure of the underlying bushfire hazard in areas dominated by woody vegetation. The fine fuel load at any given time is a balance between the rate of fuel build up, and factors that remove fuel such as litter decomposition and fire. In the absence of fire, fuel loads in forests and woodlands with a shrubby or heathy understorey build up to a quasi-equilibrium state where the rate of fuel production equals the rate of decomposition. The maximum levels vary for different vegetation types and for the same vegetation types in different locations.

It has been found that fuel structure is possibly more important than the total fine fuel load in determining bushfire behaviour. Fuels in forests, woodlands and shrublands can be categorised into four layers with differing effects on fire behaviour (Hines, et al., 2010). These layers are:

Surface fine fuels: leaves, bark, small twigs and other fine fuel lying on the ground. These fuels provide the horizontal continuity that allows a bushfire to spread

Near surface fine fuels: grasses, low shrubs, bracken etc. up to about .5 m above the ground surface. Fuels in this layer will burn when the surface fuel layer burns and will increase bushfire intensity

Elevated fuels: larger shrubs and small saplings with most of the fuel closer to the top of this layer and a clear gap between them and the surface fuels. These interact with the two-layer fuel layers to further increase bushfire intensity. They also contribute to the vertical continuity of fire that allows fire to 'climb' into the tree canopy

Bark fuels: flammable bark on trees, saplings and large bushes from ground level to the canopy. Loose fibrous bark on string-bark eucalypts, and candle bark on some gums can generate large amounts of burning embers which can start spot fires ahead of the main fire front.

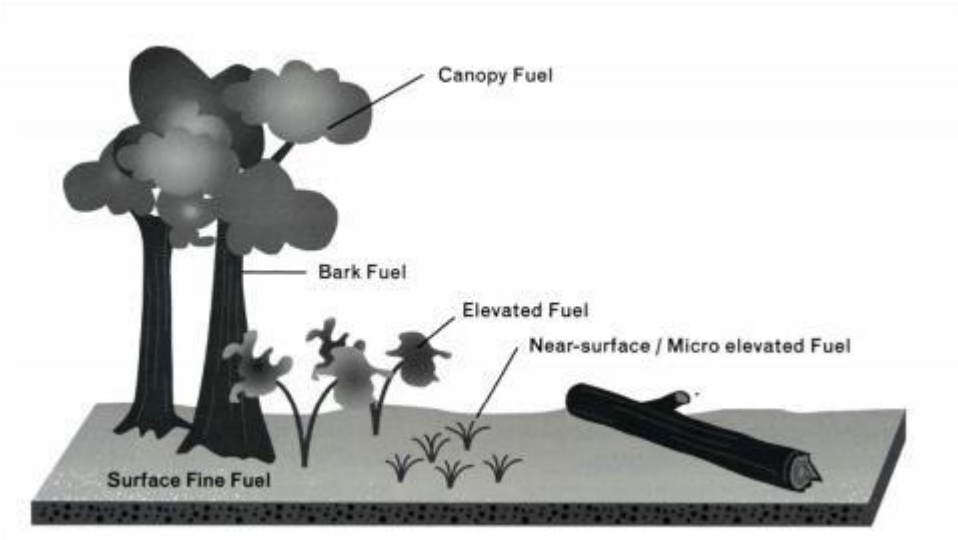


Figure 2 - Overview of fuel structure that affects bushfire behaviour

Bushfire Hazard Landscape Assessment

The Bushfire Hazard Landscape Assessment is completed to provide an assessment of the bushfire hazard more than 150 metres away from the subject site. This assessment considers all available information to determine the effects of a bushfire from more than 150m from the site.

For this assessment, the landscape risk has been assessed at one kilometre and 10 kilometres.

Fire History

The historical information provided by DEWLP indicates that bushfires have occurred in the surrounding landscape but some distance from this development. The bushfires have mainly been contained to the forested areas associated with the Great Dividing Range to the north of the development. In the areas surrounding the development, there is a history of small grassfires within the DELWP data.

Figure 4 shows the bushfire history according to DELWP records.

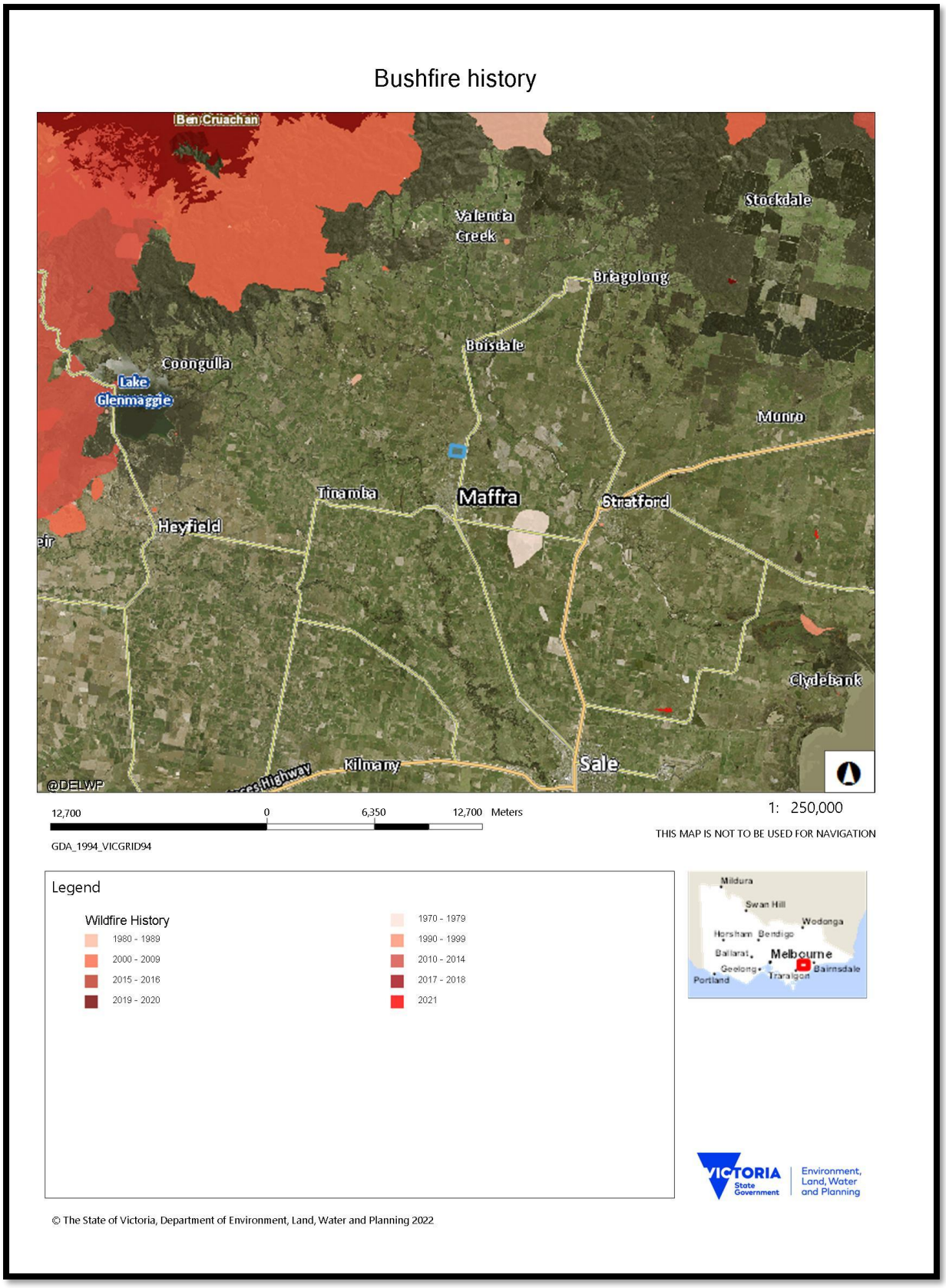


Figure 3 - Bushfire history. The shapes represent multiple bushfire events

Likely Bushfire Scenarios

Figures 4 and 5 indicate the likely scenarios from a bushfire in the surrounding area and how they may impact on the proposed dwelling. This assessment considers all aspects however history shows us that bushfires would be likely to impact on the property from a north westerly direction and then subsequently from a south westerly direction after the wind change. These two fire scenarios cause the greatest amount of damage, including loss of life, in south eastern Australia during bushfire events.

