



**Expert Evidence Statement to the  
VPA Projects Standing Advisory Committee  
Referral 4 – Proposed Hume Planning  
Scheme Amendment for the  
Craigieburn West Precinct Structure Plan**

Prepared by Hamish Allan  
Manager Bushfire Planning & Design, Terramatrix Pty Ltd,  
for the Victorian Planning Authority (VPA)

April 2021

[WWW.TERRAMATRIX.COM.AU](http://WWW.TERRAMATRIX.COM.AU)

Terramatrix project: VPA-2021-04 CI13.02\_BPA\_EWS-Craigieburn West

Cover image: Looking southeast into the precinct from the northwest corner.

**Terramatrix Pty. Ltd.**

ACN 129 163 373

ABN 44 129 163 373

PO Box 1391, Collingwood VIC 3066

P: 03 9417 2626

[www.terramatrix.com.au](http://www.terramatrix.com.au)

**Copyright**

Unless otherwise agreed in writing, this report is the intellectual property of Terramatrix. The report is designed to be used exclusively by the person that commissioned it. Permission must be sought prior to the reproduction of any portion of this document and every effort made to ensure proper referencing of this document.

**Disclaimer**

This report may be of assistance to you and has been made with careful consideration and with the best information available to Terramatrix at the time of writing. Before relying on information in this report, users should carefully evaluate the accuracy, completeness and relevance of the information provided for their purposes. Terramatrix Pty Ltd, its directors and employees do not guarantee that it is without flaw or omission of any kind or is wholly appropriate for your particular purposes and therefore disclaim all liability for any error, loss or other consequence that may arise from you relying on any information in this report.

## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>2</b>
<b>2</b>	<b>EXPERT WITNESS DETAILS.....</b>	<b>2</b>
2.1	NAME AND ADDRESS .....	2
2.2	QUALIFICATIONS .....	2
2.3	AREA OF EXPERTISE .....	2
2.4	SKILLS AND EXPERIENCE .....	2
<b>3</b>	<b>INSTRUCTIONS AND SCOPE OF THIS REPORT .....</b>	<b>3</b>
<b>4</b>	<b>CLIENT RELATIONSHIP .....</b>	<b>4</b>
<b>5</b>	<b>REFERENCES .....</b>	<b>4</b>
<b>6</b>	<b>FACTS, MATTERS AND ASSUMPTIONS .....</b>	<b>4</b>
6.1	REVIEW OF THE FEBRUARY 2020 BUSHFIRE DEVELOPMENT REPORT .....	4
6.1.1	<i>Minor matters pertaining to updates.....</i>	5
6.1.2	<i>Implications of changes to the Draft Place Based Plan .....</i>	6
6.2	DELWP SETTLEMENT PLANNING GUIDELINES.....	13
6.3	REVIEW OF THE DRAFT PSP AND PROPOSED ORDINANCE .....	13
6.3.1	<i>Proposed UGZ12 Schedule .....</i>	14
6.3.2	<i>Precinct Structure Plan Draft for Public Consultation.....</i>	14
<b>7</b>	<b>DECLARATION.....</b>	<b>17</b>
<b>8</b>	<b>REFERENCES .....</b>	<b>18</b>

## 1 Introduction

1. This report comprises expert evidence to the Victorian Planning Authority (VPA) Projects Standing Advisory Committee – Referral 4, regarding the proposed Hume Planning Scheme Amendment for the Craigieburn West Precinct Structure Plan (PSP).
2. This report has been prepared in accordance with Planning Panels Victoria *Guide to Expert Evidence* (PPV,2019).

## 2 Expert witness details

### 2.1 Name and address

Name: Hamish Allan  
Title: Manager Bushfire Planning and Design  
Company: Terramatrix Pty. Ltd.  
Address: Unit 6A/71 Victoria Crescent  
Abbotsford VIC 3067  
Email: info@terramatrix.com.au  
Telephone: (03) 9417 2626

### 2.2 Qualifications

- Bachelor of Applied Science in Environmental Assessment and Land Use Policy, 1990, Victoria College.
- Level 3 Accredited Bushfire Practitioner - Bushfire Planning and Design, Fire Protection Association Australia (FPAA) Accreditation Number BPAD29090.

### 2.3 Area of expertise

3. Bushfire planning and design.

### 2.4 Skills and experience

4. I have over 30 years' experience in land use planning (environmental, strategic and statutory planning), environmental management and bushfire planning including as a Park Ranger and Environmental Planner for State and local governments.



5. I have been employed at Terramatrix for the past 10 years, as Manager of the Bushfire Planning and Design (BPAD) team. This includes leading and undertaking bushfire risk assessments for strategic planning projects such as precinct structure plans, producing Bushfire Management Statements and other bushfire development reports for residential and commercial developments, subdivisions and planning scheme amendments.
6. I am a Victorian bushfire practitioner accredited by the Fire Protection Association Australia (FPAA) in association with the CFA and Department of Environment, Land, Water and Planning (DELWP) to provide Level 3 Bushfire Planning and Design (BPAD) services.
7. I am a guest lecturer in Bushfire Planning and Design for University of Melbourne - Bushfire Urban Planning and have previously presented on the Victoria University Graduate Certificate in Performance Based Building and Fire Codes. I have also provided sessional training services for a range of clients including the Planning Institute of Australia PLANET course - Preparing and Assessing a Bushfire Management Statement.
8. I am regularly engaged to provide expert evidence to VCAT and Planning Panels Victoria about bushfire safety and compliance matters.

