
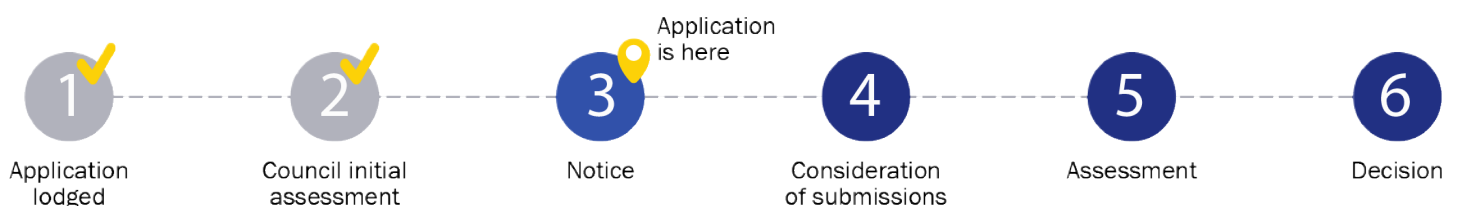


Notice of Application for a Planning Permit

| | |
|--|---|
| The land affected by the application is located at: | L2 PS635148 V11191 F394 14 Doran Road, Bunyip VIC 3815 |
| The application is for a permit to: | Subdivision of Land into Three (3) Lots, Creation of Restrictions and Removal of Vegetation |
| A permit is required under the following clauses of the planning scheme: | |
| 32.03-3 | Subdivide land |
| 42.03-2 | Remove, destroy or lop vegetation |
| 43.02-3 | Subdivide land |
| 52.02 | To proceed under Section 23 of the Subdivision Act 1988 to create a restriction |
| APPLICATION DETAILS | |
| The applicant for the permit is: | Ms Julie Bowyer Nobelius Land Surveyors |
| Application number: | T250376 |
| <p>You may look at the application and any documents that support the application at the office of the Responsible Authority:</p> <p>Cardinia Shire Council, 20 Siding Avenue, Officer 3809.</p> <p>This can be done during office hours and is free of charge.</p> <p>Documents can also be viewed on Council's website at cardinia.vic.gov.au/advertisedplans or by scanning the QR code.</p> | |
|  | |
| HOW CAN I MAKE A SUBMISSION? | |
| This application has not been decided. You can still make a submission before a decision has been made. The Responsible Authority will not decide on the application before: | |
| 19 September 2025 | |
| WHAT ARE MY OPTIONS? Any person who may be affected by the granting of the permit may object or make other submissions to the responsible authority. If you object, the Responsible Authority will notify you of the decision when it is issued. | <p>An objection must:</p> <ul style="list-style-type: none">• be made to the Responsible Authority in writing;• include the reasons for the objection; and• state how the objector would be affected. |
| The Responsible Authority must make a copy of every objection available at its office for any person to inspect during office hours free of charge until the end of the period during which an application may be made for review of a decision on the application. | |



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ePlanning

Application Summary

Portal Reference A2258440

Basic Information

Proposed Use The subdivision of the land into three (3) lots and the removal of native vegetation.

Current Use The land has been developed with a single story dwelling and associated outbuildings.

Site Address 14 Doran Road Bunyip 3815

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? No such encumbrances are breached

☐ Note: During the application process you may be required to provide more information in relation to any encumbrances.

Contacts

Total \$1,453.40



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

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Documents Uploaded

| Date | Type | Filename |
|------------|---------------------|---|
| 24-06-2025 | Subdivision Plan | Plan of Subdivision dated 16 June 2025.pdf |
| 24-06-2025 | Additional Document | Cover Letter -Initial Submission - 14 Doran Road, Bunyip .pdf |
| 24-06-2025 | Additional Document | 14 Doran Rd BUNYIP - Stormwater Strategy.pdf |
| 24-06-2025 | Additional Document | 25-04-09DoranBunyip.pdf |
| 24-06-2025 | Additional Document | 25-04-09IMPACTDoranBunyip.pdf |
| 24-06-2025 | Explanatory Letter | Town Planning Report 14 Doran Road.pdf |
| 24-06-2025 | Additional Document | Doran Rd Development Plan Ver 1.pdf |
| 24-06-2025 | Additional Document | Doran Road Site Analysis.pdf |
| 24-06-2025 | Additional Document | Instrument AH045495J dated 16 June 2025.pdf |
| 24-06-2025 | Additional Document | Instrument AH045496G dated 16 June 2025.pdf |
| 24-06-2025 | Additional Document | Title dated 16 June 2025.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



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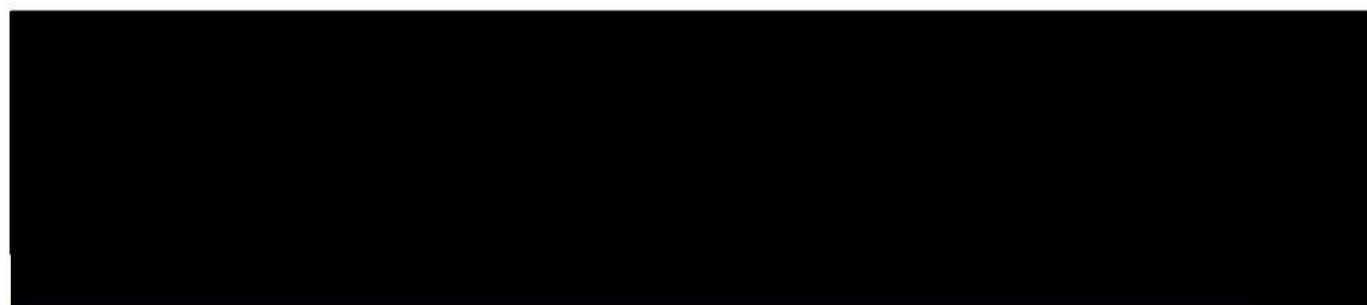
Monday to Friday 8.30am–
5pm
Phone: 1300 787 624
After Hours: 1300 787 624
Fax: 03 5941 3784

Application to amend a current planning application



| | |
|-------------------------|---|
| Application number: | T250376 |
| Address of subject site | L2 PS635148, 14 Doran Road, Bunyip VIC 3815 |

| Pursuant to which section of the Planning and Environment Act 1987 is this amendment being made? | |
|--|-------------------------------------|
| Section 50 – Amendment to application at request of applicant before notice: | <input checked="" type="checkbox"/> |
| Section 50A – Amendment to application at request of responsible authority before notice: | <input type="checkbox"/> |
| Section 57A – Amendment to application after notice is given: | <input type="checkbox"/> |



| What is the purpose of the amendment? Please list all changes: |
|--|
| The Cost of Works anticipated for the Subdivision of 14 Doran Street Bunyip is less than \$100,000 considering the cost of infrastructure and service provision, tree removal and creation of access. |
| The preamble is to include the creation of restrictions. The preamble should read "Subdivision of the land into Three (3) lots; Removal of vegetation: and Creation of Restriction". |
| |
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Declaration

I declare that all the information in this application is true and correct and the owner (if not myself) has been advised of the planning permit application.

Print name: Julie Bowyer

Signature:



18 August 2025

Fees

Amendment in accordance with Section 50 or 50A

Nil

Amendment pursuant to Section 57A

40% of the fee applicable to the original permit class plus the difference in fees if the amendment changes the class of permit to that with a higher application fee.

Lodgement of application

Your application can then be sent via email, mail or submitted in person at Council's Civic Centre.

Assistance

If any assistance in completing this form is required, we recommend you contact Council's Statutory Planning Unit on **1300 787 624** before lodging an application. Insufficient or unclear information may delay the processing of your application.

Note: Any material submitted with this application, 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.

Cardinia Shire Council
Civic Centre
20 Siding Avenue, Officer

PO Box 7
Pakenham 3810 (DX 81006 Pakenham)

Phone: 1300 787 624
Email: mail@cardinia.vic.gov.au



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

Page 1 of 1

VOLUME 11191 FOLIO 394

Security no : 124125351909D

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LAND DESCRIPTION

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Lot 2 on Plan of Subdivision 635148A.
PARENT TITLE Volume 09438 Folio 490
Created by instrument PS635148A 12/03/2010

REGISTERED PROPRIETOR

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE AM053945P 23/07/2015
AUSTRALIA AND NEW ZEALAND BANKING GROUP LTD

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

AGREEMENT Section 173 Planning and Environment Act 1987
AH045495J 18/02/2010

AGREEMENT Section 173 Planning and Environment Act 1987
AH045496G 18/02/2010

DIAGRAM LOCATION

SEE PS635148A FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 14 DORAN ROAD BUNYIP VIC 3815

ADMINISTRATIVE NOTICES

NIL

eCT Control 16165A AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED
Effective from 22/10/2016

DOCUMENT END

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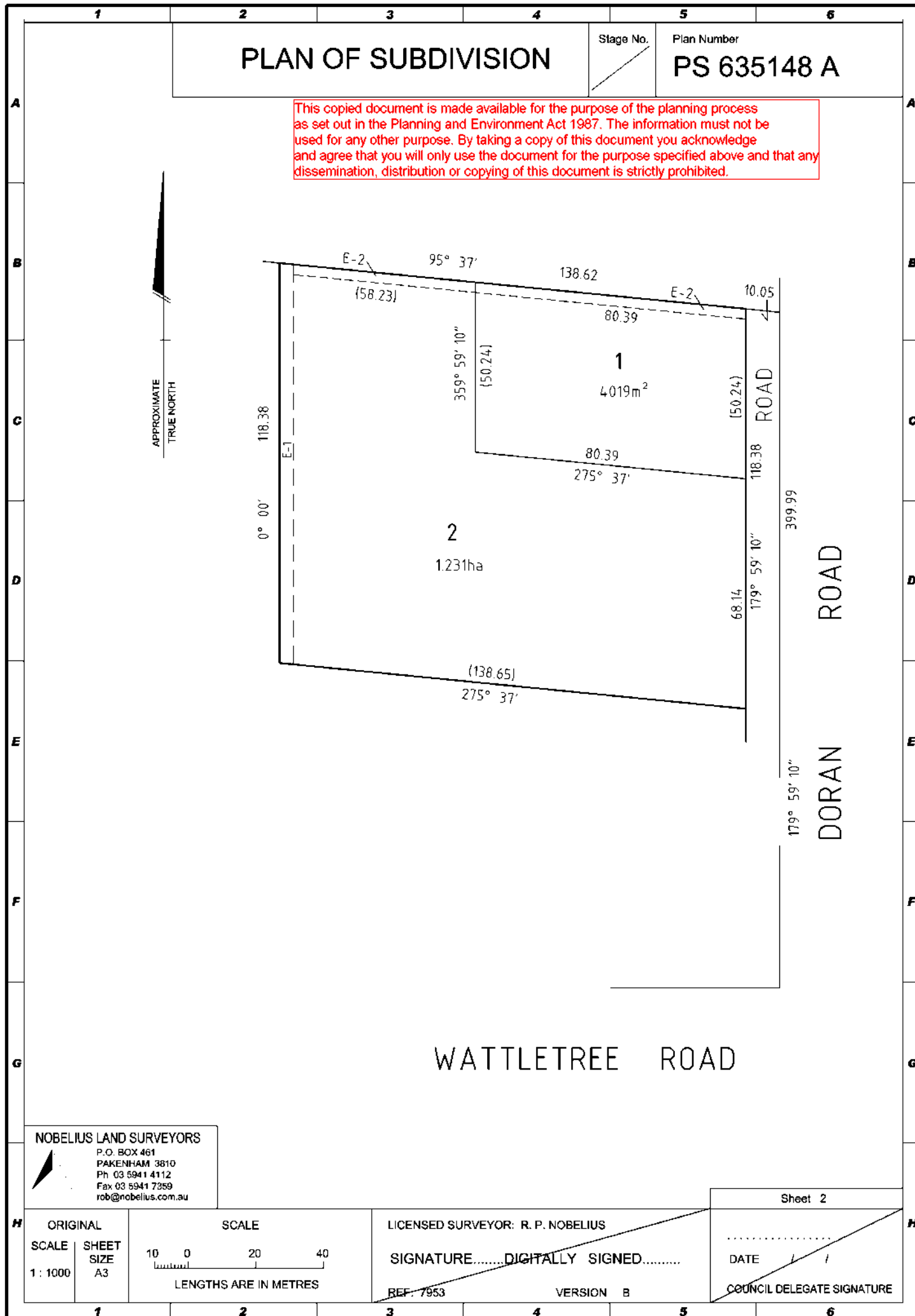
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Signed by: Robin Peter Nobelius (Nobelius Land Surveyors Pty Ltd) 21/12/2009



Plan of Subdivision PS635148A

Certification by Council (Form 5)

SUBDIVISION (PROCEDURES) REGULATIONS 2000

SPEAR Reference Number: S005534H

Plan Number: PS635148A

Council Name: Cardinia Shire Council

Council Reference Number 1: S09/190

Surveyor's Plan Version: B

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Certification

This plan is certified under section 6 of the Subdivision Act 1988

Public Open Space

A requirement for public open space under section 18 of the Subdivision Act 1988

Has not been made

Digitally signed by Council Delegate: Carolyn Murphy

Organisation: Cardinia Shire Council

Date: 19/02/2010

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Planning and Environment Regulations 1998 No. 8

AH045495J

18/02/2010 \$102.90 173



Form 13

Section 181

APPLICATION BY A RESPONSIBLE AUTHORITY FOR THE MAKING OF A
RECORDING OF AN AGREEMENT



Planning and Environment Act 1987

Lodged at the Land Titles Office by:

Name: • *Ensedels*
Phone: •
Address: •
Ref: •

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Customer Code: • *2483 N* •

The Authority having made an agreement referred to in Section 181(1) of the Planning and Environment Act 1987 requires a recording to be made in the Register for the land.

Land (*Insert Volume and Folio reference*) (*if part only, define the part*)

Certificate of Title Volume 9438 Folio 490

Authority (*name and address*)

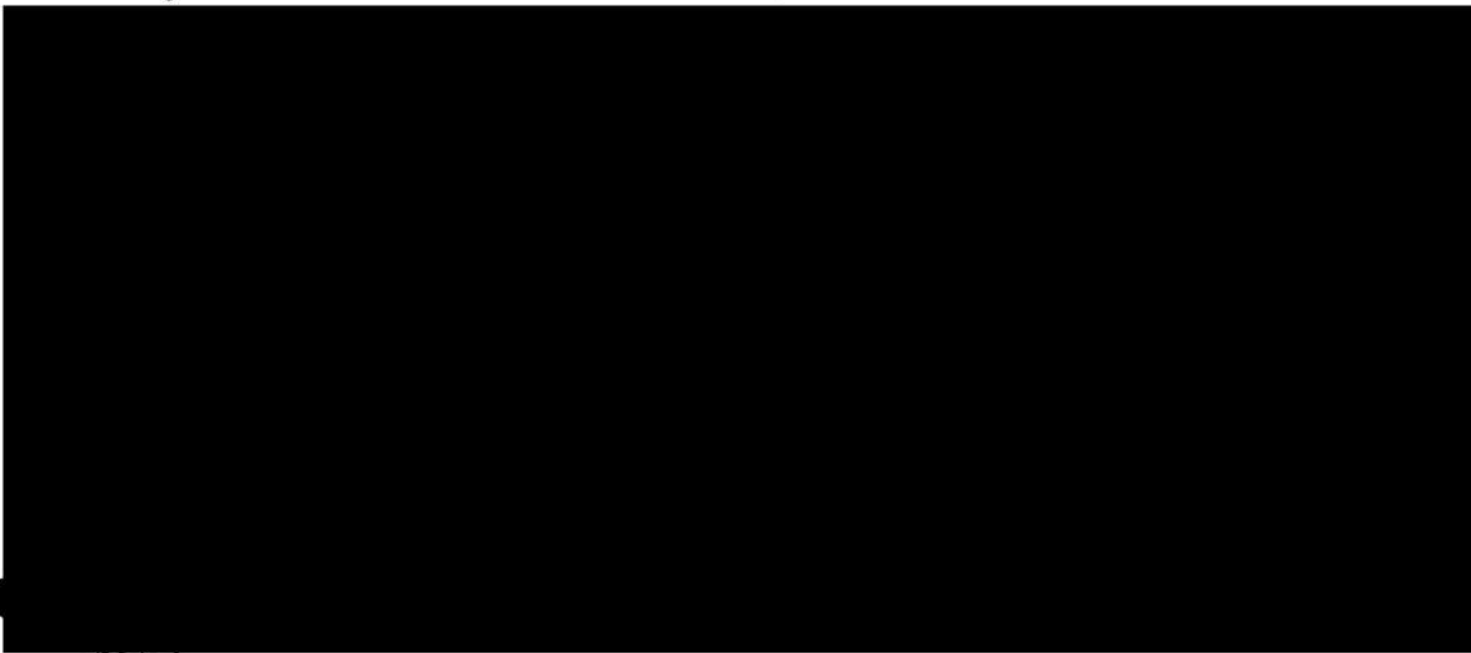

Cardinia Shire Council, Municipal Offices, Henty Way, Pakenham 3810

Section and Act under which agreement made:

Section 173 of the Planning and Environment Act 1987



This Agreement is made on the 27th day of November 2009

- 
- 
- B. The Council is the Responsible Authority under the Planning and Environment Act 1987.
- C. Nobelius Land Surveyors on behalf of the Owner, made application to the Responsible Authority for a permit to subdivide the Land into two (2) lots.
- D. The Responsible Authority granted Planning Permit No. T090294 ("the Permit") on 16 September 2009 for the Land to be subdivided into two (2) lots subject to a condition.
- E. Condition 6 of the Permit provides that:

Prior to the Statement of Compliance being issued, the permit holder must:

- d) Enter into a Section 173 Agreement with the responsible authority agreeing to contribute to the construction of Doran Road and/or a drainage scheme to service the area should Cardinia Shire Council decide to construct such works in the future. The form and content of the agreement must be to the satisfaction of the responsible authority, and all costs relating to the preparation and registration of the agreement on title must be met by the permit holder. Prior to the issue of a Statement of Compliance, the permit holder must provide a dealing number to the responsible authority to demonstrate that the agreement has been lodged with the Land Titles Office.

13 NOV 2009

PLANNING DEPARTMENT

AH045495J



The Agreement

1. Agreement to be binding on owners and their successors

- (1) The parties acknowledge and agree that this Agreement is made under Section 173 of the Planning and Environment Act 1987.
- (2) The obligations imposed on the Owners are binding on the successors, purchasers, transferees, mortgagees and assigns of the Owners and on any person obtaining possession of the Land or any part of the Land as if each of those persons had individually executed this Agreement.
- (3) The Owners must not sell, transfer, dispose of or part with possession of the Land or any part of it without first disclosing the existence and nature of this Agreement.

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2. Covenants

The Owner covenant and agree with the Council that:

- (1) They will contribute to the cost of constructing Doran Road and/or a drainage scheme to service the area, should Cardinia Shire Council decide to construct such works in the future.

As required in Condition 6d) of planning permit T090294.

3. Terms and registration of this Agreement

- (1) The terms of this Agreement come into force immediately on execution, and runs with the Land.
- (2) The Owner/s must use their best endeavours to have a memorandum of this Agreement registered on the title to the Land by the Registrar of Titles in accordance with Section 181 of the Planning and Environment Act 1987.

4. Cost

The Owner/s must bear the cost of and incidental to the making and the registration of this Agreement.

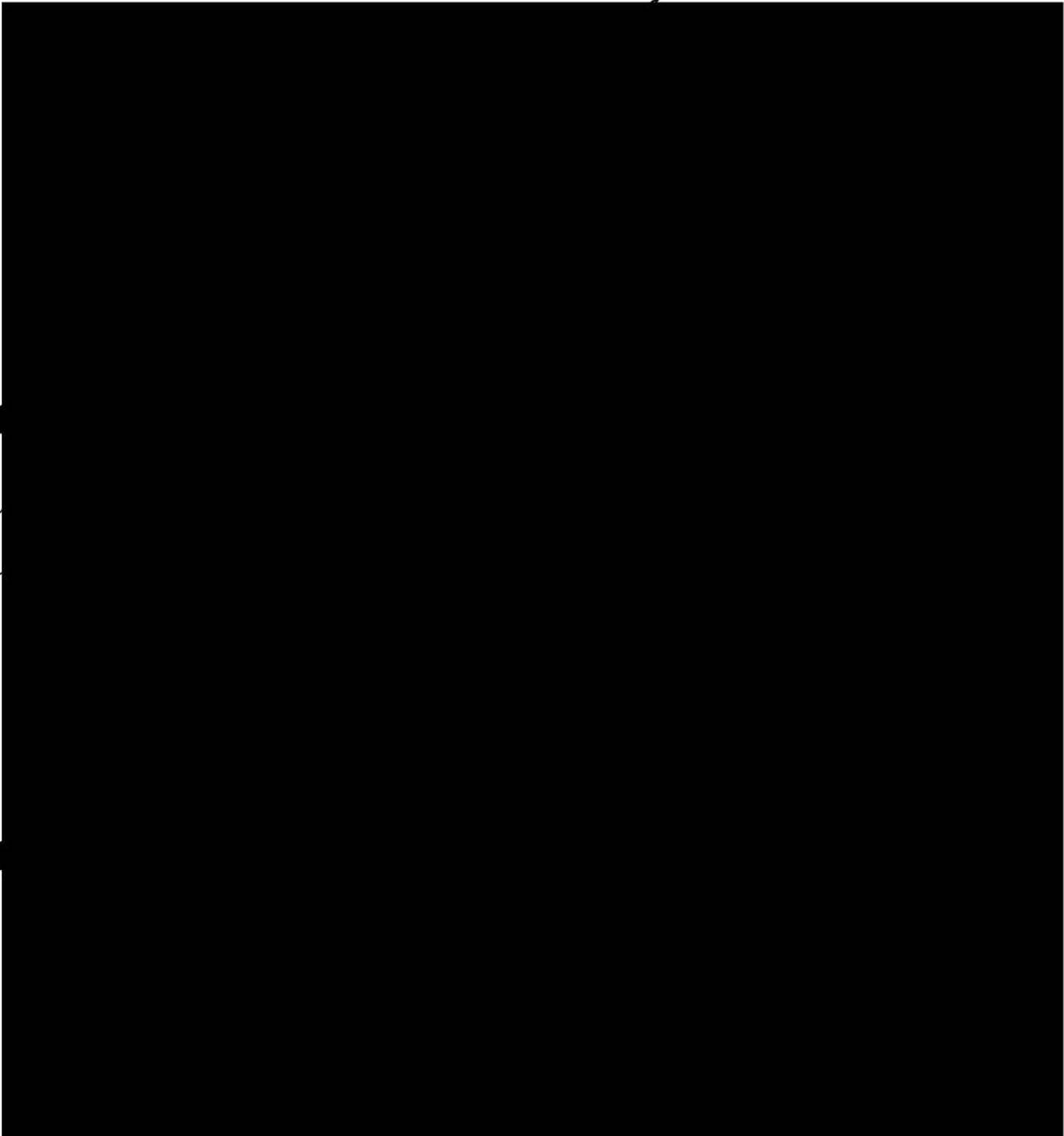
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In witness whereof the parties have set their hands and seals the day and year set out above.



13 NOV 2009
PLANNING DEPT

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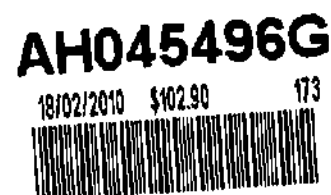
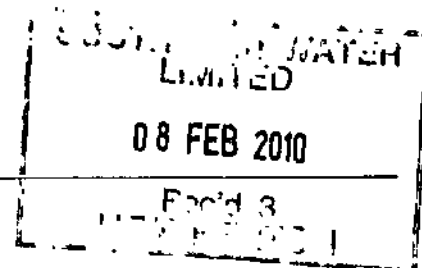
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173

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Deed of Agreement

Section 173 Agreement

Cardinia Shire Council

and

**South East Water Limited
ABN 89 066 902 547**

and

Ian Maxwell Gidden and Sylvia Lesley Gidden

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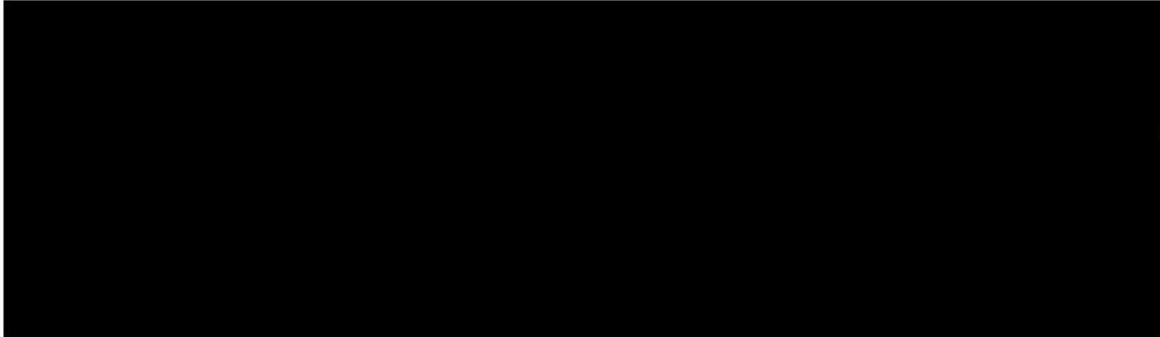
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**DEED OF AGREEMENT
Section 173 Agreement**

DATE 5th February, 2010



3202

- A. The Owner is the registered proprietor of an estate in fee simple of the land known as Lot 82 on Plan of Subdivision 136865 and known as 14-16 Doran Road, Bunyip and being part of the land described in Certificate of Title Volume 9438 Folio 490 (the "Land").
- B. The Cardinia Shire Council is the Responsible Authority, under the *Planning and Environment Act 1987* (the "Act"), for the purposes of the Cardinia Planning Scheme (the "Scheme"). The Land is affected by the provisions of the Scheme.
- C. South East Water is the holder of a water and sewerage licence pursuant to section 17 of the *Water Industry Act 1994* (Vic). The Land is included in South East Water's licensed area.
- D. The Responsible Authority issued a planning permit (permit no. **T090294**) to subdivide the Land into two (2) allotments in accordance with plan of Subdivision no. PS 635148 A (the "Permit"). Pursuant to Condition 3 of the Permit, the Owner is required to enter into an agreement with South East Water for the provision of sewerage services to the Land and fulfil all requirements (in relation to the provision of sewerage infrastructure) to South East Water's satisfaction.
- E. At the date of this Agreement, the Land is encumbered by Mortgage No X128801R in favour of the Commonwealth Bank Australia (the "Mortgagee"). The Mortgagee has consented to the Owner entering into this Agreement with respect to the Land.
- F. The Responsible Authority, South East Water and the Owner have agreed to enter into this agreement pursuant to section 173 of the Act.

OPERATIVE PROVISIONS

1. DEFINITIONS AND INTERPRETATION

Definitions

"Act" means the Planning and Environment Act 1987.

"Agreement" means this Deed of Agreement.

"Chief General Manager" means the Chief General Manager within the meaning of the Health Act 1958 (Vic).

"EPA" means the Environment Protection Authority.

"Land" has the meaning ascribed to it in Recital A.

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"Laws" means Commonwealth, Victorian or local government legislation, regulations, by-laws and other sub-ordinate legislation, codes and policies (including the State Environment Protection Policy (Waters of Victoria)), judicial, administrative or regulatory decrees, judgments or orders from time to time including as amended or modified or re-enacted from time to time.

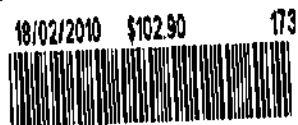
"Sewage" means sewage as defined in the Water Act 1989 (Vic).

"South East Water" means South East Water Limited ABN 89 066 902 547 of 20 Corporate Drive, Heatherton, Victoria and includes any delegate of South East Water or any subsequent holder of a water and sewerage licence pursuant to Section 17 of the Water Industry Act that applies to the Land.

"Transferee" means a person or company who takes transfer of or enters into a Contract of Sale to purchase the Land.

"Water Industry Act" means the Water Industry Act 1994 (Vic).

AH045496G



General Interpretation

In this Agreement, unless the context otherwise requires:

- (a) a reference to any legislation or any legislative provision includes any statutory modification or re-enactment of, or legislative provisions substituted for, and any subordinate legislation issued under, that legislation or legislative provisions;
- (b) the singular includes the plural and vice versa;
- (c) a reference to an individual or person includes a corporation, partnership, joint venture, association, authority, trust, state or government, or vice versa;
- (d) a reference to any gender includes all genders;
- (e) a reference to a recital, clause, schedule, annexure or exhibit is to a recital, clause, schedule, annexure or exhibit of or to this Agreement;
- (f) a recital, schedule, annexure or a description of the parties forms part of this Agreement;
- (g) a reference to any Agreement or document is to that Agreement or document (and, where applicable, any of its provisions) as amended, innovated, supplemented, or replaced from time to time;
- (h) a reference to any party to this Agreement or any other document or arrangement includes that party's executors, administrators, substitutes, successors and permitted assigns; and
- (i) where an expression is defined, another part of the speech or grammatical form of that expression has a corresponding meaning.

Headings

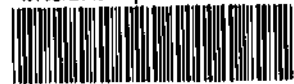
In this Agreement, headings are for convenience of reference only and do not affect interpretation.

2. CONFIRMATION OF RECITALS

Each of the parties to this Agreement confirms the recitals that relate to that party.

AH045496G

18/02/2010 \$102.90 173



3. EFFECT OF THE AGREEMENT AND REGISTRATION

3.1 Agreement Under Section 173 of the Act

The parties agree that without limiting or restricting the respective powers to enter into this Agreement and, in so far as it can be so treated, this Agreement is made pursuant to section 173 of the Act.

3.2 Covenants to Run with the Land

The parties agree and declare that the obligations imposed on the Owner under this Agreement are intended to take effect as covenants which shall be annexed to and run at law and equity with the whole or any part of the Land and bind the Owner, its successors, transferees and permitted assigns, the registered proprietor or proprietors for the time being of the Land.

3.3 Registration Memorandum

- (a) An application, pursuant to section 181 of the Act shall be made by the Responsible Authority to the Registrar of Titles for the entry of a memorandum of this Agreement upon the Certificate of Title to the Land.
- (b) The Owner shall do all things necessary to enable the application made by the Responsible Authority to be entered on the Certificate of Title to the Land, including signing any further agreement, acknowledgment or document.

4. COVENANTS

4.1 Owner's Covenants

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If a reticulated sewerage system is not provided to the Land, the Owner covenants and agrees with the Council and South East Water as follows:

- (a) It will at the written request of the Council, the Chief General Manager or the EPA, upon 60 days notice, provide proof at the cost of the Owner, and to the satisfaction of the Council, Chief General Manager or the EPA making the request, that:
 - (i) all sewage is being and will continue to be treated and retained within the Land without danger to public health, safety and the environment; and
 - (ii) any treatment systems meet and will continue to meet the relevant requirements of all Laws relating to such systems;
- (b) For the purpose of providing proof under clause 4.1(a), and without limiting any other form of proof that may be required, it will conduct such tests reasonably required by the Council, the Chief General Manager or the EPA at the cost of the Owner;
- (c) It will at the written request of the Council, and at the Owner's cost:
 - (i) repair, replace or upgrade its treatment system; and
 - (ii) take any other steps required by the Council to ensure that:
 - (A) all sewage is being and will continue to be adequately treated and retained within the Land without danger to public health, safety or the environment; and
 - (B) any treatment system it uses meets and will continue to meet the requirements of Laws relating to such systems and the treatment of sewage from time to time;

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(d) Without limiting any powers of the Council under clause 4.1(c), if the Council is not satisfied that:

- (i) all sewage is being or will continue to be adequately treated and retained within the Land without danger to public health, safety or the environment; or
- (ii) any treatment system used by the Owner meets and will continue to meet the requirements of all Laws relating to such systems and the treatment of sewage from time to time,

subject to clause 4.1(e), the Owner will at the written request of the Council, enter into an agreement with South East Water for the provision of reticulated sewerage services to the Land and fulfil all requirements of South East Water;

(e) If South East Water provides, agrees to provide, or is legally required to provide reticulated sewerage services to the Land, whether pursuant to any agreement, or backlog or other program or scheme or otherwise, the Owner will pay the cost of extending and connecting the reticulated sewer and associated works to the Land, including pay the cost of any works, and pay the area contribution charge and other charges applicable from time to time.

4.2 Council's and Owner's Agreements and Acknowledgments

The Council and the Owner acknowledge and agree that:

- (a) South East Water shall not be required to enter into an agreement with the Owner for the provision of reticulated sewerage services to the Land except to the extent it is required to do so under the Water Industry Act; and
- (b) nothing in this Agreement shall limit the powers of South East Water under the Water Industry Act, including Section 65(1) of that act.

4.3 South East Water's Agreement

Any payments required by South East Water under Sections 27 and 29 of the Water Industry Act shall be assessed by South East Water in accordance with those respective provisions of that act.

5. OWNER'S INDEMNITY AND RELEASE

The Owner agrees not to make any claim for damage or loss of any kind against the Responsible Authority or South East Water arising from or referable to the provision of sewerage services to the Land, this Agreement or any non-compliance with this Agreement. The Owner agrees to hold harmless and keep the Responsible Authority and South East Water indemnified for and against all actions, claims, liability, demands, damages, losses, expenses and/or costs by or at the instance of any person or body whatsoever and howsoever caused, including but without limiting, any claim in negligence or arising from personal injury, arising from or referable to the provision of sewerage services to the Land, this Agreement or any non-compliance with this Agreement.

6. OWNER'S WARRANTIES

- (a) Without limiting the operation or effect of this Agreement, the Owner warrants that apart from the Owner and any other person who has consented in writing to this Agreement, no other person has any interest, either legal or equitable, in the Land which may be affected by this Agreement.
- (b) The Owner covenants to obtain the consent by any mortgagee to be bound by the covenants in this Agreement if the mortgagee becomes a mortgagee in possession of the Land.

AH045496G

16/02/2010 \$102.90 173



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(c) Without limiting the operation or effect of this Agreement, the Owner must ensure that until a Memorandum of this Agreement is registered on the Certificate of Title to this Land, the Owner will ensure that its Transferees:

- (i) give effect to, do all acts and sign all documents to give effect to this Agreement; and
- (ii) execute a deed agreeing to be bound by this Agreement.

7. OWNER'S OR TRANSFEREE'S DEFAULT

If the Owner or a Transferee fails to comply with the provisions of this Agreement or any requirement made under the provisions of this Agreement, the Responsible Authority or South East Water may serve a notice on the Owner or a Transferee (as the case may be) specifying the works, matters and things in respect of which the Owner or Transferee is in default. If the alleged default continues for 30 days after the service of such notice, the Responsible Authority or South East Water may by its officers, employees, agents and contractors enter the Land and ensure that the works, matters and things are carried out. The costs incurred by the Responsible Authority or South East Water in undertaking the works as a result of the Owner or Transferee's default will be payable by the Owner or the Transferee.

8. COSTS

The Owner will pay South East Water's and the Responsible Authority's reasonable costs and expenses in relation to the negotiation, preparation, drafting, finalisation, engrossment, execution, registration and enforcement of this Agreement which are and until payable remain a debt due to the Responsible Authority and/or South East Water (as the case may be).

9. NO FETTERING OF THE RESPONSIBLE AUTHORITY'S POWERS

The parties acknowledge and agree that this Agreement does not fetter or restrict the power or discretion of the Responsible Authority to make any decision or impose any requirements or conditions in connection with the granting of any planning approval or certification of any plans of subdivision application to the Land or relating to any use or development of the Land.

10. NOTICES

Any notice under this Agreement may be served by delivering, either personally or by registered mail, to the Parties.

11. SEVERABILITY

If a court, arbitrator, tribunal or other competent authority determines that a word, phrase, paragraph or clause of this Agreement is unenforceable, legal or void then it must be severed and the other provisions of this Agreement remain operational.

12. FURTHER ASSURANCE

Each party must promptly execute and deliver all documents and take all other actions necessary or desirable to effect, perfect or complete the transactions contemplated by this Agreement.

13. NO WAIVER

Any time or time indulgence granted by the Responsible Authority or South East Water to the Owner or any variation of the terms and conditions of this Agreement will not in any way amount to a waiver of any of the rights and remedies of the Responsible Entity or South East Water in relation to the terms of this Agreement.

AH045496G

18/02/2010 \$102.90

173



AH045496G

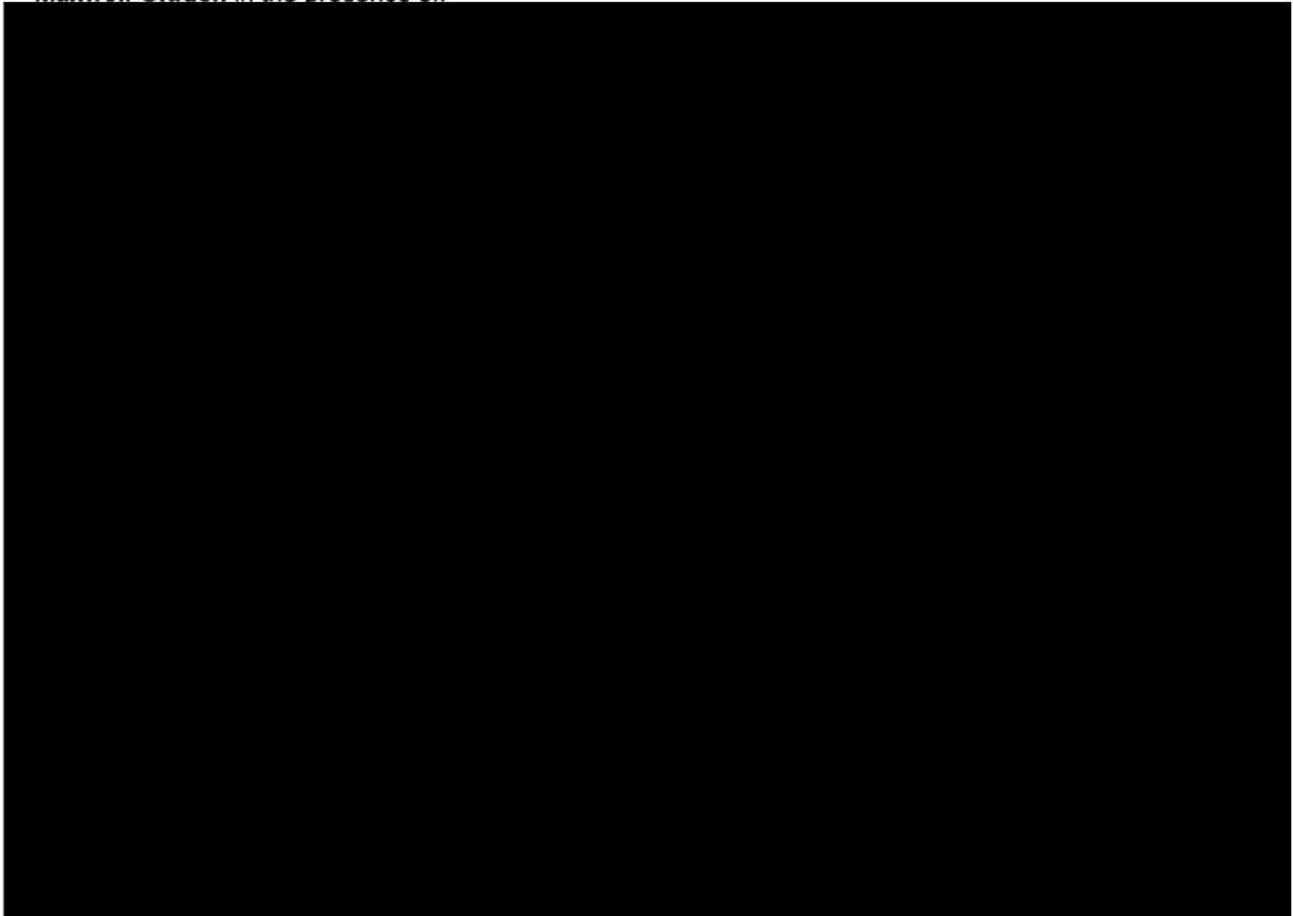
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AH045496G



SIGNED SEALED AND DELIVERED by Ian
Maxwell Gidden in the presence of:



**THE COMMON SEAL of Commonwealth Bank
of Australia** was affixed in accordance with its
Constitution in the presence of:

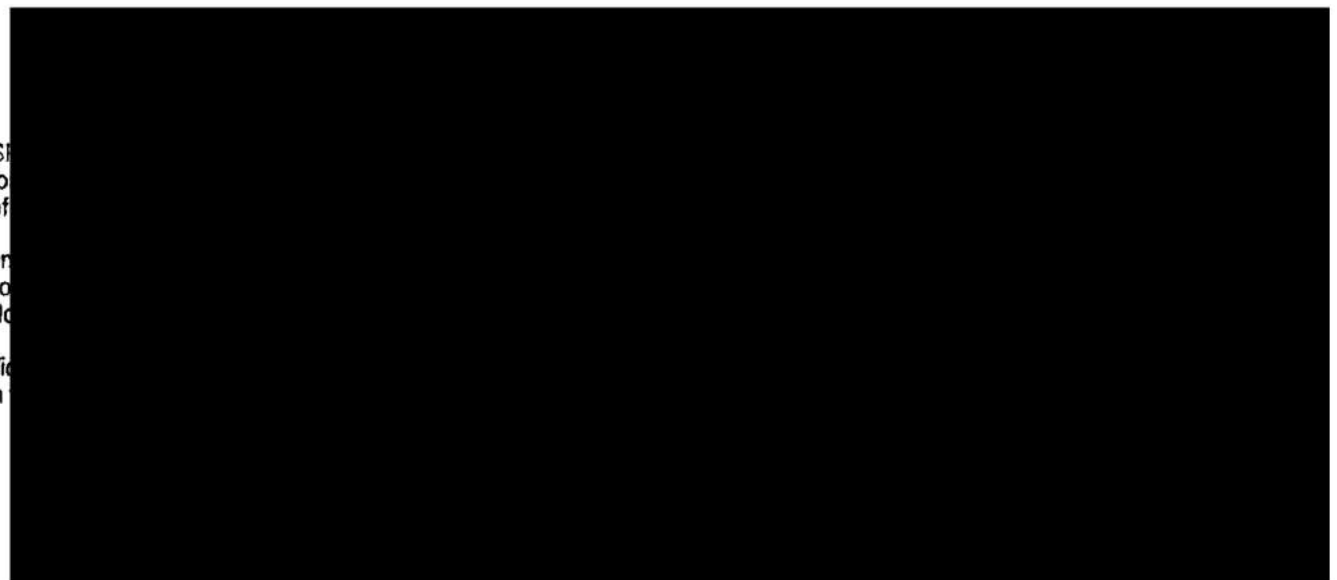
Signature of director

Signature of director/secretary

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of

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in



**EXECUTED by Commonwealth Bank
Australia by its duly authorised Attorney
presence of:**

Witness

Name (print)

Commonwealth Bank of Australia as Mortgagee of registered Mortgage No X128801R consents to the Owner entering into this Agreement and agrees to be bound by the terms and conditions of this Agreement as if the Bank were the Owner of the Land.