The following table describes the scenarios that may impact on the development:

Scenario reference	Description
Scenario A	Figure 4 and 5 outlines the potential for a bushfire to approach the property under a north westerly wind influence. The grassland areas to the north will dominate bushfire behaviour and whilst it can be assumed that the types of bushfires will be fast spreading, they will have lower intensities due to the low fuel loads. The presence of the Macalister Irrigation District to the north and north west will reduce the potential for bushfires to impact on the surrounding area. There are a number of areas to the north and north west of Maffra that are used for Market Gardens or paddocks are watered to retain high moisture levels. The fragmented vegetation along Three Chain Road to the north west will influence bushfire spread due to the varied vegetation types. The presence of modified vegetation and managed areas including lawns and garden beds will reduce a bushfires ability to spread rapidly and continuously in the surrounding area. The likely scenario from a bushfire approaching from the north west is via embers that are generated through tree stands. These may land in the new subdivision and when in contact with combustible materials, start new fires.
Scenario B	The potential for a bushfire approaching from the south west is less likely due to the modified and managed landscape to the immediate south west along Boisdale Road. Beyond the residential areas is the Macalister River, river flats which generally contain high moisture contents. It is likely for a bushfire to start close to the development and burn through treed areas that may cause the development of embers. These embers may land on or near the development and start new fires. It is not anticipated due to the vegetation fragmentation to the south west, the presence of the Macalister River and the surrounding road network where large bushfires will have the potential to burn uncontrollably. The likely bushfire impact will include embers landing on and around the property and starting smaller fires. Low levels of radiant heat may occur as a result of the small fires.

In summary, the scenarios are possible with ember attack being the key bushfire attack mechanism along with low levels of radiant heat from combustible materials burning on and around the property. The embers may start smaller fires in the local areas surrounding the site.

Landscape type

The determination of the landscape type enables the consideration of other treatments depending on the level of risk. These treatments may include additional construction requirements, vegetation management or other solutions. Note that whilst the determination of a landscape risk level is part of this analysis, the determination of the need for additional treatments will be considered as part of future activities.

In accordance with the Technical Guide, the landscape has been assessed as Type 1.

Table 1 - Landscape type descriptors

	Landscape Type Descriptors
Type 1	This landscape has minimal potential for extreme bushfire behaviour and is therefore 'lower risk'. Bushfire protection measures are required as there is still a risk of bushfire impacting development and communities: • There is little vegetation beyond 150 metres of the site (except grasslands and low threat vegetation). • Extreme bushfire behaviour is not possible. • The type and extent of vegetation is unlikely to result in neighbourhood-scale destruction of property. • Immediate access is available to a place that provides shelter from bushfire. • Immediate reliable access is available to an area of site that provides better protection and shelter from the effects of bushfire. • Standard bushfire protection measures adequately address the bushfire risk. • Strategic planning proposals should be directed to these locations. They are likely to be capable of meeting the state bushfire policy when appropriate bushfire protection measures are applied.
Type 2	In Landscape Type 2, low fuel areas can be reliably accessed and the standard bushfire protection measures when applied will usually result in an acceptable level of risk: • The type and extent of vegetation located more than 150 metres from the site may result in significant fire behaviour but will unlikely produce local and neighbourhood-scale destruction. • Bushfires can only approach from one aspect and the site is in a suburban, township or urban area managed in a minimum fuel condition. • Access is readily available to a place that provides shelter from bushfire. This will usually be within the surrounding developed area. • Strategic planning proposals might be considered in these locations, where risks can be acceptably reduced, and alternative lower risk areas have been considered. Growth and development should be directed away from the bushfire hazard interface, where possible. The Design Guidelines: Settlement Planning at the Bushfire Interface (DELWP & Country Fire Authority, 2020) should be considered when responding to bushfire policy objectives and applying bushfire protection measures.
Type 3	Development in Landscape Type 3 areas require caution as there may be the potential for extreme bushfire behaviour. These areas are unlikely to be suitable for settlement growth, large-scale subdivision, or vulnerable uses. Bushfire can approach from more than one aspect.

	• The type and extent of vegetation located more than 150 metres from the site may result in local and neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to the site. • Bushfire can approach from more than one aspect. • The site is in an area that is not managed in a minimum fuel condition. • Reliable access to an area of land that provides shelter from bushfire is not certain. • Vulnerable uses will likely require enhanced bushfire protection measures and may not be appropriate in these landscapes. • Strategic planning proposals for new or intensified development and growth are less likely to be approved in these areas, particularly when other lower risk locations are available. Generally, strategic planning proposals in these areas should only be considered where the purpose is incidental to the location.
Type 4	Landscape Type 4 areas are high risk locations. Extreme bushfire behaviour is expected, and low fuel areas are unlikely to be available. Directing settlement growth and new development to these locations as part of strategic planning proposals is not consistent with the state bushfire policy. Fires have hours or days to grow and develop before impacting. • The broader landscape presents an extreme risk. • Fires have hours or days to grow and develop before impacting. • Evacuation options are limited or not available. • Development in these landscapes should be carefully considered and will likely require enhanced bushfire protection measures. • Strategic planning proposals that direct development or growth to these areas, regardless of scale are not supported by state bushfire policy.

