

DRAWING LIST	
	Sheet Name
AR.DA. 0000	SITE AND ROOF PLAN
AR.DA. 0001	PERSPECTIVE VIEWS
AR.DA. 0100	(E) GROUND AND FIRST FLOOR
AR.DA. 1100	PROPOSED GROUND AND FIRST FLOOR PLAN
AR.DA. 3000	(N) ELEVATIONS
AR.DA. 3100	(N) SECTIONS
AR.DA. 3200	DOOR SCHEDULE
AR.DA. 3201	WINDOW SCHEDULE
AR.DA. 7000	SUN SHADOWS STUDIES
AR.DA. 4000	EXTERNAL FINISHES

CLIENT  
JUDY HSU &  
CHRIS HUDSON

DESIGN ARCHITECT  
R SQUARED STUDIOS

PLANNER  
VMDC PLANNING

LANDSCAPE CONSULTANT  
TCGD

SURVEYOR  
DONOVAN ASSOCIATES

STRUCTURAL & HYDRAULIC ENGINEER  
BMY BUILDING CONSULTANTS

ENERGY CONSULTANT  
GREEN FUTURE GROUP

Rev	Date	Description	Drawn	Auth.
P1	9.11.2023	ISSUE FOR COORDINATION	TI	RR
P2	28.11.2023	ISSUE FOR COORDINATION	TI	RR
P3	1.12.2023	ISSUE FOR COORDINATION	TI	RR
A	20.12.2023	ISSUE FOR DA	TI	RR
B	25.03.2024	ISSUE FOR DA	TI	RR

LEGEND

Proj. Arch  
RR  
Date  
MAR' 2024

Drawn  
TI  
Scale  
1 : 100

Do not scale drawings. Verify All dimensions on site. Notify architect of all discrepancies.

Project  
FRESHWATER HOUSE

31 Kooloora Avenue, Freshwater

Drawing Title  
SITE AND ROOF PLAN

Drawing No.  
AR.DA. 0000

Project Architect

Revision  
B

R Squared Studios Pty Ltd  
contact@r2studios.com.au  
www.r2studios.com.au







1 3D View 1

3 3D View 3



2 3D View 2



Job No.	Revision	Notes	Date
Hsu & Hudson	A	NathERS & BASIX Assessment	22/12/2023
Thermal Comfort Specifications			
Glazing: Doors/windows	Default codes modelled which are not brand specific. You can use any brand/manufacturer and type of glass and frame; these are maximum U-values, and there is a flexibility of +/- 10% (as stated below) with the SHGC value. Group A – bifold and casement doors: PVC-005-01: U-Value: 2.60 (equal to or lower than) SHGC: 0.50 (±10%) Group B – sliding doors/windows + fixed glazing: PVC-006-01: U-Value: 2.60 (equal to or lower than) SHGC: 0.53 (±10%) Given values are AFRC, total window system values (glass and frame)		
Skylights	Double glazed with timber or aluminium frame		
Roof	Concrete roof with waterproof membrane Colour: Light (0.475<SA)		
Ceiling	Plasterboard ceiling with R4.0 insulation (insulation only value) where roof above No insulation required to Garage ceiling Ground Floor ceiling is concrete between levels		
Ceiling penetrations	Sealed LED downlights to Ground Floor, modelled: One per 3m <sup>2</sup>		
External Walls	Concrete with R2.7 insulation (insulation only value) No insulation required to Garage walls		
Internal walls	Default Medium colour modelled (0.475<SA<0.7) Plasterboard on studs <i>Note: tested also with single skin masonry which performs 0.1 Stars better. Have applied worst case scenario with plasterboard on studs. Single skin masonry can be installed as an alternative.</i>		
Floors	Concrete slab on ground with R1.8 under slab insulation (insulation only value) Concrete to First Floor (between levels) with R2.0 insulation (insulation only value) to any suspended floor with open subfloor Floor coverings: Tiles to Ground Floor and the wet areas of First Floor, carpet to upstairs bedrooms, timber elsewhere upstairs		
Ceiling fans	Three Ceiling Fans: one to Upper Sitting Room, one to Dining Room, and one to either the GF Sitting Room or Living Room		
External Shading	Covered Alfresco and Balconies. Shading screens to Ensuite 1 and Study windows. Eaves as shown on drawings		
BASIX Water Commitments			
Fixtures	Install showerheads minimum rating of 4 stars (>6.0 and <= 7.5 Litres/min) Install toilet flushing system with a minimum rating of 4 stars in each toilet Install tap with minimum rating of 4 stars in the kitchen Install taps with minimum rating of 4 stars in each bedroom		
Alternative Water	Install rainwater tank with minimum 10,000L capacity, connected to – At least one outdoor tap and toilets, and used to top up spa and pool Rainwater harvest collected from a min. 215m <sup>2</sup> roof area		
Pool and Spa	Volume of Pool: 74kL. Volume of Spa: 6kL. Both Pool and Spa are to have a cover.		
BASIX Energy Commitments			
Hot water System	Gas instantaneous with minimum performance of 6 Stars		
Cooling system	3 phase air conditioning to living areas and bedrooms: EER 3.0-3.5		
Heating system	3 phase air conditioning to living areas and bedrooms: EER 3.0-3.5		
Ventilation	Kitchen - Individual fan, externally ducted to roof or façade, manual on/off switch Bathrooms - Individual fan, externally ducted to roof or façade, manual on/off switch Laundry - Individual fan, externally ducted to roof or façade, manual on/off switch		
Pool and Spa	Pool Heating System: solar (electric boosted), controlled by timer, dual speed pool pump with minimum performance of 6 Stars. Spa Heating System: solar (electric boosted), controlled by timer		
Alternative Energy	Minimum 5.5kW of solar/PV, with panels sloped between >0° to <=10°, and facing North West		
Other	Gas cooktop & electric oven Outdoor clothes drying line		

CLIENT

JUDY HSU &  
CHRIS HUDSON

DESIGN ARCHITECT  
R SQUARED STUDIOS

PLANNER  
VMDC PLANNING

LANDSCAPE CONSULTANT  
TCGD

SURVEYOR  
DONOVAN ASSOCIATES

STRUCTURAL & HYDRAULIC ENGINEER  
BMY BUILDING CONSULTANTS

ENERGY CONSULTANT  
GREEN FUTURE GROUP

Rev	Date	Description	Drawn	Auth.
P1	9.11.2023	ISSUE FOR COORDINATION	TI	RR
P2	28.11.2023	ISSUE FOR COORDINATION	TI	RR
P3	1.12.2023	ISSUE FOR COORDINATION	TI	RR
A	20.12.2023	ISSUE FOR DA	TI	RR
B	25.03.2024	ISSUE FOR DA	TI	RR

LEGEND

Proj. Arch

RR

Date

MAR' 2024

Do not scale drawings. Verify All dimensions on site. Notify architect of all discrepancies.

Drawn

TI

Scale

Project

FRESHWATER HOUSE

31 Kooloora Avenue, Freshwater

Drawing Title

PERSPECTIVE VIEWS

Drawing No.

