

ePlanning

Application Summary

Basic Information

Proposed Use	Construction of a machinery storage shed 18M x 32M x 6M in colorbond Monument finish
Current Use	1 x dwelling, another storage shed.
Cost of Works	\$142,758
Site Address	65 Evans Road Cockatoo 3781

Covenant Disclaimer

Does the proposal breach, in any way, an encumbrance on title such as restrictive covenant, section 173 agreement or other obligation such as an easement or building envelope?	Yes, one or more encumbrances are breached
This proposal must include all details of request to change restrictive covenant, section 173 or other obligation to be considered.	

Contacts

Туре	Name	Address	Contact Details
Applicant	Action Steel	20-24 Playford St, Stawell VIC 3380	
Preferred Contact	Action Steel	20-24 Playford St, Stawell VIC 3380	

Fees

Regulation Fee Condition			Modifier	Payable
9 - Class 12	More than \$100,000 but not more than \$1,000,000	\$1,661.60	100%	\$1,661.60

Total \$1,661.60



Civic Centre 20 Siding Avenue, Officer, Victoria

Council's Operations Centre (Depot) Purton Road, Pakenham, Victoria Postal Address Cardinia Shire Council P.O. Box 7, Pakenham VC, 3810

Email: mail@cardinia.vic.gov.au

Monday to Friday 8.30am-

5pm

Phone: 1300 787 624 After Hours: 1300 787 624 Fax: 03 5941 3784

Documents Uploaded

Date	Туре	Filename
21-02-2024	A Copy of Title	Copy of title.pdf
21-02-2024	Encumbrance	00719113750042024022105220001.pdf
21-02-2024	Encumbrance	00719113750052024022105220001.pdf
21-02-2024	Encumbrance	00719113750062024022105220001.pdf
21-02-2024	Encumbrance	00719113750072024022105220001.pdf
21-02-2024	Site plans	Site Plan - Matt Wong.pdf
21-02-2024	A proposed floor plan	ASI-2547 Matt Wong - Floorplan A01.pdf
21-02-2024	Proposed elevation plan	ASI-2547 Matt Wong.pdf
21-02-2024	Additional Document	Copy of Plan.pdf

	Remember it is against the law to provide false or misleading information, which could result in a heavy fine and cancellation of the permit	
Dec	laration	



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Fax: 03 5941 3784



Request to amend a current planning permit application

This form is used to request an amendment to an application for a planning permit that has already been lodged with Council, but which has not yet been decided. This form can be used for amendments made before any notice of the application is given (pursuant to sections 50 / 50A of the *Planning and Environment Act* 1987) or after notice is given (section 57A of the Act).

PERMIT APPLICATION DI	ETAILS			,	
Application No.:	T240072				
Address of the Land:	65 Eva	ns Rd, Cockatoo VIC			
APPLICANT DETAILS					
Name:					
Organisation:	Action 9	Steel Industries			
Address:	20-24 F	Playford St Stawell			
Phone:					
Email:					
AMENDMENT TYPE					
Under which section of th	e Act is this	amendment being made?	(select one))	
Section 50 – Amendment to application at request of applicant before notice:					
Section 50A - Amendment to application at request of responsible authority before notice:					
Section 57A – Amendment to application after notice is given:					
AMENDMENT DETAILS					
What is being amended? (select all th	nat apply)			
What is being applied for		Plans / other documents		Applicant / owner deta	ails
Land affected Other					
Describe the changes. If you need more space, please attach a separate page.					
Trigger for the use of	f the land	d as agricultural land			
UPDATED SITE PLAN.					
*					
		-			

Specify the estimated cost of any development for which the permit is required:				
Not applicable	Unchanged 🗸	New amount \$		

DECLARATION

I declare that all the information in this request is true and correct and the owner (if not myself) has been notified of this request to amend the application.				
Name:				
Signature:				
Date:	04.04.2024			

LODGEMENT

Please submit this form, including all amended plans/documents, to mail@cardinia.vic.gov.au

You can also make amendments to your application via the Cardinia ePlanning Portal at https://eplanning.cardinia.vic.gov.au/

If you have any questions or need help to complete this form, please contact Council's Statutory Planning team on 1300 787 624.

IMPORTANT INFORMATION

It is strongly recommended that before submitting this form, you discuss the proposed amendment with the Council planning officer processing the application.

Please give full details of the nature of the proposed amendments and clearly highlight any changes to plans (where applicable). If you do not provide sufficient details or a full description of all the amendments proposed, the application may be delayed.

No application fee for s50/s50A requests unless the amendment results in changes to the relevant class of permit fee or introduces new classes of permit fees. The fee for a s57A request is 40% of the relevant class of permit fee, plus any other fees if the amendment results in changes to the relevant class (or classes) of permit fee or introduces new classes of permit fees. Refer to the *Planning and Environment (Fees) Regulations 2016* for more information.

The amendment may result in a request for more under section 54 of the Act and/or the application requiring notification (or re-notification). The costs associated with notification must be covered by the applicant.

Council may refuse to amend the application if it considers that the amendment is so substantial that a new application for a permit should be made.

Any material submitted with this request, including plans and personal information, will be made available for public viewing, including electronically, and copies may be made for interested parties for the purpose of enabling consideration and review as part of a planning process under the *Planning and Environment Act* 1987.



Request to amend a current planning permit application

This form is used to request an amendment to an application for a planning permit that has already been lodged with Council, but which has not yet been decided. This form can be used for amendments made before any notice of the application is given (pursuant to sections 50 / 50A of the *Planning and Environment Act 1987*) or after notice is given (section 57A of the Act).

Environment Act 1987) or after notice is given (section 57A of the Act).					
PERMIT APPLICATION D	T24007	2			
Application No.:	0.0000000000000000000000000000000000000				
Address of the Land:	65 Evar	ns Rd Cockatoo VIC			
APPLICANT DETAILS					
Name:					
Organisation:	Action S	Steel Industries			
Address:	20-24 F	layford St Stawell			
Phone:					
Email:					
AMENDMENT TYPE					
Under which section of th	ne Act is this	amendment being made?	(select one	e)	
Section 50 - Amendmen	t to applicat	ion at request of applicant	before not	ice:	
Section 50A - Amendmen	nt to applica	tion at request of responsib	ole authorit	y before notice:	✓
Section 57A – Amendment to application after notice is given:					
AMENDMENT DETAILS					
What is being amended? (select all that apply)					
What is being applied for Plans / other documents Applicant / owner details					ails
Land affected		Other			
Describe the changes. If you need more space, please attach a separate page.					
Based off options provided by Cardinia Shire on 10/05/2024 we have selected option 2.					
		client 31.05.2024 de been used for agricu			
		attached). Documents			

historic spray diary, aerial imagery, Photos, aerial and property sale documents.

Specify the estimated cost of any development for which the permit is required:				
Not applicable	Unchanged 🗸	New amount \$		

DECLARATION

I declare that all the information in this request is true and correct and the owner (if not myself) has been notified of this request to amend the application.

Name:		
Signature:		
Date:	4.6.2024	

LODGEMENT

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Cardinia Shire Council 2



▼ Covernment

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REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 1 of 2

VOLUME 10471 FOLIO 841

Security no : 124111379346W Produced 18/12/2023 02:57 PM

LAND DESCRIPTION

Lot 2 on Plan of Subdivision 428147H. PARENT TITLE Volume 09278 Folio 038 Created by instrument PS428147H 07/10/1999

REGISTERED PROPRIETOR



ENCUMBRANCES, CAVEATS AND NOTICES



DIAGRAM LOCATION

SEE PS428147H FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL								
		-END (OF RE	GISTER	SEARCH	STA'	TEMENT-	
Additional	information:	(not	part	of the	e Regist	ter :	Search	Statement)

Title 10471/841 Page 1 of 2



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REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 2 of 2

Street Address: 65 EVANS ROAD COCKATOO VIC 3781

ADMINISTRATIVE NOTICES

NIL

eCT Control 20065F Effective from 10/07/2023

DOCUMENT END

Title 10471/841 Page 2 of 2

Imaged Document Cover Sheet

The document following this cover sheet is an imaged document supplied by LANDATA®, Secure Electronic Registries Victoria.

