THERMAL ENVIRONMENTAL

ECOSYSTEM ARCHITECTURE

68E Caledonia Street, Paddington

Alteration and Additions BASIX Assessment Report

Report No: S-R2021081900

19th August 2021

REVISION STATUS

Report No	S-R2021081900	Revision	[00]	Date	19/08/2021

Revision	Description of Revision	Date	Checked	Approved
00	Alteration and Addition BASIX Assessment	19/08/2021	-	AA

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1. INTRODUCTION

This report has been prepared by Thermal Environmental for Ecosystem Architecture in regards to achieving regulatory compliance for Water and Energy using BASIX Alteration and Additions of an existing dwelling located at 68E Caledonia Street, Paddington NSW

The proposed alterations and additions consist of construction of a new basement floor, an attic level and internal modifications on Ground and Level 1. The main structure of the new construction is cross laminated timber with cladding for walls, roof and roof top garden. For further details on Architectural documentation refer to Appendix A.

2. BASIX ALETRATIONS AND ADDITIONS

The thermal performance of the proposed alteration has been evaluated using Alterations and Additions BASIX tool for regulatory compliance. The thermal performance of the building envelope and its services is detailed in section 2.1.

2.1 BASIX COMMITMENTS

The building fabric and glazing minimum performance specifications to achieve BASIX compliance is described in Table 1.

Table 1: BASIX Commitments – Building Envelope

Element	Material	Detail
External walls	Concrete blockwork / Plasterboard	Insulation: R2.18 (or Total R-value of R1.70 including construction)
	Structural Panel – CLT timber with CFC cladding	R1.25 including construction
Slab Edge	Concrete floor	Insulation R 1.0 – where in In slab heating system is nominated.
Internal walls	• Plasterboard • Concrete blockwork	nil
Floors	CLT Floor	nil
All Windows	Timber or uPVC or similar	Window System: • U-value 3.99 • SHGC 0.4
	Shading device	As per Plans & Elevations
Skylight	Single Clear	System performance: • U-value 6.21 • SHGC 0.808
Roof	Raked Ceiling / Flat Ceiling	Roof insulation – foil blanket – 55 mm
		Light colour – 0.475 – 0.7 (medium solar absorptance)
Ceilings	Plasterboard	No insulation

Table 2 summarises the building services minimum performance to meet BASIX compliance.

Table 2: BASIX Commitments – Building Services

Fixtures and Systems	Services	Detail
Lighting	Electrical	Minimum – 40% of new or altered fixtures to be Fluorescent, CFL or LEDs
Fixtures	Hydraulics	• Shower heads – Flow rate no greater than 9 L/min or 3 Strs WELS rating • Toilet - Flow rate no greater than 4 L per flush or minimum 3 Star WELS rating • Taps – Flow rate no greater than 9 L/min or minimum 3 Stars WELS rating

For further details on commitments refer to Appendix B of this report.

2.2 BUILDING FABRIC THERMAL INSULATION

All insulation must be installed as per the relevant / applicable BCA and relevant Australian Standards.

2.3 BUILDING SERVICES

The design, location and insulation of all services must be installed as per the relevant/applicable BCA.

2.4 AIR LEAKAGE AND INFILTRATION

Energy Efficiency provisions for Class 1 Building Part 3.12 of the NCC in NSW are covered under NSW State Variations. The relevant clause and NSW State Variation is -

NSW P2.6.1(b) Building Sealing. This clause requires:

- A building must have to the degree necessary, a level of building sealing against air leakage to facilitate the efficient use of energy for artificial heating and cooling appropriate to –
    - The function and use of the building; and
    - Internal environment; and
    - The geographic location of the building

