94 Edgecliffe Boulevard
Collaroy Plateau

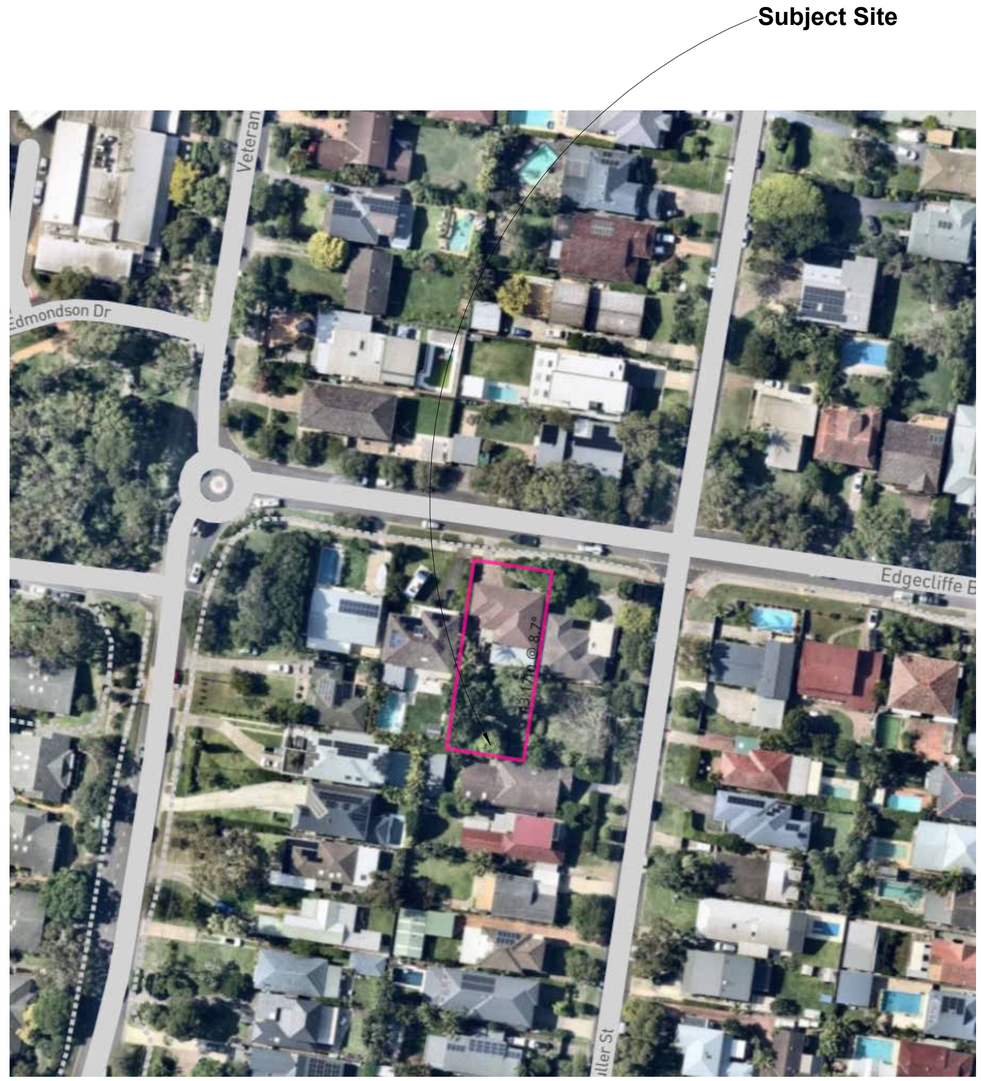
DEVELOPMENT APPLICATION

FOR PROPOSED DUPLEX WITH BASEMENT AND POOLS

DRAWING LIST

A001	Site Plan	24/06/25
A002	Driveway Gradient	24/06/25
A003	Site Analysis	24/06/25
A004	Shadow Diagram	24/06/25
A005	Sediment/Erosion Control Plan	24/06/25
A006	Strata Subdivision Plan	24/06/25
A102	Demolition Plan	24/06/25
A200	Basement Floor Plan	24/06/25
A201	Proposed Ground Floor Plan	24/06/25
A202	Proposed First Floor Plan	24/06/25
A301	Elevations	24/06/25
A302	Elevations	24/06/25
A350	Sections	24/06/25
A504	Site Compliance	24/06/25
A505	BASIX Commitments	24/06/25
A506	NATHERS	24/06/25
A507	NATHERS D1	24/06/25
A508	NATHERS D2	24/06/25
A601	Height Blanket	24/06/25
A603	Material Schedule	24/06/25
A650	Window & Door Schedule	24/06/25

3D VIEW - ARTIST IMPRESSION ONLY



SITE LOCATION

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR:

NORTH:

DRAWINGS BY:

Duplex
Building Design

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Cover Sheet**

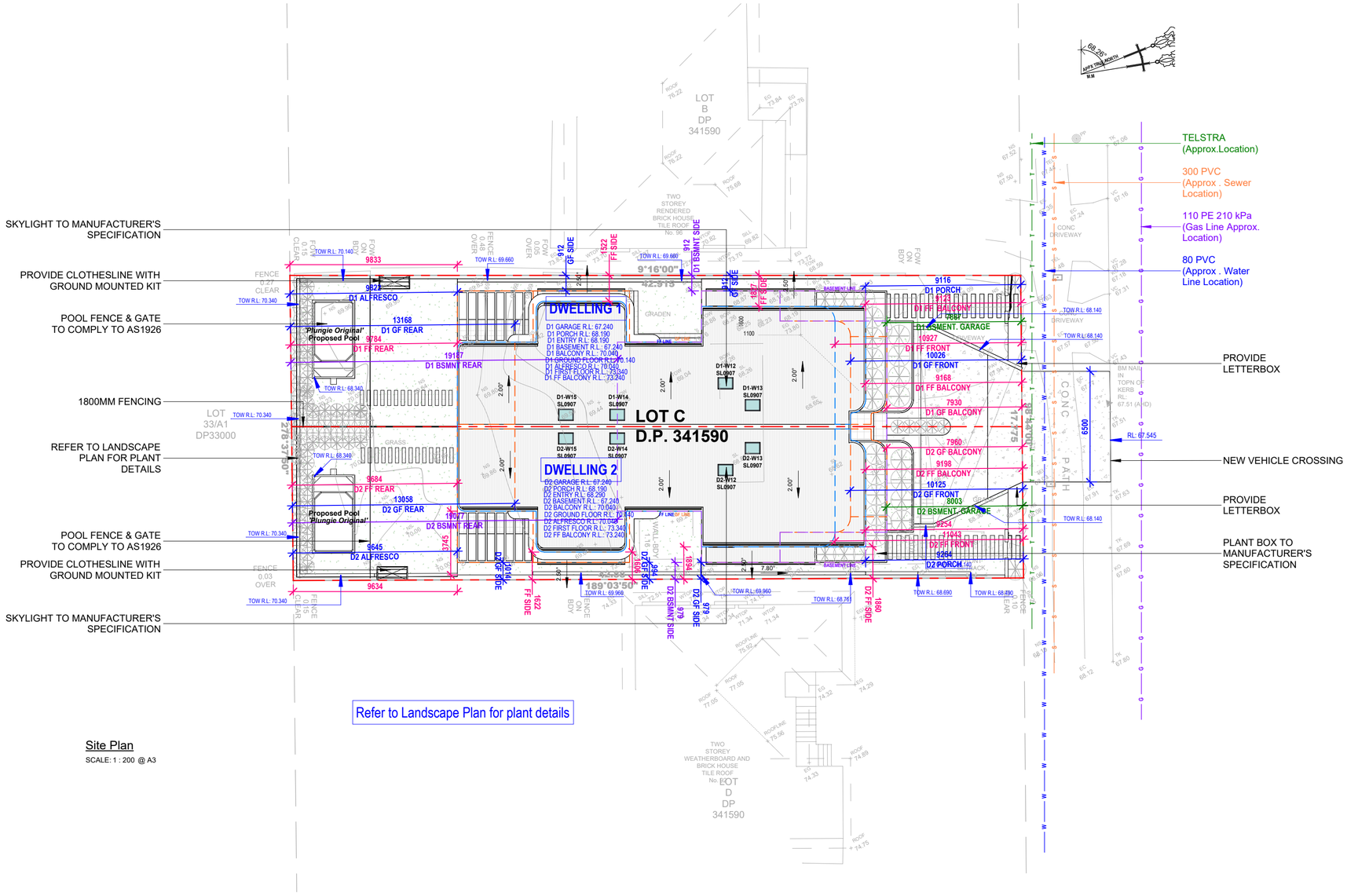
DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**

SCALE: @A2

PROJECT No:	DRAWING No:	ISSUE:
24100	**A000**	**D**



Site Plan

SCALE: 1 : 200 @ A3

LEGEND:

ADJ	ADJOINING BUILDING
AHD	AUSTRALIAN HEIGHT DATUM
BM	BENCH MARK
BB	BEAM BOTTOM LEVEL
BT	BEAM TOP LEVEL
TEL	TELSTRA PIT
CONC	CONCRETE
CS	CONCRETE SURFACE
EC	EDGE OF CONCRETE
D/H/S	DIAMETER/HEIGHT/SPREAD
D	DOOR
E-G	EAVE & GUTTER
FL	FLOOR LEVEL
PP	POWER POLE
GDN	GARDEN
NS	NATURAL SURFACE
PP	POWER POLE
RL	REDUCED LEVEL
S	STEPS
SV	STOP VALE
SILL	WINDOW SILL
TK	TOP OF KERB
TOP	TOP OF WINDOW
SV	STOP VALVE
VC	VEHICLE CROSSING
W	WINDOW
WM	WATER METER

UTILITY LEGENDS:

- MAIN SEWER LINE
- MAIN GAS LINE
- MAIN WATER LINE
- MAIN POWER LINES
- NBN/TELSTRA LINES

BASEMENT FLOOR LINE

FIRST FLOOR LINE

GROUND FLOOR LINE

DWELLING 1 STORAGE AREA	
LOCATION	SIZE (m^3)
STORAGE @ BASEMENT	45.7m^3
STORAGE @ FF LINEN	1.5m^3
STORAGE @ FF LINEN	4.0m^3
TOTAL:	**51.2m^3**

DWELLING 2 STORAGE AREA	
LOCATION	SIZE (m^3)
STORAGE @ BASEMENT	45.7m^3
STORAGE @ FF LINEN	1.5m^3
STORAGE @ FF LINEN	4.0m^3
TOTAL:	**51.2m^3**

94 Edgecliffe Boulevard Collaroy - DA CONTROLS
SITE AREA: 765.73m²
LOT WIDTH AT BUILDING LINE (m): 17.810m

LANDSCAPE COMPLIANCE	
Landscape Location	Areas
Area	197.87 m²
Area	16.59 m²
Area	16.90 m²
Area	37.78 m²
Area	36.96 m²
LANDSCAPED	306.10 m²
LANDSCAPING TOTAL	306.10 m² 40%

STRATA SUBDIVISION		
LOT NO.	DWELLING NO.	Area
DWELLING 1	Area	381.31 m²
DWELLING 2	Area	384.42 m²
Total Lot Area		765.73 m²

www.dialbeforeyoudig.com.au DIAL 1100 BEFORE YOU DIG

DIAL BEFORE YOU DIG SHOULD BE CONTACTED PRIOR TO ANY EXCAVATION ON SITE.

BASEMENT FLOOR SETBACK

GROUND FLOOR SETBACK

FIRST FLOOR SETBACK

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 4000 8000 12000

SCALE 1 : 200

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Site Plan**

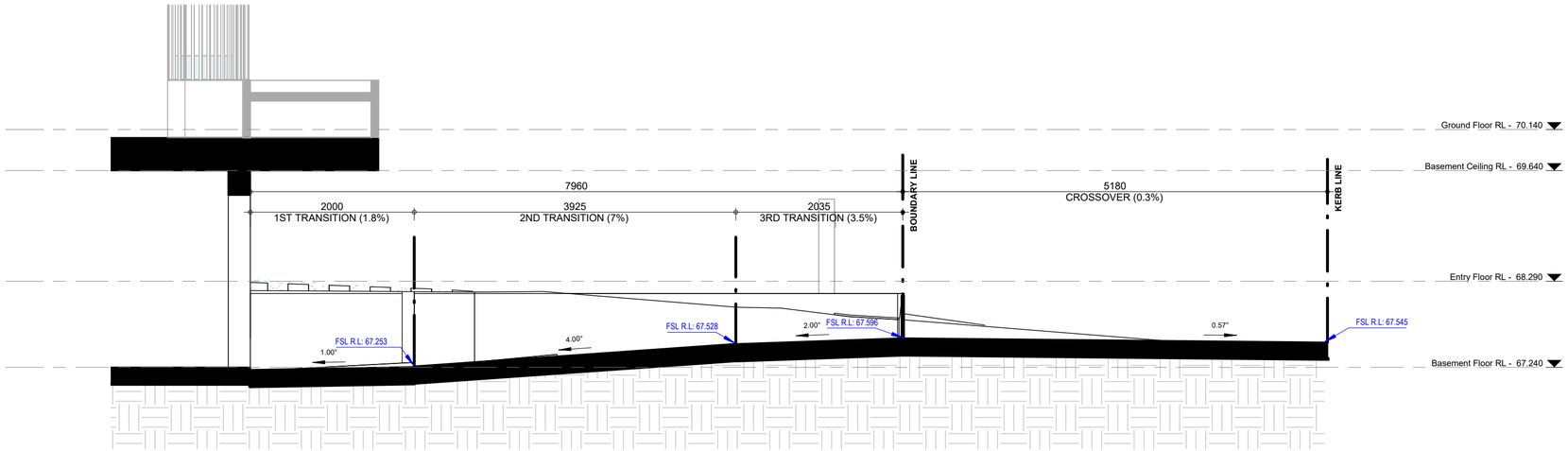
DESIGNER: BW

DRAWN: LM

DATE: **24/06/25**

SCALE: **As indicated** @A2

PROJECT No: **24100** DRAWING No: **A001** ISSUE: **D**



Driveway Gradient

SCALE: 1 : 50 @ A3

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 1000 2000 3000

SCALE 1 : 50

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Driveway Gradient**

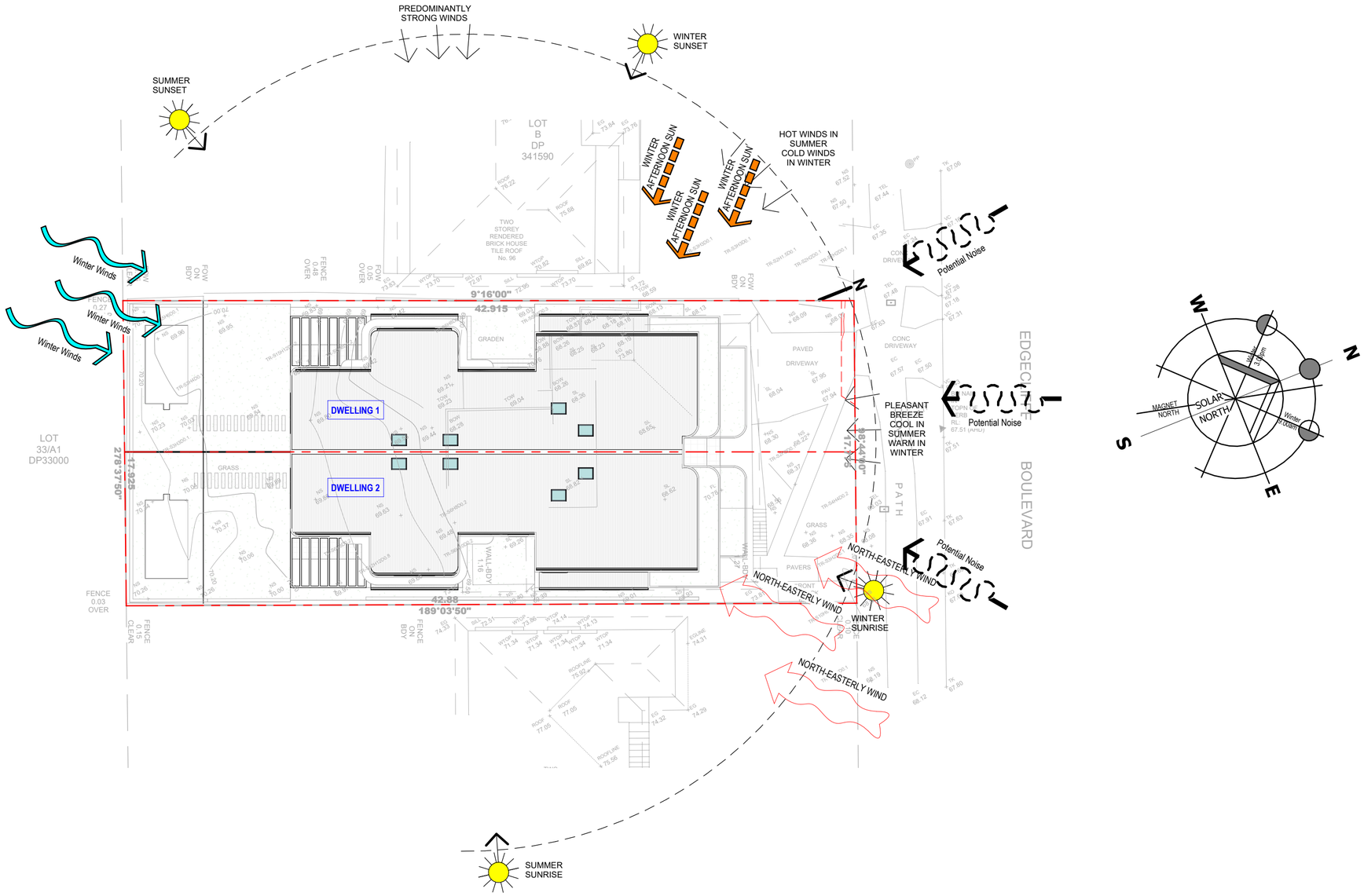
DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**

