



JARRYD WYATT

Country

I acknowledge the Wurundjeri and Bunurong peoples of the Kulin Nation, the Traditional Custodians of the land on which my designs are situated. I recognize their ongoing connection to the land, waters, and culture, and pay my respects to their Elders past, present, and emerging. Sovereignty was never ceded and recognize their enduring presence and rights to this land.

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A - Academic **P** - Professional **I** - Individual

I am a motivated architecture graduate eager to advance my career in the industry. With a strong interest in the technical aspects of architecture, I am committed to designing, developing and documenting sustainable designs that are both practical and innovative. I value approachability and consistently strive to exceed expectations, aiming to make a positive impact in every project I undertake.



A handwritten signature in a cursive script, reading "Jarryd Wyatt".

Website

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OUTREACH CENTRE

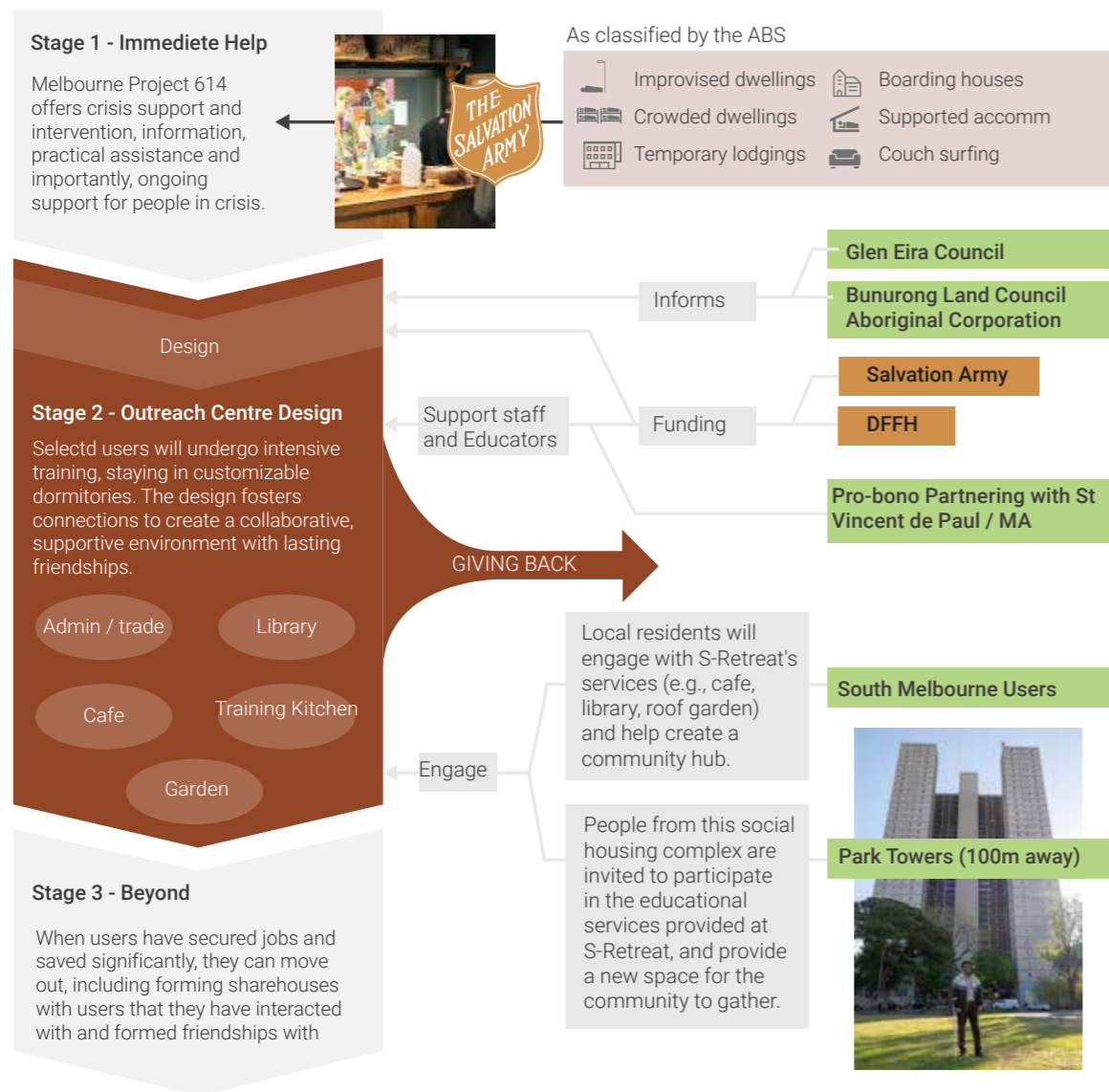
Established through philanthropic donations and government grants, the Outreach Centre is dedicated to supporting marginalized and homeless individuals. The initiative and design focus on equipping these individuals with administrative, hospitality, and catering skills, helping them enter the workforce and achieve financial independence. The design aims to create a comforting atmosphere for residents, many of whom are accustomed to physically and mentally challenging environments. Additionally, it encourages public engagement and financial support through retail and hospitality initiatives.

Academic - 2024

Individual work

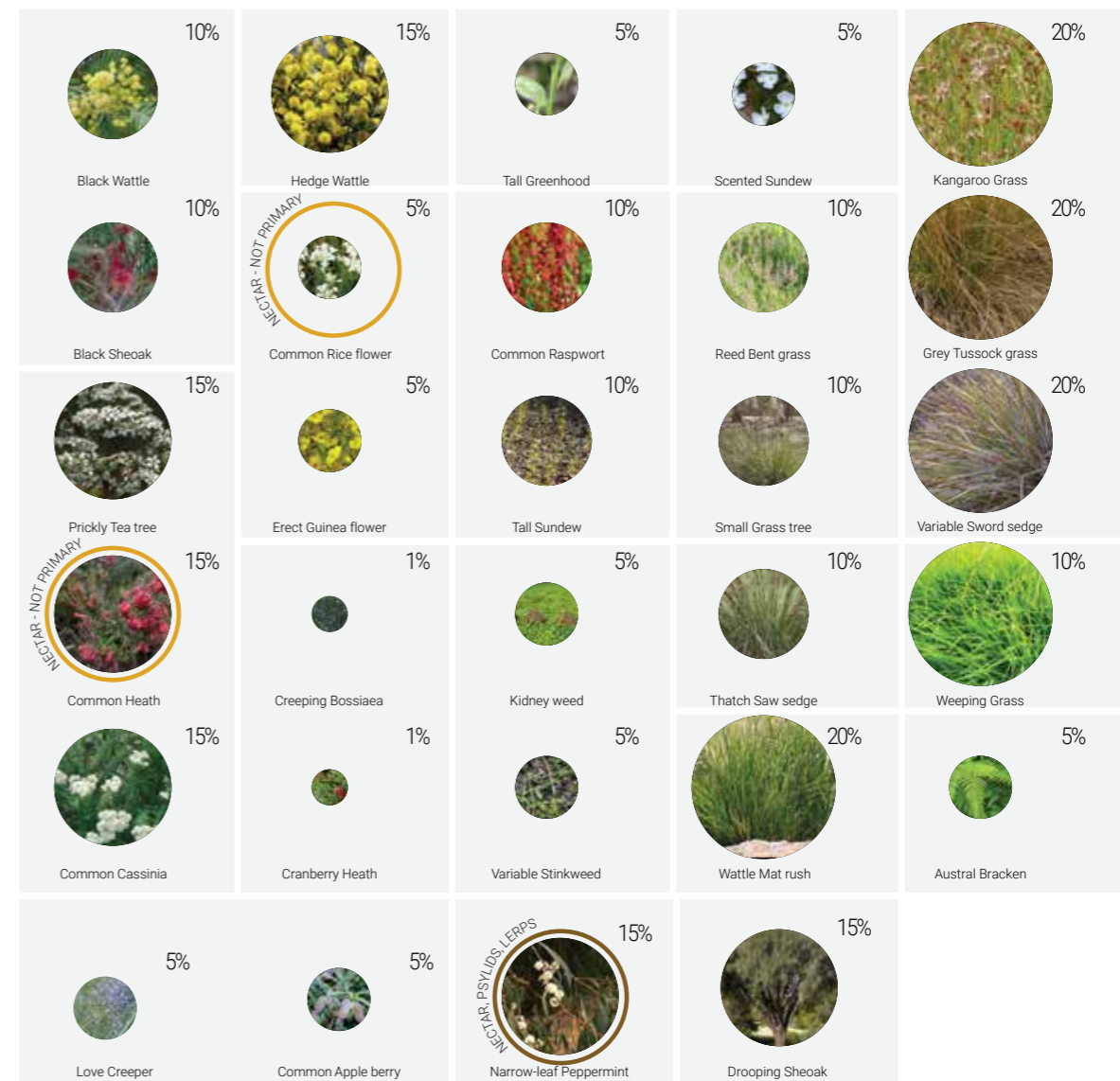
South Melbourne





SUMMARIZED RESEARCH AND PROGRAM

Three-stage project by the Salvation Army, in collaboration with other partners, to support homeless and socially disadvantaged individuals. It outlines a plan to provide immediate help, create the outreach center, and offer intensive training within a supportive community environment, aiming to help participants secure jobs, form lasting connections, and eventually transition out of the program into stable living situations.



REPLANTING PRE-1750 EVC 175

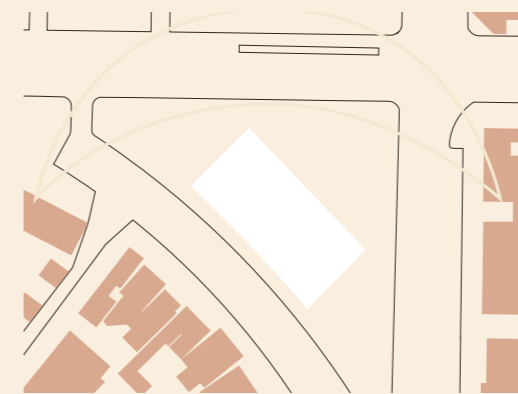
The vegetation to be replanted on the site is selected from the pre-1750 Ecological Vegetation Class (EVC 175) of the Gippsland Region Grassy Woodlands.



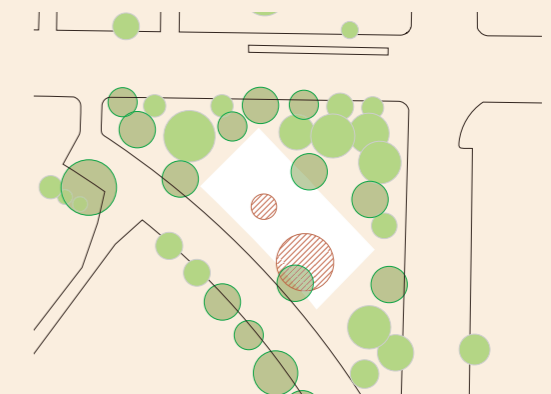
SITE PLAN

- 1 Tram Access
- 2 Underground Carpark Access
- RGZ1: Intensive residential development is encouraged.
- C1Z: Accommodate retail, office, and commercial activities.
- NRZ1: Maintain the existing character of residential areas

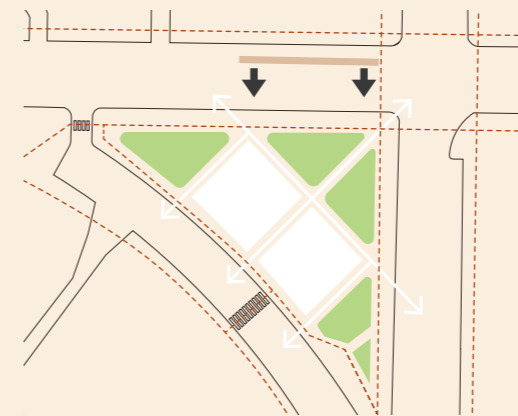
1:1200



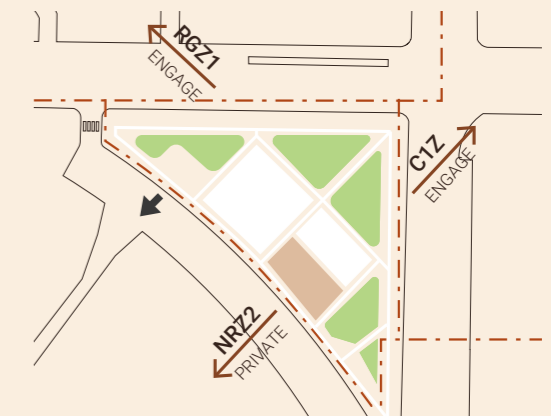
1 **Ground floor massing:** Building is oriented for equal accessibility and adequate solar access



