

Anstey Road Development Company  
Bushfire Management Plan (BMP) Compliance and  
Condition Clearance Report

Stage 4 Kara Estate, Treeby

3 May 2022

JBS&G 62726  
62726/144,424 (Rev 0)

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



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## 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	Stage 4 Kara Estate, Treeby, WA 6164 <ul style="list-style-type: none"> <li>69 proposed residential lots</li> <li>1 proposed lot for the purposes of a childcare centre (Lot 700)</li> </ul>
Local government area	City of Cockburn
Description of building works	<ul style="list-style-type: none"> <li>Construction of a single residential Class 1a dwelling and associated Class 10a structure within each proposed residential lot</li> <li>Construction of a childcare centre within Lot 700 (subject to a separate development application)</li> </ul>

### 1.2 Purpose of report

This Bushfire Management Plan (BMP) compliance and condition clearance report has been prepared for 69 proposed residential lots and one proposed Childcare Centre lot within Stage 4 Kara Estate, Treeby (hereafter referred to as the project area). Lots within the project area are subject to WAPC subdivision approval (WAPC Ref. 160849; dated 24 September 2021) and the following bushfire-related conditions of subdivision:

#### Condition 15

*Information is to be provided to demonstrate that the measures contained in Section 6; Table 6 of the Lot 703 Ghostgum Avenue Bushfire Management Plan (Revision 1, dated 7 September 2020) have been implemented during subdivisional works. This information should include a completed 'Certification by Bushfire Consultant' from the bushfire management plan. (Local Government)*

This report provides documentary evidence and certification that demonstrates the relevant management actions from the approved Strategen-JBS&G BMP (2020) have been implemented throughout the duration of subdivisional works to facilitate clearance of the abovementioned subdivision condition. This report also provides a post-subdivisional works update of the Bushfire Attack Level (BAL) ratings for individual lots within the project area (where required) and has been prepared for the benefit of the developer, future lot purchasers and decision makers.

Fifty of the 69 proposed residential lots are situated within a designated bushfire prone area on the DFES Map of Bush Fire Prone Areas (2021; as depicted in Figure 1). Accordingly, these lots require BAL assessment and certification to accompany future building permit applications. Individual lot BAL certificates related to the BAL assessment outlined in this report are provided in Appendix A.

Lot 700 is included within Stage 4 and is subject to a separate development application (DA) for a Class 9 Childcare Centre. As the proposed use is not for residential purposes, a BAL certificate is not required.

The BAL assessment detailed within 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 the previous BAL contour assessment documented in the BMP prepared to accompany the subdivision application (Strategen-JBS&G 2020). The approach for preparation of this BMP compliance report is consistent

with Section 4.2 and Appendix 3 of *Guidelines for Planning in Bushfire Prone Areas* (the Guidelines; WAPC 2021).

## 2. Implementation of relevant bushfire management measures

The endorsed BMP includes bushfire management measures that are inherent to the ability for the development to achieve bushfire compliance and for the associated residential lots to achieve the BAL ratings intended under the subdivision stage BAL contour map. Table 2 summarises the status of each implementation actions listed in the subdivision stage BMP and provides a reference to the evidence of compliance.

**Table 2: Implementation of bushfire management measures**

Item	Action	Status	Evidence
1 BMP Table 6	Construct the public roads and reticulated water supply to the standards stated in this BMP, as well as any temporary access staging requirements (e.g. temporary compliant EAWs/cul-de-sacs).	Complete (with works bonded in accordance with approved civil engineering plans)	<p>Stage 4 proposed public roads will be constructed in accordance with the civil roadworks plans (refer to Appendix B), which are in accordance with the approved BMP and technical requirements of the Guidelines. The public road layout of Stage 4 will not result in any no-through roads, meaning all proposed lots will have two access routes at all times, with primary access north to Ghostgum Avenue via Lycaste Parade; and secondary emergency access via the on-site temporary Emergency Access Way (EAW) from Encyclia Boulevard to Ghostgum Avenue in the west, then on to Armadale Road, in the south.</p> <p>The temporary compliant EAW has already been established as part of previous stages and is secured in an easement as per the approved BMP and technical requirements of the Guidelines (refer to Figure 1).</p> <p>Reticulated water supply and network of hydrants will be installed in accordance with the civil water reticulation plans (refer to Appendix C), which are in accordance with the approved BMP and technical requirements of the Guidelines.</p>
2 BMP Table 6	Construct the permanent cul-de-sac to the standards stated in this BMP.	N/A	Not applicable to this stage – all proposed roads are through roads.
3 BMP Table 6	Install the EAW to Ghostgum Avenue and associated signs/gates to the standards stated in this BMP. The EAW is to be constructed by the Developer to provide a temporary secondary access to the Structure Plan area, until such time as a permanent secondary access is provided via subdivisional roads to the east (via Lots 705 and 707 Armadale Road).	Complete	<p>As mentioned previously, the temporary compliant EAW has been constructed as part of previous stages to provide secondary access to the project area and is secured in the required easement as per the approved BMP and technical requirements of the Guidelines (refer to Plate 1). This requirement has already been addressed as part of previous stages under Condition 19 of subdivision approval (WAPC Ref 159307).</p> <p>Construction of Stage 4 roads will replace the majority of the EAW alignment, with the remaining portion extending through Conservation POS to meet Ghostgum Avenue.</p>

