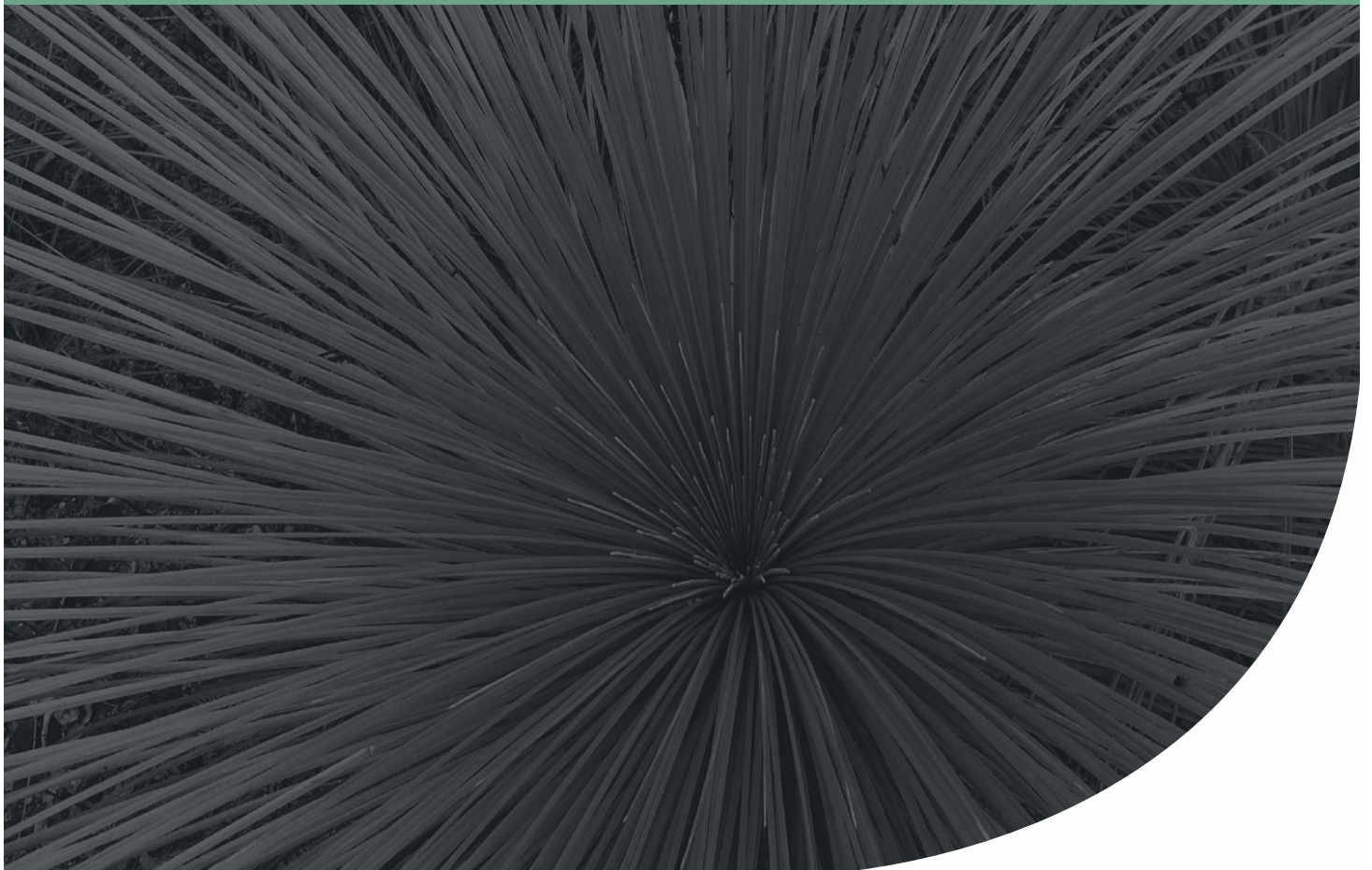


# Bushfire Attack Level Assessment

Rivermark Stage 2 Subdivision Area

Project No: EP19-105(51)

**Prepared for Hesperia Pty Ltd  
January 2023**



# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area



## Document Control

<b>Doc name:</b>	Bushfire Attack Level Assessment Rivermark Stage 2 Subdivision Area				
<b>Doc no.:</b>	EP19-105(51)--111 PPS				
Version	Date	Author		Reviewer	
1	January 2023	Pascal Scholz	PPS	Dana Elphinstone	DAE
Report issued to client.					

### Disclaimer:

This document has been prepared in good faith and is derived from sources believed to be reliable and accurate at the time of publication. Nevertheless, this publication is distributed on the terms and understanding that the author is not responsible for the results of any actions taken based on information in this publication or for any error in or omission from this publication.

The content of this document has been prepared primarily to consider the layout of the development or the appropriate building construction standard, where relevant. The measures outlined are considered to be prudent minimum standards only based on the relevant experience of the author and the standards prescribed by the relevant authorities. The level of implementation of the fire precautions achieved will depend upon the actions of the landowner or occupiers of the land and is not the responsibility of the author. The relevant local government and fire authority (i.e. Department of Fire and Emergency Services or local bushfire brigade) should be approached for guidance on preparing for and responding to a bushfire.

Notwithstanding the precautions adopted in this report, it should always be remembered that bushfires burn under a wide range of conditions. An element of risk, no matter how small always remains. The objective of the Australian Standard AS 3959-2018 is to "prescribe particular construction details for buildings to reduce the risk of ignition from a bushfire while the front passes" (Standards Australia 2018). Building to the standards outlined in AS 3959 does not guarantee a building will survive a bushfire or that lives will not be lost.

# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area



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# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area



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### **Appendix A**

BAL Assessment Certificate

### **Appendix B**

Deposited Plan 400991 (MNG 2022)

# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area



## List of Abbreviations

Table A1: Abbreviations – General terms

General terms	
AHD	Australian Height Datum
APZ	Asset Protection Zone
AS 3959	<i>Australian Standard 3959-2018 Construction of buildings in bushfire prone areas</i>
BAL	Bushfire Attack Level
BMP	Bushfire Management Plan
BPAD	Bushfire Planning and Design
CoS	City of Swan
FDI	Fire Danger Index
FZ	Flame Zone

Table A2: Abbreviations – Organisations

Organisations	
DFES	Department of Fire and Emergency Services
OBRM	Office of Bushfire Risk Management
WAPC	Western Australian Planning Commission



# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area

## 1 Introduction

### 1.1 Background

This Bushfire Attack Level (BAL) Assessment has been prepared on behalf of Hesperia Pty Ltd (the proponent) to support the future construction of residential dwellings within Stage 2 of subdivision approval WAPC 158848 of the proponent's Rivermark residential development.

Stage 2 (herein referred to as the 'site') is located to the east of Cranwood Crescent, south of Harford Avenue and to the west of the Eveline Road extension adjacent to the decommissioned Midland Brick brickworks, Viveash within the City of Swan (CoS). Stage 2 includes the development of 15 residential lots ranging from 210 m<sup>2</sup> to 645 m<sup>2</sup> in size and an area of public open space (POS) to the south in accordance with Deposited Plan 400991 provided in **Appendix B**. The site is identified as 'Urban' under the Metropolitan Region Scheme (MRS) and 'Residential Development' under the CoS Local Planning Scheme (LPS) No. 17. The location of the site is shown in **Figure 1**.

Portions of the site are currently identified as a 'bushfire prone area' under the state-wide *Map of Bush Fire Prone Areas* as prepared by the Office of Bushfire Risk Management (OBRM 2021), see **Plate 1**. Where a Class 1, Class 2, Class 3 or Class 10a building is proposed to be located in a designated 'bushfire prone area', a BAL assessment in accordance with *Australian Standard AS 3959 – 2018 Construction of buildings in bushfire prone areas* (Standards Australia 2018) is required to support the building permit application to determine any related construction requirements.