### 3 Instructions and scope of this report

9. I have been engaged by the VPA and instructed by Aaron Shrimpton of Harwood Andrews, to provide expert evidence about the bushfire safety and compliance aspects of the proposed amendment.
10. I have been instructed in writing and verbally to prepare an expert witness statement report and appear at the hearing if required, including ensuring that my evidence report:
  - *'Includes a statement identifying the role that you had in preparing or overseeing the earlier report(s);*
  - *Provides a statement to the effect that you adopt the earlier report(s) as your evidence and identifying:*
    - *any departure, corrections or revisions you wish to make to the finding or opinions expressed in the report(s) and why;*
    - *any questions falling outside your expertise;*
    - *any key assumptions made in preparing the report(s); and*
    - *whether the earlier report(s) is incomplete or inaccurate in any respect;*

- *Includes details of any changed circumstances or assumptions since the earlier report(s) were prepared, and whether these affect the opinions expressed in the earlier report(s);*
- *Provides your opinion on the submissions relevant to your expertise and the VPA's response as set out in the Part A Submission (and attachments).'*' (Harwood Andrews, 2021).

## **4 Client relationship**

11. I was engaged in April 2021 to provide expert evidence. My relationship with the client is a standard commercial one and no private, personal or other matter has influenced the content or findings in this report.

## **5 References**

12. A list of documents referred to is provided as a reference list at the end of this report.

## **6 Facts, matters and assumptions**

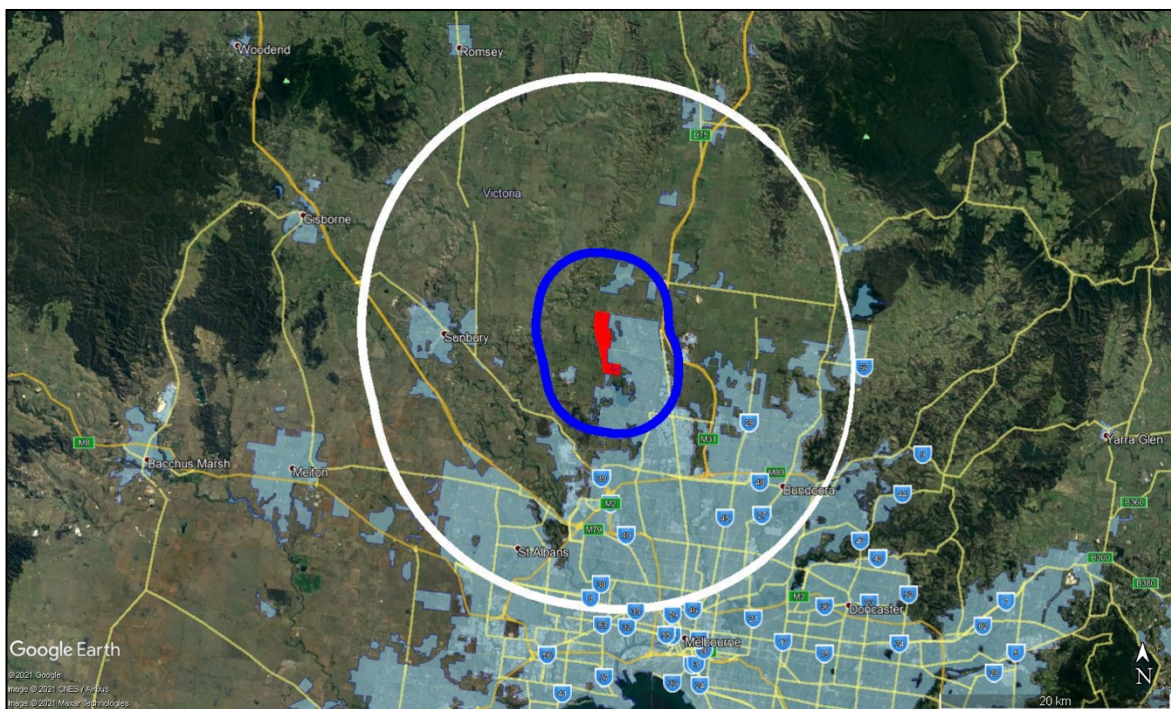
### **6.1 Review of the February 2020 Bushfire Development Report**

13. I have reviewed the Terramatrix Report prepared by myself for the PSP and provided to the VPA in February 2020, titled '*Bushfire Development Report for the Craigieburn West Precinct Structure Plan*, Report Prepared for the Victorian Planning Authority (VPA), v1.1, dated 2019-02-25' (Terramatrix, 2020).
14. I note that some of the dates in the accountability and version tables on the inside cover of the report have a minor error. The years in the dates should read 2020 not 2019.
15. The analysis, mapping, photos and content of the report is entirely my work, and was peer reviewed by Jon Boura, Managing Director - Terramatrix, as per the accountability and versions tables in the inside front cover.
16. I confirm and support the analysis and assessment of the hazard presented in the report and the findings and conclusions relating to what measures are required to appropriately mitigate the bushfire risk and how those measures can be implemented in response to, and to comply with, the applicable planning and building controls that relate to bushfire.

17. I believe there are no errors or omissions of any consequence in the report. However, I make the following specific comments in relation to some minor matters as follows.

#### 6.1.1 Minor matters pertaining to updates

18. To reflect the most recent BPA extent gazetted 1<sup>st</sup> February 2021, I have updated Figure 1 on Page 8 of the report, in Figure 1 below, which shows BAL-LOW areas (i.e. land not designated as a Bushfire Prone Area (BPA)) in the broader surrounding landscape around the precinct.



