

20 APRIL 2021

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Heritage Planner, Strategic Planning & Environment
Macedon Ranges Shire Council
PO Box 151
Kyneton Victoria 3444

Dear Dannielle,

BUSHFIRE CONSIDERATIONS: AMENDMENT C127 (HERITAGE)

Macedon Ranges Shire Council (the 'Council') has engaged us to consider the planning scheme bushfire implications of proposed amendment C127 (the '*amendment*') to the Macedon Ranges Planning Scheme (the '*planning scheme*').

Please find below our advice.

1.0 About the amendment

The amendment proposes to apply the Heritage Overlay to 32 properties (the '*subject properties*') within Macedon Ranges Shire (the '*Shire*'). Selected properties are proposed to have tree controls applied and/or prohibited uses enabled.

Attachment 1 includes a full list of subject properties and Attachment 2 includes contextual information relevant to the subject properties.

2.0 Planning scheme bushfire context

The planning scheme bushfire context that informs decision making is set out in Attachment 3.

3.0 Appreciation of the landscape bushfire risk

The bushfire landscape(s) in proximity to subject properties are described in Attachment 4 and a landscape type has been applied to each subject property in Attachment 1. The landscape type is derived from applying the methodology in *Planning Permit Applications Bushfire Management Overlay Technical Guide* (DELWP, 2017). The following landscape types for subject properties emerge from this:

- Subject properties at a lower landscape risk where the landscape risk is from grasslands (landscape type 1) or where there is no landscape risk (properties not on the settlement edge of Woodend). These properties are outside of the Bushfire Management Overlay and in some cases are outside of a Bushfire Prone Area.
- The subject property at 29 Goldies Lane, Woodend is at a moderate to high landscape risk as it may be exposed to more extreme fire behaviour but there is access to low fuel areas in the neighbourhood (landscape type 3a). This property is within the Bushfire Management Overlay.
- The subject properties in Macedon are at a high landscape risk as they may be exposed to more extreme fire behaviour, including high levels of ember attack, but there are more opportunities to access low fuel areas in the neighbourhood (landscape type 3a or 3b). These properties are within the Bushfire Management Overlay.

- Subject properties at a higher landscape risk where the landscape risk is from forested areas in rugged terrain (landscape type 3b or 4). These properties are within the Bushfire Management Overlay.

4.0 Operation of the planning scheme if amended

It is necessary to consider how the planning scheme, if amended, would operate in relation to bushfire.

4.1 Bushfire Management Overlay

Subject properties at a higher landscape risk (landscape type 3a, 3b or 4) are within the Bushfire Management Overlay. Any future planning application under the Heritage Overlay of interest to bushfire would likely also require a permit under the Bushfire Management Overlay. In these circumstances bushfire would generally be prioritised in any permit issued because:

- There are defined bushfire requirements specified in *c53.02 Bushfire Planning* (objectives, approved measures and alternative measures) that will apply.
- There is an application requirement under the Bushfire Management Overlay to prepare a bushfire hazard site assessment that assesses vegetation in completed development for bushfire purposes. This would include any heritage related vegetation that is to remain in the completed development.
- There is a referral to relevant fire authority that would at a minimum prompt the responsible authority to accommodate bushfire in the permit (although recognising the relevant fire authority is not always a determining referral authority).
- The consideration of heritage issues alongside bushfire issues is generally manageable in the context of decision making. This is especially the case given the need for assessments to fully understand the implications from a heritage and bushfire perspective when development is proposed. This reflects the inevitability that discretion can only be exercised once these assessments are completed and moderation can occur based on likely outcomes.

The application of the Heritage Overlay to subject properties within the Bushfire Management Overlay is unlikely to result in a planning scheme conflict where bushfire would be compromised. This situation would also be enhanced by the other recommendations in this advice being accommodated.

4.2 Land outside of the Bushfire Management Overlay

Subject properties outside of the Bushfire Management Overlay benefit from lower landscape risks but lose the specificity associated with being included in the Bushfire Management Overlay. Instead, they would rely on the general policies in *c13.02-1S Bushfire Planning*, including the *Use and development control in a bushfire prone area*. This 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.*

General bushfire policies and the *Use and development control in a bushfire prone area* may not routinely require effective bushfire risk mitigation because:

- There are no requirements or outcomes to be achieved in completed development.

- There are no bushfire-related application requirements that enable bushfire risk to be assessed or appropriate bushfire protection measures to be applied.
- There is no referral to the relevant fire authority (although referral under other planning scheme requirements may arise, depending on the type of application).
- There is potential for variable integration of bushfire in assessing a planning application.

Despite this, the subject properties outside of the Bushfire Management Overlay are not likely to be so compromised by the amendment that it need not proceed. This is because there is not necessarily an inherent conflict between heritage and bushfire. Instead, the focus needs to be on securing acceptable bushfire outcomes in completed development under the Heritage Overlay.

One means to achieve this would be to secure greater integration of decision making within the 'heritage' decision. *c21.08-1 Heritage conservation* of the planning scheme includes objectives, strategies and decision guidelines that are to be applied when deciding an application under the Heritage Overlay. It would be a sensible refinement to include into the decision guidelines a requirement that bushfire be considered.

The following wording is suggested:

In bushfire prone areas, consider the implementation of bushfire protection measures necessary to manage bushfire risks.

The above would operate alongside the *Use and development control in a bushfire prone area*. It would support the identification of bushfire as relevant to decision making and may be of assistance in preparing a planning application, including ensuring bushfire is considered early in the preparation of a planning application.

5.0 Considerations where tree controls are proposed

The amendment proposes tree controls for 21 subject properties. These may result in a range of scenarios that impact on how discretion may be exercised and the bushfire outcome achieved.

5.1 Bushfire protection permit exemptions

Bushfire exemptions for vegetation will continue to apply and operate unaffected by the amendment. Attachment 3 sets these out (in section 3.8) and they include the 10/30[50] rule. Permit exemptions will also enable the creation of defendable space in conjunction with permits issued under the Bushfire Management Overlay for a dwelling.

5.2 Subject properties within the Bushfire Management Overlay

Development in the Bushfire Management Overlay will require defendable space to be provided and any trees within this area will need to be compliant with defendable space vegetation management requirements unless the relevant fire authority provides an exemption. An exemption to enable selected trees to be retained for heritage purposes may be proposed in these circumstances but would be accompanied by the bushfire hazard site assessment required under the Bushfire Management Overlay.

Any trees to be retained that conflicts with standard defendable space vegetation management would only arise after the assessment of the bushfire hazard. Advice from the relevant fire authority would be received in all cases. It is likely that any trees protected on heritage grounds would therefore be consistent with bushfire outcomes.

Protecting individual trees that would otherwise need to be removed within the defendable space area is relatively common under the Bushfire Management Overlay where the defendable space will otherwise still deliver the intended outcome.

5.3 Subject properties outside of the Bushfire Management Overlay

Subject properties outside of the Bushfire Management Overlay are in lower landscape risk locations (landscape type 1) where the main landscape bushfire risk is from grassfires. These subject properties will only have tree controls in the form of the Heritage Overlay.

Due to the lower landscape risk and in combination with existing permit exemptions, there is no compelling bushfire reason why trees could not be considered for protection on these subject properties having regard to the bushfire hazard, lot sizes and the landscape risk.

As part of an application, subject properties within the bushfire prone area would need to consider bushfire using *c13.02-1S Bushfire Planning* including the *Use and development control in a bushfire prone area*. This would also be supported by the proposed refinements to *c21.08-1 Heritage conservation* that seek to enable bushfire to be considered within the 'heritage' decision.

Subject properties not within a bushfire prone area, in combination with a low landscape risk, do not realistically have any bushfire constrain in relation to heritage tree controls.

5.4 Subject properties with other vegetation protection controls

Many parts of Macedon Ranges Shire have vegetation protection controls, including the VPO and SLO. These apply to all subject properties in higher landscape risk areas, so permit requirements are generally already included into the planning scheme. This includes subject properties in Mount Macedon assessed as landscape type 4 and which are at extreme risk of bushfire.

The risk increase of adding additional tree controls to trees already requiring a planning permit is considered much lower than a permit trigger being introduced for the first time.

5.5 Conclusions on proposed tree controls

Based on the above, the proposed tree controls are considered acceptable in the context of bushfire.

6.0. Considerations where prohibited uses are enabled in the amendment

The amendment proposes that 7 subject properties can seek a permit for a prohibited use.

6.1 Lower landscape risk subject properties where prohibited uses are enabled

Subject properties in lower landscape risk areas (landscape type 1), which is all but one property proposed for prohibited uses, are sufficiently low risk that there is no bushfire reason why prohibited uses cannot be enabled. These properties are outside of the Bushfire Management Overlay so *c13.02-1S Bushfire Planning* including the *Use and development control in a bushfire prone area* would provide an assessment framework. This would be supported by the proposed refinements to *c21.08-1 Heritage conservation* that seek to enable bushfire to be considered within the 'heritage' decision.

These are effective mechanisms to ensure proper bushfire assessments are done. Especially with the recommended change to c21.08-1, there is no bushfire reason not to proceed with enabling prohibited uses on the lower landscape risk subject properties.

6.2 Higher landscape risk subject property where prohibited uses are enabled

The subject property at 51 Glen Drouitt Road, Mount Macedon is in a higher landscape risk area (landscape type 3b – 4). This property is within the Bushfire Management Overlay. It is highly likely that any application for a prohibited use would also trigger a planning permit under the Bushfire Management Overlay, enabling a full bushfire assessment to be made. Based on this, there are no bushfire reason not to proceed with enabling prohibited uses on this subject property.

7.0 Conclusions

The amendment proposed to apply the Heritage Overlay to selected properties. The planning scheme, if amended, would provide an acceptable decision making framework that enables bushfire to be prioritised in decision making. This is delivered through:

- The Bushfire Management Overlay, where it applies.
- The considerations under *c13.02-1S Bushfire Planning* and the *Use and development control in a bushfire prone area*.
- The proposed refinements to *c21.08-1 Heritage conservation* that seek to enable bushfire to be considered within the ‘heritage’ decision.
- Bushfire protection exemptions that will continue to apply.

Where the Bushfire Management Overlay does not apply, bushfire considerations would be made by the responsible authority (the Council) without advice or directions from the relevant fire authority, in most circumstances. It is for this reason that a focus on bushfire where it is a relevant issue for an application under the Heritage Overlay is required. However, where the Council is prepared to prioritise bushfire in its decision making, the planning scheme amendment is likely to deliver acceptable bushfire outcomes.

It would be desirable for the Council to provide training to its statutory planners on the operation of the planning scheme as it relates to integrated decision making where bushfire is a consideration. This is especially needed for planning applications in areas outside of the Bushfire Management Overlay and would support the planning scheme if amended by C127.

Next steps

Please contact me if you require any further information.