Document Type	Plan
Document Identification	PS428147H
Number of Pages	2
(excluding this cover sheet)	
Document Assembled	18/12/2023 14:57

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The document is invalid if this cover sheet is removed or altered.

	PL#	AN OF SU	BDIVIS	ION	STAGE N	10.		SE ONL'	1 7		N NUMBER 3428147 H
	LOCA	TION OF LA	ND				NCIL (ERTIF	ICATIO	N AN	ID ENDORSEMENT
LOCATION OF LAND PARISH: Gambrook TOWNSHIP: — SECTION: — CROWN ALLOTMENT: 122A (Part) CROWN PORTION: — LTO BASE RECORD: Parish Plan 5h2 (2645) TITLE REFERENCES: Val. 9278 Fol. 038 LAST PLAN REFERENCE/S: LP 89551 Lat 1 POSTAL ADDRESS: 115 Evans Raad (At time of subdivision) Cockataa 3781				COUNCIL NAME: CARDINIA SHIRE CONCIL REF. 599/089 1. This plan is certified under Section 6 of the Subdivision Act 1988. 2. This plan is cartified under Section 11(7) of the Subdivision Act 1988. 3. This is a statement of compliance issued under Section 21 of the Subdivision Act 1988. OPEN SPACE (i) A requirement for public open space under Section 18 of the Subdivision Act 1988 has/has not been made. (iii) The requirement is to be satisfied. (iii) The requirement is to be satisfied in Stage							
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	Lat 2 is not the subject of this survey. SURVEY THIS PLAN IS/IS NOT BASED ON SURVEY THIS SURVEY HAS BEEN CONNECTED TO PERMANENT MARKS NO.(S) 6 IN PROCLAIMED SURVEY AREA NO.										
LEGEND	A - Appurter	nant Easement	EASEMENT E - Encur	mbering Ea	RMATION sement	R - E	Encumbe	ering Eas	ement (Ro	ad)	LTO USE ONLY STATEMENT OF COMPLIANCE/
Easement Reference	Purp	cose L	Width (Metres)	Orig This 1		Lo		nefited/in F	Favour Of		DATE 6 19199 LTO USE ONLY PLAN REGISTERED TIME 12-30 (PM) DATE 7 1 10 1 9 9
P.U. DOX 4401			O SURVEYOR RE C 2202			D/	BELILI VE /	S	Assistant Registrar of Titles SHEET 1 OF 2 SHEETS DATE / / COUNCIL DELEGATE SIGNATURE ORIGINAL SHEET SIZE A3		

Delivered by LANDATA®, timestamp 18/12/2023 14:57 Page 1 of 2



Electronic Instrument Statement

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Produced 21/02/2024 04:22:30 PM

Status Registered Dealing Number AX600146E

Date and Time Lodged 22/12/2023 11:07:41 AM

Lodger Details

Lodger Code

Name

Address

Lodger Box

Phone

Email

Reference

232988

CAVEAT

Jurisdiction VICTORIA

Privacy Collection Statement

The information in this form is collected under statutory authority and used for the purpose of maintaining publicly searchable registers and indexes.

Land Title Reference

10471/841

Caveator

Given Name(s) Family Name

Given Name(s) Family Name



Grounds of claim

Declaration of Trust with the following Parties and Date.

Parties

The Registered Proprietor(s)

Date

06/07/2023

Estate or Interest claimed

Freehold Estate

Prohibition

Unless I/we consent in writing





Electronic Instrument Statement

Name and Address for Service of Notice

JT Lawyers

Address

Floor Type LEVEL
Floor Number M
Street Number 225
Street Name BOURKE
Street Type STREET
Locality MELBOURNE

State VIC Postcode 3000

The caveator claims the estate or interest specified in the land described on the grounds set out. This caveat forbids the registration of any instrument affecting the estate or interest to the extent specified.

Execution

- 1. The Certifier has taken reasonable steps to verify the identity of the caveator or his, her or its administrator or attorney.
- 2. The Certifier has retained the evidence supporting this Registry Instrument or Document.

The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant law and any Prescribed Requirement.

File Notes:

NIL

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Statement End.





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Produced 21/02/2024 04:22:27 PM

Status Registered Dealing Number AX600151M

Date and Time Lodged 22/12/2023 11:08:11 AM

Lodger Details

Lodger Code Name

Address Lodger Box

Phone Email

Reference

232988

CAVEAT

Jurisdiction VICTORIA

Privacy Collection Statement

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Land Title Reference

10471/841

Caveator

Name

ACN

Grounds of claim

Declaration of Trust with the following Parties and Date.

Parties

The Registered Proprietor(s)

Date

06/07/2023

Estate or Interest claimed

Freehold Estate

Prohibition

Unless I/we consent in writing

Name and Address for Service of Notice

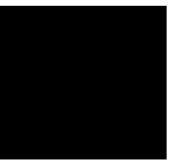




Electronic Instrument Statement

Address

Floor Type
Floor Number
Street Number
Street Name
Street Type
Locality
State



The caveator claims the estate or interest specified in the land described on the grounds set out. This caveat forbids the registration of any instrument affecting the estate or interest to the extent specified.

Execution

Postcode

- 1. The Certifier has taken reasonable steps to verify the identity of the caveator or his, her or its administrator or attorney.
- 2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
- 3. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant law and any Prescribed Requirement.



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Produced 21/02/2024 04:22:27 PM

Status Registered Dealing Number AX029210G

Date and Time Lodged 10/07/2023 01:46:03 PM

Lodger Details

Lodger Code

Name

Address

Lodger Box

Phone

Email

Reference

TRANSFER

Jurisdiction VICTORIA

Privacy Collection Statement

The information in this form is collected under statutory authority and used for the purpose of maintaining publicly searchable registers and indexes.

Land Title Reference

10471/841

Transferor(s)

Given Name(s)

Family Name

Estate and/or Interest being transferred

Fee Simple

Consideration

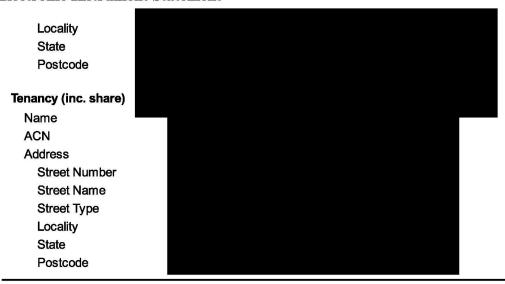
\$AUD 2120000.00







Electronic Instrument Statement



Duty Transaction ID 5748492

The transferor transfers to the transferee their estate and/or interest in the land specified for the consideration, subject to any restrictive covenant set out or referred to in this transfer.

Execution

- 1. The Certifier has taken reasonable steps to verify the identity of the transferor or his, her or its administrator or attorney.
- 2. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
- 3. The Certifier has retained the evidence supporting this Registry Instrument or Document.
- 4. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant law and any Prescribed Requirement.







Electronic Instrument Statement

Execution

- 1. The Certifier has taken reasonable steps to verify the identity of the transferee or his, her or its administrator or attorney.
- The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
- 3. The Certifier has retained the evidence supporting this Registry Instrument or Document.

4. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant law and any Prescribed Requirement

ement

File Notes:

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Statement End.





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Produced 21/02/2024 04:22:27 PM

Status Registered Dealing Number AX110098U

Date and Time Lodged 01/08/2023 07:23:41 PM



CAVEAT

Jurisdiction VICTORIA

Privacy Collection Statement

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Land Title Reference

10471/841

Grounds of slaim

Grounds of claim

Declaration of Trust with the following Parties and Date.

Parties

The Registered Proprietor(s)

Date

06/07/2023

Estate or Interest claimed

Freehold Estate

Prohibition

Unless I/we consent in writing







Electronic Instrument Statement



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Execution

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- 2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
- 3. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant law and any Prescribed Requirement.