<p>4 BMP Table 6</p>	<p>Establish any low threat areas (e.g. site footprint, POS, staging buffers, etc) to the standards stated in this BMP to achieve the intended BAL outcomes.</p>	<p>Complete</p>	<p><u>Project area, associated staging buffers and POS</u></p> <p>The project area, associated staging buffers and POS have all been cleared to mineral earth and regrowth of weeds/grasses being maintained in a low threat state to achieve the intended BAL outcomes, as per requirements of the BMP (refer to Photo Points 4b and 4g in Appendix E, as well as aerial imagery in Figure 1). Areas of low threat POS have been established as low threat as per BMP requirements (refer to aerial imagery in Figure 1 and the Landscape Plan in Appendix D).</p> <p><u>Conservation POS</u></p> <p>The on-site Conservation POS abutting the western boundary of Kara Estate was intended under the subdivision stage BMP to be excluded under AS 3959 Clause 2.2.3.2 (b). This was to be achieved by ensuring the area of retained/replanted classified vegetation does not exceed 1 ha in area, with at least 100 m separation achieved between the patch of unmanaged vegetation and surrounding classified vegetation.</p> <p>During development of the landscaping plan, the City advised that the northern portion of Conservation POS was to be retained as unmanaged vegetation due to the presence of Declared Rare Flora (DRF) within this area. On-site landscaping has now been established in accordance with this advice, and the Landscaping Plan. This has resulted in an additional area of approximately 80 m<sup>2</sup> of unmanaged vegetation in the northern portion of POS in comparison to the indicative landscape concept plan on which the subdivision stage BMP was based. While the area of unmanaged vegetation does not exceed 1 ha (total of 0.796 ha), the separation distance to the nearest classified vegetation is 88 m, which is slightly less than the 100 m required under Clause (b) (refer to Figure 1). A Level 3 BPAD practitioner at Strategen-JBS&amp;G has assessed the bushfire risk to the site based on the reduced separation distance and considers it remains appropriate to exclude the vegetation under Clause (b), as discussed below:</p> <ul style="list-style-type: none"> <li>• The City has advised that the vegetation in question has high environmental value and detailed studies have determined that it would be contrary to conservation efforts to manage this vegetation in a low threat state to mitigate bushfire risks.</li> <li>• The unmanaged portion of Conservation POS will be bordered on all sides by low threat vegetation, including: <ul style="list-style-type: none"> <li>○ Ghostgum Avenue to the west</li> <li>○ Irrigated turf and future rock and ground cover style bund within POS to the north</li> <li>○ Encyclia Boulevard to the east – a 20 m wide perimeter road providing separation between Stage 4 residential lots.</li> </ul> </li> <li>• The surrounding low threat land will provide a defensible space for firefighting operations should a fire be ignited within the Conservation POS as a result of spotting from surrounding classified vegetation (or a locally ignited fire). Encyclia Boulevard will provide a substantial interface to carry out a fire suppression response in direct proximity to the Stage 4 lots.</li> <li>• The nearest DFES Career Fire Station is located at Cockburn Central, approximately 3 km away and an immediate fire suppression response is therefore anticipated. This will limit the capacity for bushfire impact from within this vegetation.</li> </ul>
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Item	Action	Status	Evidence
			<ul style="list-style-type: none"> <li>Bushfire behaviour is expected to be limited to minor ember attack and smoke given the limited potential for steady state bushfire to be achieved.</li> <li>The area of unmanaged vegetation in question is relatively small (&lt; 1ha) and is surrounded by low threat vegetation. This is considered to meet the intent of exclusion under Clause [d] which acknowledges the limited potential for fire spread from adjoining vegetation and the limited bushfire impact should a fire be ignited within this isolated vegetation.</li> </ul>
5 BMP Table 6	Undertake BMP compliance assessment.	Complete	This report.