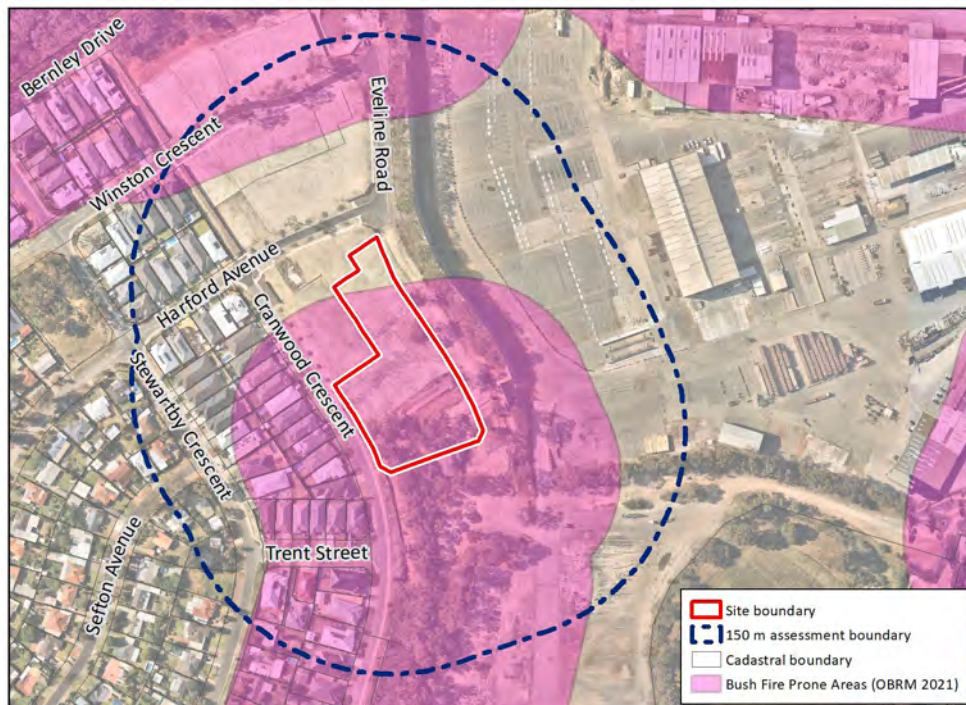


Plate 1: Areas within and surrounding the site identified as 'bushfire prone areas' (as indicated in purple) under the state-wide *Map of Bush Fire Prone Areas* (OBRM 2021).

## Bushfire Attack Level Assessment

### Rivermark Stage 2 Subdivision Area



#### 1.2 Aim of this report

This BAL assessment aims to assess classified vegetation and effective slope in accordance with Method 1 of AS 3959 in order to determine the applicable BAL ratings for all lots within the site. The outcomes of this assessment will be used to support the clearance of subdivision conditions for WAPC subdivision approval 158848 and the building permit application process.

#### 1.3 Statutory policy and framework

The following key legislation, policies and guidelines are relevant to the preparation of a BAL assessment:

- *Fire and Emergency Services Act 1998*
- *Bush Fires Act 1954*
- *Planning and Development (Local Planning Scheme Amendment) Regulations 2015*
- *Building Regulations 2012*
- *State Planning Policy 3.7 Planning in Bushfire Prone Areas (SPP 3.7) (WAPC 2015)*
- *Guidelines for Planning in Bushfire Prone Areas version 1.4 (the Guidelines) (DPLH & WAPC 2021)*
- *Australian Standard AS 3959 – 2018 Construction of buildings in bushfire prone areas (AS 3959) (Standards Australia 2018).*

# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area



## 2 BAL Assessment

A Method 1 BAL assessment has been completed for the site in accordance with AS 3959. This assessment considers the vegetation classification and effective slope for the site and surrounding 150 m (**Figure 2**). A BAL contour plan has been prepared in accordance with the Guidelines to demonstrate the determined BAL ratings (**Figure 3**).

AS 3959 specifies requirements for the construction of buildings in bushfire-prone areas in order to improve their resistance to bushfire attack from embers, burning debris, radiant heat, flame contact, and combinations of these attack forms. It provides six BAL ratings: BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40 and BAL-FZ, based on the radiant heat flux thresholds from vegetation within 100 m of a building. Each BAL rating is associated with specific national construction requirements, which have been summarised in **Table 1** below.

It is relevant to note that while buildings constructed to increased standards under AS 3959 are more likely to survive a bushfire than buildings that do not conform to these construction standards, building survival is not guaranteed.

*Table 1: Summary of BAL ratings, heat flux thresholds and associated construction standards, as outlined within AS 3959*

Bushfire Attack Level (BAL)	Classified vegetation within 100 m of the subject building and heat flux exposure thresholds	Description of the predicted bushfire attack and levels of exposure	Construction section (within AS 3959)
BAL-LOW	See Section 2.2.3.2 of AS 3959	There is insufficient risk to warrant specific construction requirements	4
BAL-12.5	$\leq 12.5 \text{ kW/m}^2$	Ember attack	3 & 5
BAL-19	$> 12.5 \text{ kW/m}^2$ to $\leq 19 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers blown together with increasing heat flux	3 & 6
BAL-29	$> 19 \text{ kW/m}^2$ to $\leq 29 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers blown together with increasing heat flux	3 & 7
BAL-40	$> 29 \text{ kW/m}^2$ to $\leq 40 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers blown together with the increased likelihood of exposure to flame	3 & 8
BAL-FZ	$> 40 \text{ kW/m}^2$	Direct exposure to flames from fire front in addition to heat flux and ember attack	3 & 9

Not all vegetation is a classified bushfire risk. Vegetation and ground surfaces that are exempt from classification as a potential hazard are identified as a low threat under Section 2.2.3.2 of AS 3959.



## Bushfire Attack Level Assessment

### Rivermark Stage 2 Subdivision Area

## 2.1 Assessment inputs

The classification of vegetation within the site and the surrounding 150 m has been undertaken in accordance with AS 3959. The assignment of vegetation classifications is based on Section 2.2.3 and Table 2.3 of AS 3959 and generally considers the various fuel layers of different vegetation types. For example, fuel layers in a typical forest environment can be broken down into five segments as illustrated in **Plate 2** below.



*Plate 2: The fuel layers in a forest environment that could be associated with fire behaviour (Gould et al. 2007)*

An assessment of existing vegetation within the site and surrounding 150 m was undertaken on 15 December 2022 and 4 January 2023 in accordance with AS 3959. **Table 2** below outlines the determined vegetation classifications and associated effective slope, and where relevant outlines the existing management practices that have informed the vegetation classification. The plots referenced in **Table 2** are also shown in **Figure 2**.

### 2.1.1 Assumptions

The BAL assessment includes the following assumptions:

- **Designated FDI:** 80
- **Flame temperature:** 1090 K
- **Effective slope beneath classified vegetation:** flat/upslope (see **Figure 2**)
- Areas of low threat vegetation outside Stage 2 will continue to be managed and/or considered to achieve low threat (in accordance with Section 2.2.3.2 of AS 3959) based on the existing maintenance regimes, and/or as per the CoS firebreak notice.
- The southern POS area will be delivered as part of future Stage 2 development and formally landscaped in consultation with the CoS. Until landscaping works occurs, the POS area will be maintained to the presently low-threat standard by the proponent.
- Classified vegetation that has been identified to the south of the site has been assumed to remain in its current state (unless stated otherwise) and will therefore remain a bushfire hazard to development within the site. It is noted that future development within these areas will result in the removal and/or management of classified vegetation to a low threat

# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area




standard; however, for the purposes of this BAL Assessment, all bushfire hazards are assumed to remain as such.

### 2.1.2 Vegetation Classification

All vegetation within 150 m of the site was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the BAL rating is identified in **Table 2** and shown in **Figure 2**.

Table 2: AS3959 Vegetation Classification (refer to **Figure 2**)

Plot:	1	Photo ID:	1	 <p>-31°52'26", 116°0'3", -16.8m, 148° 15 Dec 2022 10:09:41 am</p>
Vegetation Classification or Exclusion Clause				
Forest (Class A) – Flat/upslope				
Description / Justification for Classification				
Forest vegetation has been identified to the south of the site comprising predominantly mature trees growing to a height of between 6-10 m, with a greater than 30% foliage cover over an understorey of shrubs, grasses and juvenile trees.				
Plot:	1	Photo ID:	2	
Vegetation Classification or Exclusion Clause				
Forest (Class A) – Flat/upslope				
Description / Justification for Classification				
Photo ID 2 shows the identified forest vegetation to the south of the site comprising predominantly mature trees growing to a height of 10-15 m, with a greater than 30% foliage cover over an understorey of shrubs, grasses and juvenile trees.				



