HUME CITY COUNCIL

Office Use Only

Application No.: Date Lodged: / /

Application for
Planning Permit

Planning Enquiries
Phone: 03 9205 2200
Web: http://www.hume.vic.gov.au

If you need help to complete this form, read How to complete the Application for Planning Permit 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 concerns, please contact Council's planning department.

⚠ **Questions marked with an asterisk (*) are mandatory and must be completed.**

⚠ **If the space provided on the form is insufficient, attach a separate sheet.**

Clear Form

The Land

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

Street Address *

Unit No.: | St. No.: 35 | St. Name: Bicentennial Cresent

Suburb/Locality: Meadow Heights | Postcode:3048

Formal Land Description *
Complete either A or B.

⚠ This information can be found on the certificate of title.

A Lot No.: 2175 ◯ Lodged Plan ◯ Title Plan ◉ Plan of Subdivision No.: 216218J

OR

B Crown Allotment No.: | Section No.:

Parish/Township Name:

If this application relates to more than one address, please click this button and enter relevant details. Add Address

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.

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

If you need help about the proposal, read: How to Complete the Application for Planning Permit Form

Proposal of 8 double story dwellings to the rear of existing dwelling with proposed alterations to existing dwelling

Provide additional information on 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.

(3) **Estimated cost of development for which the permit is required ***

Cost $2,300,000 ⚠ You may be required to verify this estimate. Insert `0' if no development is proposed.

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 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

(4) **Describe how the land is used and developed now ***

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

existing double story dwelling

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

Title Information

5 Encumbrances on title *

If you need help about the title, read: How to complete the Application for Planning Permit form

Does the proposal breach, in any way, an encumbrance on title such as a restrictrive 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', eg. restrictive covenants.)

Applicant and Owner Details

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

Applicant *

The person who wants the permit.

Name:

Title: Mr | First Name: Jake | Surname: Da Ros

Organisation (if applicable): Planform

Postal Address: | If it is a P.O. Box, enter the details here:

Unit No.: | St. No.: | St. Name: Po Box 576

Suburb/Locality: South Morang | State: VIC | Postcode: 3752

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 (if so, go to 'contact information') ☑

Name:

Title: Mr | First Name: Jake | Surname: Da Ros

Organisation (if applicable): Planform

Postal Address: | If it is a P.O. Box, enter the details here:

Unit No.: | St. No.: | St. Name: Po Box 576

Suburb/Locality: South Morang | State: VIC | Postcode: 3752

*Please provide at least one contact phone number **

Contact information

Business Phone: 0431020698 | Email: info@planform.com.au

Mobile Phone: | Fax:

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.

Same as applicant ☐

Name:

Title: | First Name: | Surname:

Organisation (if applicable): 35 BICENTENNIAL PTY LTD

Postal Address: | If it is a P.O. Box, enter the details here:

Unit No.: | St. No.: [redacted] | St. Name: [redacted]

Suburb/Locality: [redacted] | State: VIC | Postcode: 3064

Owner's Signature (Optional):

Date: 31/5/2022 (day / month / year)

Declaration

7 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: JDaRos

Date: 31/5/2022 (day / month / year)

Need help with the Application?

If you need help to complete this form, read How to complete the Application for Planning Permit form
General information about the planning process is available at www.delwp.vic.gov.au/planning

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

8 **Has there been a pre-application meeting with a Council planning officer?**

(•) No ( ) Yes

Checklist

9 **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 (eg 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 (section 7)?

Lodgement

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

Hume City Council
PO Box 119 Dallas VIC 3047
Pascoe Vale Road Broadmeadows VIC 3047

Contact information:

Telephone: 61 03 9205 2200
Email: email@hume.vic.gov.au
DX: 94718
Translation: 03 9205 2200 for connection to Hume Link's multilingual telephone information service

Deliver application in person, by fax, or by post:

Print Form

Make sure you deliver any required supporting information and necessary payment when you deliver this form to the above mentioned address. This is usually your local council but can sometimes be the Minister for Planning or another body.

Save Form:

Save Form To Your Computer

You can save this application form to your computer to complete or review later or email it to others to complete relevant sections.

APPROX. TRUE NORTH

NAIL IN RAIL
PAL
0.04 PAL
PAL
0.12 POST
N.F

NAIL IN RAIL
PAL

OLD LEANING PALING
82°49'20"
(96.15)

RIVET
0.03
0.04
N.F

BICENTENNIAL CRESCENT

156°29'40"
20.68
N.F
0.07
SPIKE

SINGLE STOREY BRICK DWELLING
SPLIT LEVEL WEATHERBOARD EXTENSION & CAR PORT
BALCONY

Lot 2175
LP216218J
1991m²

DRAINAGE & SEWERAGE & MUNICIPAL PURPOSES RESERVE

0°00' 20m

N.F
0.26
OLD DILAPIDATED PALING
E-1 (2m)

(104.47)
0.04
0.08
0.04 POST
PRESSED STEEL
N.F

262°49'20"
RECENT PALING
0.17
PRESSED STEEL

32.66

E-1 (2m)
0.08
0.05
OLD DILAPIDATED PALING

NAILS 0.50m x 0.50m OFFSET
RECENT PALING
NOT FENCED
PAL
PALING

3m

MACALISTER COURT

PAL
0.25 PAL
PAL
NAILS 0.50m x 0.50m OFFSET
0.11 POST
PAL
0.07

PLAN OF SURVEY
TITLE RE-ESTABLISHMENT SURVEY

COUNTY OF BOURKE
PARISH OF YUROKE
SECTION 4
CROWN ALLOTMENT □(PART)

PARCEL PARTICULARS□
TITLE□ -
LAST PLAN REF□ LP216218□ L□□2175
ADDRESS□ 35 B□□□□□□□□□Cr□□□□□□M□□d□□ H□□□□□

EASEMENTS□
E-1...Dr□□□□□ □ S□□ r□□□ E□□□m□□□(2m □d□)

NOTES□
T□□ □□d □ □□□ □r□□□ □ □□□□ □ □□□□□□d □□ □□□□ □□□□□□□□ □□□□

P□□□□□ □□□□□□ □ □□□□□□□□ □r□□□□□ □ □□□ □□□□d□r□ □□□ □□□□ □□□□□□r□□d □r □□r□□□□□ □□r□□□□□R□□□□□□□□ □d□□□d □□ □rr□□ d □□□□

CERTIFICATION BY SURVEYOR
I□A□□□□□ F□rd L.S. □□r□□ □□□□□□ □□□ □rr□□□ r□r□□□□ □□ □□□□r□d □□ □□d □□r□□ □□ □□ 05.12.2018

.....
L□□□d S□r□□r
D□□ 6□ D□□m□r 2018

SCALE□
1□350 □ A3
LENGTHS ARE IN METRES 3.5 0 3.5 7 10.5 14

REF□4507 VERSION□01 AMENDMENT DATE□
SHEET 1 OF 1 SHEETS SHEET SIZE□ A3

anthony ford + ASSOCIATES
Licensed Land Surveyors
Development Consultants
Town Planners
Tel 9370 9925 | Fax 9372 8796 | PO Box 148 Ascot Vale Vic 3032
info@anthonyfordsurveying.com.au | www.anthonyfordsurveying.com.au

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

VOLUME 09952 FOLIO 055

Security no : 124097974643C
Produced 31/05/2022 10:34 AM

LAND DESCRIPTION

Lot 2175 on Plan of Subdivision 216218J.
PARENT TITLE Volume 09940 Folio 104
Created by instrument LP216218J 24/05/1990

REGISTERED PROPRIETOR

[redacted]

35 BICENTENNIAL PTY LTD of 6 MCPHERSON BOULEVARD ROXBURGH PARK VIC 3064
AM129837W 25/08/2015

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE AM129838U 25/08/2015
WESTPAC BANKING CORPORATION

COVENANT (as to whole or part of the land) in instrument P913740G 20/07/1990

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 LP216218J FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

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

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

Street Address: 35 BICENTENNIAL CRESCENT MEADOW HEIGHTS VIC 3048

ADMINISTRATIVE NOTICES

NIL

eCT Control 16320Q WESTPAC BANKING CORPORATION
Effective from 22/10/2016

DOCUMENT END

Imaged Document Cover Sheet

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

Document Type	**Instrument**
Document Identification	**P913740G**
Number of Pages (excluding this cover sheet)	**3**
Document Assembled	**31/05/2022 10:36**

Lodged at the Titles Office by

Titles Office Use Only
DO NOT WITHDRAW WITHOUT REFERENCE TO P.E.C. – CAVEAT OFFICER
P913740G

Code

VICTORIA — TRANSFER OF LAND

CAVEAT

Subject to the encumbrances affecting the land including any created by dealings lodged for registration prior to the lodging of this instrument the transferor for the consideration expressed at the request and by the direction of the directing party (if any) transfers to the transferee the estate and the interest specified in the land described together with any easement hereby created and subject to any easement hereby reserved or restrictive covenant herein contained or covenant created pursuant to statute and included herein. (Notes 1-4)

Land (Note 5)

CERTIFICATE OF TITLE VOLUME 9952 FOLIO 055

STAMP DUTY VICTORIA
U#01C#1 S#1 T#037950 00049451 17/07/90
R#139993 D#44 $1,233.00

Consideration (Note 6)

FIFTY NINE THOUSAND SEVEN HUNDRED DOLLARS ($59,700.00)

Transferor (Note 7)

URBAN LAND AUTHORITY

Transferee (Note 8)

[redacted]

Estate and Interest (Note 9)

All ~~our~~ its estate and interest in the fee simple

Directing Party (Note 10)

Creation (or Reservation) of Easement and/or Covenant (Notes 11-12)

see overleaf

Comptroller of Stamps Use Only
CODE 44
DUTY $ 1233.
STATUS V
TYPE
VALUE $ 59700
TOP 1

T2 Office Use Only

A memorandum of the within instrument has been entered in the register book.

OFFICE OF TITLES VICTORIA

S.R.

Approval No. T2/1 LJE 13/8/90

~~The Purchaser for himself his heirs, executors, administrators and transferees~~ the registered proprietor or proprietors for the time being of the land hereby sold and every part thereof COVENANTS ~~with~~ the Vendor that the transfer of the land hereby sold will incorporate a covenant in the following form which it is intended shall ~~run with the land and appear on the Certificate of Title to issue in relation to the land:~~

"The Transferee HEREBY for himself his heirs executors administrators and transferees the registered proprietor or proprietors for the time being of the lot hereby transferred COVENANTS with URBAN LAND AUTHORITY pursuant to the provisions of Section 14 of the Urban Land Authority Act 1979 that:

(a) he will within a period of five years following the date hereof erect or cause to be erected on the said land one house only for his own occupation and occupy that house as his home for a period of at least twelve (12) months (unless Urban Land Authority shall consent to a lessor period which consent shall not be unreasonably withheld)' and

(b) he will not use the said house for display purposes

and it is intended that this covenant shall appear as an encumberance affecting the same and every part thereof on the Certificate of Title to be issued in respect of the Lot hereby transferred and FURTHER that this covenant shall forever run at Law."

Date 13 JUL 1990 (Note 13)

Execution and Attestation (Note 14)

THE COMMON SEAL of URBAN LAND AUTHORITY)
was hereunto affixed in the presence of:)

..... *Chairman*

..... ~~*Property Manager*~~
SALES ADMINISTRATION MANAGER

URBAN LAND AUTHORITY
THE COMMON SEAL OF

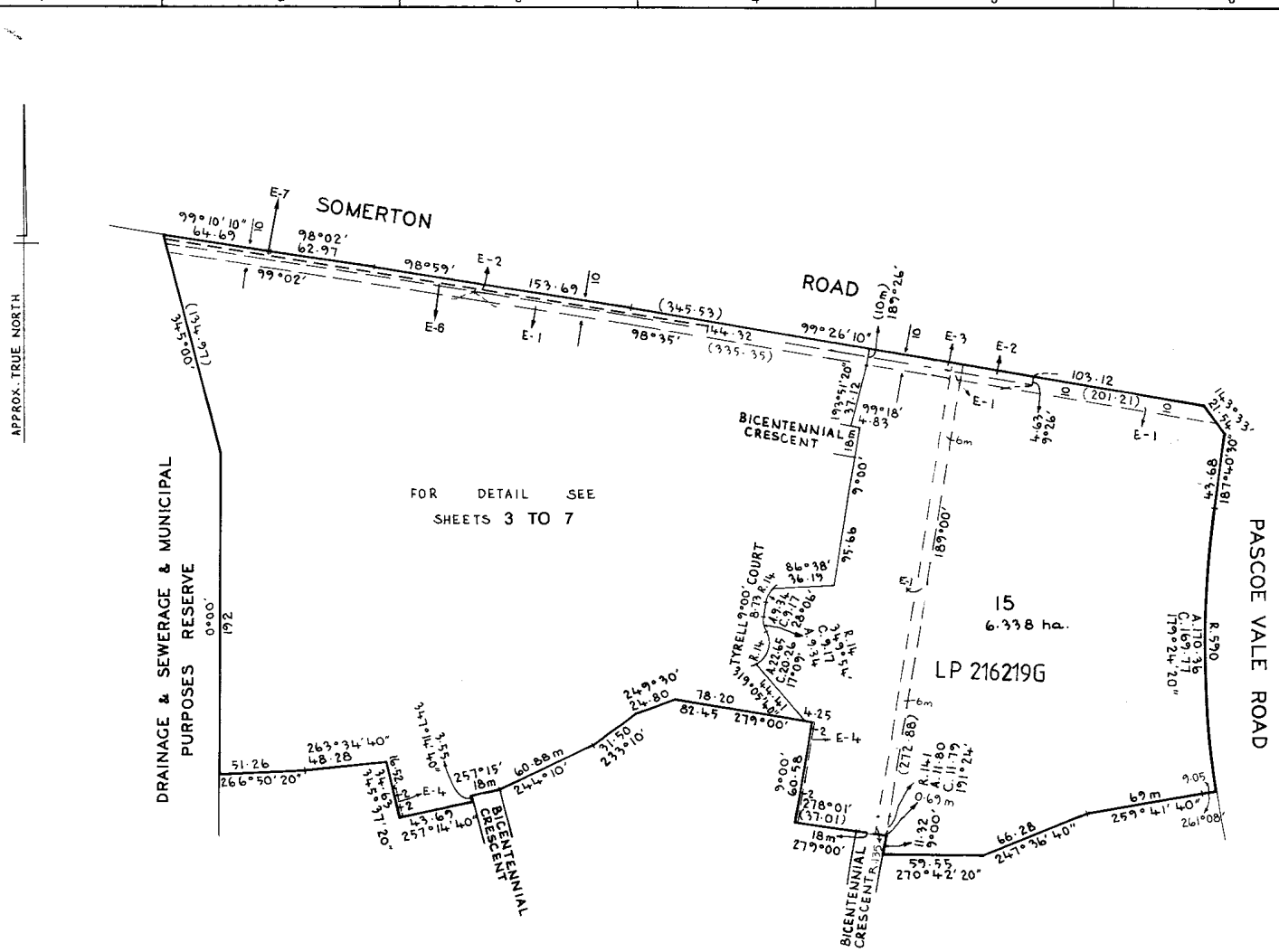
SIGNED by the Transferees in)
the presence of:)
)

.....

Imaged Document Cover Sheet

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

Document Type	**Plan**
Document Identification	**LP216218J**
Number of Pages (excluding this cover sheet)	**7**
Document Assembled	**31/05/2022 10:36**



OFFICE USE ONLY

LP216218J
EDITION 7

CH 19

NOTATIONS

LAND SUBJECT TO EASEMENT

SEE SHEET 2 FOR EASEMENT INFORMATION

ROADS WITHIN THE THICK LINES FOR WAY, DRAINAGE, SEWERAGE AND THE SUPPLY OF WATER, ELECTRICITY, TELEPHONE AND GAS.

LOT NUMBERS 1 TO 14 (BOTH INCLUSIVE) 16 TO 2167 (BOTH INCLUSIVE), 2172, 2243, 2244, 2245 AND 2265 TO 2331 (BOTH INCLUSIVE) HAVE BEEN OMITTED FROM THIS PLAN.

TO BE COMPLETED WHERE APPLICABLE
THIS SURVEY HAS BEEN CONNECTED TO PERMANENT MARKS NOS:
IN PROCLAIMED SURVEY AREA NO.

THE LAND TO BE SUBDIVIDED IS SHOWN ENCLOSED BY THICK LINES

TITLE REF: VOL 9940 FOL 104
LAST PLAN REF: LOT 14 L.P. 215145Q (4696/15)

CERTIFICATION BY SURVEYOR

I, of
certify that this plan has been prepared from a survey made under my immediate direction and supervision, in accordance with the *Surveyors Act 1978* and completed on
and that this plan is accurate and correctly represents the adopted boundaries and the classification of the survey is
Date:

Licensed Surveyor,
Surveyors Act 1978

AMENDMENTS
E-5 EASEMENT ADDED TO LOTS 2246 & 2183.

PEYTON WAITE PTY. LTD.
CONSULTING LAND SURVEYORS
353 PLENTY ROAD PRESTON 3072
PHONE 478 4933

SURVEYORS REF. 4696/17
Nº OF LOTS 100
AREA 10·12 ha.
PLAN C. c.c

CERTIFICATE OF MUNICIPAL CLERK

MUNICIPALITY CITY OF BROADMEADOWS COUNCIL REF. 2054

LIST OF MODIFICATIONS

LAND	MODIFICATION	DEALING No	A.R.T.	NEW EDN	LAND	MODIFICATION	DEALING No	A.R.T.	NEW EDN
15	RE SUBDIVISION	LP216219G		2					
LOT 2171	RE-SUBDIVISION	PS 303630		3					
LOT 2212	RESUBDIVISION	PS 310245		4					
LOT 2173	RE SUBDIVISION	PS 307729		5					
LOT 2237	SUBDIVISION	PS 317778P		6					
RES. 2	CREATION OF EASEMENT	AK423370X	H.Y.	7					

OFFICE USE ONLY

PLAN APPROVED
AT
ON 24-5-'90

(ASSISTANT) REGISTRAR OF TITLES

PLAN OF SUBDIVISION

COUNTY BOURKE
PARISH YUROKE
SECTION 4
CROWN ALLOTMENT J (PART)
SECTION 5
CROWN ALLOTMENT I (PART)

NUMBER OF SHEETS IN PLAN : 7
NUMBER OF THIS SHEET : 1

SCALE 40 20 0 40 80
LENGTHS ARE IN METRES

ORIGINAL SCALE 1:2000 | SHEET SIZE A2

OFFICE USE ONLY
LP216218J
VICTORIA

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm

ONLY CERTIFICATE A OR CERTIFICATE B TO BE COMPLETED
■ DELETE WORDS NOT APPLICABLE

Creffields

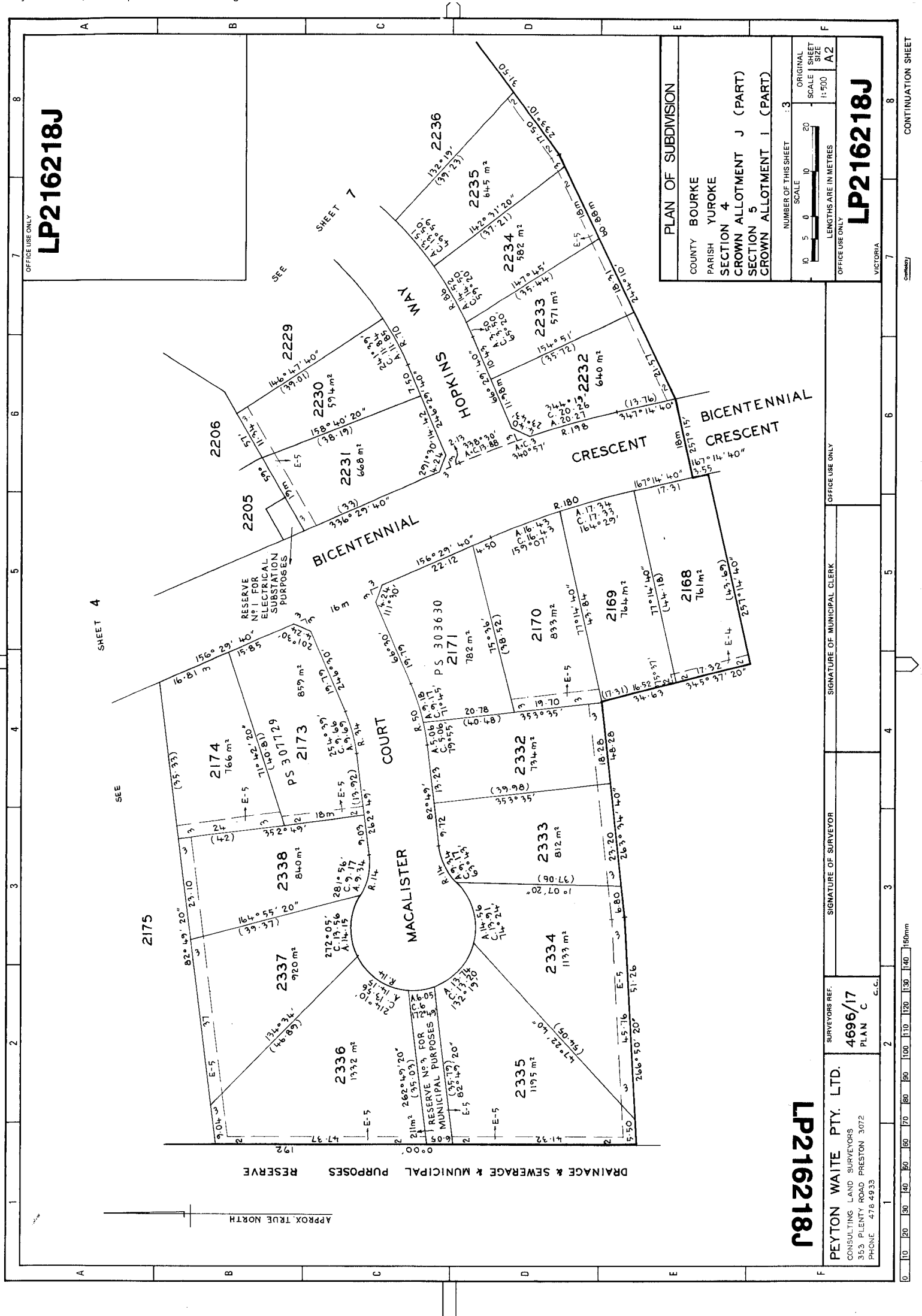
SECTION 12(2) OF THE SUBDIVISION ACT 1988 APPLIES TO THE WHOLE OF THIS PLAN.