**Plate 1: Temporary compliant EAW constructed to Ghostgum Avenue (looking west)**



### 3. Bushfire assessment results

#### 3.1 Assessment inputs

##### 3.1.1 Vegetation classification

Strategen-JBS&G assessed classified vegetation and exclusions within the 150 m assessment area through on-ground verification on 14 March 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 E and depicted in Figure 1.

Site observations indicate that the vegetation classifications align with the post-development vegetation classifications determined by the endorsed BMP (Strategen-JBS&G 2020), aside from the following refinements:

- areas of previously classified Class B Woodland have been re-classified as Class D Scrub since the woodland classification is a legacy classification from the Structure Plan stage that is not an accurate representation of the vegetation present in accordance with the 2018 version of AS3959 (i.e. the vegetation is consistent with banksia/sheoak dominated scrub between 2–6 m in height, with no significant eucalyptus overstorey)
- retention of native vegetation within on-site Conservation POS has been increased to the north of the POS which has resulted in unmanaged vegetation being within 100 m (88 m) of surrounding classified vegetation. Strategen-JBS&G has assessed the bushfire risk due to the reduced separation and considers it remains appropriate to classify the vegetation in accordance with Clause (b). This is discussed previously in Table 2.

Classified vegetation within 150 m of the project area was identified as follows:

- Class D Scrub to the north of the project area – within Bush Forever site 390 and east of Clementine Boulevard (Plot 1)
- Class A Forest and Class D Scrub within private property south of Armadale Road (Plot 5/Plot 1)
- unmanaged grassland (Class G Grassland) within future Stages 5A and 5B, to the east of the project area (Plot 6).

Exclusions within the project area and adjacent 150 m are as follows:

- non-vegetated and low threat managed land within the project area and surrounding Kara Estate cleared footprint (including roads, footpaths, infrastructure, low threat staging buffers on adjacent stages and low threat POS), excluded in accordance with Clauses 2.2.3.2 (e) and (f) (Plot 4)
- off-site Conservation POS between Cilantro Parkway and Ghostgum Avenue to the west, which is excluded under Clause 2.2.3.2 (d) (Plot 2)
- on-site Conservation POS in the project area (refer to Appendix D), which is considered to meet the intent of Clause 2.2.3.2 (b) (as discussed above; Plot 3).

##### 3.1.2 Effective slope

Strategen-JBS&G assessed effective slope under classified vegetation within the 150 m assessment area through on-ground verification on 14 March 2022 in accordance with AS 3959. Results were cross-referenced with DPIRD 2 m contour data and are depicted in Figure 1.

Site observations indicate that effective slope under classified vegetation aligns with the effective slopes identified within the endorsed BMP (Strategen-JBS&G 2020), which comprise all flat/up-slope land.

