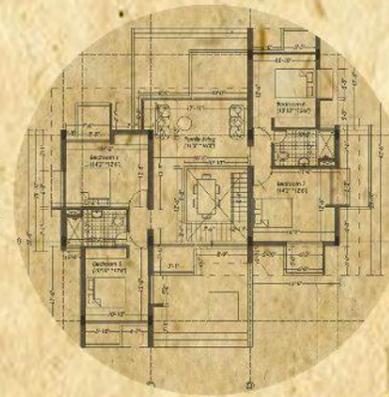
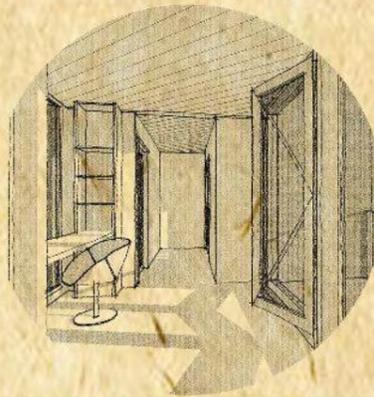


THE Portfolio



Sammana Hasan
Building design consultant
Profressional works (2018 - present)

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Year: 2022 - 2023 Location: **Bangladesh** 07

The
completed
projects



THE BOLTO RESIDENCE

Floor area calculation:
Upper floor area: 41 sqm
Lower floor area: 84 sqm
Void area: 28 sqm
Garage area: 35 sqm
Total livable space: 188 sqm

Client name: Bronwyn & Kevin Bolto
Project timeline: 2017 - 2019
My role: Concept design development, presentation for client briefing, DA drawing set preparation
Software used: Sketchup & Layout

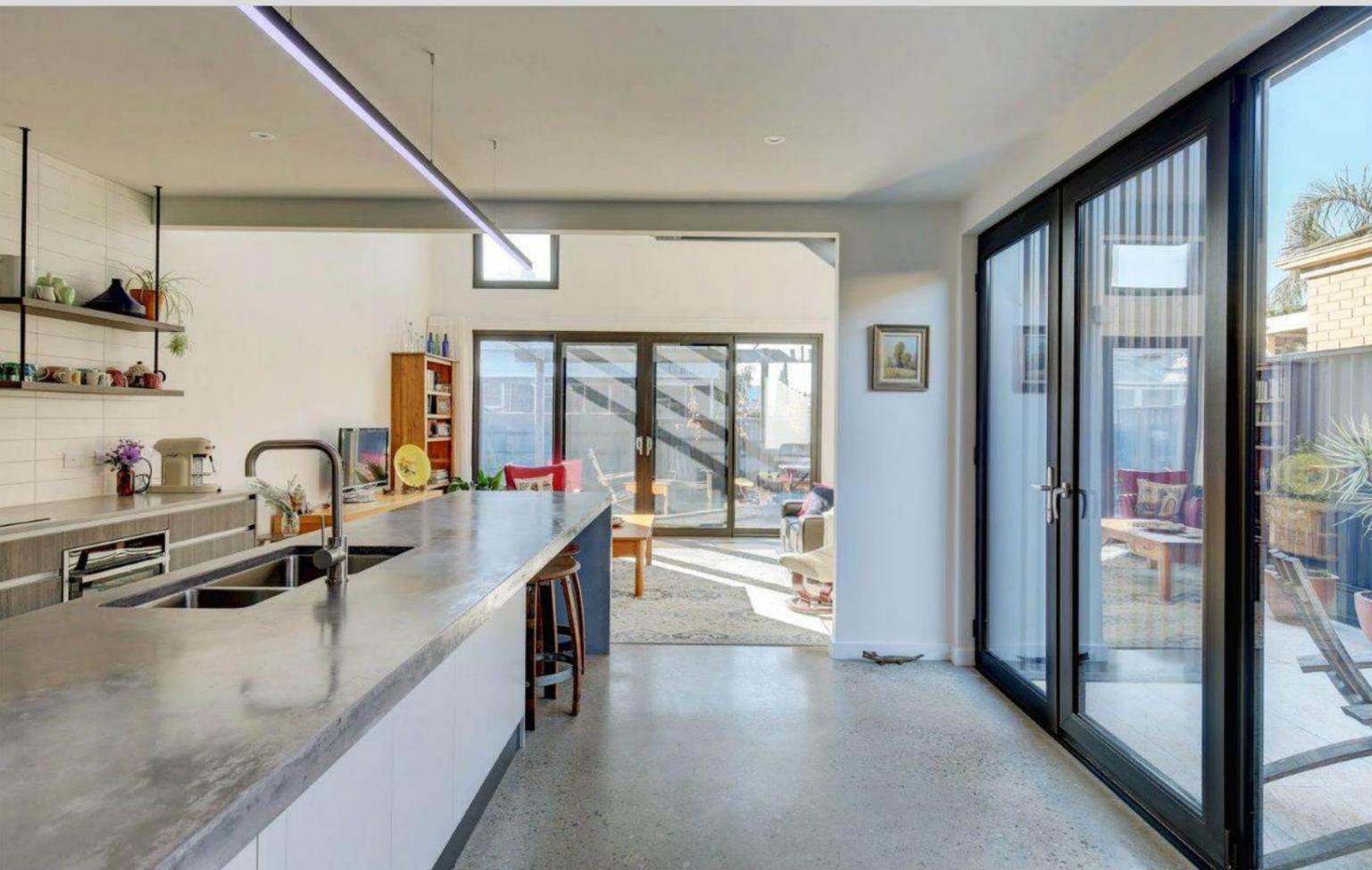
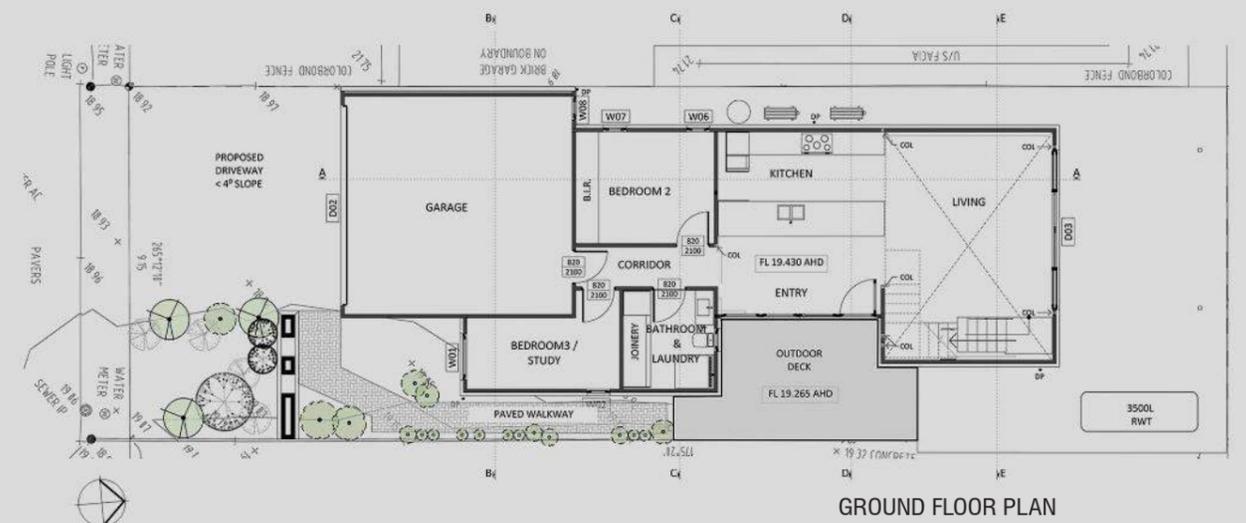
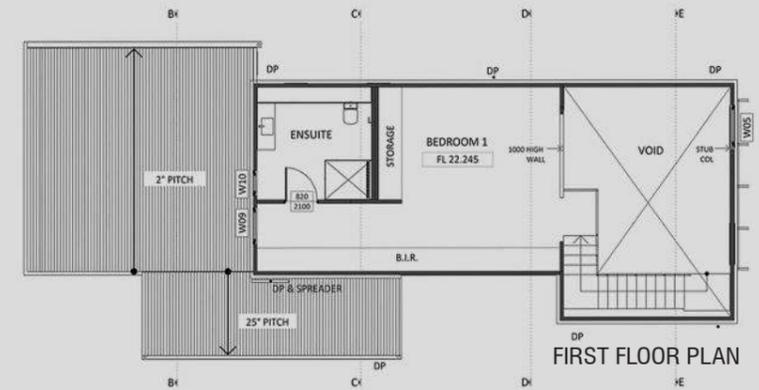
Ground floor area: 119 sqm
Site area: 261 sqm
Ground coverage: 46%

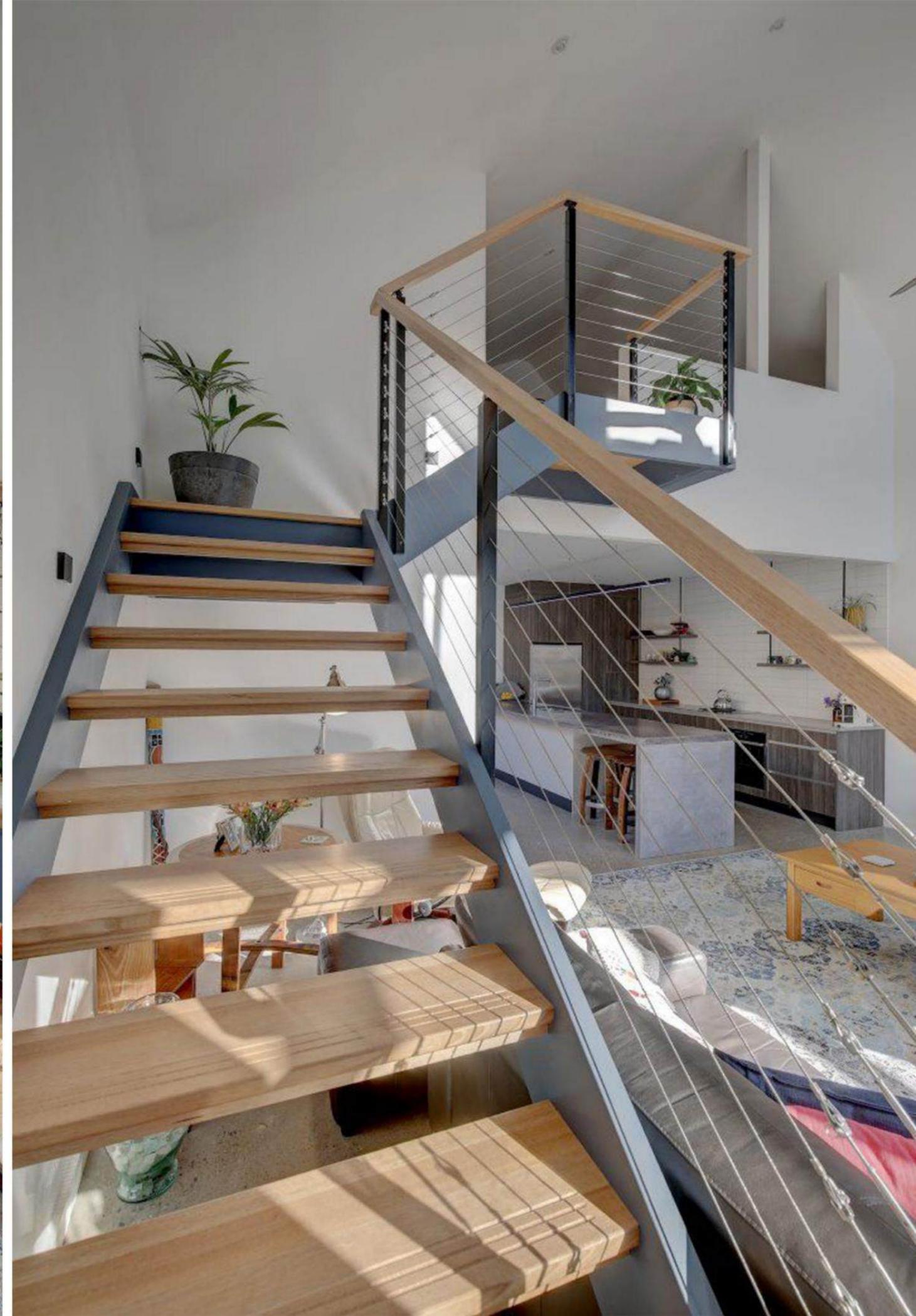
PROJECT SUMMERY

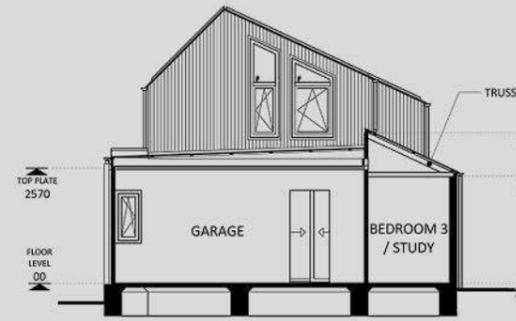
The proposed new build residence at 26 Taylors Lane, Mile End, SA 5031 has been designed to be as environmentally friendly as possible. The design is driven by the site and the neighbouring buildings with a view to maximize passive solar orientation. The goal was to achieve the lowest energy assumption for the house and higher level of comfort all year around, minimising the usage of non renewable energy source for heating and cooling through the lifespan of the building.

The proposal is to use lightweight construction materials to lower the environmental impact by reducing the carbon production. The building achieved an energy rating of 7.6 star . It will use minimal energy to maintain a comfortable environment all year round and incorporate a wall construction system developed from the zero carbon house at Lochiel park, SA.

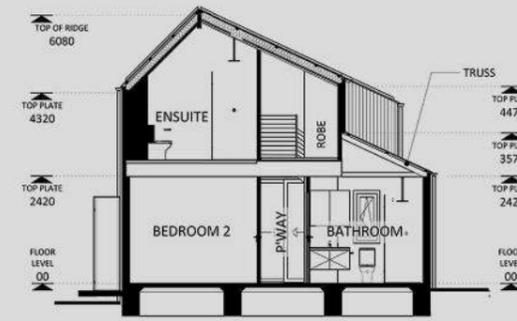
The house is designed for a retired couple who are empty nesters. The functional requirement for the house was a kitchen/ diner with open plan living, double garage, a study and a spare bedroom for visitors with a master suite. The site was small so to maximize the footprint the design idea was to introduce a mezzanine floor within the high ceiling space. Due to the narrow street front the double garage took the major part of it so it was only logical to put the study beside the garage which is a narrow space and it enabled the positioning of an obligatory window to be used for community surveillance. Because there was no more space left for a formal entryway between the garage and study we introduced a courtyard that can lead to the entryway that leads straight to the open plan living space. The courtyard and the entrypoint is specified with the use of a pseudo brickwall which creates an inviting entrance to the house as well as provides privacy to the courtyard for year round use. The mastersuite is located on the mezzanine floor which provides a view over the living space with the use of a low height wall as they don't need that level of privacy. As a result the house is a cozy retreat for the elderly couple with all of their functional needs and a volume of space that lend a spaciousness to the house that the footprint won't allow.



