



Bushfire Development Risk Assessment Report

to inform the
Derrimut Fields Precinct

Prepared for
Victorian Planning Authority

August 2026

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Terramatrix project code: DTP-2026-03 CI1302_BPA-Derrimut Fields PSP
Report prepared by Terramatrix for the Department of Transport and Planning

Cover photo – Looking east across the precinct from Hopkins Road.

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Version control

Version	Date	Comments	Distribution
0.1	2026-06-23	Draft BDRA report.	Eric Harsan - DTP
1.0	2026-08-27	Minor edits requested by DTP and inclusion of draft Place Based Plan. BDRA to client.	Henry Kassay - DTP

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Glossary

AS 3959:2018	AS 3959:2018 <i>Construction of buildings in Bushfire Prone Areas</i> . Australian standard invoked by the National Construction Code and Victorian building regulations for the assessment of BALs and the design and construction of defined building classes in a BPA.
BAL	<i>Bushfire Attack Level</i> - A means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per metre squared, and the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire e.g. a building constructed to a BAL-12.5 standard is designed to be exposed to radiant heat not exceeding 12.5 kW/m ² .
BMO	<i>Bushfire Management Overlay</i> - A planning scheme provision used to guide the development of land in areas of high bushfire hazard. The BMO applies to areas where there is potential for extreme bushfire behaviour, such as a crown fire and extreme ember attack and radiant heat
BPA	<i>Bushfire Prone Area</i> - An area that is subject to, or likely to be subject to, bushfire attack as determined by the Minister for Planning.
Bushfire	An unplanned fire burning in vegetation; sometimes referred to as wildfire. A generic term which includes grass fires, forest fires and scrub fires.
Bushfire attack	Attack by wind, burning embers, radiant heat or flame generated by a bushfire.
Bushfire hazard	A specific source of potential damage or harm, typically consisting of three key elements; vegetation, weather and topography.
Bushfire risk	The chance or probability of damage or harm if exposed to a bushfire hazard and the severity of the impact i.e. consideration of the likelihood and consequences of impacts from bushfire.
Classified vegetation	Vegetation deemed to be a bushfire hazard in accordance with the Bushfire Management Overlay (BMO) and/or AS 3959:2018 <i>Construction of buildings in bushfire prone areas</i> .

CFA	<i>Country Fire Authority</i>
DTP	<i>Department of Transport and Planning</i>
Effective slope	The slope of the land (gradient, measured in degrees) under the classified vegetation which most influences the bushfire attack. The slope is determined on the basis of the fire moving towards the building and the rate of spread of the fire and not solely on the basis of the relative elevation of the vegetation.
Ember attack	Attack by smouldering or flaming windborne debris that is capable of entering or accumulating around a building, and that may ignite the building or other combustible materials and debris.
EVC	<i>Ecological Vegetation Class</i> - The standard unit for classifying vegetation types in Victoria. EVCs are described through a combination of floristics, lifeforms and ecological characteristics, and through an inferred fidelity to particular environmental attributes. Each EVC includes a collection of floristic communities (i.e. lower level in the classification) that occur across a biogeographic range and, although differing in species, have similar habitat and ecological processes operating.
FFDI	<i>Forest Fire Danger Index</i> – A numerical index representing the chance of a fire starting, its rate of spread, its intensity and the difficulty of its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long- and short-term drought effects.
FRV	<i>Fire Rescue Victoria</i>
PSP	<i>Precinct Structure Plan</i> – Strategic masterplans for local areas that usually cater for between 5,000 to 30,000 people, 2,000 to 10,000 jobs or a combination of both. They are the ‘blueprint’ for localised development and investment that will occur over many years and will incorporate any relevant directions already outlined in a higher level Framework Plan.
RHF	<i>Radiant heat flux</i> - The heat transfer rate per unit area from thermal (electromagnetic) radiation, expressed as kilowatts per metre squared. Calculated or measured for a specific surface to determine the radiant heat received by that surface from flames associated with a bushfire.

1 Summary

The Department of Transport and Planning (DTP) are planning the Derrimut Fields Precinct, to guide the future urban development of approximately 519 ha of land at Mount Cottrell on the western edge of the Melbourne urban area. The current agricultural land will be rezoned from Farming Zone (FZ) to Urban Growth Zone (UGZ) to facilitate development as a predominantly industrial area.

The precinct is wholly within a designated Bushfire Prone Area (BPA) but not covered by the Bushfire Management Overlay (BMO). The re-zoning requires a planning scheme amendment and constitutes settlement planning and, as such, Clause 13.02-1S *Bushfire Planning* of the Melton Planning Scheme requires that bushfire risk be considered (Melton Planning Scheme, Clause 13.02-1S).

Key points:

- The precinct is wholly within a designated BPA.
- The precinct is within a rapidly developing urban area, adjacent to the developing Truganina PSP to the south, Tarneit North PSP to the south-west and Tarneit Plains PSP to the north-west, and the established commercial area of the Robinsons Road Employment Area South to the east. To the north is the large, predominantly low threat area of the Ravenhall quarry and landfill (part of the yet to be completed Ravenhall (Quarry Site) PSP and to the west is pasture and woodland in the yet to be completed Chartwell East PSP.
- The precinct is close to urban areas to the east and south that have been excised from the BPA as urban development has occurred and that would be rated as BAL-Low using the AS 3959:2018 site assessment methodology.
- Grassland and Woodland, adjacent to and within the precinct, comprises a bushfire hazard that must be considered in the development and use of the precinct.
- Future waterway reserves and retarding basins within the precinct may comprise a bushfire hazard that must be considered in the development of adjacent land.
- The terrain within and around the precinct is benign from a bushfire perspective, being essentially flat to the west, upslope to the north and a very gentle downslope to the south and east. To the north, the quarry and landfill create a complex topography but as there is little vegetation in this area it has minimal significance from a bushfire perspective.
- To reduce radiant heat flux to less than 12.5 kW/m² as required by Clause 13.02-1S *Bushfire Planning* for a planning scheme amendment that will result in the introduction or intensification of development in a BPA, in most parts of the precinct buildings will need to be setback 19 m or 22 m from classified Grassland, depending upon the effective slope, and 33 m from the Woodland to the west.

- The setback required from classified vegetation outside of the precinct will be provided to a large degree by perimeter roads.
- Large areas of the precinct will achieve the less than 12.5 kW/m² threshold upon the completion of development.
- The bushfire risk is low across the precinct and will decrease over time as the surrounding PSPs are finalised and developed. The area of greatest risk is the western edge of the precinct that currently abuts classified Woodland west of Hopkins Road. This is anticipated to be an interim hazard until the Chartwell East PSP is developed.
- The UGZ or other appropriate planning instrument could stipulate bushfire protection measures, including setback of buildings from classified vegetation, provision of perimeter roads, provision of multiple egress roads away from the largely temporary bushfire hazard outside the precinct, provision of fire brigade access and a reticulated hydrant system, inclusion of bushfire in emergency management plans for businesses operating in the precinct, maintenance of low threat vegetation on private property within the precinct, and requirement for a Bushfire Site Management Plan for staged subdivisions.
- Much of the precinct is likely to be rendered low threat by the planned urban development and should become eligible for excision from the BPA as development proceeds.

2 Introduction

The Department of Transport and Planning (DTP) are currently planning the Derrimut Fields Precinct to guide the future urban development of the land. The precinct comprises approximately 519 ha of land at Mount Cottrell on the western edge of the Melbourne urban area.

The southern two-thirds of the precinct is Urban Growth Zone (UGZ), whilst the northern third and electricity transmission line easement are Farm Zone (FZ). A strip of Rural Conservation Zone (RCZ) and Urban Floodway Zone (UFZ) contain the western branch of Skeleton Creek, while the rail corridor is Transport Zone 1 (TRZ). The intent is to re-zone FZ land to UGZ to facilitate development as a predominantly industrial or commercial area.

This Bushfire Risk Assessment Report has been prepared for the DTP to assess how development in the Derrimut Fields Precinct can respond to the bushfire risk and comply with the applicable planning and building controls that relate to bushfire, especially the objectives and strategies of the Planning Policy Framework (PPF) at Clause 13.02-1S *Bushfire Planning* in the Melton Planning Scheme.

An initial Place Based Plan has been developed (see Figure 1) that will be refined as planning for the precinct progresses,

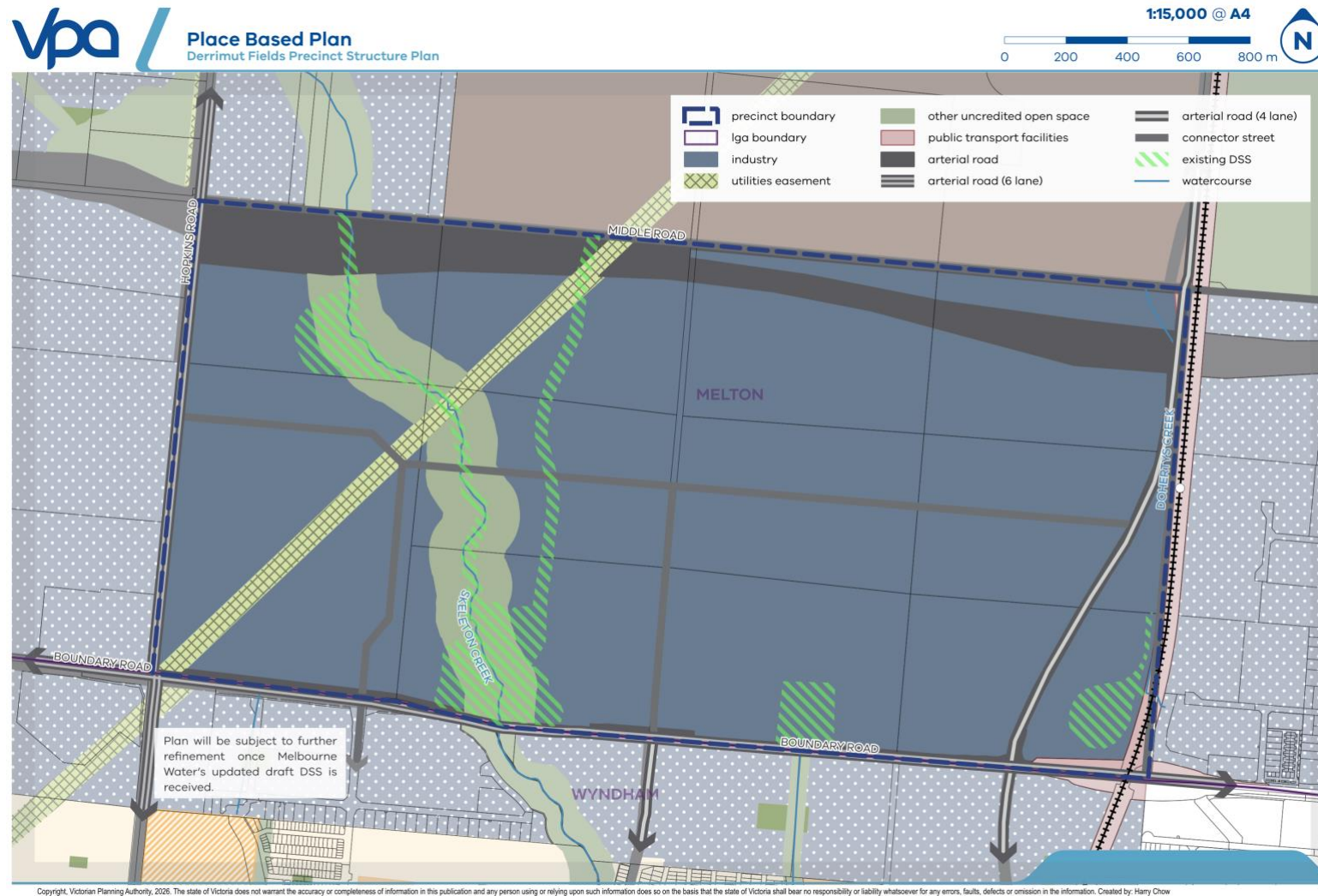


Figure 1 - Draft Place Based Plan (VPA, 2026).

Clause 13.02-1S has the objective *‘To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life’*. *‘This policy must be applied to all planning and decision making under the Act relating to land:*

- *In a bushfire prone area;*
- *In a Bushfire Management Overlay; or*
- *Proposed to be used or developed in a way that may create a bushfire hazard’* (Melton Planning Scheme, Clause 13.02-1S).

The precinct and some of the surrounding land is in a designated Bushfire Prone Area (BPA). None of the precinct or surrounding land for more than 10 km is covered by the Bushfire Management Overlay (BMO), which denotes areas of higher bushfire hazard. The closest BMO coverage is a small area north of Eynesbury to the west of the precinct.

As the PSP and associated rezoning will enable intensification of development, Clause 13.02-1S requires that bushfire risk be considered (Melton Planning Scheme, Clause 13.02-1S).

Clause 13.02-1S provides strategies for protection of human life, bushfire hazard identification and risk assessment, strengthening the resilience of settlements and communities, and use and development that will result in people congregating in large numbers.

Clause 13.02-1S requires, amongst other things, that any planning scheme amendment that results in the introduction or intensification of development must, upon completion, provide areas that would be exposed to radiant heat of no more than 12.5 kW/m² in the event of bushfire.

Bushfire prone area decision guidelines are provided at Clause 53.02-6 that apply to an application under any provision of the planning scheme to subdivide land in a BPA that is not in a BMO.

The UGZ (or other instrument) has the potential to specify bushfire protection requirements commensurate to the level of bushfire risk to the precinct. A staging plan is yet to be developed but it is assumed the precinct will be developed in stages over several years.

This report has been prepared in accordance with guidance for the assessment of, and response to, bushfire risk, provided in:

- *Bushfire Hazard Assessments – Guideline* (DTP, 2026a).
- *Planning Permit Applications – Bushfire Management Overlay or Bushfire Prone Area - Guideline* (DTP, 2026b).
- *Design Guidelines, Settlement Planning at the Bushfire Interface* (DELWP, 2020a).
- *AS 3959:2018 Construction of buildings in bushfire-prone areas* (Standards Australia, 2020).