SCALE: **1 : 50** @A2

PROJECT No: **24100** DRAWING No: **A002** ISSUE: **D**



SITE ANALYSIS LEGENDS

- Potential Noise
- Winter Winds
- WINTER AFTERNOON SUN
- NORTH-EASTERLY WIND

Site Analysis

SCALE: 1 : 200 @ A3

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 4000 8000 12000

SCALE 1 : 200

NORTH:

DRAWINGS BY: Duplex Building Design

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Site Analysis**

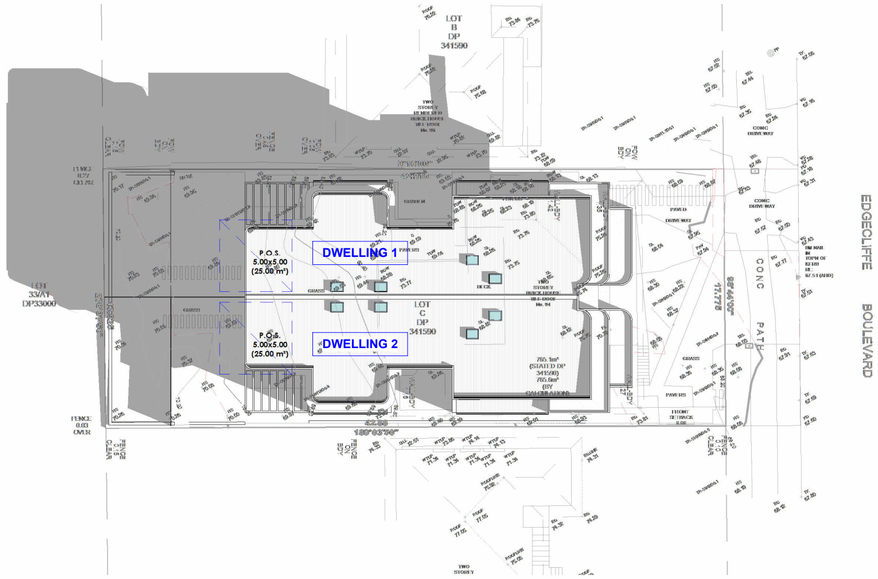
DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**

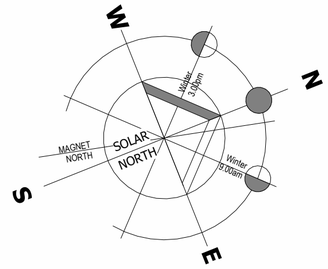
SCALE: **As indicated** @A2

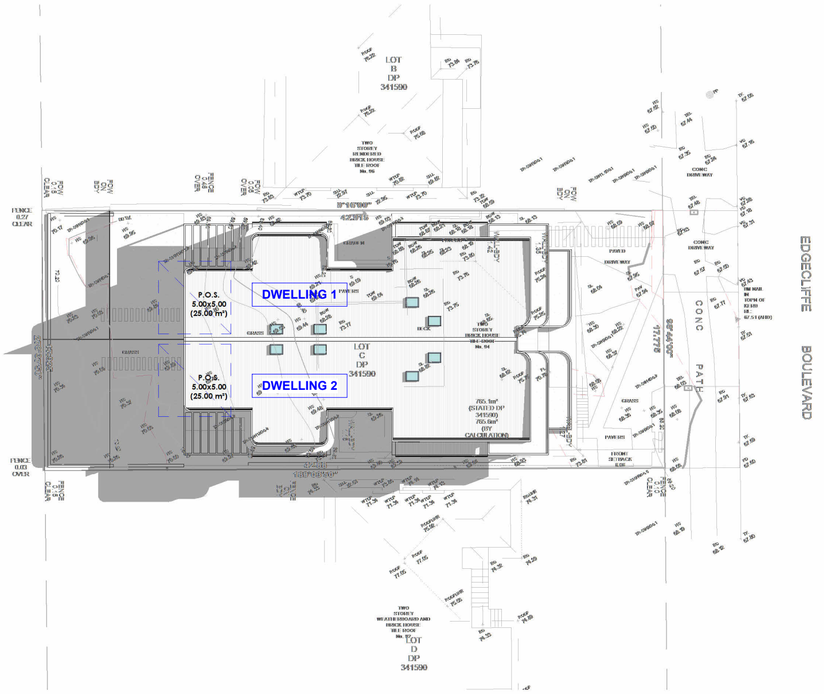
PROJECT No: **24100** DRAWING No: **A003** ISSUE: **D**



9am Winter Solstice Shadow Diagram

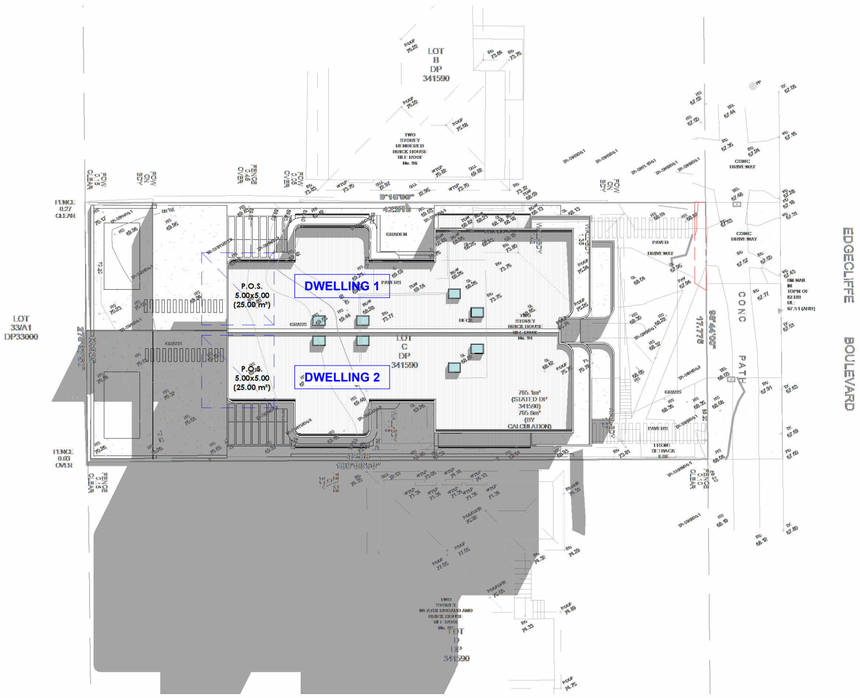
SCALE: 1 : 300 @ A3





12pm Winter Solstice Shadow Diagram

SCALE: 1 : 300 @ A3



3pm Winter Solstice Shadow Diagram

SCALE: 1 : 300 @ A3

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 8000 16000 24000

SCALE 1 : 300

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Shadow Diagram**

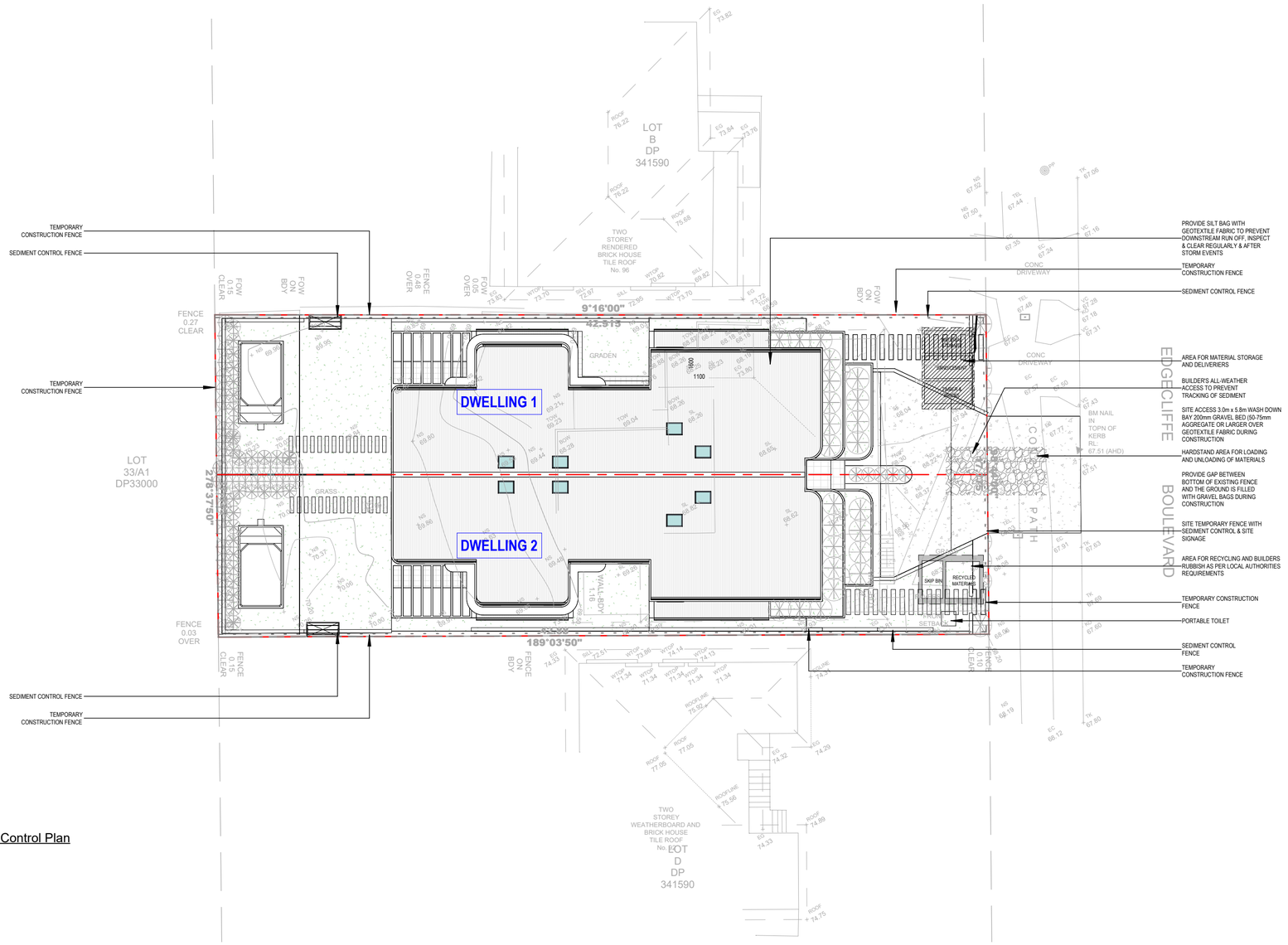
DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**

SCALE: **1 : 300** @A2

PROJECT No: **24100** DRAWING No: **A004** ISSUE: **D**

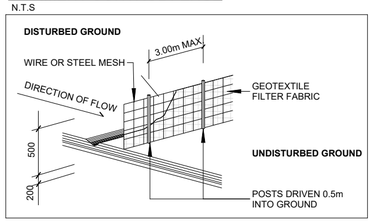


Sediment / Erosion Control Plan

SCALE: 1 : 200 @ A3

SEDIMENT CONTROL FENCE

N.T.S



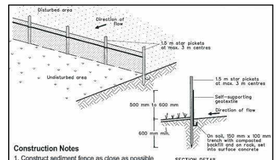
SITE MANAGEMENT LEGEND

	AREA FOR RECYCLING AND BUILDERS RUBBISH AS PER LOCAL AUTHORITIES REQUIREMENTS		PORTABLE TOILET/ LOO	TEMPORARY CONSTRUCTION FENCE
	BUILDER'S ALL-WEATHER ACCESS TO PREVENT TRACKING OF SEDIMENT		AREA FOR MATERIAL STORAGE AND DELIVERERS	SEDIMENT CONTROL FENCE

SITE & SEDIMENT CONTROL

1. The site manager shall ensure at all times that all soil and sediment control works and devices are implemented in accordance with the department of housing "managing urban Stormwater soils & construction 1998. The Blue Book"
2. Prior to commencement sediment control details are to be installed as detailed on this plan.
3. Stabilized construction access is to be installed as required
4. Area disturbed are to be minimized at all times. Sediment fence or other suitable devices are to be installed downstream of disturbed areas
5. During windy and prolonged dry periods, disturbed areas are to be kept moist by sprinkling with water for dust containment.
6. Diversion banks/channels etc. are to be installed where required to divert upstream overland flows from entering disturbed areas.
7. the site manager must inspect all sedimentation control devices at least weekly and also at end each storm event to ensure they are operational and perform their functions as intended.
8. Where a device is unsuitable a new device shall be installed to specification to ensure it will perform the necessary sediment & erosion control task
9. Clean and remove trapped sediments and dispose off site and/or spread and compact on site in a manner to prevent further erosion & pollution.
10. Assess the effectiveness of devices and install additional and or new devices in accordance with "The Blue Book" to ensure that downstream protection is achieved.
11. Where feasible all disturbed areas are to be rehabilitated as soon as possible with vegetative cover.
12. Waste bins are to be provided for contaminated wastes eg. paint, concrete, mortar slurries, light weight materials, litters etc. and bins are to be emitted at regular intervals at waste disposal sites.
13. All contaminated materials are to be stored in waste bins clear off poor drainage areas, eg. overland flow paths etc so that they will not be transported to downstream waterways & drainage systems.

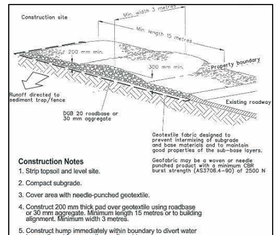
SEDIMENT FENCE DETAILS



Construction Notes

1. Construct sediment fence as close as possible to parallel to the contours of the site.
2. Drive 1.5 metre long star pickets into ground, 2.5 metres apart (max.).
3. Dig a 150 mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
4. Fix self-supporting geotextile to upslope side of posts with wire ties or as recommended by geotextile manufacturer.
5. Join sections of fabric at a support post with a 150 mm overlap.
6. Backfill the trenchover the base of the fabric and compact it thoroughly over the geotextile

ALL WEATHER ACCESS DETAIL



Construction Notes

1. Strip topsoil and level site.
2. Compact subgrade.
3. Cover area with needle-punched geotextile.
4. Construct 200 mm thick pad over geotextile using roadbase or 30 mm aggregate. Minimum length 15 metres or to building alignment. Minimum width 3 metres.
5. Construct hump immediately within boundary to divert water to a sediment fence or other sediment trap.

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 4000 8000 12000

SCALE 1 : 200

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Sediment/Erosion Control Plan**

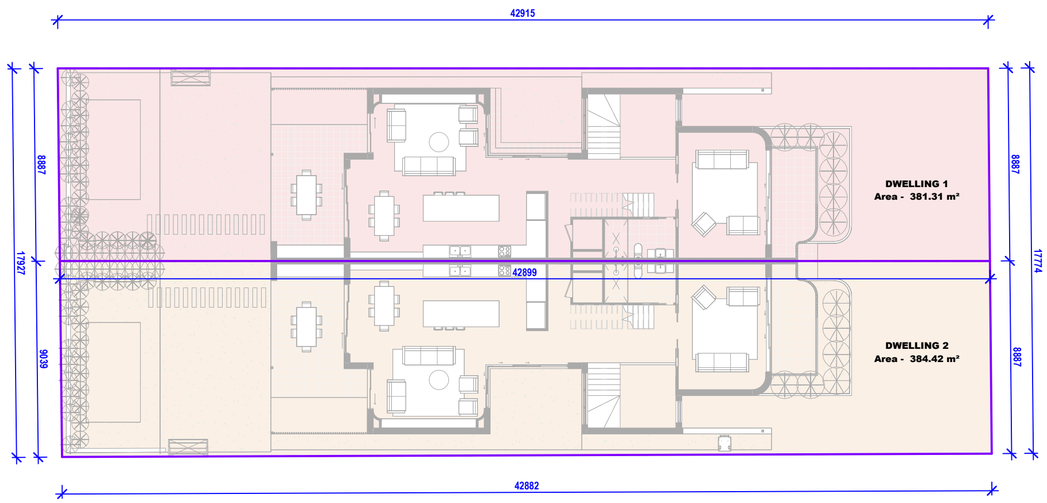
DESIGNER: **BW**

DRAWN: **BW**

DATE: **24/06/25**

SCALE: **As indicated** @A2

PROJECT No: **24100** DRAWING No: **A005** ISSUE: **D**



Strata Subdivision Plan

SCALE: 1 : 200 @ A3

STRATA SUBDIVISION		
LOT NO.	DWELLING NO.	Area

DWELLING 1	Area	381.31 m²
DWELLING 2	Area	384.42 m²
Total Lot Area		765.73 m²

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 4000 8000 12000

SCALE 1 : 200

NORTH:

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

DRAWINGS BY:

Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Strata Subdivision Plan**

DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**

SCALE: **1 : 200** @A2

PROJECT No: **24100** DRAWING No: **A006** ISSUE: **D**

DEMOLITION NOTES:
1. ALL DEMOLITION WORK AND LOADING WILL BE CONDUCTED MANUALLY AND IN ACCORDANCE WITH AS2601-2001

2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL NECESSARY FEES AND ALL NECESSARY PERMIT FOR CLEANING SOILS, EROSION, PROTECTIONS AND DISPOSING OF DEFERS FROM SITE. THE CONTRACTOR SHALL COORDINATE THE REMOVAL, RELOCATION, OR RE-ROUTING OF ANY UTILITIES WITH EACH RESPECTIVE UTILITY COMPANIES OR AGENCIES PRIOR TO THE START OF WORK.