Yours sincerely,



Kevin Hazell
DIRECTOR

Attachment 1: Subject properties bushfire analysis

Attachment 1: Bushfire assessment of subject properties

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
682 Mount Macedon Road, Mount Macedon	Mount Macedon	Mount Macedon Presbyterian Church	3b or 4	Localised burning elements Ember attack from forests Extreme fire behaviour likely	Bushfire Management Overlay Use and development control in a bushfire prone area	0.8ha RCZ (place of assembly)	No	No
20 Cheniston Road, Mount Macedon	Mount Macedon	Cheniston	3b or 4	Forest fire Ember attack from forests Extreme fire behaviour likely	Bushfire Management Overlay Use and development control in a bushfire prone area	5.49ha RCZ (dwelling)	No	Yes Extensive existing trees in northern part of site, more managed in southern part near existing buildings Only the retention of carefully selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. c52.12-1 Exemption to create defensible space (10/30(50)) rule c52.12-5 Exemption to create defensible space for a Bushfire Management Overlay dwelling Heritage local policy to consider bushfire within the heritage decision SLO1 / SLO2 / VPO2 / VPO9

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
455 Mount Macedon Road, Mount Macedon	Mount Macedon	Dreamthorpe	3b or 4	Localised burning elements Ember attack from forests Extreme fire behaviour likely, although some separation from main forest fire runs	Bushfire Management Overlay Use and development control in a bushfire prone area	4.05ha RCZ (dwelling)	No	Yes Extensive existing trees. Only the retention of carefully selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. c52.12-1 Exemption to create defensible space (10/30(50)) rule c52.12-5 Exemption to create defensible space for a Bushfire Management Overlay dwelling Heritage local policy to consider bushfire SLO1 / VPO2 / VPO9
51 Glen Drouitt Road, Mount Macedon	Mount Macedon	Glen Drouitt	3b or 4	Grassfire Ember attack from forests Extreme fire behaviour likely, although some separation from main forest fire runs	Bushfire Management Overlay Use and development control in a bushfire prone area	24.37ha RCZ (dwelling)	Yes Unlikely to create a planning scheme conflict subject to assessment as part of any application Heritage local policy to	Yes Minimal existing trees. Only the retention of carefully selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. c52.12-1 Exemption to create defensible space (10/30(50)) rule c52.12-5 Exemption to create defensible space for a Bushfire Management Overlay dwelling

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
							consider bushfire	Heritage local policy to consider bushfire SLO1 / VPO9
36 (part), 42 and 68A (part) Main Road, Lancefield	Lancefield	Lancefield Railway Station	1	Grassfire Extreme fire behaviour unlikely	Use and development control in a bushfire prone area	4.02ha (total of three separate individually owned lots) LDRZ	No	No
3 Clarkes Lane, Woodend North	Woodend North	Springfield State School	1	Grassfire	Use and development control in a bushfire prone area	0.83ha FZ	No	No
16 Brooke Street, Woodend	Woodend	Woodend Catholic Primary School	1	Localised fire on railway reserve	None required. Land not in a bushfire prone area or Bushfire Management Overlay Bushfire not likely to be relevant to Heritage Overlay decision	0.39ha NRZ	No	No
18 Brooke Street, Woodend	Woodend	Blanchwood	1	Localised fire on railway reserve	None required. Land not in a bushfire prone area or Bushfire Management Overlay Bushfire not likely to be relevant to	0.81ha NRZ	No	Yes Low landscape risk. Land not within a planning scheme bushfire control. Retention of selected vegetation considered to be acceptable from a bushfire perspective.

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
					Heritage Overlay decision			Heritage local policy to consider bushfire
6-8 Collier Street, Woodend	Woodend	Lyndhurst	1	Nil	None required. Land not in a bushfire prone area or Bushfire Management Overlay Bushfire not likely to be relevant to Heritage Overlay decision	0.26ha NRZ	No	No
2-8 Dickens Street, Woodend	Woodend	Pindiri	1	Nil	None required. Land not in a bushfire prone area or Bushfire Management Overlay Bushfire not likely to be relevant to Heritage Overlay decision	1.24ha NRZ	No	Yes Low landscape risk. Land not within a planning scheme bushfire control. Retention of selected vegetation considered to be acceptable from a bushfire perspective. Heritage local policy to consider bushfire
35 (part) Forest Street, Woodend	Woodend	Woodend Masonic Lodge	1	Nil	None required. Land not in a bushfire prone area or Bushfire Management Overlay Bushfire not likely to be relevant to Heritage Overlay decision	0.17ha NRZ	No	No

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
37 (part) Forest Street, Woodend	Woodend	St Andrews Church	1	Localised fire on vacant land to the north.	None required. None required. Land not in a bushfire prone area or Bushfire Management Overlay Bushfire not likely to be relevant to Heritage Overlay decision	0.20ha NRZ	No	No
16 and 18 (part) Templeton Street, Woodend	Woodend	St Ambrose Catholic Church	1	Nil	None required. Land (substantively) not in a bushfire prone area or Bushfire Management Overlay Bushfire not likely to be relevant to Heritage Overlay decision	1.94ha NRZ	No	No
2\TP856403 Colwells Road, Woodend	Woodend	Zion Baptist Church	1	Grassfire Ember attack from forest / woodland to the west	Use and development control in a bushfire prone area	0.01ha RCZ (place of assembly)	Yes Unlikely to create a planning scheme conflict subject to assessment as part of any application Heritage local policy to	No

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
							consider bushfire	
20 Bowen Street, Woodend (HO337 interim control)	Woodend	Carramar	1	Riparian corridor relatively well contained by urban development and on an aspect away from forests	Use and development control in a bushfire prone area	1.68ha LDRZ	No	Yes Retention of selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. c52.12-1 Exemption to create defensible space (10/30(50)) rule c52.12-5 Exemption to create defensible space for a Bushfire Management Overlay dwelling Heritage local policy to consider bushfire VPO1 / VPO9
8 Carlisle Street, Woodend	Woodend	Manchester Unity Convalescent Home	1	Grassfire Extreme fire behaviour unlikely	Use and development control in a bushfire prone area	1.55ha NRZ	No	Yes Retention of selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. c52.12-1 Exemption to create defensible space (10/30(50)) rule c52.12-5 Exemption to create defensible space for a Bushfire Management Overlay dwelling Heritage local policy to consider bushfire

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
65 (part) Romsey Road, Woodend	Woodend	Flint Hill	1	Grassfire Grassland interfaces on a favourable aspect for bushfire (fire unlikely to be moving towards the site)	Use and development control in a bushfire prone area	23.93ha (5 lots in one ownership) FZ	No	Yes Property has extensive tree cover but trees close to assets in a managed setting. Retention of selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. c52.12-1 Exemption to create defensible space (10/30(50)) rule Heritage local policy to consider bushfire
153 (part) Collivers Road, Lancefield	Lancefield	The Grange Farm Complex	1 (grasslands)	Grassfire Extreme fire behaviour unlikely	Use and development control in a bushfire prone area Larger lot is likely to enable bushfire and heritage objectives to be concurrently met	66.35ha FZ	Yes Unlikely to create a planning scheme conflict subject to assessment as part of any application Heritage local policy to consider bushfire	Yes Property mostly comprises low-threat vegetation Property mostly comprises low-threat vegetation and grasslands. Retention of selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. c52.12-1 Exemption to create defensible space (10/30(50)) rule Heritage local policy to consider bushfire

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
114 (part) High Street, Lancefield	Lancefield	Blois Cottage Farm Complex	1 (grasslands)	Grassfire Extreme fire behaviour unlikely	Use and development control in a bushfire prone area Larger lot is likely to enable bushfire and heritage objectives to be concurrently met	5.99ha (total: 5 lots in one ownership) GRZ	No	Yes Property mostly comprises low- threat vegetation and grasslands. Retention of selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. c52.12-1 Exemption to create defendable space (10/30(50)) rule Heritage local policy to consider bushfire
158 (part) Mahers Road, Lancefield	Lancefield	Annie Vale Farm Complex	1 (grasslands)	Grassfire Extreme fire behaviour unlikely	Use and development control in a bushfire prone area Larger lot is likely to enable bushfire and heritage objectives to be concurrently met	17.72ha RLZ1	Yes Unlikely to be a problem subject to assessment Heritage local policy to consider bushfire	Yes Property mostly comprises low- threat vegetation and grasslands. Retention of selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. c52.12-1 Exemption to create defendable space (10/30(50)) rule Heritage local policy to consider bushfire
3416 Melbourne Lancefield Road, Lancefield	Lancefield	Lancefield Presbyterian Manse	1 (grasslands)	Grassfire Extreme fire behaviour unlikely	Use and development control in a bushfire prone area	0.88ha RLZ	Yes Unlikely to be a problem subject to assessment	Yes Property mostly comprises low- threat vegetation and grasslands. Retention of selected vegetation likely to be acceptable at the

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
							Heritage local policy to consider bushfire	landscape scale, subject to site assessment. c52.12-1 Exemption to create defensible space (10/30(50)) rule Heritage local policy to consider bushfire
46 Millers Lane, Lancefield	Lancefield	Newland Farm Complex	1 (grasslands)	Grassfire Extreme fire behaviour unlikely	Use and development control in a bushfire prone area	1.02ha FZ	Yes Unlikely to be a problem subject to assessment Heritage local policy to consider bushfire	Yes Property mostly comprises low-threat vegetation and grasslands. Retention of selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. c52.12-1 Exemption to create defensible space (10/30(50)) rule Heritage local policy to consider bushfire
1-29 Forest Street & 11 (part) Davy Street, Woodend	Woodend	Woodend Racecourse	1 (grasslands)	Grassfire Riparian corridor Extreme fire behaviour unlikely	Use and development control in a bushfire prone area Public land manager	29.29ha PCRZ	Yes Unlikely to be a problem subject to assessment Heritage local policy to consider bushfire	Yes Property mostly comprises low-threat vegetation, managed land and grasslands. Retention of selected vegetation likely to be acceptable at the landscape scale, subject to site assessment. Heritage local policy to consider bushfire

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
29-31 Margaret Street, Macedon	Macedon	29-31 Margaret Street, Macedon	3a or 3b	Ember attack from forests Extreme fire behaviour likely	Bushfire Management Overlay Use and development control in a bushfire prone area	0.16ha LDRZ (dwelling)	No	No
54 Bent Street, Macedon	Macedon	Macedon Cemetery	3a or 3b	Ember attack from forests Extreme fire behaviour likely	Bushfire Management Overlay vulnerable use provisions Use and development control in a bushfire prone area Site operations to reduce risk to acceptable levels Public land manager	4.46ha PUZ	No	Yes Property mostly comprises low-threat vegetation, managed land and grasslands. Retention of selected vegetation likely to be acceptable at the landscape scale, subject to site assessment.
29 Goldies Lane, Woodend	Woodend	Campaspe House	3a	Continuous non-grassland fuel path from forested areas Extreme fire behaviour possible	Bushfire Management Overlay Use and development control in a bushfire prone area Adjoins low fuel urban development	7.24ha NRZ (dwelling)	No	Yes Extensive existing trees Only the retention of carefully selected vegetation likely to be acceptable at the landscape scale, subject to site assessment c52.12-1 Exemption to create defendable space (10/30(50)) rule