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20 Henry Street
PO Box 461
Pakenham
VIC 3810

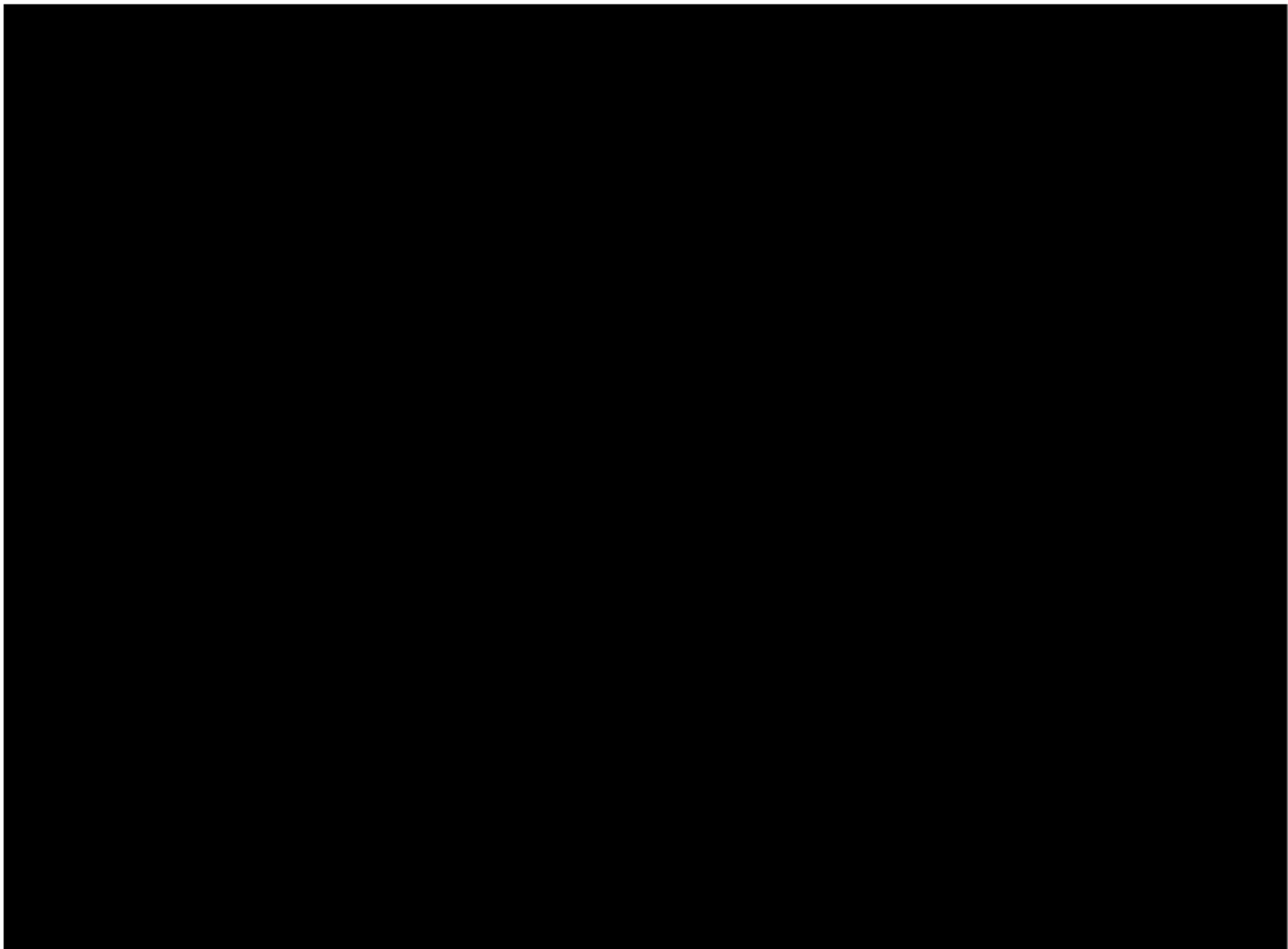
ABN: 25 006 181 344
PHONE: 03 5941 4112
EMAIL: mail@nobelius.com.au
WEB: www.nobelius.com.au

19th June 2025



Attn: Statutory Planning Department
Cardinia Shire Council
20 Siding Avenue,
Officer VIC 3809

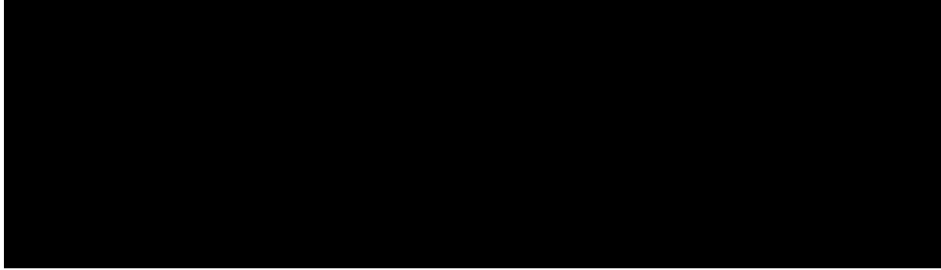
To Whom It May Concern,



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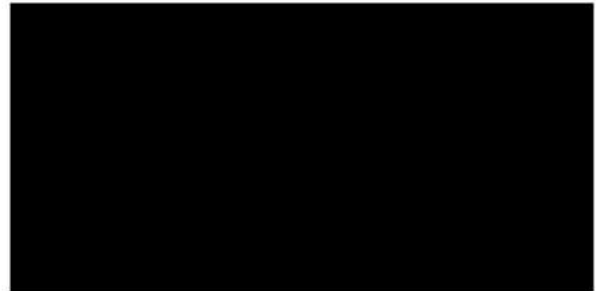
The proposal is an appropriate planning outcome that helps to give effect to Municipal Planning Strategy, the State and Local Planning Policy Framework and the relevant policies, objectives and strategies of the Cardinia Planning Scheme and as such, warrants Council's full support.

Please do not hesitate to contact me should you require any additional information or wish to discuss.



14th August, 2025

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| | |
|------------------------|---|
| APPLICATION NO. | T250376 PA |
| PROPERTY NO. | 5000009946 |
| ADDRESS | Lot 2 PS635148, 14 Doran Road, Bunyip VIC 3815 |
| PROPOSAL | Subdivision of the land into Three (3) lots; Removal of vegetation: and Creation of Restriction |

Thank you for your request for further information dated 22 July 2025.

We wish to provide the following responses:

REQUEST FOR FURTHER INFORMATION

PAYMENT OF OUTSTANDING FEES

1. Council's records show an outstanding amount for payment of application fees:

| Class | Description | Fee |
|---------------------|--|-----------|
| 11 (50%) | Development Application where the cost of development is less than \$100,000 | \$632.80 |
| 20 | Subdivide Land (3 Lots) | \$1453.40 |
| 21 (50%) | Create a restriction within the meaning of the <i>Subdivision Act 1988</i> | \$726.70 |
| Total fees required | | \$2812.90 |
| Fees paid to date | | N/A |
| Amount outstanding | | \$2812.90 |

Please Note:

- Please refer to preliminary assessment comments (below) for further advice regarding fees.
- As per regulation 10 of the Planning and Environment (Fees) Regulations 2016, the amount payable is the sum of the highest of the fees which would have applied if separate applications were made.

| | |
|------------------|---|
| Response: | The Planning fees amounting to \$2,812.90 have been paid for application T250376, including the additional fee that covers the class 21 application for the creation of a restriction. No additional fees are required. |
|------------------|---|

INFORMATION REQUIRED AS PART OF THE APPLICATION

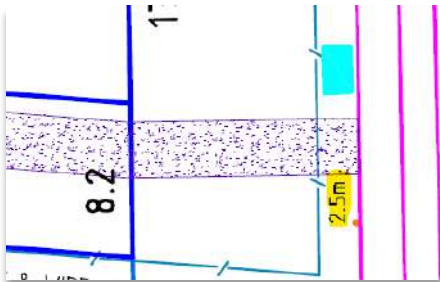
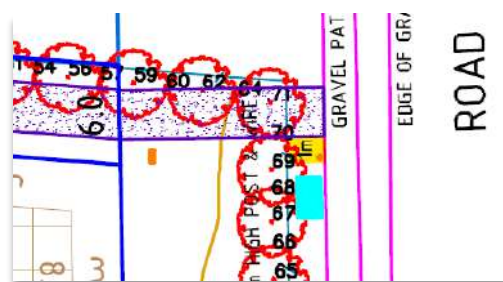
2. A revised 'application for a planning permit' form **OR** 'Section 50 Amendment' form, with the cost of development (works; vegetation removal) clearly stated.

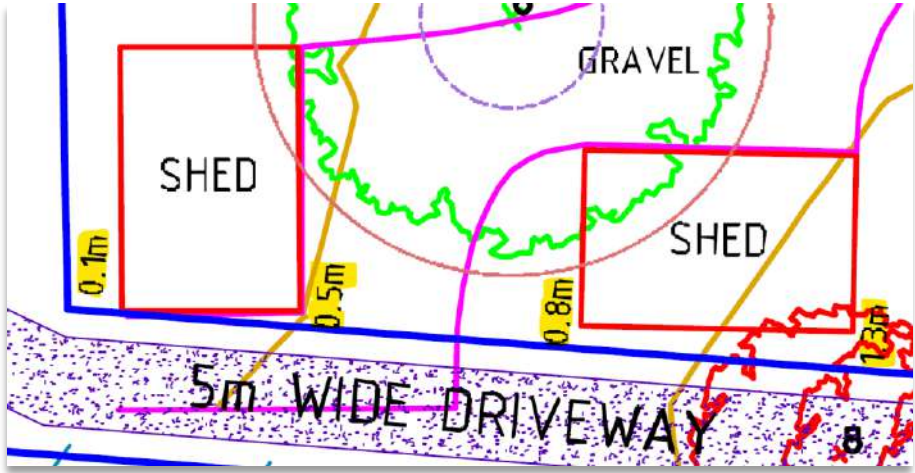
| | |
|------------------|--|
| Response: | <p>A Section 50 is provided that confirms the Cost of Works (employed to determine the Council fees for the application) equate to less than \$100,000 and include the costs associated with the provision of infrastructure and service delivery, tree removal and the provision of access to the two additional lots.</p> <p>The Section 50 also formalises the change to the Preamble to recognise the addition of the creation of a restriction. The Preamble should read "Subdivision of the land into Three (3) lots; Removal of vegetation: and Creation of Restriction".</p> <p>*Please note: The Town Planning report has been updated to respond to the requirements of clause 52.02 Easements, Restrictions and Reserves.</p> |
|------------------|--|

INFORMATION REQUIRED IN RELATION TO THE SITE PLAN

3. Fully dimensioned plans drawn to a stated scale and a minimum of A3 in size, generally in accordance with the plans submitted with the application, but amended to show:
- The minimum distance of the proposed crossovers for Lots 2-3 to the adjacent power poles clearly dimensioned, having regard to preliminary assessment comments (below).
 - The setback (from the proposed southern Lot 1 boundary) of the existing shed in the south-east corner of proposed Lot 1 clearly dimensioned.

Note: It is encouraged to show these features on separate (inset) plans (i.e. a lesser scale) for ease of reading.

| | |
|------------------|--|
| Response: | <p>The Development Plan (Ver 3) shows the following revisions:</p> <ol style="list-style-type: none"> The minimum distance measured from the southern edge of the driveway crossover for Lot 2 to the existing power pole is 2.5 metres and is shown on Development Plan (Ver3). An extract from the plan is provided below left. The minimum distance measured from the southern edge of the driveway crossover for Lot 3 to the existing power pole is 1 metre. An extract from the plan is provided below right. <div style="display: flex; justify-content: space-around;">   </div> <ol style="list-style-type: none"> The setback of the proposed southern boundary for lot 1 from the existing shed in the southeast corner of the proposed Lot 1 measures 0.1m in the |
|------------------|--|

| | |
|--|---|
| | <p>southwestern corner and 0.5m from the southeastern corner, as per the zoomed extract below. The shed to the east has a minimum setback from the new boundary of 0.8m.</p>  <p>*Please note: These details are easily visible on the Development Plan (Ver 3) when zoomed in.</p> |
|--|---|

PRELIMINARY ASSESSMENT COMMENTS

APPLICATION FEES AND PERMIT REQUIREMENTS

Council notes the application seeks permission (under the Vegetation Protection Overlay) for removal of vegetation. A separate application fee (Class 11-16) applies for this component of the proposal, dependent on the cost of the works (vegetation removal). This information has not been provided with the application and is required as above.

Given the scale of the proposed works, Council has assumed the cost of development to be less than \$100,000. If this is incorrect, please advise as soon as possible so as to allow the correct application fee to be applied.

Similarly, it is understood the application proposes to create restrictions (building and waste envelopes) on titles of the proposed lots, under section 23 of the Subdivision Act 1988. Pursuant to Clause 52.02 (Easements, Restrictions and Reserves) a permit is required before a person proceeds under Section 23 of the Subdivision Act 1988 to create a restriction.

In addition to the above comments, the application should be amended under Section 50 of the Act to clearly seek permission under this provision.

| | |
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| Response: | As per above, a Section 50 has been provided that confirms the costs associated with the provision of infrastructure and works, access and removal of vegetation, and provides the basis for the class 11 planning fees and the addition of the class 21 planning fee associated with creating a restriction. The addition of the permit trigger under Clause 52.02 has also been responded to in the revised Town Planning report. |
|------------------|---|

STORMWATER

Council notes the stormwater management strategy submitted with the application proposes the installation of 10,000 litre rainwater tanks to service dwellings on the proposed lots. If a permit is

issued for the subdivision, these tanks will be required to be installed and commissioned prior to issue of a statement of compliance.

If provision of these tanks sought to be deferred (i.e. until a dwelling is constructed on the lots), a Section 173 Agreement (relating to provision of these tanks) may be required by conditions of any permit issued.

As such, it is strongly encouraged to provide a written response to this comment.

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| Response: | <p>As per the revised response to stormwater provisions on pages 13-14 in the Town Planning report (V2); <i>Water tanks (10,000Ltr) are proposed for incorporation into the development of future dwellings (STORM calculator, page 12: 2025) to offset load to the stormwater infrastructure, and to contribute to WSUD. The provision of water tanks for Lots 2 and 3 should be implemented through agreements on the title that require water tanks to be provided at the time of development (deferred from subdivision) to allow future landowners to determine their location in context with any future dwelling designs and siting. The provision of a water tank for Lot 1 (existing dwelling) can be conditioned should a permit be issued.</i></p> <p><i>The Stormwater Drainage Strategy Plan contained in figure 6 in the stormwater strategy report represents "the initial drainage strategy" and illustrates that the proposed lots can certainly accommodate stormwater provisions within each lot.</i></p> <p>*Please note: The proposal has been revised, and formalised via the provision of a Section 50 form, to include the creation of a restriction that will cover the provision of a S173 agreement, or restriction on title that will ensure water tanks are provided at the time of development.</p> |
|------------------|---|

REPLACEMENT PLANTING

Council will require replacement planting on site by conditions of a permit, should one be issued. Given this (as well as the objectives of the Design and Development Overlay- Schedule 1 and Bunyip Township Strategy) it is encouraged to consider submitting a landscape plan in response to this letter. This plan should show the planting of replacement indigenous species, ideally along the eastern boundaries of Lots 2-3.

| | |
|------------------|---|
| Response: | <p>Given the proposed lots have a minimum area of 4,001m² (lot 3) and are subject to the Low Density Residential Zone – Schedule 2, they are considered to have ample area to accommodate planting and landscaping adjacent to boundaries, as per the decision guidelines of the DDO1 and Bunyip Township Strategy. The revised Development Plan (Ver 3) shows indicative landscaping strips adjacent to the eastern boundaries of Lots 2 and 3, and the southern and northern boundaries of Lot 2 to provide visual screening from existing development to the east and support replanting to ensure the treed character of Bunyip is maintained. These landscaping strips will be planted with indigenous species, as annotated on the Development Plan (Ver 3).</p> |
|------------------|---|

SITE ACCESS – LOTS 2-3

Council has concerns regarding the proximity of the proposed Lot 2-3 crossovers with existing electricity supply poles within the Doran Road reserve. The information (dimensioned setbacks) will provide further clarity regarding this, however it is encouraged to indicatively show the entirety of

both proposed crossovers (designed in accordance with Council's standard drawing) on plans submitted in response to this letter to avoid future issues.

| | |
|------------------|---|
| Response: | The setbacks of proposed crossovers from existing poles contained within the Doran Road reserve are discussed above. The design of crossovers is the remit of post-planning permit detailed design and will be subject to planning permit conditions, should a permit be issued. |
|------------------|---|

EXISTING SHED & LOT 2

Council has concerns regarding the existing shed adjacent to the south-west corner of the proposed Lot 1 appears to extend over the proposed title boundary of this lot, into proposed Lot 2. The information requested within this letter will provide further clarity regarding this, however if the shed is not wholly contained within Lot 1 it will be required to be demolished. Should this not be desired, it is encouraged to propose relocation of this shed as part of the current application or concurrently seek to amend Planning Permit T210204.

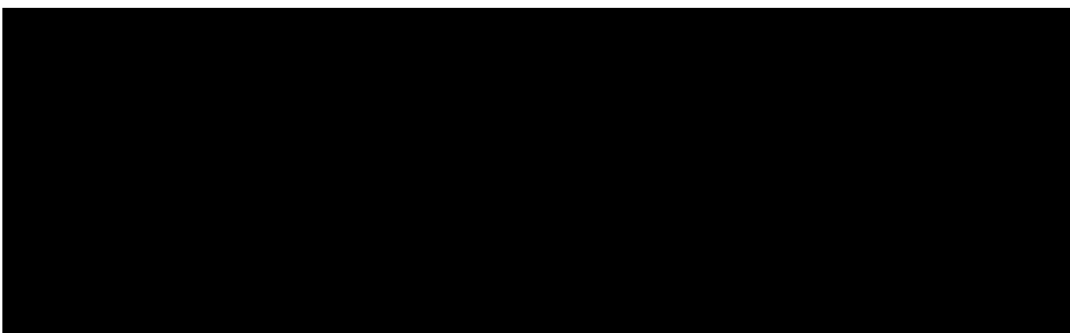
| | |
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| Response: | As previously discussed, the existing sheds adjacent to the southern boundary contained within Lot 1 are fully contained within the proposed boundaries of Lot 1 and are not proposed to be removed or relocated, avoiding an amendment of T210204. |
|------------------|---|

REFERRAL OF APPLICATION

The application has been referred to the various service authorities as required by Clause 66.01 (Subdivision Referrals), however no responses have been received to date. Following receipt of these responses, additional concerns may be identified and further information required.

| | |
|------------------|------------------|
| Response: | Noted. Thank you |
|------------------|------------------|

If any further information is required, or if there are any questions regarding the submitted information, please do not hesitate to contact me at julie@nobelius.com.au or call 5941 4112.



TOWN PLANNING REPORT

SUBDIVISION OF THE LAND INTO THREE (3) LOTS, THE REMOVAL
OF VEGETATION AND CREATION OF A RESTRICTION

AT 14 DORAN ROAD, BUNYIP



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1. PRELIMINARY

| | | | | |
|---|---|-------------|------------|----------|
| ADDRESS | Lot 2 PS635148, 14 Doran Road, Bunyip 3815 | | | |
| RESPONSIBLE AUTHORITY | Cardinia Shire Council | | | |
| ZONE | Low Density Residential Zone- Schedule 2 | | | |
| OVERLAY | Design and Development Overlay- Schedule 1 Vegetation Protection Overlay - Schedule 1 | | | |
| BUSHFIRE PRONE AREA | Yes (Partial) | | | |
| CULTURAL HERITAGE | Not applicable | | | |
| EASEMENTS, RESTRICTIONS, ENCUMBRANCES | <p>Agreement Section 173, AH045495J (18/02/2010) is registered to the Title.</p> <p>Agreement Section 173, AH045496G (10/02/2010) is registered to the Title.</p> <p>An E1 easement for the purpose of Drainage and Sewerage aligns with the western boundary and an E2 easement for the purpose of Drainage aligns with the northern boundary.</p> | | | |
| PROPOSAL | The subdivision of the land into three (3) lots and the removal of Native Vegetation. | | | |
| PERMIT TRIGGERS | <ul style="list-style-type: none"> Pursuant to clause 32.03-3 of the LDRZ a permit is required to subdivide the land. Pursuant to clause 43.02-3 of the DDO a permit is required to subdivide the land. Pursuant to clause 42.02-2 of the VPO a permit is required to remove any vegetation specified in a schedule to this overlay. Pursuant to clause 52.02 a permit is required before a person proceeds under Section 23 of the Subdivision Act 1988 to create a restriction. | | | |
| RELEVANT PLANNING CONTROLS AND INCORPORATED DOCUMENTS | <p>Clause 11 Settlement</p> <p>Clause 13 Environmental Risks & Amenity</p> <p>Clause 15 Built Environment & Heritage</p> <p>Clause 16 Housing</p> <p>Clause 19 Infrastructure</p> <p>Clause 32.03 Low Density Residential Zone</p> <p>Clause 42.02 Vegetation Protection Overlay</p> <p>Clause 43.02 Design and Development Overlay</p> <p>Clause 52.17 Native Vegetation</p> <p>Clause 56 Residential Subdivision</p> <p>Clause 65.02 Approval of an application to subdivide land</p> <p>Clause 71.03 Integrated decision making</p> <p>Bunyip Township Strategy (2009)</p> | | | |
| SUBMITTED DOCUMENTS | <ul style="list-style-type: none"> Plan of Survey – <i>Nobelius Land Surveyors</i> Arborist Assessments - <i>ArbKey</i> Copy of Title & Title Plan and registered Agreements. Stormwater Strategy – <i>NFK Civil</i> Land Capability Assessment – <i>Soil Test Express</i> | | | |
| NLS QUALITY SYSTEM | AUTHOR | DATE ISSUED | CHECKED BY | REVISION |
| | JB | 20/6/2025 | HS | 2 |

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2. INTRODUCTION

This town planning report has been prepared by Nobelius Land Surveyors on behalf of the landowner and is submitted to Cardinia Shire Council to support an application for the subdivision of the land into three (3) lots, the removal of vegetation and the creation of a restriction (to formalise the building and waste envelopes).

The subject site is located in a low-density residential area of Bunyip designated for the development of future residential lots. The land is able to connect to services (except Sewerage) and provides an excellent opportunity to provide residential land in a township experiencing sustained growth.

The purpose of this report is to assess the proposed staged subdivision of the land which will ultimately yield three (3) lots against the relevant provisions of the Cardinia Planning Scheme, the Bunyip Township Strategy and local and state planning policies. The proposed subdivision has undergone an extensive design process and is informed by a suit of technical assessment to ensure that the proposal is responsive to key site constraints and considerations, such as overland flows and vegetation. The site presents an excellent strategic location for further residential allotments and the proposal responds to and integrates with surrounding residential developments along Doran Road.

This report aims to demonstrate that the proposal is:

- Consistent with the State and Local Planning Policy framework;
- Consistent with the requirements of the Cardinia Planning Scheme;
- Consistent with the Bunyip Township Strategy (21 September 2009);
- Consistent with the requirements of Clauses 56; and
- Will satisfactorily integrate with surrounding lot sizes and land uses.

The proposal is entirely appropriate to be granted a planning permit and receive Council's full support on the basis that the proposal supports Cardinia's vision for future residential development on the two sites and is appropriate for the locality.

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3. SUBJECT SITE AND SURROUNDING LOCALITY

SITE ANALYSIS

The land is formally described as Lot 2 on Plan of Subdivision PS635148A, 14 Doran Road, Bunyip, contained within Volume 11191 Folio 394. The land is a large irregular shaped allotment, with a frontage to Doran Road to the east. The site addresses Doran Road to the east for a length of 68.14 metres and has an existing gravel crossover via Doran Road. The site has a maximum depth of 138.26 metres and has a total area of 12,308m² (1.23 hectares). The site has been developed with a single storey dwelling and associated outbuildings; the remainder of the land is predominately lawned. The site has 1.2m high post & wire fencing around all boundaries and there is a gravel pedestrian footpath along the nature strip to the front of the subject site.



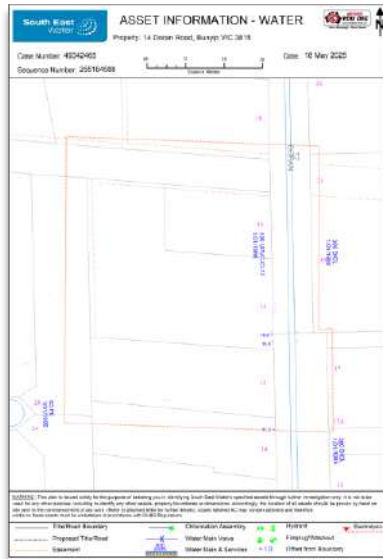
14 DORAN ROAD, BUNYIP (IMAGE COURTESY OF NEARMAP, 2025)

The land is developed with one dwelling and associated sheds. The dwelling is a single storey house sited in the eastern corner of the allotment and benefits from access from Doran Road. There are three small sheds that are employed for garden storage, vehicles and animal shelters.

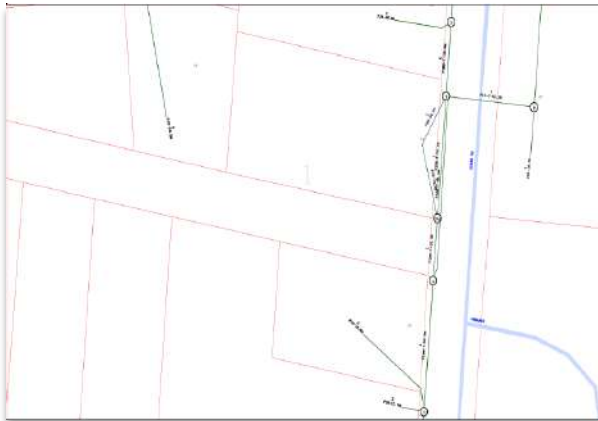
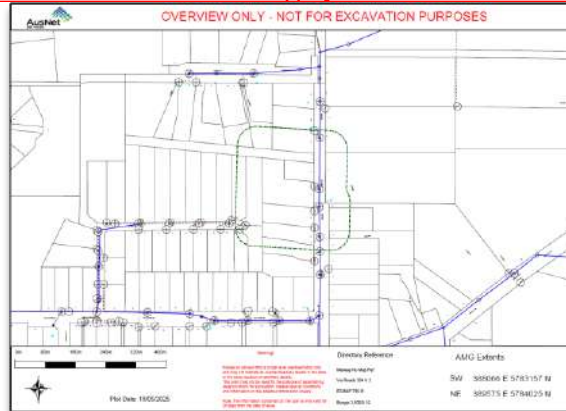
The remainder of the land is predominately cleared and fenced and employed for hobby-scale grazing.

The site benefits from connection points to reticulated water, electricity, NBN and gas (clockwise from top left). There are no reticulated connections to sewerage, nor are there options to connect the site to reticulated sewerage.

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EASEMENTS AND COVENANTS

A review of the Certificate of Title indicates that the land is encumbered by two instruments under Section 173 of the *Planning and Environment Act, 1987* or the *Subdivision Act, 1988*, which are detailed below:

- **Section 174 Agreement AH045496G dated 18/02/2010** between Cardinia Shire Council and South East Water Limited and Ian Maxwell Gidden and Sylvia Lesley Gidden (proprietors at the time) was required pursuant to Permit T090294 for the Subdivision of the land, condition 3 that required the Owner enter into an agreement with South East Water for the treatment and retention of sewerage on the land with all systems continuing to meet relevant requirements until such time that reticulated sewerage is provided to the land.
- **Section 174 Agreement AH045495J dated 18/02/2010** between Cardinia Shire Council and Ian Maxwell Gidden and Sylvia Lesley Gidden (proprietors at the time) was required pursuant to Permit T090294 for the Subdivision of the land, condition 6(d) that required the Owner enter into an agreement to contribute to the construction costs associated with the construction of Doran Road and/or a drainage scheme to service the area, should Cardinia Council decide to construct the road.

A review of the Plan of Subdivision shows the site is encumbered by two easements:

- E1 easement for the purpose of Drainage and Sewerage aligns with the western boundary;
- E2 easement for the purpose of Drainage aligns with the northern boundary.

A copy of the Certificate of Title and current Plan of Subdivision dated within 3 months of application lodgement has been provided as part of this submission.

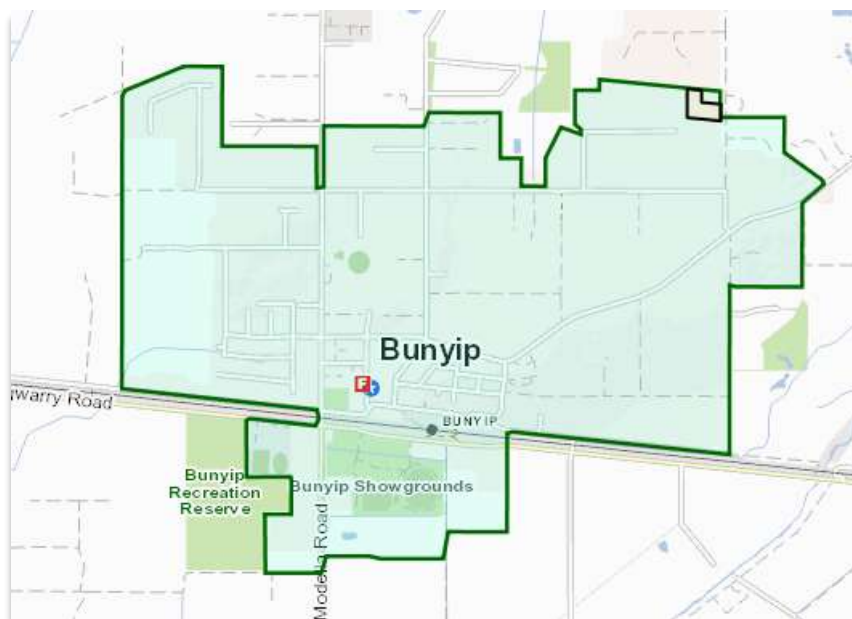
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PERMIT HISTORY

Planning Permit T090294 was issued for the Subdivision of land into Two (2) lots, issued 16 September 2009.

SURROUNDS

The subject site forms part of the Doran Road low density residential neighbourhood in Bunyip. Doran Road is an unsealed road that connects to Morris Way to the North and A'beckett Road to the South. The subject site is approximately 2km to the north-east of the Bunyip activity centre and is well located in terms of services, facilities and public open space. Doran Road provides local access to residential lots. An image identifying the subject site's location within the wider Bunyip township is provided below:






A PLAN OF THE SUBJECT SITE (TOP RIGHT CORNER OF THE TOWN BOUNDARY), LASSI 2025.

The prevailing character of the immediate neighbourhood surrounding the subject site is emerging towards residential estates in response to the significant demand for residential land and housing being experienced in Bunyip in recent times. The Wattletree Road, Hope Street and the Petty Road and Nylander Road precinct has traditionally comprised large residential allotments used for small scale agriculture and lifestyle purposes and have contributed to the valued rural character of the town. The trend toward smaller lots is also evident in Doran Road. These large rectangular allotments were

designated for future residential estates in the Bunyip Township Strategy in 2009, and as such, an emerging character that includes diverse lot sizes and infill residential development is being experienced.

The land immediately adjoining the subject site has been summarised below:

| | | |
|-------|---|---|
| NORTH |  | <ul style="list-style-type: none"> • Abuts a vacant laneway ("Paper Road") that has a high-pressure gas line. • Abuts 16 Doran Road, measuring 4,020m² and is zoned as Low Density Residential and is developed with a single storey weatherboard dwelling and an associated outbuilding. • Land to the north is similarly zoned, with land subject to the GWZ to the north east and further north. |
| EAST |  | <ul style="list-style-type: none"> • Addresses Doran Road with significant roadside vegetation contained in the road reserve. • Further east is Green Wedge zoned lots 19 & 21 Doran Road and 205 A'beckett Road. Both 19 & 21 Doran Road measure to 4.4197 hectares while 205 A'beckett Road equals 8.6326 hectares. They are all developed with dwellings. |
| SOUTH |  | <ul style="list-style-type: none"> • Abuts 12 Doran Road, developed with a single storey brick dwelling and has an associated outbuilding. The lot equals 6,898m² and is Low Density Residential Zoned. • Further south are similarly zoned lots that are smaller in area and feature dwelling development. |

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ENVIRONMENTAL CONSIDERATIONS

TOPOGRAPHY

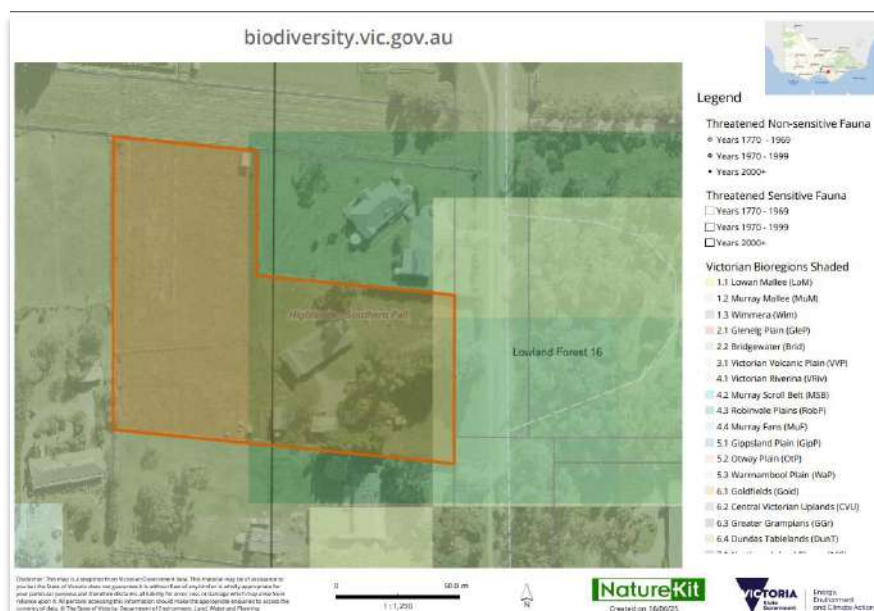
Topographically, the land falls gently from the high point in the southeast of the site to the low point in the northwest, but is generally flat. This topography equates to a slope of 3.7%, or 2°. The topography does not pose constraints to the proposed subdivision of the land.

CULTURAL HERITAGE

The land is not mapped within an area of potential cultural significance.

BIODIVERSITY

No listed flora or fauna species are recorded on the subject site, which has been highly modified for residential development and hobby-scale grazing. *NatureKit* (DELWP, 2025) identifies the subject site as a Highlands – Southern fall bioregion with a mean cost-effectiveness rank of all relevant SMP actions as 26 out of 100 (1 being low and 100 being high, where 100 is the top 1% of cost-effective actions that achieve effective biodiversity benefits relative to other actions in Victoria).



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The subject site is considered a highly modified landscape that has been subject to historical clearing. The infill residential development occurring within the immediate surrounds can also be argued to have significantly reduced the biodiversity value of the land.

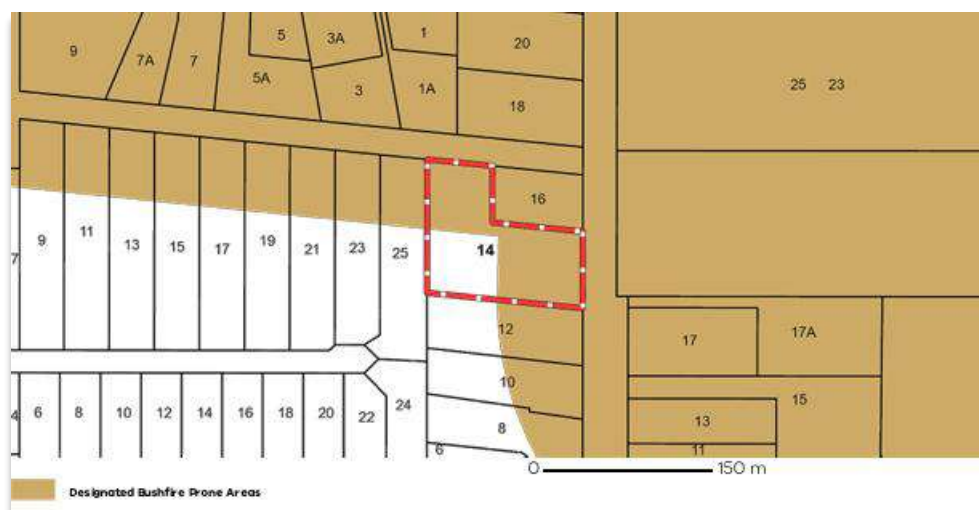
VEGETATION

The landscape is modified, and the land has been extensively cleared. The vegetation on the site and surrounding land has been assessed by *ArbKey* with the following table showing the count of assessed species (extracted from Table 3, page 5: *ArbKey* Preliminary Assessment), of which 4 trees (12,19,21 and 23) were attributed with a High arboricultural value.

| Genus Species | Common Name | Species Origin | Count of Trees | Tree IDs |
|--|----------------------|-------------------|----------------|--|
| <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 31 | 15, 17, 20, 22, 24, 26, 27, 28, 30, 33, 36, 39, 41, 44, 47, 49, 51, 54, 56, 57, 59, 60, 62, 64, 65, 66, 67, 68, 69, 70, 71 |
| <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 22 | 8, 9, 11, 13, 14, 25, 29, 31, 32, 35, 37, 38, 40, 42, 43, 45, 46, 48, 50, 52, 53, 55 |
| <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 5 | 16, 18, 58, 61, 63 |
| <i>Callistemon viminalis</i> | Weeping Bottle Brush | Australian Native | 2 | 7, 10 |
| <i>Eucalyptus camaldulensis</i> | River Red Gum | Indigenous | 2 | 21, 23 |
| <i>Fraxinus angustifolia subsp. angustifolia</i> | Narrow Leaved Ash | Exotic | 2 | 3, 6 |
| <i>Malus domestica</i> | Apple | Exotic | 2 | 2, 4 |
| <i>Corymbia citriodora</i> | Lemon-scented Gum | Australian Native | 1 | 1 |
| <i>Corymbia maculata</i> | Spotted Gum | Australian Native | 1 | 12 |
| <i>Eucalyptus bicostata</i> | Eurabbie | Australian Native | 1 | 34 |
| <i>Eucalyptus ovata</i> | Swamp Gum | Indigenous | 1 | 19 |
| <i>Prunus cerasifera</i> | Cherry Plum | Exotic | 1 | 5 |

BUSHFIRE PRONE AREA

The subject site is partially mapped as a designated Bushfire Prone Area. Further information on how the proposal has considered the implications of being mapped within a designated bushfire prone area has been provided in the response to Clause 13.02 in the State and Local Planning Policy section of this report



DESIGNATED BUSHFIRE PRONE AREA (IMAGE COURTESY OF VICPLAN)

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4. THE PROPOSAL

The applicant seeks approval for the staged subdivision of land into three (3) lots, the removal of vegetation and to create a restriction on title and the Plan of Subdivision that formalises the building and waste envelopes.

SUBDIVISION PROPOSAL

The proposed lot configuration is as per the Development Plan (Ver 3) prepared by Nobelius Land Surveyors (below).