3.THE CONTRACTOR SHALL REMOVE ALL EXISTING BUILDING, INCLUDING SHED,CONCRETE PATHS, TREES, METERS, FOUNDATION WALLS, CONCRETE SLABS,... AND ANY OTHER ATTACHMENTS SHOWN ON THIS DRAWING.

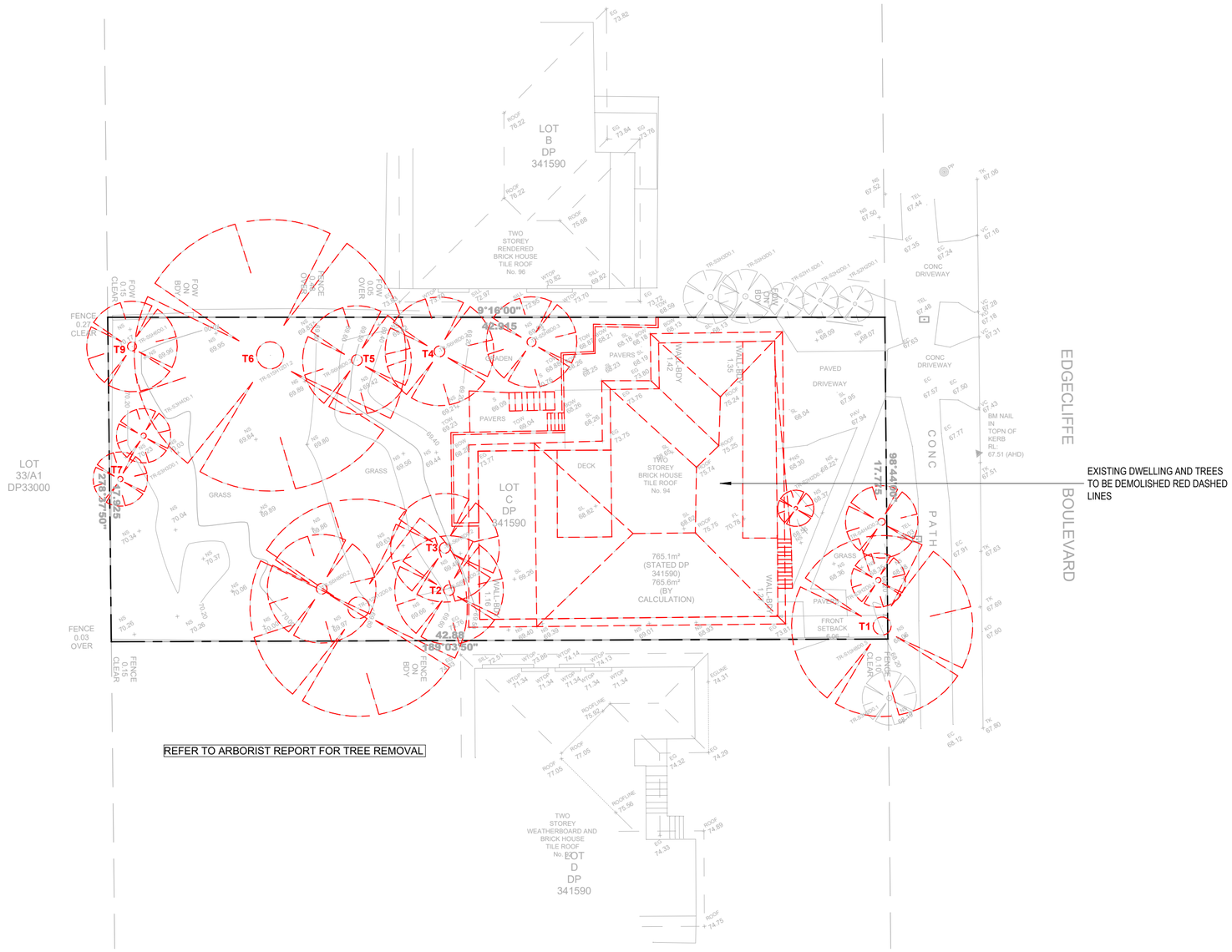
4.THE CONTRACTOR SHALL SEPARATE ALL PRODUCTS

5.THE CONTRACTOR SHALL RECYCLE PRODUCTS TO A LOCAL RECYCLING.

6.THE CONTRACTOR SHALL DISPOSE OF ALL MIXED WASTE MATERIALS TO A LICENSED WASTE OR TRANSFER STATION.

7.ALL WORKS WILL BE CARRIED OUT IN A SAFE AND TIMELY MANNER AS PER SAFE WORK METHOD STATEMENT.

8.THE CONTRACTOR SHALL CONTACT THE CITY OF CITY COUNCIL OR BUILDING DEPARTMENT FOR A DEMOLITION PERMIT BEFORE ANY SITE CLEARING OR BUILDING DEMOLITION WORK COMMENCES.



Demolition Plan

SCALE: 1 : 200 @ A3

TREE SCHEDULE	
TREE NO.	HEIGHT(m)
T1	6m
T2	12m
T3	10m
T4	10m
T5	12m
T6	14m
T7	8m
T8	11m
T9	7m
T10	10m

TREES LEGENDS:

TREES TO BE DEMOLISHED

TREES TO BE RETAINED

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 4000 8000 12000 — SCALE 1 : 200

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Demolition Plan**

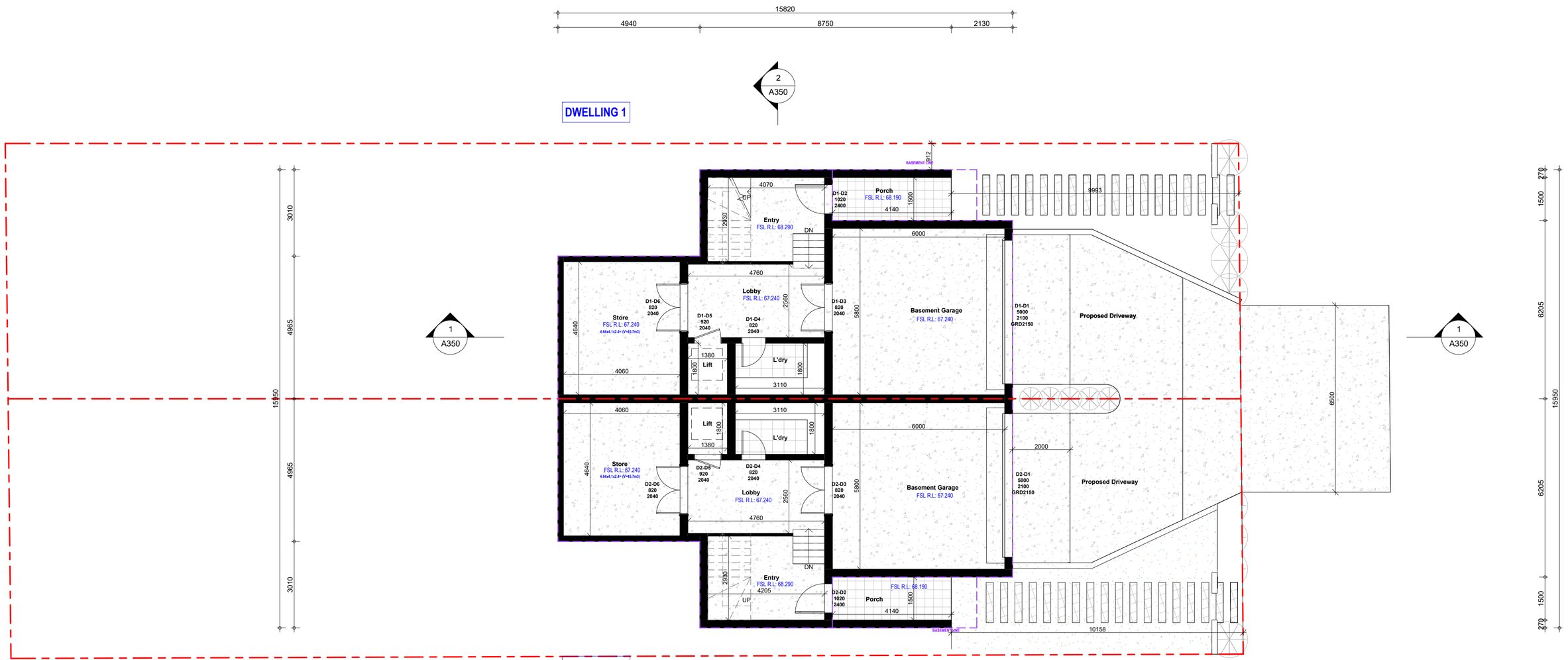
DESIGNER: BW

DRAWN: LM

DATE: **24/06/25**

SCALE: **1 : 200** @A2

PROJECT No: **24100** DRAWING No: **A102** ISSUE: **D**



Basement Floor Plan

SCALE: 1 : 100 @ A3

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 2000 4000 6000

SCALE 1 : 100

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Basement Floor Plan**

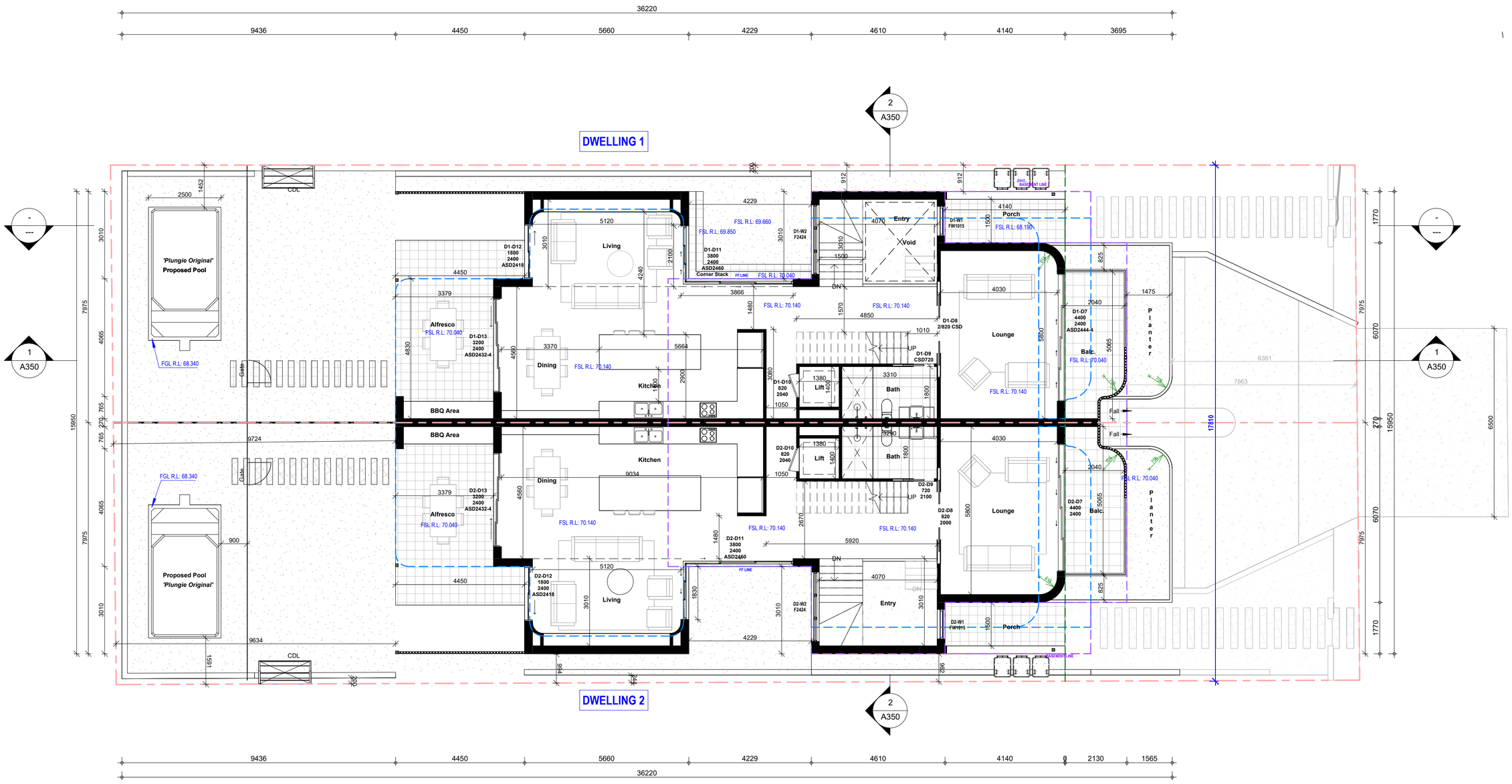
DESIGNER: BW

DRAWN: LM

DATE: **24/06/25**

SCALE: **1 : 100** @A2

PROJECT No: **24100** DRAWING No: **A200** ISSUE: **D**



Proposed Ground Floor Plan

SCALE: 1 : 100 @ A3

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 2000 4000 6000

SCALE 1 : 100

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Proposed Ground Floor Plan**