PLAN OF SUBDIVISION No: LP216218J

EASEMENT INFORMATION

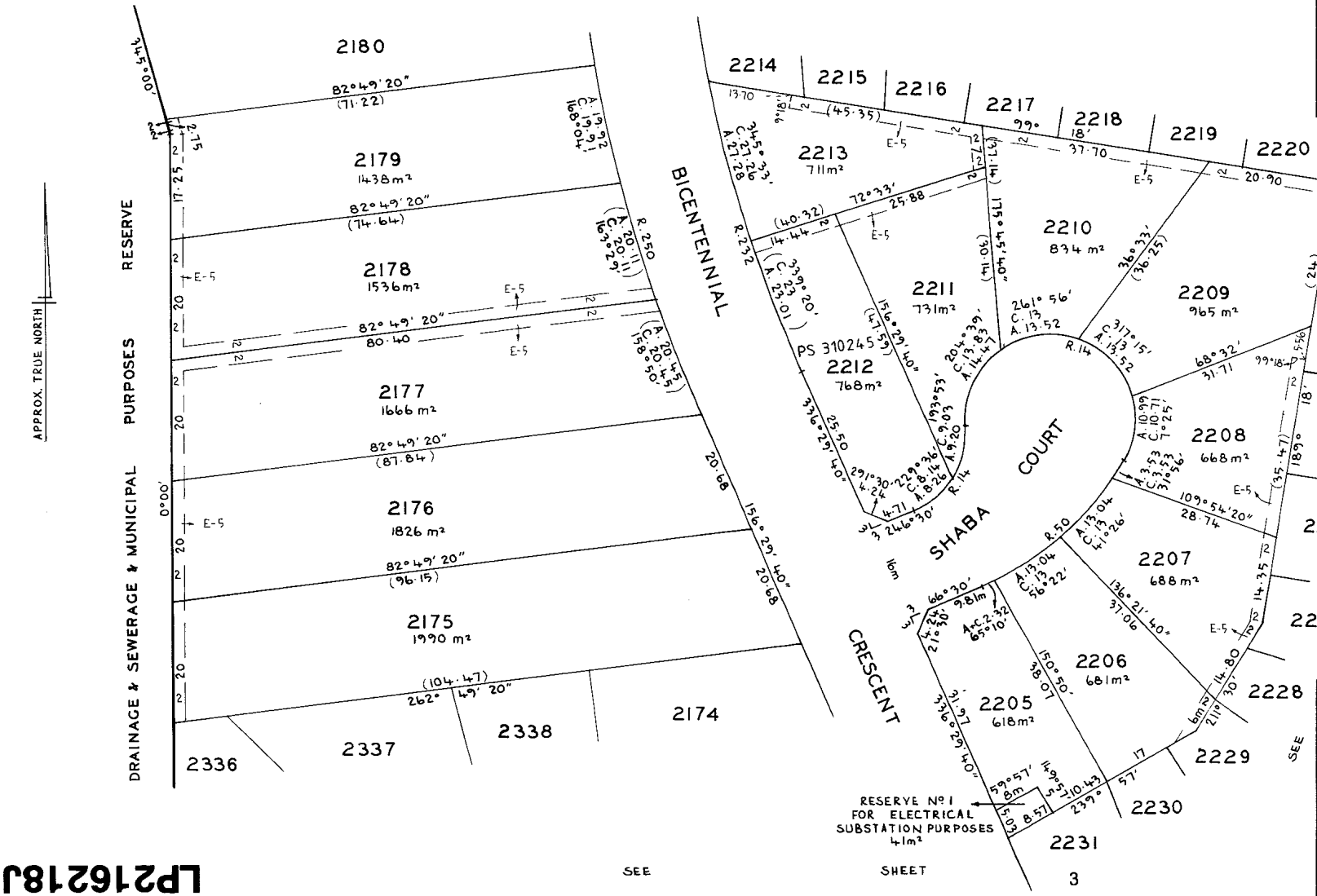
Legend: A - Appurtenant Easement E - Encumbering Easement R - Encumbering Easement (Road)

Easement Reference	Purpose	Width (Metres)	Origin	Land Benefitted / In Favour Of
E-1, E-2, E-3 & E-6	PIPELINE	SEE DIAG.	LP148394P	M.M.B.W
E-2, E-3 & E-7	ELECTRICITY SUPPLY	SEE DIAG.	1617489	S.E.C.V
E-2, E-3 & E-7	ELECTRICITY SUPPLY	SEE DIAG.	LP128784	LOTS ON LP128784
E-4	DRAINAGE AND SEWERAGE	SEE DIAG.	LP215145Q	LOTS ON LP215145Q
E-5	DRAINAGE AND SEWERAGE	SEE DIAG.	THIS PLAN	LOTS ON THIS PLAN
E-6 & E-7	TRANSMISSION OF ELECTRICITY (UNDERGROUND)	SEE DIAG.	AK423370X	JEMENA ELECTRICITY NETWORKS (VIC) LTD



OFFICE USE ONLY

LP216218J



PLAN OF SUBDIVISION

COUNTY BOURKE

PARISH YUROKE

SECTION 4

CROWN ALLOTMENT J (PART)

SECTION 5

CROWN ALLOTMENT I (PART)

NUMBER OF THIS SHEET 4

SCALE 10 5 0 10 20

LENGTHS ARE IN METRES

ORIGINAL SCALE 1:500 SHEET SIZE A2

OFFICE USE ONLY

LP216218J

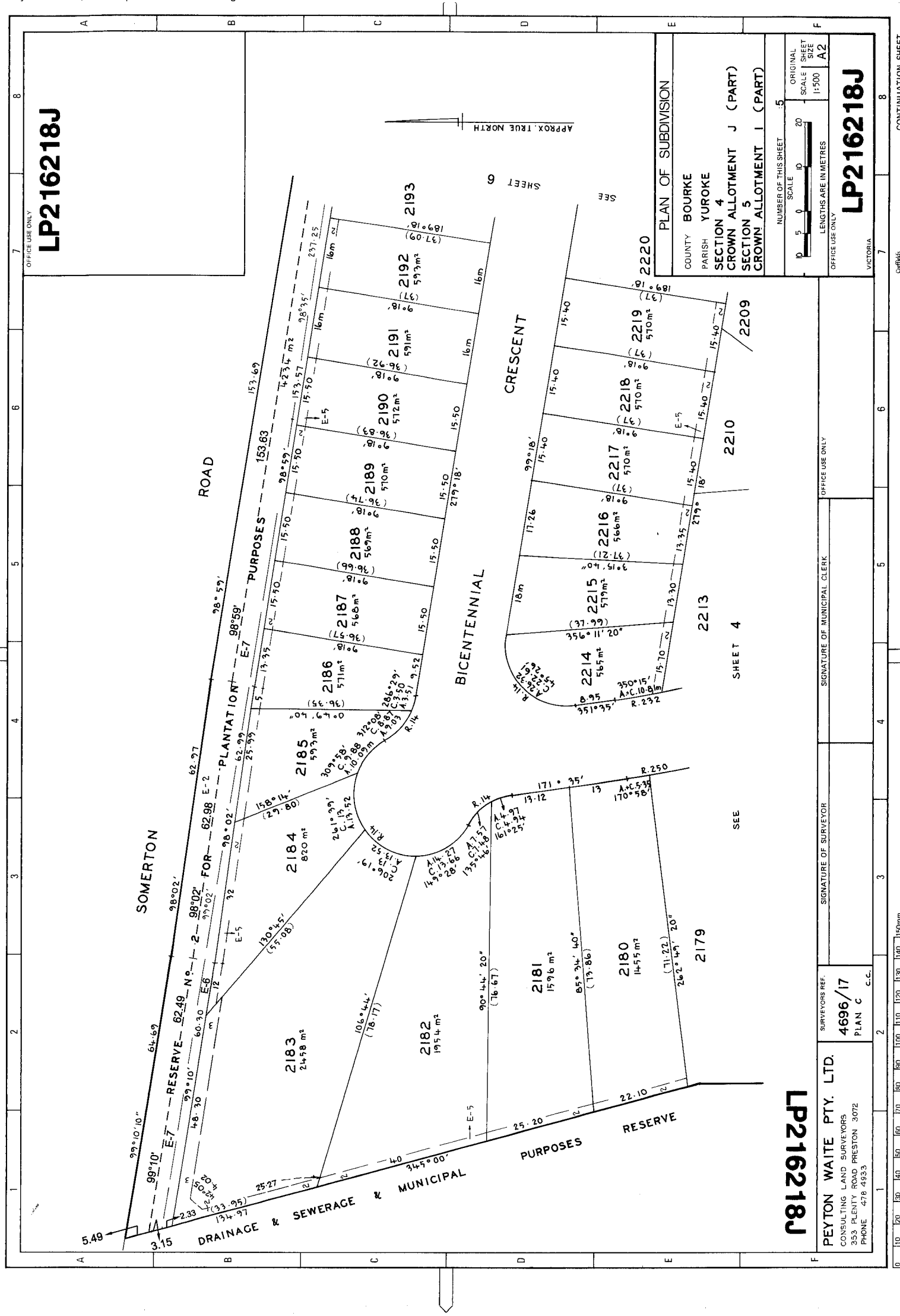
VICTORIA

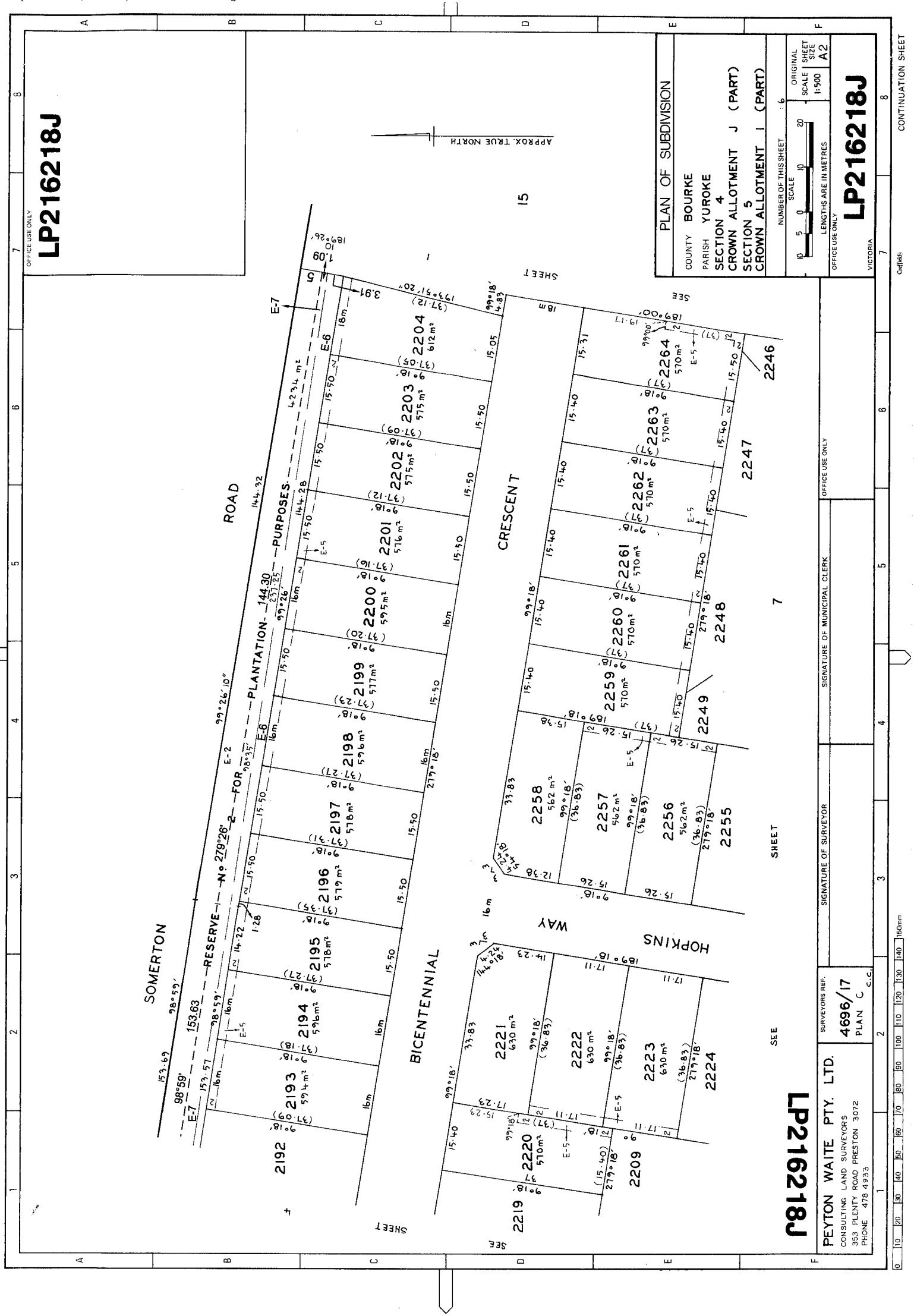
LP216218J

PEYTON WAITE PTY. LTD.	SURVEYORS REF.	SIGNATURE OF SURVEYOR	SIGNATURE OF MUNICIPAL CLERK	OFFICE USE ONLY
CONSULTING LAND SURVEYORS 353 PLENTY ROAD PRESTON 3072 PHONE 478 4933	4696/17 PLAN C c.c.			

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm

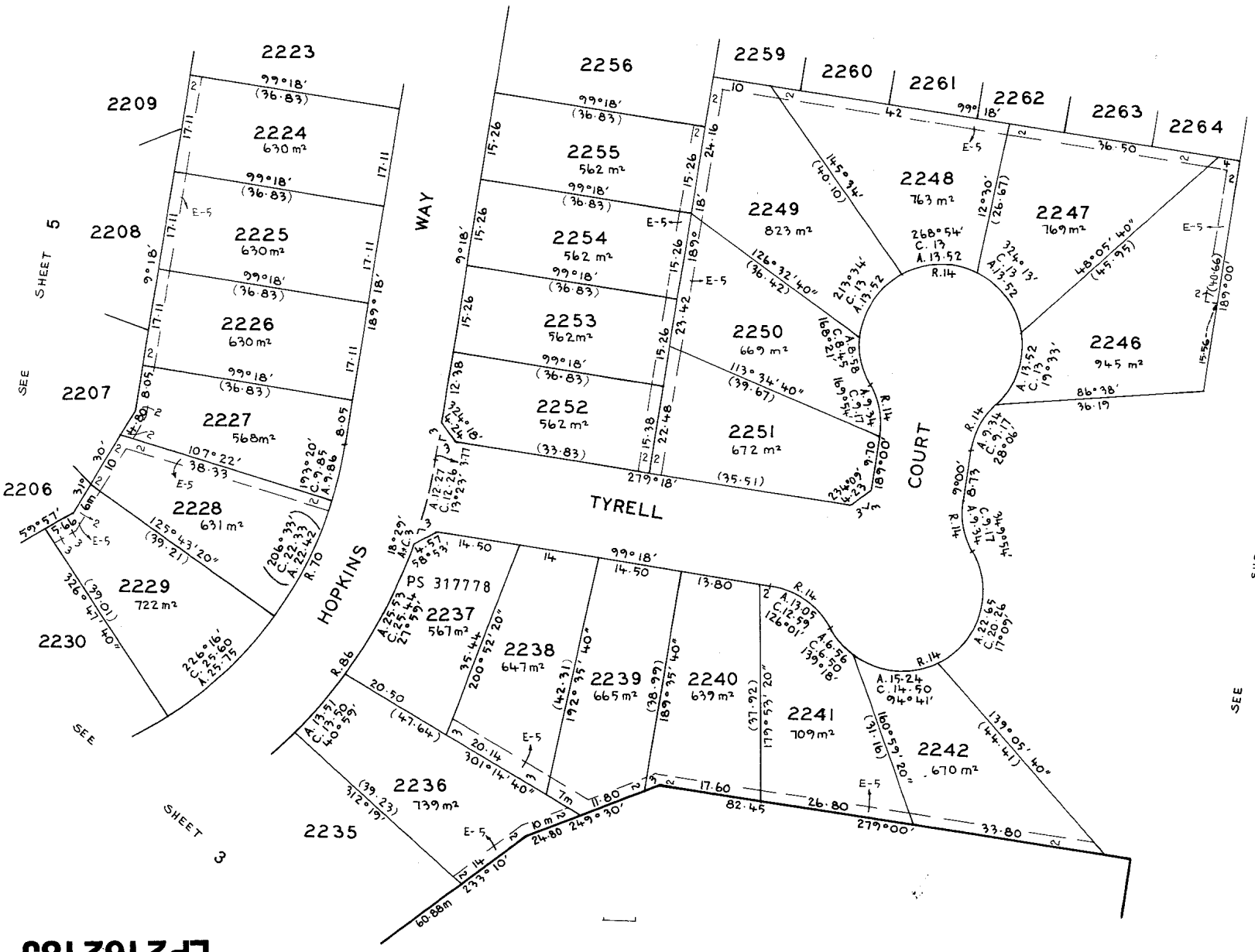
CONTINUATION SHEET





OFFICE USE ONLY

LP216218J



LP216218J

PEYTON WAITE PTY. LTD.	SURVEYORS REF.	SIGNATURE OF SURVEYOR	SIGNATURE OF MUNICIPAL CLERK	OFFICE USE ONLY
CONSULTING LAND SURVEYORS 353 PLENTY ROAD PRESTON 3072 PHONE 478 4933	4696/17 PLAN C.C.			

PLAN OF SUBDIVISION

COUNTY **BOURKE**

PARISH **YUROKE**

SECTION 4
CROWN ALLOTMENT J (PART)
SECTION 5
CROWN ALLOTMENT I (PART)

NUMBER OF THIS SHEET : 7

SCALE 10 5 0 10 20
LENGTHS ARE IN METRES

ORIGINAL SCALE 1:500 SHEET SIZE A2

OFFICE USE ONLY

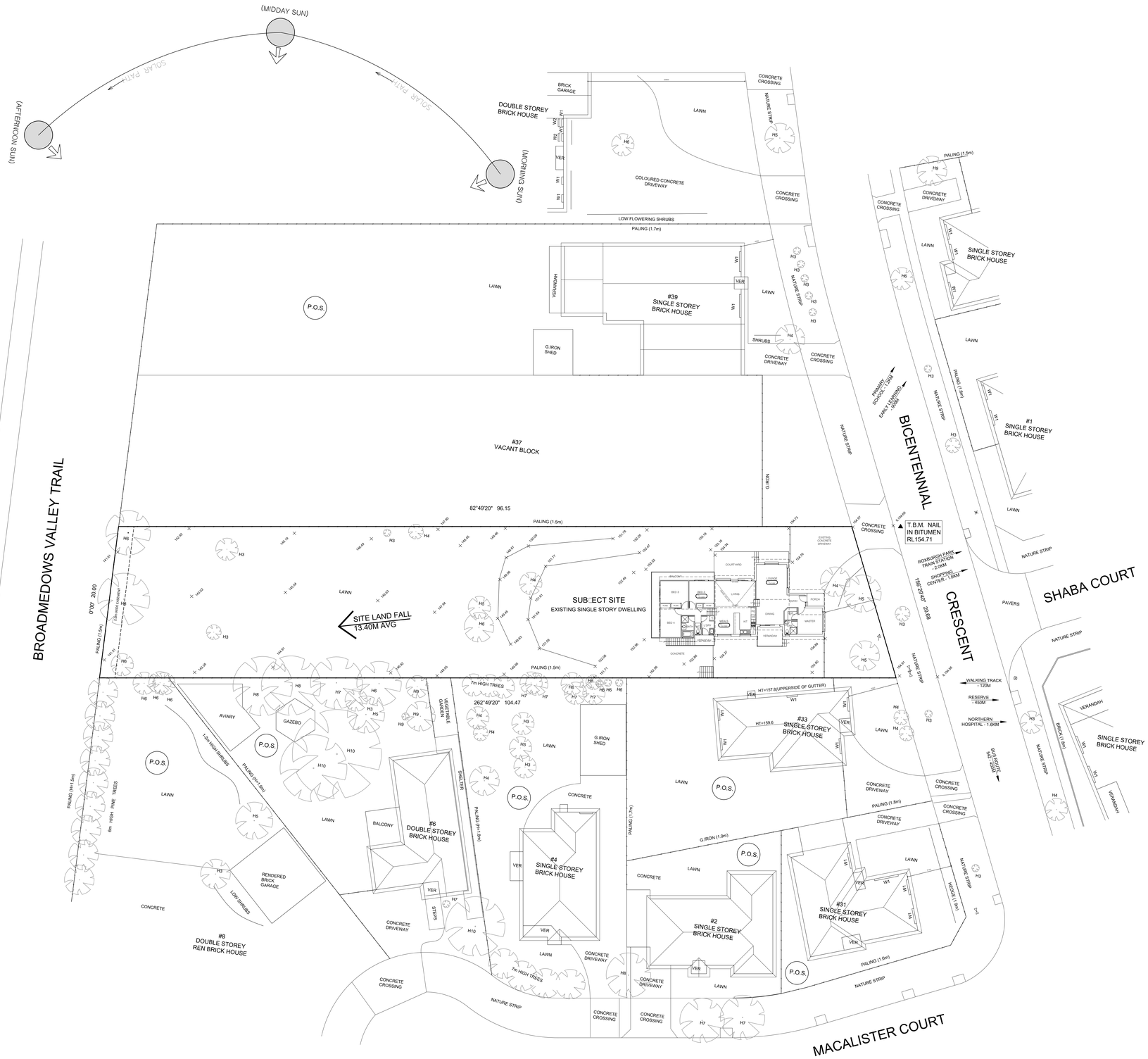
LP216218J

VICTORIA

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm

Creffield

CONTINUATION SHEET



DRAWING TITLE

NEIGHBORHOOD SITE DESCRIPTION

PLANFORM
BUILDING DESIGN

PROJECT:
PROPOSED DEVELOPMENT
AT:
NO.35 BICENTENNIAL CRESCENT, MEADOW HEIGHTS, VIC 3048
FOR:
URBAN NATIONAL HOMES

DRAWN: JS
DATE: 21/10/2022
SCALE: 1:200 (A0)
JOB NO: 3912022
STATUS: TOWN PLANNING
PG NO: 01

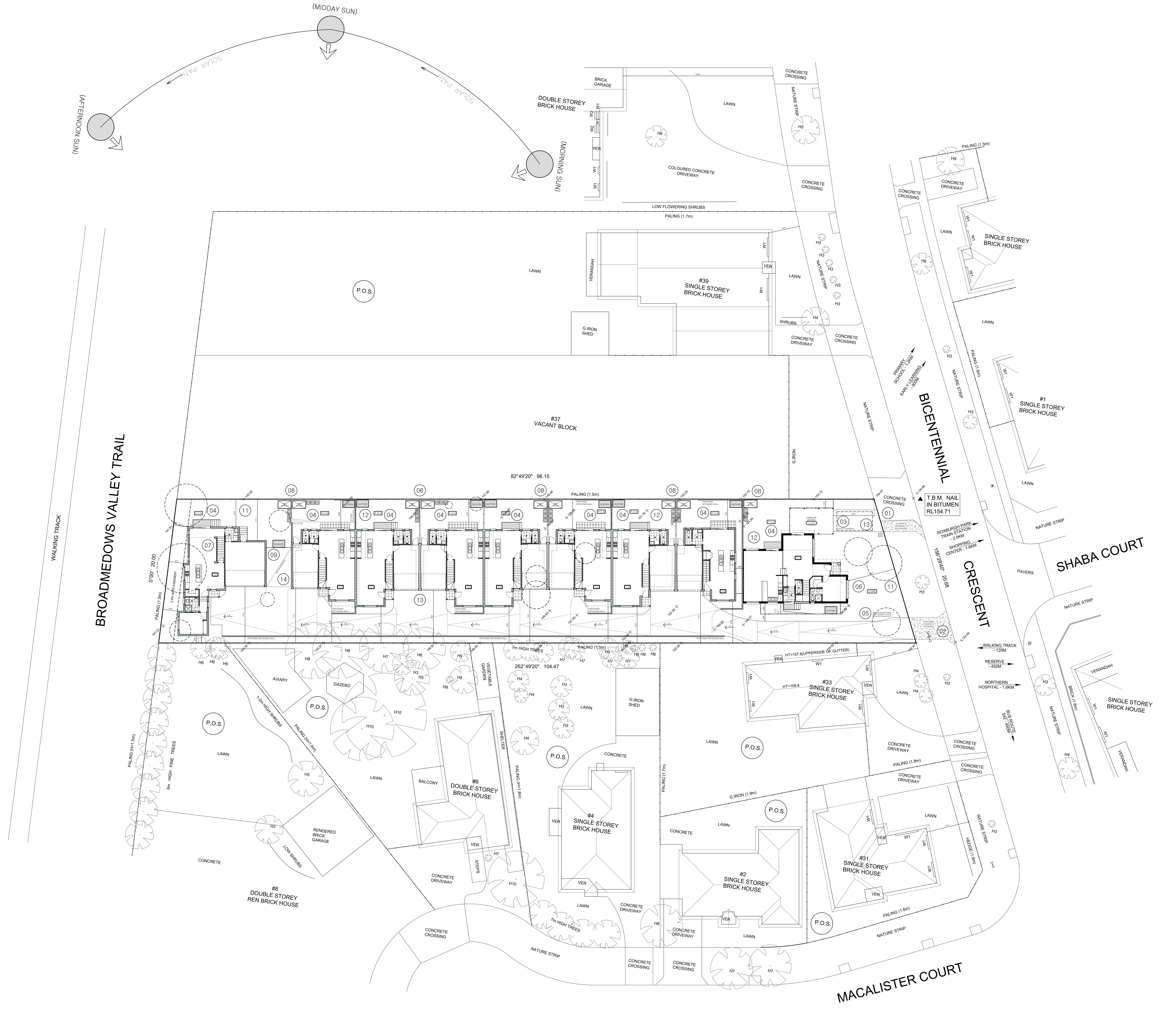
REV	DATE	AMENDMENT
A	21/10	COUNCIL RFI

E | INFO@PLANFORM.COM.AU
PH | 0431 020 698
MAIL | PO BOX 576, SOUTH MORANG, VIC, 3752.
WEB | WWW.PLANFORM.COM.AU

THE GREENHOUSE – LEVEL 1, SUITE 22, 797 PLENTY ROAD SOUTH MORANG VIC 3752

REGISTERED Building Practitioner

Design Matters National
The peak body for the building design profession
Member



DESIGN RESPONSE

01	EXISTING CROSSOVER ON BICENTENNIAL CRESCENT TO BE WIDENED AND RETAINED
02	PROPOSED NEW CROSSOVER ON BICENTENNIAL CRESCENT AS PER COUNCIL REQUIREMENTS
03	PROPOSED CAR SPACE FOR DWELLING 1
04	PROPOSED PRIVATE OPEN SPACE WITH CONVENIENT NORTH LIGHT WITH A MIN 3M DIMENSION
05	NEW MAILBOX UNIT FOR DEVELOPMENT
06	PROPOSED FRONT SETBACK -DWELLING 1; 6405MM -CARPORT; 5625MM
07	MAX BUILDING HEIGHT OF DEVELOPMENT IS 9165MM
08	6M2 STORAGE AREAS
09	SEPARATION BETWEEN DWELLINGS
11	GENEROUS LANDSCAPE AREAS
12	NORTH WINDOWS
13	PROPOSED CONCRETE DRIVEWAYS
14	VISITOR CAR SPACE