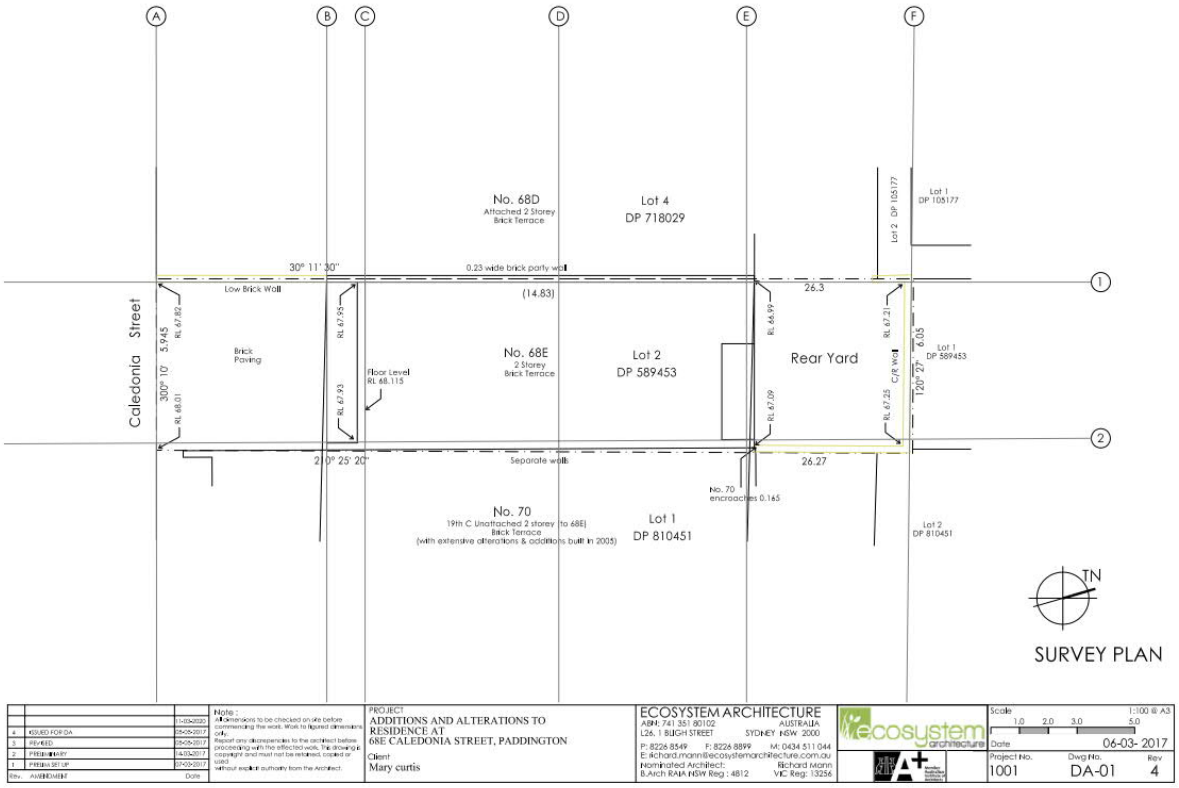
3. CONCLUSION

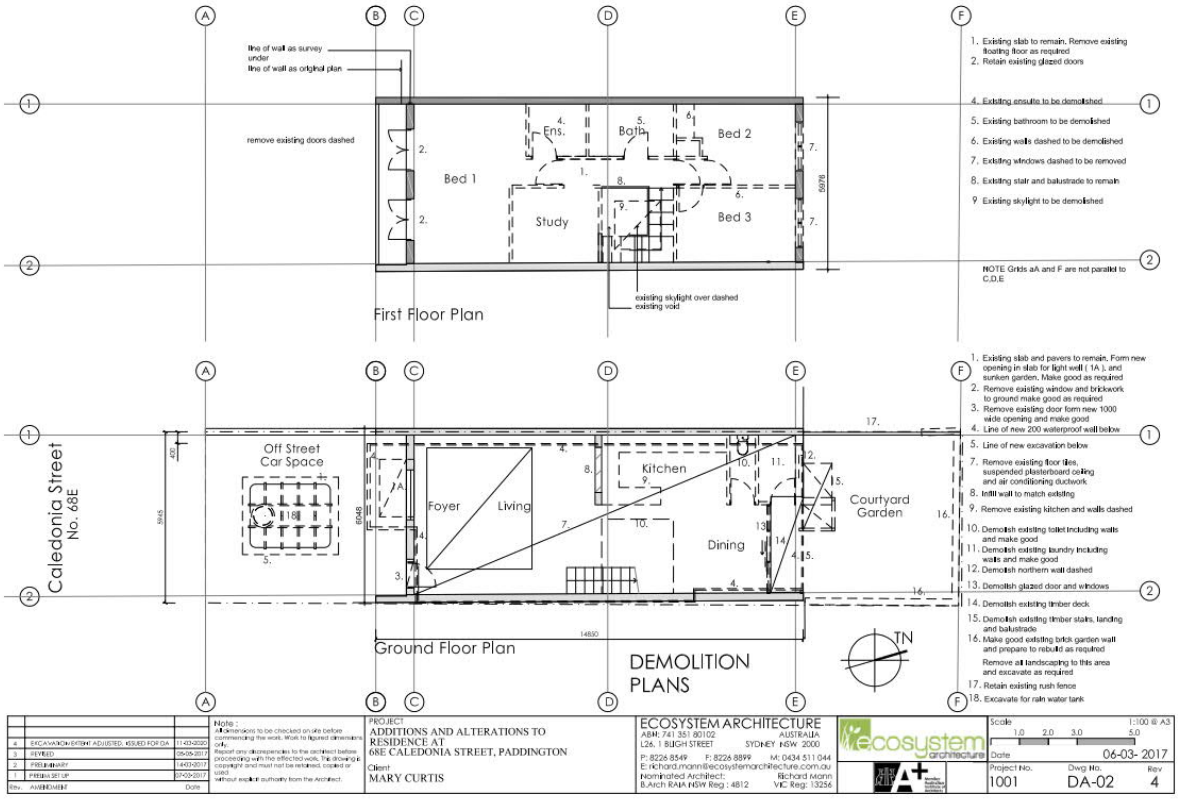
With the commitment recommendations contained within this report the proposed development is able to meet BASIX requirements and is BASIX compliant.

For further details, please refer to the BASIX Certificate No. A369916_02 provided in Appendix B.

APPENDIX A - ARCHITECTURAL DRAWINGS AND DOCUMENTATION

The assessment carried out in this report was based on the following architectural drawings supplied by Ecosystem Architecture




line of wall as survey
under
line of wall as original plan
remove existing doors dashed
Bed 1
Ens.
Bath
Bed 2
Study
Bed 3
existing skylight over dashed
existing void
First Floor Plan
1. Existing slab to remain. Remove existing floating floor as required
2. Retain existing glazed doors
4. Existing ensuite to be demolished
5. Existing bathroom to be demolished
6. Existing walls dashed to be demolished
7. Existing windows dashed to be removed
8. Existing stair and balustrade to remain
9. Existing skylight to be demolished
NOTE Grids aA and F are not parallel to C,D,E
Caledonia Street
No. 68E
Off Street
Car Space
Foyer
Living
Kitchen
Dining
Courtyard
Garden
TN
Ground Floor Plan
DEMOLITION
PLANS
1. Existing slab and pavers to remain. Form new opening in slab for light well (1A), and sunken garden. Make good as required
2. Remove existing window and brickwork to ground make good as required
3. Remove existing door form new 1000 wide opening and make good
4. Line of new 200 waterproof wall below
5. Line of new excavation below
7. Remove existing floor tiles, suspended plasterboard ceiling and air conditioning ductwork
8. Infill wall to match existing
9. Remove existing kitchen and walls dashed
10. Demolish existing toilet including walls and make good
11. Demolish existing laundry including walls and make good
12. Demolish northern wall dashed
13. Demolish glazed door and windows
14. Demolish existing timber deck
15. Demolish existing timber stairs, landing and balustrade
16. Make good existing brick garden wall and prepare to rebuild as required
Remove all landscaping to this area and excavate as required
17. Retain existing rush fence
18. Excavate for rain water tank
Note :
All dimensions to be checked on site before commencing the work. Work to figured dimensions only.
Report any discrepancies to the architect before proceeding with the effected work. This drawing is copyright and must not be retained, copied or used without explicit authority from the Architect.
PROJECT
ADDITIONS AND ALTERATIONS TO RESIDENCE AT 68E CALEDONIA STREET, PADDINGTON
Client
MARY CURTIS
ECOSYSTEM ARCHITECTURE
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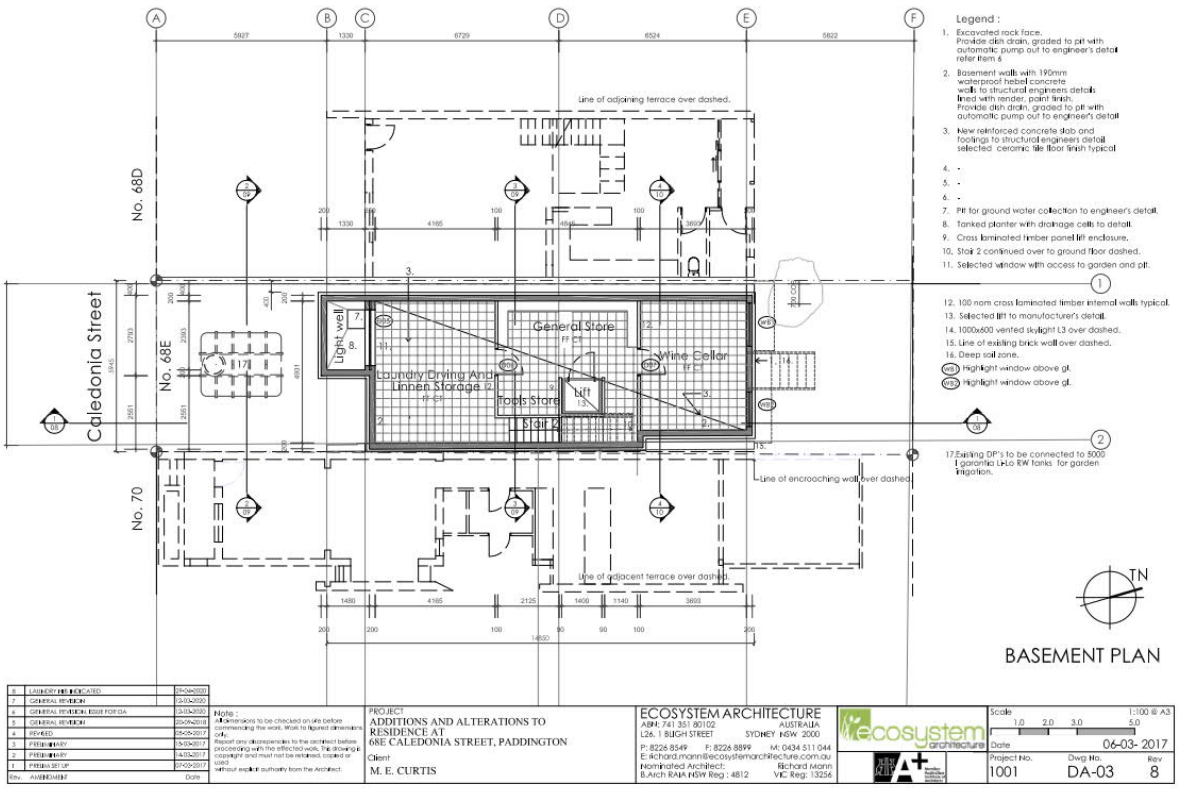
Nominated Architect: Richard Mann
B.Arch RAIA NSW Reg : 4812 VIC Reg: 13256
ecosystem architecture
Scale 1:100 @ A3
1.0 2.0 3.0 5.0
Date 06-03- 2017
Project No. 1001
Dwg No. DA-02
Rev 4