**Bushfire Attack Level Assessment**  
Rivermark Stage 2 Subdivision Area






Table 2: AS3959 Vegetation Classification (refer to Figure 2)(continued)

<b>Plot:</b>	2	<b>Photo ID:</b>	3	<p>-31°52'23", 116°0'3", -9.8m, 345° 15 Dec 2022 10:12:58 am</p>
<b>Vegetation Classification or Exclusion Clause</b>				
Exclusion clause 2.2.3.2(e) – Non-vegetated				
<b>Description / Justification for Classification</b>				
Non vegetated mineral earth for newly subdivided land comprising the Stage 2 development is excluded under clause 2.2.3.2 (e).				
<b>Plot:</b>	2	<b>Photo ID:</b>	4	<p>-31°52'24", 116°0'3", -11.5m, 319° 15 Dec 2022 10:12:40 am</p>
<b>Vegetation Classification or Exclusion Clause</b>				
Exclusion clause 2.2.3.2(e) – Non-vegetated				
<b>Description / Justification for Classification</b>				
Non vegetated mineral earth for newly subdivided land comprising the Stage 2 development is excluded under clause 2.2.3.2(e).				
<b>Plot:</b>	2	<b>Photo ID:</b>	5	<p>-31°52'25", 116°0'3", -16.0m, 83° 15 Dec 2022 10:09:03 am</p>
<b>Vegetation Classification or Exclusion Clause</b>				
Exclusion clause 2.2.3.2(e) – Non-vegetated				
<b>Description / Justification for Classification</b>				
Non vegetated strip of mineral earth for the construction of Surrey Way connecting Eveline Road to Cranwood Crescent is excluded under clause 2.2.3.2(e).				

# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area

Table 2: AS3959 Vegetation Classification (refer to Figure 2)(continued)

Plot:	2	Photo ID:	6	
Vegetation Classification or Exclusion Clause				
Exclusion clause 2.2.3.2(e) – Non-vegetated				
Description / Justification for Classification				
Cranwood Crescent and existing residential dwellings to the west of the site are excluded under clause 2.2.3.2(e).				
Plot:	2	Photo ID:	7	
Vegetation Classification or Exclusion Clause				
Exclusion clause 2.2.3.2(e) – Non-vegetated				
Description / Justification for Classification				
Non vegetated mineral earth for newly subdivided land comprising the Stage 1 development to the north of the site is excluded under clause 2.2.3.2(e).				
Plot:	2	Photo ID:	8	
Vegetation Classification or Exclusion Clause				
Exclusion clause 2.2.3.2(e) – Non-vegetated				
Description / Justification for Classification				
The intersection of Eveline Road and Harford Avenue to the north of the site within the Stage 1 development is excluded under clause 2.2.3.2(e). Areas of landscaped low threat vegetation are visible within the road verge.				



# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area


Table 2: AS3959 Vegetation Classification (refer to Figure 2)(continued)

Plot:	2	Photo ID:	9	
<b>Vegetation Classification or Exclusion Clause</b>				
Exclusion clause 2.2.3.2(e) – Non-vegetated				
<b>Description / Justification for Classification</b>				
Non vegetated land of mineral earth to the south-east of the site currently under construction for the Eveline Road extension and intersection with Surrey Way is excluded under clause 2.2.3.2(e).				
Plot:	3	Photo ID:	10	
<b>Vegetation Classification or Exclusion Clause</b>				
Exclusion clause 2.2.3.2(f) – Low threat vegetation				
<b>Description / Justification for Classification</b>				
Low threat vegetation to the south of the site within the future Stage 2 POS area. Trees have been retained within this area, with no low hanging branches and the density of the trees has been reduced so to separate tree canopies. Fine fuel load (combustible dead vegetation matter) has been reduced to a minimal fuel condition. This area will undergo additional landscape treatments and vegetation will be managed in perpetuity to a low threat condition.				
Plot:	3	Photo ID:	11	
<b>Vegetation Classification or Exclusion Clause</b>				
Exclusion clause 2.2.3.2(f) – Low threat vegetation				
<b>Description / Justification for Classification</b>				
Low threat vegetation to the east of the site comprising a single line of trees with no low hanging branches. The grassy understorey has been slashed to maintain a height of less than 100 mm. This area will undergo landscape treatments and vegetation will be managed to a low threat standard in perpetuity.				

# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area

Table 2: AS3959 Vegetation Classification (refer to Figure 2)(continued)

Plot:	3	Photo ID:	12
Vegetation Classification or Exclusion Clause			
Exclusion clause 2.2.3.2(f) – Low threat vegetation			
Description / Justification for Classification			
Low threat vegetation has been identified within landscaped road reserves along Harford Avenue and Eveline Road. The vegetation comprises planted species with mulch at the base of each plant.			
			



## Bushfire Attack Level Assessment

### Rivermark Stage 2 Subdivision Area



## 2.2 Assessment outputs

A BAL Contour Plan (see **Figure 3**) has been prepared to outline the BAL ratings applicable to the lots within the site. It is based on the determined vegetation classifications and associated effective slopes and using the BAL distances detailed in Table 2.5 of AS 3959. Based on the outcomes of the BAL assessment:

- 5 lots are exposed to a BAL rating of BAL-LOW
- 10 lots are exposed to a BAL rating of BAL-12.5.

Individual BAL ratings for each lot are shown on **Figure 4**.

## 2.3 Construction of buildings and ongoing management

### 2.3.1 Construction of buildings

**Appendix A** specifies the BAL rating applicable to each building in the form of a BAL certificate and can be used to support the building permit process. Construction requirements for each BAL rating are specified in AS 3959 and summarised in **Table 1**. It is noted that for buildings with a BAL-LOW rating, there is an insufficient risk from bushfire to warrant specific construction requirements, as outlined in Section 4 of AS 3959.

### 2.3.2 Ongoing management

All lot owners will be responsible for maintaining their own property to a low threat standard in accordance with the asset protection zone standards detailed in the Guidelines, and as per the requirements of the City of Swan Fire Hazard Reduction Notice (as published). Advice to lot owners on maintaining their property to a low threat standard can be provided by the City of Swan.

The proponent will be responsible for the maintenance of their landholdings to the north and south of the site to a low-threat standard in accordance with Section 2.2.3.2 of AS 3959 (as indicated by **Figure 2**), and in line with the City of Swan Fire Hazard Reduction Notice requirements.

Management of these areas may include:

- Install and maintain an asset protection zone.
- Clearing of vegetation.
- Regular maintenance including removal of weeds and dead material.
- Low pruning of trees (branches below 2 m in height removed where appropriate).
- Application of ground covers such as mulch or non-flammable materials.
- Regularly mowing/slashing of grass to less than 100 mm in height.

Areas of POS identified in the subdivision approval will be formally landscaped in consultation with the CoS and managed in a minimal fuel condition in perpetuity.

## Bushfire Attack Level Assessment

### Rivermark Stage 2 Subdivision Area



## 3 Certification by Bushfire Consultant

### 3.1 Accreditation

This BAL assessment has been prepared by Emerge Associates who have been providing bushfire risk management advice for more than eight years, undertaking detailed bushfire assessments (and associated approvals) to support the land use development industry.

### 3.2 Declaration

I declare that the information provided is true and correct to the best of my knowledge.

Signature:

A handwritten signature in black ink that reads "Dana Elphinstone".

**Name:** Dana Elphinstone

**Company:** Emerge Associates

**Date:** 11 January 2022

**BPAD Accreditation:** Level 2 BPAD no. 52565

## Bushfire Attack Level Assessment

### Rivermark Stage 2 Subdivision Area



## 4 References

### 4.1 General references

Department of Planning, Lands and Heritage, and Western Australian Planning Commission, (DPLH & WAPC) 2021, *Guidelines for Planning in Bushfire Prone Areas Version 1.4*, Perth, Western Australia.

Standards Australia 2018, *AS 3959:2018 Construction of buildings in bushfire-prone areas*, Sydney.

Western Australian Planning Commission (WAPC) 2015, *State Planning Policy 3.7 Planning in Bushfire Prone Areas*, Perth.

### 4.2 Online references

Department of Water 2008, *LIDAR derived 1 m elevation contours* dataset, Government of Western Australia.

