





Planning Enquiries
Phone: (03) 9688 0200
Web: www.maribyrnong.vic.gov.au

Clear Form

Application for a Planning Permit

If you need help to complete this form, read MORE INFORMATION at the end of this form.

-  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*. If you have any questions, please contact Council's planning department.
-  Questions marked with an asterisk (*) must be completed.
-  If the space provided on the form is insufficient, attach a separate sheet
-  Click for further information.

The Land


Address of the land. Complete the Street Address and one of the Formal Land Descriptions.

Street Address *

Unit No.:	St. No.:	St. Name:
Suburb/Locality:		Postcode:

Formal Land Description *


Complete either A or B.


 This information can be found on the certificate of title.


If this application relates to more than one address, attach a separate sheet setting out any additional property details.

A	Lot No.:	<input type="radio"/> Lodged Plan	<input type="radio"/> Title Plan	<input type="radio"/> Plan of Subdivision	No.:
OR					
B	Crown Allotment No.:	Section No.:			
Parish/Township Name:					


The Proposal


 You must give full details of your proposal and attach the information required to assess the application. Insufficient or unclear information will delay your application

 For what use, development or other matter do you require a permit? *

 Provide additional information about the proposal, including: plans and elevations; any information required by the planning scheme, requested by Council or outlined in a Council planning permit checklist; and if required, a description of the likely effect of the proposal.

Cost \$

 You may be required to verify this estimate. Insert '0' if no development is proposed.

 Estimated cost of any development for which the permit is required *

If the application is for land within **metropolitan Melbourne** (as defined in section 3 of the *Planning and Environment Act 1987*) and the estimated cost of the development exceeds \$1.093 million (adjusted annually by CPI) the Metropolitan Planning Levy **must** be paid to the State Revenue Office and a current levy certificate **must** be submitted with the application. Visit www.sro.vic.gov.au for information.

Existing Conditions

Describe how the land is used and developed now *

For example, vacant, three dwellings, medical centre with two practitioners, licensed restaurant with 80 seats, grazing.

Provide a plan of the existing conditions. Photos are also helpful.

Title Information

Encumbrances on title *

Does the proposal breach, in any way, an encumbrance on title such as a restrictive covenant, section 173 agreement or other obligation such as an easement or building envelope?

- Yes (If 'yes' contact Council for advice on how to proceed before continuing with this application.)
- No
- Not applicable (no such encumbrance applies).

Provide a full, current copy of the title for each individual parcel of land forming the subject site. The title includes: the covering 'register search statement', the title diagram and the associated title documents, known as 'instruments', for example, restrictive covenants.

Applicant and Owner Details

Provide details of the applicant and the owner of the land.

Applicant *

The person who wants the permit.

Name:		
Title:	First Name:	Surname:
Organisation (if applicable):		
Postal Address:		If it is a P.O. Box, enter the details here:
Unit No.:	St. No.:	St. Name:
Suburb/Locality:		State: Postcode:

Please provide at least one contact phone number *

Contact information for applicant OR contact person below	
Business phone:	Email:
Mobile phone:	Fax:

Where the preferred contact person for the application is different from the applicant, provide the details of that person.

Contact person's details*		Same as applicant <input type="checkbox"/>
Name:		
Title:	First Name:	Surname:
Organisation (if applicable):		
Postal Address:		If it is a P.O. Box, enter the details here:
Unit No.:	St. No.:	St. Name:
Suburb/Locality:		State: Postcode:

Owner *


The person or organisation who owns the land

Where the owner is different from the applicant, provide the details of that person or organisation.

Owner *		Same as applicant <input type="checkbox"/>
Name:		
Title:	First Name:	Surname:
Organisation (if applicable):		
Postal Address:		If it is a P.O. Box, enter the details here:
Unit No.:	St. No.:	St. Name:
Suburb/Locality:		State: Postcode:
Owner's Signature (Optional):		Date: day / month / year

Declaration

This form must be signed by the applicant *

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

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

Signature:

Date:

day / month / year

Need help with the Application?

General information about the planning process is available at planning.vic.gov.au

Contact Council's planning department to discuss the specific requirements for his application and obtain a planning permit checklist. Insufficient or unclear information may delay your application

Has there been a pre-application meeting with a council planning officer

No

Yes

If 'Yes', with whom?:

Date:

day / month / year

Checklist

Have you:

Filled in the form completely?

Paid or included the application fee?



Most applications require a fee to be paid. Contact Council to determine the appropriate fee.



Provided all necessary supporting information and documents?

A full, current copy of title information for each individual parcel of land forming the subject site.

A plan of existing conditions.

Plans showing the layout and details of the proposal.

Any information required by the planning scheme, requested by council or outlined in a council planning permit checklist.

If required, a description of the likely effect of the proposal (for example, traffic, noise, environmental impacts)

If applicable, a current Metropolitan Planning Levy certificate (a levy certificate expires 90 days after the day on which it is issued by the State Revenue Office and then cannot be used). Failure to comply means the application is void

Completed the relevant council planning permit checklist?

Signed the declaration?

Lodgement

Lodge the completed and signed form, the fee and all documents with:

Maribyrnong City Council

PO Box 58

Footscray VIC 3011

Cnr Napier & Hyde Streets

Footscray VIC 3011

Contact information:

Phone: (03) 9688 0200

Email: email@maribyrnong.vic.gov.au

DX: 81112

Deliver application in person, by post or by electronic lodgement.

MORE INFORMATION

The Land

Planning permits relate to the use and development of the land. It is important that accurate, clear and concise details of the land are provided with the application.

How is land identified


Land is commonly identified by a street address, but sometimes this alone does not provide an accurate identification of the relevant parcel of land relating to an application. Make sure you also provide the formal land description - the lot and plan number or the crown, section and parish/township details (as applicable) for the subject site. This information is shown on the title.

See **Example 1**.

The Proposal

Why is it important to describe the proposal correctly?


The application requires a description of what you want to do with the land. You must describe how the land will be used or developed as a result of the proposal. It is important that you understand the reasons why you need a permit in order to suitably describe the proposal. By providing an accurate description of the proposal, you will avoid unnecessary delays associated with amending the description at a later date.

 Planning schemes use specific definitions for different types of use and development. Contact the Council planning office at an early stage in preparing your application to ensure that you use the appropriate terminology and provide the required details.

How do planning schemes affect proposals?

A planning scheme sets out policies and requirements for the use, development and protection of land. There is a planning scheme for every municipality in Victoria. Development of land includes the construction of a building, carrying out works, subdividing land or buildings and displaying signs.

Proposals must comply with the planning scheme provisions in accordance with Clause 61.05 of the planning scheme. Provisions may relate to the State Planning Policy Framework, the Local Planning Policy Framework, zones, overlays, particular and general provisions. You can access the planning scheme by either contacting Council's planning department or by visiting Planning Schemes Online at planning-schemes.delwp.vic.gov.au

 You can obtain a planning certificate to establish planning scheme details about your property. A planning certificate identifies the zones and overlays that apply to the land, but it does not identify all of the provisions of the planning scheme that may be relevant to your application. Planning certificates for land in metropolitan areas and most rural areas can be obtained by visiting www.landata.vic.gov.au Contact your local Council to obtain a planning certificate in Central Goulburn, Corangamite, Macedon Ranges and Greater Geelong. You can also use the free Planning Property Report to obtain the same information.

See **Example 2**.


Estimated cost of development

In most instances an application fee will be required. This fee must be paid when you lodge the application. The fee is set down by government regulations.

To help Council calculate the application fee, you must provide an accurate cost estimate of the proposed development. This cost does not include the costs of development that you could undertake without a permit or that are separate from the permit process. Development costs should be calculated at a normal industry rate for the type of construction you propose.

Council may ask you to justify your cost estimates. Costs are required solely to allow Council to calculate the permit application fee. Fees are exempt from GST.

 Costs for different types of development can be obtained from specialist publications such as Cordell Housing: Building Cost Guide or Rawlinsons: Australian Construction Handbook.

 Contact the Council to determine the appropriate fee. Go to planning.vic.gov.au to view a summary of fees in the Planning and Environment (Fees) Regulations.

Metropolitan Planning Levy refer Division 5A of Part 4 of the *Planning and Environment Act 1987* (the Act). A planning permit application under section 47 or 96A of the Act for a development of land in metropolitan Melbourne as defined in section 3 of the Act may be a leviable application. If the cost of the development exceeds the threshold of \$1 million (adjusted annually by consumer price index) a levy certificate must be obtained from the State Revenue Office after payment of the levy. A valid levy certificate must be submitted to the responsible planning authority (usually council) with a leviable planning permit application. Refer to the State Revenue Office website at www.sro.vic.gov.au for more information. A leviable application submitted without a levy certificate is void.

Existing Conditions

How should land be described?

You need to describe, in general terms, the way the land is used now, including the activities, buildings, structures and works that exist (e.g. single dwelling, 24 dwellings in a three-storey building, medical centre with three practitioners and 8 car parking spaces, vacant building, vacant land, grazing land, bush block).

Please attach to your application a plan of the existing conditions of the land. Check with the local Council for the quantity, scale and level of detail required. It is also helpful to include photographs of the existing conditions.

See **Example 3**.

Title Information

What is an encumbrance?

An 'encumbrance' is a formal obligation on the land, with the most common type being a 'mortgage'. Other common examples of encumbrances include:

- **Restrictive Covenants:** A 'restrictive covenant' is a written agreement between owners of land restricting the use or development of the land for the benefit of others, (eg. a limit of one dwelling or limits on types of building materials to be used).
- **Section 173 Agreements:** A 'section 173 agreement' is a contract between an owner of the land and the Council which sets out limitations on the use or development of the land.
- **Easements:** An 'easement' gives rights to other parties to use the land or provide for services or access on, under or above the surface of the land.
- **Building Envelopes:** A 'building envelope' defines the development boundaries for the land.

Aside from mortgages, the above encumbrances can potentially limit or even prevent certain types of proposals.

What documents should I check to find encumbrances

Encumbrances are identified on the title (register search statement) under the header 'encumbrances, caveats and notices'. The actual details of an encumbrance are usually provided in a separate document (instrument) associated with the title. Sometimes encumbrances are also marked on the title diagram or plan, such as easements or building envelopes.

What about caveats and notices?

A 'caveat' is a record of a claim from a party to an interest in the land. Caveats are not normally relevant to planning applications as they typically relate to a purchaser, mortgagee or chargee claim, but can sometimes include claims to a covenant or easement on the land. These types of caveats may affect your proposal.

Other less common types of obligations may also be specified on title in the form of 'notices'. These may have an effect on your proposal, such as a notice that the building on the land is listed on the Heritage Register.

What happens if the proposal contravenes an encumbrance on title?

Encumbrances may affect or limit your proposal or prevent it from proceeding. Section 61(4) of the *Planning and Environment Act 1987* for example, prevents a Council from granting a permit if it would result in a breach of a registered restrictive covenant. If the proposal contravenes any encumbrance, contact the Council for advice on how to proceed.

You may be able to modify your proposal to respond to the issue. If not, separate procedures exist to change or remove the various types of encumbrances from the title. The procedures are generally quite involved and if the encumbrance relates to more than the subject property, the process will include notice to the affected party.

▲ You should seek advice from an appropriately qualified person, such as a solicitor, if you need to interpret the effect of an encumbrance or if you seek to amend or remove an encumbrance.

Why is title information required?

Title information confirms the location and dimensions of the land specified in the planning application and any obligations affecting what can be done on or with the land.

As well as describing the land, a full copy of the title will include a diagram or plan of the land and will identify any encumbrances, caveats and notices.

What is a 'full' copy of the title?

The title information accompanying your application must include a 'register search statement' and the title diagram, which together make up the title.

In addition, any relevant associated title documents, known as 'instruments', must also be provided to make up a full copy of the title.

Check the title to see if any of the types of encumbrances, such as a restrictive covenant, section 173 agreement, easement or building envelope, are listed. If so, you must submit a copy of the document (instrument) describing that encumbrance. Mortgages do not need to be provided with planning applications.

▲ Some titles have not yet been converted by Land Registry into an electronic register search statement format. In these earlier types of titles, the diagram and encumbrances are often detailed on the actual title, rather than in separate plans or instruments.

Why is 'current' title information required?

It is important that you attach a current copy of the title for each individual parcel of land forming the subject site. 'Current' title information accurately provides all relevant and up-to-date information.

Some councils require that title information must have been searched within a specified time frame. Contact the Council for advice on their requirements.

▲ Copies of title documents can be obtained from Land Registry: Level 10, 570 Bourke Street, Melbourne; 03 8636 2010; www.landata.vic.gov.au – go direct to "titles & property certificates"

Applicant and Owner Details

This section provides information about the permit applicant, the owner of the land and the person who should be contacted about any matters concerning the permit application.

The applicant is the person or organisation that wants the permit. The applicant can, but need not, be the contact person.

In order to avoid any confusion, the Council will communicate only with the person who is also responsible for providing further details. The contact may be a professional adviser (e.g. architect or planner) engaged to prepare or manage the application. To ensure prompt communications, contact details should be given.

Check with Council how they prefer to communicate with you about the application. If an email address is provided this may be the preferred method of communication between council and the applicant/contact.

The owner of the land is the person or organisation who owns the land at the time the application is made. Where a parcel of land has been sold and an application made prior to settlement, the owner's details should be identified as those of the vendor. The owner can, but need not, be the contact or the applicant.

See **Example 4**.

Declaration

The declaration should be signed by the person who takes responsibility for the accuracy of all the information that is provided. This declaration is a signed statement that the information included with the application is true and correct at the time of lodgement.

The declaration can be signed by the applicant or owner. If the owner is not the applicant, the owner must either sign the application form or must be notified of the application which is acknowledged in the declaration

▲ Obtaining or attempting to obtain a permit by wilfully making or causing any false representation or declaration, either orally or in writing, is an offence under the *Planning and Environment Act 1987* and could result in a fine and/or cancellation of the permit

Need help with the Application?

If you have attended a pre-application meeting with a Council planner, fill in the name of the planner and the date, so that the person can be consulted about the application once it has been lodged.

Checklist

What additional information should you provide to support the proposal?

You should provide sufficient supporting material with the application to describe the proposal in enough detail for the Council to make a decision. It is important that copies of all plans and information submitted with the application are legible.

There may be specific application requirements set out in the planning scheme for the use or development you propose. The application should demonstrate how these have been addressed or met.

The checklist is to help ensure that you have:

- provided all the required information on the form
- included payment of the application fee
- attached all necessary supporting information and documents
- completed the relevant Council planning permit checklist
- signed the declaration on the last page of the application form

▲ The more complete the information you provide with your permit application, the sooner Council will be able to make a decision.

Lodgement

The application must be lodged with the Council responsible for the planning scheme in which the land affected by the application is located. In some cases the Minister for Planning or another body is the responsible authority instead of Council. Ask the Council if in doubt.

Check with Council how they prefer to have the application lodged. For example, they may have an online lodgement system, prefer email or want an electronic and hard copy. Check also how many copies of plans and the size of plans that may be required.

Contact details are listed in the lodgement section on the last page of the form.

▲ Approval from other authorities: In addition to obtaining a planning permit, approvals or exemptions may be required from other authorities or Council departments. Depending on the nature of your proposal, these may include food or health registrations, building permits or approvals from water and other service authorities.

EXAMPLES

Example 1

The Land i

Address of the land. Complete the Street Address and one of the Formal Land Descriptions.

Street Address *

Unit No.: 4	St. No.: 26	St. Name: Planmore Avenue
Suburb/Locality: HAWTHORN		Postcode: 3122

Formal Land Description *
Complete either A or B.

A Lot No.: **2** Lodged Plan Title Plan Plan of Subdivision No.: **LP93562**

OR

B Crown Allotment No.: Section No.:

Parish/Township Name:

⚠ This information can be found on the certificate of title.
If this application relates to more than one address, attach a separate sheet setting out any additional property details.

Example 2

i For what use, development or other matter do you require a permit? *

Construction of two, double-storey dwellings and construction of two new crossovers.

📎 Provide additional information about the proposal, including: plans and elevations; any information required by the planning scheme, requested by Council or outlined in a Council planning permit checklist; and if required, a description of the likely effect of the proposal.

Example 3

Existing Conditions i

Describe how the land is used and developed now *

For example, vacant, three dwellings, medical centre with two practitioners, licensed restaurant with 80 seats, grazing.

Single dwelling.

📎 Provide a plan of the existing conditions. Photos are also helpful.

Example 4

Applicant and Owner Details i

Provide details of the applicant and the owner of the land.

Applicant *

The person who wants the permit.

Please provide at least one contact phone number *

Where the preferred contact person for the application is different from the applicant, provide the details of that person.

Owner *

The person or organisation who owns the land

Where the owner is different from the applicant, provide the details of that person or organisation.

Name:
Title: **Mr** First Name: **Len** Surname: **Browning**

Organisation (if applicable): **Responsible Developers P/L**

Postal Address: If it is a P.O. Box, enter the details here:
Unit No.: **4** St. No.: **12** St. Name: **Ardour Lane**

Suburb/Locality: **Wycheproof** State: **Vic** Postcode: **3527**

Contact information for applicant OR contact person below

Business phone: **9123 4567** Email: **tcpl@bigpond.net.au**

Mobile phone: **0412 345 678** Fax: **9123 4567**

Contact person's details* Same as applicant

Name:
Title: **Mr** First Name: **Andrew** Surname: **Hodge**

Organisation (if applicable): **Town Planning Consultants**

Postal Address: If it is a P.O. Box, enter the details here:
Unit No.: St. No.: St. Name: **PO Box 111**

Suburb/Locality: **Parkdale** State: **Vic** Postcode: **3194**

Name: Same as applicant

Title: First Name: Surname:

Organisation (if applicable):

Postal Address: If it is a P.O. Box, enter the details here:
Unit No.: St. No.: St. Name:

Suburb/Locality: State: Postcode:

Owner's Signature (Optional): Date:
day / month / year

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

VOLUME 07361 FOLIO 148

Security no : 124115695250W
Produced 11/06/2024 10:40 AM



LAND DESCRIPTION

Lot 294 on Plan of Subdivision 009942.
PARENT TITLE Volume 05494 Folio 767
Created by instrument 2281472 31/01/1950

REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
ANH NGOC NGUYEN
HOAN NGOC LE both of 84 OBERON AVENUE ST ALBANS VIC 3021
AX760541B 23/02/2024

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE AX760542Y 23/02/2024
PERMANENT CUSTODIANS LTD

COVENANT 1394339

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 or imaged folio set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP713423H FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NUMBER		STATUS	DATE
AX760541B (E)	TRANSFER	Registered	23/02/2024
AX760542Y (E)	MORTGAGE	Registered	23/02/2024

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

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

Street Address: 17 RIVER STREET MARIBYRNONG VIC 3032

ADMINISTRATIVE NOTICES

NIL

eCT Control 18478R FIRST LEGAL
Effective from 23/02/2024

DOCUMENT END

TITLE PLAN		EDITION 1	TP 713423H
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<p>Location of Land</p> <p>Parish: CUT-PAW-PAW Township: Section: 21 Crown Allotment: 12(PT) Crown Portion:</p> <p>Last Plan Reference: LP 9942 Derived From: VOL 7361 FOL 148 Depth Limitation: NIL</p>	<p>Notations</p> <p>ANY REFERENCE TO MAP IN THE TEXT MEANS THE DIAGRAM SHOWN ON THIS TITLE PLAN</p>
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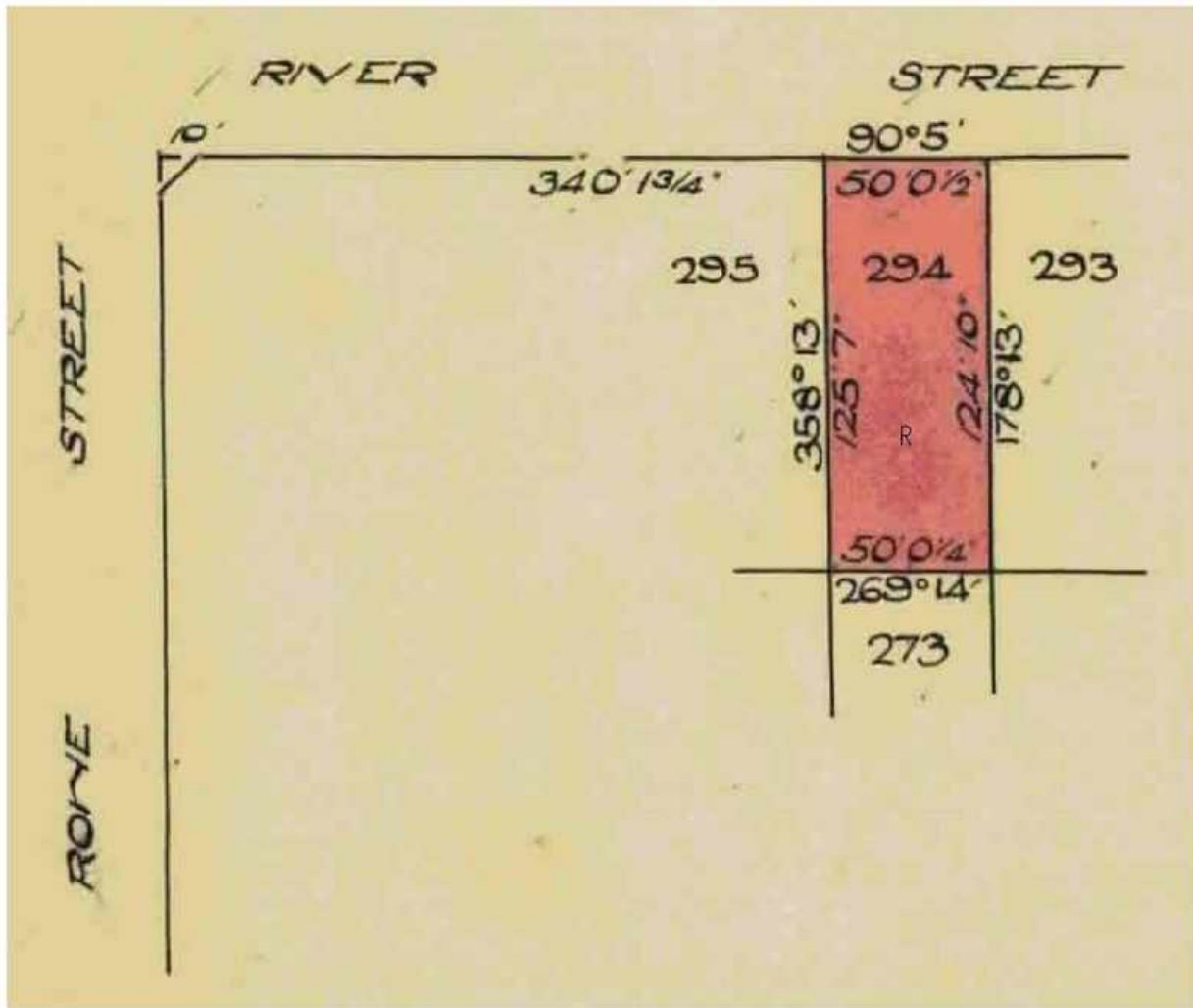
Description of Land / Easement Information

All that piece of Land, delineated and coloured ---

red on the map in the margin being Lot 294 on Plan of Subdivision No.9942 lodged-----
 in the Office of Titles and being part of Crown Allotment Twelve Section Twenty-one-
 Parish of Cut Paw Paw County of Bourke - Together with a right of carriage way ---
 over the roads coloured brown on the said Plan of Subdivision - - - - -