Legend :
1. Excavated rock face. Provide dish drain, graded to pit with automatic pump out to engineer's detail refer item 6
2. Basement walls with 190mm waterproof hebel concrete walls to structural engineers details lined with render, paint finish. Provide dish drain, graded to pit with automatic pump out to engineer's detail
3. New reinforced concrete slab and footings to structural engineers detail. selected ceramic tile floor finish typical
4. -
5. -
6. -
7. Pit for ground water collection to engineer's detail.
8. Tanked planter with drainage cells to detail.
9. Cross laminated timber panel lift enclosure.
10. Stair 2 continued over to ground floor dashed.
11. Selected window with access to garden and pit.
12. 100 nom cross laminated timber internal walls typical.
13. Selected lift to manufacturer's detail.
14. 1000x600 vented skylight L3 over dashed.
15. Line of existing brick wall over dashed.
16. Deep soil zone.
17. Existing DP's to be connected to 5000 l garantia Hi-Lo RW tanks for garden irrigation.
Line of adjoining terrace over dashed.
Line of encroaching wall over dashed.
Line of adjacent terrace over dashed.
No. 68D
No. 68E
No. 70
Caledonia Street
General Store
Wine Cellar
Laundry Drying And Linen Storage
Tools Store
Light well
Stair 2
lift
TN
BASEMENT PLAN
PROJECT
ADDITIONS AND ALTERATIONS TO RESIDENCE AT 68E CALEDONIA STREET, PADDINGTON
Client
M. E. CURTIS
ECOSYSTEM ARCHITECTURE
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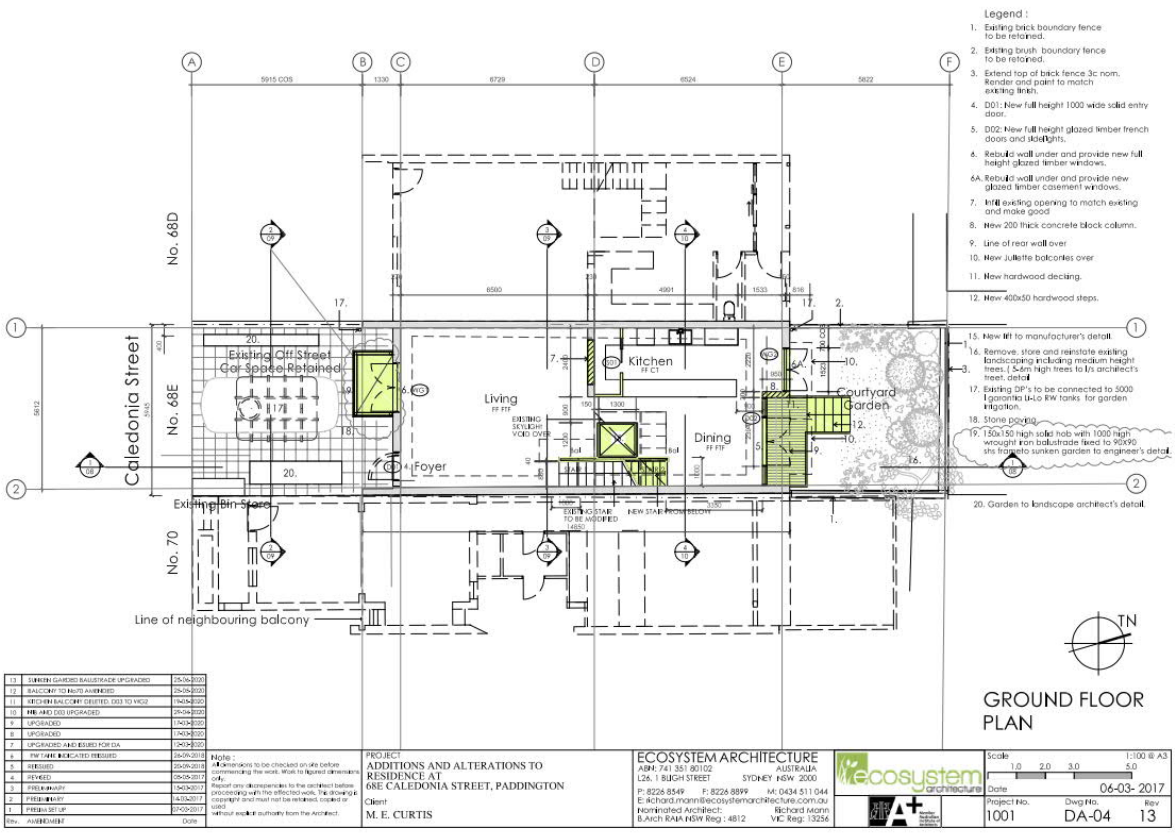
Date 06-03- 2017
Project No. 1001
Dwg No. DA-03
Rev 8



Rev.	AMENDMENT	Date
13	SUNKEN GARDEN BALUSTRADE UPGRADED	25-06-2020
12	BALCONY TO N&S AMENDED	25-06-2020
11	KITCHEN BALCONY DELETED, D03 TO W02	19-05-2020
10	WE AMD D03 UPGRADED	29-04-2020
9	UPGRADED	14-04-2020
8	UPGRADED	14-04-2020
7	UPGRADED AND ISSUED FOR DA	12-03-2020
6	PW TANK INDICATED REQUIRED	26-09-2018
5	REISSUED	25-09-2018
4	REVISED	26-05-2017
3	PRELIMINARY	15-03-2017
2	PRELIMINARY	14-03-2017
1	PRELIM SET UP	07-03-2017