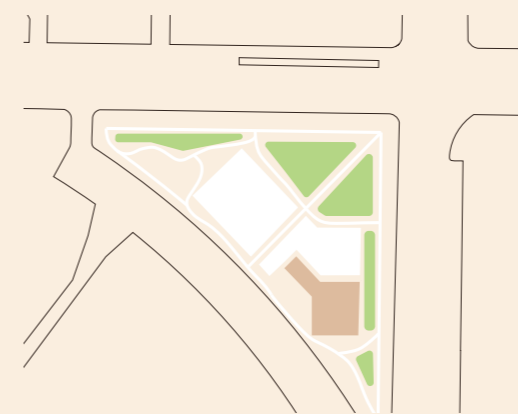
2 Design preserves existing trees, removing only two, with additional native trees planted



3 Circulation diagram divides the site into two main sections



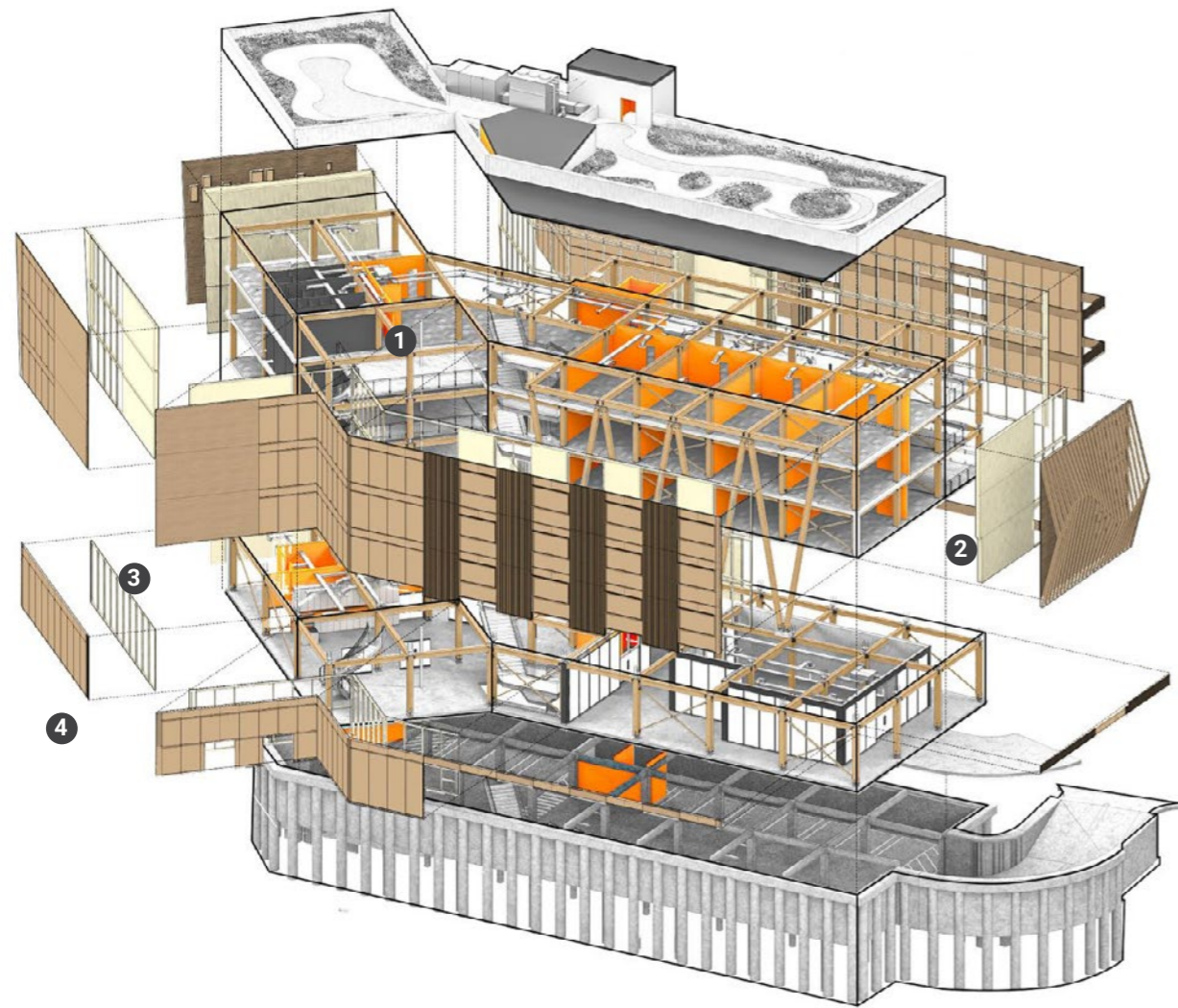
4 Front spaces are open; rear spaces are enclosed for training



5 Form adjusted for to fit the site and create interest, with new paths



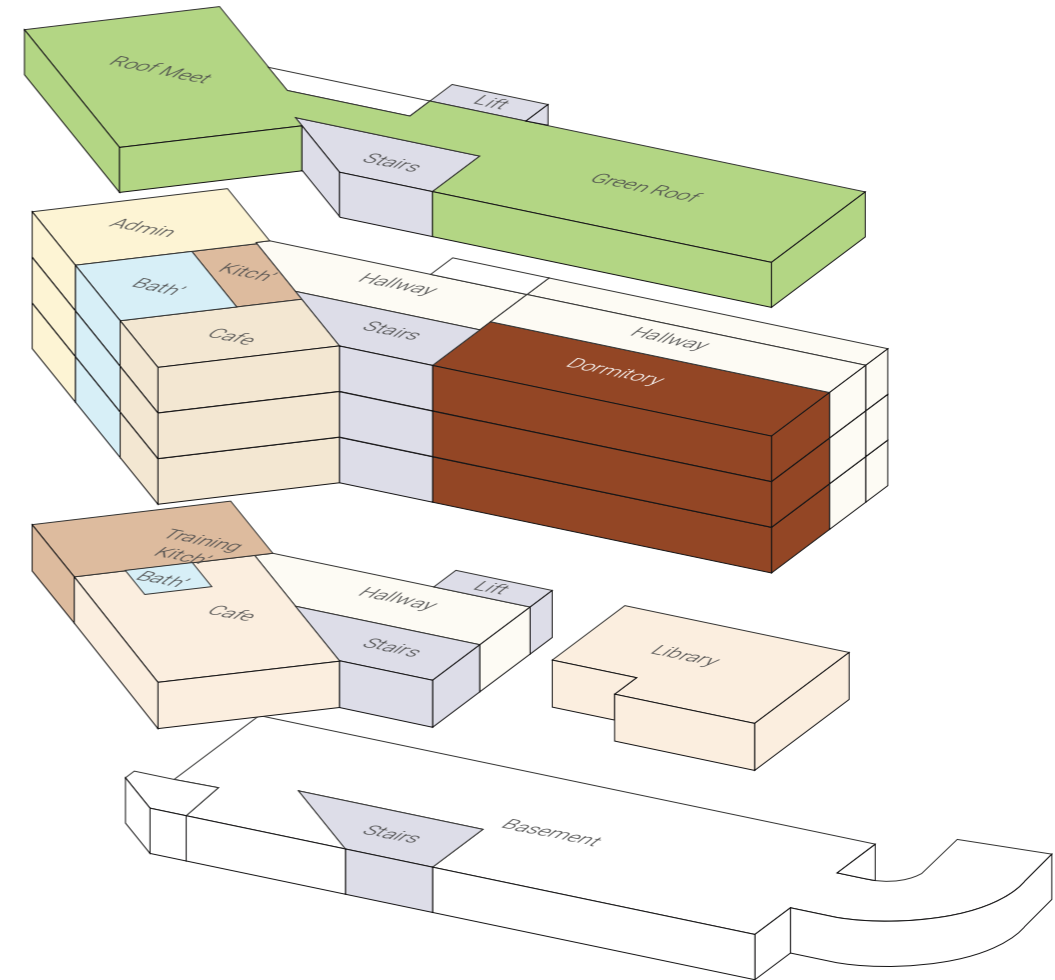
6 **First floor massing:** Dormitory views limited towards the street, maximized towards the city



TIMBER DESIGN

The design predominantly utilizes glulam columns and beams, as well as CLT panels, to achieve a lower carbon footprint compared to concrete.

- 1 Glulam beam structure
- 2 Large format CLT panels
- 3 Interior vertical mullions
- 4 Exterior double glazing curtain walls
- 5 Piles distributed at 3 centers to varying depths

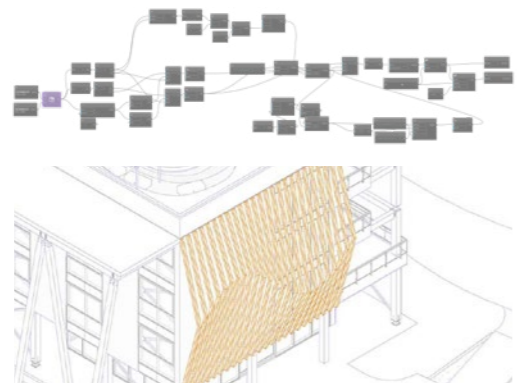


SPACE LAYOUT

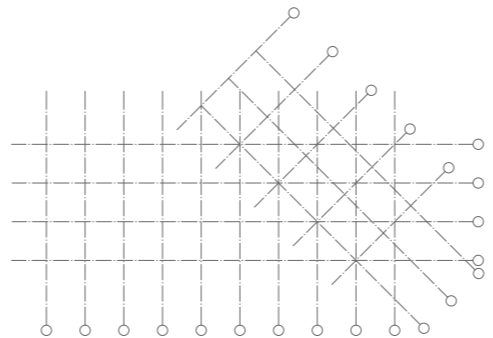
- Green Roof
- Admin/Trade Training
- Kitchens Training
- Cafe/Library Training
- Dormitory
- Bathrooms
- Vertical Circulation
- Basement

MULTI-CLASS SYSTEM UNDER A6G1 OF NCC

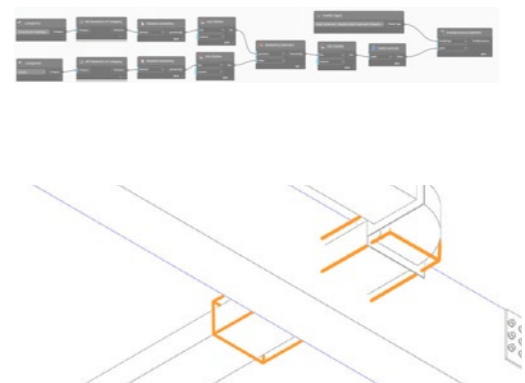
Basement floor	100%	Class 7A (Car park)
Ground floor	76.5%	Class 6 (Cafe / Library)
	23.5%	Class 9b (kitchen training)
Floor 1 to 3	50.8%	Class 3 (Dormitories)
	27.7%	Class 6 (Cafe)
	21.4%	Class 7 (School trade)



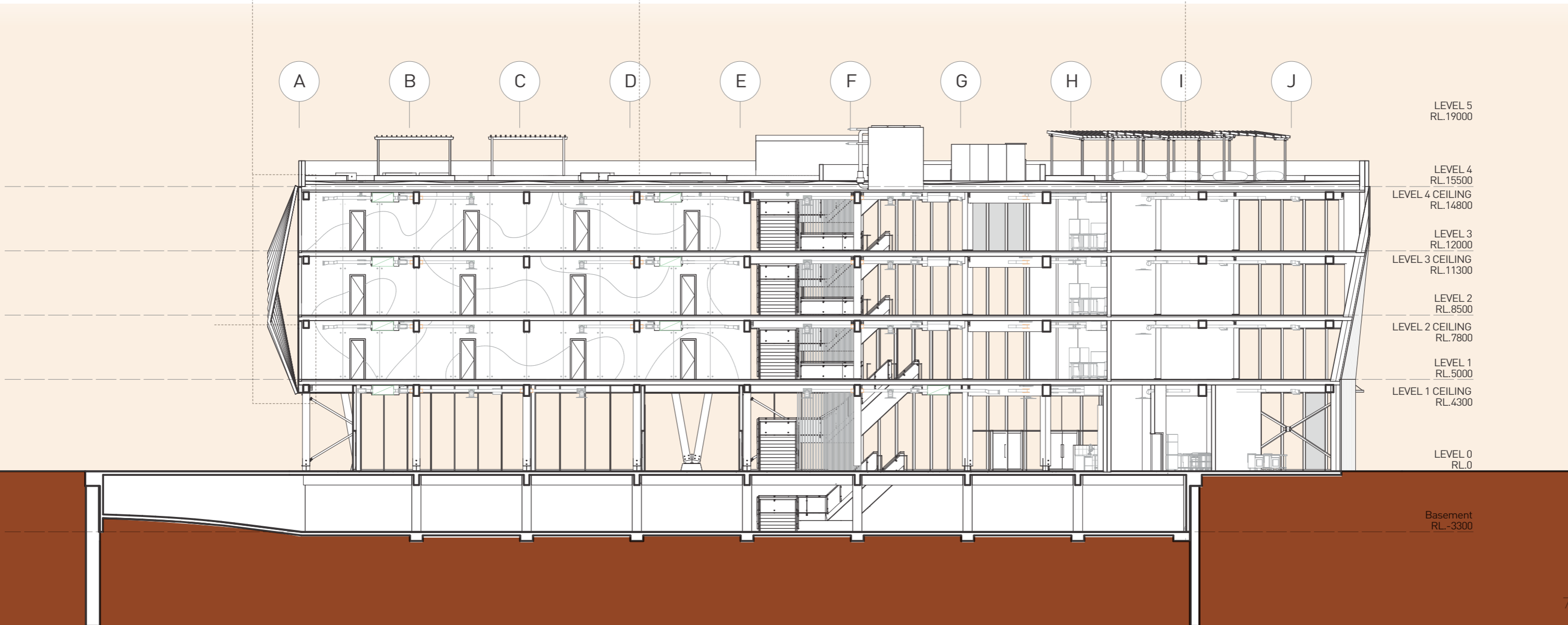
Constructed a parametric louver system in Dynamo using two edge lines, creating and adjusting points with a sine operation, and connecting / extruding them.