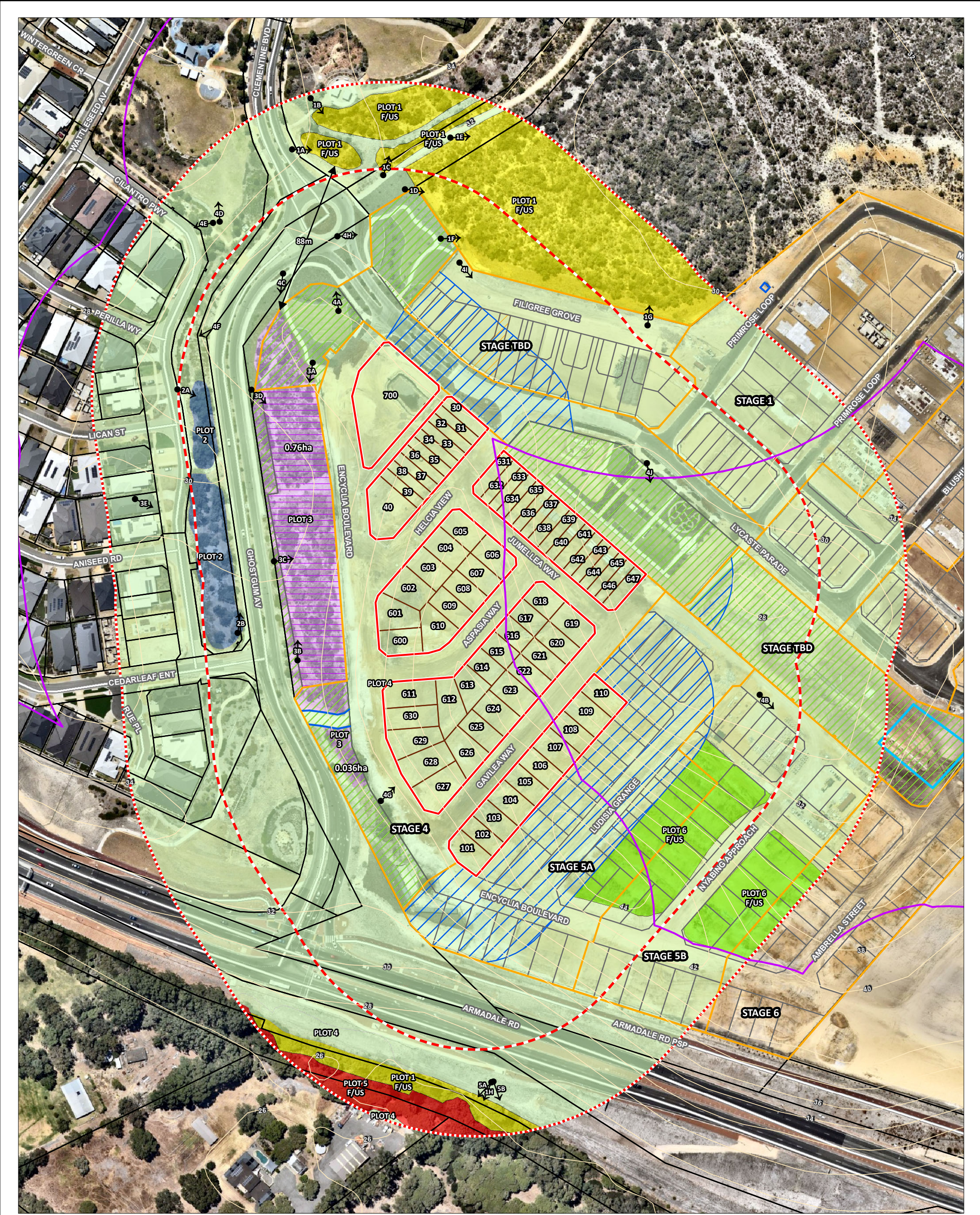
### 3.1.3 Summary of inputs

Figure 1 illustrates the current vegetation classifications and exclusions observed during the site inspection. The vegetation classifications/exclusions and effective slope are summarised in Table 3.

**Table 3: Summary of vegetation classifications, exclusions and effective slope**

Vegetation plot	Vegetation classification	Effective slope	Comments
1	Class A Forest	Flat/upslope (0°)	Forest vegetation to the south of Armadale Road
2	Excluded – Clause 2.2.3.2 [d]	N/A	On-site Conservation POS, being less than 1 ha in area, and sufficiently isolated from surrounding vegetation hazards (as discussed in Table 2).
3	Excluded – Clause 2.2.3.2 [b]	N/A	Off-site POS between Ghostgum Avenue and Cilantro Parkway.
4	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	On-site and off-site low threat residential lots, POS, and staging buffers.
5	Class D Scrub	Flat/upslope (0°)	Scrub vegetation to the north of the project area and south of Armadale Road.
6	Class G Grassland	Flat/upslope (0°)	Unmanaged grassland (greater than 100 mm in height) within future Stages 5A and 5B, to the east.





<b>Legend</b> <ul style="list-style-type: none"><li>Project area</li><li>100m assessment area</li><li>150m assessment area</li><li>Cadastral boundary</li><li>Bushfire prone areas</li><li>Temporary emergency access way</li><li>Proposed lots</li><li>Indicative subdivisions on adjacent stages</li></ul>	<ul style="list-style-type: none"><li>Conservation POS</li><li>PAW (pedestrian access way)</li><li>Reserve for recreation</li><li>Drainage basin</li><li>50m wide low threat staging buffer</li><li>Photo point directions</li><li>Stage boundaries</li><li>Topographic contours (mAHd)</li></ul>	<b>Vegetation classification</b> <ul style="list-style-type: none"><li>Class A Forest</li><li>Class D Scrub</li><li>Class G Grassland</li><li>Clause 2.2.3.2 (b)</li><li>Clause 2.2.3.2 (d)</li><li>Clause 2.2.3.2 (e) &amp; (f)</li><li>Roads (MRWA)</li></ul>	 Job No: 62726 Client: LWP Property Group Drawn By: jcrute Checked By: CT	 Scale 1:2,000 at A3 Coord. Sys. GDA 1994 MGA Zone 50 Version: A Date: 05-May-2022	<b>Stage 4 Kara Estate, Treeby, WA</b> <b>VEGETATION CLASSIFICATION AND EFFECTIVE SLOPE</b> <b>FIGURE 1</b>
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## 3.2 Assessment outputs

### 3.2.1 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 class
- effective slope
- distance maintained between proposed development areas and the classified vegetation.

The BAL contours are based on the current on-ground site conditions and take into consideration the bushfire management measures that have been implemented on site as listed in Section 2.