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
								<p>c52.12-5 Exemption to create defensible space for a Bushfire Management Overlay dwelling</p> <p>Heritage local policy to consider bushfire</p> <p>Bushfire Management Overlay</p>
109 (part) Mountains Road, Mount Macedon	Mount Macedon	Craigielea	4	<p>Forest fire</p> <p>Ember attack from forests</p> <p>Extreme fire behaviour likely</p>	<p>Bushfire Management Overlay</p> <p>Use and development control in a bushfire prone area</p>	<p>8.89ha RCZ (dwelling)</p>	No	No
222 (part) Alton Road, Mount Macedon	Mount Macedon	Penola	4	<p>Forest fire</p> <p>Ember attack from forests</p> <p>Extreme fire behaviour likely</p>	<p>Bushfire Management Overlay</p> <p>Use and development control in a bushfire prone area</p>	<p>2.71ha RCZ (dwelling)</p>	No	<p>Yes</p> <p>Extensive existing trees</p> <p>Only the retention of carefully selected vegetation likely to be acceptable at the landscape scale, subject to site assessment</p> <p>c52.12-1 Exemption to create defensible space (10/30(50)) rule</p> <p>c52.12-5 Exemption to create defensible space for a Bushfire Management Overlay dwelling</p> <p>Heritage local policy to consider bushfire</p>

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
								SLO1 / VPO9 Bushfire Management Overlay
51 Devonshire Lane, Mount Macedon	Mount Macedon	Ard Rudah	4	Forest fire Ember attack from forests Extreme fire behaviour likely	Bushfire Management Overlay Use and development control in a bushfire prone area	2.28ha RCZ (dwelling)	No	Yes Extensive existing trees Only the retention of carefully selected vegetation likely to be acceptable at the landscape scale, subject to site assessment c52.12-1 Exemption to create defensible space (10/30(50)) rule c52.12-5 Exemption to create defensible space for a Bushfire Management Overlay dwelling Heritage local policy to consider bushfire SLO1 / VPO9 Bushfire Management Overlay
53 Devonshire Lane, Mount Macedon	Mount Macedon	Marnanie	4	Forest fire Ember attack from forests Extreme fire behaviour likely	Bushfire Management Overlay Use and development control in a bushfire prone area	2.28ha RCZ (dwelling)	No	Yes Extensive existing trees Only the retention of carefully selected vegetation likely to be acceptable at the landscape scale, subject to site assessment c52.12-1 Exemption to create defensible space (10/30(50)) rule

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
								<p>c52.12-5 Exemption to create defensible for a Bushfire Management Overlay dwelling</p> <p>Heritage local policy to consider bushfire</p> <p>SLO1 / VPO9</p> <p>Bushfire Management Overlay</p>
864 Mount Macedon Road, Mount Macedon	Mount Macedon	Sefton	4	<p>Forest fire</p> <p>Ember attack from forests</p> <p>Extreme fire behaviour likely</p>	<p>Bushfire Management Overlay</p> <p>Use and development control in a bushfire prone area</p>	<p>8.78ha</p> <p>RCZ</p> <p>(dwelling)</p>	No	<p>Yes</p> <p>Extensive existing trees</p> <p>Only the retention of carefully selected vegetation likely to be acceptable at the landscape scale, subject to site assessment</p> <p>c52.12-1 Exemption to create defensible space (10/30(50)) rule</p> <p>c52.12-5 Exemption to create defensible for a Bushfire Management Overlay dwelling</p> <p>Heritage local policy to consider bushfire</p> <p>SLO1 / VPO9</p> <p>Bushfire Management Overlay</p>
80 (part) Turner Ave, Mount Macedon	Mount Macedon	Ard Choille Cottage	4	<p>Forest fire</p> <p>Ember attack from forests</p>	<p>Bushfire Management Overlay</p> <p>Use and development control</p>	<p>5.18ha</p> <p>RCZ</p> <p>(dwelling)</p>	No	<p>Yes</p> <p>Extensive existing trees</p>

STREET	LOCATION	HERITAGE PLACE	LANDSCAPE TYPE	LIKELY BUSHFIRE	MITIGATION	ZONE AND LOT SIZE	PROHIBITED USES	TREE CONTROLS
				Extreme fire behaviour likely	in a bushfire prone area	(accommodation)		<p>Only the retention of carefully selected vegetation likely to be acceptable at the landscape scale, subject to site assessment</p> <p>c52.12-1 Exemption to create defensible space (10/30(50)) rule</p> <p>c52.12-5 Exemption to create defensible for a Bushfire Management Overlay dwelling</p> <p>Heritage local policy to consider bushfire</p> <p>SLO1</p> <p>VPO9</p> <p>Bushfire Management Overlay</p>

