

Richard Noble
Bushfire Attack Level (BAL) Compliance Report
Parco Glade, Vivente Estate

4 October 2022
59239/147,548 (Rev 1)

JBS&G Australia Pty Ltd T/A Strategen-JBS&G

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- Appendix A Vegetation plot photos and descriptions
- Appendix B BAL certificates
- Appendix C BAL assessment from endorsed Fire Management Plan

1. Introduction

1.1 Site/development summary

Table 1 provides a summary of the site and proposed development. The development layout and subject lots are shown in Figure 1 and Figure 2.

Table 1: Site/development summary

Site details	
Address details	Lots 4402, 4403, 4404 and 4405 Parco Glade (Vivente Residential Estate) Hammond Park WA 6164
Local government area	City of Cockburn
Description of building works	Construction of a single residential dwelling (Class 1a building and associated Class 10a building/s) within each lot

1.2 Purpose of report

This Bushfire Attack Level (BAL) compliance report has been prepared for four residential lots on Parco Glade within Vivente Residential Estate, Hammond Park (hereafter referred to as the project area). Since preparation of the previous BAL compliance report for this stage of the development (Strategen-JBS&G 2020), the proposed lot layout has changed and the seven residential lots have since been amalgamated into four lots.

This report provides a post-subdivisional works update of the Bushfire Attack Level (BAL) within the project area. BAL certificates for each individual lot (contained in Appendix B) have been prepared based on the final site compliance check and are appended for use by prospective lot purchasers at the building permit stage. The BAL assessment outlined in this report is the most up to date assessment from Strategen-JBS&G relating to the project area and has been prepared in consideration of current on-ground conditions and the previous BAL assessments documented in the endorsed BAL Compliance Report (Strategen-JBS&G 2020) and Bushfire Management Plan (Strategen 2015; see Appendix C). The approach for preparation of this BAL compliance report is consistent with Section 4.2 and Appendix 3 of *Guidelines for Planning in Bushfire Prone Areas* (the Guidelines; WAPC 2021).

Other plans/reports that have been prepared for the project area include:

- previously endorsed Bushfire Management Plan (BMP) for Vivente Estate prepared by Strategen (2015)
- Bushfire Attack Level (BAL) Compliance Report for Parco Glade Vivente prepared by Strategen-JBS&G (2020).

The entire project area is designated as bushfire prone on the Map of Bush Fire Prone Areas (DFES 2021, see Plate 1). As such, bushfire risk considerations and BAL assessment, including BAL certification, are applicable to the building stage for all four lots.



Plate 1: Map of Bush Fire Prone Areas (DFES 2021)

2. Bushfire assessment results

2.1 Assessment inputs

2.1.1 Vegetation classification

Strategen-JBS&G assessed classified vegetation and exclusions within the 150 m assessment area through on-ground verification on 15 October 2020 and reassessment on 7 September 2022 in accordance with AS 3959—2018 *Construction of Buildings in Bushfire-Prone Areas* (AS 3959; SA 2018) and the *Visual Guide for Bushfire Risk Assessment in Western Australia* (DoP 2016). Georeferenced site photos and a description of the vegetation classifications and exclusions are contained in Appendix A and depicted in Figure 1.

Site observations indicate there is no longer any presence of classified vegetation within the 150 m assessment area due to the extent of development and construction on lands surrounding the project area. Instead, the following exclusions were confirmed within the project area and surrounding 150 m:

- existing non-vegetated areas (i.e. cleared vacant lots, cleared roads under construction, existing roads, mulched areas, paths, playgrounds, driveways) excluded under Clause 2.2.3.2 (e)
- low threat managed vegetation (i.e. turfed areas, street trees, verge treatments, irrigated/managed portions of POS, managed gardens, slashed road verges) excluded under Clause 2.2.3.2 (f)
- the project area itself has been completely cleared and maintained in preparation for individual lot development and is excluded under the abovementioned Clauses 2.2.3.2 (e) and (f).

2.1.2 Effective slope

Since there is no longer any classified vegetation within the project area or adjacent 150 m, effective slope is not applicable to the BAL contour assessment.