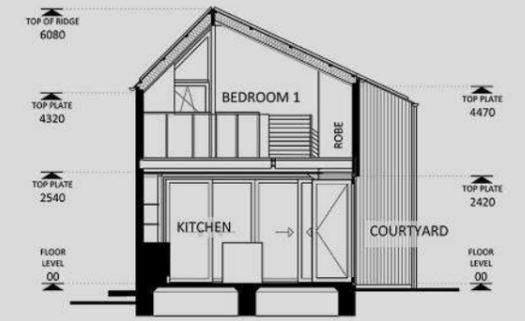




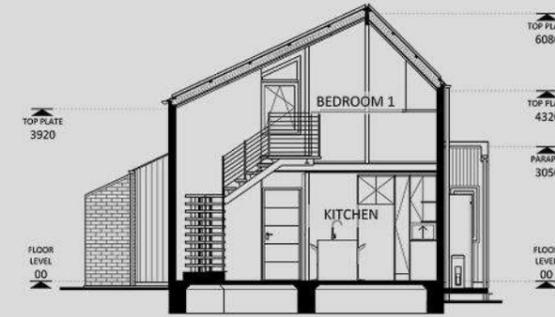
SECTION BB



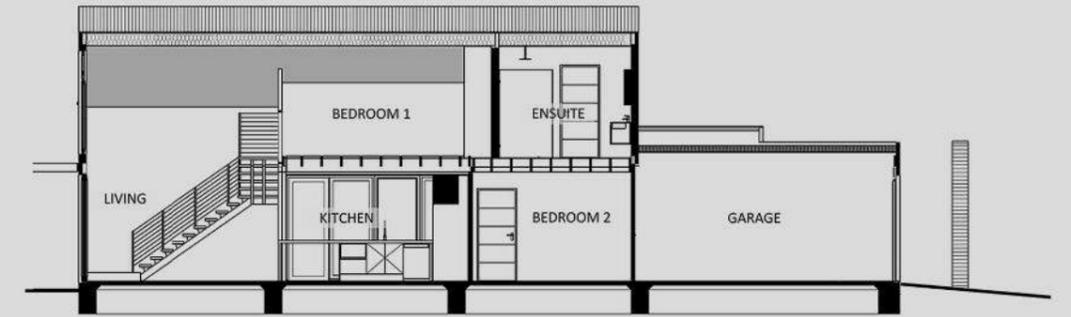
SECTION CC



SECTION DD



SECTION EE



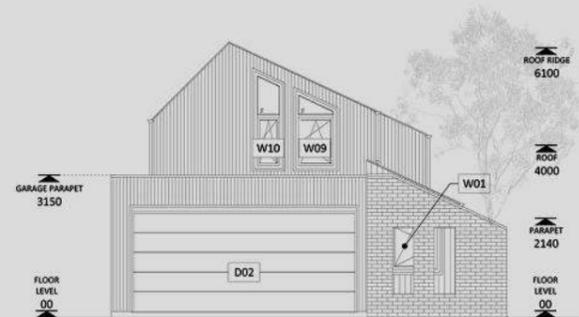
SECTION AA



NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION

THE PIANO HOUSE







Floor area calculation:
Upper floor area: 71 sqm
Lower floor area: 126 sqm
Void area: 16 sqm
Garage area: 35 sqm
Total livable space: 248 sqm

Client name: Grace & Jeff Tate
Project timeline: 2018 - 2020
My role: Concept design development, presentation for client briefing & DA drawing set preparation
Software used: Sketchup & Layout

Ground floor area: 141 sqm
Site area: 350 sqm
Ground coverage: 46%

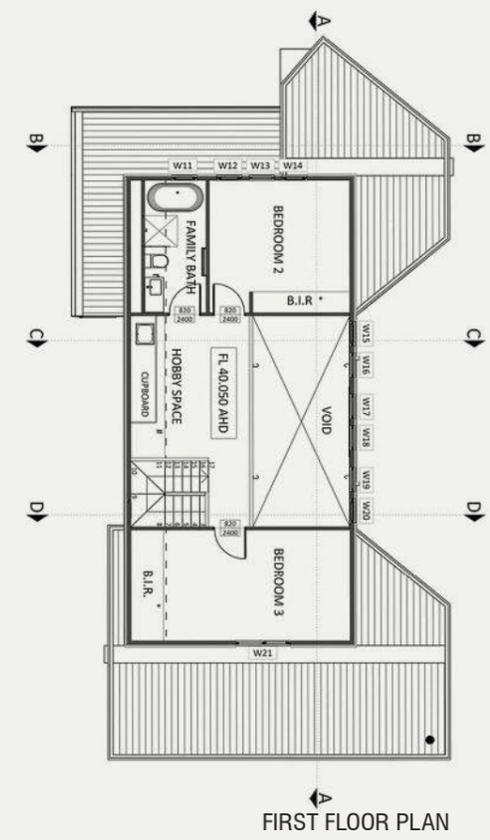
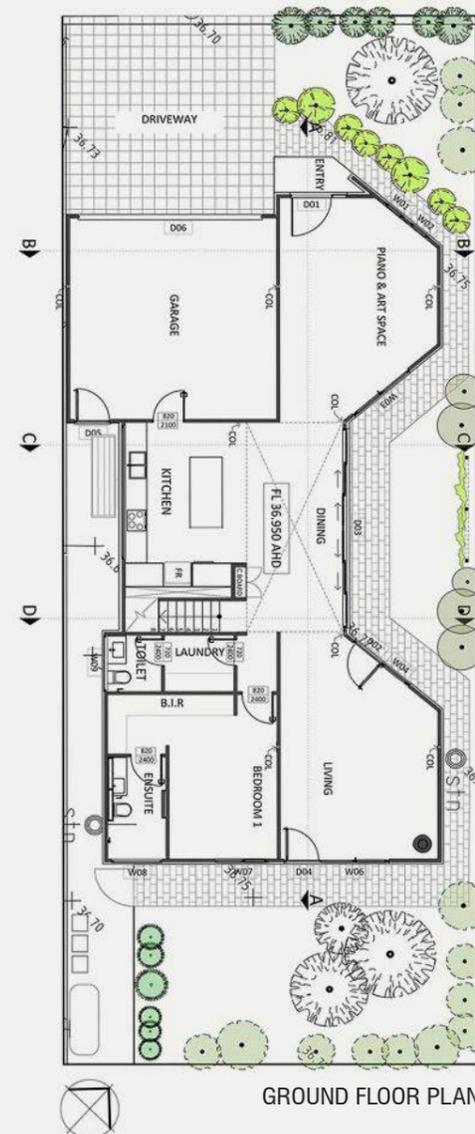
PROJECT SUMMERY

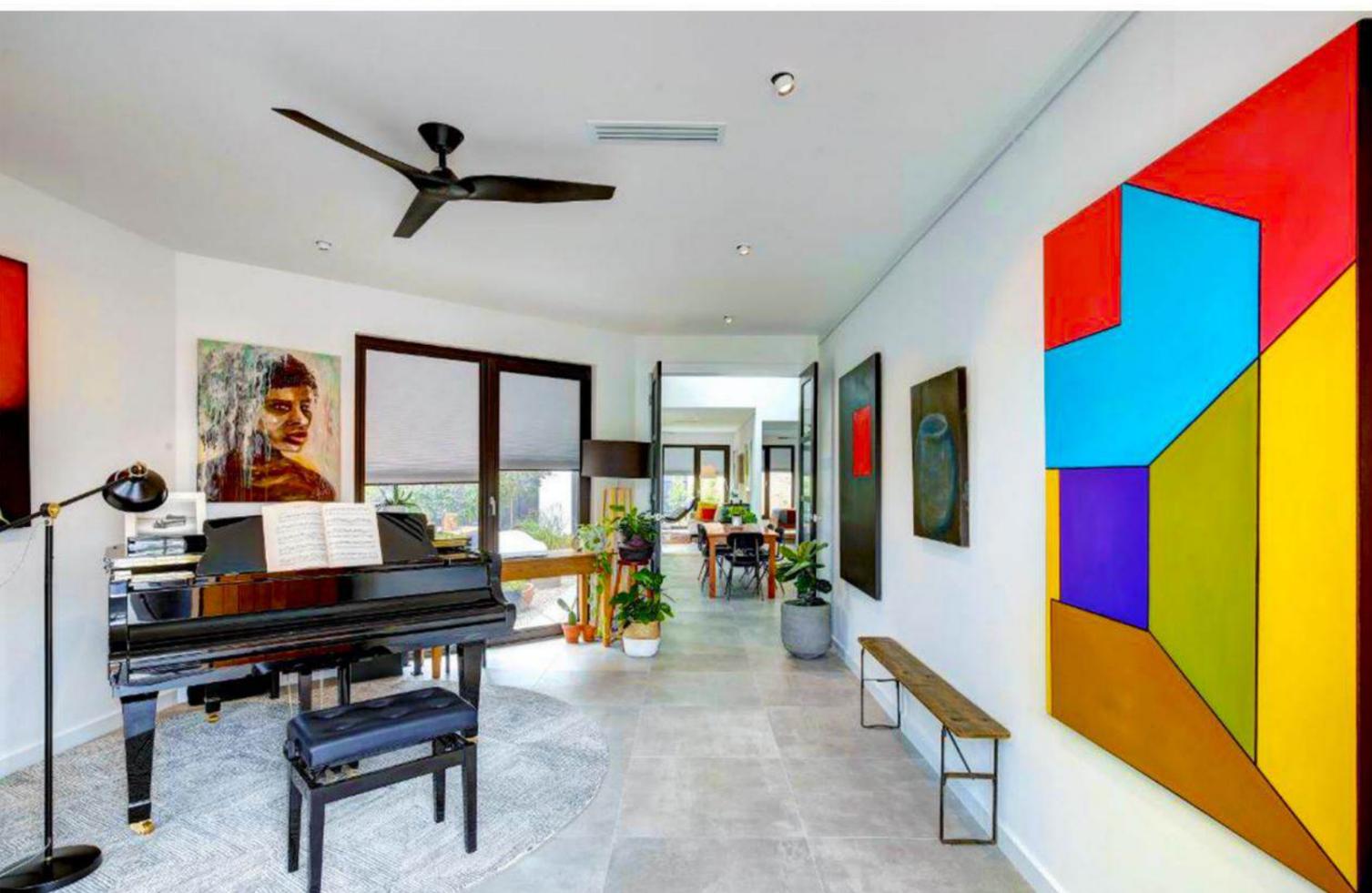
The proposed new build residence at 2B Torrens Street, Gilberton, SA 5081 has been designed to be as environmentally friendly as possible. The design is driven by the site and the neighbouring buildings with a view to maximize passive solar orientation. The goal was to achieve the lowest energy assumption for the house and higher level of comfort all year around, minimising the usage of non renewable energy source for heating and cooling through the lifespan of the building.

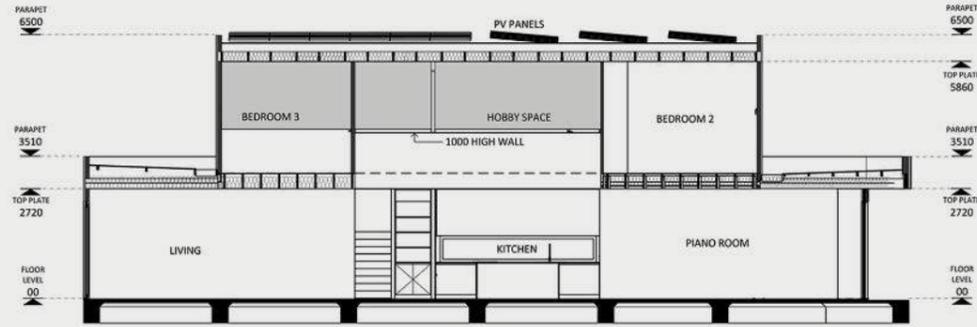
The proposal is to use lightweight construction materials to lower the environmental impact by reducing the carbon production. The building achieved an energy rating of 7.6 star.

The house is designed for a retired couple who wanted a tranquil retreat. The site is a subdivided land and the footprint of the house was small. To make the house feel a lot more expansive and spacious than it actually is, a double height dining space is introduced as the heart of the house. The kitchen, living room and the piano room are connected to the dining space which in turn leads to the backyard. There is a visual and spatial connection between the kitchen leading to the dining space towards the backyard which is also connected to the upper floor hobby space through the double height void.

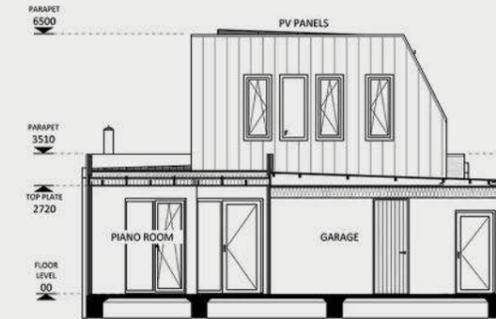
The house is shaped like a piano to achieve maximum solar gain as the site is located on 45° to the North. So to gain northern sun the facades are rotated 45° which also creates more connectivity between the spaces and a cozy backyard space.



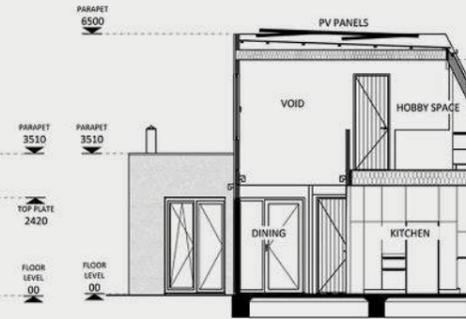




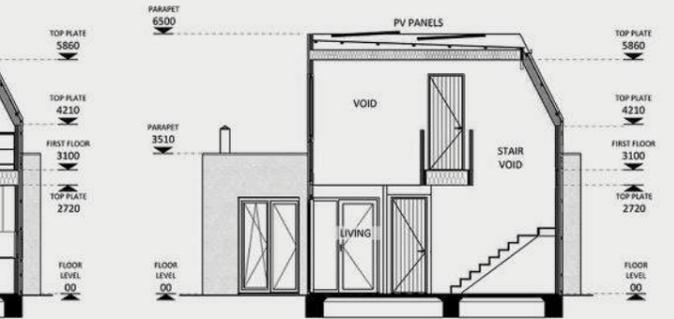
SECTION AA



SECTION BB



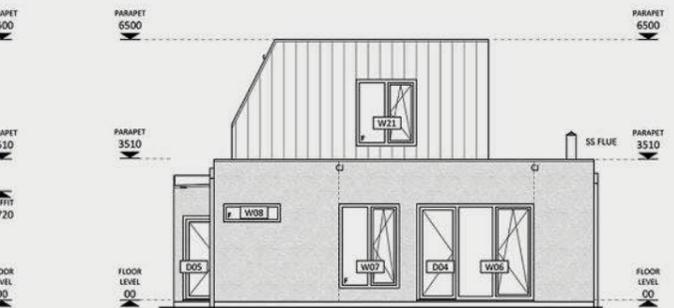
SECTION CC



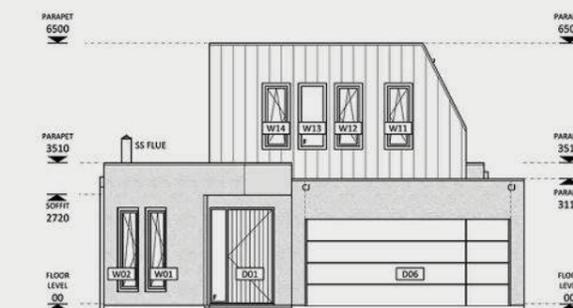
SECTION DD



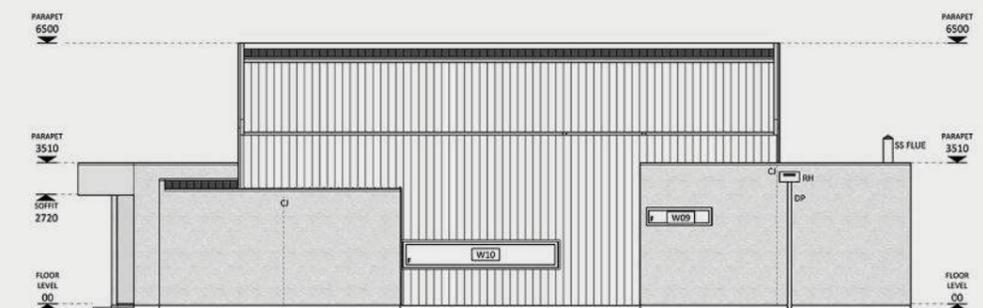
NORTH EASTERN ELEVATION



SOUTH EASTERN ELEVATION



NORTH WESTERN ELEVATION



SOUTH WESTERN ELEVATION



The
projects on site

PROJECT SUMMARY

The proposed new build residence at 39 Main Avenue, Frewville, SA 5063 has been designed to be as environmentally friendly as possible. The design is driven by the site and the neighbouring buildings with a view to maximize passive solar orientation. The goal was to achieve the lowest energy assumption for the house and higher level of comfort all year around, minimising the usage of non renewable energy source for heating and cooling through the lifespan of the building.

The proposal is to use lightweight construction materials to lower the environmental impact by reducing the carbon production. The building achieved an energy rating of 7.6 star . It will use minimal energy to maintain a comfortable environment all year round and incorporate a wall construction system developed from the zero carbon house at Lochiel park, SA.

Highly efficient, low maintenance uPVC windows have been used as well as quality LED lighting and low water usage water taps and fittings. A solar panel array system is installed and battery operated to cater for the family's power usage all through the year.