3 Overview of the precinct

The Derrimut Fields Precinct is at Mount Cottrell on the western edge of the Melbourne urban area (see Map 1) in the City of Melton local government area (LGA). The precinct comprises approximately 519 ha of land, bounded by:

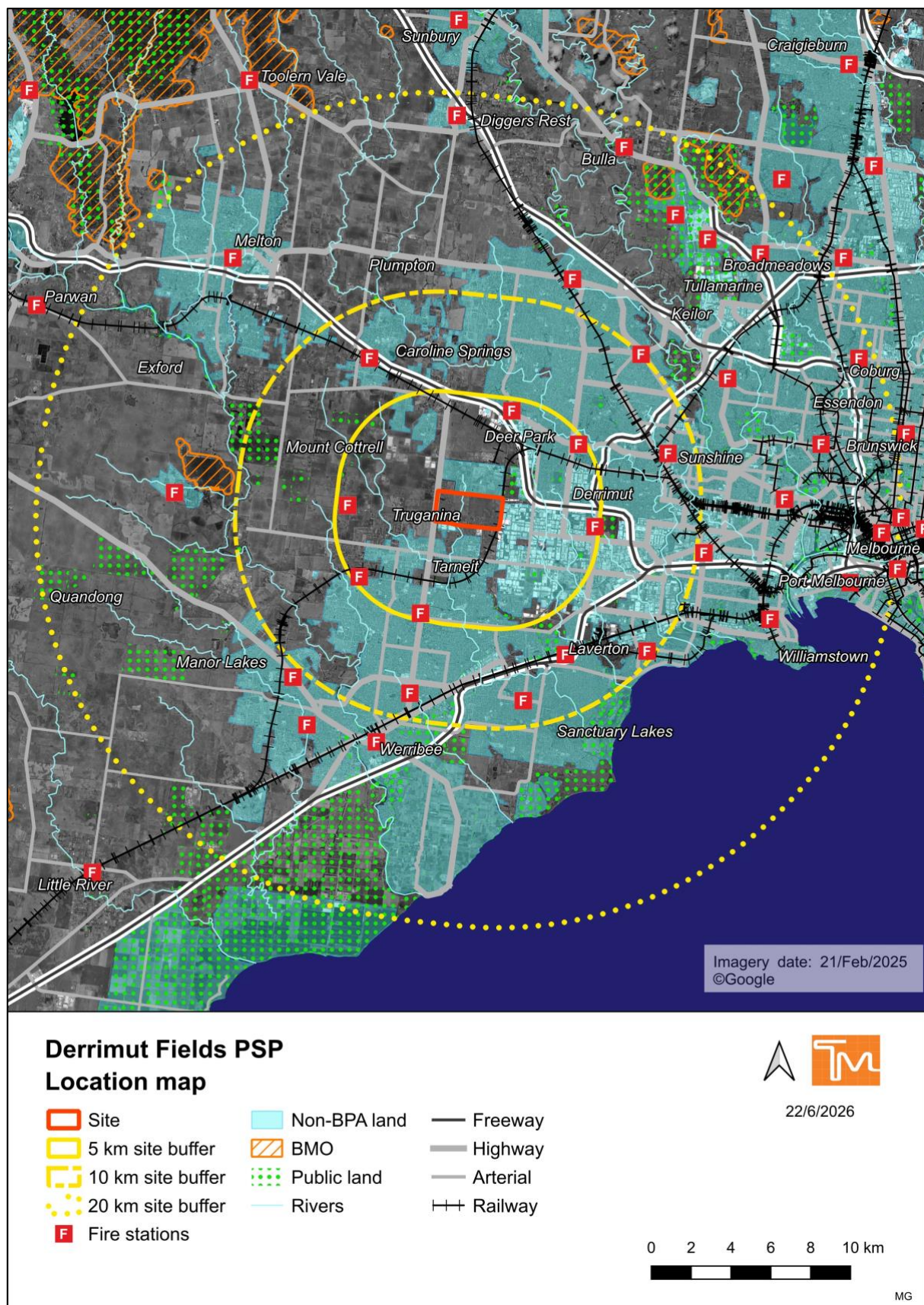
- To the north – Middle Road, which is currently an unsurfaced track.
- To the west – Hopkins Road, which is currently a two-lane bitumen road but planned to be upgraded to a six-lane road.
- To the south – Boundary Road, which is currently a two-lane bitumen road but planned to be upgraded.
- To the east – the currently unmade Christies Road reservation and rail corridor, both of which are within the precinct.

The southern two-thirds of the precinct is UGZ, whilst the northern third and electricity transmission line easement that runs south-west to north-east across the western part of the precinct are FZ. A strip of RCZ and UFZ contain the western branch of Skeleton Creek, whilst the rail corridor is TRZ1.

The currently agricultural land will be rezoned from FZ to UGZ to facilitate development as a predominantly industrial area and development plans will be prepared by proponents once the planning scheme amendment is gazetted.

The precinct will contain drainage/waterway reserves, including along the two branches of Skeleton Creek in the west and centre of the precinct, the Forsyth Road Drain on the southern boundary in the centre of the precinct, and Dohertys Drain in the south-east corner, which we assume will all contain classified Grassland.

As the exact location, size and nature of the vegetation the reserves within the precinct will contain and the width and position of upgraded perimeter road is not known at the time of this report, this Bushfire Development Risk Assessment Report provides a high-level assessment of how industrial or commercial development in the precinct can respond to the bushfire hazard in accordance with the requirements of Clause 13.02-1S in the Melton Planning Scheme.



Map 1 – Location of the Derrimut Fields Precinct.

4 Bushfire planning and building controls

This section summarises the applicable planning and building controls that relate to bushfire.

4.1 Planning provisions

4.1.1 *Clause 12.03-1S River and riparian corridors, waterways, lakes, wetlands and billabongs*

As the Skeleton Creek and other drainage lines transect the precinct, this Clause may be relevant. Strategies of the clause relevant to bushfire are:

- *‘Retaining, enhancing and re-establishing indigenous riparian vegetation along waterway systems, ensuring it responds to the bushfire risk of a location.*
- *Retaining and re-establishing vegetation, including grasslands and canopy trees, surrounding waterway systems to enhance and connect to the landscape setting, ensuring it responds to the bushfire risk of a location’* (Melton Planning Scheme, Clause 12.03-1S).

4.1.2 *Clause 13.01-1S Natural hazards and climate change*

The objective of this Clause is to minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning. Strategies to achieve the objective are:

- *‘Respond to the risks associated with climate change in planning and management decision making processes.*
- *Identify at risk areas using the best available data and climate change science.*
- *Integrate strategic land use planning with emergency management decision making.*
- *Direct population growth and development to low risk locations.*
- *Develop adaptation response strategies for existing settlements in risk areas to accommodate change over time.*
- *Ensure planning controls allow for risk mitigation and climate change adaptation strategies to be implemented.*
- *Site and design development to minimise risk to life, health, property, the natural environment and community infrastructure from natural hazards’* (Melton Planning Scheme, Clause 13.01-1S).

In southern and eastern Australia there has been an increase in the length of the fire weather season, and a greater number of higher risk days associated with climate change since the 1950s (CSIRO/BOM, 2024). The Australian and New Zealand Council for Fire and Emergency Services identify that a failure of building codes and land use planning to adequately adapt to climate change is a significant risk (AFAC, 2020).

Clause 13.01-1S supports the adoption of a precautionary and conservative approach to assessing and responding to bushfire risk.

4.1.3 Clause 13.02-1S Bushfire Planning

The State Planning Policy at Clause 13.02-1S *Bushfire Planning* requires that bushfire risk be considered for strategic planning, planning scheme amendments and planning applications involving a range of uses including subdivision and development in a BPA (Melton Planning Scheme, Clause 13.02-1S).

The proposed re-zoning and development of the Derrimut Fields PSP will need to address the policy objective and all strategies.

Objective – *‘To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life’.*

Overarching strategies are provided for:

- Protection of human life.
- Bushfire hazard identification and risk assessment.
- Strengthening the resilience of settlements and communities.
- Avoiding unacceptable biodiversity impacts.
- Use or development that will result in people congregating in large numbers.

Clause 13.02-1S requires priority to be given to the protection of human life by:

- *‘Prioritising the protection of human life over all other policy considerations.*
- *Directing population growth and development to low risk locations and ensuring the availability of, and reliable access to, areas where human life can be better protected from the effects of bushfire.*
- *Reducing the vulnerability of communities to bushfire through consideration of bushfire risk in decision-making at all stages of the planning process’* (Melton Planning Scheme, Clause 13.02-1S).

Development should not be approved where *‘...a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied or bushfire protection measures can be adequately implemented’* (Melton Planning Scheme, Clause 13.02-1S).

This study assesses the bushfire hazard in accordance with hazard identification and risk assessment strategies of Clause 13.02-1S and identifies the bushfire protection measures that will be required for future development in accordance with the settlement planning strategies. It is considered that development in the Derrimut Fields precinct can appropriately prioritise the protection of human life and meet the objective of Clause 13.02-1S. Key features to achieve this are appropriate subdivision design, including lot layout, perimeter roads and separation from hazardous vegetation during and after development. Minimum separation distances should ensure future development will not be exposed to radiant heat flux above 12.5 kW/m².

The maximum 12.5 kW/m² safety threshold is required in settlement planning as the upper limit for acceptable risk. Responsible authorities are to strengthen resilience to bushfire by *‘Not preparing, adopting or approving a plan that will result in the introduction or intensification of development in an area that has, or will have on completion, a radiant heat exposure of more than 12.5 kilowatts/square metre in the event of a bushfire. In this strategy, ‘plan’ means a strategic plan, policy statement, and amendment to a planning scheme, including an amendment to the Planning Policy Framework, or a plan approved under a provision of the planning scheme’* (Melton Planning Scheme, Clause 13.02-1S).

A detailed response to the strategies in Clause 13.02-1S and recommendations for development are provided in Section 7.

4.1.4 Clause 13.02-1L Bushfire planning

This local policy applies to land in the BPA that is not covered by the BMO, including the Derrimut Fields Precinct. It provides three strategies:

- *‘Design development to allow for the rapid and effective response by emergency services.*
- *Locate dwellings as close as possible to public roads to maximise opportunities for safe evacuation.*
- *Implement grassfire protection measures to address identified grassfire risk’* (Melton Planning Scheme, Clause 13.02-1L).

The first and third strategies are relevant to Derrimut Fields and are addressed by the bushfire protection measures detailed later in this report.

4.1.5 Clause 71.02-3 Integrated Decision Making

Clause 71.02-3 states that planning and responsible authorities should endeavour to integrate policies and balance conflicting objectives in favour of net community benefit. However, in bushfire affected areas, it states that the protection of human life must be prioritised over all other policy considerations (Melton Planning Scheme, Clause 71.02-3).

4.2 Bushfire Prone Area (BPA)

BPAs are those areas subject to or likely to be subject to bushfire, as determined by the Minister for Planning. The entire precinct is currently designated as a BPA, however as development occurs, much of it will likely become eligible for excision from the BPA.

Note that land not within the BPA is defined as an area of low bushfire hazard, where the extent, configuration and/or management of vegetation results in low potential for bushfire spread (DELWP, 2019).

Map 4 shows the extent of BPA coverage (shown as shading of non-BPA land) in and around the precinct and the surrounding broader landscape. In a BPA, the Building Act 1993 and associated

Building Regulations 2018, through application of the National Construction Code 2022 (NCC), require specific design and construction standards for Class 1, 2 and 3¹ buildings, certain Class 9 and 4 buildings², and Class 10A buildings³ or decks adjacent to, or connected with, these classes of buildings.

We understand that the precinct will contain industrial and/or commercial buildings that will likely be of a class that does not need to be built to a BAL construction standard under the Victorian Building Regulations.

4.2.1 Land use planning in a BPA

VC248 introduced 'Bushfire prone area decision guidelines' at Clause 53.02-6 of the Melton Planning Scheme. They apply to:

- *An application under any provision of the planning scheme to subdivide land in a bushfire prone area that is not in a Bushfire Management Overlay.*
- *An application under any provision of the planning scheme to construct a building or construct or carry out works associated with the use of land for accommodation, education centre, hospital, indoor recreation facility, major sports and recreation facility or place of assembly in a bushfire prone area that is not in a Bushfire Management Overlay (Melton Planning Scheme, Clause 53.02-1).*

The decision guidelines are grouped into:

- General.
- Proposed vegetation.
- Dwellings and small second dwellings.
- Vulnerable people.
- Subdivision.

The manner in which the proposed development will respond to these guidelines is documented in this Bushfire Development Risk Assessment Report in Section 8.

DTP review and excise areas from the BPA approximately every 6 months, particularly in growth areas where the hazard is removed as urban development occurs.

Land becomes eligible for excision if it satisfies statewide hazard mapping criteria, including that the land needs to be:

¹ Class 1, 2 and 3 buildings are defined in the NCC and are generally those used for residential accommodation, including houses and other dwellings, apartments, hotels and other buildings with a similar function or use.

² Applicable Class 9 buildings are Class 9a health-care buildings, Class 9b early childhood centres, primary and secondary schools, Class 9c residential care buildings, and any Class 4 parts of a building associated with these Class 9 buildings.

³ Class 10a buildings are defined in the NCC as non-habitable buildings including sheds, carports, and private garages.

- At least 300 m from areas of classified vegetation (except grassland) larger than 4 ha in size; and
- At least 150 m from areas of classified vegetation (except grassland) 2 to 4 ha in size; and
- At least 60 m from areas of unmanaged grassland more than 2 ha in size (DELWP, 2019).

For isolated areas of vegetation greater than 1 ha but less than 2 ha, the shape of the area and connectivity to any other hazardous vegetation is a further consideration (DELWP, 2019).

4.3 Other controls

4.3.1 Zoning

The southern two-thirds of the precinct is UGZ, whilst the northern third and electricity transmission line easement that runs south-west to north-east across the western part of the precinct are FZ. A strip of RCZ and UFZ contain the western branch of Skeleton Creek (see Map 2). The rail corridor is TRZ.

The UGZ or other instrument could be used to guide development within the precinct. Potential bushfire protection measures that could be incorporated are discussed at Section 6.7.

4.3.2 Overlays

Clause 42.01 Environmental Significance Overlay (ESO2)

Schedule 2 to the Environmental Significance Overlay (ESO2) protects wetlands, waterways and riparian strips and recognises the environmental significance of Skeleton Creek (Melton Planning Scheme, Clause 42.01). It will influence the retention of existing vegetation and potential revegetation along the creek.

Clause 42.03 Significant landscape Overlay (SLO3)

Schedule 3 to the Significant Landscape Overlay (SLO3) applies to Skeleton Creek and recognises its spiritual and cultural significance to Traditional Owners and its high landscape value. The schedule identifies opportunities to revegetate or naturalise the creek but notes that management of bushfire hazard is important and, in the BPA, requires an assessment of bushfire risk from any proposed planting (Melton Planning Scheme, Clause 42.03).

Clause 43.01 Heritage Overlay (HO203)

HO203 applies to the dry stone walls in the western part of the precinct, along Middle Road and some paddock boundaries (Melton Planning Scheme, Clause 43.01). This overlay is not considered to have implications for bushfire risk.

Clause 43.02 Design and Development Overlay (DDO3)

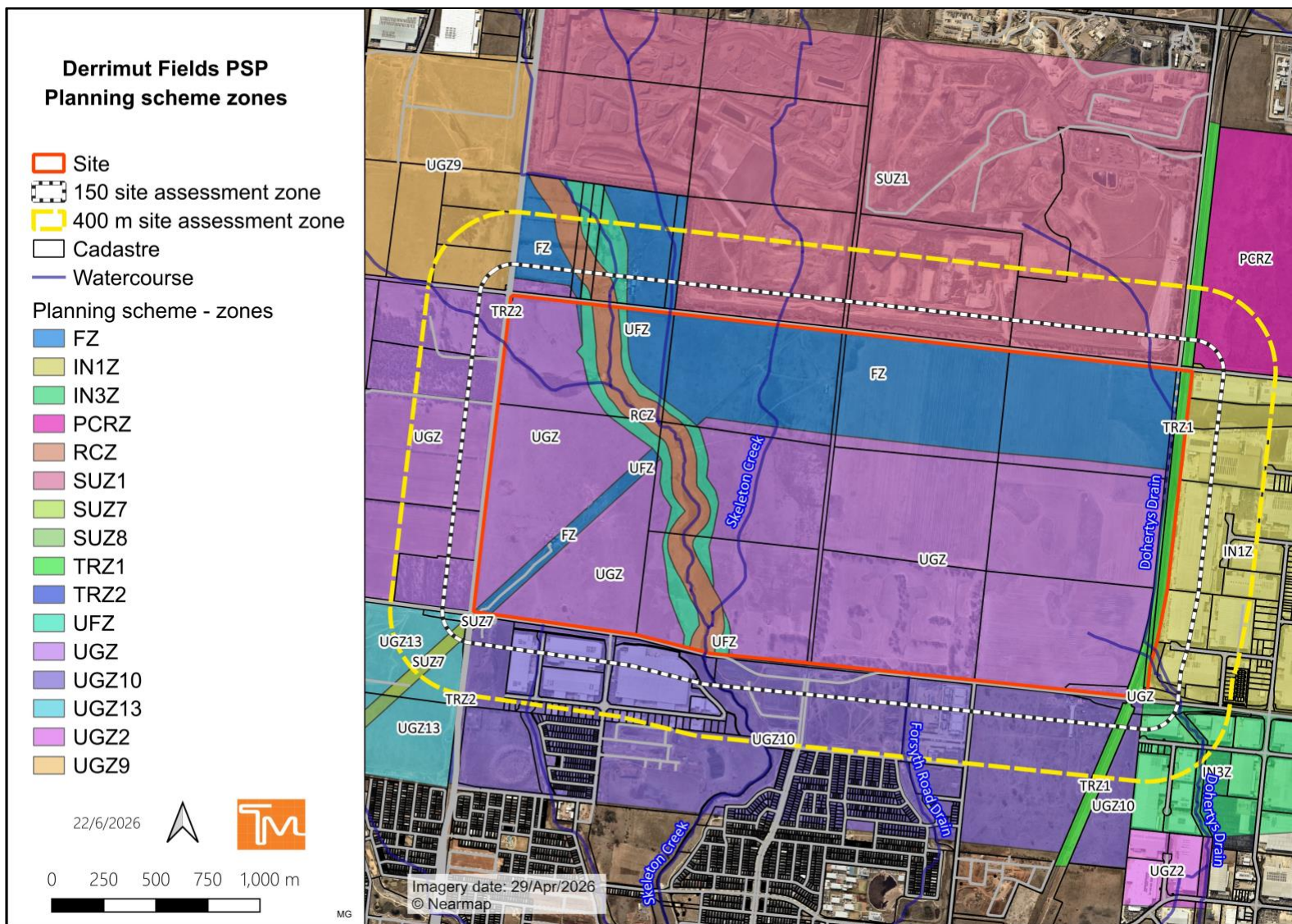
Schedule 3 to the Design and Development Overlay (DDO3) is to protect bedrooms from the impact of noise from the operation of trains on Regional Rail Link Section 2 (Melton Planning Scheme, Clause 43.02). This overlay is not considered to have implications for bushfire risk.