File Notes:

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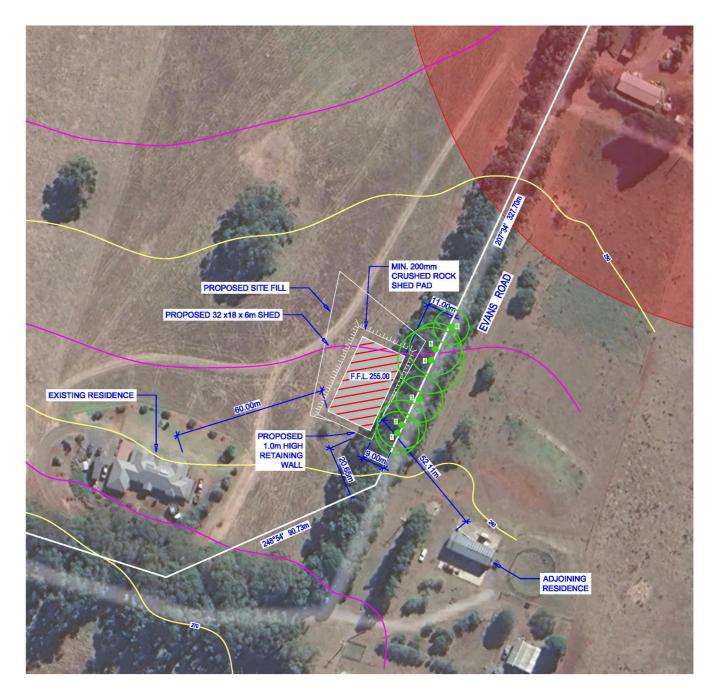
Statement End.



PROPOSED 32.0 x 18.0 x 6.0m SHED FOR







PART SITE PLAN 1:1500

SITE PLAN 1:5000



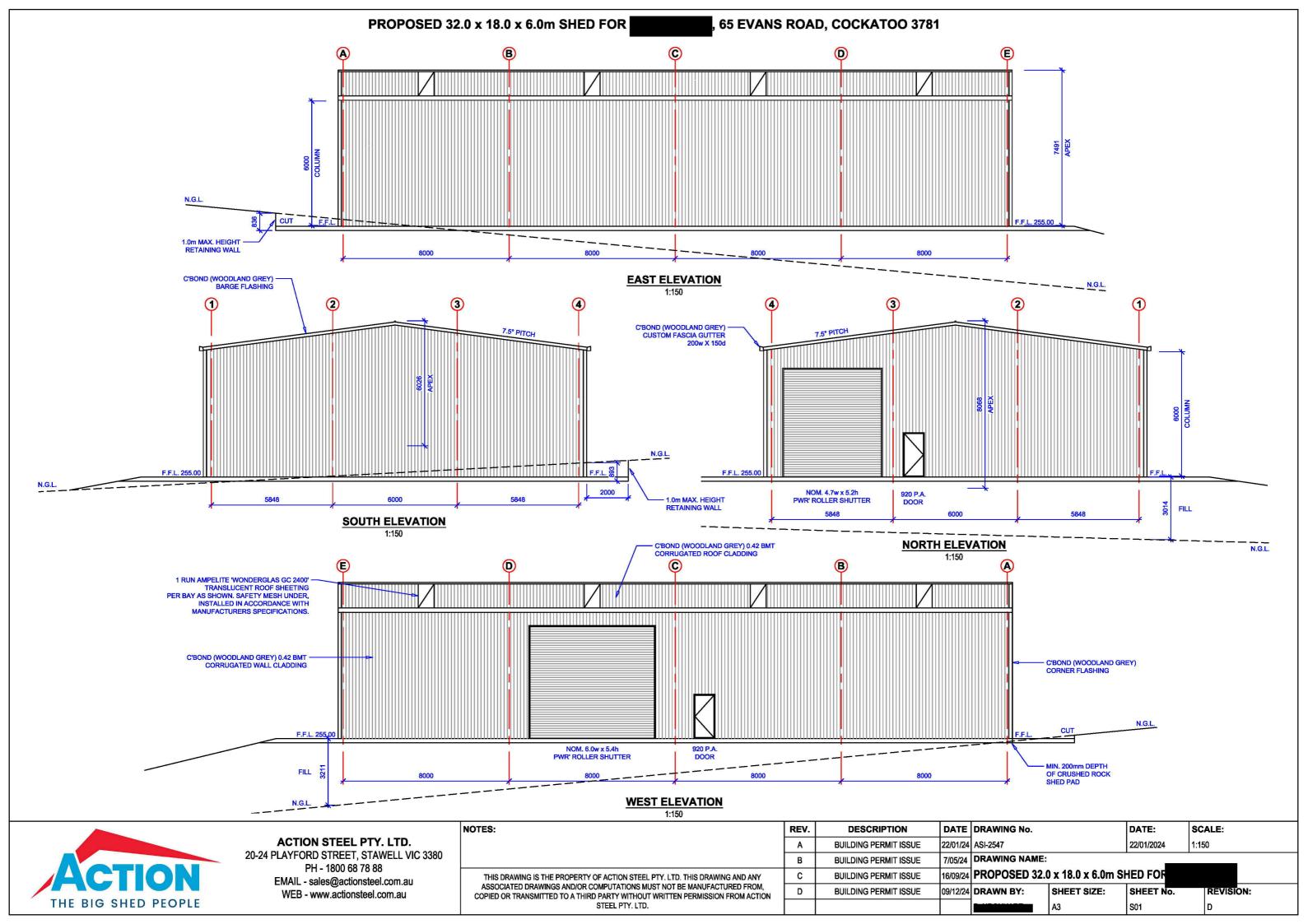
ACTION STEEL PTY. LTD.

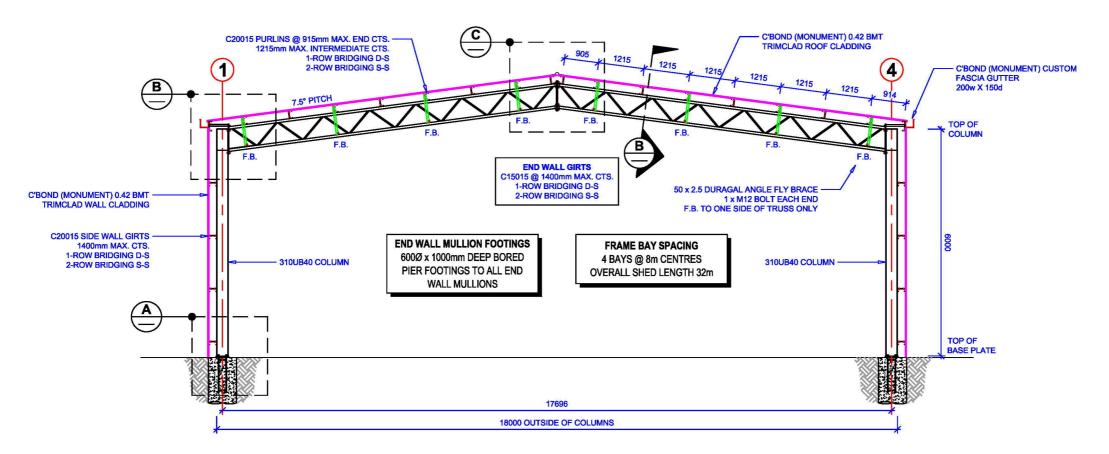
20-24 PLAYFORD STREET, STAWELL VIC 3380
PH - 1800 68 78 88
EMAIL - sales@actionsteel.com.au
WEB - www.actionsteel.com.au

