

BROMWICH PLACE, Menai

Residential Development

4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

DA ISSUE

DRAWING SCHEDULE		
SHEET No.	REV.	SHEET NAME

DD001	K	SITE PLAN
DD002	D	SITE PLAN 1:200 - GROUND LEVEL
DD003	D	SITE PLAN 1:200 - LEVEL 1
DD004	D	SITE PLAN 1:200 - ROOF
DD005	D	PROPOSED BOUNDARIES
DD006	A	SITE ANALYSIS
DD010	I	STREET ELEVATION - BROMWICH PLACE
DD011	I	STREET ELEVATION - HOPMAN AVENUE
DD020	I	SITE SECTIONS
DD100	J	BUILDING 1 - SITE PLAN
DD101	K	BUILDING 1 - GROUND FLOOR PLAN
DD102	L	BUILDING 1 - LEVEL 1 PLAN
DD103	M	BUILDING 1 - ROOF PLAN
DD104	K	BUILDING 1 - ELEVATION
DD105	K	BUILDING 1 - ELEVATION
DD200	K	BUILDING 2 - SITE PLAN
DD201	J	BUILDING 2 - GROUND FLOOR PLAN
DD202	J	BUILDING 2 - LEVEL 1 PLAN
DD203	J	BUILDING 2 - ROOF PLAN
DD204	J	BUILDING 2 - ELEVATION
DD205	J	BUILDING 2 - ELEVATION
DD300	I	BUILDING 3 - SITE PLAN
DD301	I	BUILDING 3 - GROUND FLOOR PLAN
DD302	I	BUILDING 3 - LEVEL 1 PLAN
DD303	J	BUILDING 3 - ROOF PLAN
DD304	I	BUILDING 3 - ELEVATION
DD305	I	BUILDING 3 - ELEVATION
DD306	B	BUILDING 3 - ADAPTABILITY PLAN
DD400	O	BUILDING 4 - SITE PLAN
DD401	O	BUILDING 4 - GROUND FLOOR PLAN
DD402	O	BUILDING 4 - LEVEL 1 PLAN
DD403	O	BUILDING 4 - ROOF PLAN
DD404	O	BUILDING 4 - ELEVATION
DD405	O	BUILDING 4 - ELEVATION
DD406	B	BUILDING 4 - ADAPTABILITY PLAN
DD500	K	BUILDING 5 - SITE PLAN
DD501	K	BUILDING 5 - GROUND FLOOR PLAN
DD502	K	BUILDING 5 - LEVEL 1 PLAN
DD503	J	BUILDING 5 - ROOF PLAN
DD504	J	BUILDING 5 - ELEVATION
DD505	J	BUILDING 5 - ELEVATION
DD506	B	BUILDING 5 - ADAPTABILITY PLAN
DD600	K	BUILDING 6 - SITE PLAN
DD601	K	BUILDING 6 - GROUND FLOOR PLAN
DD602	K	BUILDING 6 - LEVEL 1 PLAN
DD603	H	BUILDING 6 - ROOF PLAN
DD604	I	BUILDING 6 - ELEVATION
DD605	I	BUILDING 6 - ELEVATION
DD606	B	BUILDING 6 - ADAPTABILITY PLAN
DD700	H	SHADOW DIAGRAM - WINTER
DD701	H	SHADOW DIAGRAM - WINTER
DD703	H	SHADOW DIAGRAM - SUMMER
DD704	H	SHADOW DIAGRAM - SUMMER
DD705	A	SHADOW DIAGRAM - EQUINOX
DD706	A	SHADOW DIAGRAM - EQUINOX



DA ISSUE

SITE AREA	3981.3m ²
Site Cover	36%
Soft Landscape Area	38%
Deep Planting	29%

LOTS 21-26 DP43295
SUTHERLAND SHIRE



SITE PLAN
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

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PROJECT No: 13484SYD
DATE: JUN 2014
SCALE: 1:400 @ A3
DRAWING No: D0001 K

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TOTAL GFA	1842m ²
Site Area	3981.5m ²
CURRENT P&R	0.46:1
SS/EP ALLOWED P&R	0.48:1

ACCOMMODATION SCHEDULE		
BUILDING 1	No.	TYPE AREA
2 BEDROOM	1	A 97m ²
3 BEDROOM	1	B 102m ²

TOTAL		302m ²
BUILDING 2	Nb.	TYPE AREA
2 BEDROOM	1	A 97m ²
3 BEDROOM	1	B 108m ²
2 BEDROOM	1	C 96m ²

NO. IN	BUILDING 3	NE	TYPE AREA	SQ. FT.
	2 BEDROOM	1	B	109m ²
	3 BEDROOM	1	B	120m ²
	3 BEDROOM	1	C	108m ²
	TOTAL			337m ²

BUILDING 4	Nb.	TYPE AREA
2 BEDROOM	1	C 96m ²
2 BEDROOM	1	C 96m ²
2 BEDROOM	1	A 97m ²
2 BEDROOM	1	D 98m ²

BUILDINGS	No.	TYPE	AREA
3 BEDROOM	1	D	110m ²
2 BEDROOM	1	A	50m ²
2 BEDROOM	1	C	96m ²
TOTAL			302m²

COLLINGWOOD	NO.	TYPE AREA
3 BEDROOM	1	E 122m'
2 BEDROOM	1	F 103m'
TOTAL		225m'

SITE AREA	3087.2m ²
Site Cover	30%
Soft Landscape Area	11%
Deep Planting	24%

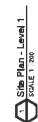
LEGEND

L	CLOTHES LINE
R	DRAINAGE PIT WITH
	GRATED COVER
D	GRATED DRAIN

LETTERBOXES
METER BOX
RAIN WATER TANK
SOLAR HOT WATER
SOLAR TUBE
STORMWATER

TOP OF WALL
AND13464SYDAs indicated @ A1
b: 002 E

五、**“三三制”**



Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

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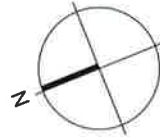
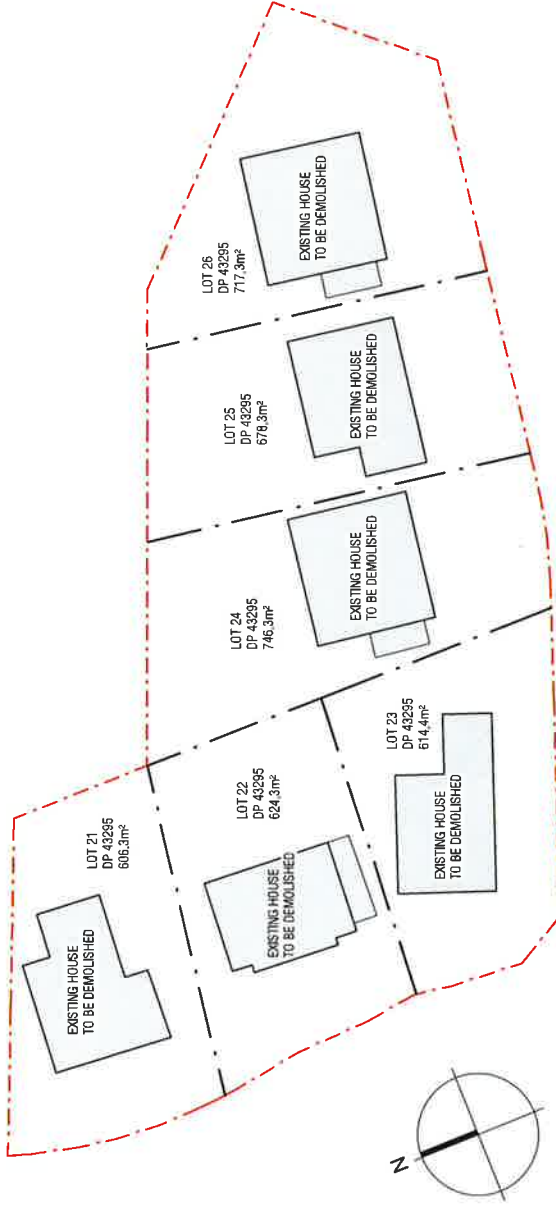
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PROJECT No: 13464SYD
DATE: APR 2014
SCALE: As indicated @ A1
DRAWING No: 003 D

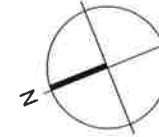
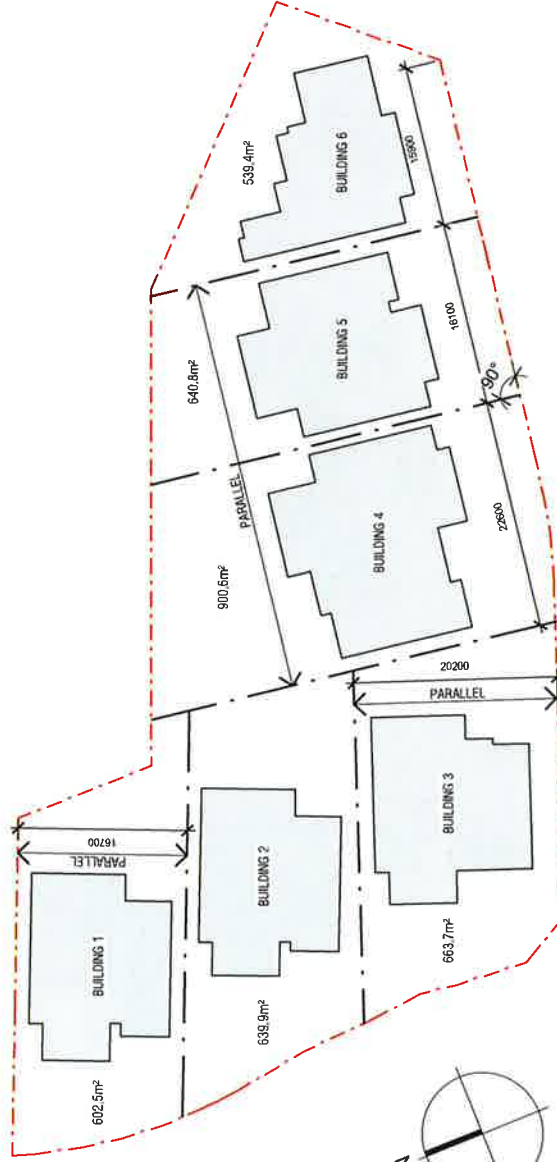
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Existing Boundaries
1:500@A3



Proposed Boundaries
1:500@A3

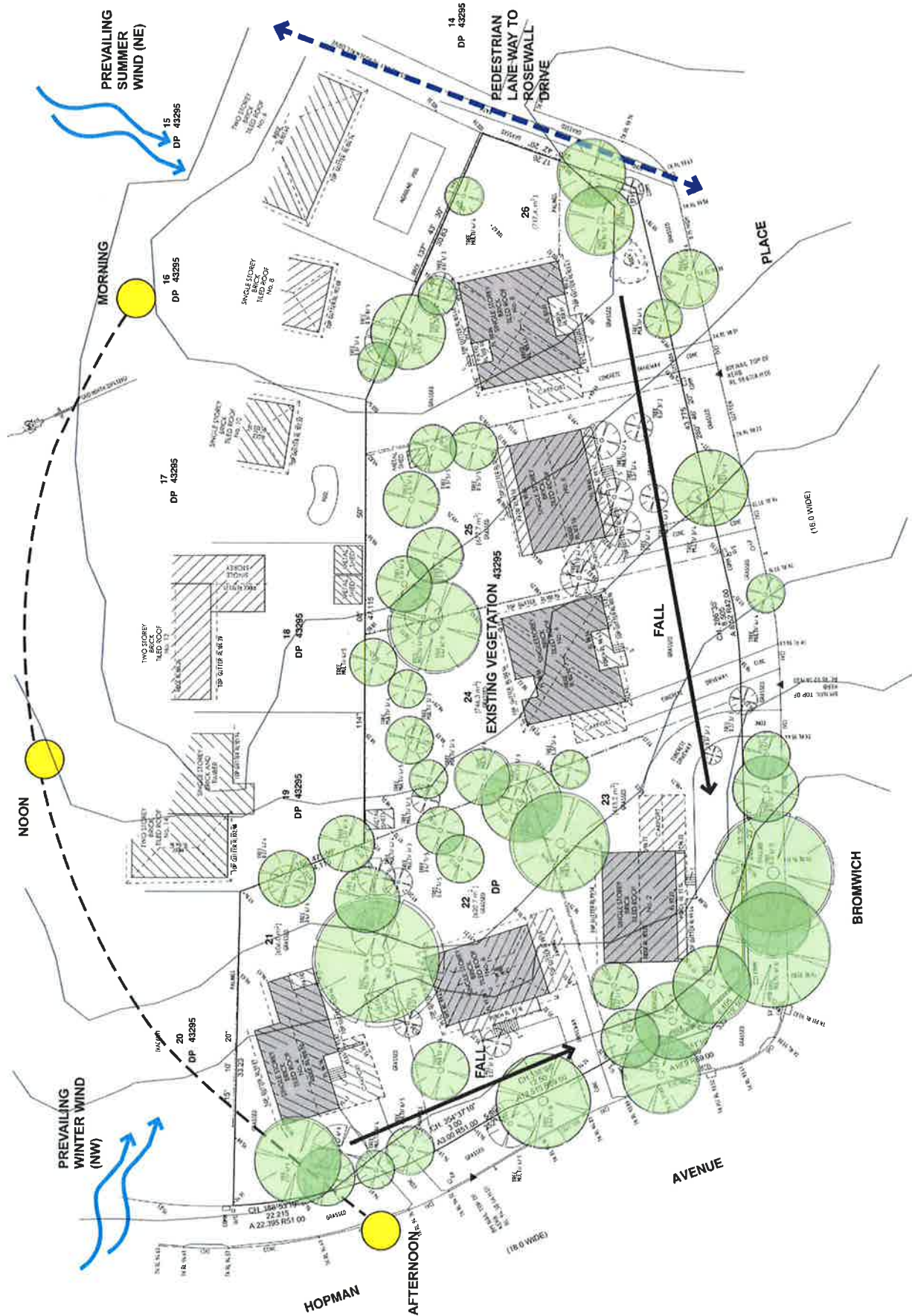
PROPOSED BOUNDARIES

Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

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PROJECT No: 13444SYD
DATE: JUN 2014
SCALE: 1:500@A3
DRAWING No: 00005 E



SITE ANALYSIS

Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

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PROJECT No: 134645YD
DATE: 06/03/14
SCALE: @ A3
DRAWING No: 00000 A

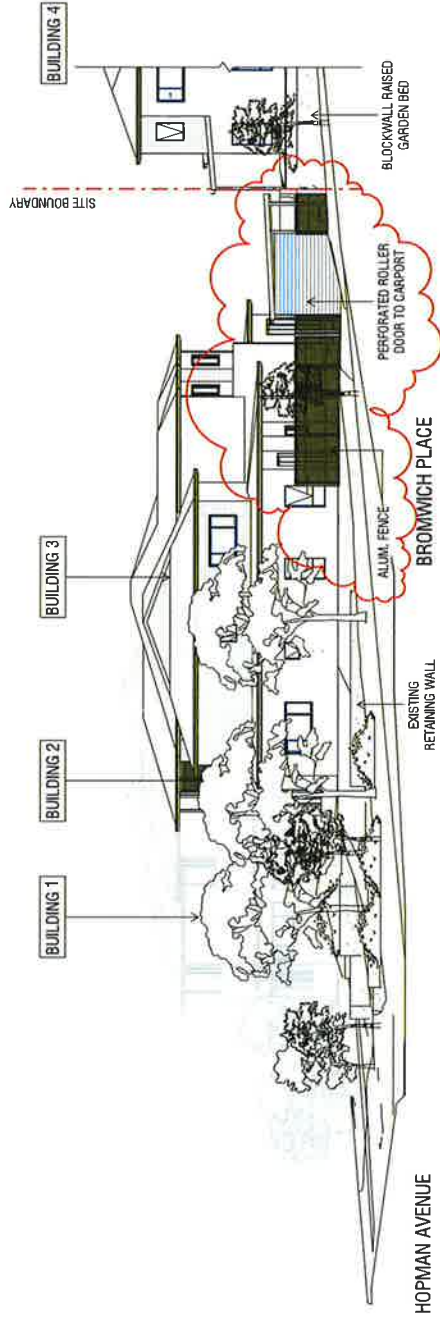


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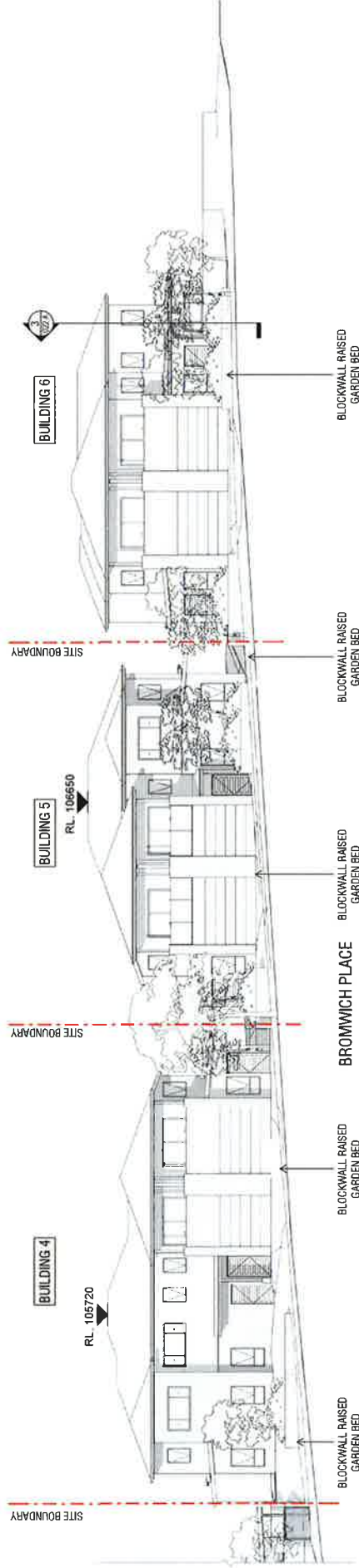


Bromwich Place Elevation
1:500@A3



HOPMAN AVENUE

Bromwich Place Elevation
1:200@A3



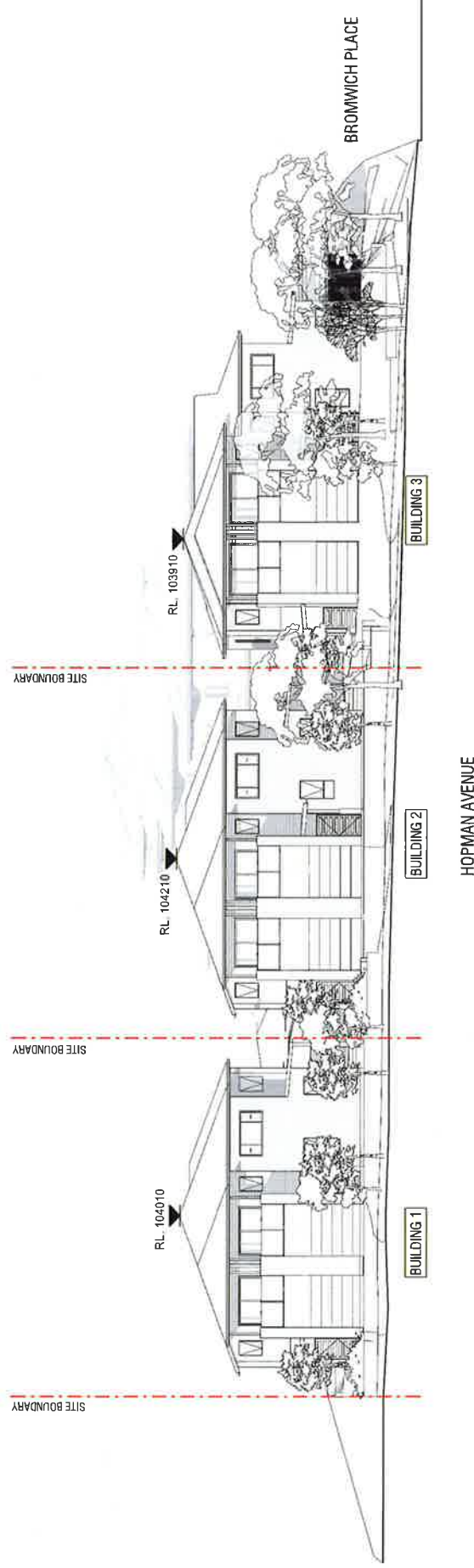
Bromwich Place Elevation
1:200@A3

STREET ELEVATION - BROMWICH PLACE
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

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PROJECT No: 1344510
DATE: AUG 2014
SCALE: As indicated @ A3
DRAWING No: D0010 J





STREET ELEVATION - HOPMAN AVENUE

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4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE



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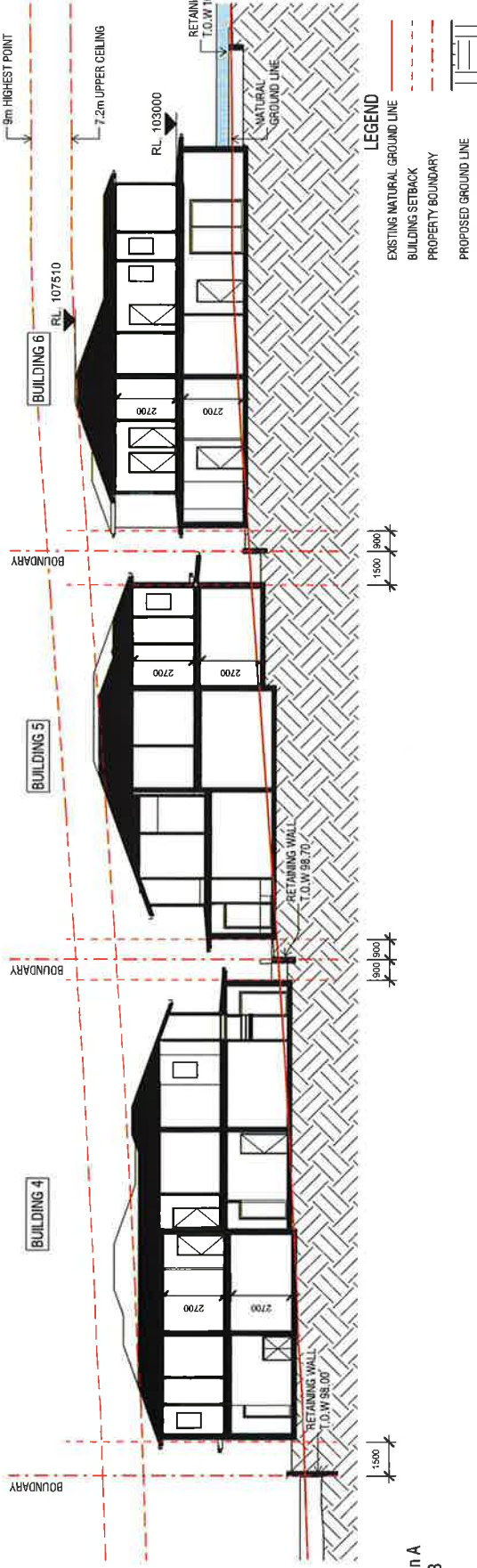
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DATE: JUN 2014
SCALE: 1 : 200@ F
DRAWING No: DD011 J

DA ISSUE

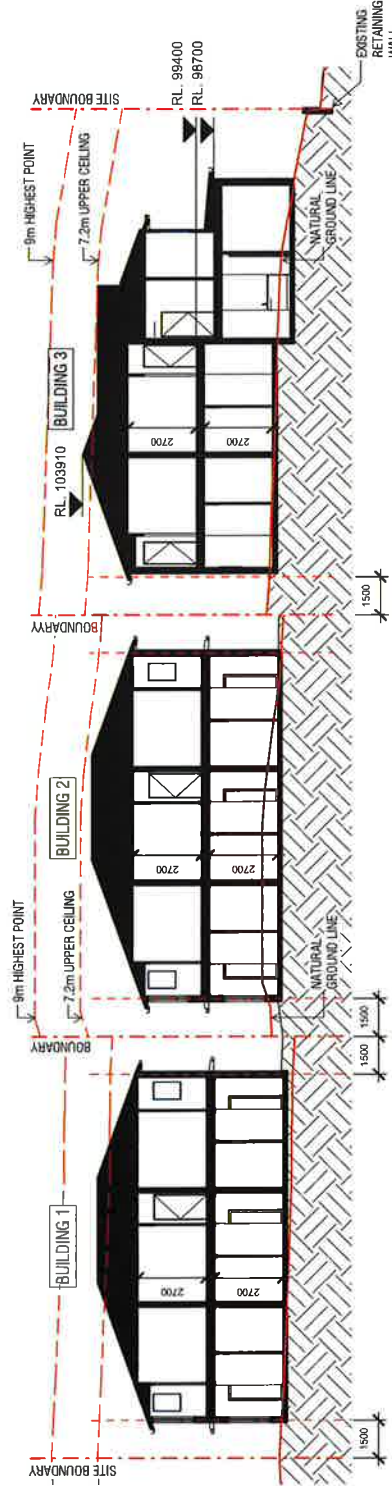
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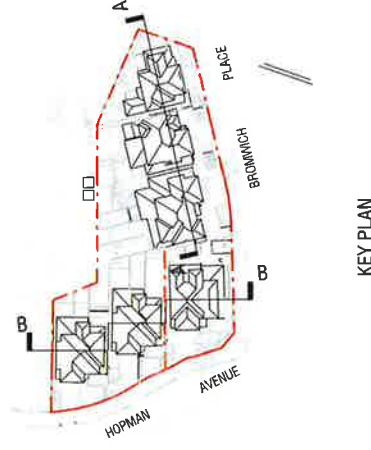
URBAN DESIGN
MASTER PLANNING
ARCHITECTURE
INTERIOR DESIGN
LANDSCAPE ARCH
GRAPHIC DESIGN



Site Section A
1:200@A3



Site Section B
1:200@A3



KEY PLAN

SITE SECTIONS
Bromwich Place Residential Development, Menai
4, 6, 8 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE



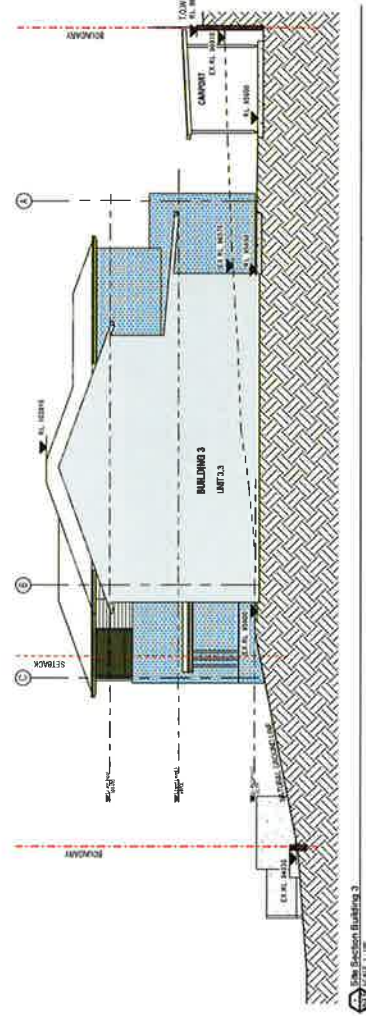
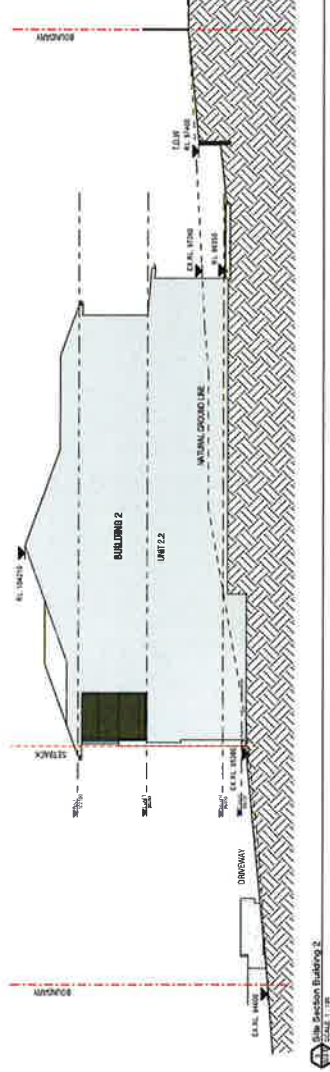
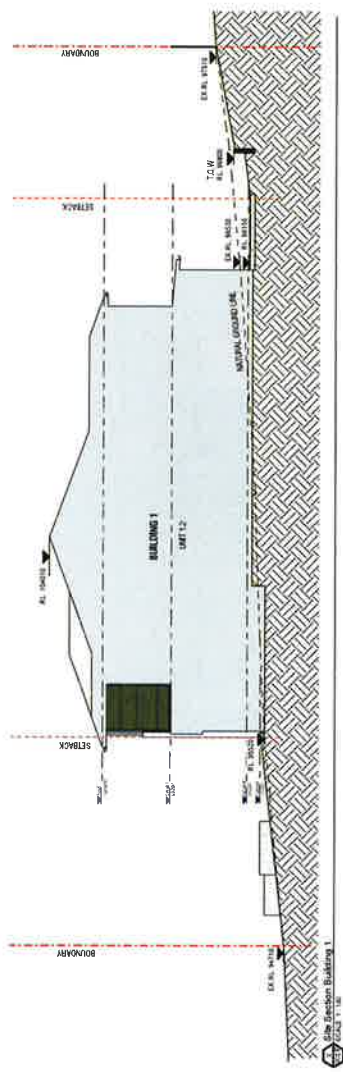
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Building Sections
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