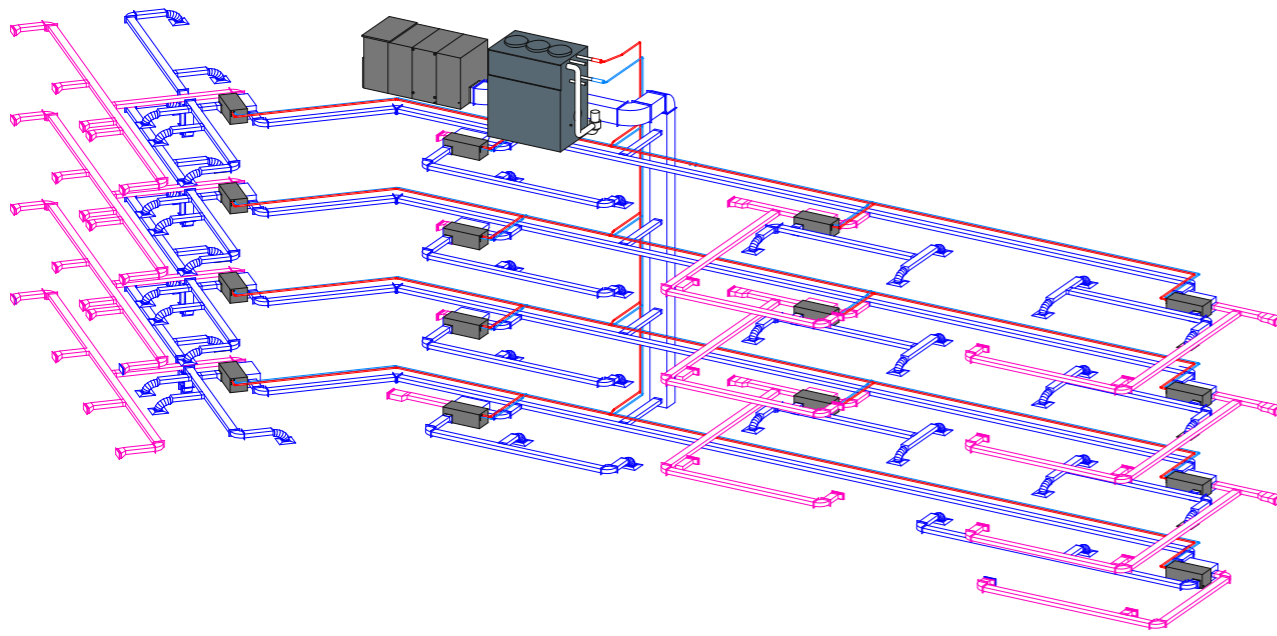


R
RVT
Modular construction for re-arrangement for future uses and changing occupancy

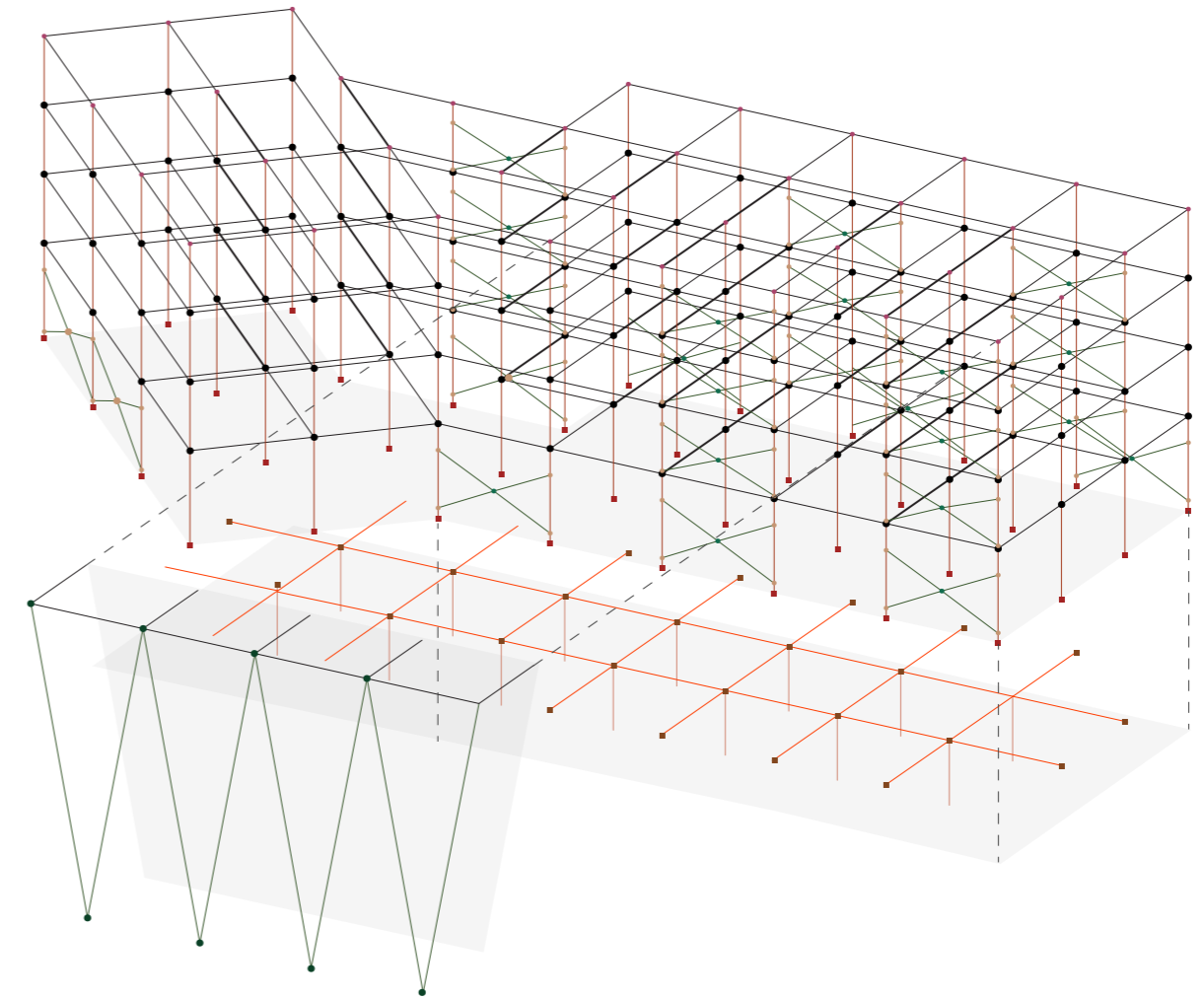


Using Dynamo to place fixed generic family voids at the intersection of beams and mechanical ducts, positioned at the centroid of the intersecting geometries.





- J6D3- (1) (a) De-activatable air conditioning when not being used
- J6D3- (1) (b) Thermostatic control for different zonings of the building
- J6D3- (1) (c) Outdoor Air Economy Cycle required (cooling when the outside temperature is lower than the indoor temperature) as total air flow rate will likely exceed 2000 L/s.
- J6D3- (1) (d) Systems with multiple water heaters, chillers, or coils must stop water flow to non-operating units.
- J6D3- (1) (e) Systems with airflow >1000 L/s must have a variable speed fan if air supply is variable.
- J6D3- (1) (h) A control dead band of $\pm 2^{\circ}\text{C}$ is required.
- J6D3- (1) (i) Balancing dampers and valves must ensure flow doesn't exceed design by more than 15%.
- J6D3- (1) (j) Separate floors must have independent airflow termination.
- J6D3- (1) (k) Automatic variable temperature operation for heated and chilled water circuits is required.
- J6D3- (1) (l) Motorised outdoor/return air dampers must close when the system is deactivated.
- J6D3 (3) Time switches are required for AC systems >2 kW_r and heaters >1 kW heating, with programmable on/off schedules. Exceptions apply for specific building classes and continuous use spaces.
- J6D4(1) (a) De-activatable air ventilation when not being used
- J6D4(1) (b) Excess ventilation heating/cooling energy is to be reclaimed by minimum 60%, occupancy detectors to reduce demand based on occupancy needs, with no more than 20% more outdoor air than what's required
- J6D4(3) Carpark control exhaust system in accordance with AS 1668.2 (Clause 4.11)
- J6D4(4) A time switch to disable electric power during pre-programmed times (midnight - 6am)
- J6D5 (2) NA - System higher than 200 Pa
- J6D5 (3) Limited flexible ductwork, no sudden changes in duct size and rigid turning angles are used to reduce pressure drops. The longest ductwork section (index run) must not exceed 1 Pa/m in pressure drop
- J6D5 (4) (a) The AHU will supply ventilation to WSHP for heating and cooling, which will use 2 coils requiring a maximum pressure drop of 50 Pa
- J6D5 (4) (c-d) The AHU air filters must not exceed a pressure drop of 55 Pa, single stage louvres 30 Pa
- J6D5 (4) (j) Supply air diffusers and grilles must not exceed a pressure drop of 40 Pa
- J6D6 Insulation provided for heating and cooling ductwork connected to WSHP, with vapour barriers required
- J6D7 Sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.
- J6D8 The pipework from the Boiler to the WSHP is circulatory, to which a glandless impeller pump must have an Energy Efficiency Index (EEI) of ≤ 0.27 , whilst the nominal piping of less than means the maximum



HVAC SYSTEM

HVAC System: AHU (no coils) supplies air to zoned WSHP units (2 coils – heating and cooling), which then supply heated and cooled air.

SUMMARY OF NCC SECTION J PART 4

Air-conditioning and ventilation systems must have deactivatable controls, thermostatic zoning, outdoor air economy cycles, and minimal pressure drops.