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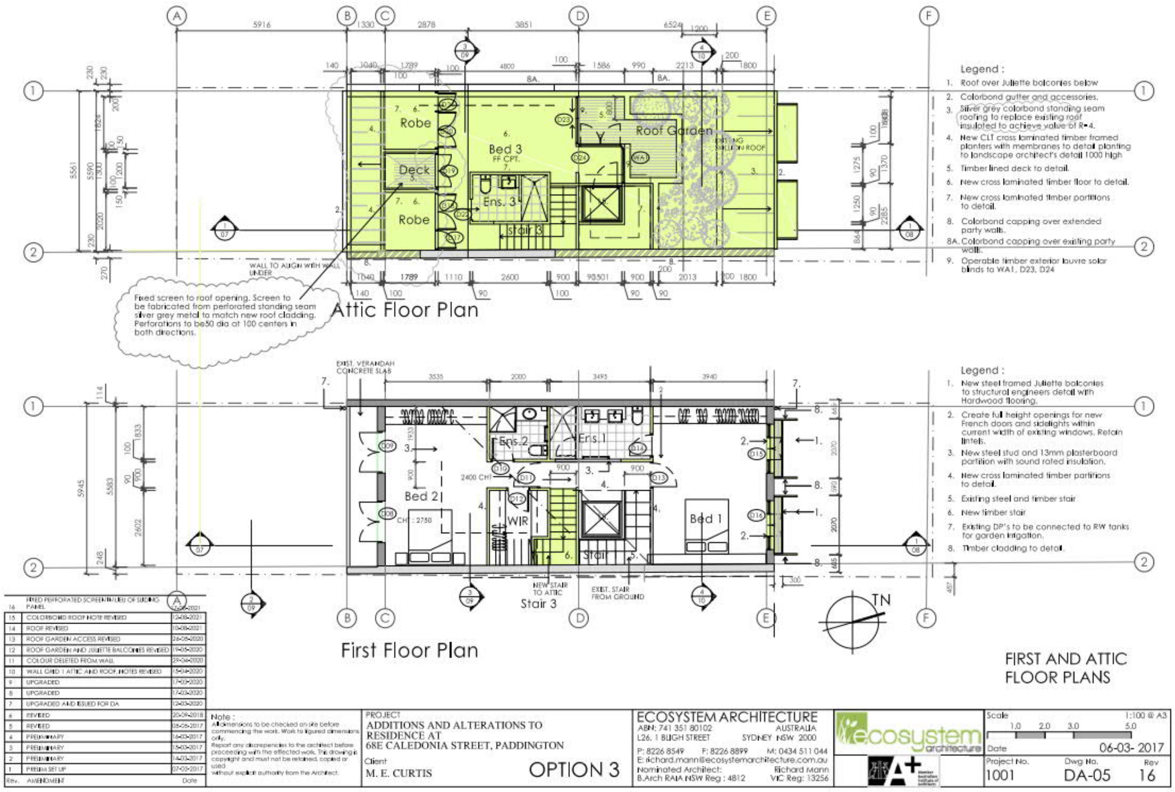
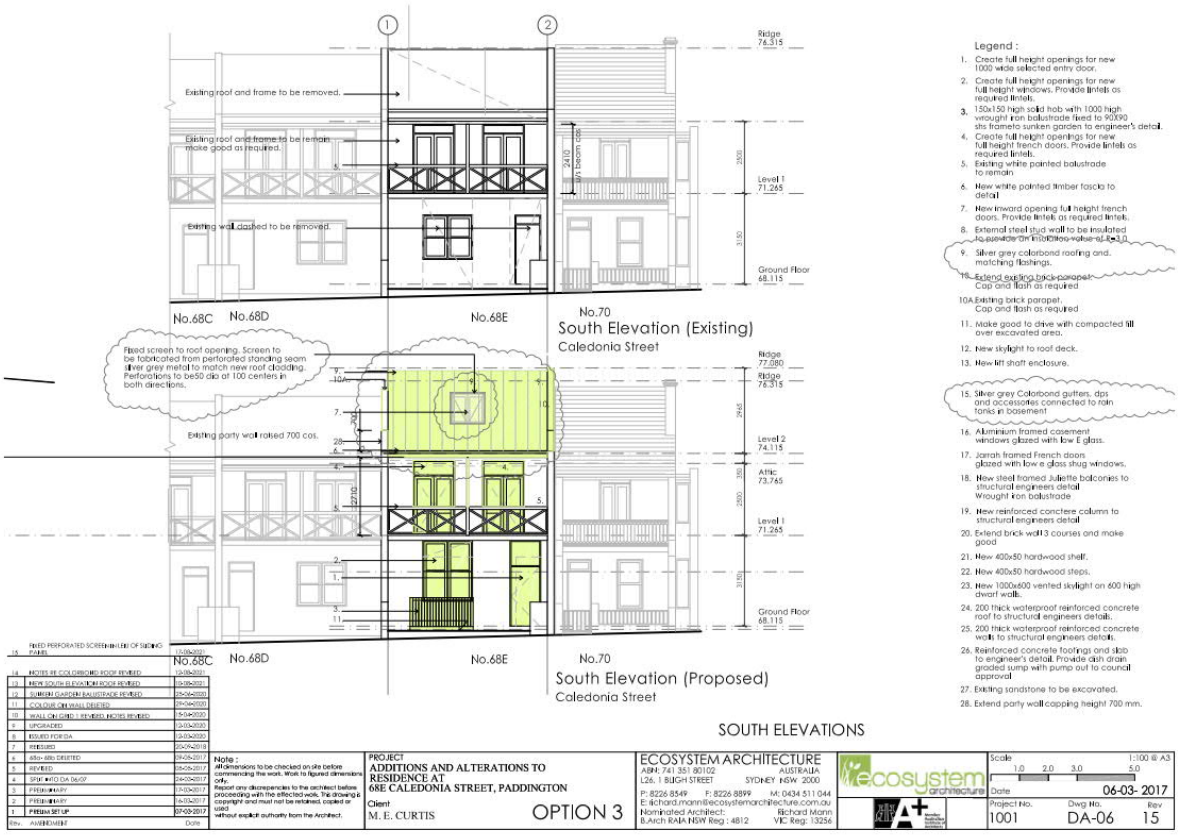

Attic Floor Plan
First Floor Plan
FIRST AND ATTIC FLOOR PLANS
ECOSYSTEM ARCHITECTURE
ADDITIONS AND ALTERATIONS TO RESIDENCE AT 68E CALEDONIA STREET, PADDINGTON
M. E. CURTIS
OPTION 3
06-03- 2017
1001
DA-05
16



Legend :

1. Create full height openings for new 1000 wide selected entry door.
2. Create full height openings for new full height windows. Provide lintels as required lintels.
3. 150x150 high solid hob with 1000 high wrought iron balustrade fixed to 90X90 shs frame to sunken garden to engineer's detail.
4. Create full height openings for new full height french doors. Provide lintels as required lintels.
5. Existing white painted balustrade to remain.
6. New white painted timber fascia to detail
7. New inward opening full height french doors. Provide lintels as required lintels.
8. External steel stud wall to be insulated to provide an R value of R=3.0
9. Silver grey colorbond roofing and matching flashings.
10. Extend existing brick parapet. Cap and flash as required
10A. Existing brick parapet. Cap and flash as required
11. Make good to drive with compacted fill over excavated area.
12. New skylight to roof deck.
13. New lift shaft enclosure.
15. Silver grey Colorbond gutters, dps and accessories connected to rain tanks in basement
16. Aluminium framed casement windows glazed with low E glass.
17. Jarrah framed French doors glazed with low e glass shug windows.
18. New steel framed Juliette balconies to structural engineers detail Wrought iron balustrade
19. New reinforced concrete column to structural engineers detail
20. Extend brick wall 3 courses and make good
21. New 400x50 hardwood shelf.
22. New 400x50 hardwood steps.
23. New 1000x600 vented skylight on 600 high dwarf walls.
24. 200 thick waterproof reinforced concrete roof to structural engineers details.
25. 200 thick waterproof reinforced concrete walls to structural engineers detail.
26. Reinforced concrete footings and slab to engineer's detail. Provide dish drain graded sump with pump out to council approval
27. Existing sandstone to be excavated.
28. Extend party wall capping height 700 mm.

Rev.	AMENDMENT	Date
15	FIXED PERFORATED SCREEN in LIEU OF Sliding PANEL	17-06-2021
14	NOTES RE COLORBOND ROOF REVISED	28-06-2021
13	NEW SOUTH ELEVATION ROOF REVISED	25-06-2020
12	SUNKEN GARDEN BALUSTRADE REVISED	25-06-2020
11	COLOUR ON WALL DELETED	29-04-2020
10	WALL ON GRID 1 REVISED, NOTES REVISED	15-04-2020
9	UPGRADED	2-03-2020
8	ISSUED FOR DA	24-04-2020
7	REISSUED	20-09-2018
6	68a-68b DELETED	29-08-2017
5	REVISED	25-06-2017
4	SPW #FO DA 06/07	24-04-2017
3	PRELIMINARY	19-03-2017
2	PRELIMINARY	16-03-2017
1	PRELIM SET UP	07-03-2017

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PROJECT
ADDITIONS AND ALTERATIONS TO RESIDENCE AT 68E CALEDONIA STREET, PADDINGTON

Client
M. E. CURTIS

OPTION 3

ECOSYSTEM ARCHITECTURE
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Scale 1:100 @ A3
1.0 2.0 3.0 5.0
Date 06-03- 2017
Project No. 1001
Dwg No. DA-06
Rev 15