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The details of each lot have been provided in the table below:

| LOT | AREA | EXISTING CONDITIONS | PROPOSED CONDITIONS |
|-----|--------------------|---|--|
| 1 | 4249m ² | Single storey red brick dwelling with a gravel driveway & associated outbuilding. | An indicative waste envelope of 477m ² to the north-east of the lot. Removal of trees 18 and 12 are required to facilitate driveway access. Onsite sheds to remain in place. |
| 2 | 4063m ² | Vacant | Driveway measures 5 metres in width and is located adjacent to the southern boundary that connects the building envelope (area of 1524m ²) to Doran Road. There is a proposed waste envelope of 633m ² that is setback from |

| | | | |
|---|--------------------|-------------------------------------|---|
| | | | boundaries by between 3-6 metres and the building envelope is setback from boundaries by 5 metres. Removal of trees 8, 9, 11, 13 & 14 necessary to create driveway access. |
| 3 | 4001m ² | Shed towards the northern boundary. | Proposed driveway is 6 metres in width and located adjacent to the northern boundary. An indicative building envelope of 1495m ² is proposed with 5 metre setbacks from boundaries and an indicative waste envelope of 625m ² that is setback from boundaries between 3-6 metres. 16 trees are proposed to be removed to facilitate the access; these trees are a <i>Photinia xfraseri</i> planted hedge of low arboricultural value. |

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VEGETATION REMOVAL

The proposal contemplates the removal of thirty- eight (38) trees. The complete list of trees to be removed has been incorporated into the table below.

| TREE NO | COMMON NAME/ SPECIES | ORIGIN | DBH | REMOVE/ RETAIN | PERMIT | | EXEMPTION APPLIES |
|---------|----------------------|-------------|-------|----------------|-------------------------------------|--------------------------|-------------------|
| | | | | | VPO1 | 52.17 | |
| 8 | Leyland Cypress | Exotic | 64.2 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 9 | Leyland Cypress | Exotic | 64.2 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 11 | Leyland Cypress | Aust Native | 69 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 12 | Corymbia maulata | Aust Native | 69 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | CI52.12.1 |
| 14 | Leyland Cypress | Exotic | 64.2 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 15 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 17 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 18 | Swamp Mahogany | Aus Native | 64.64 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 20 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 22 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 24 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 26 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 27 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 28 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 30 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 33 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 36 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 39 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 41 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 44 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 47 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 49 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 51 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 54 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |

| | | | | | | | |
|----|------------------|--------|-----|--------|-------------------------------------|--------------------------|----|
| 56 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 57 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 59 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 60 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 62 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 64 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 65 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 66 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 67 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 68 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 69 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 70 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 71 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |

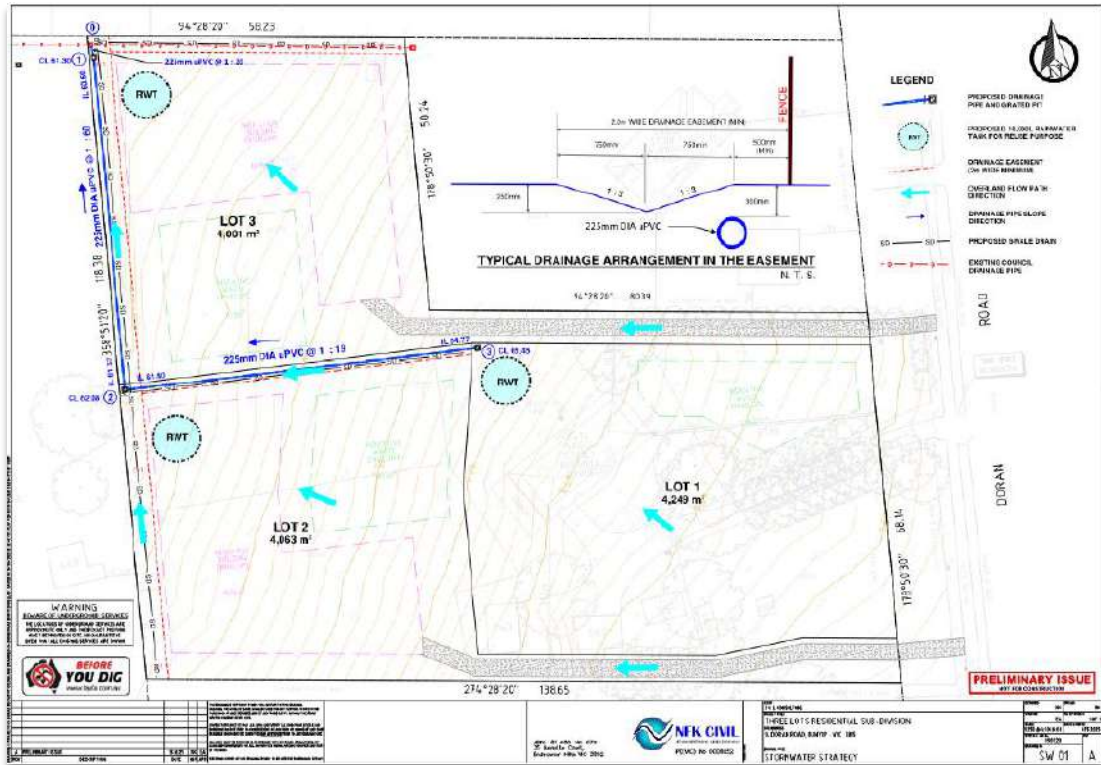
The Tree Protection Zone of Tree 34 will be encroached by the proposed development by less than 10%, which is regarded as a 'minor encroachment' (*ArbKey*, 2025:6). The tree is expected to remain viable throughout the implementation of the design (*Arbkey*, 2025:6). Tree 12 is a Spotted Gum that will be removed to facilitate access to Lot 3. This tree is located within 10 metres of the dwelling, the construction of which dates prior to 2009 therefore, the removal of Tree 12 is exempt under Clause 52.12-1 Bushfire Exemptions. The remaining onsite trees will not be encroached by the design and will remain viable.

STORMWATER ARRANGEMENTS

NFK Civil have assessed the site, proposal and provided a stormwater strategy report (dated 19 June 2025) that identifies the relevant drainage Strategy as the Wattletree Road Drainage Scheme (2854) with a terminal point located at the northwestern corner of the site, identified as X11 and X12 on the DS (2025:17). It is noted that the site is subject to a contribution to the Wattletree Road DS, which is consistent with Section 174 Agreement AH045495J dated 18/02/2010, a portion of which has regard to water quality can be offset by any Water Sensitive Urban Drainage (WSUD) implemented on the site/s, once subdivided. Water tanks (10,000Ltr) are proposed for incorporation into the development of future dwellings (STORM calculator, page 12: 2025) to offset load to the stormwater infrastructure, and to contribute to WSUD. The provision of water tanks for Lots 2 and 3 should be implemented through agreements on the title that require water tanks to be provided at the time of development (deferred from subdivision) to allow future landowners to determine their location in context with any future dwelling designs and siting. The provision of a water tank for Lot 1 (existing dwelling) can be conditioned should a permit be issued.

The Stormwater Drainage Strategy Plan contained in figure 6 in the stormwater strategy report represents "the initial drainage strategy" and illustrates that the proposed lots can certainly accommodate stormwater provisions within each lot, an extract of which is provided below.

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5. RELEVANT PLANNING CONTROLS

The following section addresses the objectives and requirements of the zoning and overlay controls relevant to the subject site identifying how these planning controls relate to the proposal, trigger an assessment and how we have addressed the requirements of planning provisions.

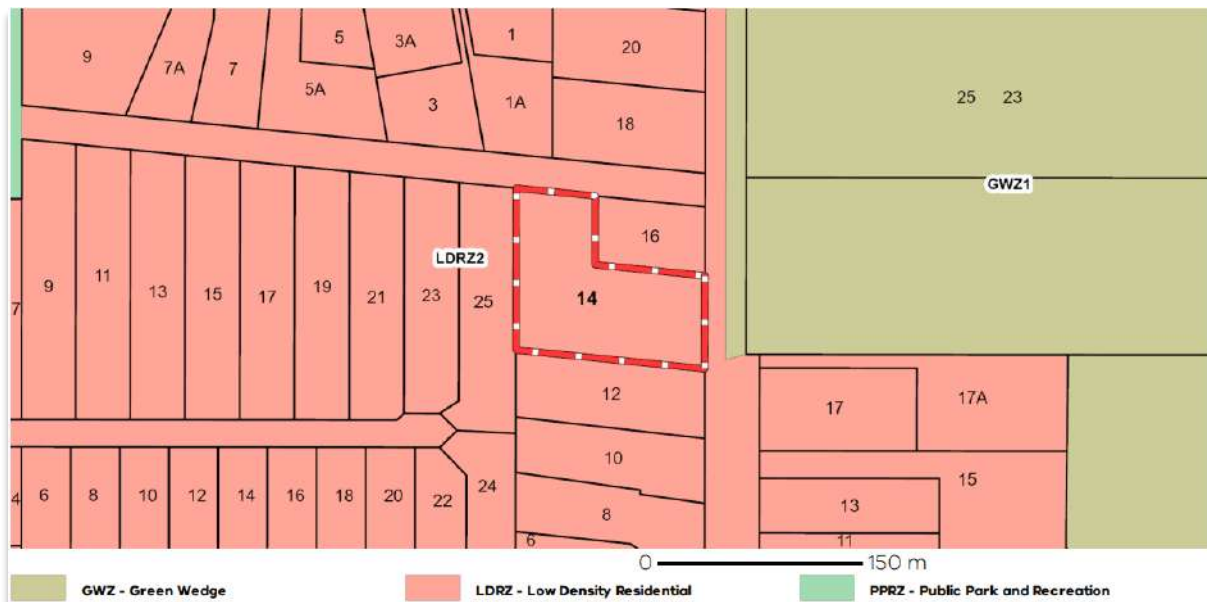
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ZONING CONTROLS

The following provides a brief summary of the planning controls relevant to the subject site identifying how these planning controls relate to the proposal.

LOW DENSITY RESIDENTIAL ZONE

The subject site and all surrounding land is mapped within the Low-Density Residential Zone – Schedule 2 (LDRZ2).



The Low Density Residential Zone has the following purposes relevant to this proposal:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To provide for low-density residential development on lots which, in the absence of reticulated sewerage, can treat and retain all wastewater.

PERMIT REQUIREMENT

Pursuant to **Clause 32.03-3**, a permit is required to subdivide land, each lot must be at least the area specified for the land in a schedule to this zone.

Pursuant to Clause 1.0 Subdivision requirements each lot must be at least 0.4 ha.

APPLICATION REQUIREMENTS

The application is consistent with the requirements at **Clause 32.03-5** and is supported with the following information:

- A Land Capability Assessment is provided by Soil Test Express, dated 2nd May 2025 that provides evidence that the soil profile is suitable to provide on-site effluent detention and treatment that mitigates any risks to human health and the environment. The table below shows the area requirements relevant to the number of bedrooms within a dwelling that may be proposed on the new lots in future (please read in conjunction with the LCA by *Soil Test Express*). The Development Plan (Ver 3) shows Waste Envelopes that exceed the areas required to accommodate the retention and treatment of waste onsite.

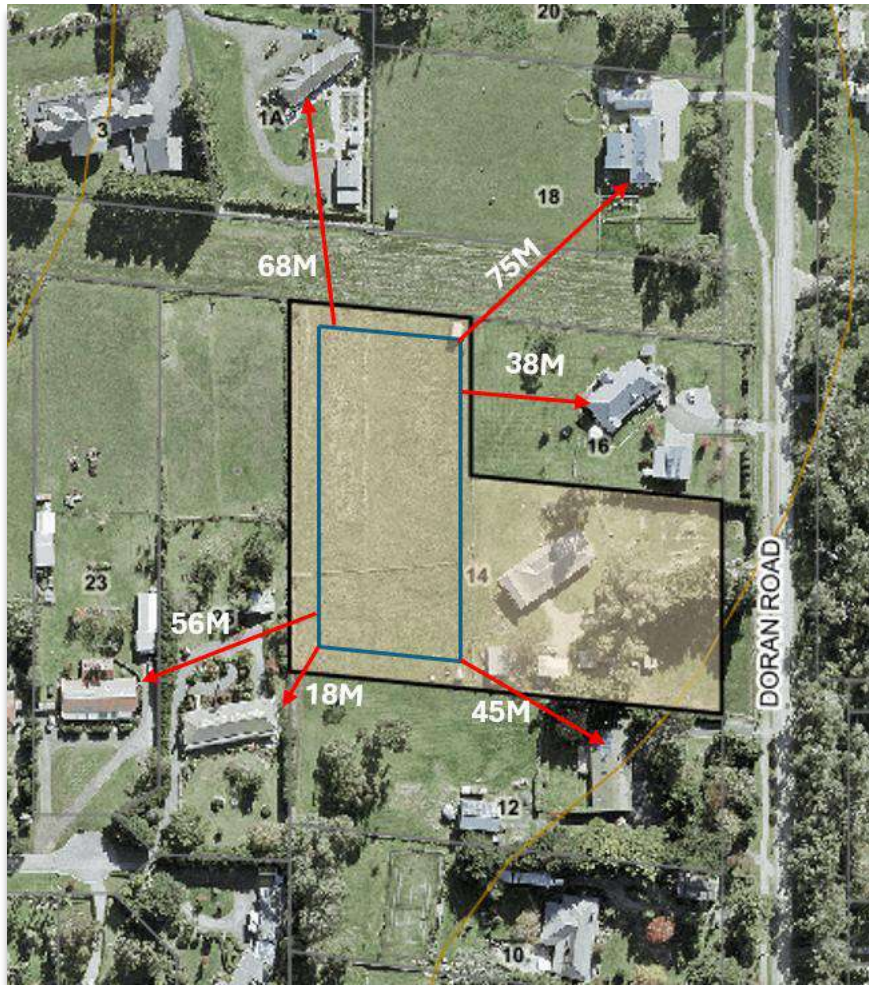
| LOT | BEDROOM DESIGN LOAD RATING (DLR) | SUBSURFACE AREA |
|-------|----------------------------------|-------------------|
| 1 | 5 | 388M ² |
| 2 & 3 | 5 | 582M ² |

- The Development Plan (Ver 3) provided by Nobelius Land Surveyors includes:
 - A building envelope and driveway to the envelope.
 - Existing vegetation.
 - In the absence of reticulated sewerage, an effluent disposal area.
- The Feature and Levels Plan provided by Nobelius Land Surveyors shows the subject land in context with the surrounding and adjacent lots. The proposed building envelopes are generously setback from dwellings on adjoining land, evidencing the proposal will not pose a risk to the amenity of adjoining dwellings. The aerial below shows that a battle-ax lot configuration is consistent with existing examples of battle-ax lots.



A survey plan and subdivision plan from Nobelius Land Surveyors 8th October 2024 details the proposed BE and driveway and Indicative Waste Area for Lots 2 and 3. Lot 1 contains the existing dwelling, driveway, associated sheds and septic tank. All vegetation has been mapped, and setbacks adhere to the *Bunyip Township Strategy 2009*. The Aerial below shows the setback distances of the proposed building envelopes (5 metre setback from boundaries) from existing dwelling on adjacent land.

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SCHEDULE 2 TO LOW DENSITY RESIDENTIAL ZONE

Subdivision requirements for schedule 2 that are relevant to the site and the proposed subdivision. The minimum subdivision area is 0.4 ha (4,000m²). The proposal is not connected to sewerage and subsequent investigations show there is no capacity to connect the site to reticulated sewerage services. Therefore, the development plan shows the lot has the capacity to accommodate a generous septic absorption field to ensure waste can be retained and treated on site. The area of the proposed lots have a minimum area of 4,000m².

LOW DENSITY RESIDENTIAL ZONE - DECISION GUIDELINES

The decision guidelines contained in Clause 32.03-6 have been considered in the proposed design. An assessment of the proposal against each relevant guideline is provided below:

GENERAL

Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- *The Municipal Planning Strategy and the Planning Policy Framework.*

SUBDIVISION

- *The protection and enhancement of the natural environment and character of the area including the retention of vegetation and faunal habitat and the need to plant vegetation along waterways, gullies, ridgelines and property boundaries.*

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- *The availability and provision of utility services, including sewerage, water, drainage, electricity and telecommunications.*
- *In the absence of reticulated sewerage:*
 - *The capability and suitability of the lot to treat and retain all wastewater as determined by a Land Capability Assessment on the risks to human health and the environment of an on-site wastewater management system constructed, installed or altered on the lot in accordance with the requirements of the Environment Protection Regulations under the Environment Protection Act 2017.*
 - *The benefits of restricting the size of lots to generally no more than 2 hectares to enable lots to be efficiently maintained without the need for agricultural techniques and equipment.*
- *The relevant standards of Clauses 56.07-1 to 56.07-4.*

The proposal meets the requirements of the Municipal Planning Strategy and the Planning Policy Framework as addressed in Section 6 (below). The proposal contemplates the subdivision of land into three (3) lots, with Lot 1 being 4,249m² in area and retains the existing dwelling. Lot 2 will measure 4,063m² in area, with a Building Envelope measuring 1,524m² and a waste envelope measuring 633m². Lot 3 will measure 4,001m² in area, with a Building Envelope measuring 1,495m² and a waste envelope measuring 625m². The proposed building envelopes of Lots 2 and 3 feature a 5 metre setback from boundaries, which is consistent with the Bunyip Township Strategy 2009 discussed in detail below, and in excess of the minimum side and rear setbacks contained in clause 56, and contribute to avoiding adverse impacts to neighbours on adjoining land.

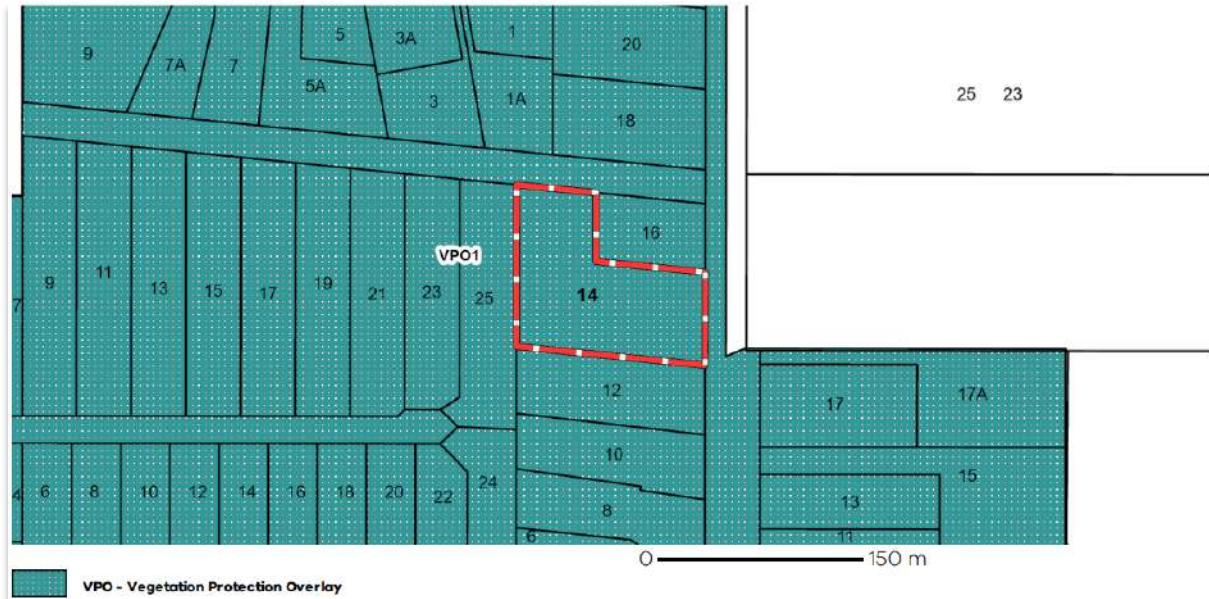
As such, the proposed subdivision is consistent with the requirements and purposes of the Low Density Residential Zone, and warrants Council support.

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OVERLAYS

VEGETATION PROTECTION OVERLAY

The land is subject to the Vegetation Protection Overlay, as per the *VicPlan* (2025) below:



VEGETATION PROTECTION OVERLAY – SCHEDULE 1 (VICPLAN, 2025)

PURPOSE

The Vegetation Protection Overlay seeks:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To protect areas of significant vegetation
- To ensure that development minimizes loss of vegetation
- To preserve existing trees and other vegetation.
- To recognize vegetation protection areas as locations of special significance, natural beauty, interest and importance.
- To maintain and enhance habitat and habitat corridors for indigenous fauna.
- To encourage the regeneration of native vegetation.

VEGETATION SIGNIFICANCE & OBJECTIVES

Schedule 1 to Clause 42.02 Vegetation Protection Overlay outlines the following statement of nature and significance of vegetation to be protected:

STATEMENT OF NATURE AND SIGNIFICANCE OF VEGETATION TO BE PROTECTED

The low density residential areas within the Shire support substantial areas of remnant indigenous vegetation and mature exotic species. The maintenance and enhancement of the flora habitat is vital for the long term protection of these areas and the native fauna they support. Some of these

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areas contain small lots which are not protected under the native vegetation controls of Clause 52.17 resulting in areas of vegetation becoming increasingly fragmented.

The remnant vegetation is important for its contribution to habitat and environmental values and processes. This vegetation provides protection to waterways including in the reduction of siltation and contributes to habitat corridors as well as playing a role in supporting soil stability, reducing stormwater runoff, and limiting erosion and salinity. Remnant vegetation is important for its contribution to habitat and environmental values and processes. This vegetation provides protection to waterways including in the reduction of siltation and contributes to habitat corridors as well as playing a role in supporting soil stability, reducing stormwater runoff, and limiting erosion and salinity.

Schedule 1 to Clause 42.02 Vegetation Protection Overlay outlines the following vegetation protection objectives to be achieved:

VEGETATION PROTECTION OBJECTIVES TO BE ACHIEVED

- *To protect and conserve existing vegetation as an important element of the character of low density residential areas.*
- *To maintain and enhance local habitat and biolinks, including hollow bearing trees.*
- *To avoid and minimize the removal of vegetation where it contributes to the management of environmental hazards such as erosion, salinity, siltation of creeks and watercourses, and stormwater runoff.*
- *To ensure that vegetation remains a significant part of the character and visual amenity of these areas, with the built form being located within a landscape, and vegetation being a predominant feature.*

PERMIT REQUIREMENT

Pursuant to **Clause 42.02-2** and Part 3.0 of Schedule 1 to the VPO, a permit is required to remove, destroy or lop any vegetation specified in a schedule to this overlay.

A permit is sought pursuant to **Clause 42.02-2 Permit requirement** to remove thirty-eight (38) trees, one (1) of which is an Australian Native, none are Indigenous to Victoria.

The table below details the trees that are proposed to be removed. Please note that the proposal trigger the Vegetation protection Overlay only, not Clause 52.17 given the absence of Indigenous species on the site.

| TREE NO | COMMON NAME/ SPECIES | ORIGIN | DBH | REMOVE/ RETAIN | PERMIT | | EXEMPTION APPLIES |
|---------|----------------------|-------------|------|----------------|-------------------------------------|--------------------------|-------------------|
| | | | | | VPO1 | 52.17 | |
| 8 | Leyland Cypress | Exotic | 64.2 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 9 | Leyland Cypress | Exotic | 64.2 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 11 | Leyland Cypress | Aust Native | 69 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |

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| | | | | | | | |
|----|------------------|-------------|-------|--------|-------------------------------------|--------------------------|-----------|
| 12 | Corymbia maulata | Aust Native | 69 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | CI52.12.1 |
| 14 | Leyland Cypress | Exotic | 64.2 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 15 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 17 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 18 | Swamp Mahogany | Aus Native | 64.64 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 20 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 22 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 24 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 26 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 27 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 28 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 30 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 33 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 36 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 39 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 41 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 44 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 47 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 49 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 51 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 54 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 56 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 57 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 59 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 60 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 62 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 64 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 65 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 66 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 67 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 68 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 69 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 70 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |
| 71 | Chinese Hawthorn | Exotic | 9.9 | Remove | <input checked="" type="checkbox"/> | <input type="checkbox"/> | NA |

DECISION GUIDELINES

Before deciding on an application, the responsible authority must consider, as appropriate (in addition to Clause 65):

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *The statement of the nature and significance of the vegetation to be protected and the vegetation protection objective contained in a schedule to this overlay.*
- *The effect of the proposed use, building, works or subdivision on the nature and type of vegetation to be protected.*
- *The role of native vegetation in conserving flora and fauna.*
- *The need to retain native or other vegetation if it is rare, supports rare species of flora or fauna or forms part of a wildlife corridor.*

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- *The need to retain vegetation which prevents or limits adverse effects on ground water recharge.*
- *The need to retain vegetation:*
 - *Where ground slopes exceed 20 percent.*
 - *Within 30 metres of a waterway or a wetland.*
 - *On land where the soil or subsoil may become unstable if cleared.*
 - *On land subject to or which may contribute to soil erosion, slippage or salinisation*
 - *In areas where the removal, destruction or lopping of vegetation could adversely affect the integrity or long term preservation of an identified site of scientific, nature conservation or cultural significance*
 - *Which is of heritage or cultural significance.*
- *The need to remove, destroy or lop vegetation to create a defensible space to reduce the risk of bushfire to life and property*
- *Any relevant permit to remove, destroy or lop vegetation in accordance with a land management plan or works program.*
- *Whether the application includes a land management plan or works program.*
- *Whether provision is made or is to be made to establish and maintain vegetation elsewhere on the land.*
- *Any other matters specified in a schedule to this overlay.*

The application contemplates a three lot subdivision that necessitates the removal of planted trees to facilitate access to Lots 2 and 3. All trees proposed for removal are planted and exotic, apart from trees 12 (Spotted Gum) and 18 (Corymbia maculata). Tree 12 is removed under the exemptions of Clause 52.12-1 Bushfire exemptions given the tree is within 10 metres of the existing dwelling that was constructed before September 2009. Tree 18 is a planted tree as evidenced by its size and requires permission under the VPO to remove. The indigenous trees on Lot 1 will be retained including trees 16, 19, 21 and 23, which are assessed as medium to high arboricultural value. The retention of the higher value trees contributes to the preservation of the valued flora in the area, which contributes to the landscape character of the district. The generous lot sizes provide ample opportunities to landscape the land and employ drought-tolerant species that will both improve the biodiversity of the area and maintain the landscape character. The proposal meets the decision guidelines for the Vegetation protection Overlay and warrants Council support.

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DESIGN AND DEVELOPMENT OVERLAY

The land is subject to the Design and Development Overlay, as per the *VicPlan* (2025) below:



DESIGN AND DEVELOPMENT OVERLAY (VICPLAN, 2025)

PURPOSE & TRIGGER

The Design and Development Overlay has the following purposes relevant to this proposal:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To identify areas which are affected by specific requirements relating to the design and built form of new development.

Pursuant to **Clause 43.02-3** a permit is required to subdivide the land.

Subdivision of the land must occur in accordance with any lot size or other requirement specified in a schedule to this overlay.

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DESIGN OBJECTIVES

Schedule 1 to Clause 43.02 Design and Development Overlay contains the following design objectives:

- To ensure that the location and design of buildings creates an attractive low density residential environment.
- To ensure that any development has regard to the environmental features and constraints of the land.
- To ensure that the subdivision of land has regard to the existing pattern of subdivision in the area.

DECISION GUIDELINES

The decision guidelines contained in **Clause 43.02-6** and Part 6.0 of Schedule 1 of the DDO have been considered in the proposed design. An assessment of the proposal against each relevant guideline is provided below:

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *The design objectives of the relevant schedule to this overlay.*
- *The provisions of any relevant policies and urban design guidelines.*
- *Whether the bulk, location and appearance of any proposed buildings and works will be in keeping with the character and appearance of adjacent buildings, the streetscape or the area.*
- *Whether the design, form, layout, proportion and scale of any proposed buildings and works is compatible with the period, style, form, proportion, and scale of any identified heritage places surrounding the site.*
- *Whether any proposed landscaping or removal of vegetation will be in keeping with the character and appearance of adjacent buildings, the streetscape or the area.*
- *The layout and appearance of areas set aside for car parking, access and egress, loading and unloading and the location of any proposed off-street car parking*
- *Whether subdivision will result in development which is not in keeping with the character and appearance of adjacent buildings, the streetscape or the area.*
- *Any other matters specified in a schedule to this overlay.*

Schedule 1 to Clause 43.02 contains the following decision guidelines:

- *The Land Capability Study for the Cardinia Shire (February 1997)*
- *The protection and enhancement of the natural environment and character of the area including the retention of remnant vegetation and habitat, and the need to plant vegetation along waterways, gullies, ridgelines and property boundaries.*
- *The impact of any buildings and works on areas of remnant vegetation, and habitat of botanical and zoological significance.*
- *The impact of the proposed buildings and works on the landscape character of the area, including prominent ridgelines and significant views.*
- *Measures to address environmental hazards or constraints including slope, erosion, drainage, salinity and fire.*
- *The protection of waterways and water quality through the appropriate management of effluent disposal, erosion and sediment pollution.*

The proposal meets the requirements of the Municipal Planning Strategy and the Planning Policy Framework as addressed in Section 6 (below). The proposal contemplates the subdivision of land into three (3) lots, with Lot areas consistent with those evident on Doran Road and surrounding road networks. The proposed building envelopes feature 5 metre setbacks from boundaries, which are consistent with the Bunyip Township Strategy 2009 and in excess of the minimum side and rear setbacks contained in clause 56 and avoid adverse impacts on neighbours on adjoining land. Trees adjacent to boundaries will be removed to facilitate access. The proposal contemplates generous areas suitable for future dwelling development and waste retention, with setbacks consistent with those required by the Bunyip Township Strategy, 2009, ensuring the local character is preserved. Development Plan (Ver 3) provide indicative landscaping strips that illustrate the proposals capacity to provide visual screens from existing dwellings and ensure there is capacity to provide landscaping that is consistent with the DDO1 and the Bunyip Township Strategy.

As such, the proposed subdivision is appropriate and warrants Council support.

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6. MUNICIPAL PLANNING STRATEGY

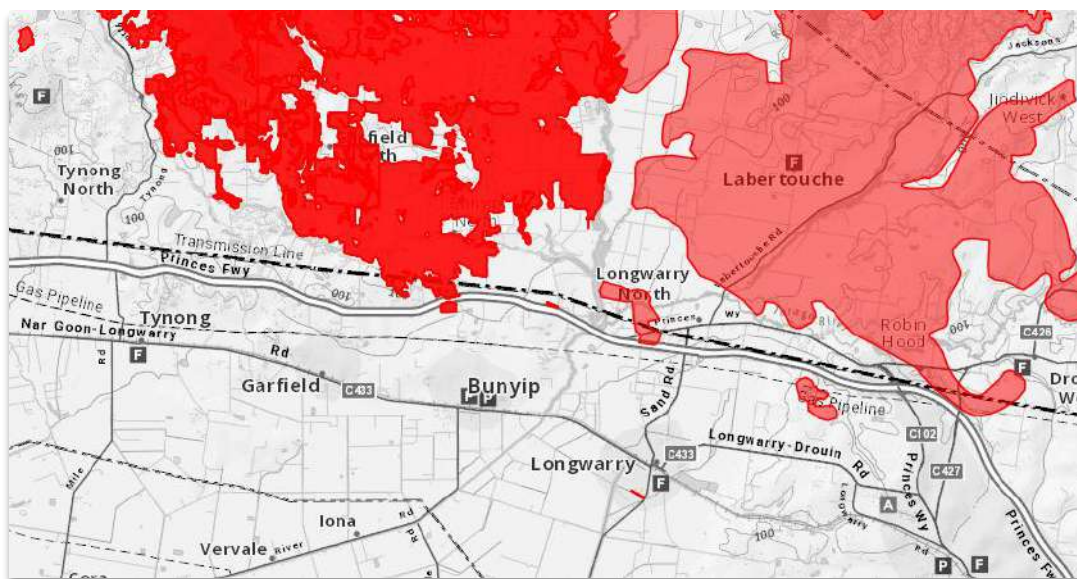
CLAUSE 21.01-2 KEY INFLUENCES AND CLAUSE 21.01-3 KEY ISSUES

The Cardinia Shire seeks to be recognised as a unique place of environmental significance where our quality of life and sense of community is balanced by sustainable and sensitive development, population and economic growth. The proposal is sensitive to the key issues facing Cardinia that have regard to preserving environmentally heritage significant areas, mitigating risks associated with flooding and bushfire, providing housing and services for a growing community, and facilitating economic development. The subject site is located within the strategic residential area of Bunyip and is consistent with the Cardinia Shire Strategic framework plan at clause 21.01-5.

CLAUSES 21.02 ENVIRONMENT, 21.02-2 LANDSCAPE AND 21.02-3 BIODIVERSITY

Clause 21.02 Environment, has the objective, among others, to manage development to mitigate impacts on the operation and health of waterway systems via the provision of retention and treatment of domestic wastewater. The proposal avoids detrimental impacts on waterways by reducing stormwater via water tanks that harvest rainwater from the roof of the existing dwelling. Additionally, the septic system that services the existing dwelling has been inspected by a Licensed Plumber and found to be in good working order. Any proposed dwelling on lots 2 and 3 will be subject to Council requirements regarding stormwater and water management. A Land Capability Assessment supplied by *Soil Test Express* provides evidence that the soil is such that can accommodate the development of dwellings (with 5 bedrooms) and retain and treat wastewater onsite.

Clause 21.02-3 Bushfire management acknowledges the high risk associated with some of the areas within the shire. Bunyip has modest slope with vegetation coverage akin to grazed paddocks (AS3959-2018) as opposed to the more steeply sloped and densely vegetated areas associated with the Bunyip State Reserve to the north of the Princess freeway, which has experienced fire damage as a result of the 2009 and 2019 fires (refer below). Locating subdivision and infill development in existing low risk areas such as Bunyip meets the primary objective of all planning provisions that seek to mitigate bushfire risk.



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BUNYIP HAS TOPOGRAPHIC AND VEGETATION CHARACTERISTICS THAT MAKE IT A LOW RISK AREA AS EVIDENCED BY THE VICTORIAN FIRE RISK MAPPING ABOVE, 2025.

CLAUSES 21.03 SETTLEMENT AND HOUSING, 21.03-4 RURAL TOWNSHIPS

Clause 21.03 Settlement and Housing and more specifically **Clause 21.03-4 Rural Townships** identifies Bunyip as a large rural township, and highlights the key issues facing rural townships that are relevant to our submission as:

- *Retaining and enhancing the existing rural township character.*
- *Acknowledging that the capacity for growth varies depending on the environmental and infrastructure capacities of each of the towns.*

The proposed subdivision addresses these key issues through ensuring that the lot sizes are respectful and consistent with the existing subdivision patterns and lifestyle and amenity values of the surrounding neighbourhood. The proposal avoids vegetation impacts.

Clause 21.08-2 Bunyip ensures use and development proposals are consistent with the requirements of the Bunyip Township Strategy, September 2009. As previously stated, the subject sites are located within the area identified as Precinct 3 – Low density residential area within the Strategic Framework Plan (Figure 5, Bunyip Township Strategy, September 2009) which can contribute to the projected growth of residential (infill) development within the Bunyip township boundaries while preserving the low density residential character (refer to Sections 4.7 Objectives and 4.8 Policy, *Bunyip Township Strategy, September 2009*).

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7. STATE AND LOCAL PLANNING POLICY FRAMEWORK

This part of the report assesses and responds to the legislative and policy requirements for the project outlined in the Cardinia Planning Scheme and in accordance with the Planning and Environment Act 1987. The relevant clauses of the State & Local Planning Policy Framework for subdivisions of the type presented in this report are largely contained in Clauses 11, 13, 15, 18 and 19. The proposal is located within of the study area of the *Bunyip Township Strategy*.

An assessment against the relevant clauses of the Cardinia Planning Scheme has been provided below:

CLAUSE 11 SETTLEMENT

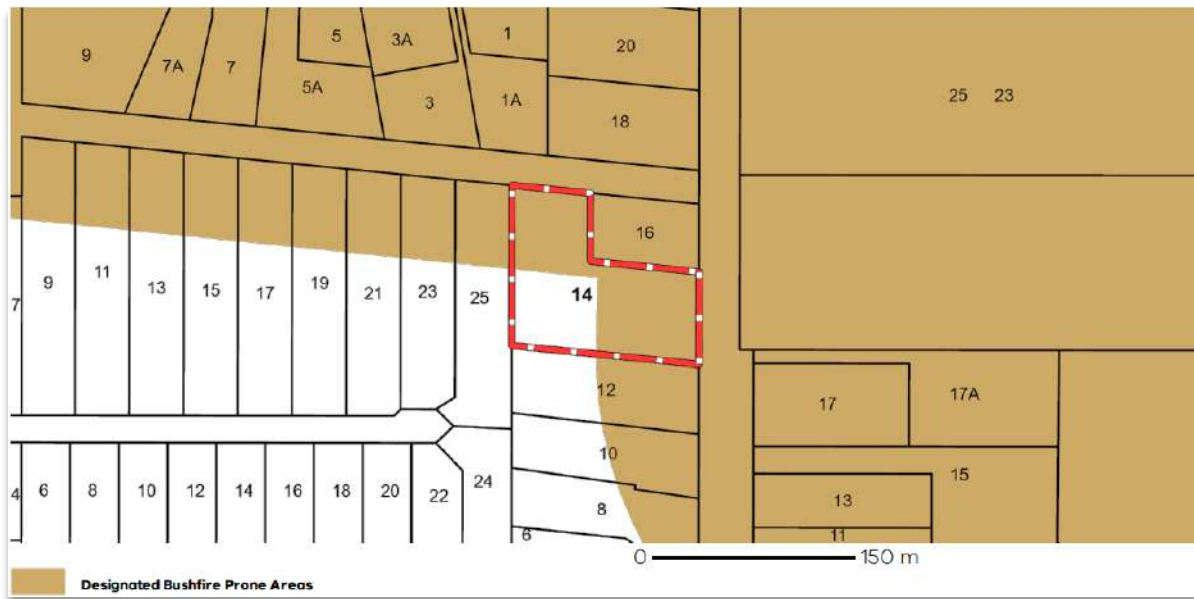
Clause 11.01-1S Settlement and **Clause 11.02-1S Supply of urban land** have regard for the development of sustainable growth and development that preserves the distinction between the residential areas of townships such as Bunyip and the green wedge zoned land that surrounds such communities. They have the shared objective to ensure a sufficient supply of land is available for residential, commercial, retail, industrial recreational, institutional, and other community uses, with the intensification of existing urban areas nominated as a viable option. Our proposal is consistent with this objective.

CLAUSE 13 ENVIRONMENTAL RISKS AND AMENITY

Clause 13.01-1S Natural hazards and climate change is a recently introduced planning mechanism (VC216, 10/06/2022) that seeks to prioritise risk-based planning in an effort to minimise the impacts of natural hazards associated with climate change. One strategy that has salience here is the directive to focus growth and development to low-risk locations. The subject sites are not vulnerable to flooding, nor are they subject to the intensified risks associated with bushfire (though they are identified as Bushfire Prone). The proposal contemplates the subdivision of land within an existing residential area and the development of a road that dissects the lots and facilitates access and egress, which is consistent with risk mitigation policies.

Clause 13.02-1S Bushfire Planning relates to land within a designated bushfire prone area; subject to the Bushfire Management Overlay; and/or proposed to be used or development in a way that may create a bushfire hazard. The objective of Clause 13.02-1S is to “*strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life*” achieved through strategies that prioritise the *protection of human life* over all other policy considerations; “*directing population growth and development to low-risk locations*” and “*ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire*” with low risk location being those that are assessed as having a radiant heat flux of less than 12.5 kilowatts/square metre under AS3959-2018 (Construction of Buildings in Bushfire Prone Areas (Standards Australia, 2020); and reducing community vulnerability to bushfire through the consideration of bushfire risk at all stages of the planning process. The subject site is within an identified Bushfire Prone Area as per the *VicPlan* extract below.

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Clause 13.02-1S (Bushfire) of the Planning Scheme applies to all decision making relating to land that is within a BPA; subject to the BMO; or proposed to be used or developed in a way that may create a bushfire hazard and seeks:

To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.

Strategies employed to achieve the above-mentioned objective include:

- *prioritising the protection of human life;*
- *requiring a robust assessment of the bushfire hazard and risk assessment before any strategic or statutory decision is made; and*
- *directing population growth and new settlements to low risk locations.*

Clause 13.02-1S provides strategies that seek to mitigate risk associated with bushfire. The following table provides a response to the strategies of clause 13.02-1S.