2.1.3 Summary of inputs

Figure 1 illustrates the current post-development vegetation classifications and exclusions observed during the latest site inspection on 7 September 2022. The vegetation classifications/exclusions and effective slope are summarised in Table 2.

Table 2: Summary of vegetation classifications, exclusions and effective slope

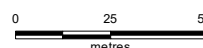
Vegetation plot	Vegetation classification	Effective slope	Comments
1	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Existing non-vegetated areas (i.e. cleared vacant lots, cleared roads under construction, existing roads, mulched areas, paths, playgrounds, driveways) and low threat managed vegetation (i.e. turfed areas, street trees, verge treatments, irrigated/managed portions of POS, managed gardens, slashed road verges).



Legend

- | | |
|---|---|
| Project area | Vegetation classification |
| 100m assessment area | Clause 2.2.3.2 (e) & (f) |
| 150m assessment area | Photo point directions |
| Cadastral boundary | Roads |
| POS | |
| Stage boundaries | |

Scale 1:2,000 at A4



Coord. Sys. GDA 1994 MGA Zone 50



Job No: 59239

Client: Richard Noble

Version: A

Drawn By: jcrute

Date: 15-Sep-2022

Checked By: CT

Parco Glade
Hammond Park, WA

VEGETATION CLASS
AND EFFECTIVE SLOPE

FIGURE 1



2.2 Assessment outputs

2.2.1 Bushfire Attack Level (BAL) contour assessment

Strategen-JBS&G has undertaken a BAL contour assessment in accordance with Method 1 of AS 3959 for the project area (Figure 2). The Method 1 procedure incorporates the following factors:

- state adopted FDI 80 rating
- vegetation classification
- effective slope
- distance maintained between proposed development areas and the classified vegetation.

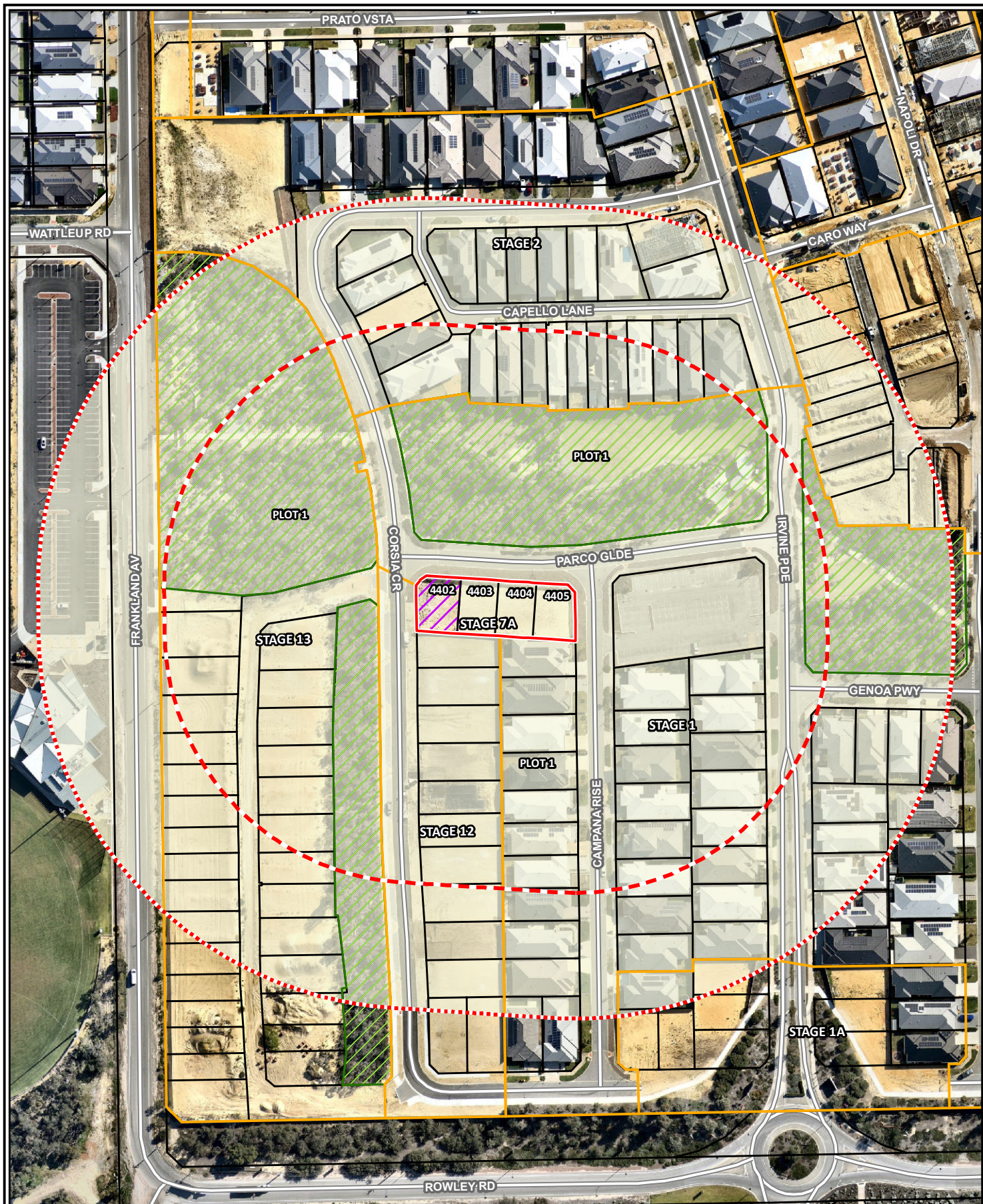
The BAL contours are based on the current on-ground site conditions. Results of the BAL contour assessment are detailed in Table 3 and illustrated in Figure 2.