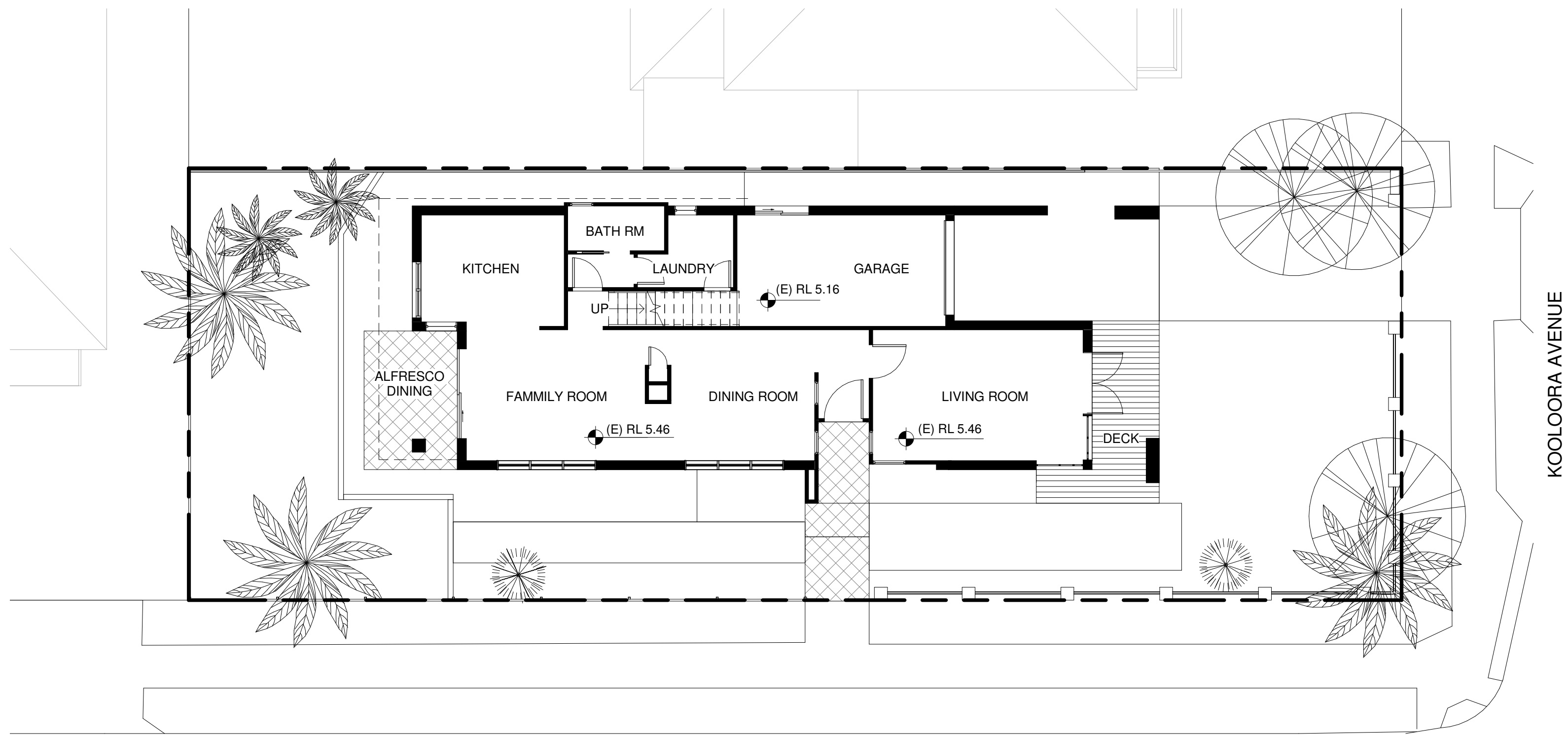
AR.DA. 0001

Project Architect

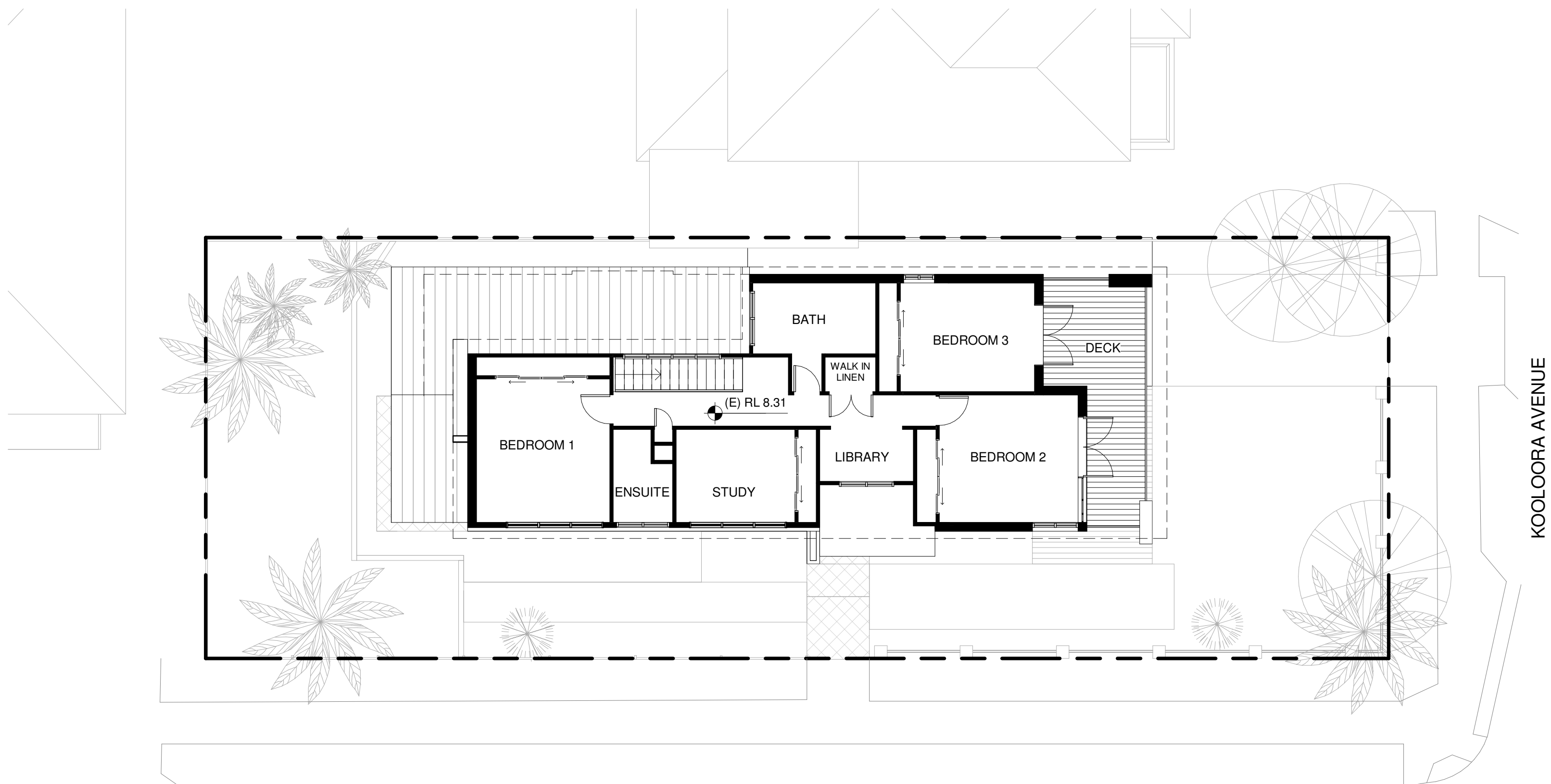
R Squared Studios Pty Ltd  
contact@r2studios.com.au  
www.r2studios.com.au







1 (E) GROUND FLOOR  
1 : 100



2 (E) FIRST FLOOR  
1 : 100



CLIENT  
JUDY HSU &  
CHRIS HUDSON

DESIGN ARCHITECT  
R SQUARED STUDIOS

PLANNER  
VMDC PLANNING

LANDSCAPE CONSULTANT  
TCGD

SURVEYOR  
DONOVAN ASSOCIATES

STRUCTURAL & HYDRAULIC ENGINEER  
BMY BUILDING CONSULTANTS

ENERGY CONSULTANT  
GREEN FUTURE GROUP

Rev	Date	Description	Drawn	Auth.
P1	9.11.2023	ISSUE FOR COORDINATION	TI	RR
P2	28.11.2023	ISSUE FOR COORDINATION	TI	RR
P3	1.12.2023	ISSUE FOR COORDINATION	TI	RR
A	20.12.2023	ISSUE FOR DA	TI	RR
B	25.03.2024	ISSUE FOR DA	TI	RR

LEGEND

Proj. Arch	Drawn
RR	TI
Date	Scale
MAR' 2024	1 : 100

Do not scale drawings. Verify All dimensions on site. Notify architect of all discrepancies.