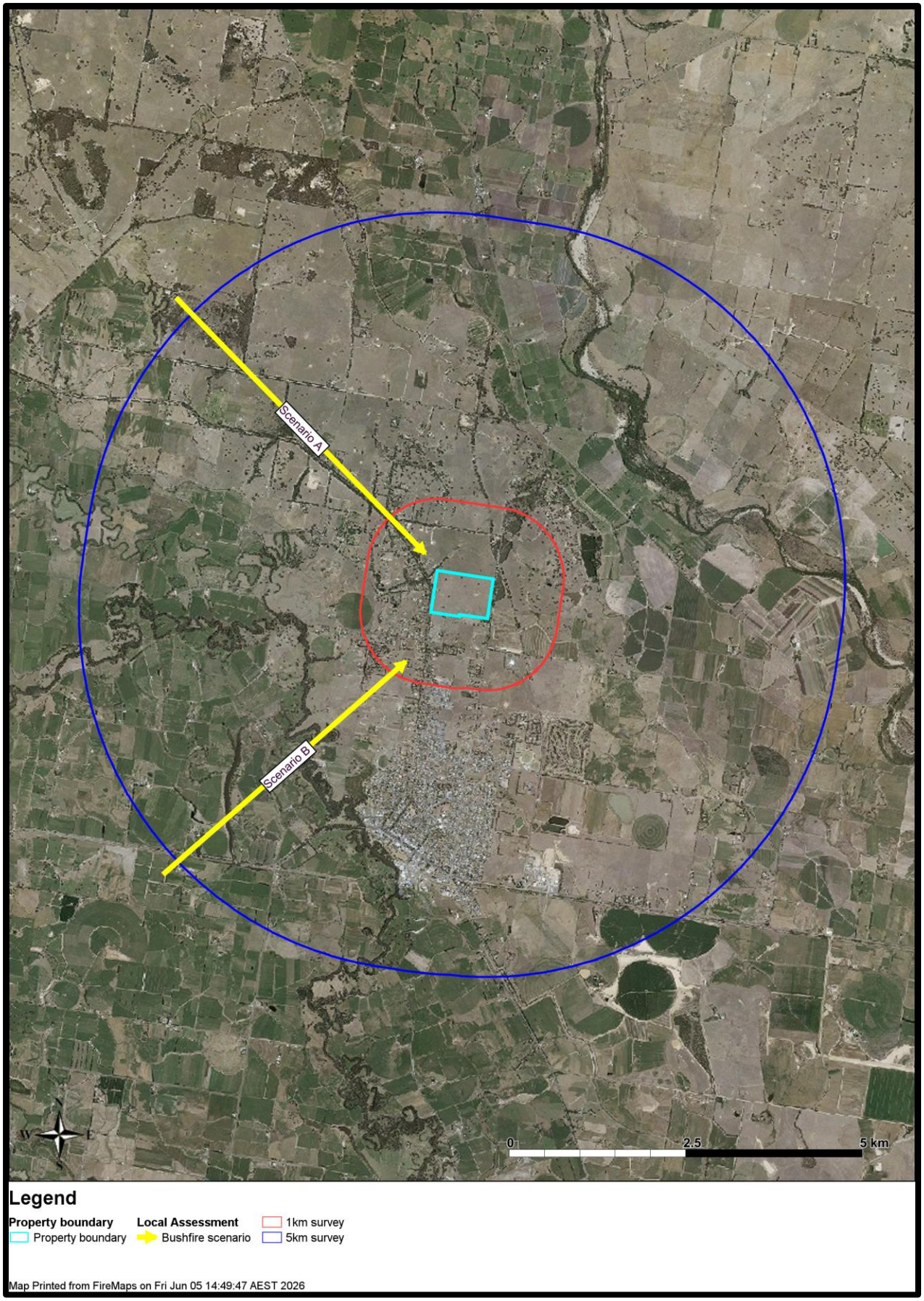


Figure 4 - 5 and 1 kilometre landscape risk analysis

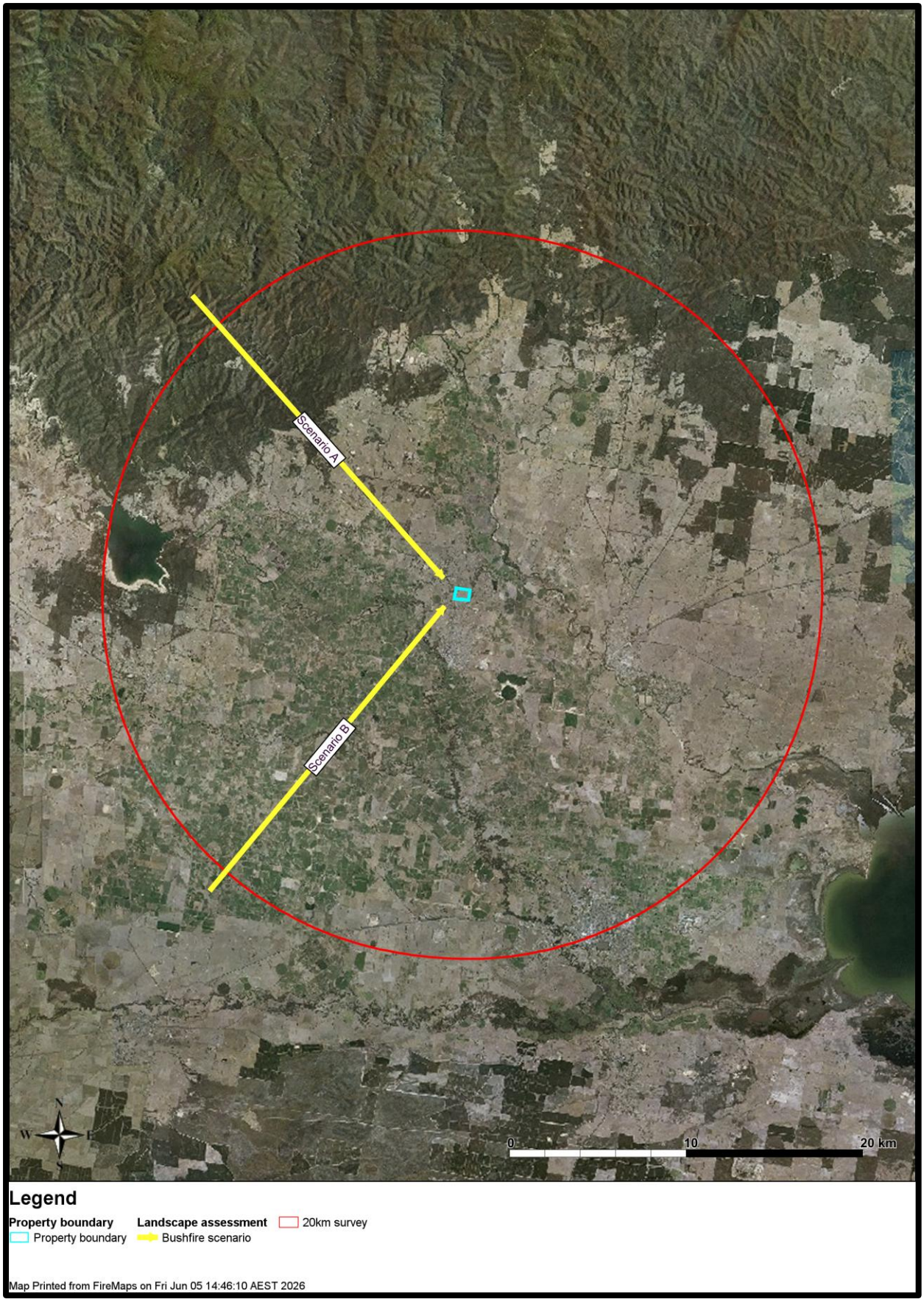


Figure 5 - 20 kilometre landscape risk analysis

Bushfire Hazard Site Assessment

The bushfire hazard within 150 metres of the development includes excluded areas and grassland vegetation.

Appendix 1 outlines the Bushfire Hazard Site Assessment.

Vegetation classification	Slope	Plot	Separation
Class G. Grassland	Upslope	1	N/A
Class A. Forest	Upslope	2	52 metres
Excluded	Upslope	3	N/A

53.02-4.4 Subdivision objectives

This subdivision is required to meet the requirements of AM 5.2 of clause 53.02-4.4.

AM 5.2 subdivision objectives

An application to subdivide land zoned for residential or rural residential purposes must be accompanied by a plan that shows:

1	
Provision	**Each lot satisfies AM 2.1.** **AM 2.1 - The bushfire risk to the development from the landscape beyond the site can be mitigated to an acceptable level.**
Discussion	The assessment against Clause 13.02-1S and the landscape bushfire hazard analysis has identified the potential for bushfires to approach the property from the north west or south west. The landscape assessment identifies the presence of various landscape features that will assist with reducing the bushfire impact on the development site from a bushfire approaching from the either direction including the Macalister Irrigation District, Macalister River and the developed low residential areas to the north west and south west of the property. The property is to the south of extensive areas of grassland associated with cropping, stock grazing and further to the north west, market gardens. The size of each Lot will enable the providing of defendable space that ensure a heightened level of safety for the development occupants. The design solution for this development is for all properties to achieve BAL12.5 defendable space. This solution will provide sufficient management of the risk.
Outcome	Achieved

2	
Provision	**A building envelope for a single dwelling on each lot that complies with AM 2.2 and is setback from the bushfire hazard in accordance with the vegetation type and slope set out in Table 1 to clause 53.02-5 for the distance provided at either:** • **Columns A or B of Table 2 to Clause 53.02-5 for a subdivision that creates 10 or more lots; or** • **Columns A, B or C of Table 2 to Clause 53.02-5 for a subdivision that creates less than 10 lots.** **AM 2.2 - A building is sited to ensure the site best achieves the following:** • **The maximum separation distance between the building and the bushfire hazard.**

	• **The building is close to a public road.** • **Access can be provided to the building for emergency service vehicles.**
Discussion	The development is creating multiple new properties. The building envelopes will be located so that a minimum of 19 metres of separation can be achieved to these boundaries that abut classified vegetation post the completion of the development. The new dwellings, due to their requirement to achieve defendable space, will only have short driveways with the dwellings being accessible to emergency service vehicles. The provision of static water supplies and emergency vehicle access will be achieved. There will be no changes to the landscape that is utilised for farming activities to the north. This land has been identified as potential future development.
Outcome	Achieved

3	
Provision	**The bushfire attack level that corresponds to the setback in accordance with Table 1 to clause 53.02-5 is noted on the building envelope.**
Discussion	The new building envelope will be designed to achieve BAL 12.5. The building envelope will be set back from the subdivision boundary fences by at least 19 metres to allow for defendable space to be achieved. Within the development, defendable space will be shared between the properties. The building envelopes have been identified on the Bushfire Management Plan.
Outcome	Achieved

4	
Provision	**Water supply and vehicle access that complies with AM 4.1.**
Discussion	**Water supply** Due to the limitations within the Maffra town water supply, the entire development is not able to be reticulated. Every property will be provided with 20,000 litres of water supply and comply with the following requirements. **Residential property**