Results of the BAL contour assessment are detailed in Table 4 and illustrated in Figure 2.

**Table 4: BAL contour assessment results**

Method 1 BAL determination								
Lot	Designated bushfire prone area	Plot	Vegetation classification	Effective slope	Separation distance	Highest BAL	Setback required to achieve lower BAL	Potential new BAL with setback*
30	Yes	1	Class D Scrub	Flat/upslope (0°)	73 m	BAL-12.5	N/A	N/A
31	Yes	1	Class D Scrub	Flat/upslope (0°)	80m	BAL-12.5	N/A	N/A
32	Yes	1	Class D Scrub	Flat/upslope (0°)	85m	BAL-12.5	N/A	N/A
33	Yes	1	Class D Scrub	Flat/upslope (0°)	90m	BAL-12.5	N/A	N/A
34	Yes	1	Class D Scrub	Flat/upslope (0°)	95m	BAL-12.5	5 m truncated setback (from south/east lot boundary)	BAL-Low
35	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
36	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
37	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
38	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
39	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
40	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
101	Yes	6	Class G Grassland	Flat/upslope (0°)	>50m	BAL-Low	N/A	N/A
102	Yes	6	Class G Grassland	Flat/upslope (0°)	>50m	BAL-Low	N/A	N/A
103	Yes	6	Class G Grassland	Flat/upslope (0°)	>50m	BAL-Low	N/A	N/A
104	Yes	6	Class G Grassland	Flat/upslope (0°)	>50m	BAL-Low	N/A	N/A
105	Yes	6	Class G Grassland	Flat/upslope (0°)	>50m	BAL-Low	N/A	N/A
106	Yes	6	Class G Grassland	Flat/upslope (0°)	>50m	BAL-Low	N/A	N/A
107	Yes	6	Class G Grassland	Flat/upslope (0°)	>50m	BAL-Low	N/A	N/A
108	Yes	6	Class G Grassland	Flat/upslope (0°)	>50m	BAL-Low	N/A	N/A
109	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
110	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
600	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
601	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
602	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
603	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
604	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A

Method 1 BAL determination								
Lot	Designated bushfire prone area	Plot	Vegetation classification	Effective slope	Separation distance	Highest BAL	Setback required to achieve lower BAL	Potential new BAL with setback*
605	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
606	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
607	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
608	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
609	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
610	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
611	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
612	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
613	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
614	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
615	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
616	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
617	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
618	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
619	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
620	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
621	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
622	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
623	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
624	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
625	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
626	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
627	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
628	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
629	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
630	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
631	Yes	1	Class D Scrub	Flat/upslope (0°)	96 m	BAL-12.5	4 m rear setback (from north lot boundary)	BAL-Low
632	Yes	1	Class D Scrub	Flat/upslope (0°)	99 m	BAL-12.5	1 m rear setback (from north lot boundary)	BAL-Low
633	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
634	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
635	Yes	1	Class D Scrub	Flat/upslope (0°)	>100m	BAL-Low	N/A	N/A
636	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
637	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
638	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
639	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
640	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
641	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
642	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
643	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
644	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
645	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Method 1 BAL determination								
Lot	Designated bushfire prone area	Plot	Vegetation classification	Effective slope	Separation distance	Highest BAL	Setback required to achieve lower BAL	Potential new BAL with setback*
646	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
647	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A
700 (Childcare centre)	Yes	1	Class D Scrub	Flat/upslope (0°)	63m	BAL-12.5	N/A	N/A
*The new BAL rating can only be confirmed once the building plan for the relevant lot has been prepared to demonstrate compliance with the recommended setback.								

### 3.2.2 BAL certificates

BAL certificates for the 50 proposed residential lots situated in a designated bushfire prone area are provided in Appendix A in accordance with the BAL contour assessment results detailed in Figure 2 and Table 4.

Should a lower BAL rating be realistically achievable through an appropriate building setback, then the landowner can refer to the recommended setbacks listed in Table 4. The lower BAL rating may be achieved if the recommended building setback is reflected on the building plan for that lot and a revised BAL certificate can be issued at that time.







## 4. Conclusion and recommendations

This BMP compliance and condition clearance report has been prepared for Stage 4 Kara Estate, which contains 69 proposed residential lots and one proposed lot for development of a childcare centre.

Strategen-JBS&G can confirm that the subdivision stage BMP has been implemented as intended throughout the duration of subdivisional works for the relevant Stage 4 area and adjacent land to achieve the bushfire management and BAL outcomes as planned. Where landscaping is not consistent with that anticipated in the subdivision stage BMP, a detailed justification has been provided for this deviation in the context of anticipated bushfire behaviour and risk. On this basis, Condition 17 of WAPC subdivision approval (WAPC Ref. 159307) has been sufficiently addressed.