**Figure 1 - Update of Figure 1 on Page 8, showing Craigieburn West PSP landscape location (site in red outline, 5km buffer in blue outline and 20km buffer in white outline) (© Google 2021, Image © 2021 CNES/Airbus & Maxar Technologies). BAL-LOW areas (i.e. land not designated as a Bushfire Prone Area) is shown in semi-transparent blue shading (as the per most recent gazettal of the BPA, 2021-02-01).**

19. Similarly, *Map 2 - Bushfire Hazard Site Assessment Map* on page 22 of the report, *Map 4 - Bushfire Hazard Broad Landscape Assessment Map* on page 37 of the report and *Map 5 - Bushfire Hazard Local Landscape Assessment Map* on page 38 of the report, have also been updated in this evidence statement to show the most recent BPA coverage (see Maps 1, 2 and 3 following).
20. These maps have also been updated to show current parcel boundaries and roads.

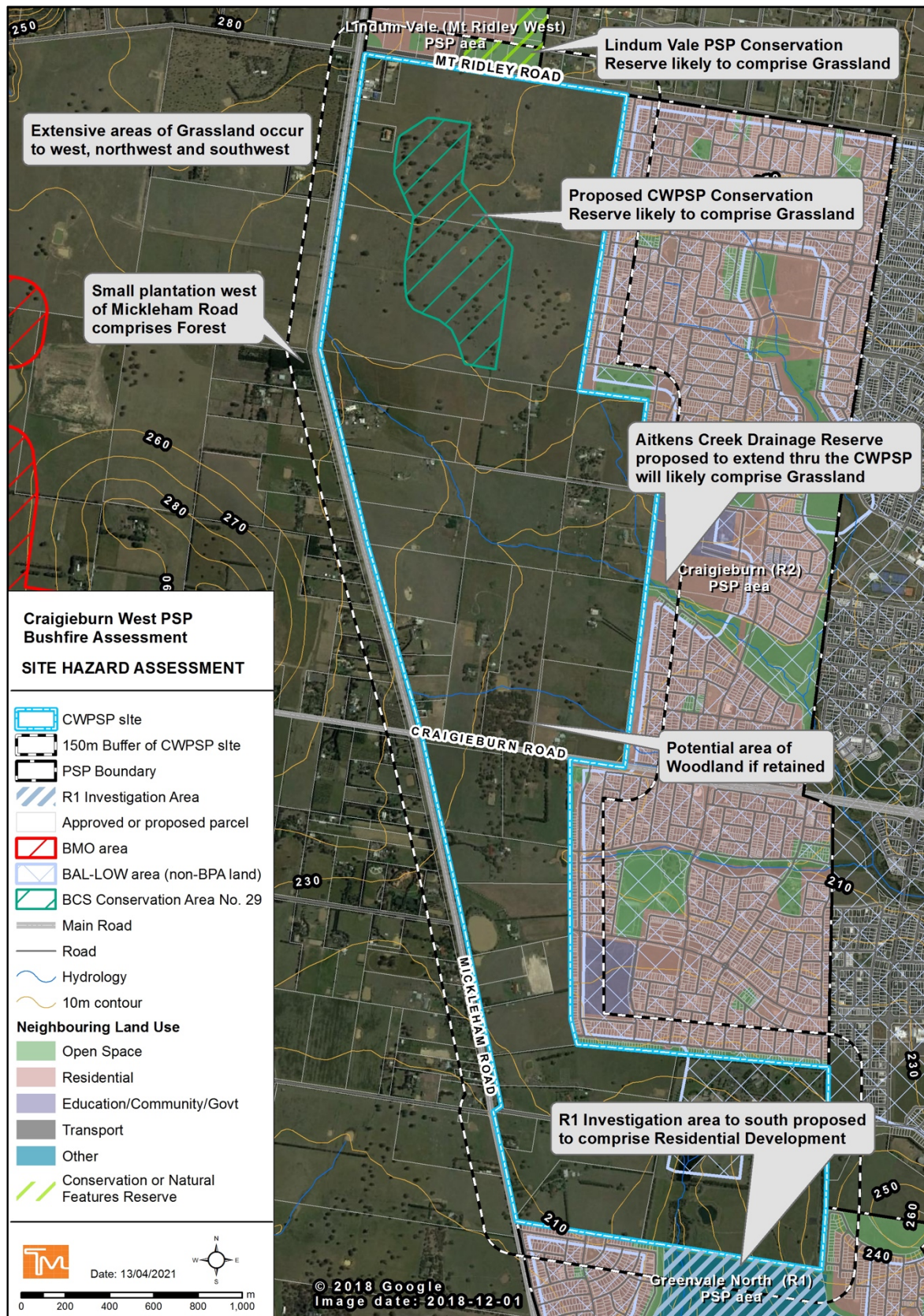
21. The draft Place Based Plan (PBP) shown in Figure 2 on page 10 of the report, has been superseded by the draft PBP provided as Plan 4 in the Craigieburn West PSP Draft for Public Consultation, dated November 2020 (VPA, 2020).
22. Accordingly, Maps 6 and 7 on pages 47 and 48 of the report, have also been updated with the more recent draft PBP, and are provided as Map 4 and Map 5 in this evidence statement. These maps have also been updated with current parcel boundaries and roads.
23. None of the updates to the BPA mapping, parcels or roads surrounding the precinct are considered to have any appreciable safety or compliance implications. It does reinforce however, that the surrounding landscape to the north, east and south is being transformed into a lesser hazard landscape, as development occurs. The extent of BAL-LOW land has increased to the east of the precinct, and additional lots and roads have also been created for residential development, mainly in the Craigieburn (R2) PSP area.
24. A more recent version of *AS 3959-2018 Construction of buildings in bushfire prone areas*, the Australian Standard referred to throughout the report, was released in 2020, which comprised 'Amendment No. 2' to the standard. Therefore, all references to *AS 3959-2018* in the report (and in the Hume Planning Scheme at Clauses 13.02, 44.06 and 53.02) should be read as *AS 3959-2018 Construction of buildings in bushfire prone areas (including Amendment No. 2)* (Standards Australia, 2020).
25. The changes in Amendment No. 2 are inconsequential to the analysis and findings in the report and future development in the precinct.

