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20 FEBRUARY 2019 (v2.0)

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BUSHFIRE PLANNING ASSESSMENT

60 Valley Road, Langwarrin

FINAL REPORT

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Version Control		
v1.0	8 February 2019	Version 1 for PLC
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Bushfire Planning

Bushfire Planning is a town planning service that works with public and private sector clients to understand and apply planning scheme bushfire policies and requirements. It is led by Kevin Hazell who is a qualified town planner with extensive experience working on bushfire planning at State and local levels in Victoria.

Disclaimer

The views expressed in this report are those of the author. Information in this document is current at the time of writing. While all professional care has been undertaken in preparing the document, the author accepts no liability for loss or damages incurred because of reliance placed upon its content.

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EXECUTIVE SUMMARY

Sand extraction is proposed at 60 Valley Road, Langwarrin and (part of) 150 Quarry Road, Langwarrin (the 'subject site'). This report assesses the proposals for sand extraction against bushfire-related requirements of the Frankston Planning Scheme (the 'planning scheme').

PLC Consulting Pty Ltd (PLC) has been commissioned by Hanson Construction Materials Pty Ltd to prepare regulatory approvals for the proposal. This report is one of a number of background reports being prepared.

The proposal

Sand extraction is proposed at 60 Valley Road, Langwarrin. This site adjoins an existing sand extraction facility at 150 Quarry Road, Langwarrin. As both sites are in the same ownership, sand extraction is also proposed along the buffer area between the two parcels of land.

Planning scheme controls

The subject site is within the Rural Conservation Zone (Schedule 2) (60 Valley Road, Langwarrin) and a Special Use Zone (Schedule 2). The land is also subject to the Bushfire Management Overlay. The subject site is within a declared bushfire prone area under the Building Regulations 2018.

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Planning scheme bushfire related permit triggers and considerations

A planning permit is not required under the Bushfire Management Overlay. Buildings and works associated with the use of the land for *Earth and energy resource industry* is not a listed use in the permit triggers for the Bushfire Management Overlay.

Planning considerations for bushfire are not required under the *c13.02-1S Use and development control in a bushfire prone area* as the proposal is not a listed use and will not result in large numbers of people congregating on the site.

No bushfire planning consideration is therefore required under the planning scheme.

Landscape bushfire considerations

The landscape scale bushfire risk is from a bushfire in the Pines Flora and Fauna Reserve moving into the low-density area to the south of Valley Road that brings bushfire closer to the edge of the subject site. However, the configuration of the vegetation is that a fire front consistently moving across this area is unlikely.

The potential to generate extreme fire behaviour is low due to the lack of vegetation, the limited fire runs where a bushfire cannot grow large, and the relatively flat terrain.

The potential landscape bushfire is considered alongside the availability of locations where human life can be better protected from the harmful effects of bushfire, including areas of BAL:Low to the immediate north and south of the subject site that provide enhanced protection from a bushfire due to minimal fuels in these areas.

The identified landscape type using the Bushfire Management Overlay methodology is landscape type one with parts of landscape type two. This positions the subject site at the lower end of bushfire risk in Victoria.

Based on the landscape assessment undertaken, it is concluded that the proposal is consistent with landscape-scale bushfire considerations of the planning scheme.

Site scale bushfire considerations

The site scale risk from a bushfire confirms that there is an area of land available within the subject site for people to be separated from the bushfire hazard greater than the distance specified for 12.5kw/sq.m of radiant heat and greater than 100m as specified for an area to be classified as BAL:Low.

The bushfire risk at the site scale is low to moderate based on the exposure benchmarks in planning schemes. There is no site-scale bushfire feature or risk that impacts on the use of the subject site for sand extraction.

Assessment of the proposal against bushfire provisions in the planning scheme

An assessment has been undertaken against *c13.02-1S Bushfire* and other relevant bushfire provisions of the planning scheme. The proposal is consistent with the bushfire policies and directions contained in the planning scheme. There is no bushfire factor that would warrant the proposal not proceeding.

Recommendations

Based on the assessments contained in this report, the following recommendations should be incorporated into the proposal.

Recommendation 1: Fuel management on the subject site

The northern narrow strip of land on 60 Valley Road, Langwarrin which is not proposed for sand extraction should be managed in a low fuel condition. The vegetation management requirements to achieve a low fuel outcome is specified in Table 6 to *c53.02 Bushfire* of the planning scheme and included in Figure 13 of this report.

Recommendation 2: Access to areas of BAL:Low

Site operational arrangements should be established to formalise the movement of people from the subject site to areas of enhanced safety in the event of a bushfire, including to the urban area to the north of Valley Road and to the adjoining sand extraction area to the south.

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1.0 INTRODUCTION

Sand extraction is proposed at 60 Valley Road, Langwarrin and (part of) 150 Quarry Road, Langwarrin (the 'subject site'). This report assesses the proposals for sand extraction against bushfire-related requirements of the Frankston Planning Scheme (the 'planning scheme').

PLC Consulting Pty Ltd (PLC) has been commissioned by Hanson Construction Materials Pty Ltd to prepare regulatory approvals for the proposal. This report is one of a number of background reports being prepared.

To ensure bushfire planning scheme matters are considered in developing the proposal, the report:

- Provides an overview of relevant bushfire planning provisions in the planning scheme.
- Provides planning scheme bushfire hazard assessments to better understand the risk to the subject site (as defined by the planning scheme).
- Provides a commentary on the proposal against bushfire policy in *c13.02-1S Bushfire* of the planning scheme.
- Makes recommendations for bushfire risk management that can be accommodated in the proposal.

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2.0 THE SUBJECT SITE AND LOCALITY

60 Valley Road, Langwarrin is a 'battle-axe' type lot with a narrow strip of land adjoining Valley Road opening up into a larger triangular parcel of land where it adjoins 150 Quarry Road, Langwarrin. The land is a mixture of treed areas and open, grassed area with a number of vehicle access tracks throughout.

Vehicle access to 60 Valley Road, Langwarrin is available from Valley Road although the proposal will integrate with land at 150 Quarry Road, Langwarrin and access for sand extraction will be through this existing infrastructure, including vehicle access to Quarry Road.

Surrounding the subject site:

- Land to the north-west comprises urban development at conventional residential densities. Land to the north-east, east and west comprises lower-density residential development in a rural living setting.
- Land to the east and south-east comprises a mix of lower-density residential land, urban development, and some larger areas of vegetation.
- Land to the south and south-west comprise extraction sites.