The functional requirements for the house is kitchen, dining and open plan living space , two kids bedrooms along with the mastersuite and a multipurpose room which can also be used as spare bedroom when parents in law come visiting from abroad. The design prncipal was to devide the house in a way that the sleeping quarters can be totally closed off from the living spaces when not in use to reduce the heating and cooling requirements.

Client name: Lynda Lieu & Tommy Leung

Project timeline: 2021 - 2023

My role: Design lead & development application (DA), building rules (BR) drawing set development

Software used: Sketchup & Layout

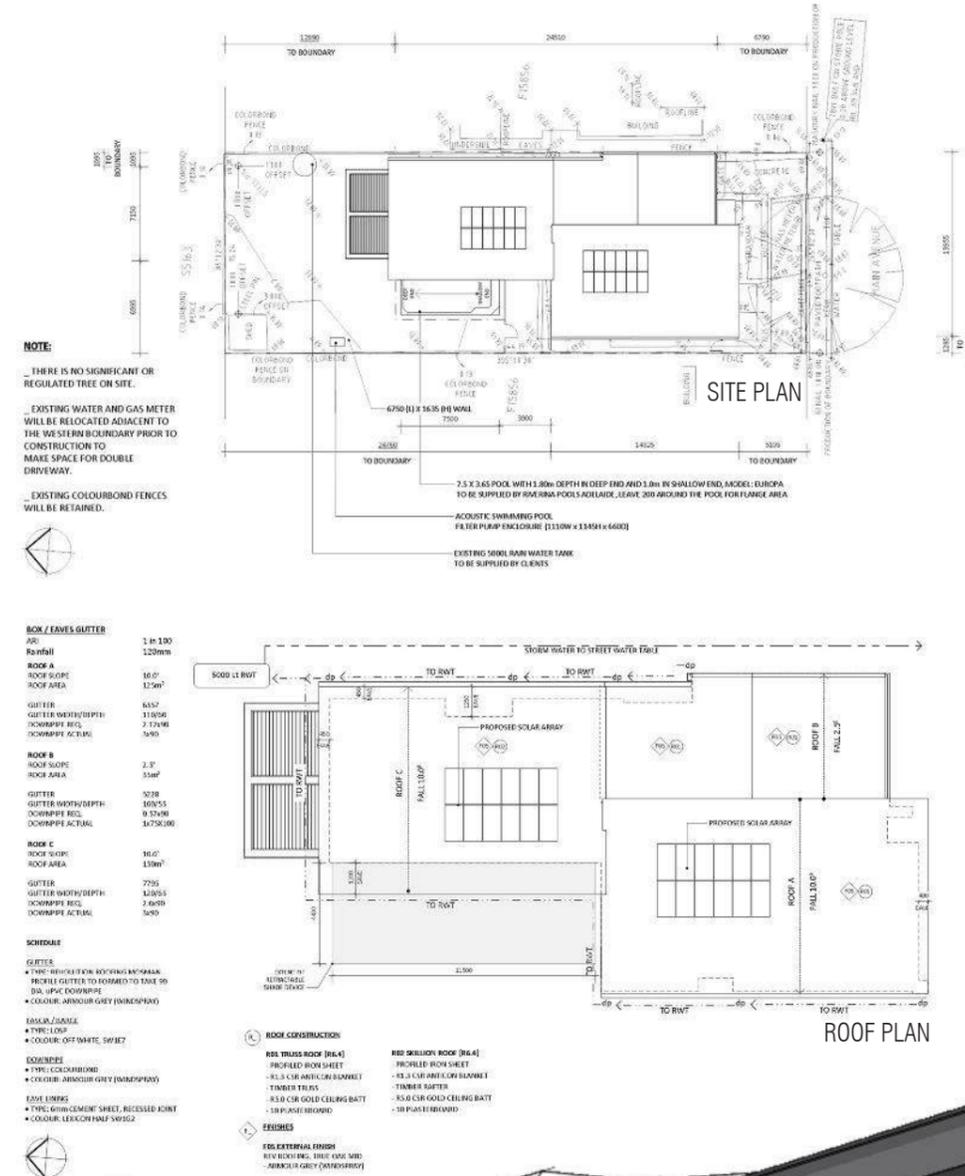
Floor area calculation:

Livable area: 226 sqm

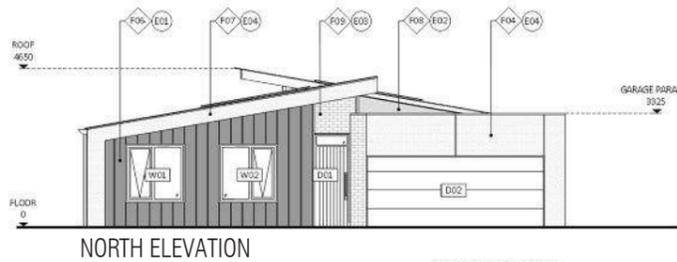
Garage area: 36 sqm

Total livable space: 262 sqm

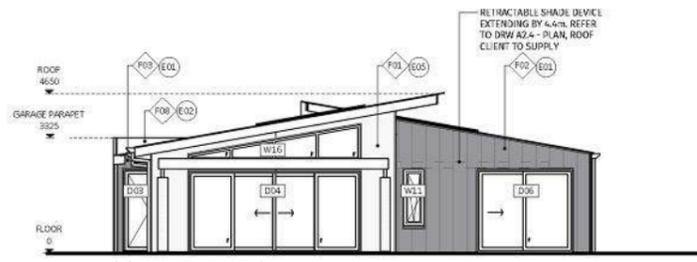
Pool area and alfresco : 100 sqm



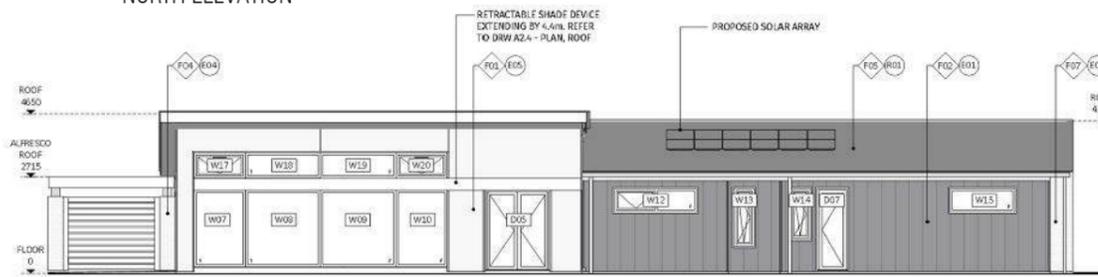
THE LIEU - LEUNG RESIDENCE



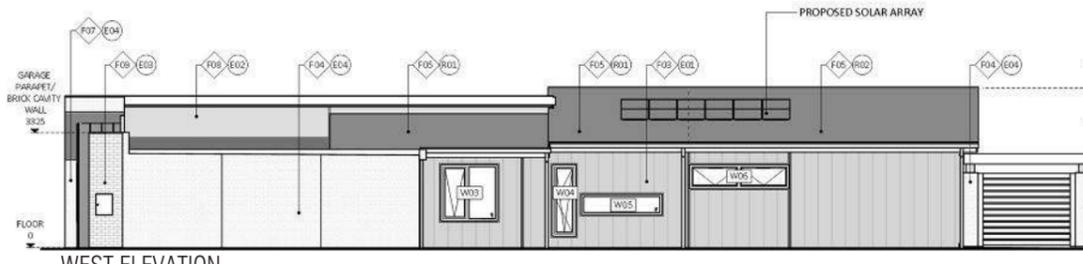
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

R. ROOF CONSTRUCTION

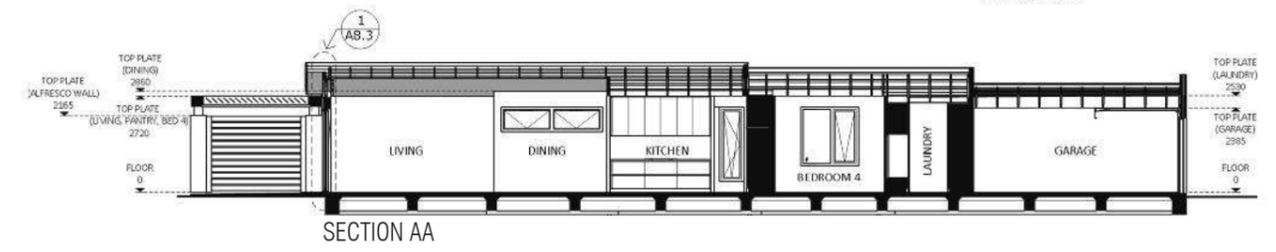
- R01 TRUSS ROOF [R6.4]**
- PROFILED IRON SHEET
 - R1.3 CSR ANTICON BLANKET
 - TIMBER TRUSS
 - R5.0 CSR GOLD CEILING BATT
 - 10 PLASTERBOARD
- R02 SKILLION ROOF [R6.4]**
- PROFILED IRON SHEET
 - R1.3 CSR ANTICON BLANKET
 - TIMBER RAFTER
 - R5.0 CSR GOLD CEILING BATT
 - 10 PLASTERBOARD

E. EXTERNAL WALL CONSTRUCTION

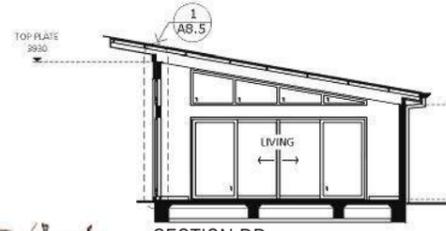
- E01 EXTERNAL WALL - THERMAL [R5.4]**
- CLADDING
 - 90 x 45 TIMBER BATTEN
 - R2.06 45 PIR RIGID INSULATION
 - AMETALIN SILVERWRAP MD
 - 90 x 35 TIMBER STUD
 - R2.5 CSR BRADFORD WALL BATT
 - 10 PLASTERBOARD
- E02 EXTERNAL WALL - THERMAL [R3.1]**
- CLADDING
 - 90 x 45 TIMBER BATTEN
 - AMETALIN SILVERWRAP MD
 - 90 x 35 TIMBER STUD
 - R2.5 CSR BRADFORD WALL BATT
 - 10 PLASTERBOARD [HABITABLE AREAS]
- E03 EXTERNAL WALL - THERMAL [R4.6]**
- STANDARD 110mm BRICK
 - 50 CAVITY WITH WALL TIE
 - AMETALIN SILVERWRAP MD BREATHABLE MEMBRANE
 - 90 x 35 TIMBER STUD
 - 10 PLASTERBOARD [HABITABLE AREAS]
- E04 EXTERNAL WALL - THERMAL [R2.5]**
- RENDER
 - 75 STEEL REINFORCED HEBEL POWERPANEL
 - 25 x 70 TOP HAT
 - 90 x 35 TIMBER STUD
 - R2.5 CSR BRADFORD WALL BATT [HABITABLE AREAS]
 - 10 PLASTERBOARD [HABITABLE AREAS]
- E05 EXTERNAL WALL [R6.3]**
- CLADDING
 - 90 x 35 TIMBER BATTEN
 - AMETALIN SILVERWRAP MD BREATHABLE MEMBRANE
 - 140 x 35 TIMBER STUD
 - R4.0 CSR BRADFORD WALL BATT
 - 10 PLASTERBOARD

F. FINISHES

- F01 EXTERNAL FINISH**
- CLADDING - BGC FIBRE CEMENT BOARD
 - RANGE - STRATUM DUO 300 [150 GROOVE]
 - FINISH - DULUX WEATHERSHIELD SMOOTH OR ECQV.
 - COLOUR - DULUX SILKWORT PG2C2
- F02 EXTERNAL FINISH**
- CLADDING - BGC FIBRE CEMENT BOARD
 - RANGE - DURAGROOVE SMOOTH EXTRA WIDE 400
 - FINISH - DULUX WEATHERSHIELD SMOOTH OR ECQV.
 - COLOUR - MONUMENT
- F03 EXTERNAL FINISH**
- CLADDING - BGC FIBRE CEMENT BOARD
 - RANGE - DURAGROOVE SMOOTH EXTRA WIDE 400
 - FINISH - DULUX WEATHERSHIELD SMOOTH OR ECQV.
 - COLOUR - DULUX SILKWORT PG2C2
- F04 EXTERNAL FINISH**
- CLADDING - HEBEL POWERPANEL
 - FINISH - DULUX ACRATEX RENDER SYSTEM
 - DULUX WEATHERSHIELD, DIESKAU PG2C1
- F05 EXTERNAL FINISH**
- CLADDING - METAL PROFILE
 - PROFILE - REV. ROOFING, TRUE OAK DEEP 21
 - COLOUR - ARMOUR GREY [WINDSPRAY]
- F06 EXTERNAL FINISH**
- CLADDING - METAL PROFILE
 - PROFILE - REVOLUTION ROOFING, MAXLINE 340
 - COLOUR - MONOLITH [MONUMENT]
- F07 EXTERNAL FINISH**
- CLADDING - HEBEL POWERPANEL
 - FINISH - DULUX ACRATEX RENDER SYSTEM
 - DULUX WEATHERSHIELD, MONUMENT
- F08 EXTERNAL FINISH**
- CLADDING - METAL PROFILE
 - PROFILE - REV. ROOFING, TRUE OAK DEEP 21
 - COLOUR - ARMOUR GREY [WINDSPRAY]
- F09 EXTERNAL FINISH**
- CLADDING - PGH BRICK
 - RANGE - AUSTRAL BRICKS
 - TYPE - LANEWAY, HOSIER BLUESTONE
 - MORTAR JOINT - FLUSH
 - MORTAR COLOUR - OFF WHITE



SECTION AA



SECTION DD



SECTION BB



SECTION CC



| # | MODEL | COLOUR | WATTS | KELVIN | BEAM | CUTOUT |
|---|----------------------|------------|-------|--------|------|--------|
| 1 | APEX | WHITE | 10w | 3000k | 40° | 920 |
| 2 | APEX | WHITE | 13w | 3000k | 40° | 920 |
| 3 | APEX ADJUSTABLE | WHITE | 15w | 3000k | 40° | 900 |
| 4 | PARTICLE SMALL | WHITE | 9w | 3000k | 24° | 670 |
| 5 | FX SURFACE TRACK | BLACK | 15w | 3000k | 50° | 380 |
| 6 | TITANIUM STARLITE | WHITE | 5w | 3000k | 50° | 380 |
| 7 | ASTROFIXED ONE WALL | TEX. GREY | 7w | 3000k | - | - |
| 8 | SUPALUX LINEAR STRIP | TEX. WHITE | 33w | 3000k | 120° | - |
| 9 | ALTON PENDANT | SMOKE | 60w | - | - | - |