#### **6.1.2 Implications of changes to the Draft Place Based Plan**

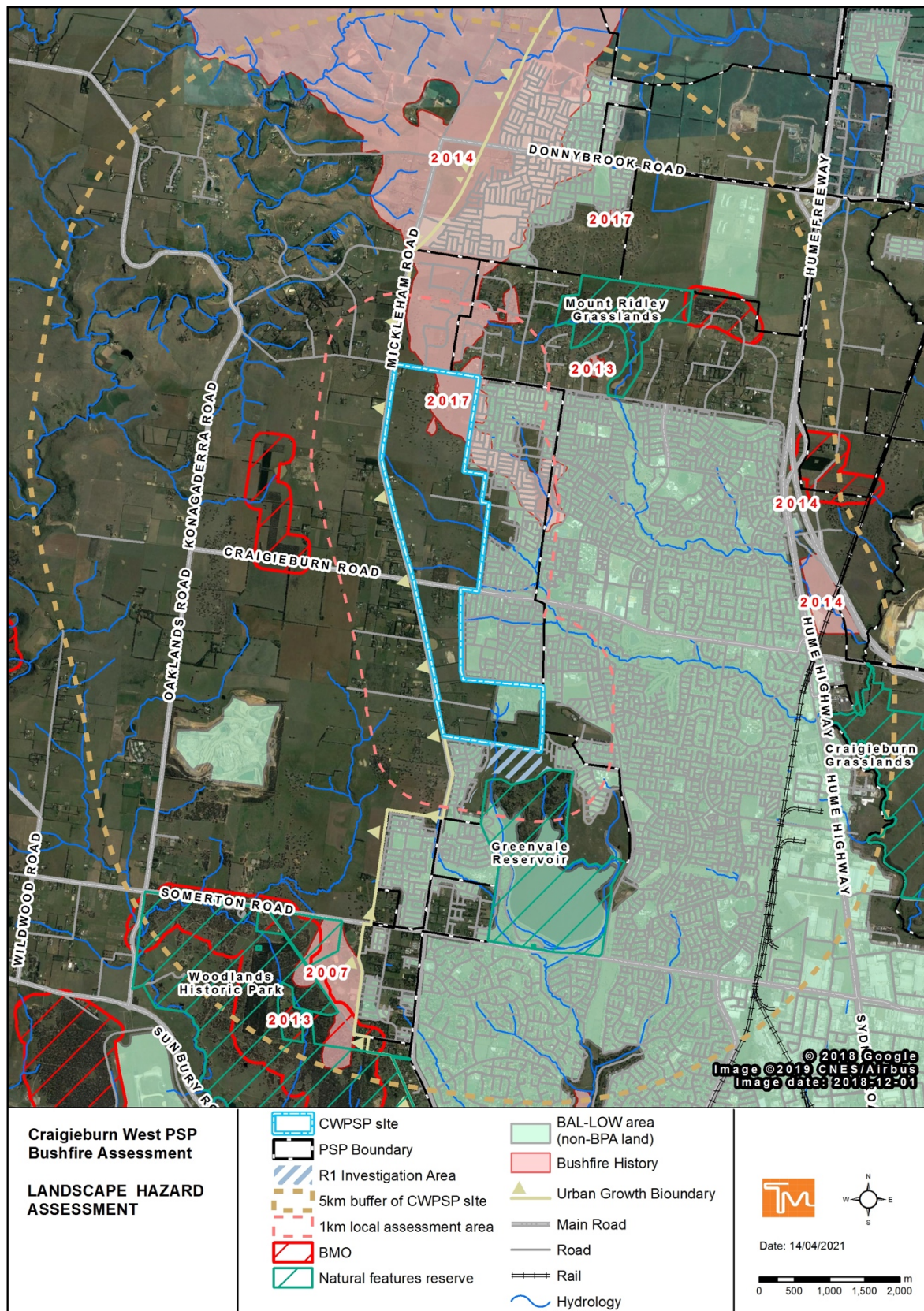
26. I consider that no matters of great significance arise from the changes made to the Draft PBP (VPA, 2020) in comparison to the Draft PBP in my report.
27. The only potential issue arises from the increase in the area of land (number and size of reserves) proposed to be set aside for a Waterway and/or Drainage function. As noted in the report, if these reserves are large enough and not managed in a low threat state, they may comprise a hazard for any adjacent houses, and if they pose a Grassland hazard, 19m setbacks for BAL-12.5 development may be needed.
28. I note that the 'Bushfire Plan' provided as Plan 7 in the Draft PSP, identifies the central large 'conservation' reserve in the north of the precinct and two of the drainage reserves will comprise 'Bushfire Hazard Area 2' (VPA, 2020).