Clause 44.04 Land Subject to Inundation Overlay (LSIO1)

Schedule 1 to the Land Subject to Inundation Overlay affects land along Skeleton Creek (Melton Planning Scheme, Clause 44.04). It may affect the location of developable land and drainage reserves and other public open space.

Clause 45.01 Public Acquisition Overlay (PAO3)

The PAO3 covers Middle Road and immediately adjacent land and is to facilitate the acquisition of the land for the Outer Metropolitan Ring.E6 Transport Corridor (Melton Planning Scheme, Clause 45.01). This overlay supports the provision of a perimeter road along the northern boundary of the precinct, although it is acknowledged that the OMR is a long-term project.



Map 2 - Current zoning.

5 Bushfire hazard assessment

One of the bushfire hazard identification and risk assessment strategies in Clause 13.02-1S, is to use the best available science to identify the hazard posed by vegetation, topographic and climatic conditions (Melton Planning Scheme, Clause 13.02-1S). The basis for the hazard assessment should be:

- *‘Landscape conditions - meaning the conditions in the landscape within 20 kilometres (and potentially up to 75 kilometres) of the site.*
- *Local and neighbourhood conditions - meaning conditions in the area within approximately 5 kilometres of the site.*
- *The site and conditions within 150 metres’* (Melton Planning Scheme, Clause 13.02-1S).

This section includes a bushfire assessment to describe the landscape conditions, local and neighbourhood conditions. The assessment of the site is presented in Section 5.2 in accordance with AS 3959:2018 *Construction of buildings in bushfire-prone areas*, which requires a site assessment of the vegetation and topography up to 100 m⁴ around a building or site for the purposes of determining the applicable BAL construction standard.

The BPA invokes AS 3959:2018 *Construction of buildings in bushfire-prone areas*, which requires a site assessment of the vegetation and topography up to 100 m around a building or site (Standards Australia, 2020). For strategic planning or larger developments in a BPA a 150 m assessment zone is required (Melton Planning Scheme, Clause 13.02-1S) and has been applied in this bushfire assessment.

5.1 Bushfire hazard landscape assessment

5.1.1 Broader landscape scale hazard

As required by Clause 13.02-1S, bushfire hazard has been considered at the landscape scale (up to 20 km of the site).

Landscape setting

The Derrimut Fields precinct is adjacent to existing and developing urban areas on the western fringe of Melbourne (see Map 1). It is a low risk location, with the bushfire hazard predominantly Grassland to the west, with only small areas of Woodland, on predominantly flat ground.

The Derrimut Fields precinct can provide large areas that would be exposed to no more than 12.5 kW/m² radiant heat in the event of a bushfire. There is easy access to low threat areas in the adjacent established urban areas to the east and south of the precinct.

⁴ Extended to 150 m for strategic planning applications.

Bushfire hazard level

Bushfire Hazard Level (BHL) mapping is undertaken by DEECA, based on modelling of potential fire behaviour across the landscape. Inputs include vegetation type, fuel load, topography and weather; and the primary output is a calculation of potential fire intensity (DELWP, 2019).

Bushfire Hazard Level 2 (BHL2) applies to areas where head fire intensity is modelled to be 30,000 kW/m or more and, along with an ember buffer, is the primary determinant of areas to be covered by the BMO (DELWP, 2019). A small BMO area occurs to the north of Eynesbury, approximately 10 km to the west of the precinct.

Bushfire Hazard Level 1 (BHL1) applies to areas where head fire intensity is modelled to be between 4,000 kW/m and 30,000 kW/m and, along with an ember buffer, is the primary determinant of areas which are to be designated as BPA but not BMO (DELWP, 2019). This includes all of the Derrimut Fields precinct and patches of undeveloped pasture immediately around it.

Bushfire Hazard Level Low (BHL Low) are areas where there is low potential for bushfire spread and land use planning and building controls for bushfire are not required (DELWP, 2019). This currently includes adjacent commercial development and the Ravenhall land fill to the north. It is likely that most of the precinct will be BHL Low following urban development,

Landscape type

To assist in assessing landscape risk, four 'broader landscape types', representing different landscape risk levels, are described in the technical guide *Planning Applications Bushfire Management Overlay*⁵. These descriptors are intended to streamline decision-making and support more consistent decisions based on the landscape risk (DELWP, 2017).

The four types range from low risk landscapes, where there is little hazardous vegetation beyond 150 m of a site and extreme bushfire behaviour is not credible, to extreme risk landscapes with limited or no evacuation options and where fire behaviour could exceed BMO/AS 3959:2018 presumptions (see Table 1).

The landscape setting of the Derrimut Fields Precinct accords best with the lower risk Landscape Type 2. A large grass fire could currently approach the precinct from the north-west or west, directions typically associated with fire approach under extreme fire weather (Long, 2006). The small patches of Woodland west of Hopkins Road are too small to generate extreme fire behaviour and spotting from the smooth-barked eucalypts is unlikely to be severe.

Map 3 shows a history of moderate sized grass fires to the west of the precinct and one small fire in the western part of the precinct in 2021.

⁵ Whilst no part of the precinct is covered by the BMO, the broader landscape types provide a commonly used description of landscape-scale risk.

The development of the precinct will extend the large, reliably low threat area Melbourne urban area that could provide a place of relative safety during bushfire.

Table 1 - Landscape risk typologies (from DTP, 2026a).

Landscape Type 1	Landscape Type 2	Landscape Type 3	Landscape Type 4
• 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. • 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.	• 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 located 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 may 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 <i>Design Guidelines: Settlement Planning at the Bushfire Interface</i> (DELWP & CFA, 2020) should be considered when responding to bushfire policy and applying bushfire protection measures.	• 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 located 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.	• 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.
			

Fire weather

The Forest Fire Danger Index (FFDI) and the Grassland Fire Danger Index (GFDI) represent the level of bushfire threat based on weather (and fuel) conditions. An FFDI 100/GFDI 130 is applied in non-alpine areas of Victoria by the building system, to establish a BAL based on building setback distances from classified vegetation in accordance with AS 3959:2018.

The indices were also used for predicting fire behaviour including the difficulty of suppression, forecasting Fire Danger Ratings (FDRs) and determining an appropriate level of preparedness for emergency services. However, in September 2022 the FFDI/GFDI were replaced by the Fire Behaviour Index (FBI) as a new Australian Fire Danger Rating System (AFDRS) for determining FDRs in all jurisdictions. Table 2 displays the new FDRs, their FBI range, the anticipated fire behaviour and recommended actions for each FDR.

Note that the AFDRS and FBIs do not correlate directly with the FFDI/GFDI indices applied in the planning and building system. However, the benchmark FFDI 100 used to represent a 'one size fits all' model of extreme fire weather conditions (and the threshold for the previous 'Code Red' FDR), can be considered analogous to the FBI 100 'Catastrophic' FDR. Note that these extreme conditions have been exceeded during significant fire events, including at some locations in Victoria on 'Black Saturday' 2009. Therefore, it is important to note that this FDR threshold is not necessarily the *worst-case* conditions for any particular location.

Additionally, in southern and eastern Australia since the 1950's there has been an increase in the length of the fire weather season and an increase in extreme fire weather (CSIRO/BOM, 2024). The trend of a longer fire season and increased number of dangerous fire weather days is projected to continue. Climate change is contributing to these changes in fire weather including by affecting temperature, relative humidity and associated changes to the fuel moisture content (CSIRO/BOM, 2024).

The Metropolitan Bushfire Management Strategy states that in Victoria, climate change is forecast to extend the length of the fire danger period, make bushfires larger, more severe and frequent, and increase the frequency of days of elevated fire danger (DELWP, 2020b).

There is a 'high confidence' that climate change will result in a harsher fire weather climate for the Southern Slopes (Victoria West) sub-cluster region that the precinct is in; with a 'very high confidence' that average temperatures will continue to increase in all seasons. Generally, less rainfall in the cool season (winter and spring) is projected with 'high confidence'. Changes to summer and autumn rainfall are possible but less certain. The magnitude of the change depends on the rainfall projection and its seasonal variation. Enhanced summer rainfall projected in some scenarios could moderate the number of severe fire weather days (CSIRO/BOM, 2025).

Climate change trends associated with the risk of bushfire, support the adoption of a precautionary and conservative approach in identifying and responding to the risk. However, as CFA and DTP have no published policy on FFDI recurrence intervals there is no compelling reason to apply a different

FFDI/GFDI from the FFDI 100/GFDI 130 threshold used throughout non-Alpine areas of Victoria in the planning and building system⁶.

Table 2 - Fire Danger Ratings (AFDRS, 2022).

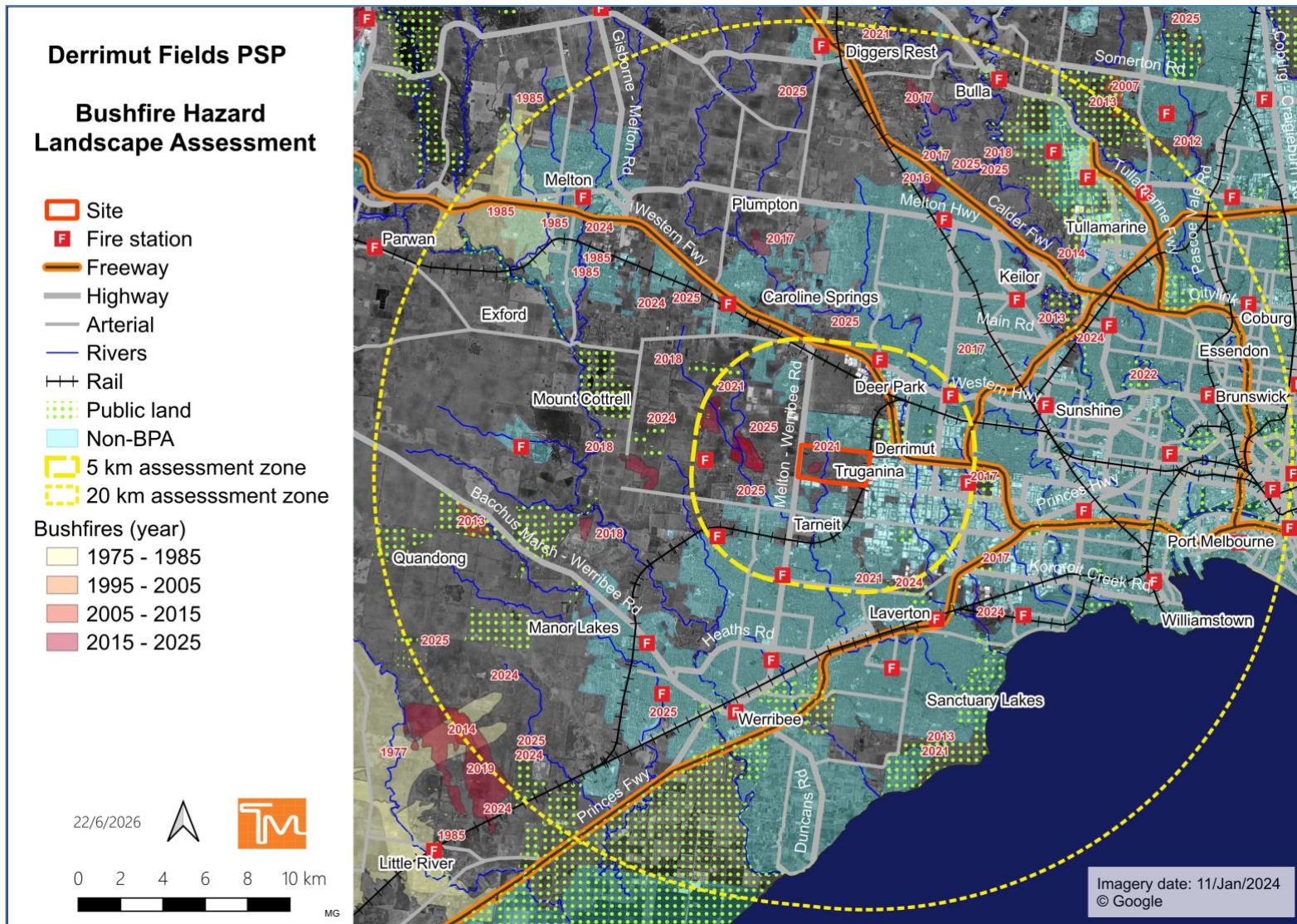
Fire Behaviour Index	Fire Danger Rating (FDR)	Fire Behaviour	Action
>=100	Catastrophic	If a fire starts and takes hold, lives are likely to be lost.	○ These are the most dangerous conditions for a fire. ○ Your life may depend on the decisions on you make, even before there is a fire. ○ For your survival, do not be in bushfire risk areas. ○ Stay safe by going to a safer location early in the morning or the night before. ○ If a fire starts and takes hold, lives and properties are likely to be lost. ○ Homes cannot withstand fires in these conditions. You may not be able to leave and help may not be available.
50-99	Extreme	Fires will spread quickly and be extremely dangerous.	○ These are dangerous fire conditions. ○ Check your bushfire plan and that your property is fire ready. ○ If a fire starts, take immediate action. If you and your property are not prepared to the highest level, go to a safer location well before the fire impacts. ○ Reconsider travel through bushfire risk areas. ○ Expect hot, dry and windy conditions. ○ Leaving bushfire risk areas early in the day is your safest option.
24-49	High	Fires can be dangerous.	○ There is a heightened risk. Be alert for fires in your area. ○ Decide what you will do if a fire starts. ○ If a fire starts, your life and property may be at risk. The safest option is to avoid bushfire risk areas.
12-23	Moderate	Most fires can be controlled.	○ Stay up to date and be ready to act if there is a fire.