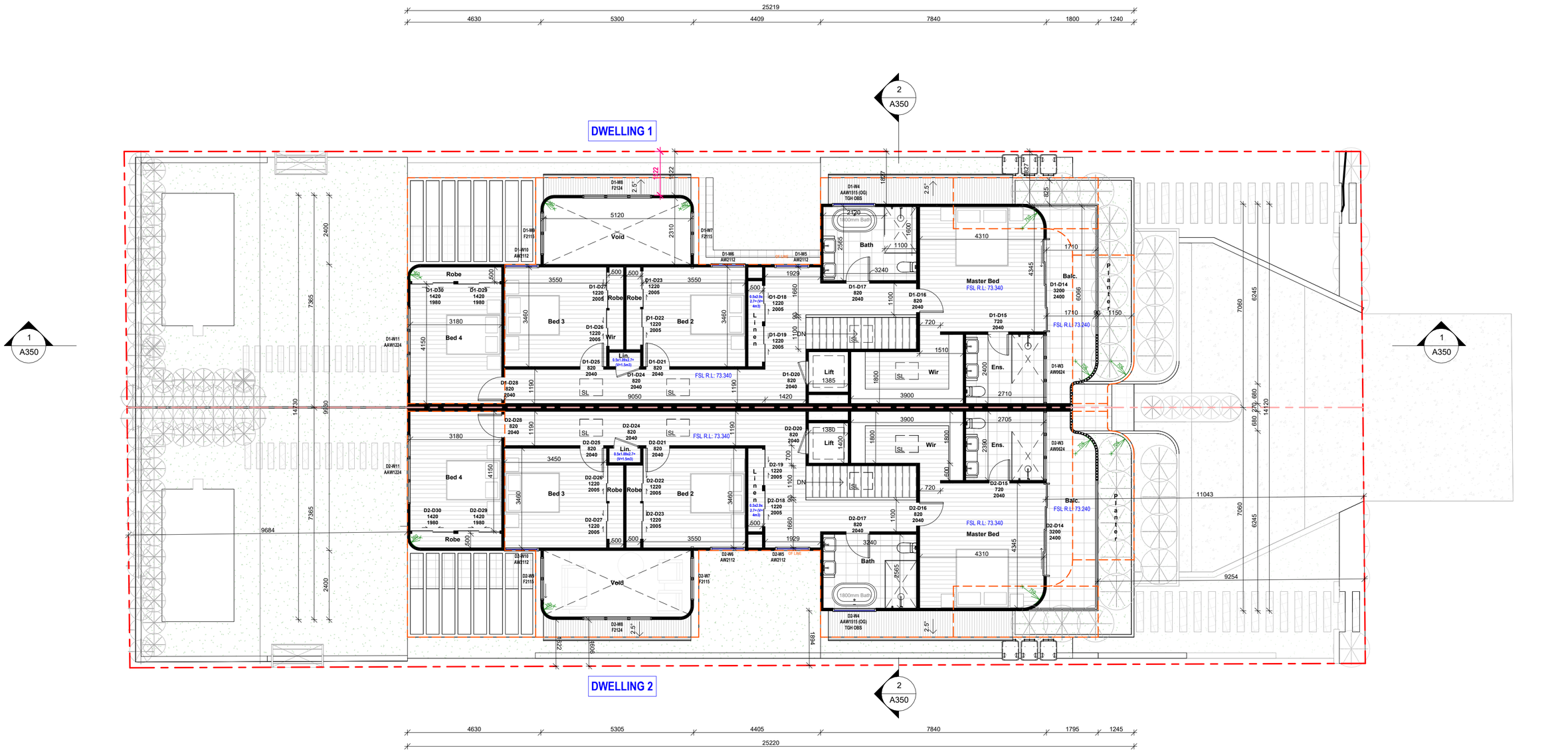
DESIGNER: BW

DRAWN: LM

DATE: **24/06/25**

SCALE: **1 : 100** @A2

PROJECT No: **24100** DRAWING No: **A201** ISSUE: **D**



Proposed First Floor Plan

SCALE: 1 : 100 @ A3

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 2000 4000 6000

SCALE 1 : 100

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Proposed First Floor Plan**

DESIGNER: BW

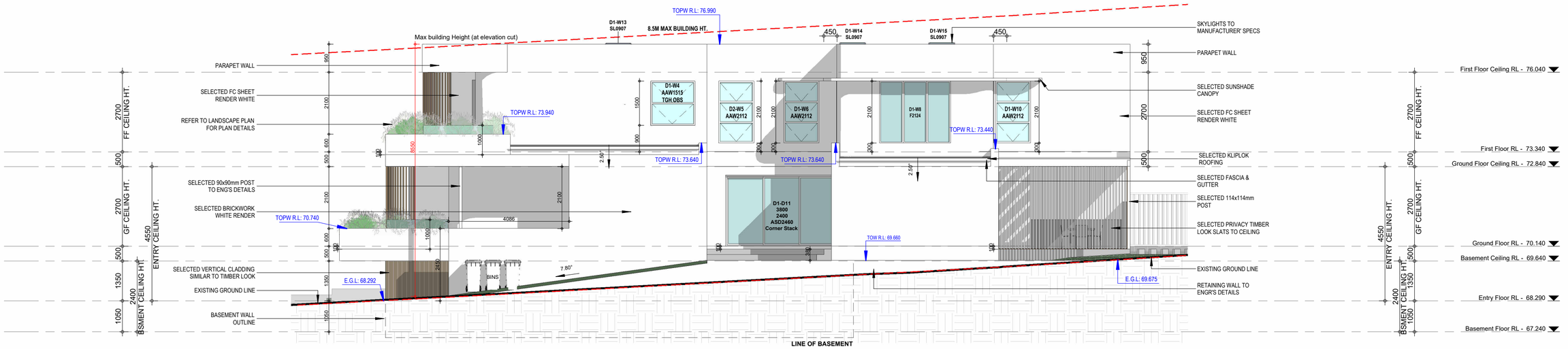
DRAWN: LM

DATE: **24/06/25**

SCALE: **1 : 100** @A2

PROJECT No: **24100** DRAWING No: **A202** ISSUE: **D**

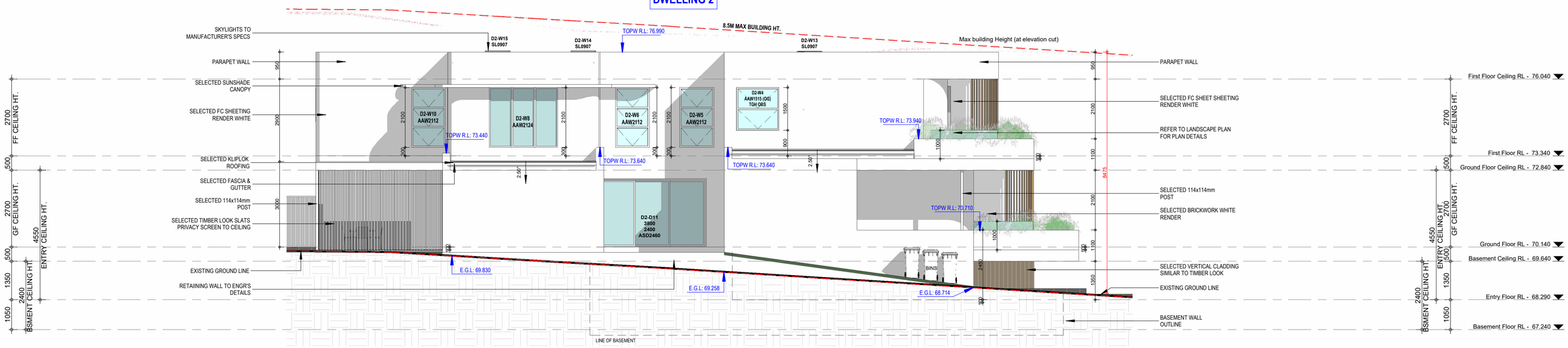
DWELLING 1



East Elevation

SCALE: 1 : 100 @ A3

DWELLING 2



West Elevation

SCALE: 1 : 100 @ A3

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25
E	Added 45 Deg. Markers	BW	24/06/25

SCALE BAR: 0 2000 4000 6000 — SCALE 1 : 100

NORTH:

DRAWINGS BY: Duplex Building Design

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Elevations**

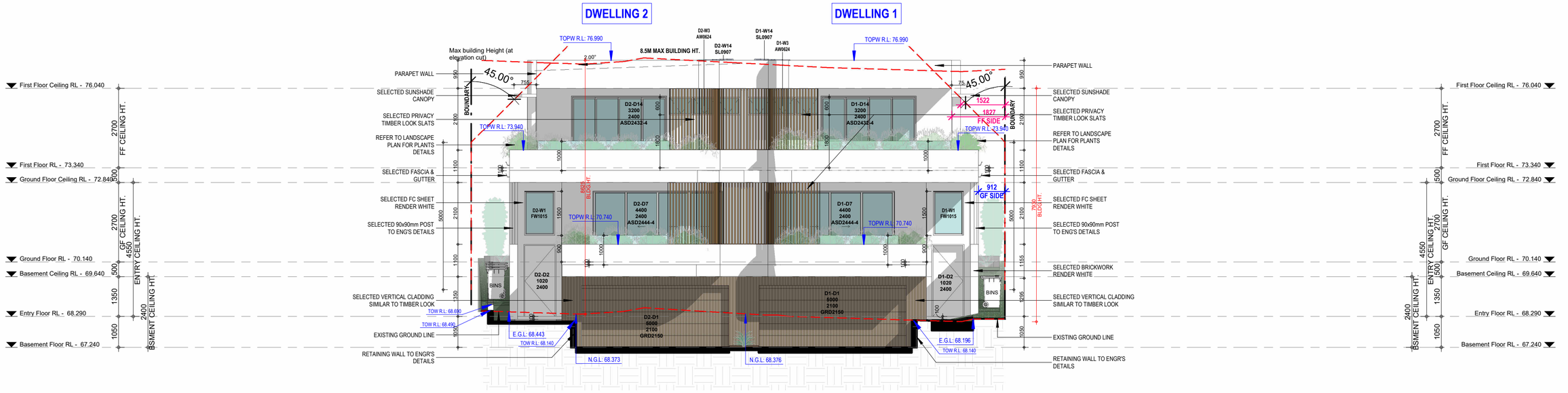
DESIGNER: BW

DRAWN: LM

DATE: **24/06/25**

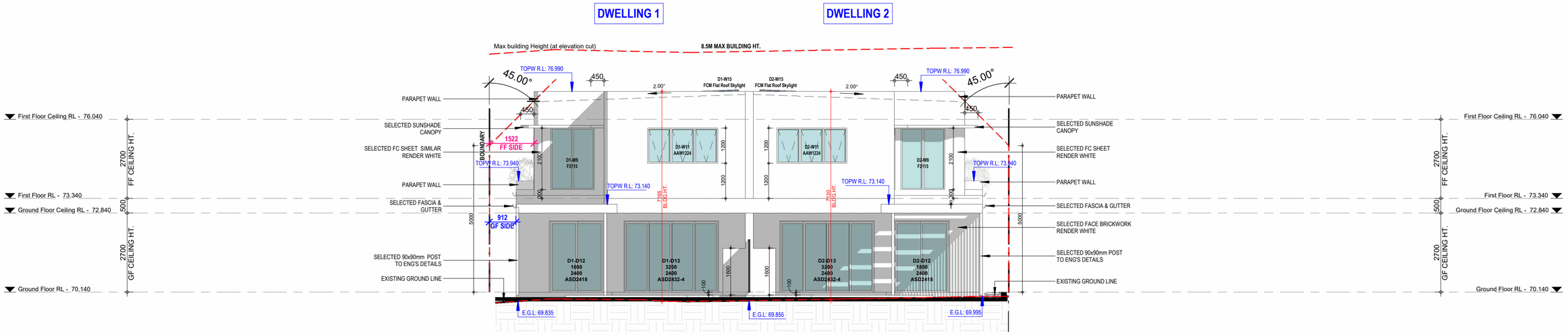
SCALE: **1 : 100** @A2

PROJECT No: **24100** DRAWING No: **A301** ISSUE: **E**



North Elevation

SCALE: 1 : 100 @ A3



South Elevation

SCALE: 1 : 100 @ A3

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25
E	Added 45 Deg. Markers	BW	24/06/25

SCALE BAR: 0 2000 4000 6000 — SCALE 1 : 100

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Elevations**

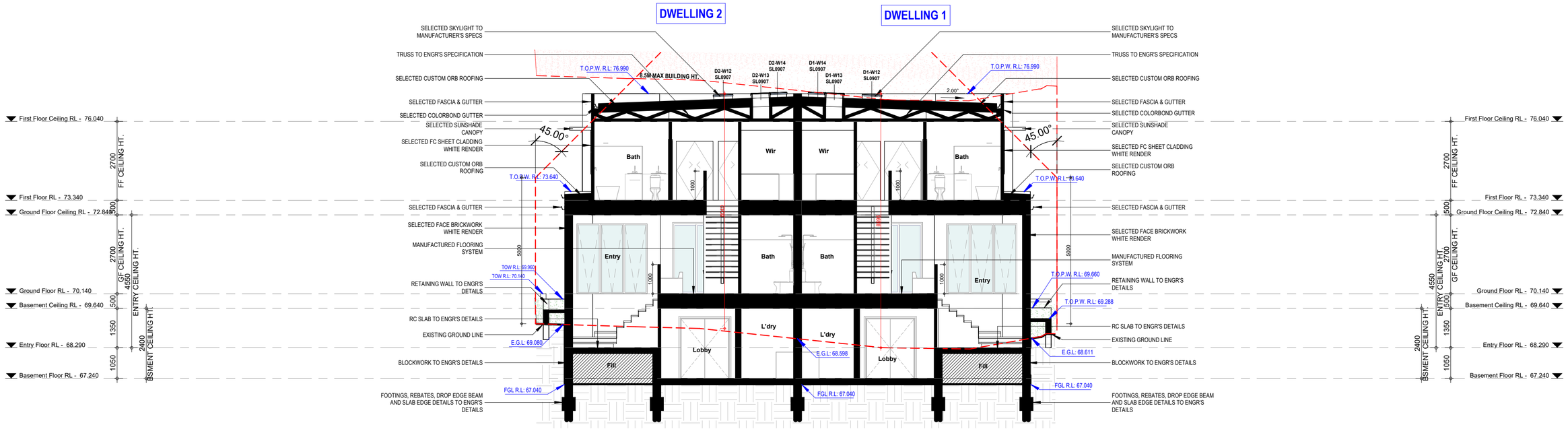
DESIGNER: BW

DRAWN: LM

DATE: **24/06/25**

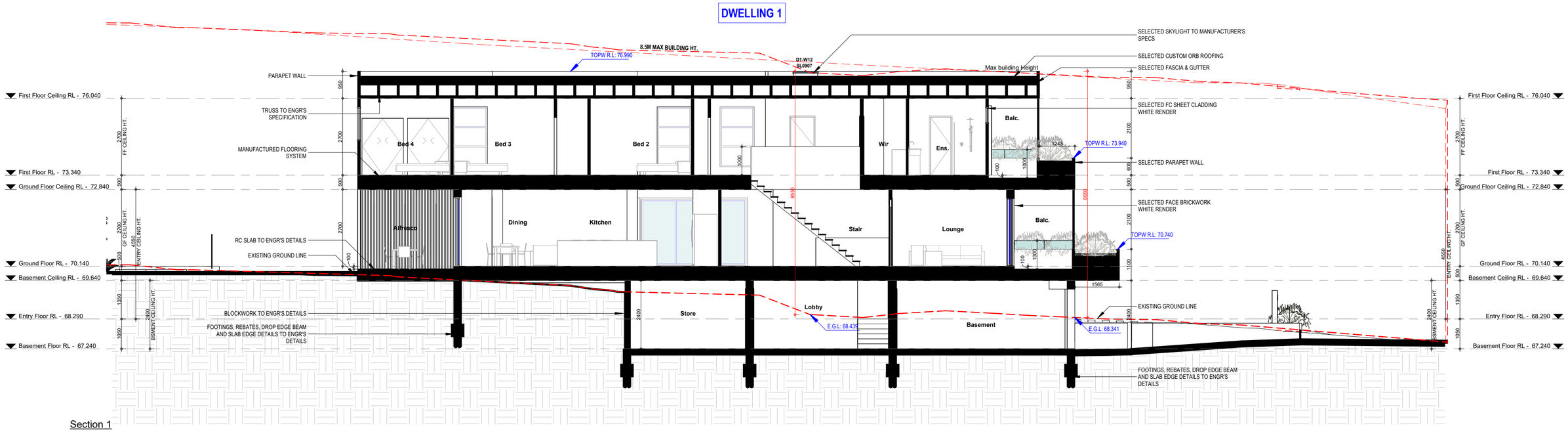
SCALE: **1 : 100** @A2

PROJECT No: **24100** DRAWING No: **A302** ISSUE: **E**



Section 5

SCALE: 1 : 100 @ A3



Section 1

SCALE: 1 : 100 @ A3

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25
E	Added 45 Deg. Markers	BW	24/06/25

SCALE BAR: 0 2000 4000 6000

SCALE 1 : 100

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Sections**

DESIGNER: BW

DRAWN: LM

DATE: **24/06/25**

SCALE: **1 : 100** @A2

PROJECT No: **24100** DRAWING No: **A350** ISSUE: **E**

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25

0 2000 4000 6000

SCALE 1:100

- THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TAKEN IN PREFERENCE TO SCALED DIMENSIONS.
DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.
- COPYRIGHT OF DUPLEX BUILDIGN DESIGN ALL RIGHTS RESERVED.
THIS DESIGN AND DRAWING SHALL NOT BE COPIED NOR REPRODUCE WITHOUT WRITTEN PERMISSION.
REPORT ALL DISCREPANCIES.

NORTH:

Duplex
Building Design

DRAWINGS BY:
DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT:
Georgeski

ADDRESS:
94 Edgecliffe Boulevard Collaroy Plateau

PROJECT:
Proposed Duplex with Basement

DRAWING:
10am Winter Shadow Diagram

DESIGNER:
Designer

DRAWN:
Author

DATE: **24/06/25**

SCALE: **@ A3**

PROJECT No:	DRAWING No:	ISSUE:
24100	**A402**	**A**

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25

0 2000 4000 6000

SCALE 1:100

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE.
DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION.
DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

REPORT ALL DISCREPANCIES.

NORTH:

Duplex
Building Design

DRAWINGS BY:
DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT:
Georgeski

ADDRESS:
94 Edgecliffe Boulevard Collaroy Plateau

PROJECT:
Proposed Duplex with Basement

DRAWING:
11am Winter Shadow Diagram

DESIGNER:
Designer

DRAWN:
Author

DATE: **24/06/25**

SCALE: **@ A3**

PROJECT No:	DRAWING No:	ISSUE:
24100	**A403**	**A**

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25

0 2000 4000 6000

SCALE 1:100

- THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS SHALL BE TAKEN IN PREFERENCE TO SCALED DIMENSIONS. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.
- COPYRIGHT OF DUPLEX BUILDIGN DESIGN ALL RIGHTS RESERVED. THIS DESIGN AND DRAWING SHALL NOT BE COPIED NOR REPRODUCE WITHOUT WRITTEN PERMISSION.
REPORT ALL DISCREPANCIES.

NORTH:

Duplex
Building Design

DRAWINGS BY:
DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT:
Georgeski

ADDRESS:
94 Edgecliffe Boulevard Collaroy Plateau

PROJECT:
Proposed Duplex with Basement

DRAWING:
12pm Winter Shadow Diagram

DESIGNER:
Designer

DRAWN:
C.F

DATE: **24/06/25**

SCALE: **@ A3**

PROJECT No:	DRAWING No:	ISSUE:
24100	**A404**	**A**

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25

0 2000 4000 6000

SCALE: 1:100

- THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS SHALL IN PREFERENCE SCALED DIM
DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

REPORT ALL DISCREPANCIES.

NORTH:

Duplex
Building Design

DRAWINGS BY:
DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT:
Georgeski

ADDRESS:
94 Edgecliffe Boulevard Collaroy Plateau

PROJECT:
Proposed Duplex with Basement

DRAWING:
1pm Winter Shadow Diagram

DESIGNER:
Designer

DRAWN:
Author

DATE: **24/06/25**

SCALE: **@ A3**

PROJECT No:	DRAWING No:	ISSUE:
24100	**A405**	**A**

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25

0 2000 4000 6000

SCALE: 1:100

-THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE.
DIMENSIONS TO BE PREFERRED OVER SCALED DIM.
DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

REPORT ALL DISCREPANCIES.

NORTH:

DRAWINGS BY:
DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT:
Georgeski

ADDRESS:
94 Edgecliffe Boulevard Collaroy Plateau

PROJECT:
Proposed Duplex with Basement

DRAWING:
2pm Winter Shadow Diagram

DESIGNER:
Designer

DRAWN:
Author

DATE: **24/06/25**
SCALE: **@ A3**
PROJECT No: **24100** DRAWING No: **A406** ISSUE: **A**

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25

0 2000 4000 6000

SCALE 1:100

- THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS SHALL BE TAKEN IN PREFERENCE TO SCALED DIMENSIONS. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.
- COPYRIGHT OF DUPLEX BUILDIGN DESIGN ALL RIGHTS RESERVED. THIS DESIGN AND DRAWING SHALL NOT BE COPIED NOR REPRODUCE WITHOUT WRITTEN PERMISSION.
REPORT ALL DISCREPANCIES.