Elevation (Existing) (Rear) No.70
No.68E
No.68D
No.68C
No.68B
Elevation (Proposed) (Rear)
No.70
refer section 5/09.
Wine Cellar
No.68D
No.68C
No.68B
Legend :
1. New fc cladding on cross laminated timber framed planters.
2. New full height french doors. Provide lintels as required.
3. Silver grey zinc standing seam gable cladding with insulation.
4. Extend existing brick parapet. Cap and flash as required
4A. Existing brick parapet. Cap and flash as required
5. New skylight to roof deck to replace existing skylight.
6. New CLT lift shaft enclosure clad with fc sheeting.
7. Silver grey zinc standing seam roofing to replace existing roof insulated to achieve value of R=4.
8. Silver grey Colorbond gutters, dps and accessories connected to rain tanks in basement
9. Aluminium framed casement windows glazed with low E glass.
10. Timber framed casement windows glazed with low e glass
11. New steel framed Juliette balconies to structural engineers detail wrought iron balustrade and enclosed timber clad sides to detail
12. New reinforced concrete column to structural engineers detail
13. Extend brick wall 3 courses and make good
14. New 400x50 hardwood shelf.
15. New hardwood steps.
16. New highlight windows to drying room.
17. 200 thick waterproof reinforced concrete roof to structural engineers details.
18. 200 thick waterproof reinforced concrete walls to structural engineers details.
19. Reinforced concrete footings and slab to engineer's detail. Provide ash drain graded sump with pump out to council approval
20. Existing sandstone to be excavated.
21. New drying room beyond.
22. Operable timber exterior louvre solar blinds to WA1, D23, D24
ELEVATIONS NORTH
Rev. AMENDMENT Date
11 COLOUR EXTERIOR WALL AND DOO REVISED 09-04-2020
10 WALL ON GRID 1 REVISED, NOTES REVISED 5-04-2020
9 UPGRADED AND ISSUED FOR DA 3-04-2020
8 UPGRADED AND ISSUED FOR DA 3-04-2020
7 REVISED 20-09-2018
6 68A-4B DELETED 09-06-2017
5 REVISED 25-04-2017
4 NEW SHEET 24-04-2017
3 PRELIMINARY 19-03-2017
2 PRELIMINARY 16-03-2017
1 PRELIM SET UP 07-03-2017
12 JULIETTE BALCONIES AMD WC02 UPGRADED 9-05-2020
13 BALUSTRADE TO ROOF GARDEN ADDED 23-04-2020
14 BALUSTRADE TO ROOF GARDEN DELETED 28-04-2020
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ecosystem architecture
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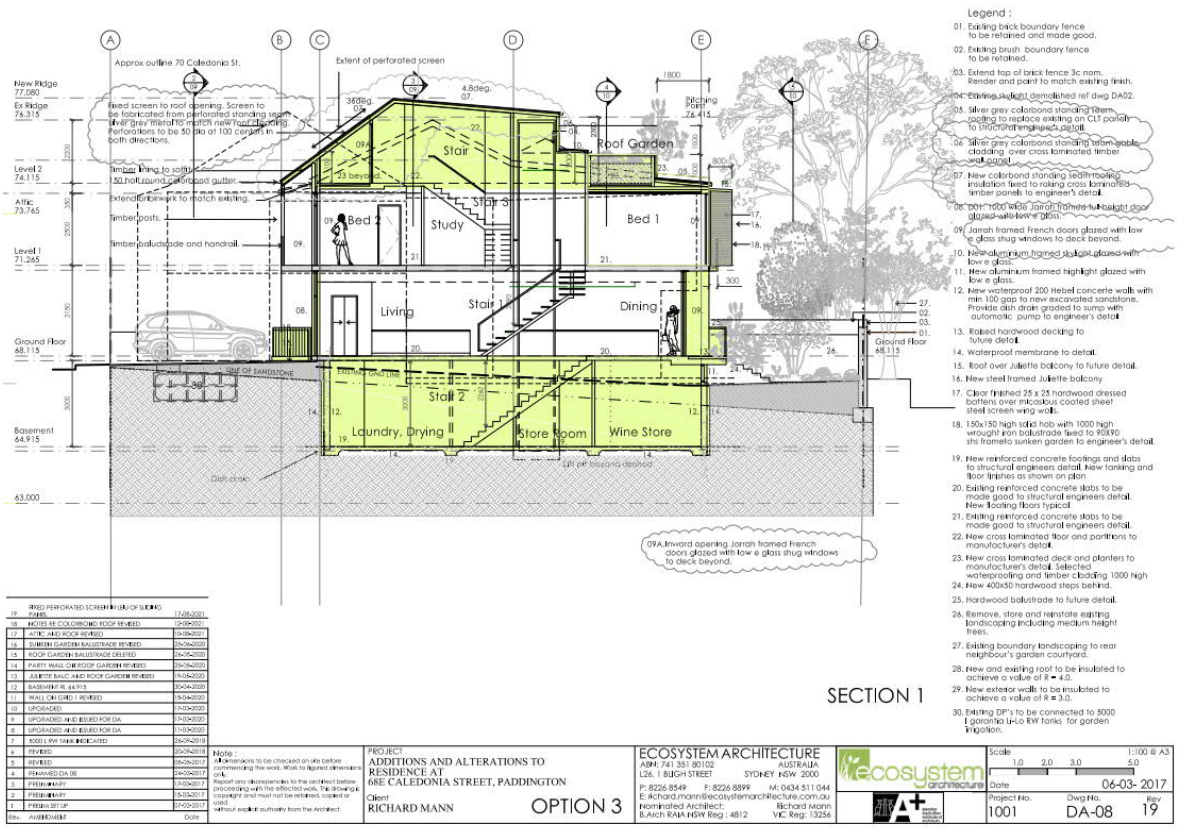
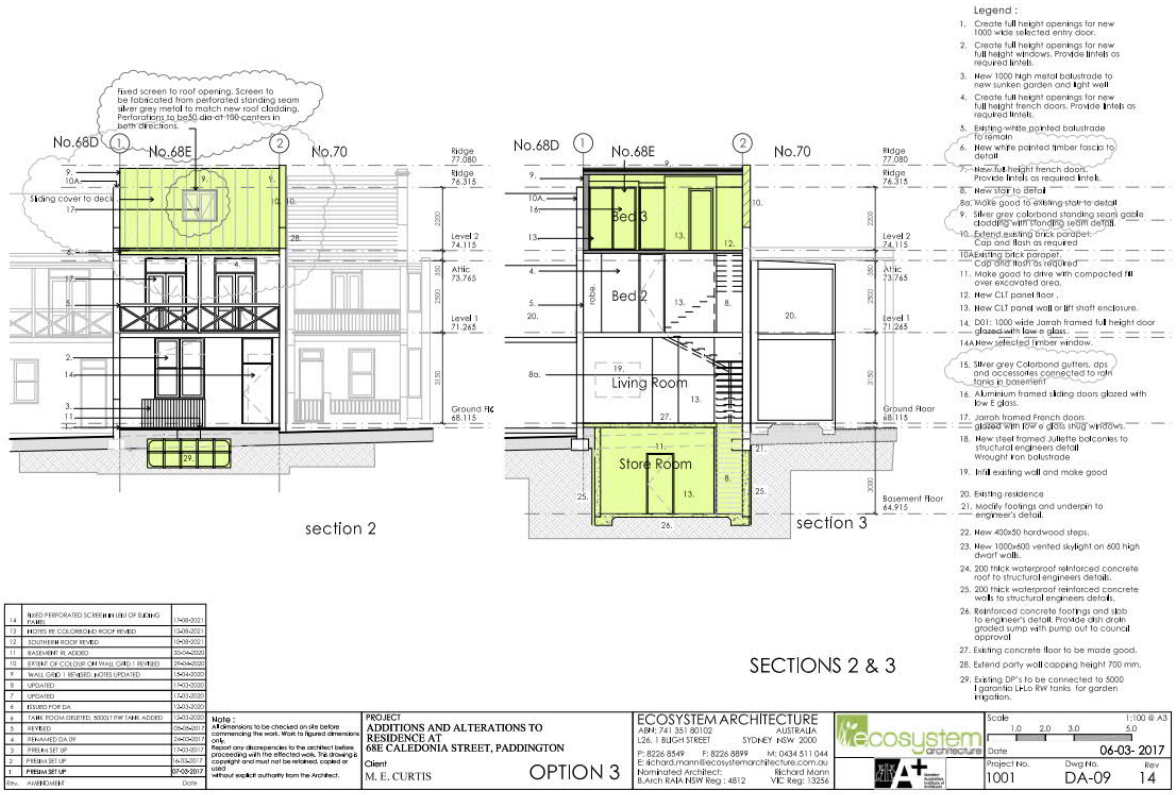
1.0 2.0 3.0 5.0
Date 06-03- 2017
Project No. 1001
Dwg No. DA-07
Rev 14