Attachment 2: Contextual information

FIGURE A2.1: AMENDMENT C127 SUBJECT PROPERTIES

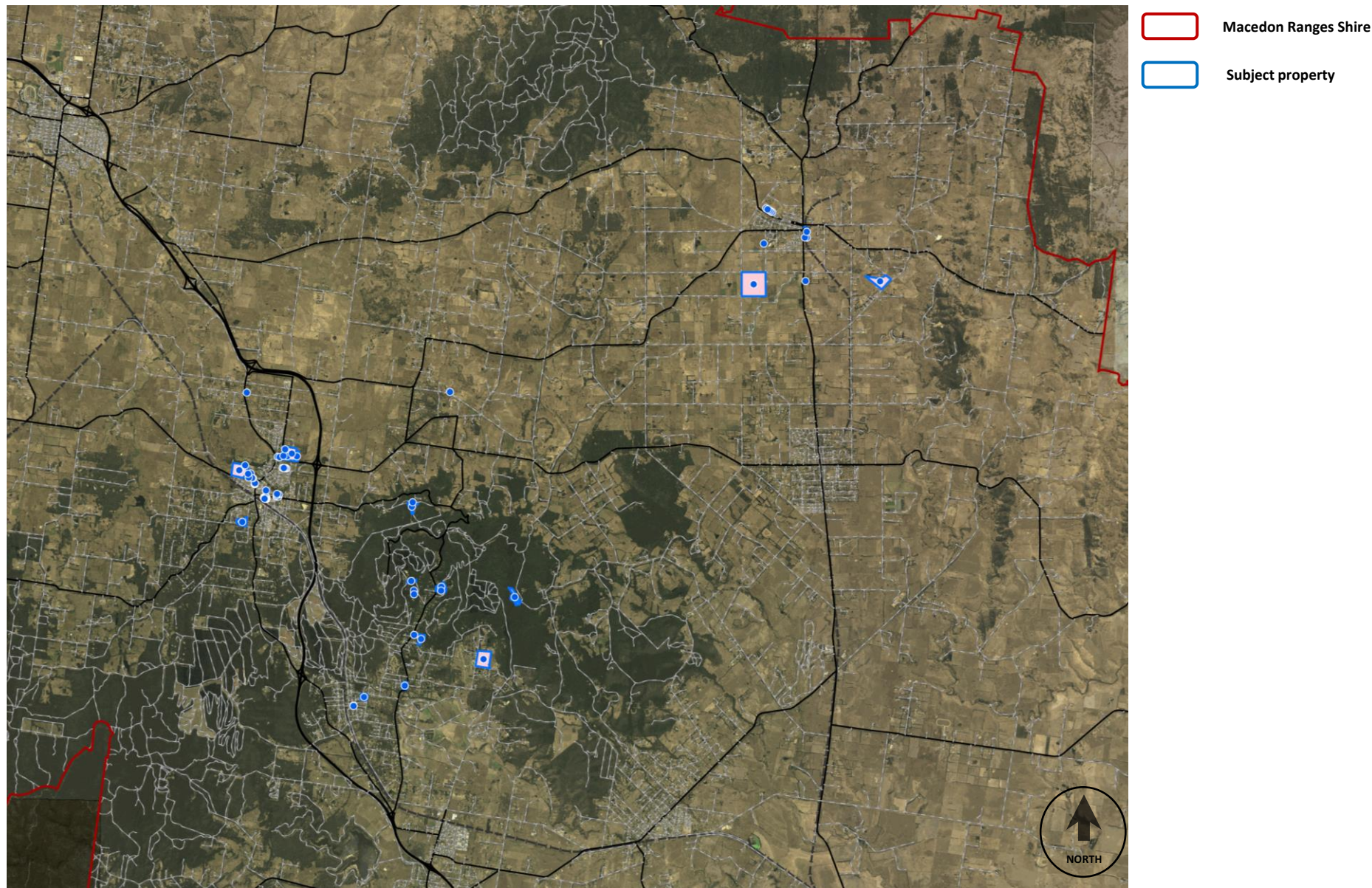


FIGURE A2.2: ZONES

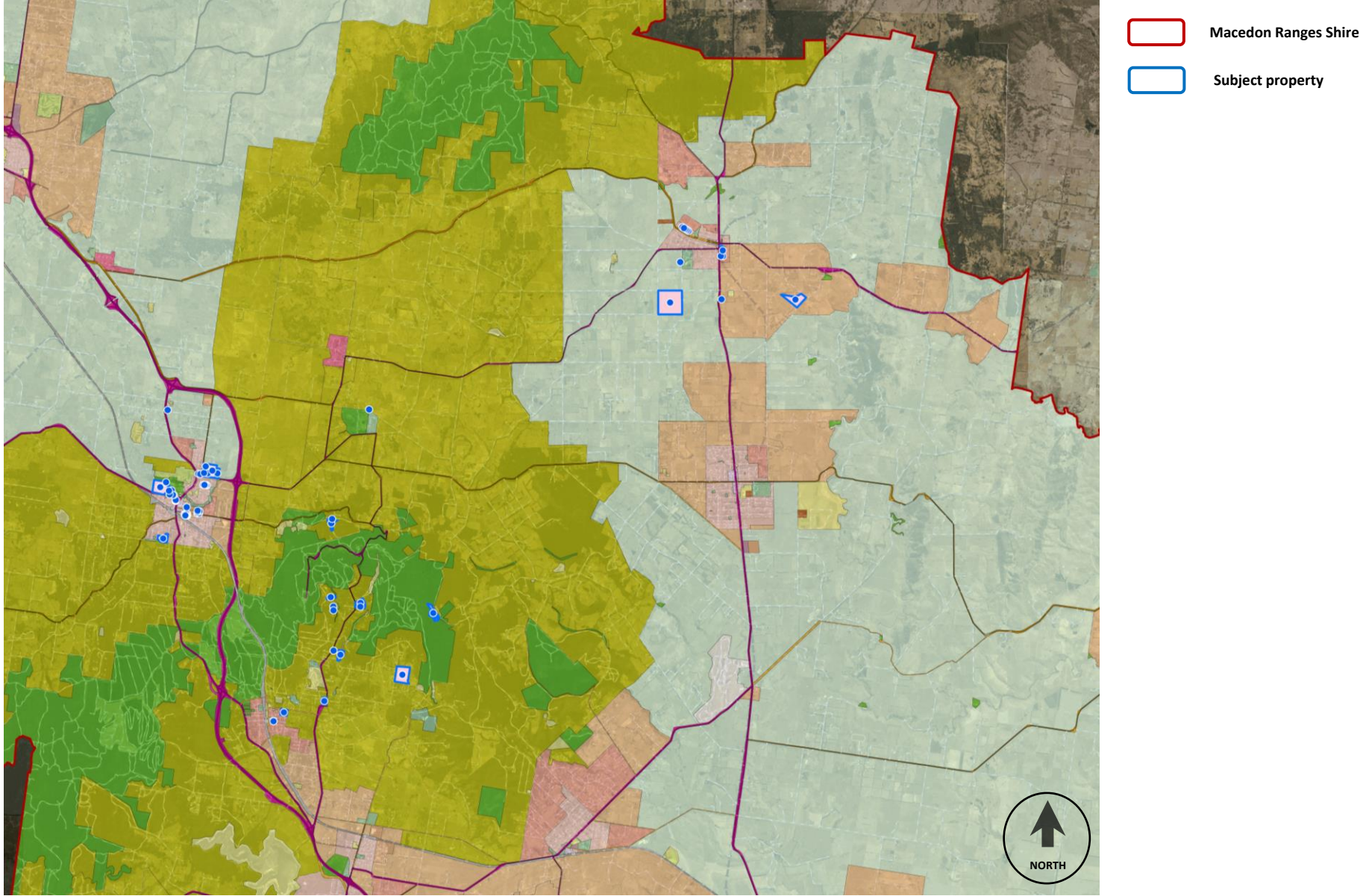
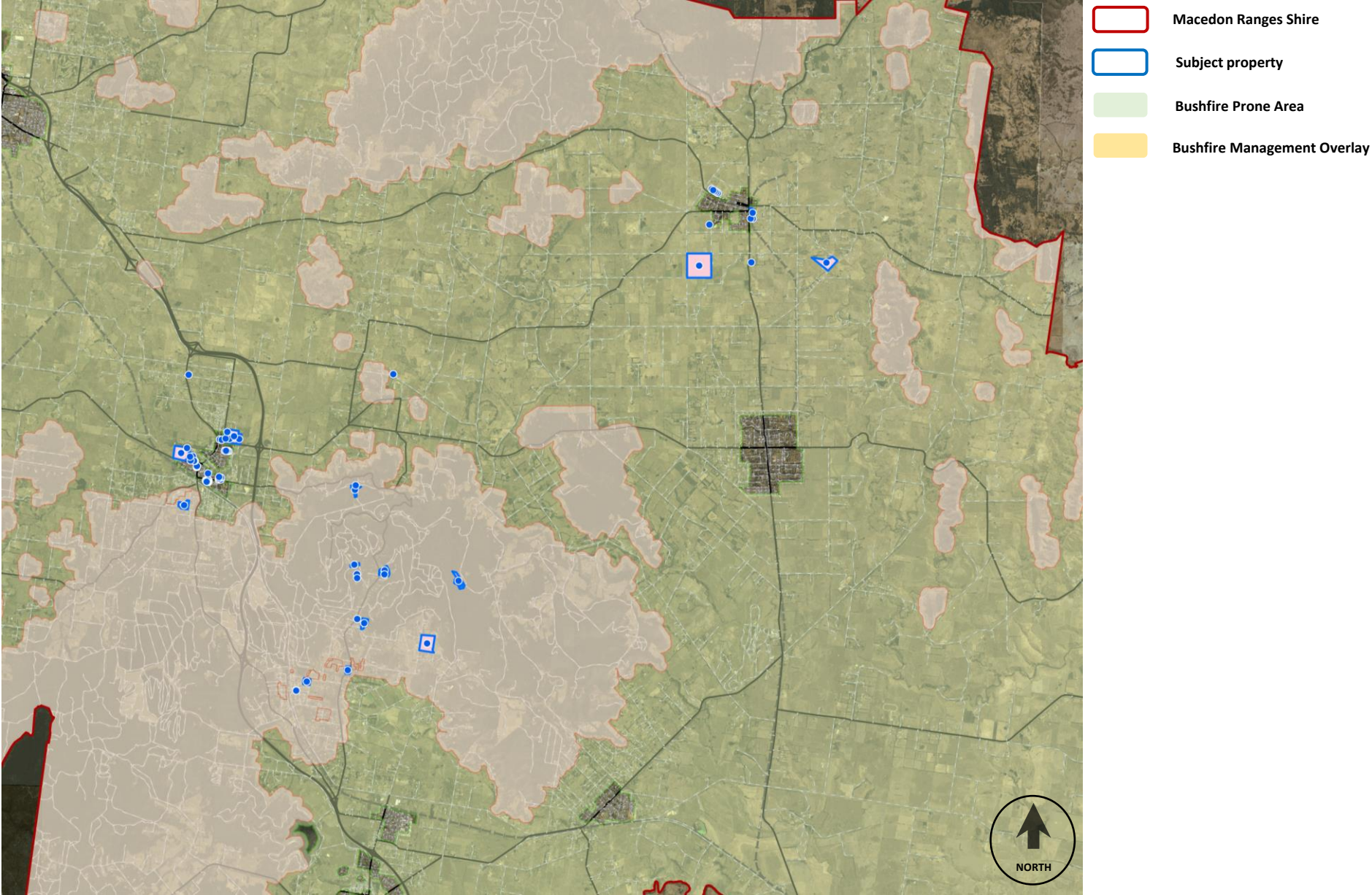


FIGURE A2.3: BUSHFIRE MANAGEMENT OVERLAY AND BUSHFIRE PRONE AREA



Attachment 3: Planning scheme bushfire context

The planning scheme contains provisions 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 A3 summarises the considerations.

3.1 Integrated decision making (c71.02-3)

c71.02-3 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*.

3.2 Natural hazards and climate change (c13.01-1S)

The objective of the State natural hazards and climate change policy is:

To minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning.

c13.01-1S *Bushfire Planning* contains a series of strategies to meet the above objective:

- *Consider 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 or risk adaptation strategies to be implemented.*
- *Site and design development to minimise risk to life, property, the natural environment and community infrastructure from natural hazards.*

3.3 State planning policy for bushfire (c13.02-1S)

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.

The key strategy that directs bushfire decision making is:

Give priority 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 safe access to, areas where human life can be better protected from the effects of bushfire.*
- *Reducing the vulnerability of communities to bushfire through the consideration of bushfire risk in decision making at all stages of the planning process.*

c13.02-1S *Bushfire Planning* applies to all planning and decision making relating to land:

- *Within a designated bushfire prone area;*
- *Subject to a Bushfire Management Overlay; or*
- *Proposed to be used or developed in a way that may create a bushfire hazard.*

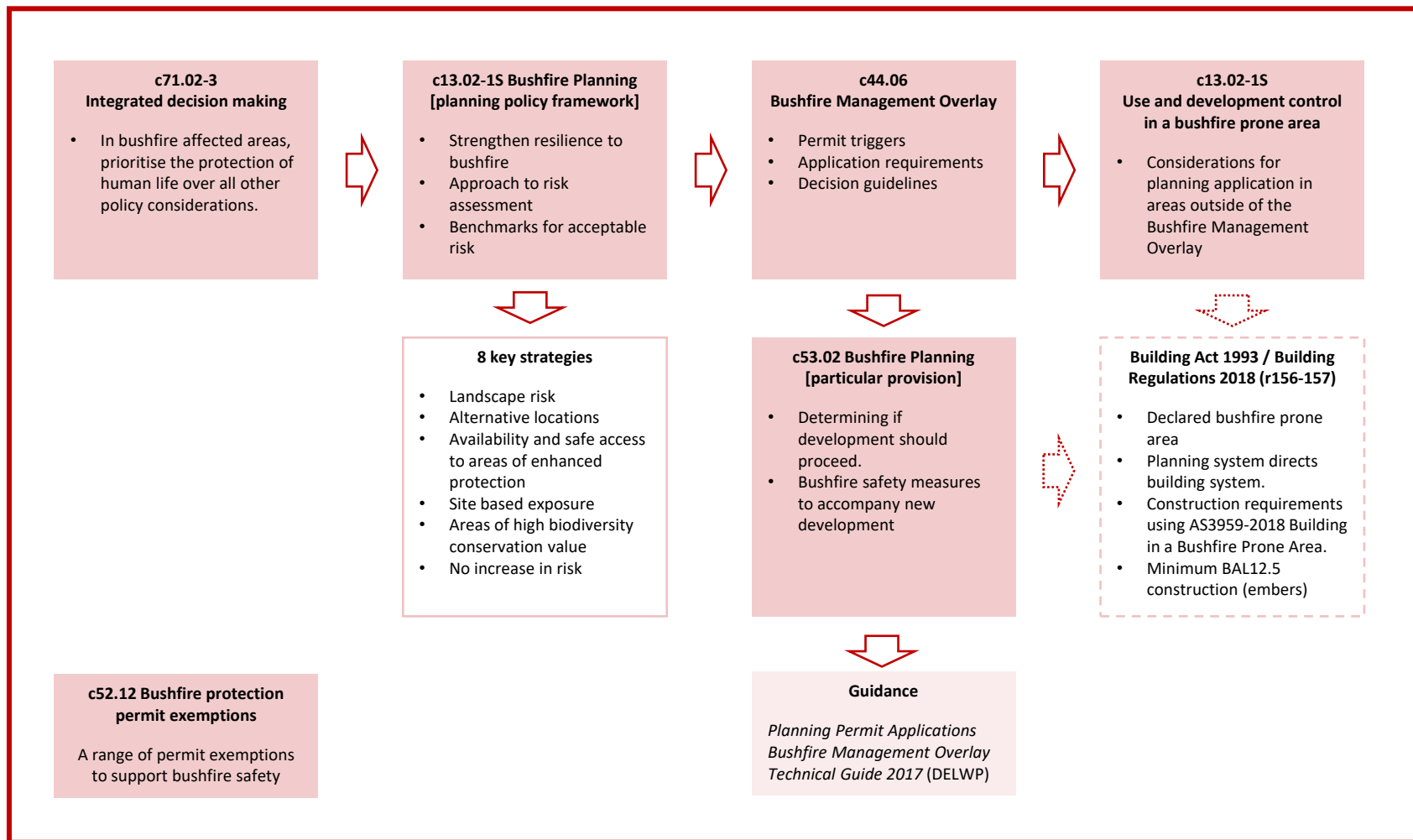
c13.02-1S *Bushfire Planning* contains a series of strategies and these are summarised below.

Landscape bushfire considerations

c13.02-1S *Bushfire Planning* 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.*

FIGURE A3: BUSHFIRE PLANNING SCHEME PROVISIONS AND SUPPORTING MATERIAL



Alternative locations for development

c13.02-1S *Bushfire Planning* 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 areas of enhanced protection

c13.02-1S *Bushfire Planning* 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 3959-2018 *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

c13.02-1S *Bushfire Planning* 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

c13.02-1S *Bushfire Planning* 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 3959-2018 *Construction of Buildings in Bushfire-prone Areas (Standards Australia)*.
- 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 3959-2018.

Areas of high biodiversity conservation value

c13.02-1S *Bushfire Planning* provides directions on situations where a bushfire risk and biodiversity 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.