REVIT ANALYTICAL STRUCTURAL MODEL (RE-COLOURED)

FOUNDATION

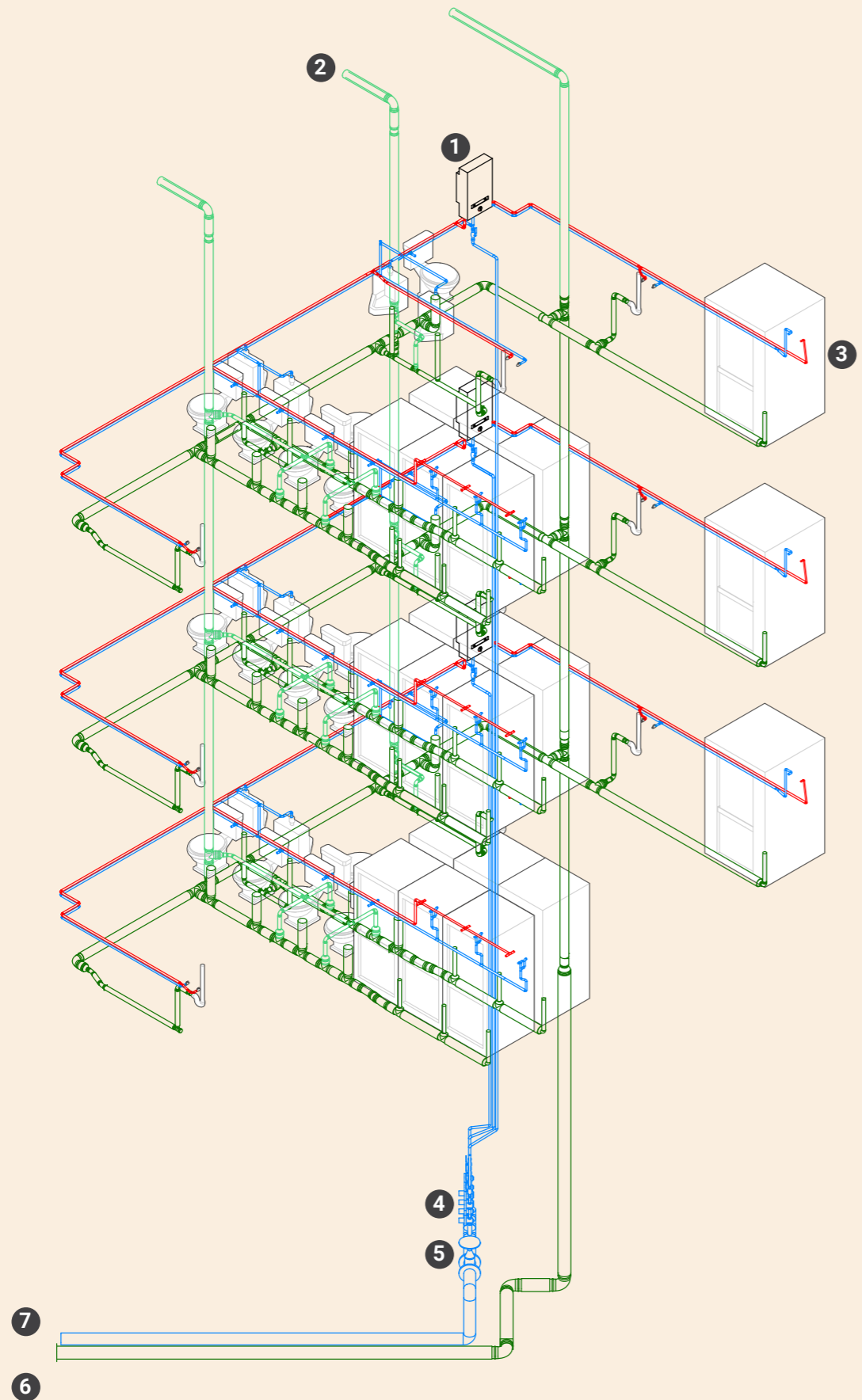
- 300 x 750 concrete beam
- 500 x 500 concrete column
- Grouted Joints

BRACING

- 100 x 100 Pine
- Single tube brace
- Middle Gusset Plate
- Custom shear plate

STRUCTURAL COLUMN AND BEAMS

- 400 x 400 Glulam Pine Column
- 300 x 400 Glulam Pine Beam
- 300 x 600 Glulam Pine Beam
- Floor plate, epoxied threaded rods
- Roof plate, epoxied threaded rods
- Beam to Column: Shear splice plate
- Column to Floor: Notch joint
- Column to Column: Plate w/ epoxied threaded rods



Calculation										Facilities in Class 3 to 9 buildings (Tables F4D4a to F4D4l Calculation)								F4D5 Accessible sanitary facilities		
Design Occupancy Number Calculation for M/F										Male		Female		NA		Unisex Employee		Unisex	M/F Ambulent Compartment	
Level	D2D18	Calculation Method	Area	m2 pp	Occu pancy	Sum (Class)	M/F Split	WC	U	WB	WC	WB	WC	WB	S	B	WC	WC	WC	
Basement	Basement	Class 7 and 8	845	30	28	28	14	1	1	1	1	1							1	1
Ground Floor	Storage space	Class 3 - other than Class 3 residential aged care buildings	100	30	3.3								3	3	3	3				
	Reading Room	Class 3 - other than Class 3 residential aged care buildings	75	2	37.5	40.8	20.4													
	Kitchen	Class 6 - restaurants, cafes, bars	98	10	9.8												1	1		
	Cafe	Class 6 - restaurants, cafes, bars	150	1	150	159.8	79.9	1	2	2	3	2								
Floor 1	Library - reading	Class 9b - public halls, function rooms or the like	100	2	50	50	25	1	1	1	1	1							1	1
	Dormitory	Class 3 - other than Class 3 residential aged care buildings	60	5	12								2	2	2	2				
	Reading Room	Class 3 - other than Class 3 residential aged care buildings	50	2	25	37	18.5													
	Cafe	Class 6 - restaurants, cafes, bars	50	1	50	50		1	1	1	1	1					1	1		
Floor 2	School - trade	Class 9b - public halls, function rooms or the like	116	4	29	29	14.5	1	1	1	1	1					1	1	1	1
	Dormitory	Class 3 - other than Class 3 residential aged care buildings	60	5	12								2	2	2	2				
	Reading Room	Class 3 - other than Class 3 residential aged care buildings	50	2	25	37	18.5													
	Cafe	Class 6 - restaurants, cafes, bars	50	1	50	50		1	1	1	1	1					1	1		
Floor 3	School - trade	Class 9b - public halls, function rooms or the like	116	4	29	29	14.5	1	1	1	1	1					1	1	1	1
	Dormitory	Class 3 - other than Class 3 residential aged care buildings	60	5	12								2	2	2	2				
	Reading Room	Class 3 - other than Class 3 residential aged care buildings	50	2	25	37	18.5													
	Cafe	Class 6 - restaurants, cafes, bars	50	1	50	50		1	1	1	1	1					1	1		
Roof	Roof top	Excluded																		
Vertical	Hallway spaces	Excluded																		
	Stairways	Excluded																		
	Service shaft	Excluded																		

WC Water Closet WB Waster Basin B Bath U Urinal S Shower

KEY FOR TOILET BANK (LEFT)

- 1 Waterheater (tankless)
- 2 Venting piping
- 3 Showers cubicles
- 4 Pressure regulating and ball valve, with water meter
- 5 Main gate valve
- 6 Waste return
- 7 Water supply

F4 CALCULATIONS FROM THE NCC

Sanitation calculations were conducted in accordance with Volume 1 of the NCC. Due to the building being multi-classed, the calculations were tailored to each level to meet the specific requirements of each class.



SUBURBAN PROVOCATIONS

Looking at speculative examinations of new and alternative forms of suburban developments, this project emphasizes retaining existing Australian ecological vegetation and conditions while promoting housing co-habitation designs with modular options for openness and privacy.