0	
	THIS DRAWING IS THE PROPERTY
	ASSOCIATED DRAWINGS AND/OR (
	COPIED OR TRANSMITTED TO A THIR

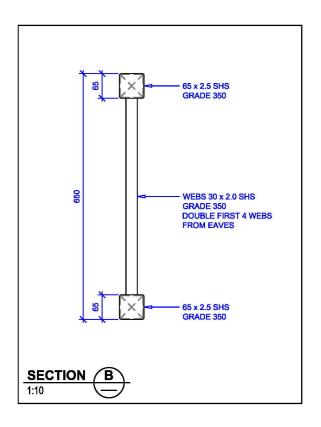
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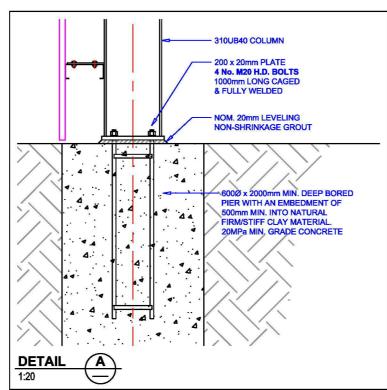
	REV.	DESCRIPTION	DATE	DRAWING No.		DATE:	SCALE:	
	Α	BUILDING PERMIT ISSUE	22/01/24	ASI-2547		22/01/2024	1:5000, 1:1500	
	В	BUILDING PERMIT ISSUE	16/09/24	DRAWING NAME:				
DRAWING IS THE PROPERTY OF ACTION STEEL PTY. LTD. THIS DRAWING AND ANY	С	BUILDING PERMIT ISSUE	09/12/24	PROPOSED 32.0 x 18.0 x 6.0m SHED FOR				
ICIATED DRAWINGS AND/OR COMPUTATIONS MUST NOT BE MANUFACTURED FROM, OR TRANSMITTED TO A THIRD PARTY WITHOUT WRITTEN PERMISSION FROM ACTION				DRAWN BY:	SHEET SIZE:	SHEET No.	REVISION:	
STEEL PTY. LTD.					A3	A02	c	



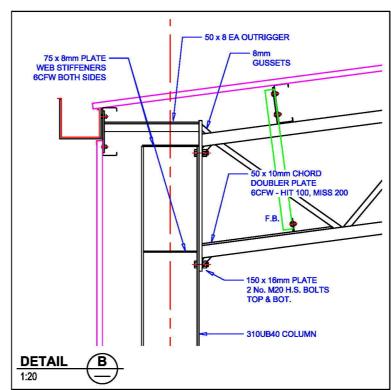


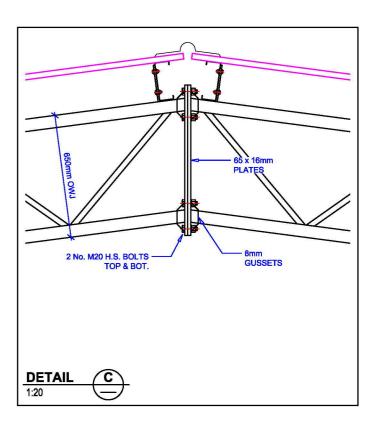






NOTES:







ACTION STEEL PTY. LTD.

-24 PLAYFORD STREET, STAWELL VIC 338

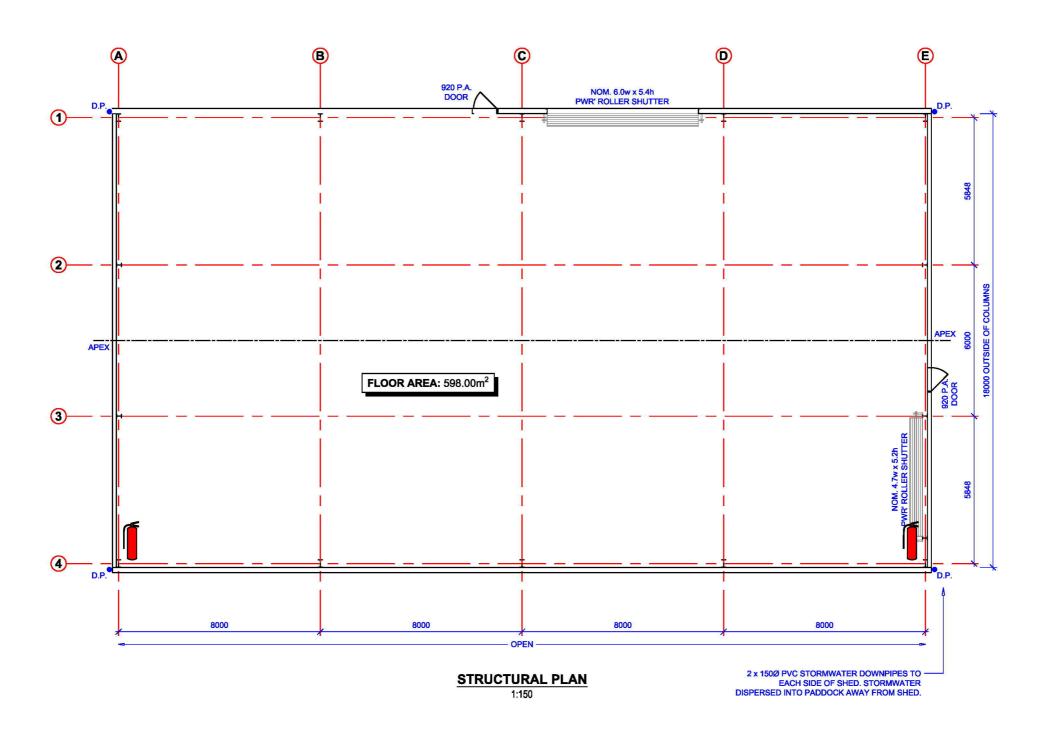
20-24 PLAYFORD STREET, STAWELL VIC 3380 PH - 1800 68 78 88

> EMAIL - sales@actionsteel.com.au WEB - www.actionsteel.com.au

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STEEL PTY. LTD.

REV.	DESCRIPTION	DATE	DRAWING No.		DATE:	SCALE:		
Α	BUILDING PERMIT ISSUE	22/01/24	ASI-2547		22/01/2024	1:100, 1:20, 1:10		
			DRAWING NAME:					
			PROPOSED 32.0 x 18.0 x 6.0m SHED FOR					
			DRAWN BY:	SHEET SIZE:	SHEET No.	REVISION:		
				A3	S02	A		







ACTION STEEL PTY. LTD. 20-24 PLAYFORD STREET, STAWELL VIC 3380 PH - 1800 68 78 88 NOTES:

EMAIL - sales@actionsteel.com.au WEB - www.actionsteel.com.au

ASSOCIATED DRAWINGS	S AND/OR COMPUTATIONS MI	. PTY. LTD. THIS DRAWING AND ANY UST NOT BE MANUFACTURED FROM, I WRITTEN PERMISSION FROM ACTION
	SIEEL PIT. LID.	

REV.	DESCRIPTION	DATE	DRAWING No.		DATE:	SCALE:		
Α	BUILDING PERMIT ISSUE	22/01/24	ASI-2547		22/01/2024	1:150		
			DRAWING NAME:					
			PROPOSED 32.0 x 18.0 x 6.0m SHED FOR					
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ARBORICULTURAL IMPACT ASSESSMENT

SITE ADDRESS:

65 Evans Road, Cockatoo, Vic. 3781

REPORT DATE:

16 December 2024

TREETEC REFERENCE:

evan1024to_AIA.V2

PREPARED FOR-

PREPARED BY:

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	DOCUMENT SUMMARY							
STAGE	REPORT REF	PURPOSE	VERSION	DATE				
	even1024to_SD	Summary document	1	29/10/2024				
1	even1024to_AIA.V2	Impact assessment	2	16/12/2024				



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1 Introduction

1.1 Purpose

Treetec have been engaged to assess the tree population in the vicinity of a proposed shed build at, 65 Evans Road, Cockatoo (the site).

In accordance with AS4970-2009 *Protection of trees on development sites* (section 2.3.5), the purpose of this report is to identify and assess development related impacts relating to assessed trees, and to provide a summary of the assessment findings.