No increase in risk

c13.02-1S *Bushfire Planning* 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.

3.4 Bushfire Management Overlay (c44.06)

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.

3.5 Bushfire Planning (c53.02)

c52.03 *Bushfire Planning* 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.*

3.6 Bushfire prone area (c13.02-1S, Building Act 1993 & Building Regulations 2018)

Bushfire Prone Areas are areas that are subject to or likely to be subject to bushfire. The Minister for Planning makes a formal determination to designate Bushfire Prone Areas under section 192A of the Building Act 1993.

Designated 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.

The Building Regulations 2018 require bushfire construction standards 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 is included in the Bushfire Prone Area is also included in the Bushfire Management Overlay, the requirements of the Bushfire Management Overlay take precedence. Where this is the case, the building regulations ensure bushfire construction requirements in a planning permit are given effect to by the relevant building surveyor at the time a building permit is issued.

3.7 Use and development control in Bushfire Prone Areas (c13.02-1S)

c13.02-1S *Bushfire Planning* includes planning requirements for Bushfire Prone Areas. These are in the form of a 'use and development control' that applies to certain uses that are in a Bushfire Prone Area.

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.*

3.8 Bushfire protection permit exemptions (c52.12)

Bushfire related permit exemptions are included in c52.12 *Bushfire protection exemptions*. Exemptions are included for the following matters:

- Permit exemptions to create defendable space around existing buildings used for accommodation. They apply to bushfire prone areas, which includes land subject to the Bushfire Management Overlay. These are commonly known as the 10/30 rule and the 10/50 rule. This exemption applies to accommodation constructed or approved on or before 2009.
- Permit exemptions to create defendable space for a dwelling under the Bushfire Management Overlay, where the defendable space is specified in a planning permit issued after 31 July 2014. The permit exemption only applies to specified zones, which include residential zones. The permit exemption does not apply to defendable space specified in a planning permit for uses other than a dwelling and for any uses outside of the Bushfire Management Overlay.
- Permit exemptions for buildings and works associated with a community fire refuge and a private bushfire shelter (where a Class 10c building).

Attachment 4: Strategic appreciation of bushfire as relevant to Amendment C127

This attachment provides bushfire context relevant to appreciating the bushfire risk to the amendment. It describes strategic and landscape bushfire considerations using contextual information and an assessment of landscape-scale bushfire hazards.

Landscape-scale bushfire hazards are the extent and type of vegetation and topography in and around a location that is subject to a planning decision. The extent of the surrounding landscape that is relevant is determined by factors including the extent and continuity of vegetation, potential fire runs, and where a bushfire can start, develop and grow large.

Landscape-scale bushfire hazards are important because they help to understand how bushfire may impact on a location, including the likelihood of a bushfire threatening a location, its likely intensity and destructive power, and the potential impact on life and property.

Strategic and landscape bushfire considerations are assessed in this report using the approach to a bushfire hazard landscape assessment described in *Planning Permit Applications Bushfire Management Overlay Technical Guide* (DELWP 2017).

4.1 Bushfire conditions in Victoria

The Department of Environment, Land, Water and Planning (2015) identifies key features relevant to bushfires in Victoria. These include:

- A forest fire danger index of well over 100
- Severe drought conditions
- Temperatures above 40° C
- Relative humidity below 10%
- Strong to gale-force north-westerly winds
- A strong to gale-force west-south-westerly wind change that turns the eastern flank of a running bushfire into a wide new fire front.

DELWP notes that these weather conditions are representative of where a bushfire does most of its damage in a single day. The greatest loss of life and property have historically been caused by such single day bushfires.

DELWP (2020) further notes that climate change is forecast to:

- Extend the bushfire season
- Make bushfires larger, more severe, and more frequent
- Make days with an elevated fire danger rating more frequent
- Start the bushfire season earlier, with more bushfires starting in spring (which may also change fire weather conditions that are experienced, such as wind speed and direction)

4.2 Planning scheme bushfire designations

Planning schemes identify potentially bushfire affected land through the inclusion of land into the Bushfire Management Overlay or within a designated bushfire prone area (referenced in *c13.02-1S Bushfire Planning* and approved under the Building Act 1993). All land within a Bushfire Management Overlay is also included into the Bushfire prone area.

The Bushfire Management Overlay is applied to non-grassland vegetation larger than 4ha and land within 150m of these areas. It is also applied to land likely to be subject to extreme bushfire behaviour.

The Bushfire prone area applies to grassland areas, smaller patches of non-grassland vegetation and land within 50m of these areas.

See **Figure A2.3: Bushfire Management Overlay and bushfire prone area**

Landscape appreciation of planning scheme bushfire designations

Large forested areas in the south-west and north-east part of Macedon Ranges Shire are included within the Bushfire Management Overlay. This is consistent with the potential for the bushfire hazard in these areas to generate extreme bushfire behaviour. Other areas of Bushfire Management Overlay apply where the extent of non-grassland vegetation is greater than 4ha. These tend to be in smaller 'islands' located in the north and east of Macedon Ranges Shire.

The Bushfire Prone Area applies to the balance of Macedon Ranges Shire, excluding urban areas beyond the hazard-interface of settlements. This reflects the extensive grassland areas.

4.3 Bushfire management strategy guiding public agencies

The *Loddon Mallee Bushfire Management Strategy* (DELWP 2020) considers the long-term implications of bushfire to direct the activities of bushfire-related public agencies and to reduce bushfire risk to people, property, infrastructure and economic activity.

The bushfire management strategy contains assessments that provide information on landscape bushfire that are of assistance to better appreciating landscape bushfire risk. This includes the following summary bushfire history and patterns relevant to the study area:

Destructive bushfire weather in Victoria is generally defined by a high-pressure system over the Tasman Sea and a cold pressure system in the Great Australian Bight. This leads to hot and dry conditions, with strong north-westerly winds followed by a mid-afternoon south-westerly change.

The change brings gusting winds, instability, lightning events and often no rainfall or increase in humidity to provide relief. Under these conditions, in the forests of the southern parts of the Loddon Mallee region, fires may be dominated by powerful convection columns, intense flames and ember storms.

[...]

Fires in the region can occur at any time of the year but are most common between October and April, and the most damaging fires have occurred from December through to February. Despite the worst bushfires occurring on days with similar weather patterns, the hot, dry climate of our region means destructive bushfire events can occur under lower fire danger conditions. Days with a fire danger rating of low to moderate — with temperatures of 20 ° C, surface winds at 20 km/hr and relative humidity of 20% — often support fast-running grass and scrub fires that can significantly impact life, property and other values.

The bushfire management strategy outlines the following:

- *Nearly 14% of recorded bushfires in Victoria have occurred in the southern part of the Loddon Mallee region, and more than half of these can be attributed to human activities*
- *Fires can start at any time during the day, but most occur in the early afternoon between 14:00 and 15:30 hrs. This is when fire danger approaches its peak, with peak fuel dryness being a significant contributor to bushfire spread at this time of day.*

The bushfire management strategy includes information on the modelled risk of house loss, using a comparison of where houses could be lost across the region. This shows there is relatively higher risk of house loss in the study area, especially oriented around the south-west and north-east parts of Macedon Ranges Shire. These areas correlate with large forested areas and are included within the Bushfire Management Overlay.

See **Figure A4.1: Modelled bushfire risk based on potential house losses (DELWP 2020)**

4.4 Bushfire history

Bushfire history can be informative to understanding landscape bushfire behaviour, although bushfire history or lack of bushfire history should not be over-emphasised in the planning decision.

The potential for bushfire is demonstrated by bushfire history in the large forested parts of Macedon Range Shire. This includes the 1983 Ash Wednesday bushfires.

See **Figure A4.2: Bushfire history**

The Australian Institute for Disaster Resilience (AIDR 2021) provides descriptions of past major bushfires. The following is relevant to the bushfire landscape.

This fire began at approximately 2.00pm near East Trentham due to two powerlines touching and sparking. The fire moved to the Wombat State Forest and burnt much of Bullengarook. The fire stalled for a time, but picked up again following a wind change to the south-west, and moved towards Woodend at 8.30pm with a 7 metre fire front.

The fire reached Macedon where people and animals sheltered in the Hotel protected by volunteers. The rest of the town was annihilated. After reaching the top of Mount Macedon, the fire was controlled in an area that was previously burnt on 1 February.

Seven people died, 20,000 hectares were burnt, and 200 homes were destroyed in Macedon – 150 on Mount Macedon, 50 in Bullengarook and 20 in Woodend.

Forest Fire Victoria (2021) also provides contextual and descriptive content on past bushfires, including Ash Wednesday. The following discusses the impact of wind change:

The wind change moved through south-west Victoria by early evening. This was disastrous as the westerly winds caused the fires to change direction and size. Prior to the wind change, the fires had been relatively long and thin, with a narrow head, or front. After the wind change, the long side of the fire then became the head, or front, of the fire, burning across a much wider front.

4.5 Victorian Fire Risk Register

The Victorian Fire Risk Register (VFRR) is a data set prepared by fire authorities and local councils that identifies assets at risk of bushfire. The human settlement data is most relevant to planning scheme decision making. The VFRR should not be over-emphasised in planning decision making, as it has not been prepared for this purpose and does not contemplate new risk that might arise because of a planning decision. The VFRR however is useful to the extent that it shows current assets (for example, settlements) at risk.

The VFRR for Macedon Ranges Shire identifies areas of extreme risk in the southern part of Woodend and in Macedon and Mt Macedon. See **Figure A4.3: Victorian Fire Risk Register human settlement polygons**

4.6 Regional Bushfire Planning Assessment

The Regional Bushfire Planning Assessment Loddon Mallee Region 2012 (DPCD) provides information about 'identified areas' where a range of land use planning matters intersect with a bushfire hazard.

Identified areas apply to the following locations:

- Extensive identification of areas in the south-west of Macedon Ranges Shire, including small and medium sized lots, limited access and settlement / bushfire hazard interfaces.
- Medium sized lots to the north of Lancefield and to the north-east of Kyneton.

See **Figure A4.4: Regional Bushfire Planning Assessment extract**

4.7 Topography

The wider landscape has a complex topography, associated with the Mount Macedon / Macedon Ranges, Wombat State Forest and Lerderberg State Park in the south-west and Cobaw State Forest in the north-east of Macedon Ranges Shire.

The topography in these places, combined with heavily forested areas, provides the type of rugged terrain where extreme bushfire behaviour can arise.

See **Figure A4.5: Topographic conditions**

4.8 Vegetated extent

Landcover (2015-2019) as contained on Nature Kit 2.0 (DELWP) shows the extensively trees areas in the south-west and north-east of Macedon Ranges Shire, with exotic pasture / grasslands throughout the rural hinterland. These broadly correlate with the Bushfire Management Overlay and the Bushfire Prone Area designations.

4.9 Bushfire landscape types

Landscape types are based on the landscape typologies set out in *Planning Permit Applications Bushfire Management Overlay Technical Guide* (DELWP 2017).