29. Table 4 on page 27 of the Draft PSP, identifies that the 'Bushfire Hazard Area 2' designation equates to a Grassland hazard, requiring a 19m setback (presumably for dwellings/buildings requiring a BAL standard and commensurate setback, but that is not stated).
30. I consider that this issue can be dealt with at the subdivision application, and potentially, building approvals stages (see for example Section 6.3.1 - Proposed UGZ12 Schedule following).
31. It seems reasonable to assume that most of the local parks will be low threat and therefore, not hazardous. Accordingly, building setbacks from them should not be required for bushfire safety.
32. However, I note that one exception is shown in the 'Bushfire Plan' provided as Plan 7 in the Draft PSP. This plan identifies the square shaped local park immediately north Craigieburn Road will have a 'Bushfire Hazard Area 1' designation (VPA, 2020).
33. Table 4 on page 27 of the Draft PSP, identifies that the 'Bushfire Hazard Area 1' designation equates to a Woodland hazard, requiring a 33m setback (presumably for dwellings/buildings requiring a BAL standard and commensurate setback, but that is not stated) (see Section 6.3.2 - Precinct Structure Plan Draft for Public Consultation following).
34. As with the waterway and drainage reserves, I consider that this issue can be dealt with at the subdivision application, and potentially, building approvals stages.
35. I also note that the proposed cross sections for Mickleham Road, Connector Streets and Local Access Streets in the Draft PSP, show they will comprise low threat vegetation and non-vegetated land. Therefore, depending on their width and location, they will substantially contribute to, or even wholly achieve, the required BAL setbacks where appropriate.