Office of Bushfire Risk Management (OBRM) 2021, Map of Bush Fire Prone Areas, viewed December 2022, <https://maps.slip.wa.gov.au/landgate/bushfireprone/>

# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area



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# Figures



*Figure 1: Site Location*

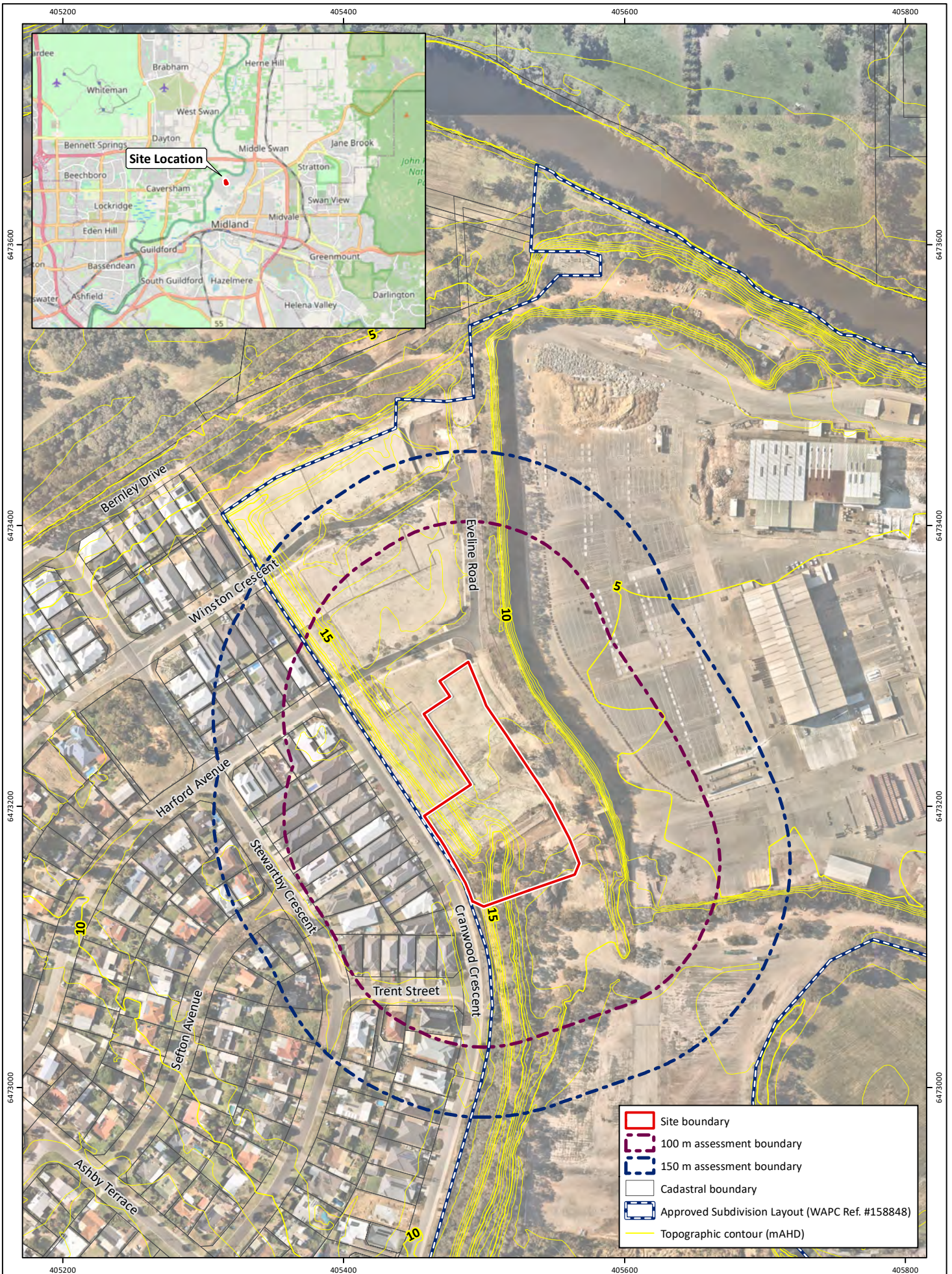
*Figure 2: AS 3959 Vegetation Classification and Effective Slope*

*Figure 3: Bushfire Attack Level Contour Plan*

*Figure 4: Bushfire Attack Level Ratings for Individual Lots*





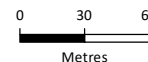


**Figure 1: Site Plan and Topographic Contours**

**Project:** Stage 2 BAL Assessment  
Linc Midland Brick Development Support

**Client:** Hesperia Pty Ltd

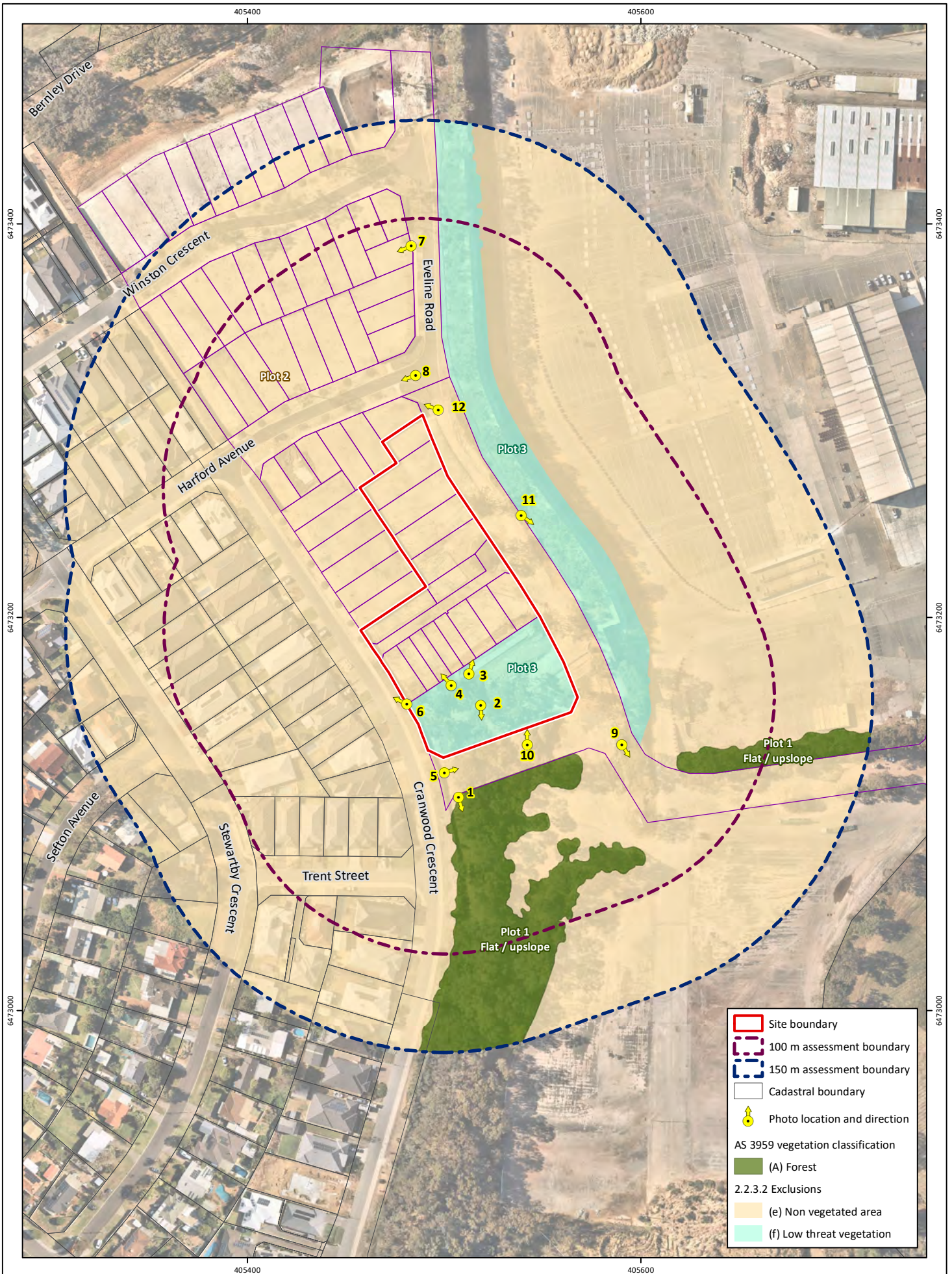
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**Date:** 05/01/2023  
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**Approved:** DAE  
**Date:** 12/01/2023