Table 3: BAL contour assessment results

Method 1 BAL determination						
Lot	Designated bushfire prone	Vegetation plot	Vegetation classification	Effective slope	Separation distance	Highest BAL
4402	Yes	1	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	BAL-12.5 (precautionary application as per approved BMP)
4403	Yes	1	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	BAL-Low
4404	Yes	1	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	BAL-Low
4405	Yes	1	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	BAL-Low

2.2.2 BAL certificates

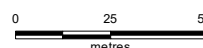
BAL certificates for the subject lots are provided in Appendix B in accordance with the BAL contour assessment results detailed in Table 3. A precautionary BAL-12.5 rating has been applied to any building construction within Lot 4402 as per the endorsed BMP (refer to Appendix C) to mitigate the potential risk of ember attack from the broader vegetation extent to the west.



Legend

- Project area
- 100m assessment area
- 150m assessment area
- Cadastral boundary
- POS
- Stage boundaries
- Precautionary BAL-12.5 in accordance with approved BMP
- BAL Low
- Roads

Scale 1:2,000 at A4



Coord. Sys. GDA 1994 MGA Zone 50



Job No: 59239

Client: Richard Noble

Version: A

Drawn By: jcrute

Date: 04-Oct-2022

Checked By: CT

Parco Glade
Hammond Park, WA

BAL CONTOUR MAP

FIGURE 2



3. Conclusion and recommendations

This BAL compliance report has been prepared to reflect the updated lot layout since seven residential lots were amalgamated to four residential lots on Parco Glade, Hammond Park, within Vivente Residential Estate. The BAL assessment outlined in this report is the most up to date assessment from Strategen-JBS&G relating to the project area and is accurate to inform BAL certification for use at the building permit stage. Assessment results are consistent with current on-ground conditions, as well as provisions of the endorsed BMP.

4. References

- Department of Fire and Emergency Services (DFES) 2021, *Map of Bush Fire Prone Areas*, [Online], Government of Western Australia, available from:
<https://maps.slip.wa.gov.au/landgate/bushfireprone/>, [3/10/2022].
- Department of Planning (DoP) 2016, *Visual guide for bushfire risk assessment in Western Australia*, Department of Planning, Perth.
- Standards Australia (SA) 2018, *Australian Standard AS 3959–2018 Construction of Buildings in Bushfire-prone Areas*, Standards Australia, Sydney.
- Strategen Environmental (Strategen) 2015, *Fire Management Plan: Barfield Road Local Structure Plan*, report prepared for Richard Noble, October 2015.
- Strategen-JBS&G 2020, *Bushfire Attack Level (BAL) Compliance Report, Parco Glade Vivente*, report prepared for Richard Noble, November 2020.
- Western Australian Planning Commission (WAPC) 2017, *Guidelines for Planning in Bushfire Prone Areas*, Version 1.3 August 2017, Western Australian Planning Commission, Perth.