THIS PLAN HAS BEEN PREPARED FOR THE LAND REGISTRY, LAND VICTORIA, FOR TITLE DIAGRAM PURPOSES AS PART OF THE LAND TITLES AUTOMATION PROJECT
 COMPILED: 08/12/2000
 VERIFIED: CP

COLOUR CODE
 R = RED





LP 9942
EDITION 2
PLAN MAY BE LODGED
10/04/1924

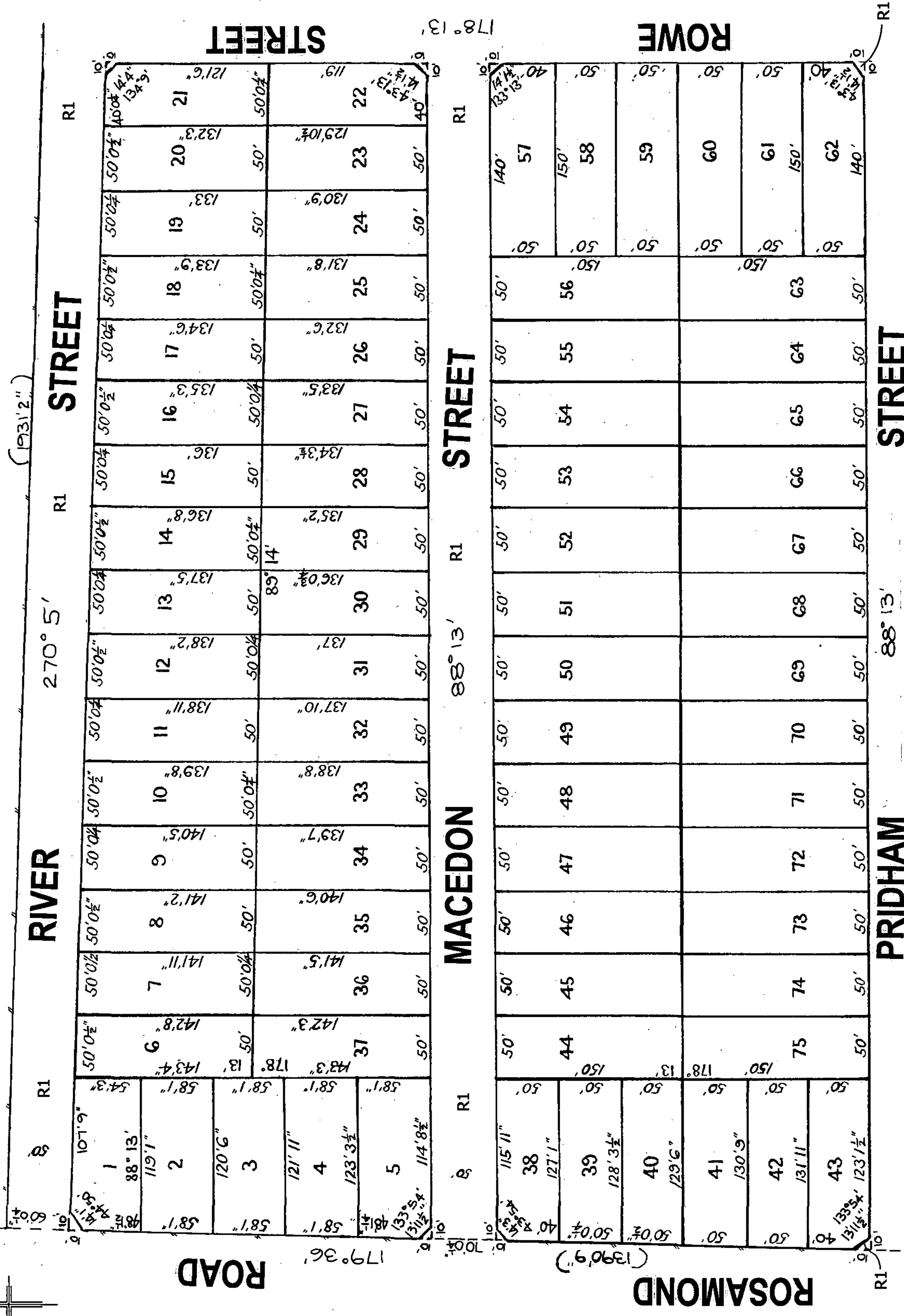
4 SHEETS
SHEET 1

COLOUR CODE
E-1 = BLUE
R1 = BROWN
ROADS COLOURED BROWN

ENCUMBRANCES
AS TO ROAD R1
ANY EASEMENTS AFFECTING
THE SAME

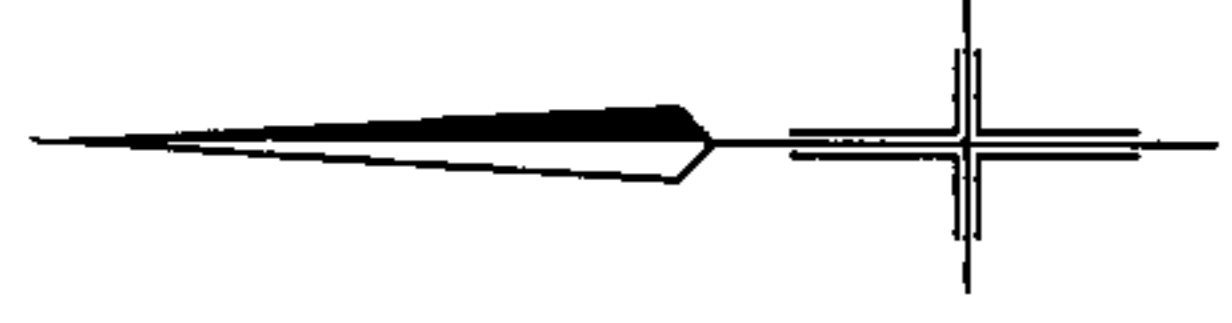
PLAN OF SUBDIVISION
CROWN ALLOTMENT I2. SECTION 21
PARISH OF CUT-PAW-PAW

COUNTY OF BOURKE
VOL.2226 FOL.154
Measurements are in Feet & Inches
Conversion Factor
FEET X 0.3048 = METRES



SEE SHEET 2

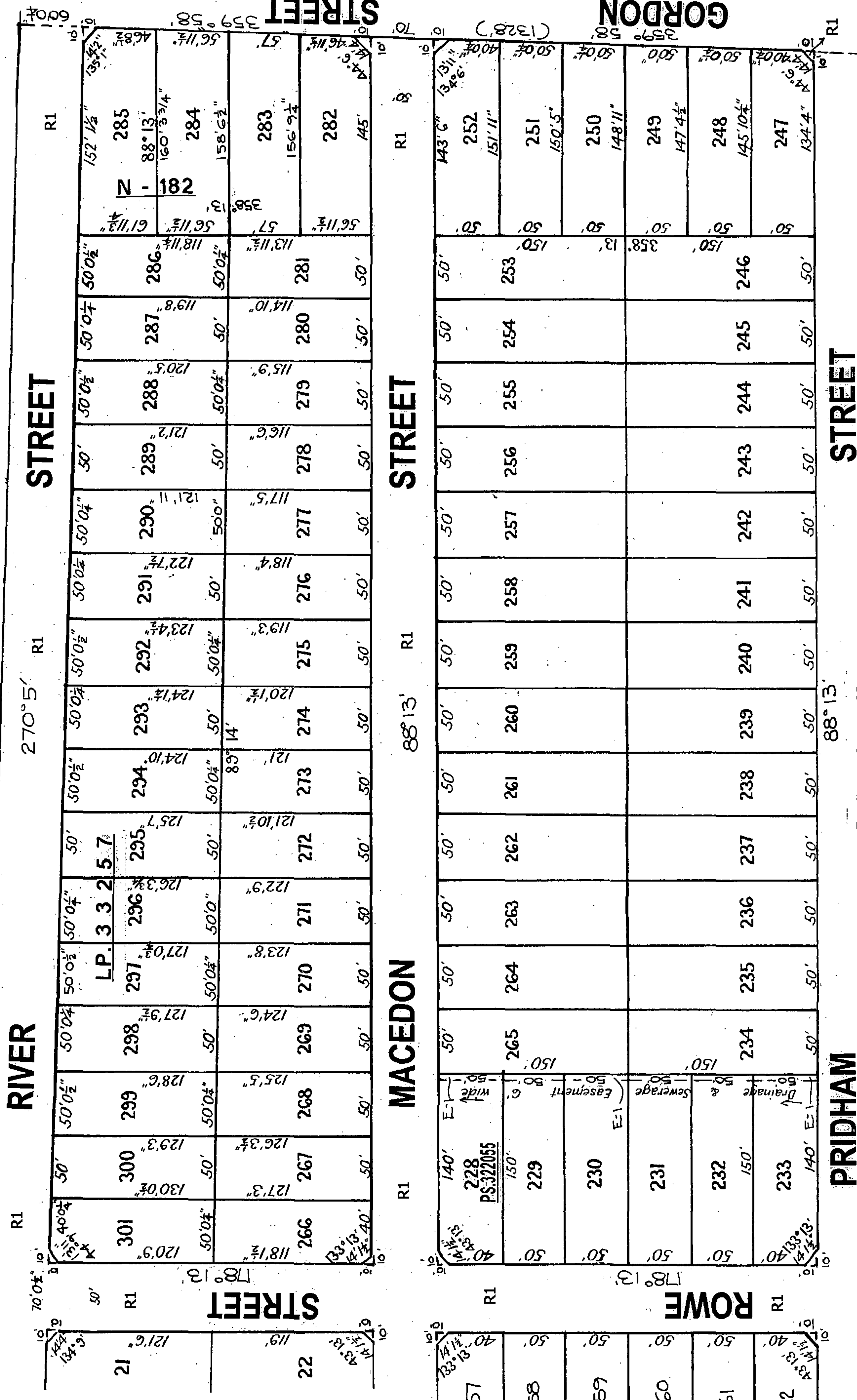
SEE SHEET 4



LP 9942

4 SHEETS
SHEET 2.

SFF SHEET 1

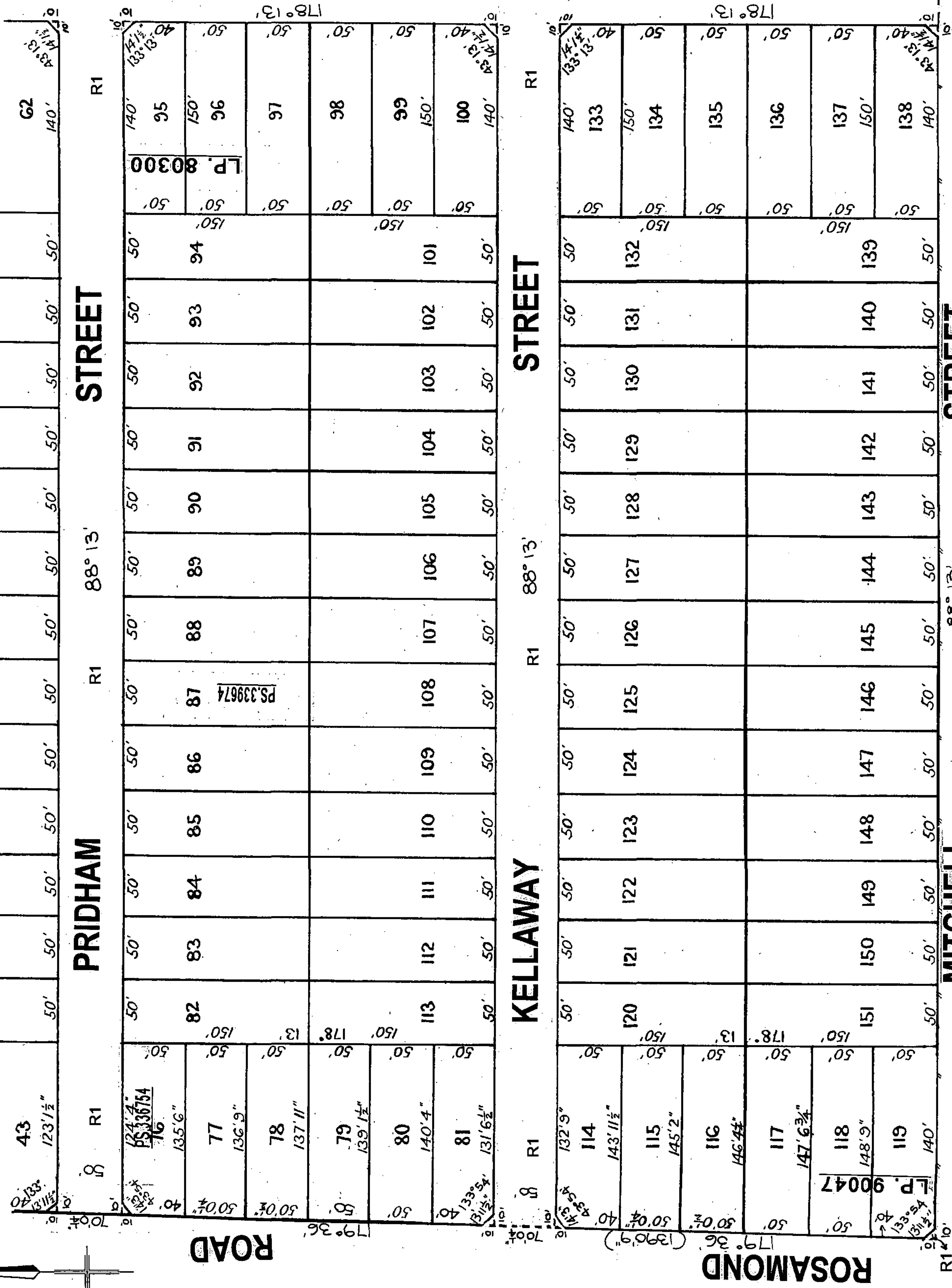


SEE SHEET 3

LP 9942
4 SHEETS
SHEET 4

SEE SHEET 3

SEE SHEET 1





Imaged Document Cover Sheet

CITY OF MARIBYRNONG

RECEIVED

25/7/2024

URBAN PLANNING

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

Document Type	Instrument
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Number of Pages (excluding this cover sheet)	2
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The document is invalid if this cover sheet is removed or altered.

1394339

STEWART & DIMELOW

VICTORIA

[FREEHOLD]

Transfer of Land

I, THOMAS LAWRENCE McNAMARA of "Yangoora" The Avenue Canterbury in the State of Victoria Accountant being registered as the proprietor of an estate in fee simple in the land hereinafter described subject to the encumbrances notified hereunder in consideration of the sum of Four hundred and ninety pounds paid to me by WILLIAM ALEXANDER MADDERN of Alexandria in the State of New South Wales Draughtsman

DO HEREBY TRANSFER to the said William Alexander Maddern all my estate and interest in ALL THAT piece of land being Lots Number 27, 28, 29, 295, 296 and 297 on Plan of Subdivision Number 9942 lodged in the Office of Titles and being part of Crown Allotment twelve Section twenty-one Parish of Cut Paw Paw County of Bourke and being part of the land described in Certificates of Title Volume 5319 Folio 1063619 Together with a right of carriage way over the roads colored brown on the said Plan of Subdivision

AND I the said William Alexander Maddern for myself my heirs executors administrators and transferees the registered proprietor or proprietors for the time being of the land hereby transferred DO HEREBY COVENANT with the said Thomas Lawrence McNamara his heirs executors administrators and transferees the registered proprietor or proprietors for the time being of the land remaining untransferred in the said Certificate of Title THAT I the said William Alexander Maddern will not excavate carry away or remove or permit to be excavated carried away or removed from the said land hereby transferred any earth clay stone gravel or sand except for the purpose of excavating for the foundation of any building to be erected thereon or use or permit or allow the said land to be used for the manufacture or winning of bricks tiles or pottery-ware and I the said William Alexander Maddern consent to the foregoing covenant appearing as an encumbrance on the Certificate of Title to be issued in respect of the said land and running with such land.

DATED this 5th day of December One thousand nine hundred and twenty-eight.

in Victoria THOMAS LAWRENCE McNAMARA by his Attorney under Power

SIGNED by the said THOMAS LAWRENCE McNAMARA in Victoria in the presence of T.M. BURKE PROPRIETARY LIMITED The Common Seal of T.M. BURKE PROPRIETARY LIMITED was hereunto affixed by order of the Governing Director.

T.M. Burke
GOVERNING DIRECTOR

SIGNED by the said WILLIAM ALEXANDER MADDERN in New South Wales in Victoria in the presence of

W.A. Maddern
A.S. Block J.P.

ENCUMBRANCES REFERRED TO

IMAGED

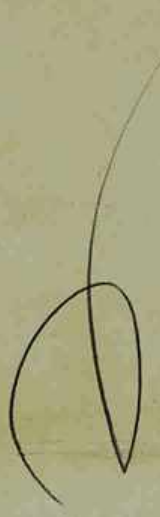


See field

W.A. Maddern

W.A. Maddern

✓
2



MEMORIAL OF INSTRUMENT.

NATURE OF INSTRUMENT	TIME OF ITS PRODUCTION FOR REGISTRATION	TO WHOM GIVEN	NUMBER OF REGISTERED EASEMENT
Transfer as to part and Creation of Easement	THE 10 th DAY OF December 1928	William Alexander Maddern	1394339

AMT

T. H. Hooking

ASSISTANT REGISTRAR OF TITLES

I Certify THAT A MEMORIAL OF THE WITHIN INSTRUMENT WAS ENTERED, AT THE TIME LAST ABOVE MENTIONED IN THE REGISTER BOOK VOL 5319 FOL 1063618-9.

T. H. Hooking

ASSISTANT REGISTRAR OF TITLES

2 Certs to same note register

10/11/28 5319/619 A.C.F.
5319/618 C.F.

Under an acre
being lots 27, 28 on L.P. 9942
in being A.C.F.'s Plot 12, Sec 21
Parish of Cut Paw Paw
County of Bourke
Togeth Roads being in said L.P.
Entry the Cont in T^e 1394339.

2nd Cert
5319/618 P.A.C.F.
5319/619 C.F.

Under an acre
being lots 294, 295, 296, 297
on L.P. 9942
4 being (etc as in plot)
Togeth Roads between
Said L.P.
Entry the Cont in
T^e 1394339
- A.M.T.

AMT
31/1/28

10/11/28
5319/618
5319/619



PLANNING ASSESSMENT REPORT

(Rev. 26.08.24)

1.0 Client & project details

LOCALITY PLAN



CLIENT NAME: HL Homes

SITE ADDRESS: 17 River Street, Maribyrnong

PROPOSED WORKS: Proposed 2 Townhouse Development

2.0 Introduction

The following written assessment will:

- Identify and document the constraints and attributes considered applicable for the residential redevelopment of this site,
- Provide an analysis of the proposal against the Victorian planning provisions in particular the state planning policy framework, the municipal strategic statement, the local planning policy framework & Rescode clause 55.

3.0 Maribyrnong Planning Scheme Controls

The development has been assessed against the following sections of the Maribyrnong Planning scheme, which are relevant to the consideration of the proposal.

3.1 SPPF (State Planning Policy Framework)

3.1.1 Clause 11 Settlement

Clause 11.02-2 – Supply of Urban Land. The objective of this clause is;

- To ensure a sufficient supply of land is available for residential, commercial, industrial, recreational, institutional and other public uses.
- To facilitate the orderly development of urban areas.

3.1.2 Clause 16 Housing

Clause 16.01-3S is for housing diversity; the objectives of this clause are to;

To ensure housing stock matches changing demand by widening housing choices, particularly in middle & outer suburbs which encourage the development of well-designed medium-density housing which:

- Respects the neighbourhood character.
- Improves housing choice.
- Makes better use of existing infrastructure.
- Improves energy efficiency of housing.

3.2 MSS (Municipal Strategic Statement)

General

The City of Maribyrnong is changing, as Melbourne's inner western suburbs become more popular and significant new residential developments occur. In the past, the defence industries and other manufacturing industries dominated the municipality, which was once Melbourne's industrial heartland. With the closure and redevelopment of many of these industrial sites and changing economic circumstances, the municipality has experienced considerable changes to its economy, pattern of land uses and population.

Location and Regional Context

The City of Maribyrnong (the City) is a relatively small municipality situated on the Maribyrnong River, 4km to the west of the Melbourne Central Business District (CBD). The municipality comprises the suburbs of Braybrook, Footscray, Kingsville, Maidstone, Maribyrnong, Seddon, West Footscray, Tottenham and Yarraville. The City is a 'gateway' to Melbourne's western region; sitting between Melbourne's Docklands and port and the outer western industrial and residential areas. Melbourne's western region, with its land supply, major transport routes and accessibility to the port and airports, is a significant growth area in metropolitan Melbourne. The region's population will significantly increase by 2030, as more housing is developed in growth areas in the cities of Wyndham and Brimbank. The Port of Melbourne, situated on the eastern boundary of the city, is Australia's largest container port and is an important driver in the state and national economies. Significant regional facilities located within the city include the Western Hospital, Victoria University, Footscray Community Arts Centre and Whitten Oval. These facilities are important to Maribyrnong's economic and community wellbeing.

Settlement

The city has a comprehensive network of activity centres varying in their size, functions and roles, ranging from boutique centres like Yarraville through to regional centres like Footscray and the Highpoint Shopping Centre. This network allows residents access to a very wide range of retail and business services all within the local municipality. Activity centres are key locations for employment, transport, retailing, businesses, community services and increasingly are locations for higher density forms of housing. The larger activity centres such as Footscray and Highpoint have potential to broaden their range of uses, particularly increasing the extent of professional offices and residential development.

For more than a decade the city's population has been steadily increasing and in 2008 was estimated at nearly 70,000 people. Forecasts expect this to increase to 103,000 by 2030 as an increasing proportion of Melbourne's residential growth occurs within established suburbs. Over the next 20 years approximately 13,000 - 16,000 additional dwellings will be needed to accommodate this growth. Changes in global market forces together with the closure of Commonwealth defence facilities and the attraction of more suitable alternative locations have resulted in a significant reduction in the manufacturing and defence industries and associated employment within the city. This has led to many redundant and underutilised industrial sites. Consequently, over the last decade, a significant proportion of Commonwealth and industrial land has been redeveloped for residential and mixed use developments.

Built Environment and Heritage

The changing pattern of land use and the extent of new development over the past 10 years has changed the appearance and form of the city significantly. The dominance of the industrial character and image has receded and the city's 'renewal' is bringing about a greater residential character and reputation. The context for development varies from established residential neighbourhoods and commercial centres to large scale new estates. New development needs to be responsive to its context. The extent of new development provides opportunities to build on the qualities of the city's heritage and neighbourhood character and streetscapes whilst also introducing new forms of development that can enhance the city's role, design, image and liveability. The City of Maribyrnong has a rich and diverse heritage. Places of Aboriginal cultural heritage, early European settlement and sites that reflect the various phases of the cities Industrial, commercial and residential development can be found within the city.

Housing

Compared to the metropolitan area, the city has a culturally diverse population and has a lower proportion of younger and older age groups and a larger proportion of family age groups. The city has a higher proportion of lone person households and an increasing proportion of family households. Compared to the metropolitan area there is a relatively high proportion of public housing stock (6%) which is predominantly located in Braybrook, Maidstone and parts of Footscray

21.07 Housing

Overview

21.07-1 Residential capacity and location

The City has opportunities for significant residential redevelopment for the next 20 years that will cater for the forecast population and housing increase. Substantial, Incremental and Limited change areas are identified on the Framework Plan that forms part of this Clause.

Housing growth area framework

Substantial Change Areas

Significant redevelopments are proposed for the Maribyrnong Defence Site (MDS), Kinnears site in Footscray, the former Defence site in Beachley Street, Braybrook and the Bradmill Precinct in Yarraville. Other smaller sites across the municipality will also contribute to the supply of new housing.