PLANFORM
BUILDING DESIGN

DRAWING TITLE
DESIGN RESPONSE PLAN

PROJECT:
PROPOSED DEVELOPMENT
AT:
NO.35 BICENTENNIAL CRESCENT, MEADOW HEIGHTS, VIC 3048
FOR:
URBAN NATIONAL HOMES

DRAWN: JS
DATE: 21/10/2022
SCALE: 1:200 (A0)
JOB NO: 3912022
STATUS: TOWN PLANNING
PG NO: 02

REV	DATE	AMENDMENT
A	21/10	COUNCIL RFI

E | INFO@PLANFORM.COM.AU
PH | 0431 020 698
MAIL | PO BOX 576, SOUTH MORANG, VIC, 3752.
WEB | WWW.PLANFORM.COM.AU
THE GREENHOUSE - LEVEL 1, SUITE 22, 797 PLENTY ROAD SOUTH MORANG VIC 3752

SITE & AREA ANALYSIS

SITE (APPROX)		1991m2
SITE COVERAGE	Xm2	X%
PERMEABILITY	Xm2	X%
GARDEN AREA	Xm2	X%

EXISTING

GROUND FLOOR	152.80m2	
PORCH	4.0m2	
VERANDAH	13.0m2	
COURTYARD	19.0m2	
BALCONY	18.0m2	
TOTAL	206.80m2	22.26 SQS

LEGEND

W/H	NEIGHBORING HABITABLE WINDOW
W/NH	NEIGHBORING NON-HABITABLE WINDOW
DOOR	NEIGHBORING DOOR
P.O.S	ALLOCATED PRIVET OPEN SPACE
	EXISTING STRUCTURE
	PROPOSED STRUCTURE
	EXISTING FENCE
	PROPOSED FENCE
	EXISTING TREE
GW	PROPOSED GENERAL WASTE RUBBISH BIN
RW	PROPOSED RECYCLE RUBBISH BIN
CW	COMPOST BIN
CLOTHES	PROPOSED FOLD DOWN CLOTHES LINE WALL OR GROUND MOUNTED
GAS	PROPOSED GAS METER
LB	PROPOSED LETTER BOXES
6M² STORAGE	DENOTES MIN. 6M3 STORAGE SHED WITH AVERAGE 2.2M HEIGHT
2000L	2000L SLIM LINE RAINWATER TANK
SL	PROPOSED SKY LIGHT
D.G	DOUBLE GLAZED WINDOW
S.D	DENOTES OPERABLE SHADING DEVICE
	PROPOSED GARDEN AREA

PALING (1.7m)

LAWN

P.O.S.

VERANDAH

#39
SINGLE STOREY
BRICK HOUSE

W1

VER

4000

NATURE STRIP

SHRUBS

G.IRON
SHED

CONCRETE
DRIVEWAY

CONCRETE
CROSSING

BICENTENNIAL

#37
VACANT BLOCK

G.IRON

82°49'20" 96.15

PALING (1.5m)

147.80 148.45 149.46 150.09 151.78 152.25 152.47 153.19 153.16 154.34 154.73 154.97

142.92 145.19 146.49 149.67 151.77 152.52 154.76

141.61 143.02 145.04 146.63 147.94 149.56 151.61 152.49

0°00' 20.00

2.0m WIDE EASEMENT

PALING (1.5m)

141.51 143.38 144.91 146.92 148.05 149.68 151.71 152.56 154.27 154.89 154.91

149.45 149.83 151.59 152.08 152.56 152.86 154.60

PALING (1.5m)

7m HIGH TREES

262°49'20" 104.47

156°29'40" 20.68

CRESCENT

NATURE STRIP

IL154.66

T.B.M.
NAIL IN BITUMEN
RL154.71

EXISTING
CONCRETE
DRIVEWAY

CONCRETE
CROSSING

IL154.55

BALCONY
COURTYARD
BED 3
BED 2
LIVING
LOUNGE
ENTRY
PORCH
DINING
MASTER
BED 4
BATH
WC
L'DRY
MEALS
KIT
VERANDAH
CONCRETE

HT=157.8(UPSIDE OF GUTTER)

HT=159.6

#33
SINGLE STOREY
BRICK HOUSE

LAWN

CONCRETE
DRIVEWAY

CONCRETE
CROSSING

AVIARY

GAZEBO

P.O.S.

1-2m HIGH SHRUBS

PALING (H=1.6m)

PALING (H=1.8m)

VEGETABLE
GARDEN

SHELTER

6m HIGH PINE TREES

PALING (H=1.5m)

LAWN

G.IRON
SHED

CONCRETE

PALING (1.7m)

LAWN

P.O.S.

DRAWING TITLE
EXISTING GROUND FLOOR PLAN

PLANFORM
BUILDING DESIGN

PROJECT:
PROPOSED DEVELOPMENT
AT:
NO.35 BICENTENNIAL CRESCENT, MEADOW HEIGHTS, VIC 3048
FOR:
URBAN NATIONAL HOMES

DRAWN: JS
DATE: 21/10/2022
SCALE: 1:100 (A0)
JOB NO: 3912022
STATUS: TOWN PLANNING
PG NO: 03

REV	DATE	AMENDMENT
A	21/10	COUNCIL RFI

E | INFO@PLANFORM.COM.AU
PH | 0431 020 698
MAIL | PO BOX 576, SOUTH MORANG, VIC, 3752.
WEB | WWW.PLANFORM.COM.AU

THE GREENHOUSE – LEVEL 1, SUITE 22, 797 PLENTY ROAD SOUTH MORANG VIC 3752

SITE & AREA ANALYSIS

SITE (APPROX)		1991m2
SITE COVERAGE	804.50m2	40.40%
PERMEABILITY	720.00m2	36.16%
GARDEN AREA	711.00m2	35.71%
DWELLING 1		
GROUND FLOOR	105.00m2	
FIRST FLOOR	83.00m2	
PORCH	2.00m2	
CARPORT	21.00m2	
TOTAL	211.00m2	22.71 SQS
PRIVATE OPEN SPACE DWELLING 1		
OVER 3M DIMENSION		60.00M²
TOTAL		74.00M²
DWELLING 2		
GROUND FLOOR	51.20m2	
FIRST FLOOR	66.30m2	
PORCH	0.60m2	
GARAGE	23.00m2	
TOTAL	141.10m2	15.18 SQS
PRIVATE OPEN SPACE DWELLING 2		
OVER 3M DIMENSION		37.00M²
TOTAL		48.30M²
DWELLING 3		
GROUND FLOOR	59.60m2	
FIRST FLOOR	66.30m2	
PORCH	1.60m2	
GARAGE	23.00m2	
TOTAL	150.50m2	16.20 SQS
PRIVATE OPEN SPACE DWELLING 3		
OVER 3M DIMENSION		37.00M²
TOTAL		39.00M²
DWELLING 4		
GROUND FLOOR	54.10m2	
FIRST FLOOR	68.70m2	
PORCH	1.40m2	
GARAGE	23.00m2	
TOTAL	147.20m2	15.84 SQS
PRIVATE OPEN SPACE DWELLING 4		
OVER 3M DIMENSION		37.00M²
TOTAL		39.00M²
DWELLING 5		
GROUND FLOOR	57.60m2	
FIRST FLOOR	66.50m2	
PORCH	1.70m2	
GARAGE	23.00m2	
TOTAL	148.80m2	16.01 SQS
PRIVATE OPEN SPACE DWELLING 5		
OVER 3M DIMENSION		37.00M²
TOTAL		39.00M²
DWELLING 6		
GROUND FLOOR	58.30m2	
FIRST FLOOR	69.90m2	
PORCH	1.50m2	
GARAGE	23.00m2	
TOTAL	152.70m2	16.43 SQS
PRIVATE OPEN SPACE DWELLING 6		
OVER 3M DIMENSION		37.00M²
TOTAL		39.00M²
DWELLING 7		
GROUND FLOOR	58.20m2	
FIRST FLOOR	67.00m2	
PORCH	1.50m2	
GARAGE	23.00m2	
TOTAL	149.70m2	16.11 SQS
PRIVATE OPEN SPACE DWELLING 7		
OVER 3M DIMENSION		37.00M²
TOTAL		39.00M²
DWELLING 8		
GROUND FLOOR	54.00m2	
FIRST FLOOR	67.90m2	
PORCH	1.40m2	
GARAGE	23.00m2	
TOTAL	146.30m2	15.74 SQS
PRIVATE OPEN SPACE DWELLING 8		
OVER 3M DIMENSION		37.00M²
TOTAL		39.00M²
DWELLING 9		
GROUND FLOOR	75.40m2	
FIRST FLOOR	78.30m2	
PORCH	1.40m2	
GARAGE	36m2	
BALCONY	4.70m2	
TOTAL	195.80m2	21.07 SQS
PRIVATE OPEN SPACE DWELLING 9		
OVER 3M DIMENSION		78.00M²
TOTAL		120.00M²

SDA NOTES

TOILETS AND LAUNDRY TO BE CONNECTED TO RAINWATER TANKS

THE USE OF NATIVE OR DROUGHT TOLERANT SPECIES TO BE USED FOR LANDSCAPED AREAS

DWELLINGS TO BE COMMITTED TO 4W/M2 LIGHTING DENSITY

LIGHT SENSORS FOR ALL EXTERNAL LIGHTING

DEVELOPMENT TO BE COMMITTED TO WATER EFFICIENT FITTINGS AND FIXTURES
- TOILET – 4 STAR
- TAPS (BATHROOM & KIT) 5 STAR
- SHOWERHEAD – 3-4 STAR WITH AERATION DEVICE (6.0 – 7.5L/MIN)

DWELLINGS TO BE COMMITTED TO 6.5 STAR AVERAGE RATINGS FOR THE DEVELOPMENT

LEGEND

W/H	NEIGHBORING HABITABLE WINDOW
W/NH	NEIGHBORING NON-HABITABLE WINDOW
DOOR	NEIGHBORING DOOR
P.O.S	ALLOCATED PRIVET OPEN SPACE
	EXISTING STRUCTURE
	PROPOSED STRUCTURE
	EXISTING FENCE
	PROPOSED FENCE
	EXISTING TREE
GB	PROPOSED GENERAL WASTE RUBBISH BIN
RB	PROPOSED RECYCLE RUBBISH BIN
CB	COMPOST BIN
CLOTHES	PROPOSED FOLD DOWN CLOTHES LINE WALL OR GROUND MOUNTED
GAS	PROPOSED GAS METER
LB	PROPOSED LETTER BOXES
6M³ STORE	DENOTES MIN. 6M3 STORAGE SHED WITH AVERAGE 2.2M HEIGHT
	2000L SLIM LINE RAINWATER TANK
S/L	PROPOSED SKY LIGHT
D.G	DOUBLE GLAZED WINDOW
S.D	DENOTES OPERABLE SHADING DEVICE
	PROPOSED GARDEN AREA
	PROPOSED ROOF CATCHMENT AREA

PEDESTRIAN VISABILITY SPLAY OF A MINIMUM 2.5M LONG X 2.0M WIDE AT THE SIDE OF THE ACCESSWAY AND THE STREET RESERVE AS SHOWN HATCHED. THIS AREA TO BE KEPT CLEAR FROM A MAXIMUM HEIGHT OF 0.9M AND TO COMPLY WITH RELEVANT AUSTRALIAN STANDARDS.

2500 × 2000

PLANFORM
BUILDING DESIGN

DRAWING TITLE
PROPOSED GROUND FLOOR PLAN

PROJECT:
PROPOSED DEVELOPMENT
AT:
NO.35 BICENTENNIAL CRESCENT, MEADOW HEIGHTS, VIC 3048
FOR:
URBAN NATIONAL HOMES

DRAWN: JS
DATE: 21/10/2022
SCALE: 1:100 (A0)
JOB NO: 3912022
STATUS: TOWN PLANNING
PG NO: 04

REV	DATE	AMENDMENT
A	21/10	COUNCIL RFI

E | INFO@PLANFORM.COM.AU
PH | 0431 020 698
MAIL | PO BOX 576, SOUTH MORANG, VIC, 3752.
WEB | WWW.PLANFORM.COM.AU

THE GREENHOUSE – LEVEL 1, SUITE 22, 797 PLENTY ROAD SOUTH MORANG VIC 3752

REGISTERED Building Practitioner

Design Matters National — The peak body for the building design profession — Member

PALING (1.7m)

LAWN

P.O.S.

VERANDAH

#39
SINGLE STOREY
BRICK HOUSE

4300

W1

VER

W1

LAWN

NATURE STRIP

SHRUBS

CONCRETE
DRIVEWAY

CONCRETE
CROSSING

G.IRON
SHED

#37
VACANT BLOCK

BICENTENNIAL

NATURE STRIP

G.IRON

CONCRETE
CROSSING

82°49'20" 96.15

PALING (1.5m)

CRESCENT

156°29'40" 20.68

0°00' 20.00

2.0m WIDE EASEMENT

PALING (1.5m)

7m HIGH TREES

PALING (1.5m)

262°49'20" 104.47

VEGETABLE
GARDEN

PALING (H=1.8m)

SHELTER

AVIARY

GAZEBO

P.O.S.

P.O.S.

1-2m HIGH SHRUBS

PALING (H=1.6m)

PALING (H=1.5m)

6m HIGH PINE TREES

LAWN

G.IRON
SHED

LAWN

P.O.S.

CONCRETE

PALING (1.7m)

LAWN

P.O.S.

CONCRETE
DRIVEWAY

CONCRETE
CROSSING

VER

HT=157.8(UPPERSIDE OF GUTTER)

W1

W1

W1

W1

HT=159.6

VER

#33
SINGLE STOREY
BRICK HOUSE

LAWN

NATURE STRIP

89M2 OF DWELLING 9 ROOF TO BE DIVERTED TO 3000L RAINWATER TANK FOR TOILET FLUSHING AND LAUNDRY FOR EACH DWELLING, IF A CHARGED SYSTEM IF REQUIRED, CHARGED PIPES NOT TO BE RUNNING UNDERNEATH THE SLAB

63.40M2 OF DWELLING 8 ROOF TO BE DIVERTED TO 3000L RAINWATER TANK FOR TOILET FLUSHING AND LAUNDRY FOR EACH DWELLING, IF A CHARGED SYSTEM IF REQUIRED, CHARGED PIPES NOT TO BE RUNNING UNDERNEATH THE SLAB

65.2M2 OF DWELLING 7 ROOF TO BE DIVERTED TO 3000L RAINWATER TANK FOR TOILET FLUSHING AND LAUNDRY FOR EACH DWELLING, IF A CHARGED SYSTEM IF REQUIRED, CHARGED PIPES NOT TO BE RUNNING UNDERNEATH THE SLAB

64.7M2 OF DWELLING 6 ROOF TO BE DIVERTED TO 3000L RAINWATER TANK FOR TOILET FLUSHING AND LAUNDRY FOR EACH DWELLING, IF A CHARGED SYSTEM IF REQUIRED, CHARGED PIPES NOT TO BE RUNNING UNDERNEATH THE SLAB

64.5M2 OF DWELLING 5 ROOF TO BE DIVERTED TO 3000L RAINWATER TANK FOR TOILET FLUSHING AND LAUNDRY FOR EACH DWELLING, IF A CHARGED SYSTEM IF REQUIRED, CHARGED PIPES NOT TO BE RUNNING UNDERNEATH THE SLAB

63.20M2 OF DWELLING 4 ROOF TO BE DIVERTED TO 3000L RAINWATER TANK FOR TOILET FLUSHING AND LAUNDRY FOR EACH DWELLING, IF A CHARGED SYSTEM IF REQUIRED, CHARGED PIPES NOT TO BE RUNNING UNDERNEATH THE SLAB

67M2 OF DWELLING 3 ROOF TO BE DIVERTED TO 3000L RAINWATER TANK FOR TOILET FLUSHING AND LAUNDRY FOR EACH DWELLING, IF A CHARGED SYSTEM IF REQUIRED, CHARGED PIPES NOT TO BE RUNNING UNDERNEATH THE SLAB

118.6M2 OF DWELLING 1 ROOF TO BE DIVERTED TO 3000L RAINWATER TANK FOR TOILET FLUSHING AND LAUNDRY FOR EACH DWELLING, IF A CHARGED SYSTEM IF REQUIRED, CHARGED PIPES NOT TO BE RUNNING UNDERNEATH THE SLAB

76.9M2 OF DWELLING 2 ROOF TO BE DIVERTED TO 3000L RAINWATER TANK FOR TOILET FLUSHING AND LAUNDRY FOR EACH DWELLING, IF A CHARGED SYSTEM IF REQUIRED, CHARGED PIPES NOT TO BE RUNNING UNDERNEATH THE SLAB

LEGEND

W/H	NEIGHBORING HABITABLE WINDOW
W/NH	NEIGHBORING NON-HABITABLE WINDOW
DOOR	NEIGHBORING DOOR
P.O.S	ALLOCATED PRIVET OPEN SPACE
	EXISTING STRUCTURE
	PROPOSED STRUCTURE
	EXISTING FENCE
	PROPOSED FENCE
	EXISTING TREE
GW	PROPOSED GENERAL WASTE RUBBISH BIN
RW	PROPOSED RECYCLE RUBBISH BIN
CW	COMPOST BIN
CLOTHES	PROPOSED FOLD DOWN CLOTHES LINE WALL OR GROUND MOUNTED
GAS	PROPOSED GAS METER
LB	PROPOSED LETTER BOXES
SHED 9M² APPROX.	DENOTES MIN. 6M3 STORAGE SHED WITH AVERAGE 2.2M HEIGHT
	2000L SLIM LINE RAINWATER TANK
S/L	PROPOSED SKY LIGHT
D.G	DOUBLE GLAZED WINDOW
S.D	DENOTES OPERABLE SHADING DEVICE
	PROPOSED GARDEN AREA
	PROPOSED ROOF CATCHMENT AREA

PEDESTRIAN VISABILITY SPLAY OF A MINIMUM 2.5M LONG X 2.0M WIDE AT THE SIDE OF THE ACCESSWAY AND THE STREET RESERVE AS SHOWN HATCHED, THIS AREA TO BE KEPT CLEAR FROM A MAXIMUM HEIGHT OF 0.9M AND TO COMPLY WITH RELEVANT AUSTRALIAN STANDARDS.