5.1.2 Local and neighbourhood scale hazard

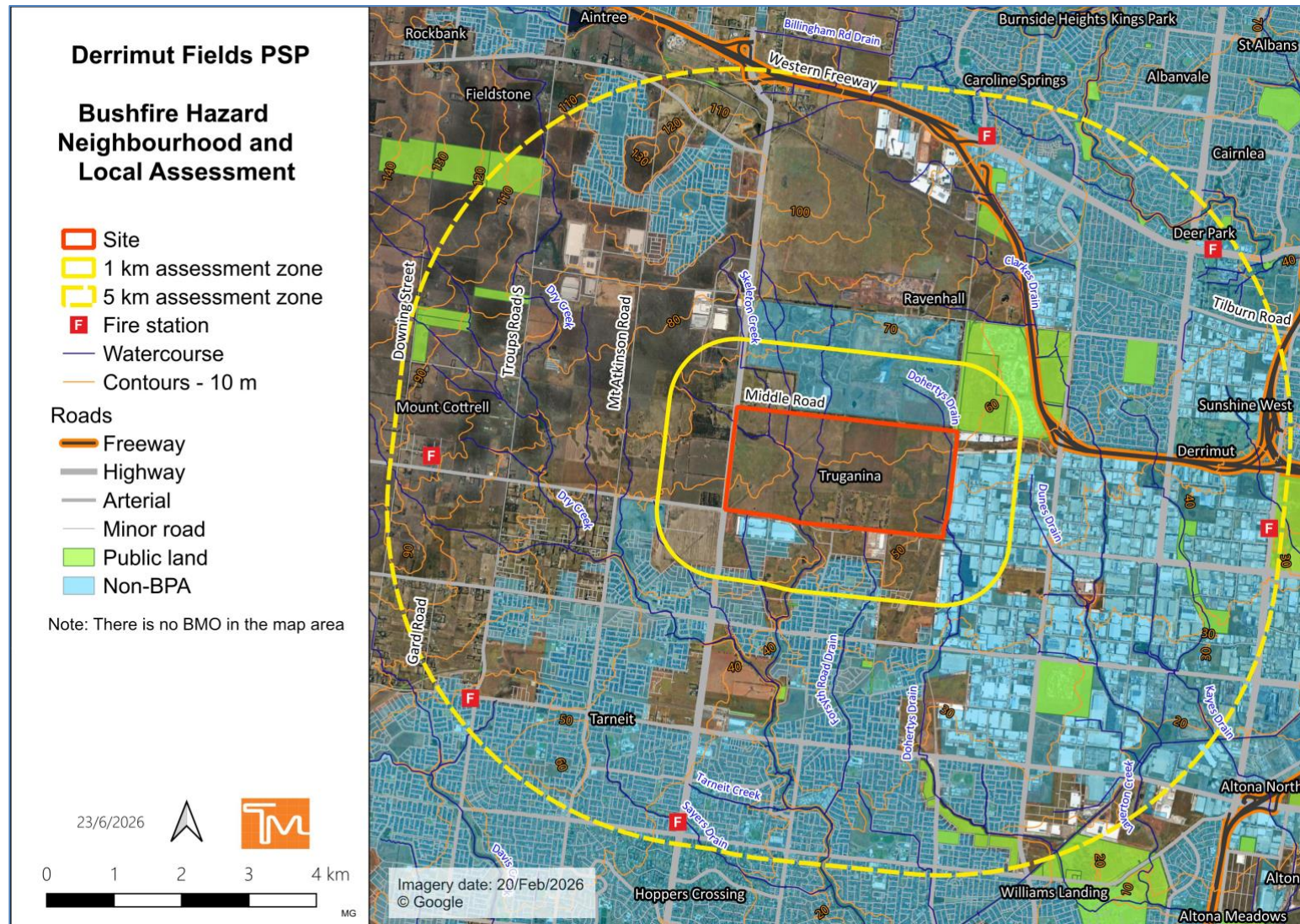
A fire could start to the north-west or west of the precinct and spread rapidly across agricultural land towards the precinct under a strong north-westerly wind typically associated with elevated fire weather (Long, 2006). While the woodlots west of Hopkins Road remain, there may be an increase in flame height and ember generation as the fire reaches the western edge of the precinct. The fire would, however, be unlikely to spread significantly into the new urban area, assuming an appropriate edge treatment is provided and undeveloped land within the precinct is maintained in a low threat state.

⁶ In Alpine areas of Victoria an FFDI 50 applies for determining BALs using Method 1 of AS 3959:2018.

The development of the precinct will provide a large, reliably low threat area that could provide a place of safety during bushfire. The established urban area to the east and south also comprises land that is not in a designated BPA, with easy access to it from the precinct via Boundary Road and, in the future, Middle Road and Christies Road. Following development, much of the interior of the precinct would accord best with Landscape Type 1, whilst the western edge, exposed predominantly to Grassland, would have characteristics of Landscape Type 2 until the Chartwell East PSP is developed.



Map 3 - Bushfire hazard landscape assessment.



Map 4 - Bushfire hazard neighbourhood and local assessment.

5.2 Bushfire hazard site assessment

5.2.1 Existing vegetation

Classified vegetation is vegetation that is deemed hazardous from a bushfire perspective and is classified in accordance with the AS 3959:2018 methodology.

The classification system is not directly analogous to Ecological Vegetation Classes (EVCs) but uses a generalised description of vegetation based on the AUSLIG (Australian Natural Resources Atlas: No. 7 - Native Vegetation) classification system. The classification should be based on the likely fire behaviour that it will generate and, for settlement planning purposes, the long-term structure of the vegetation in its mature state.

Grassland

Grassland is the predominant vegetation type within the Derrimut Fields Precinct (see Figure 2) and in the 150 m site assessment zone adjacent to most of the precinct boundaries (see Map 5, Figure 3, Figure 4 and Figure 5).

Areas of grassy vegetation, whether native or pasture, greater than 100 mm high with an overstorey foliage cover of less than 10% are classifiable in the Grassland group of AS 3959:2018, which is defined as '*All forms (of vegetation) including areas with shrubs and trees, if overstorey foliage cover is less than 10%*' (Standards Australia, 2020).

Grassland vegetation is considered hazardous, and therefore classifiable, when it is unmanaged, i.e. more than 100 mm tall. Settlement planning should apply a conservative and precautionary approach, and assume Grassland areas will be unmanaged and classifiable, unless there is reasonable assurance they will be managed in a low threat state, no more than 100 mm high, in perpetuity.

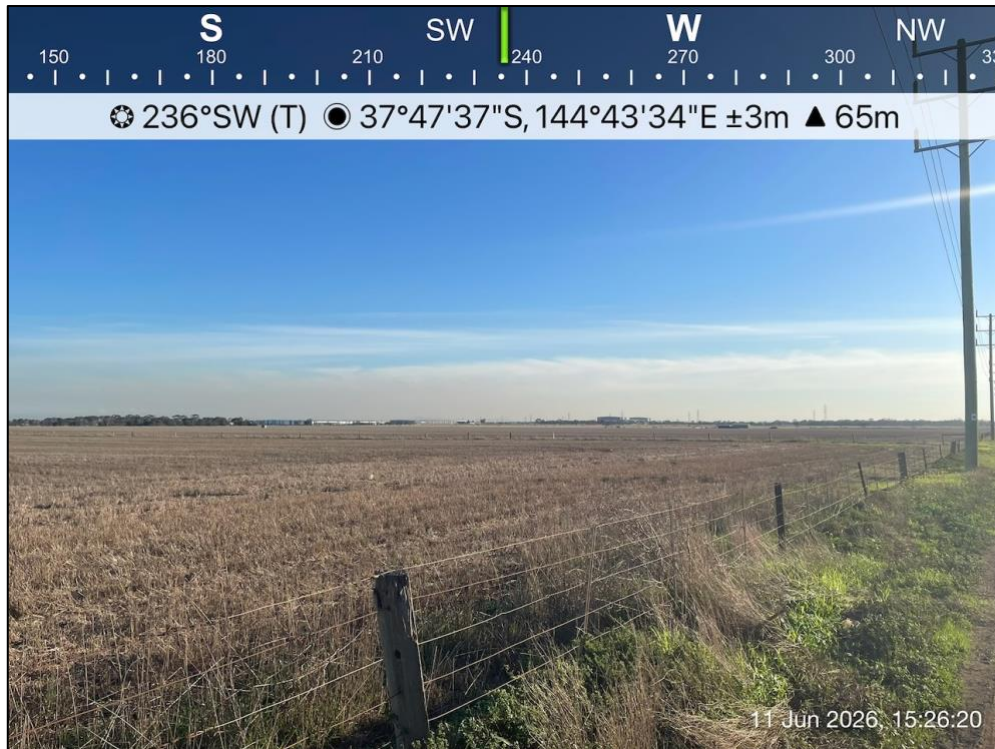


Figure 2 – Looking into the precinct from Middle Road.



Figure 3 – Looking north-east from Christies Road at classified Grassland in the Ravenhall Nature Conservation Reserve, between the eastern boundary of the precinct and the prisons.

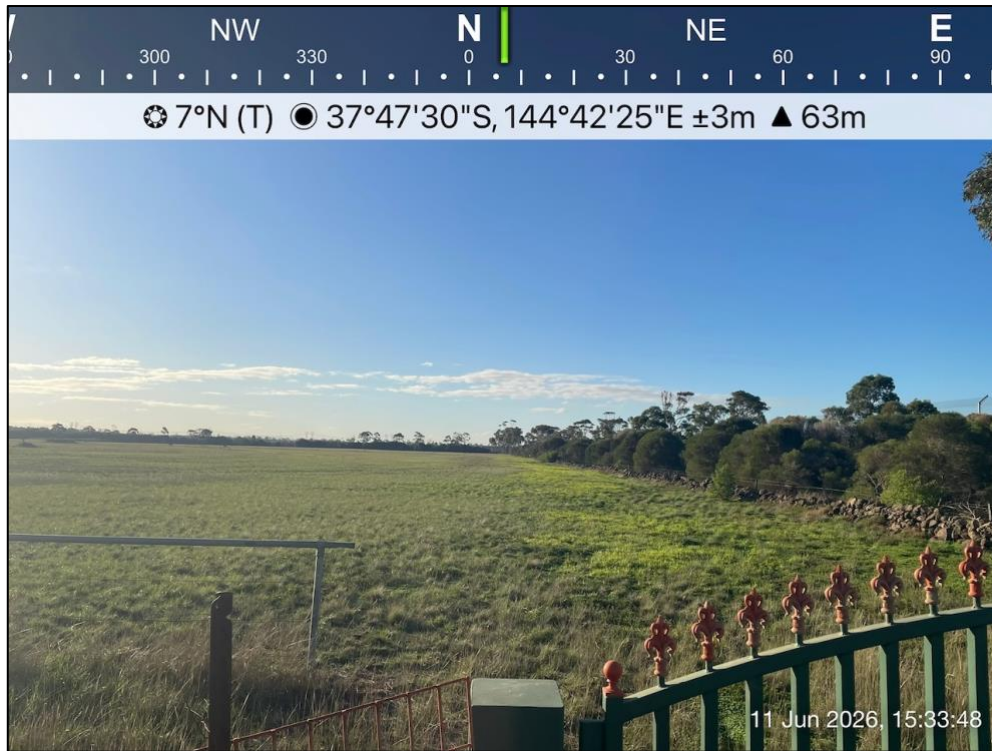


Figure 4 – Classified Grassland north of Middle Road, west of the Ravenhall landfill.

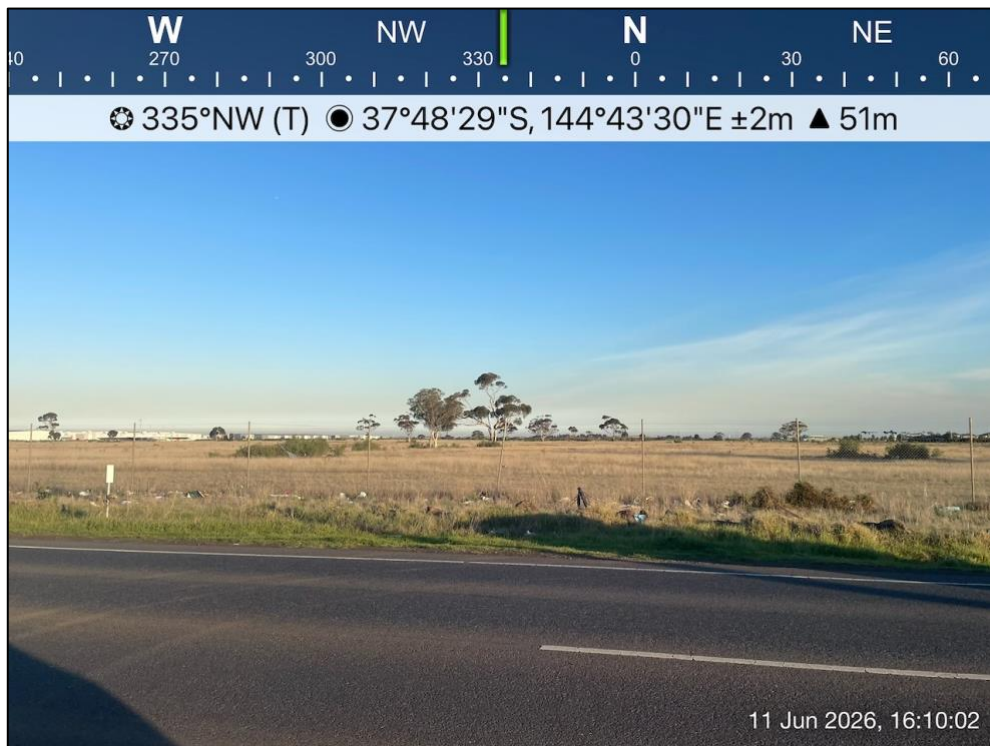


Figure 5 – Classified Grassland on undeveloped land south of Boundary Road.

Woodland

Two relatively small areas of treed vegetation west of Hopkins Road (see Map 5, Figure 6, Figure 7, Figure 8) and a narrow strip between Middle Road and the Ravenhall landfill, best accord with the Woodland group of AS 3959. Woodland typically comprises areas with trees up to 30 m tall and 10-30% foliage cover dominated by eucalypts (and/or callitris), with a prominent grassy understorey that may contain isolated shrubs (Standards Australia, 2020).

It is noted that the Woodland west of Hopkins Road is within the Chartwell East PSP and that Hopkins Road is intended to be significantly widened (from 2 lanes to 6 lanes, totalling 41 m) and may be only an interim hazard. Even if retained, for example in a reserve, once the Chartwell PSP has been developed, they will likely be small patches isolated from the Grassland outside the urban area.

Similarly, the band of trees north of Middle Road may be impacted by road building as it is covered by the PAO for the Outer Metropolitan Ring.E6 Transport Corridor and will remain a very narrow band between the urban area within the precinct and the predominantly low threat and non-vegetated area of the Ravenhall landfill.



Figure 6 – Northern patch of Woodland west of Hopkins Road.



Figure 7 –Southern patch of Woodland at the corner of Hopkins Road and Boundary Road.



Figure 8 – Looking east from Boundary Road towards the back of the Woodland on Hopkins Road.

Excluded vegetation and non-vegetated areas

Areas of low threat vegetation and non-vegetated areas can be excluded from classification in accordance with Section 2.2.3.2 of AS 3959:2018, if they meet one or more of the following criteria:

- (a) *'Vegetation of any type that is more than 100 m from the site.*
- (b) *Single areas of vegetation less than 1 ha in area and not within 100 m of other areas of vegetation being classified vegetation.*
- (c) *Multiple areas of vegetation less than 0.25 ha in area and not within 20 m of the site, or each other, or of other areas of vegetation being classified vegetation.*
- (d) *Strips of vegetation less than 20 m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 m of the site or each other, or other areas of vegetation being classified vegetation.*
- (e) *Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.*
- (f) *Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition⁷, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks' (Standards Australia, 2020).*

The Ravenhall landfill site to the north of the precinct is a mix of low threat vegetation and non-vegetated areas excluded from classification under points (e) and (f) above (see Figure 9). The quarry/landfill site has been excised from the BPA, indicating it is not considered a significant bushfire hazard.

The grounds of the commercial/industrial sites east of Christies Road (see Figure 10) and south of Boundary Road comprise mown law, cultivated gardens and non-vegetated areas excluded from classification under points (e) and (f) above. Land cleared for development (see Figure 11 and Figure 12) are excluded under point (f).

Within the precinct, it is reasonable to assume that all the proposed industrial/commercial areas will be either non-vegetated or comprise low threat vegetation such as maintained lawns, roadsides or cultivated gardens. It is also reasonable to assume that any local parks will be managed in a low threat state. As the layout of development areas, reserves and other areas of retained vegetation has not been determined at this stage, Map 5 does not show any classified vegetation within the precinct, other than the waterway reserves and retarding basins.