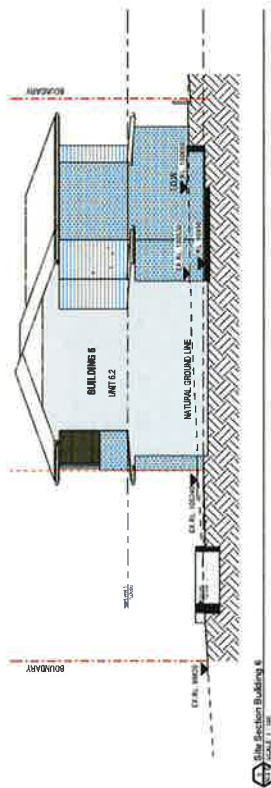
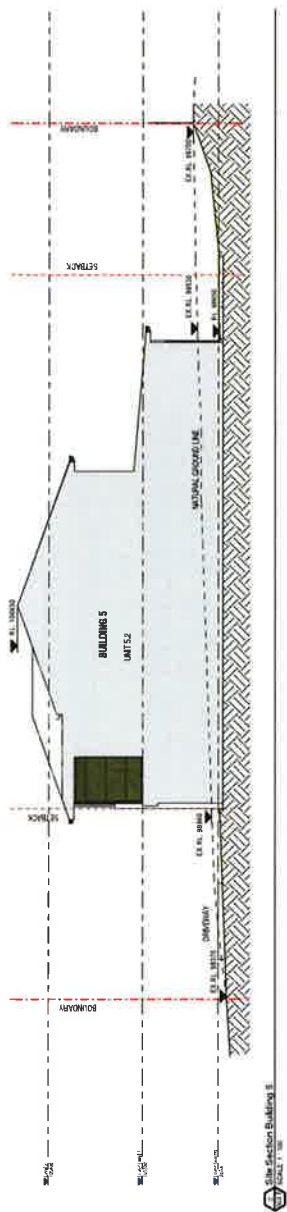
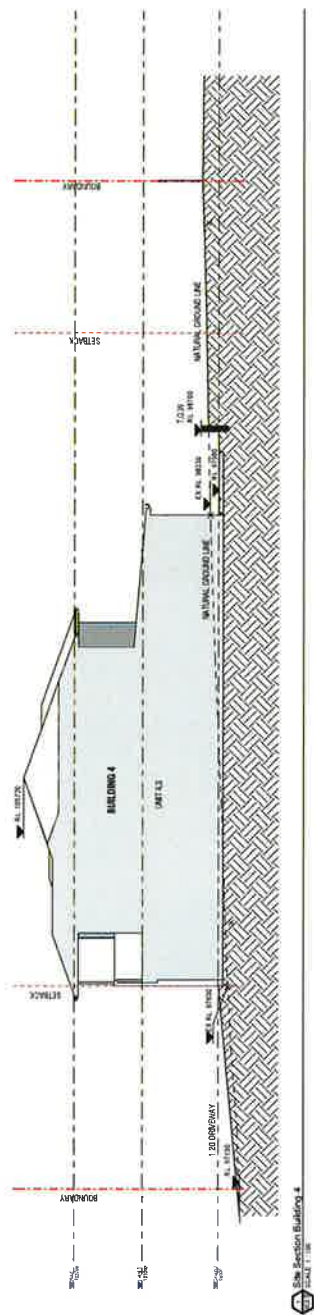
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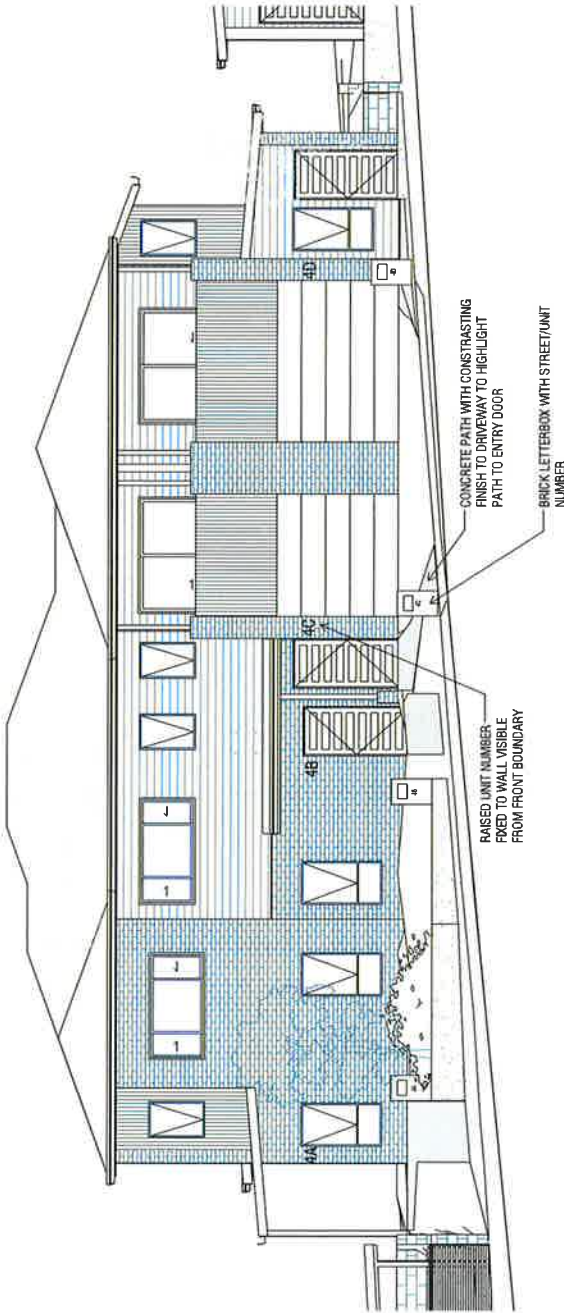
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Building Sections 2
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

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1 TYPICAL STREET ELEVATION SIGNAGE
SCALE 1 : 100

TYPICAL SIGNAGE AT STREET ELEVATION
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

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DRAWING No: DD030 A

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DA ISSUE

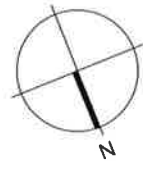
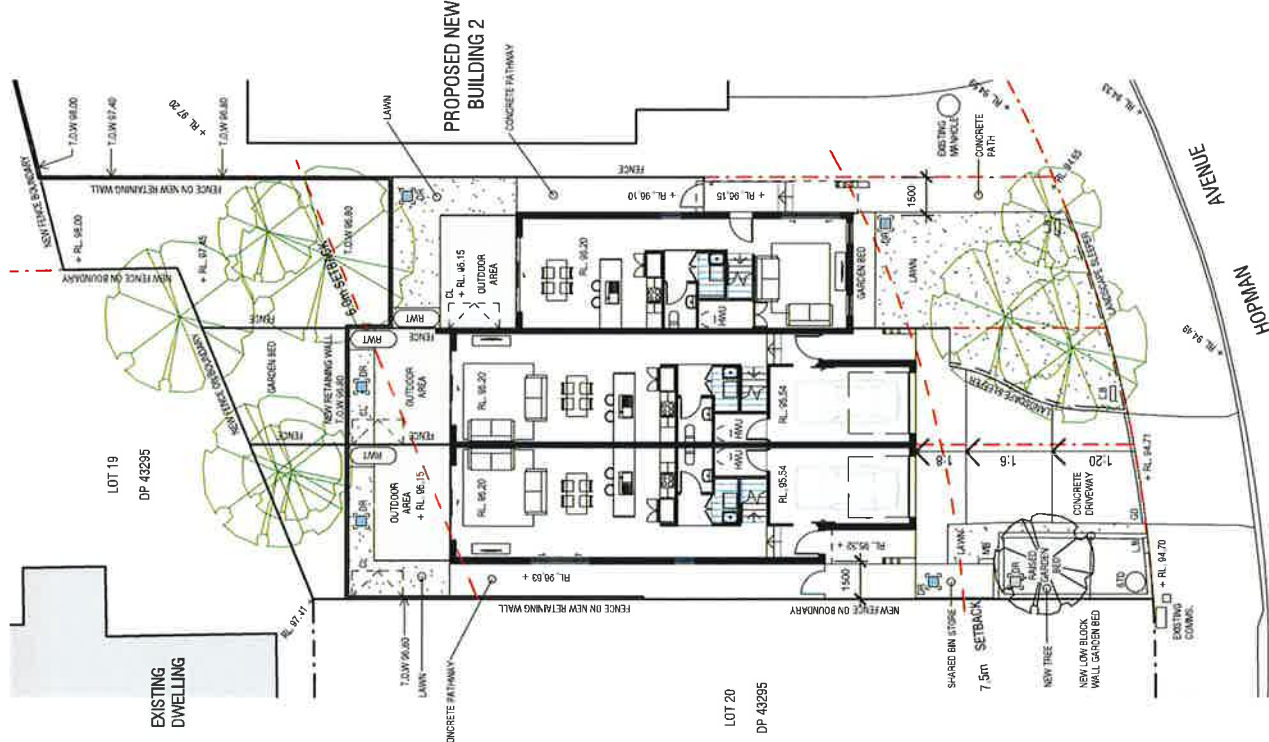


URBAN DESIGN
MASTER PLANNING
ARCHITECTURE
INTERIOR DESIGN
LANDSCAPE ARCH
GRAPHIC DESIGN

LEGEND

- CL CLOTHES LINE
- DR DRAINAGE PIT WITH GRATED COVER
- GD GRATED DRAIN
- HAW HOT WATER UNIT
- LB LETTERBOXES
- MB METER BOX
- RWT RAIN WATER TANK
- STD STORMWATER TREATMENT DEVICE
- TOW TOP OF WALL

BUILDING 1		
LOT AREA		601.6m ²
ACCOMMODATION SCHEDULE		
BUILDING 1	No.	TYPE AREA
2 BEDROOM	1	A 97m ²
3 BEDROOM	1	B 109m ²
2 BEDROOM	1	C 96m ²
TOTAL		302m ²



Site plan
SCALE 1:200

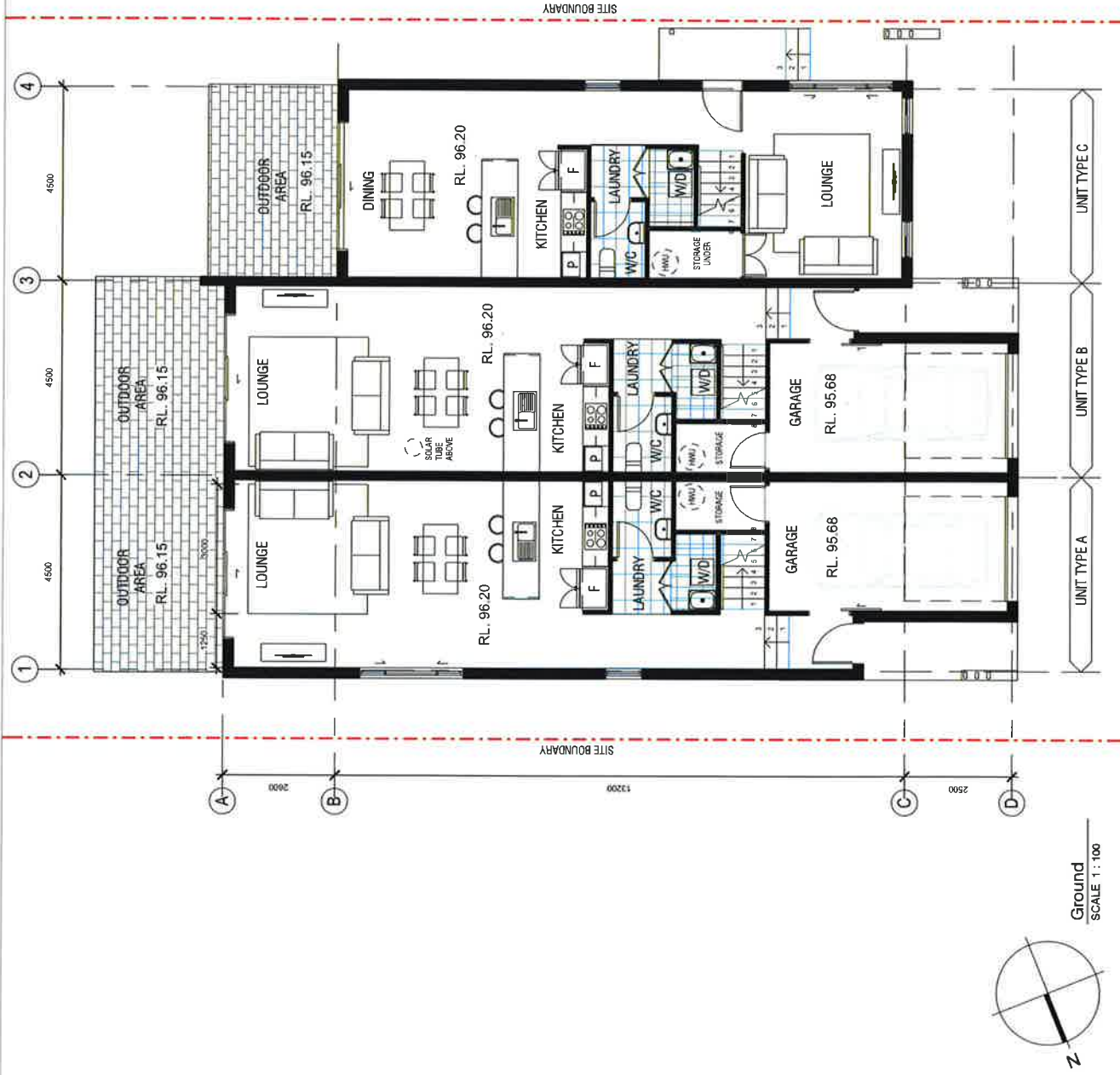
BUILDING 1 - SITE PLAN
Bromwich Place Residential Development, Menai

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PROJECT No: 134845D
DATE: APR 2014
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DRAWING No: DD101 J



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BUILDING 1 - GROUND FLOOR PLAN
Bromwich Place Residential Development, Menai



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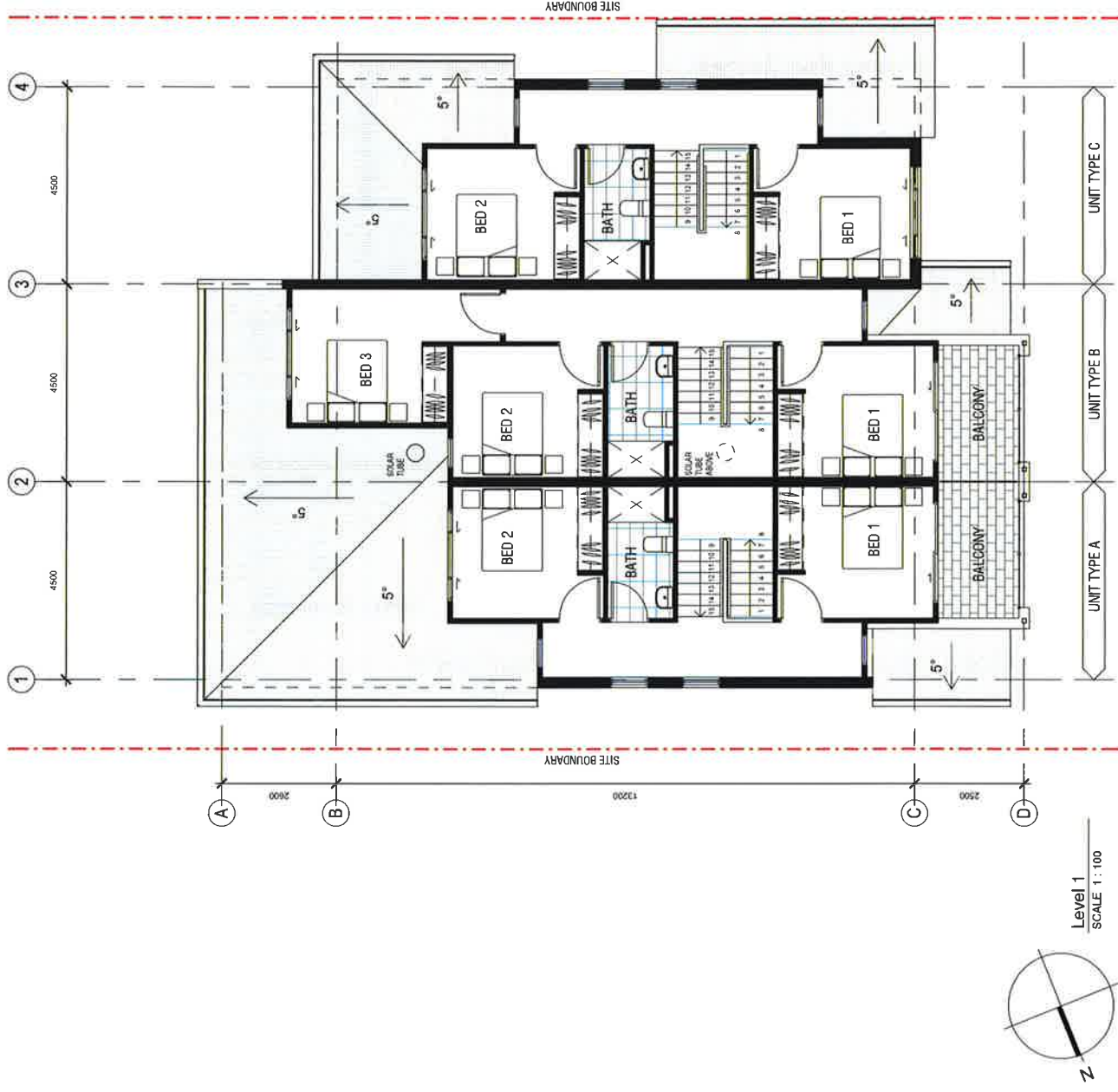
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14/04/2014 4:20:11 PM

DA ISSUE

**MODE
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■ BUILDING 1 - LEVEL 1 PLAN

Bromwich Place Residential Development, Menai

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PROJECT No: 1344437D
DATE: APR 2014
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DRAWING No: 00102 L



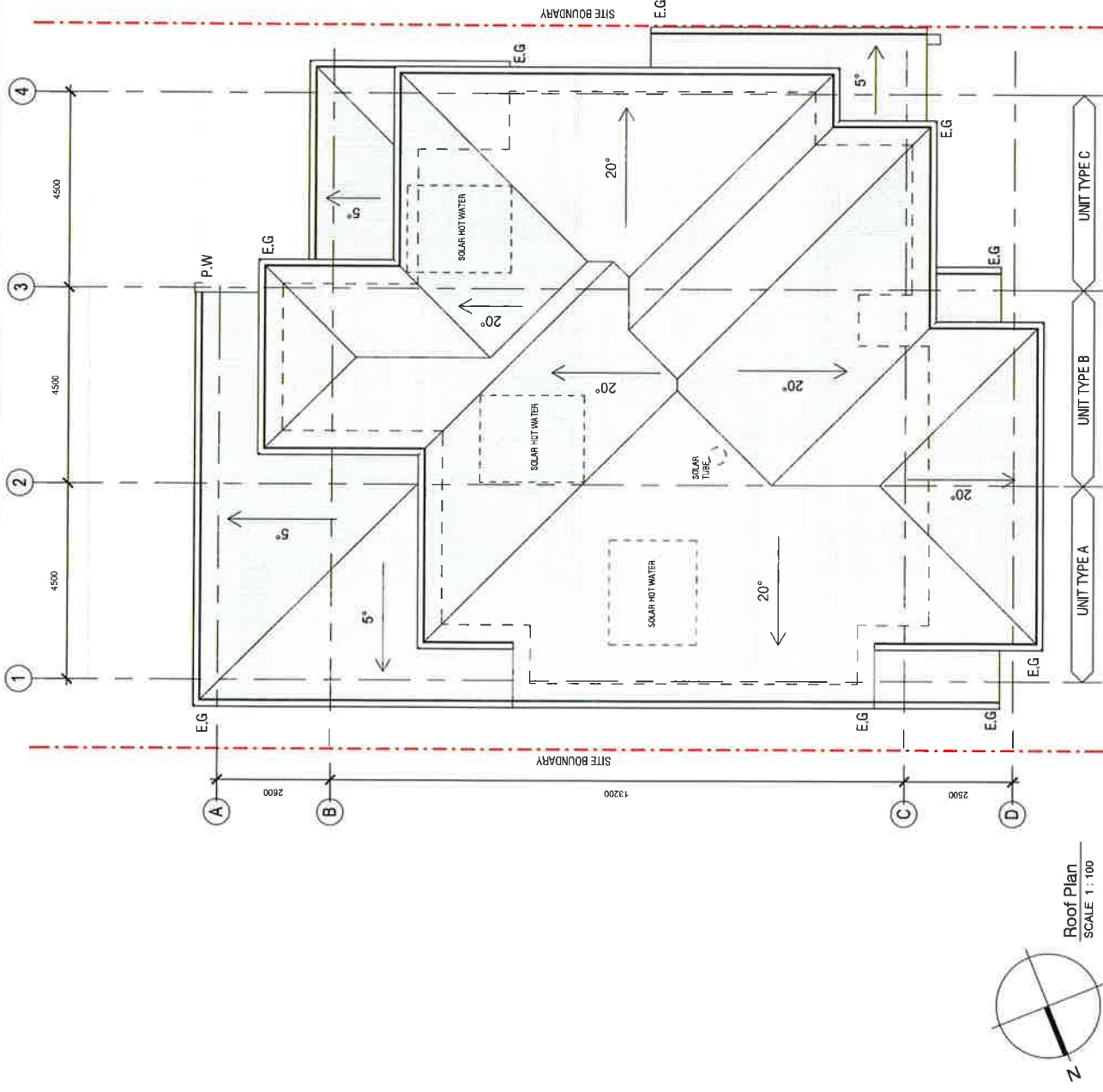
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14/04/2014 4:20:12 PM

LEGEND

EG EAVES GUTTER
PW PARAPET WALL
ST SOLAR TUBE



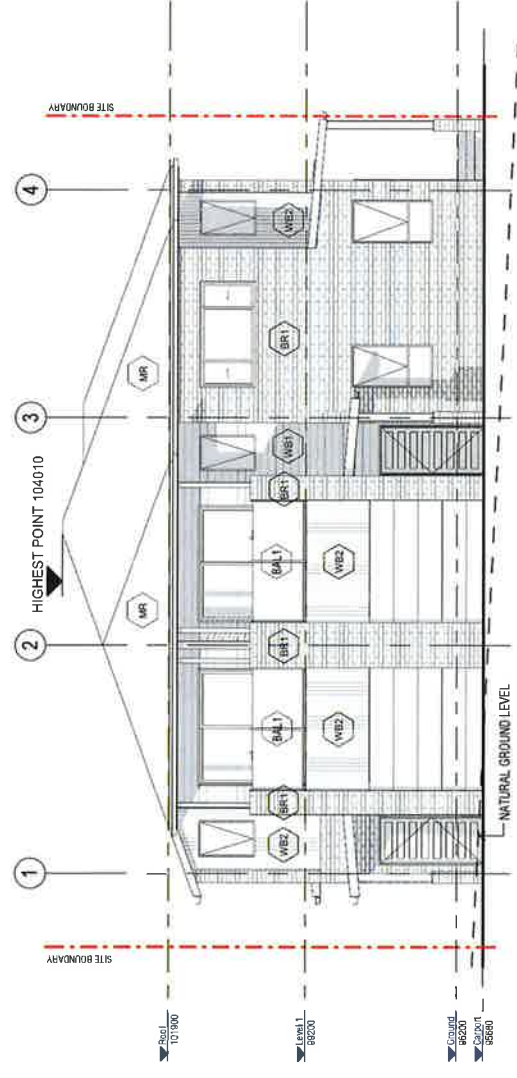
Roof Plan
SCALE 1 : 100

BUILDING 1 - ROOF PLAN
Bromwich Place Residential Development, Menai

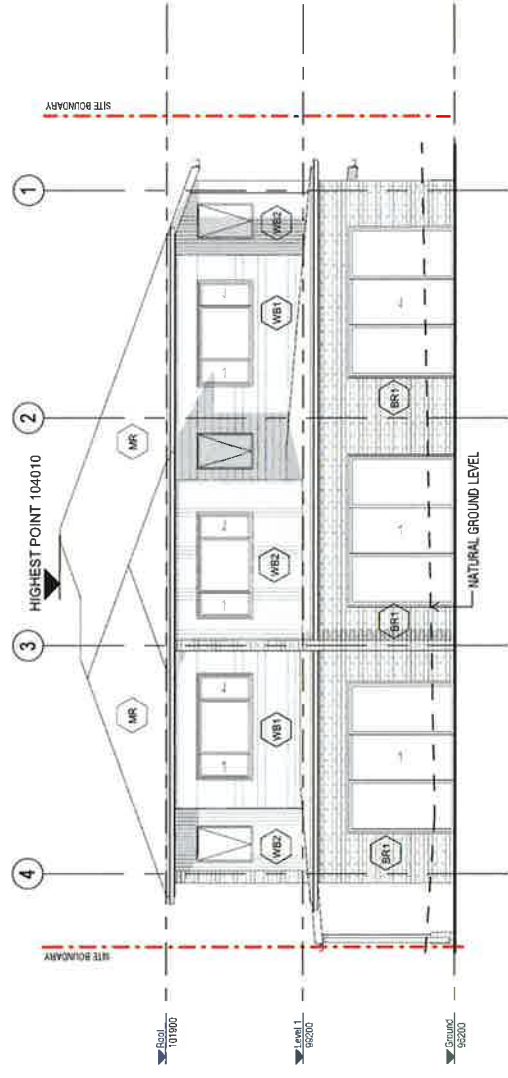


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PROJECT No: 13445YD
DATE: JUN 2014
SCALE: 1 : 100 @ A3
DRAWING No: D0103 M



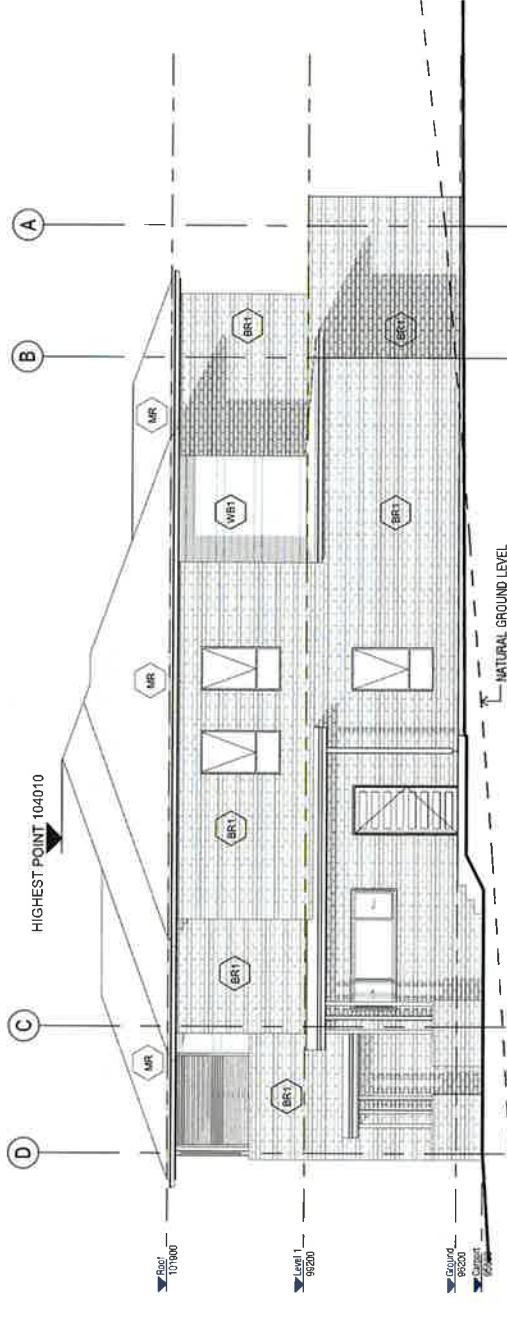
1 West Elevation (Hopman Avenue)
SCALE 1 : 100



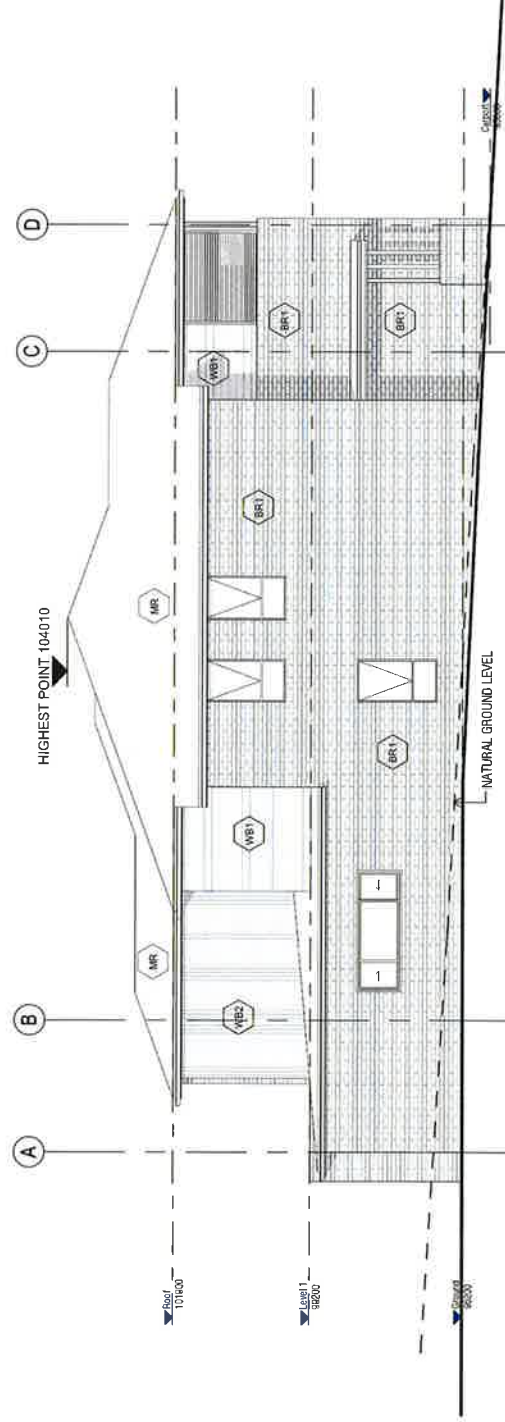
2 East Elevation
SCALE 1 : 100

ELEVATION LEGEND - FINISHES

WB1	SCYON STRIA 150mm WEATHERBOARD CLADDING OR SIMILAR PAINT FINISH (VARIED)
WB2	SCYON ANON VERTICAL CLADDING OR SIMILAR PAINT FINISH (VARIED)
BR1	AUSTRAL BRICKS URBAN ONE REFER FINISHES SCHEDULE FOR SELECTION
BAL1	OBSCURED GLASS BALUSTRADE
MR	METAL ROOF SHEETING