Project  
FRESHWATER HOUSE

31 Kooloora Avenue, Freshwater

Drawing Title  
(E) GROUND AND FIRST FLOOR

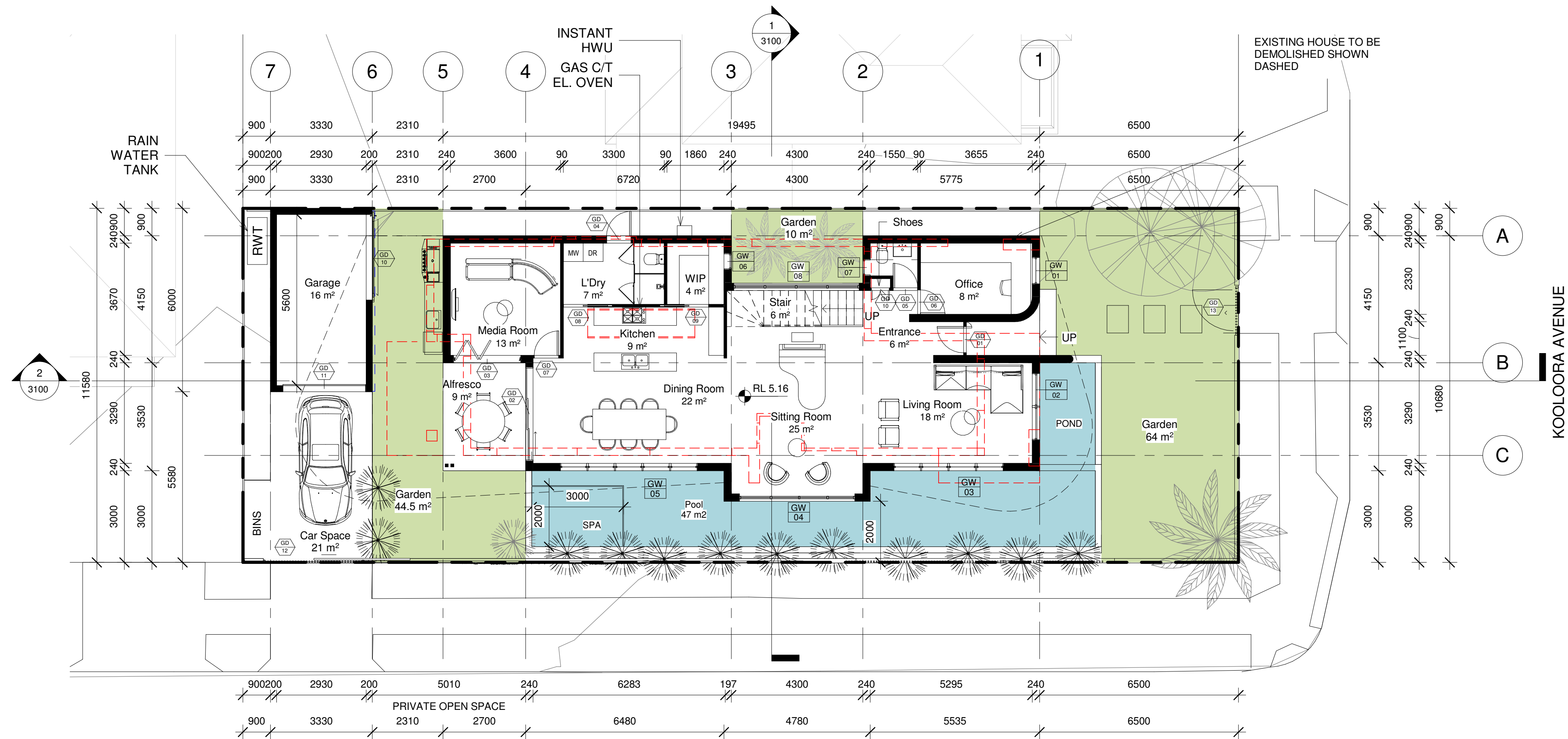
Drawing No.  
AR.DA. 0100

Revision  
B

R Squared Studios Pty Ltd  
contact@r2studios.com.au  
www.r2studios.com.au



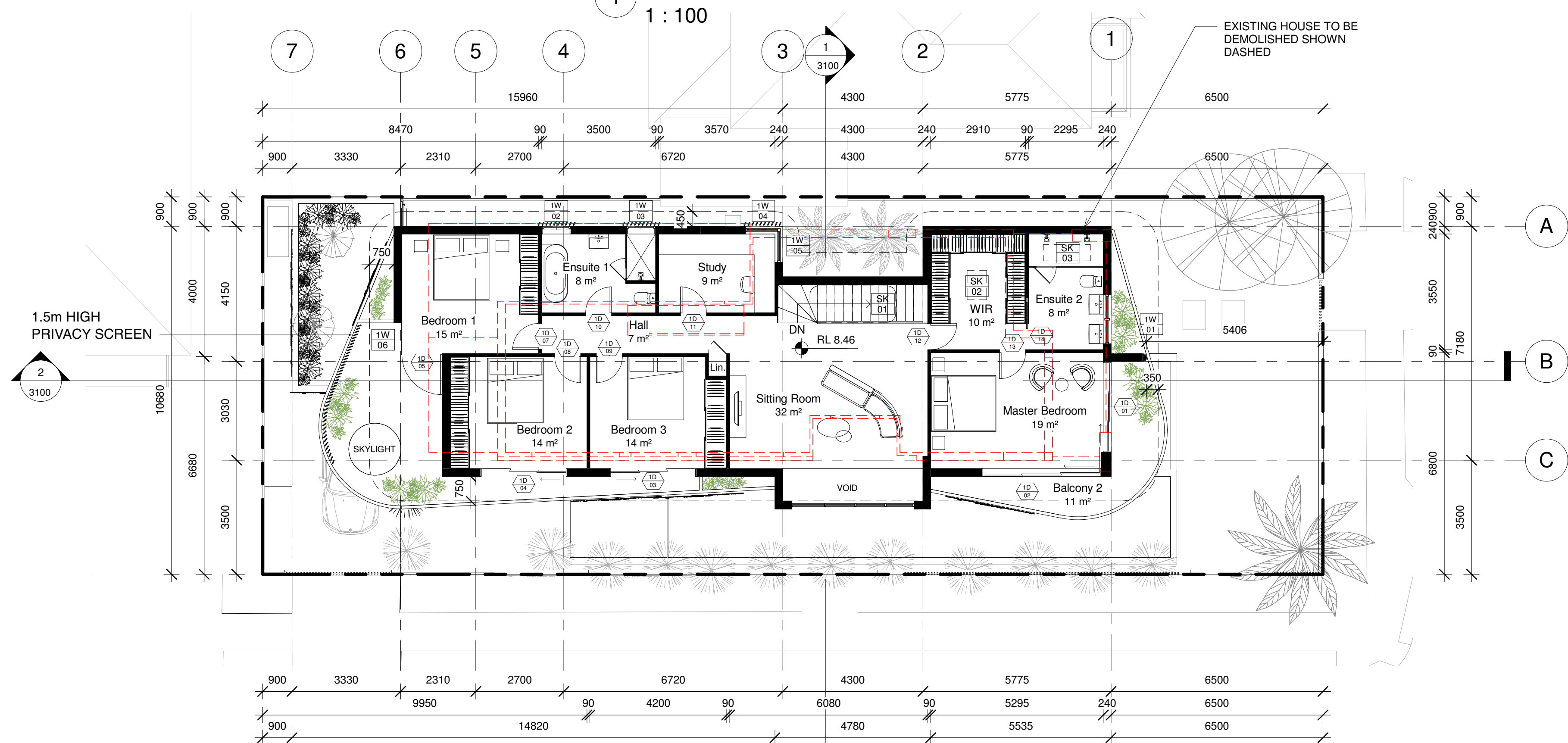




Ground Floor Room Schedule	
Name	Area
Media Room	13 m²
Kitchen	9 m²
L'Dry	7 m²
WIP	4 m²
Sitting Room	25 m²
Entrance	6 m²
Office	8 m²
Powder Room	2 m²
Living Room	18 m²
Dining Room	22 m²
Stair	6 m²
	119 m²
Garage	16 m²
Alfresco	9 m²
Car Space	21 m²
	47 m²

Landscape Area Schedule	
Name	Area
Garden	63 m²
Garden	64 m²
Pool	41 m²
Garden	10 m²
	178 m²

PROPOSED GROUND FLOOR



First Floor Room Schedule	
Name	Area
Balcony 1	21 m²
Bedroom 1	15 m²
Ensuite 1	8 m²
Study	9 m²
Bedroom 2	14 m²
Bedroom 3	14 m²
Hall	7 m²
Sitting Room	32 m²
WIR	10 m²
Ensuite 2	8 m²
Master Bedroom	19 m²
Balcony 2	11 m²
	170 m²

PROPOSED FIRST FLOOR



CLIENT  
JUDY HSU &  
CHRIS HUDSON

DESIGN ARCHITECT  
R SQUARED STUDIOS

PLANNER  
VMDC PLANNING

LANDSCAPE CONSULTANT  
TCGD

SURVEYOR  
DONOVAN ASSOCIATES

STRUCTURAL & HYDRAULIC ENGINEER  
BMY BUILDING CONSULTANTS

ENERGY CONSULTANT  
GREEN FUTURE GROUP

Rev	Date	Description	Drawn	Auth.
P1	9.11.2023	ISSUE FOR COORDINATION	TI	RR
P2	28.11.2023	ISSUE FOR COORDINATION	TI	RR
P3	1.12.2023	ISSUE FOR COORDINATION	TI	RR
A	20.12.2023	ISSUE FOR DA	TI	RR
B	25.03.2024	ISSUE FOR DA	TI	RR

LEGEND

Proj. Arch	Drawn
RR	TI
Date	Scale
MAR' 2024	1 : 100
Do not scale drawings. Verify All dimensions on site. Notify architect of all discrepancies.	