	20,000 litres of effective water supply must be provided for firefighting purposes for each property and meets the following requirements: • Be stored in an above ground water tank constructed of concrete or metal. • Have all fixed above-ground water pipes and fittings required for firefighting purposes made of corrosive resistant metal. • Include a separate outlet for occupant use. • Be readily identifiable from the building or appropriate identification signs to the satisfaction of the relevant fire authority. • Be located within 60 metres of the outer edge of the approved building. • The outlet/s of the water tank must be within 4 metres of the accessway and unobstructed. • Incorporate a separate ball or gate valve (British Standard Pipe (BSP 65 millimetre) and coupling • (64 millimetre CFA 3 thread per inch male fitting). • Any pipework and fittings must be a minimum of 65 millimetres (excluding the CFA coupling). **Vehicle access** Access to the dwellings must be provided for firefighting purposes which meets the following requirements: • All weather construction • A load limit of at least 15 tonnes • Provide a minimum trafficable width of 3.5 metres • Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically • Curves must have a minimum inner radius of 10 metres • The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres • Dips must have no more than a 1 in 8 (12.5 per cent) (7.1 degrees) entry and exit angle A turning area for fire fighting vehicles must be provided at any dead-end roads (including between stages) by one of the following: • A turning circle with a minimum radius of eight metres • A driveway encircling the dwelling • The provision of other vehicle turning heads such as a T head or Y Head – which meet the specification of Austroad Design for an 8.8 metre service vehicle. Incorporate passing bays at least every 200m which must be at least 20 metres long and have a minimum trafficable width of 6 metres.
Outcome	Achieved

5	
Provision	**The setback distance is:** • **Wholly contained within the boundaries of the proposed subdivision. The setback may be shared between lots**

	within the subdivision and may utilise communal areas, such as roads. • **Managed as an area of defendable space that meets the defendable space vegetation management requirements specified at Table 4 to clause 53.02-5 and the area is capable of being maintained in accordance with these requirements. This includes any shared or communal areas within the setback.**
Discussion	The required setbacks of 19m can be provided wholly within the boundaries of the subdivision. Defendable space will be provided to the property boundary.
Outcome	Achieved

AM 5.3 subdivision greater than 10 lots

A subdivision of land to create 10 or more lots provides a perimeter road adjoining the bushfire hazard to separate future development from the bushfire hazard and to support fire fighting.

Whilst the development is more than 10 lots, due to the size of the properties (average 6,000m²), there are opportunities to manage the bushfire risk through the provision of larger lots and increased defendable space requirements. There is also the potential for future development to occur to the north of this property which enable better alignment.

The key bushfire design feature of allocating the entire new property as defendable space with a 19 metre setback from the subdivision boundary will ensure an acceptable level of safety is achieved. The 19 metres provides sufficient separation from the grassland vegetation and the separation to the forest to the east of Maffra – Briagolong Road is more than 48 metres from the closest boundary thereby achieving BAL 12.5 distances.

Outcome: Achieved (through an alternative design)

AM 5.4 future landscaping public open space and communal areas

A subdivision of land manages the bushfire risk to future development from existing or proposed landscaping, public open space, conservation areas (including vegetation links and corridors) and communal areas.

The drainage reserves will be maintained as low threat areas due to their size and so that they can achieve their purpose.

Outcome: Achieved.

AM 5.5 low fuel features

A subdivision of land is provided with no fuel or low fuel features such as accessways, parking areas, hardstand areas, managed open spaces at the bushfire hazard interface and is oriented to protect future buildings from being impacted by a moving bushfire front.

The subdivision has been designed so that all future building envelopes are located within the interior of the development and setback from the external

boundaries. A minimum 19 metre defendable space setback is provided to the subdivision perimeter adjoining grassland vegetation, with greater separation achieved to the forest vegetation east of Maffra-Briagolong Road.

AM 5.5 Staged subdivision

A staged subdivision of land manages interim bushfire hazards during the construction or staging.

The subdivision is proposed to be developed in stages. Throughout each stage of development, bushfire hazards will be managed to ensure that an acceptable level of safety is maintained for future residents, construction personnel and emergency services.

The site will be maintained in a low fuel condition during the staging process. Any undeveloped balance land will remain subject to ongoing vegetation management, including the maintenance of grass fuels at reduced levels consistent with surrounding agricultural land uses.

Access for emergency vehicles will be provided during each stage through the construction of all-weather roads and associated infrastructure. Temporary dead-end roads created during staging will incorporate suitable turning facilities for firefighting vehicles in accordance with CFA requirements.

Clause 53.02-4.6 Decision guidelines

Before deciding on an application, in addition to the decision guidelines in clause 65, the responsible authority must consider the following. To assist, a response has been provided.

Table 2 - Response to Clause 53.02-4.6

Category	Decision Guideline	Response
General	The Municipal Planning Strategy and the Planning Policy Framework.	The proposal has been assessed against the relevant bushfire planning provisions of the Planning Scheme, including Clause 13.02-1S and Clause 53.02. The subdivision design prioritises the protection of human life and incorporates bushfire risk mitigation measures consistent with the Planning Policy Framework.
General	The bushfire hazard landscape assessment, the bushfire hazard site assessment, bushfire management statement and bushfire management plan submitted with the application.	A bushfire hazard landscape assessment, bushfire hazard site assessment, Bushfire Management Statement and Bushfire Management Plan have been prepared. These documents identify the relevant landscape, site, vegetation, access, water supply and defendable space measures required to manage bushfire risk.
General	The impact of any State, regional or local bushfire management and prevention actions occurring around the site and in the wider area on the bushfire hazard and the level of risk to the proposed development.	Existing and ongoing bushfire management actions in the broader area, including fuel management, local property maintenance, CFA engagement, public land management and community preparedness programs, assist in reducing landscape-scale bushfire risk. The design does not rely solely on these actions, but they provide additional support to the proposed mitigation framework.
General	Whether the risk arising from the broader landscape can be mitigated to an acceptable level.	The broader landscape risk can be mitigated to an acceptable level through the subdivision layout, perimeter roads, managed open space, defendable space, BAL12.5 construction and separation from classified vegetation. The landscape has been assessed as Type 1, and the proposed

Category	Decision Guideline	Response
		development is located in a low risk location.
General	Whether there is reliable access to areas of land where human life can be better protected from the effects of bushfire.	The development provides access to the surrounding road network, including routes to the Maffra township. Future residents will also be able to remain within lower-risk parts of the completed development where separation from bushfire hazards is provided.
General	The risk to property and community infrastructure from bushfire.	The risk to property and community infrastructure is reduced through the provision of setbacks, defendable space, BAL12.5 construction, reticulated water supply, static water supply, hydrants, internal roads and managed vegetation. The subdivision design separates future dwellings from the primary bushfire hazards.
General	Whether the proposed development meets the objectives of clause 53.02-4 regardless of other measures which may be available, including private bushfire shelters, community shelters and the presence of places of last resort.	The proposal meets the objectives of Clause 53.02-4 through siting, design, defendable space, construction, water supply, access and subdivision layout measures. The assessment does not rely on private bushfire shelters, community shelters or places of last resort as the primary bushfire protection strategy.
General	Whether the proposed measures can be practically implemented and maintained in conjunction with the ongoing use of the land.	The proposed measures can be practically implemented and maintained. Defendable space is incorporated into the subdivision layout, roads and setbacks, and ongoing management will be secured through planning controls, Section 173 agreements, and future lot management obligations.
General	Whether the use of an alternative measure meets the relevant objective having regard to the bushfire hazard and the nature of any constraint that prevents the applicable approved measure from being implemented.	Where alternative measures are relied upon, they have been developed having regard to the bushfire hazard and site constraints. The proposed outcomes achieve the relevant objectives through conservative vegetation classification, appropriate setbacks, and a

Category	Decision Guideline	Response
		BAL12.5 construction and managed defendable space to the subdivision boundary.
General	If one or more of the objectives in clause 53.02-4 will not be achieved in the completed development, whether the development will, taking all relevant factors into account, reduce the bushfire risk to a level that warrants it proceeding.	The development is considered to achieve the relevant Clause 53.02-4 objectives. The completed subdivision will reduce bushfire risk through managed vegetation, compliant access, provision of 20,000L of static water supply, BAL12.5 construction and the creation of areas with lower bushfire exposure.
General	Whether bushfire protection measures can be implemented without unacceptable biodiversity impacts.	The site is a vacant property and will not result in unacceptable biodiversity impacts.
General	Whether the water supply and access arrangements are appropriate for the bushfire risk.	The water supply and access arrangements are appropriate for the bushfire risk.
Vegetation	Whether the existing and proposed vegetation, and other fuel sources, respond to the separation distance between the bushfire hazard interface and the development.	The subdivision layout responds to existing and proposed vegetation by providing separation between future dwellings and identified bushfire hazards.
Vegetation	If vegetation is proposed, if it will cause or contribute to the bushfire hazard and increase the risk to life, property, or community infrastructure.	Proposed landscaping and vegetation will be managed so that it does not increase bushfire risk.
Subdivision	Whether a staged subdivision manages interim bushfire hazard during the construction or staging.	The staged subdivision will manage interim bushfire hazards during construction and staging. Grassland areas within the development will be managed during the fire danger period.