2000
2500

DRAWING TITLE
PROPOSED FIRST FLOOR PLAN

PLANFORM
BUILDING DESIGN

PROJECT:
PROPOSED DEVELOPMENT
AT:
NO.35 BICENTENNIAL CRESCENT, MEADOW HEIGHTS, VIC 3048
FOR:
URBAN NATIONAL HOMES

DRAWN: JS
DATE: 21/10/2022
SCALE: 1:100 (A0)
JOB NO: 3912022
STATUS: TOWN PLANNING
PG NO: 05

REV	DATE	AMENDMENT
A	21/10	COUNCIL RFI

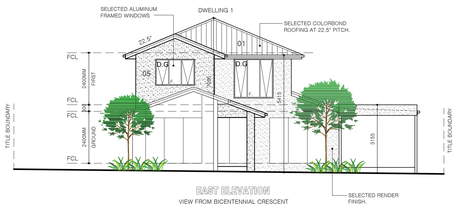
N

E | INFO@PLANFORM.COM.AU
PH | 0431 020 698
MAIL | PO BOX 576, SOUTH MORANG, VIC, 3752.
WEB | WWW.PLANFORM.COM.AU

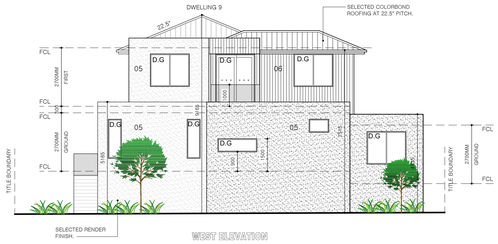
THE GREENHOUSE - LEVEL 1, SUITE 22, 797
PLENTY ROAD SOUTH MORANG VIC 3752

REGISTERED
Building Practitioner

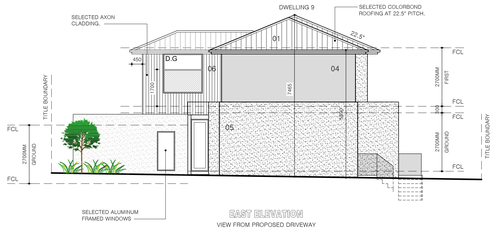
Design Matters National
The peak body for the building design profession
Member



EAST ELEVATION
VIEW FROM BICENTENNIAL CRESCENT



WEST ELEVATION



EAST ELEVATION
VIEW FROM PROPOSED DRIVEWAY

FINISHES SCHEDULE

01 FINISH 01
COLORBOND ROOF
COLOUR : MONUMENT

02 FINISH 02
ALUMINUM FRAMED WINDOWS/DOORS
COLOUR: NIGHT SKY

03 FINISH 03
FASCIA / GUTTERS / DOWNPIPES
COLORBOND: MONUMENT

04 FINISH 04
RENDER FINISH
COLOUR: WHITE

05 FINISH 05
RENDER FINISH
COLOUR: GREY

06 FINISH 06
SELECTED AXON CLADDING
COLOUR: CHARCOAL

07 FINISH 07
PAVING AND DRIVEWAY
COLOUR: CHARCOAL

08 FINISH 08
SELECTED COLORBOND GARAGE DOOR
COLOUR: NIGHT SKY

09 FINISH 09
TIMBER (MERBAU) DECK
COLOUR: NATURAL STAIN

SOUTH ELEVATION
VIEW FROM PROPOSED DRIVEWAY

NORTH ELEVATION

PLANFORM
BUILDING DESIGN

DRAWING TITLE
PROPOSED ELEVATIONS

PROJECT:
PROPOSED DEVELOPMENT
AT:
NO.35 BICENTENNIAL CRESCENT, MEADOW HEIGHTS, VIC 3048
FOR:
URBAN NATIONAL HOMES

DRAWN: JS
DATE: 21/10/2022
SCALE: 1:100 (A0)
JOB NO: 3912022
STATUS: TOWN PLANNING
PG NO: 06

REV	DATE	AMENDMENT
A	21/10	COUNCIL RFI

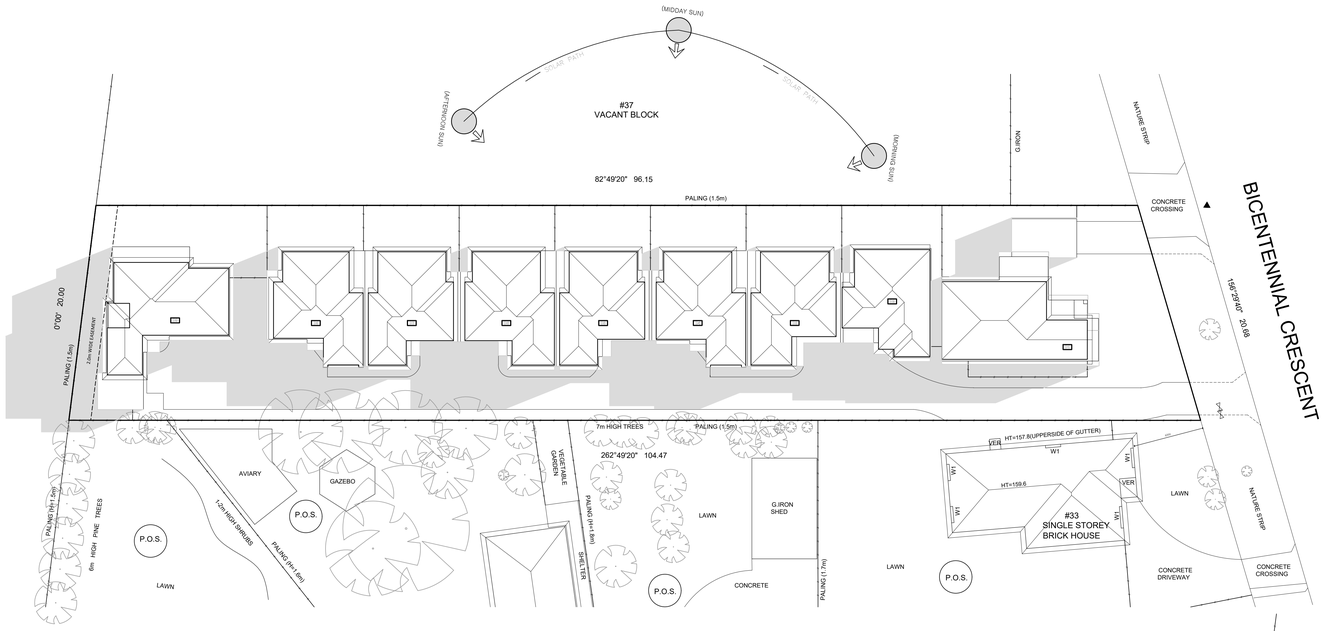
N

E | INFO@PLANFORM.COM.AU
PH | 0431 020 698
MAIL | PO BOX 576, SOUTH MORANG, VIC, 3752.
WEB | WWW.PLANFORM.COM.AU

THE GREENHOUSE - LEVEL 1, SUITE 22, 797 PLENTY ROAD SOUTH MORANG VIC 3752

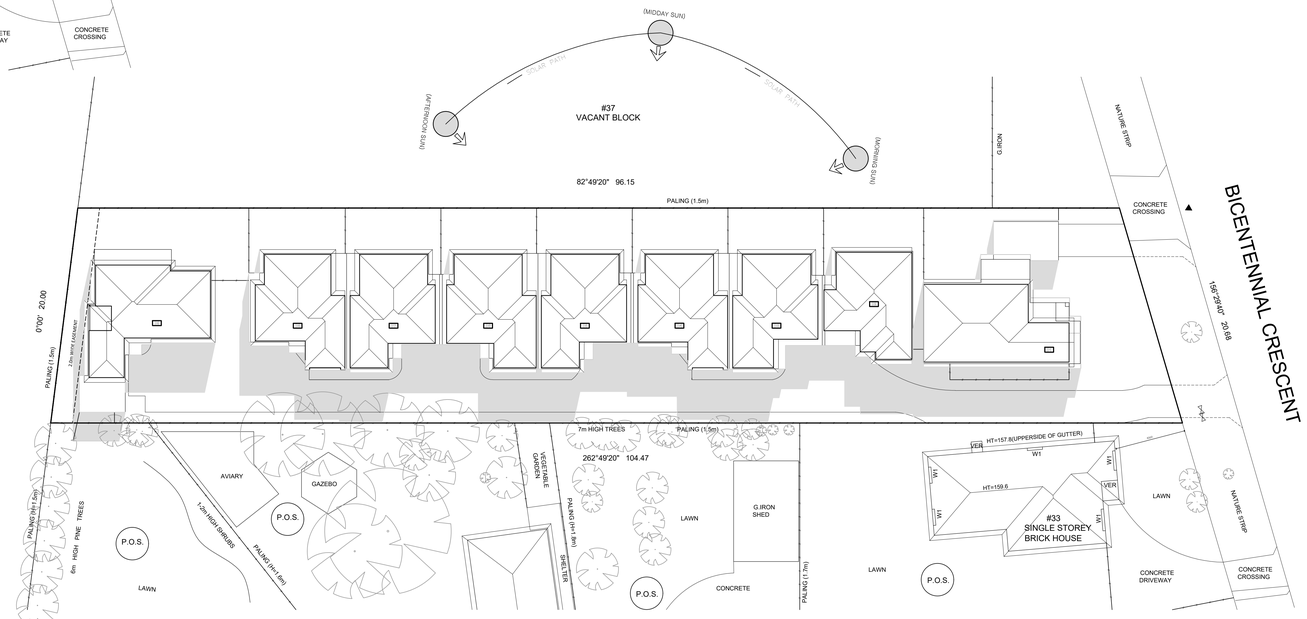
REGISTERED Building Practitioner

Design Matters National
The peak body for the building design profession
Member



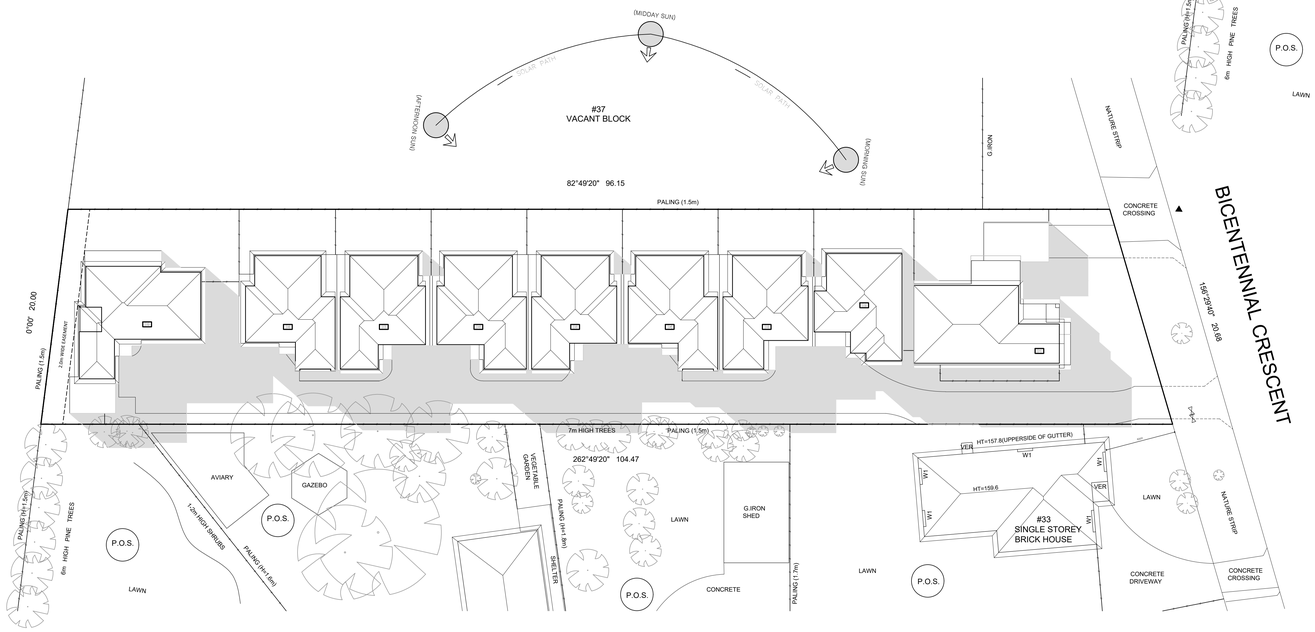
SHADOW DIAGRAM 9:00 AM

MARCH 21 ~ SEPTEMBER 23 (EQUINOX)
Melbourne Standard Time (Latitude 38.0° South)



SHADOW DIAGRAM 12:00 PM

MARCH 21 ~ SEPTEMBER 23 (EQUINOX)
Melbourne Standard Time (Latitude 38.0° South)



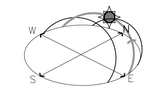
SHADOW DIAGRAM 3:00 PM

MARCH 21 ~ SEPTEMBER 23 (EQUINOX)
Melbourne Standard Time (Latitude 38.0° South)

SHADOW NOTES

PROPOSED SHADOWS

EXISTING SHADOWS



SEPTEMBER EQUINOX

Date: Sept 22nd
Season: September Equinox
Scale: 1:200

DRAWING TITLE

PROPOSED SHADOW DIAGRAMS

PLANFORM
BUILDING DESIGN

PROJECT:
PROPOSED DEVELOPMENT
AT:
NO.35 BICENTENNIAL CRESCENT, MEADOW HEIGHTS, VIC 3048
FOR:
URBAN NATIONAL HOMES

DRAWN: JS
DATE: 21/10/2022
SCALE: 1:200 (A0)
JOB NO: 3912022
STATUS: TOWN PLANNING
PG NO: 07

REV	DATE	AMENDMENT
A	21/10	COUNCIL RFI

E | INFO@PLANFORM.COM.AU
PH | 0431 020 698
MAIL | PO BOX 576, SOUTH MORANG, VIC, 3752.
WEB | WWW.PLANFORM.COM.AU

THE GREENHOUSE - LEVEL 1, SUITE 22, 797 PLENTY ROAD SOUTH MORANG VIC 3752

REGISTERED Building Practitioner

Design Matters National
The peak body for the building design profession
Member

RedSquare Traffic

Creativity in Transport Engineering

35 Bicentennial Crescent, Meadow Heights
Swept Path Analysis

Prepared for Planform Building Design

13 November 2022

Reference J176O251/1022

REVISION HISTORY

Revision No.	Date	Prepared By	Reviewed By	Approved For Issue By
1.0	13/11/2022	Sachini H.	Dane W.	Dane W.

REDSQUARE TRAFFIC

Platform	Contact Details
Website	http://www.redsquaretraffic.com.au
Telephone	03 7036 6734 | 0437 644 054
Email	mail@redsquaretraffic.com.au
LinkedIn	https://www.linkedin.com/company/redsquare-traffic
Facebook	http://www.facebook.com/RedSquareTraffic
Instagram	http://www.instagram.com/redsquaretraffic
Twitter	http://www.twitter.com/redsquaret
Blog	https://www.redsquaretraffic.com.au/redsquareblog
ABN	70 656 924 757
ACN	656 924 757

DISTRIBUTION LIST

Client	Date Issued
Planform Building Design	13 November 2022

IMPORTANT NOTICE

Unless explicitly stated otherwise in writing, RedSquare Traffic does not accept a duty of care or any other legal responsibility whatsoever in relation to this report, or any related enquiries, advice, or other work, nor does RedSquare Traffic make any representation in connection with this report, to any person other than Planform Building Design. Any other person who receives a draft or a copy of this report (or any part of it) or discusses it (or any part of it) or any related matter with RedSquare Traffic, does so on the basis that he or she acknowledges and accepts that he or she may not rely on this report nor on any related information or advice given by RedSquare Traffic for any purpose whatsoever.

1 SWEPT PATH ASSESSMENT

Attached below are swept path plots that demonstrate the forward entry & exit movements of the residential development at 35 Bicentennial Crescent, Meadow Heights.

Swept path plots have been developed using B85 Passenger Car shown in Figure 1 below.

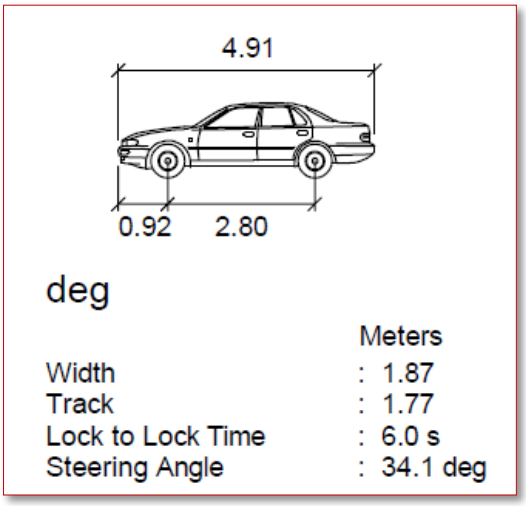


FIGURE 1: B85 PASSENGER CAR

I confirm, the following conditions have been met in the swept path assessment.

- Appropriate base dimensions have been used as per AS/NZS 2890.1:2004.
- Vehicles do not 'turn from stop' when travelling in a forward direction unless proceeding directly after a reverse movement.
- Appropriate clearances maintained to ensure vehicles are kept clear of obstructions.
- Movements do not contain more than one correctional movement in accordance with AS/NZS 2890.1:2004.
- A vehicle design speed of at least 5km/h has been adopted.

Yours Sincerely,

RedSquare Traffic

Dinith (Dane) Wanninayake

Principal Traffic Engineer

B.Eng. (Hons)/B. Com (Finance)

DoT Accredited Senior Road Safety Auditor

DoT Recommended Safe System Assessor

13 November 2022

GENERAL NOTES

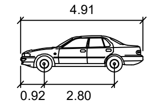
Appropriate base dimensions as per AS/NZS 2890.1:2004.

Vehicles do not 'turn from stop' when travelling in a forward direction unless proceeding directly after a reverse movement.

Appropriate clearances maintained to ensure vehicles are kept clear of obstructions.

Movements do not contain more than one correctional movement in accordance with AS/NZS 2890.1:2004.

Design speeed 5km/h,



deg

		Meters
Width	:	1.87
Track	:	1.77
Lock to Lock Time	:	6.0 s
Steering Angle	:	34.1 deg

PROJECT NAME: 35 Bicentennial Crescent, Meadow Heights

DRAWING TITLE: Entry Movements

DRAWN BY: SH

CHECKED BY: DW

APPROVED BY: DW

DATE: 13/11/2022

CLIENT/DESIGNER

Planform Building Design

RedSquare Traffic
Creativity in Transport Engineering
ABN 70 656 924 757
www.redsquaretraffic.com.au
03 7036 6734
mail@redsquaretraffic.com.au
Suite 11/36 Wilson Street, South Yarra

PROJECT NO: J176O251-1022

SCALE: 1:450

SHEET: A3

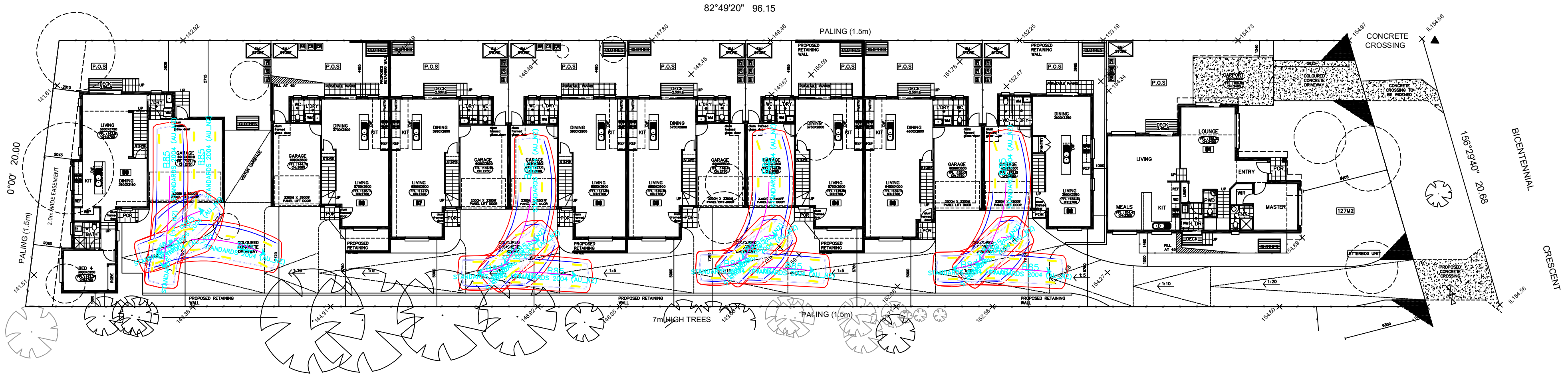
DRAWING NO: J176O251-1022-D1

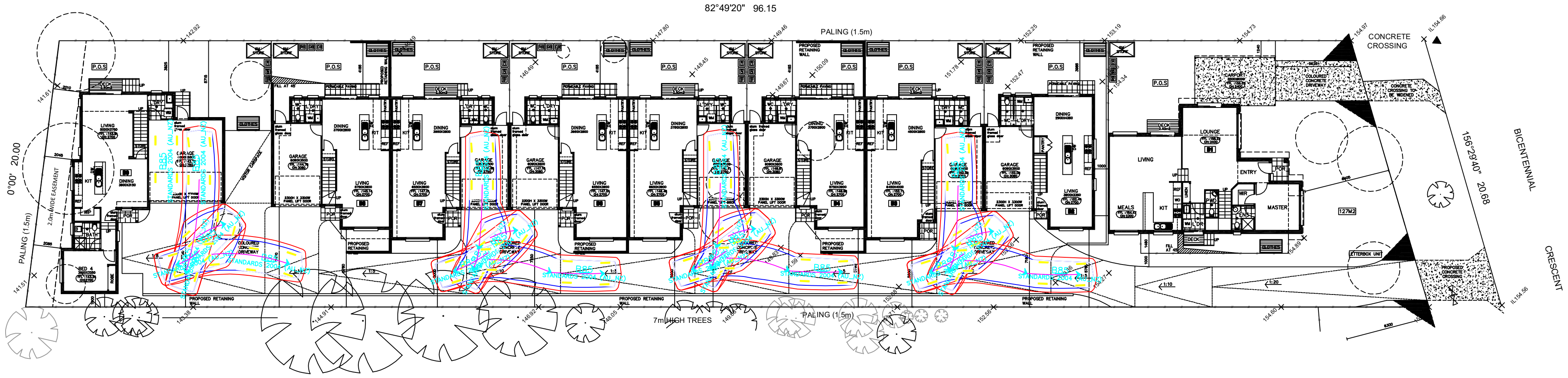
SHEET NO: 1 OF 1

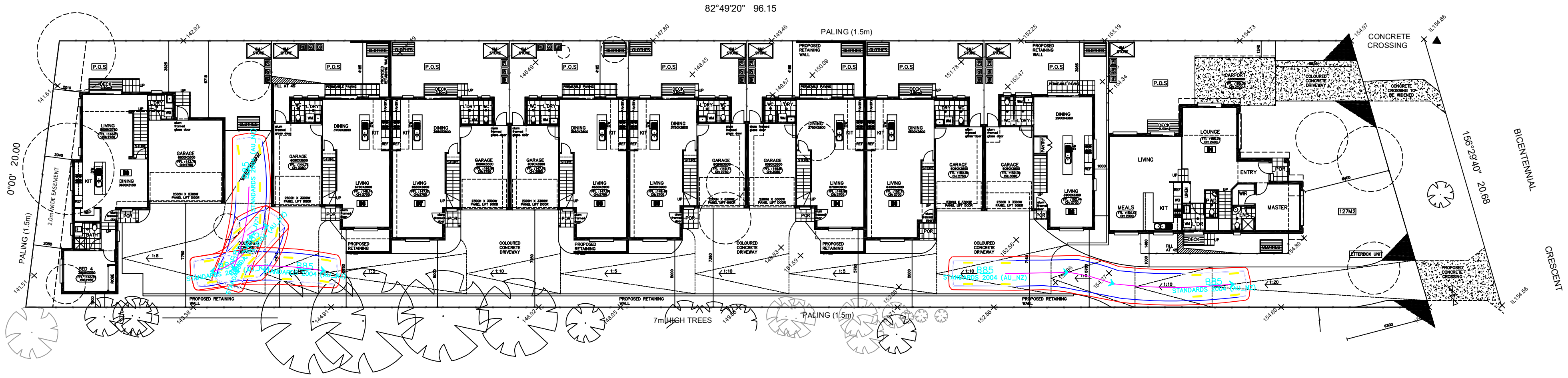
REVISION: A

UNIT: -

REV	DESCRIPTION	BY	DATE
A	Final	DW	13/11/2022







GENERAL NOTES

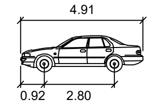
Appropriate base dimensions as per AS/NZS 2890.1:2004.

Vehicles do not 'turn from stop' when travelling in a forward direction unless proceeding directly after a reverse movement.

Appropriate clearances maintained to ensure vehicles are kept clear of obstructions.

Movements do not contain more than one correctional movement in accordance with AS/NZS 2890.1:2004.