Substantial Change Activity Centres

In the future the Highpoint PAC and Footscray CAD will assume a stronger role and greater capacity for substantial medium and higher density housing developments.

Incremental Change Areas

All other residential areas without heritage significance or an identified residential character that warrants planning protection through specific overlays.

Incremental Change Activity Centres

The mixed use and residential developments occurring in activity centres will continue and increase.

Limited change areas

Existing residential areas with heritage significance or an identified residential character that warrants planning protection through specific overlays, and areas with an identified constraint, such as inundation, that necessitate protection through an overlay. The majority of these areas have been identified in Council's Heritage Study (2001) and neighbourhood character studies.

The mixed use and residential developments occurring in key activity centres will continue and increase. This will extend housing choice, improve access to infrastructure, services and transport for residents and will help support and broaden the function of centres.

Objective 1

To provide significant opportunities for new residential development in substantial change areas and substantial change activity centres.

Strategies

Determine the form, amount and mix of housing of substantial change areas through site planning. Ensure the site planning of larger sites facilitates the development of diverse, high amenity precincts which have an identifiable sense of place. Encourage residential development in substantial change areas to predominantly comprise medium and higher density housing in the form of townhouses; units; apartments; and shop-top dwellings. Encourage a range of dwelling types and sizes, including affordable housing, to be provided in larger developments.

Ensure new development integrates with existing areas and communities.

Ensure new larger scale developments establish a preferred urban design and architectural character that complements existing areas and creates safe and liveable communities.

When applying overlays or other planning tools to larger substantial change sites ensure the requirements include:

- provision of a diversity of dwelling types, sizes and tenures
- appropriate provision of community infrastructure and open space
- consideration of public realm improvements and amenity protection at residential interfaces
- preparation of an adverse amenity report
- Incorporation of environmentally sustainable design principles.

Objective 2

To provide incremental opportunities for new residential development in incremental change areas and incremental change activity centres.

Strategies

Ensure development has regard to and clearly responds to preferred character statements and design guidelines for specific neighbourhood character precincts.

Ensure the siting and design of infill development respects the scale, form and siting of surrounding development.

Encourage residential development within incremental change areas to predominantly comprise of low and medium density housing in the form of separate and semi detached houses and in appropriate locations units, shop top dwellings and low scale apartments. Centres; they must reflect existing local character in terms of height, mass setbacks and building materials; and provide a sensitive and appropriate interface to adjoining streetscapes, buildings and residential areas.

Support gradual medium density 'infill' development, in the form of townhouses, units and shop-top dwellings, located close to transport, activity centres and community infrastructure.

Support smaller scale infill residential development in keeping with the streetscape and character of the centres and their adjacent residential in incremental change activity centres.

Encourage the retention of existing housing that positively contributes to preferred neighbourhood character.

Ensure development in activity centres follows relevant structure plans and urban design frameworks.

Protect areas that contribute to the range of housing choice especially for families and lifestyle choices.

Objective 3

In Limited change areas, limit development in residential areas with heritage significance; an identified residential character protected through a specific overlay; and identified constraints, such as inundation, that necessitate protection through an overlay.

Strategies

Maintain and enhance these areas and ensure that new development respects the existing heritage values and preferred neighbourhood character.

Ensure the scale, form and appearance of new housing is in keeping with the surrounding development and the heritage and preferred neighbourhood character values of the area.

Support the renovation and redevelopment of single houses as a means of ensuring diversity across the municipality and providing accommodation for larger household types.

Support a diversity of dwelling types and sizes, including affordable housing, where appropriate.

21.07-2 Housing Diversity and Affordability

The city has a range of housing comprising detached housing (67%), semi-detached (13%), and apartment (20%); this varies across its suburbs. Recent significant developments indicate densities are increasing with more medium density housing forms and some highrise developments, particularly within the Footscray CAD.

In the future there will be an increasing proportion of medium and higher density housing in the municipality. However, detached housing will remain the predominant form of housing across the municipality. The existing stock of detached 'family' housing (lots greater than 500 sqm) contributes to the diversity and choice of housing available within the municipality, as they can cater for family households and people preferring these forms of housing as part of their lifestyle. It is expected that this stock of housing will reduce as a proportion of overall housing. The city has been an affordable area offering housing opportunities for a wide range of households and incomes. The increasing popularity of the area and rising housing prices is reducing affordability and housing opportunities for some lower and middle income households. Increasing the supply and diversity of housing opportunities can assist in meeting affordability objectives.

Objective 5

To encourage a mix of housing.

Strategies

Support increased housing choice by providing a diversity of dwelling types, sizes and tenures.

Ensure new residential developments provide a mix of housing that caters for a range of households, lifestyles, age, incomes and life stages appropriate to the scale and nature of the project.

Encourage larger developments to provide a range of dwelling types and sizes, including affordable housing.

Encourage forms of housing suitable for the needs of an ageing population.

Encourage forms of housing suitable for home based businesses.

Protect areas that contribute to the range of housing choice especially for families and lifestyle choices.

Support the renovation and redevelopment of single houses as a means of providing accommodation for larger household types.

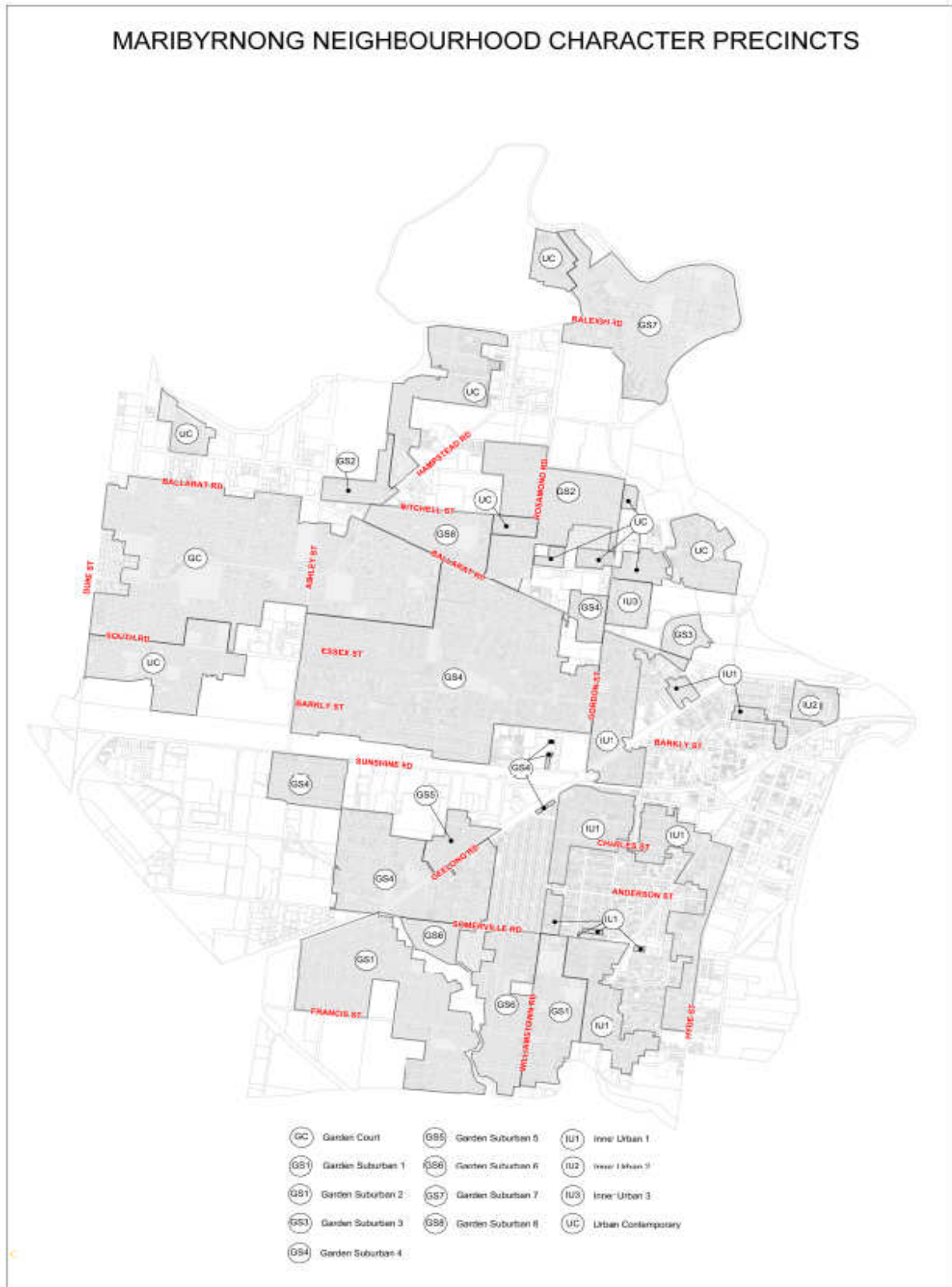
Policy Response

The proposal:

- *provides for additional & diverse housing stock in the popular infill area of Maribyrnong &*
- *provides additional affordable options of housing in Maribyrnong &*
- *respects the prevailing neighbourhood character &*
- *makes efficient use of the site*

22.05 URBAN CONTEMPORARY NEIGHBOURHOOD CHARACTER POLICY

This policy applies to development (including subdivision) in the General Residential Zone in the Urban Contemporary Maribyrnong Neighbourhood Character area, as shown on Map 1 forming part of this Clause.



22.05-1 Policy basis

The Maribyrnong Neighbourhood Character areas comprise 13 neighbourhood character types across the municipality (as shown on the Neighbourhood Character Precinct Map forming part of this Clause). This policy assists in achieving the objectives of the State Planning Policy Framework, particularly in relation to responding to neighbourhood character and urban design principles. The policy builds on the objectives of Clause 21.06 and 21.07 of the Maribyrnong Municipal Strategic Statement by ensuring that new development respects and enhances the preferred neighbourhood character of the residential areas. The policy implements the findings of the Maribyrnong Neighbourhood Character Review, February 2010 which identifies the key existing characteristics and preferred neighbourhood character of Maribyrnong, defining residential precincts based on the delineation of areas of similar character elements

22.09-2 Objectives

- To ensure that development is responsive to the preferred future character of the area.
- To retain and enhance the identified elements that contribute to the character of the area.
- To implement the recommendations of the Maribyrnong Neighbourhood Character Review, February 2010.

22.05-3 Policy

It is policy that the following Character Descriptions, Statements of Preferred Neighbourhood Character, Objectives and Design Responses are taken into account when considering any application to develop or subdivide land. Proposals that meet the Design Responses are considered to meet the related Objectives.

Garden Suburban 2 – GS2

The cohesiveness of streetscapes brought about by consistencies in the built form and the open, spacious qualities of streets will be maintained and strengthened. Older dwellings that contribute to the character of the area, including those from the Interwar and 1950s eras will be retained and complemented by newer development that is distinguishable from original building stock. Replacement buildings will reflect low-scale appearance of buildings and will use materials that complement those commonly found within the precinct. New development will be sited to retain the spaciousness of precincts through the provision of setbacks on all sides of dwellings. Landscaping that includes the planting of new canopy trees, shrubs and lawn areas will add to the garden settings of dwellings and provide a sense of leafiness in the precinct. Front fences will remain low or constructed of permeable materials to retain views to gardens.

Policy Response to Urban Character Guidelines:

CHARECTAR ELEMENT	OBJECTIVE	DESIGN RESPONSE	APPLICATION RESPONSE
EXISTING BUILDINGS	To encourage the retention of older dwellings that contribute to the valued character of the area.	Retain dwellings from the Interwar and Postwar era that are intact and in good condition wherever possible.	The Existing Dwelling is to be demolished.
VEGETATION	To maintain & strengthen the garden setting of the dwellings.	Retain Large, established trees & provide for the planting of new trees where possible. Buildings should be sited & designed to incorporate space for the planting of substantial vegetation	A full & comprehensive landscape plan will be submitted as part of any Conditional permit. There are no existing trees or vegetation on site of any significance. There are numerous opportunities for meaningful & contributory landscaping.
SITING	To maintain the consistency, where present, of front boundary setbacks. To maintain gaps between dwellings where this is a characteristic of the street. To minimise the loss of front garden space & the dominance of parking structures.	The front setback should be no less than the average setback of the adjoining two dwellings. Buildings should be setback from the side boundaries in accordance with the pattern in the street. Locate garages and carports behind the line of the dwelling. Minimise paving in front garden areas including driveways and crossovers.	The proposed front setback (@first floor balconys) are slightly set forward of the average setback requirement however given varying surrounding setbacks, the anomaly will not affect the surrounding streetscape as there is no predominant setback pattern. The proposed dwellings are designed to maintain some side boundary setbacks, maintaining separations between 1 side boundary Proposed garages for the dwellings are set behind the primary façade. Meaningful & generous permeable areas have been included in the front transitional areas for the proposal
HEIGHT & BUILDING FORM	To ensure that buildings and extensions do not dominate the streetscape.	Respect the predominant building height in the street and nearby properties Recess Two Storey Elements from the Front Facade	The Proposed Dwelling facing the primary orientation to River Street, with facades not dissimilar to the surrounding building patterns & respective of the surrounding streetscape. The overall building heights & scale is be consistent with those of surrounding similar developments.
FRONT BOUNDARY TREATMENT	To enhance the security of the properties & maintain views into front gardens	Provide a low or open style front fence. Provide no front fence where this predominates in the street.	A 1200h front fence has been proposed for dwelling's fron boundaries, providing a consistent balance with the prevailing street character vs the requirements for the developments occupants

4.0 Zoning & Overlays

4.1 Neighbourhood Residential Zone -Schedule 1 (NRZ1)

Pursuant to clause 32.08 of the Maribyrnong Planning Scheme, the land is located within a Neighbourhood Residential Zone - Schedule 1. Purposes of this zone include;

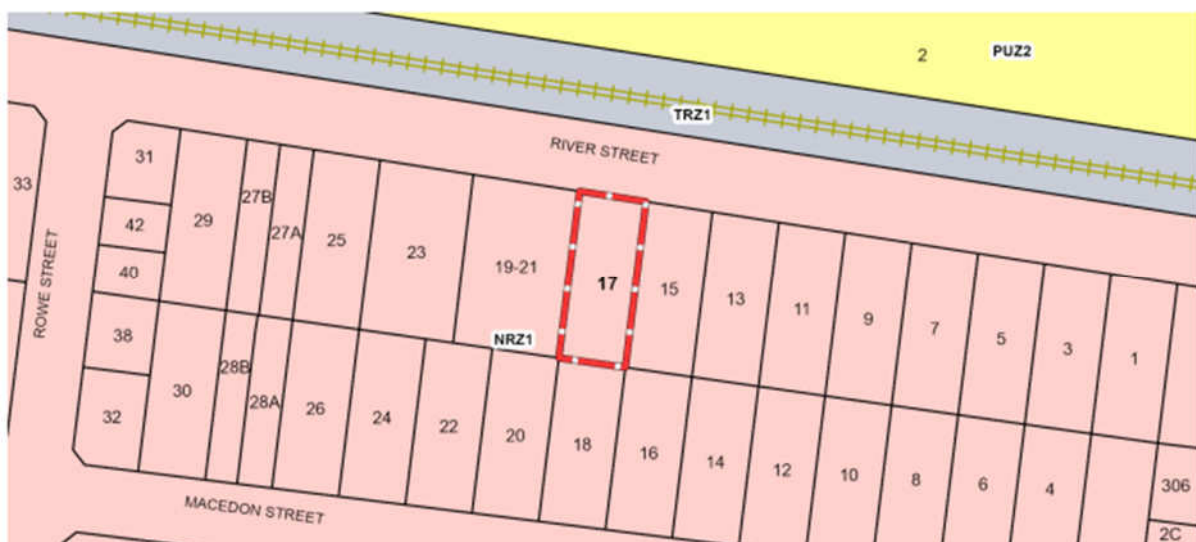
- To implement the State Planning Policy Framework and the Local Planning Policy framework, including the Municipal Strategic Statement and local planning policies,
- To provide for residential development at a range of densities with a variety of dwellings to meet the housing needs of all households,
- To encourage residential development that respects the neighbourhood character,
- In appropriate locations, to allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs.

Pursuant to clause 32.08-6 Construction and extension of two or more dwellings on a lot and residential buildings, a permit is required to;

- Construct a dwelling if there is at least one dwelling existing on the lot.
- Construct two or more dwellings on a lot.
- Extend a dwelling if there are two or more dwellings on the lot.
- Construct or extend a residential building.

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

- The State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- The objectives, standards and decision guidelines of Clause 55 (two or more buildings).



SCHEDULE 10 TO CLAUSE 43.02 DESIGN AND DEVELOPMENT OVERLAY
COLONIAL AMMUNITIONS ESTATE PRECINCT, MARIBYRNONG

Objectives

- To ensure development fits with the surrounding context.
- To maintain the sense of spaciousness and garden setting of the precinct.
- To encourage the continuation of the prevalent subdivision pattern with a predominance of low scale detached dwellings with pitched roofs, in a garden setting.
- To maintain the consistent streetscape rhythm by ensuring appropriate side setbacks and with front setbacks of approximately 8 metres.
- To ensure that fences are low scale and allow views into front gardens.

Policy Response

The proposal:

- *The Proposed development fits with the surrounding context being a mixture of single & double storey stand alone & side/side Townhouse development*
- *The proposed Development's setback & built form maintains the generous front open space area in front of the dwellings that will provide ample opportunity for meaningful landscaping which shall include Canopy Trees, to maintain the garden style setting of the immediate area.*
- *Whilst the proposed Development is not of a low scale in comparison to the immediate surrounds, it's height meets the Planning Scheme requirement. The detached form is provided by increased façade articulation an interpretation & reflect the surrounding dwellings double & triple frontages. Other similar examples of flat roofed double storey dwellings are scattered throughout the precinct, with some examples in the immediate area located at:*
 - *37 River Street*
 - *2 Macedon Street*
 - *20 Macedon Street*
 - *31 Macedon Street*
- *The proposed front ground floor setbacks of 8.93m & 8.71m to the respective dwellings, maintains the streetscape setback pattern, whilst a side setback to dwelling 2 of 1.0m has been provided to also maintain appropriate setback patterns of the surrounding streetscape.*
- *Proposed front boundary fencing is of a low scale brickwork & piers with aluminium infill panels, maintains a minimum 65% transparent visual connection & allowing the front open spaces to be visually connected with the public realm.*

5.0

ResCode Clause 55 - Two or More Dwellings on a Lot and Residential Buildings Planning Report At: 17 River Street, Maribyrnong.

CLAUSE 55.01 NEIGHBOURHOOD & SITE DESCRIPTION & DESIGN RESPONSE

CLAUSE 55.01-1 NEIGHBOURHOOD AND SITE DESCRIPTION

The neighbourhood and site description may use a site plan, photographs or other techniques and must accurately describe:

• **In relation to the neighbourhood:**

- The built form, scale and character of surrounding development including front fencing.
- Architectural and roof styles.
- Any other notable features or characteristics of the neighbourhood.

• **In relation to the site:**

- Site shape, size, orientation and easements.
- Levels of the site and the difference in levels between the site and surrounding properties.
- Location of existing buildings on the site and on surrounding properties, including the location and height of walls built to the boundary of the site.
- The use of surrounding buildings.
- The location of secluded private open space and habitable room windows of surrounding properties which have an outlook to the site within 9 metres.
- Solar access to the site and to surrounding properties.
- Location of significant trees existing on the site and any significant trees removed from the site in the 12 months prior to the application being made, where known.
- Any contaminated soils and filled areas, where known.
- Views to and from the site.
- Street frontage features such as poles, street trees and kerb crossings.
- Any other notable features or characteristics of the site.

If in the opinion of the responsible authority a requirement of the neighbourhood and site description is not relevant to the evaluation of an application, the responsible authority may waive or reduce the requirement.

✓ **Complies**

Comments:

The subject land is located at 17 River Street, Maribyrnong. The land is of a rectangle shape displaying a frontage of 15.25 metres to River Street with a depth of approx. 38.24 metres, yielding a total site area of approximately 582.00 square metres.

The site currently is currently contains a single storey weatherboard dwelling.

The land does not contain any trees or vegetation of any significance. The subject property is accessible via an existing single driveway located from the River Street boundary.

The property is located within a Neighbourhood Residential Zone -Schedule 1, a mixture of residential single and double storey dwellings surround the land.

Topography, the subject site is similar to the adjoining properties and is characterised by a grade of approx 0.2m fall towards the front (North). As a consequent we envisage that the storm water discharge point is located at the front of the property (to be confirmed via a LPD Application).

There are no other restrictive covenants that directly affect this proposal contained on the subject Certificate of Title.

Surrounds

The application site is located within the well-established suburb of Maribyrnong (Garden Suburban 2 Precinct), being a mixture of commercial & residential area comprising of single and double storey residences, townhouse & larger apartment style residential developments. The surrounding streetscape is varied in housing style & form, with single & double storey residences in close proximity to the proposed development

Front setbacks vary generally ranging between 6.0 to 11.5 metres whilst side boundaries also vary between 0.0 to 3.0 metres.

Adjoining land immediately to the West & East support an existing single storey residences, with similar orientations & SPOS areas to the existing subject site.

Extending beyond River Street, the site is well surrounded by major roads, located in close proximity to Rosamond Road, Gordon Street & Ballarat Road. The site is also located with easy access to a number of recreational facilities which include leisure centres, parks & reserves around the site including Commercial & Shopping precincts.

A number of high schools & primary schools surround the site such as well & as well as numerous childcare & kindergarten facilities nearby.

The site provides for easy access by main roads and public transport, trams directly across the site along River Street, as well as nearby Gordon Street & Ballarat Road and Surrounding Bus routes. The following provides a summary of the key features that characterise the neighbourhood.

- A consolidated residential precinct with a consistency of residential & recreational land use activity,
- A diversity of building form including single and double storey dwellings & multi-dwelling developments / units /apartments
- A presence of commercial/ and business development on Rosamond Road & Gordon Street, Hampstead Road, Mitchell Street as well as surrounding local Streets,
- A variety of roof forms including pitched, hipped and flat,
- A range of building cladding materials including rendered brickwork, red and brown & neutral brick and various cladding materials,
- A range of building roof materials including terra-cotta and concrete tiles and corrugated (colorbond) sheeting,
- Varying front, side and rear setbacks,
- The location of crossovers and driveways on the street frontage,
- Parallel car parking on both sides of River Street is unrestricted.