1 South Elevation
SCALE 1 : 100



2 North Elevation
SCALE 1 : 100

ELEVATION LEGEND - FINISHES

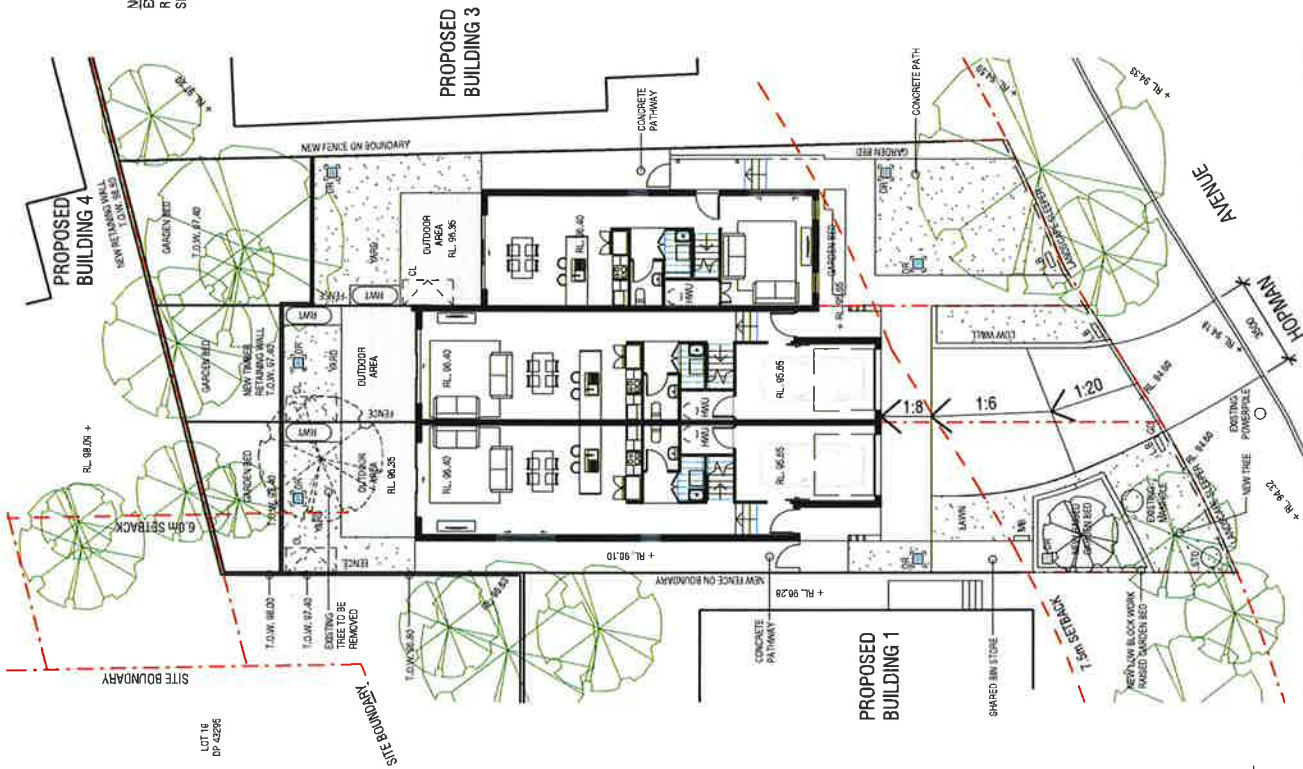
- WB1 SCYON STRIA 150mm
WEATHERBOARD CLADDING
OR SIMILAR
PAINT FINISH (VARIED)
- WB2 SCYON AXON
VERTICAL CLADDING
OR SIMILAR
PAINT FINISH (VARIED)
- BR1 AUSTRAL BRICKS
URBAN ONE
REFER FINISHES SCHEDULE FOR
SELECTION
- BAL1 OBSCURED GLASS
BALUSTRADE
- MR METAL ROOF SHEETING

LEGEND

- CL CLOTHES LINE
- DR DRAINAGE PIT WITH
- GD GRATED COVER
- HD HOT WATER UNIT
- LB LETTERBOXES
- MB METER BOX
- RWT RAINWATER TANK
- STD STORMWATER
- TREATMENT DEVICE
- TOW TOP OF WALL

BUILDING 2		630.2m ²
LOT AREA		
ACCOMMODATION SCHEDULE		
BUILDING 2	No.	TYPE AREA
2 BEDROOM	1	A 97m ²
3 BEDROOM	1	B 109m ²
2 BEDROOM	1	C 96m ²
TOTAL		302m ²

NOTE:
EXISTING TREES TO BE
RETAINED UNLESS
SHOWN OTHERWISE



Site plan
SCALE 1 : 200

BUILDING 2 - SITE PLAN

Bromwich Place Residential Development, Menai



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PROJECT No: 13464SYD
DATE: JUN 2014
SCALE: As indicated @ A3
DRAWING No: DD200 K



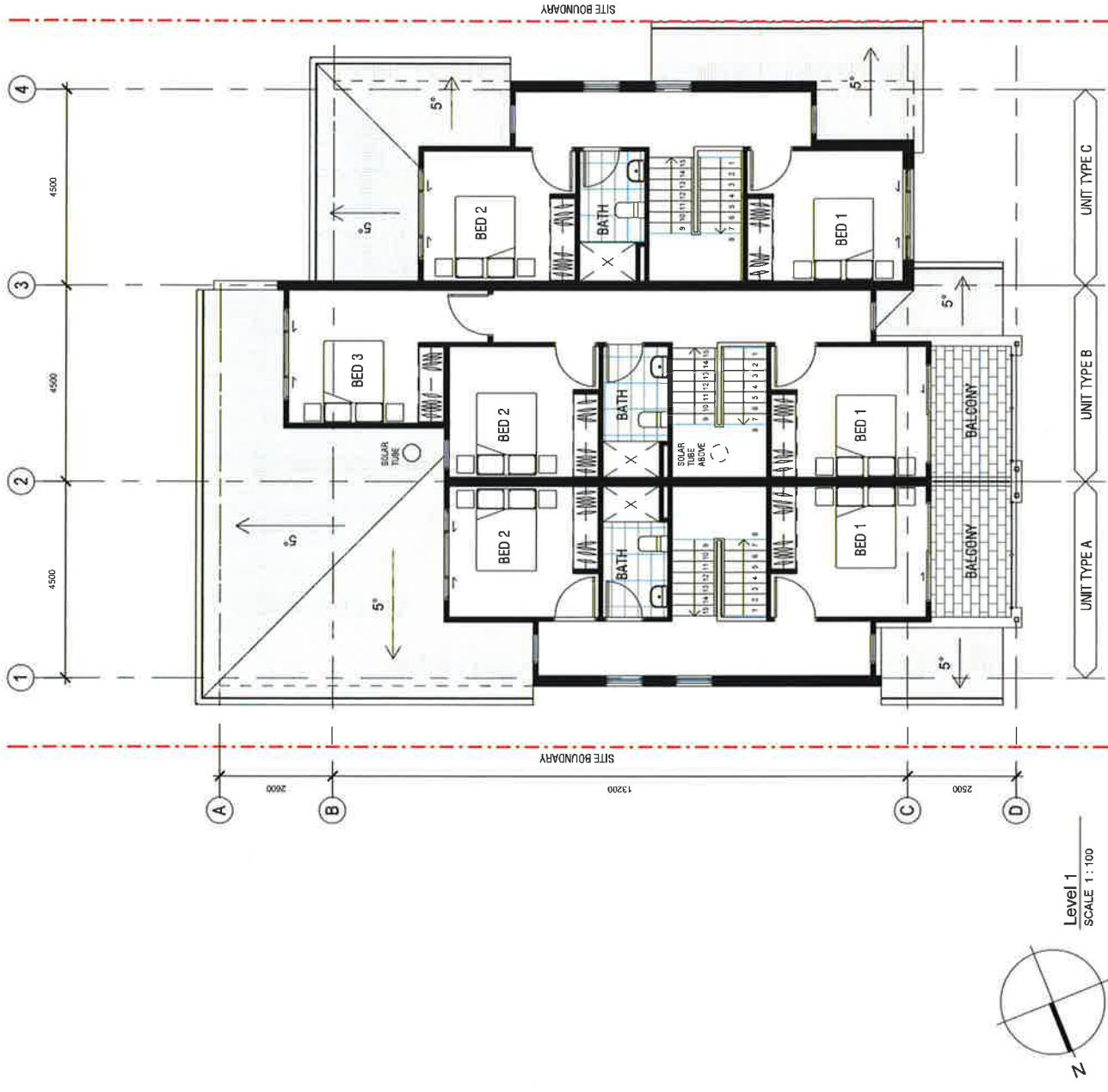
Ground
SCALE 1 : 100

BUILDING 2 - GROUND FLOOR PLAN
Bromwich Place Residential Development, Menai



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PROJECT No: 13443YD
DATE: APR 2014
SCALE: 1 : 100 @ A3
DRAWING No: 00201 J



BUILDING 2 - LEVEL 1 PLAN
Bromwich Place Residential Development, Menai

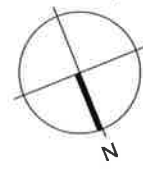
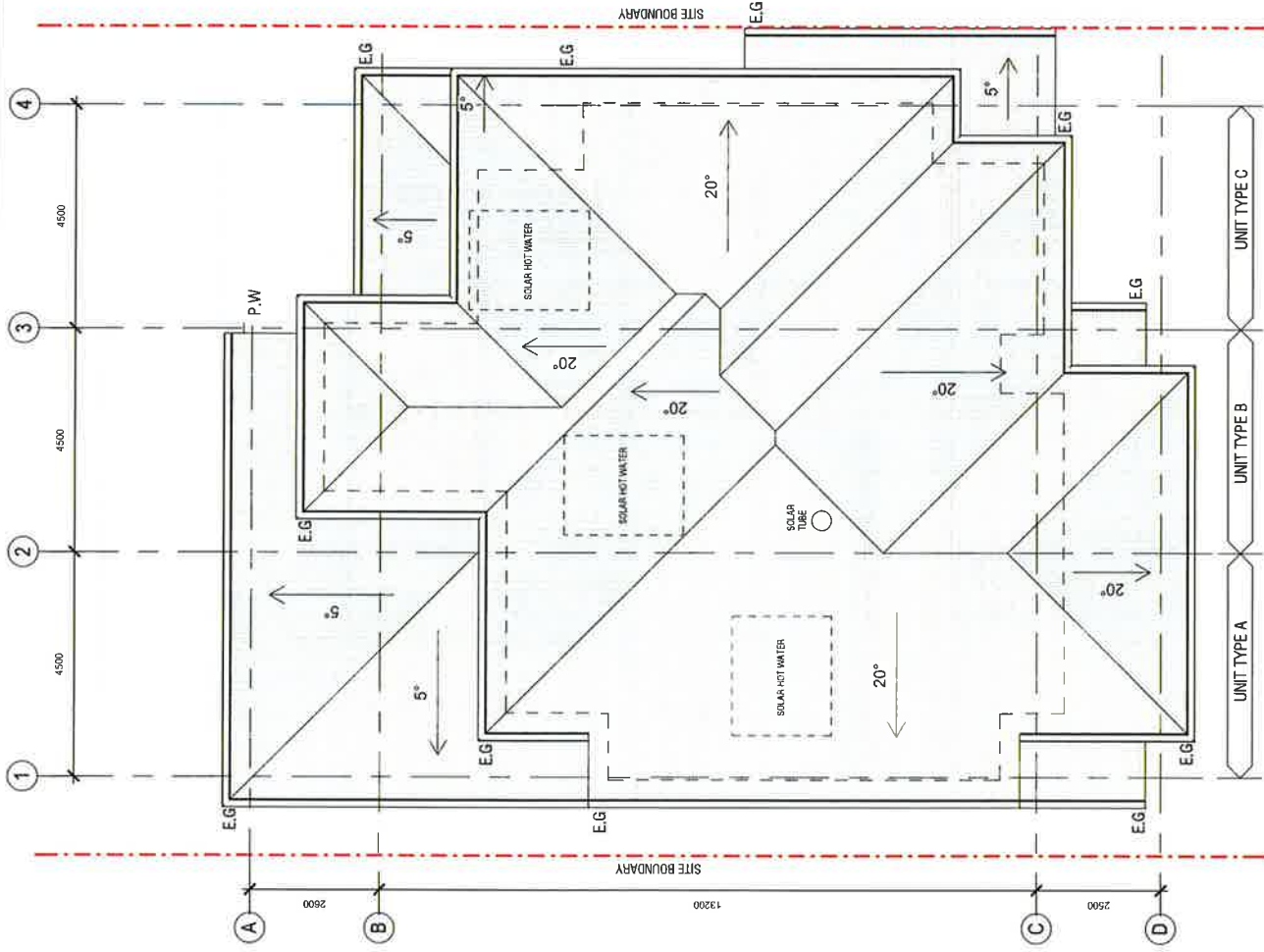


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PROJECT No: 13464SYD
DATE: APR 2014
SCALE: 1: 100@ A3
DRAWING No: D0202 J

LEGEND

EG EAVES GUTTER
PW PARAPET WALL
ST SOLAR TUBE



Roof Plan
SCALE 1 : 100

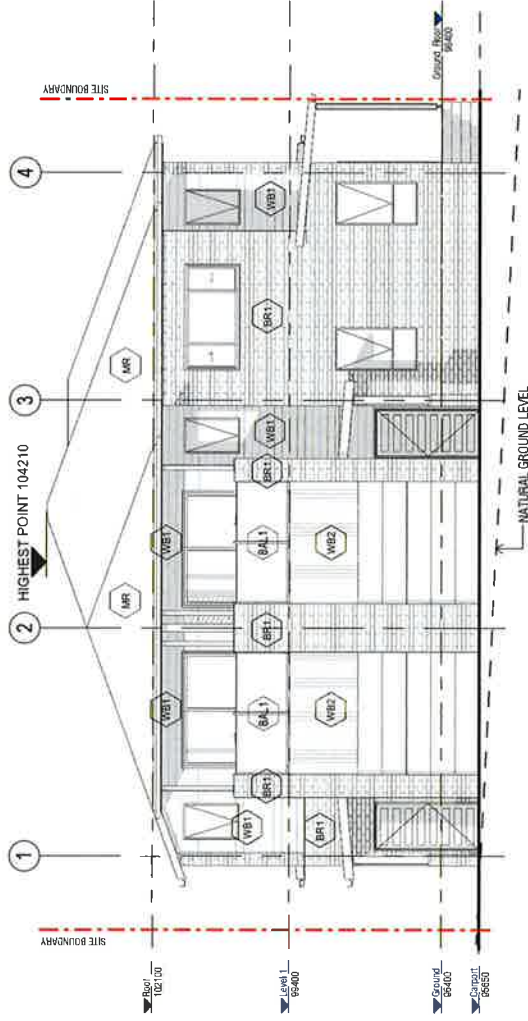


BUILDING 2- ROOF PLAN
Bromwich Place Residential Development, Menai

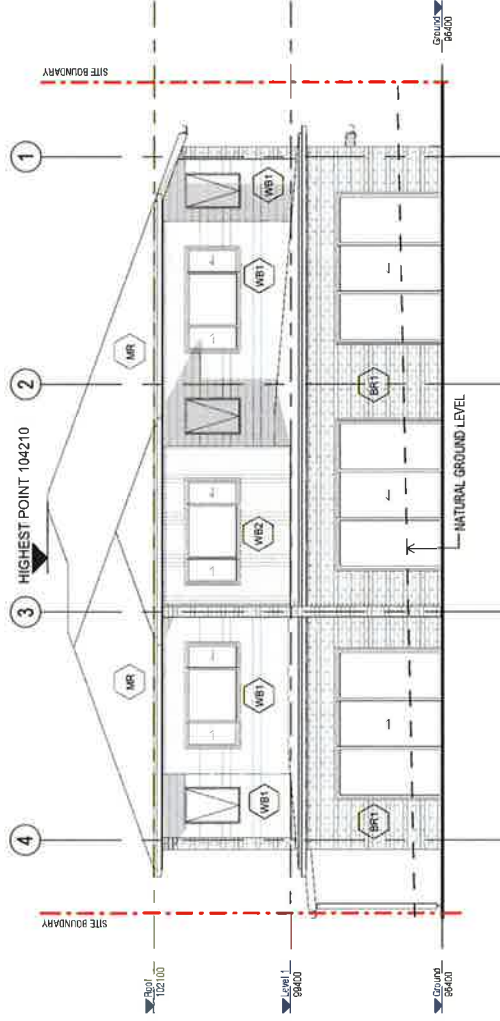
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PROJECT No: 134643YD
DATE: JUN 2014
SCALE: 1 : 100@ A3
DRAWING No: DD203 J



1 West Elevation (Hopman Avenue)
SCALE 1 : 100



2 East Elevation
SCALE 1 : 100

ELEVATION LEGEND - FINISHES

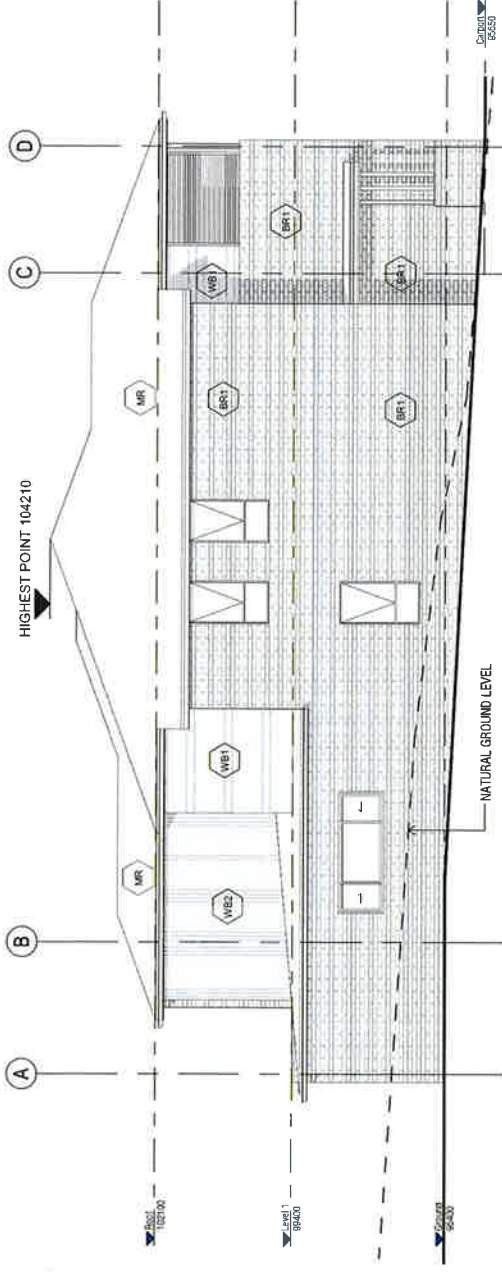
WB1 WEATHERBOARD CLADDING
OR SIMILAR
PAINT FINISH (VARIED)

WB2 WEATHERBOARD CLADDING
OR SIMILAR
PAINT FINISH (VARIED)

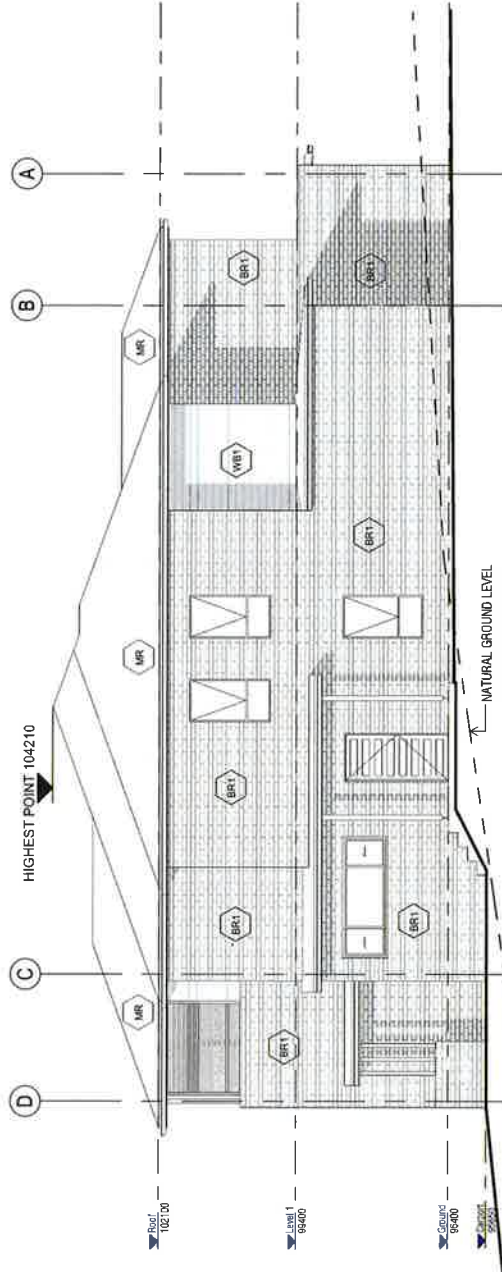
BR1 AUSTRAL BRICKS
URBAN ONE
REFER FINISHES SCHEDULE
FOR SELECTION

BAL1 OBSCURED GLASS
BALUSTRADE

MR METAL ROOF SHEETING



2 North Elevation
SCALE 1:100



1 South Elevation
SCALE 1:100

ELEVATION LEGEND - FINISHES

- WB1 SCYON STRIA 150mm WEATHERBOARD CLADDING OR SIMILAR PAINT FINISH (VARIED)
- WB2 SCYON AXON VERTICAL CLADDING OR SIMILAR PAINT FINISH (VARIED)
- BR1 AUSTRAL BRICKS URBAN ONE REFER FINISHES SCHEDULE FOR SELECTION
- BAL1 OBSCURED GLASS BALUSTRADE
- MR METAL ROOF SHEETING

DA ISSUE

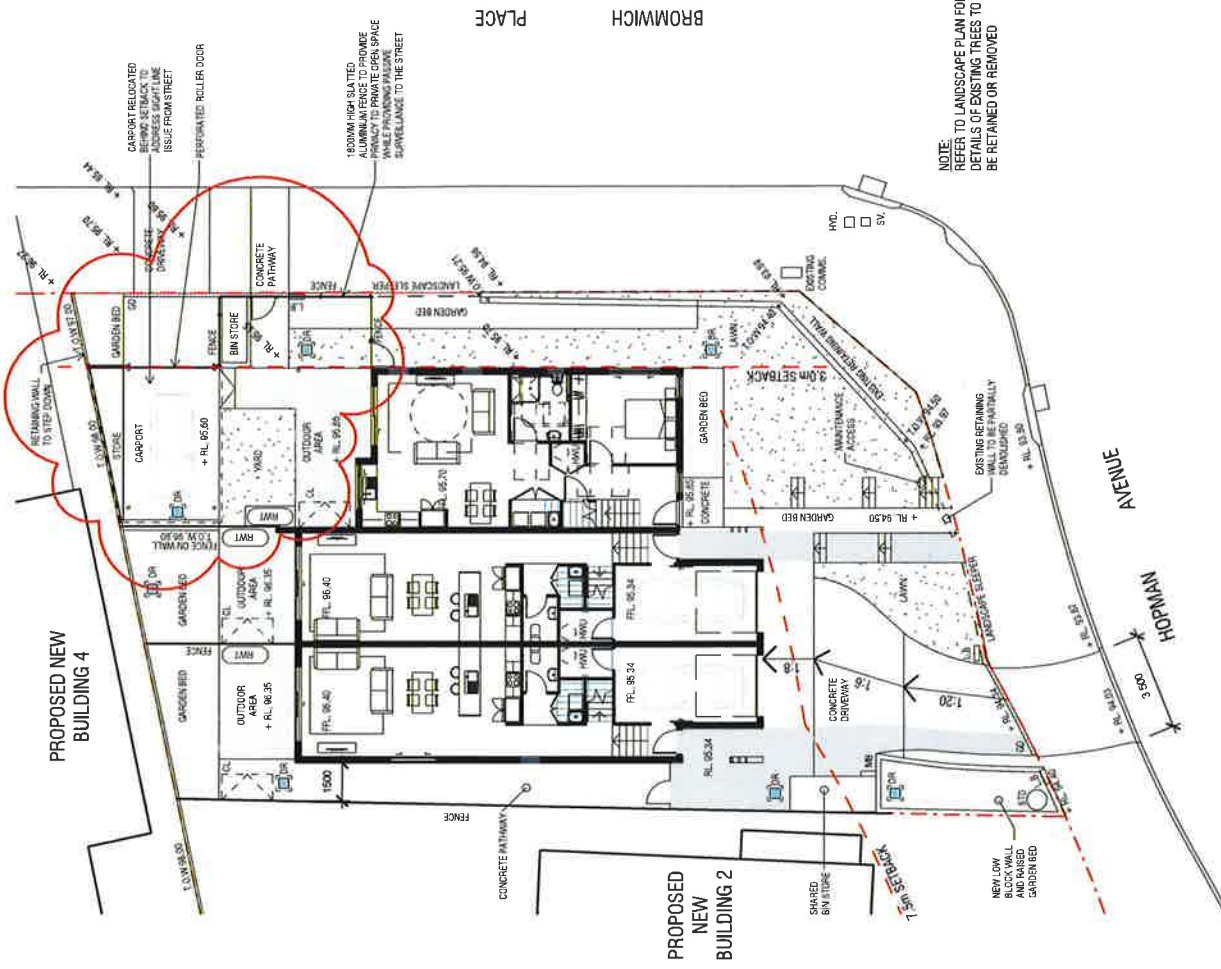
**MODE
DESIGN**

URBAN DESIGN
MASTER PLANNING
ARCHITECTURE
INTERIOR DESIGN
LANDSCAPE ARCH
GRAPHIC DESIGN

LEGEND

- CL CLOTHES LINE
- DR DRAINAGE POINT WITH
- GO GRATED COVER
- HWU HOT WATER UNIT
- LB LETTERBOXES
- MB METER BOX
- RWT RAIN WATER TANK
- STD STORMWATER
- TREATMENT DEVICE
- TOW TOP OF WALL

BUILDING 3			
LOT AREA			670.5m ²
ACCOMMODATION SCHEDULE			
BUILDING 3	No.	TYPE	AREA
3 BEDROOM	1	B	109m ²
3 BEDROOM	1	B	109m ²
3 BEDROOM	1	G	108m ²
TOTAL			325m ²



Site Plan
SCALE 1:200

■ BUILDING 3 - SITE PLAN

Bromwich Place Residential Development, Menai



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PROJECT No: 13463YD
DATE: AUG 2014
SCALE: As Indicated @ A3
DRAWING No: 00300 J

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28/08/2014 8:56:54 AM

DA ISSUE

MODE DESIGN

MANAGE METHOD FORM
URBAN DESIGN
MASTER PLANNING
ARCHITECTURE
INTERIOR DESIGN
LANDSCAPE ARCH
GRAPHIC DESIGN



BUILDING 3 - GROUND FLOOR PLAN
Bromwich Place Residential Development, Menai



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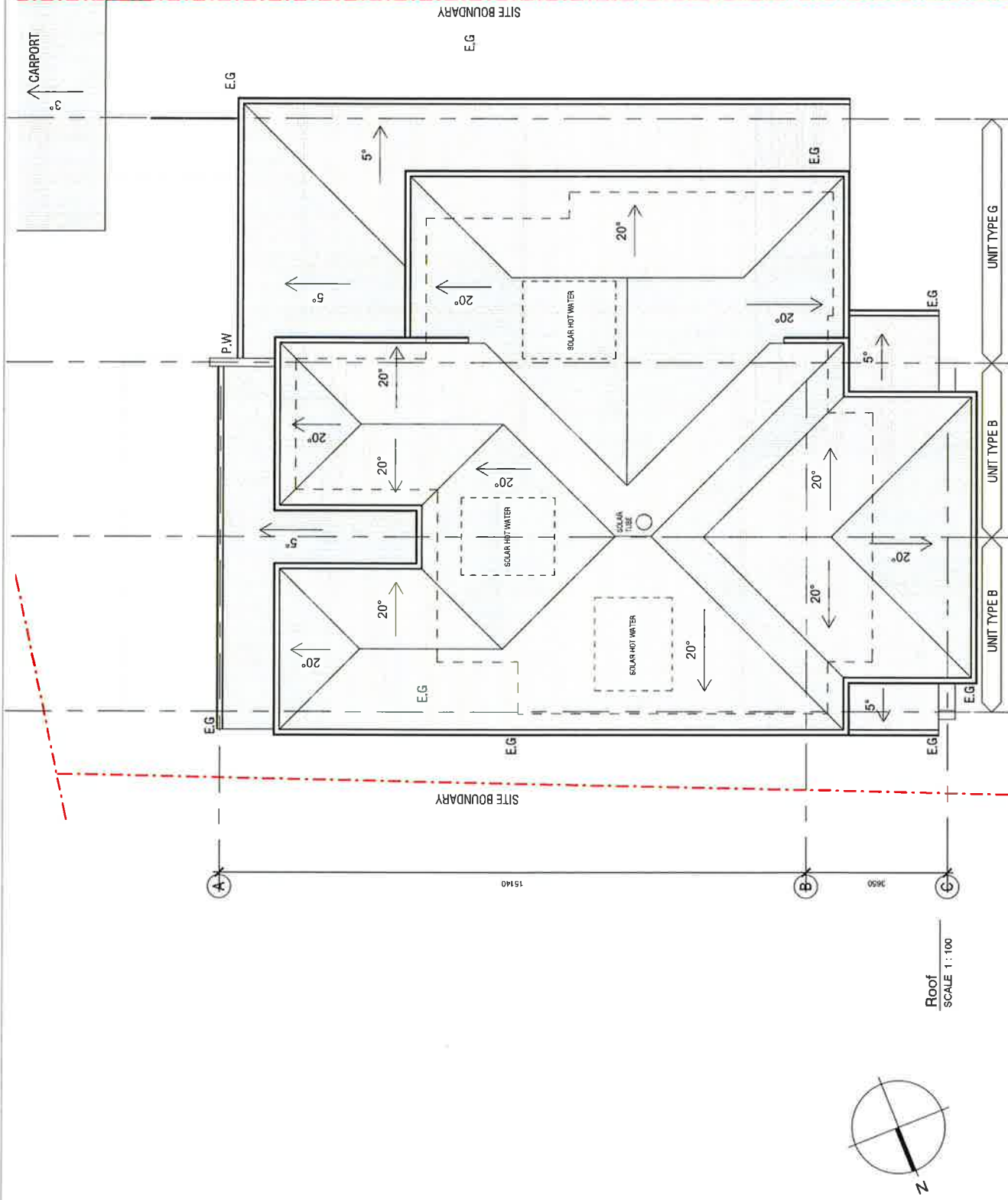
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14/04/2014 4:29:17 PM