1.2 Background

The proposed works involve construction of a 32m x 18m shed, including cut/fill works to level the site and the installation of all associated infrastructure.

An initial assessment of the site was undertaken by Treetec on 25 October 2024 and preliminary tree data supplied in a summary document (Treetec reference evan1024to_SD) to assist with the siting of the shed.

1.3 Scope

- Based on the current proposal, determine which trees may be impacted by the proposed works
- Provide details on the subject trees including their species, amenity value, condition and dimensions
- Assess the impact the proposed works are likely to have on the subject trees
- Comment on measures likely to be required to enable the protection of subject trees proposed to be retained.

1.4 Method

- Tom Oldmeadow undertook an arboricultural assessment on 25 October 2024
- All observations were taken at ground level, using stage 1 of the Visual Tree Assessment (VTA) method (Mattheck and Breloer 1994)
- Data collected has been categorised in line with definitions found in Appendix 7.2-Glossary.

1.5 Limitations

- Root assessment requiring excavation was not undertaken. Therefore, root condition has not been included unless above ground signs, such as soil heaving or cracking were observed
- Aerial examination (tree climbing) was not undertaken
- Tree height and canopy width were estimated
- There are numerous trees within the road reserve adjacent to the proposed shed. Only trees with TPZs extending into the site and with the potential to be impacted were detailed.

For the full list of assumptions and limitations for this report please refer to Appendix 7.1

1.6 Documents viewed

Site plans. Drawing number- ASI-2547. Dated- 09/12/2024. Prepared by- Action Steel Pty. Ltd.



1.7 Planning scheme and applicable overlays

The site is covered by the Cardinia Planning Scheme and is zoned Rural Conservation Zone – Schedule 1 (RCZ1).

Local law

The Local Law no. 17 applies to the subject trees adjacent to the site.

Relevant planning overlays

- Environmental Significance Overlay Schedule 1 (ESO1)
- Bushfire Management Overlay (BMO)

The overlay does not cover the entire site and does not cover the area of the proposed shed and associated works.

2 Findings

2.1 Site summary

The proposed shed is to be situated in the southeast corner of the property; currently an open paddock.

The only trees in the vicinity are within the adjacent road reserve of Evans Road to the east.

The tree population within the road reserve is comprised of semi-mature to mature Messmate Stringybark (*Eucalyptus obliqua*); an indigenous species that forms a dense vegetated corridor along Evans Road.

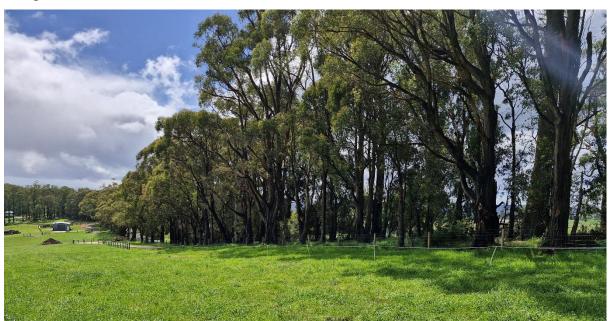


Plate 1 - Panoramic view of the shed siting area.

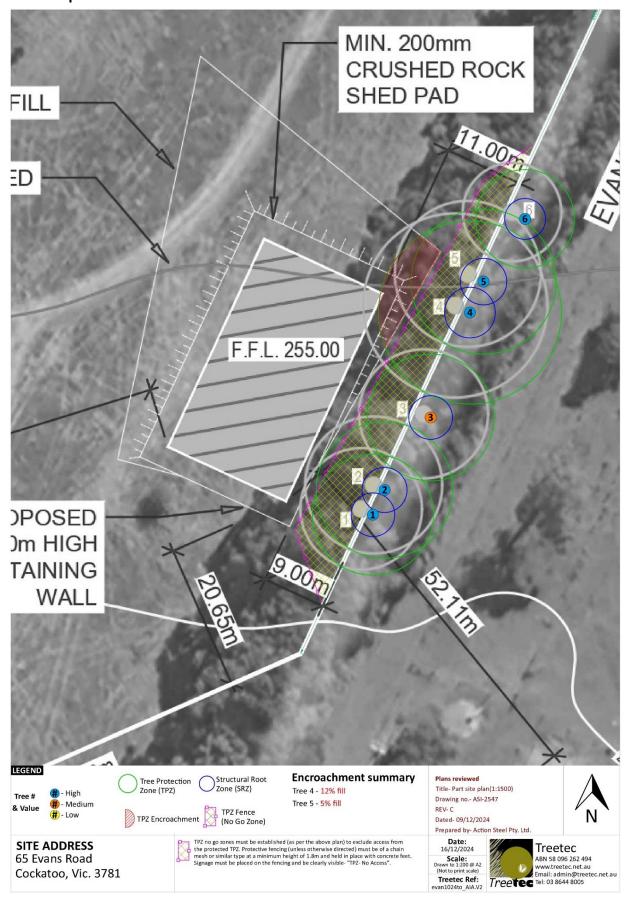
2.2 Tree locations

Tree positions were captured during the site assessment using an Arrow 100 Differential GNSS unit, which were then provided and plotted on the siting plans. The unit generally provides submeter accuracy, however, inaccuracies were noted (potentially due to the dense canopy cover) with some trees appearing to be within the subject site.

Tree location used on the plan within this report were adjusted to match the onsite measurements of trunk centre to boundary fence, taken during the site assessment.



2.3 Site plan





2.4 Tree data

Recommendations

Tree # 1 Species			
Common name Messmate Stringybark Type Indigenous DBH (cm) 72 Height (m) 20 Spread (m) 9 Structure Good Health Good Age Semi-mature Amenity value High ULE (yrs) >40 TPZ (m) 8.6 SRZ (m) 3.1 Notes 1m from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	Tree #	1	
Type Indigenous DBH (cm) 72 Height (m) 20 Spread (m) 9 Structure Good Health Good Age Semi-mature Amenity value High ULE (yrs) >40 TPZ (m) 8.6 SRZ (m) 3.1 Notes Im from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	Species	Eucalyptus obliqua	
DBH (cm) 72 Height (m) 20 Spread (m) 9 Structure Good Health Good Age Semi-mature Amenity value High ULE (yrs) >40 TPZ (m) 8.6 SRZ (m) 3.1 Notes Im from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	Common name	Messmate Stringybark	A A A Will be a second
Height (m) 20 Spread (m) 9 Structure Good Health Good Age Semi-mature Amenity value High ULE (yrs) >40 TPZ (m) 8.6 SRZ (m) 3.1 Notes 1m from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	Туре	Indigenous	
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Structure Good Health Good Age Semi-mature Amenity value High ULE (yrs) >40 TPZ (m) 8.6 SRZ (m) 3.1 Notes 1m from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	Height (m)	20	
Health Good Age Semi-mature Amenity value High ULE (yrs) >40 TPZ (m) 8.6 SRZ (m) 3.1 Notes 1m from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	Spread (m)	9	
Age Semi-mature Amenity value High ULE (yrs) >40 TPZ (m) 8.6 SRZ (m) 3.1 Notes 1m from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	Structure	Good	
Amenity value High ULE (yrs) >40 TPZ (m) 8.6 SRZ (m) 3.1 Notes 1m from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	Health	Good	
TPZ (m) 8.6 SRZ (m) 3.1 Notes 1m from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	Age	Semi-mature	
TPZ (m) 8.6 SRZ (m) 3.1 Notes 1m from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	Amenity value	High	
SRZ (m) 3.1 Notes 1m from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	ULE (yrs)	>40	
Notes 1m from subject site boundary. Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	TPZ (m)	8.6	
Impact assessment Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	SRZ (m)	3.1	
	Notes	1m from subject site boundary.	
Recommendations Erect fencing to protect root zone from development related impacts.	Impact assessment	Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	
	Recommendations	Erect fencing to protect root zone from development related impacts.	