Design speeed 5km/h,



deg

	Meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0 s
Steering Angle	: 34.1 deg

PROJECT NAME:
35 Bicentennial Crescent, Meadow

DRAWING TITLE:
Egress Movements

DRAWN BY: SH

CHECKED BY: DW

APPROVED BY: DW

DATE: 13/11/2022

CLIENT/DESIGNER
Planform Building Design

RedSquare Traffic
Creativity in Transport Engineering
ABN 70 656 924 757
www.redsquaretraffic.com.au
03 7036 6734
mail@redsquaretraffic.com.au
Suite 11/36 Wilson Street, South Yarra

PROJECT NO: J176O251-1022

SCALE: 1:450

SHEET: A3

DRAWING NO: J176O251-1022-D2

SHEET NO: 1 OF 1

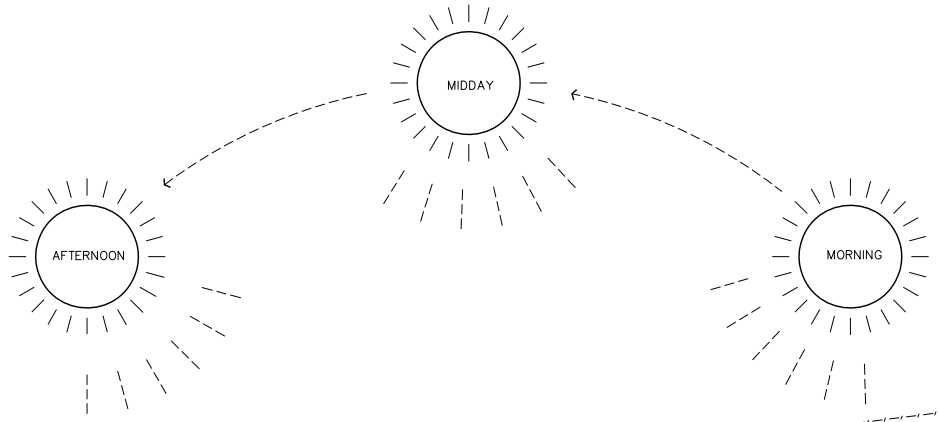
REVISION: A

UNIT: -

N E S W

REV	DESCRIPTION	BY	DATE
A	Final	DW	13/11/2022

RedSquare Traffic
03 7036 6734 | mail@redsquaretraffic.com.au | www.redsquaretraffic.com.au



BROADMEDOWS VALLEY TRAIL

WALKING TRACK

#37
VACANT BLOCK

#39
SINGLE STOREY
BRICK HOUSE

DOUBLE STOREY
BRICK HOUSE

BRICK GARAGE

LAWN

COLOURED CONCRETE
DRIVEWAY

LOW FLOWERING SHRUBS

PALING (1.7m)

VERANDAH

G.IRON
SHED

P.O.S.

NATURE STRIP

CONCRETE
CROSSING

CONCRETE
DRIVEWAY

SHRUBS

BICENTENNIAL
CRESCENT

PALING (1.5m)

CONCRETE
CROSSING

CONCRETE
DRIVEWAY

LAWN

SINGLE STOREY
BRICK HOUSE

#1
SINGLE STOREY
BRICK HOUSE

PALING (1.6m)

T.B.M.
NAIL IN BITUMEN
RL154.71

SHABA COURT

PAVERS

VERANDAH

BRICK (1.8m)

SINGLE STOREY
BRICK HOUSE

#35
SPLIT LEVEL
BRICK & WEATHERBOARD
HOUSE

BALCONY

CONCRETE

STAIRS

#33
SINGLE STOREY
BRICK HOUSE

HT=157.8(UPPERSIDE OF GUTTER)

HT=159.6

7m HIGH TREES

VEGETABLE
GARDEN

GAZEBO

AVIARY

1.2m HIGH SHRUBS

PALING (H=1.6m)

PALING (H=1.5m)

6m HIGH PINE TREES

#6
DOUBLE STOREY
BRICK HOUSE

STEPS

#4
SINGLE STOREY
BRICK HOUSE

#2
SINGLE STOREY
BRICK HOUSE

#31
SINGLE STOREY
BRICK HOUSE

G.IRON (1.9m)

HEDGE (1.8m)

RENDERED
BRICK
GARAGE

LOW SHRUBS

#8
DOUBLE STOREY
REN BRICK HOUSE

MACALISTER COURT

LEGEND	
▲	T.B.M.
⧖	TELSTRA PIT
●	ELECTRICITY POLE
⊛	ELECTRICITY PIT
Ⓢ	SEWER VENT
○	TRAFFIC LIGHT
✱	STREET LIGHT
▣	FIRE HYDRANT
⚶	WATER METRE
✿	TREE
⊗	SIGN

PEN WIDTHS	
RED	0.18
WHITE	0.25
YELLOW	0.35
GREEN	0.50
BLUE	0.70
ORANGE	0.90

NOTATIONS

THIS PLAN SHOULD NOT BE USED FOR ANY PURPOSE OTHER THAN WHAT IT WAS INTENDED

ANY UNCERTAINY IN THIS PLAN MUST BE CLARIFIED WITH THE AUTHOR

ONLY VISIBLE SERVICES HAVE BEEN LOCATED

PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE, THE RELEVANT AUTHORITY SHOULD BE CONTACTED FOR POSSIBLE LOCATION OF UNDERGROUND SERVICES & DETAILED LOCATIONS OF ALL SERVICES

ONLY HABITABLE ROOM WINDOWS HAVE BEEN LOCATED

THIS IS NOT A RE-ESTABLISHMENT OF TITLE SURVEY

ALL SETBACKS SHOWN MEASURED TO FENCING

THIS IS A SCHEMATIC REPRESENTATION OF EXISTING CONDITIONS AND SO SHOULD NOT BE USED FOR SETOUT PURPOSES

BOUNDARIES ARE NOT FENCED UNLESS OTHERWISE STATED

OVERHEAD CABLES NOT SHOWN

THESE NOTES ARE AN INTEGRAL PART OF THIS PLAN

LEVELS ARE TO AUSTRALIAN HEIGHT DATUM YUROKE PM390

AESTHETIC DESIGN
Surveying & Town Planning
www.aestheticdesign.com.au
aesdgn@bigpond.net.au
PH: 9370 3222 FAX: 9374 4416

DRAWING
SITE & NEIGHBOURHOOD DESCRIPTION

AT:
35 BICENTENNIAL CRESCENT
MEADOW HEIGHTS

SURVEY: N.CASSAR
DARTING: M.ROMEO & N.CASSAR
DATE OF SURVEY: 02 JULY 08
SCALE: 1:250

REF: 0201277

PLANFORM

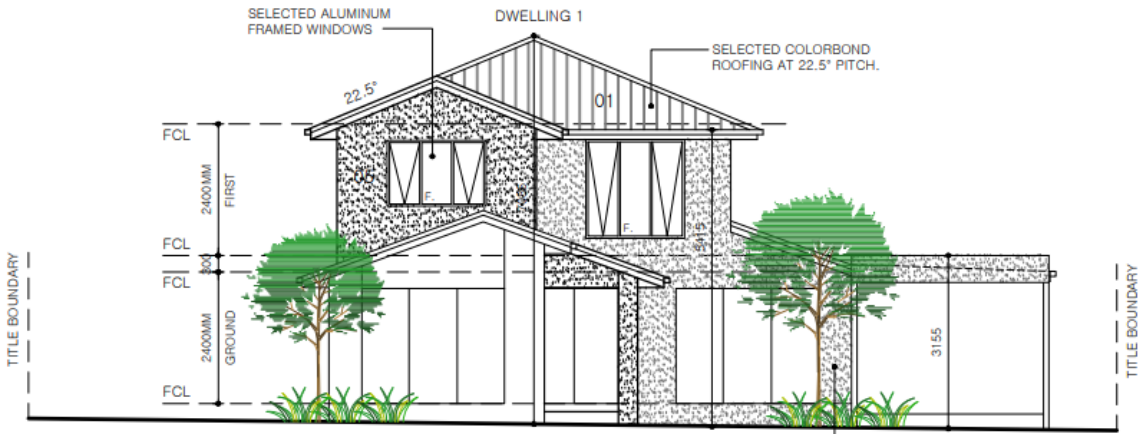
APPLICATION FOR A PLANNING PERMIT

Proposed Unit Development

at

35 Bicentennial Crescent,

Meadow Heights.



ResCode 2001

CLAUSE 55

Assessment and Written Response

May 2022

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

PLANFORM

THE PROPOSAL

The proposal put forth by Planform Building Design is for the Extension and alterations of an existing dwelling, in addition to 8 Double storey dwellings atop a sloping lot in Meadow Heights.

The existing dwelling is to be extended to become a 5 bedroom double storey stand alone dwelling, and the 8 preceding Townhouses will be equipped 2-4 bedrooms with generous dining and living opportunities for prospective residents.

The total site area is 1991m2 in this Meadow Heights development.

Please see attached plans and documents accompanying this report prepared by Planform Building design for further information.

PLANNING SCHEME PROVISIONS

35 Bicentennial Crescent, as well as the surrounding dwellings are in an area of General Residential Zone GRZ1. This has been governed by the Hume City Planning Scheme.

The Site has One (1) overlay that affects the site; being the General Residential Zone – Schedule 1.

The proposed design adheres to Clause 22.02 Residential Neighbourhood Character Policy under the Hume City Planning Scheme in key areas such as:

To implement the Municipal Planning Strategy and the policy Framework.

To Encourage Development that respects the Neighbourhood character of the area.

To encourage a diversity of housing types and housing growth particularly in locations offering good access to services and transport.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

PLANFORM

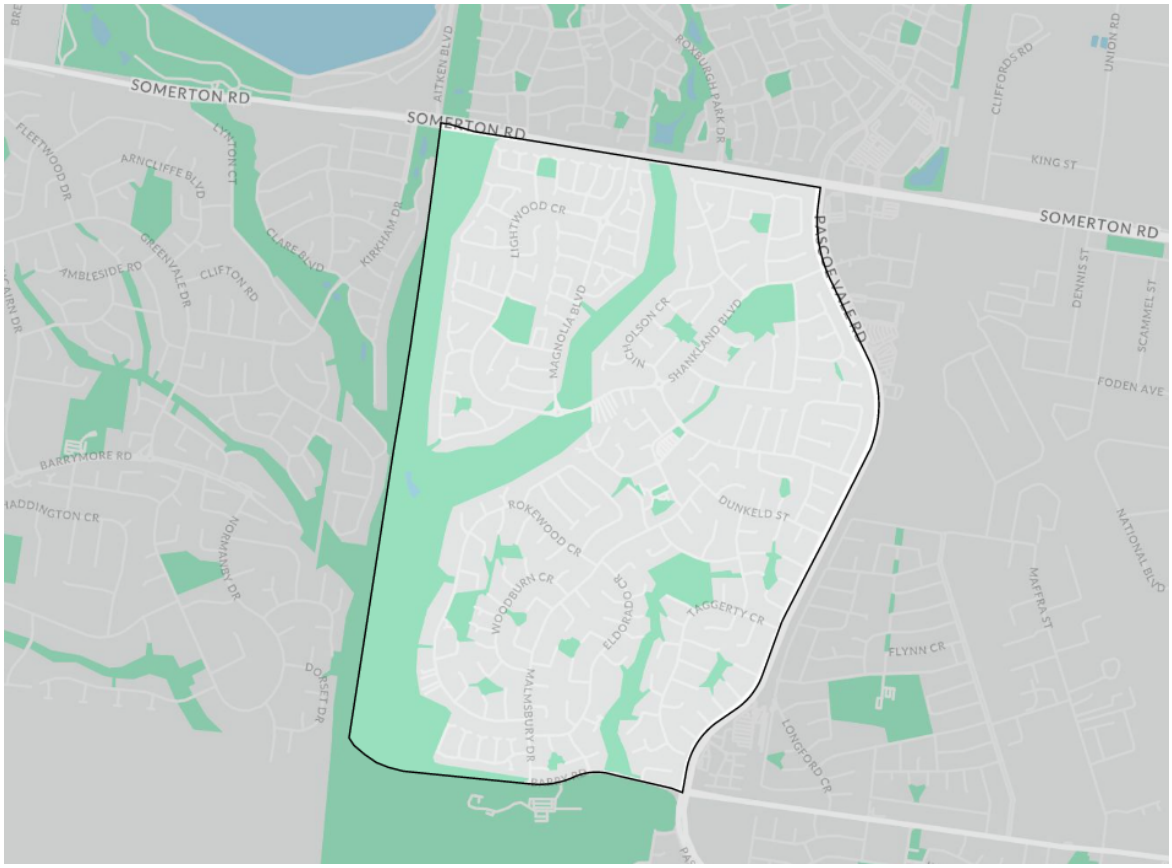
DEVELOPMENT INTRODUCTION

Situated in the continually expanding suburb of Meadow Heights, sits the proposal put forth by Planform. With over 15000 current residents the suburb is able to cater for individuals of any needs. From large modern houses to subtle unit developments, there are many living options for prospective buyers to reside.

With over 4100 dwellings in the area, the residents of Meadow Heights are now experiencing a subtle growth corridor in their neighbourhood, providing for affordable housing opportunities for people of all walks of life.

Existing and prospective residents have access to many main roads and freeways within close proximity. There is ease of access to a range of local doctors, hospitals and recreational centers and the airport to allow the residents to lead healthy lives to their optimal levels.

Below is a map highlighting the proximity of the suburb in which the proposal is situated:



Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

The proposal is a large site at 35 Bicentennial Crescent, and allows for the construction of 8 new double storey Units to the lot, as well as the extension and alteration to the existing dwelling, allowing it to become a genuine double storey home.

With 9 double storey dwellings in total, the land is subject to quite a significant fall from front to rear of the allotment, that has been used to the advantage of the proposal

7 of the spacious new double storey dwellings contain 2 bedrooms each with a single car garage for prospective occupants. While the Rear Dwelling consists of 4 bedrooms and a double lock up garage. The altered Existing dwelling will feature 5 bedrooms with the inclusion of its second storey extension, as well as a new covered carport for the residents to utilize.

There are spacious living dining and kitchen quarters to each proposed development and the unique nature of the land topography enables maximal use of soft scaping produced throughout the proposal.

These dwellings are proposed on a site that has an area of 1991 Square meters.

The intelligent, and unique proposal has been specifically designed to utilize the orientation of the land; which in turn, provides a generously spacious living environment for prospective occupants.

The design presented, responds considerably well to the constraints and opportunities of the site- as the architectural design conforms to the existing neighbourhood Character and as such will be a positive contribution to the street and surrounding area. Developing this site in this manner is consistent with both the emerging and existing building developments.

The written design response and assessment, as prescribed under Rescode 2001, forms part of the Application for a planning permit should be read in conjunction with the Neigbourhood Site description plan, design response plan and all other documentation submitted with this application by Planform Building Design.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

PLANFORM

SUBJECT LAND

The Land has a East to West orientation and is situated at 35 Bicentennial Crescent, Meadow Heights.

The site has excellent access to a full range of local infrastructure and is well connected with major metropolitan arterial roads.

The land is currently occupied by a single dwelling, and shares a substantial fall of land.

The Subject land is predominantly rectangular in shape and includes these Dimensions/ attributes:

- Frontage to street (Eastern Boundary): Approx. 20 meters
- Southern Boundary: Approx. 104 meters long.
- Western Boundary: Approx. 20 meters long.
- Northern Boundary: Approx. 97 Meters long.
- There is currently a 2m wide Easement to the rear of the property.
- The pipe details are fully detailed as per the Drawing set submitted by Planform.
- The total site area is 1991 square meters.

This parcel of land contains a fall of over 13 meters. the highest point being the Front of the property. The land grades down evenly across the site. Most, if not all of the other properties along this, and surrounding streets Share similar if not the same topography Patterns. Street levels offer uniform falls for drainage and are relative to the falls of the adjoining lots.

The siting and internal configurations of the Proposal utilize private open spaces, which allows views and access from the interior of the proposed townhouses into the private open spaces.

Bicentennial Crescent is classified as a local road with two-way traffic, with almost no traffic driving through the street daily, as this proposal will be the only development in the unique street.

The site has ready access to a range of local facilities, district and regional centers, open public spaces and public transport services which include various bus, train and tram routes.

The site is situated in an established area and is ideally located for additional residential development in accordance with urban consolidation policies and planning schemes. As such, the proposal will increase diversity in a range of housing opportunities.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

As mentioned previously, The neighboring parcel of land from 35 Bicentennial Crescent consists of a vacant block of land.

To the other side of the proposed site, consists of the rear portions of 3 stand alone properties that face Macallister Court, around the corner from the subject site.

The proposal will incorporate the existing crossover as well as a new crossover for the townhouses to share to be constructed with the satisfaction of the relevant authority:

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

ASSESSMENT: CLAUSE 55- RESCODE 2001.

55.01- NEIGHBOURHOOD AND SITE DESCRIPTION AND DESIGN RESPONSE

55.01-1 – Neighbourhood and Site Description:

The surrounding area is positioned within established residential areas of the Hume Precinct. Housing around the immediate vicinity of Bicentennial Crescent is primarily made up of a mixture of single and double storey brick and render dwelling types, both of housing and unit developments.

The Proposed site has access to numerous public open spaces, there are also various educational facilities such as nearby, and other private/ catholic schools. There are other other important facilities such as community health centers, nature reserves and the Melbourne airport nearby.

These properties are on predominantly large pieces of land, and the houses are of a miniscule footprint in comparison to their respective lots. The most common roof form of the aforementioned dwellings consists of hip and gable roofs, flat roofs are less visible in the neighborhood.

The site has access to local and district commercial service facilities and offers easy access through the district centers of Meadow Heights and the neighbouring suburbs.

55.01-2 Design Response:

The conceptualized design for 35 Bicentennial Crescent has been intricately pieced together to form a proposal that responds adequately to the site at hand. The Proposal incorporates key characteristics and principles for developing as prescribed in the planning scheme. As such, the development will make a positive contribution to the existing developing neighbourhood character.

The main architectural character of the proposal is a combination of brick, vertical board cladding and render with colorbond roof sheeting. The combination of these materials is commonly viewed throughout the subject and surrounding streets,and accurately represents and reflects the neighbourhood character and will be a strong addition to the community.

The architectural nature of the Proposed Units means that it is site responsible and contributes to the ever-growing character of the neighbourhood. This has been achieved through the proposed scale of the buildings. The Proposal takes into consideration the surrounding build form as well as nearby modern developments.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

The design has taken into consideration, and accommodates for, off site impacts and provides sound living environments for prospective occupants. Private open spaces have been increased from the previous design and are more than reasonably sized.

Considering the lack of adjoining properties to contend with, overshadowing on adjacent windows is relatively minor for this type of development. Overshadowing of adjoining properties is in accordance with the requirements of Rescode 2001 (refer to shadow diagrams in application attached)

-for further details of the design response and site description, refer to the site description and design response material that accompany this written report.

Level 1, Suite 22, 797 Plenty Road, **South Morang.**
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

PLANFORM

55.02- NEIGHBOURHOOD CHARACTER & INFRASTRUCTURE

55.02-1 – Neighbourhood character objective

Standard B1:

The significant fall of the land has played a major role in the dictation of the layout of these strikingly attractive homes. The dwellings needed to be staggered down evenly throughout the development to allow for the natural fall of the land at Bicentennial Crescent, which is readily seen throughout the surrounding areas.

Whilst the proposal put forth council is of a subtle nature, the Practicality of this design is apparent from the outset. To accommodate 9 Units in total on a lot of this size is well within the confines of the neighbourhood character objective.

Design and layout of the proposed new dwellings are respectful of the existing housing of the area and the emergent forms of buildings within the area. The proposed build form and scale is similar to the housing patterns along Bicentennial Cres.

The proposed garages will not in any way dominate the façade of the development, as they have been designed to not be able to be viewed from the street, allowing for the prominent façade features such as porches, canopies, and window placements to highlight the nature of this design.

The private open space areas are oriented as best as possible to avoid overlooking into the neighbours private open spaces.

Respecting the neighbourhood character surrounding Bicentennial Crescent, was a large reason as to why high quality materials had been selected. (see colour schedule) The intricate use of these materials will allow a feasible and creative way of blending in with the surrounding Neighbourhood but simultaneously allowing for a sense of individuality amongst the ever growing area within the district. With all of those elements combined, any passerby is comfortably able to admire many different aspects of the building.

Landscaping to the front of the proposal,along with the allowance of canopy planting creates further interest in the development all the while tying in the natural landscape into the proposed built form.

This proposed new development will provide a suitable and necessary contribution to the area, and is sympathetic to the area itself, as the design is orientated to avoid any direct views into and from the proposed new dwelling

Given the abundance of evidence, the proposal will be a suitable contribution to the area and the proposal achieves the objectives and standards of 55.02-1.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

55.02-2 Residential Policy objectives

Standard B2:

It is expected that the "State Planning Policy Framework, and the Local Planning Policy Framework" do not have any restrictions of such a development, proposed at 35 Bicentennial Crescent, Meadow Heights

55.02-3 Dwellings Diversity Objectives

Standard B3

The development proposes the construction of Nine (9) dwellings and as such, this objective is deemed not relevant at this time.

55.02-4 Infrastructure Objectives:

Standard B4:

It is expected that the "infrastructure" within Meadow Heights, will be more than capable to accommodate such a development, proposed at 35 bicentennial Crescent, Meadow Heights.

55.02-5 Integration with the Street Objective

The proposed development promotes the observation of abutting streets and abutting public open spaces through design, building articulation and window placement.

The entrances of the proposed dwellings are front street facing, and are accentuated by an inviting porch which will have the occupant easily transfer from the outer landscape to their home. Adequate vehicle and pedestrian links to maintain and enhance local accessibility have been provided.

The site and its layout integrate with the local street network and development on all adjoining and nearby sites, this was of considerable importance based on the corner nature of the site.

The layout of the site also provides for buildings that directly address the public street and are relatively consistent with the building stock.

Therefore, the proposal achieves the objectives and standards of 55.02-5.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

55.03- SITE LAYOUT AND BUILDING MASS

55.03-1 Street Setback Objective:

The existing front setback of the remaining dwelling is to remain (6405mm.) Based on this proposal the Table at B1 is not applicable as the development is consistent with the existing street setback and will not be altering this portion of the proposal.

It is believed that the front setback for the existing dwelling is in line with the overall objective of standard 55.03-1.

55.03-1 Building Height Objective.

Standard B7:

At Bicentennial Crescent, the proposed maximum Building height of the unit to the rear of the property is 9870mm high (Dwelling 9). This overall height respects the existing and preferred neighbourhood character.

Based on the fall of the land at the proposed site of over 2.5 Degrees over 8 meters The proposed dwellings maximum heights are well within the max. building height allowance of 10.00m.

Based on the design creating this level of compliance, the proposal achieves the objectives of standards 55.03-2.

55.03-3 Site Coverage Objectives:

Standard B8:

At 35 Bicentennial Crescent, the Building site coverage for the 9 units totals 848.95 m2, 42.63% and is therefore below the allowable 60% maximum allowable under this objective

The proposed site coverage for the 9 dwellings respects the existing, or preferred neighbourhood character and response to the features of the site, resulting in a proposal that conforms to achieves the objectives of standard 55.03-3.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

55.03-4 Permeability and Stormwater Management Objectives

Standard B9:

The Proposal has been designed to reduce the impact of stormwater run- off on the drainage system and facilitate on-site stormwater infiltration.

Permeability of the proposal is 747.55m2, 37.54%, sitting well above the 20% minimum as described in this specific Objective.

The reticulated underground stormwater drainage system serving the site and surrounding area has ample capacity to accommodate the drainage run-off generated by the proposal.