NORTH:

Duplex
Building Design

DRAWINGS BY:
DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT:
Georgeski

ADDRESS:
94 Edgecliffe Boulevard Collaroy Plateau

PROJECT:
Proposed Duplex with Basement

DRAWING:
3pm Winter Shadow Diagram

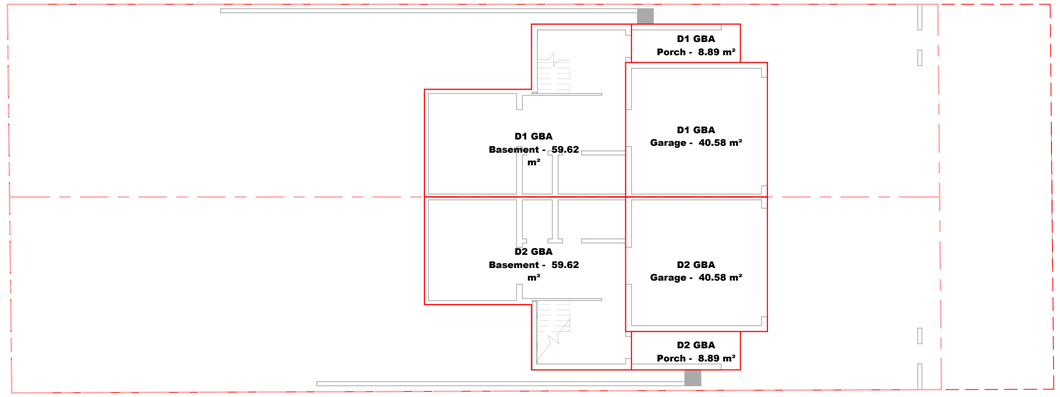
DESIGNER:
Designer

DRAWN:
C.F

DATE: **24/06/25**

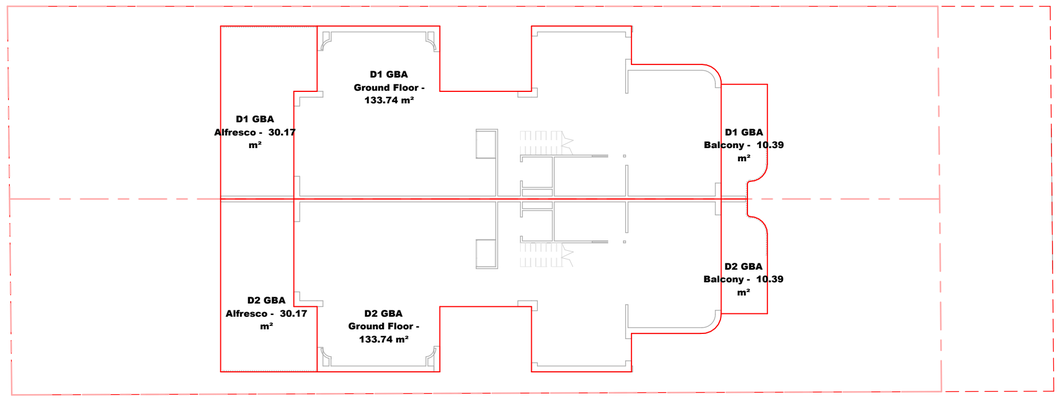
SCALE: **@ A3**

PROJECT No:	DRAWING No:	ISSUE:
24100	**A407**	**A**



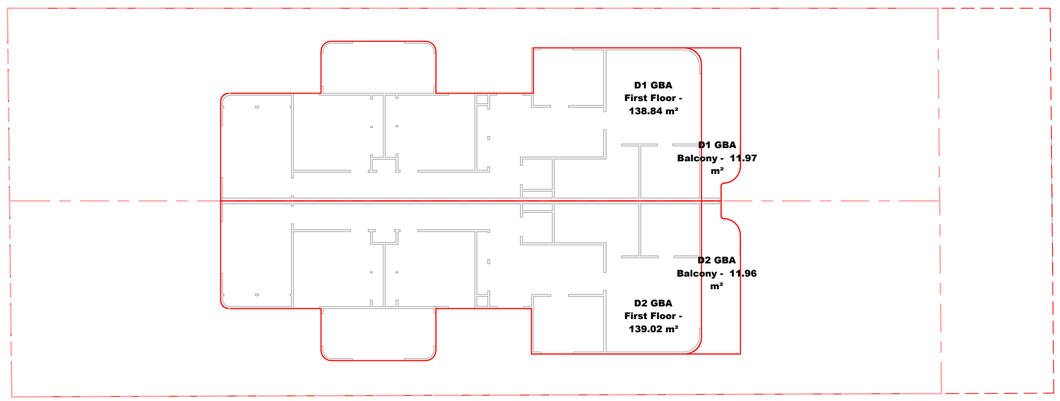
GBA Basement Floor

SCALE: 1 : 200 @ A3



GBA Ground Floor

SCALE: 1 : 200 @ A3



GBA First Floor

SCALE: 1 : 200 @ A3

94 Edgecliffe Boulevard Collaroy - DA CONTROLS
SITE AREA: 765.73m²
LOT WIDTH AT BUILDING LINE (m): 17.810m

GROSS BUILDING AREA (GBA)

Name	Areas
Ground Floor	133.74 m²
First Floor	138.84 m²
Garage	40.58 m²
Basement	59.62 m²
Porch	8.89 m²
Alfresco	30.17 m²
Balcony	10.39 m²
Balcony	11.97 m²
D1 GBA	434.20 m²

GROSS BUILDING AREA (GBA)

Name	Areas
First Floor	139.02 m²
Ground Floor	133.74 m²
Garage	40.58 m²
Basement	59.62 m²
Porch	8.89 m²
Alfresco	30.17 m²
Balcony	10.39 m²
Balcony	11.96 m²
D2 GBA	434.37 m²
Grand total	868.57 m²

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 4000 8000 12000

SCALE 1 : 200

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY:

Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **GBA / FSR**

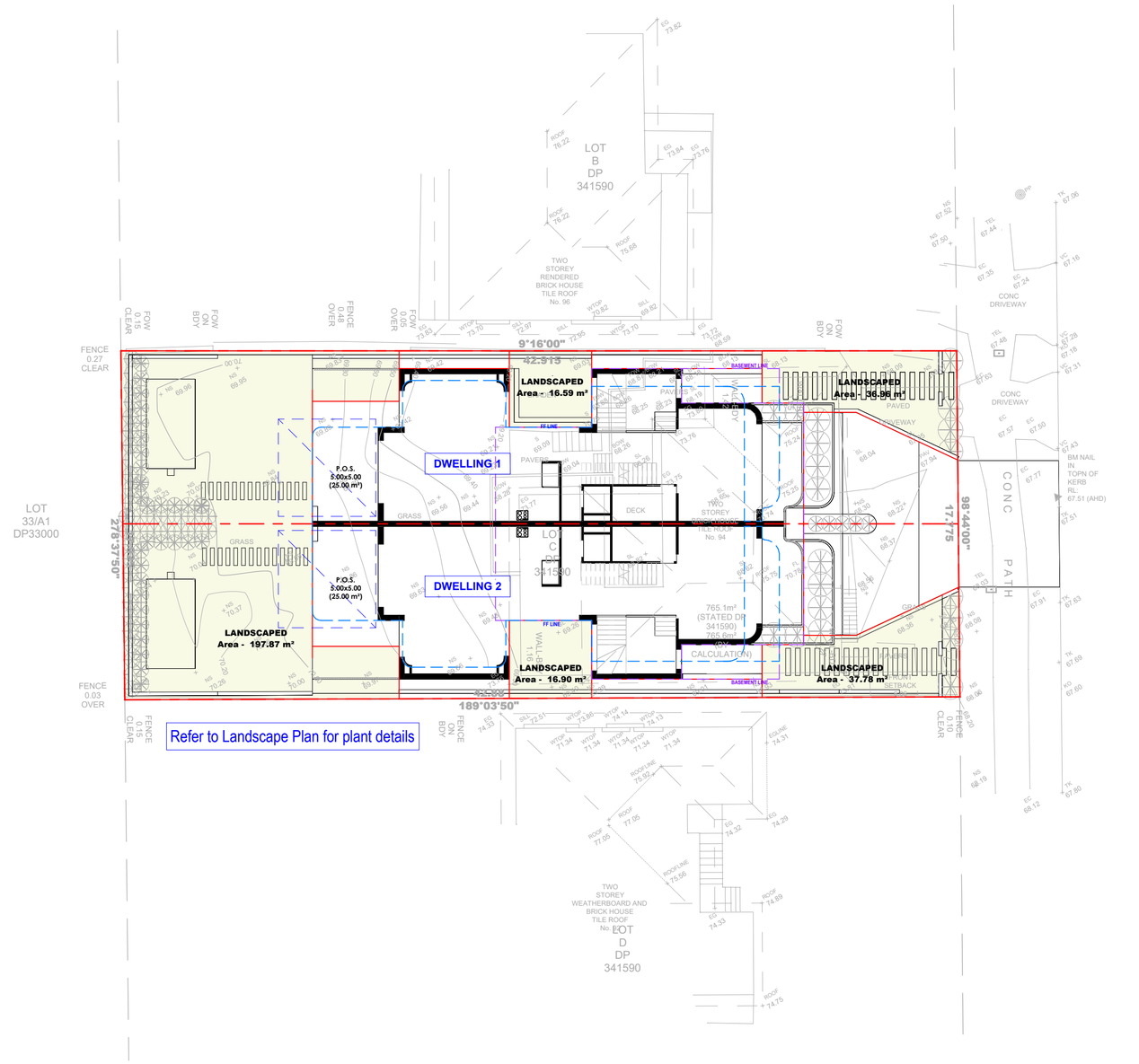
DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**

SCALE: **As indicated** @A2

PROJECT No: **24100** DRAWING No: **A503** ISSUE: **D**



Site Compliance

SCALE: 1 : 200 @ A3

LANDSCAPE COMPLIANCE

Landscape Location	Areas
Area	197.87 m²
Area	16.59 m²
Area	16.90 m²
Area	37.78 m²
Area	36.96 m²
LANDSCAPED	306.10 m²
LANDSCAPING TOTAL	306.10 m² 40%

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR: 0 4000 8000 12000
SCALE 1 : 200

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Site Compliance**

DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**
SCALE: **1 : 200** @A2
PROJECT No: **24100** DRAWING No: **A504** ISSUE: **D**

BASIX™ Certificate

Building Sustainability Index
www.planningportal.nsw.gov.au/development-and-assessment/basix

Multi Dwelling

Certificate number: 1799955M

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at www.planningportal.nsw.gov.au/definitions

Secretary
Date of issue: Monday, 16 June 2025
To be valid, this certificate must be submitted with a development application or lodged with a complying development certificate application within 3 months of the date of issue.

When submitting this BASIX certificate with a development application or complying development certificate application, it must be accompanied by NatHERS certificate GAQYKBXELP.

Project summary	
Project name	94 Edgecliffe Boulevard Collaroy Plateau 2097
Street address	94 EDGECLIFFE BOULEVARD COLLAROY PLATEAU 2097
Local Government Area	NORTHERN BEACHES
Plan type and plan number	Deposited Plan 341590
Lot No.	C
Section no.	-
No. of residential flat buildings	0
Residential flat buildings: no. of dwellings	0
Multi-dwelling housing: no. of dwellings	2
No. of single dwelling houses	0

Project score		
Water	✔ 45	Target 40
Thermal Performance	✔ Pass	Target Pass
Energy	✔ 81	Target 72
Materials	✔ -20	Target n/a

Certificate Prepared by
Name / Company Name: PAUL&DAVID CONSULTING PTY LTD.
ABN (if applicable):

Description of project

Project address	
Project name	94 Edgecliffe Boulevard Collaroy Plateau 2097
Street address	94 EDGECLIFFE BOULEVARD COLLAROY PLATEAU 2097
Local Government Area	NORTHERN BEACHES
Plan type and plan number	Deposited Plan 341590
Lot No.	C
Section no.	-

Common area landscape	
Common area lawn (m²)	0
Common area garden (m²)	0
Area of indigenous or low water use species (m²)	0

Assessor details and thermal loads	
Assessor number	101225
Certificate number	GAQYKBXELP
Climate zone	56

Project type	
No. of residential flat buildings	0
Residential flat buildings: no. of dwellings	0
Multi-dwelling housing: no. of dwellings	2
No. of single dwelling houses	0

Site details	
Site area (m²)	765
Roof area (m²)	330.00
Non-residential floor area (m²)	0
Residential car spaces	4
Non-residential car spaces	0

Project score		
Water	✔ 45	Target 40
Thermal Performance	✔ Pass	Target Pass
Energy	✔ 81	Target 72
Materials	✔ -20	Target n/a

Description of project

The tables below describe the dwellings and common areas within the project

Multi-dwelling houses

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
1	4+	245.5	27.57	153	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
2	4+	245.5	27.57	153	0

No common areas specified.

Schedule of BASIX commitments

1. Commitments for multi-dwelling housing
   - (a) Dwellings
     - (i) Water
     - (ii) Energy
     - (iii) Thermal Performance and Materials
2. Commitments for common areas and central systems/facilities for the development (non-building specific)
   - (b) Common areas and central systems/facilities
     - (i) Water
     - (ii) Energy

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carriedout. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

1. Commitments for multi-dwelling housing

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✔	✔	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it		✔	✔
(d) The applicant must install an on-demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✔	✔
(e) The applicant must install: (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✔ ✔	✔ ✔
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✔	✔	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✔	
(g) The pool or spa must be located as specified in the table.	✔	✔	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✔	✔	✔

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	4 star (> 4.5 but <= 6 L/min)	4 star	4 star	4 star	-	-	-	14	no	outdoors	no	-	-	-

	Alternative water source						
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (ts)	Laundry connection	Pool top-up	Spa top-up
All dwellings	Individual water tank (No. 1)	Tank size (min) 2000 liters	To collect run-off from at least: 100 square metres of roof area; 0 square metres of impervious area; 0 square metres of garden and lawn area; and 0 square metres of planter box area.	yes	yes	yes	no	no

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✔	✔	✔
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✔	✔
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✔	✔
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✔	✔

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✔	✔	✔
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✔ ✔	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✔ ✔ ✔	 ✔
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✔	
(j) The applicant must install the photovoltaic system specified for the dwelling under the "Photovoltaic system" heading of the "Alternative energy" column of the table below, and connect the system to that dwelling's electrical system.	✔	✔	✔

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	gas instantaneous - 7 star	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

	Cooling		Heating		Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
All dwellings	1-phase airconditioning - ducted / 2.5 star (average zone)	1-phase airconditioning - ducted / 2.5 star (average zone)	1-phase airconditioning - ducted / 2.5 star (average zone)	1-phase airconditioning - ducted / 2.5 star (average zone)	2	no

	Individual pool			Individual spa		Appliances other efficiency measures				
Dwelling no.	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	no heating	single speed-6 stars	yes	-	-	gas cooktop & electric oven	-	-	yes	yes

Alternative energy			
Dwelling no.	Photovoltaic system (min rated electrical output in peak kW)	Photovoltaic collector installation	Orientation inputs
All dwellings	between >0° to <=10° degree to the horizontal	2	NE

(iii) Thermal Performance and Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.			
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.	✔		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.		✔	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✔	✔
(g) Where there is an in-slab heating or cooling system, the applicant must:	✔	✔	✔

(iii) Thermal Performance and Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.			
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✔	✔	✔
(i) The applicant must show on The plans accompanying The development application for The proposed development, The locations of ceiling fans set out in The Assessor Certificate.	✔		
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		✔	

Thermal loads			
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)	Area adjusted total load (in MJ/m²/yr)
1	12.2	17.6	29.800

Thermal loads			
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)	Area adjusted total load (in MJ/m²/yr)
All other dwellings	14.7	13.5	28.200

Construction of floors and walls					
Dwelling no.	Concrete slab on ground (m²)	Suspended floor with open subfloor (m²)	Suspended floor with enclosed subfloor (m²)	Suspended floor above garage (m²)	Primarily rammed earth or mudbrick walls
All dwellings	150.37	-	-	25	no

Floor types											
	Concrete slab on ground				Suspended floor above enclosed subfloor			Suspended floor above open subfloor			
Dwelling no.	Area (m²)	Insulation	Low emissions option	Dematerialisation	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation	
All dwellings	150.37	polyurethane	-	conventional slab	-	-	-	-	-	-	

Floor types											
	First floor above habitable rooms or mezzanine			Suspended floor above garage			Garage floor				
Dwelling no.	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation	Low emissions option	Dematerialisation
All dwellings	particle board, frame: timber - H2 treated softwood	97.7	fibreglass batts or roll	concrete - suspended	25	-	concrete slab on ground	35	-	none	conventional slab

External walls								
	External wall type 1				External wall type 2			
Dwelling no.	Wall type	Area (m²)	Insulation	Low emissions option	Wall type	Area (m²)	Insulation	Low emissions option
All dwellings	framed (fibre cement sheet or boards), frame :	76	fibreglass batts or roll	none	brick veneer, frame : timber	20	fibreglass batts or roll	none

External walls								
	External wall type 1				External wall type 2			
Dwelling no.	Wall type	Area (m²)	Insulation	Low emissions option	Wall type	Area (m²)	Insulation	Low emissions option
	timber - H2 treated softwood				- H2 treated softwood			

External walls								
	External wall type 3				External wall type 4			
Dwelling no.	Wall type	Area (m²)	Insulation	Low emissions option	Wall type	Area (m²)	Insulation	Low emissions option
All dwellings	-	-	-	-	-	-	-	-

Internal walls								
	Internal walls shared with garage			Internal wall type 1			Internal wall type 2		
Dwelling no.	Wall type	Area (m²)	Insulation	Wall type	Area (m²)	Insulation	Wall type	Area (m²)	Insulation
All dwellings	plasterboard, frame: timber - H2 treated softwood	22.8	fibreglass batts or roll	plasterboard, frame: timber - H2 treated softwood	104	-	-	-	-

Ceiling and roof								
	Flat ceiling / pitched roof			Raked ceiling / pitched or skillion roof			Flat ceiling / flat roof		
Dwelling no.	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation
All dwellings	framed - metal roof, frame: timber - H2 treated softwood	165	Ceiling:fibreglass batts or roll;Roof: foil backed blanket	-	-	Ceiling:,Roof:	-	-	Ceiling:,Roof:

Glazing type				Frame types					
Dwelling no.	Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)	
All dwellings	36.88	44.92	-	81.8	-	-	-	-	

2. Commitments for common areas and central systems/facilities for the development (non-building specific)

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✔	✔
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✔	✔	✔
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✔	✔	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✔	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✔	✔
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✔	✔

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	no common laundry facility

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✔	✔
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✔	✔
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✔	✔	✔

Central energy systems	Type	Specification
Other	-	-

Notes

1. In these commitments, "applicant" means the person carrying out the development.
2. The applicant must identify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and specifications accompanying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or reference as is given to that dwelling, building or common area in this certificate.
3. This note applies if the proposed development involves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both residential and non-residential purposes). Commitments in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of the building or development to be used for residential purposes.
4. If this certificate lists a central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that system need only be installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating is specified in a commitment, this is a minimum rating.
6. All alternative water systems to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: NSW Health does not recommend that stormwater, recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for human consumption in areas with potable water supply.