Conclusion

The proposed subdivision is occurring in an area that is zoned for residential development. The provision of block sizes is allowing the development to better manage the bushfire risk through appropriate setbacks and bushfire safety features including defendable space, construction requirements, firefighting water supply and access. The subdivision layout has been developed to effectively manage the bushfire risk within the boundary.

The assessment of landscape risk has identified a low risk bushfire hazard to the northwest and southwest of the property. In both the northwest and southwest aspects, the potential for large scale bushfires is limited due to the surrounding landscape and other features. Due to the low risk, it has been determined that no additional treatments are required to manage the bushfire risk.

This assessment has considered both the interim and ultimate development outcomes for the subject land as part of the proposed staged planning process. The bushfire protection measures identified within this report demonstrate that the land is capable of accommodating the proposed 22-lot subdivision under the current planning controls while also supporting the future development intent for the balance land. The assessment confirms that the staged development approach is capable of achieving an acceptable level of bushfire safety through all phases of development, subject to the implementation of the bushfire mitigation measures detailed within this report and the accompanying Bushfire Management Plan.

This subdivision does not increase the bushfire risk to the future occupants and the proposal meets the requirements of the Bushfire Management Overlay

Appendix 1 – Bushfire Hazard Site Assessment

Appendix 2 – Bushfire Management Statement

Construction Standard

All dwellings will be designed and constructed to a minimum Bushfire Attack Level of **BAL 12.5**

Defendable Space

Vegetation (and other flammable materials) will be maintained to the property boundary in accordance with the following requirements:

- Grass must be short cropped and maintained during the declared fire danger period.
- All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
- Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.
- Plants greater than 10 centimetres in height must not be placed within 3m of a window or glass feature of the building.
- Shrubs must not be located under the canopy of trees.
- Individual and clumps of shrubs must not exceed 5 sq. metres in area and must be separated by at least 5 metres.
- Trees must not overhang or touch any elements of the building.
- The canopy of trees must be separated by at least 5 metres.
- There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

Water Supply

20,000 litres of effective water supply must be provided for firefighting purposes, for each dwelling that meets the following requirements:

- Be stored in an above ground water tank constructed of concrete or metal.
- Have all fixed above-ground water pipes and fittings required for firefighting purposes made of corrosive resistant metal.
- Include a separate outlet for occupant use.
- Be readily identifiable from the building or appropriate identification signs to the satisfaction of the relevant fire authority.
- Be located within 60 metres of the outer edge of the approved building.
- The outlet/s of the water tank must be within 4 metres of the accessway and unobstructed.
- Incorporate a separate ball or gate valve (British Standard Pipe (BSP 65 millimetre) and coupling (64 millimetre CFA 3 thread per inch male fitting).
- Any pipework and fittings must be a minimum of 65 millimetres (excluding the CFA coupling).

Access

Access to the dwellings must be provided for firefighting purposes which meets the following requirements:

- All weather construction
- A load limit of at least 15 tonnes
- Provide a minimum trafficable width of 3.5 metres
- Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically
- Curves must have a minimum inner radius of 10 metres
- The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres
- Dips must have no more than a 1 in 8 (12.5 per cent) (7.1 degrees) entry and exit angle

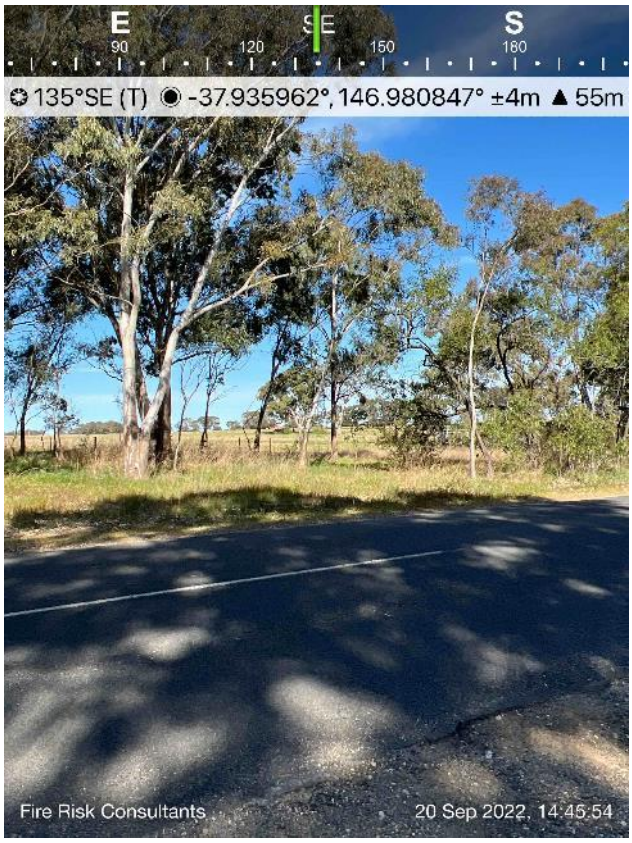
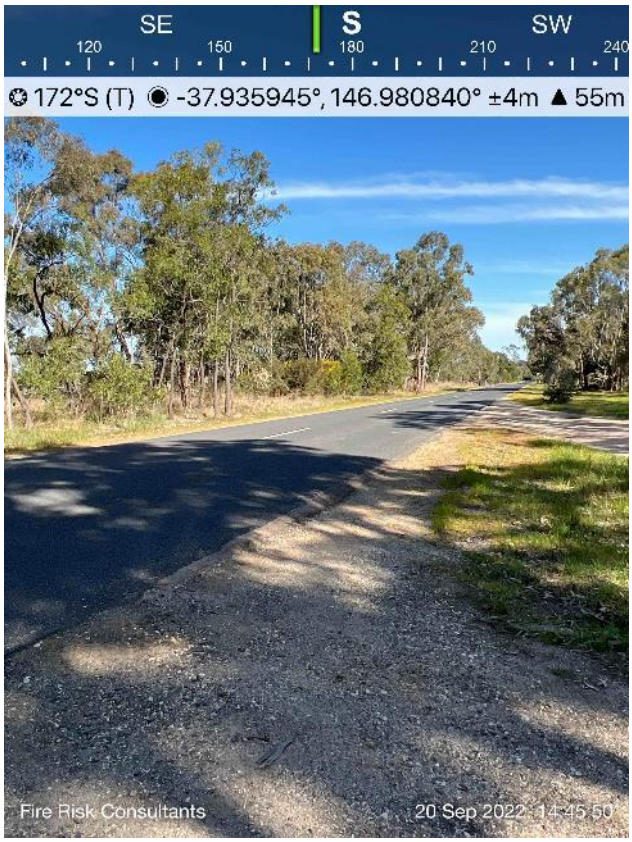
A turning area for fire fighting vehicles must be provided at any dead-end roads (including between stages) by one of the following:

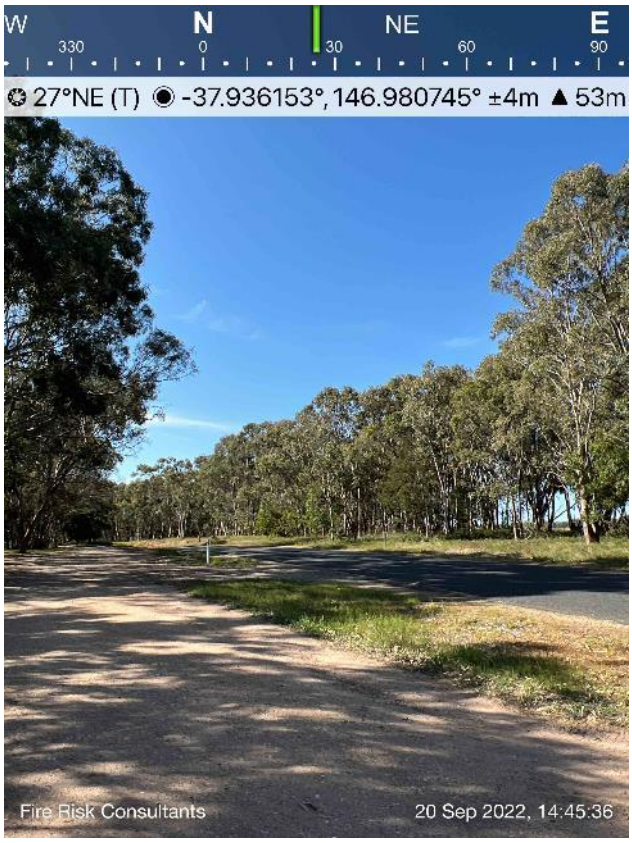
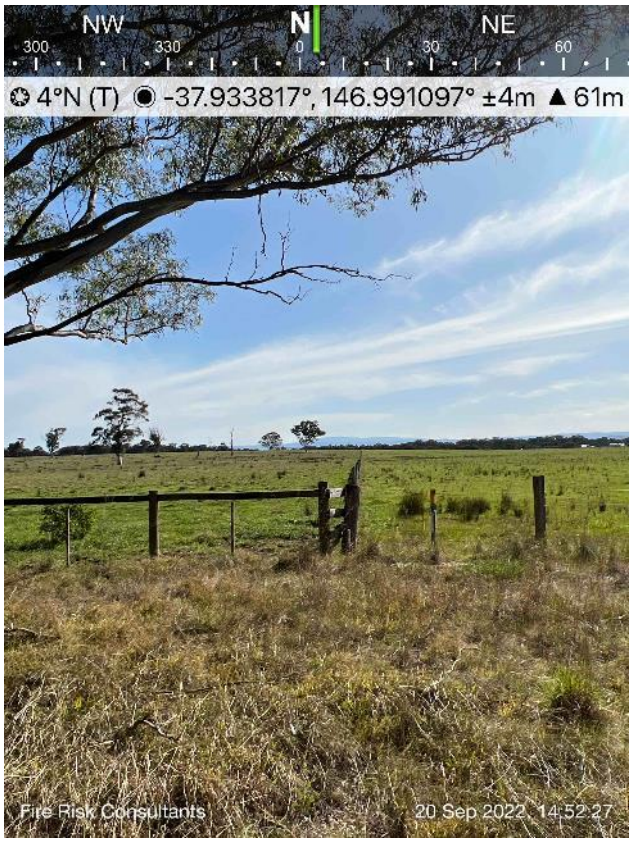
- A turning circle with a minimum radius of eight metres
- A driveway encircling the dwelling
- The provision of other vehicle turning heads such as a T head or Y Head – which meet the specification of Austroad Design for an 8.8 metre service vehicle.
- Incorporate passing bays at least every 200m which must be at least 20 metres long and have a minimum trafficable width of 6 metres.

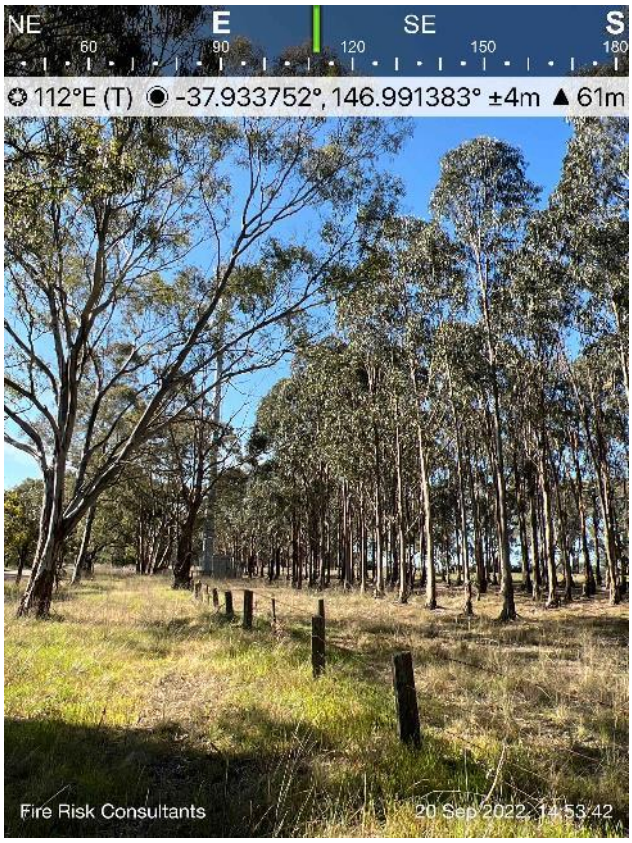
Refer to the supplied Bushfire Management Plan.

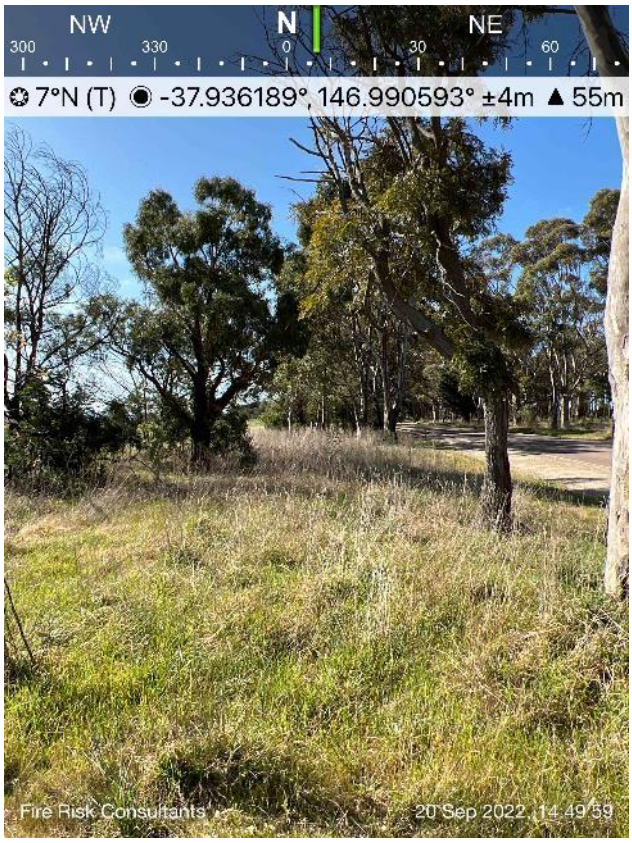
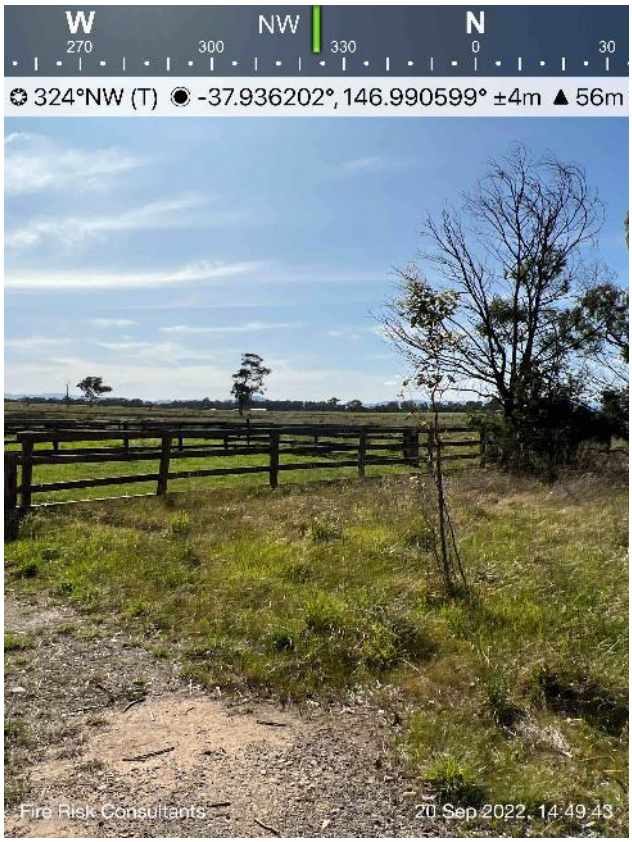
Appendix 3 – Photos