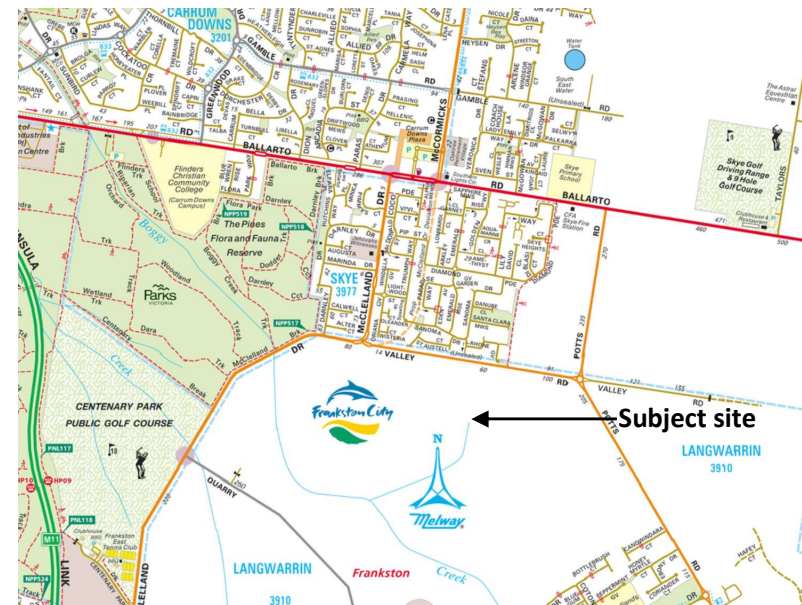
Planning scheme controls that apply to the subject site

The subject site is within the Rural Conservation Zone (Schedule 2) (60 Valley Road, Langwarrin) and a Special Use Zone (Schedule 2) . The land is also subject to the Bushfire Management Overlay. The subject site is within a declared bushfire prone area under the Building Regulations 2018. A planning property report for 60 Valley Road, Langwarrin is included in Attachment 1.

The locality

The subject site is located approximately 3 km from the Skye Road exit of the Peninsula Link freeway.

FIGURE 1: LOCALITY PLAN (Source: Melway online)



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FIGURE 2: SUBJECT SITE AERIAL PHOTO



FIGURE 4: PLANNING SCHEME ZONES

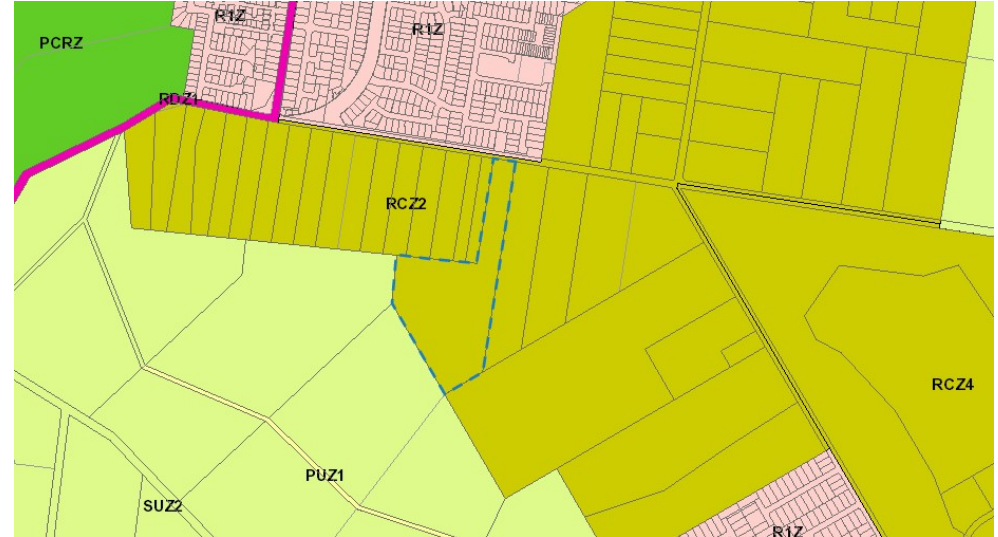


FIGURE 3: BUSHFIRE PRONE AREA (Building Regulations 2018)

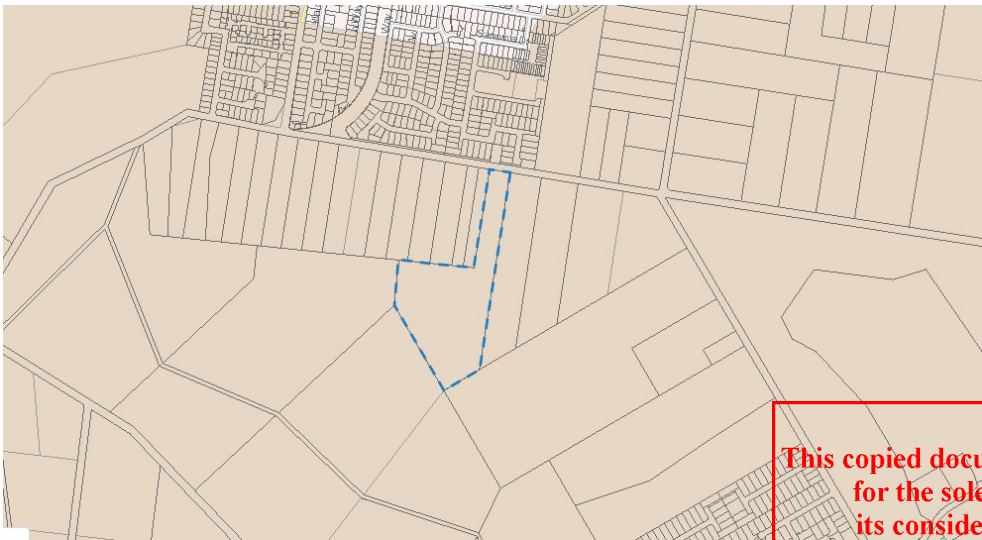
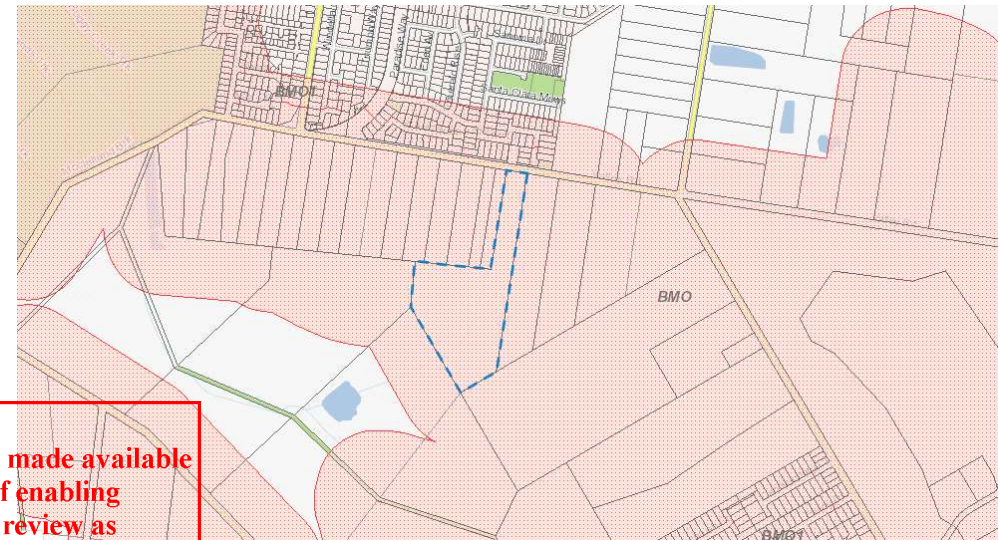


FIGURE 5: PLANNING SCHEME BUSHFIRE MANAGEMENT OVERLAY



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3.0 THE PROPOSAL

Sand extraction is proposed at 60 Valley Road, Langwarrin. This site adjoins an existing sand extraction facility at 150 Quarry Road, Langwarrin. As both sites are in the same ownership, sand extraction is also proposed along the (previous) buffer area between the two parcels of land.