Legend

1. Commitments identified with a "✔" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
2. Commitments identified with a "✔" in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
3. Commitments identified with a "✔" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR:

NORTH:

DRAWINGS BY: Duplex Building Design

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **BASIX Commitments**

DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**
SCALE: @A2
PROJECT No: **24100** DRAWING No: **A505** ISSUE: **D**

Nationwide House Energy Rating Scheme®
Multiple Class 1 Dwellings Summary
NatHERS® Certificate No. GAQYKBXELP

Generated on 16 Jun 2025 using FirstRate5 v5.5.5a

Property

Address 94 Edgecliff Boulevard,,
Collaroy Plateau, NSW, 2097

Lot/DP

NatHERS Climate Zone Mascot (Sydney Airport)

Accredited assessor

Name Pranab chakma

Business name PAUL & DAVID

Email info@basixcertifier.com.au

Phone 0490511593

Accreditation No. 101225

Assessor Accrediting Organisation
ABSA

Verification

To verify this certificate, scan the QR code or visit https://www.fr5.com.au/QRCodeLanding?PublicId=GAQYKBXELP&GrpCert=1
When using either link, ensure you are visiting www.fr5.com.au.

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Summary of all dwellings

Certificate number and link	Unit number	Heating load (load limit) [MJ/m²/p.a.]	Cooling load (load limit) [MJ/m²/p.a.]	Total load [MJ/m²/p.a.]	Star rating	Whole of Home Rating
7OZTUYUR28	D1	12.2 (N/A)	15.3 (N/A)	27.5	7.3	NA
7OZTUYUR28-01	D1	12.2 (N/A)	17.6 (N/A)	29.8	7	NA

Summary of all dwellings

Certificate number and link	Unit number	Heating load (load limit) [MJ/m²/p.a.]	Cooling load (load limit) [MJ/m²/p.a.]	Total load [MJ/m²/p.a.]	Star rating	Whole of Home Rating
35B2FIUF6G	D2	14.7 (N/A)	13.5 (N/A)	28.2	7.2	NA

Explanatory notes

About this report

This is a summary of NCC Class 1 dwellings in a development. For more details of each dwelling refer to the individual dwelling's certificate using the certificate number in summary of all dwellings table

NatHERS ratings use computer modelling to evaluate a home's energy effi ciency and performance. They use localised climate data and standard assumptions on how people use their home to predict the energy loads and energy value*. The thermal performance star rating uses the home's building specifi cations, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy production and storage to estimate the homes energy value*.

For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link)

Accredited Assessors

For high quality NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Licensed assessors in the Australian Capital Territory (ACT) can produce assessments for regulatory purposes only, using endorsed software, as listed on the ACT licensing register

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specifi ed on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in certificates is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy use, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data fi les may be available from the assessor

Certificate No. # GAQYKBXELP

Scan QR code or follow website link for rating details.

Assessor name Pranab chakma
Accreditation No. 101225
Property Address 94 Edgecliff Boulevard,,
Collaroy Plateau, NSW, 2097

https://www.fr5.com.au/QRCodeLanding?PublicId=GAQYKBXELP&GrpCert=1

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR:

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: Georgeski
ADDRESS: 94 Edgecliffe Boulevard Collaroy Plateau

PROJECT: Proposed Duplex with Basement
DRAWING: NATHERS

DESIGNER: BW
DRAWN: BW

DATE: 24/06/25
SCALE: @A2
PROJECT No: 24100
DRAWING No: A506
ISSUE: D

Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. 7OZTUYUR28-01

Generated on 16 Jun 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	D1, 94 Edgecliff Boulevard, Collaroy Plateau, NSW, 2097
Lot/DP	C/-/DP341590
NCC Class*	Class 1a
Floor/all Floors	
Type	New Home

Plans

Main plan	REV B
Prepared by	DD

Construction and environment

Assessed floor area [m²]*		**Exposure type**
Conditioned*	245.5	suburban
Unconditioned*	63.1	**NatHERS climate zone**
Total	308.6	56 Mascot AMO
Garage	35.6	

Accredited assessor

Name	Pranab chakma
Business name	PAUL & DAVID
Email	info@basixcertifier.com.au
Phone	0490511593
Accreditation No.	101225
Assessor Accrediting Organisation	ABSA
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating

7

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME®

29.8 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	12.2	17.6
Load limits	N/A	N/A

Features determining load limits

Floor type (lowest conditioned area)	N/A
NCC climate zone 1 or 2	N/A
Outdoor living area	N/A
Outdoor living area ceiling fan	N/A

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit https://www.fr5.com.au/QRCodeLanding?PublicId=7OZTUYUR28-01 When using either link, ensure you are visiting www.fr5.com.au.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the ABCB NatHERS heating and cooling load limits Standard 2022 for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:
- CSOG – Concrete Slab on Ground
- SF – Suspended Floor (or a mixture of CSOG and SF)
- NA – Not Applicable

NCC climate Zone 1 or 2:
- Yes
- No
- NA – not applicable

Outdoor living area:
- Yes
- No
- NA – not applicable

Outdoor living area ceiling fan:
- Yes
- No
- NA – not applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

Certificate check

The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.

	Approval stage: Assessor checked	Approval stage: Consent authority/ surveyor checked	Construction stage: Builder checked	Construction stage: Consent authority/ surveyor checked	Occupancy/other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in *'Window and glazed door schedule'* and *'Roof window schedule'* tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the *'Window and glazed door type and performance'* and *'Roof window type and performance'* tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the *'External wall type'* table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Floor type'* table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the *'quantity'* and *'type'* of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling penetrations'* table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling type'* table on this Certificate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the *'Roof type'* table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match the values in the ABCB Standard 2022: NATHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

Certificate check

Continued

	Approval stage: Assessor checked	Approval stage: Consent authority/ surveyor checked	Construction stage: Builder checked	Construction stage: Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the *'Onsite Renewable Energy schedule'* on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes

Room *schedule*

Room	Zone Type	Area [m²]
Basement	garage	35.6
Laundry	dayTime	5.8
CELLER	unconditioned	19.4
Basement Entry Hallway	dayTime	24.7
lift	dayTime	2.4
Lounge	living	23.1
Bath	dayTime	5.8
Kitchen/Living/Dining	kitchen	56.2
Ground Entry Hallway	dayTime	29.8
LIFT1	dayTime	2.4
Upstairs Bath	unconditioned	8.2
MasterBed	bedroom	18.4
WIR MasterBed	nightTime	7.8
ENS MasterBed	nightTime	6.4
Upstairs Hallway	dayTime	28.8
Bed2	bedroom	13.8
Bed3	bedroom	13.7
Bed4	bedroom	14.8
Void	doubleHeightVoid	11.7
lift 2	dayTime	2.3

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges: SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges: SHGC lower limit	SHGC upper limit
AWS-013-54 A	541/542 Al Sliding Door DG 008_AGG PLUS Clr 4_12_4	2.97	0.5	0.48	0.53
AWS-071-32 A	RES SERIES 616 FIXED WINDOW DG 4mmClr-12Ar-4mmOptithermLE	2.71	0.53	0.5	0.56
AWS-035-32 B	726 Thermal Heart Awning Window DG 3/12Ar/3ET	2.93	0.45	0.43	0.47

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Lounge	AWS-013-54 A	D59	2400	4400	sliding	45.0	N	No
Kitchen/Living/-Dining	AWS-013-54 A	D11	2400	3800	sliding	60.0	W	No
Kitchen/Living/-Dining	AWS-071-32 A	D11A	2400	1830	fixed	0.0	N	No
Kitchen/Living/-Dining	AWS-013-54 A	D12	2400	1800	sliding	45.0	S	No
Kitchen/Living/-Dining	AWS-013-54 A	D13	2400	3200	sliding	45.0	S	No
Ground Entry Hallway	AWS-071-32 A	W1	1500	1020	fixed	0.0	N	No
Ground Entry Hallway	AWS-071-32 A	W2	2400	2400	fixed	0.0	S	No
Upstairs Bath	AWS-035-32 B	W4	1500	1500	awning	80.0	W	No
MasterBed	AWS-013-54 A	D14	2400	3200	sliding	45.0	N	No
ENS MasterBed	AWS-035-32 B	W3	600	2400	awning	80.0	N	No
Upstairs Hallway	AWS-035-32 B	W5	2100	1200	awning	80.0	W	No
Bed2	AWS-035-32 B	W6	2100	1200	awning	80.0	W	No
Bed3	AWS-035-32 B	W10	2100	1200	awning	80.0	W	No
Bed4	AWS-035-32 B	W11	1200	2400	awning	80.0	S	No
Void	AWS-071-32 A	W9	2100	1500	fixed	0.0	S	No
Void	AWS-071-32 A	W7	2100	1500	fixed	0.0	N	No
Void	AWS-071-32 A	W8	2100	2400	fixed	0.0	W	No

Roof window* *type and performance value*

Default* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges: SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges: SHGC lower limit	SHGC upper limit
Velux:VEL-011-01 W	VELUX FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.58	0.24	0.23	0.25

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
WIR MasterBed	Velux:VEL-011-01 W	W15	0.0	0.5	0	W	None	None
Upstairs Hallway	Velux:VEL-011-01 W	W12	0.0	0.5	0	W	None	None
Upstairs Hallway	Velux:VEL-011-01 W	W13	0.0	0.5	0	SW	None	None
Upstairs Hallway	Velux:VEL-011-01 W	W14	0.0	0.5	0	W	None	None

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
Basement	2100	5000	100.0	N
Basement Entry Hallway	2400	1020	100.0	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	FR5 - Concrete Block Solid/Core Filled	0.5	Medium		No
2	FR5 - Concrete Block Solid/Core Filled	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
3	WALL-01 - WALL-BASEMENT	0.5	Medium	Polyurethane rigid foamed aged: R2.0 (R2.0)	No
4	EX-01 - RENDER	0.3	Light	Glass fibre batt: R2.5 (R2.5)	Yes
5	WALL-01 - DOUBLE BRICK	0.5	Medium		No
6	WALL-01 - HABEL	0.3	Light	Glass fibre batt: R2.5 (R2.5)	Yes

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Basement	1	2400	6148	E	0	No
Basement	2	2400	5785	N	0	No

Basement	2	2400	6129	W	0	Yes
Laundry	1	2400	3280	E	0	No
CELLER	3	2400	4187	W	0	No
CELLER	3	2400	4621	S	0	No
CELLER	1	2400	4230	E	0	No
Basement Entry Hallway	2	2400	1764	N	0	Yes
Basement Entry Hallway	3	2400	4059	W	0	No
Basement Entry Hallway	3	2400	3015	S	0	No
Basement Entry Hallway	3	2400	696	W	0	Yes
lift	2	2400	1351	E	0	No
Lounge	4	2700	3449	W	911	Yes
Lounge	5	2700	4021	E	0	No
Lounge	4	2700	5317	N	2134	Yes
Lounge	4	2700	259	N	0	No
Lounge	4	2700	252	NW	0	No
Lounge	4	2700	258	NW	0	Yes
Bath	5	2700	3268	E	0	No
Kitchen/Living/Dining	5	2700	9013	E	0	No
Kitchen/Living/Dining	4	2700	2849	W	0	Yes
Kitchen/Living/Dining	4	2700	3009	N	0	Yes
Kitchen/Living/Dining	4	2700	5094	W	0	Yes
Kitchen/Living/Dining	4	2700	3014	S	0	Yes
Kitchen/Living/Dining	4	2700	1071	W	0	Yes
Kitchen/Living/Dining	4	2700	4539	S	3416	Yes
Ground Entry Hallway	4	2700	1781	N	3223	Yes
Ground Entry Hallway	4	2700	4056	W	0	Yes
Ground Entry Hallway	4	2700	3013	S	0	Yes
Ground Entry Hallway	4	2700	1828	W	0	Yes
Ground Entry Hallway	5	2700	1033	E	0	No
LIFT1	5	2700	1364	E	0	No
Upstairs Bath	6	2700	2107	S	0	Yes
Upstairs Bath	6	2700	3228	W	0	No
MasterBed	6	2700	3700	N	1668	Yes
MasterBed	6	2700	217	N	0	No
MasterBed	6	2700	239	N	0	No
MasterBed	6	2700	269	NW	0	No
MasterBed	6	2700	268	NW	0	No
MasterBed	6	2700	3590	W	0	No
WIR MasterBed	5	2700	3887	E	0	No

ENS MasterBed	5	2700	2690	E	0	No
ENS MasterBed	6	2700	2379	N	801	Yes
Upstairs Hallway	5	2700	10441	E	0	No
Upstairs Hallway	6	2700	2488	W	0	Yes
Bed2	6	2700	1888	W	0	Yes
Bed3	6	2700	1360	W	0	Yes
Bed4	6	2700	3153	W	0	Yes
Bed4	6	2700	4709	S	283	Yes
Bed4	5	2700	3151	E	0	No
Void	6	2700	100	W	0	No
Void	6	2700	101	W	0	No
Void	6	2700	151	SW	0	Yes
Void	6	2700	147	SW	0	Yes
Void	6	2700	2002	S	0	Yes
Void	6	2700	1915	N	0	Yes
Void	6	2700	131	N	0	Yes
Void	6	2700	156	N	0	Yes
Void	6	2700	159	NW	0	Yes
Void	6	2700	163	NW	0	Yes
Void	6	2700	4340	W	0	No
lift 2	5	2700	1315	E	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Concrete Block Solid/Core Filled	39.7	Glass fibre batt: R2.5 (R2.5)
2	FR5 - Internal Plasterboard Stud Wall	149.2	Glass fibre batt: R2.0 (R2.0)
3	FR5 - Internal Plasterboard Stud Wall	27.5	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Basement	FR5 - CSOG: Slab on Ground	10.5	Enclosed	R2.0	none
Basement	FR5 - CSOG: Slab on Ground	25.1	Enclosed	R2.0	none
Laundry	FR5 - CSOG: Slab on Ground	5.8	Enclosed	R2.0	Tiles
CELLER	FR5 - CSOG: Slab on Ground	19.4	Enclosed	R2.0	none
Basement Entry Hallway	FR5 - CSOG: Slab on Ground	24.7	Enclosed	R2.0	none

lift	FR5 - CSOG: Slab on Ground	2.4	Enclosed	R2.0	Timber
Lounge	FR5 - 150mm concrete slab Lined	23.1	Enclosed	R2.5	none
Bath	FR5 - 150mm concrete slab Lined	5.8	Enclosed	R2.5	Tiles
Kitchen/Living/D- ining	FR5 - 150mm concrete slab Lined	15.2	Enclosed	R2.5	none
Kitchen/Living/D- ining	FR5 - CSOG: Slab on Ground	2.6	Enclosed	R2.0	none
Kitchen/Living/D- ining	FR5 - CSOG: Slab on Ground	38.4	Enclosed	R2.0	none
Ground Entry Hallway	FR5 - 150mm concrete slab Lined	2.3	Enclosed	R2.5	none
Ground Entry Hallway	FR5 - 150mm concrete slab Lined	27.5	Enclosed	R2.5	none
LIFT1	FR5 - 150mm concrete slab Lined	2.4	Enclosed	R2.5	Timber
Upstairs Bath	FR5 - Timber Lined	8.2	Enclosed	R2.5	Tiles
MasterBed	FR5 - Timber Lined	2.3	Elevated	R2.5	Timber
MasterBed	FR5 - Timber Lined	16	Enclosed	R2.5	Timber
WIR MasterBed	FR5 - Timber Lined	7.8	Enclosed	R2.5	Timber
ENS MasterBed	FR5 - Timber Lined	6.4	Enclosed	R2.5	Tiles
Upstairs Hallway	FR5 - Timber Lined	28.8	Enclosed	R2.5	Timber
Bed2	FR5 - Timber Lined	13.8	Enclosed	R2.5	Timber
Bed3	FR5 - Timber Lined	13.7	Enclosed	R2.5	Timber
Bed4	FR5 - Timber Lined	14.8	Elevated	R2.5	Timber
Void	No Floor	11.7	Enclosed	R2.5	No Floor
lift 2	FR5 - Timber Lined	2.3	Enclosed	R2.5	Timber (Mountain ash)