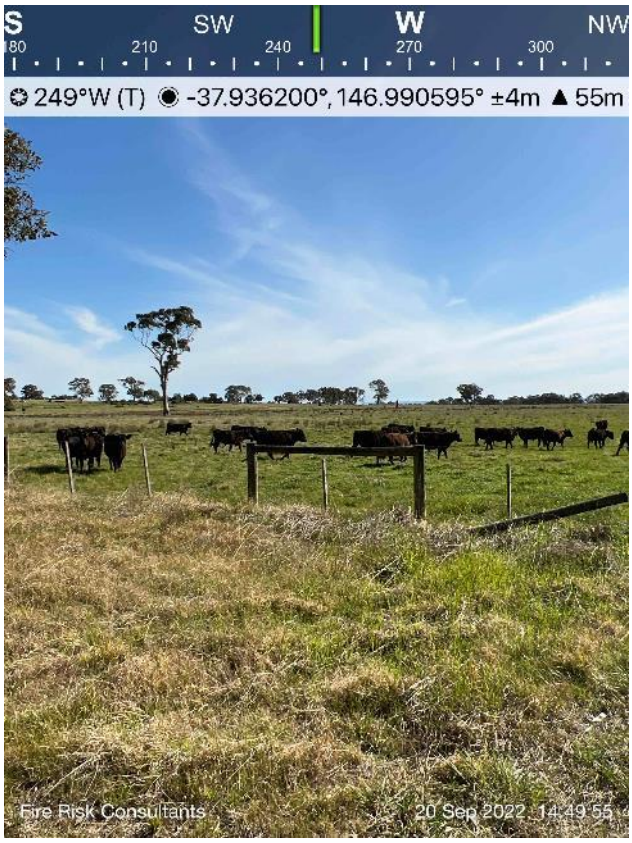
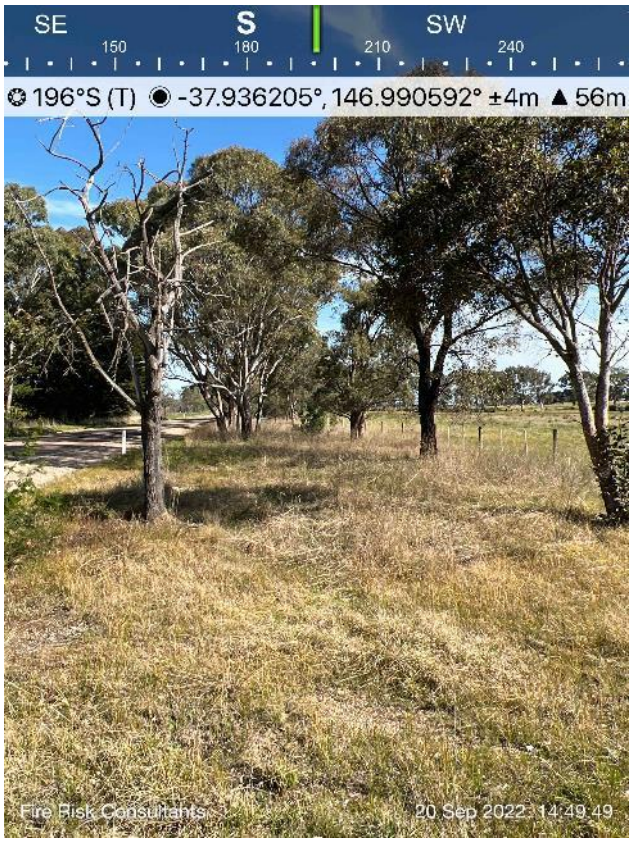
1 View of the treed vegetation within the road reserve to the west of the development.	
2 Looking from Three Chain Road towards the property.	

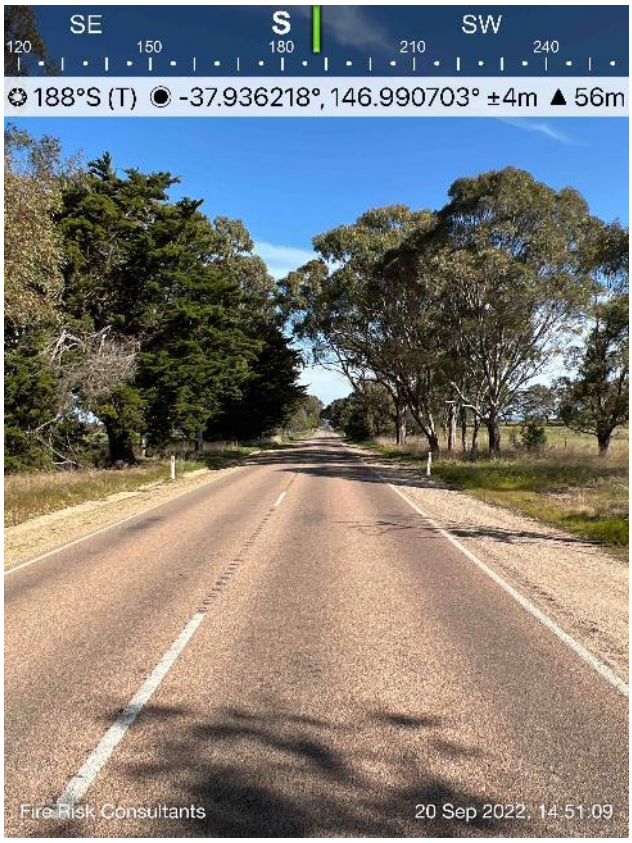
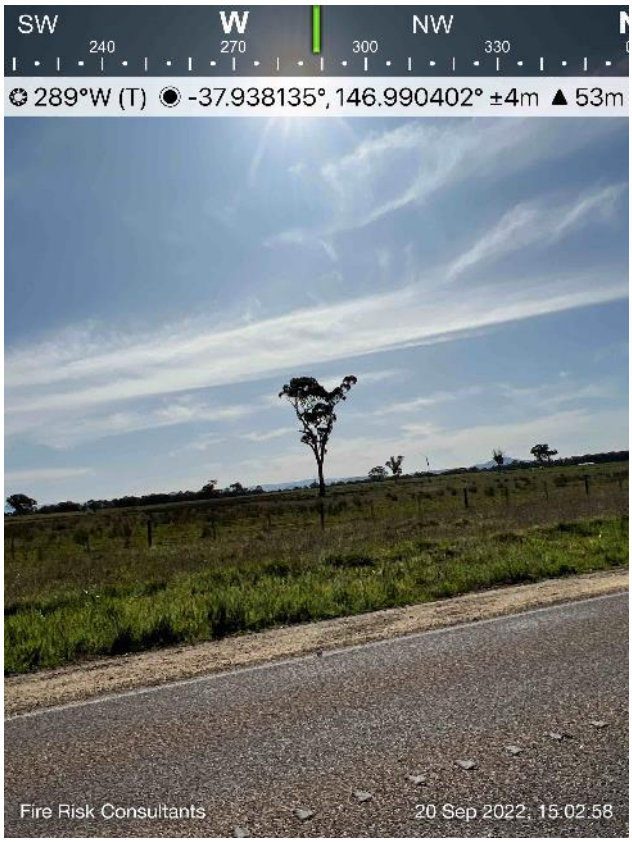
3 Looking south east across the proposed development.	
4 Looking south along Three Chain Road.	

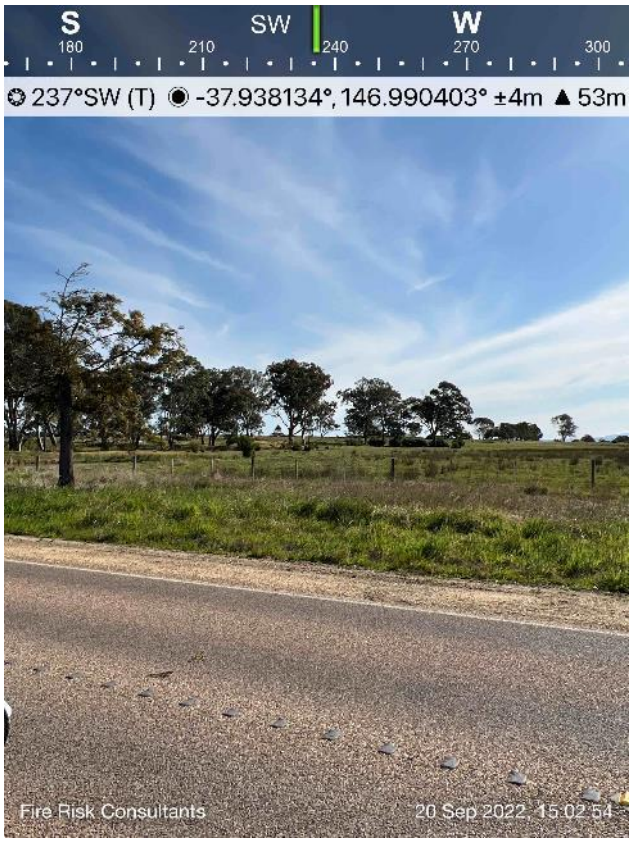
5 Looking north along Three Chain Road.	
6 Looking north into the paddocks to the north of the development.	