LEGEND

EG EAVES GUTTER
PW PARAPET WALL
ST SOLAR TUBE



Roof
SCALE 1 : 100

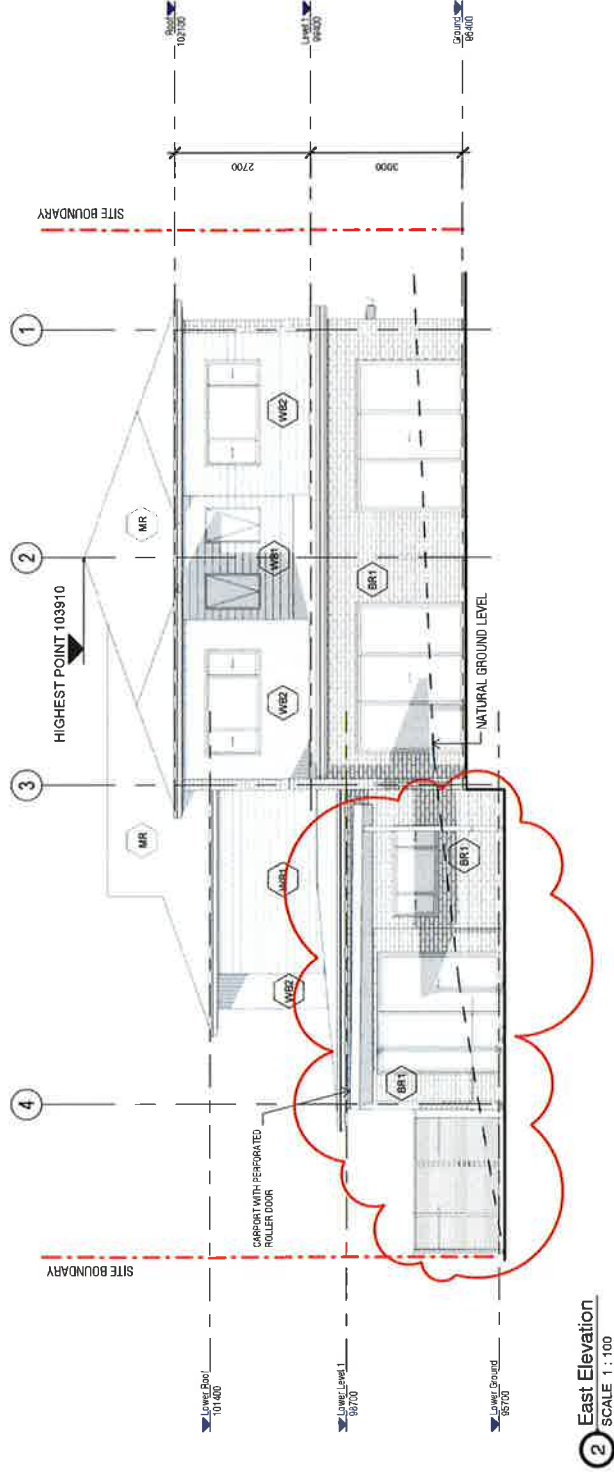
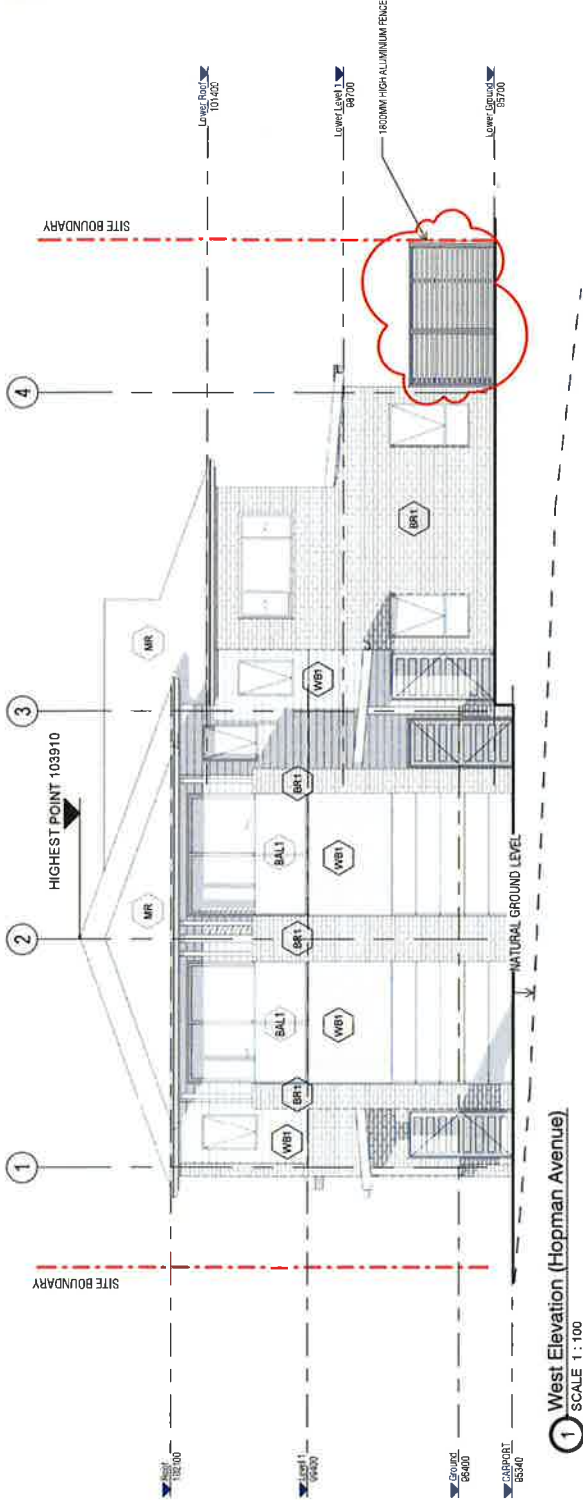
■ BUILDING 3 - ROOF PLAN

Bromwich Place Residential Development, Manai



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Sydney
PROJECT No: 13445TD
DATE: JUN 2014
SCALE: 1 : 100 @ A3
DRAWING No: 00303 J

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ELEVATION LEGEND - FINISHES

- WB1 SCYON STRIA 150mm WEATHERBOARD CLADDING OR SIMILAR PAINT FINISH (VARIED)
- WB2 SCYON AXON VERTICAL CLADDING OR SIMILAR PAINT FINISH (VARIED)
- BR1 AUSTRAL BRICKS URBAN ONE REFER FINISHES SCHEDULE FOR SELECTION
- BAL1 OBSCURED GLASS BALUSTRADE
- MR METAL ROOF SHEETING

BUILDING 3 - ELEVATIONS
Bromwich Place Residential Development, Menai

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PROJECT No: 1344510
DATE: AUG 2014
SCALE: As Indicated @ A3
DRAWING No: DD304 J

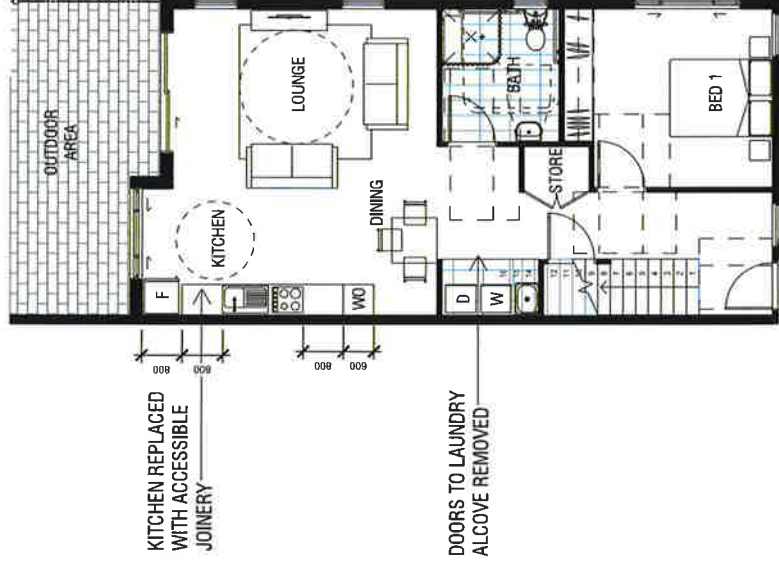


BUILDING 3 - ELEVATIONS
Bromwich Place Residential Development, Menai

Quinn Perth Sunshine Coast Gold Coast Auckland



PRE-ADAPTABILITY UNIT TYPE G

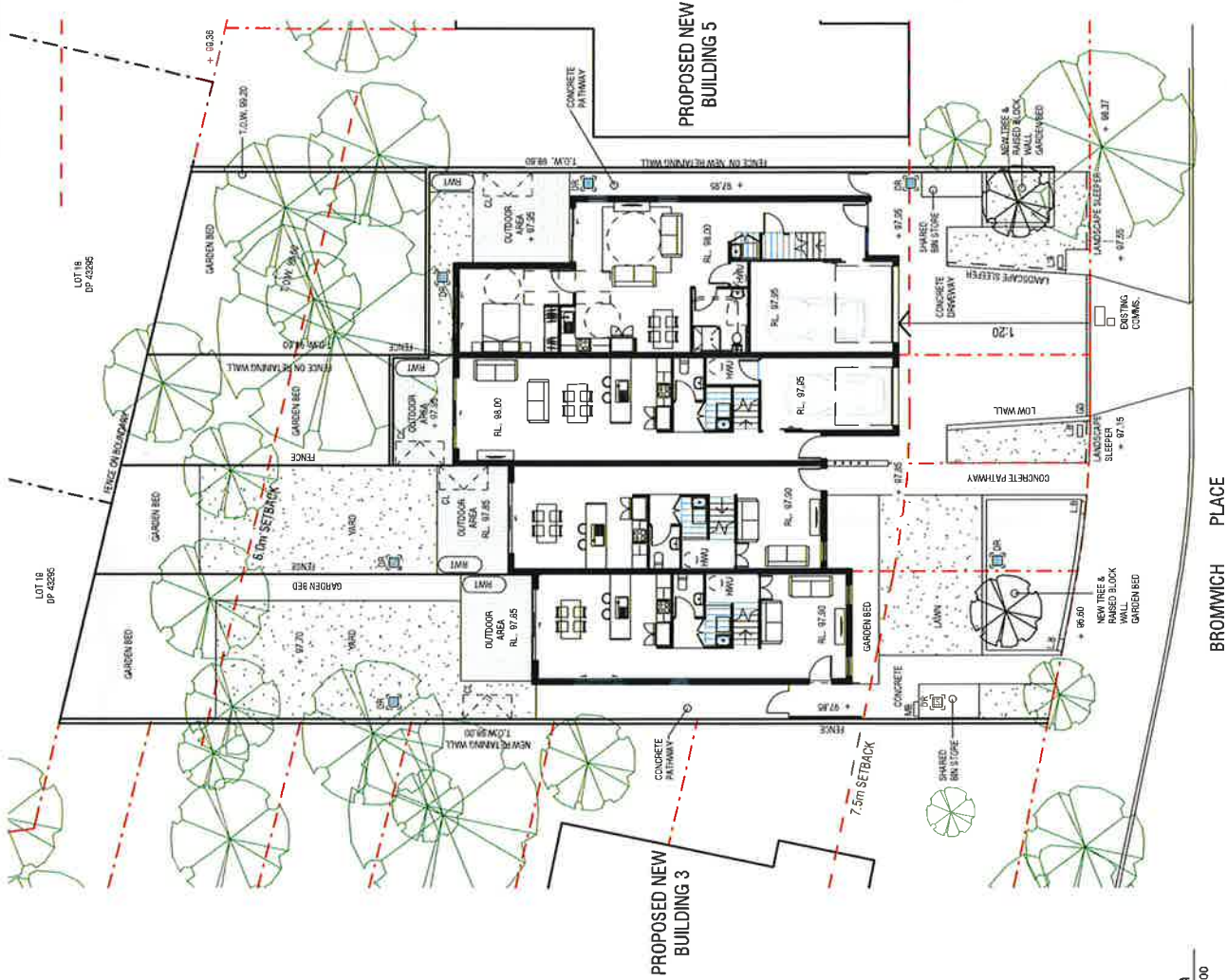


POST-ADAPTABILITY UNIT TYPE G

LEGEND

- CL CLOTHES LINE
- DR DRAINAGE PIT WITH
- GD GRATED COVER
- HWU HOT WATER UNIT
- LB LETTERBOXES
- MB METER BOX
- RWT RAIN WATER TANK
- STD STORMWATER
- TREATMENT DEVICE
- TOW TOP OF WALL

BUILDING 4		
LOT AREA		905.27m ²
ACCOMMODATION SCHEDULE		
BUILDING 4	No.	TYPE AREA
2 BEDROOM	1	C 96m ²
2 BEDROOM	1	C 96m ²
2 BEDROOM	1	A 97m ²
2 BEDROOM	1	D 96m ²
TOTAL		387m ²



Site Plan
SCALE 1:200

BUILDING 4 - SITE PLAN

Bromwich Place Residential Development, Menai



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PROJECT No: 134431D
DATE: APR 2014
SCALE: As Indicated @ A3
DRAWING No: 00400 D



Ground
SCALE 1:100

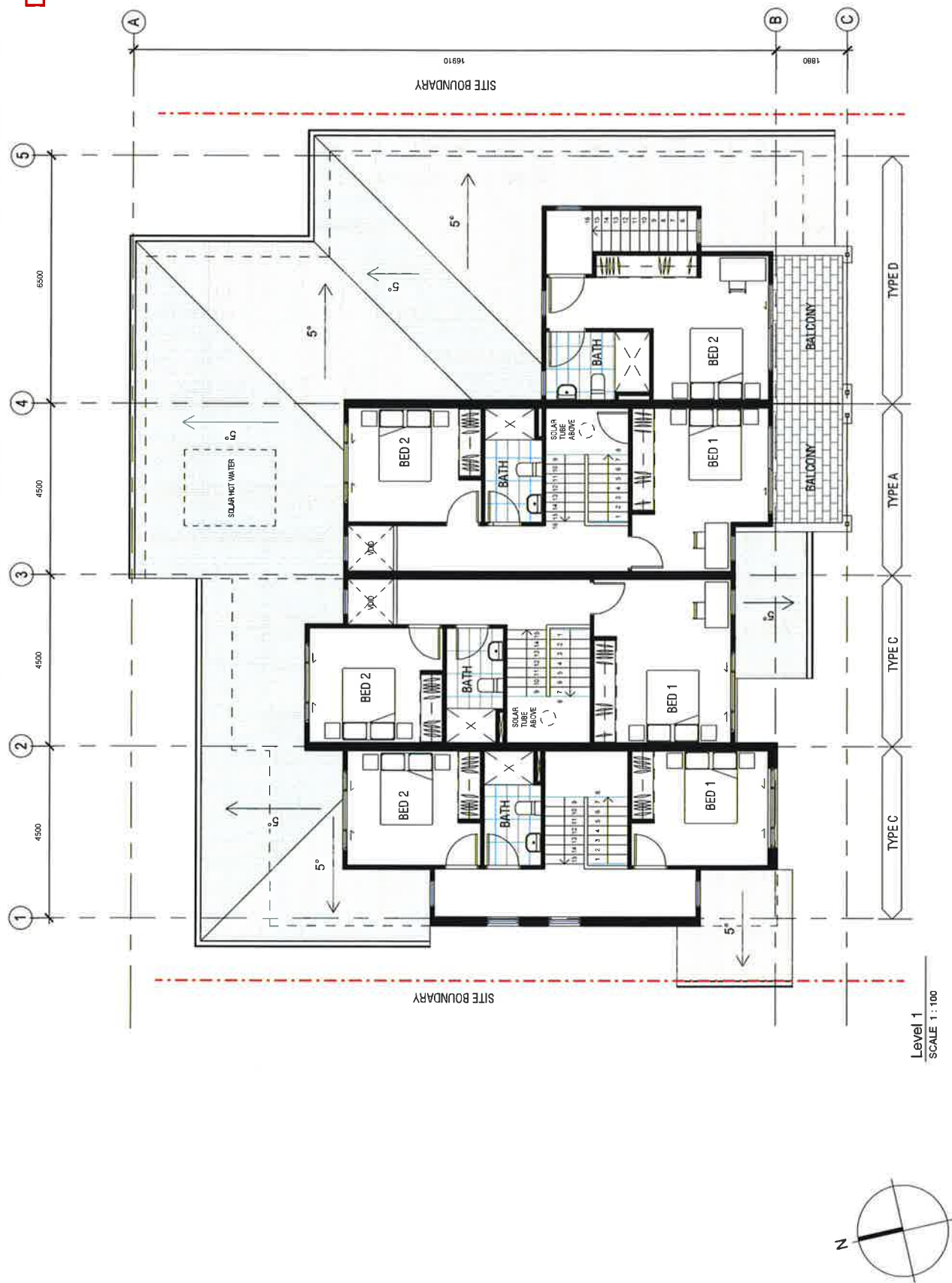
BUILDING 4 - GROUND FLOOR PLAN
Bromwich Place Residential Development, Menai

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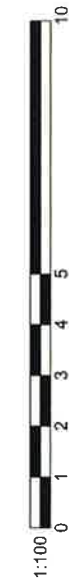
1:100
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PROJECT No: 1344310
DATE: APR 2014
SCALE: 1:100 @ A3
DRAWING No: DD401 D



BUILDING 4 - LEVEL 1 PLAN

Bromwich Place Residential Development, Menai



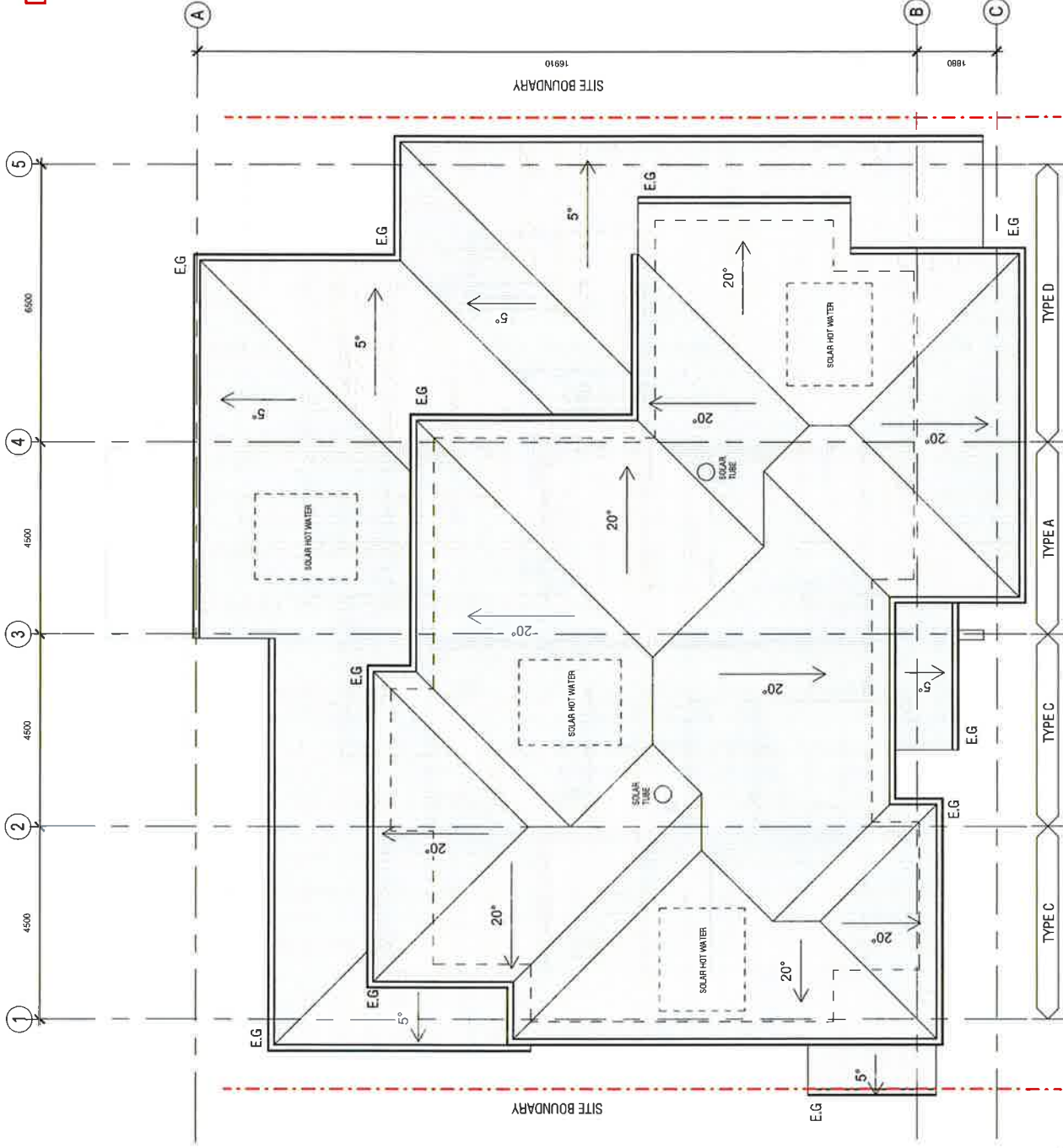
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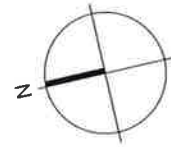
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LEGEND

EG EAVES GUTTER
PW PARAPET WALL
ST SOLAR TUBE



Roof Plan
SCALE 1:100

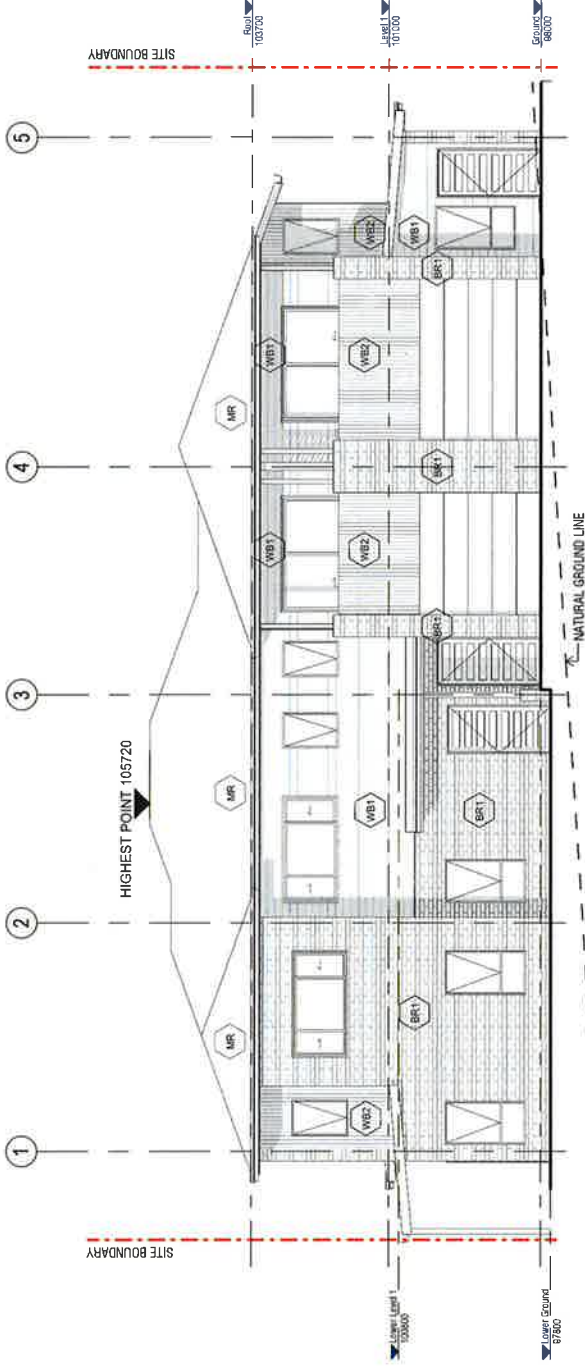


BUILDING 4 - ROOF PLAN
Bromwich Place Residential Development, Menai

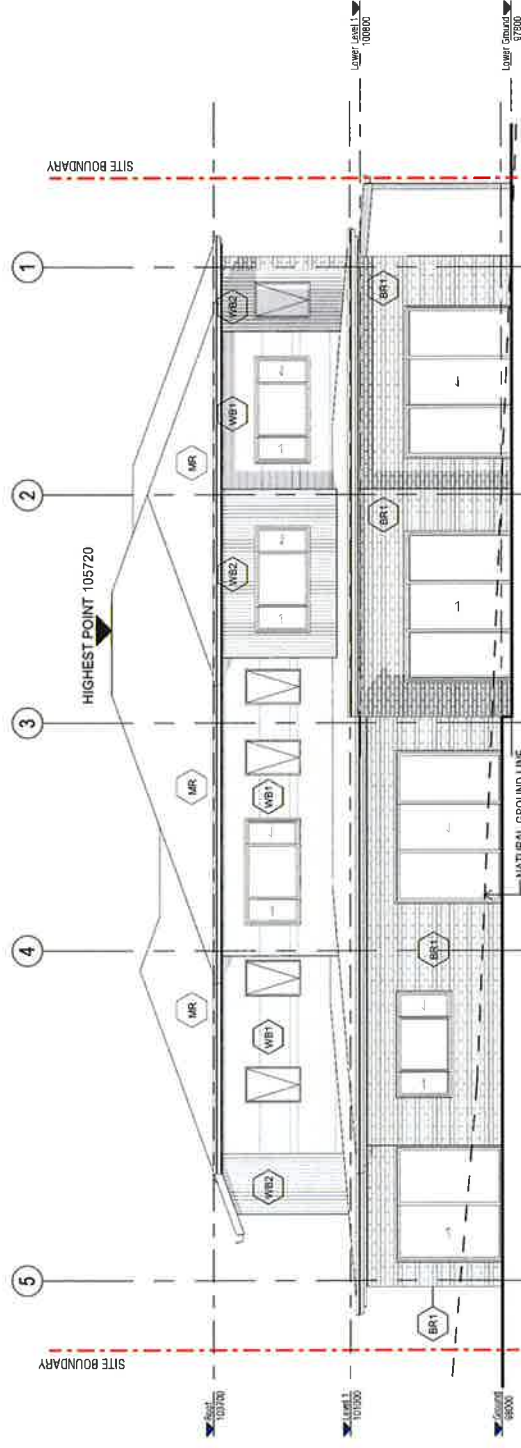


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PROJECT No: 13444SYD
DATE: JUN 2014
SCALE: 1:100 @ A3
DRAWING No: 00403 0



1 South Elevation (Bromwich Place)
SCALE 1 : 100



2 North Elevation
SCALE 1 : 100

ELEVATION LEGEND - FINISHES

- WB1 SCYON STRIA 150mm WEATHERBOARD CLADDING OR SIMILAR PAINT FINISH (VARIED)
- WB2 SCYON AXON VERTICAL CLADDING OR SIMILAR PAINT FINISH (VARIED)
- BR1 AUSTRAL BRICKS URBAN ONE REFER FINISHES SCHEDULE FOR SELECTION
- MR METAL ROOF SHEETING