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Basement	Plasterboard	R0.0	No
Basement	FR5 - 150mm concrete slab Lined	R2.5	No
Laundry	FR5 - 150mm concrete slab Lined	R2.5	No
CELLER	FR5 - 150mm concrete slab Lined	R2.5	No
Basement Entry Hallway	FR5 - 150mm concrete slab Lined	R2.5	No
lift	FR5 - 150mm concrete slab Lined	R2.5	No

Lounge	FR5 - Timber Lined	R2.5	No
Lounge	Plasterboard	R0.0	No
Bath	FR5 - Timber Lined	R2.5	No
Kitchen/Living/D- ining	FR5 - Timber Lined	R2.5	No
Kitchen/Living/D- ining	FR5 - Timber Lined	R2.5	No
Kitchen/Living/D- ining	Plasterboard	R7.0	Yes
Kitchen/Living/D- ining	FR5 - Timber Lined	R2.5	No
Ground Entry Hallway	Plasterboard	R7.0	Yes
Ground Entry Hallway	FR5 - Timber Lined	R2.5	No
LIFT1	FR5 - Timber Lined	R2.5	No
Upstairs Bath	Plasterboard	R7.0	Yes
MasterBed	Plasterboard	R7.0	Yes
MasterBed	Plasterboard	R7.0	Yes
WIR MasterBed	Plasterboard	R7.0	Yes
ENS MasterBed	Plasterboard	R7.0	Yes
Upstairs Hallway	Plasterboard	R7.0	Yes
Bed2	Plasterboard	R7.0	Yes
Bed3	Plasterboard	R7.0	Yes
Bed4	Plasterboard	R7.0	Yes
Void	Plasterboard	R7.0	Yes
lift 2	Plasterboard	R7.0	Yes

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Laundry	1	Exhaust Fans	250	250	Sealed
Laundry	1	Downlights	100	100	Sealed
CELLER	2	Downlights	100	100	Sealed
Basement Entry Hallway	4	Downlights	100	100	Sealed
lift	1	Downlights	100	100	Sealed
Lounge	4	Downlights	100	100	Sealed
Kitchen/Living/Dining	10	Downlights	100	100	Sealed
Ground Entry Hallway	4	Downlights	100	100	Sealed
Upstairs Bath	1	Exhaust Fans	250	250	Sealed
MasterBed	4	Downlights	100	100	Sealed
WIR MasterBed	1	Downlights	100	100	Sealed
ENS MasterBed	1	Exhaust Fans	250	250	Sealed
Upstairs Hallway	5	Downlights	100	100	Sealed
Bed2	2	Downlights	100	100	Sealed
Bed3	2	Downlights	100	100	Sealed

Bed4	2	Downlights	100	100	Sealed
lift 2	1	Downlights	100	100	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.5	Medium
Ceil: Ceiling	0.0	0.5	Medium
Framed:Flat - Flat Framed (Metal Deck)	1.8	0.3	Light

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary. Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate air gap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.

STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR:

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **NATHERS D1**

DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**

SCALE: @A2

PROJECT No:	DRAWING No:	ISSUE:
24100	**A507**	**D**

Nationwide House Energy Rating Scheme®
NatHERS® Certificate No. 35B2FIUF6G

Generated on 16 Jun 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address	D2, 94 Edgecliff Boulevard, Collaroy Plateau, NSW, 2097
Lot/DP	C/-/DP341590
NCC Class*	Class 1a
Floor/all Floors	
Type	New Home

Plans

Main plan	REV B
Prepared by	DD

Construction and environment

Assessed floor area [m²]*		Exposure type
Conditioned*	245.6	suburban
Unconditioned*	63.1	**NatHERS climate zone**
Total	308.7	56 Mascot AMO
Garage	35.6	

Accredited assessor

Name	Pranab chakma
Business name	PAUL & DAVID
Email	info@basixcertifier.com.au
Phone	0490511593
Accreditation No.	101225
Assessor Accrediting Organisation	ABSA
Declaration of interest	No

NCC Requirements

NCC provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating

7.2

The more stars the more energy efficient

NATIONWIDE HOUSE ENERGY RATING SCHEME®

28.2 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.7	13.5
Load limits	N/A	N/A

Features determining load limits

Floor type (lowest conditioned area)	N/A
NCC climate zone 1 or 2	N/A
Outdoor living area	N/A
Outdoor living area ceiling fan	N/A

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit https://www.fr5.com.au/QRCodeLanding?PublicId=35B2FIUF6G When using either link, ensure you are visiting www.fr5.com.au.

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating & Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the ABCB NatHERS heating and cooling load limits Standard 2022 for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:
- CSOG – Concrete Slab on Ground
- SF – Suspended Floor (or a mixture of CSOG and SF)
- NA – Not Applicable

NCC climate Zone 1 or 2:
- Yes
- No
- NA – not applicable

Outdoor living area:
- Yes
- No
- NA – not applicable

Outdoor living area ceiling fan:
- Yes
- No
- NA – not applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

Graph key:

Certificate check

The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.

	Approval stage: Assessor checked	Approval stage: Consent authority/ surveyor checked	Construction stage: Builder checked	Construction stage: Consent authority/ surveyor checked	Occupancy/other
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		☐	☐	☐	☐
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		☐	☐	☐	☐
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in *'Window and glazed door schedule'* and *'Roof window schedule'* tables on this Certificate?	☐	☐	☐	☐	☐
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the *'Window and glazed door type and performance'* and *'Roof window type and performance'* tables on this Certificate?			☐	☐	☐
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?	☐	☐	☐	☐	☐
Does the external wall shade (colour) match what is shown in the *'External wall type'* table on this Certificate?	☐	☐	☐	☐	☐
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Floor type'* table on this certificate?	☐	☐	☐	☐	☐
Ceiling penetrations*					
Does the *'quantity'* and *'type'* of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling penetrations'* table on this Certificate?	☐	☐	☐	☐	☐
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the *'Ceiling type'* table on this Certificate?	☐	☐	☐	☐	☐
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the *'Roof type'* table on this Certificate?	☐	☐	☐	☐	☐
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.	☐	☐		☐	☐
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".	☐	☐		☐	☐
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match the values in the ABCB Standard 2022: NAtHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐

Certificate check

Continued

	Approval stage: Assessor checked	Approval stage: Consent authority/ surveyor checked	Construction stage: Builder checked	Construction stage: Consent authority/ surveyor checked	Occupancy/other
Additional NCC requirements for thermal performance (not included in the NatHERS assessment)					
Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)					
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the Appliance schedule on this Certificate?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the *'Onsite Renewable Energy schedule'* on this Certificate?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			
Other NCC requirements					

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Additional notes

Room *schedule*

Room	Zone Type	Area [m²]
Basement	garage	35.6
Laundry	dayTime	5.8
CELLER	unconditioned	19.4
Basement Entry Hallway	dayTime	24.7
lift	dayTime	2.4
Lounge	living	23.1
Bath	dayTime	5.8
Kitchen/Living/Dining	kitchen	56.2
Ground Entry Hallway	dayTime	29.8
LIFT1	dayTime	2.4
Upstairs Bath	unconditioned	8.2
MasterBed	bedroom	18.4
WIR MasterBed	nightTime	7.8
ENS MasterBed	nightTime	6.4
Upstairs Hallway	dayTime	28.8
Bed2	bedroom	13.8
Bed3	bedroom	13.8
Bed4	bedroom	14.8
Void	doubleHeightVoid	11.7
lift 2	dayTime	2.3

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges: SHGC lower limit	Substitution tolerance ranges: SHGC upper limit
No Data Available					

Custom* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges: SHGC lower limit	Substitution tolerance ranges: SHGC upper limit
AWS-013-54 A	541/542 Al Sliding Door DG 008_AGG PLUS Clr 4_12_4	2.97	0.5	0.48	0.53
AWS-071-32 A	RES SERIES 616 FIXED WINDOW DG 4mmClr-12Ar-4mmOptithermLE	2.71	0.53	0.5	0.56
AWS-035-63 B	726 Thermal Heart Awning Window DG 638VLam/12/6SolE	3.02	0.4	0.38	0.42

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Lounge	AWS-013-54 A	D7	2400	4400	sliding	45.0	N	No
Kitchen/Living/-Dining	AWS-013-54 A	D13	2400	3200	sliding	45.0	S	No
Kitchen/Living/-Dining	AWS-013-54 A	D12	2400	1800	sliding	45.0	S	No
Kitchen/Living/-Dining	AWS-071-32 A	D11A	2400	1830	fixed	0.0	N	No
Kitchen/Living/-Dining	AWS-013-54 A	D11	2400	3800	sliding	60.0	E	No
Ground Entry Hallway	AWS-071-32 A	W2	2400	2400	fixed	0.0	S	No
Ground Entry Hallway	AWS-071-32 A	W1	1500	1000	fixed	0.0	N	No
Upstairs Bath	AWS-035-63 B	W4	1500	1500	awning	80.0	E	No
MasterBed	AWS-013-54 A	D14	2400	3200	sliding	45.0	N	No
ENS MasterBed	AWS-035-63 B	W3	600	2400	awning	80.0	N	No
Upstairs Hallway	AWS-035-63 B	W5	2100	1200	awning	80.0	E	No
Bed2	AWS-035-63 B	W6	2100	1200	awning	80.0	E	No
Bed3	AWS-035-63 B	W10	2100	1200	awning	80.0	E	No
Bed4	AWS-035-63 B	W11	1200	2400	awning	80.0	S	No
Void	AWS-071-32 A	W8	2100	2400	fixed	0.0	E	No
Void	AWS-071-32 A	W7	2100	1500	fixed	0.0	N	No
Void	AWS-071-32 A	W9	2100	1500	fixed	0.0	S	No

Roof window* *type and performance value*

Default* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges: SHGC lower limit	Substitution tolerance ranges: SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges: SHGC lower limit	Substitution tolerance ranges: SHGC upper limit
Velux:VEL-011-01 W	VELUX FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.58	0.24	0.23	0.25

Roof window* *schedule*

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
WIR MasterBed	Velux:VEL-011-01 W	W15	0.0	0.5	0	W	None	None
Upstairs Hallway	Velux:VEL-011-01 W	W12	0.0	0.5	0	W	None	None
Upstairs Hallway	Velux:VEL-011-01 W	W13	0.0	0.5	0	SW	None	None
Upstairs Hallway	Velux:VEL-011-01 W	W14	0.0	0.5	0	W	None	None

Skylight* *type and performance*

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door *schedule*

Location	Height [mm]	Width [mm]	Opening %	Orientation
Basement	2100	5000	100.0	N
Basement Entry Hallway	2400	1020	100.0	N

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	FR5 - Concrete Block Solid/Core Filled	0.5	Medium		No
2	WALL-01 - WALL-BASEMENT	0.5	Medium	Polyurethane rigid foamed aged: R2.0 (R2.0)	No
3	WALL-01 - RENDER	0.3	Light	Glass fibre batt: R2.5 (R2.5)	Yes
4	WALL-01 - DOUBLE BRICK	0.5	Medium		No
5	EX-01 - HABEL	0.3	Light	Glass fibre batt: R2.5 (R2.5)	Yes

External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Basement	1	2400	6129	E	0	Yes
Basement	1	2400	5785	N	0	No
Basement	1	2400	6148	W	0	No

Laundry	1	2400	3280	W	0	No
CELLER	1	2400	4230	W	0	No
CELLER	2	2400	4621	S	0	No
CELLER	2	2400	4187	E	0	No
Basement Entry Hallway	2	2400	696	E	0	Yes
Basement Entry Hallway	2	2400	3015	S	0	No
Basement Entry Hallway	2	2400	4059	E	0	No
Basement Entry Hallway	1	2400	1764	N	0	Yes
lift	1	2400	1351	W	0	No
Lounge	3	2700	258	E	0	Yes
Lounge	3	2700	252	NE	0	No
Lounge	3	2700	259	NE	0	No
Lounge	3	2700	5317	N	2134	Yes
Lounge	4	2700	4021	W	0	No
Lounge	3	2700	3449	E	0	Yes
Bath	4	2700	3268	W	0	No
Kitchen/Living/Dining	3	2700	4539	S	3416	Yes
Kitchen/Living/Dining	3	2700	1071	E	0	Yes
Kitchen/Living/Dining	3	2700	3014	S	0	Yes
Kitchen/Living/Dining	3	2700	5094	E	0	Yes
Kitchen/Living/Dining	3	2700	3009	N	0	Yes
Kitchen/Living/Dining	3	2700	2849	E	0	Yes
Kitchen/Living/Dining	4	2700	9013	W	0	No
Ground Entry Hallway	4	2700	1033	W	0	No
Ground Entry Hallway	3	2700	1828	E	0	Yes
Ground Entry Hallway	3	2700	3013	S	0	Yes
Ground Entry Hallway	3	2700	4056	E	0	Yes
Ground Entry Hallway	3	2700	1781	N	0	Yes
LIFT1	4	2700	1364	W	0	No
Upstairs Bath	5	2700	3228	E	0	No
Upstairs Bath	5	2700	2107	S	0	Yes
MasterBed	5	2700	3590	E	0	No
MasterBed	5	2700	268	E	0	No
MasterBed	5	2700	269	E	0	No
MasterBed	5	2700	239	NE	0	No
MasterBed	5	2700	217	NE	0	No
MasterBed	5	2700	3700	N	1668	Yes
WIR MasterBed	4	2700	3887	W	0	No
ENS MasterBed	5	2700	2379	N	801	Yes

ENS MasterBed	4	2700	2690	W	0	No
Upstairs Hallway	5	2700	2488	E	0	Yes
Upstairs Hallway	4	2700	10441	W	0	No
Bed2	5	2700	1888	E	0	Yes
Bed3	5	2700	1360	E	0	Yes
Bed4	4	2700	3151	W	0	No
Bed4	5	2700	4709	S	283	Yes
Bed4	5	2700	3153	E	0	Yes
Void	5	2700	4340	E	0	No
Void	5	2700	163	E	0	Yes
Void	5	2700	159	E	0	Yes
Void	5	2700	156	NE	0	Yes
Void	5	2700	131	NE	0	Yes
Void	5	2700	1915	N	0	Yes
Void	5	2700	2002	S	0	Yes
Void	5	2700	147	S	0	Yes
Void	5	2700	151	SE	0	Yes
Void	5	2700	101	SE	0	No
Void	5	2700	100	SE	0	No
lift 2	4	2700	1315	W	0	No

Internal wall *type*

Wall ID	Wall type	Area [m²]	Bulk insulation
1	FR5 - Concrete Block Solid/Core Filled	39.7	Glass fibre batt: R2.5 (R2.5)
2	FR5 - Internal Plasterboard Stud Wall	149.2	Glass fibre batt: R2.0 (R2.0)
3	FR5 - Internal Plasterboard Stud Wall	27.5	

Floor *type*

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Basement	FR5 - CSOG: Slab on Ground	10.5	Enclosed	R2.0	none
Basement	FR5 - CSOG: Slab on Ground	25.1	Enclosed	R2.0	none
Laundry	FR5 - CSOG: Slab on Ground	5.8	Enclosed	R2.0	Tiles
CELLER	FR5 - CSOG: Slab on Ground	19.4	Enclosed	R2.0	Tiles
Basement Entry Hallway	FR5 - CSOG: Slab on Ground	24.7	Enclosed	R2.0	Tiles
lift	FR5 - CSOG: Slab on Ground	2.4	Enclosed	R2.0	Tiles