The BAL contour assessment contained within this report provides a final BAL check for residential lots that are situated within a designated bushfire prone area for use at the building permit stage. Assessment results are consistent with current on-ground conditions as well as the future anticipated POS landscaping outcomes. Strategen-JBS&G considers that the BAL contour assessment and BAL certificates outlined in this report are accurate to inform individual lot building permit applications.

Should it be determined through demonstration on individual building plans that compliance with the recommended building setbacks has been achieved and subsequently a lower BAL rating has been attained (as per Table 4), then the lower BAL rating should apply and be reflected in an updated BAL certificate prepared at that time.

Ongoing requirements of the current City of Cockburn annual firebreak notice (as amended) should continue to be implemented as required, particularly with regards to ongoing fuel management of vacant lots.



## 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.

### Reliance on data

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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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## 6. References

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Strategen-JBS&G 2020, *Bushfire Management Plan (Subdivision Application)*, Lot 703 Armadale Road, Treeby, report prepared for LWP Property Group, September 2020.

Western Australian Planning Commission (WAPC) 2017, *Guidelines for Planning in Bushfire Prone Areas*, Version 1.4 December 2021, Western Australian Planning Commission, Perth.

## Appendix A BAL Certificates

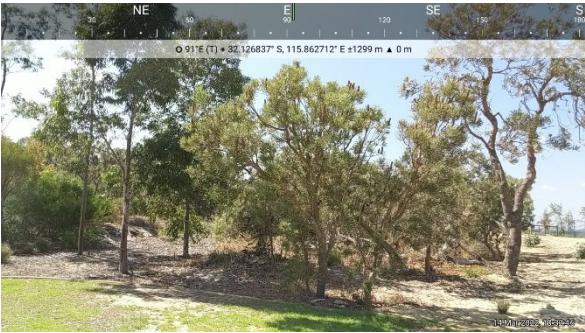




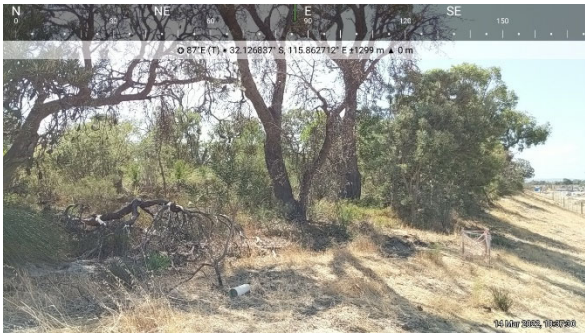


## Appendix B Civil roadworks layout plans

## Appendix C Civil water reticulation plans

## Appendix D Landscape plan

## Appendix E Vegetation plot photos and description



Plot 1	
<b>Vegetation classification</b>	Class D Scrub
<b>Description / justification</b>	Banksia woodland to the north of the project area, comprising generally continuous horizontal and vertical structure (<6m height). Scrub vegetation to the south of Armadale Road comprises Melaleuca/Paperbark typical of wet areas.
<div>  <p><b>Photo ID: 1a</b></p>  <p><b>Photo ID: 1b</b></p>  <p><b>Photo ID: 1c</b></p>  <p><b>Photo ID: 1d</b></p>  <p><b>Photo ID: 1e</b></p>  <p><b>Photo ID: 1f</b></p>  <p><b>Photo ID: 1g</b></p>  <p><b>Photo ID: 1h</b></p> </div>	



Plot 2	
Vegetation classification	Excluded – Clause 2.2.3.2 [d]
Description / justification	Narrow strip of retained Conservation POS, which is generally <20 m wide and not within 20 m of the project area of other areas of classified vegetation.