(Refer to drawings & photos prepared by Designs Plus Architectural Drafting P/L & attached title)

<p>CLAUSE 55.01-2 DESIGN RESPONSE</p> <p>The design response must explain how the proposed design:</p> <ul style="list-style-type: none"> • Derives from and responds to the neighbourhood and site description. • Meets the objectives of Clause 55. • Responds to any neighbourhood character features for the area identified in a local planning policy or a Neighbourhood Character Overlay. <p>The design response must include correctly proportioned street elevations or photographs showing the development in the context of adjacent buildings.</p> <p><i>If in the opinion of the responsible authority this requirement is not relevant to the evaluation of an application, it may waive or reduce the requirement.</i></p>	<p>✓ Complies</p> <p>Comments:</p> <p>The purpose of this application is to construct two double storey dwelling on the proposed site.</p> <p>The proposed medium density residential development and subdivision has been particularly designed to consider the relevant opportunities and constraints represented by the subject land.</p> <p>The proposed dwellings, provides a high degree of amenity for residents.</p> <p>The proposed dwellings have well orientated habitable rooms with large windows / sliding doors which provide adequate natural light. All habitable rooms have direct access to open space & courtyards, whilst all dwellings offer a large amount of private open space and provide for sufficient on-site parking.</p> <p>The elevations provide for a high degree of articulation, representing an interesting façade, which will minimise building bulk and representing a unique and pleasant aesthetics. The proposed dwellings have been designed to incorporate the grades on the subject site.</p> <p>The subject site has an existing vehicular entrance on River Street frontage with good accessibility and allowing for easy vehicular movements for dwelling 2. An additional crossover is proposed for dwelling 1 on the River Street frontage. All garages/carports have good access, whilst separate entrances & paths allow for good pedestrian movement throughout the site.</p> <p>The proposed design also appropriately responds to the orientation of the subject site, by providing the dwellings with suitably located private open spaces, which can receive direct sunlight throughout various hours of the day.</p> <p>Whilst setbacks may not strictly comply with the minimum requirements, the adopted setback, which are more consistent with surrounding street character, do not generate any unreasonable impacts on the amenity of neighbouring residents.</p> <p>The proposed development generally follows other existing buildings in terms of setback from side and rear boundaries, thereby ensuring a level of</p>

	<p>consistency with the established development pattern generally found in the immediate locality.</p> <p>The proposed development is a common characteristic of the surrounding dwellings and further the surrounding neighbourhood. The proposed development will not disrupt the balance and rhythm of the area nor is it considered to add a foreign element into the streetscape.</p>
<p>CLAUSE 55.02 NEIGHBOURHOOD CHARACTER AND INFRASTRUCTURE</p>	
<p>CLAUSE 55.02-1 NEIGHBOURHOOD CHARACTER</p> <p>Objectives Respect the existing n'hood character or contribute to a preferred n'hood character.</p> <p>Respond to the features of the site & the surrounding area.</p> <p>Standard B1</p> <ul style="list-style-type: none"> • Response must be appropriate to the n'hood & the site. • Design must respect the existing/preferred n'hood character & respond to the features of the site. • Dwellings <u>should</u> be orientated to front streets • High fencing in front of dwellings <u>should</u> be avoided. • Dwellings <u>should</u> promote observation of streets & public open spaces. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • Any relevant neighbourhood character objective, policy or statement set out in this scheme. • The neighbourhood and site description. • The design response. 	<p>✓ Complies</p> <p>Comments:</p> <p>The design response is appropriate to the area as outlined in the detailed discussions that form part of the attached report.</p>
<p>CLAUSE 55.02-2 RESIDENTIAL POLICY</p> <p>Objectives Ensure that residential development accords with SPPF, LPPF & local planning policies;</p> <p>Support medium densities where it can take advantage of public transport & community infrastructure & services.</p> <p>An application must be accompanied by a written statement that explains how the policies are complied with.</p> <p>Standard B2</p> <ul style="list-style-type: none"> • Written Statement describing how the development is consistent with any relevant policy for housing in the SPPF, LPPF, Municipal Strategic Statement and local planning policies. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • The State Planning Policy Framework and the Local Planning Policy Framework including the Municipal Strategic Statement and local planning policies. • The design response. 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - Refer to Policy response provided to the SPPF, LPPF, Municipal Strategic Statement & Local Planning Policies provide at the start of this passment

<p>CLAUSE 55.02-3 DWELLING DIVERSITY</p> <p>Objective Encourage a range of dwelling sizes & types in development of ten or more dwellings</p> <p>Standard B3 Developments of 10+ dwellings <u>should</u> provide a range of dwelling sizes & types including dwellings with a different number of bedrooms; & at least one dwelling with a kitchen, bath or shower, & toilet & wash basin at ground floor level.</p> <p>Decision Guidelines <i>There are no decision guidelines for this objective and standard</i></p>	<p>✓ Not Applicable</p> <p>Comments:</p> <ul style="list-style-type: none"> - The proposal is for 2 double storey dwellings.
<p>CLAUSE 55.02-4 INFRASTRUCTURE</p> <p>Objective Ensure provision of services & infrastructure and not unreasonably overload the capacity of utility services & infrastructure</p> <p>Standard B4</p> <ul style="list-style-type: none"> • Development <u>should</u> connect to reticulated services. • Developments <u>should</u> not unreasonably exceed the capacity of utility services & infrastructure. • Where infrastructure has little or no spare capacity, developments <u>should</u> provide for the upgrading or mitigation of the impact on services or infrastructure. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • <i>The capacity of the existing infrastructure.</i> • <i>In the absence of reticulated sewerage, the capacity of the development to treat and retain all wastewater in accordance with the State Environment Protection Policy (Waters of Victoria) under the Environment Protection Act 1970.</i> • <i>If the drainage system has little or no spare capacity, the capacity of the development to provide for storm water drainage mitigation or upgrading of the local drainage system.</i> 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - The proposed dwellings will be connected to all available utility services & infrastructure.
<p>CLAUSE 55.02-5 INTEGRATION WITH THE STREET</p> <p>Objective To integrate the layout of development with the street.</p> <p>Standard B5</p> <ul style="list-style-type: none"> • Adequate vehicle & pedestrian links. • Orientated to front existing & proposed streets. • Avoid high front fencing. • Designed to promote observation of abutting streets and any abutting public open space. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • <i>Any relevant neighbourhood character objective, policy or statement set out in this scheme.</i> • <i>The design response.</i> 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - Each of the proposed dwellings are orientated to face the exist. Street frontage. - A 1200h front fence is proposed, providing the dwellings with better interface with the surrounding street character & surrounds - The proposed layouts promote excellent observation of the abutting streets & public open space.

**CLAUSE 55.03
SITE LAYOUT AND BUILDING MASSING**

**CLAUSE 55.03-1
STREET SETBACK**

Objective

Respect existing/preferred neighbourhood character & make efficient use of the site

Standard B6

Walls of buildings should be setback as follows:

- Where there are buildings on both abutting lots facing the same street, & the site is not on a corner, the average distance of their front walls facing the same street or 9m, whichever lesser.
- Where there is a building on one abutting lot facing the same street, & no building on the other abutting lot facing the same street & the site is not on a corner, the same distance as the front wall of the adjacent building or 9m, whichever lesser.
- Where there is no buildings on either abutting lot facing the same street & the site is not on a corner, 6m for streets in a Road Zone Category 1, & 4m for other streets.
- Where the site is on a corner, & there is a building on the abutting lot facing the front street, the same distance as the setback of the front wall of the abutting building facing the front street, or 9m, whichever lesser.
- Where the site is on a corner & there is no building on the abutting lot facing the front street, 6m for streets in a Road Zone Category 1, & 4m for other streets.
- Buildings should be setback from the side street of a corner site, the same distance as the setback of the front wall of any existing building on the abutting allotment facing the side street, or 2m, whichever is the lesser.

Note 1: for a corner lot, the frontage or front street is the smaller frontage. For lots with equal frontage to two streets, Council may nominate the frontage or front street.

Note 2: Porches, pergolas & verandahs that are less than 3.6m high & eaves may encroach <2.5m into the setbacks.

Decision Guidelines

Before deciding on an application, the responsible authority must consider:

- Any relevant neighbourhood character objective, policy or statement set out in this scheme.
- The design response.
- Whether a different setback would be more appropriate taking into account the prevailing setbacks of existing buildings on nearby lots.
- The visual impact of the building when viewed from the street and from adjoining properties.
- The value of retaining vegetation within the front setback.

**Partial Compliance
Variation Required**

Comments:

- The setback required for this site is 8.125m, based on the average of the 2 adjoining dwellings.
- Proposed Dwellings are setback 8.93m & 8.71m respectively from the River Street frontage at the ground floor level, however the First Floor setbacks are 8.06m & 7.508m respectively, when measure taken from the First Floor balcony cantilver in lieu of the required 8.125 in accordance to the standard. Given the surrounding street setback pattern, the small area of non compliance for the dwellings will not cause any detriment, nor alter the exist. street character
- The Proposed Ground Floor Setback are 8.93 & 8.71m respectively
- The Proposed First Floor Setback are 8.06 & 7.508m respectively
- The Proposed Setback is in character to that of the surrounding dwellings as that of adj. dwellings of which that to the West & East of the subject site.

**CLAUSE 55.03-2
BUILDING HEIGHT**

Objective

Building height to respect existing/preferred neighbourhood character.

Standard B7

- The max. building height should not exceed 9m, unless the slope of the n.g.l. at any cross section wider than 8m of the site of the building is 2.5° +, in which case the max building height should not exceed 10m.
- Change of building height between existing buildings & new buildings should be graduated.

✓ **Complies**

Comments:

- The proposed Dwelling's will have a maximum average height from the NGL is 7.47m
- The proposed maximum heights are consistent with the surrounding street character

<p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • Any relevant neighbourhood character objective, policy or statement set out in this scheme. • The design response. • The effect of the slope of the site on the height of the building. • The relationship between the proposed building height and the height of existing adjacent buildings. • The visual impact of the building when viewed from the street and from adjoining properties. 	
<p>CLAUSE 55.03-3 SITE COVERAGE</p> <p>Objective Site coverage to respect existing/preferred n'hood character & respond to the features of the site</p> <p>Standard B8 Site cover <u>should</u> <60%.</p> <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • Any relevant neighbourhood character objective, policy or statement set out in this scheme. • The design response. • The existing site coverage and any constraints imposed by existing developments or the features of the site. • The site coverage of adjacent properties. • The effect of the visual impact of the building and whether this is acceptable in the neighbourhood. 	<p>Partial Compliance Variation Required</p> <p>Comments:</p> <ul style="list-style-type: none"> - Site coverage is proposed at 61.48% However this includes the rear permeable decking areas. If the decking area was excluded from the calculations the actual Site Coverage is 54.51%
<p>CLAUSE 55.03-4 PERMEABILITY</p> <p>Objectives Reduce impact of increased storm water run-off on the drainage system.</p> <p>To facilitate on-site storm water infiltration</p> <p>Standard B9 >20 % of the site <u>should</u> be pervious.</p> <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • Any relevant neighbourhood character objective, policy or statement set out in this scheme. • The design response. • The existing site coverage and any constraints imposed by existing developments. • The capacity of the drainage network to accommodate additional storm water. • The capacity of the site to absorb run-off. • The practicality of achieving at least 20 per cent site coverage of pervious surfaces, particularly on lots of less than 300 square metres. 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - Site permeability for the proposal is 35.51%, which meets the minimum 20% requirement

<p>CLAUSE 55.03-5 ENERGY EFFICIENCY</p> <p>Objectives To achieve & protect energy efficient residences.</p> <p>Reduce fossil fuel energy use & make appropriate use of daylight & solar energy</p> <p>Standard B10 Buildings <u>should</u>:</p> <ul style="list-style-type: none"> • Be orientated to make appropriate use of solar energy. • Ensure energy efficiency of existing dwellings on adjoining lots is not unreasonably reduced. • Living areas & private open space <u>should</u> be located on the north side of the dwelling, if practicable. • Developments <u>should</u> be designed so that solar access to north-facing windows is maximised. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • <i>The design response.</i> • <i>The size, orientation and slope of the lot.</i> • <i>The existing amount of solar access to abutting properties.</i> • <i>The availability of solar access to north-facing windows on the site.</i> 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - The Site is orientated North-South - All dwellings have their living & SPOS is orientated to maximise with a solar access, capitalizing on their orientation. - The Energy efficiency of the Dwellings will not be unreasonably reduced given their orientation, with other measures that will be incorporated to compensate for the orientation. - All dwellings will achieve a min. 7 Star energy rating, in compliance with Building regulations & NATHERS requirements - Energy Efficiency of adjoining dwellings will be unaffected.
<p>CLAUSE 55.03-6 OPEN SPACE</p> <p>Objective Integrate with any public or communal open space provided in or adjacent to the development</p> <p>Standard B11 Any public or communal open space <u>should</u>:</p> <ul style="list-style-type: none"> • be substantially fronted by dwellings, • provide outlook for as many dwellings as practicable • be designed to protect any natural features on the site; & be accessible & useable. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • <i>Any relevant plan or policy for open space in the State Planning Policy Framework and Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.</i> • <i>The design response.</i> 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - All dwellings have been designed to face their respective street frontages, providing better integration with the public realm for each dwelling & maximize their integration & ability to integrate with the surrounding streetscape

<p>CLAUSE 55.03-7 SAFETY</p> <p>Objective Provide for the safety & security of residents & property</p> <p>Standard B12</p> <ul style="list-style-type: none"> • Entrances <u>should</u> not be obscured or isolated. • Avoid planting which creates unsafe spaces. • Good lighting, visibility & surveillance. • Protected from inappropriate public access. <p>Decision Guideline <i>Before deciding on an application, the responsible authority must consider the design response.</i></p>	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - The proposed dwellings entrances have been designed to have visibility of the front transition area & public realm, providing excellent visibility & surveillance of the subject site & surrounding area - Appropriate levels of lighting will be provided on site. - Appropriate landscape will be adopted to ensure that it does not create unsafe spaces along the driveway or side access points. - All private open spaces and thoroughfares are well defined and isolated so that they may not be confused with public open spaces.
<p>CLAUSE 55.03-8 LANDSCAPING</p> <p>Objectives To respect the landscape character of the n'hood. To provide appropriate landscaping. To encourage the retention of mature vegetation.</p> <p>Standard B13</p> <ul style="list-style-type: none"> • Landscape layout & design <u>should</u>: <ul style="list-style-type: none"> - Protect any landscape features of the neighbourhood. - Take into account the soil type & drainage patterns. - Allow for intended vegetation growth & structural protection of buildings. - Provide a safe, attractive & functional environment. • Provide for retention/planting of trees, where these are part of the n'hood character. • Replace any significant trees removed in previous 12 months. • The landscape design <u>should</u> specify landscape themes, vegetation (location & species), paving & lighting. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • Any relevant neighbourhood character objective, policy or statement set out in this scheme. • Any relevant plan or policy for landscape design in the State Planning Policy Framework and Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies. • The design response. • The location and design of gardens and the predominant plant types in the neighbourhood. • The health of any trees to be removed. • Whether a tree was removed to gain a development advantage. 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - The site currently contains large non-descript lawns areas & small garden beds - A detailed Landscape plan will be provided as part of any conditional permit, which will provide the proposed development with meaningful & sensitive landscape design, including canopy trees to both the the front & rear open spaces. - No trees of any significance have been removed in the last 12 months from the proposed site

<p>CLAUSE 55.03-9 ACCESS</p> <p>Objectives Safe, manageable & convenient access.</p> <p>To ensure no. & design of crossovers respects the n'hood character</p> <p>Standard B14</p> <ul style="list-style-type: none"> • Accessways <u>should</u>: <ul style="list-style-type: none"> - Be convenient, safe & efficient & connect to street network. - Ensure forward exit direction if the accessway serves 5+ spaces, 3+ dwellings, or connects to a Road Zone. - Be at least 3m wide. - Have internal radius at least 4m at changes of direction. - Provide a passing area at entrance at least 5m wide & 7m long if accessway serves 10+ spaces & connects to Road zone. • The width of accessways or car spaces <u>should</u> not exceed: <ul style="list-style-type: none"> - 33% of frontage if the width of a frontage of >20m; or - 40% of frontage if the width of the frontage is <20m. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider: The design response.</i></p> <ul style="list-style-type: none"> • <i>The impact on the neighbourhood character</i> • <i>The practicality of providing car parking on the site, particularly for lots of less than 300 square metres.</i> • <i>The reduction of on-street car parking spaces.</i> • <i>Traffic flows in the street and the safety of motorists and pedestrians.</i> • <i>The effect on any significant vegetation on the site and footpath.</i> • <i>The efficient use of the site.</i> <p><i>For developments with accessways longer than 60 metres or serving more than 40 dwellings, the relevant standards of Clause 56.</i></p>	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - The existing & proposed vehicle crossovers are safe, convenient, manageable and are designed to be accessed from River Street, for safety & ease of access & egress for occupants - Where the existing crossover require re-alignment or alteration or a new crossing is proposed, they shall meet all council standards complying with the Maribyrnong Council urban type residential construction - driveways. The client/builder shall take the appropriate steps and provide bond payments when applying and constructing the proposed driveway / crossover modifications. (if required) - All access ways and driveways are well defined, safe, and conveniently located. - The crossovers are approximately min. 3 metres wide and shall provide good access for service, emergency, and delivery vehicles. - The width of the proposed accessways equates to 39.37% of the River street frontage.
<p>CLAUSE 55.03-11 PARKING PROVISION</p> <p>Objectives Parking appropriate to need.</p> <p>Practical & attractive design</p> <p>Standard B16</p> <ul style="list-style-type: none"> • Car parking for residents <u>should</u> be provided as follows: <ul style="list-style-type: none"> - One space for each 1 or 2-bedroom dwelling; - Two spaces for each 3 or 3+ bedroom dwelling, with one space under cover. • Separate studies/studios must be counted as bedrooms. • Developments of 5+ dwellings <u>should</u> provide: <ul style="list-style-type: none"> - One space clearly marked as visitor parking per 5 dwellings. - Bicycle parking spaces. • Car spaces & accessways <u>should</u> have the min. dimensions specified in Table B2. • A building may project into a car space if it is at least 2.1m above the space. • Car spaces constrained by walls, <u>should</u> be at least 6m long & have an internal width of 3.5m - single space, or 5.5m - double space. • Car parking facilities <u>should</u> be: <ul style="list-style-type: none"> - Be designed for efficient use & management; - Minimise the area of hard surface; 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - Each dwelling proposes a min. 2 car spaces for each dwelling, with a minimum 1 of these car spaces located within a secure lock up garage - All proposed cars parking spaces meet the min. dimensions as specified in table B2 - The single garages have a min. dimension of 3.5m wide x 6.0m deep (clear)

<p>- Be designed, surfaced & graded to reduce run-off & allow storm water to drain into the site;</p> <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • The reduction in the demand for on-site parking in rental housing, managed by not for profit organisations, intended for residents likely to have a low level of car ownership. • The number, type and size of dwellings. • The availability of public transport and on-street parking. • The practicality of providing car parking on the site, particularly for lots of less than 300 square metres. • The reduction of on-street car parking spaces resulting from the provision of car parking on the site, particularly for lots of less than 300 square metres. • Local traffic and parking management plans and safety considerations. • Any relevant local planning policy or parking precinct plans. 	
<p>CLAUSE 55.04 AMENITY IMPACTS</p>	
<p>CLAUSE 55.04-1 SIDE & REAR SETBACKS</p> <p>Objective Ensure heights & setbacks from a boundary respects the existing/preferred n'hood character & limits the impact on the amenity of existing dwellings.</p> <p>Standard B17</p> <ul style="list-style-type: none"> • New building not on, or within 200mm of boundary <u>should</u> be setback from side or rear boundaries: <ul style="list-style-type: none"> - 1m, + 0.3m per metre height over 3.6m up to 6.9m, plus 1m per metre height over 6.9m. • Sunblind's, verandahs, porches, eaves, gutters etc. may encroach not more than 0.5m. • Landings of not more than 2m², & <1m high, stairways, ramps, pergolas, shade sails & carports may encroach into the setbacks <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • Any relevant neighbourhood character objective, policy or statement set out in this scheme. • The design response. • The impact on the amenity of the habitable room windows and secluded private open space of existing dwellings. • Whether the wall is opposite an existing or simultaneously constructed wall built to the boundary. <p><i>Whether the wall abuts a side or rear lane.</i></p>	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - Site & rear setback for the proposed dwellings meet &/or exceed the requirements of this standard. Refer to accompanying plans for specific locations & respective setback dimensions - All walls are in compliance with this requirement in respect to the setback vs overall wall heights to respective boundaries

**CLAUSE 55.04-2
WALLS ON BOUNDARIES**

Objective

Location, length & height of a wall on a boundary to respect the existing/preferred n'hood character & limit the impact on the amenity of existing dwellings.

Standard B18

- New wall on/within 150mm of a side or rear boundary of a lot, or a carport on or within 1m of a side/rear boundary should not abut the boundary for a length >:
 - 10m + 25% of the remaining length of the boundary of an adjoining lot; or
 - the length of an existing or simultaneously constructed wall or carport. whichever is greater.
- A new wall/carport may fully abut a side/rear boundary where the slope & retaining walls would result in the effective height of the wall/carport being <2m on the abutting property boundary.
- A building on a boundary includes a building up to 150mm from a boundary.
- New wall on/within 150mm of a side/rear boundary, or a carport on/within 1m of a side/rear boundary should not exceed an av. 3m height, with no part >3.6m, unless abutting a higher existing or simultaneously constructed wall.

Decision Guidelines

Before deciding on an application, the responsible authority must consider:

- Any relevant neighbourhood character objective, policy or statement set out in this scheme.
- The design response.
- The extent to which walls on the boundary are part of the neighbourhood character.
- The impact on the amenity of existing dwellings.
- The opportunity to minimise the length of walls on boundaries aligning a new wall on a boundary with an existing wall on a lot of an adjoining property.
- The orientation of the boundary that the wall is being built on.
- The width of the lot.
- The extent to which the slope and retaining walls or fences reduce the effective height of the wall.
- Whether the wall abuts a side or rear lane.
- The need to increase the wall height to screen a box gutter.

✓ **Complies**

Comments:

- Dwelling 1's Garage wall is built to it's respective boundary.
- Where walls are located on the boundary, they do not exceed 3.2m (average) in height.
- Any Walls built to on the boundary do not exceed the maximum permissible length for a wall on a boundary

**CLAUSE 55.04-3
DAYLIGHT TO EXISTING WINDOWS**

Objective

Allow adequate daylight into existing habitable room windows.

Standard B19

- Buildings opposite an existing habitable room window should provide for a light court to the existing window, of at least 3m² & 1m clear to the sky. The area may include land on the abutting lot.
- Walls or carports >3m height opposite an existing habitable room window should be setback from the window at least 50% of the height of the new wall if the wall is within a 55° arc from the center of the existing window. The arc may be swung to within 35° of the plane of the wall containing the window.

Note: Where the existing window is above ground level, the wall height is measured from the floor level of the room containing the window.