5. Limitations

Scope of services

This report ("the report") has been prepared by Strategen-JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen-JBS&G. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

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The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen-JBS&G disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

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Appendix A Vegetation plot photos and descriptions

Plot 1	
Vegetation classification	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
Description / justification	Low threat cultivated gardens and maintained lawns within surrounding properties and non-vegetated areas including roads, footpaths, driveways and building footprints



Photo ID: 1a



Photo ID: 1c

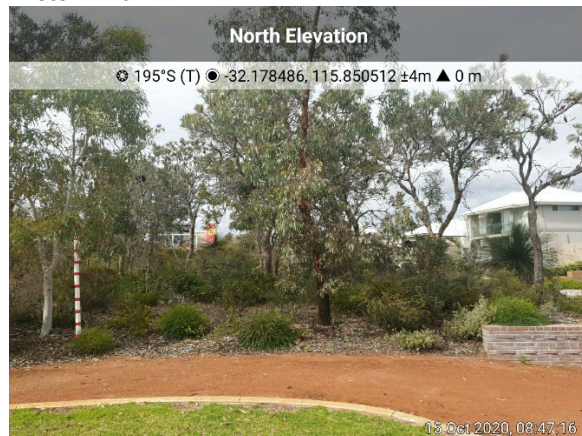


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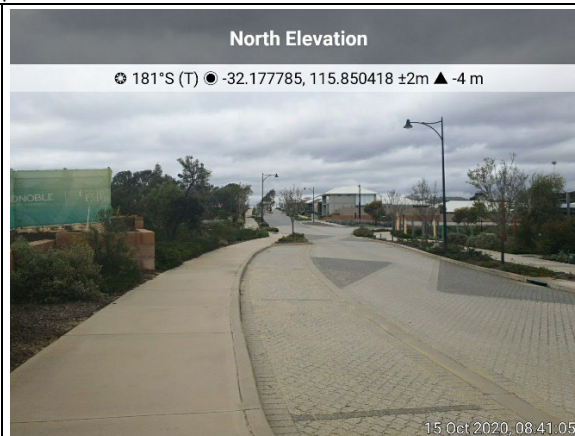


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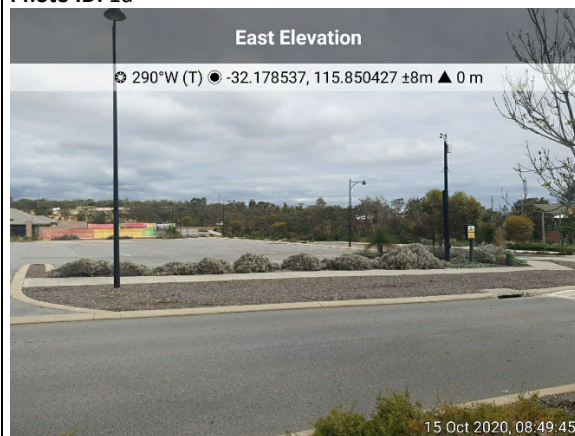