NOTE - CLIENT TO SUPPLY GLOBES FOR ALTON PENDENTS

| # | MODEL | AC/DC | BODY | BLADE | LED |
|---|-------------|-------|-------|---------|-----|
| 1 | THREE SIXTY | DC | WHITE | NATURAL | NO |
| 2 | FANCO | DC | WHITE | WHITE | NO |

| SWITCHGEAR | |
|-------------|---------------|
| - SUPPLIER: | CLIPSAL |
| - TYPE: | ICONIC SERIES |
| - COLOUR: | WHITE |

| DIMMER | |
|-----------|--------------------|
| - TYPE: | DIGINET ROTARY LED |
| - COLOUR: | WHITE |

| MOTION SENSOR | |
|-----------------------------------|-------|
| - INFRASCAN 360° P. CEILING MOUNT | |
| - RECESSED | |
| - COLOUR: | WHITE |

| SMOKE ALARM | |
|-------------|--|
| - TYPE: | GOOGLE NEST HARD WIRED WITH BATTERY BACKUP |
| - COLOUR: | WHITE |

| HEATING AND COOLING | |
|---------------------|--------------------|
| - SUPPLIER: | THERMANN |
| - TYPE: | X HYBRID HEAT PUMP |
| - CAPACITY: | 300 LITRES |

| ELECTRICAL OUTLETS | |
|--------------------|---------|
| - SUPPLIER: | CLIPSAL |
| - TYPE: | ICONIC |
| - COLOUR: | WHITE |

| VENTILATION | |
|-------------|------------------|
| - SUPPLIER: | CLIPSAL |
| - TYPE: | AIRFLOW CEF30-WE |
| - COLOUR: | WHITE |

| # | ITEM REFERENCE NUMBER |
|---|--|
| 1 | SMOKE ALARM TO BE INTERCONNECTED TO CONSUMER MAINS POWER AS 3786 LIGHT, CEILING MOUNTED, <u>ADJUSTABLE</u> LIGHT, CEILING MOUNTED, <u>PENDENT</u> LIGHT, CEILING MOUNTED, <u>ADJUSTABLE</u> LIGHT, CEILING MOUNTED, <u>PENDENT</u> LIGHT SWITCH (1000 AFL) LIGHT SWITCH, DIMMABLE (1000 AFL) CEILING MOUNTED EXTRACTOR FAN UNDER CUPBOARD LED STRIP LIGHT WALL LIGHT, HIGH LEVEL, 2000 AFL LED TUBE LIGHT SUPERLUX |

| POWER | |
|-------|---------------------------------------|
| 1 | GPO, DOUBLE / SINGLE @ 400 AFL |
| 2 | GPO, DOUBLE, ABOVE BENCH, 1050 TO U/S |
| 3 | GPO, DOUBLE, UNDER BENCH |
| 4 | GPO, DOUBLE, EXTERNAL IP PROTECTION |
| 5 | GPO, HEIGHT EG. 1000 AFL |
| 6 | GPO, RANGE HOOD |
| 7 | DATA OUTLET CAT5e |
| 8 | METER BOX (SB - SUB BOARD) |
| 9 | CONSUMER BOARD |
| 10 | TELEVISION OUTLET |
| 11 | EXHAUST FAN, CEILING MOUNT |
| 12 | CEILING FAN |

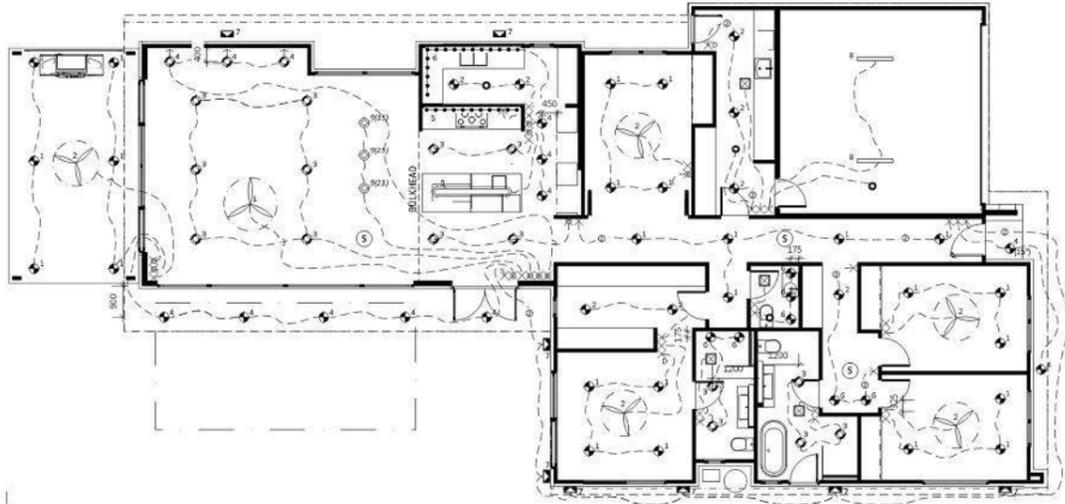
| WATER | |
|-------|-----------------------------------|
| 1 | HOT WATER CYLINDER |
| 2 | HOT & COLD WATER + WASTE PLUMBING |
| 3 | ROUTER POINT |
| 4 | HDMI POINT |
| 5 | EXTERNAL WATER TAP |

| SOLAR | |
|-------|----------|
| 1 | INVERTER |
| 2 | BATTERY |

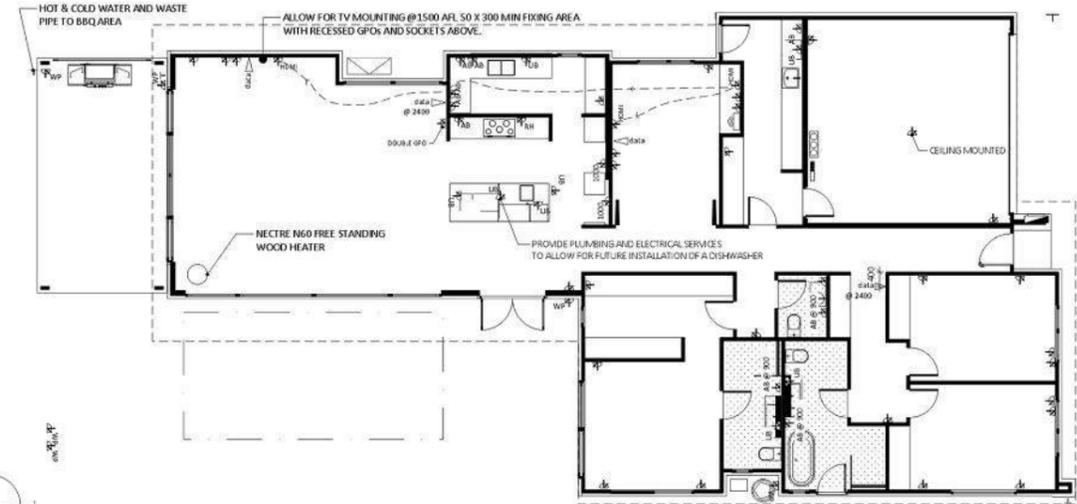
| UNDER FLOOR HEATING | |
|---------------------|-------------------------|
| 1 | UNDERFLOOR HEATING AREA |

| SCHEDULE SERVICES FITTINGS | |
|------------------------------------|-------------------|
| GPO | |
| - SUPPLIER: | CLIPSAL |
| - TYPE: | ICONIC |
| - COLOUR: | WHITE |
| - LOCATION: | AS PER FLOOR PLAN |
| DATA POINTS | |
| - SUPPLIER: | CLIPSAL |
| - TYPE: | ICONIC |
| - COLOUR: | WHITE |
| - LOCATION: | AS PER FLOOR PLAN |
| TV POINTS | |
| - SUPPLIER: | CLIPSAL |
| - TYPE: | ICONIC |
| - COLOUR: | WHITE |
| - LOCATION: | AS PER FLOOR PLAN |
| NBN | |
| - LEAD-IN CONDUIT (LIC) BY BUILDER | |
| - CONNECTION BY CLIENT | |

| SCHEDULE | |
|--|--|
| HEATING & COOLING (A/C) | |
| - SUPPLIER: | |
| - TYPE: | |
| - POWER SUPPLY: | |
| HEATING & COOLING (WATER) | |
| - SUPPLIER: | |
| - TYPE: | |
| - POWER SUPPLY: | |
| HEATING & COOLING (RADIANT) | |
| - SUPPLIER: | |
| - TYPE: | |
| - POWER SUPPLY: | |
| UNDERFLOOR HEATING | |
| - SUPPLIER: | |
| - TYPE: | |
| - POWER SUPPLY: | |



ELECTRICAL PLAN (LIGHTING)



ELECTRICAL PLAN (POWER/UTILITY)



- GENERAL NOTES**
- SCHEDULE AS VIEWED FROM OUTSIDE
 - ALL DIMENSIONS ARE TAKEN FROM FLOOR LEVEL
 - SEE SECTIONS AND PERSPECTIVES FOR INSTALLATION METHOD
 - ADD 25mm TO WINDOW AND DOOR DIMENSIONS FOR TIMBER FRAME OPENINGS
 - ALL WINDOWS AND DOORS TO BE KEYS ALIVE
 - ALL OPENABLE WINDOWS TO HAVE FLY SCREENS
 - ALL SLIDING DOORS TO HAVE INTEGRATED SECURITY SCREEN USING 3 TRACK SYSTEM UNLESS THERE IS 1x FIXED AND 2x SLIDERS
 - ALL DIMENSIONS SHOULD BE CONFIRMED ON SITE PRIOR TO MANUFACTURE
 - BATHROOM WINDOWS TO COMPLY WITH NCC 3.6.4.5
 - OBSIDIAN GLAZING IS SUFFICED BY *
 - IGUPS TO COMPLY TO CURRENT NCC GLAZING CODES

- WINDOW PERFORMANCE**
- SUPPLIER: DOUBLE GLAZED LONSDALE
 - TYPE: UPVC FRAME OUTER WITH INTERNAL STEEL REINFORCING

- WINDOW**
- AWNINGS: REH-010-012 IGU: FGI DE-Clr 4/12Ar/4 Uw: 1.8 SHGC: 0.34
 - TILT/TURNE: REH-007-12 IGU: FGI DE-Clr 4/12Ar/4 Uw: 1.9 SHGC: 0.33
 - SLIDING DOOR/WINDOW: REH-008-012 IGU: FGI DE-Clr 4/12Ar/4 Uw: 1.8 SHGC: 0.44

- WINDOW COLOUR**
- INTERNAL FRAME COLOUR: CEYLON
 - EXTERNAL FRAME COLOUR: CEYLON

- UPVC WINDOW & DOOR HARDWARE**
- SUPPLIER: DOUBLE GLAZED LONSDALE
 - TYPE: BY MANUFACTURER
 - COLOUR: BLACK
 - MULTI POINT LOCKING

- BUSHFIRE ATTACK LEVEL**
- THE BAL RATING ASSESSMENT FOR THIS PROJECT IS **BAL 0**
 - SUPPLY FLYSCREENS TO COMPLY TO BAL RATING AND CURRENT CODE

- EXTERNAL DOOR (D02)**
- SUPPLIER: HUME
 - TYPE: XLR 500 LINEAR ENTRANCE
 - COLOUR: GOLDEN OAK
 - LOCATION: REFER TO FLOOR PLAN

- EXTERNAL HARDWARE**
- SUPPLIER: GAINSBOROUGH
 - TYPE: TRILOCK OMNI ALLURE 600mm DOUBLE CYLINDER ENTRANCE SET
 - COLOUR: MATT BLACK
 - HINGE TYPE: 100mm, QUANTITY DEPENDENT ON WIDTH OF DOOR
 - COLOUR: SATIN CHROME

- INTERNAL DOORS**
- SUPPLIER: HUME OR EQUIV.
 - TYPE: HAG11 (PANEL DOOR WITH 7 VERTICAL LINES)
 - COLOUR: LEXICON HALF PN2A1
 - LOCATION: REFER TO FLOOR PLAN

- INTERNAL HARDWARE**
- SUPPLIER: GAINSBOROUGH
 - TYPE: G2 SERIES OUTLINE LEVERSET
 - COLOUR: SATIN CHROME
 - USE PRIVACY LOCKS ON TOILET, ENSUITE AND BATHROOM
 - TYPE: 100mm, 3 PER DOOR
 - COLOUR: SATIN CHROME

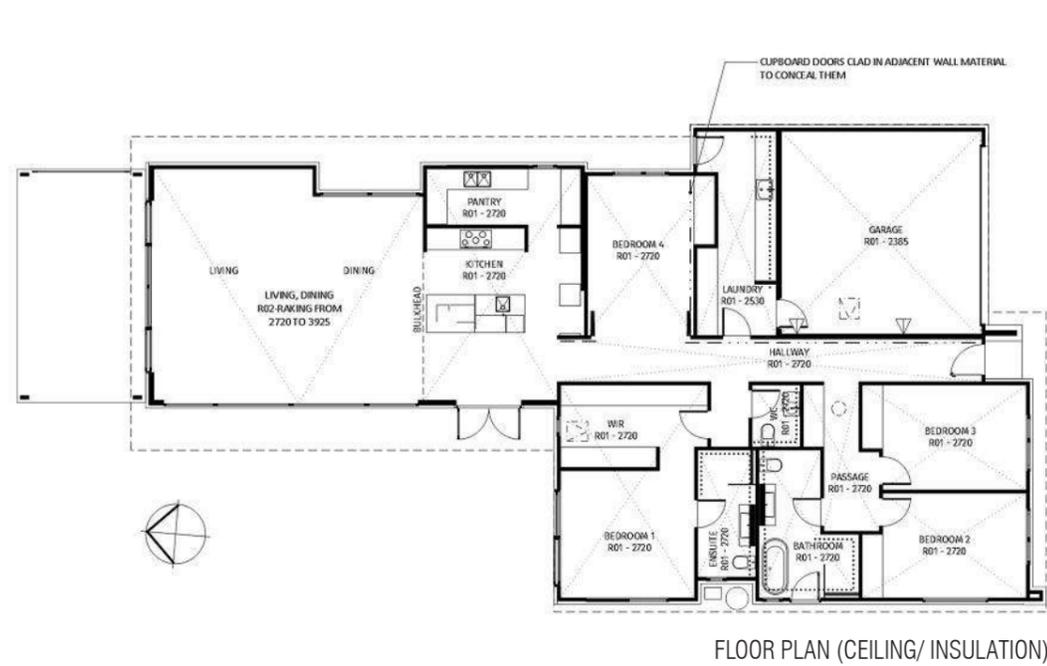
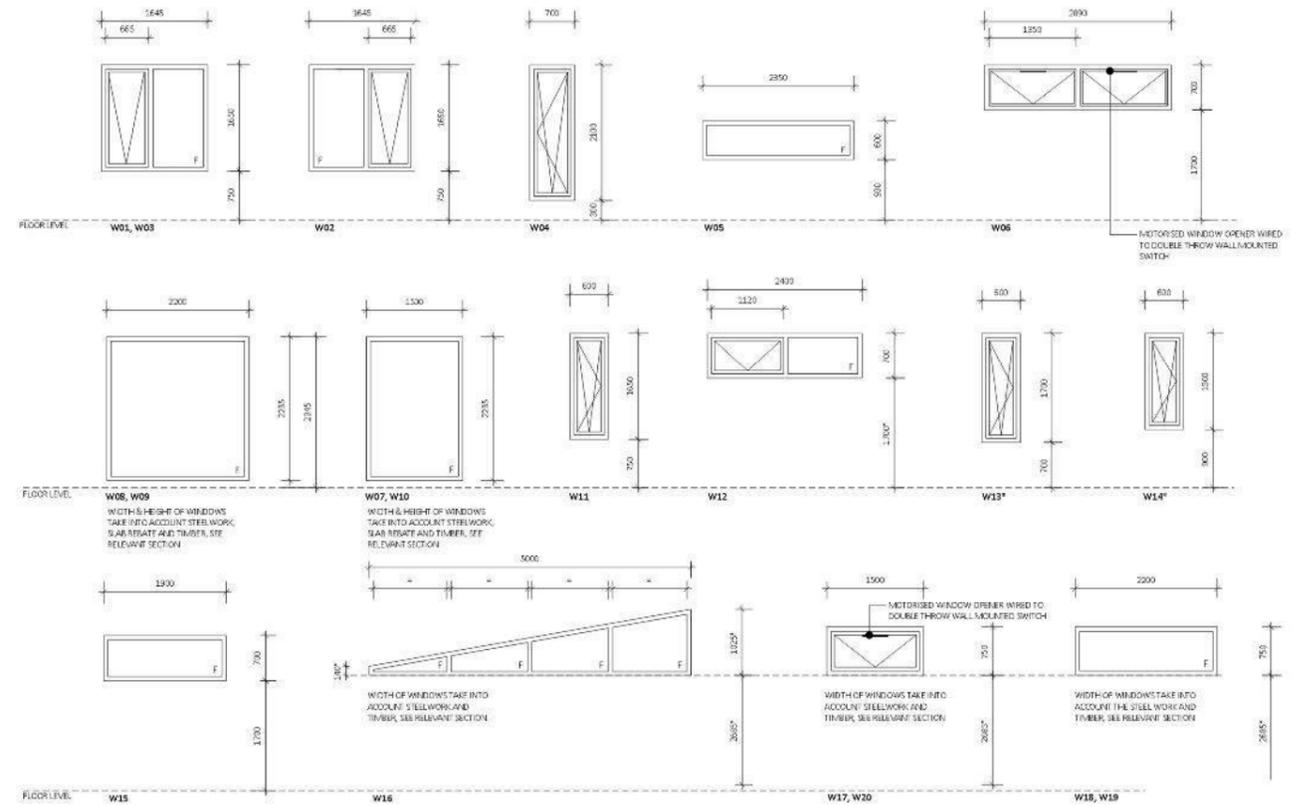
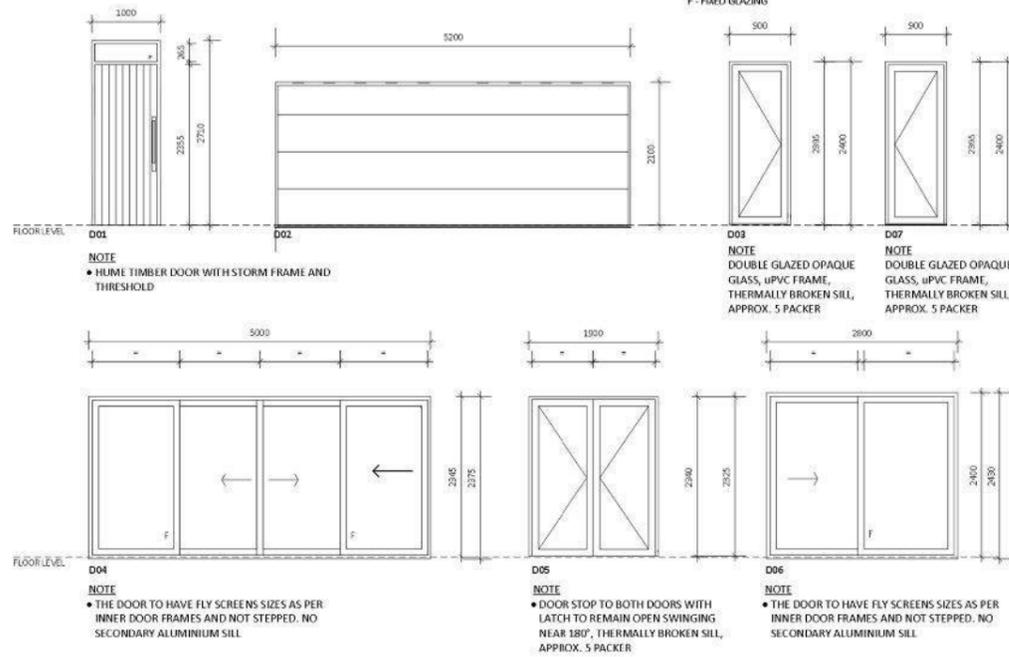
- DOOR STOP, LAYOUT DEPENDENT**
- SUPPLIER: GAINSBOROUGH
 - TYPE: G207 TUBE WALL STOP
 - COLOUR: SATIN CHROME