See **Figure A4.6: Overview of landscape types**

The landscape types assessed for subject properties are schematically illustrated on Figure A4.7 and are included for each subject property in Attachment 1.

See **Figure A4.7: Bushfire landscape types as they relate to subject properties**

For the purpose of the subject properties in Amendment C127, the following bushfire landscape types are identified. The landscape types (and the subject properties within them) are considered here in order of risk, from higher landscape risk to lower landscape risk.

Subject properties in Landscape type 3b or 4: Forested area

The subject properties within forested areas arise in Mount Macedon. The extent of hazard, vegetation type and topography have the potential to generate extreme fire behaviour.

Forested areas also have the potential to generate ember attack at high levels. DELWP (2020) identifies that embers account for most house loss, with most occurring within 1km of the edge of forested areas (although house loss from ember attack can still occur beyond this distance).

The subject properties within forested areas are assessed as a combination of Landscape type 3b and landscape type 4. Landscape 3b is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can approach from more than aspect*
- *The area is located in an area that is not managed in a minimal fuel condition*
- *Access to an appropriate place that provides shelter from bushfire is not certain.*

Landscape 4 is described by DELWP (2017) as follows:

- *The broader landscape presents an extreme risk*
- *Bushfires may have hours or days to grow and develop before impacting1*
- *Evacuation options are limited or not available.*

Subject properties in Landscape type 3a or 3b: Forest interface areas

The subject properties in forest interface areas are assessed as a combination of Landscape type 3a and 3b. They include properties in Macedon and a single property (29 Goldies Lane) on the southern edge of Woodend. The bushfire landscape has the potential to generate high levels of ember attack combined with risks associated with localised vegetation around subject properties (for examples, patches of trees, roadside vegetation and gardens).

DELWP (2020) identifies that embers account for most house loss, with most occurring within 1km of the edge of forested areas (although house loss from ember attack can still occur beyond this distance).

Landscape 3a is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can approach from more than aspect*
- *The area is located in an area that is not managed in a minimal fuel condition*
- *Access to an appropriate place that provides shelter from bushfire is available* (it is noted that this is often within a development site).

Landscape 3b is described by DELWP (2017) as follows:

- *The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site*
- *Bushfire can approach from more than aspect*
- *The area is located in an area that is not managed in a minimal fuel condition*
- *Access to an appropriate place that provides shelter from bushfire is not certain.*

It is noted that the subject property at 29 Goldies Lane, Woodend would comfortably fit within Landscape type 3a as it immediately adjoins low fuel urban areas.

Subject properties in Landscape type 1: Grassland and township areas

The subject properties in grasslands are located on the edges of Woodend, in Lancefield and in the rural hinterland of Macedon Ranges Shire. The Country Fire Authority (CFA) (2021) identifies key characteristics of grasslands and grassfires to include:

- *Grassfires can start and spread quickly and are extremely dangerous.*
- *Grassfires can travel up to 25 km per hour and pulse even faster over short distances.*
- *Grass is a fine fuel and burns faster than bush or forests.*
- *Grassfires tend to be less intense and produce fewer embers than bushfires, but still generate enormous amounts of radiant heat.*
- *The taller and drier the grass, the more intensely it will burn.*
- *The shorter the grass, the lower the flame height and the easier the fire will be to control.*
- *Grassfires can start earlier in the day than bushfires, because grass dries out more quickly when temperatures are high.*

Due to modified environments grassland areas are often in a managed setting either because of agricultural activities or managed as part of the gardens associated with rural living development. For considering the landscape risk associated with grassland areas, it is assumed that grasslands are unmanaged.

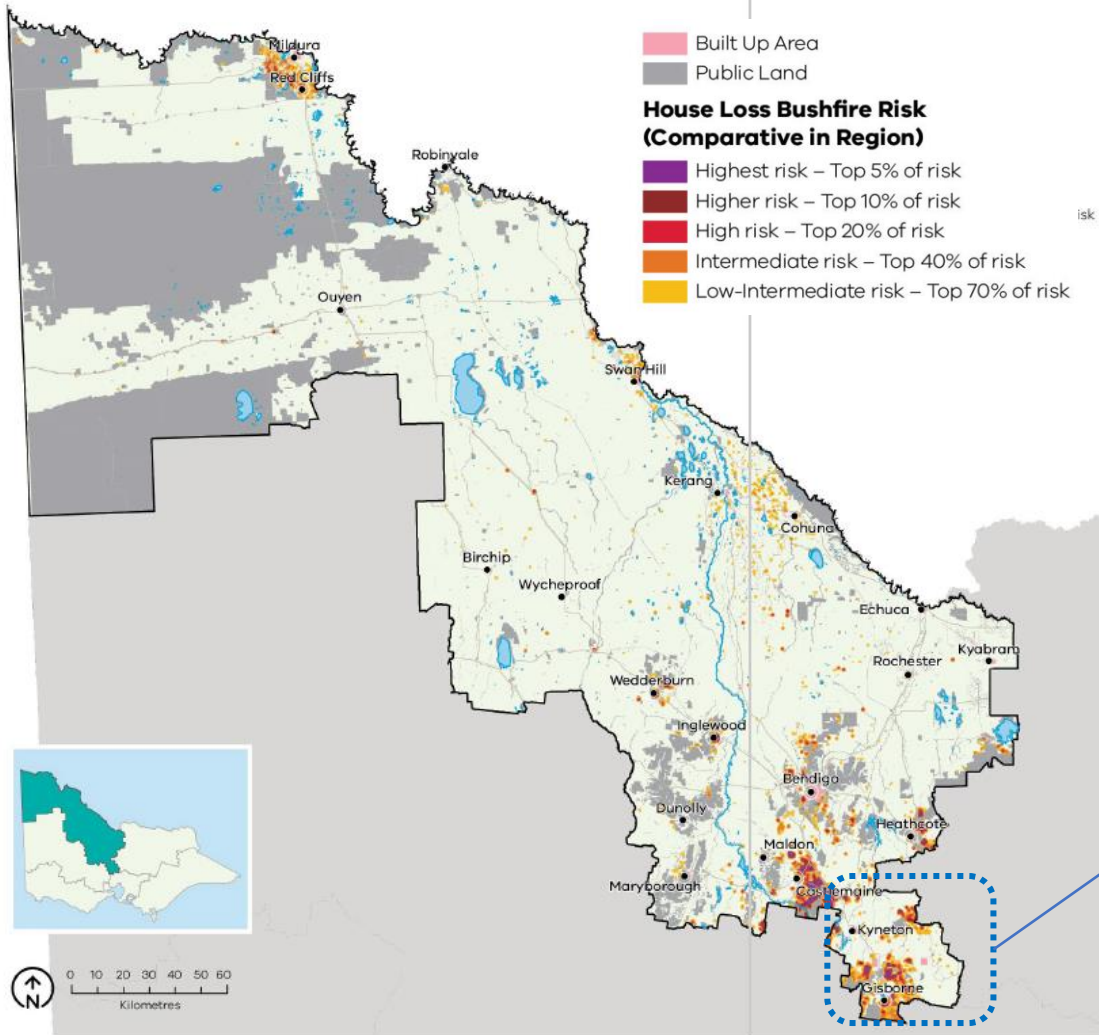
Interspersed with grassland areas are areas of fragmented vegetation. These will include clumps of non-grassland vegetation, roadside vegetation, strips of trees (for example, along vehicle accesses and water courses) and the smaller patched (on a landscape scale) of non-grassland vegetation. The extent of fragmentation will be a factor when considering bushfire at the local and site scale but the impact on landscape-scale bushfire is minimal. The grassland vegetation will be the dominant driver of bushfire behaviour in these grassland areas.

The subject properties located within Woodend that are not located on settlement edges are not exposed to landscape-scale hazards. For consistency, the lowest landscape risk type (1) has been applied to fit them within the landscape types approach.

Subject properties in grassland areas and township areas are assessed as Landscape type 1. Landscape type 1 is described by DELWP (2017) as follows:

- *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.*

FIGURE A4.1: MODELLED BUSHFIRE RISK BASED ON POTENTIAL HOUSE LOSSES (DELWP 2020) (ADAPTED)




 Study area (notional)

Figure 10. Bushfire risk within the Loddon Mallee region. This map only considers modelled house loss within the Loddon Mallee region and so risk shown on this map can only be compared within this region.