No quarrying is proposed on the northern part of the land providing vehicle access to Valley Road and adjacent to rural residential properties. A 20m buffer on the western, northern and eastern boundaries of the extraction area is proposed.

The sand quarried from the subject site will be processed at the existing plant on 150 Quarry Road, Langwarrin. No changes are anticipated to the process, volumes or material types processed. Sands will be extracted using the equipment currently available on 150 Quarry Road and in the same manner as is currently being undertaken.

Vehicle access to 60 Valley Road, Langwarrin is available from Valley Road although the proposal will integrate with land at 150 Quarry Road, Langwarrin and access for sand extraction will be through this existing infrastructure, including vehicle access to Quarry Road.

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**FIGURE 6: PROPOSED EXTRACTION AREA
60 VALLEY ROAD AND 150 QUARRY ROAD, LANGWARRIN**



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4.0 PLANNING SCHEME BUSHFIRE CONTEXT

The planning scheme contains provisions that that inform permit requirements, application requirements and policies & decision guidelines where the bushfire hazard could be an influence on future land use and development. This section provides an overview of these provisions. Figure 7 summarises the considerations.

Integrated decision making (Clause 71.02-3)

Clause 71.02-3 requires planning authorities, in bushfire areas:

[T]o prioritise the protection of human life over all other policy considerations.

Bushfire considerations are not to be balanced in favour of net-community benefit, as occurs for all other planning scheme matters. The bushfire emphasis in c71.02-3 was introduced through Amendment VC140 in December 2017. Such policy settings were recommended in 2011 by the *2009 Victorian Bushfires Royal Commission*.

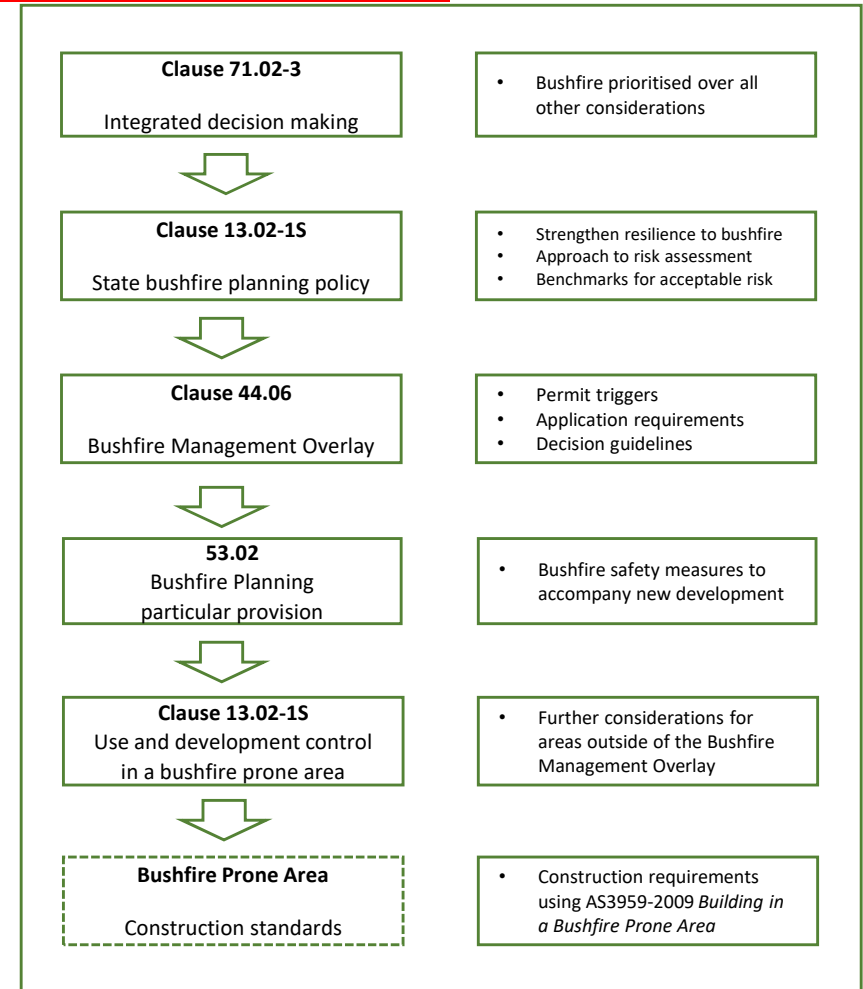
State planning policy for bushfire (Clause 13.02-1S)

The objective of the State planning policy for bushfire is:

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

Clause 13.02-1S contains a series of strategies to meet the above objective and these are summarised below.

FIGURE 7: PLANNING SCHEME BUSHFIRE PROVISIONS



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Landscape bushfire considerations

Clause 13.02-1S requires a tiered approach to assessing the hazard:

- *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 from a site;*
- *Assessing and addressing the bushfire hazard posed to the settlement and the likely bushfire behaviour it will produce at a landscape, settlement, local, neighbourhood and site scale, including the potential for neighbourhood-scale destruction.*

Alternative locations for development

Clause 13.02-1S includes two strategies that seek to direct new development:

- *Give priority to the protection of human life by [...] directing population growth and development to low risk locations [.]*
- *Assessing alternative low risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis.*

Availability and safe access to area of enhanced protection

Clause 13.02-1S requires a location in easy reach that provides better protection for life from the harmful effects of bushfire:

- *Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009) where human life can be better protected from the effects of bushfire.*
- *Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire.*

The views of the relevant fire authority

Clause 13.02-1S identifies that a key element of a risk assessment is to:

- *Consult [...] with [...] the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.*

Site based exposure

Clause 13.02-1S provides policy directions for planning authorities about the level of acceptable exposure for new development enabled by a planning scheme amendment:

- *Directing population growth and development to low risk locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metre under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009).*
- *Not 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 on completion have, more than a BAL-12.5 rating under AS 3959-2009.*

Areas of high biodiversity conservation value

Clause 13.02-1S provides directions on situations where a high bushfire risk and high biodiversity conservation values are both present:

- *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 of high biodiversity conservation value.*

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No increase in risk

Clause 13.02-1S provides an overall view of acceptable risk:

- *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 reduce bushfire risk overall.*

Bushfire Management Overlay (Clause 44.06)

The purpose of the Bushfire Management Overlay is:

- *To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.*
- *To identify areas where the bushfire hazard warrants bushfire protection measures to be implemented.*
- *To ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.*

The Bushfire Management Overlay is generally applied to patches of vegetation (except grasslands) that are larger than 4 hectares in size. Where such a patch of vegetation exists, a 150 metre ember protection buffer is added and this land is also included in the Bushfire Management Overlay. Areas of extreme hazard are also included in the Bushfire Management Overlay.

Planning Advisory Note 46: Bushfire Management Overlay Methodology and Criteria (2013, DPTLI) provides more information on where the Bushfire Management Overlay is applied.