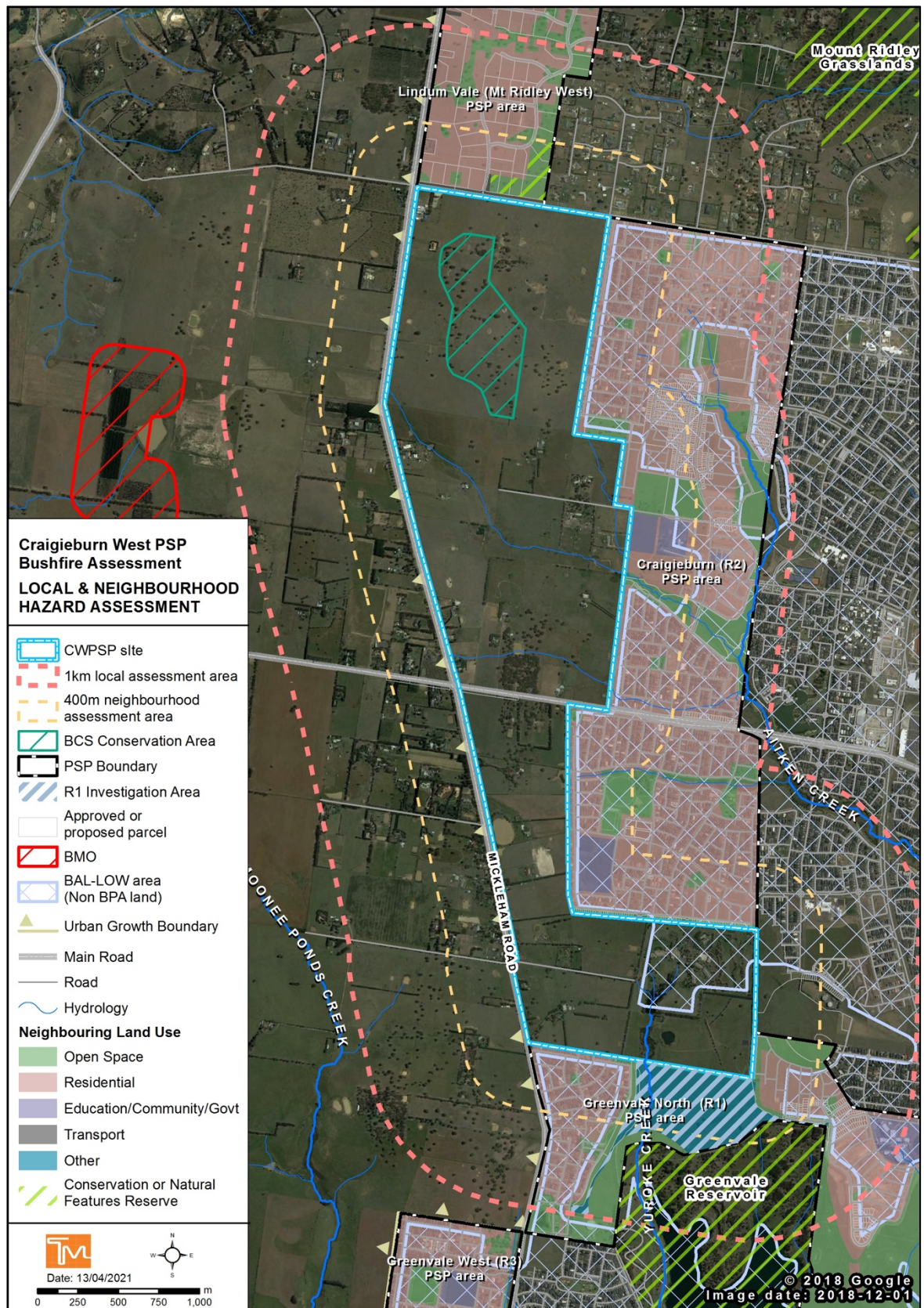




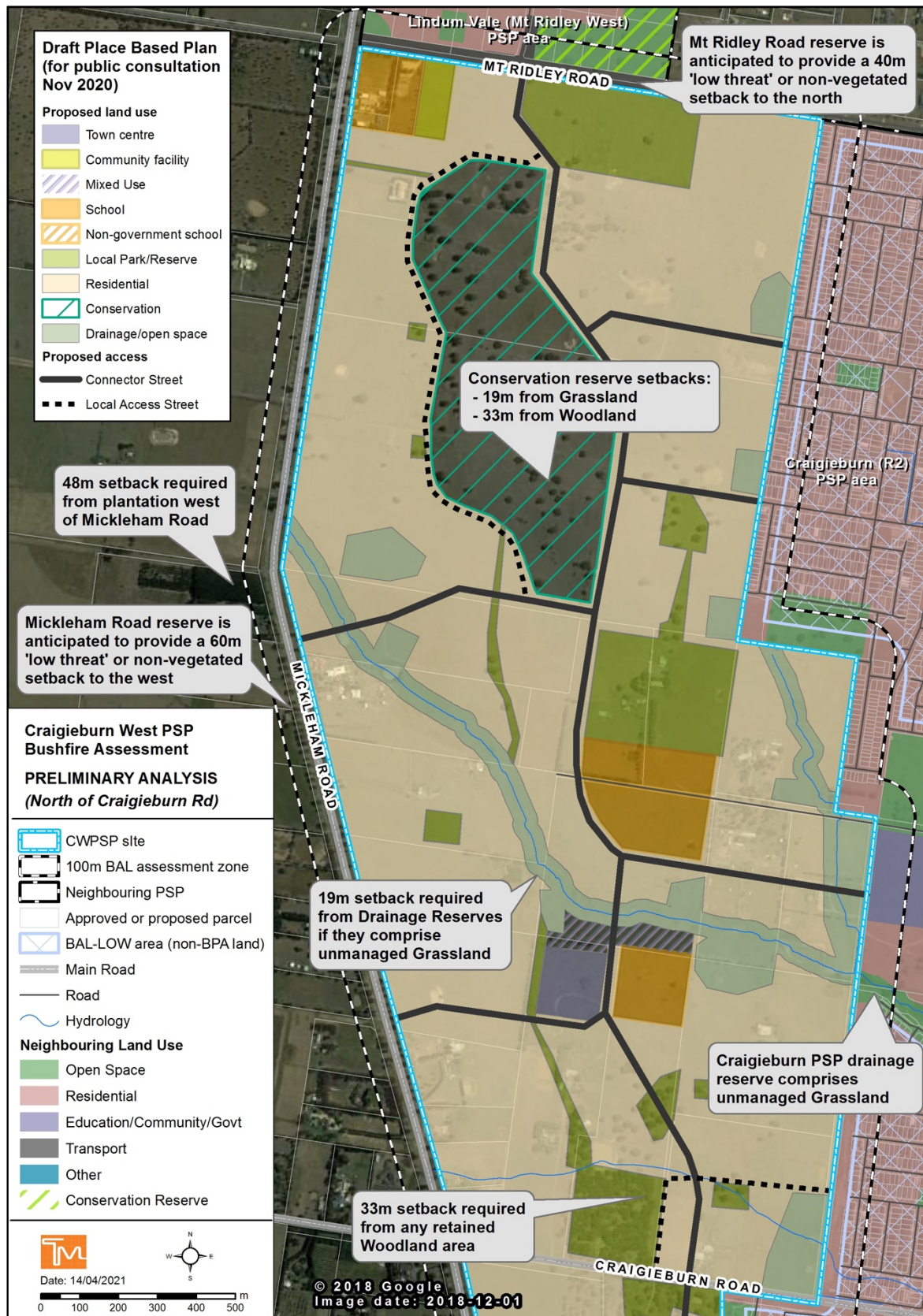


Map 2 – Updated Bushfire Hazard Broad Landscape Assessment Map.