✓ **Complies**

Comments:

- Proposed dwellings are setback sufficient distance from any exist. habitable windows in accordance with Standard B19.
- The proposed walls on boundaries do not interfere with any exist. habitable room windows
- Refer to shadow diagrams for specific details

<p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • The design response. • The extent to which the existing dwelling has provided for reasonable daylight access to its habitable rooms through the siting and orientation of its habitable room windows. • The impact on the amenity of existing dwellings. 	
<p>CLAUSE 55.04-4 NORTH FACING WINDOWS</p> <p>Objective Allow adequate solar access to existing north facing habitable room windows.</p> <p>Standard B20</p> <ul style="list-style-type: none"> • If a north-facing habitable room window of an existing dwelling is within 3m of a boundary of an abutting lot, a building <u>should</u> be setback: <ul style="list-style-type: none"> - 1m, +0.6m per metre height over 3.6m up to 6.9m, plus 1m per metre height over 6.9m, for 3m from the edge of each side of the window. <p>Note: A north facing window is a window with an axis perpendicular to its surface orientated north 20 degrees west to north 30 degrees east.</p> <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • The design response. • Existing sunlight to the north-facing habitable room window of the existing dwelling. • The impact on the amenity of existing dwellings. 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - There are no adjoining neighbours' North facing habitable windows to the proposed Development
<p>CLAUSE 55.04-5 OVERSHADOWING OPEN SPACE</p> <p>Objective To ensure buildings do not unreasonably overshadow existing secluded private open space.</p> <p>Standard B21</p> <ul style="list-style-type: none"> • Where sunlight to the secluded private open space of an existing dwelling is reduced, at least 75%, or 40m² with a min. dimension of 3m, whichever is lesser, or the secluded open space <u>should</u> receive a minimum of 5 hrs sunlight between 9am & 3pm at 22 Sept. • If existing sunlight to the secluded private open space of a dwelling is less than the requirements of this Standard, the amount of sunlight <u>should not</u> be further reduced. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • The design response. • The impact on the amenity of existing dwellings. • Existing sunlight penetration to the secluded private open space of the existing dwelling. • The time of day that sunlight will be available to the secluded private open space of the existing dwelling. <p><i>The effect of a reduction in sunlight on the existing use of the existing secluded private open space.</i></p>	<p>✓ Complies</p> <p>Comments:</p> <p>The developments shadow impact on existing neighbouring open space is minimal as shown on the submitted shadow diagrams. The sites orientation & the dwelling design has taken into account the possibility of adverse overshadowing impacts to the adjoining dwellings. Where additional overshadowing occurs the adjoining SPOS are still able to achieve a min of 5hrs of sunlight to at least 40m² of this open space.</p> <p>The accompanying Shadow Diagrams demonstrate that the Proposed development will not cast any shadow which will impact the exist. open space of adjoining dwellings.</p> <p>See accompanying shadow diagrams, which demonstrate the extent of shadow cast by the development over any exist. adjoining secluded private open space.</p>

<p>CLAUSE 55.04-6 OVERLOOKING</p> <p>Objective Limit views into existing secluded private open space & habitable room windows.</p> <p>Standard B22</p> <ul style="list-style-type: none"> Habitable room windows, balconies, terraces etc. <u>should</u> avoid direct view to secluded private open space & habitable room windows of an existing dwelling within 9m, & a 45° arc from the window, balcony etc. The window, balcony etc. may: <ul style="list-style-type: none"> Be offset at least 1.5m from the edge of one window to the edge of the other; or Have sill heights, obscure glazing or permanent screens of at least 1.7m above floor level. Obscure glazing may be openable provided it does not allow direct views. <p>Note: Does not apply to a new habitable room window, balcony, terrace etc. which faces a property boundary where there is a visual barrier at least 1.8m high & the floor level of the habitable room, balcony, terrace etc. is < 0.8m above ground level at the boundary.</p> <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> The design response. The impact on the amenity of the secluded private open space or habitable room window. The existing extent of overlooking into the secluded private open space and habitable room windows of existing dwellings. The internal daylight to and amenity of the proposed dwelling or residential building. 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> All habitable room windows to the proposed development that may project views into adj. SPOS or habitable windows will be either; <ol style="list-style-type: none"> have visual barriers (ground floor level), such as boundary fences at least 1.8m above the nat. ground level have fixed obscure glazing to a min. 1.7m from the respective FFL
<p>CLAUSE 55.04-7 INTERNAL VIEWS</p> <p>Objective To limit overlooking within a development</p> <p>Standard B23</p> <ul style="list-style-type: none"> Windows & balconies <u>should</u> prevent overlooking of 50%+ of the secluded private open space of a lower-level dwelling directly below & in the same development. <p>Decision Guideline <i>Before deciding on an application, the responsible authority must consider the design response.</i></p>	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> Timber paling dividing fence with a min. height of 2.0m from the Nat. ground level, will separate the dwellings at a ground level. Habitable room first floor windows from the respective proposed dwelling will have fixed obscure glazing to a min. 1.7m from the FFL to minimize any overlooking to adj. dwellings on the same development. There are no balconies proposed for the development
<p>CLAUSE 55.04-8 NOISE IMPACTS</p> <p>Objectives Contain noise sources. Protect residents from external noise</p>	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> It is envisaged that no abnormal noise will be generated from the proposed development as it will be used for residential purposes

<p>Standard B24</p> <ul style="list-style-type: none"> • Mechanical plant etc., <u>should</u> not be located near bedrooms or immediately adjacent to existing dwellings. • Noise sensitive rooms & secluded private open spaces of new dwellings <u>should</u> take account of noise sources on immediately adjacent properties. • Dwellings close to busy roads; railway lines or industry <u>should</u> limit noise levels in habitable rooms. <p>Decision Guideline <i>Before deciding on an application, the responsible authority must consider the design response.</i></p>	<ul style="list-style-type: none"> - All ground floor external walls are brick veneer reducing noise - Mechanical plant & equipment will be located away from nearby bedrooms & exist. dwellings
<p>CLAUSE 55.05 ON-SITE AMENITY AND FACILITIES</p>	
<p>CLAUSE 55.05-1 ACCESSIBILITY</p> <p>Objective Consider needs of people with limited mobility.</p> <p>Standard B25</p> <ul style="list-style-type: none"> • Ground floor entries <u>should</u> be accessible to people with limited mobility. <p>Decision Guidelines <i>There are no decision guidelines for this objective and standard</i></p>	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - All grades on site are able to meet limited mobility requirements. All entrances are near the ground levels where possible ensuring that entries will be accessible for people with limited mobility. Stepless Entries are also able to be implemented into the proposal, should they be required.
<p>CLAUSE 55.05-2 DWELLING ENTRY</p> <p>Objective To provide each dwelling with its own sense of identity.</p> <p>Standard B26</p> <ul style="list-style-type: none"> • Entries <u>should</u> be visible & easily identifiable from streets & public areas; & provide shelter & a sense of personal address. <p>Decision Guidelines <i>There are no decision guidelines for this objective and standard</i></p>	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - The proposed dwellings will have entries clearly visible, accessible and easily identifiable in and around the site. All dwellings have direct pedestrian access from the front street. - All entries provide shelter, a sense of personal address and a transitional space around the entry.

<p>CLAUSE 55.05-3 DAYLIGHT TO NEW WINDOWS</p> <p>Objective Allow adequate daylight into new habitable room windows</p> <p>Standard B27</p> <ul style="list-style-type: none"> • A window in a habitable room <u>should</u> face: <ul style="list-style-type: none"> - an outdoor space clear to sky or a light court with 3m² + & min. dimension of 1m, not incl. land on an abutting lot, or - a verandah if it is open for at least 1/3rd of its perimeter, or - a carport if it has 2+ open sides & is open for at least 1/3rd of its perimeter. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • the design response. • Whether there are other windows in the habitable room which have access to daylight. 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - Wherever possible all habitable room windows with access to northern orientation to maximise internal sunlight (during the day). Where this is not possible windows facing East & West have been incorporated in the design to allow additional solar access to the dwellings in the mornings & afternoons. - In addition, all habitable windows face an outdoor space clear to the sky.
<p>CLAUSE 55.05-4 PRIVATE OPEN SPACE</p> <p>Objective To provide open space for the reasonable needs of residents.</p> <p>Standard B28</p> <ul style="list-style-type: none"> • A dwelling <u>should</u> have private open space of: <ul style="list-style-type: none"> - 40m² with one part secluded & private at the side/rear with a min. 25m², or - A balcony of 8m² with a min. width of 1.6m, or - A roof top area of 10m² with a min. width of 2m <p>all with convenient access from a living room.</p> <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • the design response. • The usability of the private open space, including its size and accessibility. • The availability of and access to public or communal open space. • The orientation of the lot to the street and the sun. 	<p>✓ Complies</p> <p>Comments</p> <ul style="list-style-type: none"> - Dwelling 1's SPOS equates to 65.77m², of which 42.36m² has a min. dimension of 3.0m - Dwelling 2's SPOS equates to 68.63m², of which 42.30m² has a min. dimension of 3.0m
<p>CLAUSE 55.05-5 SOLAR ACCESS TO OPEN SPACE</p> <p>Objective Allow solar access into the secluded private open space.</p> <p>Standard B29</p> <ul style="list-style-type: none"> • The private open space <u>should</u> be located on the north side. • The southern boundary of secluded private open space <u>should</u> be setback from any wall on the north of the space at least (2 +0.9h), where 'h' is the height of the wall. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • The design response. • The usability and amenity of the secluded private open space based on the sunlight it will receive. 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - All Dwelling's SPOS are located with a large southern orientation, with aspect also to the east & west respectively. All SPOS areas will achieve a minimum reasonable level of sunlight to their respectable SPOS. South facing SPOS are setback from North facing walls in accordance with requirements. - All dwellings will achieve an area with minimum 25m² of their respective SPOS which is in full compliance with the requirements of this standard

<p>CLAUSE 55.05-6 STORAGE</p> <p>Objective Provide adequate storage facilities for each dwelling</p> <p>Standard B30</p> <ul style="list-style-type: none"> • Each dwelling <u>should</u> have convenient access to at least 6m³ of externally accessible, secure storage space. <p>Decision Guidelines <i>There are no decision guidelines for this objective and standard</i></p>	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - All dwellings have been provided with sufficient storage space within external storage yards. A minimum storage of 6.0 cubic metres is provided; externally accessible and secure.
<p>CLAUSE 55.06 DETAILED DESIGN</p>	
<p>CLAUSE 55.06-1 DETAIL DESIGN</p> <p>Objective Encourage design detail that respects the existing or preferred n'hood character.</p> <p>Standard B31</p> <ul style="list-style-type: none"> • The design <u>should</u> respect the existing/preferred n'hood character, including: <ul style="list-style-type: none"> - Facade articulation & detailing; - Window & door proportions; - Roof form; & - Verandahs, eaves & parapets. • Garages & carports should be visually compatible with the development & the existing/preferred n'hood character. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • <i>Any relevant neighbourhood character objective, policy or statement set out in this scheme.</i> • <i>The design response.</i> • <i>The effect on the visual bulk of the building and whether this is acceptable in the neighbourhood setting.</i> • <i>Whether the design is innovative and of a high architectural standard.</i> 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - The proposal is designed to complement existing neighbourhood character. Building materials are varied & the façade is well articulated and detailed roof forms with eaves are in keeping with surrounding styles. - Garages have been designed to blend in with the proposed dwellings (with complementing finishes and roof lines).

<p>CLAUSE 55.06-2 FRONT FENCES</p> <p>Objective Front fences to respect the existing/preferred n'hood character</p> <p>Standard B32</p> <ul style="list-style-type: none"> • Front fences <u>should</u> complement the design of the dwelling & any front fences on adjoining properties. • A front fence within 3m of a street <u>should</u> not exceed: <ul style="list-style-type: none"> - 2m height for streets in a Road Zone, Category 1; or - 1.5m height for any other street. <p>Decision Guidelines <i>Before deciding on an application, the responsible authority must consider:</i></p> <ul style="list-style-type: none"> • Any relevant neighbourhood character objective, policy or statement set out in this scheme. • The design response. • The setback, height and appearance of front fences on adjacent properties. • The extent to which slope and retaining walls reduce the effective height of the front fence. • Whether the fence is needed to minimise noise intrusion. 	<p>✓ Complies</p> <p>Comments:</p> <ul style="list-style-type: none"> - A 1200h front fence is proposed, providing the dwellings with better interface with the surrounding street character & surrounds
<p>CLAUSE 55.06-3 COMMON PROPERTY</p> <p>Objectives Communal areas to be practical, attractive & easily maintained.</p> <p>Avoid future management difficulties in common areas.</p> <p>Standard B33</p> <ul style="list-style-type: none"> • Delineate public, communal & private areas. • Common property to be functional/capable of efficient management. <p>Decision Guidelines <i>There are no decision guidelines for this objective and standard</i></p>	<p>✓ Not Applicable</p>

7.0 Conclusion

The opportunities and constraints of the application site have been factored into a practical and contemporary design response illustrated on the plans attached with this application.

It is considered that the proposed medium density residential development has been designed to achieve a high degree of compliance with the relevant requirements contained within Clauses 55 and the SPPF and LPPF of the Maribyrnong Planning Scheme, as detailed in this report.

In conclusion, this submission clearly highlights the fact that the proposal fully complies with all relevant Clauses and Schemes. On this basis, the development proposal will sit comfortably within the existing urban fabric and satisfy the residential accommodation needs of the owner.

Sustainable Design Assessment

17 River Street,
Maribyrnong

23rd July 2024

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Sustainability
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Document History

Version	Date	Status	Author	Approved
0	23/07/2024	First Issue	DC	DM

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Introduction & Council's Requirements

Melbourne Sustainability Consultants has been commissioned to provide guidance on achieving environmentally Sustainable Development outcomes for the proposed townhouse development located at 17 River Street, Maribyrnong.

The assessment is being carried out in compliance with Maribyrnong City Council's sustainability requirements specifically addressing Planning Policy Clause 15.01-2L-05 *Environmentally Sustainable Development*.

Clause 15.01-2L-05 of the policy outlines the key categories that the City of Maribyrnong has identified as crucial to be addressed in the assessment. These categories include Energy Performance, Water Resources, Stormwater Management, Indoor Environment Quality, Construction, Building & Waste Management, Building Materials, Transport, and Urban Ecology.

Stormwater quality management and its impact on the environment have been acknowledged by the City of Maribyrnong. As per the requirements of Clause 53.18 *Stormwater Management in Urban Development*, this report presents a solution to address the quality aspect of stormwater management.

Site & Proposed Development Description

The 582m² site is located at 17 River Street, Maribyrnong within Maribyrnong local authority. The site is shown in the image below:



Figure 1: Site location and surroundings sourced from Google Maps

The proposed development is comprised of two townhouses (1 x 4-bedroom and 1 x 5-Bedroom). A common driveway is proposed to access each dwelling. Each unit will have access to a garage.

ESD Assessment Tools

BESS

BESS has been built and is maintained by local governments and is the only dedicated tool in Victoria for assessing sustainable design at the planning permit stage.

BESS evaluates the energy and water efficiency, thermal comfort, and overall environmental sustainability performance of new buildings or modifications. It was created to ensure that new development adheres to sustainability requirements as part of a planning permit application.

A BESS assessment has been conducted for the proposed development, providing a benchmark for the level of sustainability achieved by the project in line with the SDAPP 10 Key Sustainable Building Categories.

Each target area within the BESS tool typically receives a score ranging from 1% to 100%. To meet the energy, water, stormwater, and IEQ requirements, a minimum score of 50% is necessary. An overall project score of 50% represents 'Best Practice,' while a score above 70% represents 'Excellence.'

STORM

The Stormwater Treatment Objective - Relative Measure (STORM) calculator is a tool developed by Melbourne Water to assist with the design and assessment of stormwater management systems. The calculator enables users to determine the effectiveness of stormwater treatment measures in removing pollutants from stormwater runoff, thereby protecting waterways and aquatic ecosystems.

The STORM assessment can be found in Appendix 1.

Summary of Initiatives

Category	Requirement
Management	80% of all construction and demolition waste to be diverted from landfill
	Separate utility meter for each unit
Water Efficiency	Minimum WELS rating of fittings and fixtures: 4 Star Toilets / 5 Star Taps / 4 Star (6.0-7.5 L/min) Showerhead and 5 Star Dishwasher
	No irrigation is required after an initial period of establishment for landscaped areas – If irrigation is required, it must be connected to RWT
	2,000L tanks for each unit collecting water from part of the roof of each unit – Water to be used for toilet flushing and laundry
Energy Efficiency	Maximum 4 W/m ² lighting density within the dwelling
	Retractable clotheslines in POS
	Sensors (motion, daylight, timers) for external lighting
	Electric heat pump
	Minimum 7.0 Star NatHERS rating
	HVAC system chosen within one star of the best available
Stormwater	3,000L tanks for each unit collecting water from part of the roof of each unit – Water to be used for toilet flushing and laundry
IEQ	Double Glazing for all habitable room
	Separate dedicated exhaust fan for all kitchen (range-hood) directly exhausted outside
	All paint, adhesives, sealants and flooring to be low VOC – refer to Appendix 2 for limits
	All engineered wood will be low formaldehyde with E0 or better certification
Transport	One bike space per unit – Not installed over the bonnet
Waste	3-bin system (Rubbish, Recycling, FOGO) + Provision of space for future glass waste
Urban Ecology	At least 20% of the site is covered with vegetation
Materials	Timber framing if used to be certified PEFC, AFS or FSC – No rainforest timber to be used
	Steel to be sourced from steel maker with ISO 14001 facility a member of the World Steel Association's (WSA) Climate Action Program (CAP).
	Carpet and underlay with third-party sustainable certification (GECA, Carpet institute ECS etc.)

Initiatives listed above should be reflected on TP drawings either graphically on the plan (e.g. bike spaces, RWT etc.) or with a clear note. All WSUD initiatives listed in Appendix 1 should be clearly noted on drawings including all areas diverting to the proposed treatment (e.g. RWT, raingarden etc.) – Refer to Appendix 1.

1. Construction and Building Management

Effective construction and building management practices are crucial for sustainable development. By minimizing construction waste and effectively monitoring building performance, these practices can significantly reduce the environmental impact of the development and enhance its long-term sustainability.

Initiative	Description	Reference
Metering and Monitoring	Separate utility meters (water and electricity) will be provided for each townhouse.	N/A
Construction Waste Management	On-site staff will receive a construction waste management plan during a site orientation session to minimise on-site waste generation and ensure proper disposal. A minimum of 80% of all construction and demolition waste created on-site will be reused or recycled.	N/A
Construction Environmental Management	<p>The builder will identify environmental risks associated with construction and implement management strategies such as effective erosion and sediment control measures throughout construction and operation.</p> <p>They will also ensure that earthworks are staged appropriately to avoid bare earthworks in high-risk areas of the site during periods of dominant rainfall.</p>	Clause 53.18

2. Water Resources

Maximising water efficiency in developments helps conserve water resources, reduces the strain on local water systems, and lower water bills for homeowners, making it an environmentally responsible and economically beneficial choice for developers. Additionally, implementing water-efficient practices and technologies can also contribute to a more sustainable and resilient community.

Initiative	Description	Reference
Fixtures and Fittings	<p>The development will be provided with efficient fittings and fixtures. This will all be for a reduction of potable water use onsite. The following minimum Water Efficiency Labelling Scheme (WELS) star rating will be specified:</p> <ul style="list-style-type: none"> • 4-Star Toilets • 5-Star Taps (Kitchen and bathrooms) • 4-Star (6.0-7.5 L/min) Showerheads <p>All appliances provided as part of the based building will be chosen within one WELS star of the best available:</p> <ul style="list-style-type: none"> • 5-Star Dishwasher 	BESS Wat 1.1
Water Efficient Landscaping	<p>Irrigation will not be required for landscaped areas on site, after an initial establishment period for the plants. Native or drought-tolerant species will be preferred to achieve this outcome and the xeriscaping method should be followed where possible.</p> <p>If irrigation is required, water should be sourced from a rainwater tank.</p>	BESS Wat 3.1
Rainwater Collection and use	<p>Part of the roof of each townhouse will have rainwater runoff collected and stored in a 2,000L tank.</p> <p>Additional charged pipe systems or multiple tanks may be installed to collect water if necessary. If a charged pipe system is used, it will not be placed underneath the building's slab.</p> <p>Rainwater collected will be utilised for toilet flushing and laundry, significantly reducing the development's stormwater impact and aiding in compliance with the STORM calculator (refer to Appendix 1).</p>	BESS Wat 1.1 BESS Storm 1.1

3. Energy Efficiency

Maximizing energy efficiency in developments reduces greenhouse gas emissions and lowers utility costs for homeowners, making it an environmentally responsible and economically beneficial choice for developers. In addition, energy-efficient buildings are often more comfortable and healthier to live in, improving the quality of life for occupants.

Initiative	Description	Reference
NatHERS Commitment – Thermal Performance	<p>The building approval stage will include the completion of energy ratings, with a commitment to meeting energy efficiency requirements of a minimum 7.0-Star energy rating, ensuring no individual dwellings score less than 6.0-Stars (10% above BCA requirements).</p> <p>This will be accomplished by installing appropriate insulation levels in external walls, roofs, and floors, as well as using double-glazed windows in all habitable rooms. 7.0-star results have been assumed in BESS.</p>	<p>BESS Ene 1.2 BESS Ene 2.1 BESS Ene 2.3</p>
Hot water System	An electric heat pump hot water system will be installed for each unit.	BESS Ene 3.2
HVAC System	<p>Heating and cooling will be provided with a reverse-cycle air-conditioner.</p> <p>HVAC unit will be chosen with a minimum 3 Star energy rating or within one star of the best available in a similar range at the time of purchase, whichever is greater.</p> <p>Alternatively, the unit will be chosen with COP/EER within 15% of the best available product if no star rating is available.</p> <p>3 Star has been input in BESS as a minimum.</p>	BESS Ene 2.3
All Electric Development	The development will be all-electric and will not have a gas connection. This will align the development with Councils and state targets for net zero and reduction of fossil fuel usage.	BESS Ene 2.6
Internal Lighting	<p>LED lighting will be implemented throughout each unit resulting in lower energy consumption for artificial lighting in townhouses.</p> <p>Each unit will reduce lighting power densities by 20% from the NCC requirement (<4W/m²).</p>	BESS Ene 3.5

Initiative	Description	Reference
	Additionally, the utilisation of light internal colours will enhance daylight penetration, leading to a decreased reliance on artificial lighting.	
External Lighting	LED lighting will be implemented for all external lighting. External lighting will be controlled with motion sensors reducing overall use and energy consumption.	BESS Ene 3.3
Clothes Drying	Outdoor clotheslines will be provided for each unit. This will allow occupants to reduce the use of an electric or gas drier and its associated energy consumption.	BESS Ene 3.4

4. Stormwater Quality Management

WSUD (Water Sensitive Urban Design) is crucial for developments because it helps manage stormwater runoff, reduces flooding risks, and improves water quality by using natural systems to filter and treat water. Additionally, WSUD can enhance the aesthetic value of a development by incorporating green infrastructure and providing green spaces for occupants to enjoy.

Initiative	Description	Reference
Rainwater Collection and use	Part of the roof of each townhouse will have rainwater runoff collected and stored in a 2,000L tank. Additional charged pipe systems or multiple tanks may be installed to collect water if necessary. If a charged pipe system is used, it will not be placed underneath the building's slab. Rainwater collected will be utilised for toilet flushing and laundry, significantly reducing the development's stormwater impact and aiding in compliance with the STORM calculator (refer to Appendix 1).	BESS Wat 1.1 BESS Storm 1.1

5. Indoor Environment Quality

IEQ (Indoor Environmental Quality) is essential for development because it affects the health, comfort, and well-being of occupants by addressing factors such as air quality, temperature, lighting, and noise levels. Providing a high-quality indoor environment can also increase the value and desirability of a development, leading to higher occupancy rates and property values.

Initiative	Description	Reference
Daylight Access	Light internal colours will be used for the development which will result in better internal reflection of natural light, enhancing the penetration of daylight through windows or other openings. Large windows will be installed in the living room which will increase natural light access.	Clause 15.01-2L Minimum Requirement
Double Glazing	Double glazing will be installed in all habitable rooms (living, bedroom, study, rumpus etc.). This will provide better thermal comfort for occupants as well as improving condensation management.	BESS IEQ 3.1
Natural Ventilation	All units will be provided with openable windows, allowing for effective cross-flow ventilation. Magnetic door stops and catches will be provided to internal doors in each dwelling to help create effective breeze paths through the units.	BESS IEQ 2.2
Mechanical Exhaust	The range hood in the kitchen will be directly diverted to the outside, not within the ceiling or wall cavity.	Minimum Requirement
Low VOC and Low Formaldehyde	All paints, adhesives and sealants and flooring should not exceed the limits outlined in Appendix 3. Alternatively, products will be selected with no VOCs. All engineered wood products will have 'low' formaldehyde emissions, certified as E0 or better or with no formaldehyde. Providers such as Polytec and Laminex Australia offer E0 or better products in their range.	Clause 15.01-2L Minimum Requirement


6. Sustainable Transport

Sustainable transport such as cycling and public transport is essential for residential developments as it reduces the environmental impact of commuting while improving air quality and decreasing traffic congestion. Additionally, it promotes healthy lifestyles by encouraging physical activity and reducing sedentary behaviours associated with car dependence.