- GARAGE DOOR (D02)**
- SUPPLIER: GLIDEROL GARAGE DOORS AND AUTOMATION
 - TYPE: SECTIONAL, HAT ME SERIES
 - COLOUR: TEXTURED
 - MOTOR: GLIDERMATIC GTS+

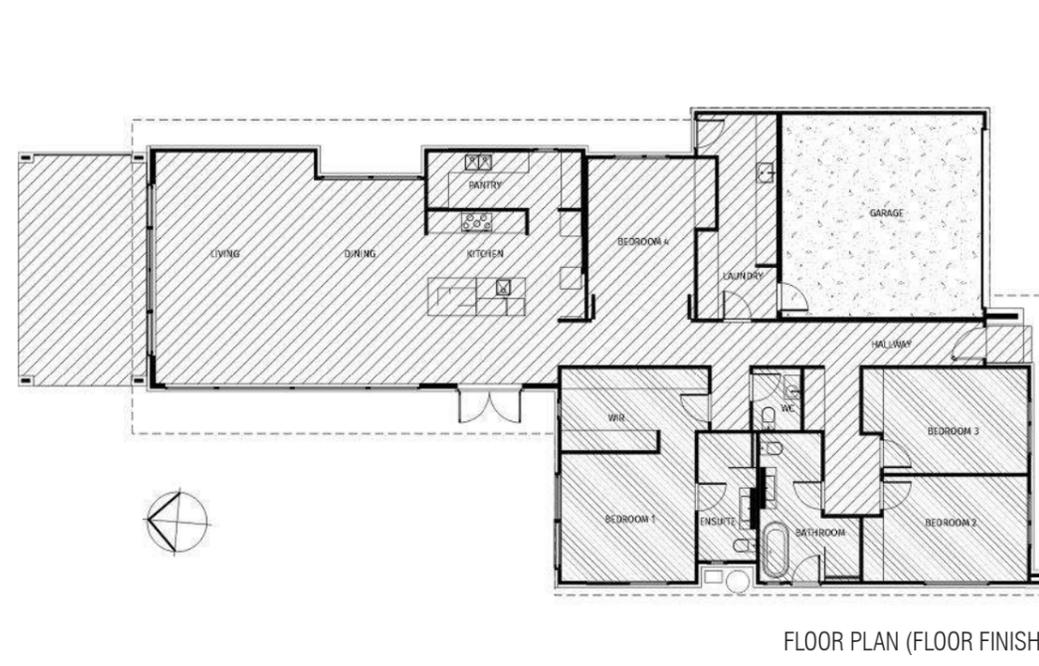
- ARCHITRAVE AND SKIRTING**
- SUPPLIER: HUME
 - TYPE/SIZE: SINGLE BEVEL 90x18mm
 - MATERIAL: MDF, PRIMED
 - COLOUR: LEXICON HALF PN2A1
 - DOOR ARCHITRAVE AND SKIRTING
 - WINDOW REVEALS: PLASTERBOARD TO ALL SIDES

GOLDEN OAK, TUSCAN STYLE KEY

F - FIXED GLAZING



- WALL CONSTRUCTION, INTERNAL**
- ALL INTERNAL WALLS **I01 [R2.4]** UNLESS OTHERWISE SPECIFIED.
 - I01 INTERNAL WALL - THERMAL [R2.4]**
 - 10mm PLASTERBOARD
 - CSR BRADFORD R2.0 BATT
 - 10mm PLASTERBOARD
 - I02 INTERNAL WALL - THERMAL [R2.4]**
 - 10mm AQUACHECK / CEMENT BOARD TO WET AREA
 - CSR BRADFORD R2.0 BATT
 - I03 INTERNAL WALL - THERMAL [R2.4]**
 - BGC DURAGROOVE SMOOTH NARROW 100
 - CSR BRADFORD R2.0 BATT
 - 10mm PLASTERBOARD
- ROOF CONSTRUCTION**
- R01 TRUSS ROOF [R6.4]**
 - PROFILED IRON SHEET
 - R1.3 CSR ANTICON BLANKET
 - TIMBER TRUSS
 - R5.0 CSR GOLD CEILING BATT
 - 10 PLASTERBOARD
 - R02 SKILLION ROOF [R6.4]**
 - PROFILED IRON SHEET
 - R1.3 CSR ANTICON BLANKET
 - TIMBER RAFTER
 - R5.0 CSR GOLD CEILING BATT
 - 10 PLASTERBOARD
- KEY**
- MAN HOLE
 - CSR ODYSSEY HR2100 VENTILATION SYSTEM
 - SOLATUBE CORE DAYLIGHTING 160 DS SKYLIGHT WITH SQUARE JUST FROST FIXTURE
- MANHOLE**
- SUPPLIER: BUILDER TO SUPPLY
 - TYPE/SIZE: MANUFACTURER SPECIFIED
 - COLOUR: DULUX, LEXICON HALF



- SCHEDULE - FLOOR FINISH**
- CONCRETE**
 - SUPPLIER: BUILDER
 - FINISH: HELICOPTER FINISH
 - CERAMIC TILES**
 - SUPPLIER: NEWTON CERAMIC
 - TYPE/ SIZE: 750 x 750
 - COLOUR: EMEM NATURAL, MERCURY
 - GROUT: ARDEX FGB 211, SLATE GREY
 - CERAMIC TILES**
 - SUPPLIER: NEWTON CERAMIC
 - TYPE/ SIZE: 200x 1200
 - COLOUR: FROM VERT, NATURAL, STAGGERED LAY
 - GROUT: ARDEX FS DD 395, OLIVE
- SCHEDULE**
- CORNICE**
 - TYPE: SQUARE SET
 - LOCATION: THROUGHOUT
 - CEILING**
 - TYPE: FLAT
 - COLOUR: LEXICON HALF
 - SKIRTING**
 - TYPE: MDF BEVELLED EDGE
 - TYPE: 90mm
 - COLOUR: LEXICON HALF
- NOTE**
- SKIRTING TO ALL WALLS UNLESS OTHERWISE STATED. WET AREAS TO HAVE TILED SKIRTING, SEE ELEVATIONS AND INSET PLANS FOR MORE INFORMATION

The
conceptual
projects

THE KNOX HOUSE





Exterior view from the pedestrian bridge towards the house



Exterior view from the northern side of the site towards the house

PROJECT SUMMARY

The proposed new build residence at 17 Waterfall Gully Road, Burnside, SA 5066 has been designed to be as environmentally friendly as possible. The design is driven by the site which has a gentle slope with a creek running through it and dense, rich vegetation covering the ground. The site is a subdivided land with an existing pool house which is to be demolished and the new building will sit predominantly within the current one's footprint to minimize the damage to existing flora and fauna.

The building is partly elevated on stilts to provide a sense of treetop living as the site is surrounded by old gum trees. The spatial requirement of the house is divided in two parts; the upper level is the living quarters for the clients who are an elderly couple and the lower level is an independent unit which can be rented out as airBnB or used by their children when they visit.

The aim is to maximise passive solar orientation and amenity for the living spaces, ultimately achieving a low energy usage for the house and higher level of comfort all year round, minimising the use of non-renewable energy sources to heat and cool the house for the life of the build. The proposal is to use lightweight construction materials as much as possible to lower the environmental impact by reducing the amount of Carbon required for the build. Based on previous experience, the new build will achieve an estimated energy rating of > 8.0 Star.

SITE ANALYSIS AND DESIGN DECISIONS

SITE ANALYSIS:

- The proposed site is a subdivided land with an existing pool house.
- There is a creek running through it and an existing foot overbridge connects the two banks.
- Retaining walls protect the slope from the North to South Eastern side of the site.
- The site is covered with dense vegetation and well established gardens with a number of tall gum tree.
- The existing main house is on the South Western side of the subdivided land.

FUNCTIONAL REQUIREMENTS:

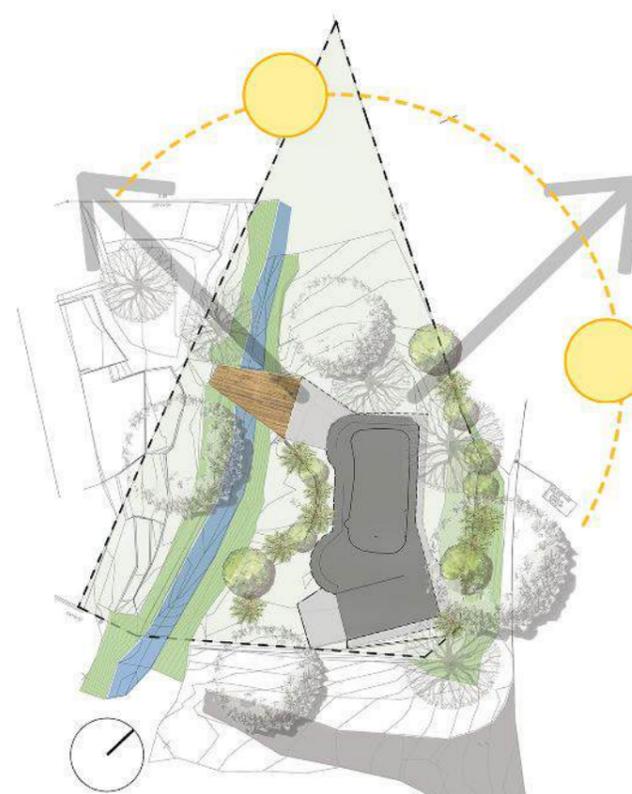
- The clients are an elderly couple with grownup kids who often visit with their own family.
- The new design has to accommodate an independent temporary rental unit with separate entrance which can also be used by the kids when they visit their parents.
- The living quarter for the clients will have an open plan living/ dining and kitchen space, a study space and mastersuite with laundry facilities.
- one single carport.

DESIGN DECISIONS:

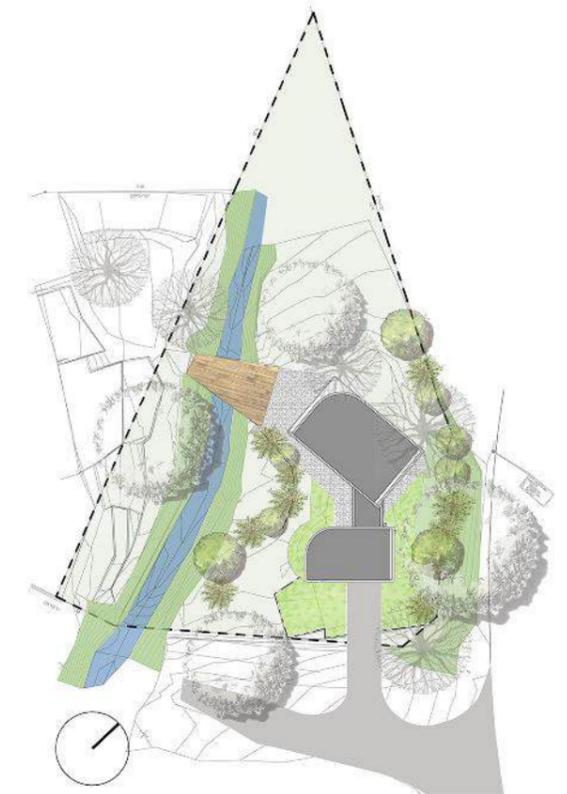
- The primary proposal is to completely segregate the rental unit with the living quarter by placing them in two different stories.
- The ground floor will house the rental for easy access.
- The upper floor will be the living quarter for the clients which has a beautiful "treetop living" feel to it and can provide the tranquil, quiet retreat they asked for.
- The upper floor is divided in two parts; one will be the open plan living/ dining and kitchen area where they can entertain friends and the other part is the mastersuit where they can retreat at the end of the day. These two parts are connected with an in between bridge space (breakout/ study) which is designed as an "indoor- outdoor" space.
- The stilt design principal is utilized to leave as much ground space possible to let the existing flower gardens and vegetation reclaim the land and to provide a "forest like sanctuary" to the clients.