Project  
FRESHWATER HOUSE  
31 Kooloora Avenue, Freshwater

Drawing Title  
PROPOSED GROUND AND FIRST FLOOR PLAN

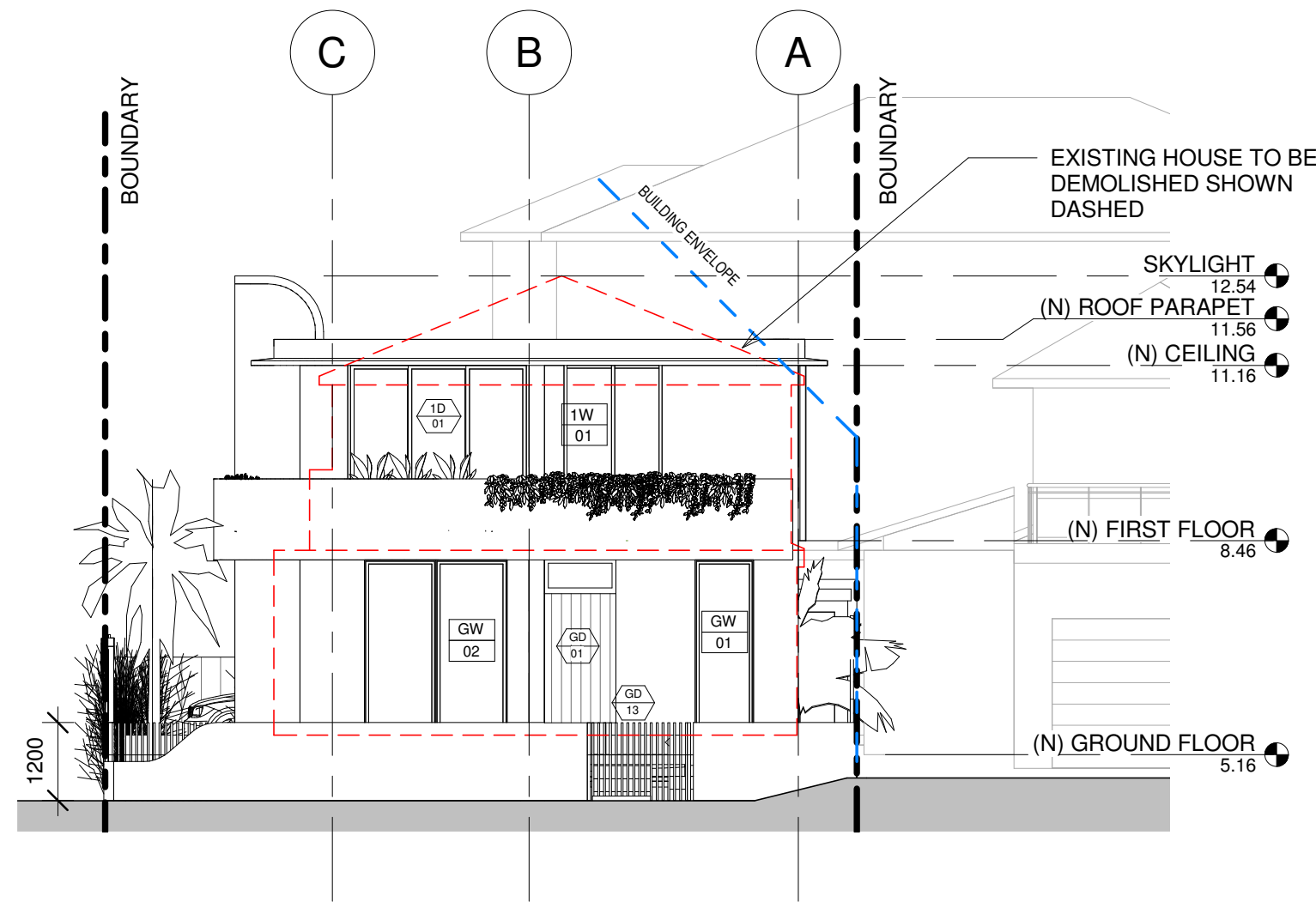
Drawing No.  
AR.DA. 1100

Revision  
B

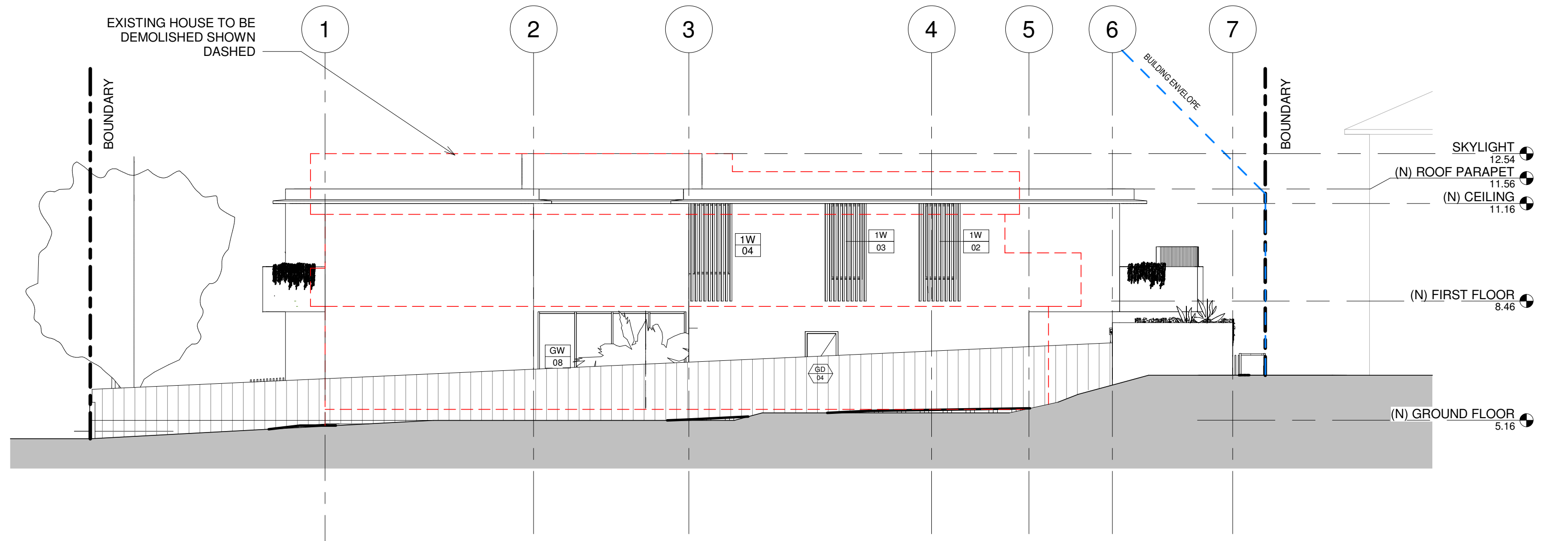
R Squared Studios Pty Ltd  
contact@r2studios.com.au  
www.r2studios.com.au