Bushfire Planning particular provision (Clause 53.02)

Clause 52.03 Bushfire specifies the requirements that apply to a planning application under c44.06 Bushfire Management Overlay. The purpose of this provision is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.*
- *To ensure that the location, design and construction of development appropriately responds to the bushfire hazard.*
- *To ensure development is only permitted where the risk to life, property and community infrastructure from bushfire can be reduced to an acceptable level.*
- *To specify location, design and construction measures for a single dwelling that reduces the bushfire risk to life and property to an acceptable level.*

Bushfire prone area (Clause 13.02-1S and building regulations)

Bushfire Prone Areas are areas that are subject to or likely to be subject to bushfire. The Minister for Planning, under the Building Regulations 2018, determines that specific areas are designated Bushfire Prone Areas for the purposes of the building control system. Bushfire Prone Areas include all areas subject to the Bushfire Management Overlay. Bushfire Prone Areas also include grassland areas and, occasionally, smaller patches of non-grassland vegetation.

Specific bushfire construction standards apply in these areas and these are implemented by the relevant building surveyor as part of the building permit. These construction standards are referred to as bushfire attack levels (BAL).

Where land included in the Bushfire Prone Area is also included in the Bushfire Management Overlay, the requirements of the Bushfire Management Overlay take precedence.

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Use and development control in Bushfire Prone Areas (Clause 13.02-1S)

Clause 13.02-1S of the planning scheme includes planning requirements for Bushfire Prone Areas. These are in the form a 'use and development control' that applies to certain uses that are in a Bushfire Prone Area but not subject to the Bushfire Management Overlay.

The use and development control applies to Subdivisions of more than 10 lots, Accommodation, Child care centre, Education centre, Emergency services facility, Hospital, Indoor recreation facility, Major sports and recreation facility, Place of assembly, and any application for development that will result in people congregating in large numbers.

The use and development control requires that when assessing a planning permit application:

- *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.*
- *Ensure new development can implement bushfire protection measures without unacceptable biodiversity impacts.*

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5.0 PLANNING SCHEME REQUIREMENTS

The planning scheme contains permit triggers for bushfire in *c44.06 Bushfire Management Overlay* and permit considerations in *c13.02-1S Bushfire*. These are discussed in this section.

c44.06 Bushfire Management Overlay

The subject site is within a Bushfire Management Overlay.

Buildings and works associated with the use of the land for *Earth and energy resource industry* is not a listed use in c44.06-2. A planning permit is therefore not required under the Bushfire Management Overlay.

c13.02-1S Use and development control in a bushfire prone area

The subject site is within a declared bushfire prone area. c13.02-1S includes planning scheme requirements for these areas in the form of a use and development control.

The use and development control applies to uses listed in the clause. None of these listed uses apply to the proposal.

The use and development control also applies to any application for development that will result in people congregating in large numbers. The proposal does not result in large numbers of people congregating on the site.

No planning consideration is therefore required under the *c13.02-1S Use and development control in a bushfire prone area*.

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6.0 BUSHFIRE HAZARD STRATEGIC AND LANDSCAPE ASSESSMENT

A bushfire hazard landscape assessment provides information on the bushfire hazard more than 150 metres from the subject site. Considering bushfire from a landscape perspective is important as it affects the likelihood of a bushfire threatening the site, its potential intensity and the level of bushfire risk a site may be exposed to. The methodology for a bushfire hazard landscape assessment is set out in *Planning Permit Applications Bushfire Management Overlay Technical Guide* (DELWP,2017).

The bushfire hazard landscape assessment is ordinarily used to respond to the objectives and approved measures in *c53.02-2.1 Bushfire Planning*. This requires that the risk from the surrounding landscape is mitigated to an acceptable level for development to proceed. The bushfire hazard landscape assessment is subsequently used to consider how site-based safety measures should be applied so as to be responsive to the landscape risk.

No planning permit is required under *c44.06 Bushfire Management Overlay* and no consideration against *c53.02-2.1 Bushfire Planning* is required. In this case, the bushfire hazard landscape assessment has been prepared to support a broader understand bushfire risk as defined by the planning scheme to inform the *c13.02 Bushfire* assessment in Section 8 of this report.

The written commentary in this section should be read in conjunction with **Figure 8: bushfire hazard landscape assessment diagram.**

The bushfire hazard and fire runs

The broader landscape is characterised by distinct areas of vegetation located within an urban setting amongst lower-fuel areas such as roads, golf courses and rural activities.

Hazard area 1 and 2 (shown as HA1 and HA2 on the landscape assessment diagram)

The most significant area of vegetation is located to the west / north-west comprising a 260ha area of vegetation within the Pines Flora and Fauna Reserve (the 'Reserve'). This area is traversed by the Mornington Peninsula Freeway, has some lower fuel areas and is partially fragmented by recreational uses (such as paths), Centenary Park Public Golf Course and a school.

However, there remains sufficient vegetation for a bushfire to start and create a hazard to surrounding development. Proximity to urban and populated areas also creates an increased potential for ignitions. The risk of bushfire in this area was realised in 2017 and 2018, with bushfire history data showing both the western and eastern part of this area have recently been affected by bushfire.

The area of the Reserve located west of the Mornington Peninsula Freeway (HA2) is separated from the subject site by Centenary Park Public Golf Course and extractive industries, both of which are low fuel. A moving fire front travelling east cannot reach the subject site from this area.

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The main area of the Reserve of consequence to the subject site is the part east of the Mornington Peninsula Freeway (HA1), primarily because of the connectivity with vegetation on low-density residential properties between the Reserve and the subject site. At a landscape scale, the vegetation in these areas is fragmented and modified although there is sufficient connectivity of vegetation that a bushfire from the Reserve may penetrate into this area. Fire runs of up to 1.5km are available within the Reserve.

The risk from the Reserve is that a bushfire moves into the low-density area to the south of Valley Road and brings bushfire closer to the edge of the subject site. However, the configuration of the vegetation is that a moving fire front consistently moving across the landscape is unlikely.

The bushfire risk from the Reserve was realised in 2018, with a bushfire in the Reserve moving into the low-density residential area (See Figure 10). This is a good representation of the potential of bushfire in this area.

The potential to generate extreme fire behaviour is low due to the lack of vegetation, the limited fire runs where a bushfire cannot grow large, and the relatively flat terrain. Extreme fire behaviour is more typically associated with longer fire runs, steeper topography and vegetation in a mostly natural state.

The risk from the Reserve and any bushfire that penetrates the low-density residential area at the interface with the western boundary of the subject site is considered to be moderate at a landscape scale. Due to the lack of landscape-scale bushfire potential, the risk is better assessed and described at the site scale (150m from the subject site) to determine the potential for flame contact and radiant heat (see next section for a site-scale assessment of the hazard).

Hazard area 3 (shown as HA3 on the landscape assessment diagram)

South of the subject site is a 70ha area of vegetation that includes Studio Park along with private land. This area is 1.2km from the subject site and is separated by managed grasslands and extractive industry. A bushfire in this area cannot move within proximity to the subject site and is a low-risk to the subject site.

Other hazard areas east of the subject site

There are numerous other hazard areas in the landscape.

To the east of the subject site some larger areas of vegetation exist in reserves, on private land and on roadsides. Under a reasonable bushfire scenario in Victoria, bushfires to the east of the subject site are likely to be moving away from the subject site under the influence of north-west and south-west winds. These areas represent a low landscape risk to the subject site.