Tree #	2	Section 1985
Species	Eucalyptus obliqua	
Common name	Messmate Stringybark	
Туре	Indigenous	
DBH (cm)	81	
Height (m)	18	
Spread (m)	8	
Structure	Good	
Health	Good	
Age	Semi-mature	
Amenity value	High	
ULE (yrs)	>40	Taka I
TPZ (m)	9.7	
SRZ (m)	3.2	100 mm 10
Notes	1m from subject site boundary.	
Impact assessment	Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	



 $\label{lem:continuous} \mbox{Erect fencing to protect root zone from development related impacts}.$



Tree #	3	
Species	Eucalyptus obliqua	
Common name	Messmate Stringybark	
Туре	Indigenous	
DBH (cm)	75	
Height (m)	17	
Spread (m)	8	
Structure	Fair	
Health	Good	
Age	Semi-mature	
Amenity value	Medium	
ULE (yrs)	>40	
TPZ (m)	9.0	
SRZ (m)	3.1	
Notes	2.6m from subject site boundary.	
Impact assessment	Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	
Recommendations	Erect fencing to protect root zone from develop	oment related impacts.
Tree #	4	11 mm
Species	Eucalyptus obliqua	



Tree #	4	
Species	Eucalyptus obliqua	
Common name	Messmate Stringybark	
Туре	Indigenous	
DBH (cm)	108	
Height (m)	22	
Spread (m)	16	
Structure	Good	
Health	Good	
Age	Mature	
Amenity value	High	
ULE (yrs)	>40	
TPZ (m)	13.0	
SRZ (m)	3.6	
Notes	1.4m from boundary. Lower branches lopped at fend	

Impact assessment

Recommendations



Limit compaction of fill to the building platform and do not compact batter within TPZ.



		THO ESSO WE THE SERVICE
Tree #	5	
Species	Eucalyptus obliqua	
Common name	Messmate Stringybark	
Туре	Indigenous	
DBH (cm)	86	
Height (m)	20	
Spread (m)	14	
Structure	Fair	
Health	Good	
Age	Semi-mature	
Amenity value	High	
ULE (yrs)	>40	
TPZ (m)	10.3	美国中国国际
SRZ (m)	3.3	The second secon
Notes	1.3m from site boundary. Codominant stems from base. Branched lopped at fence line.	
Impact assessment	Low. Proposed fill will result in a 5% TPZ encroachment. No below ground disturbance within TPZ and most of the encroachment is batter fill. Long term viability is not expected to be comprised.	

Erect fencing to protect root zone from development related impacts.

Limit compaction of fill to the building platform and do not compact batter within TPZ.



Tree #	6	
Species	Eucalyptus obliqua	
Common name	Messmate Stringybark	Congress of the Congress of th
Туре	Indigenous	
DBH (cm)	58	
Height (m)	18	MAN SINGER
Spread (m)	6	A A MAX
Structure	Good	A A A A
Health	Good	
Age	Semi-mature	
Amenity value	High	
ULE (yrs)	>40	
TPZ (m)	7.0	
SRZ (m)	2.9	A STATE OF THE STA
Notes	1.4m from boundary. Branches lopped to fence line.	
Impact assessment	Low. Proposed works are outside of the TPZ. Adverse impacts are unlikely.	

Recommendations

Recommendations



Erect fencing to protect root zone from development related impacts.



3 Discussion

3.1 Encroachment / Impacts on trees

Proposed works are within the TPZs of Trees 4 and 5.

Fill within TPZs

The proposed site cut will result in fill within the TPZs of Trees 4 and 5 with calculated encroachments of 12% and 5% respectively. These are considered a major encroachment for Tree 4 and minor for Tree 5 in accordance with AS 4970-2009 *Protection of trees on development sites*.

Works are expected to remain above grade within the encroachment area and not result in direct root damage during construction. The majority of this fill area is batter to support the levelled site and of limited fill depth.

This fill footprint will ultimately provide conditions less conducive to root productivity, but without direct root damage it is expected that the trees will be able to adapt to the change in conditions without impacting their Useful Life Expectancies.

Minimising the degree of compaction of the fill placed within TPZs wherever possible will reduce the associated adverse impacts.

3.2 Construction related activities

All six subject trees have calculated TPZs that extend into the site in proximity to planned works. The root zones of these trees may be impacted by construction related activities including, compaction from vehicle parking, positioning of plant or the storage of materials, etc.

Adequate tree protection fencing will be important in preventing these impacts during construction.

3.3 Underground services

Proposed underground services are not detailed on plans provided. The installation of these, if required, may impact trees if excavation is undertaken on the east side of the shed below natural grade.

Routing services outside TPZs or installing them using non-destructive methods will be required to avoid potential impacts.



4 Conclusion

The arboricultural assessment undertaken at 65 Evans Road, Cockatoo comprised six (6) trees, all growing within the Roade reserve of Evans Road to the east.

Specific impacts on the assessed trees are summarised below.

- Fill from the proposed site cut will result in major encroachments into the TPZ of Tree 4 and a minor encroachment into the TPZ of Tree 5.
 - Most of this encroachment area will be batter for the levelled site, with works remaining above grade.
 - Adverse impacts to both trees are expected to be minimal and not compromise the long-term viability of either tree.
- All six subject trees have calculated TPZs that extend into the site in proximity to planned works. The root zones of these trees may be impacted by construction related activities if adequate tree protection is not implemented.
- Below ground service/utility locations are not shown or accurately detailed on site plans, therefore, assessed impacts may be greater if trenching occurs within TPZs of retained trees.

No other trees are expected to be impacted by the proposed works.

5 Recommendations

Tree protection fencing – Erect fencing to protect the root zones of all trees from development related impacts (see site plan). Fencing should consist of chain wire mesh panels held in place with concrete feet, or similar, in accordance with AS 4970-2009 *Protection of trees on development sites*.

The fencing should encompass as much of the TPZ areas within the bounds of the subject site as possible whilst allowing sufficient room to complete works.

Fill within TPZs – Limit compaction of fill to the building platform and do not compact batter within TPZs.

Underground services/utilities – Ensure underground installations are routed outside of TPZs. If they must pass through a TPZ, utilise low impact methods for the installation, such as;

- horizontal boring at a depth greater than 700mm
- hydro excavation under arborist supervision, ensuring significant roots (to be determined by the arborist) are retained and protected from damage.

General - Design of any landscaping should be cognisant of root protection. Do not excavate within the nominated tree protection zones of retained trees including those trees on neighbouring properties unless permitted by the responsible authority.



6 References

Department of Transport and Planning. VicPlan, Accessed - December 24, Available at: https://mapshare.vic.gov.au/vicplan/

Mattheck, C. and Breloer, H. (1994), *The Body Language of Trees: A Handbook for Failure Analysis*, London: HMSO.

Brooker, M.I.H. & Kleining, D.A., (2006), *Field Guide to Eucalypts*, 3rd ed., Vol. 1 – South-eastern Australia, Melbourne, Australia: Bloomings Books.

ProofSafe Tree Protection Zone encroachment calculator, available online at: https://proofsafe.com.au/tpz_incursion_calculator.html

Standards Australia (2009), AS 4970-2009 Protection of trees on development sites

7 Appendix

7.1 Assumptions & Limitations

- 1. **Treetec** does not assume responsibility for legal matters, and assumes that legal descriptions, titles and ownerships are correct and good.
- 2. **Treetec** assumes that any property or project is not in violation of any applicable codes, ordinances, statutes or other government regulations.
- 3. **Treetec** takes all reasonable care to ensure all referenced material is accurate and quoted in correct context but does not take responsibility for information quoted or supplied.
- 4. **Treetec** shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including the payment of an additional fee for such services.
- 5. Loss or alteration of any part of this report invalidates the entire report.
- 6. Possession of this report, or a copy thereof, does not imply right of publication or use for any purpose by anyone but the person to whom it is addressed, without the prior written consent of *Treetec*.
- 7. All, or any part of the contents of this report, or any copy thereof, shall not be used for any purpose by anyone but the person to whom it is addressed, without the written consent of *Treetec*.
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- This report and any values expressed herein represent the opinion of *Treetec* and *Treetec's* fee is in no way
 contingent upon the reporting of a specified value, the occurrence of a subsequent event, nor upon any
 finding to be reported.
- 10. Site plans, diagrams, graphs and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
- 11. Information in this report covers only those items that were examined in accordance with the Terms of Reference, and reflects the condition of those items that were examined at the time of the inspection.
- 12. Inspections are limited to visual examination of accessible components unless otherwise stated in the "Method of Inspection".
- 13. There is no warranty or guarantee, expressed or implied, that the problems or deficiencies of the plants or property in question may not arise in the future.
- 14. Due to the dynamic nature of trees and development there can be no guarantee that the Useful Life Expectancy (ULE) of the subject tree/s won't be adversely impacted.