Academic - 2023

Individual work

South Melbourne

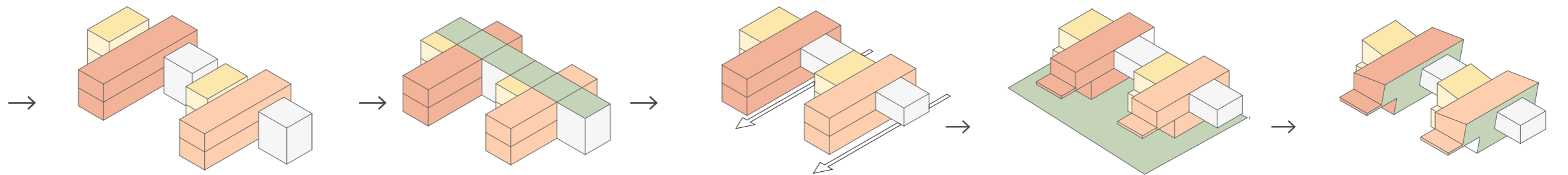


80 New 'Lots'

23 Five Bedrooms

40 One Bedroom

17 Three Bedrooms



Shareable Spaces

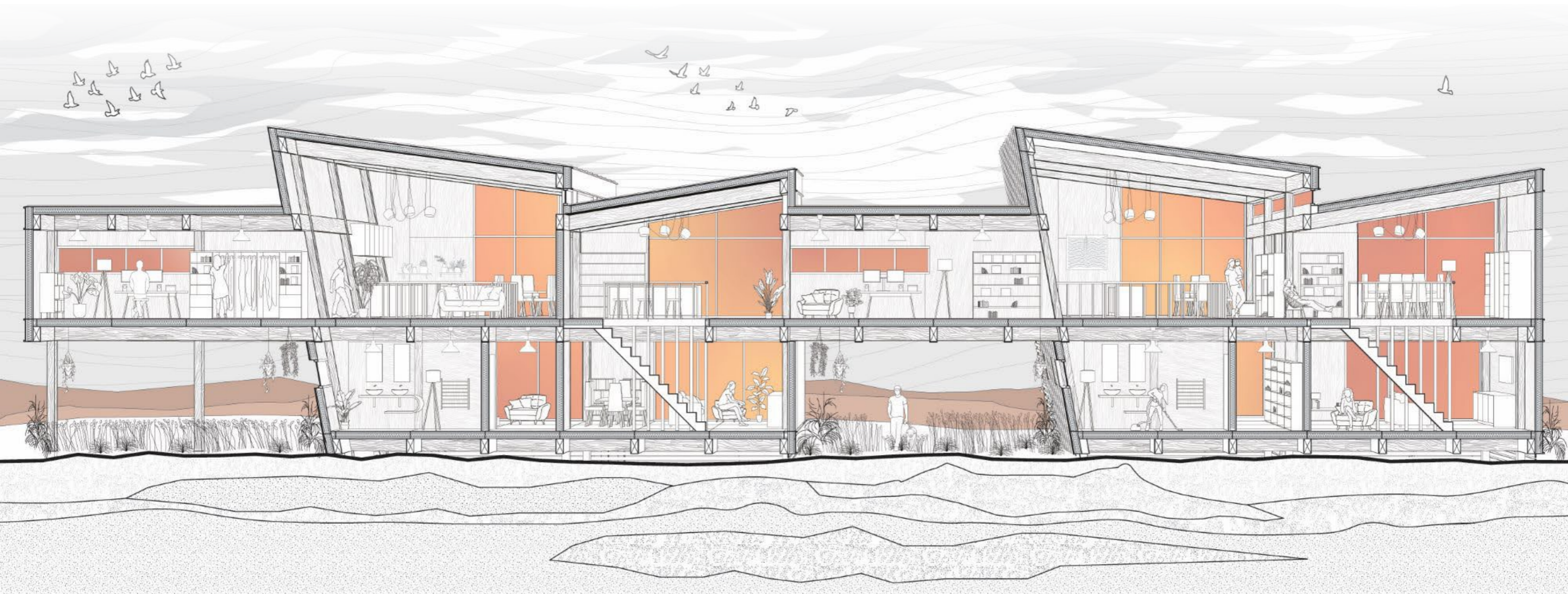
5B, 3B, 1B, shared areas

Hallway share

Elevating for eco-passage

Push/pull: private spaces

Angling walls for privacy



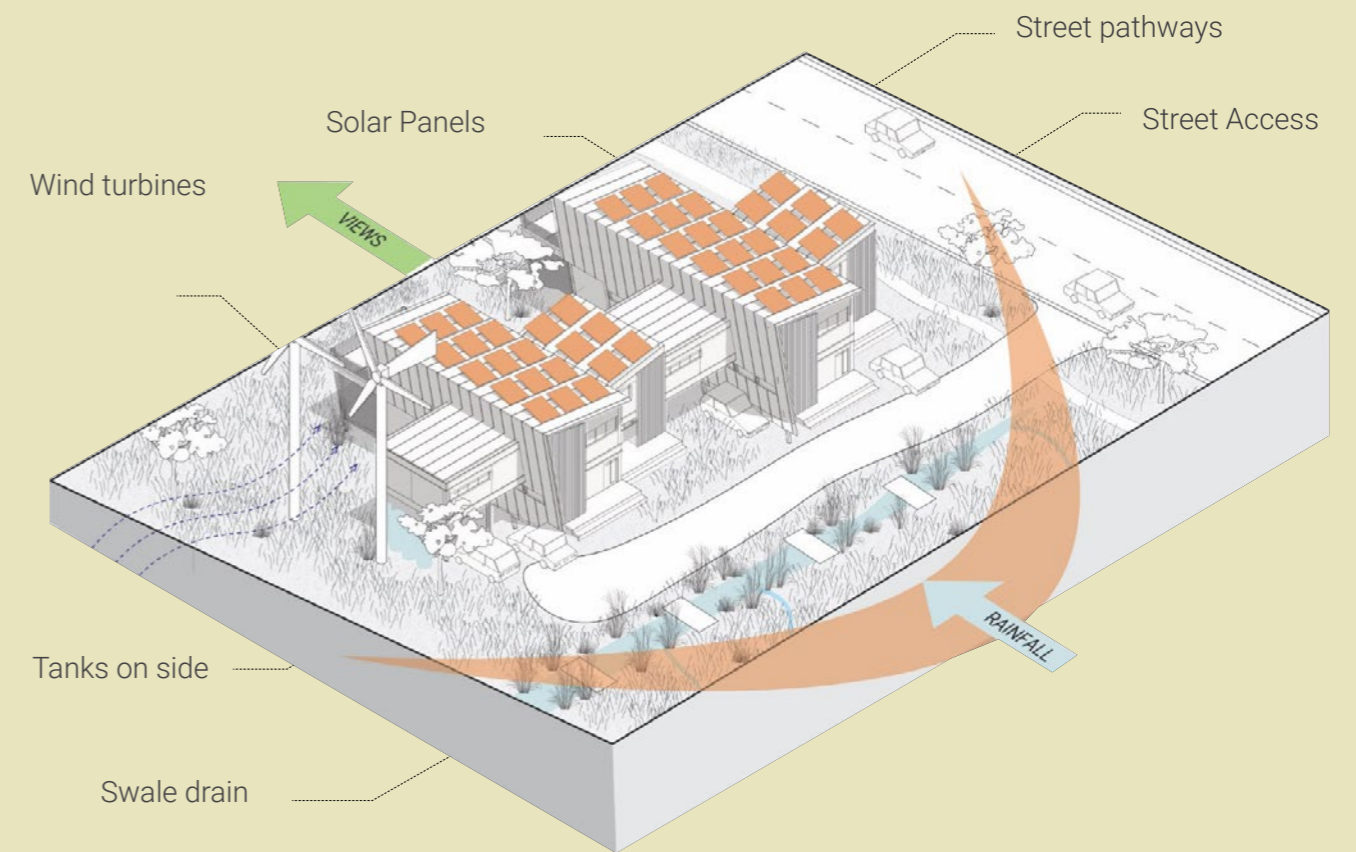


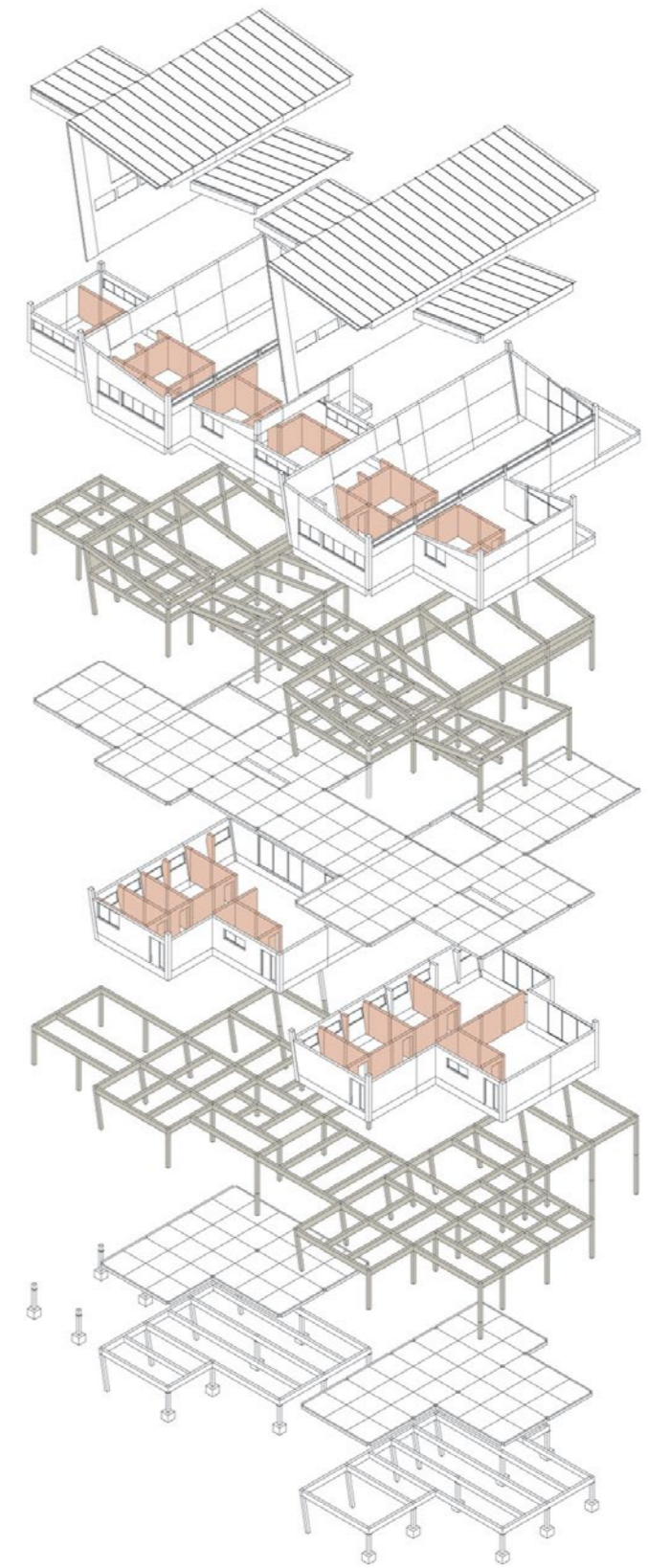
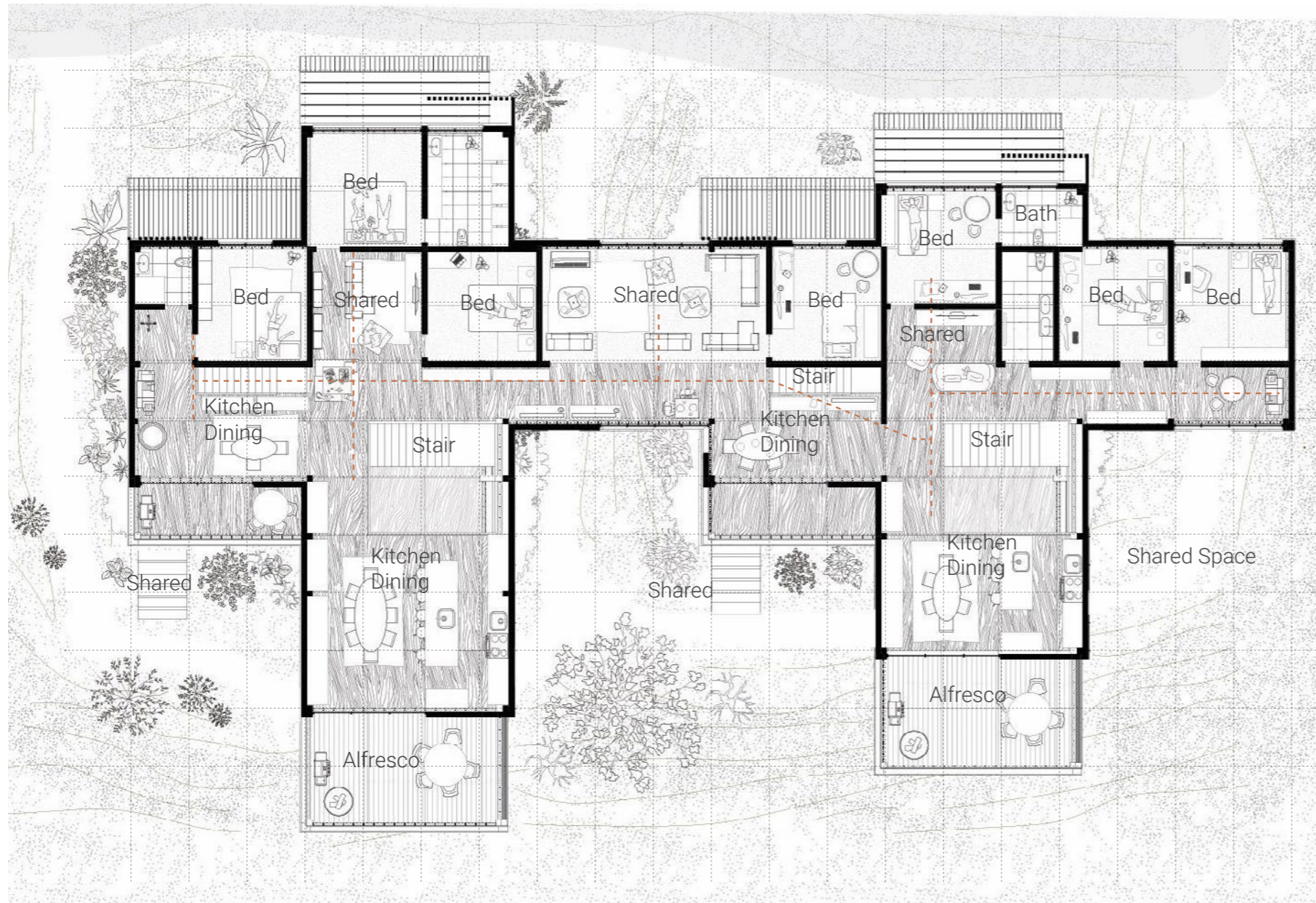
PRE-1750 EVC

- Escarpment Shrubland
- Plains Grassy Woodland
- Riparian Woodland
- Grassy Woodlands
- Creekline Grassy Woodland

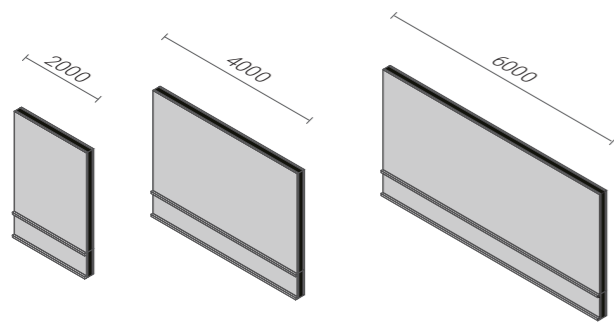
OTHER

- /// Developers Proposed 'Parkland'
- Jackson River
- Site Location for new redevelopment

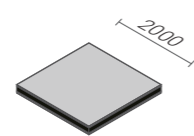




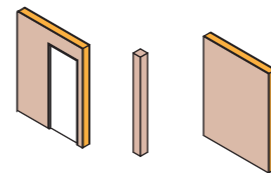
EXAMPLE MODULAR PLAN ARRANGEMENT



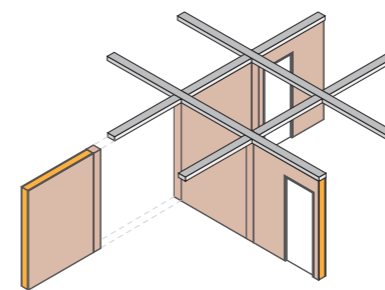
Three types of external walls



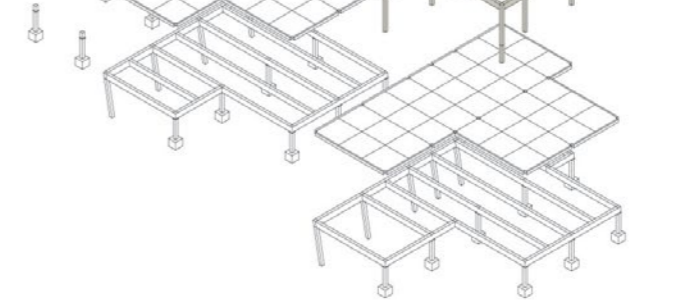
2m squared floor



Three modular internal walls



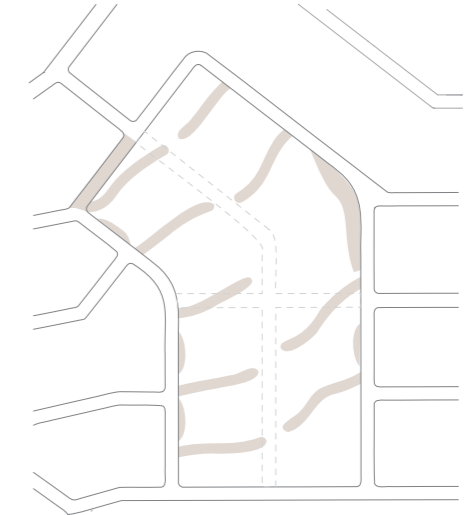
Aligned on an internal grid



Structure break up



Houses follow the natural terrain, reducing excavation while maximizing view opportunities. Previous allotments are overlaid.