Boggy Creek runs south of the subject site through areas of extractive industry. The creek is within a heavily modified environment and is configured in a narrow corridor of vegetation running east-west. Located more than 300m from the subject site, this area is a low landscape risk to the subject site.

Potential for ember attack

All hazard areas have the potential to generate ember attack. However, the relatively limited size of the hazard areas means that extreme ember attack is unlikely and the risk of embers from the hazard areas travelling onto the subject site is moderate. There is always potential for embers to travel some distance but the inability for large bushfires to arise in the landscape means that ember penetration well ahead of a bushfire front is more limited.

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On a local scale, embers driving forward a bushfire in modified vegetation, such as the low-density residential area to the immediate west of a subject site, is likely and can enable a bushfire to propagate through an area and spread the bushfire further.

Fire management

The Reserve (hazards areas 1 and 2) are part of a management regime that involves planned burns, mechanical works and other interventions by land managers. It is reasonable to assume these activities are focused on asset protection for urban areas adjoining the Reserve. However, they do contribute to reducing the risk of a bushfire spreading out of the Reserve.

Availability of locations where human life can be better protected from a bushfire

The landscape provides good proximity and access to locations that are low fuel where human life can be better protected from the harmful effects of bushfire. The planning defines such areas as BAL:Low, which are areas where hazardous vegetation is more than 100m away. Such locations will experience no flame contact from a moving fire front and lower levels of radiant heat.

BAL:Low areas are available in the urban areas immediately north of the subject site and within the area of extractive industry located immediately south of the subject site. The proximity of these areas to the subject site provides for immediate access to them in the event of a bushfire and is a favourable characteristic of the landscape.

There are no designated places of safety in the landscape (for example, a neighbourhood safer place). This is expected given the lower landscape risk and the available of low-fuel areas as part of urban and low-fuel areas.

Bushfire risk at the landscape scale

The central bushfire risk is from the Reserve (hazard area 1) moving into the low-density area to the south of Valley Road and enabling a bushfire to move closer to the edge of the subject site. However, the configuration of the vegetation in this area will not enable a fire front to consistently move across this area. The potential to generate extreme fire behaviour is low due to the lack of vegetation, the limited fire runs where a bushfire cannot grow large, and the relatively flat terrain.

The landscape risk is considered alongside the good availability of locations where human life can be better protected from the harmful effects of bushfire, including areas of BAL:Low to the immediate north and south of the subject site.

Landscape types

The methodology for a bushfire hazard landscape assessment set out in *Planning Permit Applications Bushfire Management Overlay Technical Guide* (DELWP,2017) identifies four landscape typologies to provide a framework for identifying landscape risk consistently across Victoria.

Landscape type one most closely aligns with the landscape around the subject site. The characteristic of this are that the type and extent of vegetation is unlikely to result in neighbourhood scale destruction or extreme fire behaviour and immediate access is available to a place that provides shelter from bushfire. However, the presence of vegetation to the immediate west of the subject site is consistent with elements of landscape type two.

In either event, the landscape type is at the lower end of bushfire risk in Victoria. The bushfire risk can be considered and addressed at the site-scale. There is no landscape bushfire feature or risk that impacts on the use of the subject site for sand extraction.

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Recommendations arising from the bushfire hazard landscape assessment

Site operational arrangements should be established to formalise the movement of people from the subject site to areas of enhanced safety, including ensuring emergency access from the subject site to Valley Road is available to enable access to the low fuel urban area to the north.

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FIGURE 8: LANDSCAPE ASSESSMENT DIAGRAMS



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FIGURE 9: FUEL MANAGEMENT IN THE PINES FLORA AND FAUNA RESERVE

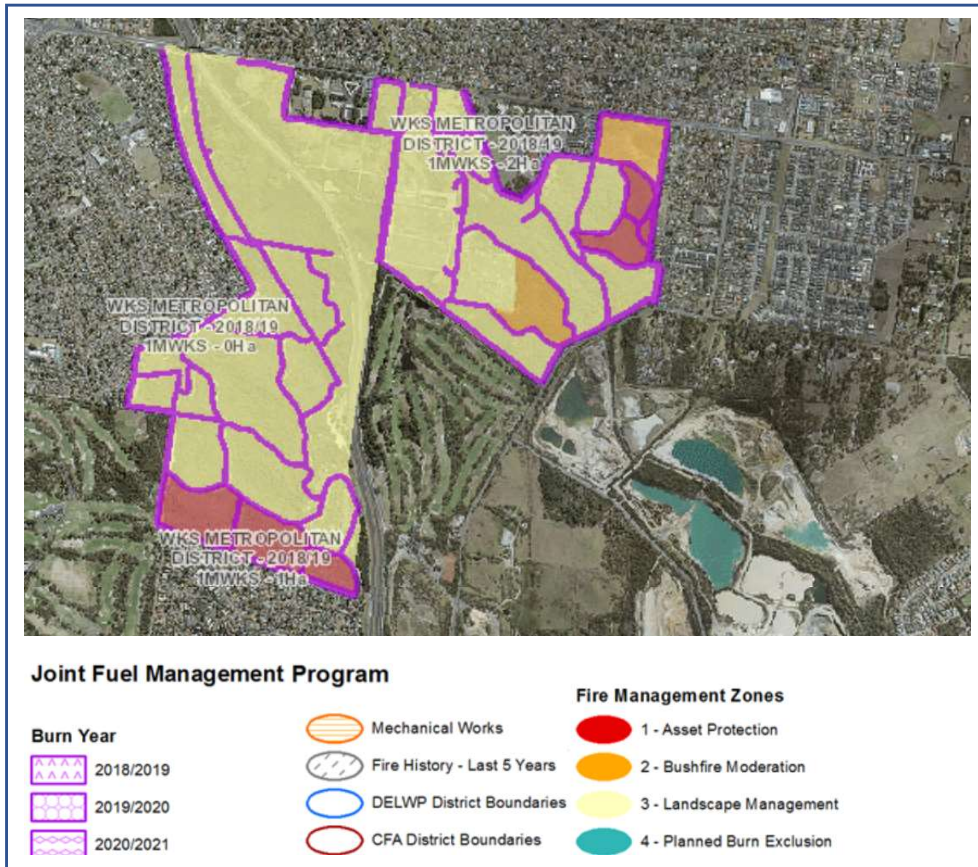
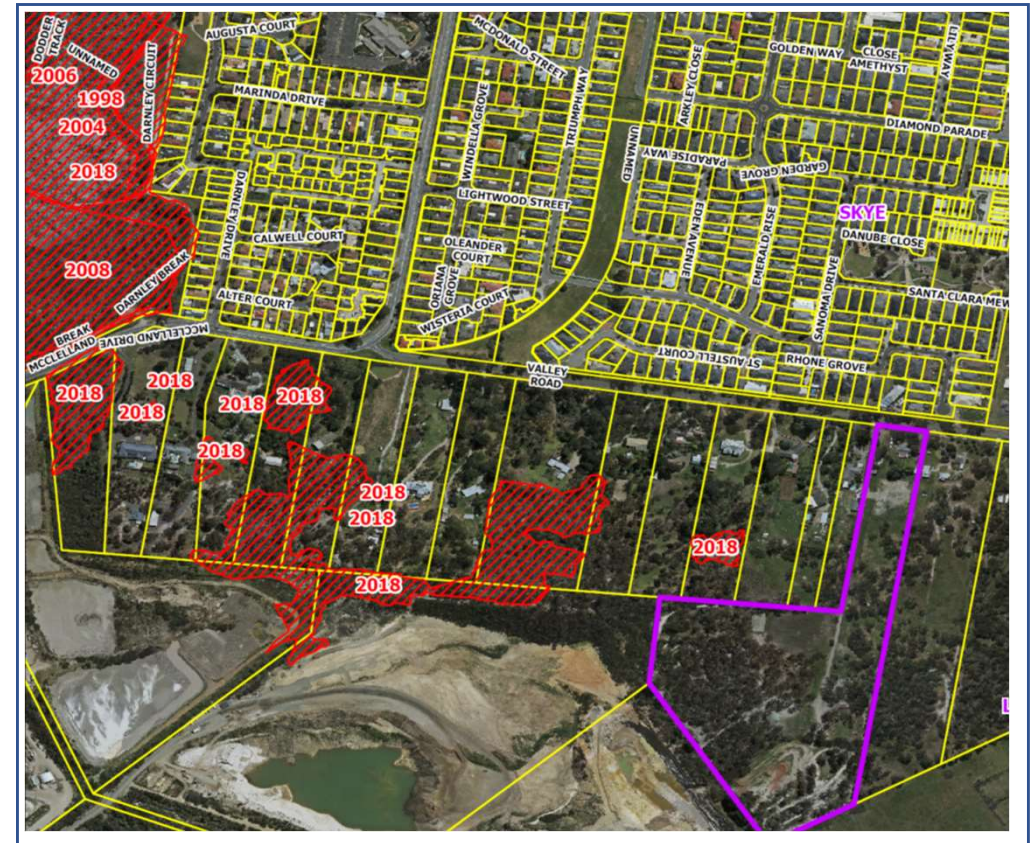