BUILDING 4 - ELEVATIONS

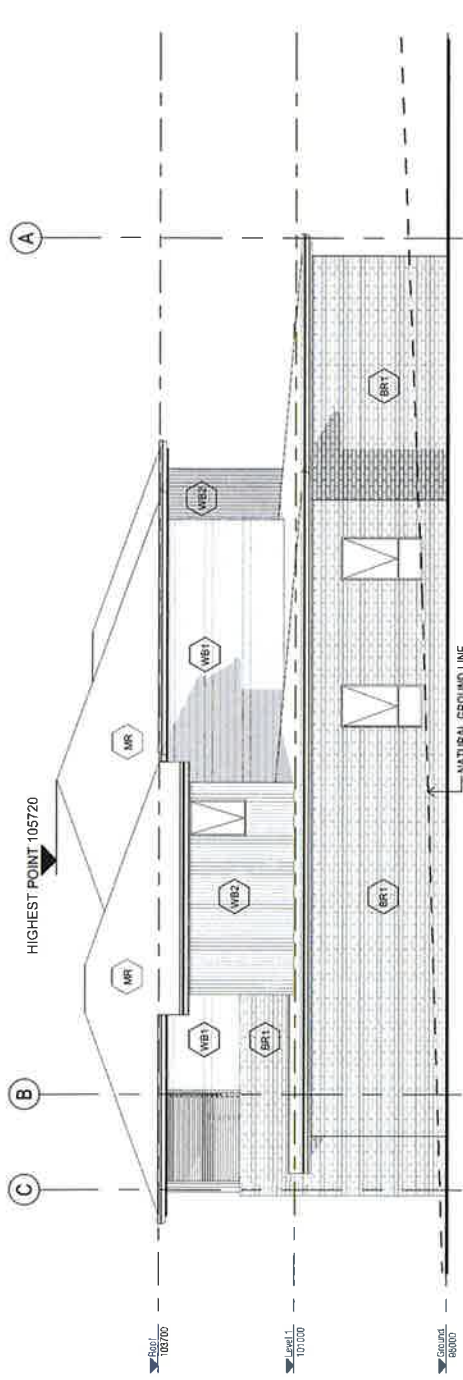
Bromwich Place Residential Development, Menai

Sydney

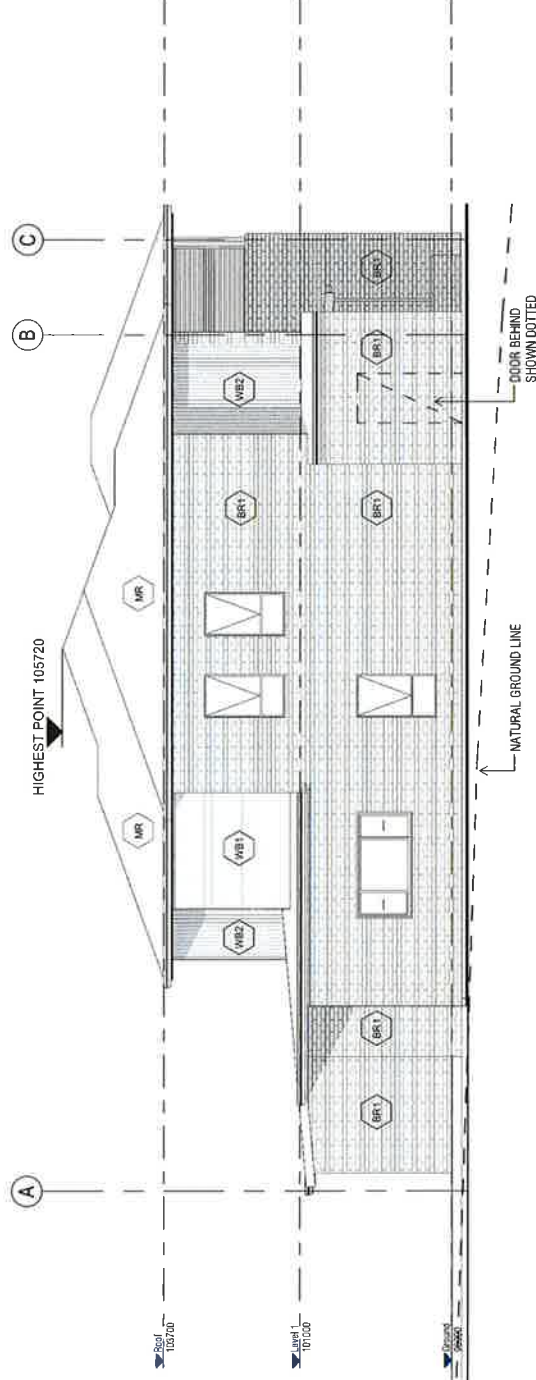
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PROJECT No: 134451D
DATE: JUN 2014
SCALE: As Indicated @ A3
DRAWING No: 00404 D



1 East Elevation
SCALE 1 : 100



2 West Elevation
SCALE 1 : 100

ELEVATION LEGEND - FINISHES

- WB1 SCYON STRIA 150mm WEATHERBOARD CLADDING OR SIMILAR PAINT FINISH (VARIED)
- WB2 SCYON AXON VERTICAL CLADDING OR SIMILAR PAINT FINISH (VARIED)
- BR1 AUSTRAL BRICKS URBAN ONE REFER FINISHES SCHEDULE FOR SELECTION
- MR METAL ROOF SHEETING

BUILDING 4 - ELEVATIONS

Bromwich Place Residential Development, Menai

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PROJECT No: 13454SYD
DATE: JUN 2014
SCALE: As Indicated @ A3
DRAWING No: DD005 D



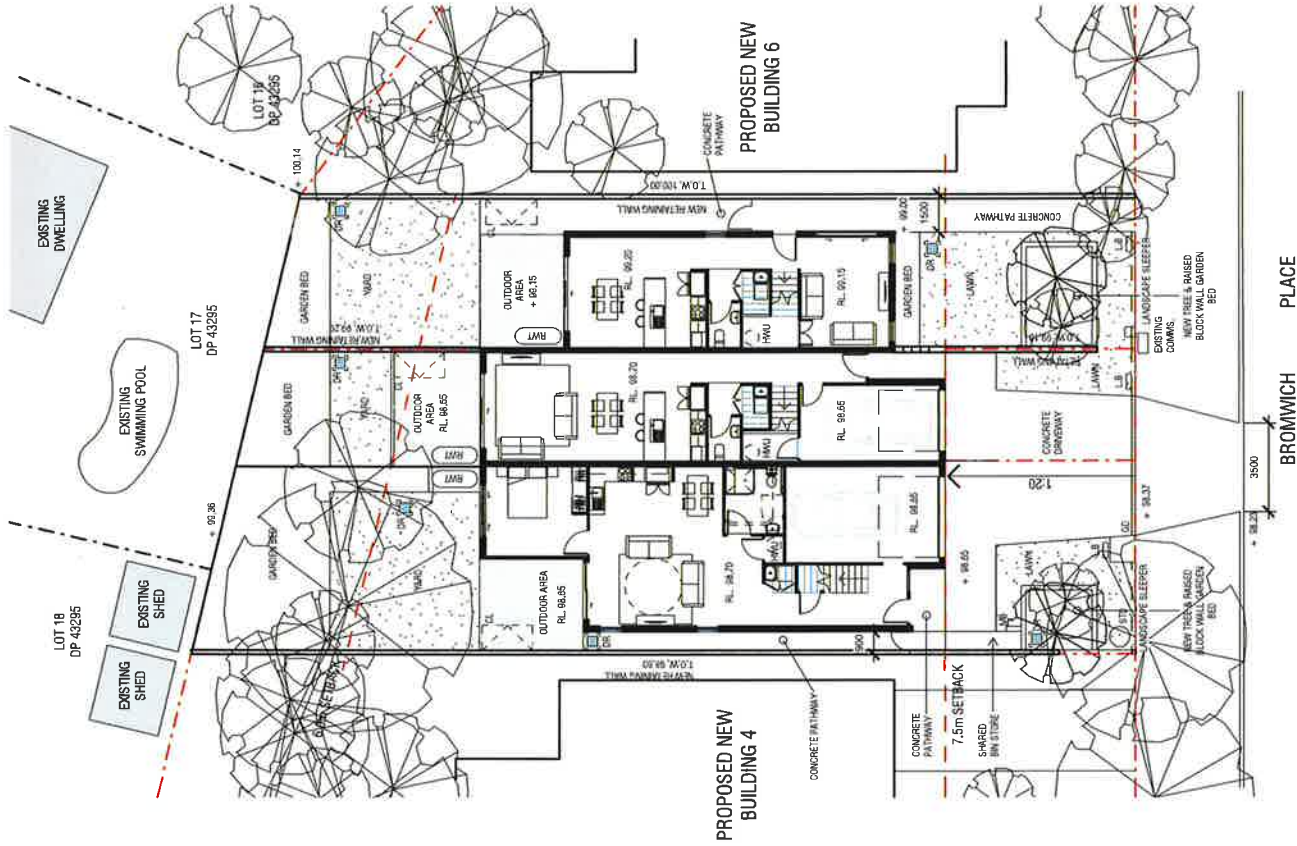
PRE-ADAPTABLE UNIT TYPE D

POST-ADAPTABLE UNIT TYPE D

LEGEND

- CL CLOTHES LINE
- DR DRAINAGE PIT WITH
- GD GRATED DRAIN
- HWJ HOT WATER UNIT
- LB LETTERBOXES
- MB METER BOX
- RWF RAIN WATER TANK
- STD STORMWATER
- TREATMENT DEVICE
- TOW TOP OF WALL

BUILDING 5	LOT AREA	639.4m ²
ACCOMMODATION SCHEDULE		
BUILDING 5	No.	TYPE AREA
2 BEDROOM	1	D 110m ²
2 BEDROOM	1	B 96m ²
2 BEDROOM	1	C 96m ²
TOTAL		302m ²



Site Plan
SCALE 1 : 200

BUILDING 5 - SITE PLAN
Bromwich Place Residential Development, Menai



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PROJECT No: 1346431D
DATE: APR 2014
SCALE: As indicated @ A3
DRAWING No: DD500 K



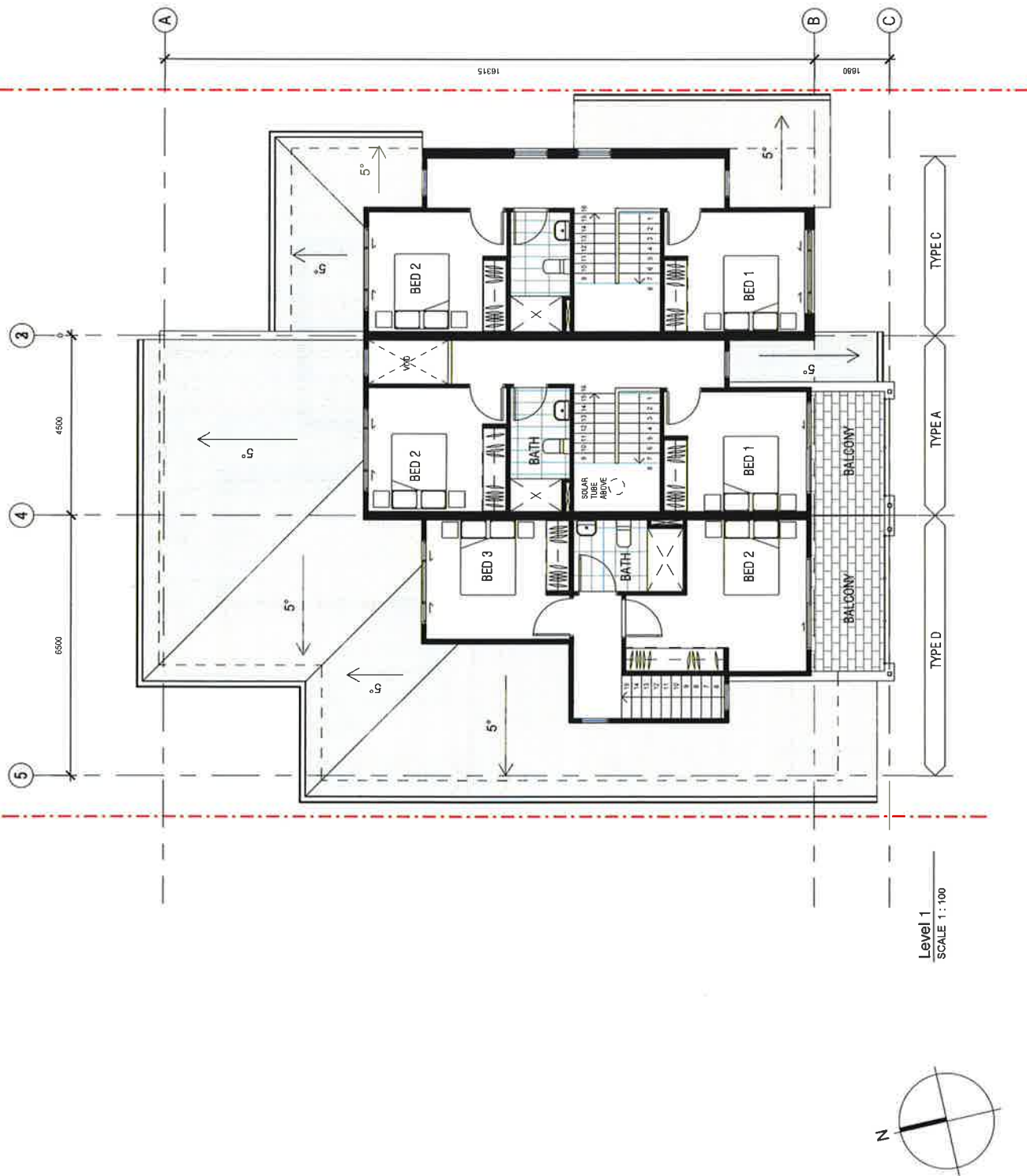
BUILDING 5 - GROUND FLOOR PLAN
Bromwich Place Residential Development, Menai



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BUILDING 5 - LEVEL 1 PLAN
Bromwich Place Residential Development, Menai

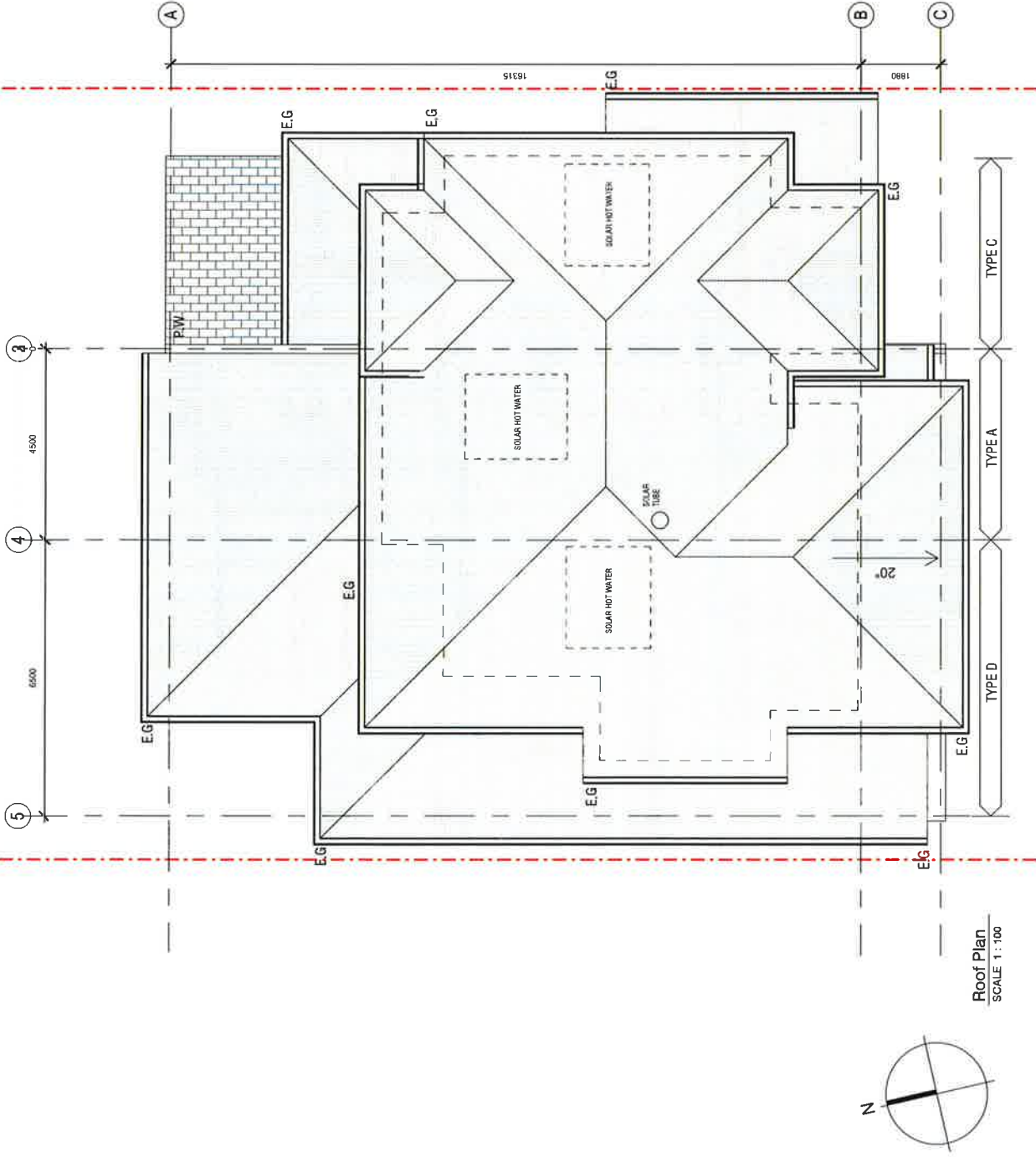


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PROJECT No: 13464SYD
DATE: APR 2014
SCALE: 1:100 @ A3
DRAWING No: DD502 K

LEGEND

EG	EAVES GUTTER
SH	SUNHOOD
PW	PARAPET WALL
ST	SOLAR TUBE



Roof Plan
SCALE 1 : 100

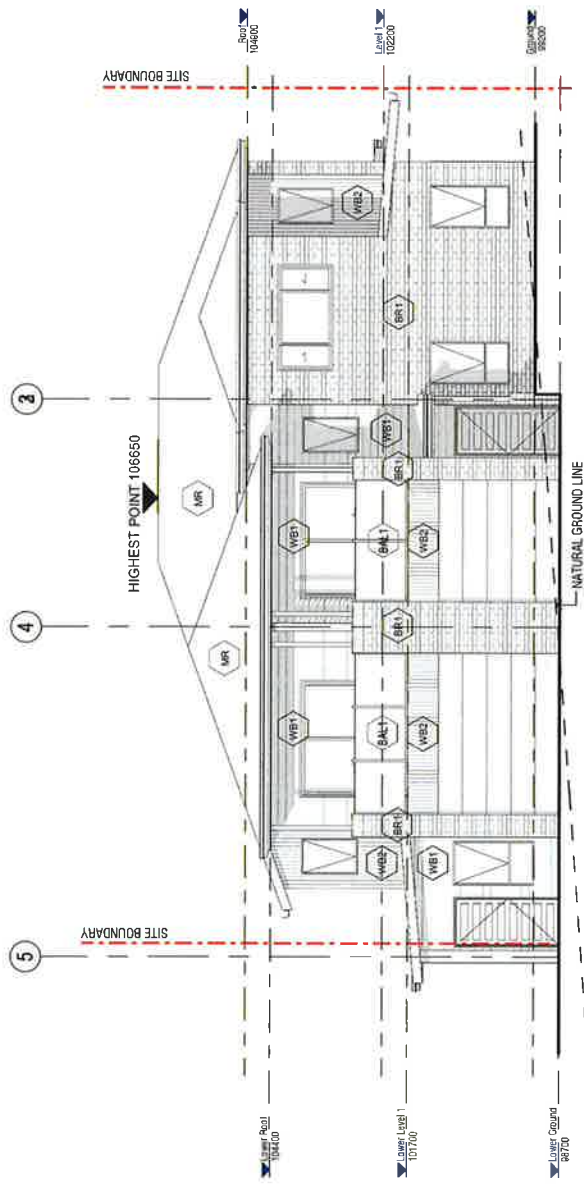
BUILDING 5 - ROOF PLAN
Bromwich Place Residential Development, Menai

1:100

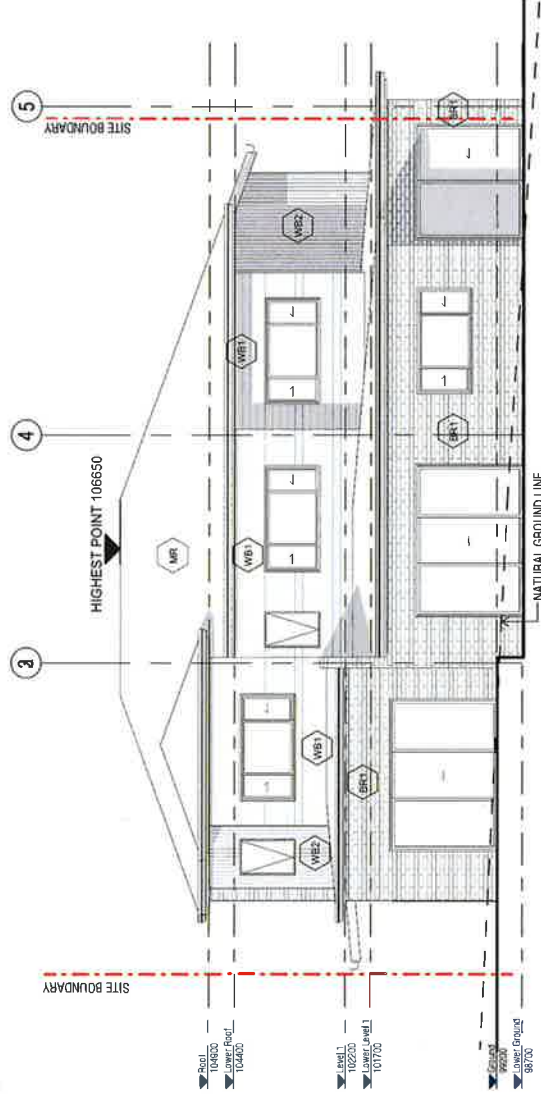


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PROJECT No: 134451D
DATE: JUN 2014
SCALE: 1 : 100@ A3
DRAWING No: 00503 J



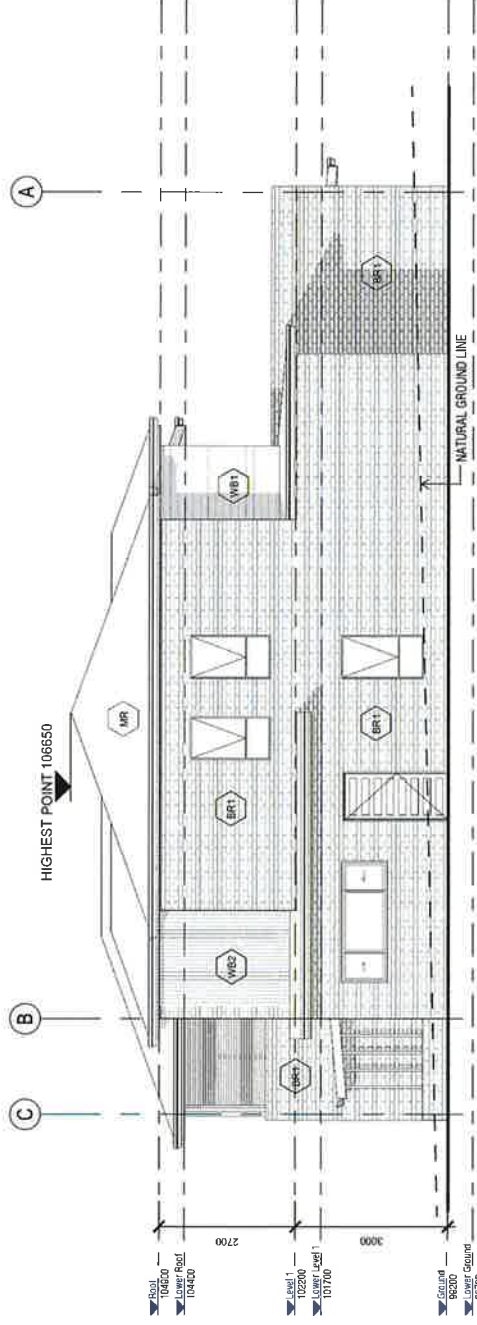
1 South Elevation (Bromwich Place)
SCALE 1 : 100



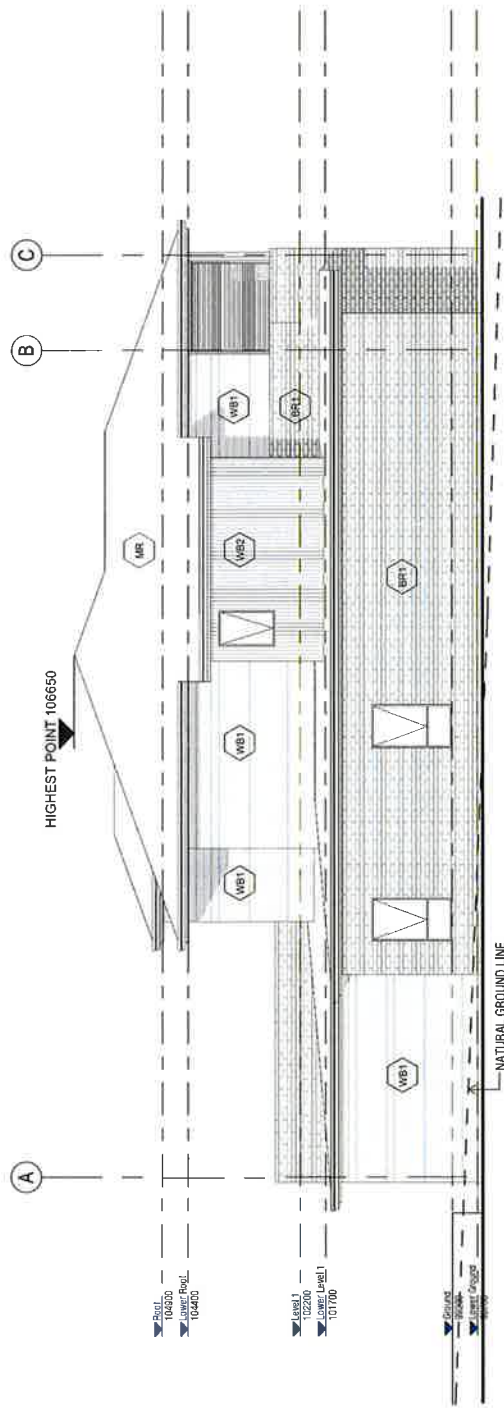
2 North Elevation
SCALE 1 : 100

ELEVATION LEGEND - FINISHES

- WB1 SCYON STRIA 150mm
WEATHERBOARD CLADDING
OR SIMILAR
PAINT FINISH (VARIED)
- WB2 SCYON AXON
VERTICAL CLADDING
OR SIMILAR
PAINT FINISH (VARIED)
- BR1 AUSTRAL BRICKS
URBAN ONE
REFER FINISHES SCHEDULE FOR
SELECTION
- BAL1 OBTAINED GLASS
BALUSTRADE
- MR METAL ROOF SHEETING



1 East Elevation
SCALE 1:100



2 West Elevation
SCALE 1:100

ELEVATION LEGEND - FINISHES

- WB1 SCYON STRIA 150mm
WEATHERBOARD CLADDING
OR SIMILAR
- WB2 SCYON AXON
VERTICAL CLADDING
OR SIMILAR
- BR1 AUSTRAL BRICKS
URBAN ONE
REFER FINISHES SCHEDULE FOR
SELECTION
- SAL1 OBTAINED GLASS
BALUSTRADE
- MR METAL ROOF SHEETING

BUILDING 5 - ELEVATIONS

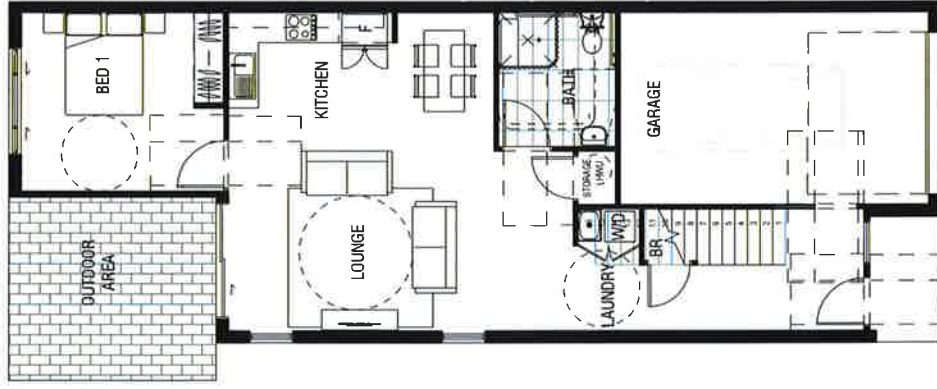
Bromwich Place Residential Development, Menai

Sydney

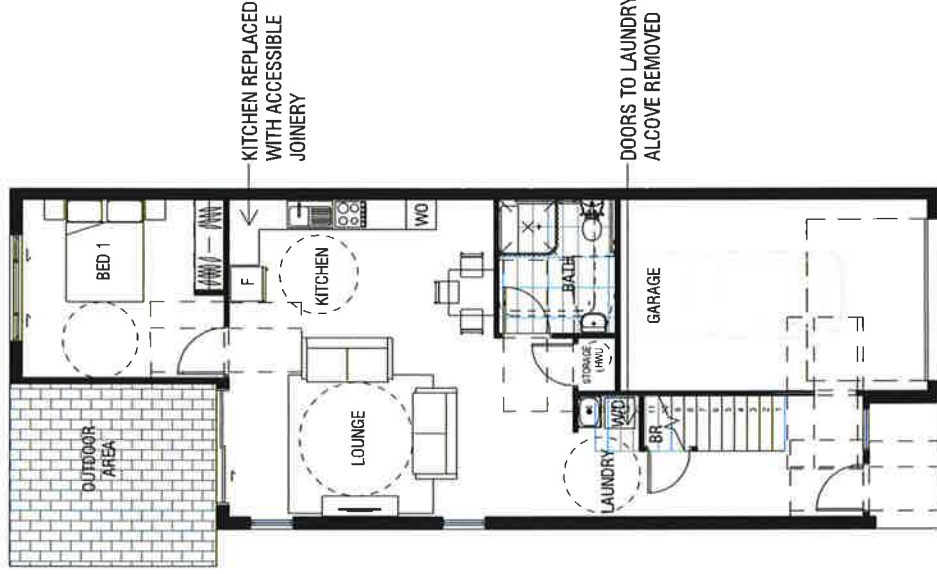
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PROJECT No: 134431D
DATE: JUN 2014
SCALE: As indicated @ A3
DRAWING No: 00505 J