Floor area calculation:
Ground floor: 54 sqm
1st floor: 130 sqm
Total livable space: 184 sqm
Carport: 41 sqm

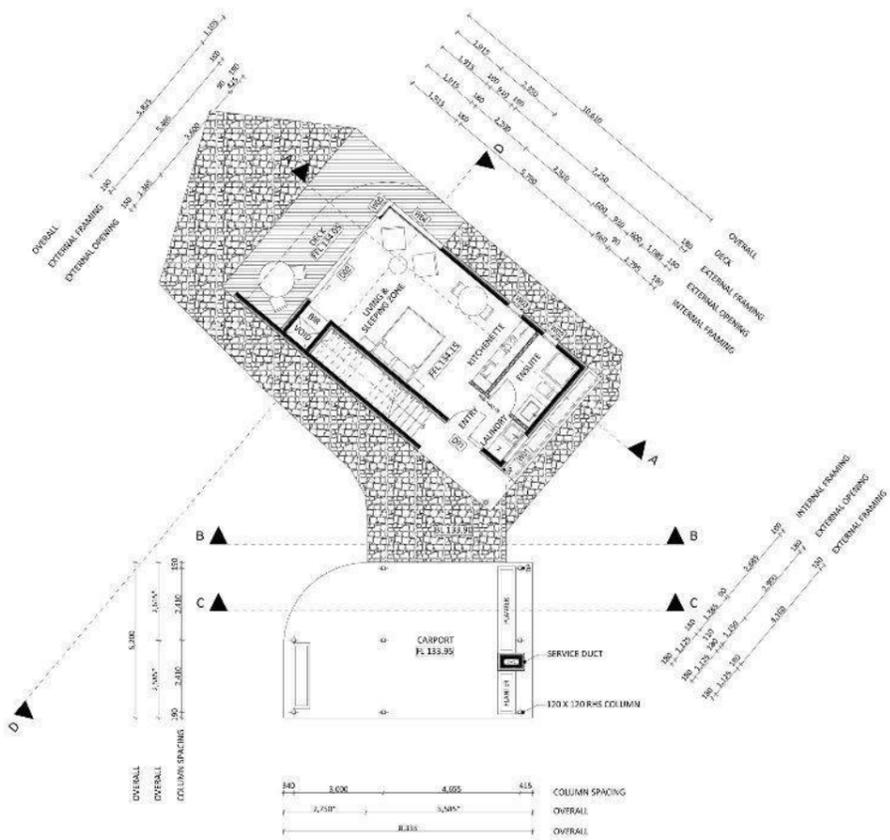
Client name: Clara & David Knox
Project timeline: 2020 - present
My role: Design lead & development
applicator: (DA) set development
Software used: ArchiCAD & Sketchup



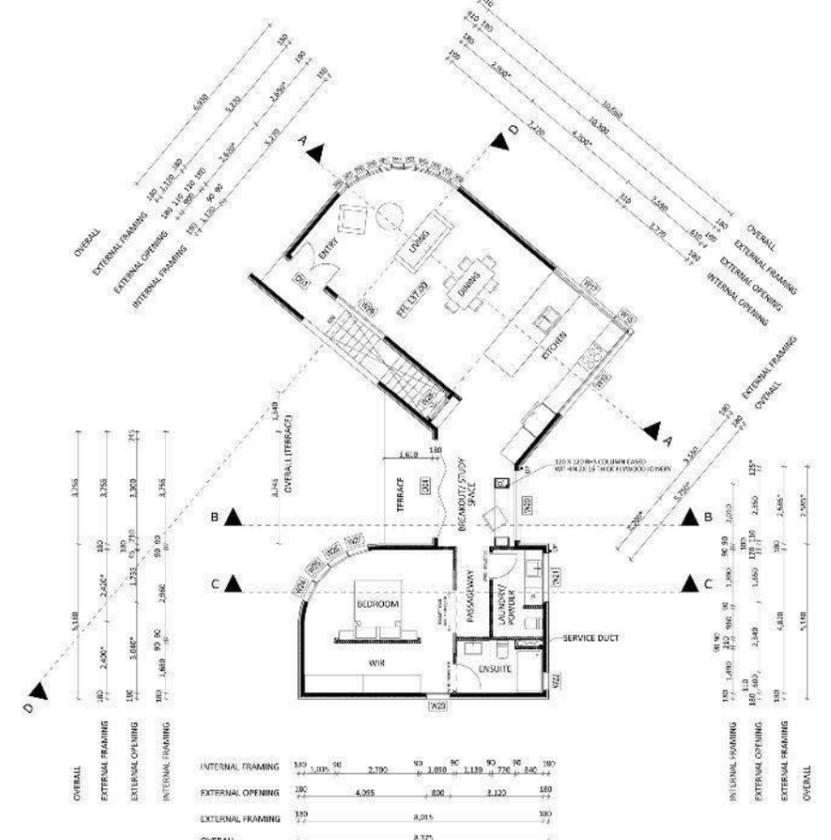
Existing site plan



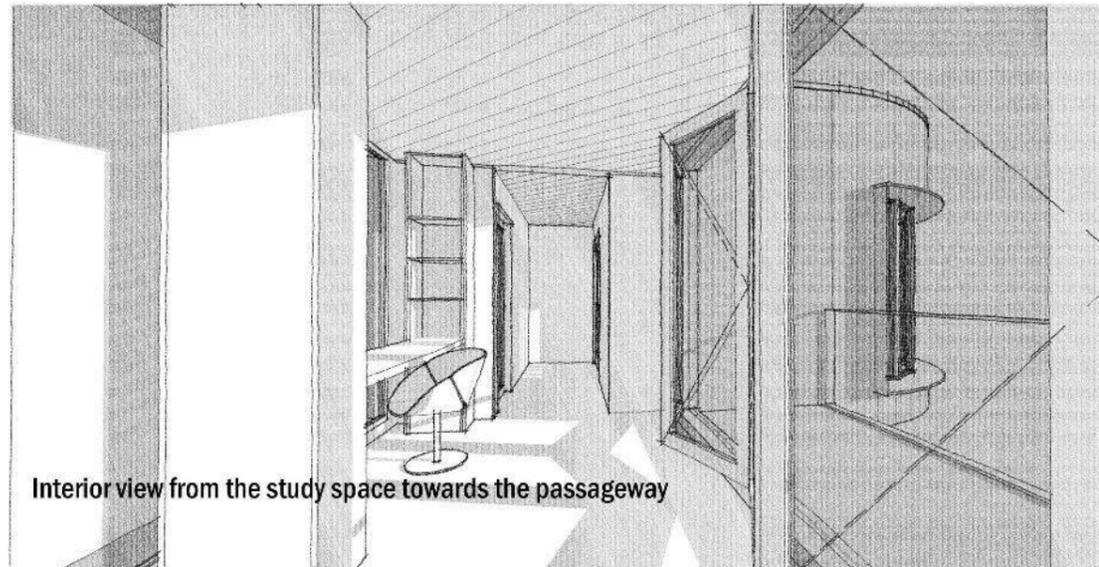
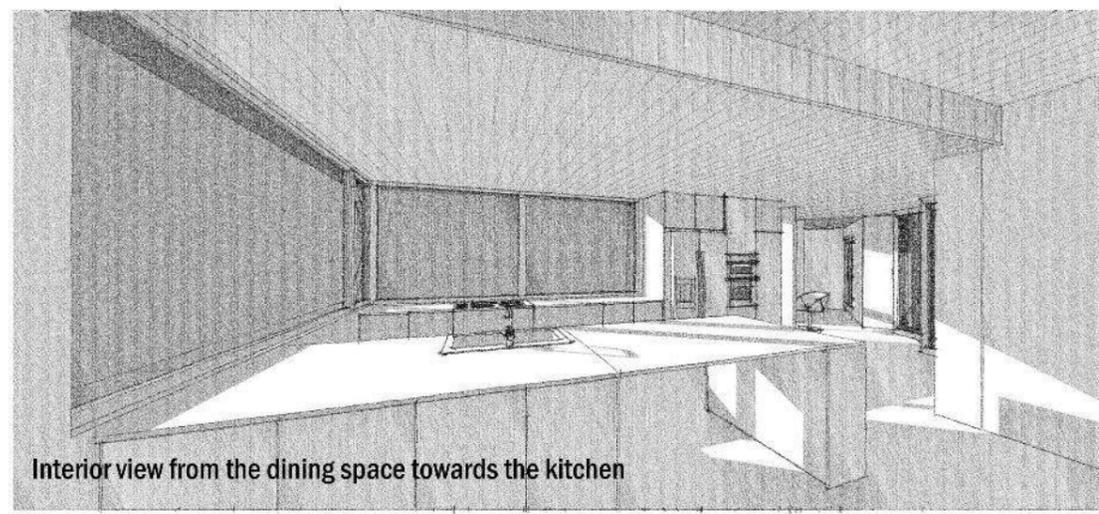
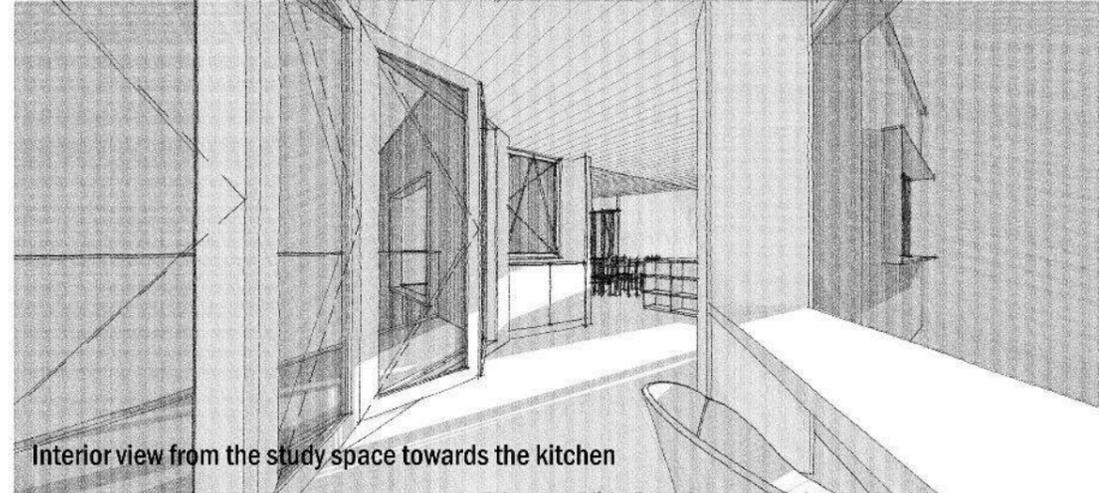
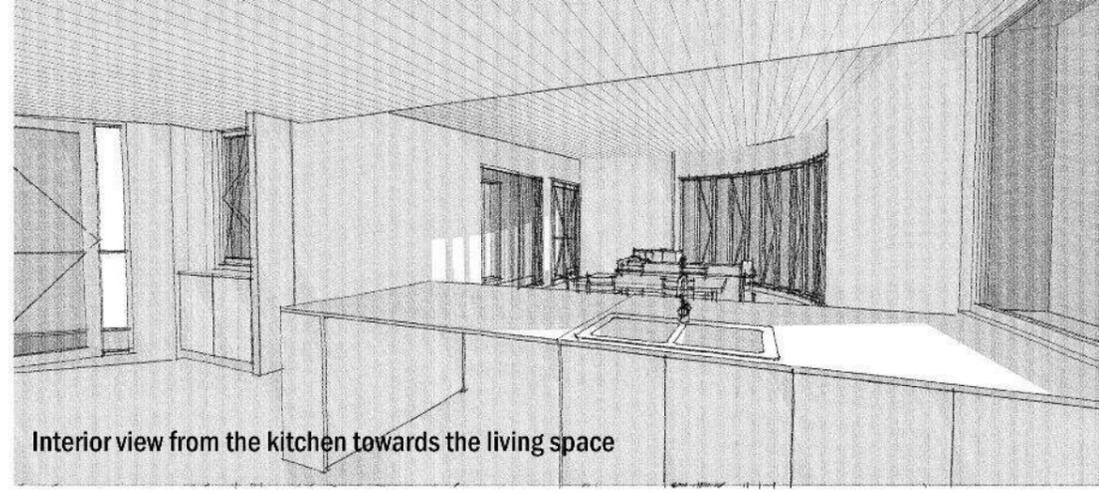
Proposed site plan



Lower level floor plan

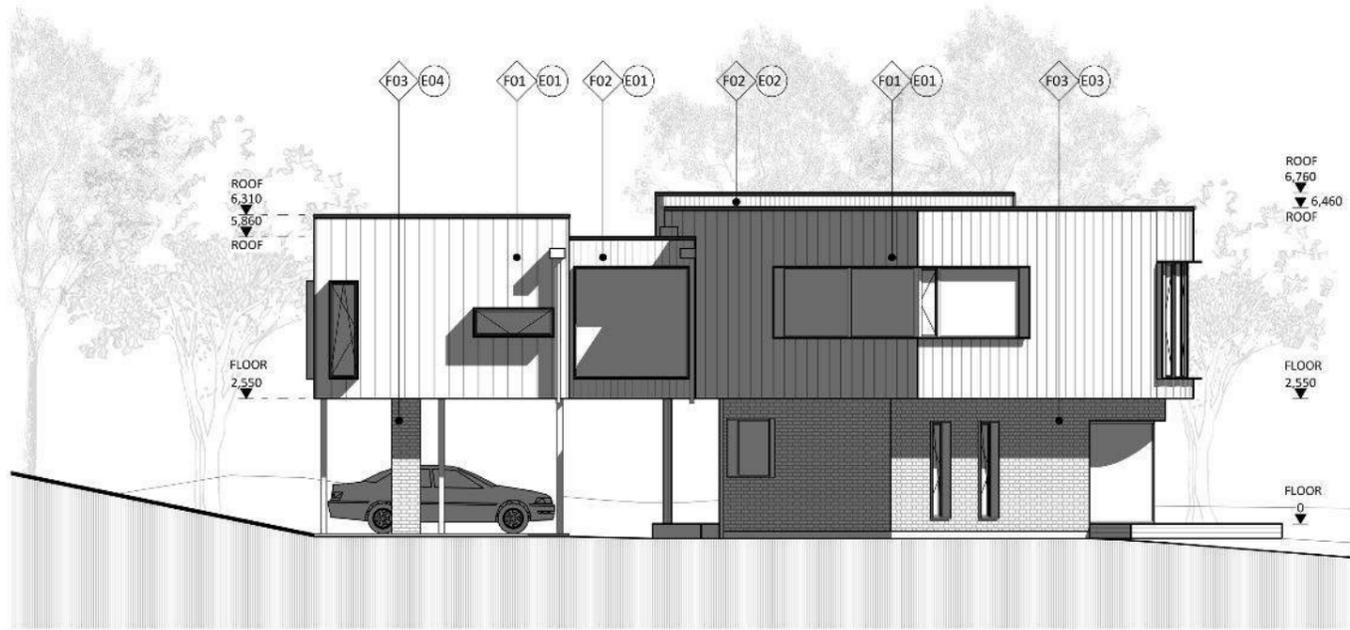


Upper level floor plan





South Elevation



North Elevation

F EXTERNAL MATERIALS AND FINISHES

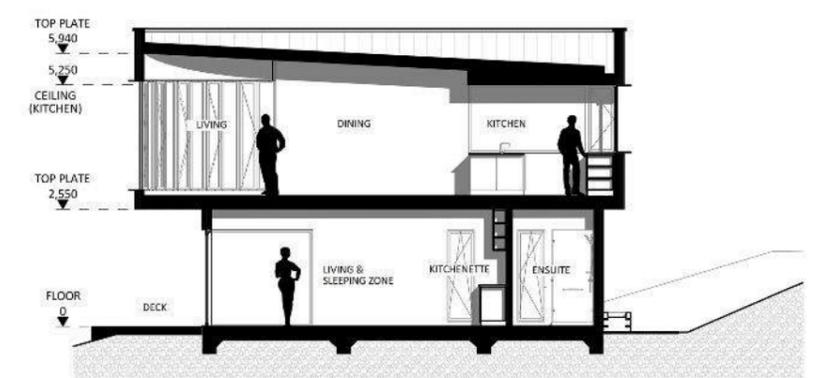
- F01 EXTERNAL FINISH**
- REVOLUTION ROOFING, MAXLINE
- MONOLITH [MONUMENT]
- F02 EXTERNAL FINISH**
- BGC FIBRE CEMENT BOARD [VERT.]
- INNOVA, STRATUM DUO
- STAIN APPLIED OVER BASE COAT, TEAK
- F03 EXTERNAL FINISH**
- AUSTRAL BRICKS, NELISSEN HASSELT
- COLOUR: HASSELT 1 NSW
- F04 EXTERNAL FINISH [ROOF]**
- REVOLUTION ROOFING, TRUE OAK MID
- GREY NOMAD [BASALT]

E WALL CONSTRUCTION

- E01 EXTERNAL WALL - THERMAL [R5.4]**
- CLADDING
- 90 x 45 TIMBER BATTEN
- R2.06 45 PIR RIGID INSULATION
- AMETALIN SILVERWRAP MD
- 90 x 35 TIMBER STUD
- R2.5 CSR BRADFORD WALL BATT
- 10 PLASTERBOARD
- E02 EXTERNAL WALL - THERMAL [R2.1]**
- CLADDING
- CAVITY SPACER
- AMETALIN SILVERWRAP MD
- 90 x 35 TIMBER STUD
- AMETALIN SILVERWRAP MD
- CAVITY SPACER
- CLADDING
- E03 EXTERNAL WALL - THERMAL [R5.4]**
- STANDARD 110mm BRICK
- 50 CAVITY WITH WALL TIE
- R2.06 45 PIR RIGID INSULATION
- AMETALIN SILVERWRAP MD
- 90 x 35 TIMBER STUD
- R2.5 CSR BRADFORD WALL BATT
- 10 PLASTERBOARD
- E04 EXTERNAL WALL - SERVICE DUCT**
- STANDARD 110mm BRICK
- 50 CAVITY WITH WALL TIE
- AMETALIN SILVERWRAP MD
- 90 x 35 TIMBER STUD