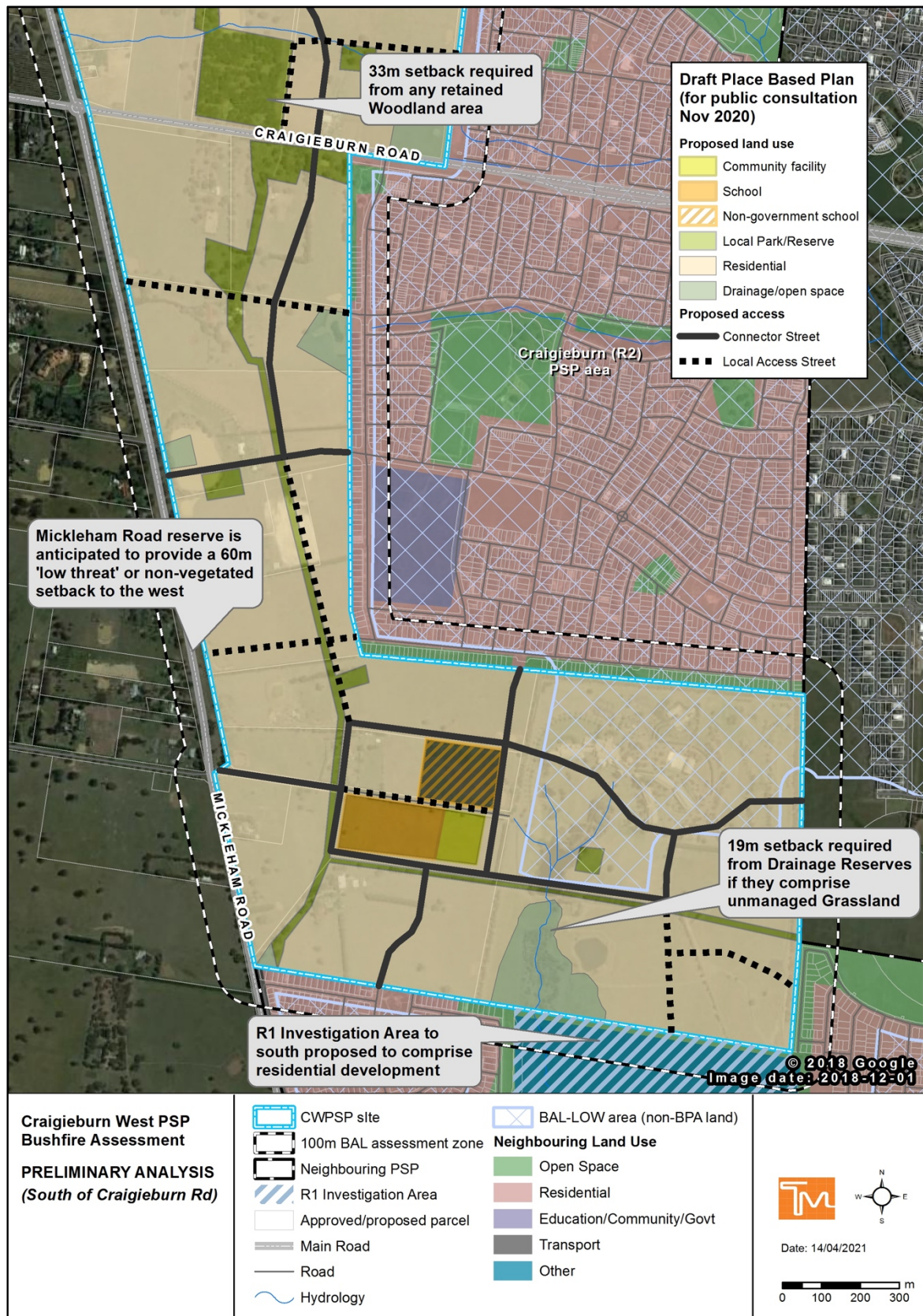












## 6.2 DELWP settlement planning guidelines

36. It is noted that since the report was prepared, the Department of Environment Land, Water and Planning (DELWP) has released a document titled '*Design Guidelines Settlement Planning at the Bushfire Interface*' (DELWP, 2020). The design guidelines provide useful information about how settlement planning proposals can assess and respond to the bushfire risk.
37. The guidelines provide design measures in three key areas:
1. *'Form and structure of settlements;*
  2. *The settlement interface with the bushfire hazard; and*
  3. *Bushfire protection measures at the settlement scale'* (DELWP, 2020).
38. The measures to be considered under these three areas are:
- *'Consider the bushfire hazard in directing growth,*
  - *Consider the distribution of uses in the settlement,*
  - *Consider lot sizes in settlement layout,*
  - *Consider vegetated areas within a settlement,*
  - *Apply the required development set back,*
  - *Design the settlement interface,*
  - *Access and egress,*
  - *Consider vegetation management,*
  - *Consider bushfire construction standards, and*
  - *Consider fences and other localised fuel sources'* (DELWP, 2020).
39. A detailed and specific assessment of the ability of the proposed PBP and Draft PSP to respond to each of these measures has not been made, but it is considered that these measures have been appropriately considered and responded to in the PSP, through the analysis and findings in the Bushfire Development Report.

## 6.3 Review of the Draft PSP and proposed ordinance

40. I have reviewed the proposed Schedule 12 to Clause 37.07 Urban Growth Zone (UGZ12) and the objective, requirements and guidelines of the Draft PSP that relate to bushfire and make the comments below.
41. I have also reviewed the tracked changes suggested in the 'Appendix 2: Part A Tracked Changes PSP Document - 12 April 2021' (VPA, 2021) and have no comments in relation to proposed changes, they appear not to have any appreciable impact on bushfire safety or compliance.

### **6.3.1 Proposed UGZ12 Schedule**

42. The application requirement that residential subdivisions prepare a '*Bushfire Site Management Plan*' is supported. The content that the plan must include is consistent with that required for residential subdivisions in most growth area PSPs and associated UGZ schedules.
43. The requirement helps to ensure that bushfire risk is managed during the pre-development and construction phase, when areas of interim hazard may be retained in proximity to new, existing, or not yet completed development. It also assists subdivision applications to demonstrate how bushfire risk will be mitigated in a Clause 13.02-1S response/application.
44. It is noted however, that this requirement can sometimes be problematic, when one subdivision stage is reliant on another subdivision abutting the site to be developed, so that perimeter lots in the first subdivision are not exposed to an interim hazard on adjoining land.
45. In such instances, the timing of development stages/subdivision within the PSP is a factor and there can be uncertainty about an enforceable mechanism that can ensure an area of 'interim hazard' adjacent a site/stage is able to be managed in a low threat state until it is developed, and hence, when the hazard (usually long grass) is removed by residential development.
46. Resolving this is beyond the scope of this PSP. However, it would be useful if LGAs and Fire Authorities could agree that written agreements between land holders can be lodged along with, and referenced on, a Bushfire Management Plan, to provide the required assurance that a temporary hazard can be managed in a low threat state during the development, if needed. Alternatively, edge lots may need to remain un-developed until the adjoining hazard has been removed.
47. It would be useful for consistency in the naming of the required plans. In the UGZ12 a *Bushfire Site Management Plan* is asked for, in other growth areas the same requirements have been asked for but are called a *Site Management Plan* or a *Construction Management Plan*. A '*Bushfire Management Plan*' is suggested as an appropriate name.