Lounge	FR5 - 150mm concrete slab Lined	23.1	Enclosed	R2.5	Tiles
Bath	FR5 - 150mm concrete slab Lined	5.8	Enclosed	R2.5	Tiles
Kitchen/Living/D- ining	FR5 - 150mm concrete slab Lined	15.2	Enclosed	R2.5	Tiles
Kitchen/Living/D- ining	FR5 - CSOG: Slab on Ground	2.6	Enclosed	R2.0	Tiles
Kitchen/Living/D- ining	FR5 - CSOG: Slab on Ground	38.4	Enclosed	R2.0	Tiles
Ground Entry Hallway	FR5 - 150mm concrete slab Lined	2.3	Enclosed	R2.5	Tiles
Ground Entry Hallway	FR5 - 150mm concrete slab Lined	27.5	Enclosed	R2.5	Tiles
LIFT1	FR5 - 150mm concrete slab Lined	2.4	Enclosed	R2.5	Timber
Upstairs Bath	FR5 - Timber Lined	8.2	Enclosed	R2.5	Tiles
MasterBed	FR5 - Timber Lined	2.3	Elevated	R2.5	Timber
MasterBed	FR5 - Timber Lined	16	Enclosed	R2.5	Timber
WIR MasterBed	FR5 - Timber Lined	7.8	Enclosed	R2.5	Timber
ENS MasterBed	FR5 - Timber Lined	6.4	Enclosed	R2.5	Tiles
Upstairs Hallway	FR5 - Timber Lined	28.8	Enclosed	R2.5	Timber
Bed2	FR5 - Timber Lined	13.8	Enclosed	R2.5	Timber
Bed3	FR5 - Timber Lined	13.8	Enclosed	R2.5	Timber
Bed4	FR5 - Timber Lined	14.8	Elevated	R2.5	Timber
Void	No Floor	11.7	Enclosed	R2.5	No Floor
lift 2	FR5 - Timber Lined	2.3	Enclosed	R2.5	Timber (Mountain ash)

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Basement	Plasterboard	R0.0	No
Basement	FR5 - 150mm concrete slab Lined	R2.5	No
Laundry	FR5 - 150mm concrete slab Lined	R2.5	No
CELLER	FR5 - 150mm concrete slab Lined	R2.5	No
Basement Entry Hallway	FR5 - 150mm concrete slab Lined	R2.5	No
lift	FR5 - 150mm concrete slab Lined	R2.5	No
Lounge	FR5 - Timber Lined	R2.5	No

Lounge	Plasterboard	R0.0	No
Bath	FR5 - Timber Lined	R2.5	No
Kitchen/Living/D- ining	FR5 - Timber Lined	R2.5	No
Kitchen/Living/D- ining	FR5 - Timber Lined	R2.5	No
Kitchen/Living/D- ining	Plasterboard	R7.0	Yes
Kitchen/Living/D- ining	FR5 - Timber Lined	R2.5	No
Ground Entry Hallway	Plasterboard	R7.0	Yes
Ground Entry Hallway	FR5 - Timber Lined	R2.5	No
LIFT1	FR5 - Timber Lined	R2.5	No
Upstairs Bath	Plasterboard	R7.0	Yes
MasterBed	Plasterboard	R7.0	Yes
MasterBed	Plasterboard	R7.0	Yes
WIR MasterBed	Plasterboard	R7.0	Yes
ENS MasterBed	Plasterboard	R7.0	Yes
Upstairs Hallway	Plasterboard	R7.0	Yes
Bed2	Plasterboard	R7.0	Yes
Bed3	Plasterboard	R7.0	Yes
Bed4	Plasterboard	R7.0	Yes
Void	Plasterboard	R7.0	Yes
lift 2	Plasterboard	R7.0	Yes

Ceiling *penetrations**

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Laundry	1	Exhaust Fans	250	250	Sealed
Laundry	1	Downlights	100	100	Sealed
CELLER	2	Downlights	100	100	Sealed
Basement Entry Hallway	4	Downlights	100	100	Sealed
lift	1	Downlights	100	100	Sealed
Lounge	4	Downlights	100	100	Sealed
Bath	1	Exhaust Fans	250	250	Sealed
Kitchen/Living/Dining	10	Downlights	100	100	Sealed
Kitchen/Living/Dining	1	Exhaust Fans	250	250	Sealed
Ground Entry Hallway	4	Downlights	100	100	Sealed
Upstairs Bath	1	Exhaust Fans	250	250	Sealed
MasterBed	4	Downlights	100	100	Sealed
WIR MasterBed	1	Downlights	100	100	Sealed
ENS MasterBed	1	Exhaust Fans	250	250	Sealed
Upstairs Hallway	5	Downlights	100	100	Sealed
Bed2	2	Downlights	100	100	Sealed

Bed3	2	Downlights	100	100	Sealed
Bed4	2	Downlights	100	100	Sealed
lift 2	1	Downlights	100	100	Sealed

Ceiling *fans*

Location	Quantity	Diameter [mm]
No Data Available		

Roof *type*

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.5	Medium
Ceil: Ceiling	0.0	0.5	Medium
Framed:Flat - Flat Framed (Metal Deck)	1.8	0.3	Light

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary. Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor using the NatHERS accredited software tool are presented in this report and further details or data files may be obtained from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose performance have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate air gap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.

STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR:

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY: Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **NATHERS D2**

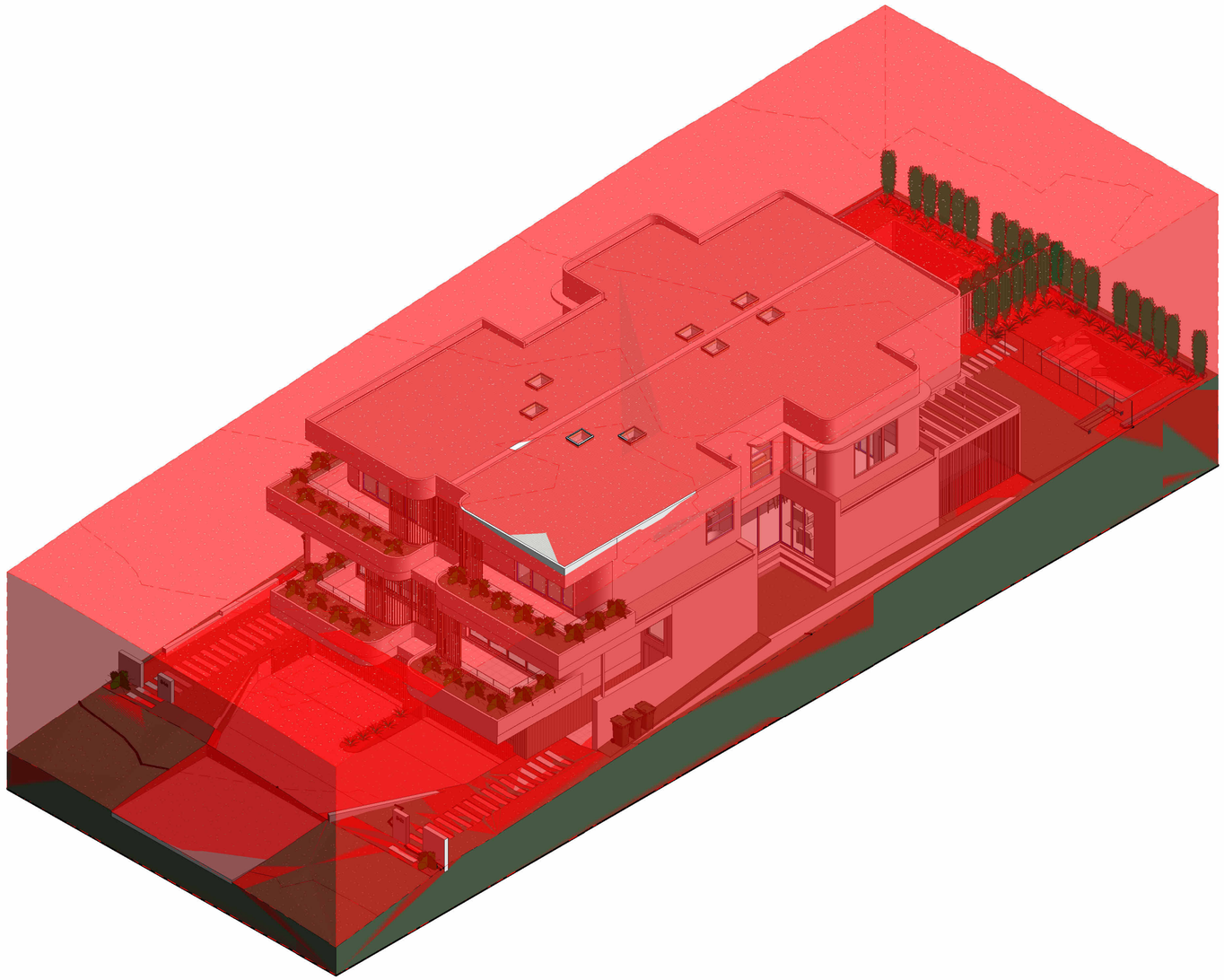
DESIGNER: BW

DRAWN: BW

DATE: 24/06/25

SCALE: @A2

PROJECT No:	DRAWING No:	ISSUE:
24100	A508	D



Height Blanket with Retaining walls

SCALE: @ A3

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR:

NORTH:

DRAWINGS BY:

Duplex
Building Design

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Height Blanket**

DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**

SCALE: @A2

PROJECT No: **24100**

DRAWING No: **A601**

ISSUE: **D**

FINISHES SCHEDULE			
ITEM	MATERIAL	COLOUR	SAMPLE
External Wall Finishes	First Floor: Rendered FC Sheeting or similar	White or simular	
	Ground Floor: Selected brickwork render	White or simular	
	Basement Wall: Vertical Cladding Brown or similar	Brown or simular	
Garage Door	Garage Door Similar to basement wall	Brown or simular	
Doors & Windows Frames	Aluminum	White or simular	
Downpipes	Steel or equivalent	White or simular	
Roof	Steel or equivalent	Surfmist or simular	
Privacy Screens	Front Screening & Balc. Rear Alfresco Screening -	Brown or simular White or simular	
Columns	White or Similar	White or simular	Material TBC

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR:

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

NORTH:

DRAWINGS BY:

Duplex Building Design

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Material Schedule**

DESIGNER: BW

DRAWN: LM

DATE: **24/06/25**

SCALE: **1 : 100** @A2

PROJECT No: **24100** DRAWING No: **A603** ISSUE: **D**

DWELLING 1 WINDOW SCHEDULE

Mark	Type	Description	Height	Width	Glazing
D1-W1	AAW1510	Residential Fixed Window	1500	1020	Clear Glass
D1-W2	AAW2424	Residential Fixed Window	2400	2400	Clear Glass
D1-W3	AAW0624	Awning Window	600	2400	Clear Glass
D1-W4	AAW1515	Awning Window	1500	1500	Obscure Glass
D1-W5	AAW2112	Awning Window	2100	1200	Clear Glass
D1-W6	AAW2112	Awning Window	2100	1200	Clear Glass
D1-W7	AAW2115	Residential Fixed Window	2100	1500	Clear Glass
D1-W8	AAW2124	Residential Fixed Window	2100	2400	Clear Glass
D1-W9	AAW2115	Residential Fixed Window	2100	1500	Clear Glass
D1-W10	AAW2112	Awning Window	2100	1200	Clear Glass
D1-W11	AAW1224	Awning Window	1200	2400	Clear Glass
D1-W12	SL0907	Fixed (non-opening) flat roof skylight	892	689	Manufacturer's Specs
D1-W13	SL0907	Fixed (non-opening) flat roof skylight	892	689	Manufacturer's Specs
D1-W14	SL0907	Fixed (non-opening) flat roof skylight	892	689	Manufacturer's Specs
D1-W15	SL0907	Fixed (non-opening) flat roof skylight	892	689	Manufacturer's Specs

DWELLING 1 DOOR SCHEDULE

Mark	Type	Description	Height	Width
D1-D1	GRD2150	Garage Rolling Door	2100	5000
D1-D2	1020 x 2400		2400	1020
D1-D3	Double Flush Door	Double Flush Door	2040	820
D1-D4	820	Flush Door	2040	820
D1-D5	920	Flush Door	2040	920
D1-D6	Double Flush Door	Double Flush Door	2040	820
D1-D7	ASD2444-4	Four Panel Aluminum Stacking Door	2400	4400
D1-D8	2/820 CSD	Cavity Sliding Door	2000	820
D1-D9	CSD720	Cavity Sliding Door	2100	720
D1-D10	820	Flush Door	2040	820
D1-D11	ASD2460	Corner Sliding Stacking Door	2400	3800
D1-D12	ASD2418	Aluminium Sliding Door	2400	1800
D1-D13	ASD2432-4	Aluminium Sliding Door	2400	3200
D1-D14	ASD2432-4	Aluminium Sliding Door	2400	3200
D1-D15	720 x 2040	Flush Door	2040	720
D1-D16	820 x 2040	Flush Door	2040	820
D1-D17	820 x 2040	Flush Door	2040	820
D1-D18	1220 x 1980	Robe Sliding Door	2005	1220
D1-D19	1220 x 1980	Robe Sliding Door	2005	1220
D1-D20	820	Flush Door	2040	820
D1-D21	820 x 2040	Flush Door	2040	820
D1-D22	1220 x 1980	Robe Sliding Door	2005	1220
D1-D23	1220 x 1980	Robe Sliding Door	2005	1220
D1-D24	820	Flush Door	2040	820
D1-D25	820 x 2040	Flush Door	2040	820
D1-D26	1220 x 1980	Robe Sliding Door	2005	1220
D1-D27	1220 x 1980	Robe Sliding Door	2005	1220
D1-D28	820 x 2040	Flush Door	2040	820
D1-D29	1420 x 1980	Robe Sliding Door	1980	1420
D1-D30	1420 x 1980	Robe Sliding Door	1980	1420

DWELLING 2 WINDOW SCHEDULE

Mark	Type	Description	Height	Width	Glazing
D2-W1	AAW1510	Residential Fixed Window	1500	1020	Clear Glass
D2-W2	AAW2424	Residential Fixed Window	2400	2400	Clear Glass
D2-W3	AAW0624	Awning Window	600	2400	Clear Glass
D2-W4	AAW1515	Awning Window	1500	1500	Obscure Glass
D2-W5	AAW2112	Awning Window	2100	1200	Clear Glass
D2-W6	AAW2112	Awning Window	2100	1200	Clear Glass
D2-W7	AAW2115	Residential Fixed Window	2100	1500	Clear Glass
D2-W8	AAW2124	Residential Fixed Window	2100	2400	Clear Glass
D2-W9	AAW2115	Residential Fixed Window	2100	1500	Clear Glass
D2-W10	AAW2112	Awning Window	2100	1200	Clear Glass
D2-W11	AAW1224	Awning Window	1200	2400	Clear Glass
D2-W12	SL0907	Fixed (non-opening) flat roof skylight	892	689	Manufacturer's Specs
D2-W13	SL0907	Fixed (non-opening) flat roof skylight	892	689	Manufacturer's Specs
D2-W14	SL0907	Fixed (non-opening) flat roof skylight	892	689	Manufacturer's Specs
D2-W15	SL0907	Fixed (non-opening) flat roof skylight	892	689	Manufacturer's Specs

DWELLING 2 DOOR SCHEDULE

Mark	Type	Description	Height	Width
D2-D1	GRD2150	Garage Rolling Door	2100	5000
D2-D2	1020 x 2400		2400	1020
D2-D3	Double Flush Door	Double Flush Door	2040	820
D2-D4	820	Flush Door	2040	820
D2-D5	920	Flush Door	2040	920
D2-D6	Double Flush Door	Double Flush Door	2040	820
D2-D7	ASD2444-4	Four Panel Aluminum Stacking Door	2400	4400
D2-D8	2/820 CSD	Cavity Sliding Door	2000	820
D2-D9	CSD720	Cavity Sliding Door	2100	720
D2-D10	820	Flush Door	2040	820
D2-D11	ASD2460	Corner Sliding Stacking Door	2400	3800
D2-D12	ASD2418	Aluminium Sliding Door	2400	1800
D2-D13	ASD2432-4	Aluminium Sliding Door	2400	3200
D2-D14	ASD2432-4	Aluminium Sliding Door	2400	3200
D2-D15	720 x 2040	Flush Door	2040	720
D2-D16	820 x 2040	Flush Door	2040	820
D2-D17	820 x 2040	Flush Door	2040	820
D2-D18	1220 x 1980	Robe Sliding Door	2005	1220
D2-D20	820	Flush Door	2040	820
D2-D21	820 x 2040	Flush Door	2040	820
D2-D22	1220 x 1980	Robe Sliding Door	2005	1220
D2-D23	1220 x 1980	Robe Sliding Door	2005	1220
D2-D24	820	Flush Door	2040	820
D2-D25	820 x 2040	Flush Door	2040	820
D2-D26	1220 x 1980	Robe Sliding Door	2005	1220
D2-D27	1220 x 1980	Robe Sliding Door	2005	1220
D2-D28	820 x 2040	Flush Door	2040	820
D2-D29	1420 x 1980	Robe Sliding Door	1980	1420
D2-D30	1420 x 1980	Robe Sliding Door	1980	1420

DOORS AND WINDOWS SCHEDULE

DA PLANS

Rev	Revision	By	Date
A	DA PLANS	LM	16.05.25
B	MARKUPS	LM	09.06.25
D	ATTACHED NATHERS & BASIX	LM	18.06.25

SCALE BAR:

NORTH:

DRAWINGS BY:

THE BUILDER SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSION. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

DUPLEX BUILDING DESIGN
Offices at: Wollongong, Kiama & Ulladulla
info@duplexbuildingdesign.com
www.duplexbuildingdesign.com
Office: 02 4209 3003

CLIENT: **Georgeski**

ADDRESS: **94 Edgecliffe Boulevard Collaroy Plateau**

PROJECT: **Proposed Duplex with Basement**

DRAWING: **Window & Door Schedule**

DESIGNER: BW

DRAWN: BW

DATE: **24/06/25**

SCALE: @A2

PROJECT No: **24100** DRAWING No: **A650** ISSUE: **D**