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GDA 1994 MGA Zone 50





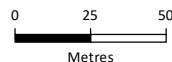


**Figure 2: AS 3959 Vegetation Classifications and Effective Slope**

**Project:** Stage 2 BAL Assessment  
Linc Midland Brick Development Support

**Client:** Hesperia Pty Ltd

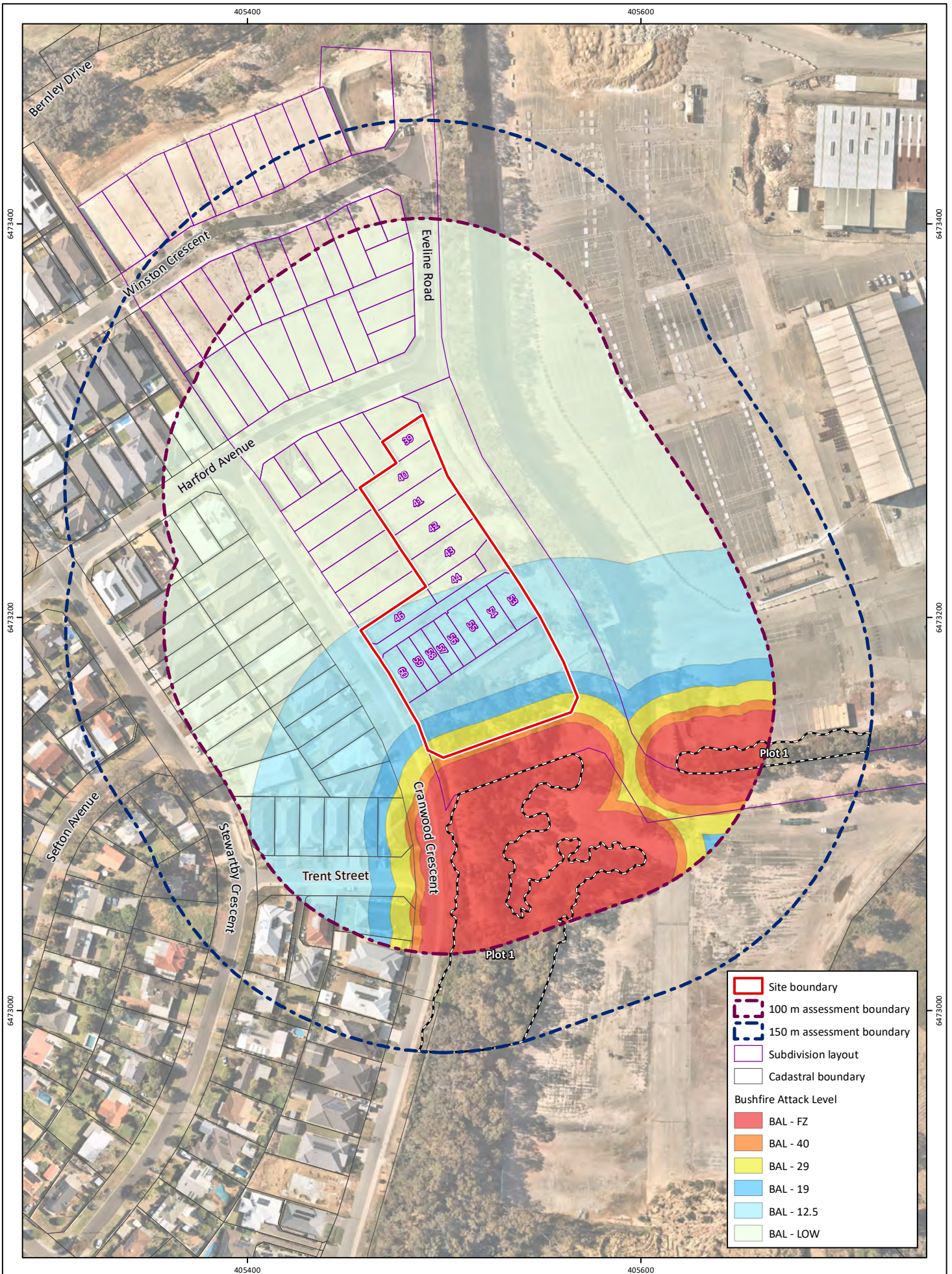
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**Drawn:** GAR  
**Date:** 05/01/2023  
**Checked:** PPS  
**Approved:** DAE  
**Date:** 12/01/2023



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GDA 1994 MGA Zone 50





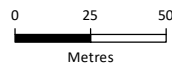


**Figure 3: Bushfire Attack Level Contour Plan**

**Project:** Stage 2 BAL Assessment  
Linc Midland Brick Development Support

**Client:** Hesperia Pty Ltd

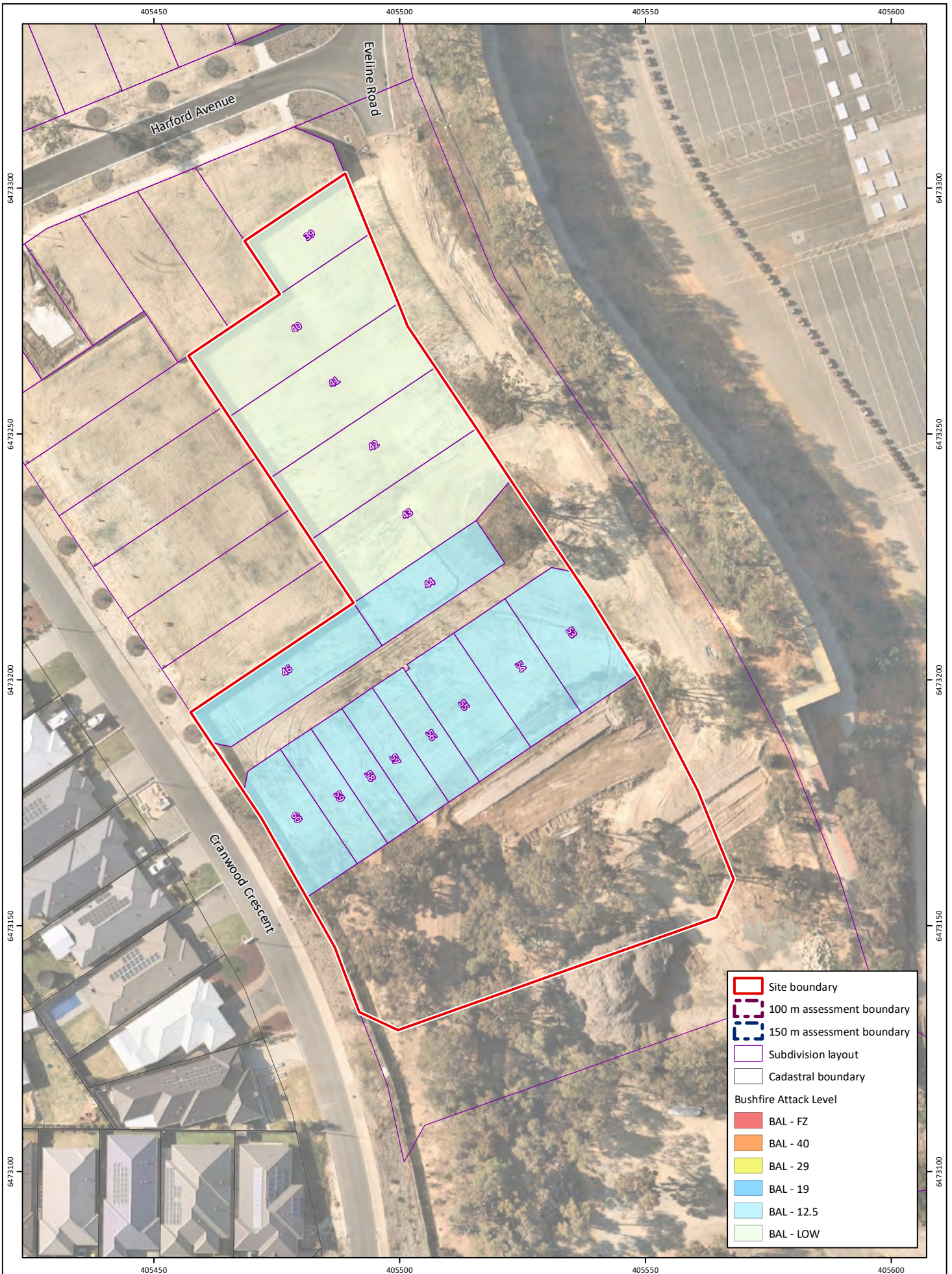
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**Drawn:** GAR  
**Date:** 05/01/2023  
**Checked:** PPS  
**Approved:** DAE  
**Date:** 12/01/2023