7 Looking towards the Blue Gum Plantation to the east of Maffra-Briagolong Road.	
8 Typical vegetation to the west of Maffra-Briagolong Road.	

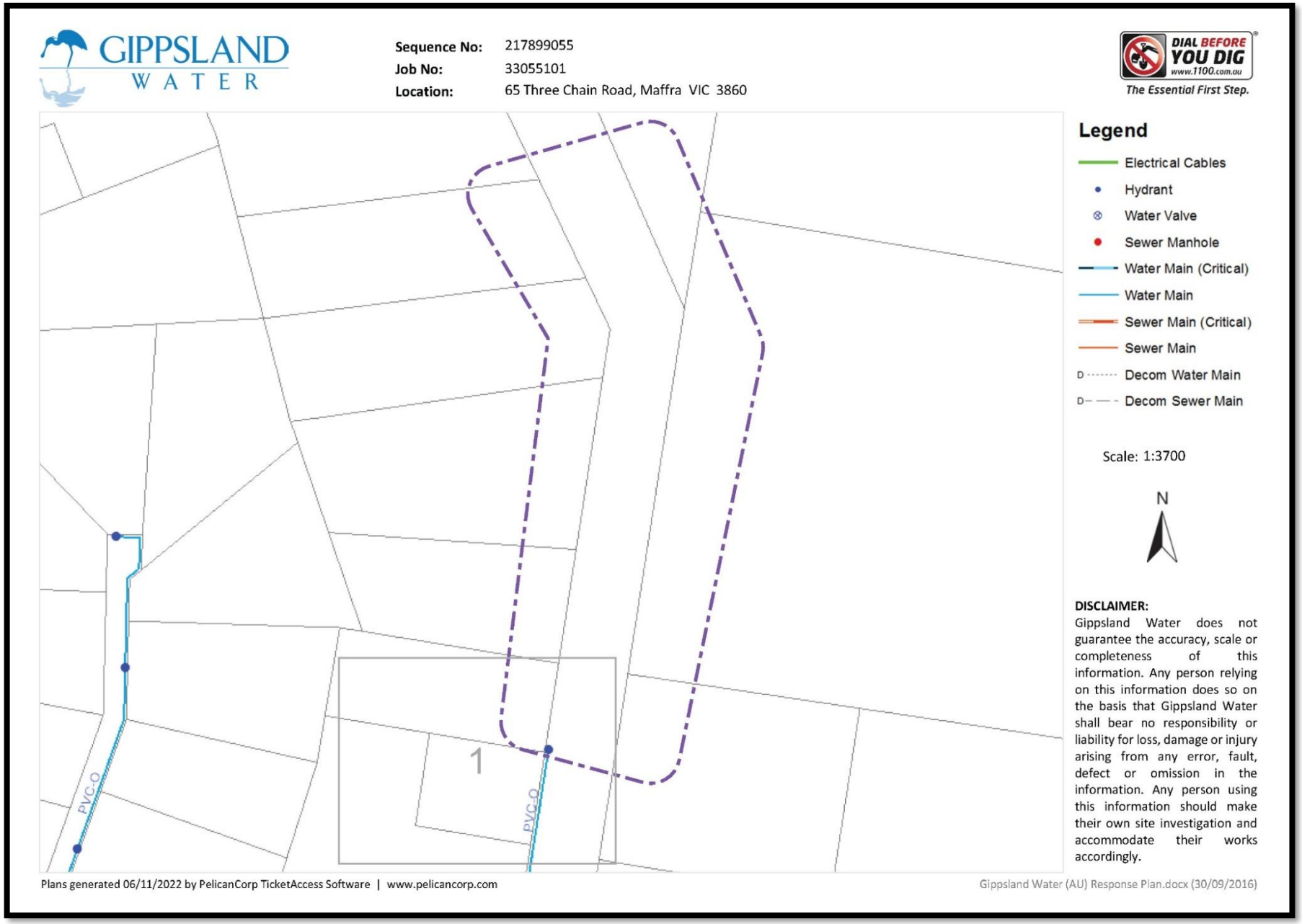
9 Typical roadside vegetation on Maffra-Briagolong Road.	
10 Looking north westerly across the property.	

11 Looking south westerly across the property from Maffra-Briagolong Road.	
12 Typical roadside vegetation along Maffra-Briagolong Road.	

13 Looking south along Maffra-Briagolong Road.	
14 Looking westerly from Maffra-Briagolong Road.	

15 Looking south westerly near the south eastern corner of the development.	

Appendix 4 – Fire Hydrant information



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- Electrical Cables
- Hydrant
- Water Valve
- Sewer Manhole
- Water Main (Critical)
- Water Main
- Sewer Main (Critical)
- Sewer Main
- Decom Water Main
- Decom Sewer Main

Scale: 1:7175

N

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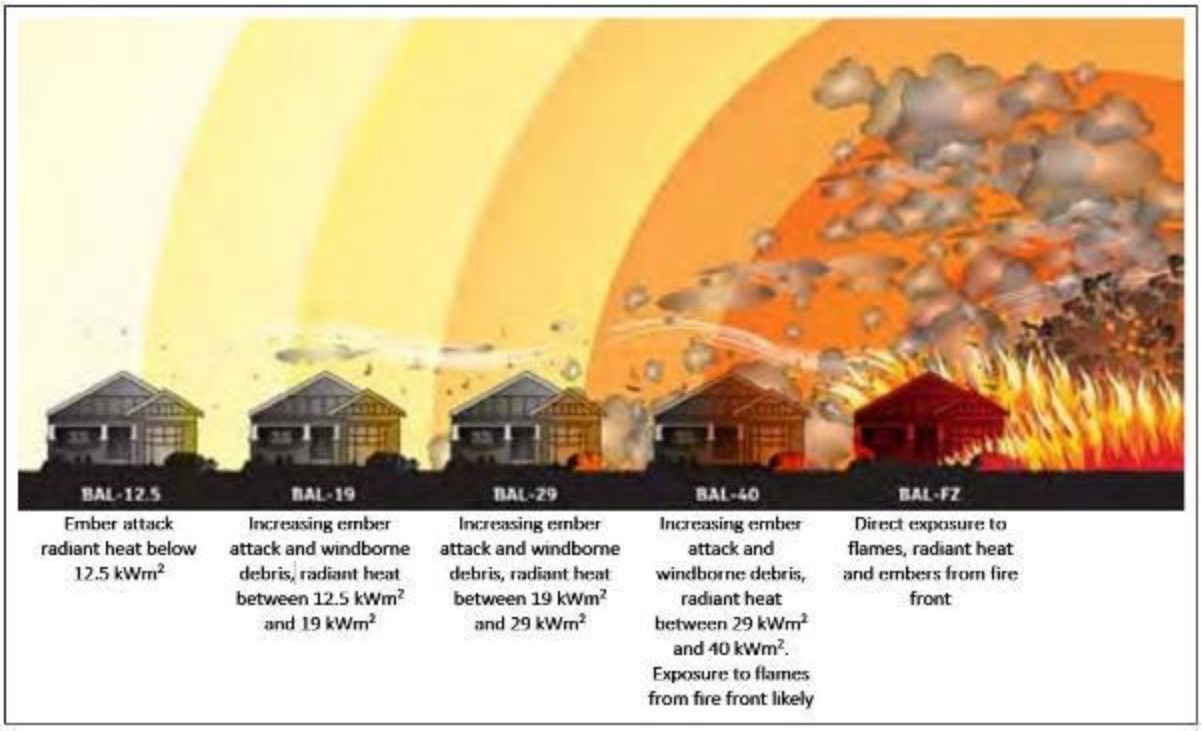
Gippsland Water (AU) Response Plan.docx (30/09/2016)

Appendix 5 – BAL levels explained

The following diagram outlines the type of bushfire attack method will impact on a dwelling associated. This then indicates the relevant BAL construction level as determined by the Bushfire Management Overlay.



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