PROTECTION OF HUMAN LIFE

| GIVE PRIORITY TO THE PROTECTION OF HUMAN LIFE BY: | RESPONSE |
|--|--|
| <i>Prioritising the protection of human life over all other policy considerations.</i> | <ul style="list-style-type: none"> • This proposal provides for a subdivision of the land into 3 lots. The report demonstrates that it meets the requirements of Clause 13.02-1S including the long term use and development controls through siting and construction to the required BAL. • The BE's will be sited towards the western aspect of the allotment with a 5m setback from the northern, western and southern boundaries. • All defensible space is contained on the allotment. |

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| | |
|---|---|
| <i>Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire.</i> | <ul style="list-style-type: none"> • There is no onsite vegetation on the land employed as Lots 2 and 3 that requires management. • Access to areas of low-no bushfire risk are available from Doran Road. • The existing road network facilitates vehicle access to areas in Bunyip township. • Access and egress are facilitated from Doran Road in the east with egress routes available and linked to Princes Freeway. |
| <i>Reducing the vulnerability of communities to bushfire through the consideration of bushfire risk in decision making at all stages of the planning process.</i> | <ul style="list-style-type: none"> • An application for the subdivision of the land needs to articulate how the design responds to the identified bushfire risk. • Any future dwelling use and development will be designed and sited to respond to bushfire and subject to a BAL assessment to ensure suitable construction in accordance with AS3959:2018. • The surrounding topography is mainly cleared farmland and the Bunyip area presents as low risk. |

BUSHFIRE HAZARD IDENTIFICATION AND ASSESSMENT

| IDENTIFY BUSHFIRE HAZARD AND UNDERTAKE APPROPRIATE RISK ASSESSMENT BY: | RESPONSE |
|---|--|
| <i>Applying the best available science to identify vegetation, topographic and climatic conditions that create a bushfire hazard.</i> | <ul style="list-style-type: none"> • The Cardinia Shire Planning Scheme relies on the planning proposal to respond to bushfire based on current assessment methods. • Clauses 13.02-15 has been considered and addressed by the proposal. • Clause 71.02-3 Integrated Decision Making strengthens the importance of bushfire planning as an appropriate tool to reconcile potential conflicts in design and vision. |
| <i>Considering the best available information about bushfire hazard including the map of designated bushfire prone areas prepared under the Building Act 1993 or regulations made under that Act.</i> | <ul style="list-style-type: none"> • The planning proposal responds to the requirements associated with the Bushfire Prone Area. |
| <i>Applying the Bushfire Management Overlay in planning schemes to areas where the extent of vegetation can create an extreme bushfire hazard</i> | <ul style="list-style-type: none"> • Not Applicable |
| <i>Considering and assessing the bushfire hazard on the basis of:</i> <ul style="list-style-type: none"> • <i>Landscape conditions - meaning the conditions in the landscape within 20</i> | <ul style="list-style-type: none"> • The Landscape conditions and local site conditions are provided below. • The Neighbourhood and local conditions are provided below. |

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| | |
|---|---|
| <p><i>kilometres and potentially up to 75 kilometres from a site;</i></p> <ul style="list-style-type: none"> • <i>Local conditions - meaning conditions in the area within approximately 1 kilometre from a site;</i> • <i>Neighbourhood conditions - meaning conditions in the area within 400 metres of a site; and,</i> • <i>The site for the development</i> | <ul style="list-style-type: none"> • The Site conditions have been discussed in Section 4 of this report and a site plan provided below. |
| <p><i>Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.</i></p> | <ul style="list-style-type: none"> • Not applicable |
| <p><i>Ensuring that strategic planning documents, planning scheme amendments, planning permit applications and development plan approvals properly assess bushfire risk and include appropriate bushfire protection measures.</i></p> | <ul style="list-style-type: none"> • This report provides evidence that informs the design and provides a basis for approval of the planning proposal, with regard to bushfire risk. • Assessing the site-based bushfire risk and including appropriate bushfire protection measures (e.g. managed vegetation, BALs, separation from the hazard) enables the achievement of the direction of the Planning Scheme. |
| <p><i>Not approving development where a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied or bushfire protection measures can be adequately implemented.</i></p> | <ul style="list-style-type: none"> • Perhaps the most salient element of clause 13.02 is it empowers the Responsible Authority to refuse a permit application until it is satisfied that the bushfire protection measures are being implemented. • This report demonstrates that the risk of bushfire should not be a reason for refusal. |

SETTLEMENT PLANNING

| PLAN TO STRENGTHEN THE RESILIENCE OF SETTLEMENTS AND COMMUNITIES AND PRIORITISE PROTECTION OF HUMAN LIFE BY: | RESPONSE |
|---|--|
| <p><i>Directing population growth and development to low risk locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metre under AS3959:2018 Construction of Buildings in Bushfire Prone Areas (Standards Australia, 2018).</i></p> | <ul style="list-style-type: none"> • The land is adjacent to established lots in an area that is recognised as a low risk from bushfire. • Lot 2 will be located outside the land subject to the BPA. • This report shows that the land can achieve suitable separation from the bushfire hazard and allow future construction. |
| <p><i>Ensuring the availability of and access to areas assessed as BAL-LOW rating under AS3959-2018 Construction of Buildings in Bushfire Prone Areas (Standards Australia, 2018) where human life can be better protected from the effects of bushfire.</i></p> | <ul style="list-style-type: none"> • The land has access to Doran Road that provides thoroughfare to areas in Bunyip that are beyond BPA mapping and bushfire risk. |

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| | |
|--|---|
| <i>Ensuring the bushfire risk to existing and future residents, property and community infrastructure will not increase as a result of the future land use and development.</i> | <ul style="list-style-type: none"> The establishment and maintenance of Defendable Space will accompany any future build being subject to ongoing vegetation maintenance as per the BAL that will reduce bushfire risk to the future residence. |
| <i>Achieving no net increase risk to existing and future residents, property and community infrastructure, through the implementation of bushfire protection measures and where possible reduce the bushfire risk overall.</i> | <ul style="list-style-type: none"> Any new dwelling on the subdivided allotments will implement the current regulations pertaining to bushfire construction. |
| <i>Assessing and addressing the bushfire hazard posed to the settlement and the likely bushfire behaviour it will produce at a landscape, settlement, local, neighbourhood and site scale, including the potential for neighbourhood-scale destruction.</i> | <ul style="list-style-type: none"> The Landscape, Local and Neighbourhood conditions are considered below and show the site is suitably setback from vegetation that would pose a risk for the spread of bushfire. |
| <i>Assessing alternative Low Risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis.</i> | <ul style="list-style-type: none"> The proposal contemplates a three (3) lot subdivision in an established residential area of Bunyip. The proposal increases resilience by applying setbacks which can be used as defendable space across the land, which benefits the existing residential lots to the south and east assuming a bushfire or ember attack approached from the north, northwest, as is usual in summer conditions. |
| <i>Not approving any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than BAL-12.5 rating under AS3959:2009.</i> | <ul style="list-style-type: none"> Perhaps the most important element of clause 13.02 is it empowers the Responsible Authority to refuse a permit application until it is satisfied with the bushfire protection measures being implemented. The proposal contemplates a statutory application only, and is not a strategic proposal. This report demonstrates that the risk of bushfire should not be a reason for refusal. |

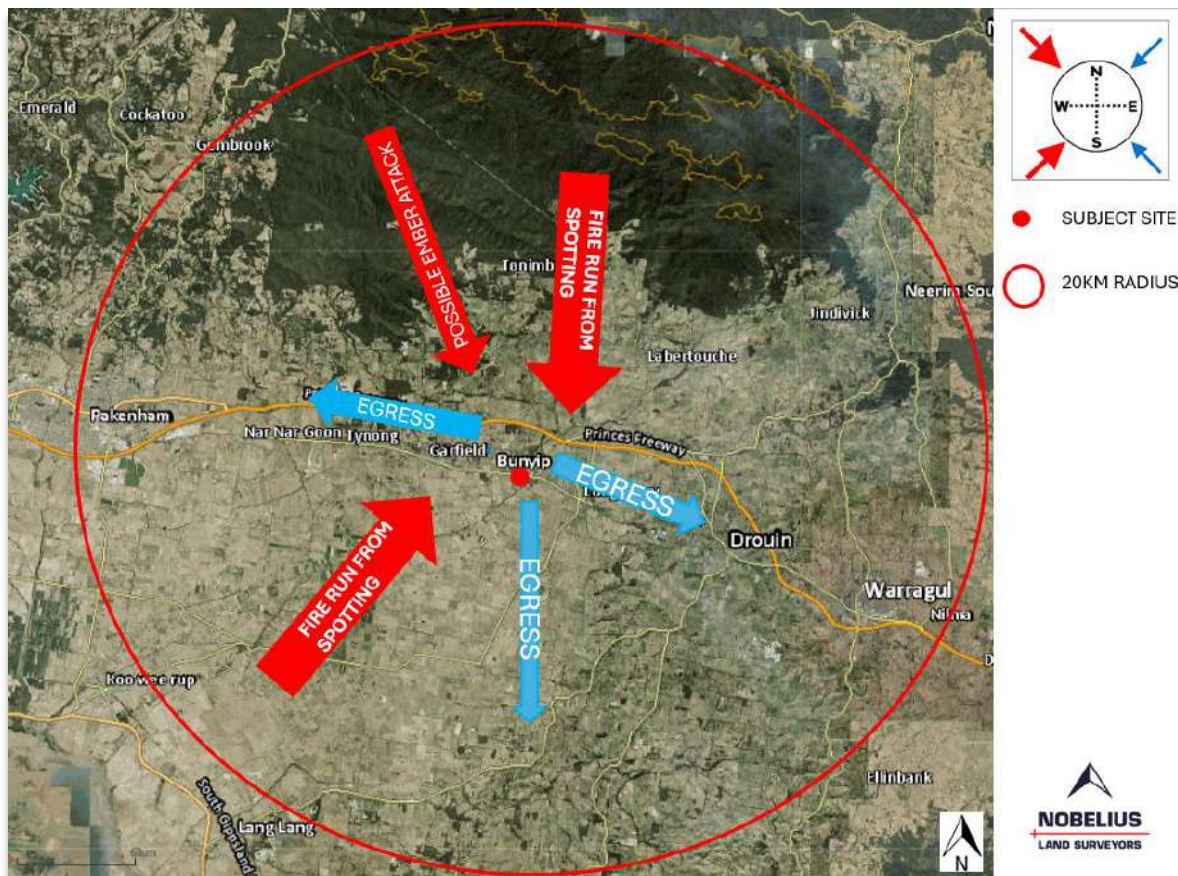
An assessment of the landscape conditions within 20 kilometres of the site; the local condition within 1 kilometre of the site; the neighbourhood conditions within 400 metres of the site; and on the subject site is presented below in accordance with the requirements of clause 13.02 for a subdivision.

LANDSCAPE CONDITIONS

Landscape conditions (as indicated below) – The area within a 20km radius of the site features a combination of landscapes consisting of cleared farming and grazing; rural/urban development, urban development. To the north are the Dandenong Ranges which exhibit extensive pockets of dense vegetation consistent with the Forest and Woodland classifications of *AS3959-2018 Construction of Buildings in bushfire-prone areas* and steep topography. The site is surrounded by a patchwork of farming and land interspersed with rural development in all directions. The surrounding road network features principal transport corridors including Princes Freeway (having a west to east orientation),

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Nar Nar Goon-Longwarry Road (East to west orientation), Bunyip-Modella Road (north to south orientation). The relevance of the road network is that they are most likely those roads that will become the main access points and thoroughfares during an emergency situation.



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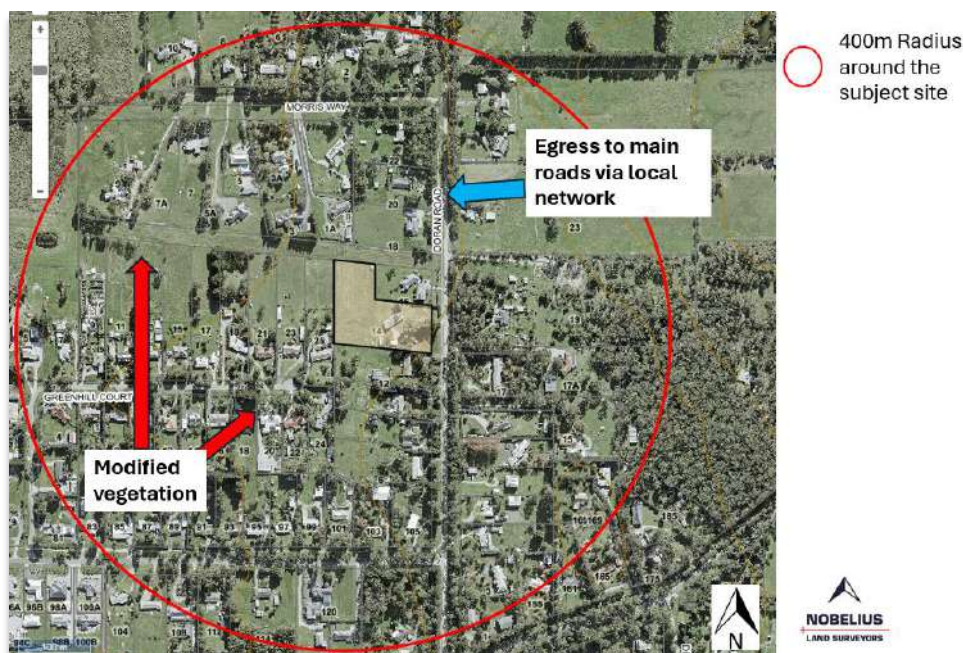
LOCAL CONDITIONS

Local conditions (please refer to the map below) – The area within a 1km radius of the subject site features a combination of land use and development consistent with rural residential zones and general residential zones. To the north is land subject to the LDR22 and LDR23 and GWZ1 accessed via a local road network that generally provides for west to east and north to south movement. Vegetation is generally planted native trees adjacent to boundaries and within road reserves with a distinct cleared areas separating the subject site from the Bunyip State Park to the north. The land is generally employed for residential development in both a westerly, easterly and southerly direction with Green Wedge zoned land within 1km to the north. Bunyip features gentle topography that flattens out to the south.



NEIGHBOURHOOD CONDITIONS

Neighbourhood conditions within 400m of the site (please refer to the map below) – The subject site is surrounded by land characterised as low density residential land and general residential land that is subject to intensifying residential development. Land to the west and south is subject to increasing development and land to the east is development with larger residential lots. Vegetation is contained to roadside reserves with isolated 'clusters' located to the west (8 Wattletree Road) and south east, which is consistent with modified woodland (AS3959:2018 Construction of buildings in Bushfire Prone Areas).



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SITE CONDITIONS

Site conditions (Please refer below) – The site features a gentle downward slope from the high point in the south eastern corner adjacent to the Doran Road reserve towards the northwestern corner of the site. The site is cleared land consisting mainly of grass at a Low Threat state consistent with 2.2.3.2 (f), *AS3959:2018 Construction of buildings in Bushfire Prone Areas*.



Access for emergency services to the site, and egress options from the site are consistent with the standards of **clause 53.02** and the strategies of **clause 21.02-4 Bushfire management**. Doran Road provides connections to the north and south. The proposed subdivision implies a modest increase to the residential population of Bunyip in an area that provides service provision, interconnected road networks and classified as a Low BAL area where the risk of bushfire is mitigated.

CLAUSE 15 BUILT ENVIRONMENT AND HERITAGE

Clause 15 Built Environment and Heritage has the objective to ensure planning delivers built form that is of high quality and efficient, responsive to the surrounding landscape and character including its associated risks, protective of heritage and provides the functionality required by the community. The proposal aligns with the objective of **Clause 15.01-3S Subdivision design**, which is:

- *To ensure the design of subdivisions achieves attractive, safe, accessible, diverse and sustainable neighbourhoods.*

The proposal contemplates a three lot subdivision of the land with easy access to the Bunyip town centre. The subdivision seeks to provide land that is consistent with other subdivisions in the immediate area that retain the low density residential and appeal. The subject site is conveniently located within walking range of reserves and sporting facilities, which promotes the objective of **Clause 15.01-4S Healthy neighbourhoods**.

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Clause 15.01-5S Neighbourhood character has the objective to:

- *..recognise, support and protect neighbourhood character, cultural identity, and sense of place.*

The immediate area is characterised as contributing to providing land for housing with a rising population within the Strategic Framework Plan (Figure 5, Bunyip Township Strategy, September 2009) with the capacity to accommodate the projected growth of residential (infill) development within the Bunyip township boundaries while preserving the low density requirements (refer to Sections 4.7 Objectives and 4.8 Policy, Bunyip Township Strategy, September 2009).

CLAUSE 18 TRANSPORT

Clause 18 Transport has regard to the provision of ‘connectivity’ for residents to social and economic opportunity which facilitates reliable movement for people and goods and supports environmental sustainability, health and wellbeing. Of salience here are the strategies of Clause 18.0-1S Land use and transport integration that seeks to reduce distances people have to travel between their place of residence and their employment, education, service providers, which promotes mobility within and between communities. Our proposal implies that the subdivision provides opportunity for a residential development within the existing township boundary whereby residents would be within 900metres of the commercial centre of Bunyip. This promotes non-car dependant mobility and supports active living and improved wellbeing synonymous with the 20-minute neighbourhood (**Clause 18.01-2S Transport system**) and sustainable and safe transport (**Clause 18.01-3S**), and the strategies of **Clause 18.02-1S Walking**, **Clause 18.02-2S Cycling** and **Clause 18.02-3S Public Transport** given Bunyip Rail Station is within 1 km of the subject site.

CLAUSE 19 INFRASTRUCTURE

Clause 19 has regard to the provision of infrastructure to our growing community. **Clauses 19.03-2S Infrastructure design and provision** and **19.03-3S Integrated water management** has the objective to provide timely, efficient and cost-effective development infrastructure that meets the community needs by integrating planning and engineering design of new subdivisions and development. In this regard, our proposal has acknowledged that the provision of drainage is salient and must be catered to on the land. The allotment has a 3m wide easement at the northern end, and a waste treatment area has been set aside for a septic system. Please refer to the Land Capability Assessment provided by *Hardcore Geotech*, December 2024.

RELEVANT & INCORPORATED DOCUMENTS

BUNYIP TOWNSHIP STRATEGY 2009

The Bunyip Township Strategy, 2009 (referred to as the strategy hereafter) outlines the following vision for Bunyip:

A rural township with extensive recreational opportunities, potential for substantial growth and a commercial and retail centre providing an extensive range of services to the township and nearby residents.

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The Bunyip Township will contain a range of housing types that respect the rural character of the town and the natural landscape. Open space areas will be diverse, to allow access for active and passive recreation while ensuring the protection of remnant vegetation and wildlife corridors to allow the movement of species throughout the landscape.

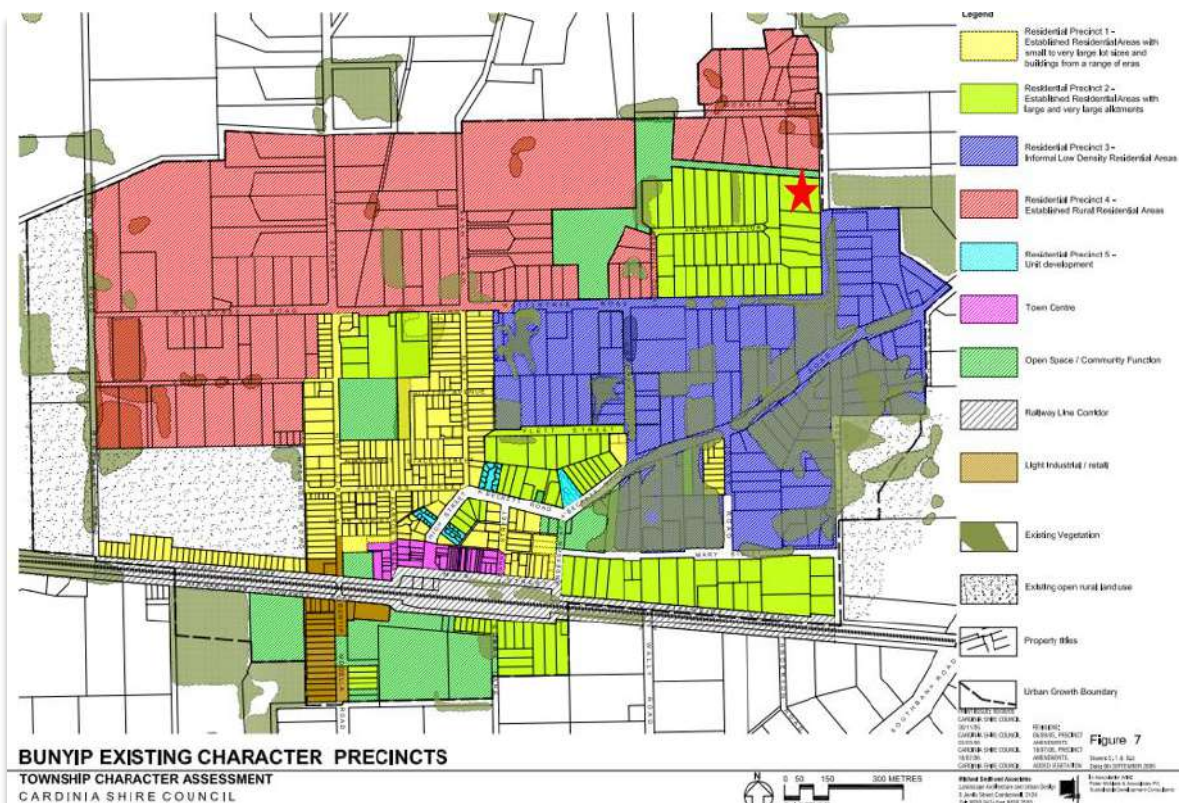
Of the many strategic objectives outlined within the strategy, the following are particularly relevant to this proposal:

- *Provide for the growth of Bunyip as an attractive rural township*
- *Maintain the rural township character*
- *Provide a range of lot sizes and types to accommodate a mix of household and lifestyle types*
- *Protect and enhance the environment, especially those elements which contribute to the character of the Bunyip Township*

The strategy identifies the following existing pattern of residential development in Bunyip (as per 2009 when the strategy was implemented):

Residential development in Bunyip reflects a number of housing styles from Edwardian to modern design with the initial stages of the present day township site having been surveyed during the 1860s. A key characteristic of Bunyip is the significantly higher proportion of large lot sizes compared with other townships. Lot sizes generally range from 500 square metres to 1.5 hectares and the larger lots on the fringe of the township help to integrate the township with the surrounding rural properties. Lot in Bunyip's residential precincts predominately retain single-storey detached dwellings with generous setbacks from the street.

The strategy identifies the subject site (Red star) as being located within Residential Precinct 2 – Established Residential Areas, as per the map below:



THE BUNYIP EXISTING CHARACTER PRECINCTS – TOWNSHIP CHARACTER ASSESSMENT MAP
(BUNYIP TOWNSHIP STRATEGY, 2009).

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Township character assessments of preferred character precincts delineated four preferred character residential precincts for Bunyip. The subject site is mapped within the low density precinct (precinct 2), which has the following preferred character:

New residential estates will retain the rural character with a high proportion of large lots, combined with wide nature strips and roads, and a significant canopy of street trees. New development will integrate with the sloping and undulating terrain, and be designed and constructed to a high standard.

Table 10 of the strategy outlines the Precinct character guidelines for Precinct 3. A response has been provided by Nobelius Land Surveyors to demonstrate how the proposal satisfies Council's vision for the Low density residential areas:

| PRECINCT 2 – NEW RESIDENTIAL ESTATES | | |
|--------------------------------------|---|--|
| LOT CHARACTERISTICS | | RESPONSE |
| | <ul style="list-style-type: none"> • 80% of lots to remain larger than 700sqm • Minimum lot size of 600sqm • Minimum front setback of 7 metres • Minimum side boundary setback of 2.5 metres • Maximum building site coverage should not exceed 40% of lot • Minimum lot width of 18m | <p>The proposed lot configuration and sizes achieve the preferred lot characteristics outlined with all lots featuring minimum areas of 4,000m².</p> <p>The Building Envelopes of Lots 2 and 3 achieve side and rear boundary setbacks of 5 metres.</p> <p>The dwelling contained on Lot 1 is existing and the setback exceeds 10 metres. The battle-Ax lot configuration ensures any future development will be suitably setback from Doran Road and dwelling development on adjoining lots.</p> |

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| | | |
|---------|--|---|
| GENERAL | <ul style="list-style-type: none"> • <i>Encourage a diversity of development styles</i> • <i>Maintain a sense of spaciousness between allotments of the residential areas through</i> <ol style="list-style-type: none"> 1. <i>No front fences or if fenced, low front fences or open wire fences to allow gardens and nature strips to merge</i> 2. <i>Providing sufficient open space or garden areas</i> 3. <i>Retaining existing vegetation</i> 4. <i>Providing new trees and garden spaces</i> • <i>Discourage small allotments of less than 600sqm</i> • <i>Require a landscape plan to accompany all applications for new subdivisions</i> • <i>Vegetation along McNamara and Petty Road to be retained</i> • <i>Maintain wide street reserves of 16-18m for local streets</i> • <i>Retain treed area in the western part of the precinct</i> • <i>Maintain a rectangular street and lot layout</i> • <i>Ensure protection and conservation of native vegetation including street trees and roadside vegetation</i> • <i>Ensure all new developments include extensive street tree plantings at an early stage of development</i> • <i>Encourage the inclusion of native vegetation and garden space for private and commercial development</i> • <i>Maintain a high level of quality in the design and construction of new buildings as well as continuity with the character of the areas existing built form.</i> • <i>Ensure building height respects the existing character of the surrounding area.</i> • <i>Residential developments should not include gated street formats but should connect visually and physically to the surrounding areas.</i> • <i>Developments to integrate with the existing landform.</i> | <p>RESPONSE</p> <p>The proposed subdivision will allow for any future construction to be diverse in nature.</p> <p>The site is relatively flat and earthworks will be minimised.</p> <p>The existing vegetation on the boundaries will be removed to facilitate access, though landscape strips adjacent to boundaries for Lots 2 and 3 illustrate the capacity to replace these trees and retain the treed character of the area. The size of the lots and the setbacks of building and waste envelopes provides for generous opportunities to re-vegetate adjacent to boundaries. Plans indicate appropriate landscaping areas adjacent to boundaries. Please refer to Development Plan Ver 3.</p> <p>Building setbacks will adhere to the requirements as set out in Lot Characteristics.</p> <p>The proposal does not contemplate changes to the existing post and wire style fencing.</p> <p>Existing vegetation has been preserved, where appropriate.</p> <p>No development of dwellings is proposed as part of this subdivision application.</p> |
|---------|--|---|

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| SUBDIVISION | <ul style="list-style-type: none"> • <i>Demonstrate how the new subdivision relates to the existing and intended use and development of adjoining land</i> • <i>Develop clear, legible road networks incorporating the existing grid layout which provide a high level of internal connectivity and external linkages for local vehicle pedestrian and bicycle movements</i> • <i>Maintain generous street, footpath and easements widths in new developments.</i> • <i>Provide a minimum width for internal streets of 7.3 metres to allow for parking on either side and access for emergency vehicles</i> • <i>Discourage cul-de-sacs and, if used, they should be connected through to another street by a wide reserve and path for safe pedestrian and bicycle access</i> | <p>RESPONSE</p> <p>The proposed subdivision is consistent with the residential subdivisions occurring on the land surrounding the subject site.</p> <p>The existing footpath is gravel and no changes are proposed to the road or existing easements to the north and west of the allotment.</p> <p>The proposal will retain the low-density residential characteristics with a minimum lot size of 4,001m² for Lot 3. Lot 1 will retain the existing dwelling and is proposed to be 4,249m². Lot 2 will measure 4,063m². Adjoining neighbours are in excess of 9m away from any potential or existing dwelling and, therefore, will not be affected. There are other subdivisions along Doran Road, Morris Way, Greenhill Court, Wattletree Road and Nash Road where there has been no adverse effect upon the adjoining neighbours.</p> <p>The proposed street network reinforces the existing grid layout and is able to connect with the existing local vehicle, pedestrian and bicycle networks.</p> |
|-------------|--|---|

Subsection 4.6 identifies the following key issues relevant to the development of residential land in Bunyip:

- *Bunyip has several large areas of undeveloped land within the township boundary. Developing vacant land within the township will provide the opportunity to increase the township's population and therefore create economic and social benefits, making the town more sustainable in the long term.*
- *While increasing the number of lots to increase the population is important, the general character of Bunyip is that of a rural township and it is important to maintain that character in all new developments.*
- *Increasing the diversity of lots and dwelling types will allow people a broader range of housing options, as well as accommodate existing residents of Bunyip as they age and their housing needs change.*

Subsection 4.7 outlines the objectives to be met by future residential development of the town:

- *Facilitate growth of residential development in Bunyip to a population of approximately 3,500 people.*
- *Ensure that the long-term residential capacity and township boundaries are clearly defined.*
- *Ensure the long-term sustainability of the community by providing residential development for a range of lifestyle opportunities.*
- *Ensure that infill residential development is integrated and respects the existing character of the township.*

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- *Maintain generous street, footpath and easement width in new developments.*

The proposal contemplates residential subdivision that will enable residents to access township amenity and services. The subdivision design illustrates a sensitivity to the existing character of Bunyip while accommodating for population growth and long term economic sustainability.

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8. PARTICULAR PROVISIONS

The relevant particular provisions/documents that will be addressed are identified below:

- Clause 52.02 Easements, restrictions and Reserves
- Clause 52.12 Bushfire exemptions
- Clause 52.17 Native vegetation
- Clause 53.01 Public open space contribution and subdivision

CLAUSE 52.02 EASEMENTS, RESTRICTIONS AND RESERVES

Clause 52.02 seeks to *enable the removal and variation of an easement or restrictions to enable a use or development that complies with the planning scheme after the interests of affected people are considered.*

Pursuant to **clause 52.02** a permit is required before a person proceeds under Section 23 of the Subdivision Act 1988 to create a restriction.

The provision of building and waste envelopes has the intention of formalising future development to ensure the strategies of the DDO1 and the Bunyip Township Strategy that have regard to setbacks from boundaries govern future development.

CLAUSE 52.12 BUSHFIRE EXEMPTIONS

Clause 52.12 Bushfire protection exemptions seek to facilitate the removal of vegetation in specific circumstances to support and protect human life and property. **Clause 52.12-1 Exemptions to create defensible space around buildings used for accommodation** and **Clause 52.12-2 Exemption for vegetation removal along a fence line** provide exemptions that enable the removal, destruction or lopping of vegetation within 10m metres of an existing building to create defensible space and along a boundary fence between properties and in different ownership if all the requirements are met:

- *The fence must be located in an area that is designated as a bushfire prone area under the Building Act 1993.*
- *The fence must have been constructed before 10 September 2009.* The internal fencing has been on the prior to 2009.
- *The clearing alongside both sides of the fence when combined must not exceed 4 metres in width, except where land has already been cleared 4 metres or more along one side of the fence, then up to 1 metre can be cleared along the other side of the fence.*

The site is located within the BPA (Partially, as indicated previously, refer to the assessment to the requirements of clause 13.02-1S) and the existing dwelling was constructed prior to 10 September 2009. The location of tree 12 is within 10 metres of the existing dwelling and meets the requirements that exempt its removal from the planning provisions. Please refer to the Plan below provided by Nobelius Land Surveyors.

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Please read in conjunction with the *Arboricultural Impact Assessment* by ArbKey.

CLAUSE 52.17 NATIVE VEGETATION

Clause 52.17 has the following purposes:

- *To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This is achieved by applying the following three step approach in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017) (the guidelines):*
 1. *Avoid the removal, destruction or lopping of native vegetation.*
 2. *Minimise the impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.*
 3. *Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.*
- *To manage the removal, destruction or lopping of native vegetation to minimise land and water degradation.*

Pursuant to Clause 52.17 Native Vegetation, locally indigenous, non-planted vegetation requires a permit (and offset) to remove, destroy or lop. *ArbKey* have prepared a Preliminary and Impact Assessment that evidences the two trees: tree 12 and 18 are planted Australian native, not Indigenous trees, and therefore are exempt from the requirements of Clause 52.17.

CLAUSE 53.01 PUBLIC OPEN SPACE CONTRIBUTION AND SUBDIVISION

A subdivision of the land attracts the requirement of a contribution to the council for (the provision of) Public Open Space the value of which is calculated as a percentage of the value of the land intended to be used for residential development. Clauses 53.01-1 and 53.02-2 (under section 18 (8)(a) of the

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Subdivision Act 1988) set out exemptions from Public Open Space requirements specified in the scheme including where the subdivision is:

- *of a building used for residential purposes where each lot contains part of the building. The building must have been constructed or used for residential purposes immediately before 30 October 1989 or a planning permit must have been issued for the building to be constructed or used for residential purposes immediately before that date.*
- *a commercial or industrial building provided each lot contains part of the building.*
- *for the purpose of excising land to be transferred to a public authority, council or a Minister for a utility installation.*
- *subdivides land into two lots and the council considers it unlikely that each lot will be further subdivided.*

The proposal does not qualify for any of the above-mentioned exemptions therefore the subdivision of land will attract a Public Open Space Contribution of the value of 8 per cent of the total value of the land, as per the requirements of the schedule to clause 53.01.

9. GENERAL PROVISIONS

The relevant general provisions that will be addressed in this section are identified below:

- Clause 65 Decision Guidelines
- Clause 65.01 Approval of an Application or Plan
- Clause 65.02 Approval of an application to subdivide land
- Clause 71.02-1 Purpose of the Planning Policy Framework
- Clause 71.02-3 Integrated decision making

CLAUSE 65 DECISION GUIDELINES

Clause 65 states that the Responsible Authority must decide whether the proposal will provide acceptable outcomes in terms of the decision guidelines of this Clause. The decision guidelines of Clause 65.01 and 65.02 relating to the approval of an application or plan and an application to subdivide the land respectfully are relevant to this application.

CLAUSE 65.01 APPROVAL OF AN APPLICATION OR PLAN

The decision guidelines outlined in Clause 65.01 are applicable to this proposal, in particular:

- *The matters set out in Section 60 of the Act.*
- *Any significant effects the environment, including the contamination of the land, may have on the use or development.*

The land is not identified as being contaminated. The site constraints and considerations of the land including native vegetation, topography and any overland flows have been responded to throughout the design process.

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *The purpose of the zone, overlay or other provision.*

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- *Any matter required to be considered in the zone, overlay or other provision.*
- *The orderly planning of the area.*

The planning considerations have been adequately addressed within this report in sections 4-6.

- *The effect on the environment, human health and amenity of the area.*

The proposed subdivision does not pose any foreseeable adverse impacts to the environment, human health or the amenity of the area. Any potential adverse impacts have been identified and responded to throughout the design process.

- *The proximity of the land to any public land.*

The proposed subdivision does not adversely impact any public land within the vicinity of the site.

- *Factors likely to cause or contribute to land degradation, salinity or reduce water quality.*

No foreseeable factors that may cause or contribute to land degradation, salinity or reduced water quality have been identified during the design process.

- *Whether the proposed development is designed to maintain or improve the quality of stormwater within and exiting the site.*

Existing drainage easements E1 and E2 are located adjacent to the northern boundary (E2) and the western boundary (E1). The proposal benefits from this drainage, which discharges to the north. The proposal will not pose any foreseeable detriment to adjoining land with a common means of drainage.

- *The extent and character of native vegetation and the likelihood of it's destruction.*

The subject site in its existing state is a highly modified landscape, with the majority of the site cleared for small-scale agriculture and lifestyle living. Vegetation is proposed to being removed adjacent to boundaries to facilitate access.

- *Whether native vegetation is to be or can be protected, planted or allowed to regenerate.*

The proposed subdivision provides landscaping buffers and lot sizes with dimensions appropriate for the planting and establishment of native vegetation.

- *The degree of flood, erosion or fire hazard associated with the location of the land and the use, development or management of the land so as to minimise any such hazard.*

The subject site is not prone to flood or erosion. The site is mapped as a designated bushfire prone area and the risk has been further addressed in Clause 13.02.

- *The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.*

Loading and unloading facilities are not relevant to this proposal.

- *The impact the use or development will have on the current and future development and operation of the transport system.*

The proposed subdivision does not adversely impact on the current and future development and operation of the transport system.

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CLAUSE 65.02 APPROVAL OF AN APPLICATION TO SUBDIVIDE LAND

The decision guidelines outlined in Clause 65.02 have been considered in the proposed design. A response has been provided where applicable to demonstrate how the proposal meets the decision guidelines outlined below:

- *The suitability of the land for subdivision.*
- *The existing use and possible future development of the land and nearby land.*
- *The availability of subdivided land in the locality and the need for the creation of further lots.*

The land is zoned for low density residential purposes and has been designated for future residential development in the Bunyip Township Strategy 2009. Surrounding land is experiencing infill residential development, and the lot sizes and street network of the proposed subdivision will integrate with and compliment the emerging character of the new residential precinct.

- *The effect of development on the use or development of other land which has a common means of drainage.*

An existing drainage system via the existing easements will support the proposed subdivision to ensure that overland flows do not adversely affect any other land with common means of drainage. Water tanks are required to support future development to ensure stormwater retention on the subject lots, avoiding detriment to other land that share the common means of drainage.

- *The subdivision pattern having regard to the physical characteristics of the land including existing vegetation.*

The subdivision is responsive to the constraints and considerations posed by the site, including native vegetation.

- *The density of the proposed development.*

The density of the proposed subdivision is appropriate for the locality and reflects the subdivision patterns seen on surrounding land.

- *The area and dimensions of each lot in the subdivision.*

The proposed subdivision has achieved lots with areas and dimensions consistent with those required by the Bunyip Township Strategy 2009.

- *The layout of roads having regard to their function and relationship to existing roads.*
- *The movement of pedestrians and vehicles throughout the subdivision and the ease of access to all lots.*

The proposed layout is functional in design and integrates with the existing street network.

The movement of pedestrians and vehicles is facilitated through driveway access to Doran Road.

- *The provision and location of reserves for public open space and other community facilities.*

The proposal does not include reserves for public open space or other community facilities.

- *The provision of off-street parking.*

All lots are able to support off-street parking.

- *The provision and location of common property.*

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- *The functions of any body corporate.*

No common property is proposed as part of this subdivision.

- *The availability and provision of utility services, including water, sewerage, drainage, electricity and gas.*
- *If the land is not seweraged and no provision has been made for the land to be seweraged, the capacity of the land to treat and retain all sewage and sullage within the boundaries of each lot.*

The subject site is able to connect to water, electricity and NBN.

Sewerage will be addressed through a septic system and a Land Capability Assessment has been provided that evidences the capacity of the land to treat and retain all sewage and sullage within the boundaries of the new subdivided land.

- *Whether, in relation to subdivision plans, native vegetation can be protected through subdivision and siting of open space areas.*

All efforts have been made to retain vegetation with medium to high value native trees located on Lot 1 preserved.

- *The impact the development will have on the current and future development and operation of the transport system.*

The proposed subdivision does not adversely impact on the current and future development and operation of the transport system.

CLAUSE 71.02-3 INTEGRATED DECISION MAKING

Clause 71.02-3 Integrated decision making seeks to balance the needs and expectations of the community in terms of the provision of built form to accommodate a growing population, protection of the environment, economic wellbeing, various social needs, management of resources and infrastructure.

Clause 71.02-3 has been recently updated (February, 2022) and aims to balance these needs and expectations through the employment of the Planning Scheme to ensure conflicting objectives are balanced in favour of net community benefit and sustainable development for the benefit present and future generations. It states that in bushfire affected areas, planning must prioritise the protection of human life over all other policy considerations.

Our proposal contemplates the subdivision of land in an area identified as low risk to the threat of bushfire. The subdivision of the subject site presents an opportunity to balance the demand for housing by the growing population, mitigate the risks associated with the land and preserve the environmental assets on and around the lot.

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10. CONCLUSION

It is submitted that the proposal is consistent with the relevant policies and provisions of the Cardinia Planning Scheme and should receive Council's support for the following reasons:

- The proposal is consistent with the Municipal Planning Strategy and the Planning Policy Framework.
- The proposal is consistent with the purpose of the Low Density Residential Zone – Schedule 2.
- As stated in this report, the matters for consideration under the *Planning and Environment Act, 1987* and associated *Planning and Environment Regulations 2015* has been satisfactorily addressed through compliance with the Cardinia Planning Scheme, demonstrating the subdivision is compatible with the existing subdivision and development pattern in the surrounding area.
- Medium to high value vegetation will be retained with lots of a generous area that provides opportunities to landscape.
- The proposed lot sizes have dimensions appropriate for building and waste envelopes that will provide for future dwellings that will not overshadow the existing rooftop solar energy systems on dwellings on adjoining residential lots and ensure waste is retained and treated onsite.
- The proposed lots provide generous opportunities for landscaping adjacent to boundaries.
- The proposal is respectful of the neighbourhood character and subdivision pattern evident in surrounding residential developments.

The proposal provides an excellent opportunity for further residential development in a well-serviced location and in an area designated for residential growth in Bunyip.

The constraints and considerations of the subject site have been appropriately responded to in the design process, and the proposal integrates into the surrounding subdivision pattern and street network and warrants the support of Council.

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14 DORAN ROAD, BUNYIP VIC - 3815

Three Lots Low Density Residential Sub-division Stormwater Strategy Report



Prepared by :
Qualification :
Professional Engineer No :
Date :



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Stormwater Strategy Report

1. INTRODUCTION

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1.1. Development Site Introduction

NFK Civil has been commissioned by 14 Doran Rd Pty Ltd (The Developer) to prepare a report concerning a stormwater drainage strategy for a development site at 14 Doran Road, Bunyip. The site is proposed to be subdivided into three lots and this report has been prepared to be lodged with the planning application for the proposed development.

Cardinia Shire Council as the local authority for the development site, adopt Engineering Design and Construction Manual (EDCM) for Subdivision in Growth Areas as the main guideline for planning and engineering process and details. The EDCM section 3.2 Documentation Requirements for Planning Permit Applications, item (d) stipulates that “An overall drainage management strategy including any proposed staging of the works and the methodology for satisfying Clause 56.07 of the municipal planning scheme”. The framework of this report is based on this clause.

NFK Civil has also been provided with a Development Plan Version 1 prepared by Nobelius Land Surveyors in May 2025, Survey Reference No. 22544. The plan indicates that the existing site parcel will be subdivided into three lots with sizes range between 4001m² to 4249m². The proposed two lots being created at the rear of existing dwelling will have individual strip of land that will serve as driveway and other utility connections.



Figure 1 - Proposed Development Plan

1.2. Site Location

The development site is located approximately 1.5km north east from Bunyip town center or train station. Doran road is local access street providing access to the residential properties in north east Bunyip area and terminates at Bunyip Native Sanctuary, south of Princes Hwy. Victoria Planning Map indicates that the development site is located within Low Density Residential Zone (LDRZ2) and the total area of the lot is approximately 12,327 m².

The development site land parcel is an L shape lot with one end to the east is abutting to Doran Road reserve and north end to the north is abutting to a gas transmission line reserve. The gas transmission reserve terminates on the west end at a Public Park and Recreation Zone (PPRZ). A series of stormwater treatment ponds/basin exist within this area and known as Melbourne Water's Wattletree Road Drainage Scheme (DS) retarding basins and wetland.

There is no stormwater related overlay (eq. Flood Overlay (FO), Land Subject to Inundation Overlay LSIO and Special Building Overlay SBO) within the close proximity of the development site.

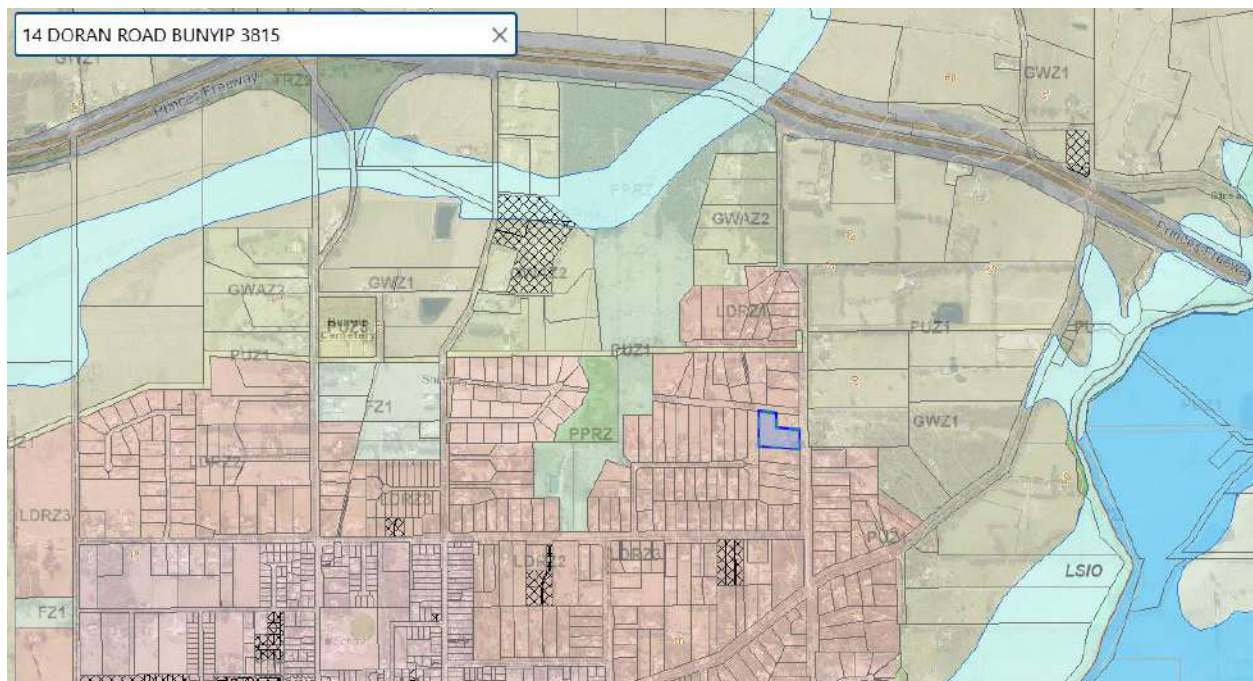


Figure 2- Property Location

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1.3. Site Terrain

The development site is located almost at the top of east ridge of the Tee Tree Creek formation, where the MW Wattletree Rd DS basins are located. Hence the development site slopes from the east end at Doran Road to the north west end at gas transmission line reserve. The slope within the site is generally around 5.5% (1 : 18) with the highest level at the south east corner at 70.00m and the lowest level is at north west corner at approximately 61.04m Australian Height Datum. The slope is almost uniform between 8% to 10%.

1.4. Assumptions and Limitations

This report has been scoped and prepared as a desktop study and analysis to provide preliminary site stormwater treatment strategy for the Cardinia Shire Council review. The framework of the study and analysis in this report is based on EDCM, particularly related to the contexts outlined in Section 1.7.11 Integrated Water Management and Section 1.7.12 Stormwater and Water Sensitive Urban Design in minimizing the increase in stormwater runoff including the incorporation of Water Sensitive Urban Design (WSUD) principal to achieve best practice in stormwater management.

There are limitations to the level of details provided given the nature of desktop study. The report relies upon information made available from service authorities including Melbourne Water, with assumptions of the accuracy and completeness of the information provided. Further assessment and confirmation of details provided will be necessary during the planning and design stages.