Middle Roads are removed for side access dirt-gravel roads, creating more grassland and private spaces



Paths are constructed to flow around the site



Natural storm water catchment system with new proposed basin system, and newly retained grassland



EDGBASTON MULGRAVE

One project of my time at KiR Architecture. This is a house extension located in Mulgrave (Edgbaston Street). I was heavily involved from post-concept design through to town planning and construction documentation. The following pages contain the full construction documentation set.

Professional - 2021- 2023

KiR Architecture

Mulgrave

<https://jarrydwyatt.com/mulgrave-extension/>

10 out 33 pages are shown for this folio



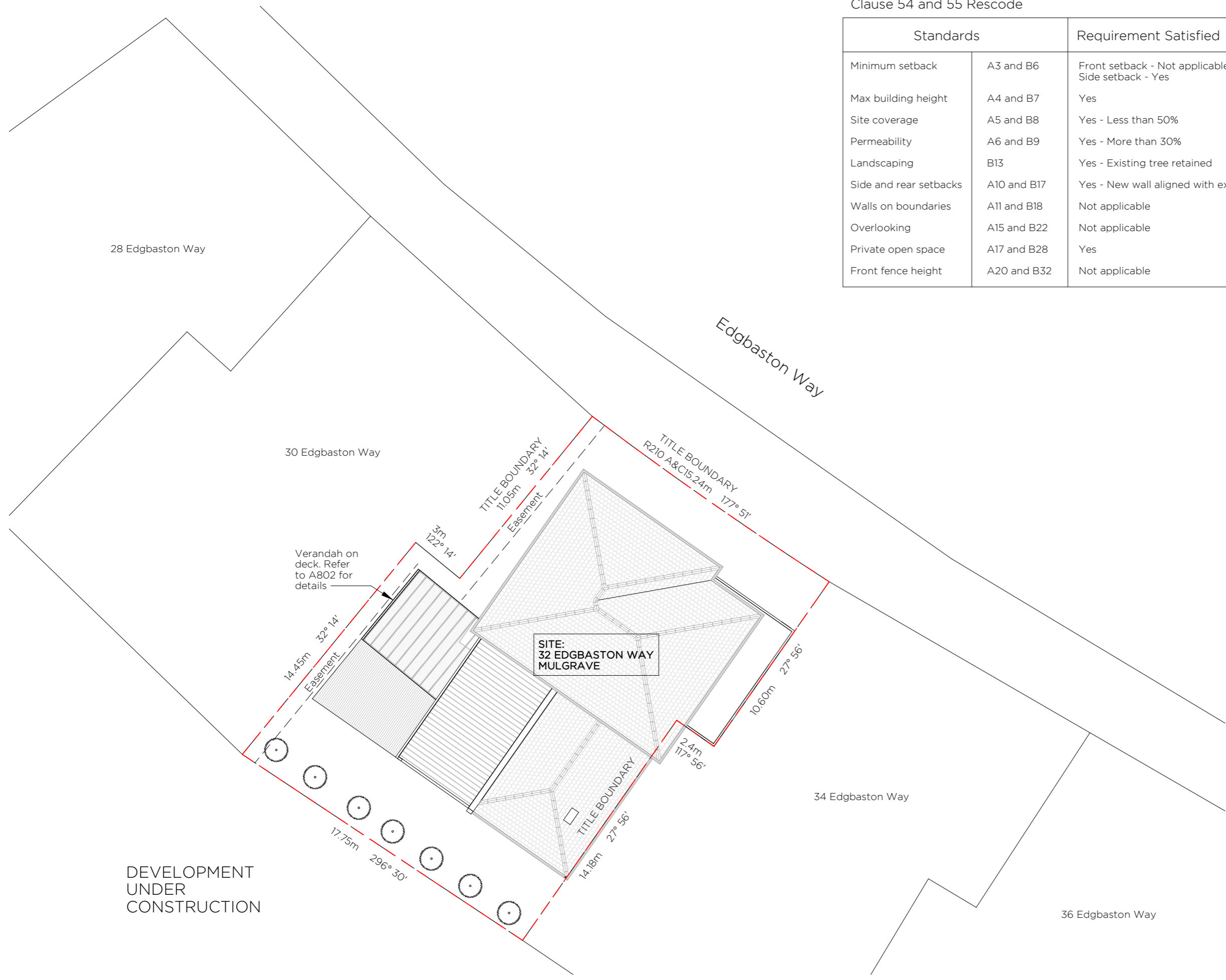


Clause 54 and 55 Rescode

Standards		Requirement Satisfied
Minimum setback	A3 and B6	Front setback - Not applicable Side setback - Yes
Max building height	A4 and B7	Yes
Site coverage	A5 and B8	Yes - Less than 50%
Permeability	A6 and B9	Yes - More than 30%
Landscaping	B13	Yes - Existing tree retained
Side and rear setbacks	A10 and B17	Yes - New wall aligned with existing
Walls on boundaries	A11 and B18	Not applicable
Overlooking	A15 and B22	Not applicable
Private open space	A17 and B28	Yes
Front fence height	A20 and B32	Not applicable

REVISION HISTORY

- D** 31/03/23 Building Permit Approval
- C** 14/12/22 Building Permit Redesign
- B** 21/07/22 Building Permit Draft
- A** 22/11/21 Pre Building Permit



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DOCUMENT CONTROL STATUS
 Building Permit Issue

CLIENT
 Scott & Fiona Annett

PROJECT
 Proposed Extension
 32 Edgbaston Way, Mulgrave

PROJECT NO
 200204

DRAWING TITLE
 Proposed Site Plan

SCALE As indicated @ A3
DATE
DRAWN BY AA



ISSUED FOR CONSTRUCTION

REVISION **D** **DRAWING NO** **A101**

DEMOLITION SCOPE OF WORKS

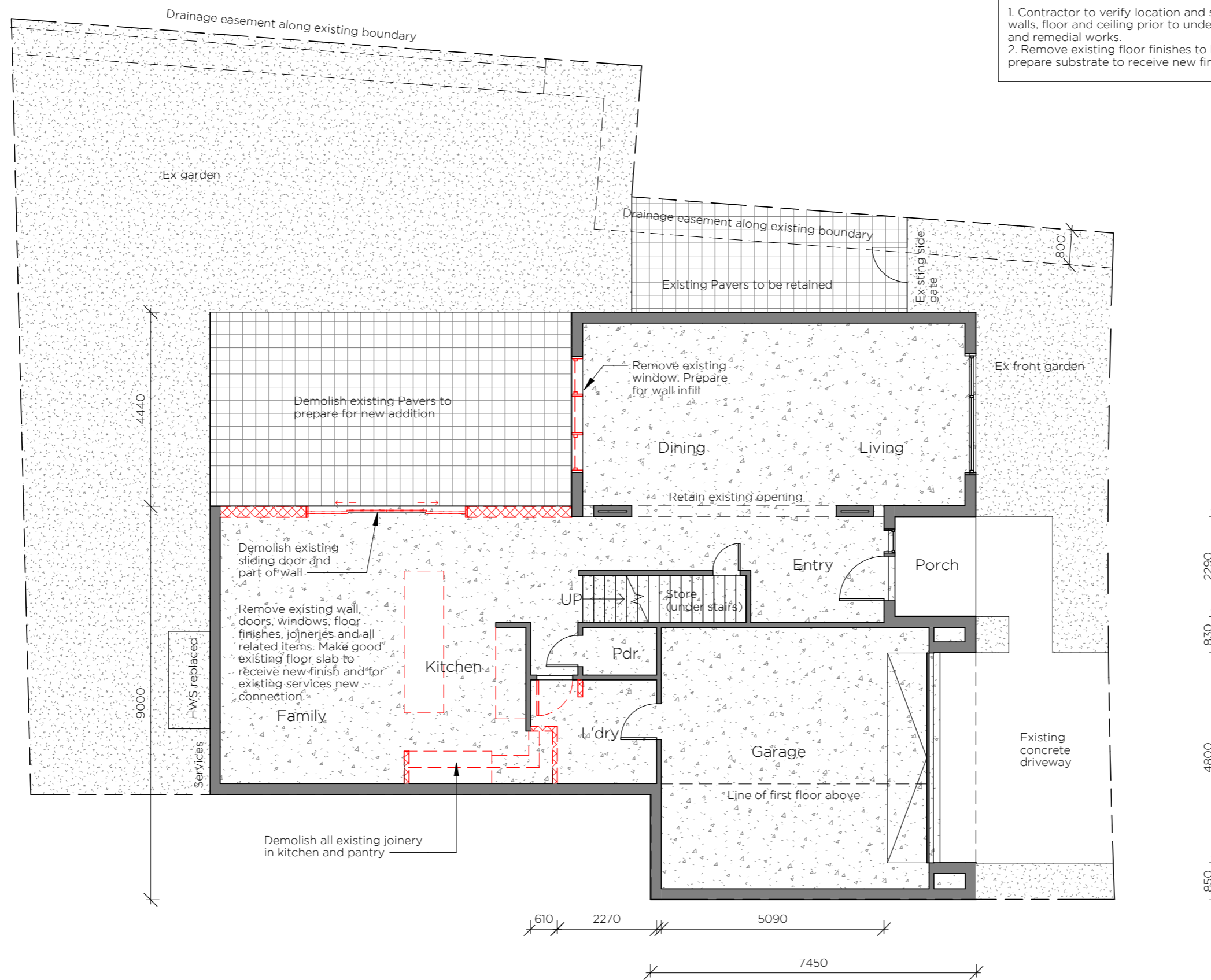
- Existing walls to be retained. Various construction.
- Existing items to be demolished

NOTES:

1. Contractor to verify location and scope of works of walls, floor and ceiling prior to undertaking demolition and remedial works.
2. Remove existing floor finishes to living spaces and prepare substrate to receive new finishes.

REVISION HISTORY

- B** 31/03/23 Building Permit Approval
- A** 22/11/21 Pre Building Permit



ISSUED FOR CONSTRUCTION

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 kathy@kirarchitecture.com
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DOCUMENT CONTROL STATUS
 Building Permit Issue

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 Scott & Fiona Annett

PROJECT
 Proposed Extension
 32 Edgbaston Way, Mulgrave

PROJECT NO
 200204

DRAWING TITLE
 Existing & Demolition Plan

SCALE 1 : 100@ A3
DATE
DRAWN BY AA



REVISION B **DRAWING NO** A001

ELEVATION NOTES

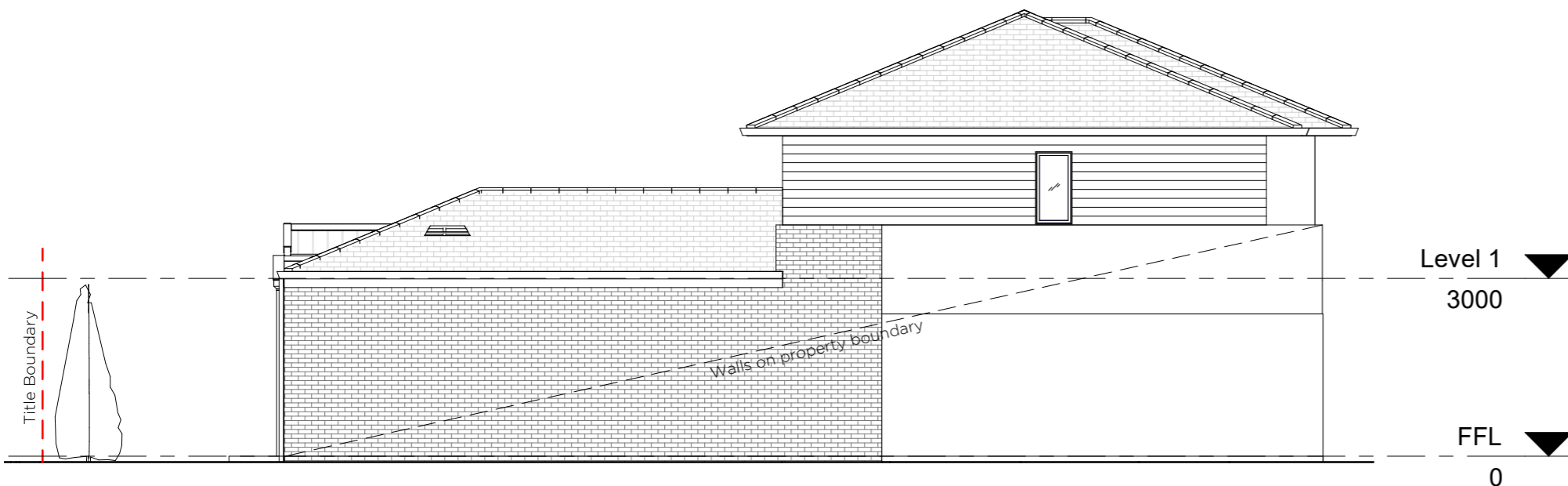
1. Refer to Window and glazing schedule for window opening types.
2. Refer to structural engineer's drawings for structural details.
3. Builder to confirm all measurements prior to construction.
4. All external cladding to be installed in accordance with manufacturer's specification. Builder to confirm location and cladding detail with nominated installer.
5. All changes to inform architect.
6. Refer to doors and windows schedule.