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Plot 1

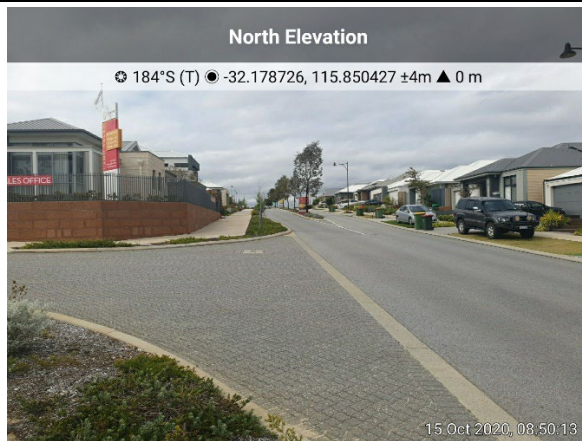


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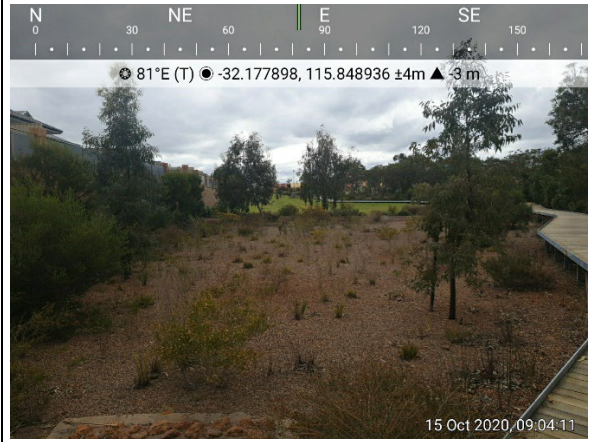


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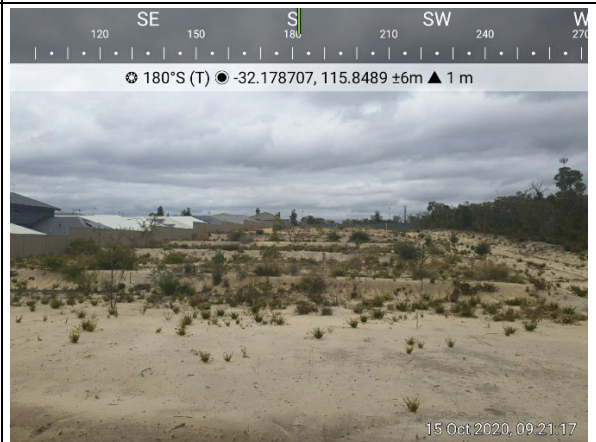


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Plot 1



Photo ID: 1m

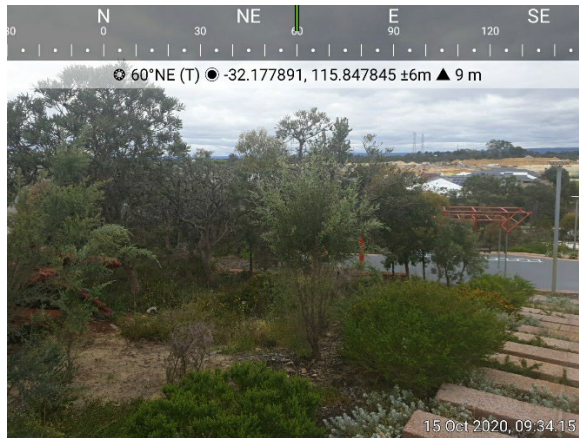


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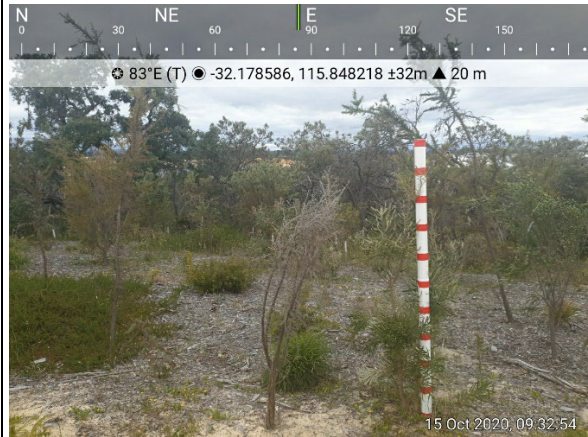