Rev.	AMENDMENT	Date
19	#3RD PERFORATED SCREEN IN LIEU OF SLIDING PANEL	17-08-2021
18	NOTES RE COLORBOND ROOF REVISED	12-08-2021
17	ATTIC AND ROOF REVISED	12-08-2021
16	SUNKEN GARDEN BALUSTRADE REVISED	26-06-2020
15	ROOF GARDEN BALUSTRADE DELETED	26-06-2020
14	PARTY WALL ON ROOF GARDEN REVISED	26-06-2020
13	JULIETTE BALC AND ROOF GARDEN REVISED	19-06-2020
12	BASEMENT RL 64.915	30-04-2020
11	WALL ON GRID I REVISED	16-04-2020
10	UPGRADED	14-03-2020
9	UPGRADED AND ISSUED FOR DA	13-03-2020
8	UPGRADED AND ISSUED FOR DA	1-03-2020
7	5000 L RW TANK INDICATED	26-09-2018
6	REVISED	25-09-2018
5	REVISED	28-06-2017
4	REMARKED DA 08	24-04-2017
3	PRELIMINARY	19-03-2017
2	PRELIMINARY	15-03-2017
1	PRELIM SET UP	07-03-2017


Fixed screen to roof opening. Screen to be fabricated from perforated standing seam silver grey metal to match new roof cladding. Perforations to be50 dia at 100 centers in both directions.
No.68D
No.68E
No.70
Sliding cover to deck
Ridge 77.080
Ridge 76.315
Level 2 74.115
Attic 73.765
Level 1 71.265
Ground Flo 68.115
section 2
No.68D
No.68E
No.70
Bed 3
Bed 2
robe
Living Room
Store Room
Ridge 77.080
Ridge 76.315
Level 2 74.115
Attic 73.765
Level 1 71.265
Ground Floor 68.115
Basement floor 64.915
section 3
Legend :
1. Create full height openings for new 1000 wide selected entry door.
2. Create full height openings for new full height windows. Provide lintels as required lintels.
3. New 1000 high metal balustrade to new sunken garden and light well.
4. Create full height openings for new full height french doors. Provide lintels as required lintels.
5. Existing white painted balustrade to remain.
6. New white painted timber fascia to detail.
7. New full height french doors. Provide lintels as required lintels.
8. New stair to detail.
8a. Make good to existing stair to detail.
9. Silver grey colorbond standing seam gable cladding with standing seam detail.
10. Extend existing brick parapet. Cap and flash as required
10A Existing brick parapet. Cap and flash as required
11. Make good to drive with compacted fill over excavated area.
12. New CLT panel floor.
13. New CLT panel wall or lift shaft enclosure.
14. DG1: 1000 wide Jarrah framed full height door glazed with low e glass.
14A New selected timber window.
15. Silver grey Colorbond gutters, dps and accessories connected to rain tanks in basement
16. Aluminium framed sliding doors glazed with low E glass.
17. Jarrah framed French doors glazed with low e glass snog windows.
18. New steel framed Juliette balconies to structural engineers detail. Wrought iron balustrade
19. Infill existing wall and make good
20. Existing residence
21. Modify footings and underpin to engineer's detail.
22. New 400x50 hardwood steps.
23. New 1000x600 vented skylight on 600 high dwarf walls.
24. 200 thick waterproof reinforced concrete roof to structural engineers details.
25. 200 thick waterproof reinforced concrete walls to structural engineers detail.
26. Reinforced concrete footings and slab to engineer's detail. Provide dish drain graded sump with pump out to council approval
27. Existing concrete floor to be made good.
28. Extend party wall capping height 700 mm.
29. Existing DP's to be connected to 5000 l garantia Lo-Lo RW tanks for garden irrigation.
SECTIONS 2 & 3
14 FIXED PERFORATED SCREEN IN LIEU OF SLIDING PANEL 14-03-2021
13 NOTES RE COLORBOND ROOF REVISED 12-03-2021
12 SOUTHERN ROOF REVISED 09-03-2021
11 BASEMENT RL ADDED 30-04-2020
10 EXTENT OF COLOUR ON Wall, GRID 1 REVISED 29-04-2020
9 WALL GRID 1 REVISED, NOTES UPDATED 15-04-2020
8 UPDATED 14-03-2020
7 UPDATED 13-03-2020
6 ISSUED FOR DA 12-03-2020
5 TANK ROOM DELETED, 5000LT PW TANK ADDED 12-03-2020
4 REVISED 06-06-2017
3 REVISED DA DP 29-05-2017
2 PRELIM SET UP 19-03-2017
1 PRELIM SET UP 16-03-2017
Rev. AMENDMENT Date
Note : All dimensions to be checked on site before commencing the work. Work to figured dimensions only. Report any discrepancies to the architect before proceeding with the effected work. This drawing is copyright and must not be retained, copied or used without explicit authority from the Architect.
PROJECT
ADDITIONS AND ALTERATIONS TO RESIDENCE AT 68E CALEDONIA STREET, PADDINGTON
Client
M. E. CURTIS
OPTION 3
ECOSYSTEM ARCHITECTURE
ABN: 741 351 80102 AUSTRALIA
L26, 1 BLIGH STREET SYDNEY NSW 2000
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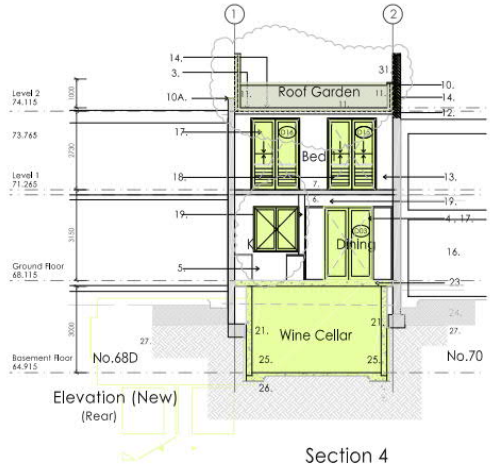
Scale 1:100 @ A3
1.0 2.0 3.0 5.0
Date 06-03- 2017
Project No. 1001
Dwg No. DA-09
Rev 14



Section 4

Legend :

1. Excavate as required.
2. Create full height openings for new full height windows. Provide lintels as required lintels.
3. New 1000 high metal balustrade to new sunken garden and light well
4. Create full height openings for new full height french doors. Provide lintels as required lintels.
5. New kitchen.
6. New ceiling and ac ductwork.
7. Existing floor to remain, make good.
8. Excavate, underpin and trim footings as required
9. Silver grey zinc standing seam gable cladding with standing seam detail.
10A Existing brick parapet. Cap and flash as required
10. Extend existing brick parapets. Cap and flash as required
11. Selected lining on battens
12. New CLT panel floor and decks .
13. New CLT panel wall or lift shaft enclosure.
14. New CLT framed planters with waterproof linings graded to outlets
15. Silver grey Colorbond gutters, dps and accessories connected to rain tanks in basement
16. Aluminium framed casement windows glazed with low E glass.
17. Jarrah framed French doors glazed with low e glass shug windows.
18. New steel framed Juliette balconies to structural engineers detail Wrought iron ballustrade
19. New reinforced concrete column to engineer's detail
20. Existing residence
21. Modify footings and underpin to engineer's detail.
22. New 400x50 hardwood steps.
23. Make good to reinforced concrete floor slab to engineer's detail.
24. 200 thick waterproof reinforced concrete roof to structural engineers details.
25. 200 thick waterproof reinforced concrete walls to structural engineers details.
26. Reinforced concrete footings and slab to engineer's detail. Provide dish drain graded sump with pump out to council approval
27. Existing concrete floor to be made good.
28. reinstate landscape to landscape architect's detail.
29. Make good to rush fence.
30. Extend back fence by 3 courses and make good.
31. Extend brick parapet as specified.