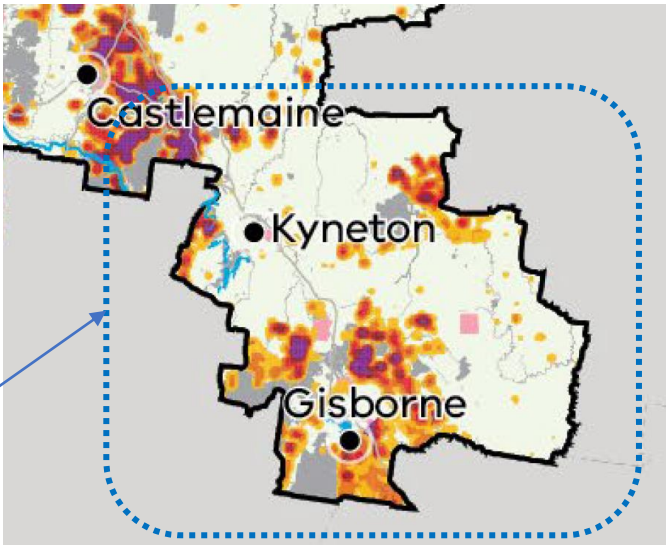


FIGURE A4.2: BUSHFIRE HISTORY

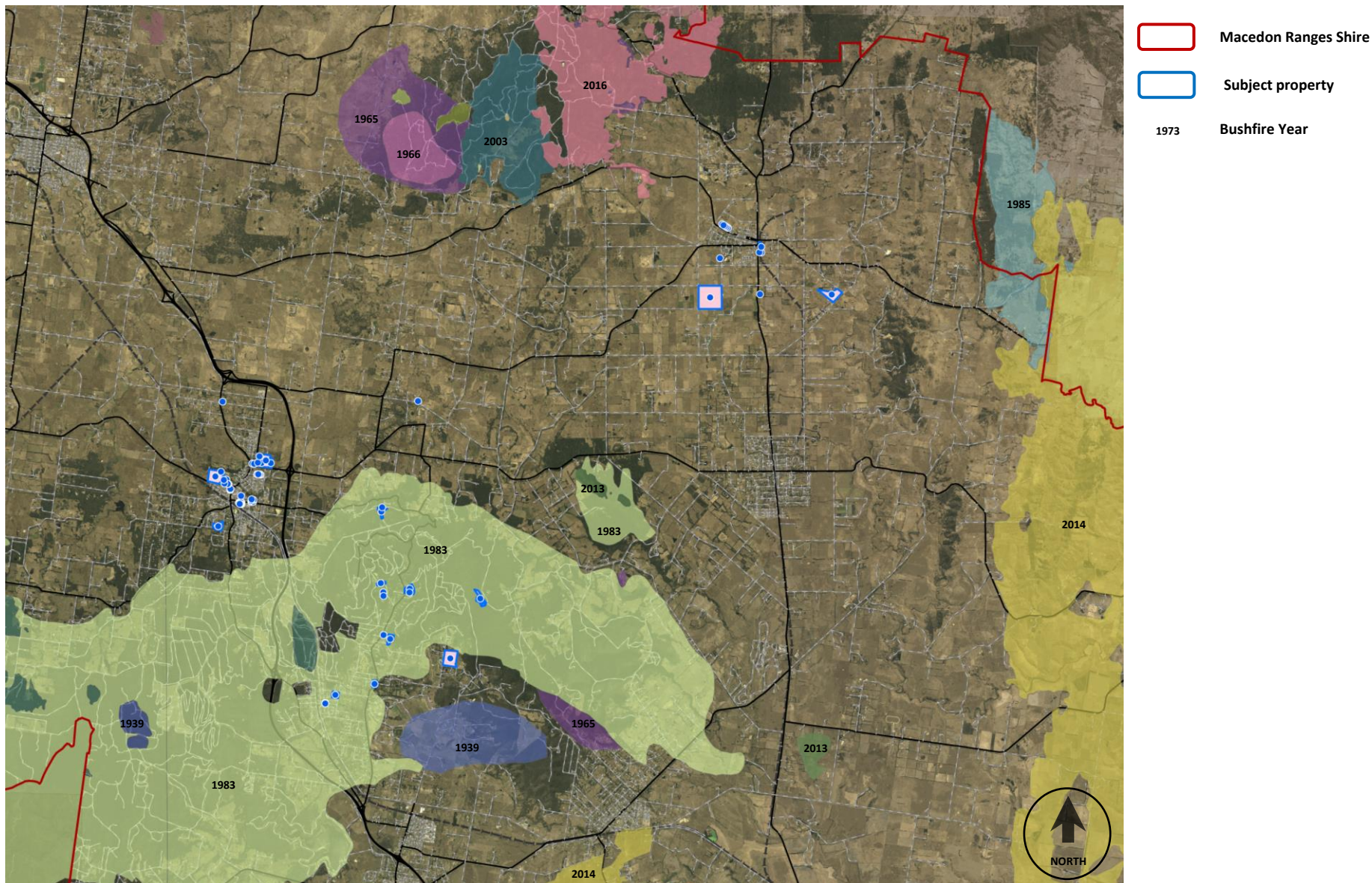


FIGURE A4.3: VICTORIAN FIRE RISK REGISTER HUMAN SETTLEMENT POLYGONS

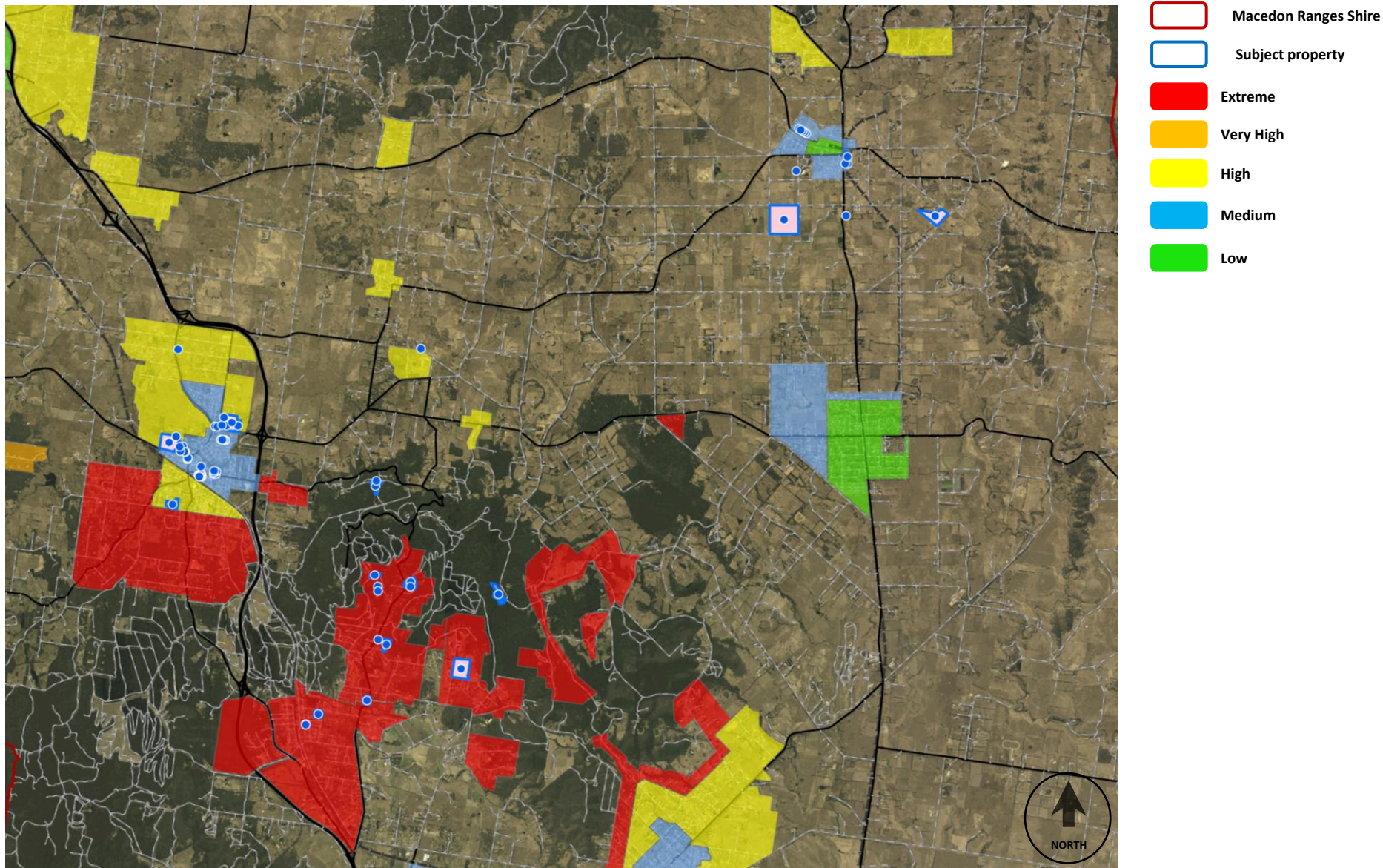


FIGURE A4.4: REGIONAL BUSHFIRE PLANNING ASSESSMENT METROPOLITAN MELBOURNE REGION (MACEDON RANGES)

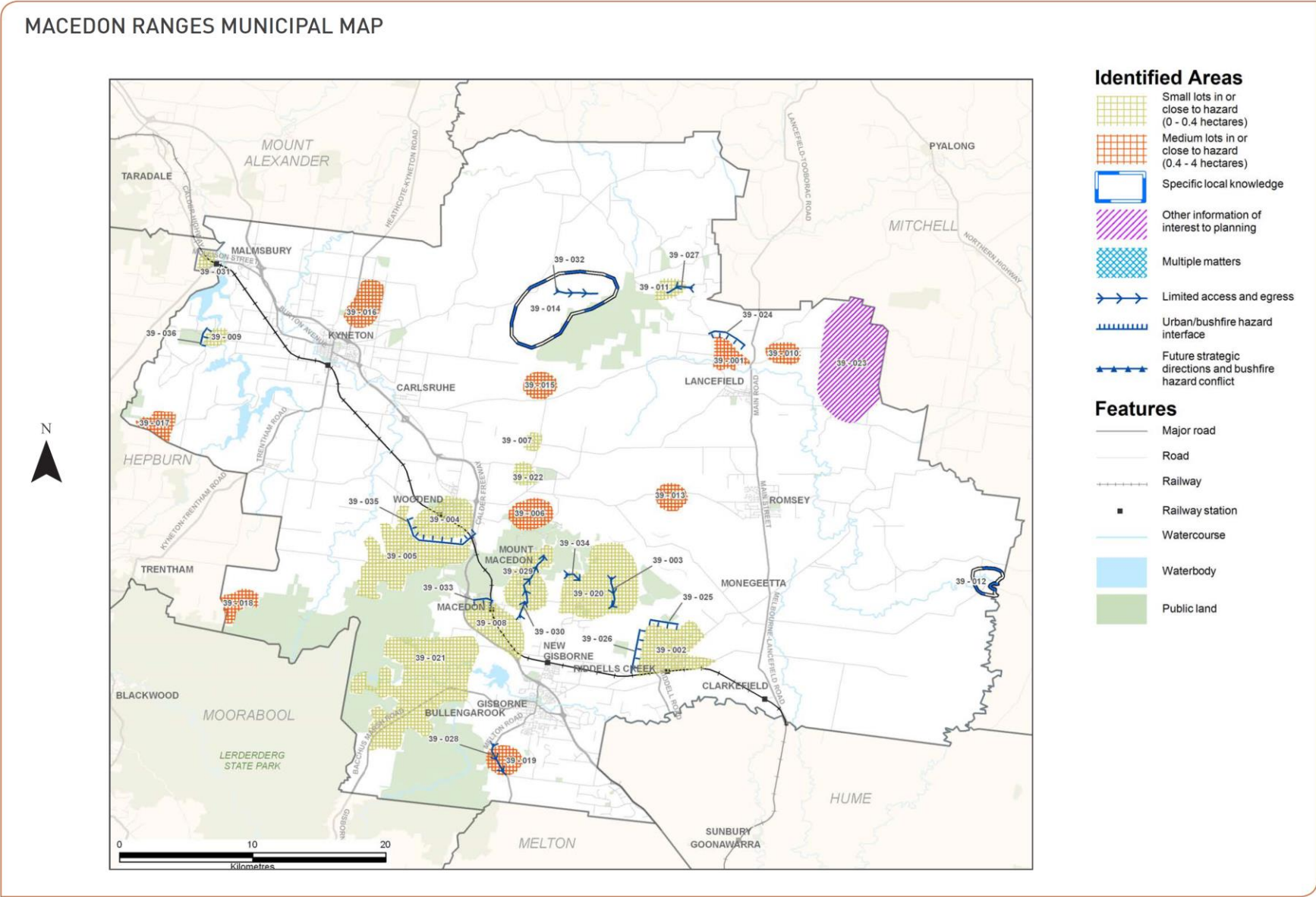


FIGURE A4.5: TOPOGRAPHY (ELEVATION IN METRES)