7.2 Glossary

.2 Glossary			
AGE CATEGORY	The age of th	e tree is represented as Juvenile, Semi-mature, Mature or Senescent.	
	Juvenile:	A young tree, given normal environmental conditions for that tree it will not yet flower or fruit.	
	Semi- mature:	Able to reproduce but not yet nearly the size of a mature specimen in that location.	
	Mature:	Has reached or nearly reached full size and spread for that species in the given location.	
	Senescent:	Health and / or structure is being adversely impacted by the old age of the tree.	
ARBORICULTURAL VALUES	Values assigned to a tree or group of trees to provide an overview of their significance with consideration to a range of factors (see below)		
AMENITY VALUE	contributed (health, struc	summary of the general condition and also the overall significance to the landscape (Visual appeal). Factors include; physical condition ture, form), age, size, and species.	
	High:	Large size, good health and structure, significant in relation to the local landscape, prominent location.	
	Medium:	Moderate size, fair health and/or structure, somewhat significant in relation to the local landscape, prominent location.	
	Low:	Small common species, poor health and structure, insignificant in relation to the local landscape, environmental weed.	
CANOPY SPREAD	Overall size of the canopy as looking from a plan view. Recorded at the widest point.		
CODOMINANT STEMS	Two stems of approximately the same thickness and height originating from the same position in the tree.		
COMMON NAME	A non-scientific name commonly used for that tree.		
CROWN WIDTH	See 'Canopy spread'		
DEAD (AS DEAD)	Cessation of all metabolic processes (or very soon to be)		
DEADWOOD	Deceased abo	ove ground tree parts such as stems or branches.	
	Minor deadwood – less than 40mm diameter		
	<i>Major</i> deadw	ood – greater than 40mm diameter	
DEVELOPMENT	The use of land including; the subdivision of land, erection or demolition of a building or works, the carrying out of a work, road works, the installation of utilities and services, and any other act, matter or thing as defined by the relevant legislation.		
DIAMETER AT	The diameter	of the trunk measured at or near 1.4m above ground level.	
BREAST HEIGHT (DBH)		is more than 1 stem originating below 1.4m the measurement recorded as described in AS 4970-2009.	
DIAMETER ABOVE	The diameter	of the trunk measured above the root buttress.	
ROOT BUTTRESS (DARB)	This measurement is used to calculate the structural root zone (see SRZ).		
HEALTH	growth, prese degree of die	ur as exhibited by the crown density, leaf colour, seasonal extension ence of stress indicators, ability to withstand diseases and pests, and the back. Where a deciduous tree is inspected without foliage and health is d a '?' will be noted.	



	Poor:	Indicating symptoms of extreme stress such as minimal foliage, or extensively damaged leaves from pests and diseases. Death probable if condition of tree deteriorates.	
	Fair:	Some minor deadwood or terminal dieback indicating a stressed condition. Minor leaf damage from pests.	
	Good:	Usual for that species given normal environmental conditions – full canopy with only minor deadwood, normal leaf size and extension growth, minimal pest or disease damage	
HEIGHT	The distance in metres from the ground to the highest point in the crown, calculated in the vertical plane. This measurement unless otherwise specified is an estimation only.		
IMPACT ASSESSMENT	tree group. Ma directly attribu	of adverse impact the proposed works are likely to have on a tree or y be short or long term; usually judged on the likely reduction in ULE stable to the works. Impact usually relates to the level of TPZ but also factors the type of impact. One or more factors may apply.	
	Low:	Proposed works are outside of the TPZ and impacts are likely to be nil. Or, minor damage may occur such as; smaller roots may be damaged or a small area of canopy pruned. Unlikely to significantly impact tree health, form, or ULE.	
	Moderate:	Direct (physical wounding), or indirect (environmental impacts) are possible, root damage may occur, canopy pruning likely, and an occurrence will reduce the ULE.	
	High:	Tree/s likely to be lost in the medium or short term, or adversely impacted so that tree health, and therefore, ULE are significantly reduced, or the tree will become unstable and/or present an unacceptable level of risk.	
	Proposed to be removed:	Trees that are within the footprint of works and proposed to be removed by the client, or are not viable to retain due to the factors listed in the conclusions of this report. Trees proposed for removal are not always required to be removed.	
INCLUDED BARK UNION	A union within a tree that has included bark (bark pressing on bark), these unions are usually poorly attached and more likely to fail as the included bark is equivalent to a split. Often characterized by an acute angle and sometimes forming ribs or flaring immediately below the union where the tree reacts to the weakness by placing secondary growth. Though these unions are weaker than a 'good' union, the risk of failure cannot be		
		a poor union does not automatically justify the removal of the tree.	
LOPPING / TOPPING (includes coppicing)	The removal of parts of a tree giving no consideration to the trees natural defence systems.		
PRUNING	Systematic rem natural defence	noval of branches of a plant whilst giving consideration to the trees e systems.	
STRUCTURAL ROOT ZONE (SRZ)	The area around the base of a tree required for the tree's stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres. This zone considers a tree's structural stability only, this is different from the root zone		
	required for a tree's vigour and long-term viability, which will usually be a much larger area.		
STRUCTURE	Reference to the structural integrity of the tree with consideration of the crown, trunk and roots. Determined using the Visual Tree Assessment (VTA) method (Mattheck and Breloer 1994). The failure of small (<60mm calliper) live or dead limbs is normal and not considered here.		



		PROFESSIONAL TREE SERVICES	
	Very poor:	Clear indications that a significant failure is likely in the near future	
	Poor:	Obvious signs of structural weakness and a failure is likely, one might expect a significant failure event within the next 5 years, possibly tomorrow	
	Fair:	Signs of weakness present though not obviously significant, likely to become worse over time	
	Good:	No obvious signs of structural weakness	
TREE	Long-lived, woody perennial plant with one or relatively few main, self-supporting, stems or trunks. Greater than (or usually greater than) 3m in height (or as defined by the responsible authority).		
TREE NUMBER	Identifying number allocated to individual trees or groups of trees, may be used to locate trees using site plans or tags on trees.		
TREE PROTECTION ZONE (TPZ)	An exclusion area radius measured from the centre of the trunk at ground level that allows for protection of canopy and roots; both the structural roots that give the tree stability and the smaller absorption roots. The radius of the TPZ is normally calculated for each tree by multiplying the DBH \times 12. The minimum distance will be 2m and maximum 15 as stipulated in AS 4970-2009 – Protection of Trees on Development Sites.		
TREETEC REFERENCE	Unique identifier assigned to an individual report by Treetec		
TYPE	Status of the species as it relates to the location.		
	Indigenous:	Naturally occurring to the local area	
	Victorian Native	: Naturally occurring within Victoria	
	Australian Nativ	e: Naturally occurring within Australia	
	Exotic:	Introduced species to Australia	
UNION	The point where a branch or stem is attached to another branch or stem.		
USEFUL LIFE EXPECTANCY (ULE)	Useful Life Expectancy is an estimation of how many years a tree can reasonably be retained in the landscape provided growing conditions do not significantly worsen and any recommended works are completed. It takes into consideration factors such as risk, species, age, health and site conditions. Usually represented as either 0, <5, 5 - 15, 15 - 40, or >40.		
WORKS	Any physical act	ivity in relation to development. See 'development'.	