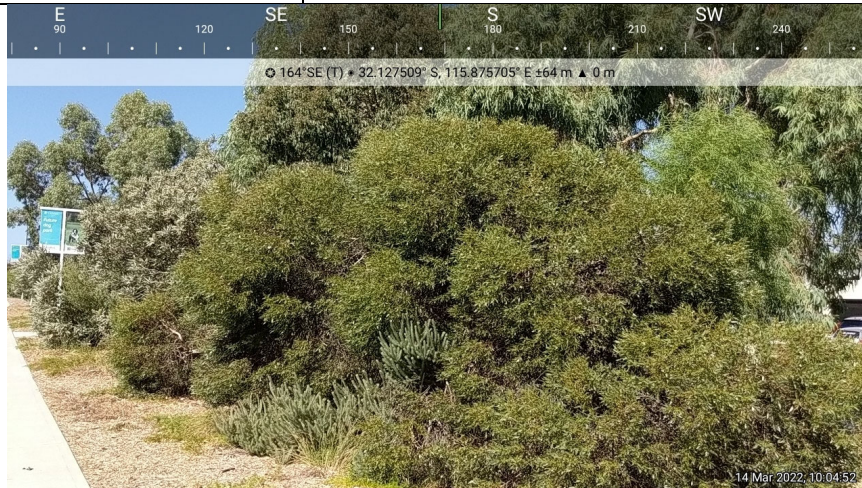


Photo ID: 2a



Photo ID: 2b



Plot 3	
<b>Vegetation classification</b>	Excluded – Clause 2.2.3.2 [b]
<b>Description / justification</b>	Single area of vegetation <1 ha. Within 88 m of nearest surrounding bushfire prone vegetation whereas Clause [d] generally requires >100 m. This outcome is deemed to be acceptable given the conservation value of Declared Rare Flora within the Conservation POS and negligible additional risk in keeping this vegetation intact.
<div>  <p><b>Photo ID: 3a</b></p> </div> <div>  <p><b>Photo ID: 3b</b></p> </div> <div>  <p><b>Photo ID: 3c</b></p> </div> <div>  <p><b>Photo ID: 3d</b></p> </div> <div>  <p><b>Photo ID: 3e</b></p> </div>	



Plot 4

Vegetation classification	Modified to non-vegetated and/or low threat (Clauses 2.2.3.2 [e] and/or [f])
Description / justification	Low threat POS, cleared vacant lots, cleared project area, slashed staging buffers and adjoining residential development.

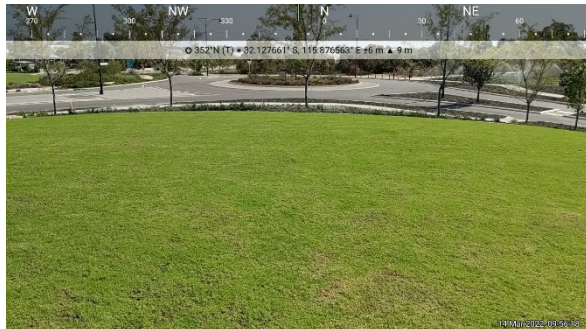


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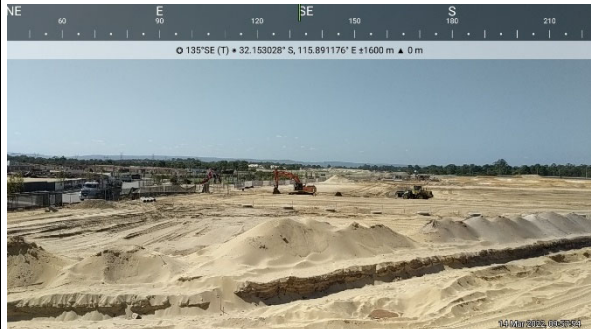


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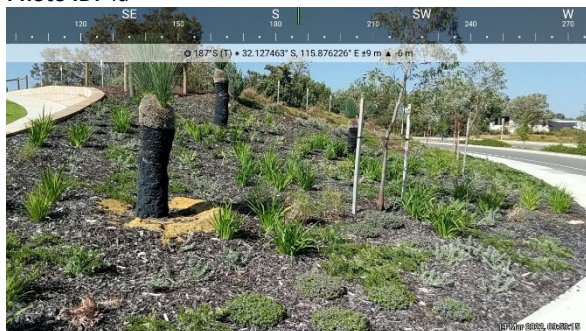


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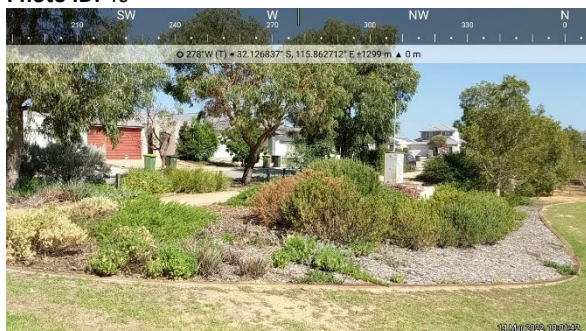