**Scale:** 1:2,500@A4  
GDA 1994 MGA Zone 50





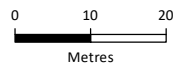


**Figure 4: Bushfire Attack Level Ratings for Individual Lots**

**Project:** Stage 2 BAL Assessment  
Linc Midland Brick Development Support

**Client:** Hesperia Pty Ltd

**Plan Number:** EP19-105(S1)-F330  
**Drawn:** GAR  
**Date:** 05/01/2023  
**Checked:** PPS  
**Approved:** DAE  
**Date:** 12/01/2023



**Scale:** 1:1,000@A4  
GDA 1994 MGA Zone 50



# Appendix A

BAL Assessment Certificate







# Bushfire Attack Level Assessment

## Rivermark Stage 2 Subdivision Area



### BUSHFIRE ATTACK LEVEL (BAL) CERTIFICATE

Determined in accordance with Australian Standard (AS) 3959-2018 Construction of buildings in bushfire prone areas

#### Site details

Address	Lots 39-44, 46 and 53-60 on Deposited Plan 400991 (Stage 2)		
Suburb	Viveash	State	WA
Local government area	City of Swan		
Date of assessment	4 January 2023	Date of report	11 January 2023
Project no.	EP19-105(51)	Document no.	EP19-105(51)--111

#### Determination of highest Bushfire Attack Level (BAL)

Lot number	Classified vegetation and plot number	Distance of lot boundary from vegetation	Effective slope	Building BAL rating (see Figure 4)	Exceptions/notes for building BAL rating
39	No classified vegetation identified within 100 m.	>100 m	Not applicable	BAL-LOW	N/A
40	No classified vegetation identified within 100 m.	>100 m	Not applicable	BAL-LOW	N/A
41	No classified vegetation identified within 100 m.	>100 m	Not applicable	BAL-LOW	N/A
42	No classified vegetation identified within 100 m.	>100 m	Not applicable	BAL-LOW	N/A
43	No classified vegetation identified within 100 m.	>100 m	Not applicable	BAL-LOW	N/A
44	Plot 1 – Forest	95 m	Flat/upslope	BAL – 12.5	N/A
46	Plot 1 – Forest	87 m	Flat/upslope	BAL – 12.5	N/A
53	Plot 1 – Forest	68 m	Flat/upslope	BAL – 12.5	N/A
54	Plot 1 – Forest	65 m	Flat/upslope	BAL – 12.5	N/A
55	Plot 1 – Forest	62 m	Flat/upslope	BAL – 12.5	N/A
56	Plot 1 – Forest	60 m	Flat/upslope	BAL – 12.5	N/A
57	Plot 1 – Forest	58 m	Flat/upslope	BAL – 12.5	N/A
58	Plot 1 – Forest	57 m	Flat/upslope	BAL – 12.5	N/A
59	Plot 1 – Forest	55 m	Flat/upslope	BAL – 12.5	N/A
60	Plot 1 – Forest	53 m	Flat/upslope	BAL – 12.5	N/A

#### Accreditation details

I hereby certify that I have undertaken the assessment of the above site and determined the Bushfire Attack Level stated above in accordance with the requirements of the National Construction Code and AS 3959-2018.

Signature:	<i>Dana C</i>	Certificate date:	11 January 2023
------------	---------------	-------------------	-----------------

# Appendix B

Deposited Plan 400991 (MNG 2022)





Plan Information	
Tenure Type	Freehold
Plan Type	Deposited Plan
Plan Purpose	Subdivision

**Plan Heading**  
 LOTS 39-44, 46, 53-60, 8000, 9008, 9009, ROADS, ROAD WIDENINGS, RESTRICTIVE COVENANT AND COVENANTS

Locality & Local Government	
Locality	VIVEASH
Local Government	CITY OF SWAN

**Department of Planning, Lands and Heritage**  
 File Number

Examination	
Examined	Date

Planning Approval	
Planning Authority	Western Australian Planning Commission
Reference	158848

Delegated under S. 16 P&D Act 2005 Date

**In Order For Dealings**  
 Subject To

For Inspector of Plans and Surveys Date

**Plan Approved** Reg. 26A (1), (4)

Inspector of Plans and Surveys / Authorised Land Officer Date

Survey Details	
Field Records	150550
Declared as Special Survey Area	Yes

**Survey Method Regulatory Statement**  
 Survey carried out under Reg. 26A Special Survey Area Guidelines. See survey sheet(s) to determine the true final position and type of all survey marks placed for this plan.

Survey Method and Plan Content Variations	
<b>Approved Variation Type</b> REG 26A(1) FINAL MARKING DEFERRED	<b>Reference</b> Approved ID D183-22 - Dated 12 December 2022, Landgate File 06909-2021/003

**Survey Certificate - Regulation 54**  
 I, Nigel J. SIMPSON hereby certify that this plan is accurate and is a correct representation of the -  
 (a) survey; and  
 (b) calculations from measurements recorded in the field records, undertaken for the purposes of this plan and that it complies with the relevant written law(s) in relation to which it is lodged.

**FINAL**  
 Licensed Surveyor Date

Survey Organisation	
Name	MNG MCMULLEN NOLAN GROUP
Address	PO Box 3526, SUCCESS W.A. 6964
Phone	6436 1599
Fax	6436 1500
Email	info @ mngsurvey.com.au
Reference	100427dp-101e

Version	Lodgement Type	Amendment Description	Authorised By	Date
2	Amendment Plan	Landgate Audit Requirements	Nigel J. SIMPSON	29/11/2022
3	Replacement Plan	Add Deferred Marking notation	Nigel J. SIMPSON	13/12/2022

New Lot / Land	Parent Plan Number	Parent Lot Number	Title Reference	Subject Land Description
39	DP 422231	Pt Lot 9005	4023/984	
40	P 9113 DP 422231 DP 422231	Pt Lot 157 Pt Lot 9005 Pt Lot 9006	1336/316 4023/984 4023/985	
41	P 9113 P 9113 DP 422231	Pt Lot 156 Pt Lot 157 Pt Lot 9005	1336/315 1336/316 4023/984	
42	P 9113 P 9113 DP 422231	Pt Lot 155 Pt Lot 156 Pt Lot 9005	1336/314 1336/315 4023/984	
43	P 9113 DP 422231	Pt Lot 155 Pt Lot 9005	1336/314 4023/984	
44	P 9113 P 9113 P 9113 DP 422231	Pt Lot 147 Pt Lot 154 Pt Lot 155 Pt Lot 9005	1336/306 1336/313 1336/314 4023/984	
46	P 9113 DP 422231	Pt Lot 147 Pt Lot 9005	1336/306 4023/984	
53-55	P 9113 P 9113	Pt Lot 153 Pt Lot 154	1336/312 1336/313	
56	P 9113 P 9113 P 9113 P 9113	Pt Lot 147 Pt Lot 148 Pt Lot 153 Pt Lot 154	1336/306 1336/307 1336/312 1336/313	
57-60	P 9113 P 9113	Pt Lot 147 Pt Lot 148	1336/306 1336/307	
8000	P 9113 P 9113 P 9113 P 9113 P 9113	Pt Lot 148 Lot 149 Lot 150 Lot 151 Lot 152 Pt Lot 153	1336/307 1336/308 1336/309 1336/310 1336/311 1336/312	
9008	DP 422231	Pt Lot 9006	4023/985	
9009	DP 405292	Pt Lot 9000	2905/766	

**FOR INTERESTS AND NOTIFICATIONS - SEE SHEET 2**

**Former Tenure Interests and Notifications**

Subject	Purpose	Statutory Reference	Origin	Land Burdened	Benefit To	Comments
	RESTRICTIVE COVENANT		DOC K532460 DOC M319216 DOC M492035	SEE DOCUMENT	LOT 9009	PROXIMITY TO BRICK WORKS
	MEMORIAL		DOC M562964	LOT 9009	DEPARTMENT OF WATER AND ENVIRONMENTAL REGULATION	
	RESTRICTIVE COVENANT		DOC M664403 DOC M718537 DOC M732005 DOC M793087 DOC M868958 DOC N314416 DOC N314418 DOC N414899 DOC N648647	SEE DOCUMENT	LOT 9009	PROXIMITY TO BRICK WORKS

**New Interests**

Subject	Purpose	Statutory Reference	Origin	Land Burdened	Benefit To	Comments
	RESTRICTIVE COVENANT	SEC 136D OF THE TLA 1893	THIS PLAN & DOC	LOTS 39-44, 46, 53-60	LOTS 39-44, 46, 53-60	
(A)	RESTRICTIVE COVENANT	SEC 129BA OF THE TLA 1893	DOC	LOT 8000	ELECTRICITY NETWORK CORPORATION	FIRE SEPARATION
(R) (S) (T) (U) (V) (W) (X) (Y)	COVENANT	SEC 150 OF THE P&D ACT 2005	THIS PLAN	LOTS 43 & 44 LOT 46 LOT 53 LOT 60	CITY OF SWAN	RESTRICTION OF ACCESS (No road vehicle access to and from adjacent road/s)