FIGURE 10: 2018 BUSHFIRE SHOWING THE SPREAD OF THE FIRE FROM THE RESERVE TOWARDS THE SUBJECT SITE



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7.0 BUSHFIRE HAZARD SITE ASSESSMENT

Assessing bushfire at the site scale considers the hazard within 150 metres of a proposed development or site. At the site scale, the exposure to bushfire is determined by the amount of separation between the bushfire hazard and a proposed structure or where people will be located.

The assessment is undertaken in accordance with *c53.02 Bushfire Planning* and Sections 2.2.3 to 2.2.5 of *Australian Standard AS3959:2009 Construction of buildings in bushfire prone areas* (Standards Australia) (referred to as 'AS3959-2009'). The simplified procedure (Method 1) set out in Clause 2.2 is used.

Using the AS3959:2009 methodology, vegetation and slope is assessed to determine different levels of exposure to a bushfire based on a range of assumptions, including a Fire Danger Rating of 100 and a flame temperature of 1080°C.

Table 2 to *c53.02 Bushfire Planning* is used as part of the assessment to determine the likely exposure based on what separation from the hazard is available. Exposure using this methodology relates to radiant heat and flame contact. Ember attack is assumed in all areas and the severity of ember attack is not separately assessed at the site level (for example, the different ember generating potential within a fuel type is not assessed or considered at the site level).

Assumptions made in the site assessment

The site assessment methodology is orientated to determining exposure to a building. The proposal does not involve a building element where people will be located during a bushfire.

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The site assessment therefore assesses the separation required for people on the site to avoid harmful level of a bushfire when in the open. It does this by determining the separation required to achieve BAL:Low and for 12.5kw/sq.m of radiant heat (which is equivalent to Column A separation in Table 2 to *c53.02 Bushfire Planning*).

The site assessment also assumes that the northern narrow strip of the subject site which is not proposed for sand extraction will be managed in a low fuel condition.

It is important to recognise that the required separation distances are not intended to be an area where sand extraction should not be permitted. Sand extraction is not a bushfire receptor as envisaged in the site assessment or in planning schemes, indicated by the lack of permit triggers or considerations for these types of uses.

Instead, the separation distances are confirming that within the subject site land is available for people to move away from the hazard (i.e. the edges of the site).

Vegetation assessment

South aspect

The sand extraction areas are low-threat and excludable under the site assessment. Grassland areas are generally managed but are assessed as unmanaged grasslands to take a conservative approach.

North, east and west aspects

Comprises non-vegetated areas and managed grasslands associated with low-density residential development. Also includes some larger patches of trees. These could be assessed in a number of ways:

- Modified vegetation where fuel loads are below that of classifiable vegetation but more than low-threat vegetation;
- Woodland as they comprise trees 10-30m high.
- Forest, as there is some elevated fuel loads in the middle layers and canopies are close together (consistent with the EVC designation of heathy woodlands).

The treed areas are assessed as Forest. This takes the most conservative approach.

Site assessment worksheet

The following worksheet uses the vegetation assessment and slope under classifiable vegetation to determine the separation for Column A in Table 2 to *c53.02 Bushfire Planning* and for BAL:Low in *AS3959-2009*.

FIGURE 11: ECOLOGICAL VEGETATION CLASSES (2005)

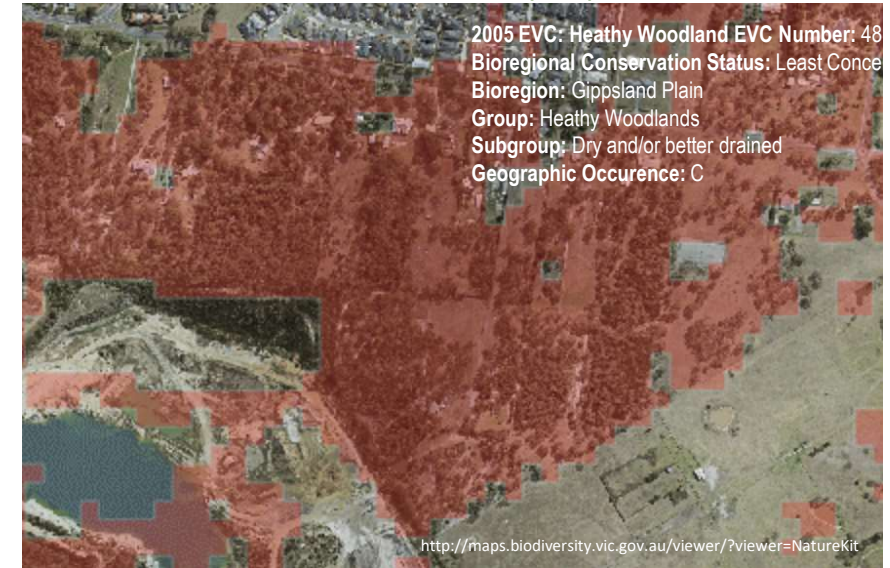


FIGURE 12 BUSHFIRE HAZARD SITE ASSESSMENT WORKSHEET

Aspect	North	East	South	West
Vegetation within 150m	Forest	Forest	Grasslands	Forest
Slope	Upslope / Flat	Upslope / Flat	Upslope / Flat	Upslope / Flat
Separation for Column A	48m	48m	19m	48m
Separation for BAL:Low	100m	100m	100m	100m
Land available beyond separation distances	Yes	Yes	Yes	Yes

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Conclusions

The site assessment demonstrates that there is an area of land available within the subject site for people to be separated from the bushfire hazard greater than the distance specified in Column A (equivalent to 12.5kw/sq.m of radiant heat) and greater than 100m as specified for an area to be classified as BAL:Low.