This makes for a proposal that achieves the objectives and standards of 55.03-4 Permeability and Stormwater Management.

55.03-5: Energy Efficiency Objectives.

Standard B10:

The 9 units contain internal ceiling heights as follows:

Unit 1:

Ground Floor: 2400mm

First Floor: 2400mm

Units 2-9:

Ground floor: 2700 mm

First Floor 2700mm on the first floor.

Living and meals areas involve direct access to the private open spaces and are orientated for daylight use and enjoyment. Simultaneously, the proposed windows have been positioned for both natural light and cross-ventilation.

Planform has used energy efficient design tactics while putting together The internal configuration and layout of bedrooms/ living areas. This results in a unique proposal without the compromise of energy efficiency.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

The new buildings have been designed to provide optimum levels of [illegible] penetration and energy efficiency, while at the same time having little to no effect on solar/ daylight penetration to the adjoining properties.

In this instance solar access to adjoining dwellings and their principal open spaces will not be compromised or negatively impacted.

The proposal Confidently achieves the objectives and standards of 55.02-5.

55.03-6- Open Space Objective

Standard B11:

The proposed 9 Unit development has been created using the involvement of significant site amenities along with associated landscaping (both public and communal).

Therefore, the proposal achieves the objectives and standards of 55.03-6. Refer to the design response for further information

55.03-7 Safety Objective:

Standard B12:

At 35 Bicentennial, the Main entrances to the units are not obscured nor is it isolated from the street or any accessways, as the aim of the development was to respect the landscape character of the neighbourhood. Further to this point, there has been no unsafe planting that is to be planted in front of, or around the dwellings.

The architectural nature of the design promotes good lighting, visibility, and surveillance of car parks and internal accessways.

The proposal has also been designed to accentuate both safety and security.

The respective private open spaces of the dwellings are sealed off from the public areas with both privacy fencing surrounding the property (timber paling fencing), they will not in any way be used as a thoroughfare for the public.

The proposal therefore achieves the objectives and standard of 55.03-7.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

PLANFORM

55.03-8- Landscape Objectives:

Standard B13:

Large Secluded private open spaces contribute to the ability for significant landscaping to 35 Bicentennial Crescent. This proposal is able to allow for significant softscape opportunities as highlighted throughout the proposal.

The Development respects the natural landscape character of the neighbourhood. The design encourages the use of intricate positioning of canopy trees and shrubbery throughout; resulting in an even spread of hardscape and softscape throughout the property.

No significant trees have been removed in the last 12 months prior to this application.

The objectives and standards of 55.03-7 have been achieved based on the above confirmation.

55.03-9- Access Objective:

2 driveways will be utilized within this development. 1 existing crossover will be retained and the other is to be constructed to the satisfaction of the council.

There will be no significant loss of vegetation on the site or the footpath based on this additional crossover being proposed.

The accessways in no way exceed 33 percent of the total street frontage. These accessway features do provide an efficient and safe vehicle movement, which connects seamlessly within the development and network of the street.

The accessways will not dominate the street frontage,and are able to connect to the street via minimal distance allowing ease of access for residents and visitors.

Passing requirements are not relevant for this proposal relating to the accessway.

The objectives and standards of 55.03-9. Have been achieved by this proposal.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

55.03-10- Parking Location Objectives:

Standard B15:

All of the proposed dwellings from D2-D8 are provided with a separate lock-up Single garage. Dwelling 9 is presented with a double lock up garage and dwelling one will feature an enclosed carport.

These garages allow for significant parking ability on site, rather than along outside either street, contributing to the safety of the prospective residents belongings.

Based on the regulations needing to be met in this instance, Car Parking to the Proposed Unit development is more than adequate to meet the needs of the potential residents.

Any parking has been designed to allow for safe and efficient movements within the development and the dimensions of the car spaces achieve the requirements of standard B15.

The Proposal Achieves the Objectives and standards of 55.03-10.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

55.04– AMENITY IMPACTS:

55.04-1- Side and Rear setback Objectives:

Standard B17:

Significant side and rear setbacks attribute each of the proposed units to this development and there are to be no walls on the boundary proposed at this time. This results in the proposed Unit Development remaining in line with the boundaries as stated in Standard A10.

The Side and Rear setbacks proposed for the dwelling have been set back to adequately respect the existing and preferred neighbourhood character. The design limits any negative impact of the existing dwellings, with the closest that the property comes to the boundary being 2000 mm to the rear of unit 9.

As stated in standard B17 any and all sunblind's, verandas, porches, eaves, fascia's, gutters, masonry chimneys, flues, pipes, domestic fuel or water tanks and heating/ cooling equipment are within the allowable encroachment distances.

Any landings have an area of not more than 2 square meters and less than 1 meter high, stairways, ramps, pergolas, shade sails and carports are in accordance with standard B17.

with a significant emphasis on softscape and landscaping opportunities, setbacks to side and rear boundaries are well within the allowable Objectives and Standards of 55.04-1.

55.04-2 Walls on Boundaries Objectives.

Standard B18:

There are No walls on boundary proposed at 35 Bicentennial Crescent, It was designed purposefully in this way to allow for softscape opportunities and contributes to a significant private open space setout for all 9, Double Storey Units.

Second to this reason, the built form does not in any way dominate the streetscape based on the intelligent offsets from the boundaries that the site is constrained to.

This allows the development to adequately achieve the Objectives of 55.04-2.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

55.04-3 – Daylight to Existing Windows Objective:

Standard B19:

The existing conditions seldom constrained this site based on the orientation of the land, positioning of the proposed units and lack of neighbouring windows to contend with.

There are 3 properties that are adjacent to the proposed site however any habitable room windows been provided with a light avenue that has a minimum of 3 square meters (minimum dimension of 1m clear to the sky)

Any wall over 3 meters high in this proposal, has been setback in accordance with Standard B19 and based on the compliance of the proposal, the Objectives and Standards of 55.04-3 were met

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

55.04-4 – North Facing Windows Objective:

Standard B20:

Adequate solar access has been allowed for in the proposal put forth at 35 bicentennial crescent, Meadow Heights.

With the use of intricate setback placement, breaks in wall planes anto all 5 units put forth in this application, satisfactory solar access to North facing windows was achieved.

North facing windows to the existing dwelling to the rear of the proposal also allow for adequate northern light and complies with Diagram B3 “north facing windows” which means the impact on the amenity of existing dwellings is non-existent.

Objectives and standards relating to 55.04-4 of the planning scheme have been met.

55.04-5 Overshadowing Open Space Objectives:

Standard 21:

Large setbacks are in place for this proposal to alleviate any potential overshadowing that may have occurred had Planform not conceptualized this design in such an intelligent state.

Shadowing to the property at number 37 is minimal and is a vacant block of land.

The opposing sites from this development also see minor shadowing of their open spaces.

The modest proposal is not considered to overshadow these properties excessively. To the rear of the development site is also a valley trail/ walking track, lessening the contention of shadows to neighbouring open spaces.

Ultimately, compliance to standard B21 is formed based on the surrounding site characteristics. At no time of the day, are adjoining private open spaces completely overshadowed. Please take reference to the shadow diagram drawing sheets provided for further reference.

The proposed development achieves the objectives and standards of 55.04-5.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

55.04-6 – Overlooking Objective:

Standard B22:

With the neighbouring site at Number 37 Bicentennial being a vacant block of land, there was no overlooking to contend with this property.

On the opposite side of the subject land sits the rear of 3 separate parcels of land. To lessen the impact that these windows will have on Overlooking into secluded open spaces and habitable room windows, the following measures have been put in place;

Obscure windows to 1.7mm from finished floor level of the upper storeys have been implemented as well as adequate building setbacks as well as a 1.5m H paling fence, to ensure overlooking into private open spaces or habitable rooms does not occur.

Please refer to the plans submitted for further information regarding how the project adheres to the objectives and standards of 55.04-6.

55.04-7 Internal Views Objective:

Standard B23:

Strategic placement of windows and balconies have been implemented at 35 Bicentennial Crescent to prevent overlooking of more than 50 percent of secluded private open space of lower level dwellings and the building beside the proposal within the same development.

The design response adequately adheres to 55.04-7

The criteria behind the objectives within this objective have been sufficiently included in this proposal.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

PLANFORM

55.04-8 – Noise Impacts

Objective: Standard B24:

All secluded open space areas and noise sensitive rooms of new and adjacent dwellings have taken noise sources into account from immediately adjacent dwellings and it is the opinion of Planform that they will not be negatively impacted.

Main sources of noise such as driveways are not located near the bedrooms of the adjacent dwellings. further to this , the development will provide adequate and necessary Insulation within the proposed dwellings, which will assist in improving acoustics.

High privacy fencing across the site is able to ensure acoustic protection to the areas of private

open space. This allows the proposal at 35 Bicentennial to achieve the Objectives and

Standards of 55.04-8.

55.04 ON SITE AMENITY IMPACTS

55.05-1 – Accessibility Objective

Standard B25:

Those with limited mobility will be able to access any of the 9 properties with ease and comfort.

This is based on the intelligent use of a gradually graded driveway that is able to allow individuals and groups alike to access any of the 9 proposed townhouses. further to this, the townhouses have been cut into the natural ground accordingly in an effort to create consistent ease of access for any persons necessary.

The ground floor of the dwellings is easily accessible, and there is also scope to provide further accessibility (i.e. temporary ramps) for people with limited mobility if the need arises.

The proposal meets the objectives and standards of 55.05-1. at this time.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

PLANFORM

55.05-2 Dwellings Entry Objective:

Standard B26:

A sense of identity has been created to each individual townhouse by using obvious entry points to any visitor or prospective occupants of the dwellings. The dwellings' entry points are easily visible and can be clearly identified from the front street and side street, as well as other public areas.

The Entrance points provide a transitional space around the entry area, shelter from weather conditions and a sense of personal and individual address.

This 9 unit development in Meadow Heights readily achieves the Objectives of 55.05-2.

55.05-3 Daylight to New Windows Objective:

Standard B27:

The design process incorporated by Panform Building Design allowed for all Habitable room windows to each of the Nine Townhouses to face outdoor spaces with lights courts clear to the sky and contain areas of minimum 3 square meters of clear sky to the proposal.

This process in the design is important to promote adequate living standards for all prospective occupants of these intricately created homes.

With the objectives and Standards of 55.05-3 being a high priority in the design process, it is believed that they have been sufficiently achieved.

Each window in this proposal is conclusively able to access clear and adequate daylight, the objectives and standards of 55.05-3 have been met.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

55.05-4 – Private Open Space Objective:

Standard B28:

The Private open spaces of all 9 Townhouses at 35 Bicentennial Crescent are able to sufficiently service the requirements of the standard.

The standard stipulates that an area of 40 square meters is necessary for POS as well as a secluded area of 25 square meters is necessary to fulfill the needs of the scheme. With this in mind, Planforms proposal allows for the following:

Unit 1:
Private Open Space: 74m2
Secluded Private Open Space: 60m2

Unit 2:
Private open space: 41m2
Secluded Private Open Space: 38m2

Unit 3:
Private open space: 41m2
Secluded Private Open Space: 38m2

Unit 4:
Private open space: 41m2
Secluded Private Open Space: 38m2

Unit 5:
Private open space: 41m2
Secluded Private Open Space: 38m2

Unit 6:
Private open space: 41m2
Secluded Private Open Space: 38m2

Unit 7 and Unit 8:
Private open space: 41m2
Secluded Private Open Space: 38m2

Unit 9:
Private open space: 127m2
Secluded Private Open Space: 76m2

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

(Please refer to the attached drawings along with the above information relating to the positioning of the private open spaces for the townhouses.)

The secluded open spaces are intelligently positioned for privacy and security of the dwellings. The Living areas provide direct access to the Private open spaces, to create a great living environment for all residents.

The objectives and standards of 55.05-4. have been readily adhered to for each of the 9 dwellings.

55.05-5 Solar Access to Open Space Objective:

Usability and amenity of the POS's has been achieved based on the vast sunlight they will both readily receive.

At 35 Bicentennial Crescent, providing adequate solar access into the secluded open space was an important aspect of the design process when creating the proposal.

The southern boundary of the secluded private open space has been set back in accordance with standard B29 and diagram B5.

The proposal achieves the Objectives and Standards of 55.05-5.

55.05-6 Storage Objective:

Standard B30:

Correct storage opportunities have been allowed for, for all of the proposed townhouses within this development. Incorporation of 6 cubic meter sheds (**externally accessible**) have been provided from units 1-9 which allows satisfaction in respect to standard B30.

Due to these storage facilities having been chosen to conform within the requirements set out in standard B30, the proposal achieves the objectives and standards of 55.05-6.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

55.05 – DETAILED DESIGN:

55.06-1 Detailed Design Objective:

Innovative and practical design characteristics implemented at 35 Bicentennial Crescent such as Facade articulation and detailing, as well as roof form to the proposed dwelling enhance the existing and preferred neighbourhood character.

These characteristics aid in reducing the visual bulk of the building and have been deemed to be an acceptable addition to the neighbouring setting.

Other successful design tactics include articulation in the elevations, window placement, porches, wall plane breaks and adequate setbacks; the design allows any passerby to admire the dwelling as a whole and invite the eye to move around the buildings.

The pitched roof form respects the existing and preferred neighbourhood character.

The proposed garages are visually compatible and necessary with the 9-building development and blend in with the existing and preferred neighbourhood character.

The objectives and standards of 55.06-1 have been satisfactorily met.

55.06-2 – Front Fences Objective:

Standard B32:

No front fence is currently being submitted to council for approval in this proposal at 35 Bicentennial crescent.

The Objective of 55.06-2. Is rendered non applicable at this time.

55.06-3 – Common Property Objective:

Standard B33:

The Proposed site does not contain any communal spaces or areas; all 9 dwellings are separate in nature from one another.

Therefore, the standards of this objective are non- applicable at this time.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

PLANFORM

55.06-4 Site Services Objectives:

Standard B34:

Australia post and private delivery services can conveniently access mailboxes provided by the proposal and bin enclosures are located for convenient access by the residents.

Each of the 9 Double storey Townhouses contain site services that have been designed so that they can be easily installed and maintained. All site facilities are readily accessible, adequate and attractive to the potential residents and passersby.

The proposed dwellings achieve the objectives and standards of 55.06-3.

TO CONCLUDE:

With home ownership becoming more out of reach for the working class, properties such as the ones proposed at 35 Bicentennial will allow the average Australian to gain a foothold in the property market, assisting in securing the financial futures of many people of all walks of life.

The Proposed 9 Unit development will confidently suit any prospective residents in the near future and allow them to live in an intelligently designed and attractive development.

With large private open spaces for said residents and comfortable living areas to complement this; the positive contribution to Meadow heights that this development will have will be enjoyed for years to come.

The constraints of the site and characteristics of the area are addressed in the Neighbourhood Site description plan and the response to these constraints has been intelligently demonstrated via use of intricate design principals throughout.

The proposal will positively contribute to the character of the area, including the immediate streets and surrounding neighbourhood Every effort has been utilized to be able to abide by each of the objectives and standards of the Hume Planning Scheme.

Level 1, Suite 22, 797 Plenty Road, South Morang.
PH | 0431 020 698
E-MAIL | INFO@PLANFORM.COM.AU
WEB | WWW.PLANFORM.COM.AU

Sustainable Design Assessment

35 Bicentennial Crescent, Meadow Heights, VIC

15/11/2022

Frater Consulting Services Pty Ltd

(03) 8691 6928
admin@fraterconsultingservices.com.au
fraterconsultingservices.com.au

a part of Sustainability Tech Partners Pty Ltd

FRATER

Sustainable Design Assessment (SDA)

Proposed Residential Development

Table of Contents

Initiatives to be Marked on Drawings 3

Introduction 4

Site Description 5

Proposed Development 5

Energy Efficiency 6

Water Efficiency & Stormwater Management 7

Indoor Environment Quality 8

Construction, Building & Waste management 9

Transport 10

Building Materials 10

Urban Ecology 11

Implementation & Monitoring 12

Appendix A – WSUD Report / STORM Assessment 13

Appendix B – WSUD Maintenance & Installation 18

Appendix C – VOC & Formaldehyde Emission Limits 22

Appendix D – BESS Assessment 24

DOCUMENT VERSION

Version 0: Issued on 15/11/2022 for Client review

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

INITIATIVES TO BE MARKED ON DRAWINGS

Water & Stormwater Management

- Mark-up showing roof catchment area to be diverted to the Rainwater tank for each dwelling – If required, the use of charged pipe system will be explicitly acknowledged on the drawings and charged pipes will not be running underneath the building footprint
- Location and size of each Rainwater tank proposed
- Note showing connection to the toilets and laundry
- Minimum of 150m^2 permeable driveway
- Note showing use of native or drought tolerant species for landscaped area. Watering will not be required after an initial period when plants are getting established.
- Note showing WELS rating for water fittings/fixtures (refer to report) – Fixtures provided as part of base building work have to be chosen within one WELS star of best available at the time of purchase

Energy Efficiency

- Note showing commitment to 4W/m^2 lighting density in the dwellings
- Retractable external clothes drying line
- Lighting sensors for external lighting (motion detectors, timers etc.)
- Commitment to 6.5-Star average energy rating for the development (on planning and construction drawings)

Indoor Environment Quality

- Note showing double glazing on all habitable rooms (floor plans and elevations)

Transport

- Bike space location for each dwelling provided in the POS or garage – not installed over bonnet
- Additional two bike spaces for visitors

Waste

- Three bins system including rubbish, recycling, organic/garden waste and future glass bin provision.

Urban Ecology

- Show extent of vegetated areas around the site (includes lawn)

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

INTRODUCTION

Frater Consulting Services have been engaged to undertake a Sustainable Design Assessment for the proposed townhouse development located at 35 Bicentennial Crescent, Meadow Heights. This has been prepared to address the Hume City Council's sustainability requirements Planning Policy Clause 22.21 *Environmentally Sustainable Development*.

Within Clause 22.21, the City of Hume has identified the following key categories to be addressed:

- Energy Performance;
- Water Resources;
- Stormwater Management;
- Indoor Environment Quality;
- Construction, Building & Waste Management;
- Building Materials;
- Transport; and
- Urban Ecology.

The site has been assessed using the BESS tool. BESS was developed by association of councils led by Merri-bek City Council. This tool assesses the energy and water efficiency, thermal comfort and overall environmental sustainability performance of new buildings or alterations. It was created to demonstrate how new development can meet sustainability requirements as part of a planning permit application for the participating council.

Each target area within the BESS tool generally receives a score of between 1% and 100%. A minimum score of 50% is required for the energy, water, stormwater and IEQ areas. An overall score of 50% represents 'Best Practice' while a score over 70% represent 'Excellence'. The result of the BESS assessment is included as Appendix D.

The Stormwater Treatment Objective – Relative Measure (STORM) calculator which addresses stormwater quality considerations has been used for the development to ensure that stormwater management best practice requirements have been achieved. The result of the STORM assessment is included as Appendix A.

bess
Built Environment
Sustainability Scorecard

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

SITE DESCRIPTION

The proposed site is located at 35 Bicentennial Crescent, Meadow Heights. The 1,991m^2 site is currently occupied by a house which is proposed to be demolished prior to the construction of the development. It is located in a residential area approximately 28kms north of the Melbourne CBD.

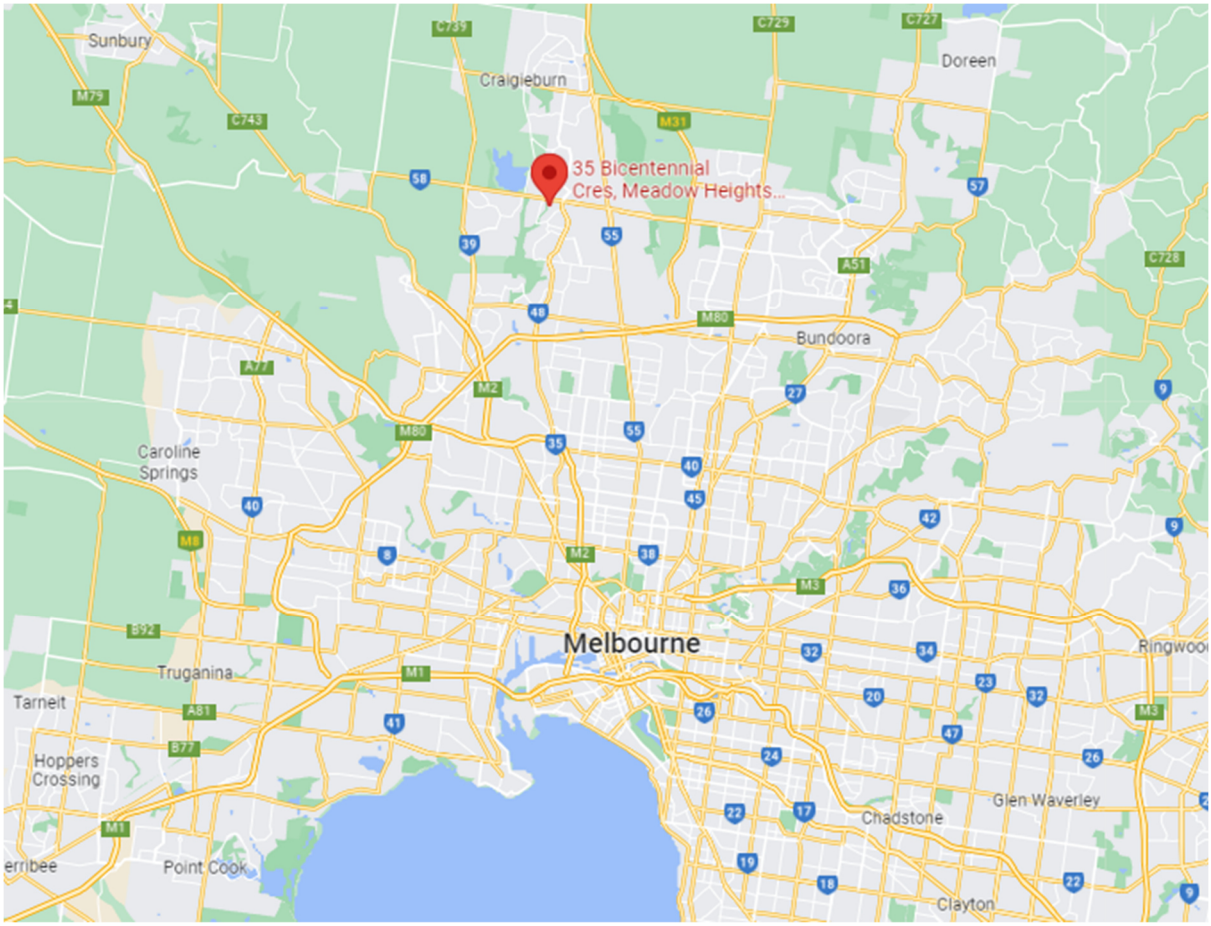


Figure 1: Location of the proposed development in Meadow Heights with relation to Melbourne CBD (Source: Google Maps)

PROPOSED DEVELOPMENT

The proposal consists of development of the site into 9 double-storey townhouses (1 x 4-bedroom, 1 x 5 -bedroom and 7 x 2-bedroom). The area of the site is 1,991m^2. Each townhouse will be provided with an undercover garage and individual and common driveways opening on Bicentennial Crescent.

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

ENERGY EFFICIENCY

Energy and its key elements should be integrated into the design of the proposed development. These elements contribute to reducing greenhouse gas emissions by utilising energy efficient appliances, energy conservation measures and renewable energy.