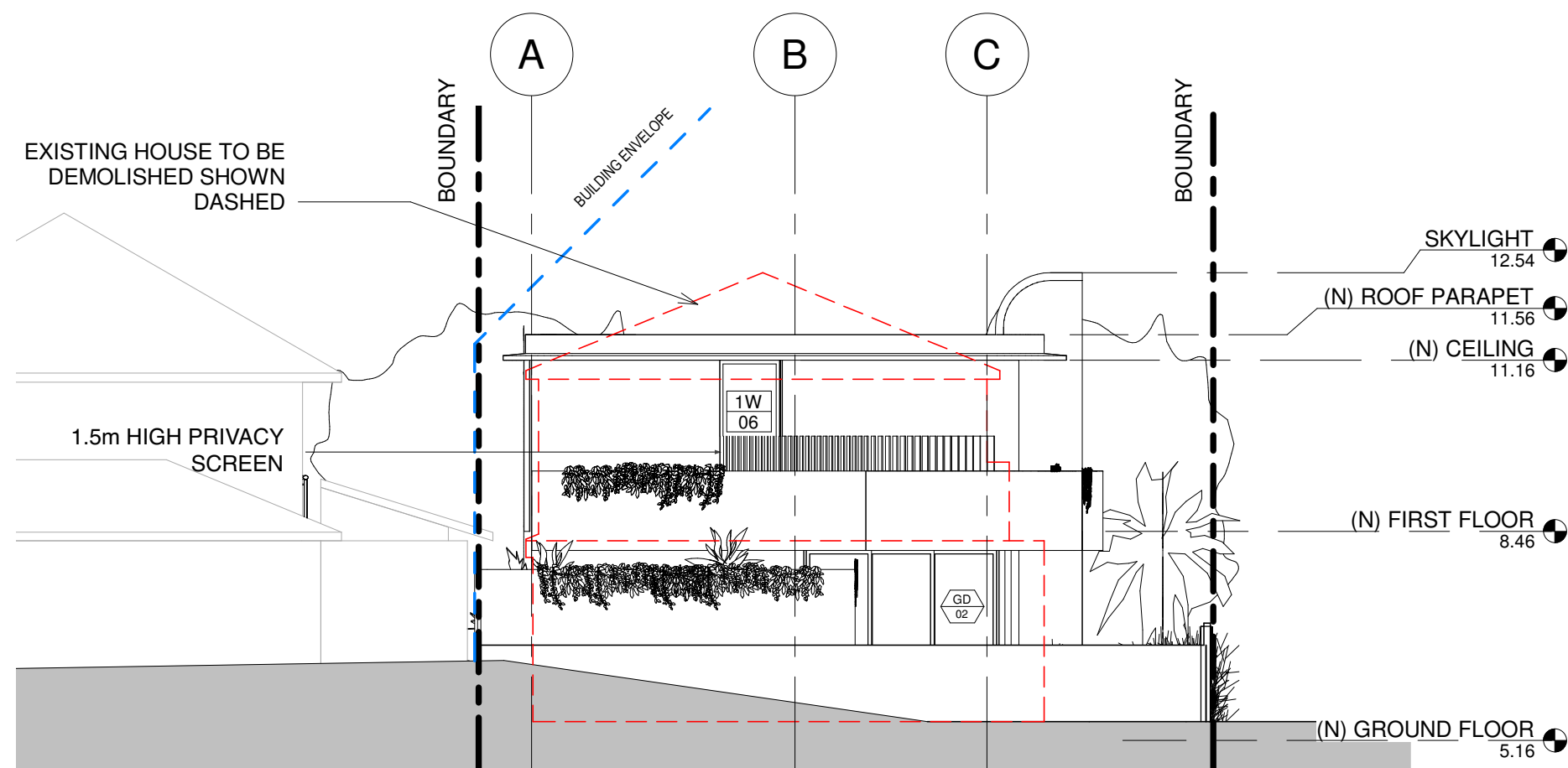




1 North Elevation  
1 : 100



2 West Elevation  
1 : 100



4 South Elevation  
1 : 100



3 East Elevation  
1 : 100



CLIENT

JUDY HSU &  
CHRIS HUDSON

DESIGN ARCHITECT  
**R SQUARED STUDIOS**

PLANNER  
**VMDC PLANNING**

LANDSCAPE CONSULTANT  
**TCGD**

SURVEYOR  
**DONOVAN ASSOCIATES**

STRUCTURAL & HYDRAULIC ENGINEER  
**BMV BUILDING CONSULTANTS**

ENERGY CONSULTANT  
**GREEN FUTURE GROUP**

Rev	Date	Description	Drawn	Auth.
P1	9.11.2023	ISSUE FOR COORDINATION	TI	RR
P2	28.11.2023	ISSUE FOR COORDINATION	TI	RR
P3	1.12.2023	ISSUE FOR COORDINATION	TI	RR
A	20.12.2023	ISSUE FOR DA	TI	RR
B	25.03.2024	ISSUE FOR DA	TI	RR

LEGEND

Proj. Arch	Drawn
<b>RR</b>	<b>TI</b>
Date	Scale
<b>MAR' 2024</b>	<b>1 : 100</b>
Do not scale drawings. Verify All dimensions on site. Notify architect of all discrepancies.	