The bushfire risk at the site scale is low to moderate based on the exposure benchmarks in planning schemes. There is no site-scale bushfire feature or risk that impacts on the use of the subject site for sand extraction.

It is recommended that the northern narrow strip on the subject site which is not proposed for sand extraction be managed in a low fuel condition to enable safer access to the north (Valley Road) in the event of a bushfire. The vegetation management requirements to achieve a low fuel outcome is specified in Table 6 (Vegetation management requirement) to c53.02 Bushfire and reproduced in Figure 13.

FIGURE 13: VEGETATION MANAGEMENT FOR BUSHFIRE PURPOSES

Table 6 in c53.02 Bushfire in planning schemes specifies the vegetation management requirements for bushfire. They are:

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

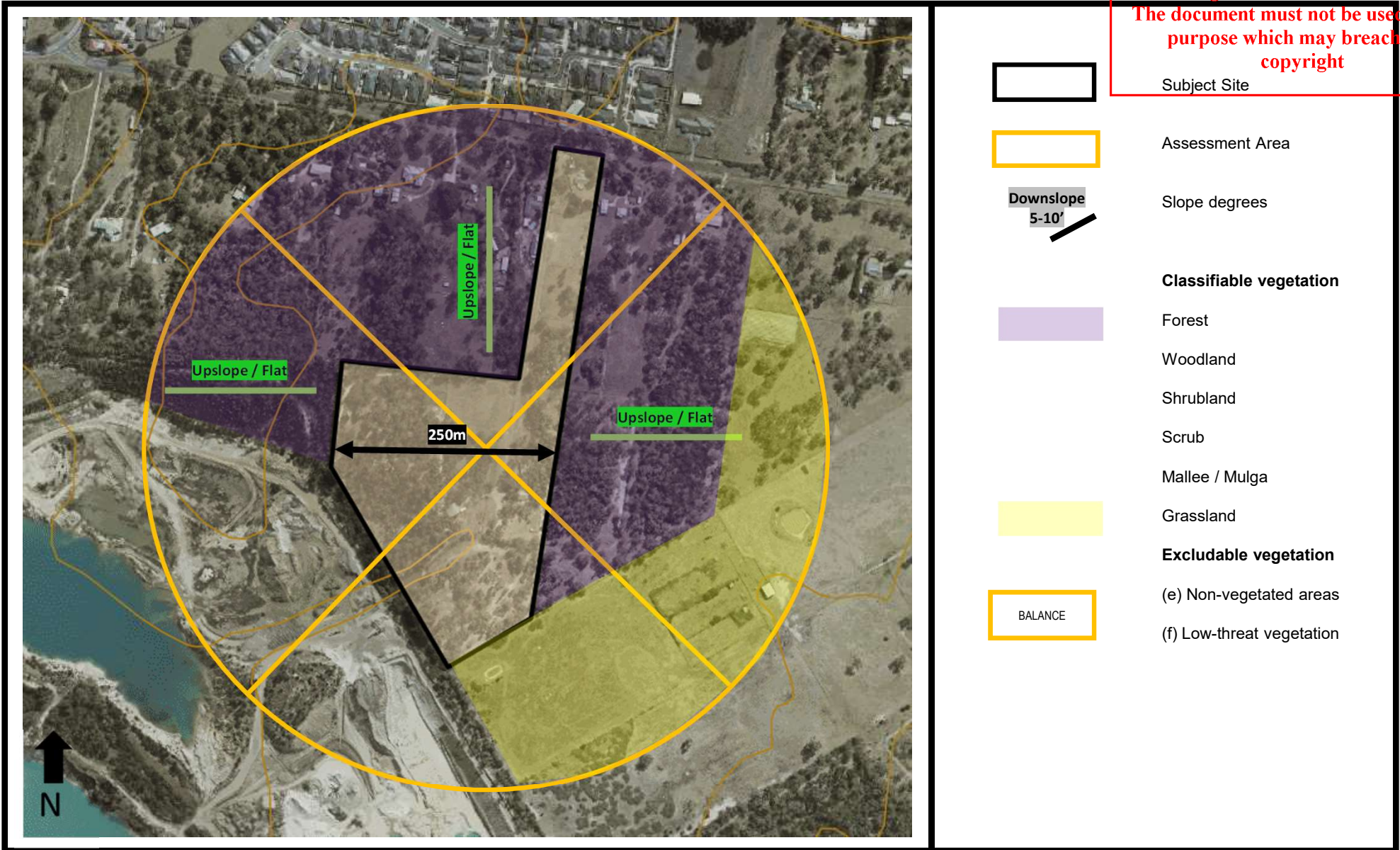
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FIGURE 14: BUSHFIRE HAZARD SITE ASSESSMENT DIAGRAM

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8.0 PLANNING SCHEME POLICY ASSESSMENT OF THE PROPOSAL

Section 4 of this report identifies the planning scheme policies in c13.02 *Bushfire*. This section of the report uses these policies to assess the proposal, having regard to the completed bushfire hazard landscape assessment and bushfire hazard site assessment. For each consideration, extracts from Clause 13 are shown.

Landscape bushfire considerations

Clause 13.02-1S requires a tiered approach to assessing the hazard:

- *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 from a site.*
- *Assessing and addressing the bushfire hazard posed to the settlement and the likely bushfire behaviour it will produce at a landscape, settlement, local, neighbourhood and site scale, including the potential for neighbourhood-scale destruction.*

Section 6 of this report provided an bushfire hazard landscape assessment. This has considered the bushfire hazard at the strategic and landscape scales as required by these policies. The residual risk is a bushfire from the Reserve (hazard area 1) moving into the low-density area to the south of Valley Road that brings bushfire closer to the edge of the subject site. However, the configuration of the vegetation is that a fire front consistently moving across this area is unlikely.

The potential to generate extreme fire behaviour is low due to the lack of vegetation, the limited fire runs where a bushfire cannot grow large, and the relatively flat terrain.

The potential bushfire is considered alongside the availability of locations where human life can be better protected from the harmful effects of bushfire, including areas of BAL:Low to the immediate north and south of the subject site.

The identified landscape type was mostly landscape type one with parts of landscape type two. This positions the subject site at the lower end of bushfire risk in Victoria.

Based on the landscape assessment undertaken, it is concluded that the proposal is consistent with landscape-scale bushfire considerations of the planning scheme.

Alternative locations for development

Clause 13.02-1S includes two strategies that seek to direct new development:

- *Give priority to the protection of human life by [...] directing population growth and development to low risk locations[.]*
- *Assessing alternative low risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis.*

The landscape scale risk is low to moderate, positioning the subject site at the lower end of bushfire risk in Victoria. The site scale risk is also low-to moderate, with separation available within the subject site for people to move away from the edges of the proposal where a bushfire would impact.