SECTION 4

12	KITCHEN WINDOW AND TERRACE REVISED	26-07-2020
11	PARTY WALL AND BALUSTRADE REVISED	06-06-2020
10	BASEMENT RL ADDED	20-04-2020
9	WALL CHD 1 REVISED, GENERAL UPGRADE	15-04-2020
8	UPGRADED	7-04-2020
7	UPGRADED	7-03-2020
6	ISSUED FOR DA	13-03-2020
5	REVISED AND SECTION 5 DELETED	25-09-2017
4	REVISED	25-05-2017
3	PRAMED DA 10	24-04-2017
2	PRELIMINARY	13-03-2017
1	PRELIM SET UP	07-03-2017
Rev.	AMENDMENT	Date

Note :
All dimensions to be checked on site before commencing the work. Work to figured dimensions only.
Report any discrepancies to the architect before proceeding with the effected work. This drawing is copyright and must not be retained, copied or used without explicit authority from the Architect.

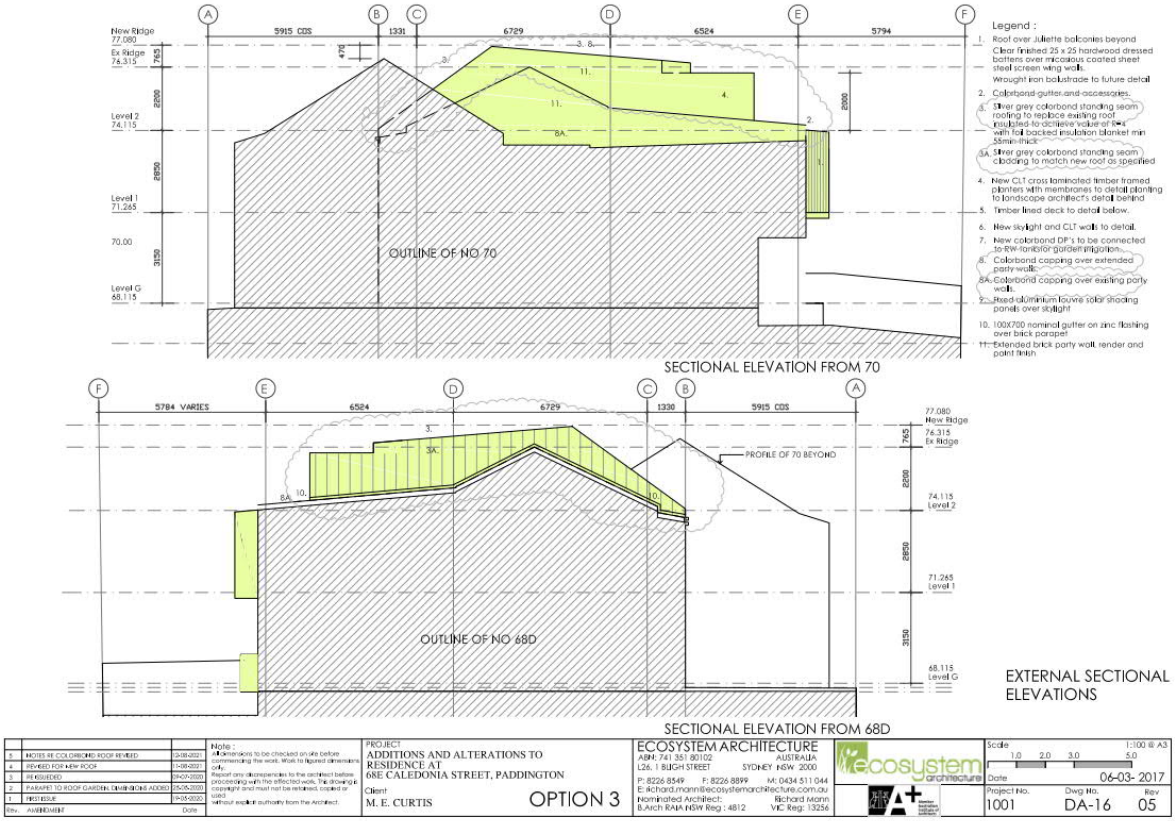
PROJECT
ADDITIONS AND ALTERATIONS TO RESIDENCE AT 68E CALEDONIA STREET, PADDINGTON

Client
M. E. CURTIS

ECOSYSTEM ARCHITECTURE
ABN: 741 351 80102 AUSTRALIA
L26, 1 BLIGH STREET SYDNEY NSW 2000
P: 8226 8549 F: 8226 8899 M: 0434 511 044
E: richard.mann@ecosystemarchitecture.com.au
Nominated Architect: Richard Mann
B.Arch RAIA NSW Reg : 4812 VIC Reg: 13256

ecosystem architecture

Scale 1:100 @ A3
1.0 2.0 3.0 5.0
Date 06-03- 2017
Project No. 1001
Dwg No. DA-10
Rev 12



5	NOTES RE COLORBOND ROOF REVISED	24-08-2021
4	REVISED FOR NEW ROOF	1-08-2021
3	REISSUED	29-07-2020
2	PARAPET TO ROOF GARDEN, DIMENSIONS ADDED	25-05-2020
1	PRETISSUE	9-05-2020
Rev.	AMENDMENT	Date

Note :
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PROJECT
ADDITIONS AND ALTERATIONS TO RESIDENCE AT
68E CALEDONIA STREET, PADDINGTON
Client
M. E. CURTIS
OPTION 3

ECOSYSTEM ARCHITECTURE
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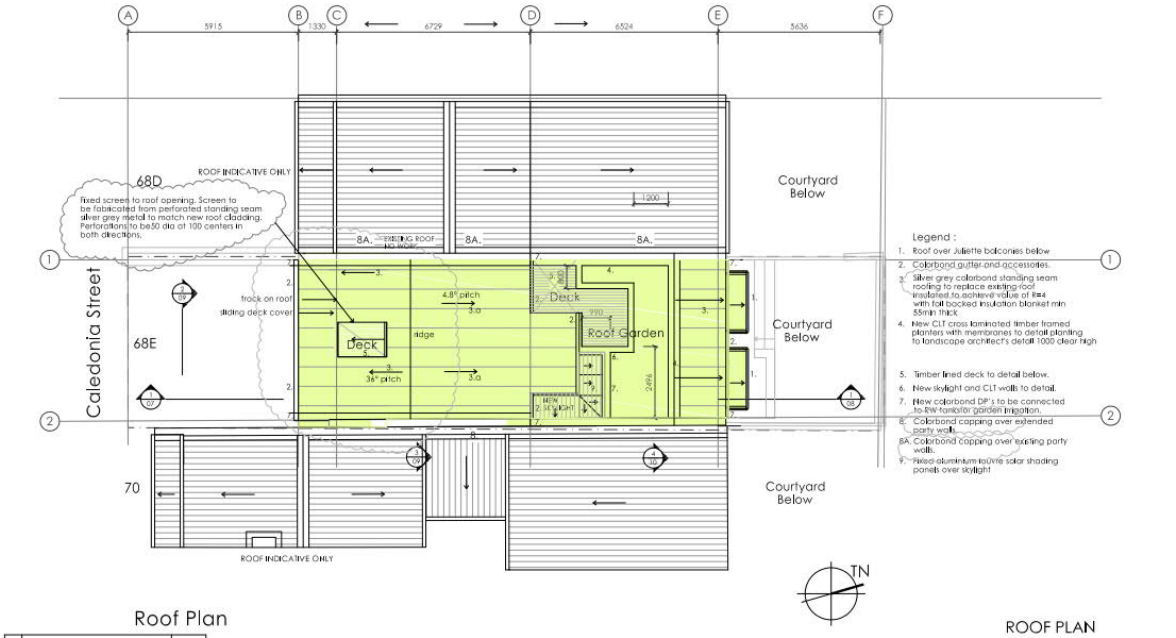
1.0 2.0 3.0 5.0
Date 06-03- 2017
Project No. 1001
Dwg No. DA-16
Rev 05



Roof Plan

ROOF PLAN

Rev.	AMENDMENT	Date
6	[illegible] PERFORATED SCREEN IN LIEU OF SIDING	15-08-2021
5	NOTES RE COLORBOND REVISED	24-08-2021
4	SOUTH ROOF REVISED	16-08-2021
3	PLANTER BALUSTRADE REVISED	26-05-2020
2	PLANTER PARAPETS AND BALUSTRADE REVISED	25-05-2020
1	PRETISSUE	14-05-2020

Note : All dimensions to be checked on site before commencing the work. Work to figured dimensions only. Report any discrepancies to the architect before proceeding with the effected work. This drawing is copyright and must not be retained, copied or used without explicit authority from the Architect.