R ROOF CONSTRUCTION

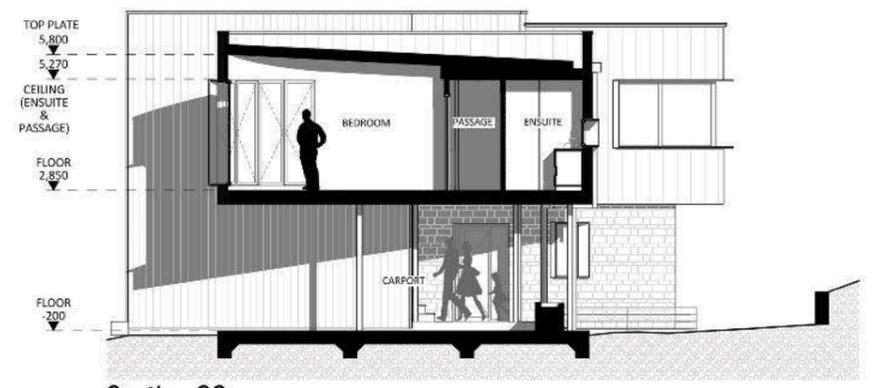
- R01 SKILLION ROOF [R6.4]**
- PROFILED IRON SHEET
- R1.3 CSR ANTICON BLANKET
- TIMBER TRUSS
- R5.0 CSR GOLD CEILING BATT
- 10 PLASTERBOARD
- R02 SKILLION ROOF [R6.4]**
- PROFILED IRON SHEET
- R1.3 CSR ANTICON BLANKET
- TIMBER RAFTER
- R5.0 CSR GOLD CEILING BATT
- 10 PLASTERBOARD



Section AA



Section BB



Section CC

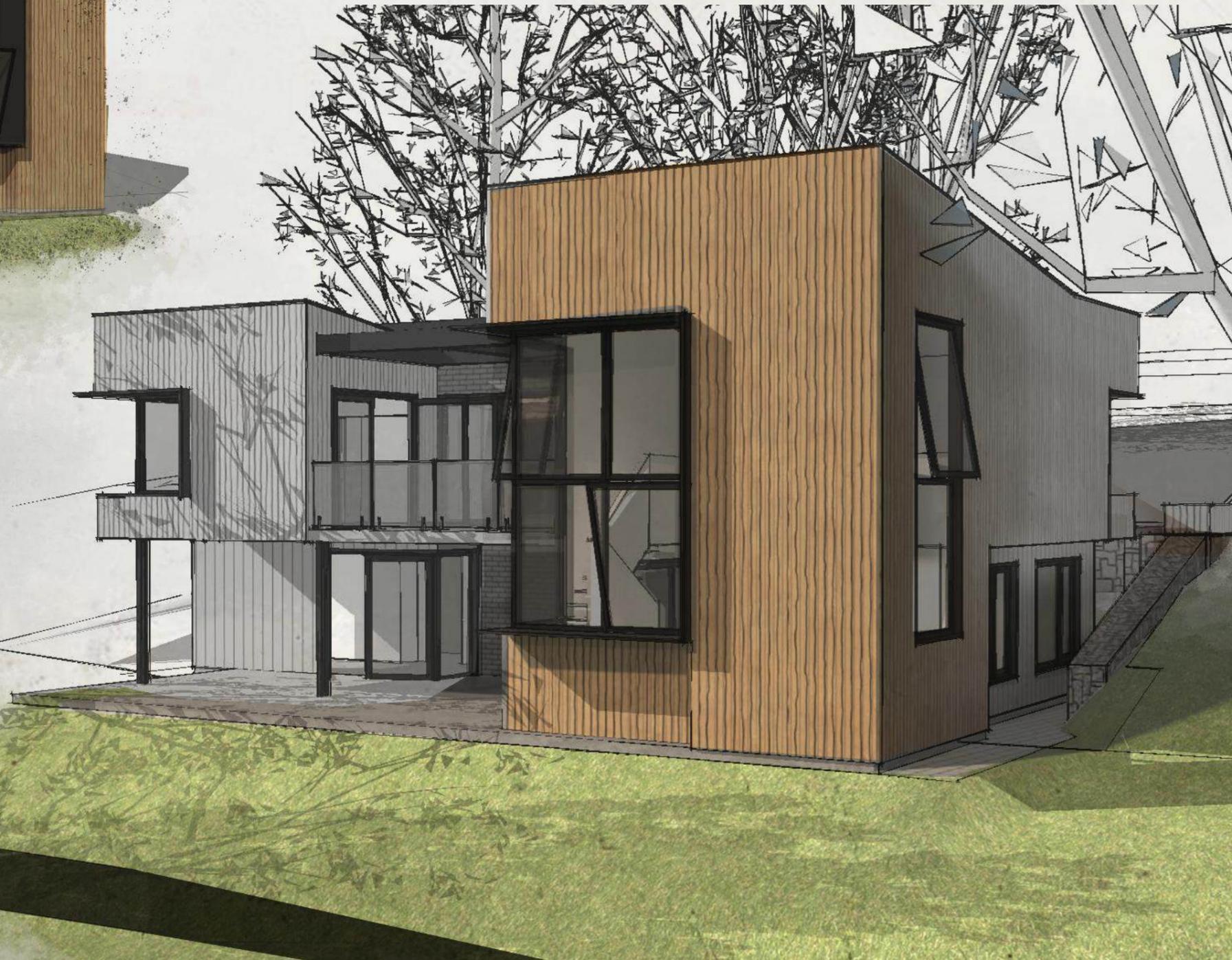
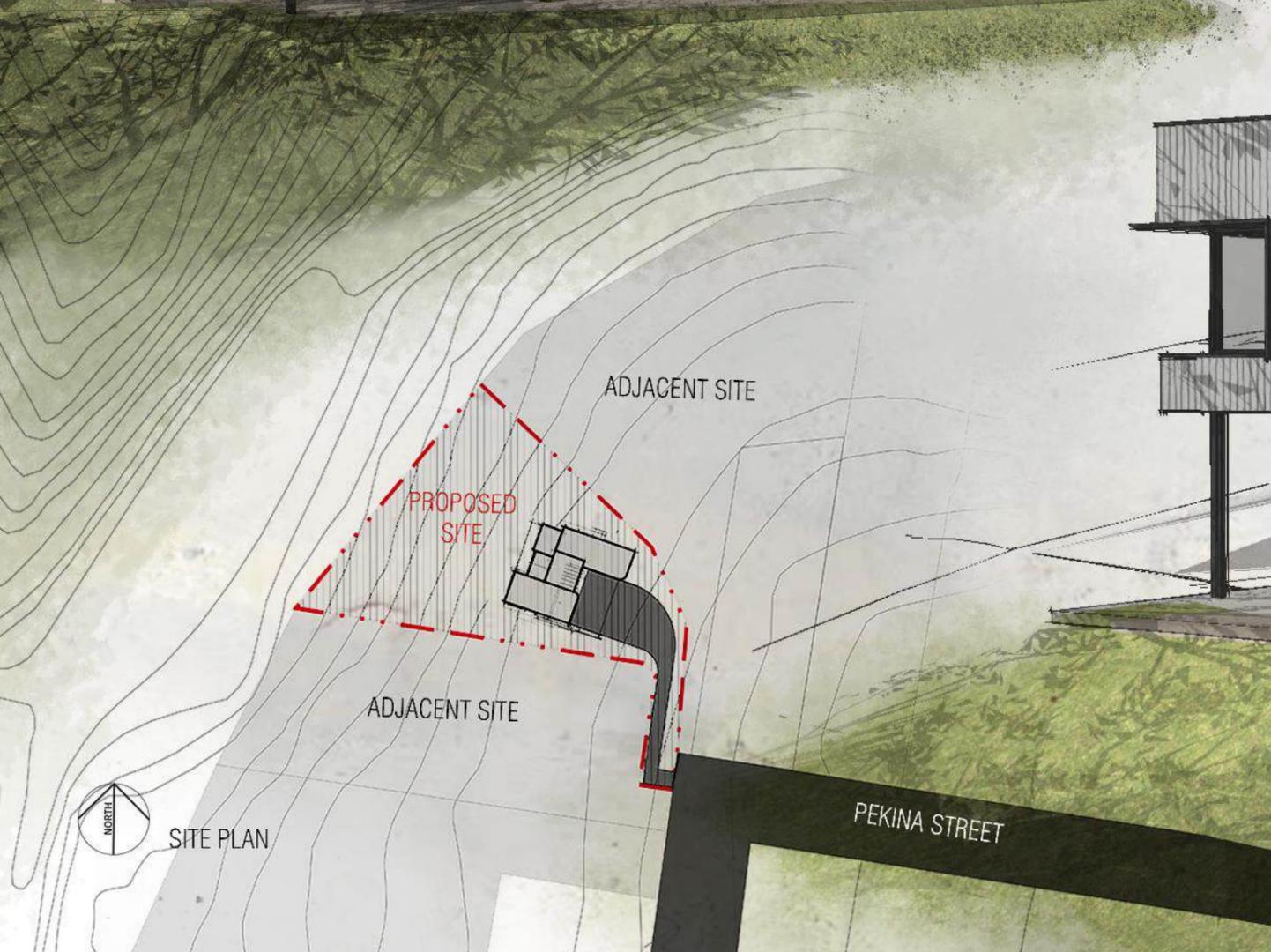


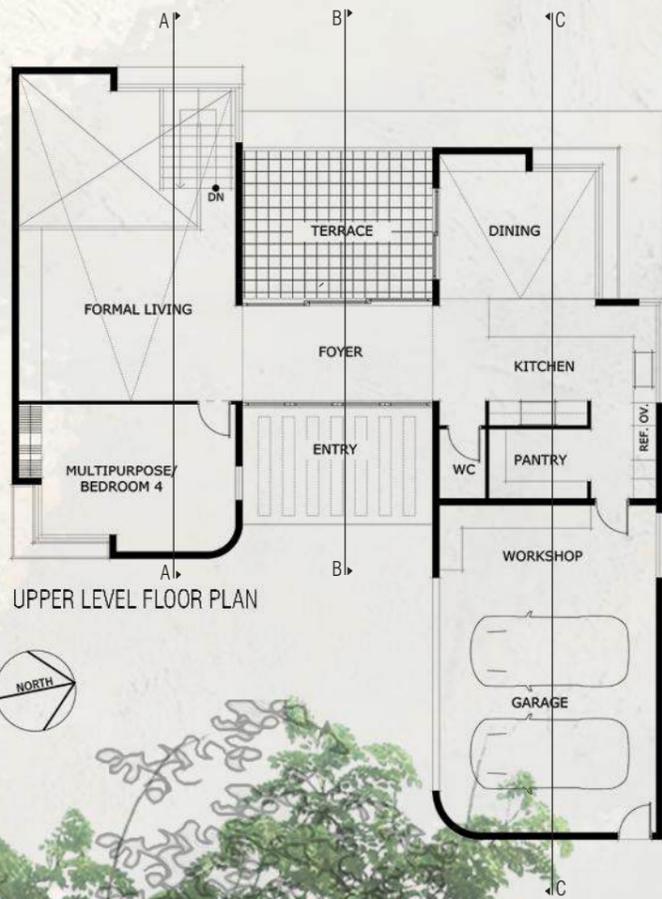
PROJECT SUMMERY

The proposed new build residence at 64 Pekina Street, Eden Hills, SA 5050 has been designed to be as environmentally friendly as possible. The design is driven by the site and the neighbouring buildings with a view to maximize passive solar orientation. The goal was to achieve the lowest energy assumption for the house and higher level of comfort all year around, minimising the usage of non renewable energy source for heating and cooling through the lifespan of the building.

Due to the decently sloping site the house is designed in a way that upon arrival it appears to be a single storey house. Entrance is through the expansive glassed wall foyer that leads straight to the upper level terrace which allows the visitors to look through the built form towards and into the wooded hill side. On left side the building then flows to the lower level through the use of double height open plan living space that are visually connected and can be accessed through the floating staircase. The double height opening facilitates an uninterrupted view of the dramatic surroundings of the house. the living quarters are mostly on lower level for comfort all year round as well as to access the surrounding ground easuly. The utility yard created through the use of retaining wall is perfect for clothing lines, RWT and HWT. The garage is equipped with a workshop for the husband's wood crafting hobby and is connected with the main house through the pantry for easy storage of grocery straight from the car. the dining space is connected with the kitchen and terrace for a seamless hosting experience.

THE SPRAU HOUSE on the hills

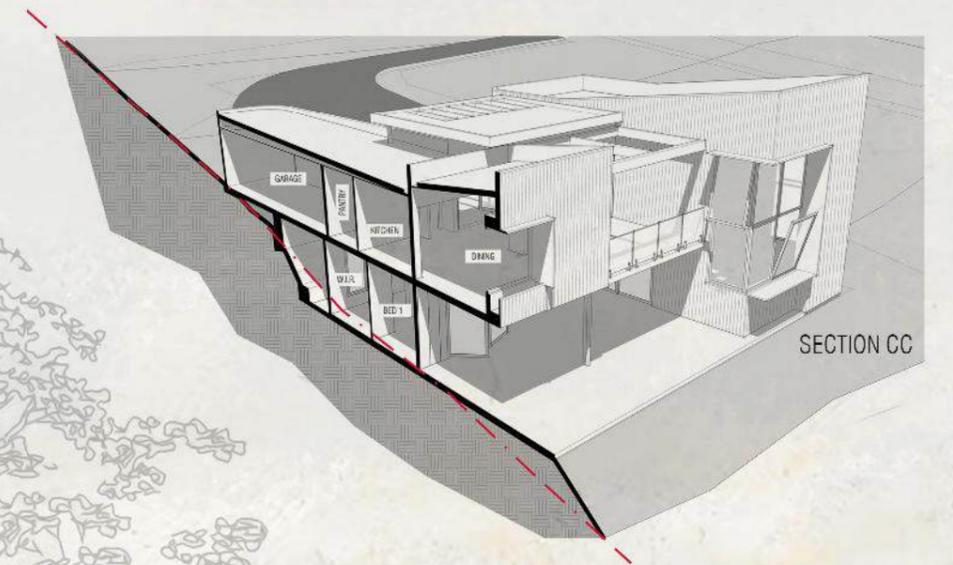
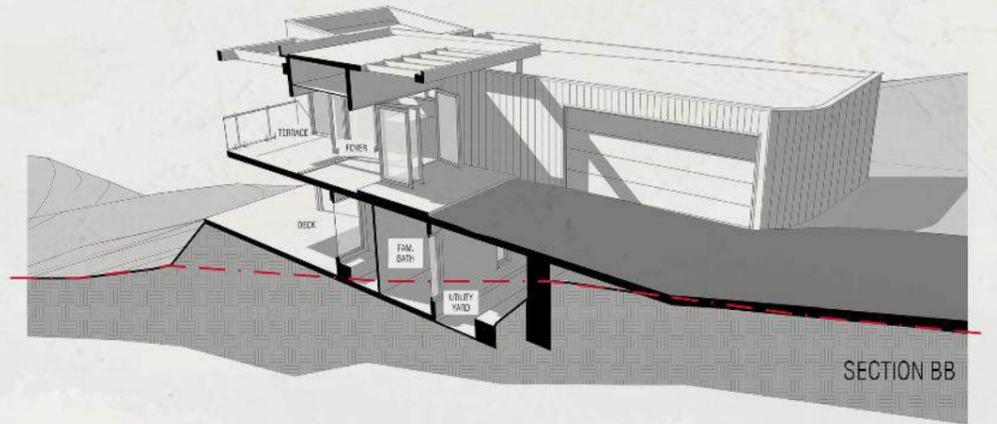
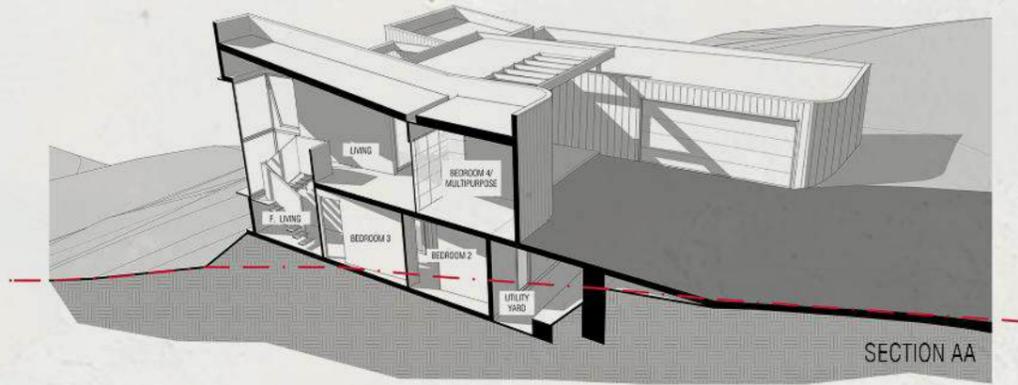