**New Notifications and Memorials**

Subject	Purpose	Statutory Reference	Origin	Land Burdened	Benefit To	Comments
	NOTIFICATION (of Hazards or other Factors seriously Affecting the Land)	SEC 165 OF THE P&D ACT 2005	DOC	LOTS 44, 46, 53-60		BUSH FIRE MANAGEMENT PLAN
	NOTIFICATION (of Hazards or other Factors seriously Affecting the Land)	SEC 165 OF THE P&D ACT 2005	DOC	LOTS 39, 41-44, 46, 53-60		PROXIMITY TO BRICK WORKS
	NOTIFICATION (of Hazards or other Factors seriously Affecting the Land)	SEC 165 OF THE P&D ACT 2005	DOC	LOT 40		PROXIMITY TO BRICK WORKS
	NOTIFICATION (of Hazards or other Factors seriously Affecting the Land)	SEC 165 OF THE P&D ACT 2005	DOC	LOTS 53-58		AIRCRAFT NOISE

**Vesting Lots**

Subject	Purpose	Statutory Reference	Origin	Land Burdened	Benefit To	Comments
LOT 8000	RESERVE FOR RECREATION	TO VEST IN THE CROWN UNDER SEC 152 OF THE P&D ACT 2005	THIS PLAN			



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Fax: (08) 6436 1500  
Email: info@mngsurvey.com.au

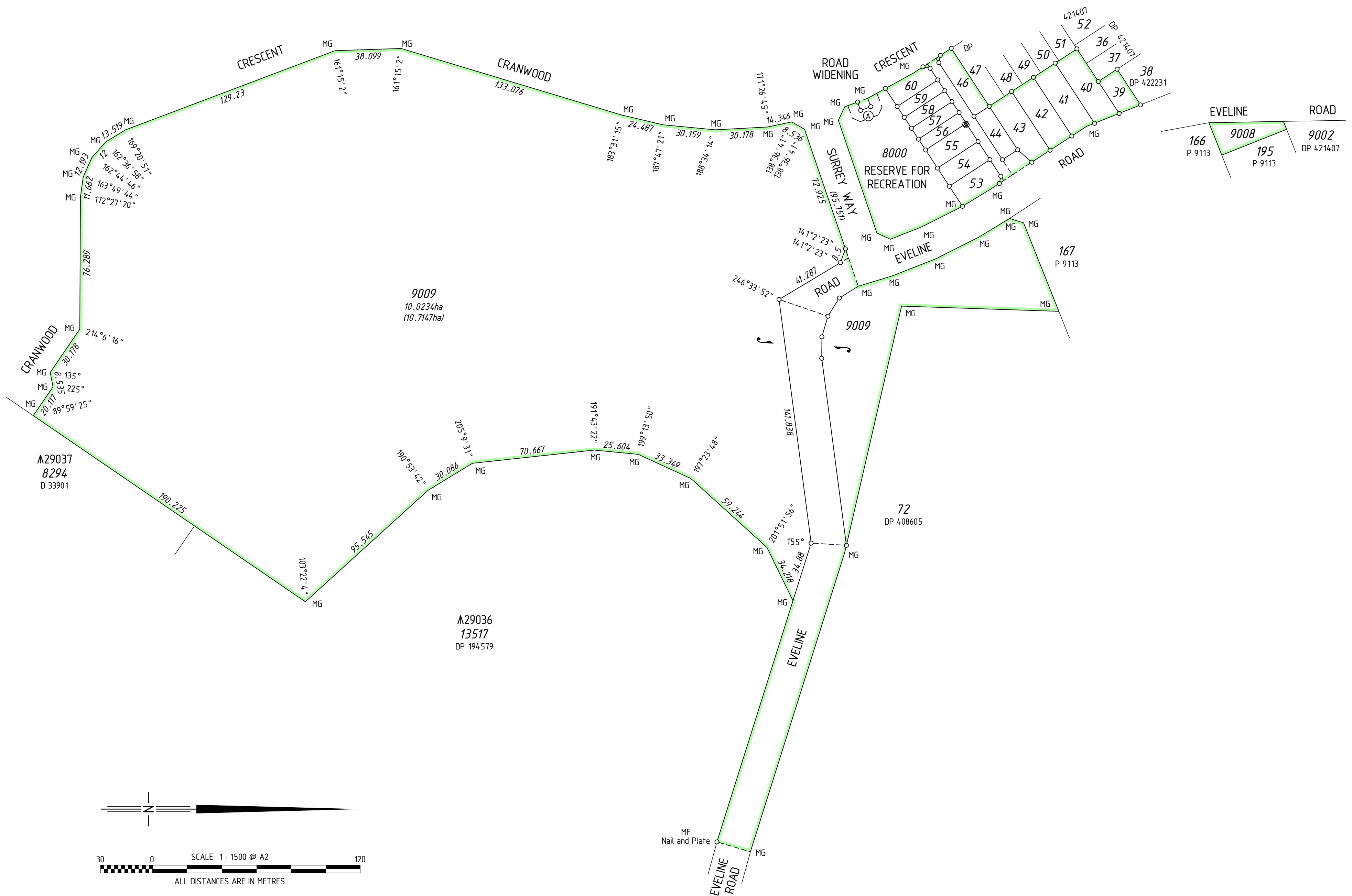
MNG Ref : 100427dp-101e - Stage 2 - DP400991.CSD