PRE-ADAPTABLE UNIT TYPE D



POST-ADAPTABLE UNIT TYPE D

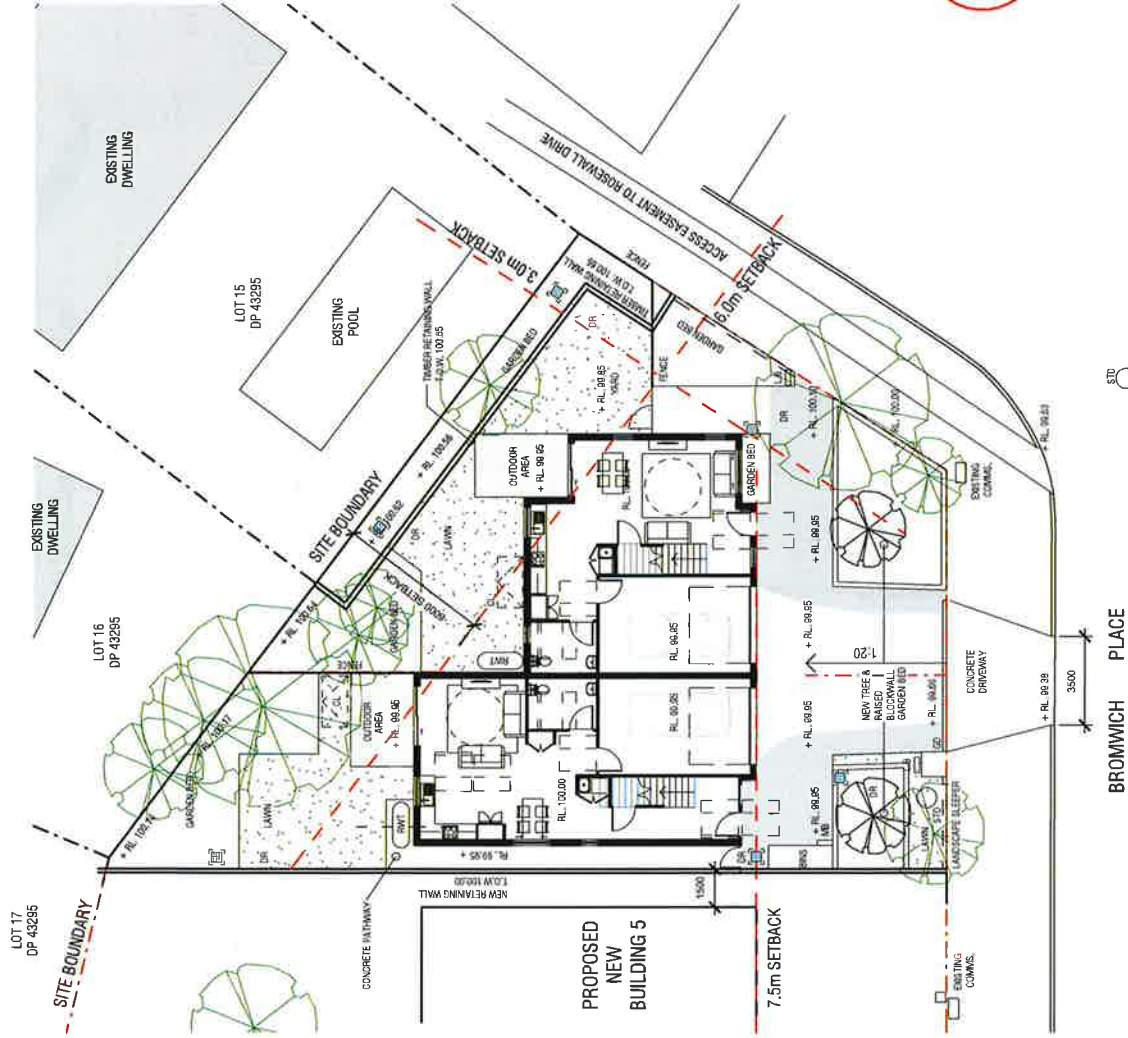
LEGEND

- CL CLOTHES LINE
- DR DRAINAGE PIT WITH GRATED COVER
- GD GRATED DRAIN
- HWU HOT WATER UNIT
- LB LETTERBOXES
- MB METER BOX
- RWT RAIN WATER TANK
- STD STORMWATER TREATMENT DEVICE
- TOW TOP OF WALL

BUILDING 6	
LOT AREA	532.8m ²
ACCOMMODATION SCHEDULE	
BUILDING 6	No. TYPE AREA
3 BEDROOM	1 E 122m ²
2 BEDROOM	1 F 103m ²
TOTAL	225m ²

REVISION NOTES

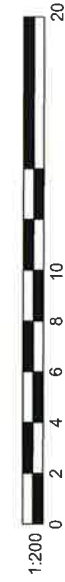
- FRONT & SIDE SETBACKS REVISED
- ACCESSIBLE BEDROOM RELOCATED TO FIRST FLOOR
- STAIRCASE WIDENED TO ALLOW FOR FUTURE PLATFORM LIFT AND CIRCULATION
- REDUCTION IN NUMBER OF BEDROOMS



Site Plan
SCALE 1 : 200

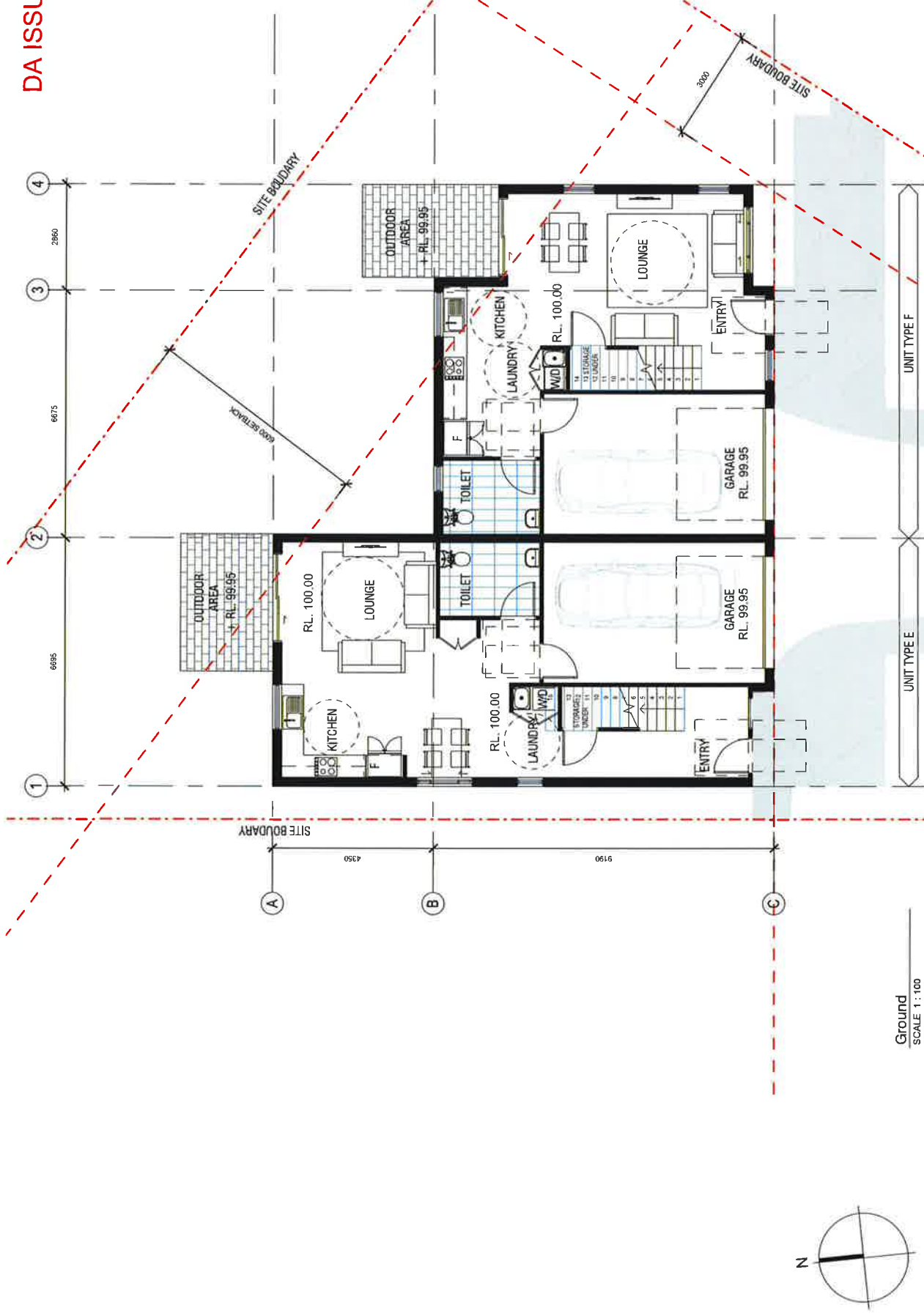


BUILDING 6 - SITE PLAN
Bromwich Place Residential Development, Menai



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PROJECT No: 134451D
DATE: AUG 2014
SCALE: As indicated @ A3
DRAWING No: 00000 L



Ground
SCALE 1 : 100



BUILDING 6 - GROUND FLOOR PLAN
Bromwich Place Residential Development, Menai

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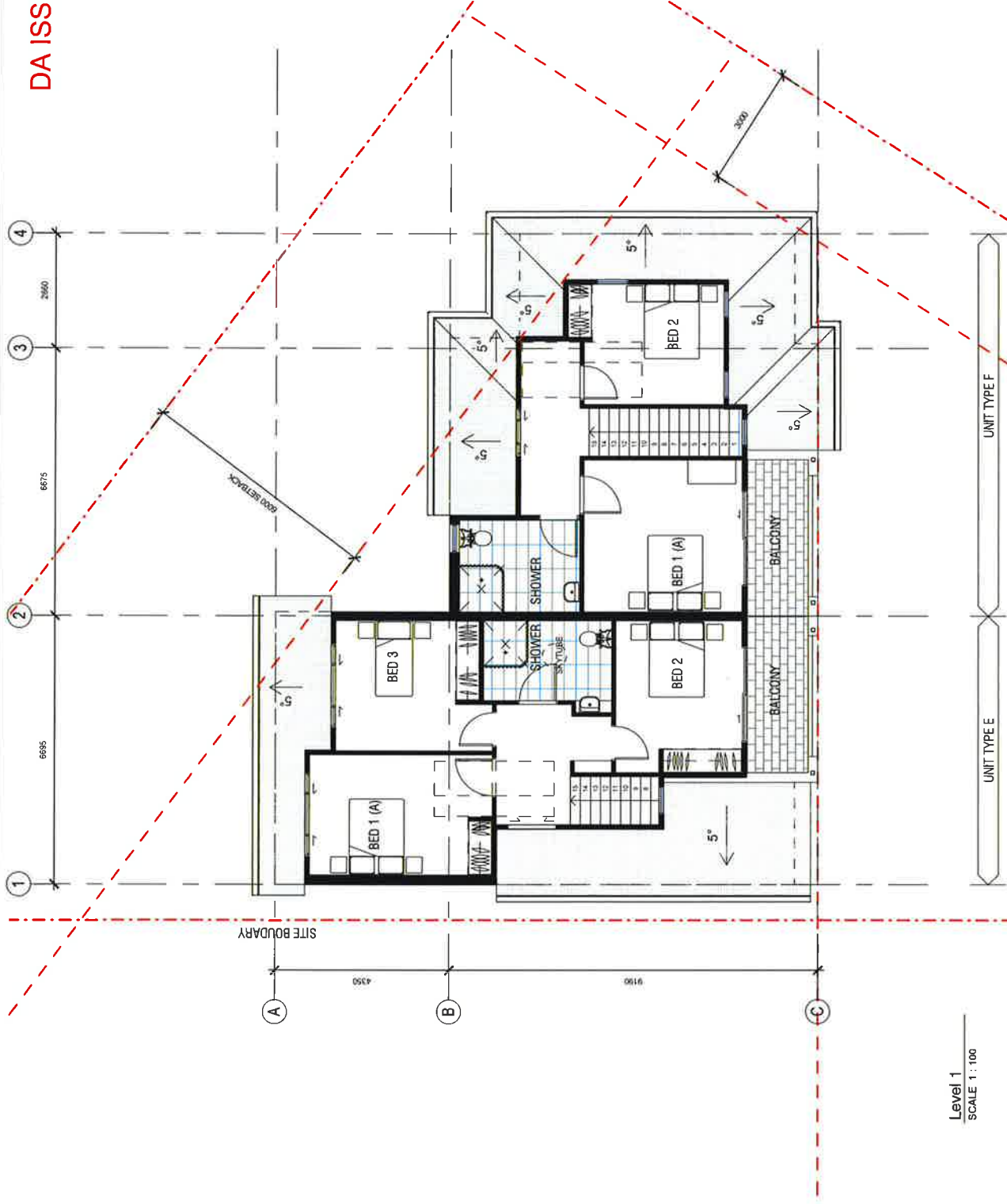
PROJECT No: 13444SYD
DATE: AUG 2014
SCALE: 1 : 100 @ A3
DRAWING No: 00001 L

DA ISSUE

**MODE
DESIGN**

MANAGER METHOD FORM

URBAN DESIGN
MASTER PLANNING
ARCHITECTURE
INTERIOR DESIGN
LANDSCAPE ARCH
GRAPHIC DESIGN



BUILDING 6 - FIRST FLOOR PLAN
Bromwich Place Residential Development, Menai

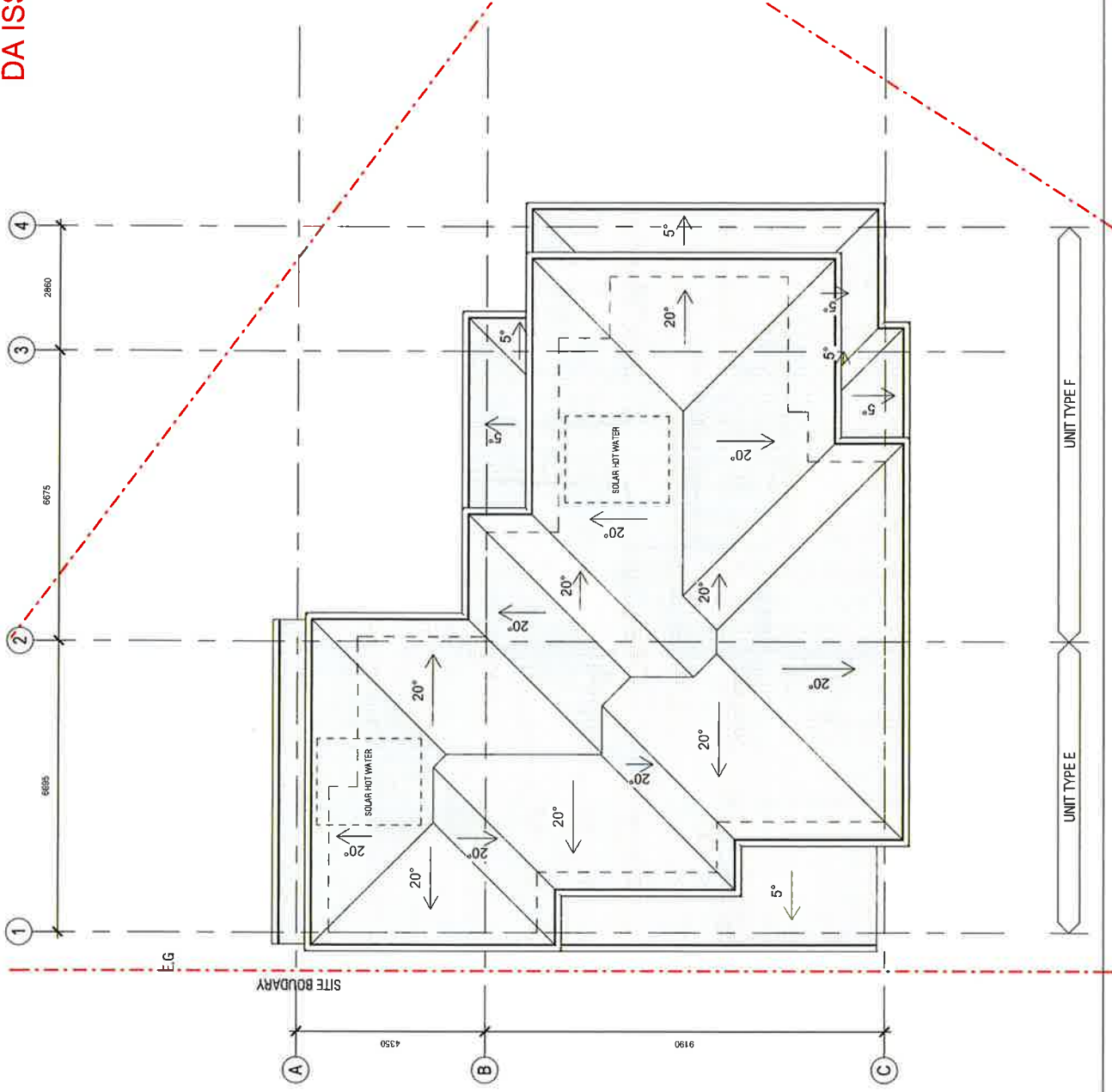


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PROJECT No: 13445YD
DATE: AUG 2014
SCALE: 1:100 @ A3
DRAWING No: 00602 L

LEGEND

EG EAVES GUTTER
SH SUNHOOD
PW PARAPET WALL



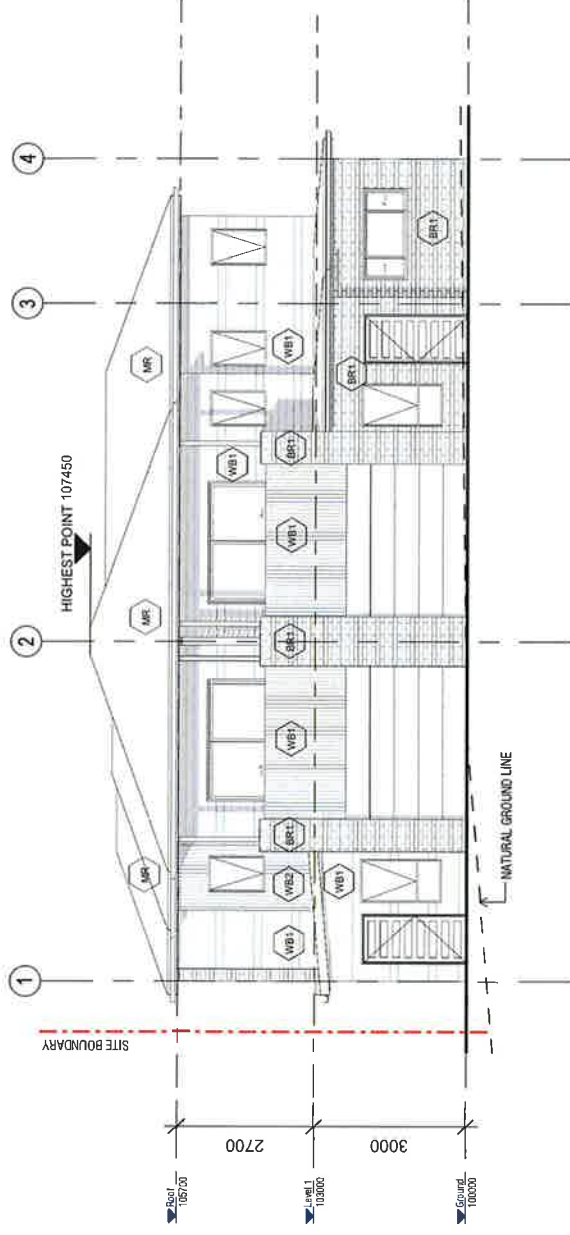
Roof
SCALE 1 : 100

BUILDING 6 - ROOF PLAN
Bromwich Place Residential Development, Menai

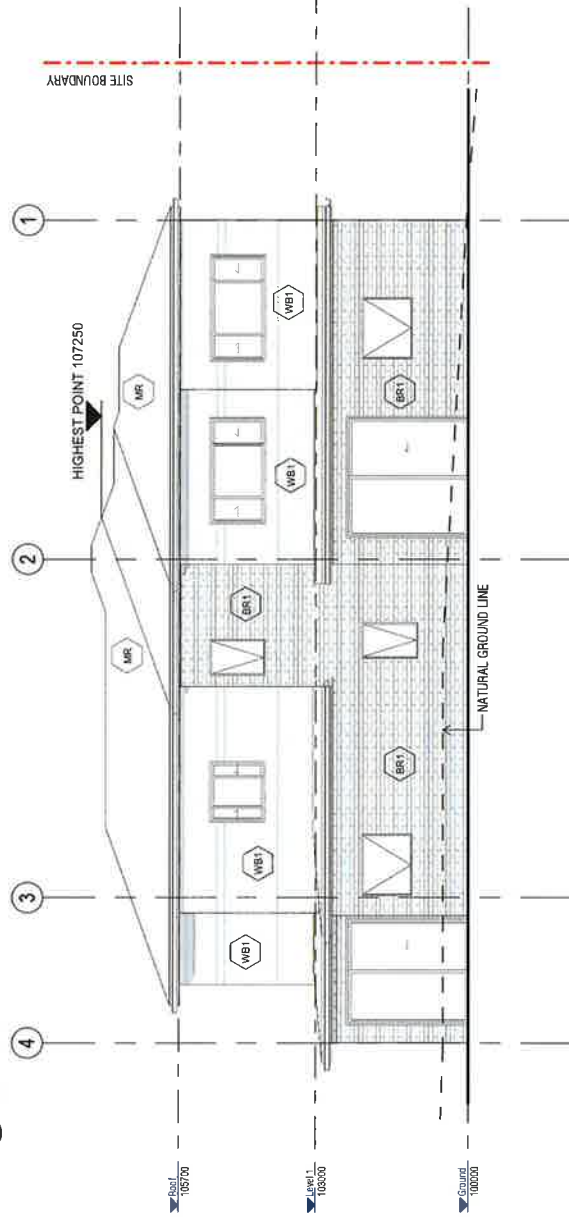


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Architect R P O'Brien Registration No. 7176

PROJECT No: 13464SYD
DATE: AUG 2014
SCALE: 1 : 100 @ A3
DRAWING No: DD003 1



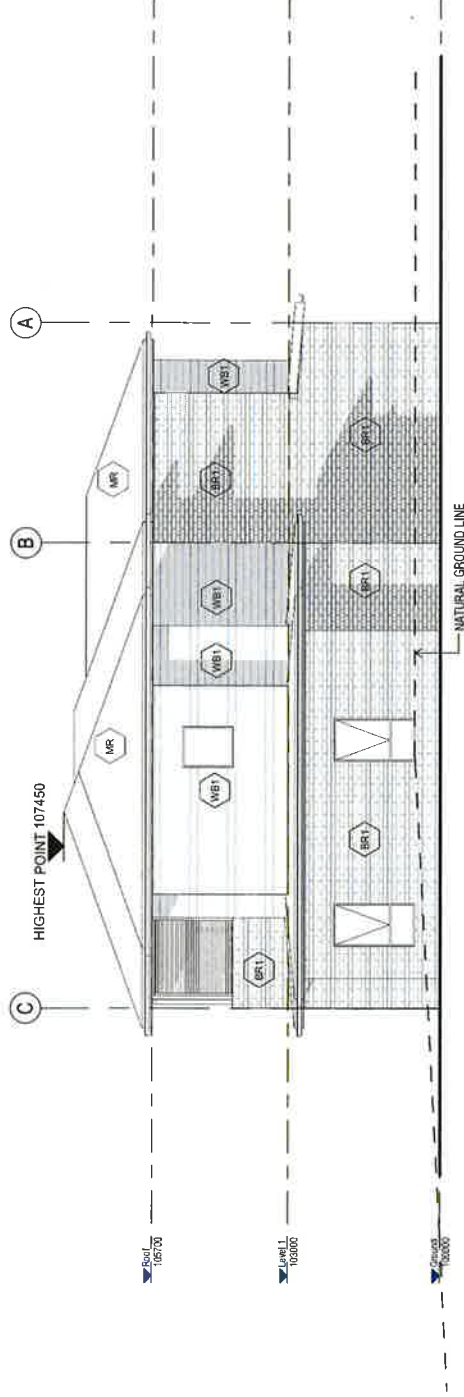
1 South Elevation (Bromwich Place)
SCALE 1:100



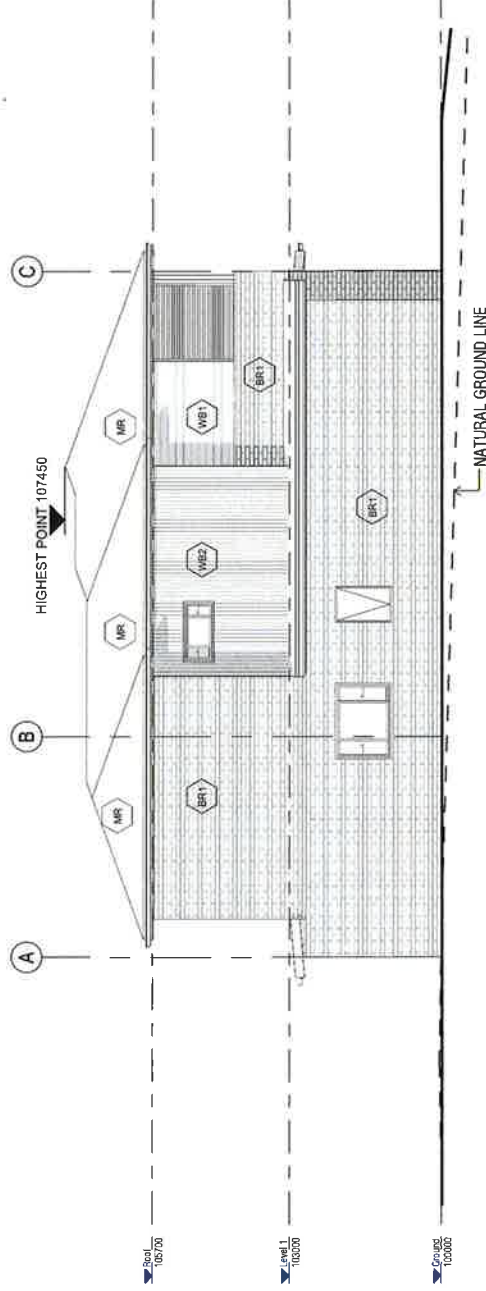
2 North Elevation
SCALE 1:100

ELEVATION LEGEND - FINISHES

- WB1 SCYON STRIA 150mm WEATHERBOARD CLADDING OR SIMILAR PAINT FINISH (VARIED)
- WB2 SCYON AXON VERTICAL CLADDING OR SIMILAR PAINT FINISH (VARIED)
- BR1 AUSTRAL BRICKS URBAN ONE REFER TO FINISHES SCHEDULE FOR SELECTION
- MR METAL ROOF SHEETING



1 East Elevation
SCALE 1 : 100



2 West Elevation
SCALE 1 : 100

ELEVATION LEGEND - FINISHES

- WB1 SCYON STRIA 150mm
WEATHERBOARD CLADDING
OR SIMILAR
PAINT FINISH (VARIED)
- WB2 SCYON AXON
VERTICAL CLADDING
OR SIMILAR
PAINT FINISH (VARIED)
- BR1 AUSTRAL BRICKS
URBAN ONE
REFER TO FINISHES
SCHEDULE FOR SELECTION
- MR METAL ROOF SHEETING

BUILDING 6 - ELEVATIONS

Bromwich Place Residential Development, Menai



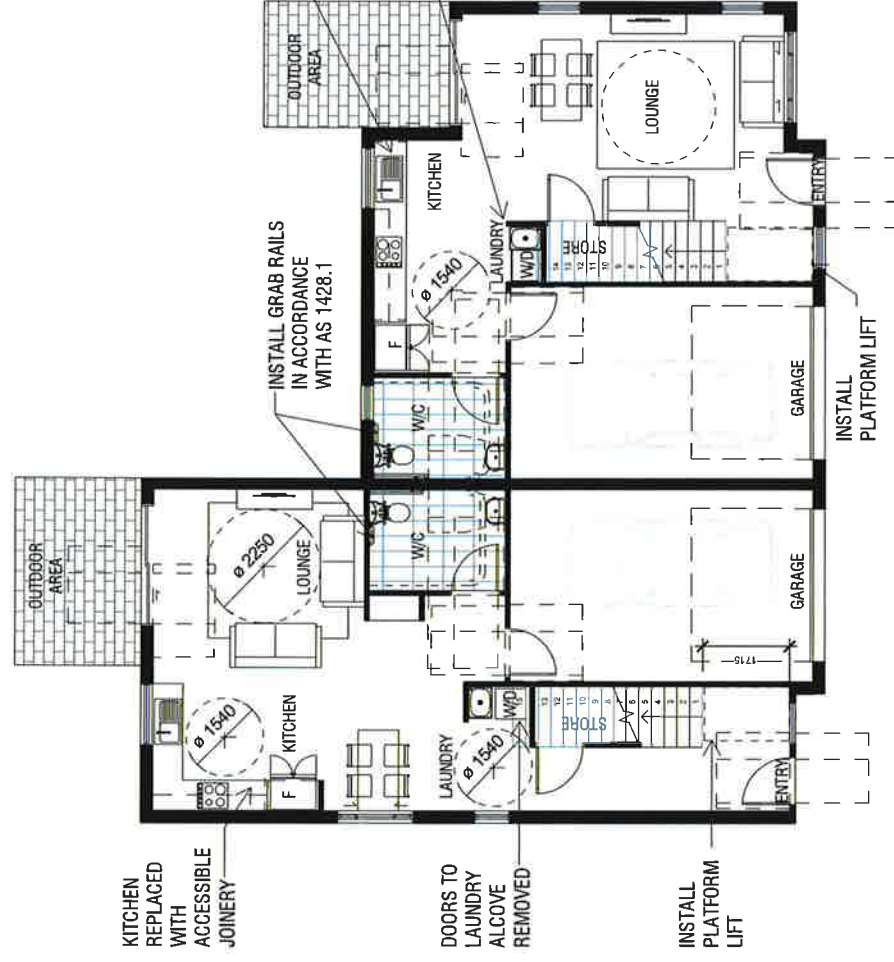
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PROJECT No: 13444SYD
DATE: AUG 2014
SCALE: As indicated @ A3
DRAWING No: DD005 J