2. Melbourne Water Drainage Scheme

2.1.2854 – Wattletree Road Drainage Scheme

Section 1.2 Site Location above mentioned that an existing Melbourne Water Drainage Scheme infrastructure is located west of the development site. This particular DS is called Wattletree Road Drainage Scheme (2854). Under the scheme, the proposed development site is located within the catchment area.

The DS indicates that at the development site north west corner which is the lowest point of the site, a drainage pipeline will be constructed as part of the scheme. This drainage pipeline will run to the west along the south boundary of gas transmission line reserve and terminate at the detention basins or wetland. The new scheme drainage pipeline has been identified between node X11 and X12 on the DS.

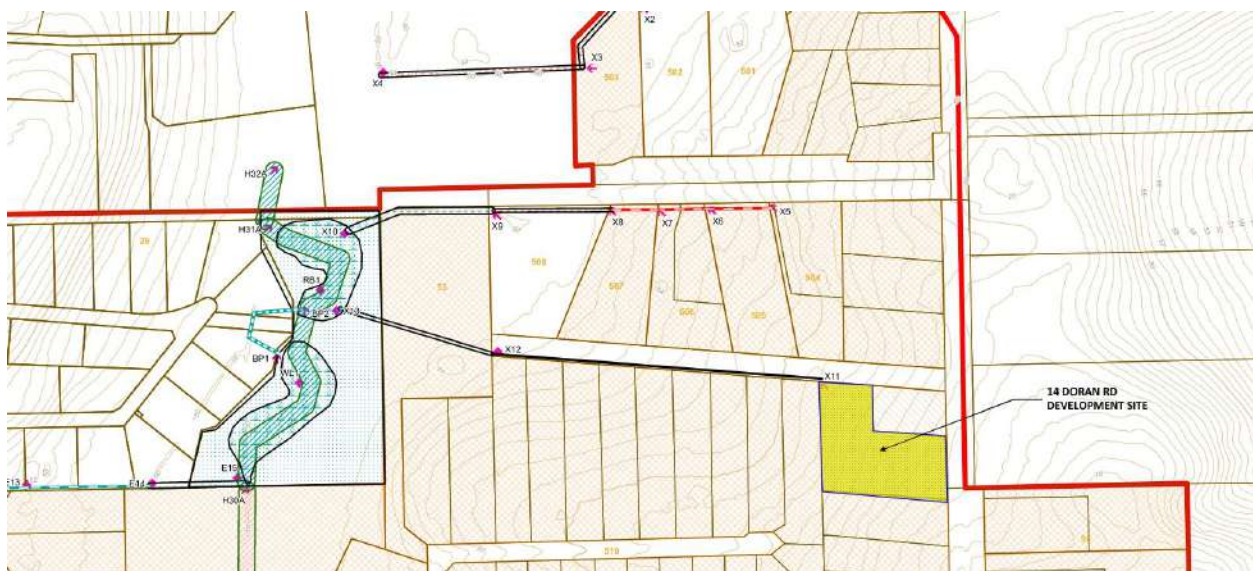


Figure 3 - MW Wattletree Rd Drainage Scheme

2.2.Drainage Scheme Contribution

Melbourne Water drainage schemes have been developed to identify the catchment-based stormwater management and strategy. The drainage scheme consists of relevant infrastructure required to ensure that any future urban development planning will meet appropriate standards for flood protection and environmental performance. The type of infrastructure commonly set as part of the drainage scheme strategy are:

- Pipelines
- Overland flow paths
- Retarding basins
- Wetlands
- Floodways etc

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Melbourne Water have set a pricing arrangement on each DS to assist in the cost of the infrastructure construction through financial contribution paid by the developers.

In their website, Melbourne Water explain the objectives and how the drainage scheme contribution works. Below is the snippet from MW website.

Drainage contributions

The strategy is funded by financial contributions paid when development occurs. All developable properties pay a drainage contribution on the basis of the development size and the development type. Contributions include a hydraulic component which funds the flood protection works, and a water quality component which funds the water quality treatment works. The water quality component may be reduced or negated by the developer undertaking their own on-site water quality treatment.

Contributions for each scheme are calculated so the income we derive from contributions is designed to equal the planned expenditure over the expected life of a scheme, using a discounted cashflow methodology.

Most scheme works are constructed by developers, and developers who are required to construct scheme works are reimbursed from the contributions received in the scheme.

How schemes are managed

We currently manage more than 200 schemes. The preparation of new schemes is prioritised in areas where new development activity is most concentrated.

Active schemes are given annual financial reviews to ensure expenditure on drainage growth infrastructure continues to be matched by contributions, and engineering reviews are undertaken on an as-needs basis to ensure our schemes continue to meet current standards for flood protection and water quality treatment.

Contributions are the costs we recover from developers to fund drainage scheme works. These costs are then reimbursed to the developers that construct the scheme works.

Figure 4 - MW Drainage Scheme Contribution Explanation

2.3. Development Site Stormwater Objectives

Considering that the development site is part of a Melbourne Water Drainage Scheme, the following will be the main objective of site stormwater management strategy

Quantitative Objectives

1. Post development minor stormwater runoff up to 20% AEP will be managed and conveyed through underground piped system
2. Post development major stormwater runoff beyond 20% up to 1% AEP will be managed and conveyed over the surface utilizing open swale or channel
3. Development site minor storm outfall will be connected to an existing Council pipe system located in the drainage easement abutting to the gas transmission line reserve
4. Development site major storm outfall will be released to the current swale formation at the north west corner of the site (gas transmission line reserve). This stormwater runoff will be then collected and conveyed via Melbourne Water Drainage Scheme pipeline
5. No on-site stormwater detention system is required as a DS hydraulic contribution is payable by the developer to MW. The reduction of stormwater runoff discharge will be part of the larger Wattle tree Road Drainage Scheme

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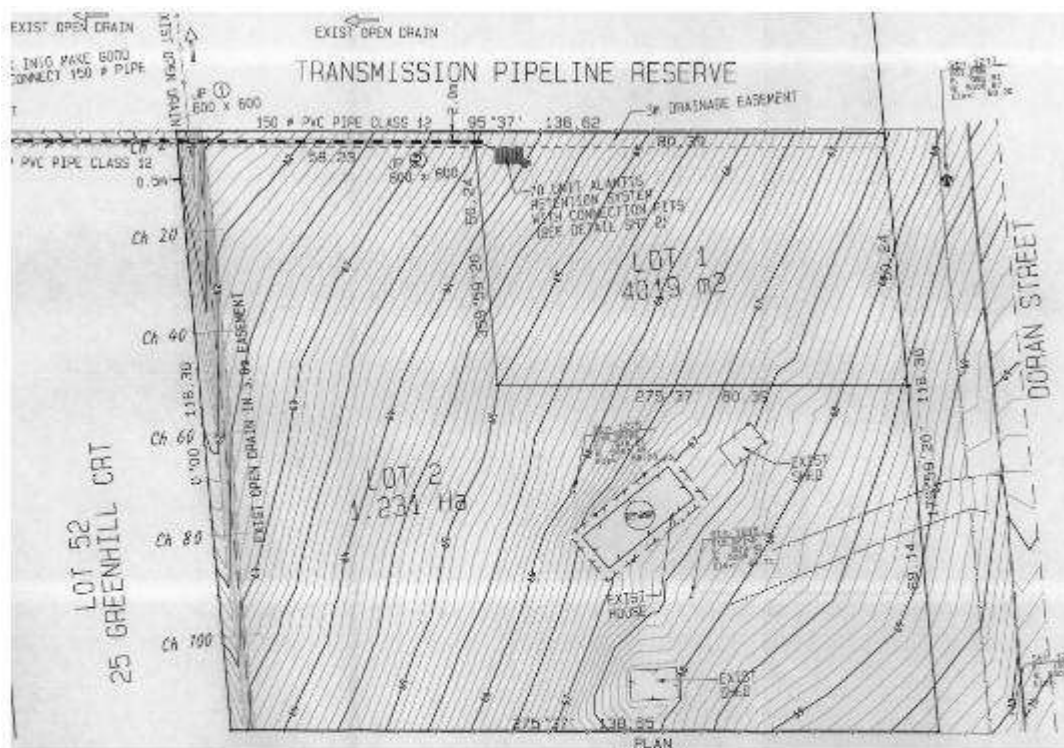
Qualitative Objectives

1. A stormwater quality treatment will be implemented on-site in accordance to Clause 56.07 to achieve the stormwater management best practice through Water Sensitive Urban Drainage
2. A proportion of Drainage Scheme water quality contribution payment required by the developer will be offset from the water quality objective achieved through the development stormwater strategy.

3. SITE STORMWATER DRAINAGE STRATEGY

3.1. Cardinia Existing Drainage Asset and Legal Point of Discharge

A legal point of discharge (stormwater) application was submitted to Cardinia on 2 June 2025 requesting Council's direction on the LPoD as well as any information pertaining to Council existing drainage infrastructure within the vicinity of the development site. In a response letter dated 3 June 2025, Cardinia Shire Council - Infrastructure Services provided the information of existing drainage pipe located along the north boundary of development site abutting with gas transmission line. This existing Council drainage line is also nominated as Legal Point of Discharge of the development site.



| PIT SCHEDULE | | | | | | | | | |
|--------------|-------|----------|------|-------|----------|--------|----------|----------|-----------|
| PIT No. | TYPE | INTERNAL | | INLET | | OUTLET | | FIN S.L. | PIT DEPTH |
| | | WID. | LEN. | DIA. | INV R.L. | DIA. | INV R.L. | | |
| 1 | EXIST | 600 | 900 | 150 | 59.020 | | | 59.945 | 0.925 |
| | JUNC | 600 | 600 | 150 | 60.500 | 150 | 60.455 | 61.215 | 0.760 |
| 2 | JUNC | 600 | 600 | | | 150 | 62.775 | 63.525 | 0.750 |

Figure 5 - Stormwater Legal Point of Discharge

The availability of existing Council drainage asset at the lowest point of the development site provides a very convenient outfall and less challenging site drainage management strategy.

3.2. Stormwater Drainage Strategy Plan

Below is the initial drainage strategy plan proposed for the development site. The stormwater strategy plan can be found in the Appendices.

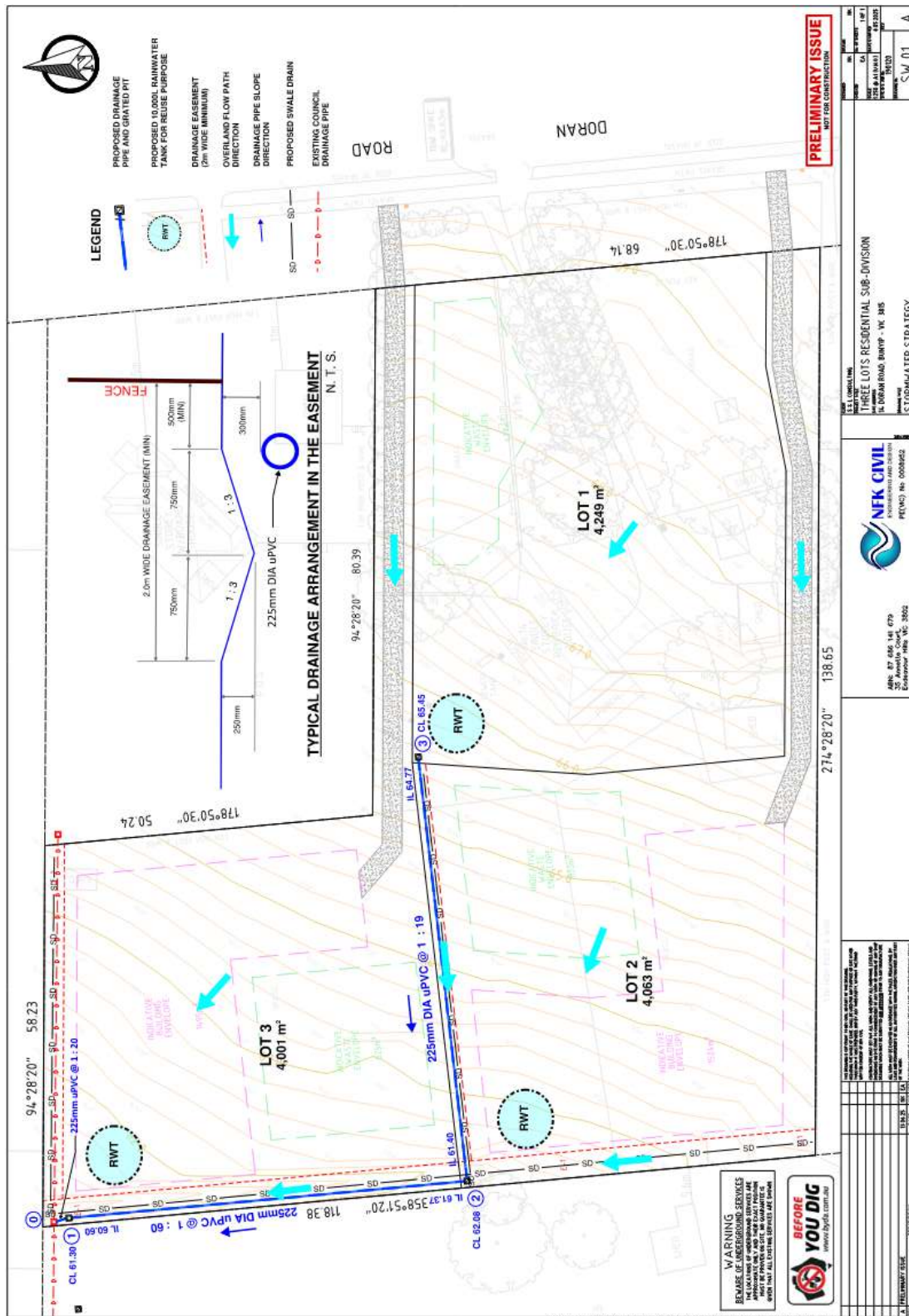


Figure 6 - Drainage Strategy Plan

4. DEVELOPMENT SITE HYDROLOGY AND HYDRAULICS

4.1. Rainfall Intensity (BOM IFD2016)

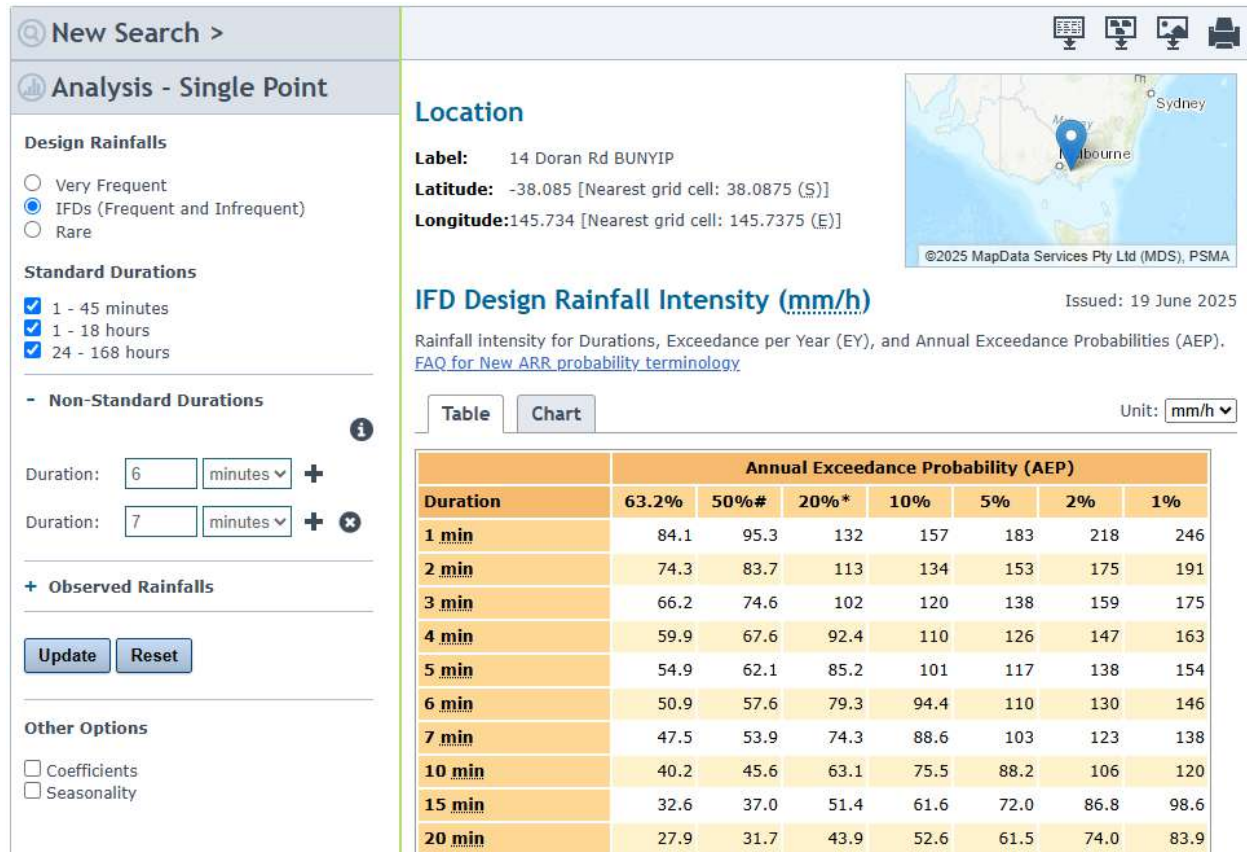


Figure 7 - BOM IFD2016 Rainfall Intensity

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4.2. Drainage Pipe Hydraulic Capacity (20% AEP)

The proposed pipe section between Pit 1 and 2 is considered the critical pipe capacity to check due to flatness of the pipe slope compared to the other pipe sections.

The following parameters are used in calculating the peak flow rate for 20% AEP of this pipe section.

- Sub catchment area (A) = Lot 1 and 2 = 4,249 + 4,063 = 8,312m² = 0.8312 Ha
- Time of concentration (t_c) = 7 minutes (Melbourne Water and EDCM)
- Run off coefficient (C) = 0.3 (Melbourne Water for LDRZ with average lot size 4000m²)
- Rainfall intensity (I) = 74.3 mm/hr

Using the Rational Method formula

The peak flow rate resulting from a storm with an average recurrence interval (ARI) of Y (years) is calculated using the following formula:

$$Q = \frac{CIA}{360}$$

Where the parameters are:

- Q** = peak flow rate resulting from ARI of Y (years) in (m³/s)
- C** = runoff coefficient for design event having an ARI of Y (years).
- I** = rainfall intensity (mm/hr) corresponding to a particular storm duration and ARI.
- A** = area of catchment in hectares.

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The peak flow rate assigned to the pipe section between Pit 1 and 2 (Q_d) = 0.05146 m³/s or **51.46 l/s**

Using Manning's equation to calculate velocity of the water flowing in the pipe,

$$V = \frac{k}{n} R_h^{\frac{2}{3}} S^{\frac{1}{2}}$$

The pipe capacity can be determined using the formula of: $Q = A/v$

The proposed drainage pipe section between Pit 1 and 2 to be 225mm diameter uPVC ($n = 0.008$), the pipe capacity (Q_c) at 1 : 60 slope can be calculated as

$$Q_c = 98.73 \text{ L/s}$$

Hence $Q_c > Q_d \rightarrow \text{OKAY}$

4.3. Swale Drain Hydraulic Capacity (1% AEP)

The major storm carries a bigger risk and any development site will require to assess the risks related to its peak flow rate and possibility of flooding due to both internal site catchment or external catchments. It is assumed that the site is not subject to external catchment flooding such as LSIO or Flood Overlay (FO). Hence the focus of risk assessment will be on the internal catchment generated flow rate.

The swale section located west of Lot 3 is the most critical section to assure adequate capacity to convey 1% AEP runoff from all of three lots. The following parameters are adopted from the previous sections to calculate the site post developed 1% AEP (100 year ARI) flow rate using Rational Method.

- Post-developed run off coefficient (C) = 0.4 (Melbourne Water for LDRZ)
- Post-developed time of concentration (T_c) = 6 minutes (calculated and round up)
- Rainfall intensity for 100 year ARI (I) = 146 mm/hr (IFD table)
- Site area (A) = 1.2313 hectares

Site peak flow for 100 year ARI using Rational Method.

$$= \mathbf{0.1997 \text{ m}^3/\text{s} \text{ or } 199.7 \text{ L/s}}$$

The drainage pipe flow capacity from the previous section = 98.73 L/s.

Hence the GAP FLOW is

$$Q_d = 199.70 \text{ L/s} - 98.73 \text{ L/s} = \mathbf{100.97 \text{ L/s.}}$$

The gap flow of 100.97 L/s will be directed and conveyed over the earthen swale in the easement and discharged to existing open drain in gas transmission reserve (refer to Cardinia LPD advice).

The earthen swale cross section to be constructed as “V” channel is as shown below.

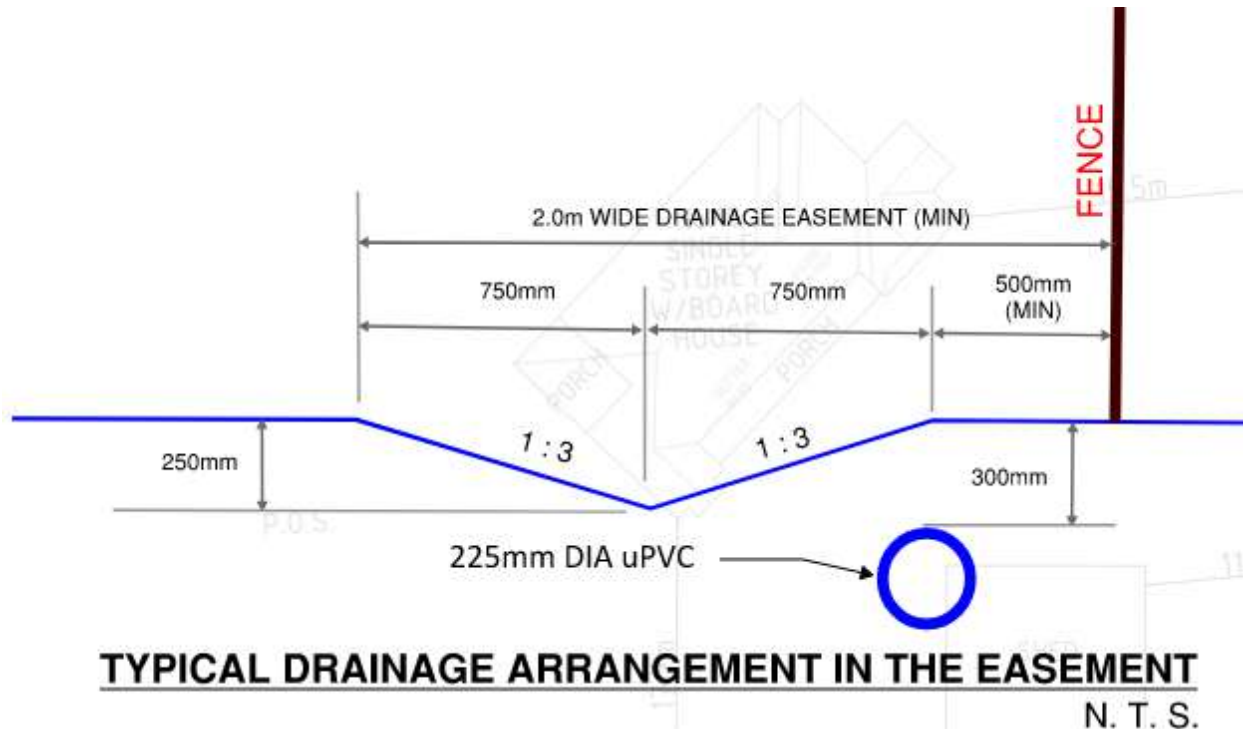


Figure 8 - Typical Swale Cross Section

Using Manning's formula, the above driveway cross sectional profile with 1 : 60 slope will be able to convey flow rate up to 0.29 m³/s or 290 L/s. This swale capacity is greater than the gap flow.

$$Q_c = 290 \text{ L/s} > Q_d \rightarrow \text{OKAY}$$

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5. WATER SENSITIVE URBAN DESIGN

5.1. Stormwater Quality Objectives

Victoria Planning Provisions Clause 56.07 provides sustainable water management provisions that aim to conserve, reuse and recycle water and manage the quality of stormwater run-off. Clause 56.07-4 Stormwater Management – standard C25 requires stormwater run-off must meet the *Urban Stormwater – Best Practice Environmental Management Guidelines* (CSIRO, 1999).

The current water quality objectives are:

- 80% retention of the typical urban annual load for Total Suspended Solids (TSS)
- 45% retention of the typical urban annual load for Total Phosphorus (TP)
- 45% retention of the typical urban annual load for Total Nitrogen (TN)
- 70% retention of the typical urban annual load for Gross Pollutants (litter)

5.2. WSUD Treatment Option

The individual lot of subdivision will have it's own rainwater tank for reuse purpose to flush toilets, wash clothes, water gardens and wash cars, significantly reducing demand on drinking water. A 10,000 L rainwater tank has been selected to be installed on each of allotment which later on will be connected to the building roof.

An average roof area of 600 m² with five bedrooms house to be built on each lot have been adopted to calculate the quality performance of this type of treatment. Considering the simplicity of treatment proposed on the development, Melbourne Water STORM Calculator has been utilised to calculate the quality performance compared to the Victoria Planning Clause 56.07-4 Stormwater Quality objectives.

5.3. STORM Calculator

A 10,000 L slimline rainwater tank is proposed to be installed on each of the lot being created on this development site to treat the stormwater captured from the roof. As discussed above, no other WSUD treatment is appropriate to be installed or created on this site.

The selection of 10,000 L size and slimline type rainwater tank is considered to be the most cost effective that will not sacrifice unnecessary footprint and aesthetic for this type and size of lot in the development. Generally, treating stormwater only with rainwater tank cannot achieve the best practice water quality outcome. However, for a development of this size, a combination of quality outcome achieved with rainwater tanks together with Melbourne Water offset contribution to the relevant Drainage Scheme will provide a better value for money and at the same time contributing to larger water quality of waterways and bays under Melbourne Water catchment.

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The previous sections discussed the roof coverage area of 600 m² for each of the lot. The STORM calculation below assumes that 80% of the roof coverage will be captured and conveyed to rainwater while the rest will be discharged via downpipes directly to drainage pipe due to practicality.

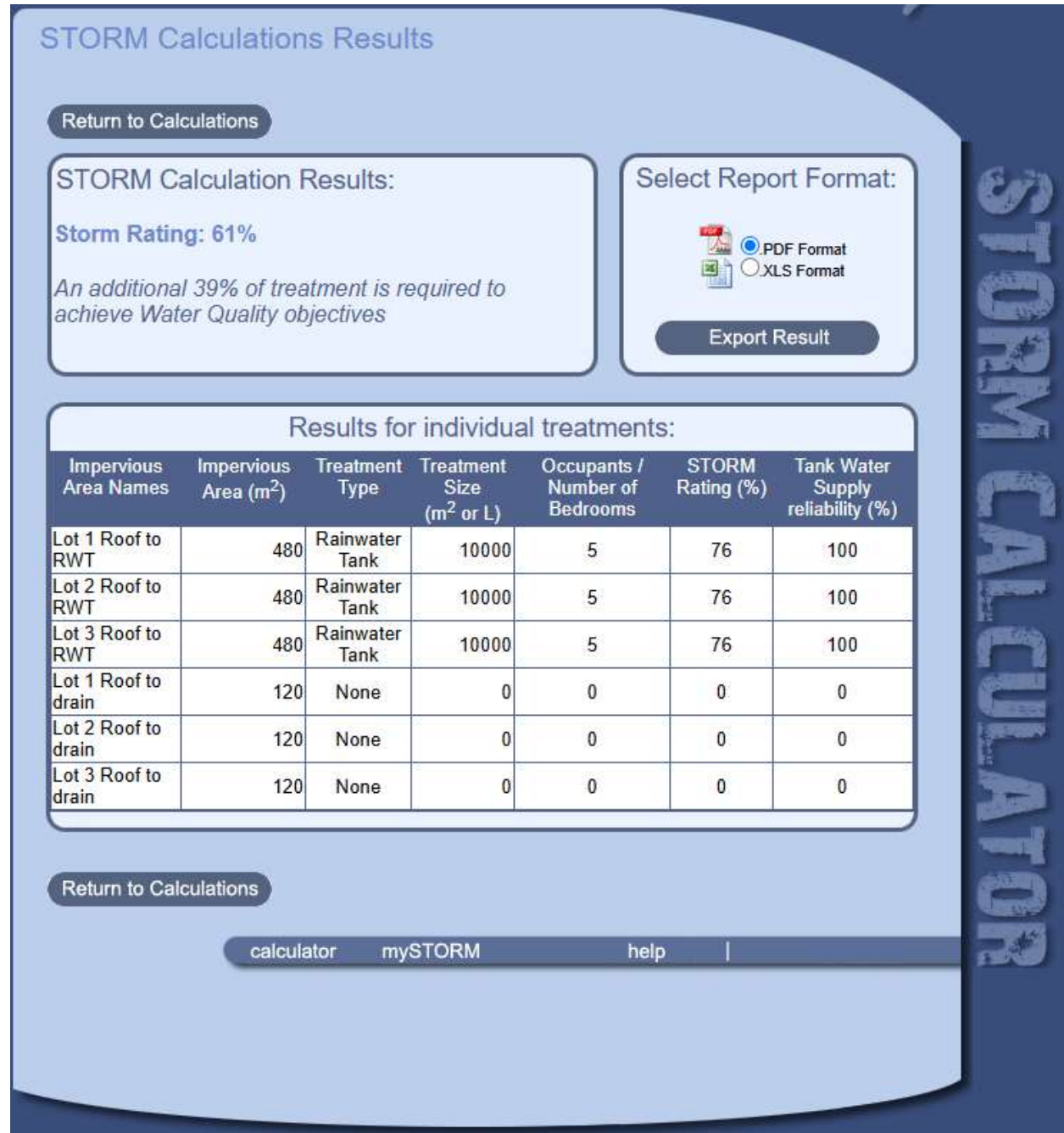


Figure 9 - STORM Calculator Outcome for the Development Water Quality

The proposed development stormwater quality treatment strategy by utilising only rainwater tank on each lot can only achieve 61% Storm Rating. Considering that the development site is located within the Melbourne Water Wattletree Rd Drainage Scheme, the balance of 39% treatment will need to be part of the drainage scheme quality treatment effort.

A stormwater quality offset contribution is payable to Melbourne Water and the next section discusses the estimated contribution amount to be made.

The details of STORM calculator report can be found in the Appendices.

5.4. Melbourne Water Stormwater Offset Contribution

The following contribution calculation is based on the Melbourne Water online calculator for the stormwater quality offset contribution under Wattletree Rd DS.

| No. | Greenfield scheme name | Current base rate (standard residential) (\$/ha) | | | | Rate changes | | |
|------|------------------------|--|---------------|--------------------------|------------|----------------|-----------|---------------|
| | | Hydraulic | Water quality | Includes scheme WQ works | Calculator | Effective date | Hydraulic | Water quality |
| 2854 | Wattletree Road DS | \$121,407 | \$18,876 | Yes | Calculator | | | |

2854 Wattletree Road DS as at 19 Jun 2025

Standard residential rates: \$121,407 (hydraulic)
\$18,876 (water quality)

Area (in ha): 1.2313

Development type: Low density (4001-10000m2)
(Density ratios)

Best practice expected / achieved %: 61 [Notes](#)

The calculator stipulates the level of best practice expected within a development. The level of treatment achieved (% of best practice) can be increased beyond the expected amount or decreased where mitigating circumstances prevent local treatment.

[Calculate](#) [Clear](#) [Close](#) [Print](#)

Calculated at \$11,326 (water quality) and \$72,844 (hydraulic) (0.6 x residential rate) per hectare.

| | |
|---|----------|
| Hydraulic contribution: | \$89,693 |
| Water quality contribution reduction for on-site treatment: | \$8,506 |
| Water quality contribution payable: | \$5,439 |
| Final total contribution: | \$95,132 |

Figure 10 - Melbourne Water Stormwater Quality Offset Contribution

6. SITE DRAINAGE CONNECTION TO COUNCIL ASSET

6.1.Site Drainage Connection Type

Legal Point of Drainage (LPD) advice received from Cardinia Shire Council specifies that the site drainage is to be connected to the existing drainage pipe/pit along the development site north boundary abutting to gas transmission line reserve.

Due to the calculated peak flow for 20% AEP as detailed in the previous sections as well as the EDCM requires a minimum 225mm diameter pipe, the existing 150mm diameter Council pipe drainage is not appropriate and will not be adequate to accommodate extra loading from the proposed development. Hence a grated pit will be constructed approximately 2.0m prior to the connection to Council existing asset to allow for surcharge.

The LPD advice also identifies an existing drainage pit asset labelled as Pit No 1 (JP) is located at the north west corner of the development site within the drainage easement. However, the most recent survey did not identify this pit. Further site investigation and detailed design will be required during design phase to establish the most appropriate type of connection of development site drainage to the existing Council asset. This report anticipates that based on the current available information, a pit connection to the existing Council drainage asset will be the most appropriate in anticipating the smaller size existing downstream pipe.

6.2.Future MW Wattletree Rd Drainage Scheme Pipe Works

Melbourne Water DS identifies a node at the end of future pipe work labelled as X11 which is located at the north west corner of the proposed development site. Both peak flow from minor system pipe (20% AEP) and the major system swale drain (1% AEP) are anticipated to be directed and captured at this node to the future DS pipe system.

Prior to the completion of DS scheme pipeline, the interim gap flows that cannot be accommodated by the existing Council drainage pipe will surcharge at the development drainage Pit 1. From this surcharge pit, water will flow through the existing open drain located within the gas transmission reserve.

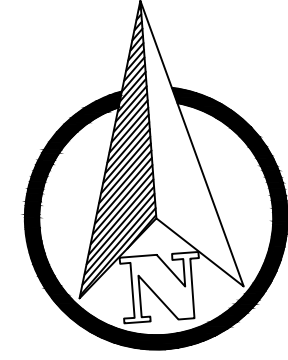
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7. APPENDICES

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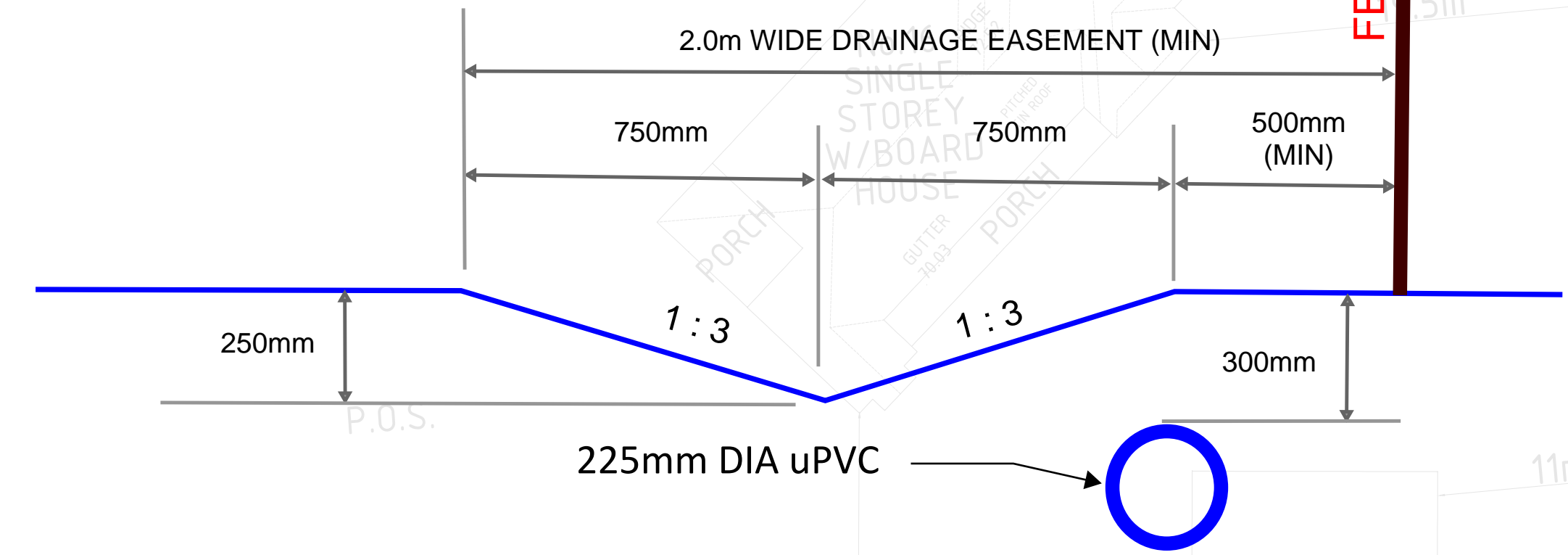
- A. Development Drainage Strategy Plan***
- B. Development Plan Version 1***
- C. Before You Dig Australia report***
- D. LPD Advice Letter from Cardinia Shire Council***
- E. BOM IFD2016 Rainfall Intensity table***
- F. Drainage Pipe Hydraulics Calculation Sheets***
- G. STORM Calculator report***
- H. Melbourne Water Stormwater Quality Offset Contribution calculator***
- I. Melbourne Water Wattletree Road Drainage Scheme***

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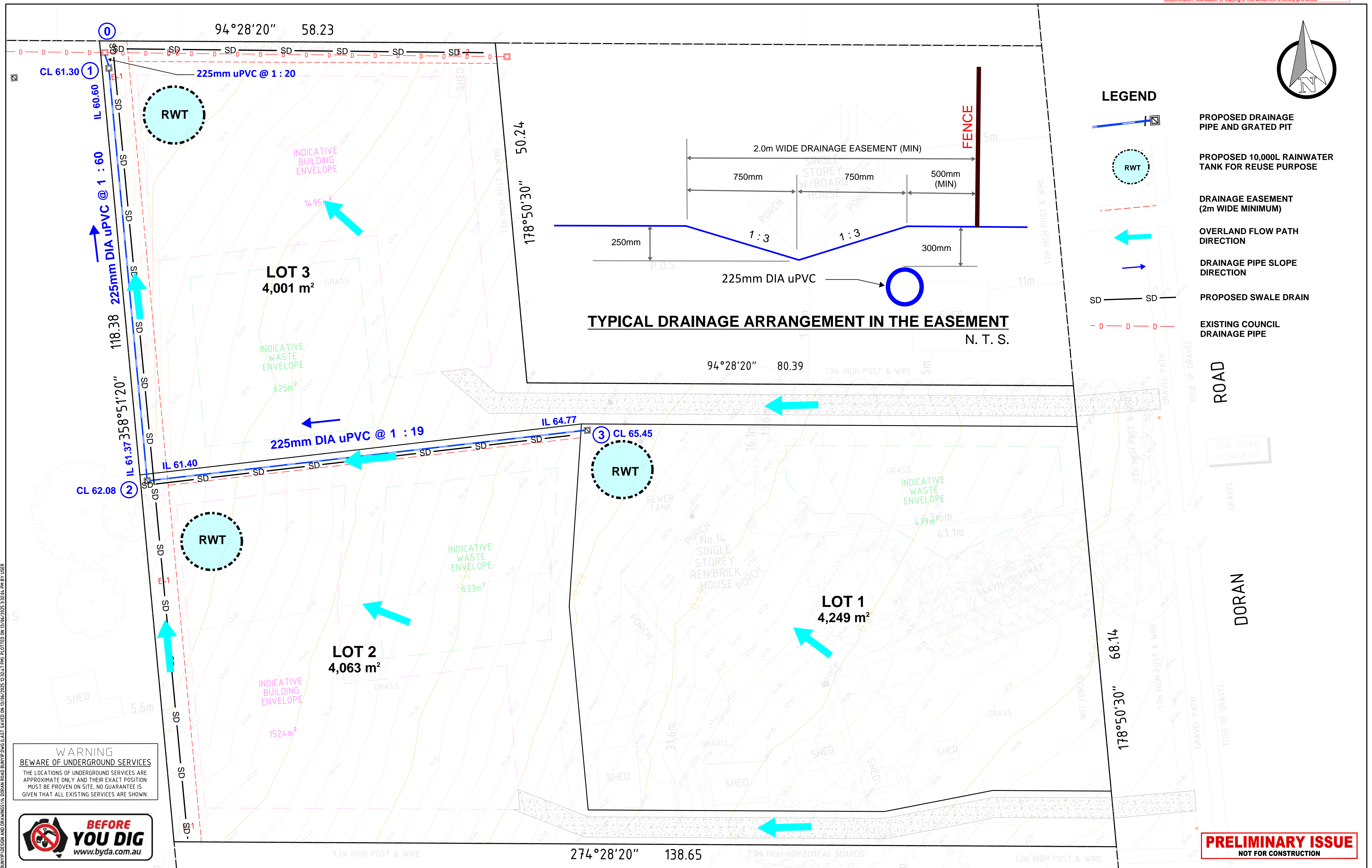


LEGEND

- PROPOSED DRAINAGE PIPE AND GRATED PIT
- PROPOSED 10,000L RAINWATER TANK FOR REUSE PURPOSE
- DRAINAGE EASEMENT (2m WIDE MINIMUM)
- OVERLAND FLOW PATH DIRECTION
- DRAINAGE PIPE SLOPE DIRECTION
- PROPOSED SWALE DRAIN
- EXISTING COUNCIL DRAINAGE PIPE



TYPICAL DRAINAGE ARRANGEMENT IN THE EASEMENT
N. T. S.



WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION MUST BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.



PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

| | | | | | | | | | | | | | | | |
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| A PRELIMINARY ISSUE | | | | 13.06.25 | | | | NK | | | | EA | | | |
| REV | | | | DATE | | | | INIT | | | | APP | | | |

ABN: 87 686 141 679
35 Annette Court,
Endeavour Hills VIC 3802

NFK CIVIL
ENGINEERING AND DESIGN
PE(VIC) No 0008952

CLIENT
S & L CONSULTING
PROJECT TITLE
THREE LOTS RESIDENTIAL SUB-DIVISION
SITE ADDRESS
14 DORAN ROAD, BUNYIP - VIC 3815
DRAWING TITLE
STORMWATER STRATEGY

| | | | |
|-------------------|---------------------|---------------|-----------|
| DESIGNED | NK | DRAWN | NK |
| CHECKED | EA | NO. OF SHEETS | 1 OF 1 |
| SCALE | 1:250 @ A1 (U.N.O.) | DATE STARTED | 8.05.2025 |
| SITE ID & JOB No. | 190120 | REV. | |
| DRAWING No. | SW 01 | | A |



Legal Point of Discharge and Stormwater Drainage Information Report

To: NFK Civil
Attention: Erik Andriansyah
Email address: erik.andriansyah@nfkcivil.com.au
From: Cardinia Shire Council – Infrastructure Services
Date: 3 June 2025

Total pages: 2

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Legal Point of Discharge and Stormwater Drainage Information Report

Pursuant to Regulation 133 of the Building Regulations 2018, please find below, stormwater drainage details and legal point of discharge for:

Property Address: Lot 2, 14 Doran Road, Bunyip Victoria

Property Number: 5000009946

See attached plans.