Thermal Performance

Energy ratings will be completed at the building approval stage. A commitment is made that the development will meet the energy efficiency requirements of minimum 6.5-Star average energy rating with no individual dwellings scoring less than 6.5 Stars (10% improvement above BCA requirements). This will be achieved using appropriate insulation level in all external walls, roof and floors as well as the use of double glazing windows throughout habitable rooms. For the purpose of BESS assessment 6.5-star average results have been assumed.

Heating and Cooling Systems

Heating and cooling systems can account to up to 40% of a household's energy use. Therefore, to reduce the energy consumption heating and cooling will be provided by energy efficient air conditioners (chosen **within one star of the best available** product in the range at the time of purchase). Please note that 3-Star energy rating has been entered in BESS as an average however actual star rating will depends on the product range.

Hot Water Heating

Hot water for the townhouses will be provided with gas instantaneous hot water units chosen as 6-Star minimum or within one star of the best available whichever is greater.

Internal Lighting

Energy consumption from artificial lighting within the townhouses will be reduced by using LED lighting. A lighting level of $4W/m^2$ will not be exceeded in the townhouses. The use of light internal colours will improve daylight penetration thus reducing the need for artificial lighting.

External Lighting

External lighting for the townhouses and common areas (driveway/pathway) will be LED and will include controls such as motion detectors or timers to minimise consumption during off-peak times.

Energy Efficient Appliances

All appliances if provided in the development as part of the base building work will be chosen within one energy efficiency star of the best available.

Clothes Drying

External retractable clothes drying lines or racks will be provided for each townhouse within the identified private open spaces.

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

WATER EFFICIENCY & STORMWATER MANAGEMENT

Water-saving use and reuse and its key elements should be integrated into the design of the proposed development. These principles contribute to reducing the water demand in addition to promoting water reuse. Stormwater management and its key elements should be integrated into the design of the proposed development. These principles contribute to ensuring natural systems are protected and enhanced whilst promoting on-site retention and aims to reduce runoff or peak flows.

Water Efficient Fittings

The development will include efficient fittings and fixtures to reduce the volume of mains water used in the development. The following WELS star ratings will be specified;

- Toilets – 4-Star,
- Taps (bathroom and kitchen) – 5-Star; and
- Showerhead – 4-Star with aeration device (6.0-7.5L/min).

Rainwater Collection & Use

Rainwater runoff from part of the roof area of each townhouse will be collected and stored in rainwater tanks[1]. Each dwelling will be provided with a 2,000L-tank.

If required, a charged pipe system or multiple tanks will be installed to collect water from part of the roof of each dwelling.

In the case of a charged pipe system, the charged pipes will not be running underneath the building footprint (slab) and the stakeholders (builder/developer/architect) will be required to explicitly acknowledge this solution and have the capacity to install it.

Rainwater collected will be used for toilet flushing and laundry in each townhouse. These initiatives will reduce significantly the stormwater impacts of the development and help achieve compliance with the STORM calculator (See Appendix A).

Stormwater Treatment – Permeable Paving

A minimum of 150m^2 of driveways will be designed to be permeable. This will help towards reducing the overall stormwater outflows from the site.

Water Efficient Appliances

All appliances if provided in the development as part of the base building work will be chosen within one WELS star of the best available.

Water Efficient Landscaping

Native or drought-tolerant plants will be implemented for the landscaped areas on site. Use of water or irrigation will not be required after an initial period when plants are getting established.

[1] Please note that any stormwater detention volume requirement for the site will be in addition to the proposed rainwater retention and that the proposed tank will not be directly topped up by mains water.

Address
281 Lygon Street
East Brunswick VIC 3057
Phone
03 8691 6928
Email
admin@fraterconsultingservices.com.au

INDOOR ENVIRONMENT QUALITY

Indoor Environment Quality and its key elements should be integrated into the design of the proposed development. These elements play a significant role in the health, wellbeing and satisfaction of the development occupants. Facilitating a good (IEQ) design provides a naturally comfortable indoor environment and less dependence on building services such as, artificial lighting, mechanical ventilation and heating and cooling device.

Volatile Organic Compounds

All paints, adhesives and sealants and flooring will have low VOC content. Alternatively, products will be selected with no VOCs. Paints such as eColour, or equivalent should be considered. Please refer to Appendix C for VOC limits.

Formaldehyde Minimisation

All engineered wood products will have 'low' formaldehyde emissions, certified as E0 or better. Alternatively, products will be specified with no Formaldehyde. Products such as ecological panel – 100% post-consumer recycled wood (or similar) will be considered for use within the development. Please refer to Appendix C for formaldehyde limits.

Daylight Levels

Daylight penetration will be enhanced with the use of light internal colours to improve daylight reflection. All bedrooms and living rooms will be provided with windows to allow for natural sunlight and ventilation. There are no bedrooms which rely on borrowed daylight. Installation of mirrored wardrobe doors could improve even further the daylight spread within the bedrooms.

Double Glazing

Glazing will be chosen in accordance with the energy rating requirements at the building approval stage. However, as a minimum double glazing will be provided to all living areas and bedrooms. This will provide better thermal performance and reduce condensation which helps prevent the formation of mould within the dwellings.

Task Lighting

A higher illuminance level (300Lux) will be provided for all task areas (e.g. kitchen bench, bathroom basin) to ensure appropriate light is provided to do any tasks in these areas.

Ventilation

All kitchens will have a separate dedicated exhaust fan (range-hood) which will be directly exhausted out of the building.

All townhouses will have access to effective cross flow ventilation. It will provide fresh air to the occupants and reduce the need for mechanical cooling. Window locks and door catches will be included to encourage and improve natural ventilation in the dwellings.

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

CONSTRUCTION, BUILDING & WASTE MANAGEMENT

Building Management and its key elements should be integrated into the design of the proposed development. These principles contribute to ensuring efficient and effective on-going building performance. Waste management and its key elements should be integrated into the design of the proposed development. These principles contribute to ensuring minimal waste is transported to landfill by means of disposal, recycling and on-site waste storage and/or collection methods.

Metering and Monitoring

Separate utility meters (water, gas and electricity) will be provided for each townhouse. This will allow residents to monitor and reduce their consumption.

Construction Waste Management

A waste management plan will be introduced to all on-site staff at a site orientation session to ensure that the waste generated on site is minimised and disposed of correctly. A minimum 80% of all construction and demolition waste generated on site will be reused or recycled.

Construction Environmental Management

The builder will identify environmental risks related to construction and include management strategies such as maintaining effective erosion and sediment control measures during construction and operation and ensure that appropriate staging of earthworks (e.g. avoid bare earthworks in high risk areas of the site during dominant rainfall period).

Operational Waste

Each townhouse will be provided with bins for general, recycling waste and garden/organic waste. Provision of glass bin for future service.

Figure 2: Organic/garden waste bin

Recycling bins will be provided next to general waste bins in the kitchen.

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

Figure 3: Examples of kitchen receptacles for general waste and recycling.

TRANSPORT

Bicycle Parking – Residents & Visitors

Residents will be able to securely park their bicycle within each townhouse's garage or POS. This will provide for a total of at least 9 bicycle spaces provided for residents.

Additional 2 bike spaces will be provided for visitors on site. The bike spaces will not be installed over bonnet.

BUILDING MATERIALS

Materials selection should be integrated into the design of the proposed development. The criteria for appropriate materials used are based on economic and environmental cost.

Timber

All timber used in the development will be Forest Stewardship Council (FSC) or Program for the Endorsement of Forest Certification (PEFC) certified, or recycled / reused.

Flooring

The use of timber flooring will be preferred for all living areas and bedrooms. Wherever possible, flooring will be selected from products/materials certified under any of the following:

- Carpet Institute of Australia Limited, Environmental Certification Scheme (ECS) v1.2;
- Ecospecifier GreenTag GreenRate V3.2; and/or
- Good Environmental Choice (GECA).

Alternatively, flooring must be durable, include some eco-preferred content, be modular and/or come from a manufacturer with a product stewardship program and ISO 14001certification.

Joinery

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

Wherever possible, joinery will be manufactured from materials/products certified under any of the following:

- Ecospecifier GreenTag GreenRate V3.1;
- Good Environmental Choice (GECA); and/or
- The Institute for Market Transformation to Sustainability (MTS) Sustainable Materials Rating Technology standard Version 4.0 – SmaRT 4.0.

The use of Ecological Panel (or equivalent) will be investigated, which is created from 100% post-consumer recycled products.

Non-toxic and Durable External Materials

All external materials used to construct the building will be long lasting and will be non-toxic.

Steel

Wherever possible, steel for the development will be sourced from a Responsible Steel Maker[2]. Reinforcing steel for the project will be manufactured using energy reducing processes commonly used by large manufacturers such as Bluescope or OneSteel.

URBAN ECOLOGY

In highly urbanised environments, such as metropolitan Melbourne, it is important to recognise the importance of maintaining and increasing the health of our urban ecosystems to improve living conditions not only for the fauna but also ourselves. We can improve our urban ecosystem through the incorporation of vegetation through landscaping for both new and existing developments.

Vegetation

Large landscaped area will be provided around the site and within the private open spaces. It will provide the occupants with a pleasant surrounding environment. The design will incorporate a mix of native species to help maintain local biodiversity.

[2] 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).

Address
281 Lygon Street
East Brunswick VIC 3057
Phone
03 8691 6928
Email
admin@fraterconsultingservices.com.au

Insulant ODP

All thermal insulation used in the development will not contain any ozone-depleting substances and will not use any in its manufacturing.

IMPLEMENTATION & MONITORING

The proposed Bicentennial Crescent development will meet the best practice requirement of the City of Hume through the different initiatives describe in this SDA such as thermally efficient building envelope, efficient air conditioning and hot water system and sustainable materials. An appropriate implementation and monitoring of the initiatives outlined within this SDA will be required.

Implementation of the ESD initiatives outlined in this report requires the following processes:

- Full integration with architectural plans and specifications
- Full integration with building services design drawings and specifications
- Endorsement of the ESD Report with town planning drawings
- ESD initiatives to be included in plans and specifications for building approval

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

APPENDIX A – WSUD REPORT / STORM ASSESSMENT

New development must comply with the best practice performance targets for suspended solids, total phosphorous and total nitrogen, as set out in the Urban Stormwater Best Practice Environmental Management Guidelines, Victoria Stormwater Committee 1999. Currently, these water quality performance targets require:

- 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.

The STORM tool, an industry accepted tool, was used to assess the development and ensure that the best practice targets described above are met. A minimum compliance score of 100% is required to achieve for the development.

Address
281 Lygon Street
East Brunswick VIC 3057

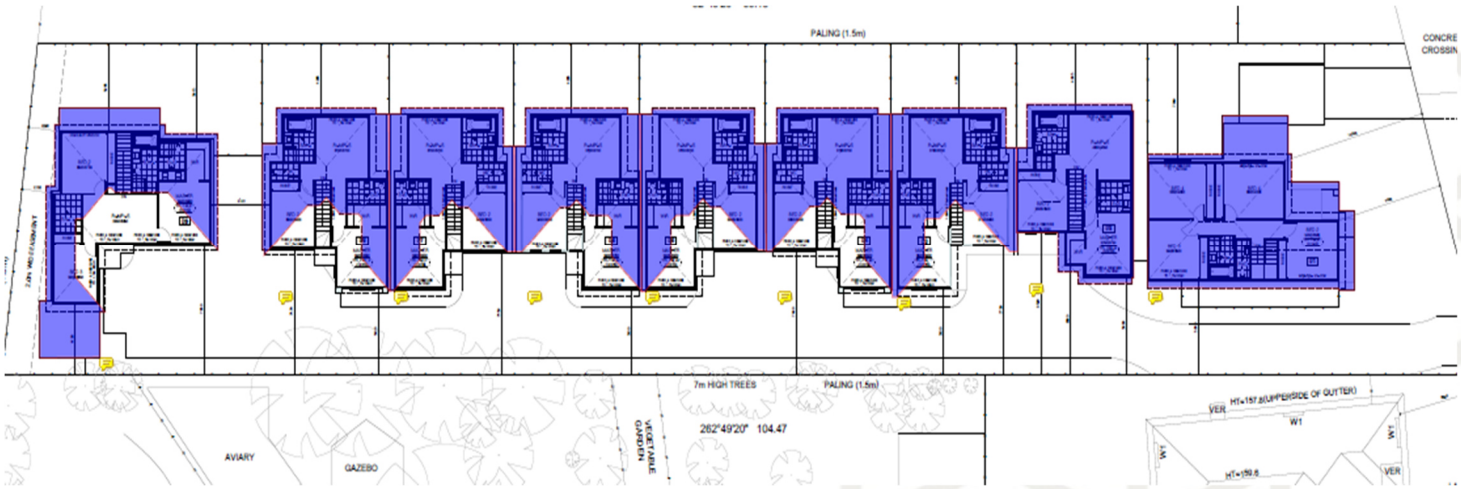
Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

Site Delineation

For the purpose of the assessment, the development has been delineated into the following surface types:

- Site area of 1,991m^2;
- Entire roof area runoff of dwelling 1 of 118.6m^2 which will be diverted into rainwater tank(s);
- Part of the roof area runoff of dwelling 2 of 76.9m^2 which will be diverted into rainwater tank(s);
- Part of the roof area runoff of dwelling 3 of 67m^2 which will be diverted into rainwater tank(s);
- Part of the roof area runoff of dwelling 4 of 63.2m^2 which will be diverted into rainwater tank(s);
- Part of the roof area runoff of dwelling 5 of 64.5m^2 which will be diverted into rainwater tank(s);
- Part of the roof area runoff of dwelling 6 of 64.7m^2 which will be diverted into rainwater tank(s);
- Part of the roof area runoff of dwelling 7 of 65.2m^2 which will be diverted into rainwater tank(s);
- Part of the roof area runoff of dwelling 8 of 63.4m^2 which will be diverted into rainwater tank(s);
- Part of the roof area runoff of dwelling 9 of 89m^2 which will be diverted into rainwater tank(s);
- Permeable area of 720m^2 comprised of landscaped area and other pervious surfaces in the backyards;
- A minimum of 150m^2 of driveways to be designed to be permeable; and
- Remainder of impervious areas of 448.5m^2 comprised of unconnected roof areas, untreated driveways and other impervious areas around the site.



Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

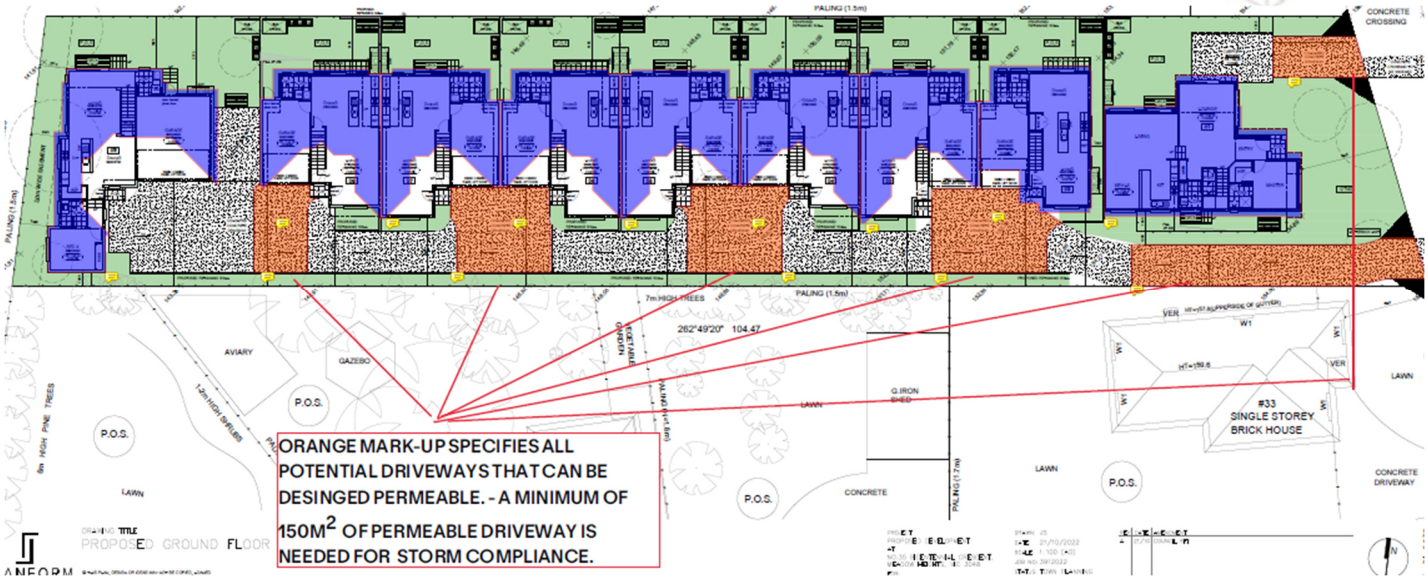


Figure 4: Roof catchment area for each dwelling to RWT (blue) , Driveways that can be permeable(orange) and landscape areas (green)

Stormwater initiatives

Rainwater Tank

(3,000L Rainwater tank for toilet flushing and laundry for each dwelling)

The roof catchment area of each townhouse (as described above) will be diverted to 3,000L rainwater tanks for each townhouse. The rainwater collected will be used for toilet flushing and laundry in all townhouses.

If required, a charged pipe system or multiple tanks will be installed to collect water from part of the roof of each dwelling.

In the case of a charged pipe system, the charged pipes will not be running underneath the slab and the stakeholders (builder / developer / architect) will be required to explicitly acknowledge this solution and have the capacity to install it.

Permeable Paving

A minimum of 150m^2 of driveways will be designed to be permeable. Driveways with a slope equal to or greater than 1:10 can be designed permeable. All the possible driveways that can be designed permeable are marked in orange (as shown above) – only 150m^2 of the driveways needs to be permeable.

This will help towards reducing the overall stormwater outflows from the site.

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

Stormwater Results

The initiatives and areas described above have been applied to the STORM calculator and the proposed development has achieved a score of 100%.

Melbourne Water **STORM Rating Report**

TransactionID:	1486753
Municipality:	HUME
Rainfall Station:	HUME
Address:	35 BICENTENNIAL CRESCENT
	MEADOW HEIGHTS
	VIC 3048
Assessor:	FRATER CONSULTING SERVICES
Development Type:	Residential - Multiunit
Allotment Site (m2):	1,991.00
STORM Rating %:	100

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
U1 ROOF TO RWT	118.60	Rainwater Tank	3,000.00	6	167.10	82.00
U2 ROOF TO RWT	76.90	Rainwater Tank	3,000.00	3	154.00	86.00
U3 ROOF TO RWT	67.00	Rainwater Tank	3,000.00	3	172.00	82.00
U4 ROOF TO RWT	63.20	Rainwater Tank	3,000.00	3	166.00	82.00
U5 ROOF TO RWT	64.50	Rainwater Tank	3,000.00	3	166.00	82.00
U6 ROOF TO RWT	64.70	Rainwater Tank	3,000.00	3	166.00	82.00
U7 ROOF TO RWT	65.20	Rainwater Tank	3,000.00	3	166.00	82.00
U8 ROOF TO RWT	63.40	Rainwater Tank	3,000.00	3	166.00	82.00
U9 ROOF TO RWT	89.00	Rainwater Tank	3,000.00	5	170.00	82.00
OTHER IMPERVIOUS AREAS	448.50	None	0.00	0	0.00	0.00

Please note that an additional occupant has been input in STORM for each dwelling to account for laundry connection.

We have assumed that on average a household will have a 3 WELS star washing machine and will run two loads per week. Based on data from WELS, 3-Star washing machine have an average consumption per load of 102 L. With two loads per week, this would represent 204 L/week for laundry or 29L/day. STORM input assume that one bedroom/occupant represent a daily consumption of 20L/day therefore connection to laundry (29L/day) has been input as an additional occupant.

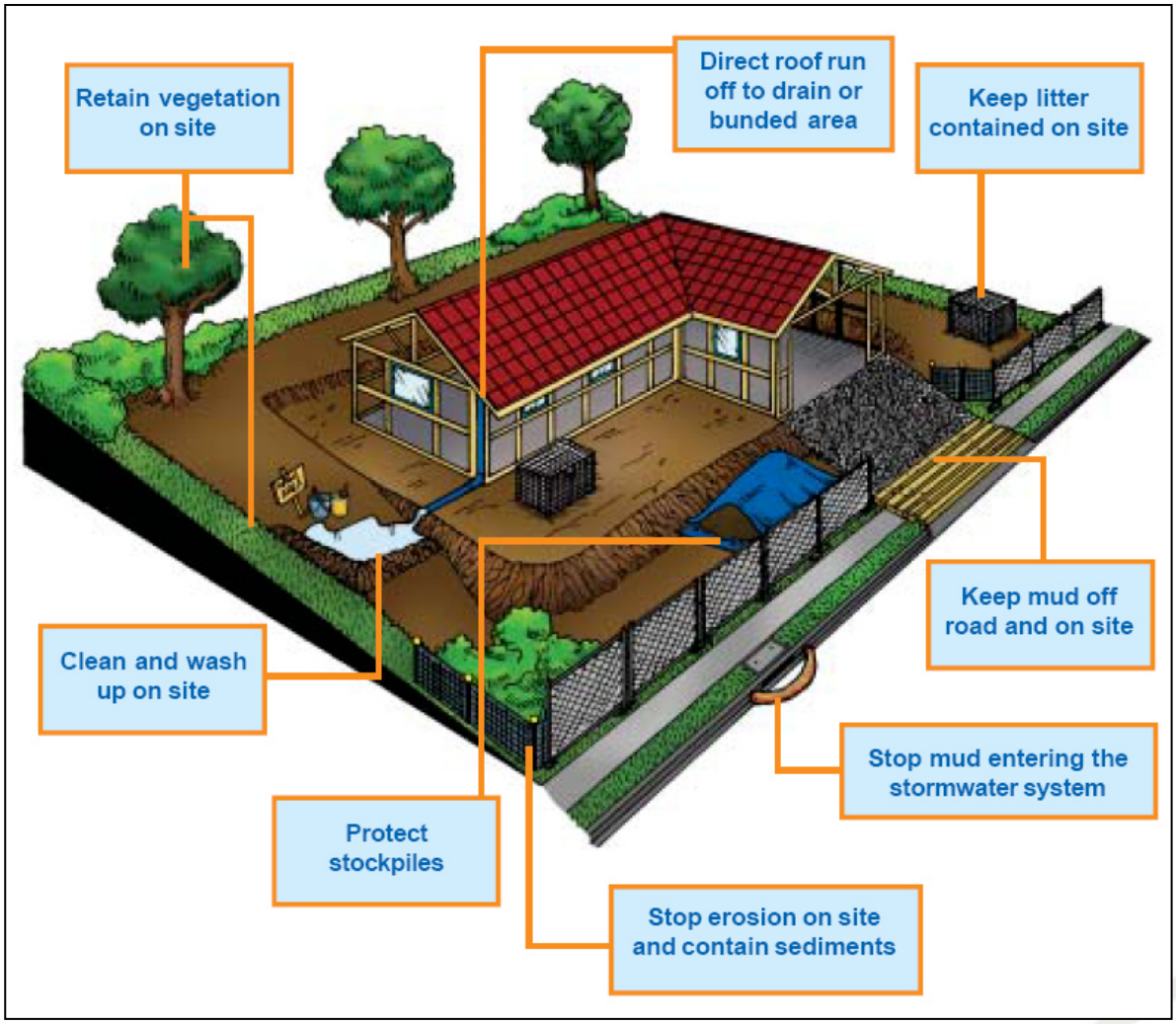
Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

Stormwater Management at Construction Site

To manage stormwater management in the construction stage, measures will be put in place to minimise the likelihood of contaminating stormwater. This will mean ensuring buffer strips are in place, sediment traps are installed, and the site will be kept clean from any loose rubbish. The builder will follow the process outlined in "Keeping Our Stormwater Clean – A Builder's Guide" by Melbourne Water.