⁷ 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 100 mm (Standards Australia, 2020).

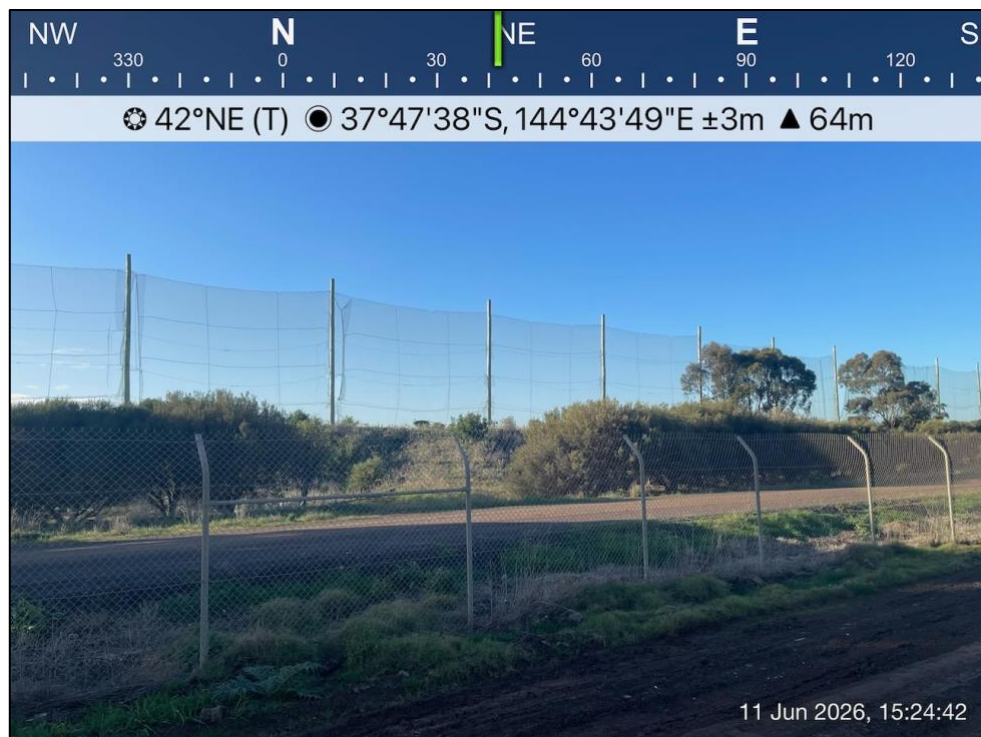


Figure 9 – Low threat area of the Ravenhall landfill.

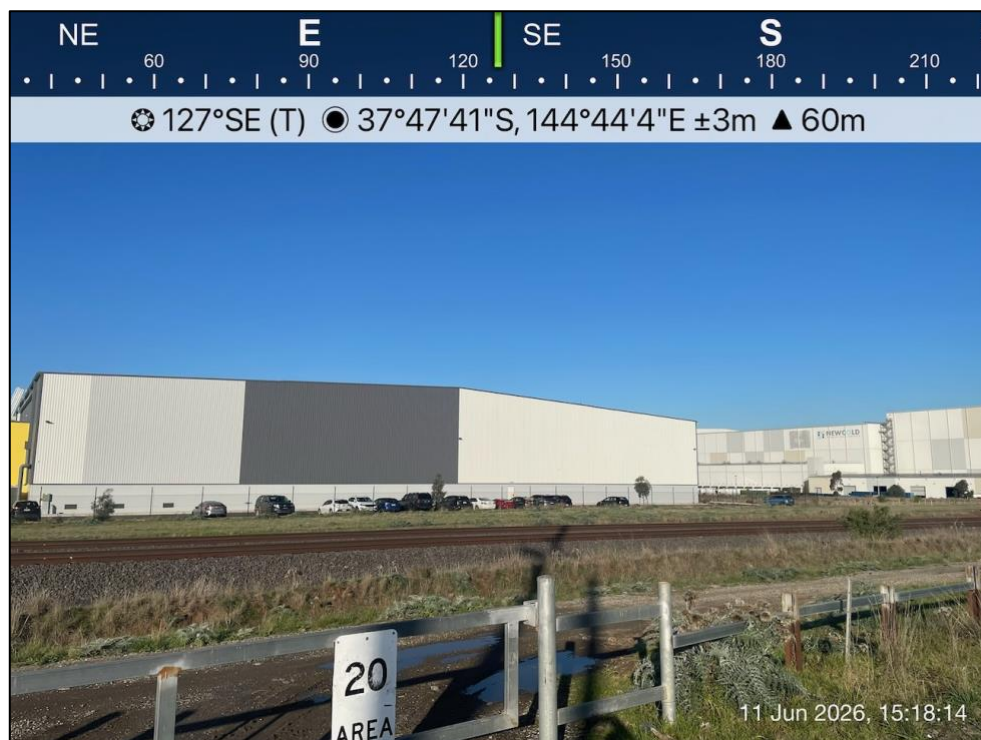


Figure 10 – Low threat commercial/industrial area east of the precinct.



Figure 11 – Land cleared for development, south-west of the corner of Boundary Road and Derrimut Road.



Figure 12 – Land cleared for development, south of Boundary Road.

5.2.2 Future vegetated form

It is assumed that classified Grassland and Woodland to the west of the precinct will remain in at least the medium-term. It is assumed the road reserves within, and around the perimeter of, the precinct will be maintained in a low threat condition (grass generally < 100 mm in height) or will be excludable from classification as narrow strips. Likewise, it is reasonable to assume the grass in the rail reserve will be maintained in a low threat condition during the declared Fire Danger Period as is standard practice in urban areas.

Urban development in the Derrimut Fields Precinct will result in the removal of much of the classified Grassland from within the precinct boundary.

We understand, however, that waterway reserves and retarding basins will be created that may comprise classified vegetation. As development plans have not yet been prepared and in the absence of knowledge of what vegetation each reserve may contain, we provide general advice on the setbacks that might be required at Section 6.1 below.

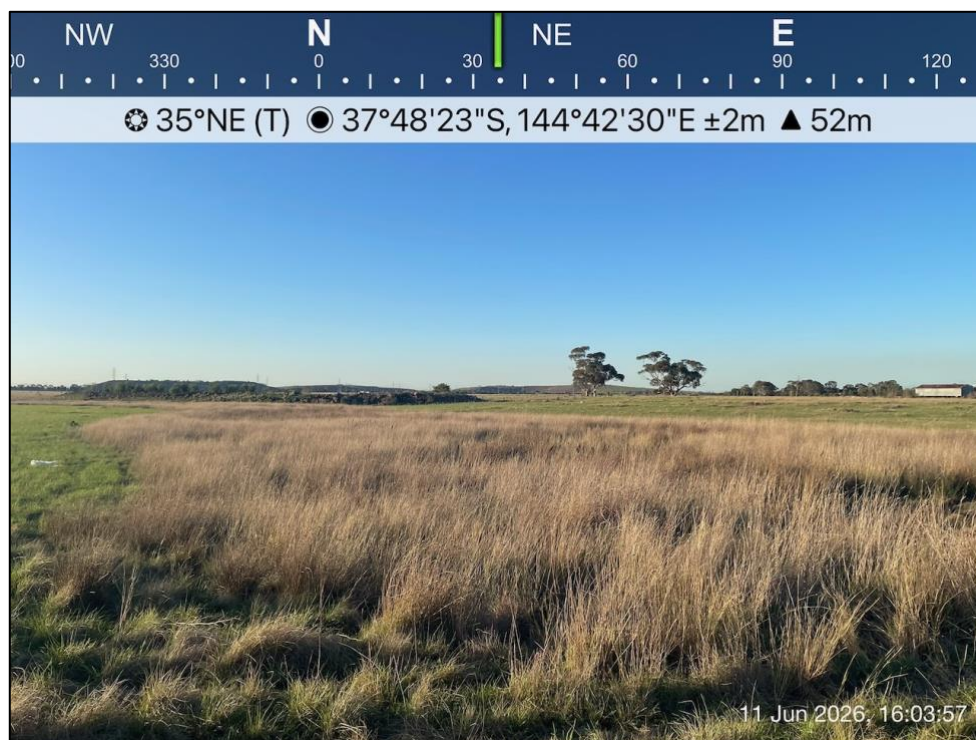


Figure 13 – Vegetation along Skeleton Creek in the south of the precinct, viewed from Boundary Road.

5.2.3 Topography

AS 3959:2018 requires that the 'effective slope' be identified to determine the BAL and applicable development setback distances from classified vegetation. This is the slope of the land under classified vegetation that will most significantly influence the bushfire attack on a building. Two broad types apply:

- Flat and/or Upslope - land that is flat or on which a bushfire will be burning downhill in relation to the development. Fires burning downhill (i.e. on an upslope) will generally be moving more slowly with a reduced intensity.
- Downslope - land on which a bushfire will be burning uphill in relation to the development. As the rate of spread of a bushfire burning on a downslope (i.e. burning uphill towards a development) is significantly influenced by increases in slope, downslopes are grouped into five classes in 5° increments from 0° up to 20°⁸.

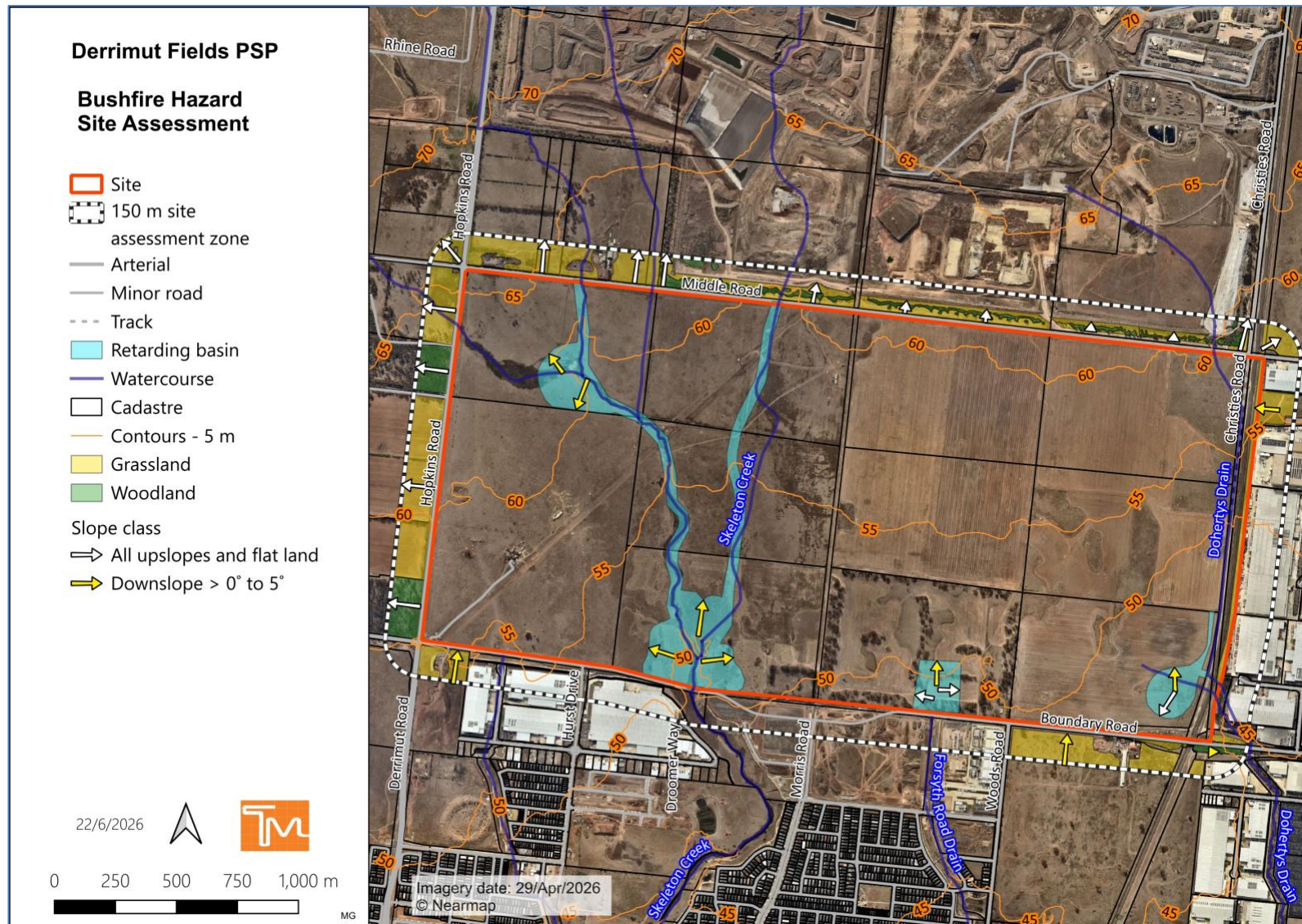
The Derrimut Fields Precinct is on the Victorian volcanic plain. Slopes are gentle and generally angle up away from the precinct, other than to the south where a slight downslope occurs under the patches of classified Grassland south of Boundary Road (see Map 5).

For the purposes of determining the vegetation setback distances required for future development to not be exposed to radiant heat greater than 12.5 kW/m², the applicable slope classes for vegetation outside the precinct boundary include:

- 'All upslopes and flat land' – for the northern and western boundaries.
- 'Downslope >0°-5°' - for parts of the eastern and southern boundaries.

Given the variety of effective slopes that could apply, future development applications will need to undertake a site-specific bushfire hazard site assessment to determine the setback from classified vegetation needed to achieve a radiant heat flux no greater than 12.5 kW/m² as required by Clause 13.02-1S.

⁸ For downslope gradients over 20° and up to 30°, the detailed 'Method 2' procedure of AS 3959:2018 is used to determine the BAL.



Map 5 – Bushfire hazard site assessment. Vegetation classification as per AS 3959:2018 – existing classified vegetation within 150 m site assessment zone and potentially retained classified vegetation within the precinct. Note – final configuration of open space along Skeleton Creek has yet to be determined.

5.3 Agency mitigation strategies and plans

5.3.1 Metropolitan Bushfire Management Strategy 2020

Strategic bushfire management planning in Victoria is jointly delivered by FFMVic, CFA, FRV, EMV and local government. A key output is a Bushfire Management Strategy for each of the six planning regions that cover the state. Each strategy informs more detailed operational-level planning, including municipal fire prevention planning, the Joint Fuel Management Program, and readiness and response planning.

The Metropolitan Bushfire Management Strategy makes no specific mention of bushfire risk for Truganina or surrounds but identifies the western grasslands as being lower risk than the forest in the east of the region (DELWP, 2020b).

Bushfire behaviour and house loss modelling show the western edge of the Melbourne metropolitan area is rated as having the least risk (i.e. less than the lowest risk rating of 'Low-intermediate risk') for potential house loss in the region (DELWP, 2020b).