Initiative	Description	Reference
Resident Bike Parking	Each unit will be provided with a bicycle park within their garages. It will not be installed over the bonnet.	BESS Tran 1.1

7. Operational Waste Management

Effective operational waste management is vital for developments to minimise the amount of waste generated, reduce environmental impacts, and improve sustainability by promoting recycling and composting. Implementing efficient waste management practices can also lower operating costs, increase efficiency, and enhance the overall liveability of the development.

Initiative	Description	Reference
Operational Waste	<p>Each unit will be provided with a three-bin system including general, recycling and food & organic (FOGO) waste.</p> <p>Additional space will be provided in the waste storage to accommodate the future fourth waste stream for glass waste as per the Victorian recycling policy for 2030.</p> 	BESS Waste 2.1

8. Urban Ecology

Incorporating urban ecology principles into development promotes biodiversity, provides ecological services such as air and water purification, and enhances the overall health and well-being of residents by connecting them with nature. Additionally, creating sustainable and resilient urban ecosystems can also help mitigate the impacts of climate change and support the long-term viability of the development.

Initiative	Description	Reference
Vegetated Area	<p>The proposed development will be covered with large areas of vegetation. As a minimum, 20% of the entire site area (117m²) will be vegetated based on current drawings.</p> <p>The exact coverage will be confirmed within landscape drawings.</p>	BESS Eco 2.1

9. Materials

Choosing the right materials for a development is crucial as it impacts the durability, energy efficiency, and overall sustainability of the buildings. Thoughtful material selection can minimize environmental impacts, improve indoor air quality, and contribute to the long-term value and desirability of the development.

Initiative	Description	Reference
Sustainable Timber	<p>No rainforest timber will be used on site.</p> <p>Timber framing (if used on site) will be procured from accredited sources such as Forest Stewardship Council (FSC), Program for the Endorsement of Forest Certification (PEFC) or Australian Forestry Scheme (AFS).</p>	Clause 15.01-2L
Carpet	Wherever used, carpet and carpet underlay will be chosen with as third party certification such as Global GreenTag, GECA or Carpet Institute of Australia Limited, Environmental Certification Scheme (ECS).	Clause 15.01-2L
Steel	<p>Steel for the development (structural and reinforcing) will be procured from a responsible steel maker.</p> <p>A responsible steel maker must have facilities with a currently valid and certified ISO 14001 Environmental Management System (EMS) in place, and be a member of the World Steel Association's (WSA) Climate Action Program (CAP).</p>	Clause 15.01-2L

10. Result in Summary & Implementation

The development will comply with the BESS and WSUD requirements by implementing all measures, as stated in this report. All the measures included in this report have demonstrated their efficiency and are easy to upkeep, with any faults promptly noticeable to the development's occupants. This approach ensures the development's sustainability in the long run, as the installed systems will be maintained and functional throughout the building's life cycle.

All initiatives listed in the report will be implemented by the relevant design team member at the relevant stage of the development. An implementation schedule has been prepared as follows – Full detail for each initiative is available in the body of the report (hyperlink):

ESD Implementation Table

Initiative	Responsibility	Stage
Metering and Monitoring	Services Engineer Architect	Design Development
Construction Waste Management Plan – 80% of waste diverted from landfill	Head Contractor	Construction
Construction Environmental Management Plan	Head Contractor	Construction
Water Fixtures and Fitting – Minimum WELS rating	Architect Head Contractor	Design Development
Water Efficient Landscaping – No irrigation requirement or reused water	Landscape Architect	Design Development
Rainwater Collection and Reuse	Architect Civil Engineer	Design Development
NatHERS Commitment – Minimum 7 Star rating	Energy Rater	Design Development
Hot Water System – Electric Heat Pump	Services Engineer Architect	Design Development
HVAC System – Split system with minimum energy rating requirements	Services Engineer Architect	Design Development
Internal Lighting Power – LED with Max 4W/m ²	Services Engineer Architect	Design Development
External Lighting – LED with sensors	Services Engineer Architect	Design Development
Clothes Drying – Clotheslines for each unit	Architect	Design Development
Double Glazing to all habitable room	Architect	Design Development

Initiative	Responsibility	Stage
Natural Ventilation – Openable windows and door catches	Architect	Design Development
Kitchen Exhaust directly to the outside	Architect	Design Development
Bathroom Exhaust with humidity sensors	Architect	Design Development
Low VOC and Low Formaldehyde Products	Architect Head Contractor	Design Development Construction
Bike parking for residents – 1 per unit	Architect	Design Development
Three bin system in each garage + Allocation for 4 th bin	Architect Waste Consultant	Design Development
Sustainable Timber	Head Contractor	DD & Construction
Carpet with third-party sustainable certification	Head Contractor	DD & Construction
Steel from Responsible Steel Maker	Head Contractor	DD & Construction



Appendix 1 – WSUD Report

To address Clause 15.01-2L-05 and 53.18, a Water Sensitive Urban Design (WSUD) assessment of the proposed development must occur.

Under Clause 53.18, WSUD assessment and associated proposed stormwater management system should be designed to:

- Meet the current best practice performance objectives for stormwater quality as contained in the Urban Stormwater - Best Practice Environmental Management Guidelines (Victorian Stormwater Committee, 1999). Currently, these water quality performance targets are:
 - Suspended Solids - 80% retention of typical urban annual load.
 - Total Nitrogen - 45% retention of typical urban annual load.
 - Total Phosphorus - 45% retention of typical urban annual load.
 - Litter - 70% reduction of typical urban annual load.
- Minimise the impact of chemical pollutants and other toxicants including by, but not limited to, bunding and covering or roofing of storage, loading and work areas.
- Contribute to cooling, improving local habitat and providing attractive and enjoyable spaces.

By identifying the impervious surfaces within the site and implementing treatments to mitigate the impacts of stormwater leaving the site, the proposed development has successfully fulfilled the objectives listed above.

The development was evaluated using the STORM tool, a widely accepted tool in the industry, to verify compliance with the aforementioned best practice targets. To meet the required standards, the development must attain a minimum compliance score of 100%

1. Stormwater Quality Management Strategies & Site Demarcation

To achieve stormwater management objectives, it will be necessary to put in place stormwater treatment measures. The upcoming section outlines the surfaces that necessitate treatment and the specific treatment required. Effective management of stormwater flows in the building area will be crucial for the building's overall performance and its ability to meet stormwater management goals. The total site area for the WSUD assessment is 582m². The following treatment will be implemented on-site:

Surface	Treatment	Area	Description
Roof Unit 1	Rainwater Tank	155.4m ²	155.4m ² of the roof runoff of Unit 1 will be diverted into a 2,000L rainwater tank. The rainwater will be used for toilet flushing and laundry . Rainwater collection might require the implementation of a charged pipe system that <u>cannot be running underneath the building footprint</u> .

Surface	Treatment	Area	Description
Roof Unit 2	Rainwater Tank	161.9m ²	161.9m ² of the roof runoff of Unit 2 will be diverted into a 2,000L rainwater tank. The rainwater will be used for toilet flushing and laundry . Rainwater collection might require the implementation of a charged pipe system that <u>cannot be running underneath the building footprint</u> .
Permeable Areas	No treatment	201.3m ²	201.3m ² of the site will be designed as permeable. This will include landscaped areas and decking.
Untreated Impervious Areas	No treatment	63.4m ²	63.4m ² of the site will be left untreated before being released at the legal point of discharge. This will include unconnected roof areas, pathways, untreated parts of driveways etc.

The development has prioritized maximizing permeable areas, resulting in decreased stormwater outflows from the site. Additionally, the proposed development includes vegetated areas, which not only reduces the heat island effect but also improves the local habitat.

2. WSUD Catchment Plan

Please refer to the next page for the full WSUD catchment plan including all treatment and areas included above.

SITE ANALYSIS

	GROUND FLOOR	FIRST FLOOR	PORCH	GARAGE/CARSPACE	DECKING	SPOS	TOTAL BLDG AREA	CARPACES
UNIT 1-PROPOSED	128.18m ²	110.14m ²	2.90m ²	24.27m ²	20.67m ²	42.36m ²	286.16m ²	2
UNIT 2-PROPOSED	132.06m ²	116.54m ²	3.78m ²	23.94m ²	19.91m ²	42.30m ²	296.23m ²	2
TOTAL	260.24m ²	226.68m ²	6.68m ²	50.36m ²	40.58m ²	84.66m ²	582.39m ²	4
SITE AREA	582.00m ²		SITE COVERAGE 357.86m ² / 61.48%		TOTAL BLDG AREA 206.71m ² / 35.51%			

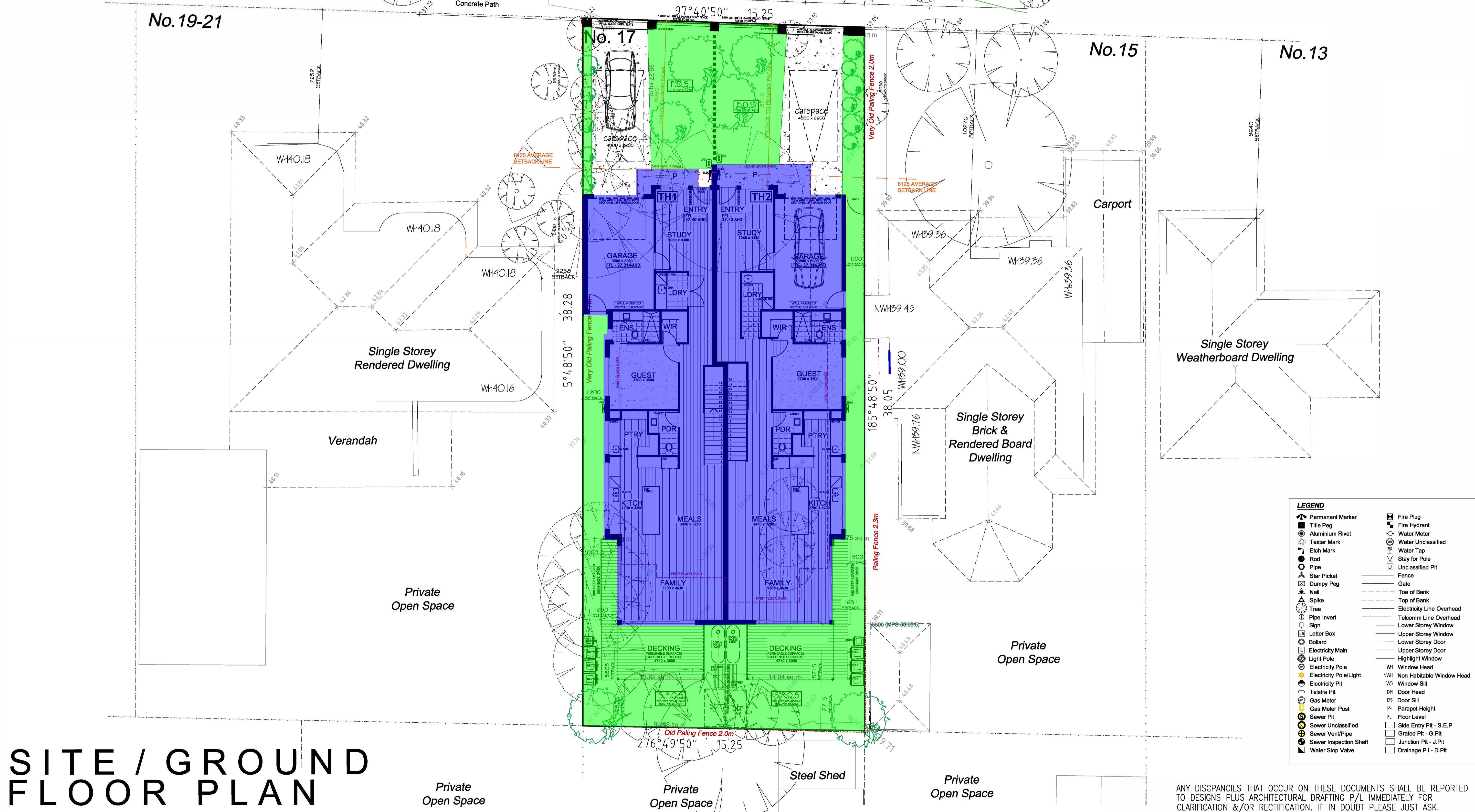
RIVER STREET

WSUD Legend

- Roof Catchment
- Permeable Areas

SERVICES LEGEND

- GAS METER
- WATER METER
- HOT WATER SERVICE
- ELEC. SWITCH BOARDS (ALL ELECTRICITY COMPANY CONNECTIONS ARE TO BE IN UNDERGROUND SUPPLY)
- RUBBISH BIN
- RECYCLE BIN



SITE / GROUND FLOOR PLAN

- LEGEND**
- Permanent Marker
 - Title Peg
 - Aluminium Rivet
 - Texter Mark
 - Etch Mark
 - Rod
 - Pipe
 - Star Picket
 - Dumpy Peg
 - Nail
 - Spike
 - Tree
 - Pipe Invert
 - Sign
 - Letter Box
 - Bollard
 - Electricity Main
 - Light Pole
 - Electricity Pole
 - Electricity Pole/Light
 - Electricity Pit
 - Telstra Pit
 - Gas Meter
 - Gas Meter Post
 - Sewer Pit
 - Sewer Unclassified
 - Sewer Vent/Pipe
 - Sewer Inspection Shaft
 - Water Stop Valve
 - Fire Plug
 - Fire Hydrant
 - Water Meter
 - Water Unclassified
 - Water Tap
 - Stay for Pole
 - Unclassified Pit
 - Fence
 - Gate
 - Toe of Bank
 - Top of Bank
 - Electricity Line Overhead
 - Telcomm Line Overhead
 - Lower Storey Window
 - Upper Storey Window
 - Lower Storey Door
 - Upper Storey Door
 - Highlight Window
 - WH: Window Head
 - NWH: Non Habitable Window Head
 - WS: Window Sill
 - DH: Door Head
 - DS: Door Sill
 - PH: Parapet Height
 - FL: Floor Level
 - S.E.P: Side Entry Pit - S.E.P
 - G.Pit: Grated Pit - G.Pit
 - J.Pit: Junction Pit - J.Pit
 - D.Pit: Drainage Pit - D.Pit

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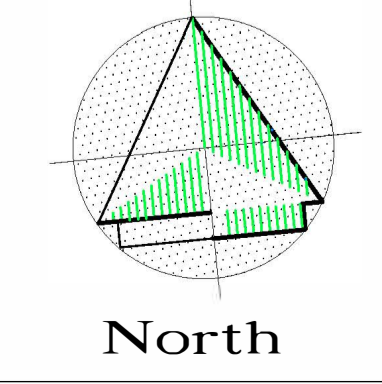
Designs Plus
Architectural Drafting Pty Ltd
(ACN: 082 201 492)

PROPOSED 2 TOWNHOUSE DEVELOPMENT

AT : 17 RIVER STREET, MARIBYRNONG.

FOR: LN HOMES

Designed : J.C.	Drawn : J.C.	Checked : J.C.
Drawing Scale:	1:100	
Date of Issue:	JULY,2024	
Job No.	Sheet No.	Revision:
24-877	TP02	-



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3. WSUD Assessment Results

All treatment measures and associated areas described above have been input into the STORM tool and the following results have been achieved:



STORM Rating Report

TransactionID: 0
Municipality: MARIBYRNONG
Rainfall Station: MARIBYRNONG
Address: 17 River Street

Maribyrnong
VIC 3032
Assessor: MSC
Development Type: Residential - Multiunit
Allotment Site (m2): 582.00
STORM Rating %: 103

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
R1	155.40	Rainwater Tank	2,000.00	5	121.60	73.20
R2	161.90	Rainwater Tank	2,000.00	6	125.40	69.60
Remainder of Impervious Areas	63.40	None	0.00	0	0.00	0.00

One additional occupant than the number of bedrooms has been input in STORM for each dwelling to account for the laundry connection. This is based on the assumption of an average of two laundry loads per week for an household. This represents 204L per week for an average washing machine (3 Star). This would average to a 29L/day water use for laundry equivalent to the additional occupant.

This approach is accepted throughout CASBE Councils.

4. Proposed Treatment Typical Cross-Section

This section will include a typical cross-section of all WSUD treatments proposed in the development.

a. Rainwater Tanks

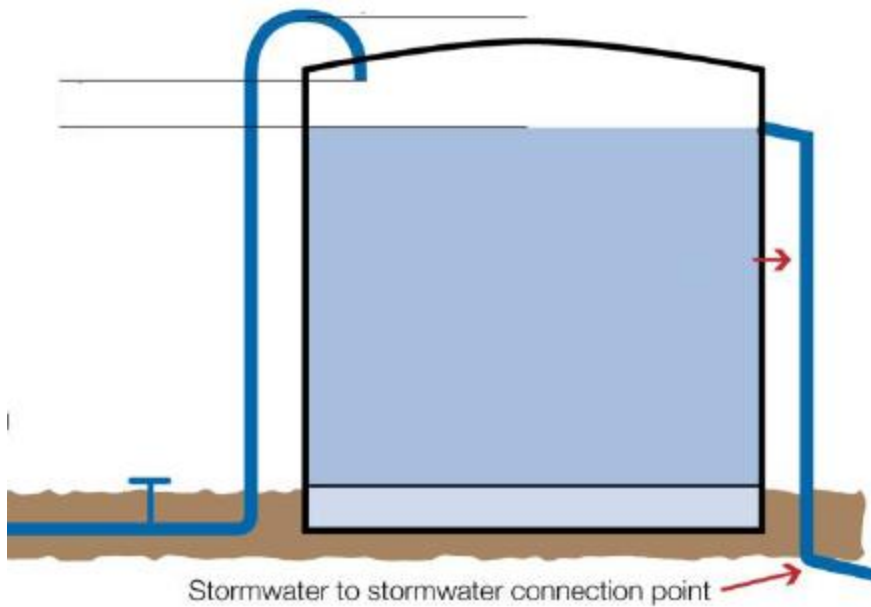
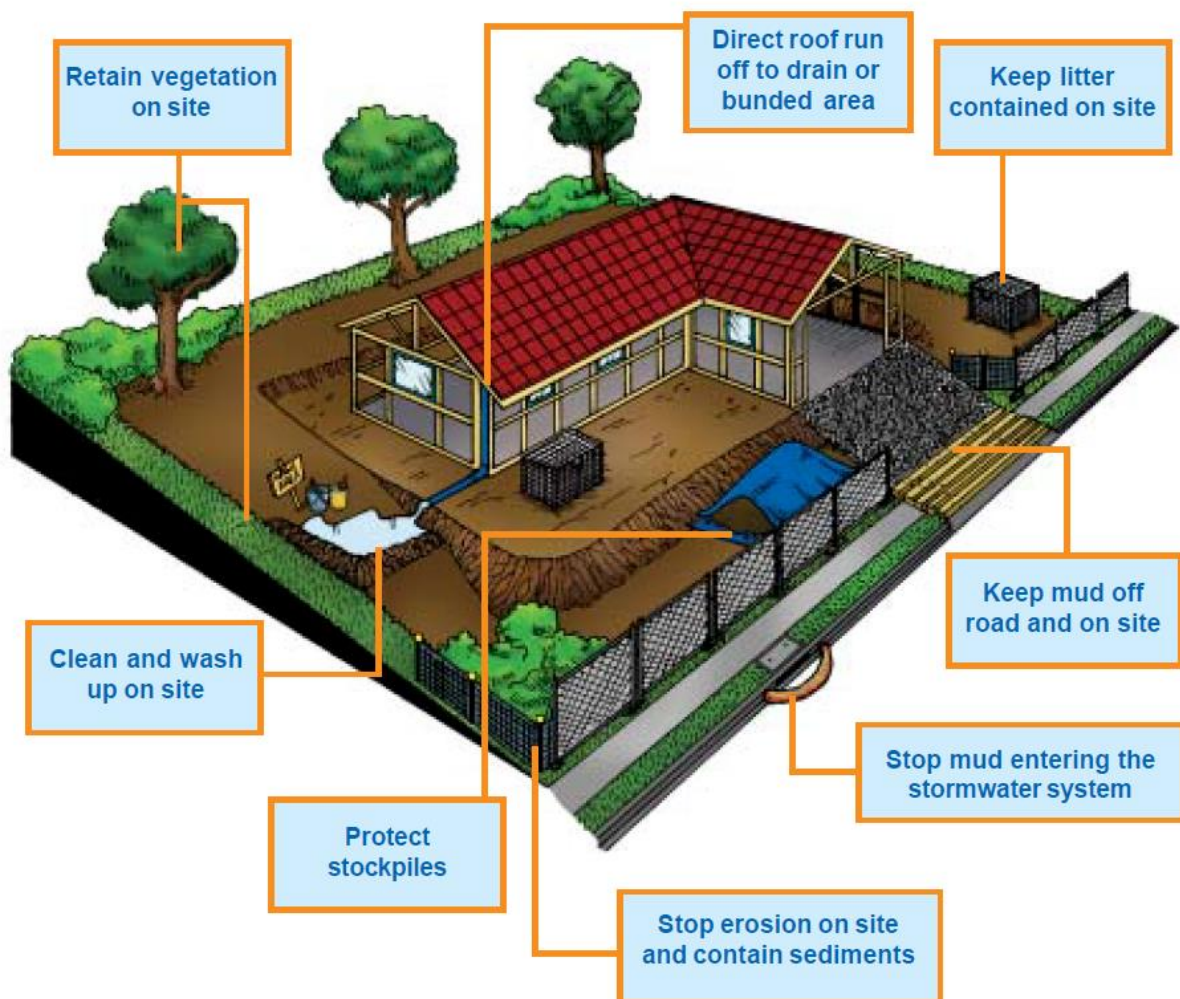


Figure 2: Typical Rainwater tank Cross-Section

5. Stormwater Management During Construction

To prevent contamination of stormwater discharge and to decrease the speed of flows produced during construction, steps will be taken to manage stormwater. These measures will involve establishing buffer strips and maintaining a clean site by removing loose rubbish. "[Keeping Our Stormwater Clean - A Builder's Guide](#)" by Melbourne Water provides additional information. The objectives depicted in the diagram below illustrate ways to minimise the effects of stormwater runoff during the construction phase.

Check Council requirements and plan before you start work on site





Appendix 2 – WSUD Maintenance Manual



WSUD manuals are sourced from the City of Port Philip which has developed a detailed manual for the majority of treatment systems.

Tips for undertaking maintenance

Things to look for and how to fix them.