### **6.3.2 Precinct Structure Plan Draft for Public Consultation**

48. Objective O4 that relates to bushfire, amongst other things, appears appropriate, although it seems a little odd to conflate water and drainage outcomes with bushfire.



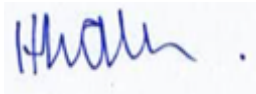
49. Requirement R20 states that *'Vegetation within bushfire hazard areas shown on Plan 7 must be managed in accordance with Table 4'*. It is unclear what this means. I assume it means that a Bushfire Hazard Area (BHA) 1 must pose no more than a Woodland hazard in accordance with the definitions for Woodland in AS 3959-2018, and similarly, that a BHA 2 must pose no more than a Grassland hazard. It follows that BHA 3 and 4 land must be managed in a low threat state. I consider the intent of, and outcomes to be achieved by, R20 and 'Table 4', is not very clear and could be improved.
50. The rationale for delineating the four BHAs is not provided.
51. Requirement R21 states that *'Development adjoining bushfire hazards shown on Plan 7 must be setback in accordance with Table 4'*. Presumably this requirement aims to ensure that the design of subdivisions will result in buildings requiring a BAL construction standard and commensurate setback from an identified bushfire hazard, achieving the minimum BAL-12.5 standard that applies in a BPA.
52. However, as with R20, the intent and outcomes are unclear and potentially misleading e.g. the term 'Development' could include roads and other features or structures (e.g. fences) that would otherwise be acceptable within a BAL setback area.
53. R20 may also lack the ability to be flexible where, for example, an identified BHA 1 or 2 may not in fact pose a Woodland or Grassland hazard, and therefore, lesser setbacks may be appropriate. Note also that setbacks are only required in BPAs. If areas in the precinct are excised from the BPA the setbacks should not be required. To this end the tracked changes suggested to R22 in the 'Appendix 2: Part A Tracked Changes PSP Document - 12 April 2021' (VPA, 2021) are supported, as they provide flexibility to address this issue.
54. Requirement R22 seeks to ensure that vegetation within a setback area between buildings and a hazard, is managed in an appropriately low threat state as 'defendable space'. If so, it may be useful to use the term defendable space, which is defined in the planning scheme. The vegetation management standards specified are a variation on the standards required for defendable space in Bushfire Management Overlay (BMO) areas, as stipulated in Table 6 to clause 53.02-5. The variation relaxes the requirement for tree canopy separation from 5m down to 2m, however, they are still very, and arguably overly, onerous e.g. no shrubs would be allowed to occur under trees. This may not be practical not even required, and it is not specified how this requirement would be enforced.

55. With reference to the proposed guidelines G36 to G41 inclusive, their intentions appear worthy but as with the requirements R20 - R22, the wording lacks clarity about the logic behind the requirement/guidelines and the desired outcome:

- G36 is vague and lacks specificity about its purpose and outcome. Standards for vegetation to be '*..managed to ensure a low risk of bushfire*' are not defined. The need for this guideline is questionable.
- G37 is supported in principle, and it is in accordance with DELWP settlement planning guidelines (DELWP, 2020). However, half of the specified BHAs are designated as low threat areas, therefore there is likely no need for them to have a perimeter road around them.
- G38 is supported in principle.
- What is meant by 'public land' in G39 is unclear. It should allow for road reserves and 'communal' land or public open space which may be on local government owned land, to contribute to or achieve setbacks. It may be preferable to re-word the guideline to state that setbacks should as far as practicable, not be wholly reliant on building setbacks within the boundaries of privately owned residential lots.
- G40 is supported in principle, although why this would apply in BHA 3 but not BHA 4 areas is unclear, as both are identified as areas that will comprise low threat vegetation. Therefore, it is not likely needed in BHA3 or BHA4. It may also potentially conflict with G47 if the intention is for non-combustible fencing adjoining BHA 1 and 2 areas to provide some shielding from bushfire impacts. If it is simply to avoid having combustible fencing abutting a bushfire hazard, then there is no likely conflict with G47 and the guideline is worthy.
- The intent of G41 is supported in principle, although it presumably cannot, or will not be achieved in BHA 1 or BHA 2 locations. Further, it somewhat overlaps G36.

## 7 Declaration

*'I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel'.*



Hamish Allan

Manager - Bushfire Planning and Design

Terramatrix Pty. Ltd.

15<sup>th</sup> April 2021



## 8 References

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

PPV (2019) *G2 Guide to Expert Evidence*, Planning Panels Victoria, Department of Environment, Land, Water and Planning (DELWP), April. Available at <<https://www.planning.vic.gov.au/panels-and-committees/planning-panel-guides>>

Harwood Andrews, (2021) Unsigned briefing letter with instructions to the author, Hamish Allan, by email, dated 14<sup>th</sup> April.

Standards Australia (2020) *AS 3959-2018 Construction of buildings in bushfire-prone areas*. Incorporating Amendment No.2, Standards Australia, North Sydney, New South Wales.

Terramatrix (2020) *Bushfire Development Report for the Craigieburn West Precinct Structure Plan*, Report Prepared for the Victorian Planning Authority (VPA), v1.1, dated 2019-02-25 (erroneously dated, the correct date should be 2020-02-25).

VPA (2020) *PSP 1068 – Craigieburn West Precinct Structure Plan Draft for Public Consultation*, November.

VPA (2021) *PSP 1068 – Craigieburn West Precinct Structure Plan: Appendix 2: Part A Tracked Changes PSP Document – 12 April 2021*.