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Photo ID: 1p



Photo ID: 1r

Plot 1

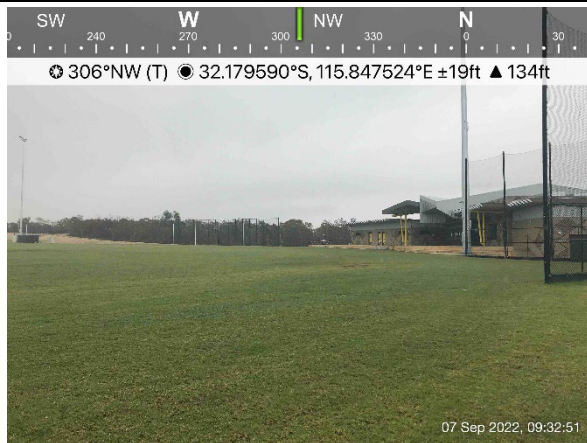


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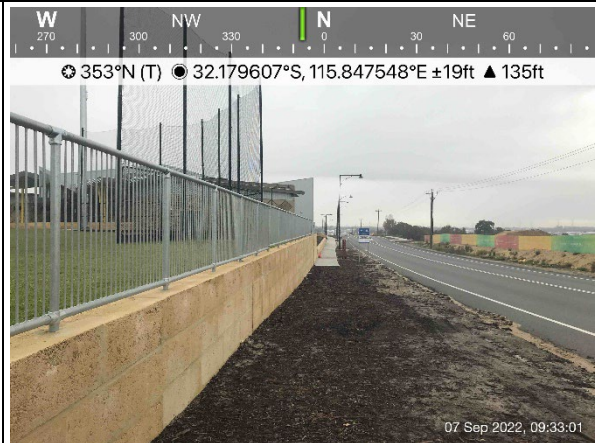


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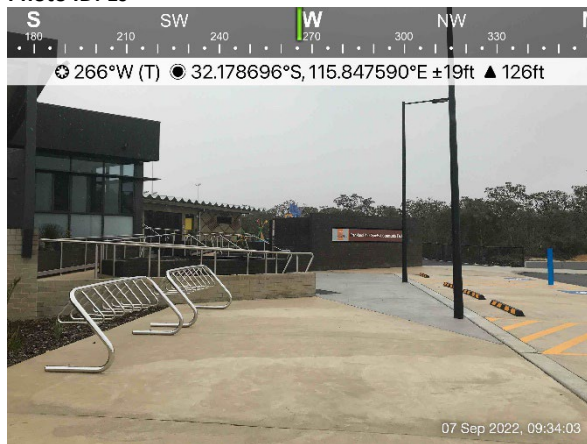


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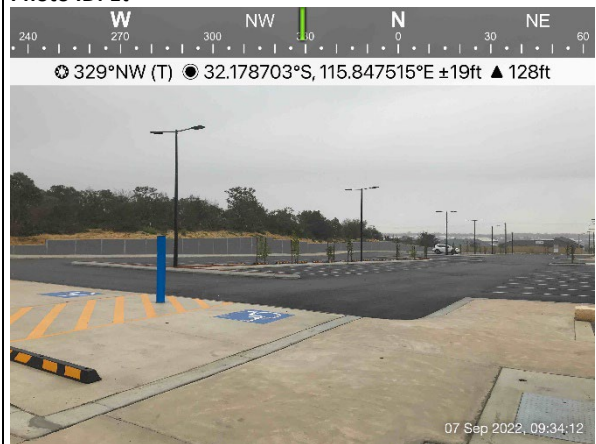