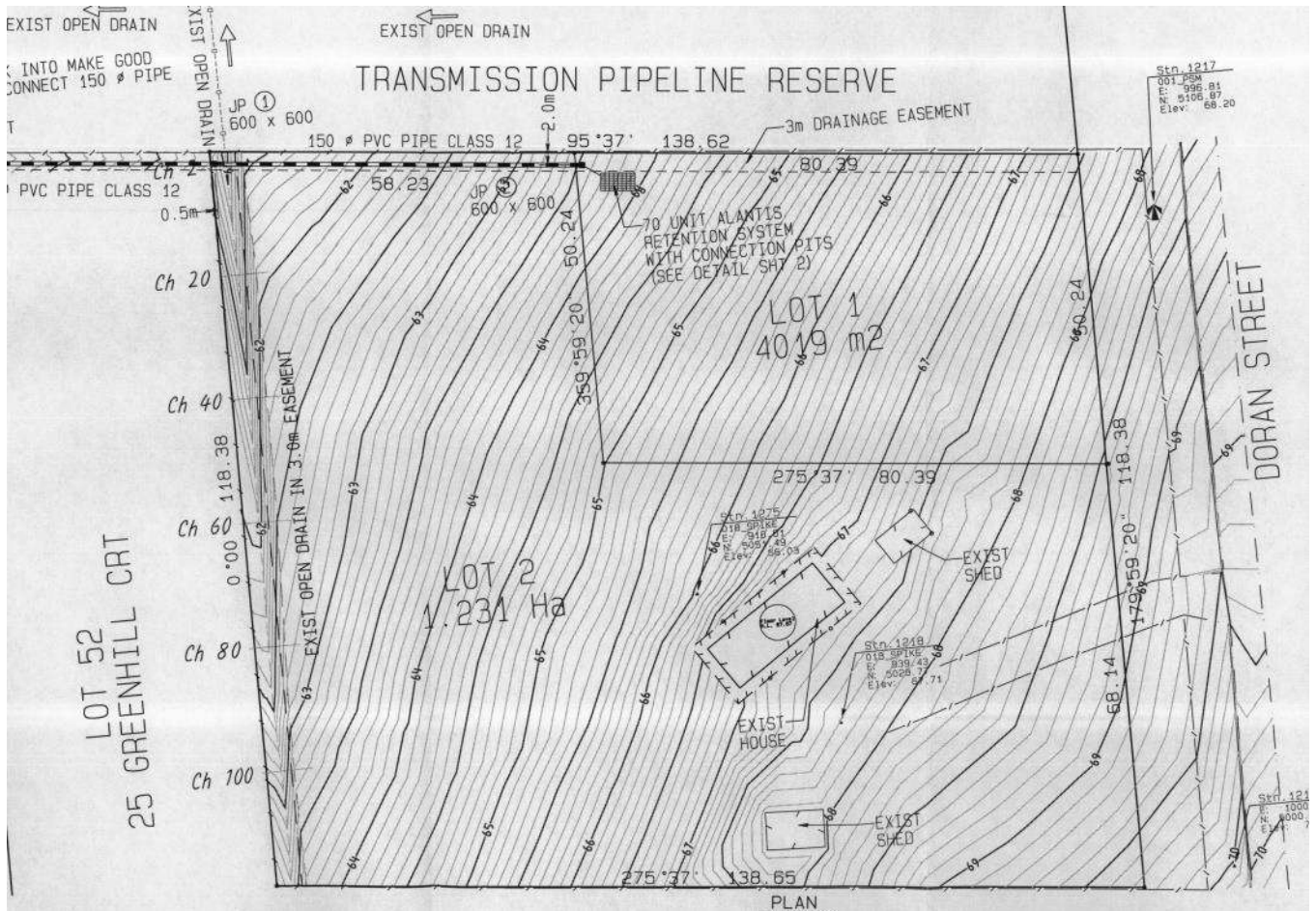
Regards,

Katie Slivarich
Development Support Officer

Please note:

- The information contained within this report is based on the drawings provided to, and approved by, Cardinia Shire Council. Cardinia Shire Council has taken reasonable steps to ensure the accuracy and currency of this information and disclaims any liability resulting from the usage of it.
- The information contained within this report is approximate only and it is recommended that the information be verified on site, and all levels checked for discharge to the nominated point, prior to the commencement of any works.
- A Works within a Road Reserve permit is required for all connections or alterations to Council assets.
- If a Town Planning Permit is required for this site, please refer to current permit for all stormwater drainage conditions.
- Stormwater pipe offsets are not provided as a part of this response.

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PIT SCHEDULE

| PIT No. | TYPE | INTERNAL | | INLET | | OUTLET | | FIN S.L. | PIT DEPTH |
|---------|-------|----------|------|-------|----------|--------|----------|----------|-----------|
| | | WID. | LEN. | DIA. | INV R.L. | DIA. | INV R.L. | | |
| | EXIST | 600 | 900 | 150 | 59.020 | | | 59.945 | 0.925 |
| 1 | JUNC | 600 | 600 | 150 | 60.500 | 150 | 60.455 | 61.215 | 0.760 |
| 2 | JUNC | 600 | 600 | | | 150 | 62.775 | 63.525 | 0.750 |

Label:14 Doran Rd BUNYIP

Requested coordinate Latitude: -38.0850

Longitude: 145.7340

Nearest grid cell Latitude: 38.0875 (S)

Longitude: 145.7375 (E)

IFD Design Rainfall Intensity (mm/h)

Issued: 19 June 2025

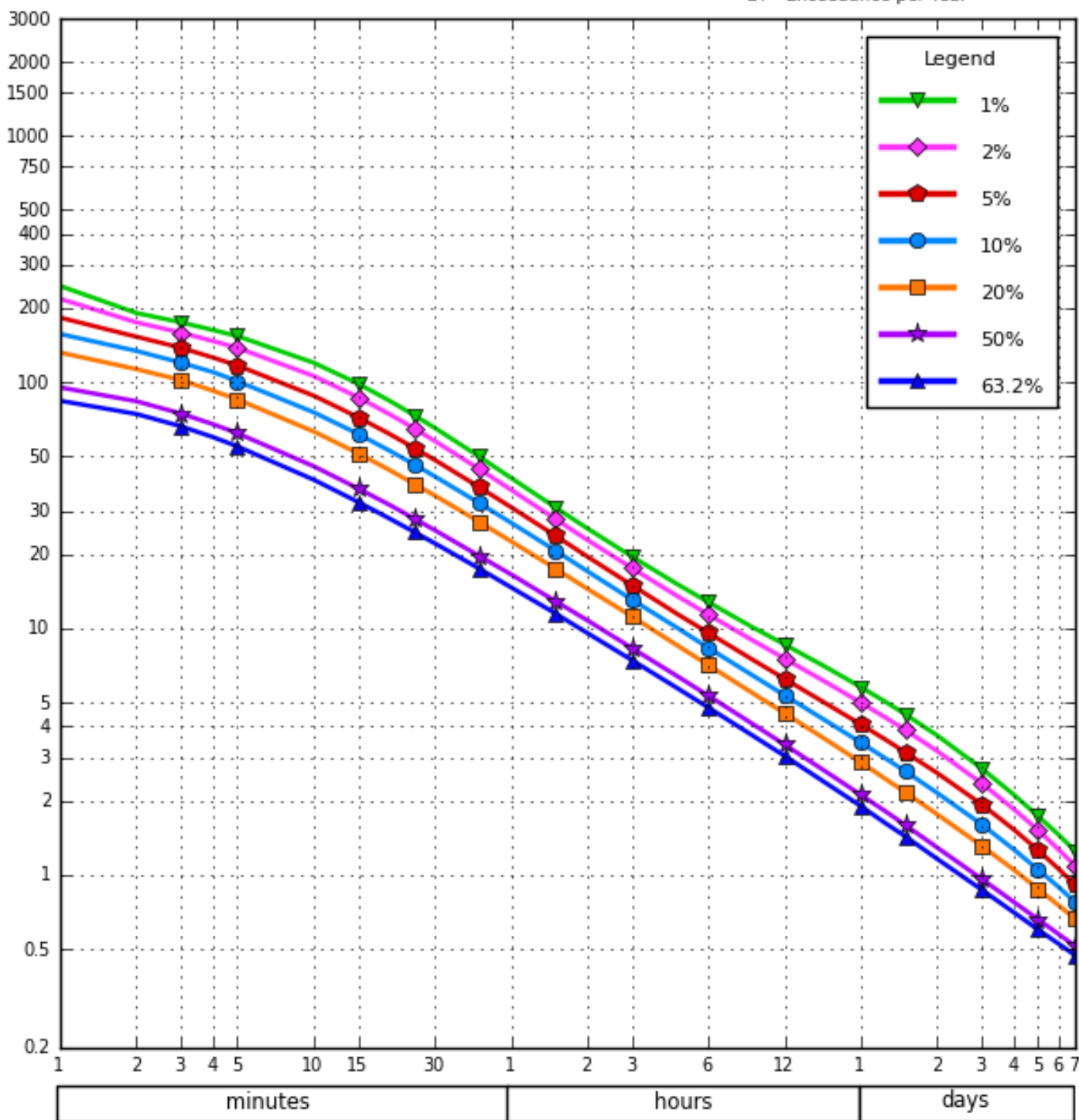
Rainfall intensity in millimetres per hour for Durations, Exceedance per Year (EY), and Annual Exceedance Probabilities (AEP).

Intensity

(mm/h)

*AEP - Annual Exceedance Probability

**EY - Exceedance per Year



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STORMWATER DRAINAGE ANALYSIS - PIPE FLOW CALCULATIONS

Client: 14 Doran Rd Pty Ltd
Project: 14 Doran Rd BUNYIP

Spreadsheet specific for this job only.

File No.: 190120
Date: 19/06/2025
Engineer: E.A

Cardinia 5 Year ARI

| a | b | c | d | e | f | g |
|----------|-----------|----------|----------|-----------|----------|----------|
| 3.145993 | -0.577488 | 0.001922 | 0.006595 | -0.002165 | 0.000038 | 0.000016 |

NOTE: YOU SHOULD REVIEW ALL INPUT CELLS (SHADED IN BLUE)

| | | |
|------------------------------|---------------------|------------|
| Manning's n | 0.008 | |
| Minimum Velocity (m/s) | 0.7 | |
| Maximum Velocity (m/s) | 6 | |
| Minimum Drop through Pit (m) | 0.05 | |
| Minimum Drop along Pipes (m) | 0.05 | |
| Minimum Freeboard at Pit (m) | 0.15 | |
| | Fraction Impervious | C (5 Year) |
| Land | 0.247 | 0.300 |
| Pavement | 0.900 | 0.781 |
| Roof | 1.000 | 0.855 |

CATCHMENT A

| Pipe | | Areas (m ²) | | | C*A | C*A Total | tc | I | Qd | DIA | I.D. | Pipe Area | Upstream | GRADE | Downstream | Length | Fall | Qc | Qd / Qc | Vc | Vp | Va | tpipe |
|---------|-----|-------------------------|------|------|---------|-----------|--------|--------|--------|------|------|-----------|----------|--------|------------|--------|-------|--------|---------|------|------|------|--------|
| Section | | Land | Pave | Roof | (m2) | | (mins) | (mm/h) | (l/s) | (mm) | (mm) | (m2) | IL | 1 in X | IL | m | m | (l/s) | | m/s | m/s | | (mins) |
| 1.0 | 6.0 | 4249.00 | 0.00 | 0.00 | 1272.83 | 1272.83 | 7.00 | 72.52 | 25.641 | 225 | 229 | 0.041 | 12.035 | 19.0 | 8.667 | 64.0 | 3.368 | 175.45 | 0.15 | 4.26 | 3.05 | 3.05 | 0.35 |
| 2.0 | 5.0 | 4063.00 | 0.00 | 0.00 | 1217.11 | 2489.94 | 7.35 | 71.07 | 49.159 | 225 | 229 | 0.041 | 8.617 | 60.0 | 7.617 | 60.0 | 1.000 | 98.73 | 0.50 | 2.40 | 2.40 | 2.40 | 0.42 |
| 3.0 | 4.0 | 4001.00 | 0.00 | 0.00 | 1198.54 | 3688.48 | 7.77 | 69.43 | 71.138 | 225 | 229 | 0.041 | 7.567 | 20.0 | 7.467 | 2.0 | 0.100 | 171.00 | 0.42 | 4.15 | 3.96 | 3.96 | 0.01 |

The diagram illustrates the cross-section of a trapezoidal channel. The top horizontal line is labeled "Channel width". The bottom horizontal line is labeled "Base width". The vertical distance from the top edge to the bottom edge is labeled "Channel depth". The vertical distance from the top edge to the water surface is labeled "Freeboard DEPTH". The sloped sides are labeled "Side slope". The sloped bottom is labeled "Base slope". A water level symbol is shown on the water surface.

Client:
Project:

File No.:
Date:
Engineer

For a given channel configuration alter the DEPTH to find the flow
 For a given flow alter the DEPTH and channel configuration as required
 For a trapezoidal channel make the base slope large enough (2000) to make the fall negligible
 For a "v" channel make the base width zero and the side slopes will form the "v"

[illegible]



STORM Rating Report

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TransactionID: 0
Municipality: CARDINIA
Rainfall Station: CARDINIA
Address: 14 Doran Rd

Bunyip
VIC 3815

Assessor: NFK Civil
Development Type: Residential - Subdivision
Allotment Site (m2): 12,313.00
STORM Rating %: 61

| Description | Impervious Area (m2) | Treatment Type | Treatment Area/Volume (m2 or L) | Occupants / Number Of Bedrooms | Treatment % | Tank Water Supply Reliability (%) |
|---------------------|-------------------------|----------------|---------------------------------------|--------------------------------------|-------------|---|
| Lot 1 Roof to RWT | 480.00 | Rainwater Tank | 10,000.00 | 5 | 76.00 | 100.00 |
| Lot 2 Roof to RWT | 480.00 | Rainwater Tank | 10,000.00 | 5 | 76.00 | 100.00 |
| Lot 3 Roof to RWT | 480.00 | Rainwater Tank | 10,000.00 | 5 | 76.00 | 100.00 |
| Lot 1 Roof to drain | 120.00 | None | 0.00 | 0 | 0.00 | 0.00 |
| Lot 2 Roof to drain | 120.00 | None | 0.00 | 0 | 0.00 | 0.00 |
| Lot 3 Roof to drain | 120.00 | None | 0.00 | 0 | 0.00 | 0.00 |

2854 Wattletree Road DS as at 19 Jun 2025

Standard residential rates: \$121,407 (hydraulic)
\$18,876 (water quality)

Area (in ha):
1.2313

Development type:
Low density (4001-10000m2)

Best practice expected / achieved %:
61

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The calculator stipulates the level of best practice expected within a development. The level of treatment achieved (% of best practice) can be increased beyond the expected amount or decreased where mitigating circumstances prevent local treatment.

Calculated at \$11,326 (water quality) and \$72,844 (hydraulic) (0.6 x residential rate) per hectare.

Hydraulic contribution:
\$89,693

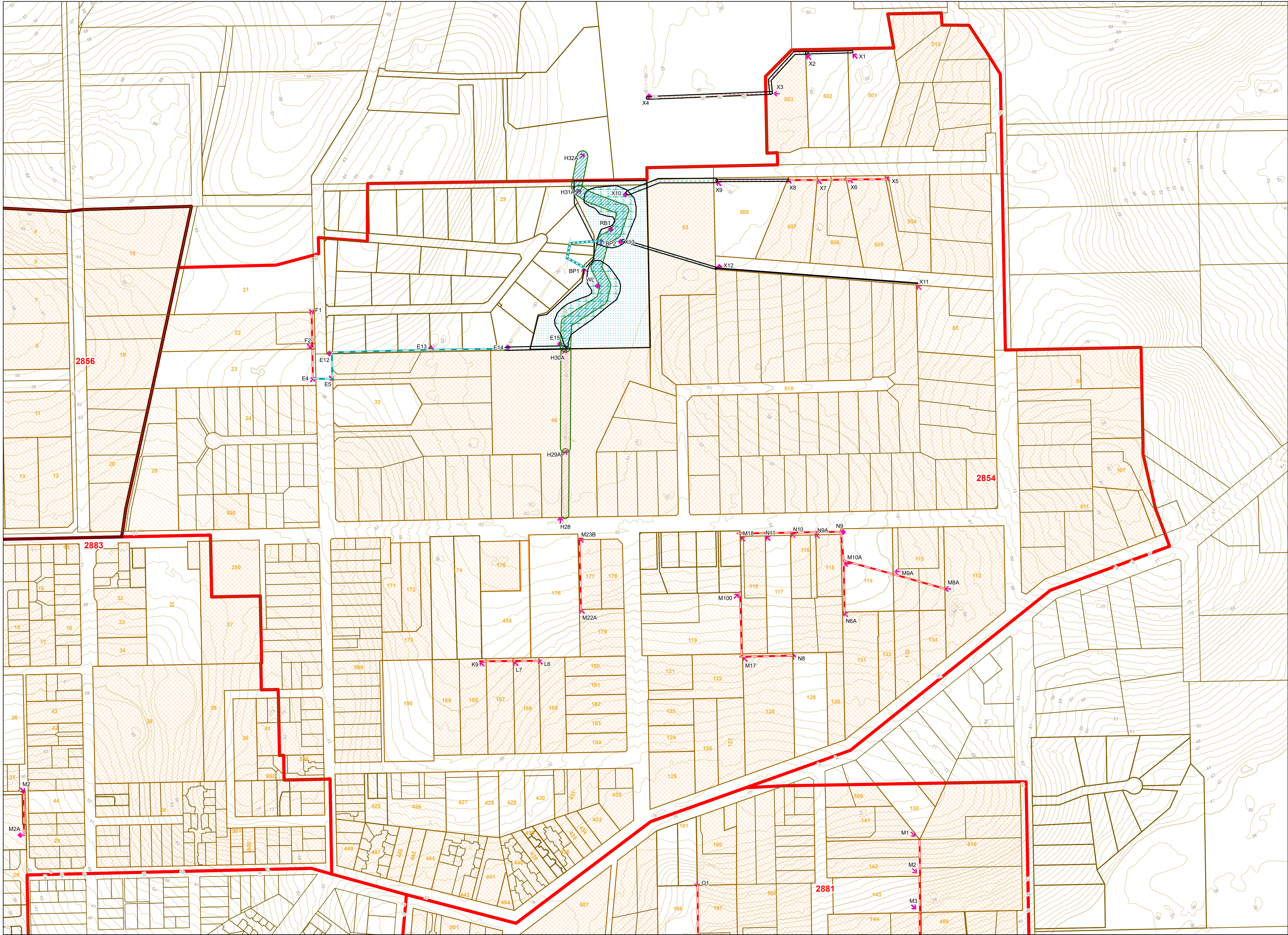
Water quality contribution reduction for on-site treatment:
\$8,506

Water quality contribution payable:
\$5,439

Final total contribution:
\$95,132

Disclaimer

This calculator is provided for illustrative purposes only as it is not possible to provide for all special conditions which may apply in particular circumstances. The results generated are based on the accuracy of information and on the assumptions shown or selected by you. The information which you calculate using this calculator is an approximate guide only and the existence of a printout does not constitute any agreement on the level of developer contributions which will apply. The terms and conditions for particular development schemes may be varied or introduced in the future. Fees and charges may be payable. For confirmation of contributions payable please submit a formal application for conditions to the Land Development Team at Melbourne Water by filling in the Application for Conditions Agreement



DFWS Planning

- Greenfield Scheme
- Greenfield Strategy
- Precinct Renewal Scheme

DFWS Properties

- Unpaid
- Partially Paid
- Fully Paid / Non-Contributing

DFWS Contribution Payments

-

DFWS Project

- DRAFT / WAPPR / DEFERRED
- APPR / INPRG / DELAYED / PRCOMP
- CAN / CLOSE / COMP

DFWS Conceptual Assets

- Litter Trap
- Sediment Trap

DFWS Nodes

-

Existing Assets

- Bioretention
- Lake
- Sed Trap
- Wetland
- Retarding Basin
- Structure
- Underground Centreline
- Other Authority Centreline
- Channel Centreline
- Natural Waterway Centreline

Land Capability Assessment

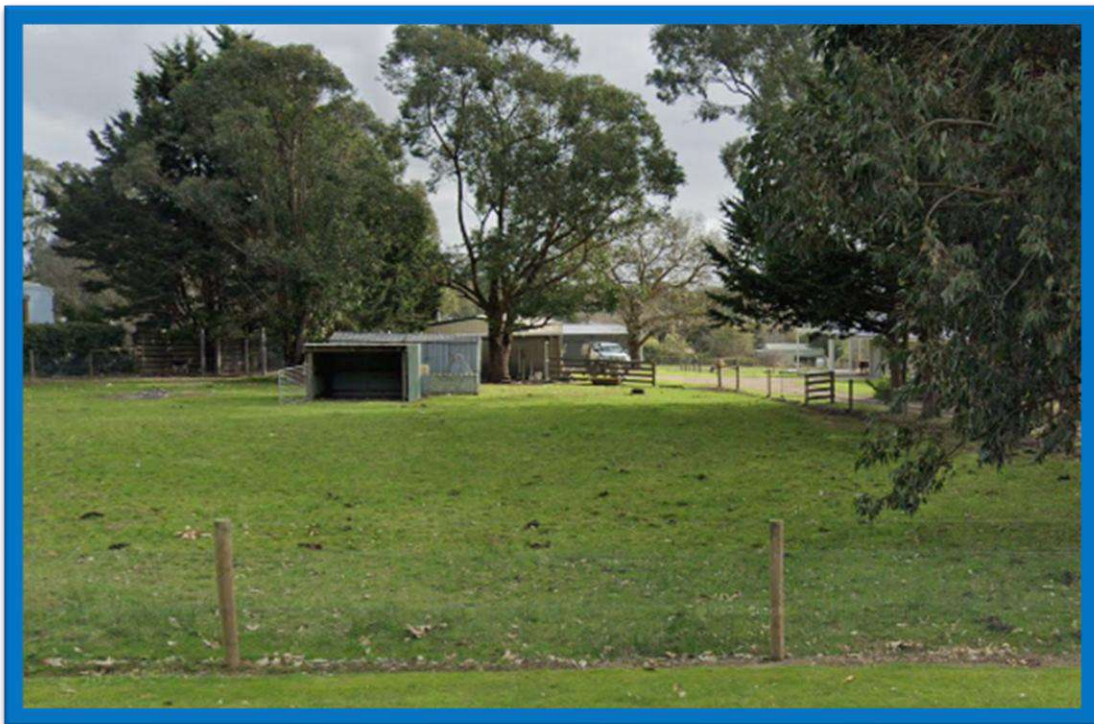
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Report No: 19998

Location: 14 Doran Rd, BUNYIP

Client: Nobelius

Date: 2/05/2025





Report No: 19998

1. **Owner/ Developer:** Nobelius

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2. **Zoning:** Low Density Residential Zone 2(LDRZ2)

3. **Overlays: (DDO)(DDO1) (VPO)(VPO1)** This property is in a bushfire prone area.

4. **Allotment Size:** Lot 1 4249m². Lot 2 4063m². Lot 3 4001m².

5. **Anticipated Wastewater:** Lot 1 720 l/d. Lot 2 and 3 1080 l/d

6. **Number of Rooms Usable for Bedrooms:** Lot 1 3 bedroom. Lot 2 and 3 5 Bedroom.

Plans unsighted room numbers provided by client.

7. Site Plan:

Note: Plan not to scale

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8. Published Soil Information:

The site is situated within a geological area of Devonian Upper, Granite. The site investigation confirmed this.

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9. Site Key Features:

Table 1: Site Assessment

| | Feature | Description | Level of Constraint | Mitigation Measures |
|---|------------------------|-----------------|---------------------|---------------------|
| A | Buffer Distances | Good | Minor | Nil |
| B | Climate | Low evaporation | Moderate | Yes |
| C | Drainage | Fair | Minor | Nil |
| D | Erosion & Landslip | Nil | Minor | Nil |
| E | Exposure & Aspect | Good Exposure | Minor | Nil |
| F | Flooding | Less than 1-100 | Minor | Nil |
| G | Groundwater | Not encountered | Minor | Nil |
| H | Imported Fill | No | Minor | Nil |
| I | Land Available for LAA | Small | Moderate | Yes |
| J | Landform | Slope | Moderate | Yes |
| K | Rock Outcrops | Nil | Minor | Nil |
| L | Feature | Nil | Minor | Nil |
| M | Run-on & Runoff | Slope | Moderate | Yes |
| N | Slope | ≤10% | Minor | Nil |
| O | Surface Waters | Nil | Minor | Nil |
| P | Vegetation | Grass | Minor | Nil |

B) Due to low evaporation and high rain fall in winter a full water balance has been completed for subsurface irrigation and conservative rates applied.

Wick trench and bed lengths have been increased by 30%.

I) Conservative DLR applied and rates of 180L per day per person.

J) M) Divert Runoff away from Effluent area.

10. Soil Survey and Analysis:

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Table 2: Soil Assessment

| | Feature | Assessment | Level of Constraint | Mitigation Measures |
|----------|---|----------------------|---------------------|---------------------|
| A | Electrical Conductivity | .38dSm ⁻¹ | Minor | Nil |
| B | Emerson Aggregate Class | 7 | Minor | Nil |
| C | pH | 5.3 | Minor | Nil |
| D | Rock Fragments | <10% | Minor | Nil |
| E | Soil Test Depth | 1.5m | Minor | Nil |
| F | Soil Permeability & Design Loading Rates | Cat 5 | Moderate | Yes |
| G | Permanent Watertable Depth | <5m not encountered | Minor | Nil |

- Bore logs on page 9.

F) Category 5 soil, full water balance has been done and conservative rates applied.

11. Water Balance:

Mean Yearly Rainfall: 869.2

Yearly Pan Evaporation: 1042.3

Daily water usage: LOT 1 720 litres per day. Lot 2 and 3 1080 litres per day.

SITE 1

| Irrigation area sizing using Nominated Area Water Balance for Zero Storage | | | | | | | | | | | | | | | | |
|--|-----------------|----------------------|------------------------|--|----------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Site Address: | | 14 Doran Road Bunyip | | | | | | | | | | | | | | |
| Date: | | | | | | Assessor: | | | | | | | | | | |
| INPUT DATA | | | | | | | | | | | | | | | | |
| Design Wastewater Flow | Q | 720 | L/day | Based on maximum potential occupancy and derived from Table 4 in the EPA Code of Practice (2013) | | | | | | | | | | | | |
| Design Irrigation Rate | DIR | 3.0 | mm/day | Based on soil texture class/permeability and derived from Table 9 in the EPA Code of Practice (2013) | | | | | | | | | | | | |
| Nominated Land Application Area | L | 267 | m ² | | | | | | | | | | | | | |
| Crop Factor | C | 0.6-0.8 | unitless | Estimates evapotranspiration as a fraction of pan evaporation; varies with season and crop type ² | | | | | | | | | | | | |
| Rainfall Runoff Factor | RF | 0.8 | unitless | Proportion of rainfall that remains onsite and infiltrates, allowing for any runoff | | | | | | | | | | | | |
| Mean Monthly Rainfall Data | Longwarry 85028 | | BoM Station and number | | | | | | | | | | | | | |
| Mean Monthly Pan Evaporation Data | Noojee 085277 | | BoM Station and number | | | | | | | | | | | | | |
| Parameter | Symbol | Formula | Units | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| Days in month | D | | days | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | 365 |
| Rainfall | R | | mm/month | 59.5 | 50.3 | 59 | 68.2 | 73.3 | 69.9 | 71.4 | 83.2 | 90.5 | 87.6 | 83.9 | 72.4 | 869.2 |
| Evaporation | E | | mm/month | 151.9 | 126 | 102.3 | 63 | 43.4 | 36 | 40.3 | 55.8 | 75 | 99.2 | 114 | 133.3 | 1040.2 |
| Crop Factor | C | | unitless | 0.80 | 0.80 | 0.70 | 0.70 | 0.60 | 0.60 | 0.60 | 0.60 | 0.70 | 0.80 | 0.80 | 0.80 | |
| OUTPUTS | | | | | | | | | | | | | | | | |
| Evapotranspiration | ET | ExC | mm/month | 122 | 101 | 72 | 44 | 26 | 22 | 24 | 33 | 53 | 79 | 91 | 107 | 773.03 |
| Percolation | B | DIRxD | mm/month | 93.0 | 84 | 93.0 | 90.0 | 93.0 | 90.0 | 93.0 | 93.0 | 90.0 | 93.0 | 90.0 | 93.0 | 1095.0 |
| Outputs | B | ET+B | mm/month | 214.5 | 184.8 | 164.6 | 134.1 | 119.0 | 111.6 | 117.2 | 126.5 | 142.5 | 172.4 | 181.2 | 199.6 | 1868.0 |
| INPUTS | | | | | | | | | | | | | | | | |
| Retained Rainfall | RR | RxRF | mm/month | 47.6 | 40.24 | 47.2 | 54.56 | 58.64 | 55.92 | 57.12 | 66.56 | 72.4 | 70.08 | 67.12 | 57.92 | 695.36 |
| Applied Effluent | W | (QxD)/L | mm/month | 83.6 | 75.5 | 83.6 | 80.9 | 83.6 | 80.9 | 83.6 | 83.6 | 80.9 | 83.6 | 80.9 | 83.6 | 984.3 |
| Inputs | W | RR+W | mm/month | 131.2 | 115.7 | 130.8 | 135.5 | 142.2 | 136.8 | 140.7 | 150.2 | 153.3 | 153.7 | 148.0 | 141.5 | 1679.6 |
| STORAGE CALCULATION | | | | | | | | | | | | | | | | |
| Storage remaining from previous month | | | mm/month | 0.0 | 0.0 | 0.0 | 0.0 | 1.4 | 24.6 | 49.8 | 73.3 | 97.0 | 107.8 | 89.1 | 55.9 | |
| Storage for the month | S | (RR+W)-(ET+B) | mm/month | -83.3 | -69.1 | -33.8 | 1.4 | 23.2 | 25.2 | 23.5 | 23.7 | 10.8 | -18.7 | -33.2 | -58.1 | |
| Cumulative Storage | M | | mm | 0.0 | 0.0 | 0.0 | 1.4 | 24.6 | 49.8 | 73.3 | 97.0 | 107.8 | 89.1 | 55.9 | 0.0 | |
| Maximum Storage for Nominated Area | N | | mm | 107.78 | | | | | | | | | | | | |
| | V | NxL | L | 26778 | | | | | | | | | | | | |
| LAND AREA REQUIRED FOR ZERO STORAGE | | | m ² | 134 | 139 | 190 | 272 | 370 | 388 | 372 | 372 | 308 | 218 | 189 | 157 | |
| MINIMUM AREA REQUIRED FOR ZERO STORAGE: | | | | 388.0 | m ² | | | | | | | | | | | |

SITE 2 & 3

Irrigation area sizing using Nominated Area Water Balance for Zero Storage

| | | | | | | | | | | | | | | | | | |
|---|--|-----------------|---------------|------------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Site Address: | | | | 14 Doran Road Bunyip | | | | | | | | | | | | | |
| Date: | | | | Assessor: | | | | | | | | | | | | | |
| INPUT DATA | | | | | | | | | | | | | | | | | |
| Design Wastewater Flow | | Q | 1,080 | L/day | Based on maximum potential occupancy and derived from Table 4 in the EPA Code of Practice (2013) | | | | | | | | | | | | |
| Design Irrigation Rate | | DIR | 3.0 | mm/day | Based on soil texture class/permeability and derived from Table 9 in the EPA Code of Practice (2013) | | | | | | | | | | | | |
| Nominated Land Application Area | | L | 267 | m ² | | | | | | | | | | | | | |
| Crop Factor | | C | 0.6-0.8 | unitless | Estimates evapotranspiration as a fraction of pan evaporation; varies with season and crop type ² | | | | | | | | | | | | |
| Rainfall Runoff Factor | | RF | 0.8 | unitless | Proportion of rainfall that remains onsite and infiltrates, allowing for any runoff | | | | | | | | | | | | |
| Mean Monthly Rainfall Data | | Longwarry 85028 | | BoM Station and number | | | | | | | | | | | | | |
| Mean Monthly Pan Evaporation Data | | Noojee 085277 | | BoM Station and number | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| Parameter | | Symbol | Formula | Units | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| Days in month | | D | | days | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | 365 |
| Rainfall | | R | | mm/month | 59.5 | 50.3 | 59 | 68.2 | 73.3 | 69.9 | 71.4 | 83.2 | 90.5 | 87.6 | 83.9 | 72.4 | 869.2 |
| Evaporation | | E | | mm/month | 151.9 | 126 | 102.3 | 63 | 43.4 | 36 | 40.3 | 55.8 | 75 | 99.2 | 114 | 133.3 | 1040.2 |
| Crop Factor | | C | | unitless | 0.80 | 0.80 | 0.70 | 0.70 | 0.60 | 0.60 | 0.60 | 0.60 | 0.70 | 0.80 | 0.80 | 0.80 | |
| OUTPUTS | | | | | | | | | | | | | | | | | |
| Evapotranspiration | | ET | ExC | mm/month | 122 | 101 | 72 | 44 | 26 | 22 | 24 | 33 | 53 | 79 | 91 | 107 | 773.03 |
| Percolation | | B | DIRxD | mm/month | 93.0 | 84 | 93.0 | 90.0 | 93.0 | 90.0 | 93.0 | 93.0 | 90.0 | 93.0 | 90.0 | 93.0 | 1095.0 |
| Outputs | | B | ET+B | mm/month | 214.5 | 184.8 | 164.6 | 134.1 | 119.0 | 111.6 | 117.2 | 126.5 | 142.5 | 172.4 | 181.2 | 199.6 | 1868.0 |
| INPUTS | | | | | | | | | | | | | | | | | |
| Retained Rainfall | | RR | RxRF | mm/month | 47.6 | 40.24 | 47.2 | 54.56 | 58.64 | 55.92 | 57.12 | 66.56 | 72.4 | 70.08 | 67.12 | 57.92 | 695.36 |
| Applied Effluent | | W | (QxD)/L | mm/month | 125.4 | 113.3 | 125.4 | 121.3 | 125.4 | 121.3 | 125.4 | 125.4 | 121.3 | 125.4 | 121.3 | 125.4 | 1476.4 |
| Inputs | | W | RR+W | mm/month | 173.0 | 153.5 | 172.6 | 175.9 | 184.0 | 177.3 | 182.5 | 192.0 | 193.7 | 195.5 | 188.5 | 183.3 | 2171.8 |
| STORAGE CALCULATION | | | | | | | | | | | | | | | | | |
| Storage remaining from previous month | | | | mm/month | 0.0 | 0.0 | 0.0 | 8.0 | 49.8 | 114.8 | 180.5 | 245.8 | 311.3 | 362.5 | 385.6 | 392.9 | |
| Storage for the month | | S | (RR+W)-(ET+B) | mm/month | -41.5 | -31.3 | 8.0 | 41.8 | 65.0 | 65.7 | 65.3 | 65.5 | 51.2 | 23.1 | 7.3 | -16.3 | |
| Cumulative Storage | | M | | mm | 0.0 | 0.0 | 8.0 | 49.8 | 114.8 | 180.5 | 245.8 | 311.3 | 362.5 | 385.6 | 392.9 | 376.6 | |
| Maximum Storage for Nominated Area | | N | | mm | 392.89 | | | | | | | | | | | | |
| | | V | NxL | L | 104902 | | | | | | | | | | | | |
| LAND AREA REQUIRED FOR ZERO STORAGE | | | | m ² | 201 | 209 | 285 | 407 | 554 | 582 | 557 | 559 | 462 | 327 | 284 | 236 | |
| MINIMUM AREA REQUIRED FOR ZERO STORAGE: | | | | m ² | 582.0 | | | | | | | | | | | | |

Site 1

| Wick Trench & Bed DLR | Wick Trench & Bed Length | Subsurface DIR | Subsurface Area |
|-----------------------|--------------------------|----------------|-------------------|
| 5 | 140m | 3 | 388m ² |

Wick Trench and Bed sizing:

Q = Daily design flow rate L/Day.

W = Width of trench & bed.

DLR = Design load rating in MM/Day from table 9.

F = Factor 1.2

720L/ (DLR x(W/F)

720L/ (5 lm² x 1.6/1.2)

720L/6.66 L/M

108.10m + 30% = 140.53m

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Site 2 & 3

| Wick Trench & Bed DLR | Wick Trench & Bed Length | Subsurface DIR | Subsurface Area |
|-----------------------|--------------------------|----------------|-------------------|
| 5 | 210.80m | 3 | 582m ² |

Wick Trench and Bed sizing:

Q = Daily design flow rate L/Day.

W = Width of trench & bed.

DLR = Design load rating in MM/Day from table 9.

F = Factor 1.2

1080L/ (DLR x(W/F)

1080L/ (5 lm² x 1.6/1.2)

1080L/6.66 L/M

162.16m +30%= 210.80

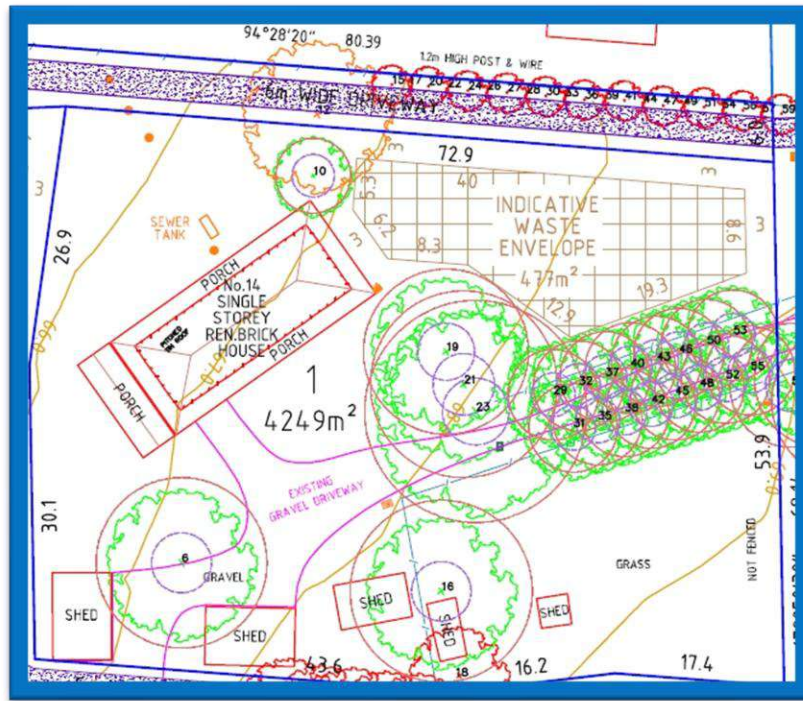
Calculated with Trench & Bed sizes. Trench - 400mm deep & 600mm wide.

Bed - 200mm deep & 1m wide.

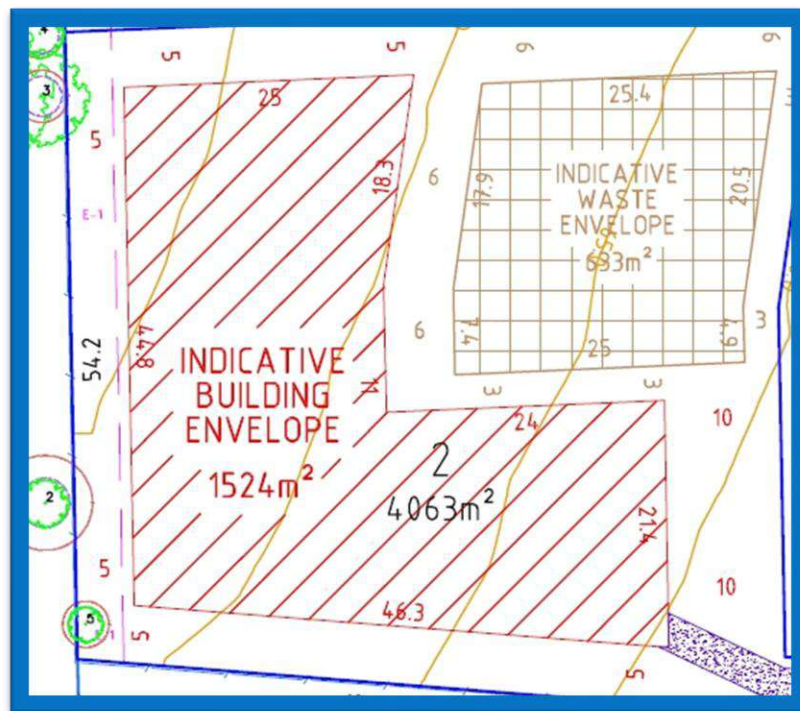
12. Location and Configuration System:

Effluent Area: EPA setbacks must be met.

Site 1

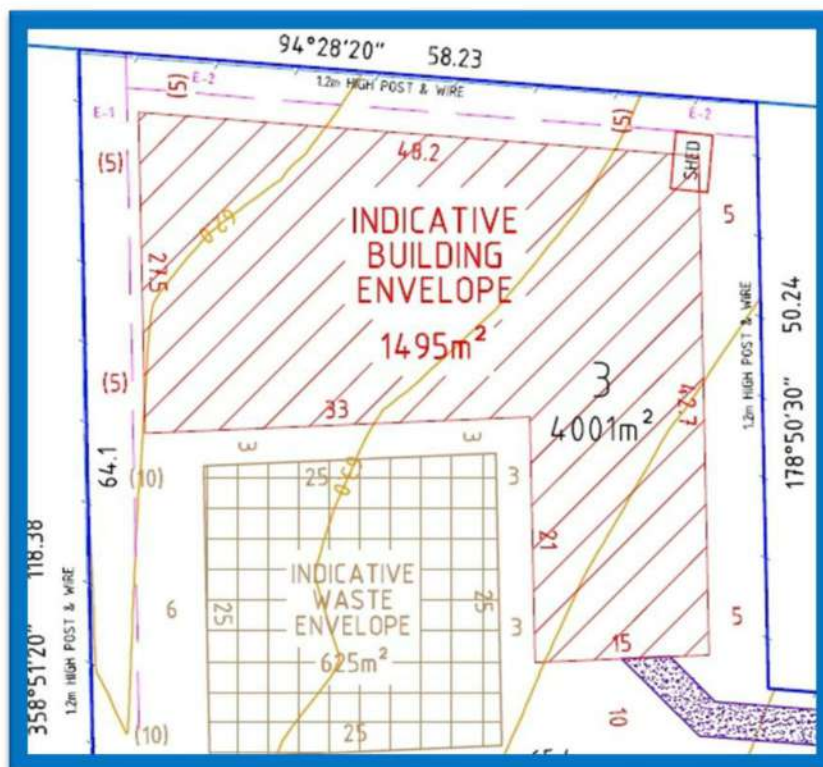


Site 2



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Site 3



13. Monitoring Operation and Maintenance:

- Have suitably trained and qualified contractor to service systems at the frequency required by council.
- Recommend use of AAA fixtures and appliances.
- Use cleaning products and toiletries suitable for septic systems.
- Maintain vegetation over effluent area.
- Keep livestock and vehicles off the effluent area to avoid compaction.