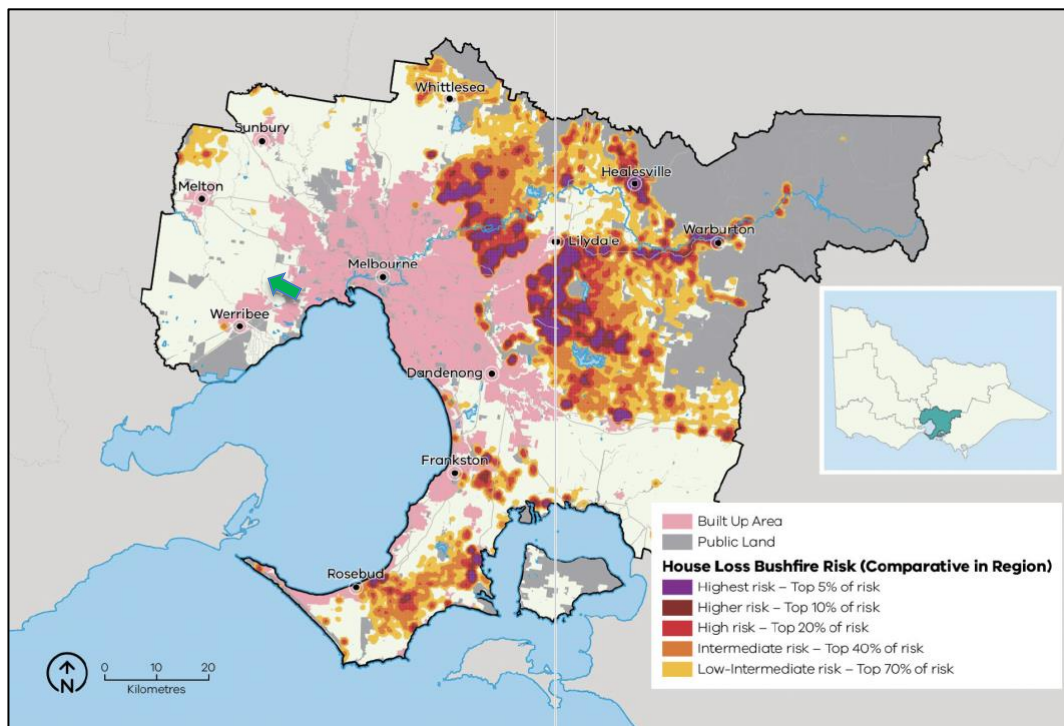


Figure 14 - Modelled risk of house loss (DELWP, 2020b). Approximate location of site indicated by tip of green arrow.

5.3.2 Joint Fuel Management Program

The Ravenhall Nature Conservation Reserve is Landscape Management Zone where planned burning will focus on maintaining and improving ecosystem resilience, and fuel management will also be undertaken for risk reduction, and scheduled for mechanical fuel management (FFMVic, 2026) (see Figure 15).

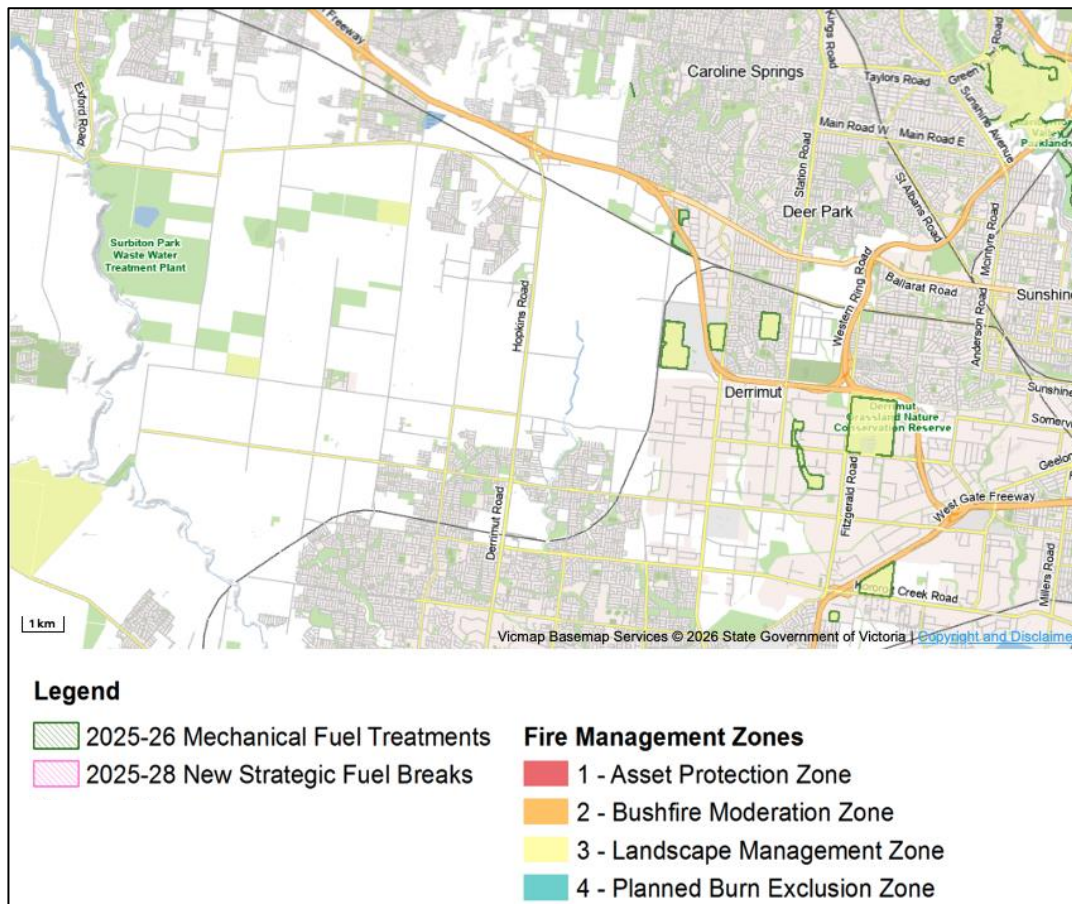


Figure 15 - Fire Management Zones in the vicinity of the Derrimut Fields Precinct (FFMVic, 2026).

5.3.3 Municipal Fire Management Plan

The City of Melton Municipal Fire Management Plan (MFMP) rates grassfire as a significant risk for the interface between rural and urban areas (MMFMPC, 2023). Risk controls include public education, fuel management, roadside management, ignition control, and fire suppression (MMFMPC, 2023).

6 Planning and design response

This section identifies how future development can respond to the bushfire risk, including the requirements of Clause 13.02-1S, published CFA and DTP guidance and the building regulations applicable to construction in a BPA.

6.1 Building setbacks

6.1.1 Setback distances

Clause 13.02-1S requires:

‘Directing population growth and development to low risk locations, being those where:

- *On completion development will not be exposed to high levels of radiant heat, which is no more than 12.5 kilowatts/square metre for locations subject to strategic planning or the preparation of a planning scheme amendment’.*

‘Not preparing, adopting or approving a plan that will result in the introduction or intensification of development in an area that has, or will have on completion, a radiant heat exposure of no more than approving any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will have on completion, a radiant heat exposure of more than 12.5 kilowatts/square metre in the event of a bushfire. In this strategy, ‘plan’ means a strategic plan, policy statement, and amendment to a planning scheme, including an amendment to the Planning Policy Framework, or a plan approved under a provision of the planning scheme’ (Melton Planning Scheme, Clause 13.02-1S).

All future buildings, regardless of whether they are a building class that requires construction to a BAL under the Victorian building regulations, will need to be sufficiently setback⁹ from classified vegetation so that radiant heat flux will be no more than 12.5 kW/m². The setbacks required for Grassland, Shrubland¹⁰ and Woodland, based on the hazard assessment in Section 5 and determined using the simple Method 1 procedure of AS 3959:2018, are shown in Table 3 and an indicative map of potential setback requirements is provided in Map 6. This mapping is indicative

⁹ The setback distance is measured from the edge of the classified vegetation to the external wall of the building, or for parts of the building that do not have external walls (including carports, verandas, decks, landings, steps and ramps), to the supporting posts or columns. The following parts of a building are excluded:

- a) Eaves and roof overhangs.
- b) Rainwater and domestic fuel tanks.
- c) Chimneys, pipes, cooling or heating appliances or other services.
- d) Unroofed pergolas.
- e) Sun blinds (Standards Australia, 2020).

¹⁰ Shrubland is a potential vegetation type in the waterway reserves and retarding basins.

only as the size and location of remnant vegetation being retained within the precinct has not been determined and there are not currently any draft development plans against which to show any overlaps into the developable area.

The setbacks need to be measured from the edge of any classified vegetation. Classified vegetation outside of the precinct includes:

- Pasture (classified as Grassland).
- Areas of trees along Middle Road and Hopkins Road (classified as Woodland).

Classified vegetation outside of the precinct is generally on flat land or upslopes to the north and west and on gentle downslopes to the south and east. In the medium-term all the required setbacks are likely to be provided by the perimeter roads (Hopkins Road, Boundary Road, Middle Road and Christies Road) once they have been constructed or widened.

Conservation reserves and drainage reserves within the precinct are most likely to comprise Grassland (current state) or Shrubland or Woodland (depending on revegetation that occurs).

The size of the reserves, their setback from buildings and other patches of classified vegetation, and how the naturally occurring and/or planted vegetation within them is managed during the fire danger period, will determine whether they are excludable as non-hazardous vegetation.

Vegetation retained within these reserves is likely to be in the 'All upslopes and flat land' or 'Downslope >0-5°' slope class.

The setbacks would need to comprise low threat vegetation or non-vegetated areas.

Note that setbacks are not required from areas of unmanaged vegetation that meet one or more of the exclusion criteria for low threat vegetation (see Section 5.2.1), including:

- Single areas of vegetation less than 1 ha in area and at least 100 m from other areas of classified vegetation.
- Multiple areas less than 0.25 ha (2,500 m²) in area that are at least 20 m from a building or each other.
- Strips of vegetation less than 20 m wide that are at least 20 m from a building, other strips or any other area of classified vegetation.

Table 3 - Building setback distances from classified vegetation for radiant heat to be no greater than 12.5 kW/m²

Slope class	Vegetation		
	Woodland	Shrubland	Grassland
All upslopes and flat land	33 m	19 m	19 m
Downslope >0°-5°	41 m	22 m	22 m

6.1.2 Interface design

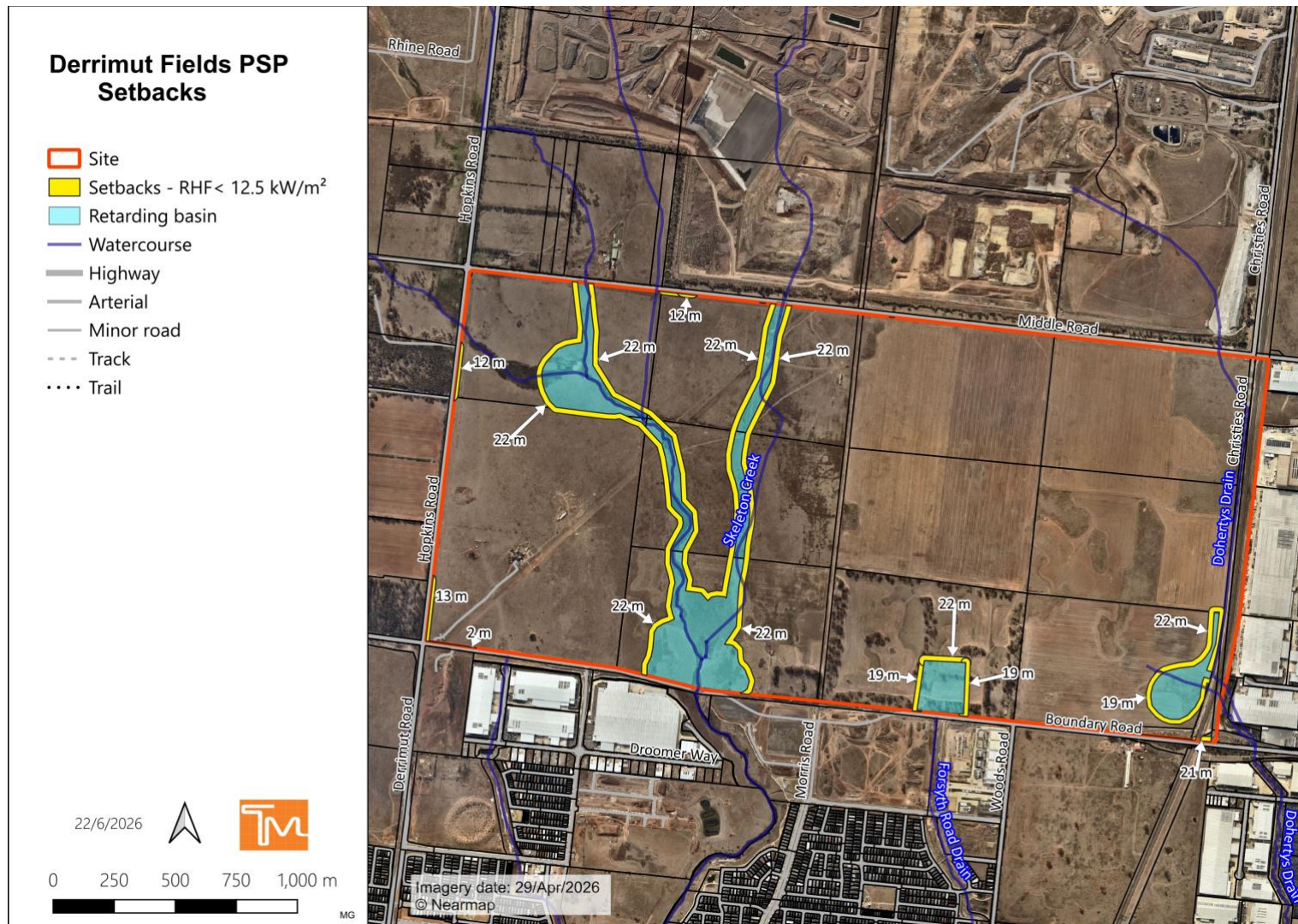
The low threat setback can be achieved by a combination of:

- Setback of buildings within adjacent lots.
- A perimeter road around the precinct or around an internal reserve.
- A managed low threat strip within or adjacent to an internal reserve.

These options are illustrated for a residential setting in Figure 16, but the principles can apply to a commercial/industrial setting such as the Derrimut Fields Precinct.



Figure 16 – An example of a perimeter road, managed parkland and wetland with fringing vegetation. File photograph from Ballarat.



Map 6 - Indicative 12.5 kW/m² setbacks. Note that proposed road widening will likely result in no requirement for setback of buildings within the developable area in response to classified vegetation outside of the precinct.

6.1.3 Perimeter roads

Perimeter roads are a useful bushfire protection measure to provide a firm edge to the urban area and to facilitate property protection and fire fighting (see Figure 17) and can be included within the low threat setback area. Perimeter roads should meet the guidelines detailed in *Vehicle Access and Water Supply Requirements in Residential Developments* (CFA, 2022) as a minimum.

Hopkins Road provides an existing perimeter road on the western boundary of the precinct exposed to the greatest bushfire hazard, and we understand it is to be significantly widened (to 41 m). Boundary Road runs along the southern boundary of the precinct and Middle Road, currently a wide but unsurfaced track, runs along the northern boundary. The reservation for an extension of Christies Road forms the eastern boundary of the precinct. We understand all will be significantly widened and are likely to provide all the required 12.5 kW/m² setback

Perimeter roads should also be considered for any substantial reserves or retarding basins that may contain classified vegetation. If the perimeter roads are to form part of the low threat setback, the roadsides will need to be maintained in a low threat state.



Figure 17 - Illustration of a perimeter road to provide required development setbacks.

6.2 Bushfire Attack Level (BAL) construction standard

6.2.1 Industrial or commercial buildings

Industrial and commercial buildings are typically not of a building class that is required by the Victorian building regulations to be built to a BAL construction standard. Thus, whilst they need

to be sufficiently setback from classified vegetation (see Section 6.1), they will not need to be built to a BAL under the Victorian building regulations.

6.2.2 Accommodation buildings

We understand that the precinct is not intended for residential use. If, however, any Class 1, 2 or 3 buildings are to be built, they will need to be setback the required distance to achieve a BAL no greater than BAL-12.5 (see Section 6.1.1) and constructed to the applicable BAL (i.e. BAL-12.5 or BAL-LOW depending on setback) in accordance with AS 3959:2018 *Construction of buildings in bushfire-prone areas* or, for Class 1 buildings and associated decks only, the NASH Standard – *Steel Framed Construction in Bushfire Areas* (NASH, 2021).

6.2.3 Certain Class 9 buildings

The National Construction Code (NCC) 2022 (ABCB, 2023) requires additional bushfire protection measures for certain Class 9 buildings; namely Class 9a healthcare, Class 9b early childhood centres, primary or secondary schools, Class 9c residential care and a Class 4 part of a building associated with the nominated Class 9 uses.