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Photo ID: 4f

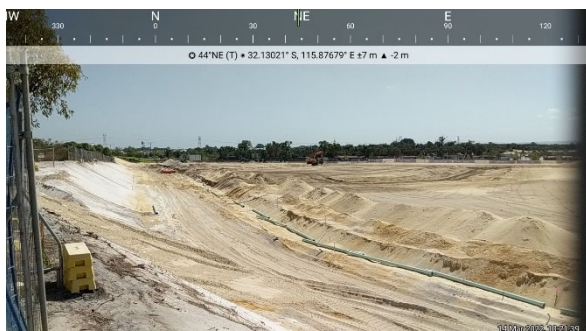


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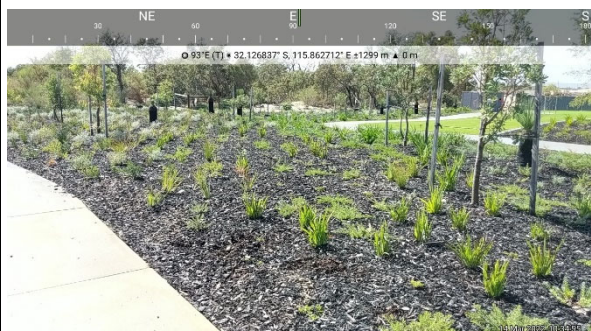


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#### Plot 4

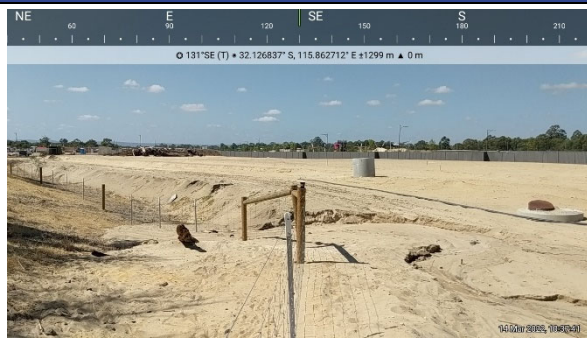


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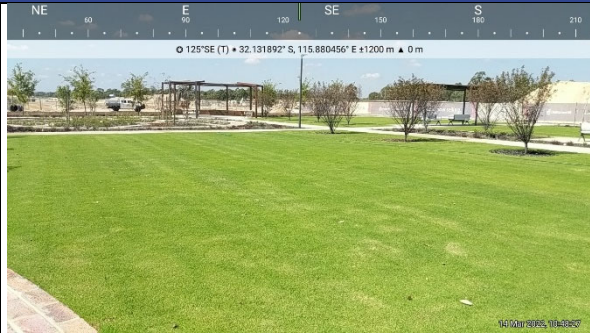


Photo ID: 4j

#### Plot 5

<b>Vegetation classification</b>	Class A Forest
<b>Description / justification</b>	Trees 10-30 m high at maturity, dominated by Eucalypts, multi-tiered structure comprising tall canopy layer, shrubby middle layer and grass/herb/sedge understorey

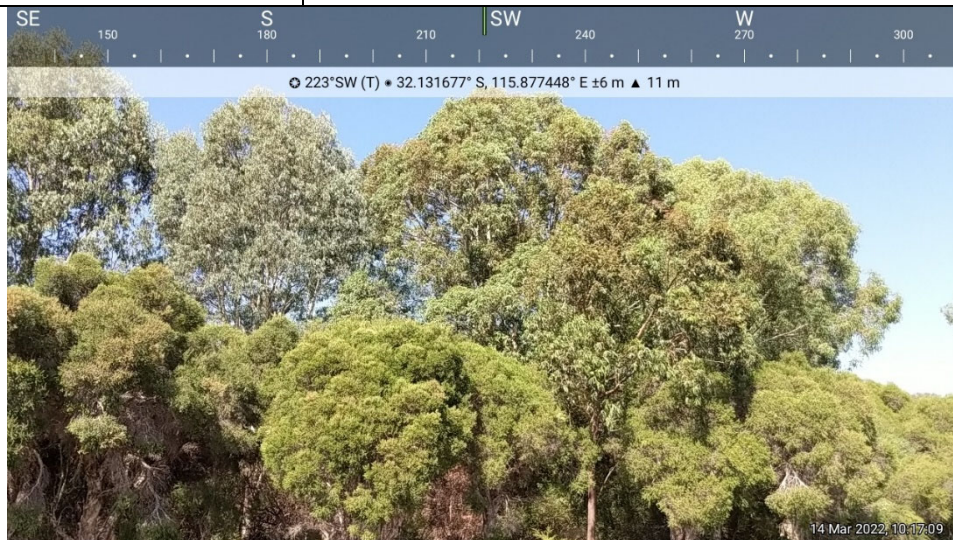


Photo ID: 5a



Photo ID: 5b

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**Document Status**

Rev No.	Purpose	Author	Reviewer, and Approved for Issue		
			Name	Signature	Date
Rev 0	Issued for use: to facilitate subdivision clearance and future building permit approvals	Louisa Robertson (BPAD 36748, Level 3)	Louisa Robertson (BPAD 36748, Level 3)	<i>LM Robertson</i>	05/05/2022