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Appendix B BAL certificates

Appendix C BAL assessment from endorsed Fire Management Plan

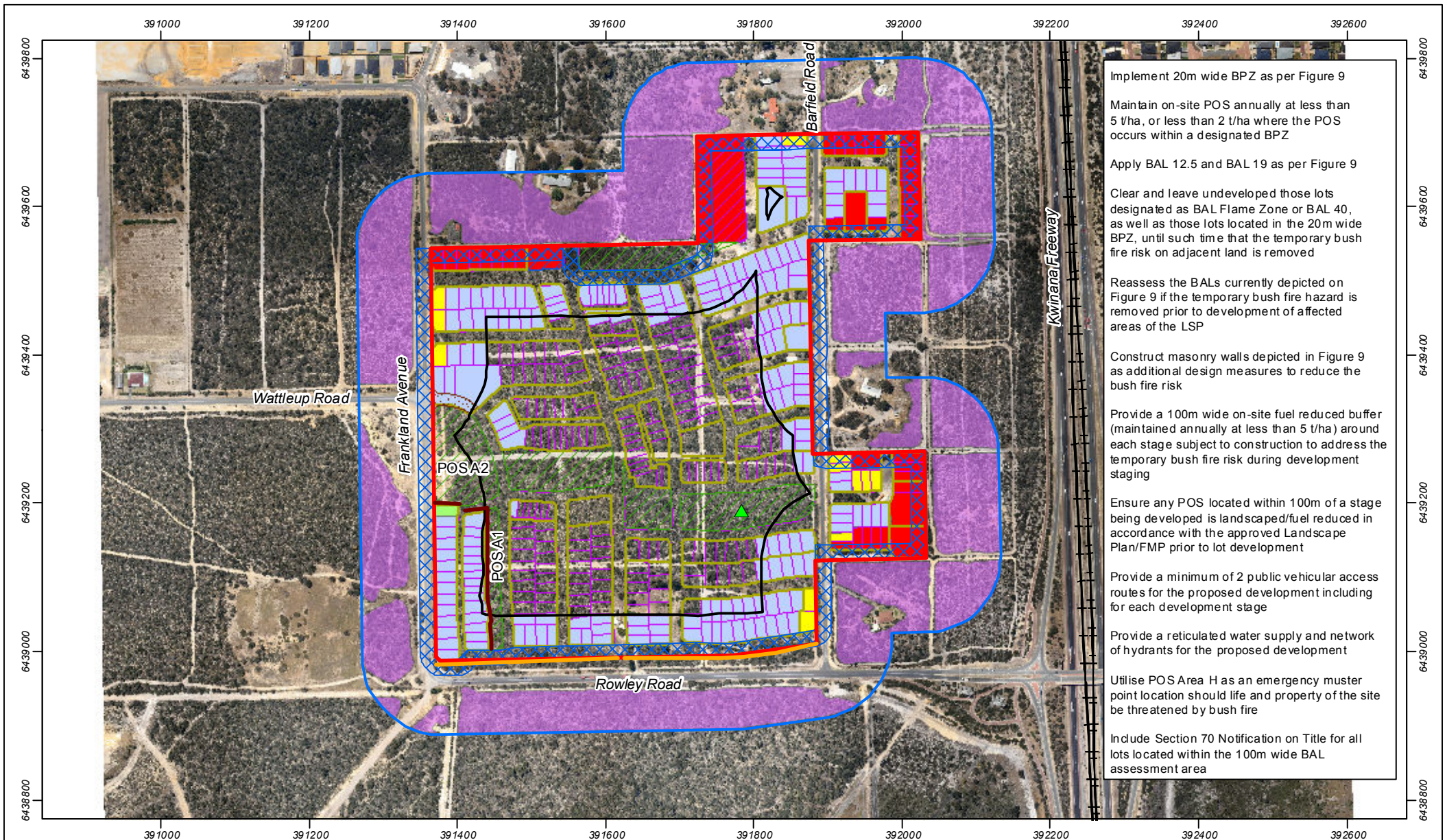


Figure 9 Fire Management Plan: Barfield Road Local Structure Plan

Scale 1:7,000 at A4
0 50 100 150 m
Coordinate System: GDA 1994 MGA Zone 50
Note that positional errors may occur in some areas
Date: 29/09/2015

Author: JCrute
Source: Aerial image: Neamap 2012. Concept plan: Client 2014.

Legend

- ▲ Suggested muster point
- Lot boundaries
- Railway
- 2m high masonry wall
- 3m high masonry wall
- Project area boundary
- 100m wide assessment area
- Residential

- 100m wide BAL assessment area
- 20m wide BPZ
- Location of additional hazard
- separation services to be determined at subdivision

- POS
- High school
- PAW
- Child care
- Bush fire prone areas
- BAL 12.5
- BAL 19
- BAL Flame Zone/BAL 40 cannot achieve 20m wide BPZ (clear and leave as undeveloped land until such time that the adjoining temporary bush fire hazard has been removed)



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Document Status

Report version	Rev No.	Purpose	Author	Reviewed and Approved for Issue	
				Name	Date
Final Report	Rev 0	Issued for use: to accompany building permits	Zac Cockerill (BPAD 37803, Level 2)	Zac Cockerill (BPAD 37803, Level 2)	16 November 2020
Final Report	Rev 1	Issued for use: to facilitate future lot sale and building approvals	Olivia Johnston	Zac Cockerill (BPAD 37803, Level 2)	4 October 2022