If these types of buildings are constructed in the future, Specification 43 of NCC 2022 applies as a 'deemed-to-satisfy' pathway for buildings with a BAL rating of no more than BAL-12.5.

Specification 43 prescribes minimum standards for:

- S43C1 Scope
- S43C2 Separation from classified vegetation
- S43C3 Separation between buildings
- S43C4 Separation from allotment boundaries and carparking areas
- S43C5 Separation from hazards
- S43C6 Non-combustible path around building
- S43C7 Access pathways
- S43C8 Exposed external areas
- S43C9 Internal tenability
- S43C10 Building envelope
- S43C11 Supply of water for fire fighting purposes
- S43C12 Emergency power supply
- S43C13 Signage
- S43C14 Vehicular access.

The ability of a Class 9 building to comply with S43C2, S43C3, S43C4, S43C8 and S43C14 may be influenced by the precinct design and for building compliance additional analysis and a performance-solution may be required for this type of development.

6.3 Access and egress

The *Design Guidelines: Settlement Planning at the Bushfire Interface* (DELWP, 2020a) list the elements of an effective road network as:

- Ensuring the spacing of roads leading away from the hazard are no more than 120 m apart on average.
- Designing road widths to meet planning scheme requirements and those of the relevant fire authority.
- Providing multiple roads leading away from the hazard edge.
- Ensuring travel to and from a location is not alongside a bushfire hazard and providing multiple access and egress routes within developed areas to minimise the use of perimeter roads during bushfire.
- Effectively connecting roads to the broader road network within the settlement (DELWP, 2020a).

The key bushfire interfaces for the precinct are the western, which could be exposed to a large, rapidly moving grass fire burning on a wide front and, to a lesser degree, the southern where the classified Grassland is more fragmented by urban development and likely to be substantially removed as the Truganina PSP is completed. It is recommended that future subdivisions be required to provide multiple roads leading into the centre of the precinct away from the bushfire hazard.

Future subdivisions should be designed to achieve the relevant characteristics outlined above¹¹ and provide adequate emergency vehicle access (see CFA, 2022b). This requirement should be included in the UGZ ordinance or other instrument intended to guide development in the precinct.

6.4 Vegetation management within the precinct

Vegetation on private property throughout the precinct should be maintained in a low threat state. This requirement should be included in the UGZ or other planning instrument intended to guide development in the precinct.

Table 4 to Clause 53.02-5 in the Melton planning scheme can be used as a guide to managing vegetation in a low threat condition:

- 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.

¹¹ The first dot point relating to the frequency of roads leading away from the hazard is intended for residential areas and may be more than is required for an industrial/commercial area.

- Within 10 m of a building, flammable objects must not be located close to the vulnerable parts of the building.
- Plants greater than 10 cm in height must not be placed within 3 m 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 m in area and must be separated by at least 5 m.
- Trees must not overhang or touch any elements of the building.
- The canopy of trees must be separated by at least 5 m.
- There must be a clearance of at least 2 m between the lowest tree branches and ground level (Melton Planning Scheme, Clause 53.02-5).

Note these requirements apply to defensible space in higher hazard locations covered by the BMO and could be varied within the Derrimut Fields Precinct.

6.5 Bushfire Site Management Plan

If the precinct is to be developed in stages, a Bushfire Site Management Plan or similar could be required to ensure that undeveloped land adjacent to areas being developed is managed in a low threat state (i.e. grass cut to less than 100 mm in height during the declared Fire Danger Period) until it in turn is rendered permanently low threat through urban development. This requirement should be included in the UGZ or other appropriate planning instrument intended to guide development in the precinct.

6.6 Excision of areas from the BPA

It is likely that as development progresses, land within the Derrimut Fields Precinct will become eligible to be excised from the BPA. DTP review and excise areas from the BPA approximately every 6 months, particularly in growth areas where the hazard is removed as urban development occurs.

Areas that may be eligible for excision as urban development progresses are:

- Land more than 60 m from classified Grassland, e.g. from the pasture and cropping outside precinct or grassland drainage or conservation reserves; and
- Land more than 300 m from classified Woodland.

6.7 Incorporating bushfire protection measures in the UGZ or another instrument

The inclusion of bushfire protection measures in the UGZ or another appropriate planning instrument can address bushfire risk early in the planning process. It can provide firm direction regarding bushfire protection measures to be determined at the planning permit stage for individual development applications.

The bushfire protection measure requirements could be incorporated into the planning ordinance as a sub-section titled 'Bushfire Management Requirements'. The following content could be considered whilst the land remains in a BPA:

- Direction that buildings are to be setback from classified vegetation external to and within the precinct to ensure radiant heat flux on buildings will be less than 12.5 kW/m² (see Section 6.1).
- Setback distances from Table 3 of this report presented in a table and/or shown on a map/s.
- Provision of perimeter roads on the interface with areas of enduring or medium-term bushfire hazard external to and within the precinct. The perimeter road can form part of the low threat setback (see Section 6.1.3).
- Provision of multiple egress routes into the centre of the precinct, away from the bushfire hazard interface particularly the hazard to the west and south of the precinct (see Section 6.3).
- Roads are to comply with fire service requirements for emergency access/egress.
- Provision of water for fire fighting via a reticulated hydrant network, supplemented by static water supplies if required by NCC 2022 for the class and size of building (see Section 6.3).
- Inclusion of bushfire in the emergency management plans for businesses directly exposed to a bushfire hazard.
- Requirement for subdivision applications to include a Bushfire Site Management Plan (see Section 6.5) identifying and confirming:
 - The staging of development.
 - Management of interim bushfire hazard setbacks (i.e. grass to be cut to less than 100 mm in height until land is rendered permanently low threat through urban development).
- Vegetation on private property to be maintained in a low threat condition (see Section 6.4).

These measures would not be applicable to parts of the precinct that have been excised from the BPA.

7 Clause 13.02-1S Bushfire Planning

The following sub-sections provide a summary response about how development in the Derrimut Fields Precinct can respond to the objectives and strategies for bushfire safety in the Policy Planning Framework at Clause 13.02-1S.

7.1 Protection of human life

Priority must be given to the protection of human life.

Prioritising the protection of human life over all other policy considerations.

The site is in a low bushfire risk location. It is currently in the BPA (but not covered by the BMO) but is likely to be excised from the BPA in entirety as it and surrounding precincts are developed. Until that time, there will be good egress to adjacent areas that are not in a designated BPA.

The protection of human life can be prioritised by:

- Ensuring future buildings are located so that radiant heat impacting upon the buildings will be no greater than 12.5 kW/m².
- Complying with the building regulations for construction in a BPA.
- Providing access and water supplies for fire fighting.

There will be no increase in risk to nearby residents or community infrastructure from the proposed development.

Directing population growth and development to low risk locations and ensuring the availability of, and reliable access to, areas where human life can be better protected from the effects of bushfire.

As identified in Section 5, the site is in a low bushfire risk location. Future buildings will be setback sufficiently from any hazardous vegetation such that they would be exposed to radiant heat no greater than 12.5 kW/m² in the vent of bushfire. The majority of the precinct would receive a BAL-LOW rating upon completion of development and will likely be excised from the BPA.

The nearest *lowest* risk locations are the established commercial area of the Robinsons Road Employment Area South to the east and areas of the Truganina PSP to the south that are not in the BPA.

Reducing the vulnerability of communities to bushfire through the consideration of bushfire risk in decision making at all stages of the planning process.

This report provides the basis for incorporating bushfire risk into decision making associated with planning for the development.

Community resilience to bushfire will be strengthened when a strategic planning proposal demonstrates that Clause 13.02-1S strategies have been applied. The CFA provide principles to respond to Clause 13.02-1S including that settlement planning decisions should:

- Direct development to locations of lower bushfire risk.
- Carefully consider development in locations where there is significant bushfire risk that cannot be avoided.
- Avoid development in locations of extreme bushfire risk.
- Avoid development in areas where planned bushfire protection measures may be incompatible with other environmental objectives.

Rezoning and subsequent development of the Derrimut Fields site can appropriately implement the strategies in Clause 13.02-1S that aim to prioritise protection of human life and will, therefore, meet the CFA strategic planning principles for bushfire.

The inclusion of bushfire protection measures in the UGZ or another appropriate planning instrument can address bushfire risk early in the planning process. It can provide firm direction regarding bushfire protection measures to be determined at the planning permit stage for individual development applications.

7.2 Bushfire hazard identification and risk assessment

The bushfire hazard must be identified and an appropriate risk assessment undertaken.

Applying the best available science to identify vegetation, topographic and climatic conditions that create a bushfire hazard.

This report identifies the hazard in accordance with the commonly accepted methodology of AS 3959:2018 and guidance provided in *Bushfire Hazard Assessments - Guideline* (DTP, 2026a).

The type and extent of (hazardous) vegetation within, and up to 5 km around, the site has been considered and within 150 m of the site, classified into AS 3959:2018 vegetation groups. Classification was based on the anticipated long-term state of the vegetation, aerial imagery, site assessment and published guidance on vegetation assessment for bushfire purposes.

The site assessment and publicly available contour data for the area determined.

At a landscape scale, a 5 km local and neighbourhood assessment zone and 20 km landscape assessment zone have been employed.

In relation to climatic conditions and fire weather, the AS 3959:2018 default FFDI 100/GFDI 130 benchmark used in the Victorian planning and building system has been applied.

Considering the best available information about bushfire hazard, including the bushfire prone area map.

The extent of BPA coverage has been considered and is shown in Map 1 and Map 4. This is based on the most recent BPA mapping for the area.

Applying the Bushfire Management Overlay to land where the extent of vegetation can create an extreme bushfire hazard.

The site is not covered by the BMO in the Melton Planning Scheme.

Considering and assessing the bushfire hazard on the basis of:

- ***Landscape conditions - meaning the conditions in the landscape within 20 kilometres (and potentially up to 75 kilometres of the site).***
- ***Local and neighbourhood conditions - meaning conditions in the area within approximately 5 kilometres of the site.***
- ***The site and conditions within 150 metres.***

The hazard has been assessed and described at the landscape, local and neighbourhood, and site scales (see Section 5).

At the site scale, the assessment follows the AS 3959:2018 methodology for classifying vegetation and topography within a 100 m assessment zone, and for this study extending out to 150 m around the site.

At the broader scale a 20 km and 5 km radius of the site has been applied in accordance with guidance about assessing risk provided in *Bushfire Hazard Assessments - Guideline* (DTP, 2026).

Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.

Terramatrix is not aware of any consultation with the fire service. It is recommended that they be provided this report, and their recommendations incorporated into an updated report or planning ordinance if required.

Ensuring that strategic planning documents, planning scheme amendments, planning permit applications and development plan approvals properly assess bushfire risk and include appropriate bushfire protection measures.

DTP advisory and practice notes, the DTP *Bushfire Hazard Assessments – Guideline* (DTP, 2026a), Clause 13.02-1S and the building regulations invoked by the BPA coverage, specify the general requirements and standards for assessing the risk. These have been used in this report as appropriate and bushfire protection measures have been identified commensurate with the risk.

Relevant regional bushfire plans have been identified, reviewed and incorporated into this assessment as appropriate.

Not approving development where a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied or bushfire protection measures can be adequately implemented.

If the objectives and strategies of Clause 13.02-1S are successfully implemented, including compliance with the applicable building regulations, as discussed in this report, then the risk can be deemed to be acceptably mitigated such that development can proceed.

At a site-scale, all buildings can be sited so as to achieve a BAL-12.5 or BAL-Low rating, indicating that the bushfire protection measures can provide an acceptable level of safety to future dwellings.

The proposed bushfire protection measures can be readily implemented through the urban design and application of the building controls in a BPA.

The property has a long history of agricultural/horticultural use. The precinct can be designed so that bushfire protection measures for future development do not impact unacceptably on environmental objectives, e.g. by creating reserves to protect waterways and other environmental values and then setting future development back from it sufficiently so that sensitive areas do not need to be managed for bushfire safety.

7.3 Strengthening the resilience of settlements and communities

Assessing the bushfire hazard at different spatial scales (landscape, local and neighbourhood and site), the likely fire behaviour, bushfire risk and the potential for local and neighbourhood-scale destruction.

The hazard and potential fire behaviour has been assessed and described at the landscape, local and neighbourhood, and site scales (see Section 5). At the site scale, the assessment follows the AS 3959:2018 methodology for classifying vegetation and topography and at the broader scale a

20 km and 5 km radius of the site has been applied in accordance with guidance about assessing risk provided in *Bushfire Hazard Assessments - Guideline* (DTP, 2026a).

Directing population growth and development to low risk locations, being those where:

- ***The risk from large bushfires in the wider landscape can be managed including the risk associated with higher levels of ember attack.***
- ***On completion, development will not be exposed to high levels of radiant heat, which is no more than 12.5 kilowatts/square metre for locations subject to strategic planning or the preparation of a planning scheme amendment.***
- ***There is reliable access to areas of land where human life can be better protected from the effects of bushfire.***
- ***Bushfire protection measures can be provided to manage the on-going risk from bushfire.***

The precinct is adjacent to the urban area of metropolitan Melbourne. It is not isolated or exposed to heavy fuel load forest or steep, rugged terrain. A large bushfire can only approach the site from the north or west. This could be a fast-moving grassfire, but ember attack would be limited. A more localised fire could develop in Ravenhall Nature Conservation Reserve to the east of the precinct but is unlikely to exceed the assumptions about fire behaviour in AS 3959:2018.

The applicable distances for dwellings or other buildings to be setback from classifiable vegetation, such that radiant heat flux is calculated to be no greater than 12.5 kW/m² have been identified. Taking into consideration the assessment of landscape risk, implementation of these can be deemed to acceptably mitigate the risk.

Large areas within the site will be at least 50 m from Grassland and 100 m from other classifiable vegetation and can, therefore, be deemed BAL-LOW locations. Areas around the site where BAL-LOW currently applies, are those parts of the Truganina PSP, Robinson Road Employment Area and Ravenhall landfill that are not in a designated BPA (see Map 4). These are immediately adjacent to the precinct, and it is anticipated that the non-BPA areas will increase as surrounding PSPs are completed.

Multiple egress routes will be provided away from the west side of the precinct and onto Hopkins Road and Boundary Road. These roads are intended to be upgraded to facilitate traffic to and from Derrimut Fields and other developing precincts.

The proposed bushfire protection measures can be readily implemented through the urban design and application of the building controls in a BPA.

Ensuring alternative low-risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis have been assessed to ensure the proposed location for growth prioritises human life.

No alternative low risk development locations have been identified or assessed as part of this study.

It is noted that the Derrimut Fields Precinct addresses the need for employment land in Melbourne's west by making more land available for industrial development (DTP, 2026c).

Ensuring the bushfire risk to existing and future residents, property and community infrastructure will not increase as a result of future land use and development.

Achieving no net increase in risk to existing and future residents, property and community infrastructure, through the implementation of bushfire protection measures and where possible reducing bushfire risk overall.

There will be no increase in risk to existing and future residents or community infrastructure if:

- Future buildings are setback from hazardous vegetation so that exposure to radiant heat during bushfire will be no greater than 12.5 kW/m², an appropriate water supply for fire fighting is provided via a conventional reticulated hydrant system, and appropriate access/egress for emergency vehicles and residents is provided via a conventional road network.
- It is ensured that any vegetation retained or re-established, does not pose a hazard within the site or create an increase in the hazard exposure for the urban areas adjacent to the precinct.

Not preparing, adopting or approving a plan that will result in the introduction or intensification of development in an area that has, or will on completion have, a radiant heat exposure of more than 12.5 kilowatts/square meter in the event of a bushfire. In this strategy, 'plan' means a strategic plan, policy statement, and amendment to a planning scheme, including an amendment to the Planning Policy Framework, or a plan approved under a provision of the planning scheme.