Project  
**FRESHWATER HOUSE**

31 Kooloora Avenue, Freshwater

Drawing Title  
**(N) ELEVATIONS**

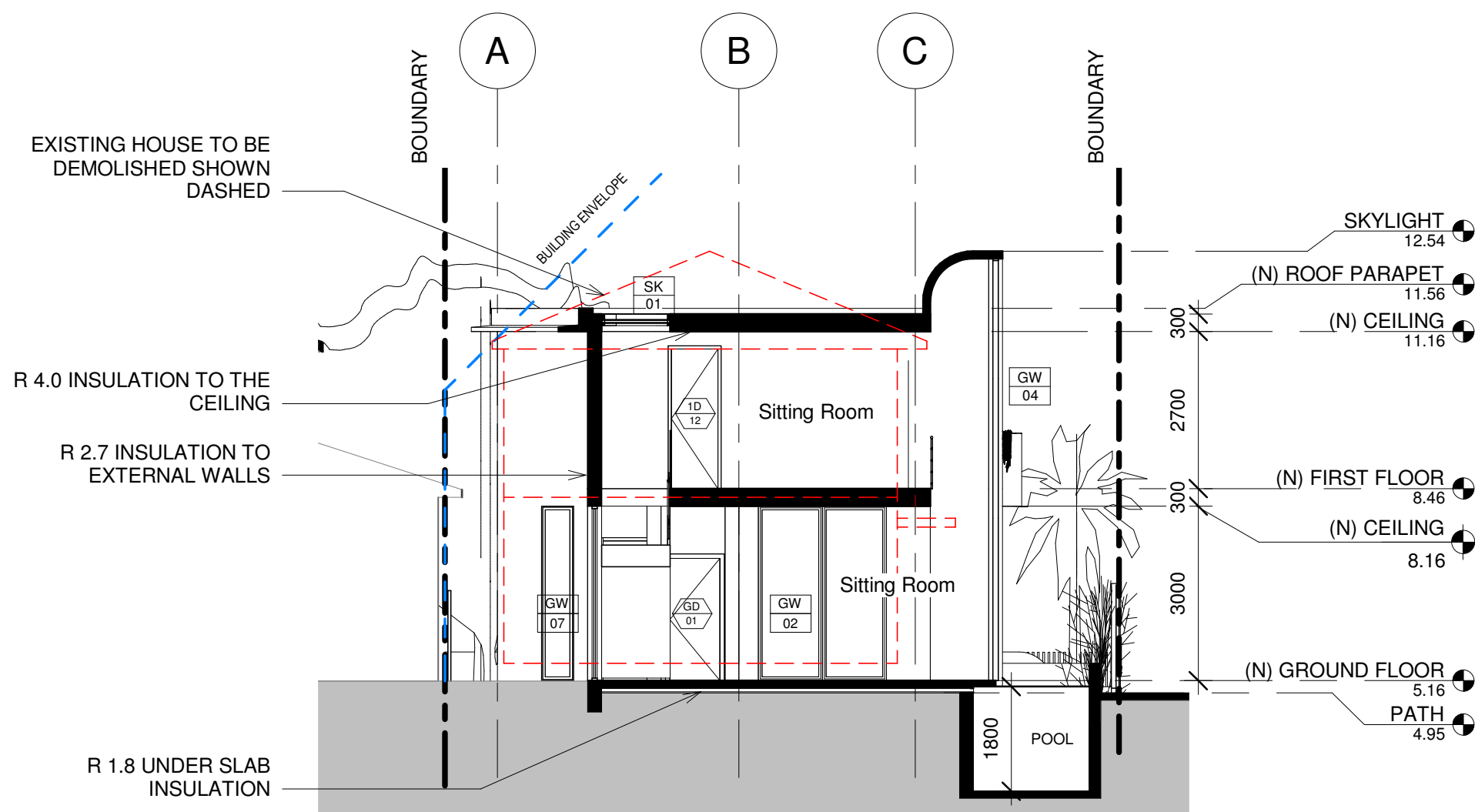
Drawing No.  
**AR.DA. 3000**

Revision  
**B**

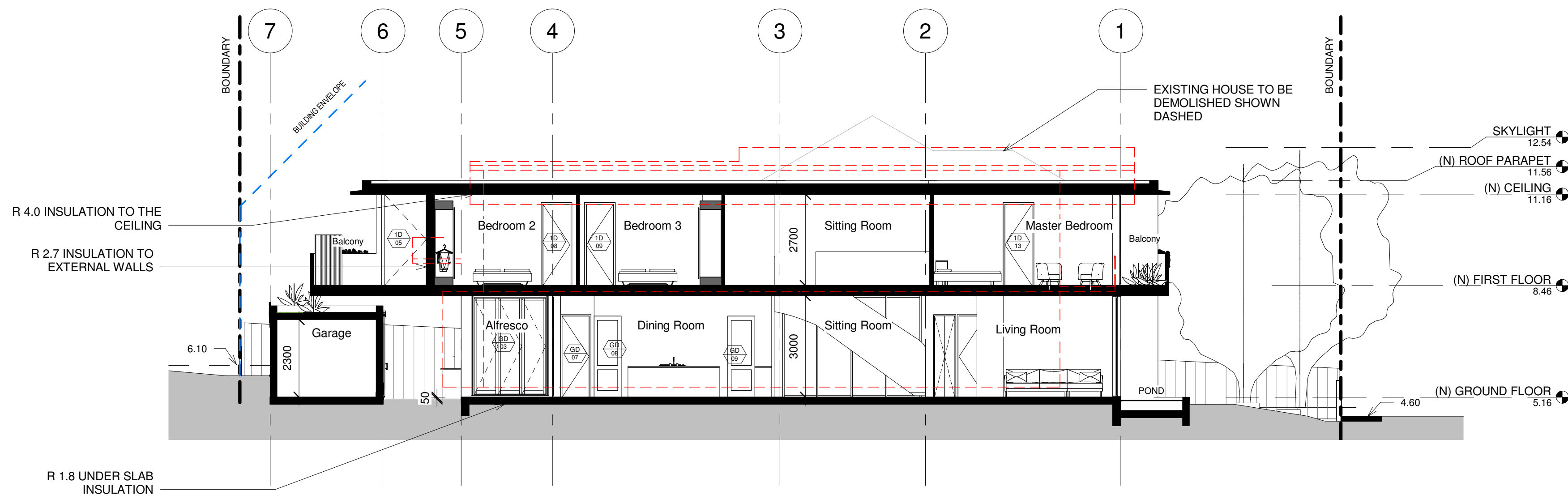
**R Squared Studios Pty Ltd**  
contact@r2studios.com.au  
www.r2studios.com.au







1 Section 1  
1 : 100



2 Section 2  
1 : 100



CLIENT  
JUDY HSU &  
CHRIS HUDSON

DESIGN ARCHITECT  
R SQUARED STUDIOS

PLANNER  
VMDC PLANNING

LANDSCAPE CONSULTANT  
TCGD

SURVEYOR  
DONOVAN ASSOCIATES

STRUCTURAL & HYDRAULIC ENGINEER  
BMY BUILDING CONSULTANTS

ENERGY CONSULTANT  
GREEN FUTURE GROUP

Rev	Date	Description	Drawn	Auth.
P1	9.11.2023	ISSUE FOR COORDINATION	TI	RR
P2	28.11.2023	ISSUE FOR COORDINATION	TI	RR
P3	1.12.2023	ISSUE FOR COORDINATION	TI	RR
A	20.12.2023	ISSUE FOR DA	TI	RR
B	25.03.2024	ISSUE FOR DA	TI	RR

LEGEND

Proj. Arch	Drawn
RR	TI
Date	Scale
MAR' 2024	1 : 100

Do not scale drawings. Verify All dimensions on site. Notify architect of all discrepancies.

Job No.	Revision	Notes	Date
Hsu & Hudson	A	NatHERS & BASIX Assessment	22/12/2023
Thermal Comfort Specifications			
Glazing: Doors/windows	Default codes modelled which are not brand specific. You can use any brand/manufacturer and type of glass and frame; these are maximum U-values, and there is a flexibility of +/- 10% (as stated below) with the SHGC value. Group A - bifold and casement doors: PVC-005-01: U-Value: 2.60 (equal to or lower than) SHGC: 0.50 (±10%) Group B - sliding doors/windows + fixed glazing: PVC-006-01: U-Value: 2.60 (equal to or lower than) SHGC: 0.53 (±10%) Given values are AFRC, total window system values (glass and frame)		
Skylights	Double glazed with timber or aluminium frame		
Roof	Concrete roof with waterproof membrane Colour: Light (0.475-SA)		
Ceiling	Plasterboard ceiling with R4.0 insulation (insulation only value) where roof above No insulation required to Garage ceiling Ground Floor ceiling is concrete between levels		
Ceiling penetrations	Sealed LED downlights to Ground Floor, modelled: One per 3m <sup>2</sup>		
External Walls	Concrete with R2.7 insulation (insulation only value) No insulation required to Garage walls Default Medium colour modelled (0.475<SA<0.7)		
Internal walls	Plasterboard on studs <i>Note: tested also with single skin masonry which performs 0.1 Stars better. Have applied worst case scenario with plasterboard on studs. Single skin masonry can be installed as an alternative.</i>		
Floors	Concrete slab on ground with R1.8 underslab insulation (insulation only value) Concrete to First Floor (between levels) with R2.0 insulation (insulation only value) to any suspended floor with open subfloor Floor coverings: Tiles to Ground Floor and the wet areas of First Floor, carpet to upstairs bedrooms, timber elsewhere upstairs		
Ceiling fans	Three Ceiling Fans: one to Upper Sitting Room, one to Dining Room, and one to either the GF Sitting Room or Living Room		
External Shading	Covered Alfresco and Balconies. Shading screens to Ensuite 1 and Study windows. Eaves as shown on drawings		
BASIX Water Commitments			
Fixtures	Install showerheads minimum rating of 4 stars (>6.0 and <=7.5 Litres/min) Install toilet flushing system with a minimum rating of 4 stars in each toilet Install tap with minimum rating of 4 stars in the kitchen Install taps with minimum rating of 4 stars in each bathroom		
Alternative Water	Install rainwater tank with minimum 10,000L capacity, connected to - At least one outdoor tap and toilets, and used to top up spa and pool Rainwater harvest collected from a min. 215m <sup>2</sup> roof area		
Pool and Spa	Volume of Pool: 74kL, Volume of Spa: 6kL. Both Pool and Spa are to have a cover.		
BASIX Energy Commitments			
Hot water System	Gas instantaneous with minimum performance of 6 Stars		
Cooling system	3 phase air conditioning to living areas and bedrooms: EER 3.0-3.5		
Heating system	3 phase air conditioning to living areas and bedrooms: EER 3.0-3.5		
Ventilation	Kitchen - Individual fan, externally ducted to roof or façade, manual on/off switch Bathrooms - Individual fan, externally ducted to roof or façade, manual on/off switch Laundry - Individual fan, externally ducted to roof or façade, manual on/off switch		
Pool and Spa	Pool Heating System: solar (electric boosted), controlled by timer, dual speed pool pump with minimum performance of 6 Stars. Spa Heating System: solar (electric boosted), controlled by timer		
Alternative Energy	Minimum 5.5kW of solar/PV, with panels sloped between >0° to <=10°, and facing North West		
Other	Gas cooktop & electric oven Outdoor clothes drying line		