There is good access to locations outside of the proposal where human life can be better protected from a bushfire, if evacuation was ever required. These characteristics make the subject site a good location to direct the proposal to through planning decision making.

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Availability of safe areas

Clause 13.02-1S requires a location in easy reach that provides absolute protection for life from the harmful effects of bushfire:

- *Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009) where human life can be better protected from the effects of bushfire.*
- *Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire.*

The bushfire hazard landscape assessment prepared as part of this report identifies the availability of locations where human life can be better protected from the harmful effects of bushfire, including areas of BAL:Low to the immediate north and south of the subject site.

It is recommended that site operational arrangements be established to formalise the movement of people from the subject site to areas of enhanced safety, including ensuring emergency access from the subject site to Valley Road is available to enable access to the low fuel urban areas to the north in the event of a bushfire.

The views of the relevant fire authority

Clause 13.02-1S identifies that a key element of a risk assessment is to:

- *Consult[...] with [...] the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.*

The risk to the subject site is low to moderate. There is no permit trigger under c44.06 Bushfire Management Overlay. There is a no bushfire consideration required under the c13.02 Bushfire Use and development control in a bushfire prone area.

There is no need to consult the relevant fire authority for this proposal as it relates to planning decision making.

Site based exposure

Clause 13.02-1S provides strong policy directions for planning authorities about the level of acceptable exposure for new development enabled by a planning scheme amendment:

- *Not 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 on completion have, more than a BAL-12.5 rating under AS 3959-2009.*
- *Directing population growth and development to low risk locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metre under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009).*

An assessment of site based exposure prepared as part of this report identifies that there is an area of land available within the subject site for people to be separated from the bushfire hazard greater than the distance specified in Column A (equivalent to 12.5kw/sq.m of radiant heat) and greater than 100m as specified for an area to be classified as BAL:Low.

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The bushfire risk at the site scale is low to moderate based on the exposure benchmarks in planning schemes. There is no site-scale bushfire feature or risk that impacts on the use of the subject site for sand extraction.

It is recommended that the northern narrow strip of the subject site which is not proposed for sand extraction be managed in a low fuel condition to enable safer access to the north (Valley Road) in the event of a bushfire.

Areas of high biodiversity conservation value

Clause 13.02-1S provides directions on situations where bushfire and high biodiversity conservation values correlate:

- 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 of high biodiversity conservation value.

The impact on biodiversity is beyond the scope of this report. This report recommends that the northern narrow strip of the subject site which is not proposed for sand extraction be managed in a low fuel condition to enable safer access to the north (Valley Road) in the event of a bushfire. The impacts of this on biodiversity, if any, should be assessed as part of other biodiversity assessments.

The vegetation management requirements to achieve a low fuel outcome is specified in Table 6 to *c53.02 Bushfire*. It is noted that the land is heavily modified due to previous uses and is likely to readily meet these requirements based on existing conditions and on-going management (for example, mowing the grass).

No increase in risk

Clause 13.02-1S provides an overall view of acceptable risk:

- *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 reduce bushfire risk overall.*

The use of the subject site for sand extraction is not likely to increase the bushfire risk to existing and future occupant on and around the site. The subject site is lower risk at both the landscape and site scale and is a good location to direct development towards.

c44.06 Bushfire Management Overlay

No planning permit is required under the Bushfire Management Overlay.

c13.02 Use and development control in a bushfire prone area

No planning consideration is required under the *c13.02-1S Use and development control in a bushfire prone area* for the proposal.

Overall conclusion

The proposal is consistent with the bushfire policies and directions contained in the planning scheme. There is no planning scheme bushfire factor that would warrant the proposal not proceeding.

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9.0 RECOMMENDATIONS

Based on the assessments contained in this report, the following recommendations should be incorporated into the proposal.

Recommendation 1: Fuel management on the subject site

The northern narrow strip of land on 60 Valley Road, Langwarrin which is not proposed for sand extraction should be managed in a low fuel condition. The vegetation management requirements to achieve a low fuel outcome is specified in Table 6 to *c53.02 Bushfire* of the planning scheme.

Recommendation 2: Access to areas of BAL:Low

Site operational arrangements should be established to formalise the movement of people from the subject site to areas of enhanced safety, including to the urban area to the north of Valley Road and to the adjoining sand extraction area to the south.

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ATTACHMENT: PLANNING PROPERTY REPORT

PLANNING PROPERTY REPORT

From www.planning.vic.gov.au on 15 November 2018 03:31 PM

PROPERTY DETAILS

Address: **60 VALLEY ROAD LANGWARRIN 3910**

Lot and Plan Number: **Lot 1 TP759169**

Standard Parcel Identifier (SPI): **1VTP759169**

Local Government Area (Council): **FRANKSTON** www.frankston.vic.gov.au

Council Property Number: **216410**

Planning Scheme: **Frankston** planning-schemes.delwp.vic.gov.au/schemes/frankston

Directory Reference: **Melway 100 K9**

UTILITIES

Rural Water Corporation: **Southern Rural Water**

Melbourne Water Retailer: **South East Water**

Melbourne Water: **inside drainage boundary**

Power Distributor: **UNITED ENERGY**

STATE ELECTORATES

Legislative Council: **EASTERN VICTORIA**

Legislative Assembly: **HASTINGS**

Planning Zones

RURAL CONSERVATION ZONE (RCZ)

RURAL CONSERVATION ZONE - SCHEDULE 2 (RCZ2)

■ PCRZ - Public Conservation & Resource	■ PPRZ - Public Park & Recreation	■ PUZ1 - Public Use - Service & Utility
■ PUZZ - Public Use - Education	■ PUZZ - Public Use - Other Public Use	■ R1Z - Residential 1
■ RCZ - Rural Conservation	■ RD21 - Road - Category 1	■ SUZ - Special Use

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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PLANNING PROPERTY REPORT: 60 VALLEY ROAD LANGWARRIN 3910

PLANNING PROPERTY REPORT

Planning Overlays

BUSHFIRE MANAGEMENT OVERLAY (BMO)

■ BMO - Bushfire Management

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

ENVIRONMENTAL SIGNIFICANCE OVERLAY (ESO)

ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 1 (ESO1)

■ ESO - Environmental Significance

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

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PLANNING PROPERTY REPORT



Designated Bushfire Prone Area

This property is in a designated bushfire prone area. Special bushfire construction requirements apply. Planning provisions may apply.



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Designated Bushfire Prone Area

Designated bushfire prone areas as determined by the Minister for Planning are in effect from 8 September 2011, as amended by gazette notices on 25 October 2012, 8 August 2013, 30 December 2013, 3 June 2014, 22 October 2014, 29 August 2015, 21 April 2016, 18 October 2016, 2 June 2017, 6 November 2017, 16 May 2018 and 16 October 2018.

The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at <http://mapshare.maps.vic.gov.au/vicplan> or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website www.vba.vic.gov.au

Copies of the Building Act and Building Regulations are available from www.legislation.vic.gov.au

For Planning Scheme Provisions in bushfire areas visit <https://www.planning.vic.gov.au>

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