14. Conclusion:

Soil Test Express can recommend the use of a secondary treated system that uses Subsurface Irrigation or Primary Wick Trench and Bed for treating and maintaining wastewater within the site. Wick trench and bed system should be divided into trench and beds no longer than 20m. Sizing for lots 1/2/3 on pages 6 and 7

EPA setbacks can be met as set out on pages 8 and 9.

Vegetation must be always maintained over and around LAA.

A reserve area of similar size should be set aside if trench system is selected.

The use of low sodium cleaning products recommended.

Note: Recommendations outlined in this report are subject to council approval.

Mr C Dunn

SOIL TEST EXPRESS

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(03) 5997 1192

admin@soiltestexpress.com.au



PO Box 233, Koo Wee Rup, VIC 3981

Shop 1/ 23-25 Station St,
Koo Wee Rup, VIC 3981

Site Location:

Lot 1,14 Doran Road,
BUNYIP

GEOTECHNICAL LAND CAPABILITY ASSESSMENT LOGS

Proposal:

Report No:

19998

Client:

Nobelius

Residential Septic System

Test Date:

16/05/25

Topography of the land:

- Uneven Surface ☐
Essentially Level ☐
Undulating Surface ☐
Multiple Hills ☐
Slight Slope ☒
Moderate Slope ☐
Steep Slope ☐
Extreme Condition ☐

Technicians Comments:

Slope Direction:

Rear

Trees ☐

type:

Size:

Water ☐

type:

Soil Drainage:

- Good: ☐ Sandy
Fair: ☒ to
Poor: ☐ Clay

Existing Structures: ☐

Existing Structure Condition:

- Good ☐ Fair ☐ Poor ☐

Existing Structure Description:

Layer Description Borehole 1

Depth

Layer Description Borehole 2

Depth

Clayey Sandy Silt Fill. Grey.
Medium Dense. Dry.

150mm

Clayey Sandy Silt Fill. Grey.
Medium Dense. Dry.

150mm

Clayey Sandy Silt
Grey
Firm
Moist

500mm

Clayey Sandy Silt
Grey
Firm
Moist

500mm

Silty Clay
Orange/Red/Grey
Stiff to Very Stiff
Medium To High Plasticity
Moist

1500mm

Silty Clay
Orange/Red/Grey
Stiff to Very Stiff
Medium To High Plasticity
Moist

1500mm

Borehole 1 Terminated at 1.5m

Borehole 2 Terminated at 2m

Soil Technician: B.Dunn

Auger Type: Hand



(03) 5997 1192



admin@soiltestexpress.com.au



PO Box 233, Koo Wee Rup, VIC 3981



Shop 1/ 23-25 Station St,
Koo Wee Rup, VIC 3981

GEOTECHNICAL LAND CAPABILITY ASSESSMENT LOGS

Site Location:

Lot 2,14 Doran Road,
BUNYIP

Proposal:

Residential Septic System

Report No:

19998

Client:

Nobelius

Test Date:

02/05/25

Topography of the land:

Uneven Surface ☐

Essentially Level ☐

Undulating Surface ☐

Multiple Hills ☐

Slight Slope ☒

Moderate Slope ☐

Steep Slope ☐

Extreme Condition ☐

Technicians Comments:

Slope Direction:

Rear

Trees ☐

type:

Size:

Water ☐

type:

Existing Structures: ☐

Existing Structure Condition:

Good ☐

Fair ☐

Poor ☐

Existing Structure Description:

Soil Drainage:

Good: ☐ Sandy

Fair: ☒ to

Poor: ☐ Clay

Layer Description Borehole 1

Depth

Layer Description Borehole 2

Depth

Clayey Sandy Silt Fill. Grey.
Medium Dense. Dry.

100mm

Clayey Sandy Silt Fill. Grey.
Medium Dense. Dry.

100mm

Clayey Sandy Silt
Grey
Firm
Moist

600mm

Clayey Sandy Silt
Grey
Firm
Moist

550mm

Silty Clay
Orange/Red/Grey
Stiff to Very Stiff
Medium To High Plasticity
Moist

1500mm

Silty Clay
Orange/Red/Grey
Stiff to Very Stiff
Medium To High Plasticity
Moist

1500mm

Borehole 1 Terminated at 1.5m

Borehole 2 Terminated at 2m

Soil Technician: B.Dunn

Auger Type: Hand



Shop 1/ 23-25 Station St,
Koo Wee Rup, VIC 3981

Site Location:

Lot 3,14 Doran Road,
BUNYIP

GEOTECHNICAL LAND CAPABILITY ASSESSMENT LOGS

Client:

Nobelius

Proposal:

Residential Septic System

Report No:

19998

Test Date:

02/05/25

Topography of the land:

- Uneven Surface* ☐
Essentially Level ☐
Undulating Surface ☐
Multiple Hills ☐
Slight Slope ☒
Moderate Slope ☐
Steep Slope ☐
Extreme Condition ☐

Soil Drainage:

- Good:* ☐ *Sandy*
Fair: ☒ *to*
Poor: ☐ *Clay*

Technicians Comments:

Slope Direction:

Rear

Trees ☐

type:

Size:

Water ☐

type:

Existing Structures: ☐

Existing Structure Condition:

Good ☐

Fair ☐

Poor ☐

Existing Structure Description:

Layer Description Borehole 1

Depth

Layer Description Borehole 2

Depth

Clayey Sandy Silt Fill. Grey.Medium Dense. Dry

50mm

Clayey Sandy Silt Fill. Grey.Medium Dense. Dry

50mm

Clayey Sandy Silt
Grey
Firm
Moist

600mm

Clayey Sandy Silt
Grey
Firm
Moist

600mm

Silty Clay
Orange/Red/Grey
Stiff to Very Stiff
Medium To High Plasticity
Moist

1500mm

Silty Clay
Orange/Red/Grey
Stiff to Very Stiff
Medium To High Plasticity
Moist

1500mm

Borehole 1 Terminated at 1.5m

Borehole 2 Terminated at 2m

Soil Technician: B.Dunn

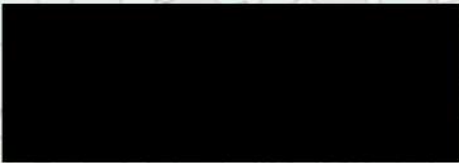
Auger Type: Hand



Preliminary Arboricultural Assessment

Location:

14 Doran Road, Bunyip



Arbkey ref: 25-04-09DoranBunyip.docx

Date submitted: May 10, 2025

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1 Introduction

Arbkey has been engaged by Shehan Tambinayagam to provide a Preliminary Arboricultural Assessment for trees potentially affected by an in-planning development at 14 Doran Road, Bunyip. For the report arbkey has:

- Identified and assessed the trees, providing their location, species, dimensions, useful life expectancy and health and structural condition.
- Allocated each tree an arboricultural value, indicating its merit for retention in the landscape throughout nearby disturbance.
- Calculated the size of the Tree Protection Zone (TPZ) in accordance with Australian Standard 4970, Protection of Trees on Development Sites.
- Provided recommendations to protect any trees through adjacent developments.

2 Site Details

The subject site is a 1.2-hectare property featuring a dwelling, driveway, sheds and yards within its eastern section and a grazing area within its western section (Figure 1). Large canopy trees are a significant feature of the eastern section of the site and are occasionally present within the adjacent properties. Development of the site is in the early planning phases.



Figure 1: Subject site frontage

2.1 Planning and Policy Context

The subject site is located within Low Density Residential Zone - Schedule 2 of the Cardinia Planning Scheme (DEECA 2025). The vegetation protection related planning or policy controls for the site and how they affect the assessed trees has been provided in Table 1.

Table 1: Vegetation controls at site

| Planning/Policy Control | Overview of control | Trees affected |
|---|---|--|
| Vegetation Protection Overlay (VPO1) | A permit is required to remove, destroy or lop any vegetation. A list of exemptions applies | All except Trees 3, 5, 6, 7, 10, 12, 19 and 25 |
| 52.17 Native Vegetation | A permit is required to remove or destroy non-planted Victorian native vegetation. | Tree ID 21 and 23 |

Trees within 10m of an existing dwelling, or 1m of an existing fence, constructed prior to September 2009 are exempt from planning scheme controls due to the site's location within a Bushfire Prone Area (DEECA 2025). When assessing the planning and policy context at the site, it has been assumed that the dwelling at the site was constructed prior to September 2009. This must be confirmed during the design process and reevaluated if required.

Due to their ownership, any trees within adjacent third-party owned property must remain viable throughout works at the subject site unless under agreement with the tree's respective owner. Modification of trees in adjacent property may also be subject to permit approval.

2.2 Site Map

A site map detailing existing conditions and tree locations has been provided in Appendix 1: Site Map

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3 Methodology

On the 22 April 2025, Lachlan Scott undertook inspection of trees greater than 3m in height located at, or with tree protection zones (AS4970 2009) likely to intersect the property at, 14 Doran Road, Bunyip. The following information was collected for the trees:

- Tree Species
- Tree Location
- Height (m)
- Crown Spread (m)
- Diameter at Breast Height (DBH) at 1.4m (cm)
- Diameter at Base (DAB) at just above the root flare (cm)
- Health
- Structure
- Significance
- Photographs of tree

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Only a ground based visual inspection was undertaken of all trees according to the principles of Visual Tree Assessment and tree hazard assessment described in Harris, Clark and Matheny (1999) and Mattheck and Breloer (1994).

Tree location has been derived using a feature survey provided by the client or if not present aligned using an RTK corrected GNSS receiver.

Height was measured on site using an impulse laser accurate to +/- 30cm. Crown spread values or drawings are indicative of crown size only, not shape or form.

A diameter tape was used to measure DBH. To prevent trespass, DBH has been estimated on adjacent sites.

Health, Structure and Significance are qualitative values derived from visual indicators and the authors experience and qualifications.

Full data collection definitions are available in Appendix 6: Data Definitions.

3.1 Documents Reviewed

Table 2: Documents reviewed to assist in the compilation of this report

| Document Name | DWG/Document # | Author | Document Description | Date compiled/drawn |
|--------------------------|----------------|-------------------------|----------------------|---------------------|
| Doran Road Site Analysis | 22544 | Nobelius Land Surveyors | Feature Survey | 15 April 2025 |

4 Observations

4.1 Tree Details

71 trees were assessed, 50 on the site itself and 21 within adjacent third-party managed property (Table 3). Full details of the assessed trees have been provided in Appendix 2: Tree Details.

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Table 3: Count of assessed species and their respective species origin

| Genus Species | Common Name | Species Origin | Count of Trees | Tree IDs |
|---|----------------------|-------------------|----------------|--|
| <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 31 | 15, 17, 20, 22, 24, 26, 27, 28, 30, 33, 36, 39, 41, 44, 47, 49, 51, 54, 56, 57, 59, 60, 62, 64, 65, 66, 67, 68, 69, 70, 71 |
| <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 22 | 8, 9, 11, 13, 14, 25, 29, 31, 32, 35, 37, 38, 40, 42, 43, 45, 46, 48, 50, 52, 53, 55 |
| <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 5 | 16, 18, 58, 61, 63 |
| <i>Callistemon viminalis</i> | Weeping Bottle Brush | Australian Native | 2 | 7, 10 |
| <i>Eucalyptus camaldulensis</i> | River Red Gum | Indigenous | 2 | 21, 23 |
| <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> | Narrow Leaved Ash | Exotic | 2 | 3, 6 |
| <i>Malus domestica</i> | Apple | Exotic | 2 | 2, 4 |
| <i>Corymbia citriodora</i> | Lemon-scented Gum | Australian Native | 1 | 1 |
| <i>Corymbia maculata</i> | Spotted Gum | Australian Native | 1 | 12 |
| <i>Eucalyptus bicostata</i> | Eurabbie | Australian Native | 1 | 34 |
| <i>Eucalyptus ovata</i> | Swamp Gum | Indigenous | 1 | 19 |
| <i>Prunus cerasifera</i> | Cherry Plum | Exotic | 1 | 5 |

5 Discussion

5.1 Arboricultural Value

All the assessed trees have been attributed an arboricultural value (Table 4). Arboricultural value is a calculated rating indicating the arboricultural merit of the tree for retention through any nearby disturbance. It is a qualitative combination of the trees ULE and significance values. Trees of higher arboricultural value should be prioritised for retention through works that may impact trees. Conversely, trees of low or no arboricultural value can often be removed to facilitate a development with little or no effect on wider landscape value.

Trees attributed an arboricultural value of 'Third Party Ownership' are located on adjacent land to the assessment. It is assumed that the owner of the tree attributes it a 'High' arboricultural value and requires its retention in the landscape.

Table 4: Overview of arboricultural value

| Arboricultural Value | Count | Tree IDs |
|-----------------------|-------|---|
| High | 4 | 12, 19, 21, 23 |
| Medium | 25 | 6, 8, 9, 10, 11, 13, 14, 16, 18, 29, 31, 32, 35, 37, 38, 40, 42, 43, 45, 46, 48, 50, 52, 53, 55 |
| Low | 21 | 5, 15, 17, 20, 22, 24, 26, 27, 28, 30, 33, 36, 39, 41, 44, 47, 49, 51, 54, 56, 57 |
| Third Party Ownership | 21 | 1, 2, 3, 4, 7, 25, 34, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71 |

5.2 Tree Protection Zone (TPZ) and Structural Root Zone (SRZ)

AS4970 (2009) specifies areas drawn radially from each tree's stem which indicate the area required for its stability (SRZ) and viability (TPZ) throughout nearby disturbance such as development. Further information on TPZs and SRZs has provided in Appendix 7: Tree Protection Zones and Encroachment

5.2.1 TPZ and SRZ details

TPZ and SRZ details for all trees has been supplied in Appendix 3: TPZ and SRZ Details.

5.2.2 TPZ and SRZ Map

Maps detailing the TPZ and SRZ have been provided in Appendix 4: TPZ and SRZ Map.

6 Conclusions and Recommendations

Development of the site at 14 Doran Road, Bunyip is currently in the early design phases. Arbkey has been engaged to assess the trees at or adjacent to the site. 71 trees were assessed, 50 on the site and 21 within adjacent property. Detailed assessments have been provided for each tree. Additionally, the tree protection zone (TPZ) and structural root zone (SRZ) has been calculated for each tree as per AS4970 (2009). It is recommended that:

- The design team is made fully aware of the location, arboricultural value and planning/policy context of the trees including all appropriate tree protection measures, prior to finalising the design process. Particularly the Tree Protection Zone (TPZ) guidelines, dimensions, and requirements.
- Trees of higher arboricultural value are prioritised for retention throughout the design process.
- The proposed design ensures that the impact to the canopy and root systems of all trees to be retained, including those within adjacent property, is kept to a minimum and does not encroach on the tree's Tree Protection Zone (TPZ). If it is impossible to keep construction out of the TPZ then encroachment should not exceed 10% of a tree's respective TPZ area.
 - Where TPZ are encroached, the lost area must be compensated elsewhere in an area contiguous to the remaining TPZ.
 - If encroachment cannot be minimised to less than 10% of a tree's respective TPZ area; tree sensitive construction methods such as at-grade construction or pier, cantilevered or screw pile footings should be considered to minimise below and above ground TPZ disturbance.
 - Site factors, such as existing hard stand or root inhibitive soil conditions, may increase the encroachment tolerance of adjacent trees. These factors should be considered during the design phases of the development.
- If, throughout the design process, the TPZ of trees will be impacted during the actual development:
 - Prior to construction commencement, an Arboricultural Impact Assessment and Tree Management Plan should be prepared by a suitably qualified arborist. This would assess the impact of the final design and provide recommendations to protect any trees to be retained on the site throughout the development.

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7 References

AS 4373, 2007, Australian Standard, Pruning Amenity Trees, 2nd Edition Standards Australia

AS 4970, 2009, Australian Standard, Protection of Trees on Development Sites, Standards Australia

DEECA 2025, Vicplan, Department of Energy, Environment and Climate Action,
<https://mapshare.vic.gov.au/vicplan/>

Harris, R.W., Clark, J.R. & Matheny, N.P., 1999, Arboriculture; Integrated management of landscape trees, shrubs, and vines, Prentice Hall, Upper Saddle River, New Jersey

IACA 2010, IACA Significance of a Tree, Assessment Rating System (STARS), Institute of Australian Consulting Arboriculturists, Australia

Mattheck, C. and Breloer, H. 1994, The body language of trees: a handbook for failure analysis, London: HMSO

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8 Appendix 1: Site Map



Figure 2: Site Map – Existing Conditions

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9 Appendix 2: Tree Details

Table 5: Details of assessed trees

| Tree ID | Genus Species | Common Name | Species Origin | Height (m) | Crown Spread (m) | Total DBH (cm) | DAB (cm) | Health | Structure | Maturity | ULE (years) | Arboricultural Value | Comments |
|---------|---|----------------------|-------------------|------------|------------------|----------------|----------|--------|-----------|-------------|-------------|-----------------------|--|
| 1 | <i>Corymbia citriodora</i> | Lemon-scented Gum | Australian Native | 15 | 8 | 44 | 50 | Fair | Fair | Mature | 5 to 15 | Third Party Ownership | |
| 2 | <i>Malus domestica</i> | Apple | Exotic | 4 | 4 | 34.18 | 35 | Good | Fair | Mature | 5 to 15 | Third Party Ownership | |
| 3 | <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> | Narrow Leaved Ash | Exotic | 5 | 3 | 18.87 | 21 | Good | Fair | Semi-mature | 5 to 15 | Third Party Ownership | |
| 4 | <i>Malus domestica</i> | Apple | Exotic | 4 | 4 | 17.03 | 20 | Fair | Poor | Semi-mature | 5 to 15 | Third Party Ownership | |
| 5 | <i>Prunus cerasifera</i> | Cherry Plum | Exotic | 3 | 3 | 12.12 | 14 | Good | Fair | Semi-mature | 5 to 15 | Low | |
| 6 | <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> | Narrow Leaved Ash | Exotic | 10 | 12 | 73 | 84 | Good | Good | Mature | 15 to 40 | Medium | Undesirable species |
| 7 | <i>Callistemon viminalis</i> | Weeping Bottle Brush | Australian Native | 6 | 5 | 29.73 | 32 | Fair | Fair | Mature | 5 to 15 | Third Party Ownership | |
| 8 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 7 | 64.2 | 70 | Good | Fair | Mature | 15 to 40 | Medium | Group of 5 as screen. Typical dbh recorded |
| 9 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 7 | 64.2 | 70 | Good | Fair | Mature | 15 to 40 | Medium | Group of 5 as screen. Typical dbh recorded |
| 10 | <i>Callistemon viminalis</i> | Weeping Bottle Brush | Australian Native | 7 | 5 | 32 | 37 | Good | Fair | Mature | 15 to 40 | Medium | |
| 11 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 7 | 64.2 | 70 | Good | Fair | Mature | 15 to 40 | Medium | Group of 5 as screen. Typical dbh recorded |
| 12 | <i>Corymbia maculata</i> | Spotted Gum | Australian Native | 18 | 12 | 69 | 75 | Good | Good | Mature | >40 | High | |
| 13 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 7 | 64.2 | 70 | Good | Fair | Mature | 15 to 40 | Medium | Group of 5 as screen. Typical dbh recorded |
| 14 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 7 | 64.2 | 70 | Good | Fair | Mature | 15 to 40 | Medium | Group of 5 as screen. Typical dbh recorded |
| 15 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 16 | <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 16 | 16 | 78 | 83 | Good | Fair | Mature | 15 to 40 | Medium | |
| 17 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 18 | <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 13 | 8 | 64.64 | 70 | Good | Fair | Mature | 15 to 40 | Medium | |

| Tree ID | Genus Species | Common Name | Species Origin | Height (m) | Crown Spread (m) | Total DBH (cm) | DAB (cm) | Health | Structure | Maturity | ULE (years) | Arboricultural Value | Comments |
|---------|---------------------------------|------------------|-------------------|------------|------------------|----------------|----------|--------|-----------|-------------|-------------|-----------------------|--|
| 19 | <i>Eucalyptus ovata</i> | Swamp Gum | Indigenous | 16 | 11 | 70.55 | 75 | Good | Fair | Mature | 15 to 40 | High | Suckers growing from base |
| 20 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 21 | <i>Eucalyptus camaldulensis</i> | River Red Gum | Indigenous | 16 | 11 | 80 | 90 | Good | Good | Mature | >40 | High | |
| 22 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 23 | <i>Eucalyptus camaldulensis</i> | River Red Gum | Indigenous | 20 | 19 | 95 | 110 | Good | Fair | Mature | >40 | High | |
| 24 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 25 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 9 | 50 | 60 | Good | Good | Mature | 15 to 40 | Third Party Ownership | |
| 26 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 27 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 28 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 29 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 30 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 31 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 32 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 33 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 34 | <i>Eucalyptus bicostata</i> | Eurabbie | Australian Native | 21 | 11 | 72 | 85 | Good | Good | Mature | 15 to 40 | Third Party Ownership | |
| 35 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 36 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 37 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |

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| Tree ID | Genus Species | Common Name | Species Origin | Height (m) | Crown Spread (m) | Total DBH (cm) | DAB (cm) | Health | Structure | Maturity | ULE (years) | Arboricultural Value | Comments |
|---------|--------------------------------|------------------|----------------|------------|------------------|----------------|----------|--------|-----------|-------------|-------------|----------------------|--|
| 38 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 39 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 40 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 41 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 42 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 43 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 44 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 45 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 46 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 47 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 48 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 49 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 50 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 51 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 52 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 53 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 54 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 55 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |

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| Tree ID | Genus Species | Common Name | Species Origin | Height (m) | Crown Spread (m) | Total DBH (cm) | DAB (cm) | Health | Structure | Maturity | ULE (years) | Arboricultural Value | Comments |
|---------|---------------------------|------------------|-------------------|------------|------------------|----------------|----------|--------|-----------|-------------|-------------|-----------------------|-------------------------------------|
| 56 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 57 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 58 | <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 12 | 9 | 53 | 60 | Good | Fair | Mature | 15 to 40 | Third Party Ownership | |
| 59 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 60 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 61 | <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 16 | 8 | 60 | 68 | Good | Fair | Mature | 15 to 40 | Third Party Ownership | |
| 62 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 63 | <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 14 | 14 | 67 | 74 | Good | Fair | Mature | 15 to 40 | Third Party Ownership | |
| 64 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 65 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 66 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 67 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 68 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 69 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 70 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 71 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |

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10 Appendix 3: TPZ and SRZ Details

Table 6: TPZ and SRZ details of assessed trees (AS4970 2009)

| Tree ID | Genus Species | Common Name | SRZ radius (m) AS4970 | TPZ radius (m) AS4970 | TPZ Area AS 4970 (m2) |
|---------|---|----------------------|--------------------------|--------------------------|--------------------------|
| 1 | <i>Corymbia citriodora</i> | Lemon-scented Gum | 2.47 | 5.28 | 87.583 |
| 2 | <i>Malus domestica</i> | Apple | 2.13 | 4.1 | 52.81 |
| 3 | <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> | Narrow Leaved Ash | 1.72 | 2.26 | 16.046 |
| 4 | <i>Malus domestica</i> | Apple | 1.68 | 2.04 | 13.074 |
| 5 | <i>Prunus cerasifera</i> | Cherry Plum | 1.5 | 2 | 12.566 |
| 6 | <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> | Narrow Leaved Ash | 3.08 | 8.76 | 241.078 |
| 7 | <i>Callistemon viminalis</i> | Weeping Bottle Brush | 2.05 | 3.57 | 40.039 |
| 8 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.85 | 7.7 | 186.265 |
| 9 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.85 | 7.7 | 186.265 |
| 10 | <i>Callistemon viminalis</i> | Weeping Bottle Brush | 2.18 | 3.84 | 46.325 |
| 11 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.85 | 7.7 | 186.265 |
| 12 | <i>Corymbia maculata</i> | Spotted Gum | 2.93 | 8.28 | 215.383 |
| 13 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.85 | 7.7 | 186.265 |
| 14 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.85 | 7.7 | 186.265 |
| 15 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 16 | <i>Eucalyptus robusta</i> | Swamp Mahogany | 3.06 | 9.36 | 275.234 |
| 17 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 18 | <i>Eucalyptus robusta</i> | Swamp Mahogany | 2.85 | 7.76 | 189.179 |
| 19 | <i>Eucalyptus ovata</i> | Swamp Gum | 2.93 | 8.47 | 225.381 |
| 20 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 21 | <i>Eucalyptus camaldulensis</i> | River Red Gum | 3.17 | 9.6 | 289.529 |
| 22 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 23 | <i>Eucalyptus camaldulensis</i> | River Red Gum | 3.44 | 11.4 | 408.281 |
| 24 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 25 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.67 | 6 | 113.097 |
| 26 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 27 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 28 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 29 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 30 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 31 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 32 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 33 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 34 | <i>Eucalyptus bicostata</i> | Eurabbie | 3.09 | 8.64 | 234.519 |
| 35 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 36 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 37 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 38 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 39 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 40 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 41 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 42 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 43 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 44 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 45 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 46 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 47 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 48 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 49 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 50 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 51 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 52 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 53 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 54 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 55 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 56 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 57 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |

| Tree ID | Genus Species | Common Name | SRZ radius (m) AS4970 | TPZ radius (m) AS4970 | TPZ Area AS 4970 (m2) |
|---------|---------------------------|------------------|--------------------------|--------------------------|--------------------------|
| 58 | <i>Eucalyptus robusta</i> | Swamp Mahogany | 2.67 | 6.36 | 127.076 |
| 59 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 60 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 61 | <i>Eucalyptus robusta</i> | Swamp Mahogany | 2.81 | 7.2 | 162.86 |
| 62 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 63 | <i>Eucalyptus robusta</i> | Swamp Mahogany | 2.92 | 8.04 | 203.078 |
| 64 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 65 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 66 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 67 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 68 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 69 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 70 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 71 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |

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11 Appendix 4: TPZ and SRZ Map

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Figure 3: TPZ and SRZ Map

12 Appendix 5: Tree Photos

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Tree ID: 1



Tree ID: 2



Tree ID: 3



Tree ID: 4



Tree ID: 5



Tree ID: 6



Tree ID: 7



Tree ID: 8, 9, 11, 13, 14



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Tree ID: 10



Tree ID: 12

Tree ID: 15, 17, 20, 22, 24, 26, 27, 28, 30, 33, 36, 39, 41, 44, 47, 49, 51,
54, 56, 57, 59, 60, 62, 64, 65, 66, 67, 68, 69, 70, 71

Tree ID: 16



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Tree ID: 18



Tree ID: 19



Tree ID: 21



Tree ID: 23



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Tree ID: 25



Tree ID: 29, 32, 37, 40, 43, 46, 50, 53



Tree ID: 31, 35, 38, 42, 45, 48, 52, 55



Tree ID: 34



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Tree ID: 58



Tree ID: 61



Tree ID: 63



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13 Appendix 6: Data Definitions

DBH (Diameter at Breast Height) is measured at 1.4 m above ground level or calculated from the total stem area if the tree was multi-stemmed at 1.4m above ground level in accordance with AS 4970 (2009).

DAB (Diameter at Base) is measured just above the root collar of a tree in accordance with AS 4970 (2009)

Health summarises qualitative observations of canopy density, overall vigour and vitality made in the field:

- Good - Canopy is visually dense with less than 10% dieback and shows no, or only very minor nutrient deficiencies, pest and disease presence or stress-induced epicormic growth.
- Fair - Canopy is of average density, consists of between 10-30% dieback and shows a minor, or occasionally moderate, level of nutrient deficiency, pest and disease presence or stress-induced epicormic growth.
- Poor - Canopy is visually sparse, consists of more than 30% dieback and typically has significant nutrient deficiency, pest and disease presence or stress induced epicormic growth.
- Dead – No indication the tree is alive

Structure summarises qualitative observations of tree structure and stability made in the field:

- Good - The tree's form is optimal for the species. Typically trees of 'Good' structure have no or only very minor trunk leans or canopy asymmetry. These trees have parts that are not structurally compromised by decay, cracks, or other structural faults. Structural failure of these trees is only likely only under strong and unusual weather events
- Fair - The tree's structure includes minor structural defects that do not typically fail in light or moderate weather events. Typically trees of 'Fair' structure have minor trunk leans or slightly asymmetric canopies. These trees are likely to have parts that are partly compromised by decay or structural defects such as included bark.
- Poor - The tree's structure includes major structural defects. Failure of these trees is considered possible under light or moderate weather events. Typically trees of 'Poor' structure have major trunk leans or heavily asymmetric canopies. These trees are likely to have parts that are heavily compromised by decay or structural defects such as included bark.

Maturity summarises the life stage of the tree.

- Juvenile – The tree is in approximately the first 10% of its expected lifespan in its current environment
- Semi-mature – Tree is 10%-20% through its expected lifespan in its current environment and has not yet reached its mature dimensions.
- Mature – The tree is through 20%-90% of its expected lifespan in its current environment.
- Over-mature – The tree is through approximately 90% of its expected lifespan in its current environment

ULE (Useful Life Expectancy) indicates the anticipated remaining years of lifespan of the tree in its existing surroundings. The tree's lifespan is the time that it will continue to provide amenity value without undue risk or hazard and with a reasonable amount of maintenance.

Significance indicates the importance a tree may have on a respective site. The following descriptors are used to derive this value (adapted from IACA 2010):

High -

- | | |
|--|---|
| <ul style="list-style-type: none"> • Tree is good condition and good vigour • The tree has a form typical for the species • The tree is a remnant specimen or is rare or uncommon in the local area or of botanical interest or substantial age • The tree is listed as a heritage item or threatened species or listed on a municipal significant tree register | <ul style="list-style-type: none"> • The tree is visually prominent and visible from a considerable distance when viewed from most directions due to its size and scale. The tree makes a positive contribution to the local amenity. • The tree supports social or cultural sentiments or spiritual associations or has commemorative values • The tree is appropriate to the site conditions |
|--|---|

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Medium -

- The tree is in fair condition and good or low vigour
- The tree has form typical or atypical of the species
- The tree is a planted locally indigenous taxa or a common species within the area.
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from a public space. The tree provides a moderate contribution to the amenity and character of the local area
- The tree is often partially restricted by above or below ground influences and/or resources.

Low -

- The tree is in fair condition and good or low vigour
- The tree has form atypical of the species.
- The tree is not visible or is partly visible from surrounding properties due to obstructions.
- The tree provides a minor contribution or has a negative impact on landscape amenity or character of the local area.
- The tree is a juvenile specimen that can easily be replaced.
- The tree's growth is severely restricted by above or below ground influences and/or resources.
- The tree has a feature that has potential to become structurally unsound.
- The tree is listed as a noxious or environmental weed under state, federal or municipal policy

Dead/Irreversible Decline -

- The tree is structurally unsound or unstable
- The tree is dead or in irreversible decline

Third Party Ownership

- The tree is located on adjoining land to the assessment.

A tree is to meet several or all the criteria in a category to be classified in that group

Arboricultural Value is a calculated value indicating the merit of the tree for retention through any nearby developments. It is a qualitative combination of the trees ULE and Significance Values (Table 7).

Table 7: Matrix for the calculation of Arboricultural Value

| ULE | Significance Value | | | | | |
|-----|--------------------|--------|--------|------|---------------------------|-----------------------|
| | | High | Medium | Low | Dead/Irreversible Decline | Third Party Ownership |
| | >40 years | High | Medium | Low | Low | Third Party Ownership |
| | 15-40 years | High | Medium | Low | Low | Third Party Ownership |
| | 5-15 years | High | Medium | Low | None | Third Party Ownership |
| | <5 years | Medium | Low | None | None | Third Party Ownership |
| | 0 years | Low | None | None | None | Third Party Ownership |

- High – Trees attributed a 'High' arboricultural value are generally of strong visual amenity and significant in the landscape. The utmost level of consideration should be given for the retention of these trees throughout development activities and/or nearby disturbance
- Medium – Trees attributed a 'Medium' arboricultural value are of moderate amenity value and have been attributed some value in the landscape. Trees attributed a 'Medium' arboricultural value should be retained and designed around during developments or nearby disturbance. If retention is not possible for these trees, removal and replacement can be often considered as an acceptable compromise.
- Low – Trees attributed a Low arboricultural value are of poor arboricultural merit. Removal and replacement is an acceptable compromise if designing around these trees is not possible.
- None – Trees attributed an arboricultural value of none have no arboricultural merit. Removal is usually acceptable or required for these trees.
- Third Party Ownership – The tree is located on adjacent land to the assessment. It is assumed that the owner of the tree attributes it a High arboricultural value and requires its retention in the landscape.

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14 Appendix 7: Tree Protection Zones and Encroachment Overview

14.1 Structural Root Zones (SRZ)

SRZs are an indication of the area surrounding the base of a tree that is required for its stability. AS 4970 (2009) provides a method to calculate the SRZ of trees: The SRZ is calculated as

$$(DAB \times 50)^{0.42} \times 0.64$$

For grass like trees such as palms or tree ferns; SRZs are not calculated.

14.2 Tree Protection Zone (TPZ)

A Tree Protection Zone (TPZ) is considered one of the most effective ways to ensure the retention of trees throughout development. The aim of a TPZ is to secure the space around the tree so that no above or below ground activities or developments can affect the integrity of the tree's root system or above ground parts.

AS 4970 (2009) provides a method for calculating the standard area of TPZ's. For all broadleaf trees, the radius of the TPZ is calculated as:

$$12 * DBH$$

For grass like trees such as palms or tree ferns; TPZs are calculated as:

$$\text{Radius of extent of canopy} + 1\text{m},$$

Dead trees are attributed a TPZ of the same size as their SRZ as only their stability can now be protected and not their vigour

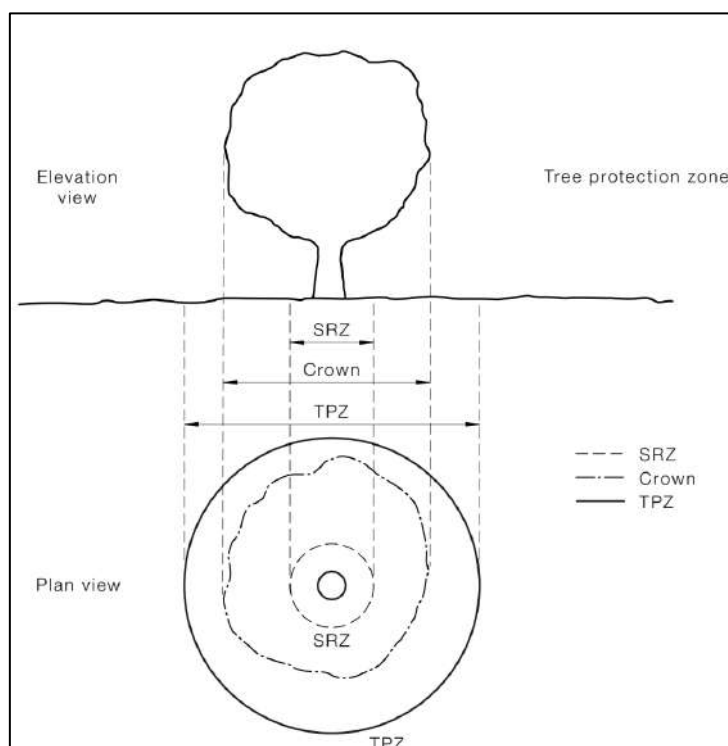


Figure 4: Diagram of TPZ and SRZ (AS 4970 2009)

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14.2.1 TPZ Encroachment:

AS 4970 (2009) allows the extents of 'calculated' TPZs to be varied, under certain conditions, to allow varying levels encroachment into TPZs. Encroachment is the term given to the level of impact of the footprint of a disturbance (such as a development or construction activity) on the calculated TPZ of a tree. Two levels of encroachment are classified within AS 4970:

14.2.1.1 Minor Encroachment

Where encroachment of a respective TPZ is limited to less than 10% of a TPZs area it is termed 'Minor Encroachment'. Minor encroachment and corresponding variations to a TPZ is considered acceptable while the lost area is compensated elsewhere while still being contiguous with the TPZ.

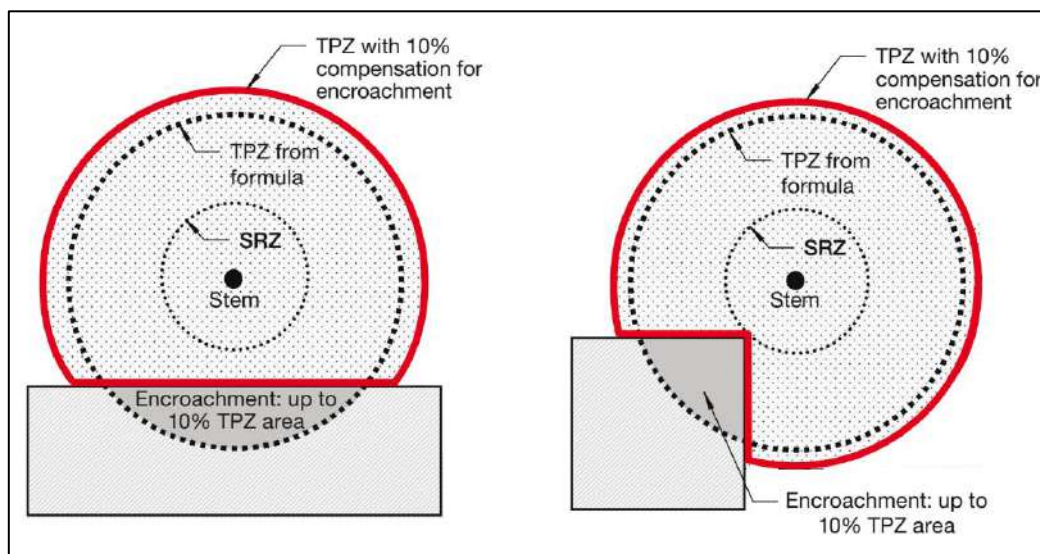


Figure 5: Examples of Minor TPZ encroachment and contiguous TPZ compensation (AS 4970 2009)

14.2.1.2 Major Encroachment

Where encroachment of the standard TPZ exceeds 10% of a TPZ it is termed 'Major Encroachment'. Major encroachment and corresponding variations to a TPZ can be considered acceptable providing the following conditions are met:

- The project arborist demonstrates the tree will remain viable through the encroachment.
- The lost area is compensated elsewhere while still being contiguous with the TPZ.

Regardless of encroachment, final TPZs and tree protection requirements should be clear to all parties during the entire construction process. Ideally all tree protection requirements should be outlined within a Tree Protection Management Plan (TPMP), prepared by a suitably qualified arborist, prior to the commencement of any construction activities

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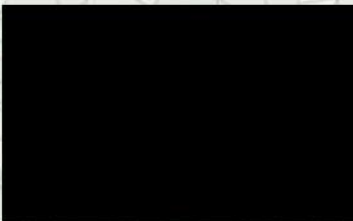
Arboricultural Impact Assessment

Location:

14 Doran Road, Bunyip

Report Commissioned by:

Shehan Tambinayagam



Arbkey ref: 25-04-09IMPACTDoranBunyip.docx

Date submitted: May 23, 2025

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1 Introduction

Arbkey has been engaged by Shehan Tambinayagam to provide an Arboricultural Impact Assessment for trees likely to be affected by a proposed development at 14 Doran Road, Bunyip. Arboricultural Impact Assessments are a procedure for determining the viability of trees at the design and review stage of a project. For the report arbkey has:

- Identified and assessed the trees, providing their location, species, dimensions, useful life expectancy and health and structural condition.
- Allocated each tree an arboricultural value, indicating its merit for retention throughout nearby disturbance.
- Calculated the size of the Tree Protection Zone (TPZ) in accordance with Australian Standard 4970, Protection of Trees on Development Sites.
- Calculated and provided comment regarding the impact of the proposed development to the trees TPZs and assessed the suitability for retention of all trees against the current development plans.
- Provided recommendations to protect any trees through the proposed developments.

2 Site Details

The subject site is a 1.2-hectare property featuring a dwelling, driveway, sheds and yards within its eastern section and a grazing area within its western section (Figure 1). Large canopy trees are a significant feature of the eastern section of the site and are occasionally present within the adjacent properties.



Figure 1: Subject site frontage

2.1 Development Proposal

Subdivision of the property into three (3) lots and development of accessways and building and waste envelopes for the new lots is proposed.

2.2 Planning and Policy Context

The subject site is located within Low Density Residential Zone - Schedule 2 of the Cardinia Planning Scheme (DEECA 2025). The vegetation protection related planning or policy controls for the site and how they affect the assessed trees has been provided in Table 1.

Table 1: Vegetation controls at site

| Planning/Policy Control | Overview of control | Trees affected |
|---|---|--|
| Vegetation Protection Overlay (VPO1) | A permit is required to remove, destroy or lop any vegetation. A list of exemptions applies | All except Trees 3, 5, 6, 7, 10, 12, 19 and 25 |
| 52.17 Native Vegetation | A permit is required to remove or destroy non-planted Victorian native vegetation. | Tree ID 21 and 23 |

Trees within 10m of an existing dwelling, or 1m of an existing fence, constructed prior to September 2009 are exempt from planning scheme controls due to the site's location within a Bushfire Prone Area (DEECA 2025). When assessing the planning and policy context at the site, it has been assumed that the dwelling at the site was constructed prior to September 2009.

Due to their ownership, any trees within adjacent third-party owned property must remain viable throughout works at the subject site unless under agreement with the tree's respective owner. Modification of trees in adjacent property may also be subject to permit approval.

2.3 Site Map

A site map detailing existing conditions and tree locations has been provided in Appendix 1: Site Map

3 Methodology

On the 22 April 2025, Lachlan Scott undertook inspection of trees greater than 3m in height located at, or with tree protection zones (AS4970 2009) likely to intersect the property at, 14 Doran Road, Bunyip. The following information was collected for the trees:

- Tree Species
- Tree Location
- Height (m)
- Crown Spread (m)
- Diameter at Breast Height (DBH) at 1.4m (cm)
- Diameter at Base (DAB) at just above the root flare (cm)
- Health
- Structure
- Significance
- Photographs of tree

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Only a ground based visual inspection was undertaken of all trees according to the principles of Visual Tree Assessment and tree hazard assessment described in Harris, Clark and Matheny (1999) and Mattheck and Breloer (1994).