Project  
FRESHWATER HOUSE

31 Kooloora Avenue, Freshwater

Drawing Title  
(N) SECTIONS

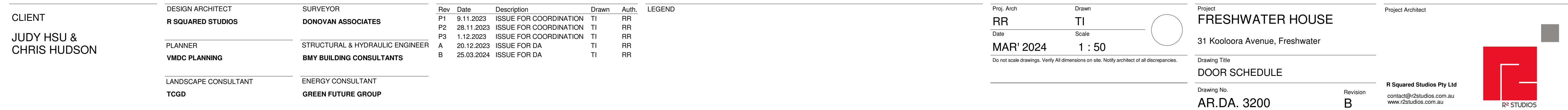
Drawing No.  
AR.DA. 3100

Revision  
B

R Squared Studios Pty Ltd  
contact@r2studios.com.au  
www.r2studios.com.au





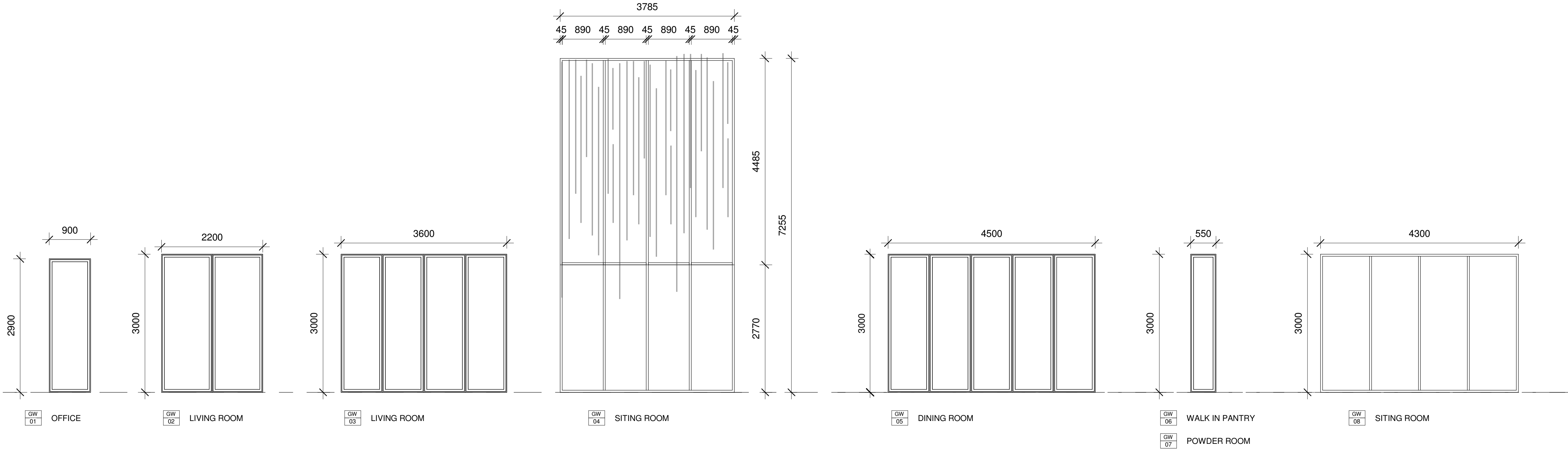




(N) WINDOWS

(E) GROUND FLOOR

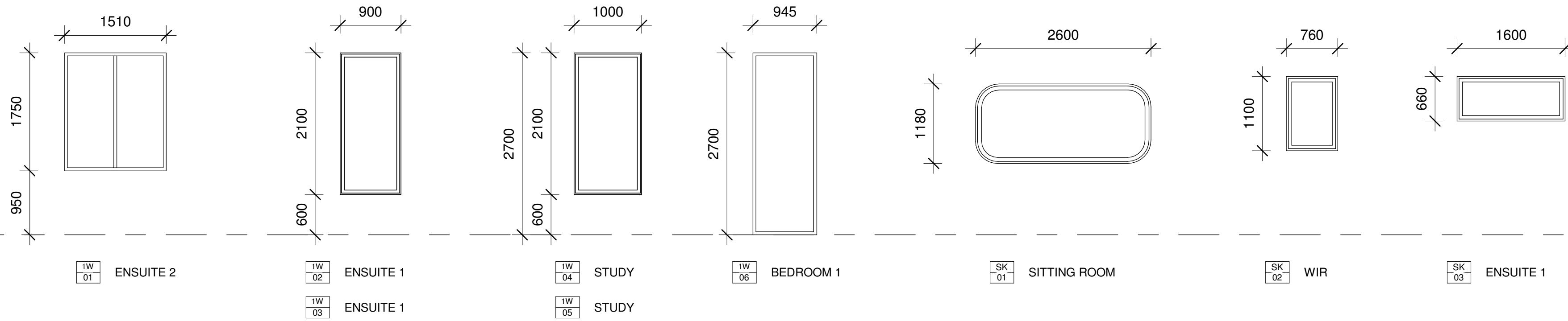
RL. 5.50



(N) WINDOWS

(E) FIRST FLOOR

RL. 8.35



CLIENT  
JUDY HSU &  
CHRIS HUDSON

DESIGN ARCHITECT  
R SQUARED STUDIOS

PLANNER  
VMDC PLANNING

LANDSCAPE CONSULTANT  
TCGD

SURVEYOR  
DONOVAN ASSOCIATES

STRUCTURAL & HYDRAULIC ENGINEER  
BMY BUILDING CONSULTANTS

ENERGY CONSULTANT  
GREEN FUTURE GROUP

Rev	Date	Description	Drawn	Auth.
P1	9.11.2023	ISSUE FOR COORDINATION	TI	RR
P2	28.11.2023	ISSUE FOR COORDINATION	TI	RR
P3	1.12.2023	ISSUE FOR COORDINATION	TI	RR
A	20.12.2023	ISSUE FOR DA	TI	RR
B	25.03.2024	ISSUE FOR DA	TI	RR

LEGEND

Proj. Arch	Drawn
RR	TI
Date	Scale
MAR' 2024	1 : 50

Do not scale drawings. Verify All dimensions on site. Notify architect of all discrepancies.

Project  
FRESHWATER HOUSE

31 Kooloorra Avenue, Freshwater

Drawing Title  
WINDOW SCHEDULE

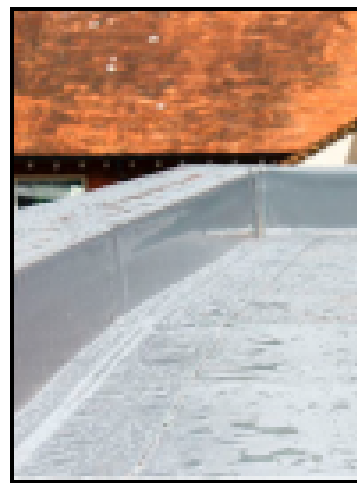
Drawing No.  
AR.DA. 3201

Revision  
B

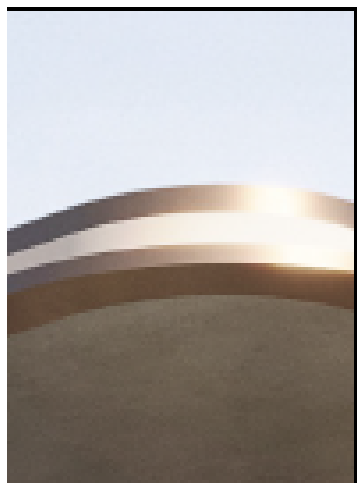
R Squared Studios Pty Ltd  
contact@r2studios.com.au  
www.r2studios.com.au