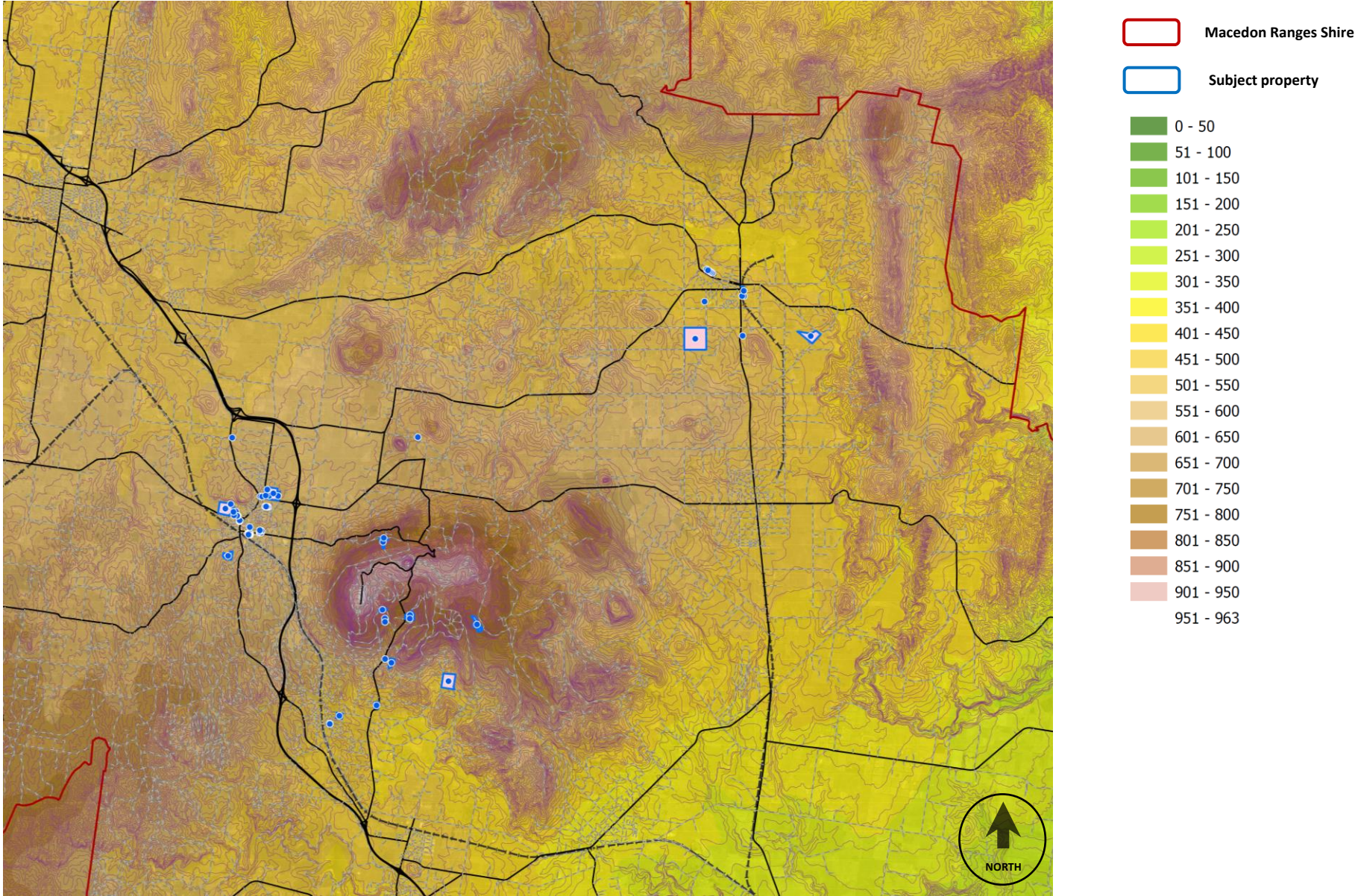


FIGURE A4.6: OVERVIEW OF LANDSCAPE TYPES

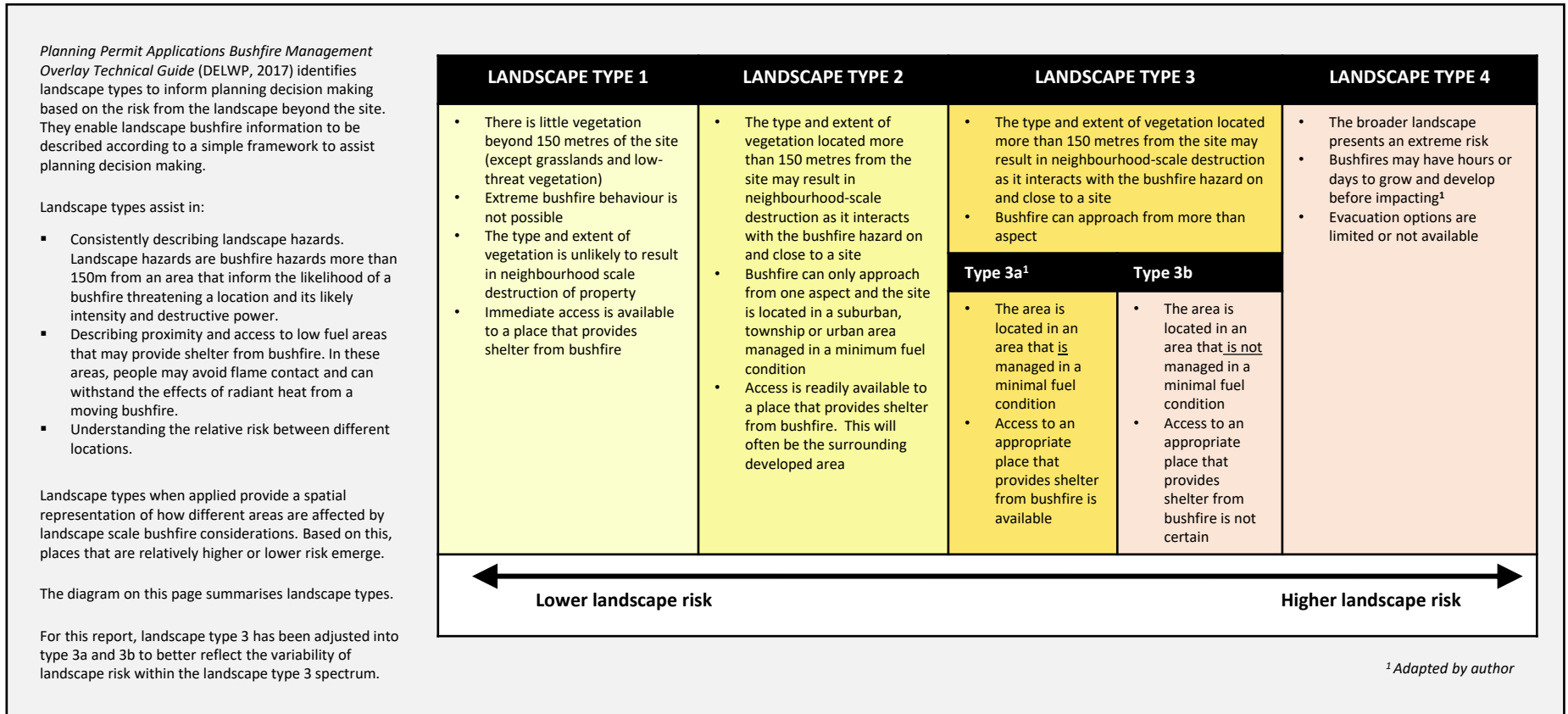
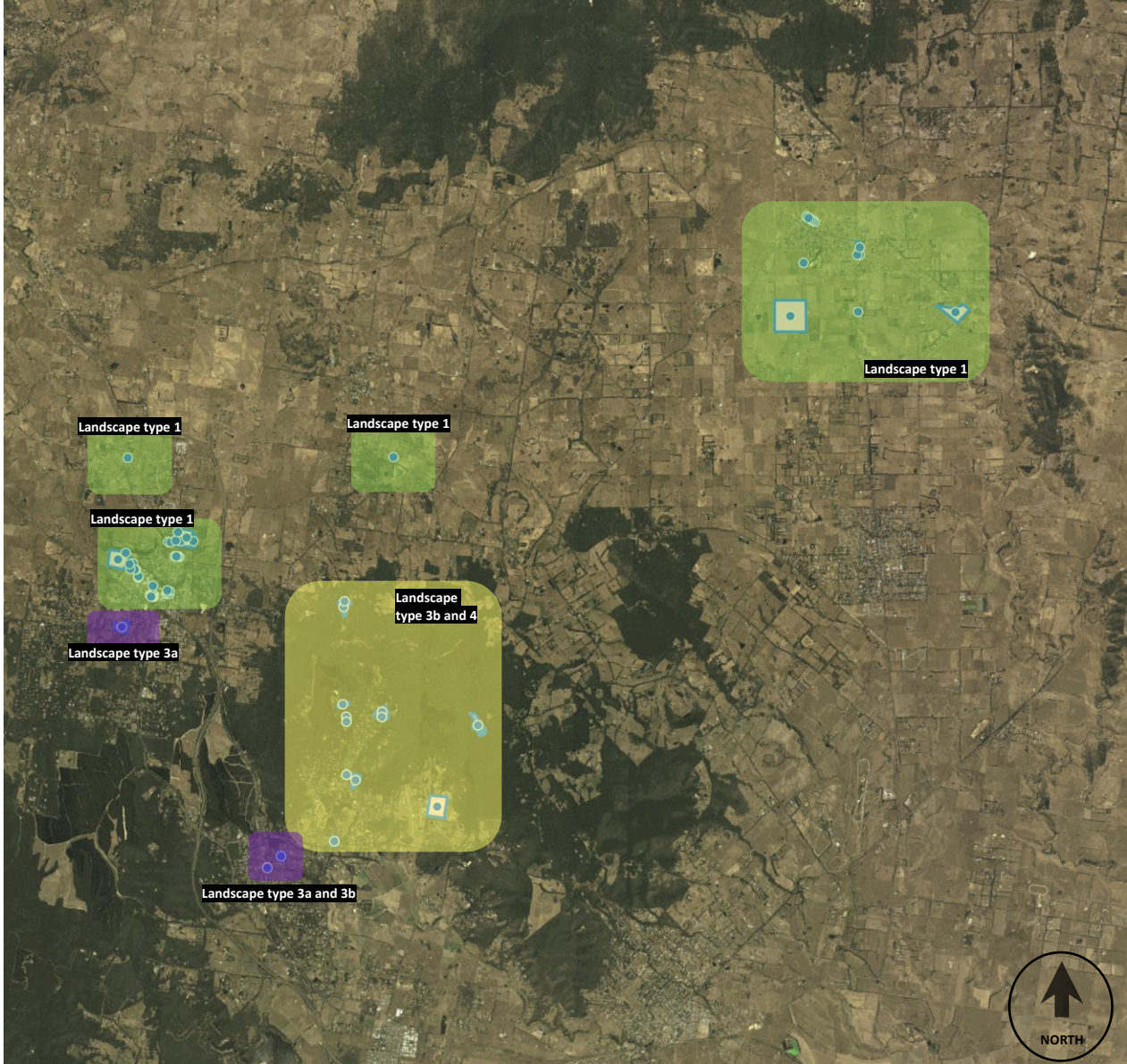


FIGURE A4.7: BUSHFIRE LANDSCAPE TYPES AS THEY RELATE TO SUBJECT PROPERTIES



- Subject property**
- Landscape types 3b and 4**
Forested areas
Extreme bushfire behaviour
- Landscape types 3a and 3b**
Forest interface
Extreme fire behaviour
- Landscape type 1**
Grassland or township areas
Extreme fire behaviour unlikely

- Notes:**
- Schematic only
 - Landscape types only apply to subject properties