If the setback distances from any hazardous vegetation, as identified in this report (see Section 6.1), are implemented, then development will not be exposed to radiant heat greater than 12.5 kW/m².

7.4 Avoiding unacceptable biodiversity impacts

Ensure settlement growth and development approvals can implement bushfire protection measures without unacceptable biodiversity impacts by discouraging settlement growth and development in bushfire affected areas that are important areas of biodiversity.

The site was previously used for agriculture and is largely devoid of vegetation, other than grass and scattered eucalypts in the south of the precinct opposite the Forsyth Road Drain.

The bushfire protection measures proposed are not expected to have unacceptable impact on environmental values.

7.5 Use or development that will result in people congregating in large numbers

When assessing a planning permit application of a use or development that will result in people congregating in large numbers:

- ***Consider the risk of bushfire to people, property and community infrastructure.***
- ***Require the implementation of appropriate bushfire protection measures to address the identified bushfire risk; and***
- ***Ensure development can implement bushfire protection measures without unacceptable biodiversity impacts.***

The proposed development is an industrial/commercial area that will result in large numbers of people being present. This report has considered the bushfire risk and appropriate bushfire protection measures can be implemented without unacceptable biodiversity impacts.

8 Clause 53.02-6 Bushfire prone area decision guidelines

Clause 53.02-6 applies to:

- An application under any provision of the planning scheme to subdivide land in a bushfire prone area that is not in a Bushfire Management Overlay.
- An application under any provision of the planning scheme to construct a building or construct or carry out works associated with the use of land for accommodation, education centre, hospital, indoor recreation facility, major sports and recreation facility or place of assembly in a bushfire prone area that is not in a Bushfire Management Overlay (Melton Planning Scheme, Clause 53.02-1).

As future development of the Derrimut Fields Precinct will require subdivision of land that will likely still be in a designated BPA, a brief response is provided to the 'Bushfire prone area decision guidelines' at Clause 53.02-6 of the Melton Planning Scheme.

8.1 General

The Municipal Planning Strategy and the Planning Policy Framework.

Derrimut is identified as part of the State significant Western Industrial Precinct, where land is to be protected from incompatible land uses to allow for further industrial growth (Melton Planning Scheme, Clause 17.03-3S).

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.

The City of Melton MFMP and public land fuel management have been outlined at Section 5.3 of this report.

The risk of bushfire to people, property and community infrastructure.

There will be no increase in risk to existing and future residents or community infrastructure if:

- Future buildings are setback from hazardous vegetation so that exposure to radiant heat in the event of a bushfire will be no greater than 12.5 kW/m², an appropriate water supply for fire fighting is provided via a conventional reticulated hydrant system, and appropriate access/egress for emergency vehicles and residents is provided via a conventional road network.
- It is ensured that any vegetation retained or re-established, does not pose a hazard within the site or create an increase in the hazard exposure for residents around the site.

Development of the Derrimut Fields Precinct will provide a substantial low threat urban area, with contemporary bushfire protection measures, on the western edge of Melbourne.

Whether the risk arising from the broader landscape can be mitigated to an acceptable level.

The site is in a low-moderate bushfire risk location, considered to have characteristics of Landscape Types 1 and 2 as per DTP (2026a).

DTP (2020a) advise that in Type 1 landscapes;

- *'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' (DTP, 2026a).*

In Type 2 landscapes:

- *'Strategic planning proposals may 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 & CFA, 2020) should be considered when responding to bushfire policy and applying bushfire protection measures' (DTP, 2026a).*

The *Design Guidelines: Settlement Planning at the Bushfire Interface* (DELWP, 2020a) should be considered in the design of future subdivisions. Relevant design guidelines include:

- Urban development with contemporary bushfire protection measures can provide protection to the established urban areas in lower risk settings.
- Low threat public open space and perimeter roads should separate development from an enduring bushfire hazard.
- Setbacks should be provided so that radiant heat on development will not exceed 12.5 kW/m² in the event of bushfire.
- Local parks and drainage reserves should be maintained in a low threat state and/or provided with a perimeter road.
- Multiple egress routes should be provided away from the hazard interface.

Whether bushfire protection measures to address the identified bushfire risk are required and can be practically implemented, including any measures set out in Clause 53.02-4.

The following bushfire protection measures should be provided commensurate to the level of bushfire risk to the site:

- Low threat setbacks for future development from classified vegetation to reduce radiant heat flux to no greater than 12.5 kW/m² in the event of a bushfire.
- Construction of applicable buildings to a BAL if required under the Victorian building regulations.
- Adequate access and egress for emergency management vehicles by a conventional road network, including perimeter roads between the development area and unmanaged vegetation to assist property defence and fire fighting.

- A reliable water supply for fire fighting reticulated hydrant network, supplemented by static water supplies if required by NCC 2025 for the class and size of building.
- If required, a site/construction management plan can be implemented to manage the bushfire risk before and during construction of a multi-stage development.

The inclusion of bushfire protection measures in the UGZ, or another appropriate planning instrument, can address bushfire risk early in the planning process. It can provide firm direction regarding bushfire protection measures to be determined at the planning permit stage for individual development applications.

Whether bushfire protection measures can be implemented without unacceptable biodiversity impacts.

The property has a long history of agricultural/horticultural use. The precinct can be designed so that bushfire protection measures for future development do not impact unacceptably on environmental objectives, e.g. by creating reserves to protect waterways and other environmental values and then setting future development back from it sufficiently so that sensitive areas do not need to be managed for bushfire safety.

8.2 Proposed vegetation

If vegetation is proposed, whether it will cause or contribute to the bushfire hazard or increase the risk to life, property, or community infrastructure.

Vegetation along Skeleton Creek is currently Grassland and is anticipated to remain so unless actively revegetated with trees and shrubs. Melbourne Water should clarify the future vegetated form of these areas.

If the creek reserve and associated retarding basins are to contain classified vegetation, development will be setback sufficiently to reduce radiant heat flux to no greater than 12.5 kW/m² in the event of a bushfire.

8.3 Dwellings and small second dwellings

Whether a static water supply for bushfire fighting is required having regard to the size of the lot, proximity to a hydrant and connection to reticulated water.

Not applicable.

If a vehicle accessway is greater than 30 metres in length or the relevant fire authority requires access to the static water supply on the land, whether the access design and construction requirements set out in Table 3 to Clause 53.02-5 should be met.

Not applicable.

8.4 Vulnerable people

For a building used for accommodation (other than a dwelling or small second dwelling), education centre, hospital, indoor recreation facility, major sports and recreation facility or place of assembly the responsible authority must also consider:

- ***The capacity for vulnerable occupants to evacuate.***
- ***Whether emergency management arrangements are provided and are sufficient for the site.***
- ***Whether the risk to vulnerable occupants warrants the closure of the use or development on days of elevated fire danger.***
- ***Whether measures to shelter in place are warranted and whether the measures will protect human life.***
- ***The net benefit provided to any existing vulnerable people.***

No vulnerable uses are likely.

8.5 Subdivision

Whether each lot can achieve the 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 corresponding distance specified in Column C of that table.

All buildings will be sufficiently separated from classified vegetation to achieve Column A to Table 1 setbacks (i.e. to ensure radiant heat flux will be no greater than 12.5 kW/m²).

Whether a staged subdivision manages interim bushfire hazard during the construction or staging.

If the site is to be developed in stages, a Bushfire Site Management Plan or similar could be implemented to ensure that undeveloped land adjacent to areas being developed is managed in a low threat state (i.e. grass cut to less than 100 mm in height during the declared Fire Danger period) until it in turn is rendered permanently low threat through urban development.

9 Conclusion

This study has assessed the bushfire hazard in and around the Derrimut Fields Precinct, in accordance with Clause 13.02-1S in the Melton Planning Scheme, the AS 3959:2018 methodology invoked by the Victorian planning and building system, and additional guidance provided in DTP planning and advisory notes.

The precinct is in a designated BPA but is not covered by the BMO. It is identified in the Planning Policy Framework as an industrial growth area of State significance.

The precinct is in a low bushfire risk landscape. Assessed at the broader landscape scale, e.g. for 20 km, the landscape setting of the Derrimut Fields Precinct accords best with Landscape Type 2. The bushfire hazard is predominantly Grassland on flat or gently sloping terrain.

There are low risk urban areas immediately to the east and south of the precinct that are not in the BPA, and which offer a place of shelter from any bushfire that may occur.

If future buildings are setback sufficiently from any hazardous vegetation so that radiant heat flux will be 12.5 kW/m² or less, and bushfire protection measures are applied as outlined in this report (see Section 6.7) the bushfire risk can be deemed to be acceptably mitigated. The potentially applicable setbacks are:

Slope class	Vegetation		
	Woodland	Shrubland	Grassland
All upslopes and flat land	33 m	19 m	19 m
Downslope >0°-5°	41 m	22 m	22 m

If parts of the precinct are excised from the BPA as urban development permanently removes the bushfire hazard, no setbacks would be required.

Perimeter roads around the precinct and around waterway reserves and retarding basins containing classified vegetation should be incorporated where possible, to contribute to the setbacks for future development from any potentially hazardous vegetation, and to facilitate property protection and fire fighting. Much of the perimeter of the precinct is bounded by existing roads, that are likely to be widened (to 41 m corridor) as development occurs in the surrounding area.

The development of the precinct will provide a large, reliably low threat area that could provide a place of safety during bushfire. Good access and egress for emergency management vehicles and residents, in the event of a bushfire, can be achieved via a conventional road network with multiple links to the adjacent urban area.

A reliable water supply for fire fighting can be provided via a reticulated hydrant system, supplemented by static supplies if required under NCC 2025.

10 References

ABCB (2025) *Building Code of Australia, Volumes 1 and 2 of the National Construction Code (NCC)*, Australian Building Codes Board (ABCB). Available at <<http://abcb.gov.au/ncc-online/>>.

AFAC (2020) *Fire and emergency services and climate change*. Position Paper v1.0. Australasian Fire and Emergency Service Authorities Council (AFAC), Available at <<https://knowledge.aidr.org.au/resources/emergency-management-and-climate-change/>>.

AFDRS (2022) *Fire Behaviour Index Technical Guide*. Australian Fire Danger Rating System (AFDRS) Version 3.0.

CFA (2022) *Design Requirements, Vehicle Access and Water Supply Requirements in Residential Developments*. Country Fire Authority, East Burwood.

CSIRO/BOM (2024) *State of the Climate 2024*, CSIRO and The Bureau of Meteorology (BOM), Commonwealth of Australia. Available at <<https://www.csiro.au/en/research/environmental-impacts/climate-change/state-of-the-climate>>.

DELWP (2019) *Bushfire Mapping Methodology and Criteria* Fact Sheet. Department of Environment, Land, Water and Planning, Melbourne. Available at <https://www.planning.vic.gov.au/__data/assets/pdf_file/0030/639507/Fact-sheet-Bushfire-mapping-methodology-and-criteria.pdf>.

DELWP (2020a) *Design Guidelines, Settlement Planning at the Bushfire Interface*. Department of Environment, Land, Water and Planning, Melbourne. Available at <<https://www.planning.vic.gov.au/policy-and-strategy/bushfire>>.

DELWP (2020b) *Metropolitan Bushfire Management Strategy*. Department of Environment, Land, Water and Planning, Melbourne. Available at <<https://www.safertogether.vic.gov.au/strategic-bushfire-management-planning>>.

DPCD (2012) *Regional Bushfire Planning Assessment – Metropolitan Region*. Department of Planning and Community Development, Melbourne.

DTP (2026a) *Bushfire Hazard Assessments – Guidelines*. Department of Transport and Planning, Melbourne.

DTP (2026b) *Planning Permit Applications in a Bushfire Management Overlay or Bushfire Prone Area – Guideline*.

DTP (2026c) *Derrimut Fields*. Department of Transport and Planning, Melbourne. Available at <<https://vpa.vic.gov.au/project/derrimut-fields/>>.

FFMVic (2026) *Joint Fuel Management Program*. Forest Fire Management Victoria, Melbourne. Available at <<https://www.ffm.vic.gov.au/bushfire-fuel-and-risk-management/joint-fuel-management-program>>.

Long M (2006) A climatology of extreme fire weather days in Victoria. *Australian Meteorological Magazine*, **55**, 3-18.

Melton Planning Scheme *Clause 12.03-1S River and riparian corridors, waterways, lakes, wetlands and billabongs*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/12.03>>.

Melton Planning Scheme *Clause 13.01-1S Natural Hazards and Climate Change*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/13.01-1S>>.

Melton Planning Scheme *Clause 13.02-1S Bushfire Planning*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/13.02-1S>>.

Melton Planning Scheme *Clause 13.02-1L Bushfire Planning*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/13.02-1L>>.

Melton Planning Scheme *Clause 17.03-3S Significant industrial land*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/17.03-3S>>.

Melton Planning Scheme *Schedule 2 to Clause 42.01 Environmental Significance Overlay*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/42.01>>.

Melton Planning Scheme *Schedule 3 to Clause 42.03 Significant Landscape Overlay*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/42.03>>.

Melton Planning Scheme *Clause 43.01 Heritage Overlay*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/43.01>>.

Melton Planning Scheme *Schedule 3 to Clause 43.02 Design and Development Overlay*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/43.02>>.

Melton Planning Scheme *Schedule 1 to Clause 44.04 Land Subject to Inundation Overlay*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/44.04>>.

Melton Planning Scheme *Schedule 3 to Clause 45.01 Public Acquisition Overlay*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/45.01>>.

Melton Planning Scheme *Clause 53.02 Bushfire Planning*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/53.02>>.

Melton Planning Scheme *Clause 56.09 Utilities*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/56.09>>.

Melton Planning Scheme *Clause 71.02-3 Integrated Decision Making*. Available at <<https://planning-schemes.app.planning.vic.gov.au/Melton/ordinance/71.02>>.

MMFMPC (2023) *Municipal Fire Management Plan City of Melton*. Melton Municipal Fire Management Planning Committee, Melton.

NASH (2021) *NS 300 NASH Standard – Steel Framed Construction in Bushfire Areas 2021*. National Association of Steel-framed Housing Inc, Hartwell, Victoria.

Standards Australia (2020) *AS 3959:2018 Construction of buildings in bushfire-prone areas, Including Amendment 3*. Standards Australia, North Sydney.

VPA (2026) *Place Based Plan Derrimut Field Precinct Structure Plan*. Victorian Planning Authority, Melbourne.

11 Appendix A: BAL construction standards

Bushfire Attack Level (BAL)	Risk Level	Construction elements are expected to be exposed to...	Comment
BAL-Low	VERY LOW: There is insufficient risk to warrant any specific construction requirements but there is still some risk.	No specification.	At 4 kW/m ² pain to humans after 10 to 20 seconds exposure. Critical conditions at 10 kW/m ² and pain to humans after 3 seconds. Considered to be life threatening within 1 minute exposure in protective equipment.
BAL-12.5	LOW: There is risk of ember attack.	A radiant heat flux not greater than 12.5 kW/m ² .	At 12.5 kW/m ² standard float glass could fail and some timbers can ignite with prolonged exposure and piloted ignition.
BAL-19	MODERATE: There is a risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to radiant heat.	A radiant heat flux not greater than 19 kW/m ² .	At 19 kW/m ² screened float glass could fail.
BAL-29	HIGH: There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level of radiant heat.	A radiant heat flux not greater than 29 kW/m ² .	At 29 kW/m ² ignition of most timbers without piloted ignition after 3 minutes exposure. Toughened glass could fail.
BAL-40	VERY HIGH: There is a much increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front.	A radiant heat flux not greater than 40 kW/m ² .	At 42 kW/m ² ignition of cotton fabric after 5 seconds exposure (without piloted ignition).
BAL- FZ (Flame Zone)	EXTREME: There is an extremely high risk of ember attack and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front.	A radiant heat flux greater than 40 kW/m ² .	At 45 kW/m ² ignition of timber in 20 seconds (without piloted ignition).

Adapted from Standards Australia (2020).