REVISION HISTORY

- D** 31/03/23 Building Permit Approval
- C** 14/12/22 Building Permit Redesign
- B** 21/07/22 Building Permit Draft
- A** 22/11/21 Pre Building Permit

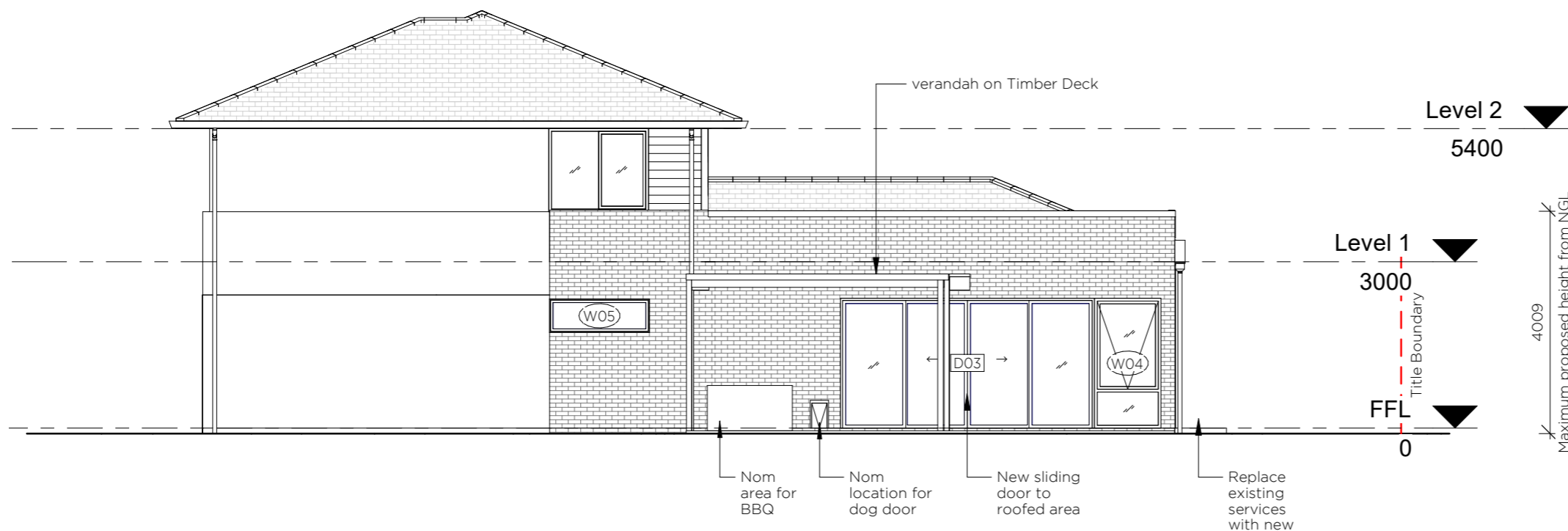
FIXTURES/FURNISHINGS

BBQ	Barbeque Area	S	Sink
BIN	Bin Insert	SK	Skirting
DW	Dishwasher	TA	Tapset
FS	Fixed Shelf	TV	TV Point
FST	Free Standing Stove	WIN	Window
GPO	Powerpoint		
RB	Robehooks		
RH	Rangehood		
RWDP	Rain Water Down Pipe		



East Elevation

1:100



West Elevation

1:100

ISSUED FOR CONSTRUCTION

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Building Permit Issue

CLIENT

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PROJECT

Proposed Extension
32 Edgbaston Way, Mulgrave

PROJECT NO

200204

DRAWING TITLE

Proposed Elevations

SCALE 1:100@ A3

DATE

DRAWN BY AA

REVISION

D

DRAWING NO

A202



REVISION HISTORY

D	31/03/23	Building Permit Approval
C	14/12/22	Building Permit Redesign
B	21/07/22	Building Permit Draft
A	22/11/21	Pre Building Permit

PLAN LEGEND

- RL 0 Finished floor level
- A.F.F.L** Above finished floor level
- dp Downpipe
- DB Electrical Distribution Board
- Existing walls
- New stud wall
- fw Floor waste
- sqm Square metres

NOTE:

1. Confirm all dimension on site.
2. Most dimensions are measured to the face of plasterboard.
3. Where there is change in floor finish, provide diminishing strip.
4. Joinery layout and detail shown indicative. Confirm with builder prior to fabrication.

SYMBOL LEGEND

- ROOM NAME** ← Room name
- AA** ← Finish code
- Refer to A804 to A805 for FFE
- D.07 Door number
- W01 Window number
- Refer to A401 for door and window schedule
- J012 Joinery unit number
- Refer to A501 to A508 for joinery detail

1. Confirm all dimension on site.
2. Dimensions are measured to the exterior face of plasterboard.

BUILDING FINISHES

- CT01 Large Format Tiles

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Proposed Extension
32 Edgbaston Way, Mulgrave

PROJECT NO

200204

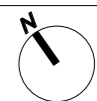
DRAWING TITLE

Proposed Ground Floor

SCALE 1 : 100@ A3

DATE

DRAWN BY AA



REVISION

D

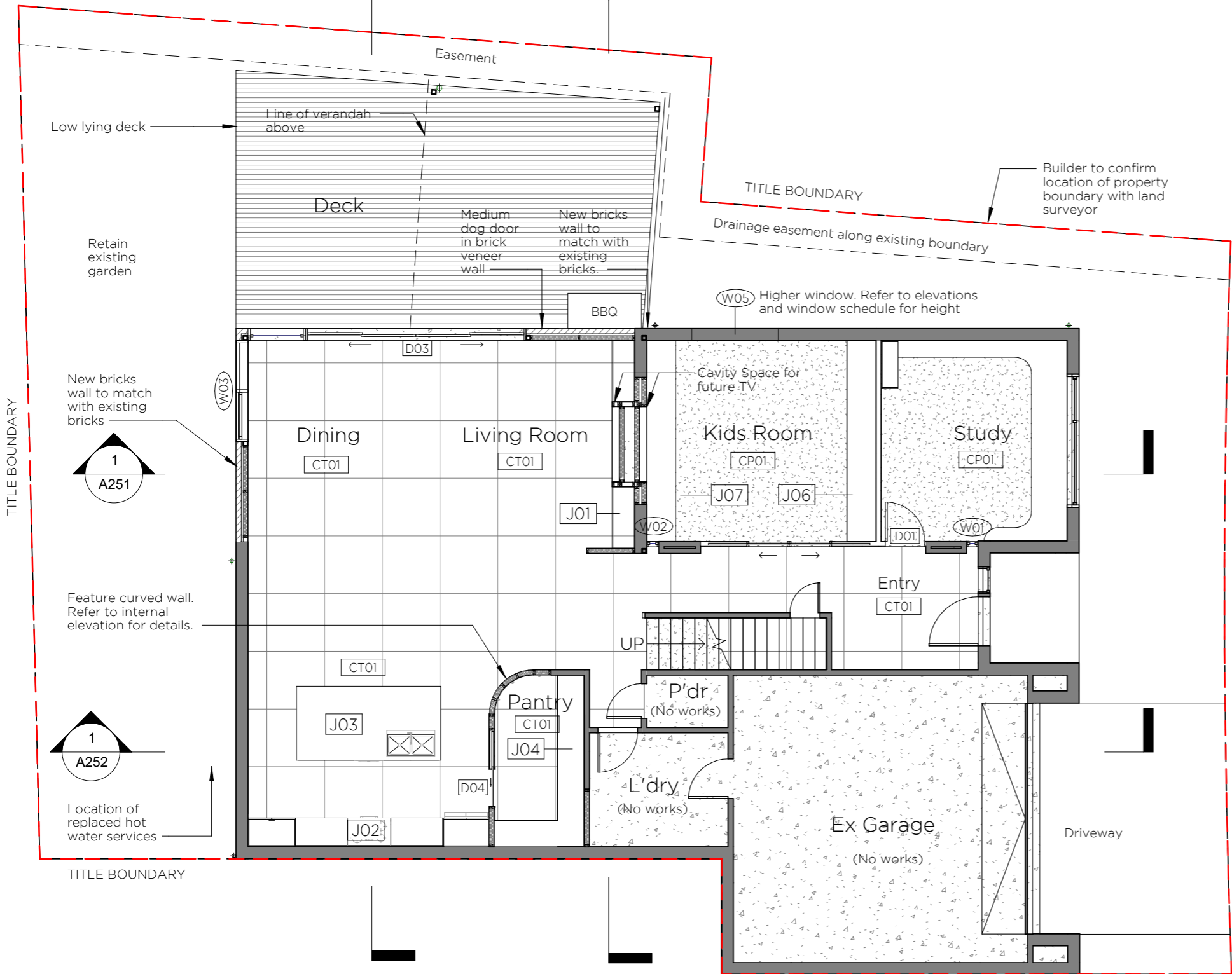
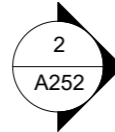
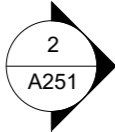
DRAWING NO

A111

250

2529
nom. new wall

3865
Study Room



2880

COS

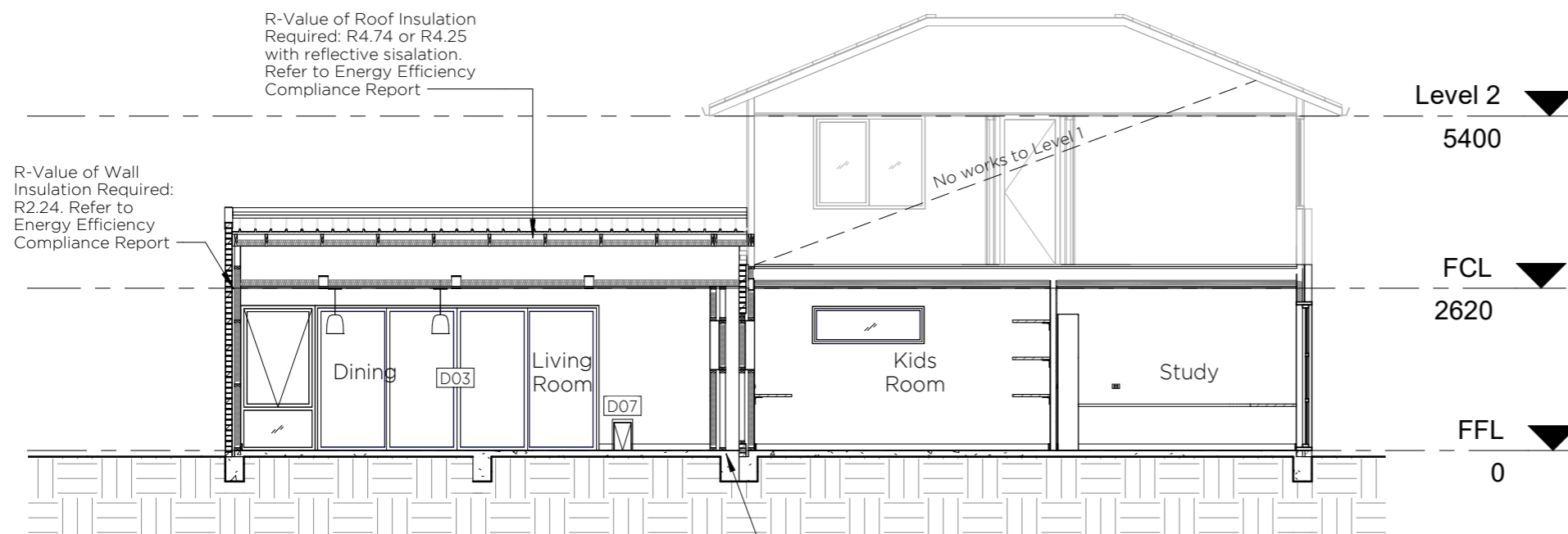
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FIXTURES/FURNISHINGS