Tree location has been derived using a feature survey provided by the client or if not present aligned using an RTK corrected GNSS receiver.

Height was measured on site using an impulse laser accurate to +/- 30cm. Crown spread values or drawings are indicative of crown size only, not shape or form.

A diameter tape was used to measure DBH. To prevent trespass, DBH has been estimated on adjacent sites.

Health, Structure and Significance are qualitative values derived from visual indicators and the authors experience and qualifications.

Encroachment of TPZs by the development has been calculated using GIS software.

Full data collection definitions are available in Appendix 6: Data Definitions.

3.1 Documents Reviewed

Table 2: Documents reviewed to assist in the compilation of this report

| Document Name | DWG/Document # | Author | Document Description | Date compiled/drawn |
|------------------------------------|----------------|----------------------------|----------------------|---------------------|
| Doran Rd Development Plan Ver 1 | 22544 | Nobelius Land Surveyors | Feature Survey | 15 April 2025 |

4 Observations

4.1 Tree Details

71 trees were assessed, 50 on the site itself and 21 within adjacent third-party managed property (Table 3). Full details of the assessed trees have been provided in Appendix 2: Tree Details.

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Table 3: Count of assessed species and their respective species origin

| Genus Species | Common Name | Species Origin | Count of Trees | Tree IDs |
|--------------------------------|------------------|-------------------|----------------|--|
| <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 31 | 15, 17, 20, 22, 24, 26, 27, 28, 30, 33, 36, 39, 41, 44, 47, 49, 51, 54, 56, 57, 59, 60, 62, 64, 65, 66, 67, 68, 69, 70, 71 |
| <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 22 | 8, 9, 11, 13, 14, 25, 29, 31, 32, 35, 37, 38, 40, 42, 43, 45, 46, 48, 50, 52, 53, 55 |
| <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 5 | 16, 18, 58, 61, 63 |
| Mixed Species | | | 13 | - |

5 Discussion

5.1 Arboricultural Value

All the assessed trees have been attributed an arboricultural value (Table 4). Arboricultural value is a calculated rating indicating the arboricultural merit of the tree for retention through any nearby disturbance. It is a qualitative combination of the trees ULE and significance values. Trees of higher arboricultural value should be prioritised for retention through works that may impact trees. Conversely, trees of low or no arboricultural value can often be removed to facilitate a development with little or no effect on wider landscape value.

Trees attributed an arboricultural value of 'Third Party Ownership' are located on adjacent land to the assessment. It is assumed that the owner of the tree attributes it a 'High' arboricultural value and requires its retention in the landscape.

Table 4: Overview of arboricultural value

| Arboricultural Value | Count | Tree IDs |
|------------------------------|-------|---|
| High | 4 | 12, 19, 21, 23 |
| Medium | 25 | 6, 8, 9, 10, 11, 13, 14, 16, 18, 29, 31, 32, 35, 37, 38, 40, 42, 43, 45, 46, 48, 50, 52, 53, 55 |
| Low | 21 | 5, 15, 17, 20, 22, 24, 26, 27, 28, 30, 33, 36, 39, 41, 44, 47, 49, 51, 54, 56, 57 |
| Third Party Ownership | 21 | 1, 2, 3, 4, 7, 25, 34, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71 |

5.2 Tree Protection Zone (TPZ) and Structural Root Zone (SRZ)

AS4970 (2009) specifies areas drawn radially from each tree's stem which indicate the area required for its stability (SRZ) and viability (TPZ) throughout nearby disturbance such as development. Further information on TPZs and SRZs has provided in Appendix 7: Tree Protection Zones and Encroachment

5.2.1 TPZ and SRZ details

TPZ and SRZ details for all trees has been supplied in Appendix 3: TPZ and SRZ Details.

5.3 Arboricultural Impact, TPZ Encroachment and Viability

5.3.1 Tree removal

38 trees are proposed for removal under the current development plans (Table 5). Permit approval is required for the removal of all these trees, except for Tree 12; a Spotted Gum (*Corymbia maculata*) that is exempt from planning overlays due to being within 10m of the site's dwelling.

Table 5: Trees proposed for removal, arboricultural value, and permit requirements.

| Tree ID | Genus Species | Arboricultural Value | Height (m) | Total DBH (cm) |
|---------|-------------------------------|-----------------------|------------|----------------|
| 8 | <i>xCuprocypris leylandii</i> | Medium | 15 | 64.2 |
| 9 | <i>xCuprocypris leylandii</i> | Medium | 15 | 64.2 |
| 11 | <i>xCuprocypris leylandii</i> | Medium | 15 | 64.2 |
| 12 | <i>Corymbia maculata</i> | High | 18 | 69 |
| 13 | <i>xCuprocypris leylandii</i> | Medium | 15 | 64.2 |
| 14 | <i>xCuprocypris leylandii</i> | Medium | 15 | 64.2 |
| 15 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 17 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 18 | <i>Eucalyptus robusta</i> | Medium | 13 | 64.64 |
| 20 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 22 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 24 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 26 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 27 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 28 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 30 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 33 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 36 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 39 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 41 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 44 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 47 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 49 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 51 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 54 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 56 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 57 | <i>Photinia xfraseri</i> | Low | 4 | 9.9 |
| 59 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |
| 60 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |
| 62 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |
| 64 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |
| 65 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |
| 66 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |
| 67 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |
| 68 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |
| 69 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |
| 70 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |
| 71 | <i>Photinia xfraseri</i> | Third Party Ownership | 4 | 9.9 |

5.3.2 Impact of design on trees to be retained

To assess the viability of the trees proposed for retention throughout the design's implementation, their TPZ and SRZ has been calculated and mapped as per AS4970 (2009). Where a development's footprint overlaps a TPZ it is termed 'encroachment' within AS4970 (2009).

One (1) tree has a TPZ encroached by the proposed development's footprint (Table 6). Tree 34 has a TPZ encroached by less than 10% of its respective area by the proposed development footprint. Where encroachment of a respective TPZ is limited to less than 10% of its area it is termed 'Minor Encroachment'. Minor encroachment and corresponding variations to a TPZ are considered acceptable while the lost area is compensated elsewhere while still being contiguous with the TPZ. Tree 34 is expected to remain viable throughout the implementation of the design.

Table 6: Trees to be retained with TPZ encroached by development footprint (AS4970 2009)

| Tree ID | Genus Species | Common Name | TPZ Encroachment (%) | SRZ Encroachment? | Encroachment Classification |
|---------|-----------------------------|-------------|----------------------|-------------------|-----------------------------|
| 34 | <i>Eucalyptus bicostata</i> | Eurabbie | 2 | No | Minor |

The remaining trees proposed for retention are not encroached by the design footprint and would remain viable throughout its implementation.

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5.3.3 TPZ, SRZ and Encroachment Map

Maps detailing the TPZ, SRZ and Encroachment have been provided in Appendix 4: TPZ, SRZ and Encroachment Map.

6 Conclusions and Recommendations

Subdivision of the property into three (3) lots and development of accessways and building and waste envelopes for the new lots is currently proposed at 14 Doran Road, Bunyip. Arbkey has been engaged to assess the impact of the development on the trees at or adjacent to the site. 71 trees were assessed, 50 on the site and 21 within adjacent property.

38 of these trees are proposed for removal under the development plans. Permit approval is required for the removal of all these trees, except for Tree 12; a Spotted Gum (*Corymbia maculata*) that is exempt from planning overlays due to being within 10m of the site's dwelling..

To assess the viability of the trees proposed for retention throughout the design's implementation, their tree protection zone (TPZ) and structural root zone (SRZ) has been calculated and mapped as per AS4970 (2009). Where a development's footprint overlaps a TPZ it is termed 'encroachment' within AS4970 (2009).

One (1) of the trees proposed for retention has a TPZ encroached by the proposed design footprint. Tree 34 has a TPZ encroached by less than 10% of its respective TPZ area, a level considered generally permissible under AS4970 (2009). Tree 34 would remain viable throughout the implementation of the proposal.

The remaining trees proposed for retention are not encroached by the design footprint and would remain viable throughout its implementation. It is recommended that, trees that are unable to be retained through the development are removed prior to the commencement of construction but after the approval of final plans by the relevant authority.

7 References

AS 4970, 2009, Australian Standard, Protection of Trees on Development Sites, Standards Australia

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8 Appendix 1: Site Map



Figure 2: Site Map – Existing Condition

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9 Appendix 2: Tree Details

Table 7: Details of assessed trees

| Tree ID | Genus Species | Common Name | Species Origin | Height (m) | Crown Spread (m) | Total DBH (cm) | DAB (cm) | Health | Structure | Maturity | ULE (years) | Arboricultural Value | Comments |
|---------|---|----------------------|-------------------|------------|------------------|----------------|----------|--------|-----------|-------------|-------------|-----------------------|--|
| 1 | <i>Corymbia citriodora</i> | Lemon-scented Gum | Australian Native | 15 | 8 | 44 | 50 | Fair | Fair | Mature | 5 to 15 | Third Party Ownership | |
| 2 | <i>Malus domestica</i> | Apple | Exotic | 4 | 4 | 34.18 | 35 | Good | Fair | Mature | 5 to 15 | Third Party Ownership | |
| 3 | <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> | Narrow Leaved Ash | Exotic | 5 | 3 | 18.87 | 21 | Good | Fair | Semi-mature | 5 to 15 | Third Party Ownership | |
| 4 | <i>Malus domestica</i> | Apple | Exotic | 4 | 4 | 17.03 | 20 | Fair | Poor | Semi-mature | 5 to 15 | Third Party Ownership | |
| 5 | <i>Prunus cerasifera</i> | Cherry Plum | Exotic | 3 | 3 | 12.12 | 14 | Good | Fair | Semi-mature | 5 to 15 | Low | |
| 6 | <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> | Narrow Leaved Ash | Exotic | 10 | 12 | 73 | 84 | Good | Good | Mature | 15 to 40 | Medium | Undesirable species |
| 7 | <i>Callistemon viminalis</i> | Weeping Bottle Brush | Australian Native | 6 | 5 | 29.73 | 32 | Fair | Fair | Mature | 5 to 15 | Third Party Ownership | |
| 8 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 7 | 64.2 | 70 | Good | Fair | Mature | 15 to 40 | Medium | Group of 5 as screen. Typical dbh recorded |
| 9 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 7 | 64.2 | 70 | Good | Fair | Mature | 15 to 40 | Medium | Group of 5 as screen. Typical dbh recorded |
| 10 | <i>Callistemon viminalis</i> | Weeping Bottle Brush | Australian Native | 7 | 5 | 32 | 37 | Good | Fair | Mature | 15 to 40 | Medium | |
| 11 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 7 | 64.2 | 70 | Good | Fair | Mature | 15 to 40 | Medium | Group of 5 as screen. Typical dbh recorded |
| 12 | <i>Corymbia maculata</i> | Spotted Gum | Australian Native | 18 | 12 | 69 | 75 | Good | Good | Mature | >40 | High | |
| 13 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 7 | 64.2 | 70 | Good | Fair | Mature | 15 to 40 | Medium | Group of 5 as screen. Typical dbh recorded |
| 14 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 7 | 64.2 | 70 | Good | Fair | Mature | 15 to 40 | Medium | Group of 5 as screen. Typical dbh recorded |
| 15 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 16 | <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 16 | 16 | 78 | 83 | Good | Fair | Mature | 15 to 40 | Medium | |
| 17 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 18 | <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 13 | 8 | 64.64 | 70 | Good | Fair | Mature | 15 to 40 | Medium | |

| Tree ID | Genus Species | Common Name | Species Origin | Height (m) | Crown Spread (m) | Total DBH (cm) | DAB (cm) | Health | Structure | Maturity | ULE (years) | Arboricultural Value | Comments |
|---------|---------------------------------|------------------|-------------------|------------|------------------|----------------|----------|--------|-----------|-------------|-------------|-----------------------|--|
| 19 | <i>Eucalyptus ovata</i> | Swamp Gum | Indigenous | 16 | 11 | 70.55 | 75 | Good | Fair | Mature | 15 to 40 | High | Suckers growing from base |
| 20 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 21 | <i>Eucalyptus camaldulensis</i> | River Red Gum | Indigenous | 16 | 11 | 80 | 90 | Good | Good | Mature | >40 | High | |
| 22 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 23 | <i>Eucalyptus camaldulensis</i> | River Red Gum | Indigenous | 20 | 19 | 95 | 110 | Good | Fair | Mature | >40 | High | |
| 24 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 25 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 9 | 50 | 60 | Good | Good | Mature | 15 to 40 | Third Party Ownership | |
| 26 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 27 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 28 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 29 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 30 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 31 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 32 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 33 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 34 | <i>Eucalyptus bicostata</i> | Eurabbie | Australian Native | 21 | 11 | 72 | 85 | Good | Good | Mature | 15 to 40 | Third Party Ownership | |
| 35 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 36 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 37 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |

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| Tree ID | Genus Species | Common Name | Species Origin | Height (m) | Crown Spread (m) | Total DBH (cm) | DAB (cm) | Health | Structure | Maturity | ULE (years) | Arboricultural Value | Comments |
|---------|--------------------------------|------------------|----------------|------------|------------------|----------------|----------|--------|-----------|-------------|-------------|----------------------|--|
| 38 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 39 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 40 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 41 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 42 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 43 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 44 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 45 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 46 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 47 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 48 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 49 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 50 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 51 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 52 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |
| 53 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 13 | 6 | 38.64 | 40 | Good | Fair | Mature | 15 to 40 | Medium | Row of Leyland cypress. Typical dbh recorded |
| 54 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 55 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | Exotic | 15 | 6 | 38 | 42 | Fair | Fair | Mature | 15 to 40 | Medium | Row of cypress. Typical dbh recorded |

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| Tree ID | Genus Species | Common Name | Species Origin | Height (m) | Crown Spread (m) | Total DBH (cm) | DAB (cm) | Health | Structure | Maturity | ULE (years) | Arboricultural Value | Comments |
|---------|---------------------------|------------------|-------------------|------------|------------------|----------------|----------|--------|-----------|-------------|-------------|-----------------------|-------------------------------------|
| 56 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 57 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Low | Screen against fence. 1.5m spacings |
| 58 | <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 12 | 9 | 53 | 60 | Good | Fair | Mature | 15 to 40 | Third Party Ownership | |
| 59 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 60 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 61 | <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 16 | 8 | 60 | 68 | Good | Fair | Mature | 15 to 40 | Third Party Ownership | |
| 62 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 63 | <i>Eucalyptus robusta</i> | Swamp Mahogany | Australian Native | 14 | 14 | 67 | 74 | Good | Fair | Mature | 15 to 40 | Third Party Ownership | |
| 64 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 65 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 66 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 67 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 68 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 69 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 70 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |
| 71 | <i>Photinia xfraseri</i> | Chinese Hawthorn | Exotic | 4 | 3 | 9.9 | 12 | Good | Fair | Semi-mature | 15 to 40 | Third Party Ownership | Screen against fence. 1.5m spacings |

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10 Appendix 3: TPZ and SRZ Details

Table 8: TPZ and SRZ details of assessed trees (AS4970 2009)

| Tree ID | Genus Species | Common Name | SRZ radius (m) AS4970 | TPZ radius (m) AS4970 | TPZ Area AS 4970 (m ²) |
|---------|---|----------------------|--------------------------|--------------------------|---------------------------------------|
| 1 | <i>Corymbia citriodora</i> | Lemon-scented Gum | 2.47 | 5.28 | 87.583 |
| 2 | <i>Malus domestica</i> | Apple | 2.13 | 4.1 | 52.81 |
| 3 | <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> | Narrow Leaved Ash | 1.72 | 2.26 | 16.046 |
| 4 | <i>Malus domestica</i> | Apple | 1.68 | 2.04 | 13.074 |
| 5 | <i>Prunus cerasifera</i> | Cherry Plum | 1.5 | 2 | 12.566 |
| 6 | <i>Fraxinus angustifolia</i> subsp. <i>angustifolia</i> | Narrow Leaved Ash | 3.08 | 8.76 | 241.078 |
| 7 | <i>Callistemon viminalis</i> | Weeping Bottle Brush | 2.05 | 3.57 | 40.039 |
| 8 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.85 | 7.7 | 186.265 |
| 9 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.85 | 7.7 | 186.265 |
| 10 | <i>Callistemon viminalis</i> | Weeping Bottle Brush | 2.18 | 3.84 | 46.325 |
| 11 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.85 | 7.7 | 186.265 |
| 12 | <i>Corymbia maculata</i> | Spotted Gum | 2.93 | 8.28 | 215.383 |
| 13 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.85 | 7.7 | 186.265 |
| 14 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.85 | 7.7 | 186.265 |
| 15 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 16 | <i>Eucalyptus robusta</i> | Swamp Mahogany | 3.06 | 9.36 | 275.234 |
| 17 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 18 | <i>Eucalyptus robusta</i> | Swamp Mahogany | 2.85 | 7.76 | 189.179 |
| 19 | <i>Eucalyptus ovata</i> | Swamp Gum | 2.93 | 8.47 | 225.381 |
| 20 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 21 | <i>Eucalyptus camaldulensis</i> | River Red Gum | 3.17 | 9.6 | 289.529 |
| 22 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 23 | <i>Eucalyptus camaldulensis</i> | River Red Gum | 3.44 | 11.4 | 408.281 |
| 24 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 25 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.67 | 6 | 113.097 |
| 26 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 27 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 28 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 29 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 30 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 31 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 32 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 33 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 34 | <i>Eucalyptus bicostata</i> | Eurabbie | 3.09 | 8.64 | 234.519 |
| 35 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 36 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 37 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 38 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 39 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 40 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 41 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 42 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 43 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 44 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 45 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 46 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 47 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 48 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 49 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 50 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 51 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 52 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 53 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.25 | 4.64 | 67.637 |
| 54 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 55 | <i>xCuprocyparis leylandii</i> | Leyland Cypress | 2.3 | 4.56 | 65.325 |
| 56 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 57 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |

| Tree ID | Genus Species | Common Name | SRZ radius (m) AS4970 | TPZ radius (m) AS4970 | TPZ Area AS 4970 (m2) |
|---------|---------------------------|------------------|--------------------------|--------------------------|--------------------------|
| 58 | <i>Eucalyptus robusta</i> | Swamp Mahogany | 2.67 | 6.36 | 127.076 |
| 59 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 60 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 61 | <i>Eucalyptus robusta</i> | Swamp Mahogany | 2.81 | 7.2 | 162.86 |
| 62 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 63 | <i>Eucalyptus robusta</i> | Swamp Mahogany | 2.92 | 8.04 | 203.078 |
| 64 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 65 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 66 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 67 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 68 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 69 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 70 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |
| 71 | <i>Photinia xfraseri</i> | Chinese Hawthorn | 1.5 | 2 | 12.566 |

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11 Appendix 4: TPZ, SRZ and Encroachment Map

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Figure 3: TPZ, SRZ and Encroachment Map

12 Appendix 5: Tree Photos

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Tree ID: 1



Tree ID: 2



Tree ID: 3



Tree ID: 4



Tree ID: 5



Tree ID: 6



Tree ID: 7



Tree ID: 8, 9, 11, 13, 14



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Tree ID: 10



Tree ID: 12

Tree ID: 15, 17, 20, 22, 24, 26, 27, 28, 30, 33, 36, 39, 41, 44, 47, 49, 51,
54, 56, 57, 59, 60, 62, 64, 65, 66, 67, 68, 69, 70, 71

Tree ID: 16



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Tree ID: 18



Tree ID: 19



Tree ID: 21



Tree ID: 23



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Tree ID: 25



Tree ID: 29, 32, 37, 40, 43, 46, 50, 53



Tree ID: 31, 35, 38, 42, 45, 48, 52, 55



Tree ID: 34



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Tree ID: 58



Tree ID: 61



Tree ID: 63



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13 Appendix 6: Data Definitions

DBH (Diameter at Breast Height) is measured at 1.4 m above ground level or calculated from the total stem area if the tree was multi-stemmed at 1.4m above ground level in accordance with AS 4970 (2009).

DAB (Diameter at Base) is measured just above the root collar of a tree in accordance with AS 4970 (2009)

Health summarises qualitative observations of canopy density, overall vigour and vitality made in the field:

- Good - Canopy is visually dense with less than 10% dieback and shows no, or only very minor nutrient deficiencies, pest and disease presence or stress-induced epicormic growth.
- Fair - Canopy is of average density, consists of between 10-30% dieback and shows a minor, or occasionally moderate, level of nutrient deficiency, pest and disease presence or stress-induced epicormic growth.
- Poor - Canopy is visually sparse, consists of more than 30% dieback and typically has significant nutrient deficiency, pest and disease presence or stress induced epicormic growth.
- Dead – No indication the tree is alive

Structure summarises qualitative observations of tree structure and stability made in the field:

- Good - The tree's form is optimal for the species. Typically trees of 'Good' structure have no or only very minor trunk leans or canopy asymmetry. These trees have parts that are not structurally compromised by decay, cracks, or other structural faults. Structural failure of these trees is only likely only under strong and unusual weather events
- Fair - The tree's structure includes minor structural defects that do not typically fail in light or moderate weather events. Typically trees of 'Fair' structure have minor trunk leans or slightly asymmetric canopies. These trees are likely to have parts that are partly compromised by decay or structural defects such as included bark.
- Poor - The tree's structure includes major structural defects. Failure of these trees is considered possible under light or moderate weather events. Typically trees of 'Poor' structure have major trunk leans or heavily asymmetric canopies. These trees are likely to have parts that are heavily compromised by decay or structural defects such as included bark.

Maturity summarises the life stage of the tree.

- Juvenile – The tree is in approximately the first 10% of its expected lifespan in its current environment
- Semi-mature – Tree is 10%-20% through its expected lifespan in its current environment and has not yet reached its mature dimensions.
- Mature – The tree is through 20%-90% of its expected lifespan in its current environment.
- Over-mature – The tree is through approximately 90% of its expected lifespan in its current environment

ULE (Useful Life Expectancy) indicates the anticipated remaining years of lifespan of the tree in its existing surroundings. The tree's lifespan is the time that it will continue to provide amenity value without undue risk or hazard and with a reasonable amount of maintenance.

Significance indicates the importance a tree may have on a respective site. The following descriptors are used to derive this value (adapted from IACA 2010):

High -

- | | |
|--|---|
| <ul style="list-style-type: none"> • Tree is good condition and good vigour • The tree has a form typical for the species • The tree is a remnant specimen or is rare or uncommon in the local area or of botanical interest or substantial age • The tree is listed as a heritage item or threatened species or listed on a municipal significant tree register | <ul style="list-style-type: none"> • The tree is visually prominent and visible from a considerable distance when viewed from most directions due to its size and scale. The tree makes a positive contribution to the local amenity. • The tree supports social or cultural sentiments or spiritual associations or has commemorative values • The tree is appropriate to the site conditions |
|--|---|

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Medium -

- The tree is in fair condition and good or low vigour
- The tree has form typical or atypical of the species
- The tree is a planted locally indigenous taxa or a common species within the area.
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from a public space. The tree provides a moderate contribution to the amenity and character of the local area
- The tree is often partially restricted by above or below ground influences and/or resources.

Low -

- The tree is in fair condition and good or low vigour
- The tree has form atypical of the species.
- The tree is not visible or is partly visible from surrounding properties due to obstructions.
- The tree provides a minor contribution or has a negative impact on landscape amenity or character of the local area.
- The tree is a juvenile specimen that can easily be replaced.
- The tree's growth is severely restricted by above or below ground influences and/or resources.
- The tree has a feature that has potential to become structurally unsound.
- The tree is listed as a noxious or environmental weed under state, federal or municipal policy

Dead/Irreversible Decline -

- The tree is structurally unsound or unstable
- The tree is dead or in irreversible decline

Third Party Ownership

- The tree is located on adjoining land to the assessment.

A tree is to meet several or all the criteria in a category to be classified in that group

Arboricultural Value is a calculated value indicating the merit of the tree for retention through any nearby developments. It is a qualitative combination of the trees ULE and Significance Values (Table 9).

Table 9: Matrix for the calculation of Arboricultural Value

| ULE | Significance Value | | | | | |
|-----|--------------------|--------|--------|------|---------------------------|-----------------------|
| | | High | Medium | Low | Dead/Irreversible Decline | Third Party Ownership |
| | >40 years | High | Medium | Low | Low | Third Party Ownership |
| | 15-40 years | High | Medium | Low | Low | Third Party Ownership |
| | 5-15 years | High | Medium | Low | None | Third Party Ownership |
| | <5 years | Medium | Low | None | None | Third Party Ownership |
| | 0 years | Low | None | None | None | Third Party Ownership |

- High – Trees attributed a 'High' arboricultural value are generally of strong visual amenity and significant in the landscape. The utmost level of consideration should be given for the retention of these trees throughout development activities and/or nearby disturbance
- Medium – Trees attributed a 'Medium' arboricultural value are of moderate amenity value and have been attributed some value in the landscape. Trees attributed a 'Medium' arboricultural value should be retained and designed around during developments or nearby disturbance. If retention is not possible for these trees, removal and replacement can be often considered as an acceptable compromise.
- Low – Trees attributed a Low arboricultural value are of poor arboricultural merit. Removal and replacement is an acceptable compromise if designing around these trees is not possible.
- None – Trees attributed an arboricultural value of none have no arboricultural merit. Removal is usually acceptable or required for these trees.
- Third Party Ownership – The tree is located on adjacent land to the assessment. It is assumed that the owner of the tree attributes it a High arboricultural value and requires its retention in the landscape.

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14 Appendix 7: Tree Protection Zones and Encroachment Overview

14.1 Structural Root Zones (SRZ)

SRZs are an indication of the area surrounding the base of a tree that is required for its stability. AS 4970 (2009) provides a method to calculate the SRZ of trees: The SRZ is calculated as

$$(DAB \times 50)^{0.42} \times 0.64$$

For grass like trees such as palms or tree ferns; SRZs are not calculated.

14.2 Tree Protection Zone (TPZ)

A Tree Protection Zone (TPZ) is considered one of the most effective ways to ensure the retention of trees throughout development. The aim of a TPZ is to secure the space around the tree so that no above or below ground activities or developments can affect the integrity of the tree's root system or above ground parts.

AS 4970 (2009) provides a method for calculating the standard area of TPZ's. For all broadleaf trees, the radius of the TPZ is calculated as:

$$12 * DBH$$

For grass like trees such as palms or tree ferns; TPZs are calculated as:

$$\text{Radius of extent of canopy} + 1\text{m},$$

Dead trees are attributed a TPZ of the same size as their SRZ as only their stability can now be protected and not their vigour

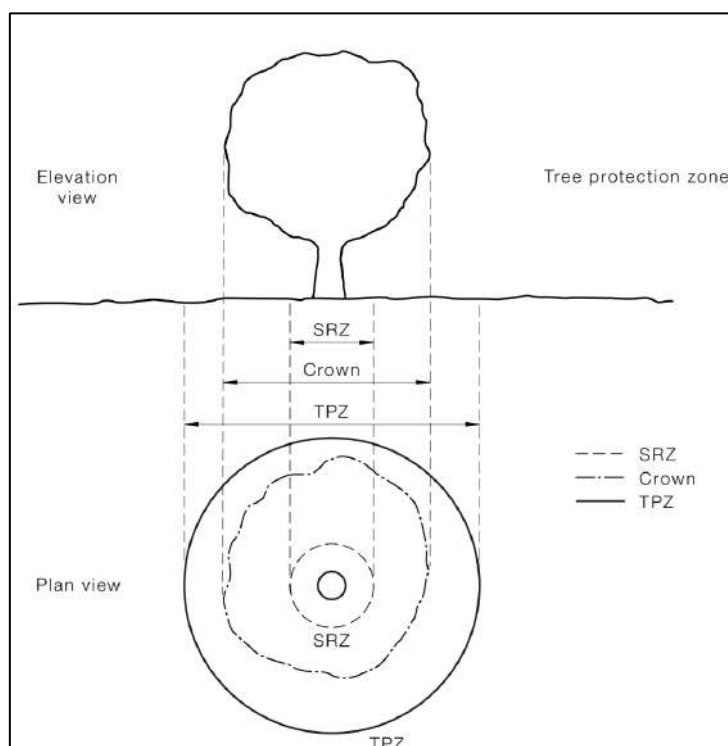


Figure 4: Diagram of TPZ and SRZ (AS 4970 2009)

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14.2.1 TPZ Encroachment:

AS 4970 (2009) allows the extents of 'calculated' TPZs to be varied, under certain conditions, to allow varying levels encroachment into TPZs. Encroachment is the term given to the level of impact of the footprint of a disturbance (such as a development or construction activity) on the calculated TPZ of a tree. Two levels of encroachment are classified within AS 4970:

14.2.1.1 Minor Encroachment

Where encroachment of a respective TPZ is limited to less than 10% of a TPZs area it is termed 'Minor Encroachment'. Minor encroachment and corresponding variations to a TPZ is considered acceptable while the lost area is compensated elsewhere while still being contiguous with the TPZ.

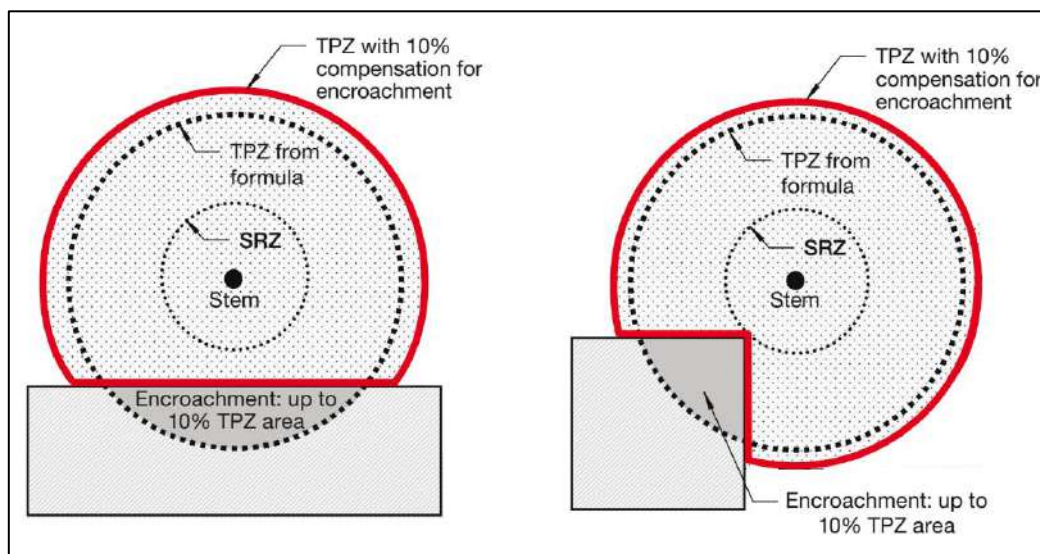


Figure 5: Examples of Minor TPZ encroachment and contiguous TPZ compensation (AS 4970 2009)

14.2.1.2 Major Encroachment

Where encroachment of the standard TPZ exceeds 10% of a TPZ it is termed 'Major Encroachment'. Major encroachment and corresponding variations to a TPZ can be considered acceptable providing the following conditions are met:

- The project arborist demonstrates the tree will remain viable through the encroachment.
- The lost area is compensated elsewhere while still being contiguous with the TPZ.

Regardless of encroachment, final TPZs and tree protection requirements should be clear to all parties during the entire construction process. Ideally all tree protection requirements should be outlined within a Tree Protection Management Plan (TPMP), prepared by a suitably qualified arborist, prior to the commencement of any construction activities

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FEATURE & LEVEL PLAN

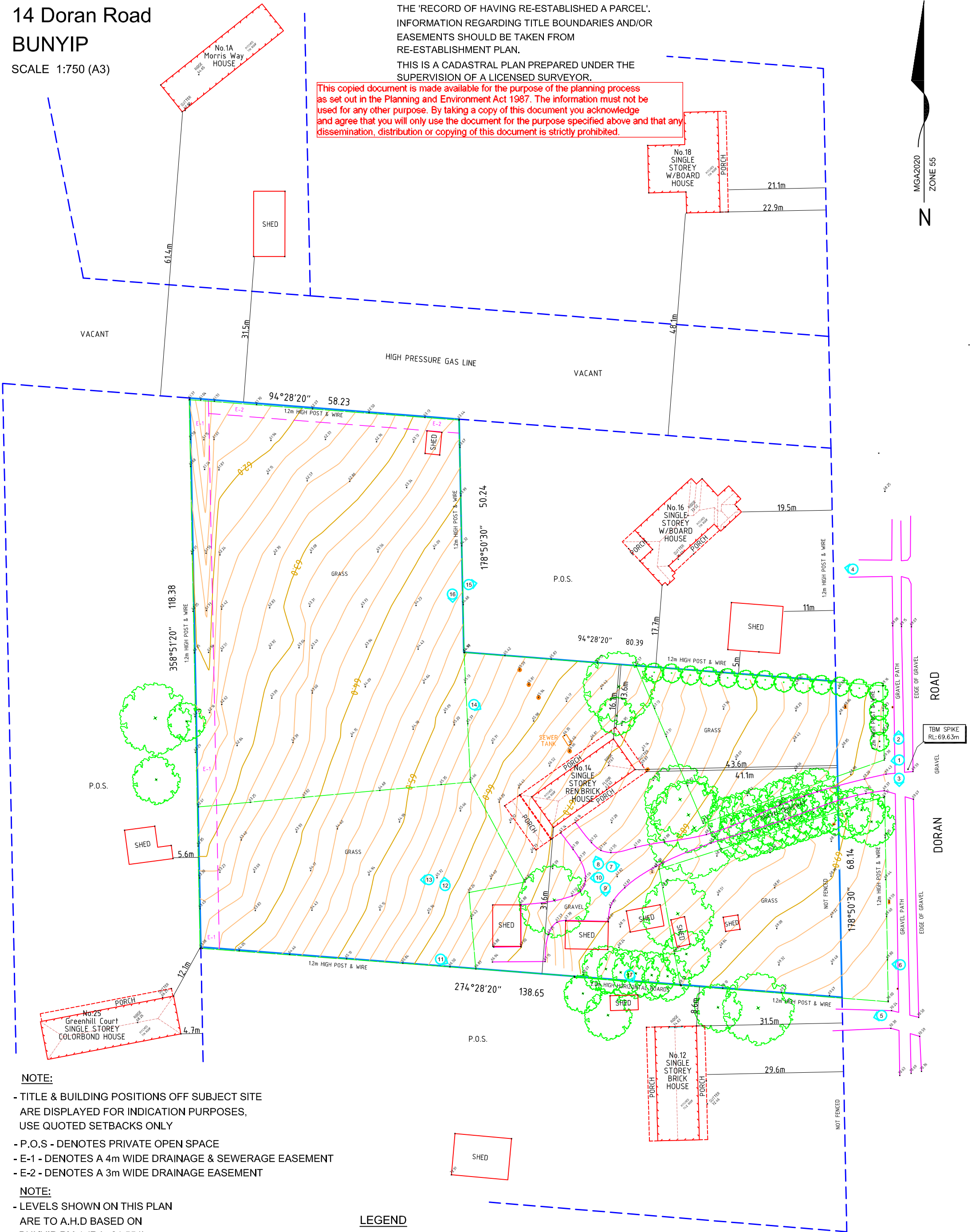
14 Doran Road
BUNYIP

SCALE 1:750 (A3)

NOTE:
- THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE 'RECORD OF HAVING RE-ESTABLISHED A PARCEL'. INFORMATION REGARDING TITLE BOUNDARIES AND/OR EASEMENTS SHOULD BE TAKEN FROM RE-ESTABLISHMENT PLAN.
THIS IS A CADASTRAL PLAN PREPARED UNDER THE SUPERVISION OF A LICENSED SURVEYOR.

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MG2020
ZONE 55
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NOTE:

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- P.O.S - DENOTES PRIVATE OPEN SPACE
- E-1 - DENOTES A 4m WIDE DRAINAGE & SEWERAGE EASEMENT
- E-2 - DENOTES A 3m WIDE DRAINAGE EASEMENT

NOTE:

- LEVELS SHOWN ON THIS PLAN ARE TO A.H.D BASED ON BUNYIP PM 1 (R.L.: 91.554)

LEGEND



- GRATE
- SEWER PIT
- WATER METER
- TELSTRA PIT
- POWER POLE



- GAS METER



- PHOTO POSITION & DIRECTION



- DENOTES GROUND FLOOR HABITABLE WINDOWS



- DENOTES APPROX. VICMAP TITLE LINE

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DRAWN BY : DUSTIN NGUYEN
CHECKED : L.N
DATE OF SURVEY : 15/04/2025
SURV. REF. NO. 22544
VERSION: 1 - 05/25

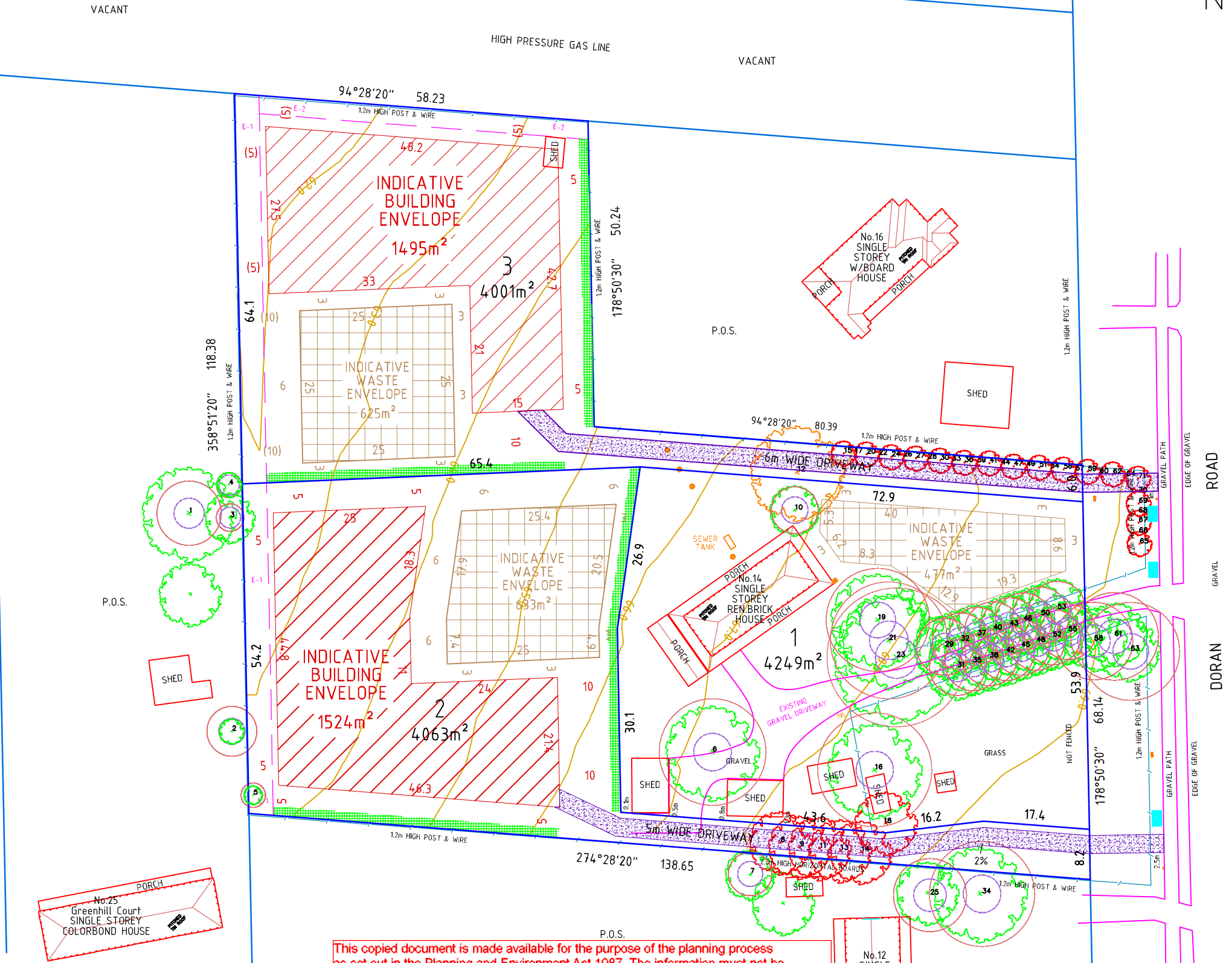
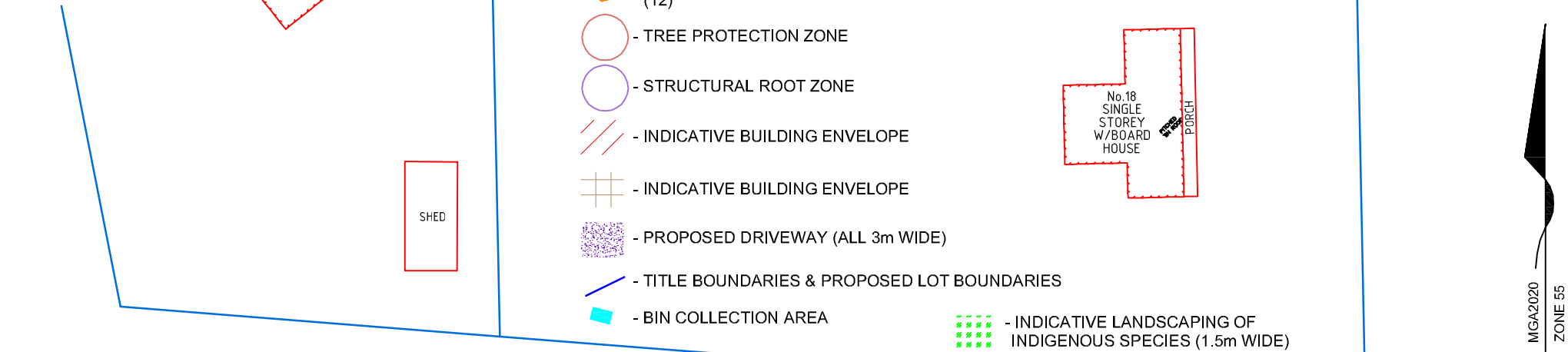
DEVELOPMENT PLAN

14 Doran Road

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VERSION 4



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CHECKED : L.N
DATE OF SURVEY : 15/04/2025
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VERSION: 1 - 05/25

A3