7.3 General comments

Pruning standards/Lopping

An Australian Standard exists to give guidance on pruning of trees (AS 4373 2007 - Pruning of Amenity Trees).

It is important that all remedial works are carried out by a competent contractor in accordance with the Australian Standard.

Lopping, as defined within the standard, is detrimental to trees and often results in decay and poorly attached epicormic shoots. Natural Target Pruning methods should be used wherever possible when removing sections from trees.

7.4 Impact on trees

Physical/Mechanical damage to trees

Physical damage to tree parts, particularly the trunk, provides entry points for pests and diseases such as fungal infections. This may cause long-term decay and can lead to partial or complete tree failure and death.

Alteration of soil levels

Alteration of soil levels around trees will affect the root zone and stability of a tree as well as tree metabolism. This may result in reduced tree health, excessive deadwood, thinning foliage and poor vigour. It can take years for impacts to become evident, at which time it is usually irreversible.

Works within a TPZ

Works such as site cut and fill, re-grading, installation of underground services, building footings or landscaping have the potential to damage tree roots.

It may be possible to work within a TPZ without significantly impacting a tree, however the size and number of roots in the area, and the specifics of the tree and its resilience to impacts, would all need to be reviewed prior to commencement. Design and construction methods may need alteration to minimise adverse impacts.

Site cut and fill has the potential to physically impact roots and thus should be located to ensure minimal disturbance within the TPZ of retained trees. If a shallow cut is proposed within a TPZ, consider increasing fill to eliminate the cut. If the grade is to be raised, the material should be coarser or more porous than the underlying material. If site cuts must occur, avoid batter cuts and instead design a vertical retaining wall to minimise disturbance.

Installation of underground services should also be routed outside TPZs; if there is no other option, they should be installed using non-destructive methods such as air or hydro excavation, or installed by boring under the TPZ at a depth of at least 700 mm (where practicable). The project arborist should assess the likely impacts of boring (including bore pit locations) on retained trees.

Driveways and pathways should not encroach into a TPZ; if encroachment is unavoidable, any hard surfaces should:

- 1) not involve any scraping or excavation most small absorbing roots are within the upper 100mm of soil.
- 2) be constructed of a permeable material and laid on a base and sub-base specifically designed to allow the movement of water through and into the soil below.

If buildings are permitted within a TPZ, foundations should be suspended on piers leaving the ground undisturbed other than the careful placement of pier holes. The bottom of supporting beams should be above existing ground level or, if this is not possible, beams should run radially



away from the tree trunk. There should be no excavation of any description, including piers, within a Structural Root Zone (SRZ).

All works within TPZs must be approved by the responsible authority prior to commencement.

Description of TPZ encroachment

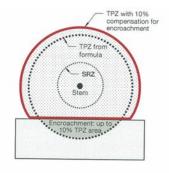
In accordance with *Australian Standard 4970-2009 (Protection of trees on development sites)* encroachment and TPZ variations is determined as per below.

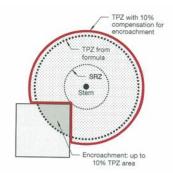
General

It may be possible to encroach into or make variations to the standard TPZ. Encroachment includes excavation, compacted fill and machine trenching.

Minor encroachment

If the proposed encroachment is less than 10% of the area of the TPZ and is outside the SRZ detailed root investigations should not be required. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. Variations must be made by the project arborist considering relevant factors listed in (see standard)...





Major encroachment

If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ, the project arborist must demonstrate that the tree(s) would remain viable. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. This may require root investigation by non-destructive methods and consideration of relevant factors listed in (see standard)...

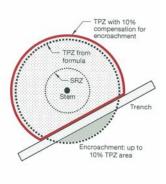
compensation for encroachment

TPZ from formula

SRZ

Stern

Encroachment: up to 10% TPZ area



NOTE: Less than 10% TPZ area and outside SRZ. Any loss of TPZ compensated for elsewhere.

Any additional encroachment that becomes necessary as the site works

progress should be reviewed by the project arborist and be approved by the Responsible Authority before being carried out.

Where the project arborist identifies roots to be pruned within or at the outer edge of the TPZ, they should be pruned with a final cut to undamaged wood. Pruning cuts should be made with sharp tools such as secateurs, pruners, handsaws or chainsaws. Pruning wounds should not be treated with dressings or paints.

It is not acceptable for roots within the TPZ to be severed with machinery such as backhoes or excavators.



7.5 Protection of retained trees

Establishment of Tree Protection Zones

The tree protection zone (TPZ) is the principal means of protecting trees on development sites. Usually fencing will delineate the Tree Protection Zones (TPZ) as defined by AS 4970-2009 Protection of trees on development sites.

Fencing is installed following permitted vegetation removal and pruning, but prior to site establishment. Unless stated otherwise and approved by the responsible authority, fencing should be retained until completion of all construction related activity.

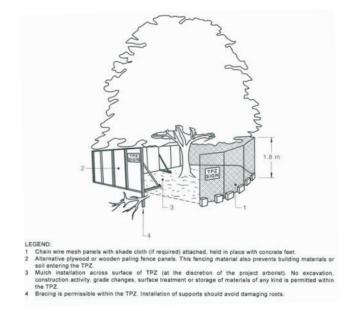
Tree protection zone fencing

The fence must provide high visibility and act as a physical barrier to construction activity. The fence should be adequately signed "Tree Protection Zone — No Access", be sturdy and prevent the entry of heavy equipment, vehicles, workers and the public.

Where feasible, tree protection fencing will consist of chain wire mesh panels held in place with concrete feet. Where chain mesh fencing is impractical to implement, alternate protection measures must be arranged.

Restricted activities within TPZ

A TPZ area may surround a single tree or group, or a patch of vegetation. Activities



Source – AS 4970-2009 Protection of trees on development sites (Tree Protection)

that must NOT be carried out within a TPZ unless permitted by the Responsible Authority include, but are not limited to, the following:

- (a) machine excavation including trenching;
- (b) excavation for silt fencing;
- (c) cultivation;
- (d) storage;
- (e) preparation of chemicals, including preparation of cement products;
- (f) parking of vehicles and plant;
- (g) refuelling;
- (h) dumping of waste;
- (i) wash down and cleaning of equipment;
- (j) placement of fill;
- (k) lighting of fires;
- (I) soil level changes;
- (m) vehicle movement access ways;
- (n) changes of grade;
- (o) temporary or permanent installation of utilities and signs, and
- (p) damage to the tree.



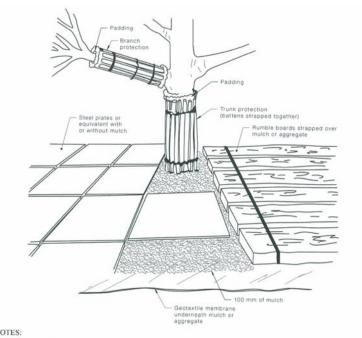
7.6 Alternative protection measures

If temporary access to the TPZ is required, protection for the trunk, branches or ground may be required. The materials and positioning of protection will be specified by the project arborist.

For temporary foot traffic through the TPZ, this may be facilitated using sheets of heavy plywood or similar material; this should not be considered a long term solution.

For machinery access within the TPZ, ground protection should be utilised to prevent root damage and soil compaction. Measures may include a permeable membrane such as geotextile fabric beneath a layer of mulch, or crushed rock below rumble boards or HPDE track mats. These measures may also be applied to root zones beyond the TPZ.

Where roots within the TPZ are exposed during approved works, temporary root protection should be installed to prevent them drying out. This may include jute mesh or hessian sheeting as multiple layers over any exposed roots and the excavated soil profile, extending to the full depth of the root zone. Root protection sheeting should be pegged in place and kept moist at all times.



- NOTES:
- 1 For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.
- 2 Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

Source - AS 4970-2009 Protection of trees on development sites (Ground Protection)