Leaf litter / debris in gutters	Pump not working
Regularly clear your gutters. Make sure you cover the tank inlet if you're rinsing down the gutters to avoid debris entering the tank.	Check operating instructions for your pump. Check that pumps are kept clear of surface water (flooding), vegetation, and have adequate ventilation. Pumps should be serviced every few years to prolong the pump life.
Blocked downpipe	Mains backup or pump not working
If you see water spilling from the edge of the gutters check that the downpipe is not blocked, removing any debris.	Have you heard the pump operating? If the mains backup switching device fails many people do not notice for a long time. Consider a manual system if the switching device is problematic and you don't mind operating it manually.
First flush diverter clogging	Overflow
To clean out, unscrew the cap at the base of the diverter and remove the filter. Wash the filter with clean water and the flow restrictor inside the cap.	Check that the overflow is not blocked and that there is a clear path for water to safely spill from the tank through the overflow pipe when full. Check that a clean mesh screen is safely in place to prevent mosquitoes entering the tank.
Debris on the mesh cover over inlets / outlets	Sediment / debris build-up in tank (more than 20mm thick)
The fine stainless steel mesh is similar to fly screen mesh. It should be cleaned regularly to ensure it does not become blocked with leaves and other material.	Over time a small amount of fine sediment will collect in the bottom of your tank and this is harmless and natural. It should not be disturbed until it is approx 20 mm thick which may take many years. To clean your tank out simply empty your tank and wash out with a high-pressure washer or hose.
Dirt and debris around the tank base or side.	Base area
Keep leaf build-up, sticks, pot plants and other items off the lid of your tank. Use a hose to remove dust and dirt from the outside of the rainwater tank and ensure there is no debris on the base, bottom lip and walls of your tank.	Tanks must be fully supported by a flat and level base. Check for any movement, cracks or damage to the slab or pavers. If damage is observed, empty the tank to remove the weight and have the fault corrected to prevent damage to the tank. There is no warranty from suppliers for damage to a rainwater tank if the base has failed.
Smelly water or mosquitos	Monitoring the water level
Rainwater tanks can smell if there is debris in the gutters. Check the gutters and leaf strainers are clean. Mosquitos or wrigglers can make their way into your tank if they are small enough to pass through the inlet strainer. A very small amount of chlorine (approx 4 parts per million) can be put in the tank to kill off mosquitos or the bacteria causing odours. The chlorine will disinfect the water and then evaporate. Chlorine tablets from a pool supplier can be used (but check the recommended dose based on your tank capacity).	A range of devices are available to monitor water level. Some simple float systems can be used effectively.

Acknowledgement: Information from PJT Green Plumbing's 'Maintenance Guide for Your Rainwater Tank' was used to develop this fact sheet.



Maintenance manual

Rainwater tanks

Site address: _____

Planning permit number: _____

Rainwater tank maintenance

This manual lists the key tasks required to maintain a domestic rainwater tank and the recommended frequency of each task. This manual can be submitted with planning permit applications for developments that include the installation of a domestic rainwater tank. Once endorsed, the property owner is responsible for continuous implementation of rainwater tank maintenance, in accordance with the guidance in this manual.

Rainwater tanks are an exceptional tool for environmental protection. They collect and store roofwater for use inside and outside the home. This simultaneously reduces the demand on our precious potable mains water and limits the amount of stormwater pollutants that enter our sensitive Bay.

Maintenance of rainwater tanks is relatively easy however it is important to do the following key tasks to ensure the quality of water is high:

- stop leaf litter and debris entering the tank.
- prevent bird droppings and dust building up in the gutters.
- prevent mosquitos and other animals entering the tank.

Tank connected to	toilet only <input type="checkbox"/> toilet & irrigation <input type="checkbox"/> toilet & laundry & irrigation <input type="checkbox"/> toilet & laundry & hot water & irrigation <input type="checkbox"/>
Rainwater tank location	
Planning drawing number showing rainwater tank location	
Rainwater tank construction date	
Date of final building inspection	
Tank volume (litres)	
Area or percentage of the roof that is connected to the tank via gutters and downpipes	

For more information please visit www.portphillip.vic.gov.au or contact the Sustainability team via:

Phone: 03 9209 6777

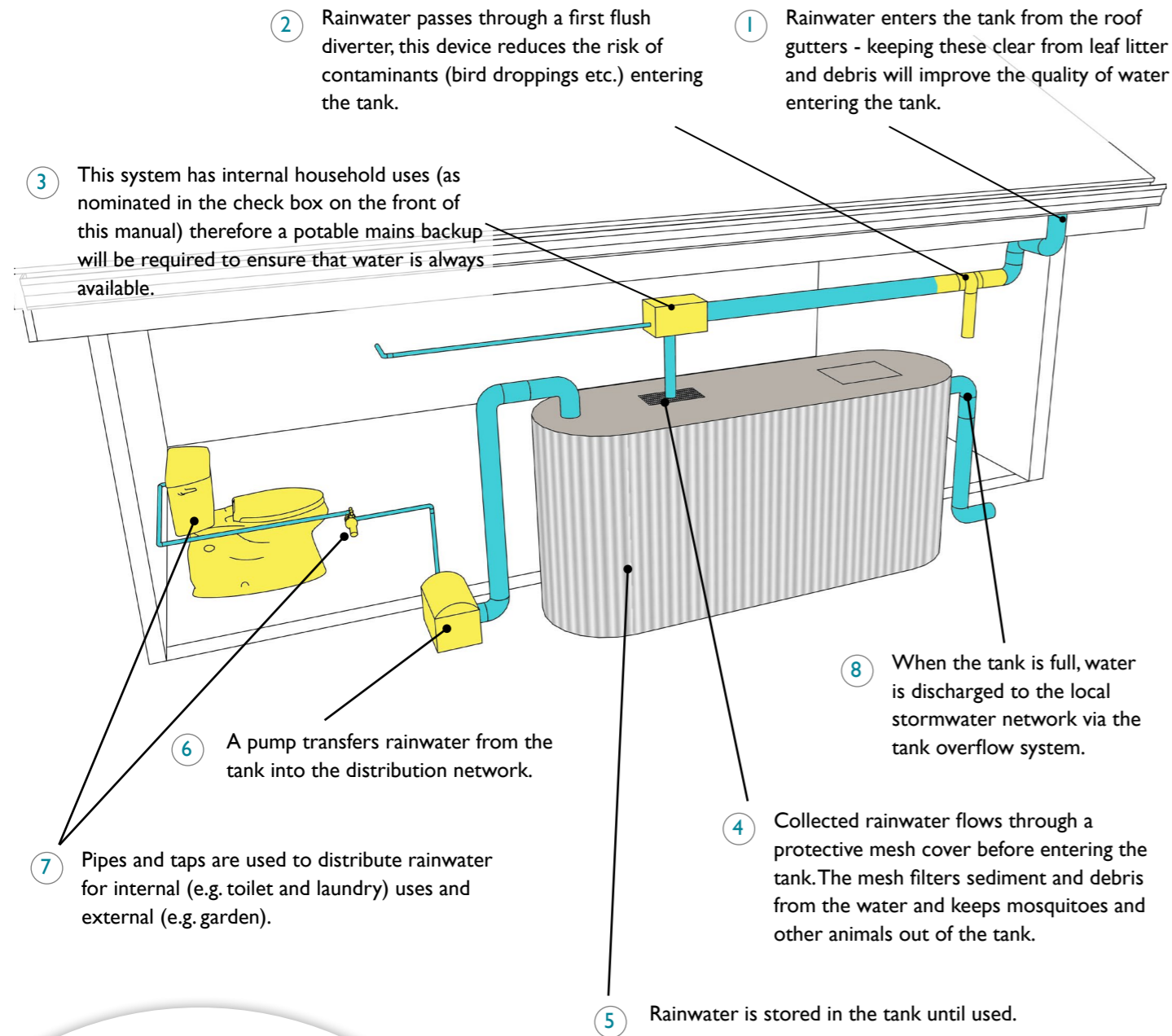
email: sustainabledesign@portphillip.vic.gov.au



Maintenance Overview

Rainwater Tank Maintenance

The following diagram identifies the key items which are important for rainwater tanks and their maintenance.



Maintenance Checklist

The property owner is responsible for checking the maintenance items in this checklist at the recommended frequency at the bottom of the table. The maintenance log at the bottom of the page should be filled in once each maintenance check is complete. Upkeep of this maintenance log should continue throughout the life of the rainwater tank.

Item	Rainwater tank element	Inspection item	Y/N	Likely maintenance task
1	Roof gutters and downpipes	Is there leaf litter or debris in the gutters?		Remove by hand and dispose responsibly.
2	First flush diverter	Is there anything blocking the first flush diverter (leaves etc)?		Remove by hand and dispose responsibly.
3	Potable mains back up device	Is the potable mains back up switch operating correctly?		Repair or replace device. Consider a manual switching device.
4	Mesh cover	Has the mesh cover deteriorated or have any holes in it?		Replace mesh cover.
5	Tank volume	Is there large amounts of sediment or debris sitting in the bottom of the tank, reducing the volume available in the tank to store water?		Remove sediment and dispose responsibly.
6	Pump	Is the pump working effectively? Have you heard it on a regular basis?		Check the potable mains back up is not permanently on. Repair or replace pump.
7	Pipes and taps	Are pipes and taps leaking?		Repair as needed.
8	Overflow	Is the overflow clear and connected to the stormwater network?		Remove blockages and/or restore connections to stormwater network.
9	Supporting base	Are there any cracks or movement of pavers?		Empty the tank to reduce weight then repair any damage to the base.

Maintenance frequency

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
All tasks	x			x			x			x		

Regular maintenance will improve the water quality and extend the life of your system. A well maintained tank isn't likely to need to be cleaned out for up to ten years (when there is more than 20mm of accumulated sediment).

Maintenance Log

Maintenance date	Maintenance undertaken





Appendix 3 – Green Star VOC Limits

VOC Limits for Paints, Adhesives and Sealants

Product Category	Maximum VOC content (g/L)
General-purpose adhesives and sealants	50
Interior wall and ceiling paint, all sheen levels	16
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65
One and two-pack performance coatings for floors	140
Acoustic sealants, architectural sealants, waterproofing membranes and sealants, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesives and sealants	100

VOC Limit for Carpets

Test Protocol	Limit (mg/m ² per hour)
ASTM D5116 – Total VOC Limit	0.5
ASTM D5116 – 4 -PC (4-Phenylcyclohexene)	0.05
ISO 16000 / EN 13419 – TVOC at three days	0.5
ISO 10580 / ISO/TC 219 (Document N238) – TVOC at 24 hours	0.5



Appendix 4 – BESS Report

BESS Report

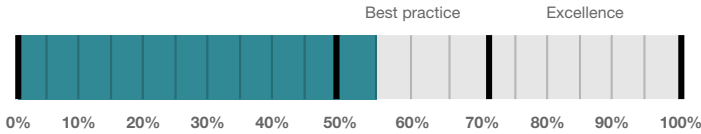
Built Environment Sustainability Scorecard



This BESS report outlines the sustainable design commitments of the proposed development at 17 River St Maribyrnong Victoria 3032. The BESS report and accompanying documents and evidence are submitted in response to the requirement for a Sustainable Design Assessment or Sustainability Management Plan at Maribyrnong City Council.

Note that where a Sustainability Management Plan is required, the BESS report must be accompanied by a report that further demonstrates the development's potential to achieve the relevant environmental performance outcomes and documents the means by which the performance outcomes can be achieved.

Your BESS Score



58%

Project details

Address 17 River St Maribyrnong Victoria 3032
Project no E7934E78-R2
BESS Version BESS-8

Site type Multi dwelling (dual occupancy, townhouse, villa unit etc)
Account admin@msconsultants.com.au
Application no.
Site area 582.00 m²
Building floor area 582.39 m²
Date 24 July 2024
Software version 2.0.0-B.533



Performance by category ● Your development ● Maximum available

Category	Weight	Score	Pass
Management	5%	0%	•
Water	9%	69%	✓
Energy	28%	70%	✓
Stormwater	14%	100%	✓
IEQ	17%	60%	✓
Transport	9%	50%	•
Waste	6%	50%	•
Urban Ecology	6%	37%	•
Innovation	9%	0%	•

Dwellings & Non Res Spaces

Dwellings

Name	Quantity	Area	% of total area
Townhouse			
Townhouse 2	1	296 m ²	50%
Townhouse 1	1	286 m ²	49%
Total	2	582 m²	100%

Supporting information

Floorplans & elevation notes

Credit	Requirement	Response	Status
Water 3.1	Annotation: Water efficient garden details		-
Energy 3.3	Annotation: External lighting controlled by motion sensors		-
Energy 3.4	Location of clothes line (if proposed)		-
Stormwater 1.1	Location of any stormwater management systems (rainwater tanks, raingardens, buffer strips)		-
IEQ 2.2	Annotation: Dwellings designed for 'natural cross flow ventilation' (If not all dwellings, include a list of compliant dwellings)		-
IEQ 3.1	Annotation: Glazing specification (U-value, SHGC)		-
Transport 1.1	Location of residential bicycle parking spaces		-
Waste 2.1	Location of food and garden waste facilities		-
Urban Ecology 2.1	Location and size of vegetated areas		-

Supporting evidence

Credit	Requirement	Response	Status
Energy 3.5	Average lighting power density and lighting type(s) to be used		-
Stormwater 1.1	STORM report or MUSIC model		-
IEQ 2.2	A list of dwellings with natural cross flow ventilation		-
IEQ 3.1	Reference to floor plans or energy modelling showing the glazing specification (U-value and Solar Heat Gain Coefficient, SHGC)		-

Credit summary

Management Overall contribution 4.5%

		0%
1.1 Pre-Application Meeting		0%
2.2 Thermal Performance Modelling - Multi-Dwelling Residential		0%
4.1 Building Users Guide		0%

Water Overall contribution 9.0%

		Minimum required 50%	69%	✓ Pass
1.1 Potable Water Use Reduction			63%	
3.1 Water Efficient Landscaping			100%	

Energy Overall contribution 27.5%

		Minimum required 50%	70%	✓ Pass
1.2 Thermal Performance Rating - Residential			0%	✓ Achieved
2.1 Greenhouse Gas Emissions			100%	
2.6 Electrification			100%	
2.7 Energy consumption			100%	
3.3 External Lighting			100%	
3.4 Clothes Drying			100%	
3.5 Internal Lighting - Houses and Townhouses			100%	
4.4 Renewable Energy Systems - Other			N/A	✦ Scoped Out
No other (non-solar PV) renewable energy is in use.				
4.5 Solar PV - Houses and Townhouses			0%	⊘ Disabled
No solar PV renewable energy is in use.				

Stormwater Overall contribution 13.5%

		Minimum required 100%	100%	✓ Pass
1.1 Stormwater Treatment			100%	

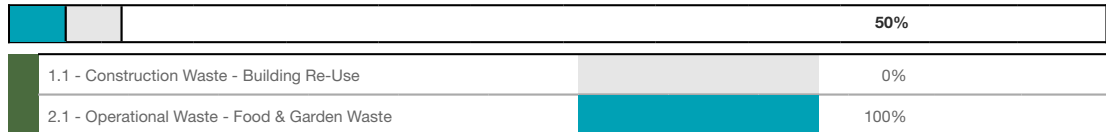
IEQ Overall contribution 16.5%

		Minimum required 50%	60%	✓ Pass
2.2 Cross Flow Ventilation			100%	
3.1 Thermal comfort - Double Glazing			100%	
3.2 Thermal Comfort - External Shading			0%	
3.3 Thermal Comfort - Orientation			0%	

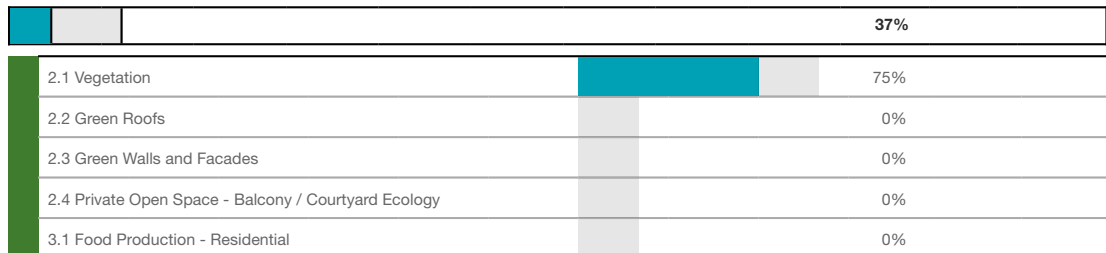
Transport Overall contribution 9.0%

		50%
1.1 Bicycle Parking - Residential		100%
1.2 Bicycle Parking - Residential Visitor		N/A ✦ Scoped Out
Not enough dwellings.		
2.1 Electric Vehicle Infrastructure		0%

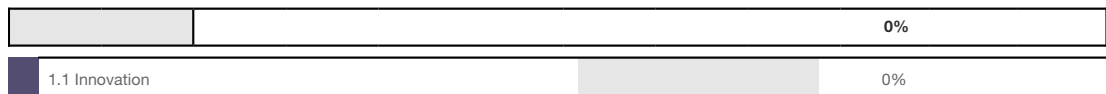
Waste Overall contribution 5.5%



Urban Ecology Overall contribution 5.5%



Innovation Overall contribution 9.0%



Credit breakdown

Management Overall contribution 0%

1.1 Pre-Application Meeting		0%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	Has an ESD professional been engaged to provide sustainability advice from schematic design to construction? AND Has the ESD professional been involved in a pre-application meeting with Council?	
Question	Criteria Achieved ?	
Project	No	
2.2 Thermal Performance Modelling - Multi-Dwelling Residential		0%
Score Contribution	This credit contributes 33.3% towards the category score.	
Criteria	Have preliminary NatHERS ratings been undertaken for all thermally unique dwellings?	
Question	Criteria Achieved ?	
Townhouse	No	
4.1 Building Users Guide		0%
Score Contribution	This credit contributes 16.7% towards the category score.	
Criteria	Will a building users guide be produced and issued to occupants?	
Question	Criteria Achieved ?	
Project	No	



Water Overall contribution 6% Minimum required 50%

Water Approach	
What approach do you want to use for Water?:	Use the built in calculation tools
Project Water Profile Question	
Do you have a reticulated third pipe or an on-site water recycling system?:	No
Are you installing a swimming pool?:	No
Are you installing a rainwater tank?:	Yes
Fixtures, fittings & connections profile	
Showerhead: All	4 Star WELS (>= 6.0 but <= 7.5)
Bath: All	Medium Sized Contemporary Bath
Kitchen Taps: All	>= 5 Star WELS rating
Bathroom Taps: All	>= 5 Star WELS rating
Dishwashers: All	>= 5 Star WELS rating
WC: All	>= 4 Star WELS rating
Urinals: All	Scope out
Washing Machine Water Efficiency: All	Occupant to Install
Which non-potable water source is the dwelling/space connected to?:	
Townhouse 1	Tank 1
Townhouse 2	Tank 2
Non-potable water source connected to Toilets: All	Yes
Non-potable water source connected to Laundry (washing machine): All	Yes
Non-potable water source connected to Hot Water System: All	No
Rainwater tank profile	
What is the total roof area connected to the rainwater tank?:	
Tank 1	155 m ²
Tank 2	162 m ²
Tank Size:	
Tank 1	2,000 Litres
Tank 2	2,000 Litres
Irrigation area connected to tank:	
Tank 1	-
Tank 2	-
Is connected irrigation area a water efficient garden?:	
Tank 1	-
Tank 2	-
Other external water demand connected to tank?:	
Tank 1	-
Tank 2	-

1.1 Potable Water Use Reduction		63%
Score Contribution	This credit contributes 83.3% towards the category score.	
Criteria	What is the reduction in total potable water use due to efficient fixtures, appliances, rainwater use and recycled water use? To achieve points in this credit there must be >25% potable water reduction.	
Output	Reference	
Project	539 kL	
Output	Proposed (excluding rainwater and recycled water use)	
Project	444 kL	
Output	Proposed (including rainwater and recycled water use)	
Project	311 kL	
Output	% Reduction in Potable Water Consumption	
Project	42 %	
Output	% of connected demand met by rainwater	
Project	100 %	
Output	How often does the tank overflow?	
Project	Often	
Output	Opportunity for additional rainwater connection	
Project	114 kL	
3.1 Water Efficient Landscaping		100%
Score Contribution	This credit contributes 16.7% towards the category score.	
Criteria	Will water efficient landscaping be installed?	
Question	Criteria Achieved ?	
Project	Yes	

Energy Overall contribution 20% Minimum required 50%

Dwellings Energy Approach	
What approach do you want to use for Dwellings?:	Use the built in calculation tools
Project Energy Profile Question	
Are you installing any solar photovoltaic (PV) system(s)?:	No
Are you installing any other renewable energy system(s)?:	No
Energy Supply:	All-electric
Dwelling Energy Profiles	
Below the floor is: All	Ground or Carpark
Above the ceiling is: All	Outside
Exposed sides: All	3
NatHERS Annual Energy Loads - Heat: All	70.0 MJ/sqm
NatHERS Annual Energy Loads - Cool: All	20.0 MJ/sqm
NatHERS star rating: All	7.0
Type of Heating System: All	Reverse cycle space
Heating System Efficiency: All	3 Stars (2011 MEPS)
Type of Cooling System: All	Refrigerative space
Cooling System Efficiency: All	3 Stars (2011 MEPS)
Type of Hot Water System: All	Electric Heat Pump Band 1
Clothes Line: All	Private outdoor clothesline
Clothes Dryer: All	Occupant to install
1.2 Thermal Performance Rating - Residential	0% ✔ Achieved
Score Contribution	This credit contributes 17.6% towards the category score.
Criteria	What is the average NatHERS rating?
Output	Average NATHERS Rating (Weighted)
Townhouse	7.0 Stars
2.1 Greenhouse Gas Emissions	100%
Score Contribution	This credit contributes 17.6% towards the category score.
Criteria	What is the % reduction in annual greenhouse gas emissions against the benchmark?
Output	Reference Building with Reference Services (BCA only)
Townhouse	9,294 kg CO2
Output	Proposed Building with Proposed Services (Actual Building)
Townhouse	7,196 kg CO2
Output	% Reduction in GHG Emissions
Townhouse	22 %
2.6 Electrification	100%
Score Contribution	This credit contributes 17.6% towards the category score.
Criteria	Is the development all-electric?
Question	Criteria Achieved?
Project	Yes

2.7 Energy consumption		100%
Score Contribution	This credit contributes 23.5% towards the category score.	
Criteria	What is the % reduction in annual energy consumption against the benchmark?	
Output	Reference Building with Reference Services (BCA only)	
Townhouse	75,591 MJ	
Output	Proposed Building with Proposed Services (Actual Building)	
Townhouse	30,478 MJ	
Output	% Reduction in total energy	
Townhouse	59 %	
3.3 External Lighting		100%
Score Contribution	This credit contributes 2.9% towards the category score.	
Criteria	Is the external lighting controlled by a motion detector?	
Question	Criteria Achieved ?	
Townhouse	Yes	
3.4 Clothes Drying		100%
Score Contribution	This credit contributes 5.9% towards the category score.	
Criteria	What is the % reduction in annual energy consumption (gas and electricity) from a combination of clothes lines and efficient driers against the benchmark?	
Output	Reference	
Townhouse	1,469 kWh	
Output	Proposed	
Townhouse	294 kWh	
Output	Improvement	
Townhouse	80 %	
3.5 Internal Lighting - Houses and Townhouses		100%
Score Contribution	This credit contributes 2.9% towards the category score.	
Criteria	Does the development achieve a maximum illumination power density of 4W/sqm or less?	
Question	Criteria Achieved?	
Townhouse	Yes	
4.4 Renewable Energy Systems - Other		N/A  Scoped Out
This credit was scoped out	No other (non-solar PV) renewable energy is in use.	
4.5 Solar PV - Houses and Townhouses		0%  Disabled
This credit is disabled	No solar PV renewable energy is in use.	