PROJECT
ADDITIONS AND ALTERATIONS TO RESIDENCE AT
68E CALEDONIA STREET, PADDINGTON

Client
M. E. CURTIS

OPTION 3

ECOSYSTEM ARCHITECTURE
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P: 8226 8549 F: 8226 8899 M: 0434 511 044
E: richard.mann@ecosystemarchitecture.com.au
Nominated Architect: Richard Mann
B.Arch RAIA NSW Reg : 4812 VIC Reg: 13256

Scale 1:100 @ A3 (1.0 2.0 3.0 5.0)
Date 06-03- 2017
Project No. 1001
Dwg No. DA-15
Rev 06

APPENDIX B - BASIX CERTIFICATE

BASIX® Certificate

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

Alterations and Additions

Certificate number: A369916_02

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 Alterations and Additions Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary
Date of issue: Thursday, 19, August 2021
To be valid, this certificate must be lodged within 3 months of the date of issue.

NSW | Planning, Industry & Environment

Description of project

Project address	
Project name	68E Caledonia Street Paddington_02
Street address	68E Caledonia Street Paddington 2021
Local Government Area	Woollahra Municipal Council
Plan type and number	Deposited Plan DP589453
Lot number	2
Section number	
Project type	
Dwelling type	Attached dwelling house
Type of alteration and addition	My renovation work is valued at $50,000 or more, and does not include a pool (and/or spa).

Certificate Prepared by (please complete before submitting to Council or PCA)
Name / Company Name: Thermal Environmental Engineering
ABN (if applicable): 166914441

Fixtures and systems	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Lighting			
The applicant must ensure a minimum of 40% of new or altered light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Fixtures			
The applicant must ensure new or altered showerheads have a flow rate no greater than 9 litres per minute or a 3 star water rating.		✓	✓
The applicant must ensure new or altered toilets have a flow rate no greater than 4 litres per average flush or a minimum 3 star water rating.		✓	✓
The applicant must ensure new or altered taps have a flow rate no greater than 9 litres per minute or minimum 3 star water rating.		✓	

Construction	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Insulation requirements			
The applicant must construct the new or altered construction (floor(s), walls, and ceilings/roofs) in accordance with the specifications listed in the table below, except that a) additional insulation is not required where the area of new construction is less than 2m2, b) insulation specified is not required for parts of altered construction where insulation already exists.	✓	✓	✓

Construction	Additional insulation required (R-value)	Other specifications
concrete slab on ground floor with in-slab heating system.	R1.00 (slab edge)	in-slab heating system
suspended floor with enclosed subfloor: concrete (R0.6).	R0.70 (down) (or R1.30 including construction)	
floor above existing dwelling or building.	nil	
external wall: structural panel system	R1.25 (including construction)	
external wall: concrete block/plasterboard	R1.18 (or R1.70 including construction)	
raked ceiling, pitched/skillion roof: structural panel >125 mm	ceiling: nil (up), roof: foil backed blanket (55 mm)	light (solar absorptance < 0.475)
flat ceiling, flat roof: structural panel >125 mm	ceiling: nil (up), roof: foil backed blanket (55 mm)	medium (solar absorptance 0.475 - 0.70)

Glazing requirements	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Windows and glazed doors			
The applicant must install the windows, glazed doors and shading devices, in accordance with the specifications listed in the table below. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The following requirements must also be satisfied in relation to each window and glazed door:		✓	✓
Each window or glazed door with improved frames, or pyrolytic low-e glass, or clear/air gap/clear glazing, or toned/air gap/clear glazing must have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below. Total system U-values and SHGCs must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. The description is provided for information only. Alternative systems with complying U-value and SHGC may be substituted.		✓	✓
For projections described in millimetres, the leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 mm above the head of the window or glazed door and no more than 2400 mm above the sill.	✓	✓	✓
Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.		✓	✓
External louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed.		✓	✓
Pergolas with fixed battens must have battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window. The spacing between battens must not be more than 50 mm.		✓	✓
Overshadowing buildings or vegetation must be of the height and distance from the centre and the base of the window and glazed door, as specified in the 'overshadowing' column in the table below.	✓	✓	✓

Windows and glazed doors glazing requirements

Window / door no.	Orientation	Area of glass inc. frame (m2)	Overshadowing		Shading device	Frame and glass type
			Height (m)	Distance (m)		
D02	N	9	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)
WG2	N	2.4	0	0	eave/verandah/pergola/balcony >=450 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)
WG1	S	5.1	0	0	eave/verandah/pergola/balcony >=900 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)

Glazing requirements							Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Window / door no.	Orientation	Area of glass inc. frame (m2)	Overshadowing		Shading device	Frame and glass type			
			Height (m)	Distance (m)					
D08	S	6.72	0	0	eave/verandah/pergola/balcony >=900 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
D09	S	6.72	0	0	eave/verandah/pergola/balcony >=900 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
D15	N	7.68	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
D16	N	7.68	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
D17	S	1.8	0	0	eave/verandah/pergola/balcony >=900 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
WA1	N	2.76	0	0	external louvre/blind (adjustable)	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
D23	N	4.14	0	0	external louvre/blind (adjustable)	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
D24	W	3.75	0	0	external louvre/blind (adjustable)	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
WB1	N	0.72	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
WB2	N	0.72	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
D05	S	5.4	3	1.35	none	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
D18	S	3.3	0	0	eave/verandah/pergola/balcony >=900 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			
D19	S	3	0	0	eave/verandah/pergola/balcony >=900 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)			

Glazing requirements	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check

Window / door no.	Orientation	Area of glass inc. frame (m2)	Overshadowing		Shading device	Frame and glass type
			Height (m)	Distance (m)		
D20	S	3.3	0	0	eave/verandah/pergola/balcony >=900 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)
D21	S	1.8	0	0	eave/verandah/pergola/balcony >=900 mm	timber or uPVC, single pyrolytic low-e, (U-value: 3.99, SHGC: 0.4)

Skylights

The applicant must install the skylights in accordance with the specifications listed in the table below.	✓	✓	✓
The following requirements must also be satisfied in relation to each skylight:		✓	✓
Each skylight may either match the description, or, have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below.		✓	✓
External awnings and louvres must fully shade the skylight above which they are situated when fully drawn or closed.		✓	✓

Skylights glazing requirements

Skylight number	Area of glazing inc. frame (m2)	Shading device	Frame and glass type
L3 New SL	2.88	external fixed louvre	aluminium, moulded plastic single clear, (or U-value: 6.21, SHGC: 0.808)

Legend
In these commitments, "applicant" means the person carrying out the development.
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).
Commitments identified with a "✓" in the "Show on CC/CDC plans & specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
Commitments identified with a "✓" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate for the development may be issued.