Copies of "Keeping Our Stormwater Clean – A Builder's Guide" booklet can be obtained from Melbourne Water by ringing on 131 722 or can be downloaded from the following website.

https://www.clearwatervic.com.au/resource-library/guidelines-and-strategy/keeping-our-stormwater-clean-a-builders-guide.php

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

APPENDIX B – WSUD MAINTENANCE & INSTALLATION

Installation

Rainwater Tank(s)

The rainwater tank(s) will be installed above ground. Its manufacturer or material has not been nominated. It will be installed with a mesh insect cover over the inlet pipe to ensure the tank does not become a breeding ground for pests. Mesh needs to be installed over overflow pipes and if a man hole is present it needs to be properly sealed.

Please refer to the architectural drawings for the location of the rainwater tank.

Pumps

The pumps required either to divert the stormwater runoff to the rainwater tank or to distribute the collected water to the end uses (toilets and laundry) will be required to be installed as per the chosen manufacturer specifications.

Permeable Paving

Permeable paving used for driveway shall be installed in strict accordance with the site plans and the permeable paving manufacturer specific drawings and requirements.

Inspection Requirements

Rainwater Tanks

Inspections of roof areas and gutters leading to the tank should take place every 6 months. Rainwater in the tanks should be checked every 6 months for mosquito infestation.

The rainwater tank should be examined every 2 years for sludge build up.

Ensure the monitoring system (be it digital or a simple float system) is functioning properly by checking the water level in the rainwater tanks.

Pumps

The pumps required will be required to be routinely inspected by listening for the day-to day operation of the pumps. Unusual noise or no noise should be investigated. Inspection should occur as per the chosen manufacturer specifications.

Permeable Paving

Permeable paving should be inspected for damage after large storm events (48.2mm in one hour is considered a large storm event in Melbourne – 1 in 100 year storm) and should be inspected every 3-month.

During inspection, the following should be looked for:

- Water ponding on porous joints or permeable pavers;
- Soggy and boggy soils;

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

- Uneven surface;
- Rubbish, leaf litter and sediment; and
- Blocked underdrainage.

Clean Out / Maintenance Procedure

Rainwater Tank, Roof and Gutters

Rainwater tanks will require the roof and gutters onsite to be maintained; gutters should be checked, maintained and cleaned every six months to avoid blockages from occurring. If a leaf blocking system is installed this can be completed annually.

Any trees onsite should be maintained every 6 months with branches overhanging the roof removed.

Water ponding in gutters should be avoided as this provides a breeding ground for mosquitos; tanks should also not become breeding grounds for mosquitoes. If mosquitoes are detected in the tank remedial steps need to occur to prevent breeding. If mosquitoes or other insects are found in rainwater tanks, the point of entry should be located and repaired. As well as preventing further access, this will prevent the escape of emerging adults. Gutters should be inspected to ensure they do not contain ponded water, and be cleaned if necessary.

Please refer to http://www.health.gov.au/internet/publications/publishing.nsf/Content/ohp-enhealth-raintank-cnt-l~ohp-enhealth-raintank-cnt-l-5~ohp-enhealth-raintank-cnt-l-5.5 for more information on mosquito control.

Rainwater tanks should be checked by regular maintenance person every 3-6 months to ensure that connection to the building is maintained and there are no blockages.

A simple way to ensure the tank is operating as intended would be through the installation of a smart monitoring device (e.g. OneBox®). These systems allow users to operate tanks remotely from internet or smartphone, monitor and control the tanks in real time, allow automatic release of stored water prior to storm events, alert users if there is any blockage and view tank history and usage patterns.

Alternatively, onsite tank gauges can help those familiar with the tank know if the tank is not working correctly.

Pumps

Maintenance should occur as per the chosen manufacturer specifications. All strainers and filters should be cleaned every 6 months. Good quality pump should provide trouble free service for up to 10 years.

Permeable Paving

Permeable paving will require ongoing maintenance based on the inspection. The following maintenance task could be required:

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

Item	What to check for	Inspected	Maintenance undertaken	Further action required or comment
Civil components – Permeable pavement				
Permeability	Pavement area is free draining (i.e. no clogging of the pavement surface). Clogging is generally evident by water ponding on the surface of the permeable paving more than 2 hours after rainfall.			
Pavement surface	No uneven paver surface (i.e. pavement surface lifting and rutting). No physical damage to the pavement surface – look for cracks and holes.			
Infill material	Infill material is present between pavers. No scour occurring.			
Landscape components – Permeable pavement				
Weeds	Less than 10% of infill surface area (where present) covered by weeds.			

Commissioning

Rainwater Tank

All rainwater tanks should be washed or flushed out prior to use. All inlets and outlets should be correctly sealed to prevent insects entering. Connection to all toilets and laundry in the development should be tested (dye test or equivalent).

Please note if new roof coating or paint is to be installed then the first few run-offs after installation need to be discarded.

Pumps

Commissioning should occur as per the chosen manufacturer specifications.

Permeable Paving

Commissioning should occur as per the chosen manufacturer specifications.

Summary

The following needs to occur onsite to ensure compliance with WSUD requirements and maintain operation of rainwater tank and connections onsite.

Task	When?	Requirement
Inspect Rainwater tanks	Every 6 months	• Check for any damage/compression • Mosquitoes infestation
	Every 2 years	• Sludge Build up – if sludge build up occurs a

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

		vacuum tank needs to be called out to site.
Inspect roofs & gutters	Every 6 months	• Clean out of leaves / debris. • Remove any overhanging branches onsite.
Inspection of Permeable Paving	3-Monthly Following large storm event	• Check joints • Check soil • Check for blockages • Check for ponding • Check for uneven surfaces

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

APPENDIX C – VOC & FORMALDEHYDE EMISSION LIMITS

The following table are an extract of the Green Star Design and as built submission guidelines:

Table 13.1.1: Maximum TVOC Limits for Paints, Adhesives and Sealants

Product Category	Max TVOC content in grams per litre (g/L) of ready to use product.
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 sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesives and sealants	100

The product complies with the Total VOC (TVOC) limits specified in the Table below.

Carpet Test Standards and TVOC Emissions Limits

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

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

Table 13.2: Formaldehyde Emission Limit Values for Engineered Wood Products

Test Protocol	Emission Limit/ Unit of Measurement
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for Plywood	≤1mg/ L
AS/NZS 1859.1:2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1.5 mg/L
AS/NZS 1859.2:2004 - MDF, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1mg/ L
AS/NZS 4357.4 - Laminated Veneer Lumber (LVL)	≤1mg/ L
Japanese Agricultural Standard MAFF Notification No.701 Appendix Clause 3 (11) - LVL	≤1mg/ L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	≤1mg/ L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	≤1mg/ L
JIS A1901 (not applicable to Plywood, applicable to high pressure laminates and compact laminates)	≤0.1 mg/m²hr*
ASTM D5116 (applicable to high pressure laminates and compact laminates)	≤0.1 mg/m²hr
ISO 16000 part 9, 10 and 11 (also known as EN 13419), applicable to high pressure laminates and compact laminates	≤0.1 mg/m²hr (at 3 days)
ASTM D6007	≤0.12mg/m³**
ASTM E1333	≤0.12mg/m³***
EN 717-1 (also known as DIN EN 717-1)	≤0.12mg/m³
EN 717-2 (also known as DIN EN 717-2)	≤3.5mg/m²hr

*mg/m²hr may also be represented as mg/m²/hr.

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

APPENDIX D – BESS ASSESSMENT

Address
281 Lygon Street
East Brunswick VIC 3057

Phone
03 8691 6928

Email
admin@fraterconsultingservices.com.au

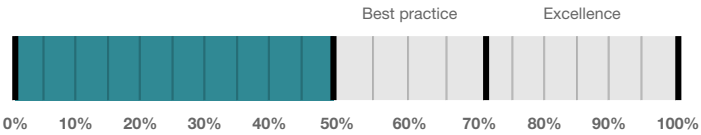
BESS Report

Built Environment Sustainability Scorecard

This BESS report outlines the sustainable design commitments of the proposed development at 35 Bicentennial Cres Meadow Heights VIC 3048. 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 Hume 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

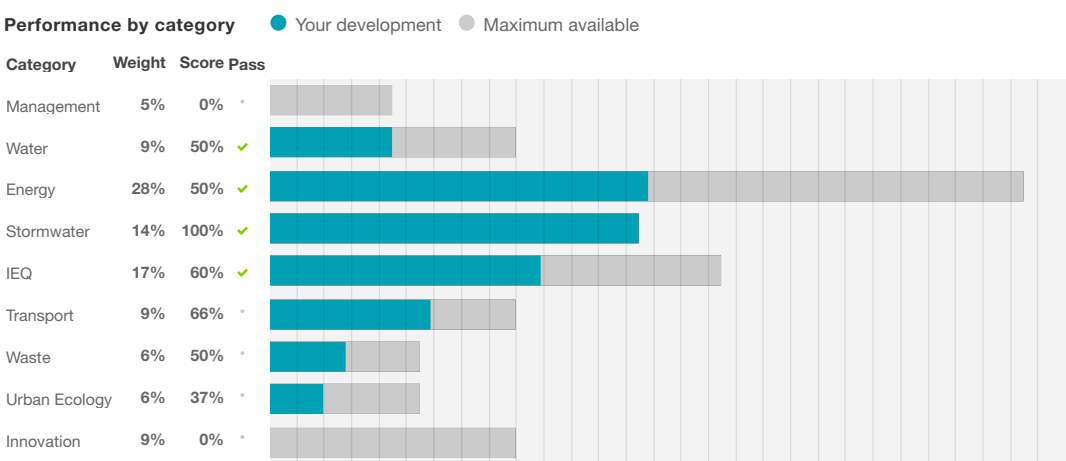


52%

Project details

Address	35 Bicentennial Cres Meadow Heights VIC 3048
Project no	DE0F4BCD-R1
BESS Version	BESS-7
Site type	Multi dwelling (dual occupancy, townhouse, villa unit etc)
Account	wali@fraterconsultingservices.com.au
Application no.	
Site area	1,991.00 m²
Building floor area	1,207.30 m²
Date	15 November 2022
Software version	1.7.1-B.392

Performance by category



Dwellings & Non Res Spaces

Dwellings

Name	Quantity	Area	% of total area
Townhouse			
UNIT 1	1	188 m^2	15%
UNIT 9	1	154 m^2	12%
UNIT 8	1	122 m^2	10%
UNIT 7	1	125 m^2	10%
UNIT 6	1	128 m^2	10%
UNIT 5	1	124 m^2	10%
UNIT 4	1	123 m^2	10%
UNIT 3	1	126 m^2	10%
UNIT 2	1	118 m^2	9%
Total	**9**	**1,207 m^2**	**100%**

Supporting information

Floorplans & elevation notes

Credit	Requirement	Response	Status
Water 3.1	Water efficient garden annotated		-
Energy 3.3	External lighting sensors annotated		-
Energy 3.4	Clothes line annotated (if proposed)		-
Stormwater 1.1	Location of any stormwater management systems used in STORM or MUSIC modelling (e.g. Rainwater tanks, raingarden, buffer strips)		-
IEQ 2.2	Dwellings meeting the requirements for having 'natural cross flow ventilation'		-
IEQ 3.1	Glazing specification to be annotated		-
Transport 1.1	All nominated residential bicycle parking spaces		-
Transport 1.2	All nominated residential visitor bicycle parking spaces		-
Waste 2.1	Location of food and garden waste facilities		-
Urban Ecology 2.1	Vegetated areas		-

Supporting evidence

Credit	Requirement	Response	Status
Energy 3.5	Provide a written description of the average lighting power density to be installed in the development and specify the 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%	50% ✔ Pass
1.1 Potable water use reduction		40%
3.1 Water Efficient Landscaping		100%

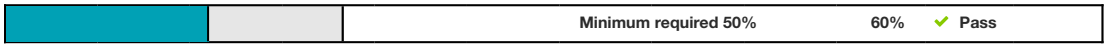
Energy Overall contribution 27.5%

	Minimum required 50%	50% ✔ Pass
1.2 Thermal Performance Rating - Residential		16%
2.1 Greenhouse Gas Emissions		100%
2.2 Peak Demand		0%
2.3 Electricity Consumption		100%
2.4 Gas Consumption		100%
2.5 Wood Consumption		N/A ⌖ Scoped Out
		No wood heating system present
2.6 Electrification		N/A ⊘ Disabled
		Credit is available when project is declared to have no gas connection.
3.2 Hot Water		100%
3.3 External Lighting		100%
3.4 Clothes Drying		100%
3.5 Internal Lighting - Residential Single Dwelling		100%
4.4 Renewable Energy Systems - Other		N/A ⊘ Disabled
		No other (non-solar PV) renewable energy is in use.
4.5 Solar PV - Houses and Townhouses		N/A ⊘ Disabled
		No solar PV renewable energy is in use.

Stormwater Overall contribution 13.5%

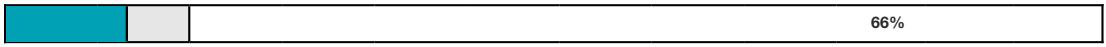
	Minimum required 100%	100% ✔ Pass
1.1 Stormwater Treatment		100%

IEQ Overall contribution 16.5%



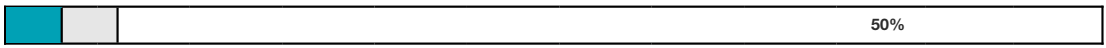
2.2 Cross Flow Ventilation	100%
3.1 Thermal comfort - Double Glazing	100%
3.2 Thermal Comfort - External Shading	0%
3.3 Thermal Comfort - Orientation	0%

Transport Overall contribution 9.0%



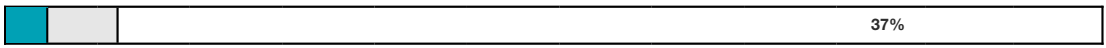
1.1 Bicycle Parking - Residential	100%
1.2 Bicycle Parking - Residential Visitor	100%
2.1 Electric Vehicle Infrastructure	0%

Waste Overall contribution 5.5%



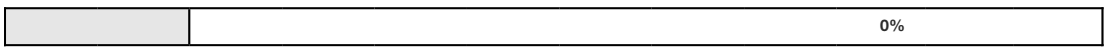
1.1 - Construction Waste - Building Re-Use	0%
2.1 - Operational Waste - Food & Garden Waste	100%

Urban Ecology Overall contribution 5.5%



2.1 Vegetation	75%
2.2 Green Roofs	0%
2.3 Green Walls and Facades	0%
2.4 Private Open Space - Balcony / Courtyard Ecology	0%
3.1 Food Production - Residential	0%

Innovation Overall contribution 9.0%



1.1 Innovation	0%

Credit breakdown

Management

Overall contribution 0%

1.1 Pre-Application Meeting		0%
Score Contribution	This credit contributes 50.0% 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 4% 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
Water fixtures, fittings and connections	
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	Default or unrated
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?:	
UNIT 1	RWT 1
UNIT 2	RWT 2
UNIT 3	RWT 3
UNIT 4	RWT 4
UNIT 5	RWT 5
UNIT 6	RWT 6
UNIT 7	RWT 7
UNIT 8	RWT 8
UNIT 9	RWT 9
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 Tanks	
What is the total roof area connected to the rainwater tank?:	
RWT 1	119 m²
RWT 2	76.9 m²
RWT 3	67.0 m²
RWT 4	63.2 m²
RWT 5	64.5 m²
RWT 6	64.7 m²
RWT 7	65.2 m²
RWT 8	63.4 m²
RWT 9	89.0 m²

Tank Size:	
RWT 1	3,000 Litres
RWT 2	3,000 Litres
RWT 3	3,000 Litres
RWT 4	3,000 Litres
RWT 5	3,000 Litres
RWT 6	3,000 Litres
RWT 7	3,000 Litres
RWT 8	3,000 Litres
RWT 9	3,000 Litres
Irrigation area connected to tank:	
RWT 1	-
RWT 2	-
RWT 3	-
RWT 4	-
RWT 5	-
RWT 6	-
RWT 7	-
RWT 8	-
RWT 9	-
Is connected irrigation area a water efficient garden?:	
RWT 1	No
RWT 2	No
RWT 3	No
RWT 4	No
RWT 5	No
RWT 6	No
RWT 7	No
RWT 8	No
RWT 9	No
Other external water demand connected to tank?:	
RWT 1	-
RWT 2	-
RWT 3	-
RWT 4	-
RWT 5	-
RWT 6	-
RWT 7	-
RWT 8	-
RWT 9	-

1.1 Potable water use reduction	40%
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	1722 kL
Output	Proposed (excluding rainwater and recycled water use)
Project	1440 kL
Output	Proposed (including rainwater and recycled water use)
Project	1105 kL
Output	% Reduction in Potable Water Consumption
Project	35 %
Output	% of connected demand met by rainwater
Project	78 %
Output	How often does the tank overflow?
Project	Never / Rarely
Output	Opportunity for additional rainwater connection
Project	365 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 14% Minimum required 50%

Dwellings Energy Approach	
What approach do you want to use for Energy?:	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
Gas supplied into building:	Natural Gas

Dwelling Energy Profiles	
Below the floor is: All	Ground or Carpark
Above the ceiling is: All	Outside
Exposed sides:	
UNIT 1 UNIT 9	4
UNIT 2 UNIT 8	3
UNIT 3 UNIT 4 UNIT 5 UNIT 6 UNIT 7	2
NatHERS Annual Energy Loads - Heat: All	98.0 MJ/sqm
NatHERS Annual Energy Loads - Cool: All	20.0 MJ/sqm
NatHERS star rating: All	6.5
Type of Heating System: All	D Reverse cycle space
Heating System Efficiency: All	3 Star
Type of Cooling System: All	Refrigerative space
Cooling System Efficiency: All	3 Stars
Type of Hot Water System: All	J Gas Instantaneous 6 star
% Contribution from solar hot water system: All	-
Clothes Line: All	D Private outdoor clothesline
Clothes Dryer: All	Occupant to Install

1.2 Thermal Performance Rating - Residential 16%

Score Contribution	This credit contributes 27.3% towards the category score.
Criteria	What is the average NatHERS rating?
Output	Average NATHERS Rating (Weighted)
Townhouse	6.5 Stars

2.1 Greenhouse Gas Emissions	100%
Score Contribution	This credit contributes 9.1% 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	71,097 kg CO2
Output	Proposed Building with Proposed Services (Actual Building)
Townhouse	23,642 kg CO2
Output	% Reduction in GHG Emissions
Townhouse	66 %

2.2 Peak Demand	0%
Score Contribution	This credit contributes 4.5% towards the category score.
Criteria	What is the % reduction in the instantaneous (peak-hour) demand against the benchmark?
Output	Peak Thermal Cooling Load - Baseline
Townhouse	118 kW
Output	Peak Thermal Cooling Load - Proposed
Townhouse	115 kW
Output	Peak Thermal Cooling Load - % Reduction
Townhouse	2 %

2.3 Electricity Consumption	100%
Score Contribution	This credit contributes 9.1% towards the category score.
Criteria	What is the % reduction in annual electricity consumption against the benchmark?
Output	Reference
Townhouse	61,551 kWh
Output	Proposed
Townhouse	17,325 kWh
Output	Improvement
Townhouse	71 %

2.4 Gas Consumption	100%
Score Contribution	This credit contributes 9.1% towards the category score.
Criteria	What is the % reduction in annual gas consumption against the benchmark?
Output	Reference
Townhouse	161,766 MJ
Output	Proposed
Townhouse	116,166 MJ
Output	Improvement
Townhouse	28 %

2.5 Wood Consumption	N/A ✧ Scoped Out
This credit was scoped out	No wood heating system present

2.6 Electrification		N/A	⊘ Disabled
This credit is disabled	Credit is available when project is declared to have no gas connection.		

3.2 Hot Water		100%
Score Contribution	This credit contributes 4.5% towards the category score.	
Criteria	What is the % reduction in annual energy consumption (gas and electricity) of the hot water system against the benchmark?	
Output	Reference	
Townhouse	44,935 kWh	
Output	Proposed	
Townhouse	32,683 kWh	
Output	Improvement	
Townhouse	27 %	

3.3 External Lighting		100%
Score Contribution	This credit contributes 4.5% 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 4.5% 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	5,738 kWh	
Output	Proposed	
Townhouse	1,148 kWh	
Output	Improvement	
Townhouse	79 %	

3.5 Internal Lighting - Residential Single Dwelling		100%
Score Contribution	This credit contributes 4.5% 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	⊘ Disabled
This credit is disabled	No other (non-solar PV) renewable energy is in use.		

4.5 Solar PV - Houses and Townhouses		N/A	⊘ Disabled
This credit is disabled	No solar PV renewable energy is in use.		

Stormwater

Overall contribution 14% Minimum required 100%

Which stormwater modelling are you using?:	Melbourne Water STORM tool
1.1 Stormwater Treatment	100%
Score Contribution	This credit contributes 100.0% towards the category score.
Criteria	Has best practice stormwater management been demonstrated?
Question	STORM score achieved
Project	100
Output	Min STORM Score
Project	100

IEQ

Overall contribution 10% Minimum required 50%

2.2 Cross Flow Ventilation	100%
Score Contribution	This credit contributes 20.0% 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 40.0% 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 20.0% 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 20.0% towards the category score.
Criteria	Are at least 50% of living areas orientated to the north?
Question	Criteria Achieved ?
Townhouse	No

Transport Overall contribution 6%

1.1 Bicycle Parking - Residential	100%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	How many secure and undercover bicycle spaces are there per dwelling for residents?
Question	Bicycle Spaces Provided ?
Townhouse	9
Output	Min Bicycle Spaces Required
Townhouse	9

1.2 Bicycle Parking - Residential Visitor	100%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	How many secure bicycle spaces are there per 5 dwellings for visitors?
Question	Visitor Bicycle Spaces Provided ?
Townhouse	2
Output	Min Visitor Bicycle Spaces Required
Townhouse	2

2.1 Electric Vehicle Infrastructure	0%
Score Contribution	This credit contributes 33.3% 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 50.0% 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 50.0% 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 50.0% 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 TOTAL SITE AREA IS COVERED BY 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 / in every courtyard?	
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	7 m^2	

Innovation Overall contribution 0%

1.1 Innovation		0%
Score Contribution	This credit contributes 100.0% towards the category score.	
Criteria	What percentage of the Innovation points have been claimed (10 points maximum)?	

Disclaimer

The Built Environment Sustainability Scorecard (BESS) has been provided for the purpose of information and communication. While we make every effort to ensure that material is accurate and up to date (except where denoted as 'archival'), this material does in no way constitute the provision of professional or specific advice. You should seek appropriate, independent, professional advice before acting on any of the areas covered by BESS.

The Municipal Association of Victoria (MAV) and CASBE (Council Alliance for a Sustainable Built Environment) member councils do not guarantee, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of BESS, any material contained on this website or any linked sites