Stormwater Overall contribution 14% Minimum required 100%

Which stormwater modelling software are you using?:		Melbourne Water STORM tool
1.1 Stormwater Treatment		100%
Score Contribution	This credit contributes 100% towards the category score.	
Criteria	Has best practice stormwater management been demonstrated?	
Question	STORM score achieved	
Project	103	
Output	Min STORM Score	
Project	100	

IEQ Overall contribution 10% Minimum required 50%

2.2 Cross Flow Ventilation		100%
Score Contribution	This credit contributes 20% towards the category score.	
Criteria	Are all habitable rooms designed to achieve natural cross flow ventilation?	
Question	Criteria Achieved ?	
Townhouse	Yes	
3.1 Thermal comfort - Double Glazing		100%
Score Contribution	This credit contributes 40% towards the category score.	
Criteria	Is double glazing (or better) used to all habitable areas?	
Question	Criteria Achieved ?	
Townhouse	Yes	
3.2 Thermal Comfort - External Shading		0%
Score Contribution	This credit contributes 20% towards the category score.	
Criteria	Is appropriate external shading provided to east, west and north facing glazing?	
Question	Criteria Achieved ?	
Townhouse	No	
3.3 Thermal Comfort - Orientation		0%
Score Contribution	This credit contributes 20% towards the category score.	
Criteria	Are at least 50% of living areas orientated to the north?	
Question	Criteria Achieved ?	
Townhouse	No	

Transport Overall contribution 4%

1.1 Bicycle Parking - Residential		100%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	How many secure and undercover bicycle spaces are there for residents?	
Question	Bicycle Spaces Provided ?	
Townhouse	2	
Output	Min Bicycle Spaces Required	
Townhouse	2	
1.2 Bicycle Parking - Residential Visitor		N/A ✦ Scoped Out
This credit was scoped out	Not enough dwellings.	
2.1 Electric Vehicle Infrastructure		0%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	Are facilities provided for the charging of electric vehicles?	
Question	Criteria Achieved ?	
Project	No	

Waste Overall contribution 3%

1.1 - Construction Waste - Building Re-Use		0%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	If the development is on a site that has been previously developed, has at least 30% of the existing building been re-used?	
Question	Criteria Achieved ?	
Project	No	
2.1 - Operational Waste - Food & Garden Waste		100%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	Are facilities provided for on-site management of food and garden waste?	
Question	Criteria Achieved ?	
Project	Yes	

Urban Ecology Overall contribution 2%

2.1 Vegetation	75%
Score Contribution	This credit contributes 50% towards the category score.
Criteria	How much of the site is covered with vegetation, expressed as a percentage of the total site area?
Annotation	At least 20% of the site (117sqm total) will be covered with vegetation
Question	Percentage Achieved ?
Project	20 %
2.2 Green Roofs	0%
Score Contribution	This credit contributes 12.5% towards the category score.
Criteria	Does the development incorporate a green roof?
Question	Criteria Achieved ?
Project	No
2.3 Green Walls and Facades	0%
Score Contribution	This credit contributes 12.5% towards the category score.
Criteria	Does the development incorporate a green wall or green façade?
Question	Criteria Achieved ?
Project	No
2.4 Private Open Space - Balcony / Courtyard Ecology	0%
Score Contribution	This credit contributes 12.5% towards the category score.
Criteria	Is there a tap and floor waste on every balcony and courtyard (including any roof terraces)?
Question	Criteria Achieved ?
Townhouse	No
3.1 Food Production - Residential	0%
Score Contribution	This credit contributes 12.5% towards the category score.
Criteria	What area of space per resident is dedicated to food production?
Question	Food Production Area
Townhouse	-
Output	Min Food Production Area
Townhouse	2 m²

Innovation Overall contribution 0%

1.1 Innovation	0%
Score Contribution	This credit contributes 100% towards the category score.
Criteria	What percentage of the Innovation points have been claimed (10 points maximum)?

Disclaimer

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Tree Report

17 River Street

Maribyrnong

Date: September 2024

Prepared for:

Designs Plus

Prepared by:

Glenn Knight B.Ap.Sc. Grad.Dip. (Hort)

INTRODUCTION

1.1 **Brief:** I received several Emails from Joe Canturi and on the 21st of August I received an Email asking me to write a report on four trees in front of 17 River Street, Maribyrnong.

1.2 **Documents and information provided:**

I was provided with a copy of the following documents:

- A survey plan
- Part of a letter from council

1.3 **Qualifications and experience:** I have based this report on my site observations, past experience, and the provided information, and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture of which I include a summary in Appendix 1.

2 SITE VISIT AND OBSERVATIONS / COLLECTION OF DATA

2.1 **Site visit:** I carried out an unaccompanied site visit on the 4th of September 2024 all my observations were from ground level without detailed investigations. The weather at the time of the inspection was slightly overcast and still with good visibility.

2.2 **Brief site description:** 17 River Street is located in the suburb of Maribyrnong. The property is located on the south side of the road between Rowe and Gordon Streets. The surrounding topography is slightly undulating and the property is not particularly exposed.

2.3 **Identification and location of the trees:** Figure 1 is the existing and proposed plans showing the locations of the trees. The TPZ is shown in dark blue and the covered TPZ in light blue. These plans are for illustrative purposes only and should not be used for directly scaling measurements. The scale plans should be consulted in this regard.

2.4 **Collection of basic data:** I inspected each of the four trees and have indicated the numbering on the sketch plan included as Figure 1. I identified obvious groups where appropriate. For each individual tree and group, I collected information on species, condition and health. I have recorded this information in the tree schedule included as Appendix 2. I stress that my inspection was of a preliminary nature and did not involve any climbing or detailed investigation beyond what was visible from accessible points at ground level.

3 CONCLUSIONS

Tree 1 is a Street Tree that has recently been planted so it has a very low amenity value and will need to be removed. It could be replanted elsewhere.

Tree 2 is also a Street Tree but it is older and does contribute to the Streetscape and should be retained.

Tree 3 is a Liquidambar that has had its top chopped off in the past. This has caused the upper central branches to rot. This central section also has co-dominate stems with included bark. Having had the top removed has made the side branches grow and most of them are attached with included bark forks. So this tree is unstable and is also damaging the concrete veranda, it needs to be removed.

Tree 4 is a Jacaranda that is 520mm from the side fence. It is not a good shape as it has a low fork. Below this fork on the east side there is a bulge. The cambium of a tree grows where it is stressed so I would assume that this fork is cracked inside the tree and the tree is packing on wood to hold its self together. Because of this I reduced its ULE. This tree is not a good enough specimen to warrant it being retained.

3 IMPACT ASSESSEMENT

Tree1 will loose half of its trunk therefore 50% of its TPZ it can not survive this and will need to be transplanted or removed.

Tree 2 will not be affected by this development.

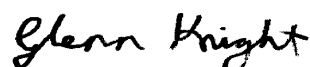
Tree 3 will loose its trunk and 62% of its TPZ so it will need to be removed.

Tree 4 will loose around 25% of its TPZ and its trunk is right next to the proposed building so it will need to be removed or it will die and maybe fall over.

4 TREE PROTECTION

The Maple at the front will need to be protected during demolition and construction. A fence should be set up on the nature strip as shown in blue on Figure 1. This fence could be made with temporary fence panels they must extend at least 2m each side of the tree. Nothing should be stored in this area to stop compaction or damage to the tree.

Yours faithfully



Glenn Knight B.Ap.Sc.Grad.Dip. (Hort)

FIGURE 1

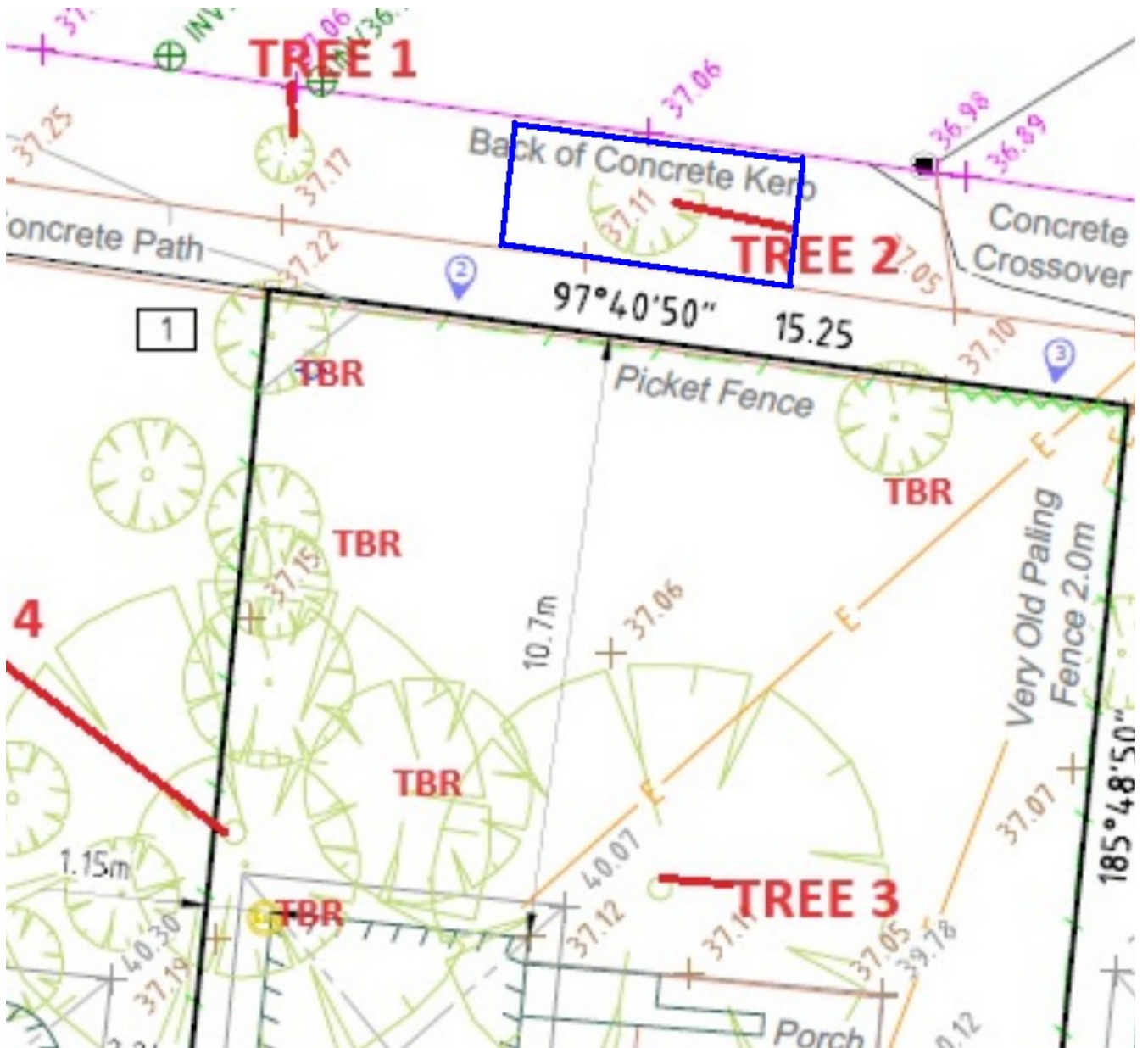
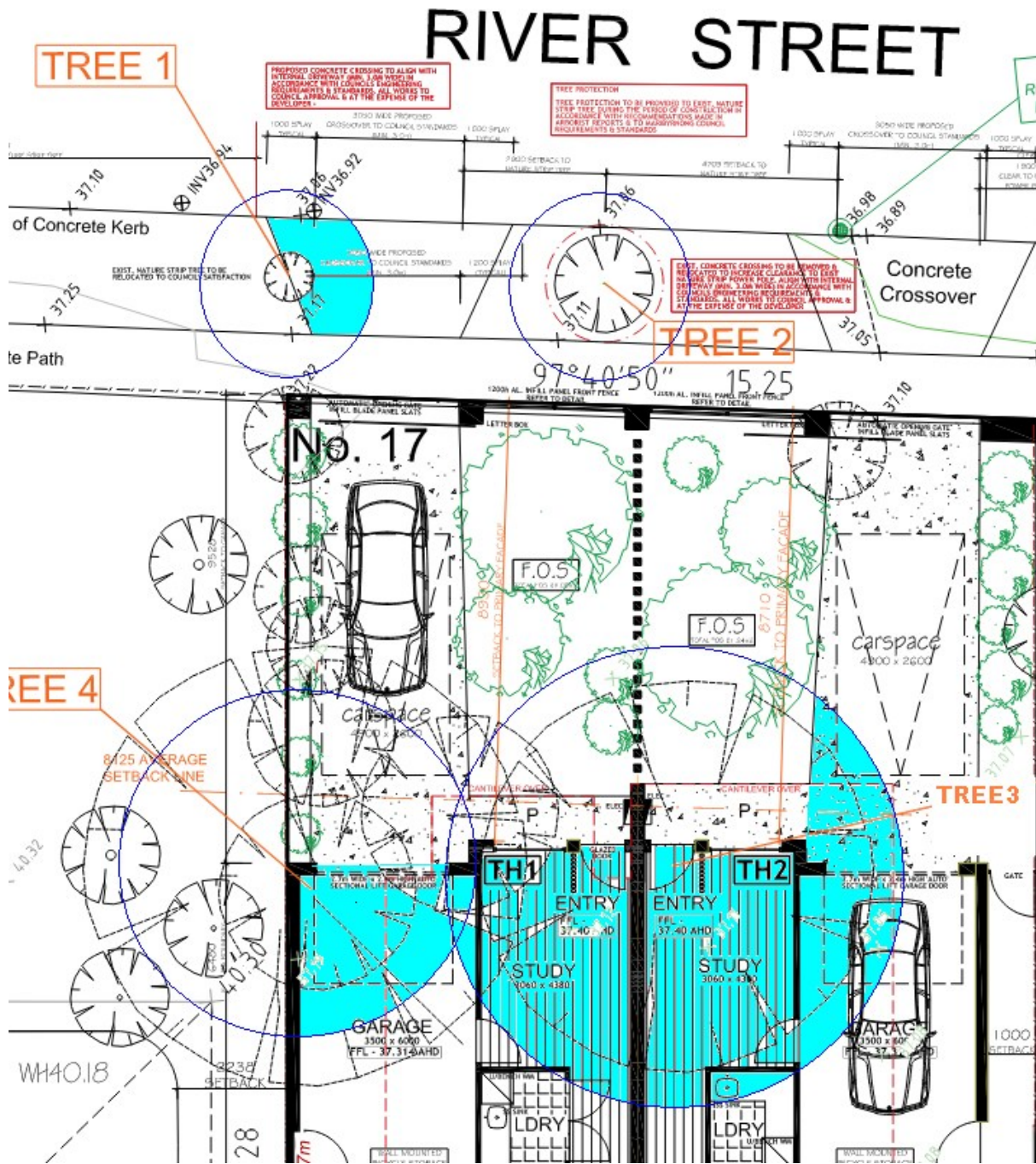


FIGURE 1



Appendix 1

Brief qualifications and experience of Glenn Knight

1. **Qualifications:** Bachelor of Applied Science (Chemistry) 1976.

Graduate Diploma in Horticulture 1986. During this time I completed the arboricultural section of both the Degree and the Associate Diploma courses.

2. **Practical experience:** I have worked as a tree surgeon intermittently since 1975 for a number of different people. From 1980 to 1986 I owned and ran a wholesale plant nursery as well as working for a local arboriculturalist. In 1987, 1988 & 1989 I taught arboriculture prac at Burnley. I joined the Australian Arboricultural Association in 1986 and was a member until it folded. I served on its executive committee for 3 years. Over this time we had a lot of input into the Australian Standard, AS4373-1996 Pruning of Amenity Trees. I was also on a committee to discuss training levels in the arboricultural industry. I ran Knights Tree Surgery from 1989 to 2007 and worked in a partnership as a tree surgeon for a few years before that. During this time I have worked for The National Trust, The Victorian Garden Scheme, Heritage Victoria, various government departments and many municipal councils.
3. **Continuing professional development:** I attend many arboricultural conferences put on by the ISA and others and I am currently a member of the Victorian Tree Industry Organisation.

APPENDIX 2

	<i>Botanical Name</i>	<i>Common Name</i>	<i>Native / exotic</i>	<i>HxW m</i>	<i>DBH mm</i>	<i>Dia m</i>	<i>TPZ M</i>	<i>SRZ m</i>	<i>Comments</i>
1	Acer buergerianum	trident maple	Exotic	3 x 0.5	25	30	2	1.5	Street Tree
2	Acer buergerianum	trident maple	Exotic	3.5 x 2	90	110	2	1.5	Street Tree
3	Liquidambar styraciflua	Liquidambar	Exotic	5 x 2	391	462	4.7	2.4	Included bark forks rotten top needs to be removed
4	Jacaranda mimosifolia	Jacaranda	Exotic	6 x 3	294	353	3.5	2.1	Possible faulty fork at base

	<i>Botanical Name</i>	<i>Age</i>	<i>Health</i>	<i>Structure</i>	<i>ULE</i>	<i>Amenity value</i>	<i>Arb value</i>	<i>Comments</i>
1	Acer buergerianum	Juvenile	Good	Good	20+	Very low	Remove	Street Tree
2	Acer buergerianum	Juvenile	Good	Good	20+	Medium	High retention	Street Tree
3	Liquidambar styraciflua	Semi-mature	Good	Poor	0	Medium	Remove	
4	Jacaranda mimosifolia	Semi-mature	Good	Fair	5-10	Medium	Medium retention	

APPENDIX 2

Explanatory Notes

Age:

Juvenile: Tree has recently been planted and is still in its establishment phase. Tree currently makes little contribution to the amenity of the landscape. Trees of this age are possible candidates for relocation during development.

Semi-mature: Tree has established. It still has not developed its mature habit. It is starting to contribute to the landscape. The size of the tree would still be expected to increase considerably given no significant changes to the current situation.

Mature: Tree has or is close to reaching its full potential and expected size. Growth has slowed, and the size of Tree is not exhibiting any major signs of health or structural weakness because of age.

Over mature: Tree is no longer actively putting out extension growth, and is starting to show signs of decline in health because of age. Canopy is thinning and signs of die back in the canopy may be present

Health:

Good: Tree is not stressed and shows no obvious signs of pest or disease. It is free of wounding. Annual growth rate is what would be expected of a healthy specimen in the area. There are no signs of die back and canopy is dense. Tree maybe partially suppressed by neighbouring trees.

Fair: Tree is showing signs of reduced health. It maybe drought stressed or show partial signs of pest or disease. Foliage density is less than ideal and may have minor die back. Tree is typical of its species. Remedial works could improve its health.

Poor: Tree is showing signs of stress. Has sparse canopy and possibly stunted growth. Large number of dead branches present or dieback. Likely to have pests or disease. Tree often in decline. Remedial works not expected to improve long-term health.

Dead: Tree shows no signs of life and is not growing.

Note on Deciduous Species: Assessment of deciduous species can be problematic and results may vary depending on the time of year of assessment. Descriptor comments in relation to foliage density do not apply to deciduous trees assessed when dormant or entering or exiting dormancy. Time of leaf drop or bud burst and extent of bud swell may be considered in the health rating of these trees. The ratings indicate that certain characteristics listed have, or have not been observed. Inspections do not assess the whole tree in detail for each characteristic. The comments category should be referred to for further information.

APPENDIX 2

Structure:

As a rule, the structure rating is based on identified faults in the tree habit that reduce trees structural integrity and may lead to part / the entire tree failing. However, it must be noted that this is not a full hazard or failure assessment of the tree.

Good: Tree appears to have no obvious structural defects that would diminish the trees structural integrity.

Fair: The tree has at least one or more obvious structural defects. E.g. dead branches, bifurcation. However, defects are unlikely to prevent the retention of the tree. Judicious remedial intervention could remove structural defects and improve rating.

Poor: Tree has at least one or more structural defects that remedial intervention cannot rectify without significantly reducing the retention value of the tree. These defects reduce the useful life expectancy of the tree.

Hazardous: The tree shows one or more structural faults that are prone to failure and present an immediate safety concern. Judicious intervention to remove structural faults and reduce safety risk would leave a tree not worthy of retention. These trees should be removed as a high priority.

Amenity value:

The amenity value rating considers the impact the tree has on any neighbouring sites as being of equal importance to that supplied to the subject site. However, trees that contribute to the amenity of the general area (e.g. streetscape) are given greater weight.

High: Tree makes a significant contribution to the amenity of the subject site and/or moderate to significant contribution to the amenity of the broader surrounding landscape.

Medium: Tree makes a moderate contribution to the amenity of the site and/or may contribute to the amenity of the broader surrounding area.

Low: Tree makes some contribution to the amenity value of the site, but makes no contribution to the amenity value of the surrounding area. Removal of the tree would result in little loss of amenity. Juvenile are generally included in this category, however they may have the potential to supply increased amenity in the future.

Very Low: Tree makes little or no contribution to the amenity value of the site or surrounding area. In some cases, the tree may be detrimental to the area's amenity value (e.g. weed).

APPENDIX 2

ULE:

The Safe, Useful, Life Expectancy of the tree from a health, structure, amenity and weediness viewpoint given no significant changes to the current situation. This category is difficult to determine, and should be taken as an estimate only, in addition to this, factors not observed at the time of inspection can lead to tree decline.

- 0 yrs.: Tree should be removed due advanced decline/ dead or hazardous.
- 0-5 yrs. Tree is in decline and has poor health or structural that intervention cannot resolve. Often over- mature
- 5-10yrs. Tree of fair health or structure
- 10-20. Semi-mature, mature tree of fair health and structure
- 20+ yrs. Juvenile, semi-mature tree or long lived species of good health and structure.

Arboricultural Value:

There Arboricultural Values shown in the table below have been calculated on the ULE of the tree which considers the tree's structure and health rating and its significance in the landscape.

The retention value assists in determining the positioning of structures and infrastructure outside the tree's identified TPZ.

APPENDIX 2

ULE	Amenity Value			
	High	Medium	Low	Very Low
20+ yrs.	High Retention		Low	Very Low
10-20 yrs.				
5-10 yrs.	Medium Retention			
0-5 yrs.	Low Retention			
0 yrs.	Remove			

APPENDIX 2

- **Mathematical abbreviations:** > = Greater than; < = Less than.
- **Measurements/estimates:** All dimensions are estimates unless otherwise indicated. Measurements taken with a tape or clinometer are indicated with a '*'. Less reliable estimated dimensions are indicated with a '?'.
- **Species:** The species identification is based on visual observations and the common name of what the tree appeared to be is listed first, with the botanical name after in brackets. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicated with a '?' after the name in order to avoid delay in the production of the report. The botanical name is followed by the abbreviation sp if only the genus is known. The species listed for groups and hedges represent the main component and there may be other minor species not listed.
- **Height:** Height is estimated to the nearest metre.
- **Width:** The maximum crown spread is visually estimated to the nearest metre from the tips of the live lateral branches.
- **Diameter:** These figures relate to measurements taken above the root buttress and are recorded in millimetres. If appropriate, diameter is measured with a diameter tape. 'Multi' indicates trees or shrubs with multiple stems; if a diameter is given it is calculated by adding the individual cross sectional areas together and calculating a diameter.
- **DBH:** Diameter breast height is the diameter measured 1.4m from the ground.
- **Distance to Structures:** This is estimated to the nearest metre and intended as an indication rather than a precise measurement.
- **SRZ:** Structural Root Zone from AS4970-2009 this is the area required for tree stability.
- **TPZ:** Tree Protection Zone from AS4970-2009 this is the area needed to keep a viable tree.
- **Included Bark Fork:** Included bark forks are forks that have bark between where the branches touch. Every year both of these branches or trunks increase in diameter which means that they are forced further and further apart until one day the tree splits apart. The wind usually gets blamed when this happens but this is the most common form of branch failure.

PICTURES



Trees 1 & 2



Tree 3



Tree 3 hacked top



Tree 3 bi-forked top



Tree 3 included bark forks



Tree 3 included bark forks



Tree 3 included bark forks



Tree 4



Tree 4 bulge



Tree 4 Base