ADDITIONAL SHEETS  
SURVEY SHEET

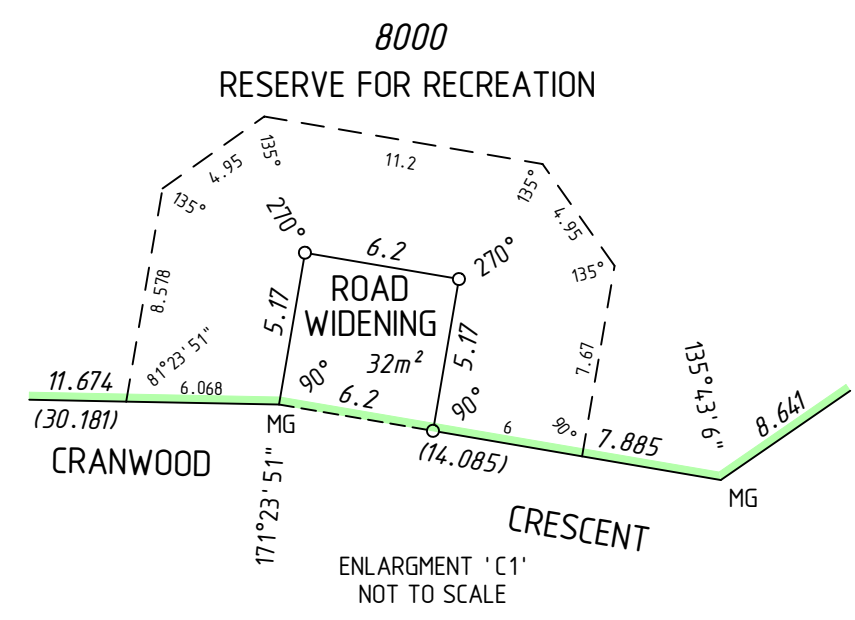
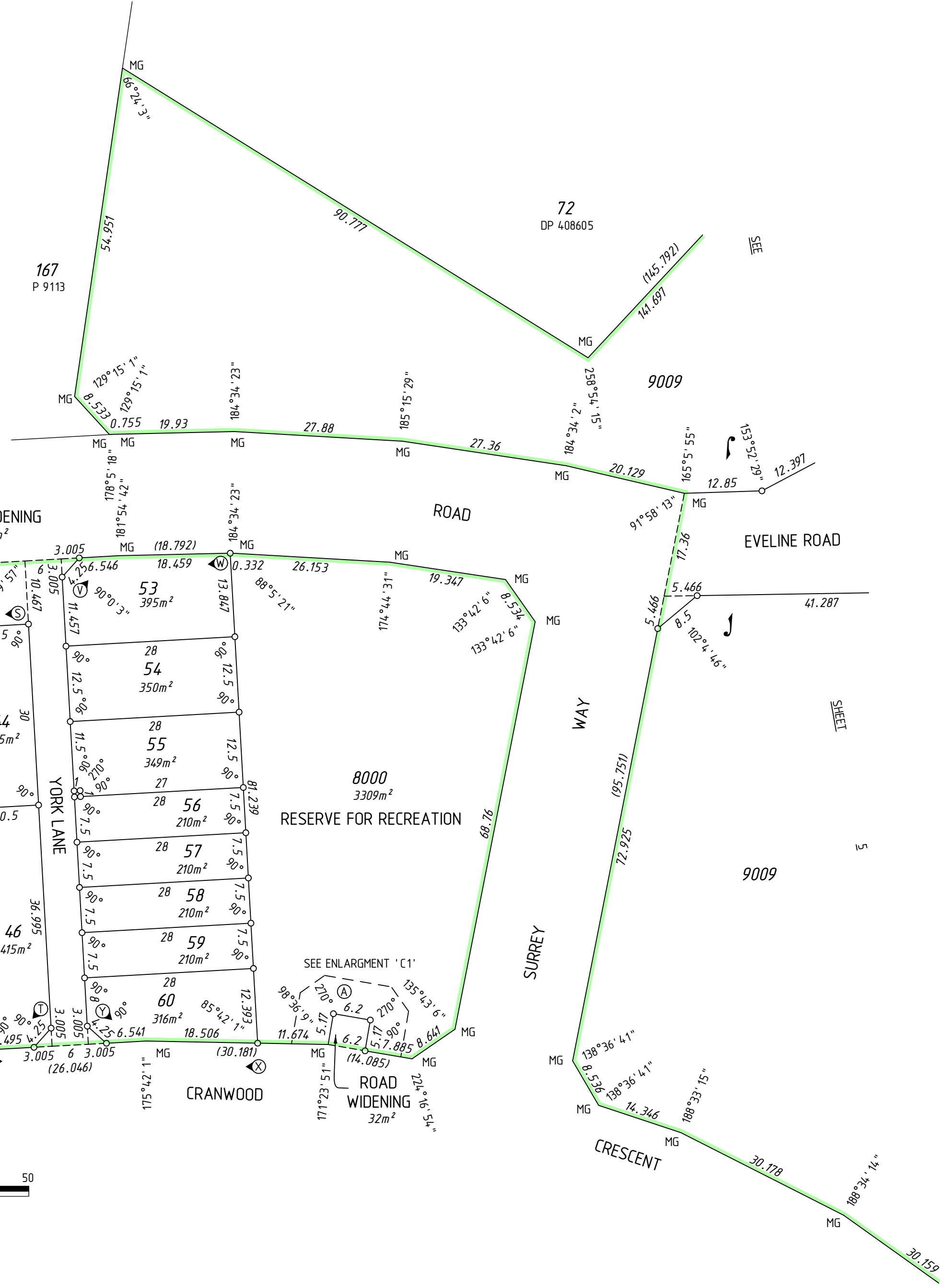
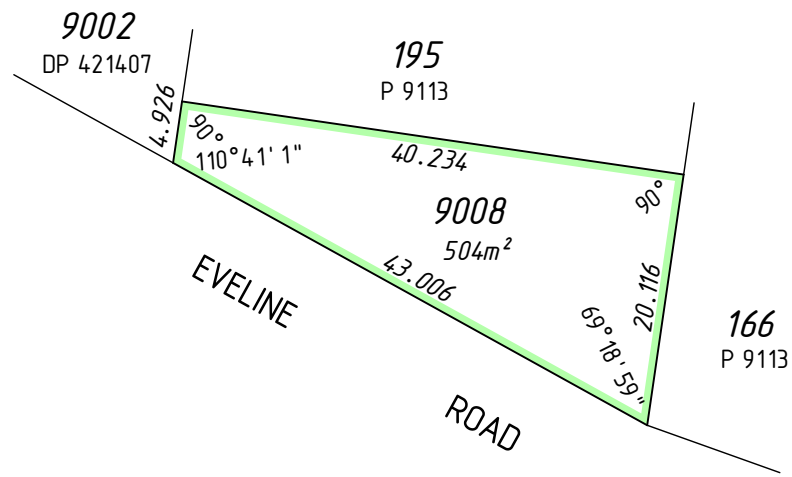
SHEET SHEETS  
2 OF 5

VERSION NUMBER  
3

DEPOSITED PLAN  
400991

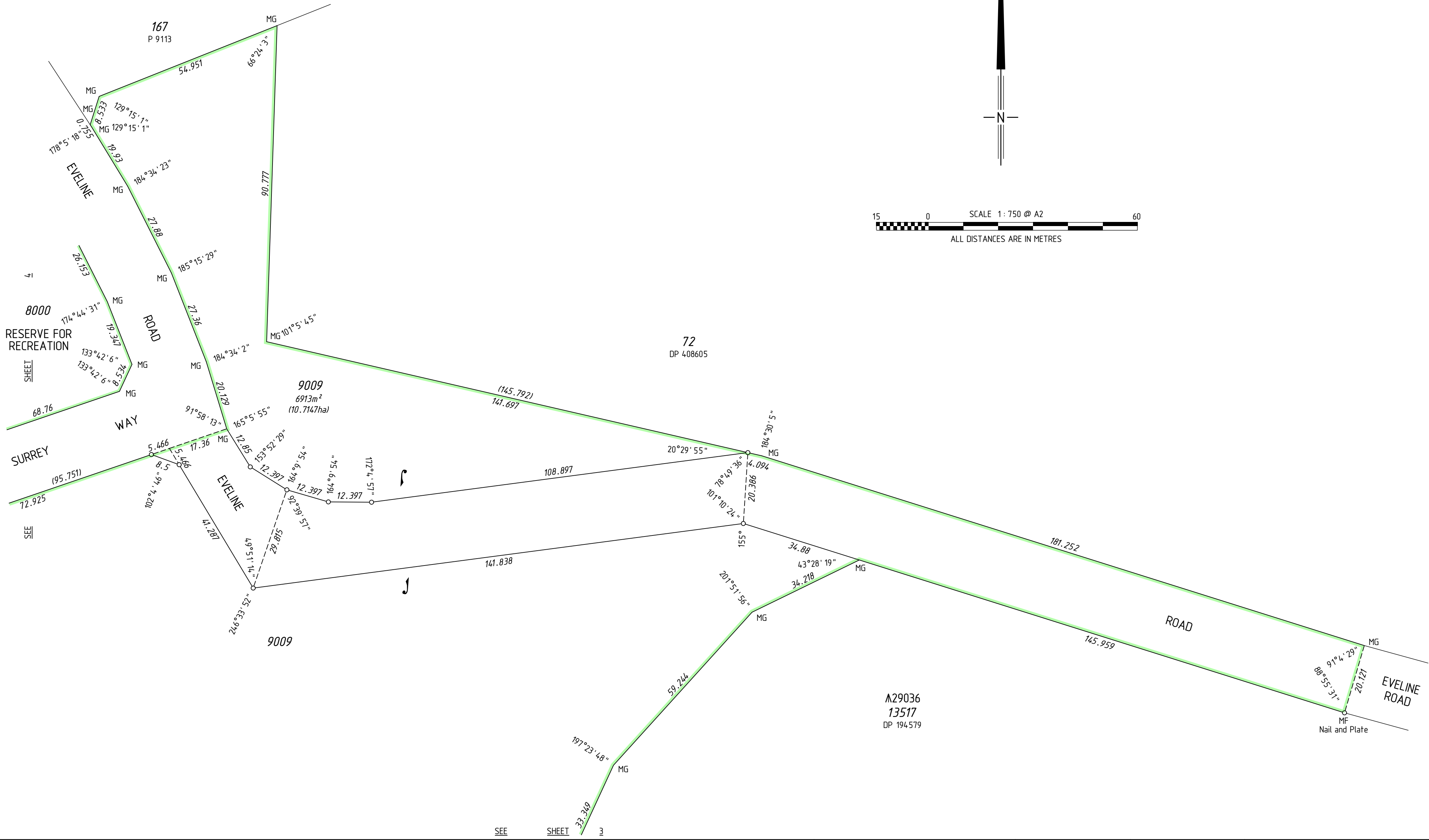






SCALE 1:600 @ A2  
ALL DISTANCES ARE IN METRES

SEE SHEET 3



THIS SURVEY SHEET WILL BE  
REPLACED BY THE SURVEY DATA



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DEPOSITED PLAN

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