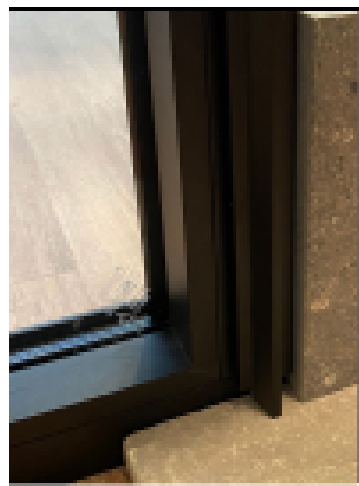
1. ROOF



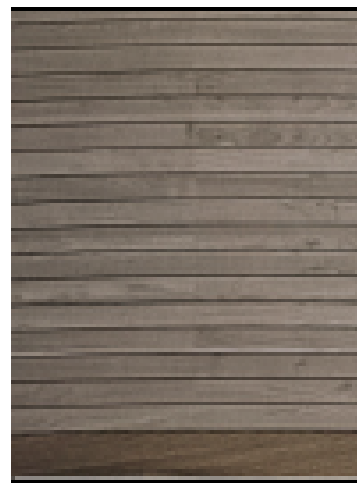
2. ROOF TRIM



3. WALLS



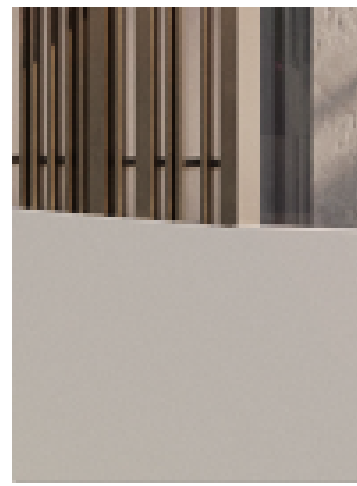
4. WINDOWS



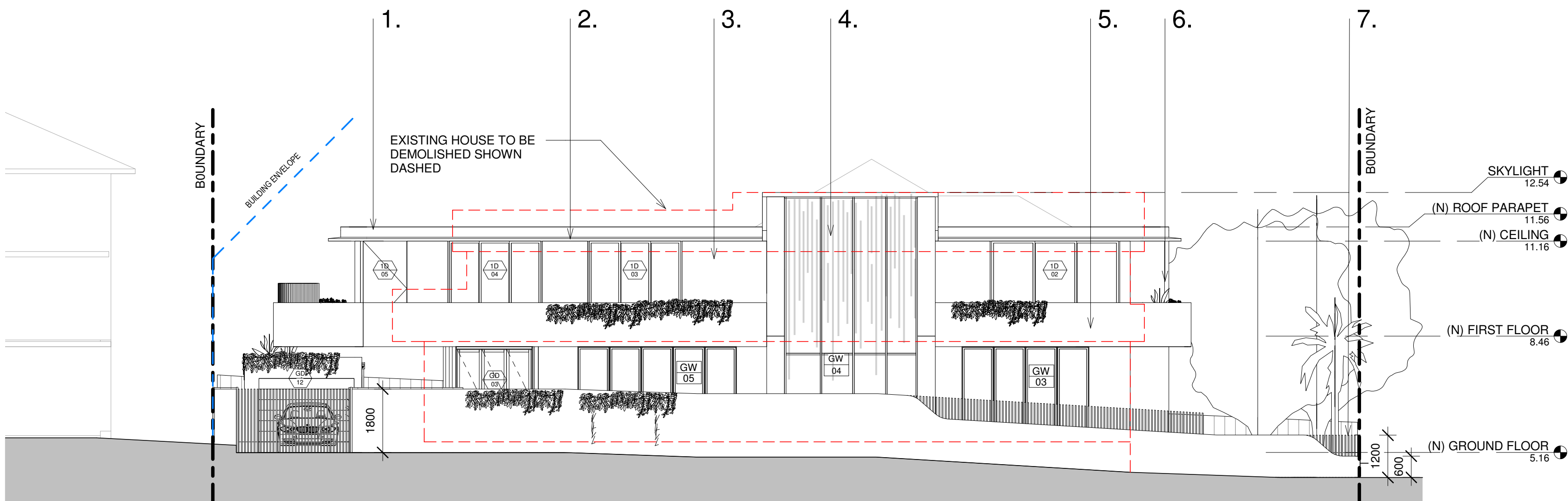
5. BALCONY



6. BLADE WALL



7. FENCE



1 External Finishes  
1 : 100

CLIENT  
JUDY HSU &  
CHRIS HUDSON

DESIGN ARCHITECT  
R SQUARED STUDIOS

PLANNER  
VMDC PLANNING

LANDSCAPE CONSULTANT  
TCGD

SURVEYOR  
DONOVAN ASSOCIATES

STRUCTURAL & HYDRAULIC ENGINEER  
BMY BUILDING CONSULTANTS

ENERGY CONSULTANT  
GREEN FUTURE GROUP

Rev	Date	Description	Drawn	Auth.
P1	9.11.2023	ISSUE FOR COORDINATION	TI	RR
P2	28.11.2023	ISSUE FOR COORDINATION	TI	RR
P3	1.12.2023	ISSUE FOR COORDINATION	TI	RR
A	20.12.2023	ISSUE FOR DA	TI	RR
B	25.03.2024	ISSUE FOR DA	TI	RR

LEGEND

Proj. Arch  
RR  
Date  
MAR' 2024

Drawn  
TI  
Scale  
As indicated

Do not scale drawings. Verify All dimensions on site. Notify architect of all discrepancies.

Project  
FRESHWATER HOUSE  
31 Kooloora Avenue, Freshwater

Drawing Title  
EXTERNAL FINISHES

Drawing No.  
AR.DA. 4000

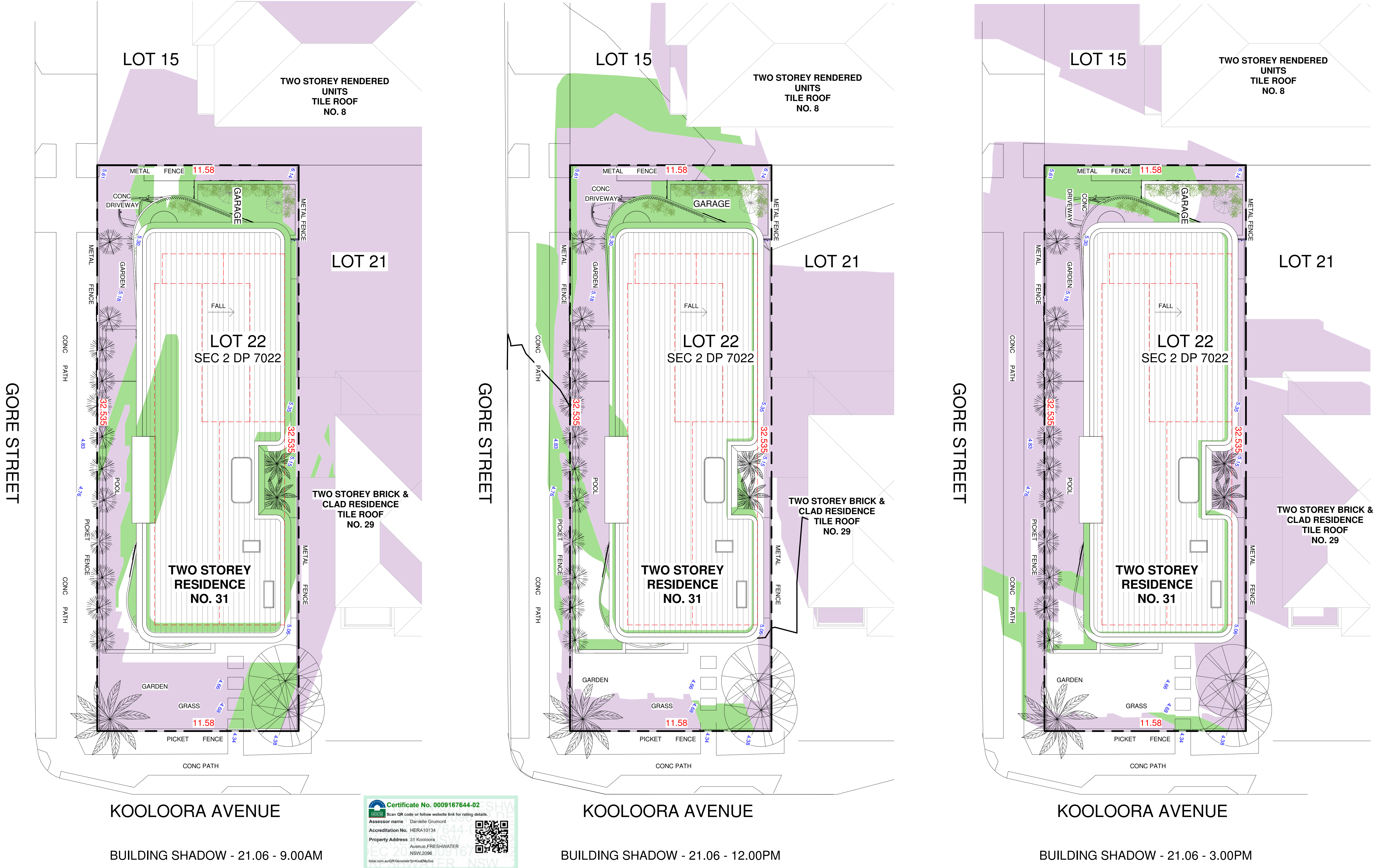
Revision  
B

Project Architect

R Squared Studios Pty Ltd  
contact@r2studios.com.au  
www.r2studios.com.au







CLIENT  
JUDY HSU &  
CHRIS HUDSON

DESIGN ARCHITECT  
R SQUARED STUDIOS

PLANNER  
VMDC PLANNING

LANDSCAPE CONSULTANT  
TCGD

SURVEYOR  
DONOVAN ASSOCIATES

STRUCTURAL & HYDRAULIC ENGINEER  
BMY BUILDING CONSULTANTS

ENERGY CONSULTANT  
GREEN FUTURE GROUP

Rev	Date	Description	Drawn	Auth.
P1	9.11.2023	ISSUE FOR COORDINATION	TI	RR
P2	28.11.2023	ISSUE FOR COORDINATION	TI	RR
P3	1.12.2023	ISSUE FOR COORDINATION	TI	RR
A	20.12.2023	ISSUE FOR DA	TI	RR
B	25.03.2024	ISSUE FOR DA	TI	RR

LEGEND
EXISTING SHADOWS
INCREASE SHADOWS
DECREASE SHADOWS

Proj. Arch	Drawn
RR	TI
Date	Scale
MAR' 2024	As indicated

Do not scale drawings. Verify All dimensions on site. Notify architect of all discrepancies.

Project  
FRESHWATER HOUSE

31 Kooloora Avenue, Freshwater

Drawing Title  
SUN SHADOWS STUDIES

Drawing No.  
AR.DA. 7000

Project Architect

Revision  
B

R Squared Studios Pty Ltd  
contact@r2studios.com.au  
www.r2studios.com.au