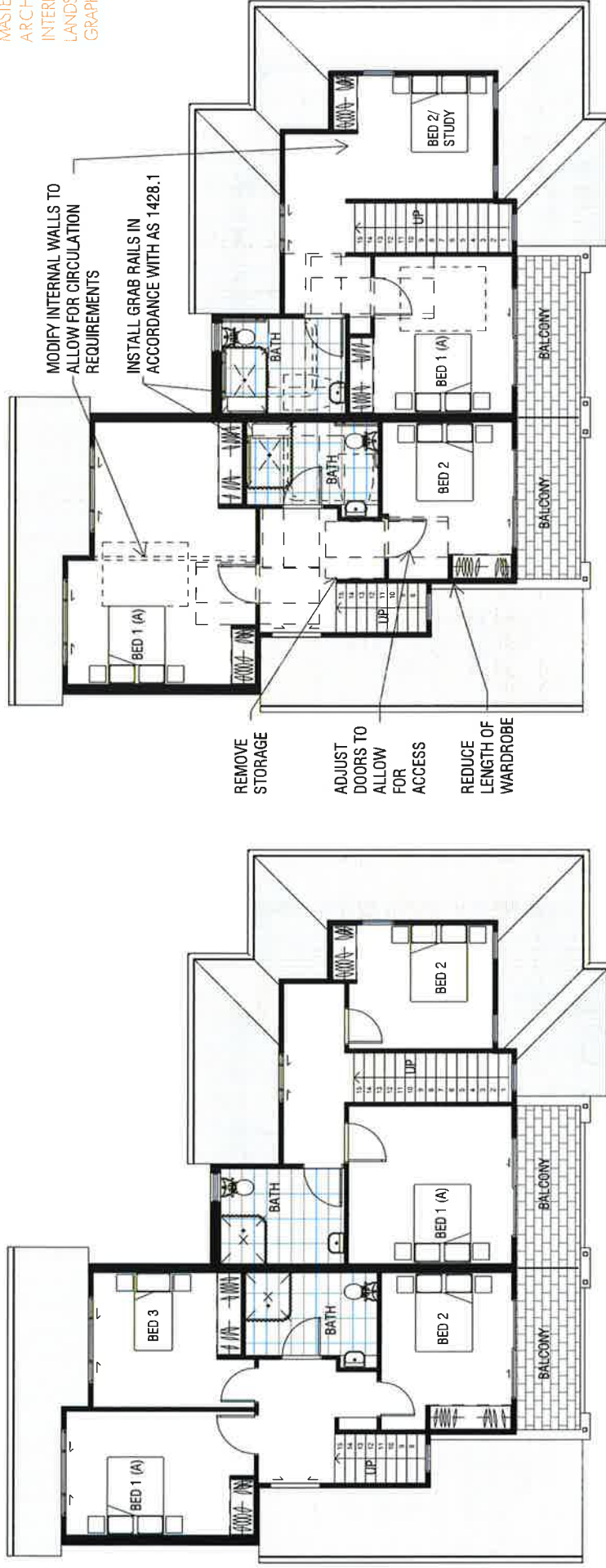
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GROUND FLOOR

PRE-ADAPTABLE UNIT TYPE F
GROUND FLOOR



POST-ADAPTABLE UNIT TYPE E
GROUND FLOOR

POST-ADAPTABLE UNIT TYPE F
GROUND FLOOR



PRE-ADAPTABLE UNIT TYPE E
FIRST FLOOR

PRE-ADAPTABLE UNIT TYPE F
FIRST FLOOR

POST-ADAPTABLE UNIT TYPE E
FIRST FLOOR

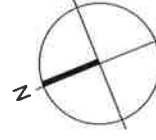
POST-ADAPTABLE UNIT TYPE F
FIRST FLOOR



1 9am WINTER
SCALE 1:600



2 12pm WINTER
SCALE 1:600



SHADOW DIAGRAMS - WINTER
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

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PROJECT No: 13443SYD
DATE: APR 2014
SCALE: 1:600 @ A3
DRAWING No: 020701

DA ISSUE

**MODE
DESIGN**

MODERN ARCHITECTURE

URBAN DESIGN
MASTER PLANNING
ARCHITECTURE
INTERIOR DESIGN
LANDSCAPE ARCH
GRAPHIC DESIGN



3pm WINTER
SCALE 1 : 600

SHADOW DIAGRAMS - WINTER
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6 BROMWICH PLACE

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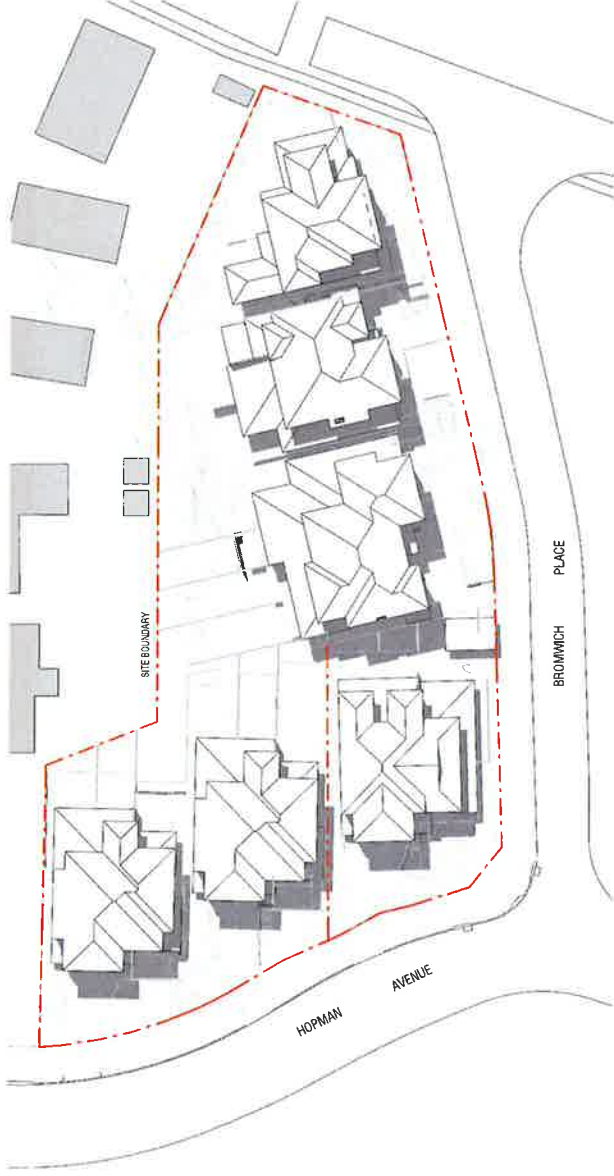


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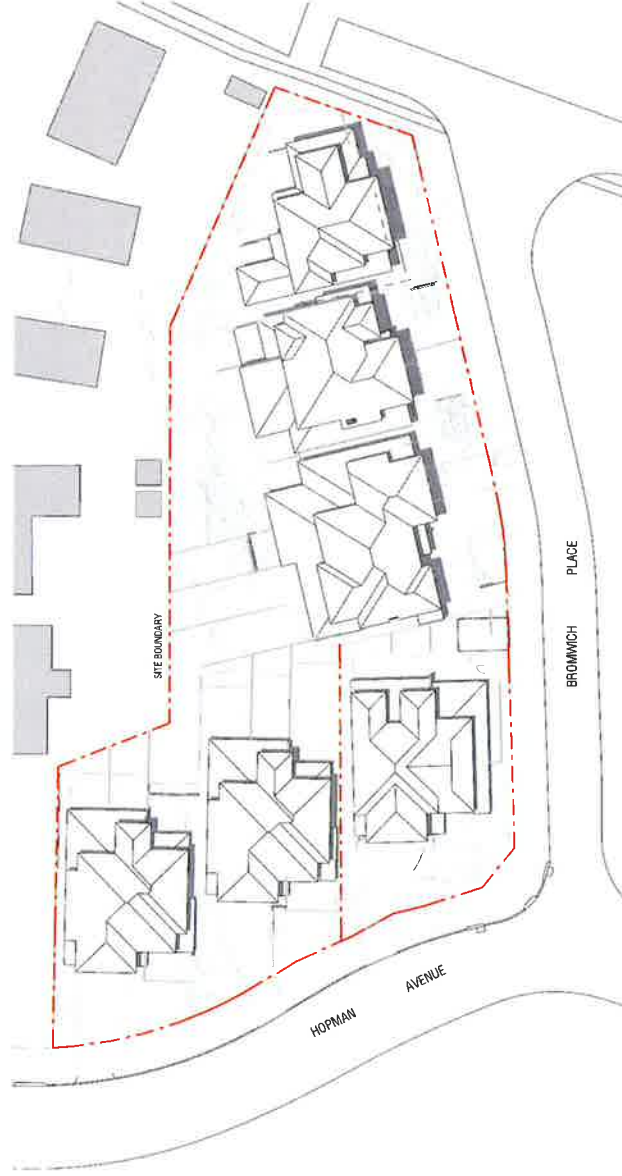
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DATE: APR 2014
SCALE: 1 : 600 @ A3
DRAWING No: D0701 1

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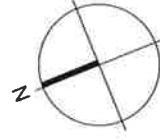
17/04/2014 2:45:08 PM



4 9am SUMMER
SCALE 1 : 600



5 12pm SUMMER
SCALE 1 : 600



SHADOW DIAGRAMS - SUMMER
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

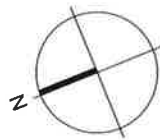


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PROJECT No: 1344510
DATE: APR 2014
SCALE: 1: 600 @ A3
DRAWING No: 00703 I



3pm SUMMER
SCALE 1 : 600



SHADOW DIAGRAM - SUMMER
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

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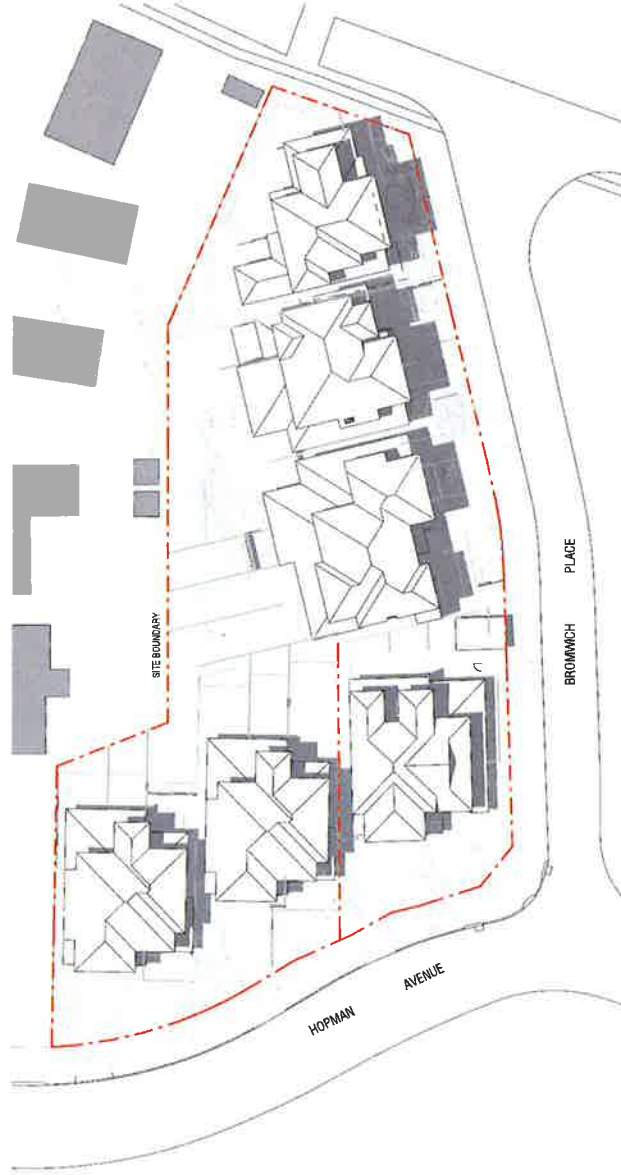


PROJECT No: 134437D
DATE: APR 2014
SCALE: 1 : 600@ A3
DRAWING No: 00704 I



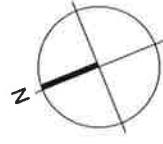
1 9am EQUINOX
SCALE 1: 600

21st March / 21st September



2 12pm EQUINOX
SCALE 1: 600

21st March / 21st September



SHADOW DIAGRAMS - EQUINOX
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

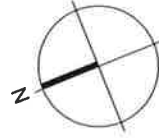


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PROJECT No: 13445YD
DATE: JUN 2014
SCALE: 1: 600 @ A3
DRAWING No: 00705 A



21st March / 21st September



SHADOW DIAGRAMS - EQUINOX
Bromwich Place Residential Development, Menai
4, 6 HOPMAN AVENUE & 2, 4, 6, 8 BROMWICH PLACE

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PROJECT No: 13454SYD
DATE: 06/02/14
SCALE: 1 : 500 @ A3
DRAWING No: 00706 A

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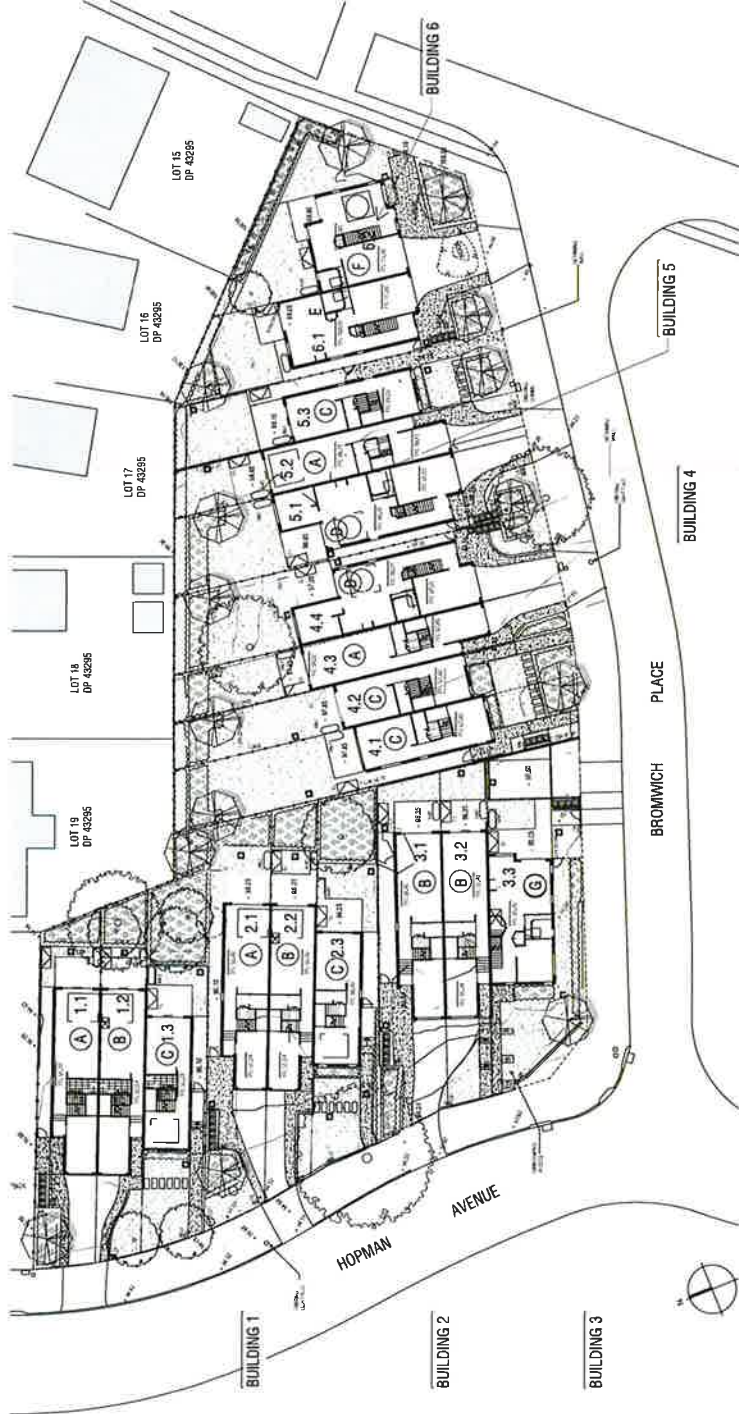
Location Plan n.t.s.



The following set of Landscape Plans for Development Application assessment have been prepared in accordance with the following:

1. Affordable Rental Housing State Environmental Planning Policy 2008
2. Sutherland Shire Council LEP & DCP 2008
3. Preliminary Assessment response letter from Sutherland Shire Council dated 31 July 2014
4. Council Resolution dated 10 November 2014
5. Instruction from the Client

- Drawings:**
- Cover / Location Plan
 - Existing Tree Survey
 - Landscape Master Plan



Materials pallet



Location plan 1:250@A1

NOTE: These plans are to be read in conjunction with the Architectural plans prepared by MODE Design Studio Sydney as well as any and all other plans and reports prepared by other disciplines as required by Sutherland Shire Council.

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Menai NSW

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Wil Robertson RALIA #568
Ted Webster RALIA #1056

PROJECT No: 13464LSC
DATE: 26/08/2014
SCALE: 1:200@A1
DRAWING No: LSC-01

Legend



CONSOLIDATION AND MAINTENANCE

For consolidation and maintenance of the site, the following table provides a summary of the proposed plant and materials. The table is divided into two sections: 'Plant and Materials' and 'Consolidation and Maintenance'. The 'Plant and Materials' section lists the proposed plant and materials, including their names, quantities, and locations. The 'Consolidation and Maintenance' section lists the proposed consolidation and maintenance activities, including their names, quantities, and locations.

PLANT SELECTION TABLE

SYM	BOTANICAL NAME	COMMON NAME	SYMBOL	HT.	SP.	PLANT USE	SYMBOL
101	Acacia saligna	Black Wattle	101	1.5m	1.5m	Screening	101
102	Acacia saligna	Black Wattle	102	1.5m	1.5m	Screening	102
103	Acacia saligna	Black Wattle	103	1.5m	1.5m	Screening	103
104	Acacia saligna	Black Wattle	104	1.5m	1.5m	Screening	104
105	Acacia saligna	Black Wattle	105	1.5m	1.5m	Screening	105
106	Acacia saligna	Black Wattle	106	1.5m	1.5m	Screening	106
107	Acacia saligna	Black Wattle	107	1.5m	1.5m	Screening	107
108	Acacia saligna	Black Wattle	108	1.5m	1.5m	Screening	108
109	Acacia saligna	Black Wattle	109	1.5m	1.5m	Screening	109
110	Acacia saligna	Black Wattle	110	1.5m	1.5m	Screening	110
111	Acacia saligna	Black Wattle	111	1.5m	1.5m	Screening	111
112	Acacia saligna	Black Wattle	112	1.5m	1.5m	Screening	112
113	Acacia saligna	Black Wattle	113	1.5m	1.5m	Screening	113
114	Acacia saligna	Black Wattle	114	1.5m	1.5m	Screening	114
115	Acacia saligna	Black Wattle	115	1.5m	1.5m	Screening	115
116	Acacia saligna	Black Wattle	116	1.5m	1.5m	Screening	116
117	Acacia saligna	Black Wattle	117	1.5m	1.5m	Screening	117
118	Acacia saligna	Black Wattle	118	1.5m	1.5m	Screening	118
119	Acacia saligna	Black Wattle	119	1.5m	1.5m	Screening	119
120	Acacia saligna	Black Wattle	120	1.5m	1.5m	Screening	120
121	Acacia saligna	Black Wattle	121	1.5m	1.5m	Screening	121
122	Acacia saligna	Black Wattle	122	1.5m	1.5m	Screening	122
123	Acacia saligna	Black Wattle	123	1.5m	1.5m	Screening	123
124	Acacia saligna	Black Wattle	124	1.5m	1.5m	Screening	124
125	Acacia saligna	Black Wattle	125	1.5m	1.5m	Screening	125
126	Acacia saligna	Black Wattle	126	1.5m	1.5m	Screening	126
127	Acacia saligna	Black Wattle	127	1.5m	1.5m	Screening	127
128	Acacia saligna	Black Wattle	128	1.5m	1.5m	Screening	128
129	Acacia saligna	Black Wattle	129	1.5m	1.5m	Screening	129
130	Acacia saligna	Black Wattle	130	1.5m	1.5m	Screening	130
131	Acacia saligna	Black Wattle	131	1.5m	1.5m	Screening	131
132	Acacia saligna	Black Wattle	132	1.5m	1.5m	Screening	132
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169	Acacia saligna	Black Wattle	169	1.5m	1.5m	Screening	169
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172	Acacia saligna	Black Wattle	172	1.5m	1.5m	Screening	172
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199	Acacia saligna	Black Wattle	199	1.5m	1.5m	Screening	199
200	Acacia saligna	Black Wattle	200	1.5m	1.5m	Screening	200

FOR APPROVAL

The following set of Landscape Plans for Development Application assessment have been prepared in accordance with the following:

1. Affordable Rental Housing State Environmental Planning Policy 2008
2. Sustainable Shire Council LEP & DCP 2008
3. Preliminary Assessment response letter from Sustainable Shire Council dated 31 July 2014
4. Preliminary Assessment response letter from Sustainable Shire Council dated 31 July 2014
5. Instruction from the Client

Bromwich Place Residential Development

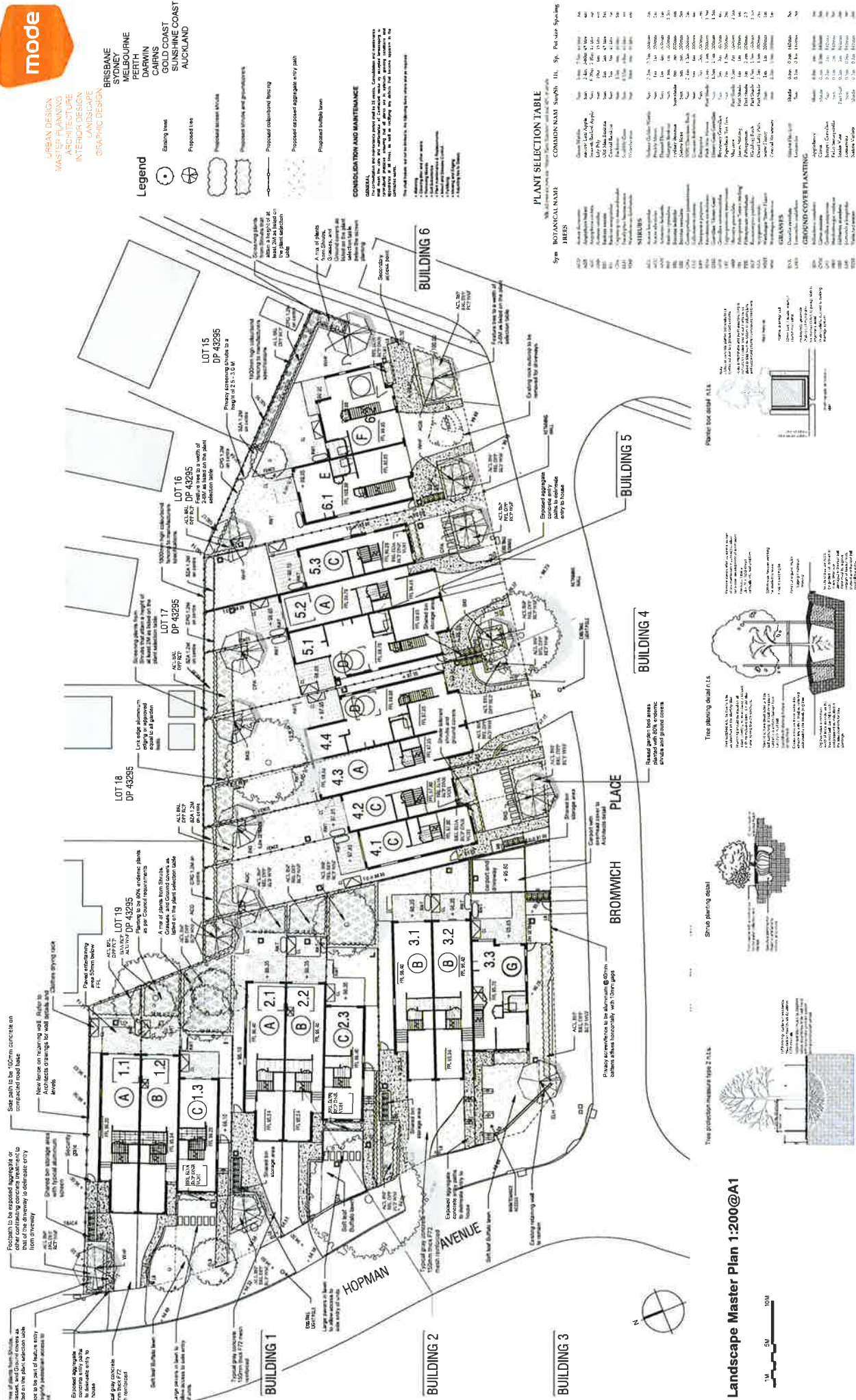
Menai NSW

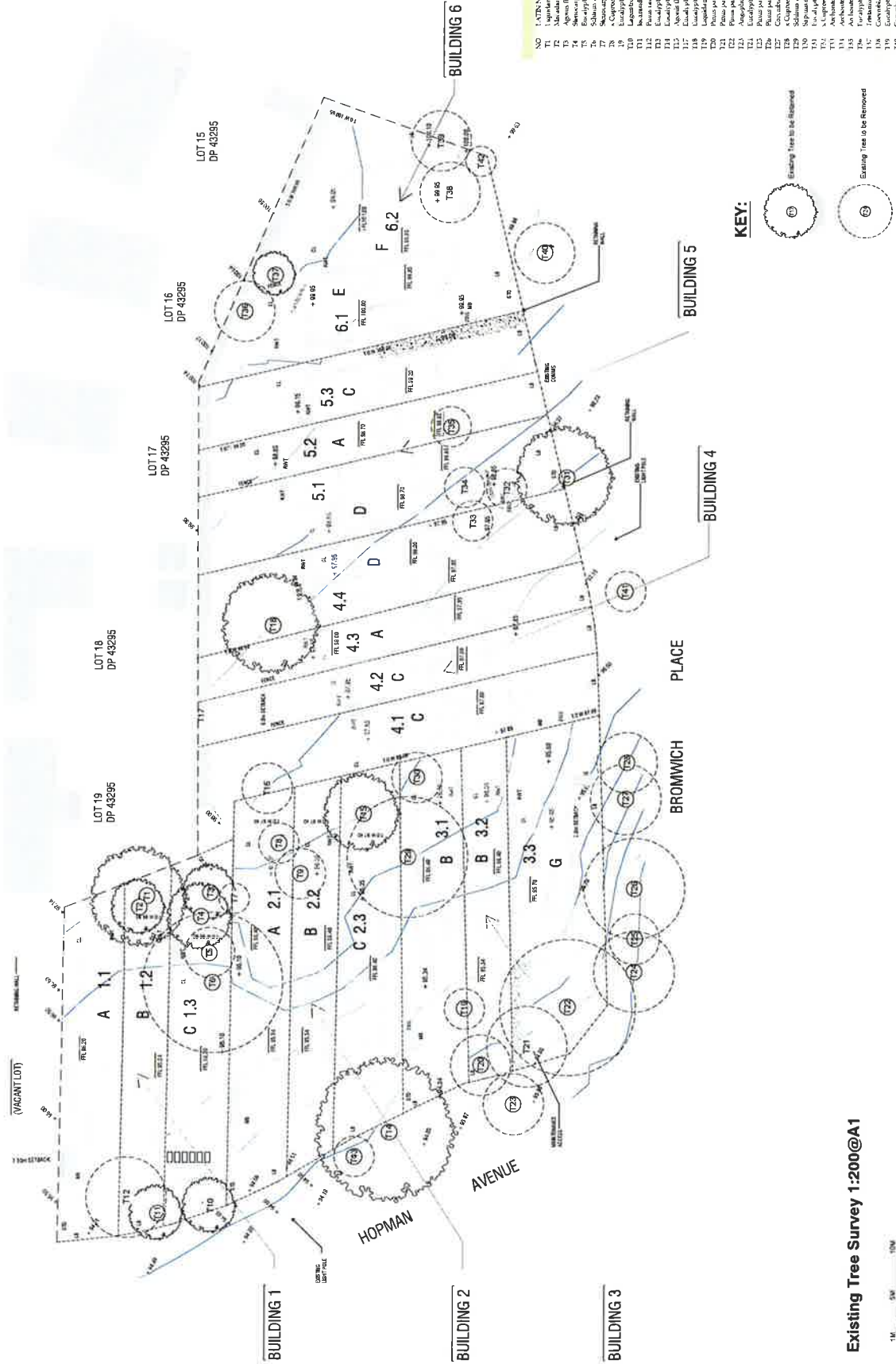
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Will Robertson RALA #595
Ted Webster RALA #1056

PROJECT No: 134413C
DATE: 26/05/2014
SCALE: 1:200@A1
DRAWING No: LSC-03

Landscape Master Plan 1:200@A1

1M 5M 10M





Existing Tax. Schedule			HEIGHT		SPEED		VTA	
Nº	1° NAME	2° NAME	1°	2°	1°	2°	1°	2°
T1	Lupinus arboreus	Chicote and Gum	143	91	143	91	Belian	Belian
T2	M. adonis murephilla	M. adonis sp.	134	54	134	54	Belian	Belian
T3	Stylosanthes biflora	Stylosanthes biflora	134	54	134	54	Belian	Belian
T4	Stylosanthes biflora	Stylosanthes biflora	134	54	134	54	Belian	Belian
T5	Erythrina velutina	Angled Beam	141	61	141	61	Padan	Padan
T6	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T7	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T8	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T9	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T10	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T11	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T12	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T13	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T14	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T15	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T16	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
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T19	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T20	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T21	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T22	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T23	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T24	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T25	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T26	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T27	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T28	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T29	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T30	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T31	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T32	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T33	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T34	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T35	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T36	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T37	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T38	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T39	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T40	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T41	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove
T42	Stylosanthes biflora	Popponi and Tree	174	104	174	104	Remove	Remove

This Existing Tree Survey is compiled from the information provided by the Survey and Arborist Report and has been included in the Landscape Documentation package at the request of Barbara Buchanan for estate of relatives when assessing the Landscape drawings.