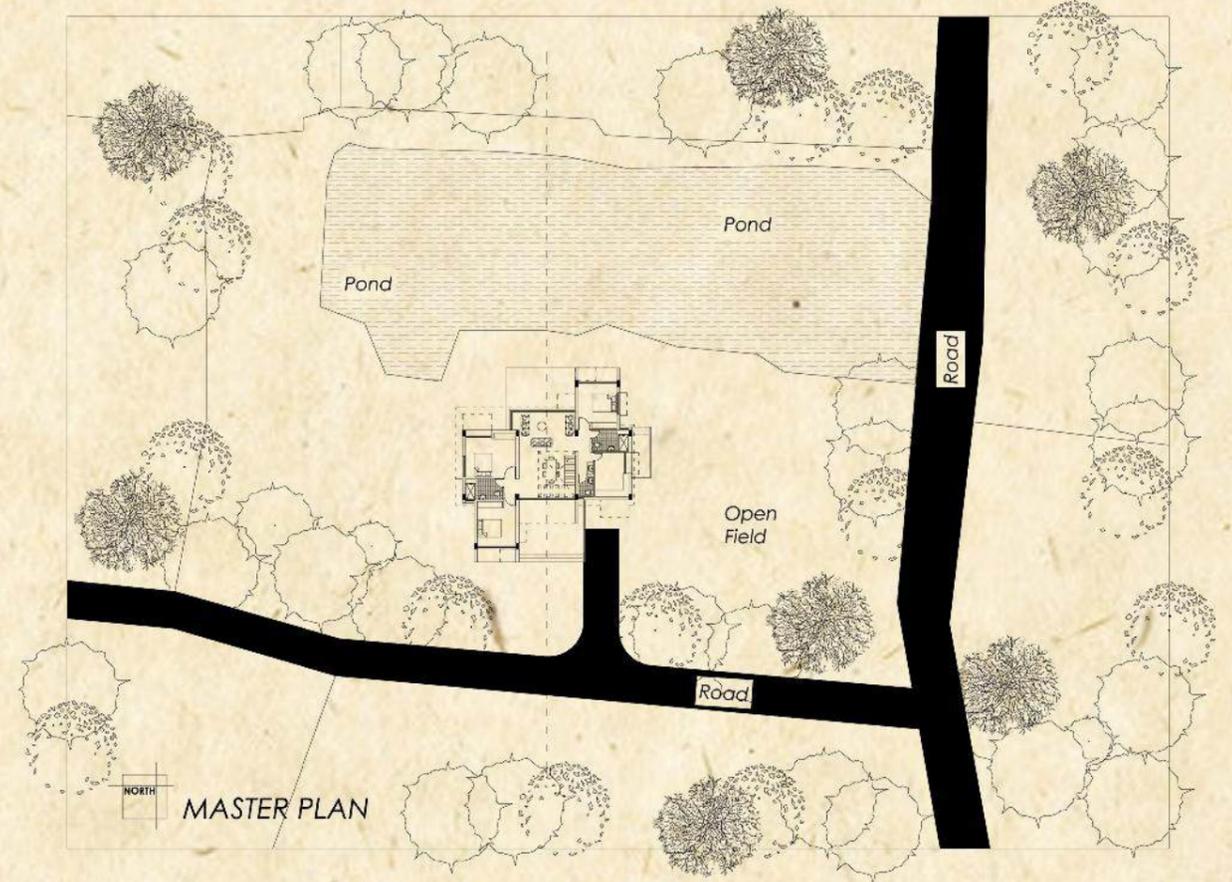
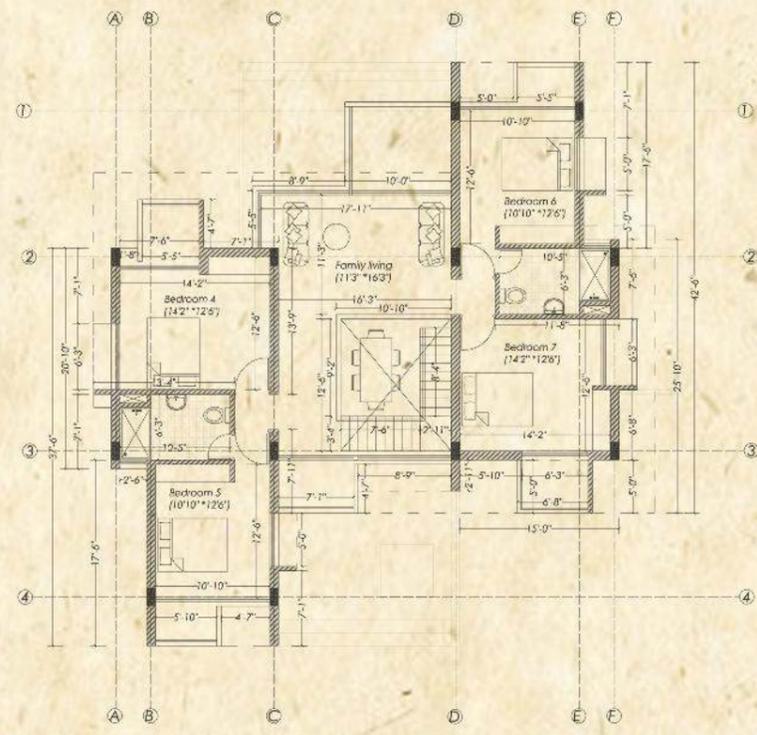
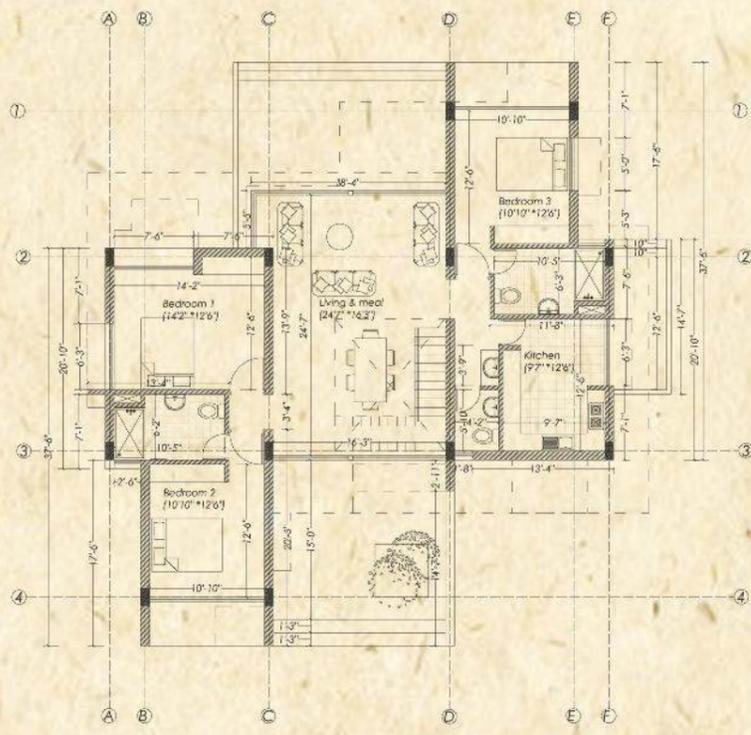
Floor area calculation:
Upper floor area: 198 sqm
Lower floor area: 124 sqm
Total livable space: 322 sqm

Deck area : 61 sqm

Client name: Anke & Patrick Sprau
Project timeline: 2022 - present
My role: Concept design development & presentation for client briefing
Software used: Sketchup & Layout



The
conceptual
projects (Bangladesh)



Professional Work

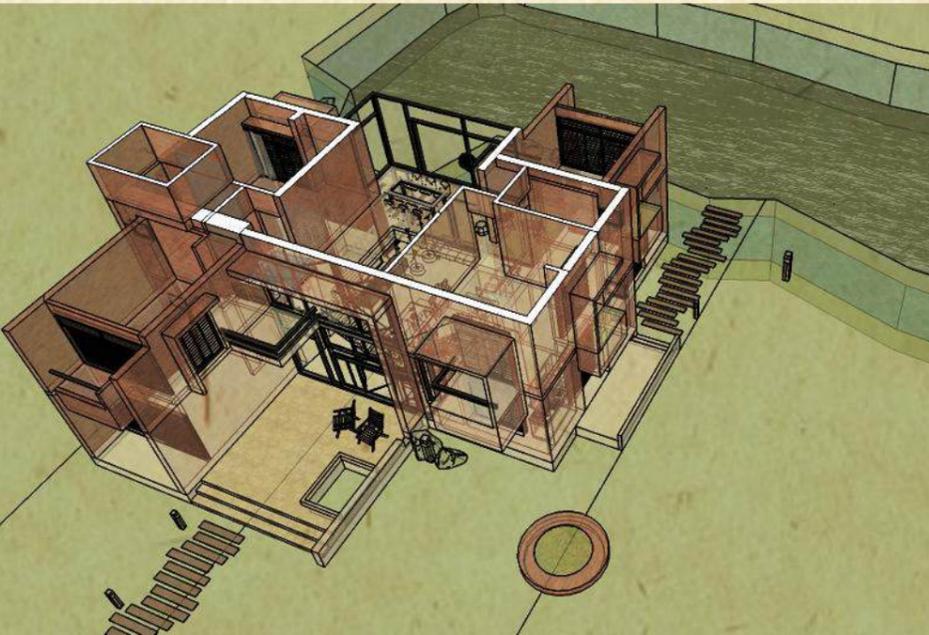
Year : 2022- 2023

Role: Concept and design development, drawing preparation

Client: Rahman brothers

Site: Netrokona, Bangladesh.

This double storied residence in the rural setting of Netrokona is designed as a holiday retreat / ancestral home for two brothers. The clients' specific requirement was to build the house in such a way that it sits exactly on the middle of the site and so that it can be divided into two equal sleeping quarters if needed in future. As a result the plan has an activity/gathering spine consisting the double high entry foyer/ dining area, formal and family living spaces. The sleeping quarters and all the ancilliary functions are set as two wings connected to the central living core. The wings then slide alongside the core to ensure maximum light and air.



HOLIDAY RETREAT at Netrokona

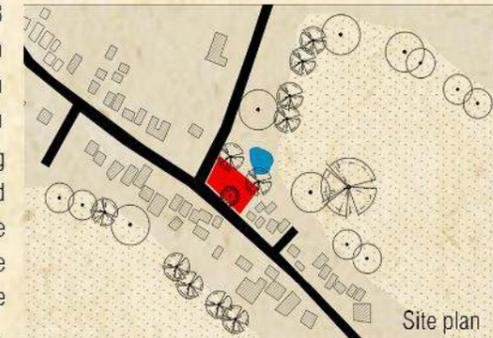
ANCESTRAL HOME at Natore

Year: 2022 - 2023

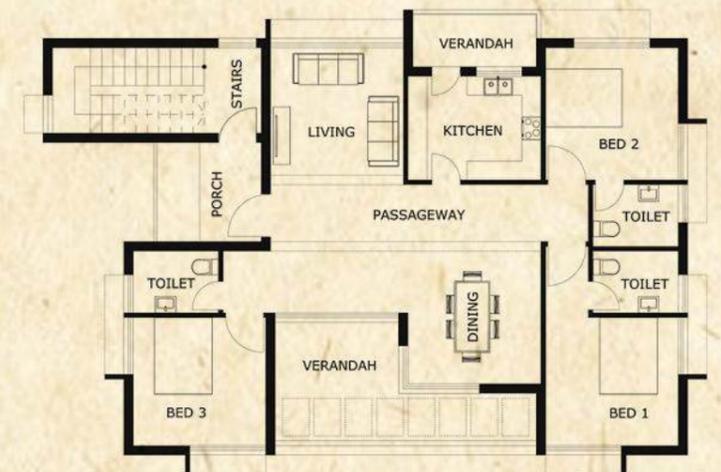
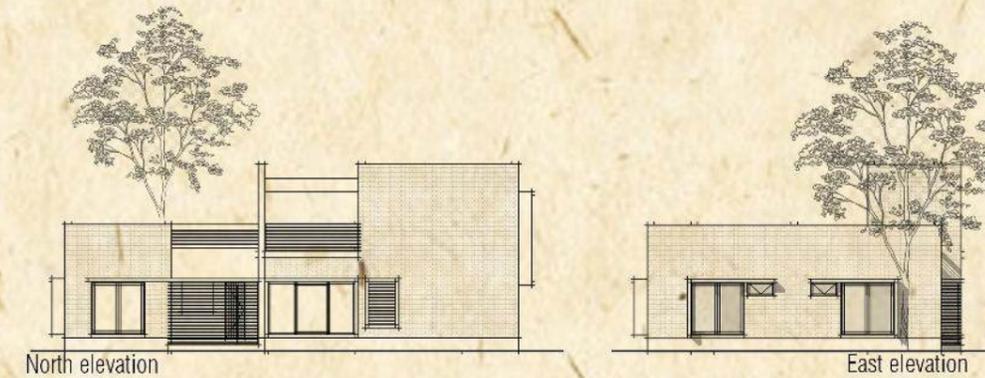
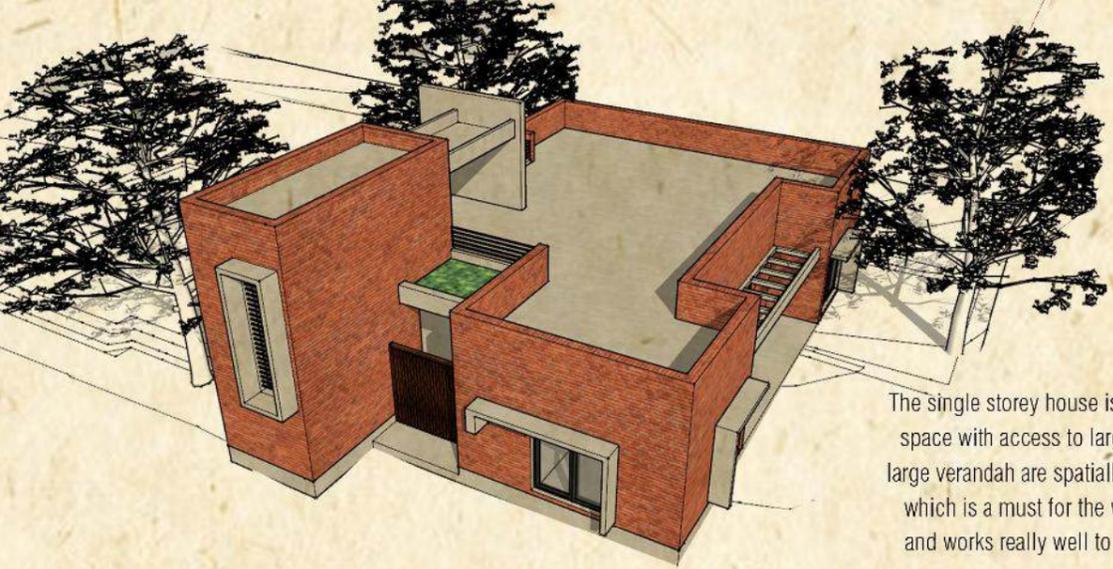
Role: Design development & drawing preparation

Client: Mahbub Hasan

Site: Natore, Bangladesh



The single storey house is designed as a single family residence on their ancestral land. The functional requirements were 3 bedrooms with toilets, kitchen, living and dining space with access to large verandah. The house is oriented and the layout is designed to receive maximum amount of southern wind and passive sun. The living, dining and large verandah are spatially and visually connected through a semi open plan. Because of the openness and spatial flow the air circulation should be optimal within the house which is a must for the warm humid climate of Bangladesh. Red brick is used as dominant cladding material as it is a vernacular building material which is readily available and works really well to blend with the surrounding nature as it encourages moss and other organic development on its facade with time. The roof terrace is designed for the family to enjoy their afternoons sitting there and do their domestic chores together with friends which is a traditional ritual in rural Bangladesh.



Floor plan

Thank you

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