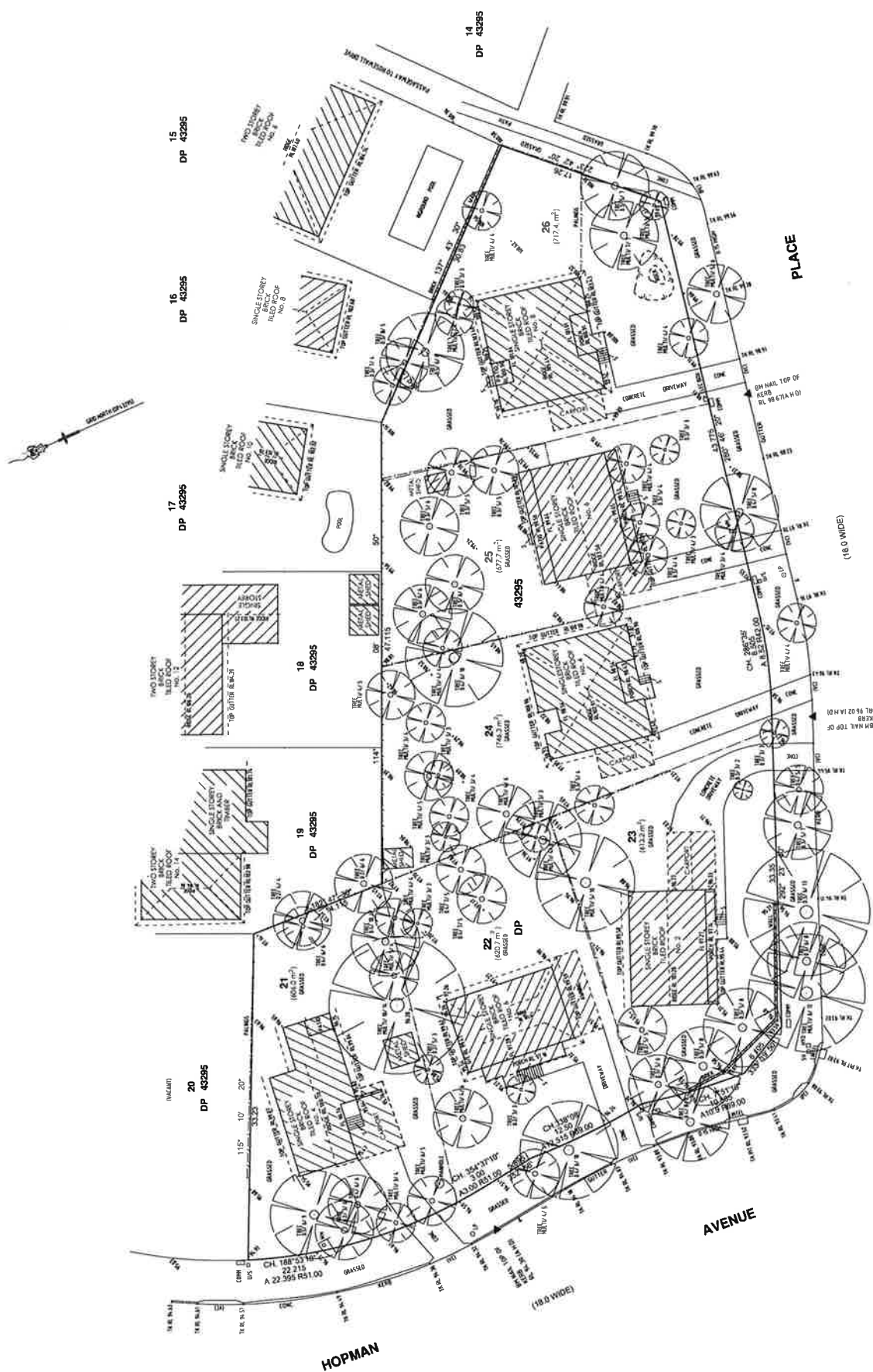
This plan should be read in conjunction with the Arborist Report and supporting documentation as prepared by Arborport and dated 10/04/14

Bromwich Place Residential Development
Menai NSW

Sydney
Shop 1, 35 Buckingham Street, Surry Hills, NSW 2010
Tel +61 2 8396 9500 Fax +61 2 8396 9555
sydney@modedesign.com.au
Will Robertson RAILA #565
Ted Webster RAILA #1056

FOR APPROVAL

PROJECT No.: 1144180
DATE: 26/08/2014
SCALE: 1:200@A1
DRAWING No.: LSC-02



NOTES:

- 1) TITLE BEARINGS AND DIMENSIONS ARE SHOWN
- 2) DIMENSIONS OF LEVELS, SLOPES, BOUNDARY ELEVATION HAS NOT BEEN UNDERTAKEN
- 3) TOTAL SITE AREA 3.9833 ha BY TITLE DIMENSIONS
- 4) UNDERGROUND SERVICES HAVE NOT BEEN INVESTIGATED
- 5) 7M - DENOTES TOP OF KERB LEVEL
- 6) 3M - DENOTES TREE SIZE 3.0 METER DIAMETER, 10 METER HIGH

Norton Survey Partners SURVEYORS & LAND TITLE CONSULTANTS	
ALC 199 734 968 PO BOX 224 670 DARLING STREET MELBOURNE VIC 3000 OFFICE@NORTONSURVEY.COM.AU	
TITLE: PLAN SHOWING SELECTED DETAIL & LEVELS OVER Nos. 4-6 HOPMAN AVE & Nos. 2-3 BROMWICH PLACE, MENA	
LGA: SUTHERLAND SHIRE	REFERENCE: 36253
CLIENT: ST GEORGE COMMUNITY HOUSING LTD	DATE: 11-10-13
SCALE: (AT A1) 1:200	SHEET: 1
ISSUE	DATE
AMENDMENT	
SURVEYOR: CN	

Bromwich Place, Menai Redevelopment NatHERS/BASIX Assessment

St George Community Housing
C/- Mode Design

Project Address:
4,6 Hopman Avenue & 2, 4, 6, 8 Bromwich Place Menai

21 August 2014
Revision No.3

Prepared by **Nicholas Johnson** 25808-SYD-G
Level 6, Building B, 207 Pacific Highway, St Leonards NSW 2065
Phone (02) 8484 7000 **Fax** (02) 8484 7100 **Email** wge@wge.com.au **Web** www.wge.com.au

Revision

REVISION	DATE	COMMENT	APPROVED BY
3	21/08/2014	Revised DA Issue	NCJ
2	17/07/2014	Revised DA Issue	NCJ
1	06/04/2014	BASIX Certificate Issue	NCJ
0	28/11/2013	Client Issue	NCJ

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Executive Summary

Summary of Assessment

In summary, we can confirm the following outcome of the BASIX analysis:-

- It has been determined that the proposed building shall achieve a BASIX Certification with the following scores:
 - Water: 41% (Required target: 40%)
 - Thermal Comfort: pass (Required target: pass)
 - Energy: 35% (Required target: 35%)
- Our BASIX Assessment has reviewed all apartments based on the Architectural drawing issue (March 2014 – DA Issue & Revised design for Building 6 – dated August 2014), as prepared by Mode Design.
- Detail regarding building services and associated characteristics have been prepared via consultation with the St George Community Housing – Development & Construction Design Requirements (Version 2.3). Council should also refer to the Building Service Development Application Report, prepared by WSP.
- Our assessment has been based on Architectural drawings received and subsequent consultation with the project design team.
- Further information regarding the thermal comfort and building fabric specification has been outlined within Section 3.0 of this report.
- Refer BASIX Certificate located within Appendix A for further information.

1. Introduction

Wood and Grieve Engineers have completed a Building Sustainability Index (BASIX) assessment for the proposed St George Community Housing, Bromwich Place, Menai, residential development in NSW. Based on information provided to date and the nominated architectural drawings (March 2014 – DA Issue) the following outcome has been achieved.

Design Target

Based on the relevant Local Environmental Plan, Development Control Plan (DCP) – Sutherland Shire Council and the National Construction Code of Australia (NCC), we understand that the project is required to demonstrate BASIX compliance in support of the application development approval.

Building Sustainability Index (BASIX)

BASIX is implemented under the Environmental Planning and Assessment Act and applies to all residential dwelling types within NSW. BASIX forms both part of the development application and building certification process within the state of NSW.

BASIX sets water and greenhouse gas reduction targets relative to the NSW average benchmark for per person potable water consumption & greenhouse gas emissions within the residential sector. BASIX also sets the minimum performance levels for thermal comfort of the dwelling and replaces the NCC Energy Efficiency benchmarks within the state of NSW. Thermal comfort levels are assessed via a simulation method in accordance with the NatHERS House Energy Rating protocol.

(NatHERS) Thermal Performance Software

Wood & Grieve Engineers have completed a thermal comfort analysis utilising the NCC endorsed FirstRate5 software. The FirstRate5 assessment tool conducts predictive analysis of the thermal performance of a Class 1 or Class 2 facility. FirstRate5 assess proposed buildings fabric on energy loads for heating and cooling. The information required for the FirstRate5 assessment includes:-

- Floor Area
- Wall Layouts and Wall Types (including insulation ratings)
- Roof Layouts and Roof Types (including insulation ratings)
- Glazing Layouts and construction types
- Shading details
- Extent of building sealing devices (i.e. door seals, window seals etc).

FirstRate5 does not include an assessment of building services plant efficiency, the embodied energy of materials or any renewable energy considerations. Information detailed within the BASIX assessment in reference to building services has been completed utilising the St George Community Housing - Development & Construction Design Requirements (Version 2.3). Council should also refer to the WSP Building Services Report, dated 19/03/2014 for further information.

Design Documentation

The following assessment is based on all architectural drawings received dated March 2014 (DA Issue), and specifications as noted above and received to date, including:

- 13464_DD001 – Site Plan
- 13464_DD005 – Site Boundaries

- 13464_DD100 – Building 1 – Site Plan (Revision - G)
- 13464_DD101 – Building 1 – Ground Floor Plan (H)
- 13464_DD102 – Building 1 – Level 1 Plan (I)
- 13464_DD103 – Building 1 – Roof Plan (J)
- 13464_DD104 – Building 1 – Elevation (H)
- 13464_DD105 – Building 1 – Elevation (H)

- 13464_D200 – Building 2 – Site Plan (G)
- 13464_D201 – Building 2 – Ground Floor Plan (G)
- 13464_D202 – Building 2 – Level 1 Plan (G)
- 13464_D203 – Building 2 – Roof Plan (G)
- 13464_D204 – Building 2 – Elevation (G)
- 13464_D205 – Building 2 – Elevation (G)

- 13464_D300 – Building 3 – Site Plan (F)
- 13464_D301 – Building 3 – Ground Floor Plan (F)
- 13464_D302 – Building 3 – Level 1 Plan (F)
- 13464_D303 – Building 3 – Roof Plan (F)
- 13464_D304 – Building 3 – Elevation (F)
- 13464_D305 – Building 3 – Elevation (F)

- 13464_D400 – Building 4 – Site Plan (L)
- 13464_D401 – Building 4 – Ground Floor Plan (L)
- 13464_D402 – Building 4 – Level 1 Plan (L)
- 13464_D403 – Building 4 – Roof Plan (L)
- 13464_D404 – Building 4 – Elevation (K)
- 13464_D405 – Building 4 – Elevation (K)

- 13464_D500 – Building 5 – Site Plan (G)
- 13464_D501 – Building 5 – Ground Floor Plan (G)
- 13464_D502 – Building 5 – Level 1 Plan (G)
- 13464_D503 – Building 5 – Roof Plan (F)
- 13464_D504 – Building 5 – Elevation (F)
- 13464_D505 – Building 5 – Elevation (F)

Revised Building 6 Design – August 2014

- 13464_D600 – Building 6 – Site Plan (L)
- 13464_D601 – Building 6 – Ground Floor Plan (L)
- 13464_D602 – Building 6 – Level 1 Plan (L)
- 13464_D603 – Building 6 – Roof Plan (I)
- 13464_D604 – Building 6 – Elevation (J)
- 13464_D605 – Building 6 – Elevation (J)

Note: Changes to the design drawings and specifications will affect the outcome of this assessment and potentially the certification of the proposed building works.

2. Thermal Comfort Design Assessment

Thermal Comfort Design Assessment

The thermal comfort aspect of this assessment was conducted using the FirstRate5 Thermal Performance Assessment Software, which assesses the thermal performance of a Class 1 or Class 2 dwelling in accordance with the requirements of **Building Designers Association of Victoria (BDAV)** as stated in the BASIX Thermal Comfort Protocol.

Compliance requires that the average area adjusted heating and cooling loads be below the average area adjusted heating and cooling loads calculated by BASIX.

Compliance also requires that the individual dwelling area adjusted heating and cooling loads be below the individual area adjusted heating and cooling loads calculated by BASIX.

Based on the information received to date from Mode Design (including architectural drawings and specification detail) the development average area adjusted heating and cooling loads were found to be as noted in the table below.

Bromwich Place	AREA ADJUSTED HEATING LOAD (MJ/m ²)	AREA ADJUSTED COOLING LOAD (MJ/m ²)
Building 1 – 1.01	23.2	24.0
Building 1 – 1.02	29.1	15.8
Building 1 – 1.03	40.3	17.5
Building 2 – 2.01	23.2	24.0
Building 2 – 2.02	29.1	15.8
Building 2 – 2.03	40.3	17.5
Building 3 – 3.01	23.2	24.0
Building 3 – 3.02	29.1	15.8
Building 3 – 3.03	29.2	23.8
Building 4 – 4.01	40.3	17.5
Building 4 – 4.02	29.8	19.0
Building 4 – 4.03	23.2	24.0
Building 5 – 4.04	29.1	18.6
Building 5 – 5.01	28.1	17.1
Building 5 – 5.02	38.1	18.9
Building 6 – 5.03	40.3	17.5
Building 6 – 6.01	26.7	16.3
Building 6 – 6.02	45.9	26.3
Average All Dwellings	31.5	19.6

Energy Modelling Limitations

The energy modelling results obtained from the FirstRate5 software provides an estimate of the base building energy performance only. This estimate is based upon a simplified and idealised version of the building that does not fully comply with the intricacies of a building and its operation. As a result the energy mode represents an interpretation of the potential building performance only. Several dependent factors will affect the actual operational performance of the building, including local climate variation, building occupant behaviour, construction technique and building services commissioning. No guarantee or warranty of building performance in practice can be based on energy modelling results alone.

3. Design Specification – Building Fabric/Services

The following specification will need to be reviewed by the Architect and design team as the design of the project develops. Changes from these details will affect the BASIX ratings of the apartments.

Design Specification:

External Walls:

A minimum of R2.0 insulation added to external walls (brick veneer, compressed fibre cement clad – as nominated).

Internal Walls to Adjoining Apartment:

As the adjoining apartment is considered a conditioned space there is no thermal insulation requirement for this wall. Therefore the insulation to this wall shall be as per acoustic requirements.

Ceilings:

We have assumed ceiling heights as indicated on the architectural drawings received.

Roof Type:

A minimum of R3.5 insulation to be added to metal clad roof.

A layer of Foil (Sisalation) is required to be added to Metal Deck roof.

Suspended Floor Slabs:

Add R1.0 insulation to underside of suspended timber floor between conditioned and unconditioned spaces (i.e. between Upper Floor and Ground Floor Garage. and anywhere where the suspended floor is exposed to external climatic conditions).

Windows

Fixed Glazing and Operable Windows:

Fixed Glazing and Operable windows have been assumed to be equivalent to a single glazed unit with standard aluminium frames with a thermal performance of U-Value of $4.6 \text{ W/m}^2\text{.K}$ and an SHGC of 0.64

All windows above have been specified with weather-strips to prevent air infiltration when closed. Refer AS2047.

Note: The thermal performance values for all windows detailed above are for glass and framing system combined.

Floor Coverings

Assumed to be carpet in the bedrooms, Tiles to the bathrooms and Kitchens.

Air Leakage

Kitchen Exhaust will be via a ducted rangehood to the roof. Back-draft dampers must be installed to prevent air infiltration. Refer NCC Section J3.4.

All bathrooms and ensuites exhaust to be via a ducted exhaust fan. Back-draft dampers must be installed to prevent air infiltration. Refer NCC Section J3.4.

Hot Water System

Individual Solar Hot Water systems with electric boost per townhouse.

Insulation to pipework as required by AS3500.

Design Specification:**Dwelling Heating and Cooling Systems:**

No AC units have been specified as part of the base-building design. Purchaser to install as option. BASIX penalty has been accounted for within current energy compliance score.

Operable windows are per Architectural detail.

Appliances:

As per nomination within the St George Community Housing - Development & Construction Design Requirements (Version 2.3).

Electric cooktop and electric oven.

Min. 2.0 star dishwashers, clothes washers. Note: Dryers, Not Specified.

A reduction in the quality of any of these appliances will affect the energy aspect of the BASIX rating.

Fixtures:

We note that fixtures with the following WELS ratings have been included in the BASIX Assessment as per the St George Community Housing - Development & Construction Design Requirements (Version 2.3).

3 Star Showerheads (>6.0 but <= 7.5 l/min), 4 Star Kitchen taps, 4 Star Bathroom taps, 4 Star Toilets.

Rainwater Tank Collection:

Minimum **2000L** rainwater tank per dwelling has been specified for each dwelling. Refer civil services design for further detail and tanking specifications.

Connection is for general landscape irrigation supply and toilet flushing as nominated within the St George Community Housing - Development & Construction Design Requirements (Version 2.3).

Others Requirements:

General Lighting – nominated as LED or Fluorescent

Ventilation of Bathrooms, Kitchen exhaust via direct duct to external façade or roof – manual operating switch. Vents must include backdraft dampers or the like as required by the NCC – Section J.

BASIX Certification Detail

Project Summary	
Project Name	Bromwich Place Redevelopment
Street Address	4-6 Bromwich Street, Menai, NSW
Local Government Area	Sutherland Shire Council
Plan Type / Number	DP 43295
Lot No#	21-26
Section No#	*
No. of Residential Buildings	6
No. of units in Residential Flat Buildings	-
No. of multi-dwelling houses	18
No. of single dwelling houses	-
Project Score	
Water	43
Thermal Comfort	Pass
Energy	35

Appendix A: BASIX Certificate

Refer BASIX Certificate attached.

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Multi Dwelling

Certificate number: 517949M_05

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 29/06/2009 published by Planning & Infrastructure. This document is available at www.basix.nsw.gov.au

Director-General

Date of issue: Thursday, 21 August 2014

To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary	
Project name	Bromwich Place Redevelopment_05
Street address	2, 4, 6, 8 Bromwich Place Menai 2234
Local Government Area	Sutherland Shire Council
Plan type and plan number	deposited DP43295
Lot no.	21-26
Section no.	-
No. of residential flat buildings	6
No. of units in residential flat buildings	18
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Project score	
Water	✓ 41 Target 40
Thermal Comfort	✓ Pass Target Pass
Energy	✓ 35 Target 35

Certificate Prepared by

Name / Company Name: Wood & Grieve Engineers

ABN (if applicable): 97137999609

Description of project

Project address	
Project name	Bromwich Place Redevelopment_05
Street address	2,4,6,8 Bromwich Place Menai 2234
Local Government Area	Sutherland Shire Council
Plan type and plan number	deposited DP43295
Lot no.	21-26
Section no.	-
Project type	
No. of residential flat buildings	6
No. of units in residential flat buildings	18
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Site details	
Site area (m ²)	3981.3
Roof area (m ²)	1537
Non-residential floor area (m ²)	0
Residential car spaces	14
Non-residential car spaces	0

Common area landscape	
Common area lawn (m ²)	0
Common area garden (m ²)	0
Area of indigenous or low water use species (m ²)	0
Assessor details	
Assessor number	BDAV/13/1513
Certificate number	15130003
Climate zone	56
Project score	
Water	✓ 41 Target 40
Thermal Comfort	✓ Pass Target Pass
Energy	✓ 35 Target 35

Description of project

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

Residential flat buildings - Building1, 3 dwellings, 2 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
1	2	88.0	18.0	96	0	2	3	101.0	18.0	40.7	0
						3	2	94.0	0.0	155	0

Residential flat buildings - Building2, 3 dwellings, 2 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
1	2	88.0	18.0	125.8	0	2	3	101.0	18.0	53	0
						3	2	94.0	0.0	159	0

Residential flat buildings - Building3, 3 dwellings, 2 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
1	2	86.0	25.0	102.7	0	2	3	101.0	25.0	30.7	0
						3	2	91.0	2.0	175	0

Description of project

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

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Building1

- (a) Dwellings
 - (i) Water
 - (ii) Energy
 - (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy

2. Commitments for Residential flat buildings - Building2

- (a) Dwellings
 - (i) Water
 - (ii) Energy
 - (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy

3. Commitments for Residential flat buildings - Building3

- (a) Dwellings
 - (i) Water
 - (ii) Energy
 - (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy

4. Commitments for Residential flat buildings - Building4

- (a) Dwellings

- (i) Water
- (ii) Energy
- (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy

5. Commitments for Residential flat buildings - Building5

- (a) Dwellings
 - (i) Water
 - (ii) Energy
 - (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy

6. Commitments for Residential flat buildings - Building6

- (a) Dwellings
 - (i) Water
 - (ii) Energy
 - (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy

7. Commitments for multi-dwelling houses

8. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. 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 Residential flat buildings - Building1

(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.	✓	✓	✓

Dwelling no.	Fixtures					Appliances		Individual pool					Individual spa		
	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	3 star (> 6 but <= 7.5 L/min)	4 star	4 star	4 star	no	2 star	2 star	-	-	-	-	0	-	-	

Alternative water source									
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up	
1	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 74.8 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	
2	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 74.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	
All other dwellings	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 58.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	

(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.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.		✓	✓
(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".		✓	

	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
3	electric heat pump - air sourced 26 to 30 RECs	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
1, 2	solar (electric boosted) not specified	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

Dwelling no.	Cooling			Heating				Artificial lighting				Natural lighting	
	living areas	bedroom areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
2	-	-	-	-	-	3	1	yes	yes	yes	yes	0	no
1, 3	-	-	-	-	-	2	1	yes	yes	yes	yes	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
3	-	-	-	-	electric cooktop & electric oven	-	no	4 star	-	-	-	-
1, 2	-	-	-	-	electric cooktop & electric oven	-	no	3 star	-	-	-	-

(iii) Thermal Comfort	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: (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.	✓	✓	✓

Thermal loads		
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
1	23.2	24.0
2	29.1	15.8
All other dwellings	40.3	17.5

(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.	✓	✓	✓

2. Commitments for Residential flat buildings - Building2

(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.	✓	✓	✓

Dwelling no.	Fixtures					Appliances			Individual pool					Individual spa		
	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	3 star (> 6 but <= 7.5 L/min)	4 star	4 star	4 star	no	2 star	2 star	-	-	-	-	0	-	-		

Alternative water source									
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up		
1	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 74.8 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-		
2	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 74.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-		
All other dwellings	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 58.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-		

(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.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.		✓	✓
(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".		✓	

	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
3	electric heat pump - air sourced 26 to 30 RECs	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
1, 2	solar (electric boosted) not specified	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

Dwelling no.	Cooling		Heating				Artificial lighting				Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
2	-	-	-	-	3	1	yes	yes	yes	yes	0	no
1, 3	-	-	-	-	2	1	yes	yes	yes	yes	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	electric cooktop & electric oven	-	no	3 star	-	-	-	-

(iii) Thermal Comfort		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: (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.		✓	✓	✓

Thermal loads		
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
1	23.2	24.0
2	29.1	15.8
All other dwellings	40.3	17.5

(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.	✓	✓	✓

3. Commitments for Residential flat buildings - Building3

(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.	✓	✓	✓

Dwelling no.	Fixtures					Appliances			Individual pool					Individual spa		
	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	3 star (> 6 but <= 7.5 L/min)	4 star	4 star	4 star	no	2 star	2 star	-	-	-	-	0	-	-		

Alternative water source									
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up	
1	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 74.8 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	
2	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 74.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	
All other dwellings	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 58.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	

(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.		✓	✓

(ii) Energy		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.			✓	✓
(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".			✓	

Dwelling no.	Hot water		Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
	Hot water system	Each bathroom	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
3	electric heat pump - air sourced 26 to 30 RECs	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
1, 2	solar (electric boosted) not specified	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		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
2	-	-	-	-	3	1	yes	yes	yes	yes	0	no
1, 3	-	-	-	-	2	1	yes	yes	yes	yes	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures								Private outdoor or unsheltered clothes drying line
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line		
All dwellings	-	-	-	-	electric cooktop & electric oven	-	no	3 star	-	-	-	-	-

(iii) Thermal Comfort		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: (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.		✓	✓	✓

Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)
1	23.2	24.0
2	29.1	15.8
All other dwellings	29.2	23.8

(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.	✓	✓	✓

4. Commitments for Residential flat buildings - Building4

(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.	✓	✓	✓

Dwelling no.	Fixtures					Appliances			Individual pool					Individual spa		
	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	3 star (> 6 but <= 7.5 L/min)	4 star	4 star	4 star	no	2 star	2 star	-	-	-	-	0	-	-		

Alternative water source									
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up	
1	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 113.4 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	
2	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 74.8 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	
3	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 74.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	
All other dwellings	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 58.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	

(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.		✓	✓	✓

(ii) Energy		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.			✓	✓
(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".			✓	

	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	solar (electric boosted) not specified	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		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen	
1, 3	-	-	-	-	3	1	yes	yes	yes	yes	0	no	
2, 4	-	-	-	-	2	1	yes	yes	yes	yes	0	no	

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	electric cooktop & electric oven	-	no	3 star	-	-	-	-

(iii) Thermal Comfort				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.						

(iii) Thermal Comfort		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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: (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.	✓	✓	✓

Thermal loads	
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)
1	40.3
2	29.8
3	23.2
All other dwellings	29.1
Thermal loads	
	Area adjusted cooling load (in MJ/m ² /yr)
1	17.5
2	19.0
3	24.0
All other dwellings	18.6

(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.	✓	✓	✓

5. Commitments for Residential flat buildings - Building5

(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.	✓	✓	✓

Dwelling no.	Fixtures					Appliances		Individual pool					Individual spa		
	All shower-heads 3 star (> 6 but <= 7.5 L/min)	All toilet flushing systems 4 star	All kitchen taps 4 star	All bathroom taps 4 star	HW recirculation or diversion no	All clothes washers 2 star	All dish-washers 2 star	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded	
All dwellings								-	-	-	-	0	-	-	-

Alternative water source									
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up	
1	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 74.8 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	-
2	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 74.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	-
All other dwellings	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 58.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	-

(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.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.		✓	✓
(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".		✓	

Dwelling no.	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry
All dwellings	solar (electric boosted) not specified	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		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
2	-	-	-	-	3	1	yes	yes	yes	yes	0	no
1, 3	-	-	-	-	2	1	yes	yes	yes	yes	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	electric cooktop & electric oven	-	no	3 star	-	-	-	-

(iii) Thermal Comfort	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.			

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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: (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.	✓	✓	✓

Thermal loads		
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
1	28.1	17.1
2	38.1	18.9
All other dwellings	40.3	17.5

(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.	✓	✓	✓

6. Commitments for Residential flat buildings - Building6

(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.	✓	✓	✓

Dwelling no.	Fixtures					Appliances			Individual pool					Individual spa		
	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	3 star (> 6 but <= 7.5 L/min)	4 star	4 star	4 star	no	2 star	2 star	-	-	-	-	0	-	-		

Alternative water source									
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up	
1	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 102.3 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	
All other dwellings	individual water tank (no. 1)	Tank size (min) 2000 litres	To collect run-off from at least: 89.7 square metres of roof area; 0 square metres of garden and lawn area;	yes	yes	-	-	-	

(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.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.		✓	✓
(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".		✓	

Dwelling no.	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry
All dwellings	solar (electric boosted) not specified	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		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
1	-	-	-	-	3	1	yes	yes	yes	yes	0	no
2	-	-	-	-	4	1	yes	yes	yes	yes	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	electric cooktop & electric oven	-	no	3 star	-	-	-	-

(iii) Thermal Comfort	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.			

(iii) Thermal Comfort		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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: (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.		✓	✓	✓

Thermal loads		
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
1	26.7	16.3
All other dwellings	45.9	26.3

(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.	✓	✓	✓

9. 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.	✓	✓	✓

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).