BBQ	Barbeque Area	S	Sink
BIN	Bin Insert	SK	Skirting
DW	Dishwasher	TA	Tapset
FS	Fixed Shelf	TV	TV Point
FST	Free Standing Stove	WIN	Window
GPO	Powerpoint		
RB	Robehooks		
RH	Rangehood		
RWDP	Rain Water Down Pipe		

REVISION HISTORY

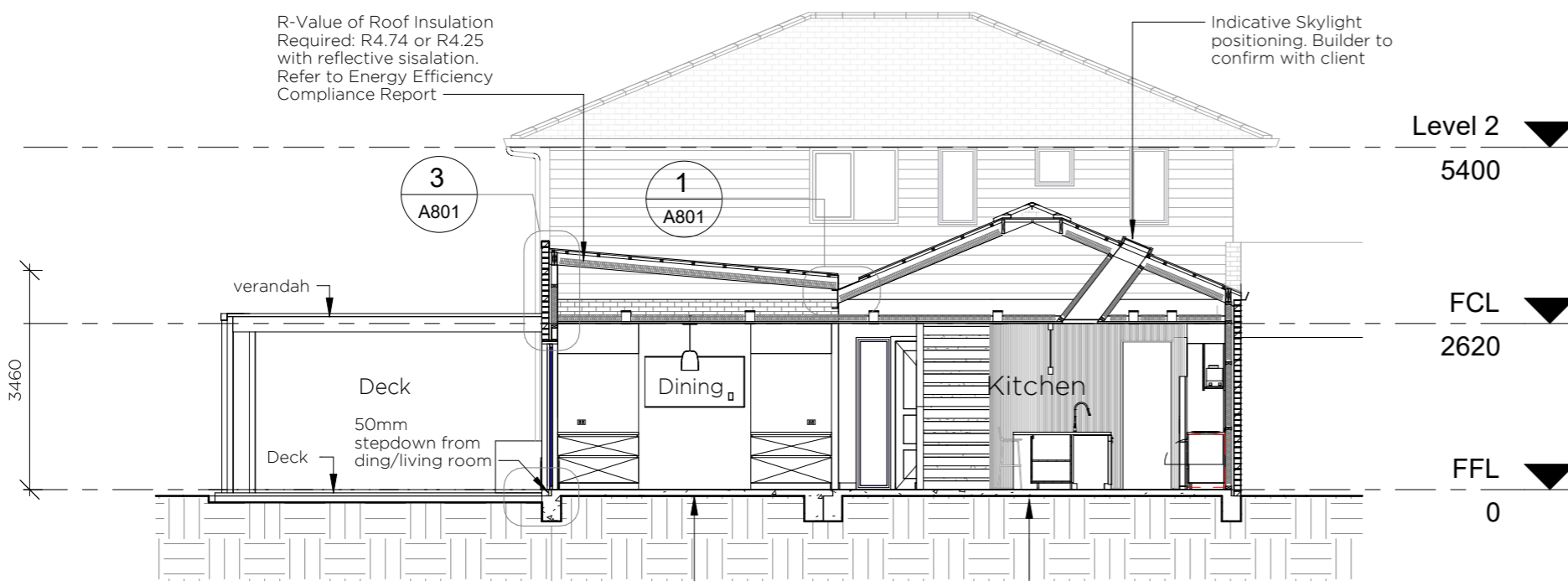
D	31/03/23	Building Permit Approval
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Section 1

1:100

Confirm with clients if walls require acoustic treatment



Section 2

1:100

New Slab for construction

Existing Slab

ISSUED FOR CONSTRUCTION

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PROJECT
 Proposed Extension
 32 Edgbaston Way, Mulgrave

PROJECT NO
 200204

DRAWING TITLE
 Proposed Sections

SCALE 1:100@ A3
DATE
DRAWN BY AA

REVISION
D

DRAWING NO
A251

REVISION HISTORY

B 31/03/23 Building Permit Approval
A 14/12/22 Building Permit Redesign

FIXTURES/FURNISHINGS

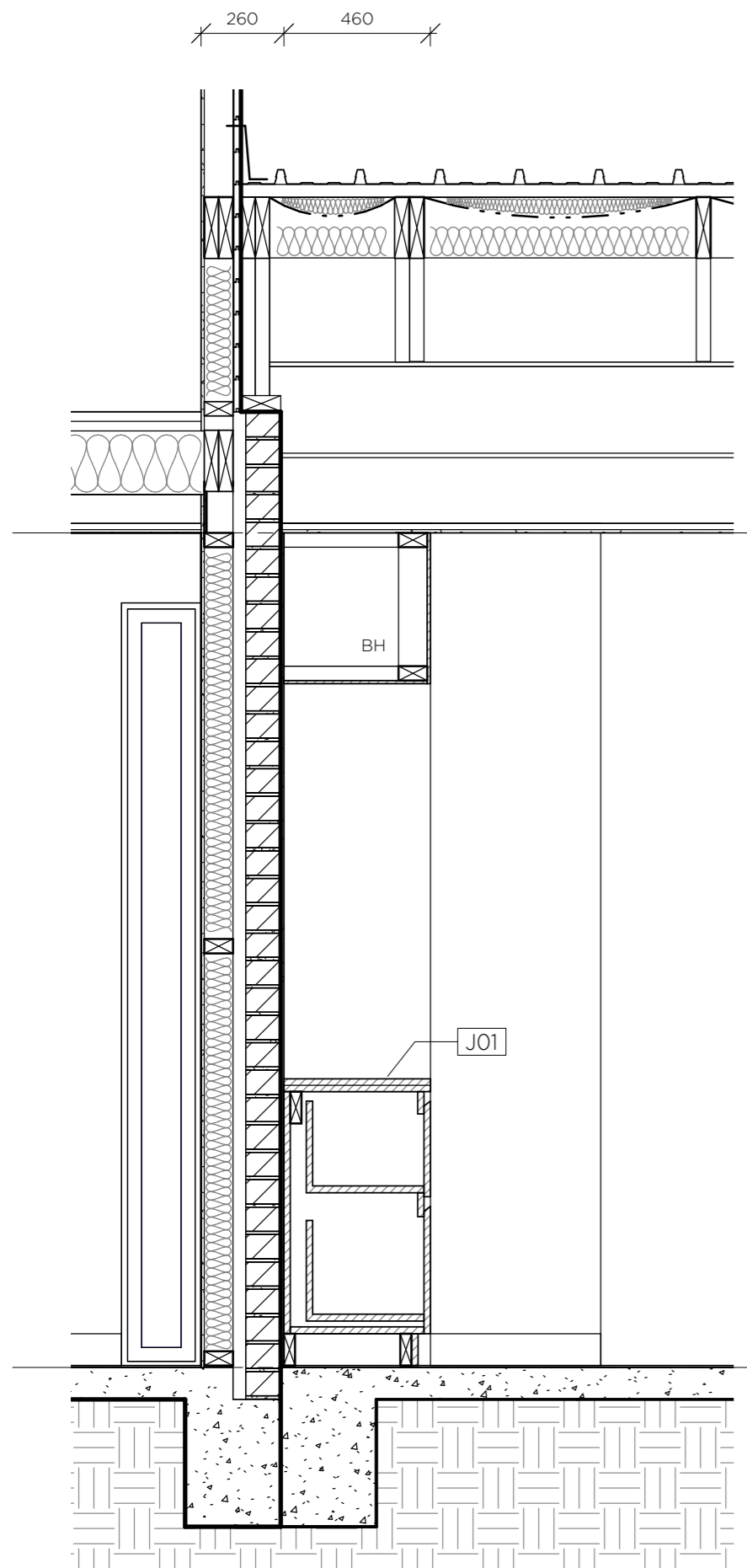
BBQ	Barbeque Area	S	Sink
BIN	Bin Insert	SK	Skirting
DW	Dishwasher	TA	Tapset
FS	Fixed Shelf	TV	TV Point
FST	Free Standing Stove	WIN	Window
GPO	Powerpoint		
RB	Robehooks		
RH	Ranghood		
RWDP	Rain Water Down Pipe		

BUILDING FINISHES

BR01	Monash Grey
CP01	Autumn Carpet
CT01	Large Format Tiles
P01	Living Pendant
P02	Kitchen Pendant
PA01	White verdict half
PA02	Lexicon Quarter

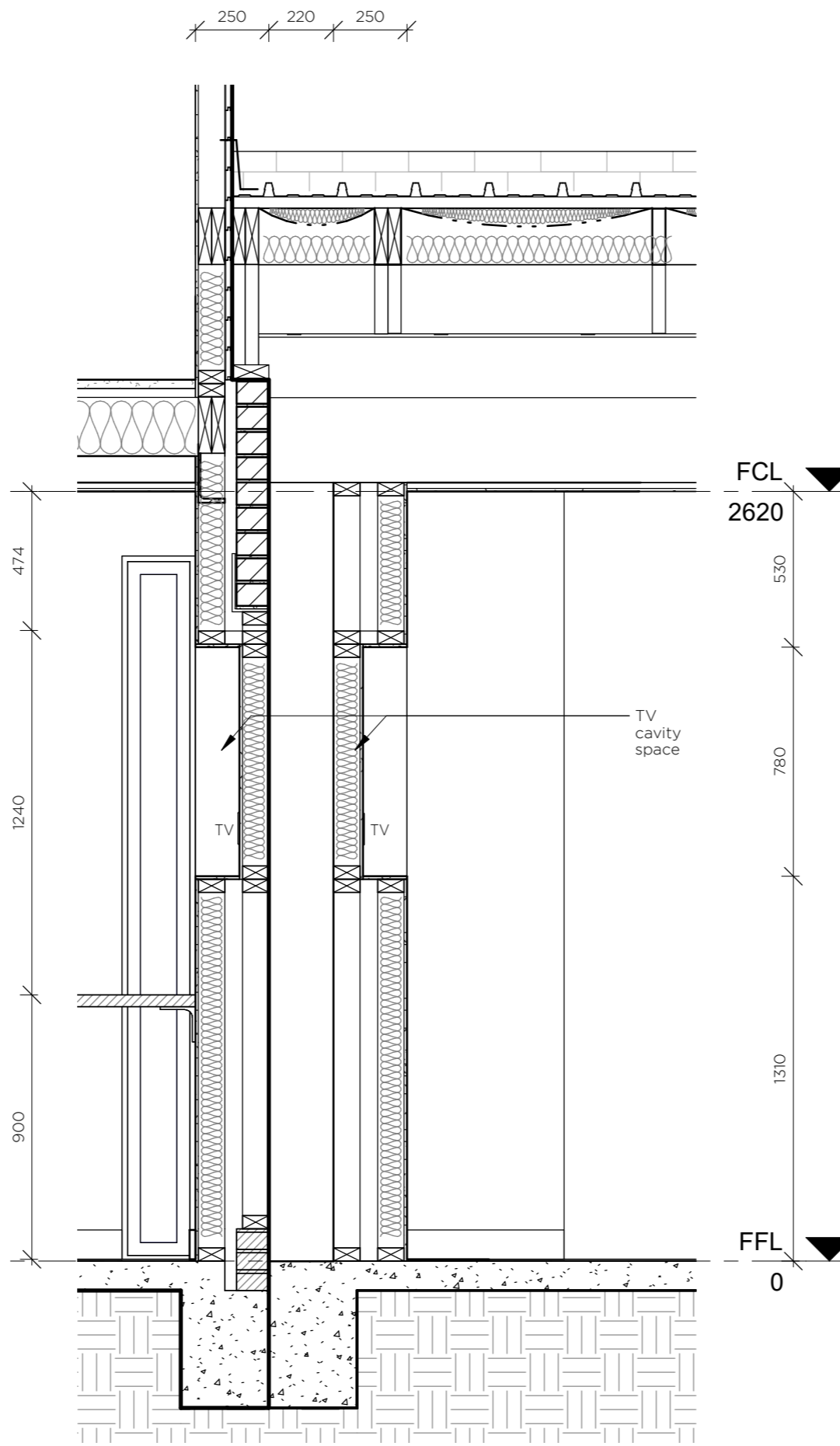
NOTES

Refer to DWG A501 for section markers



Section 5

1:20



Section 6

1:20

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Proposed Extension
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PROJECT NO

200204

DRAWING TITLE

Proposed Section 3 - J01 Wall

SCALE 1:20@ A3

DATE

DRAWN BY Author

REVISION

B

DRAWING NO

A253

REVISION HISTORY

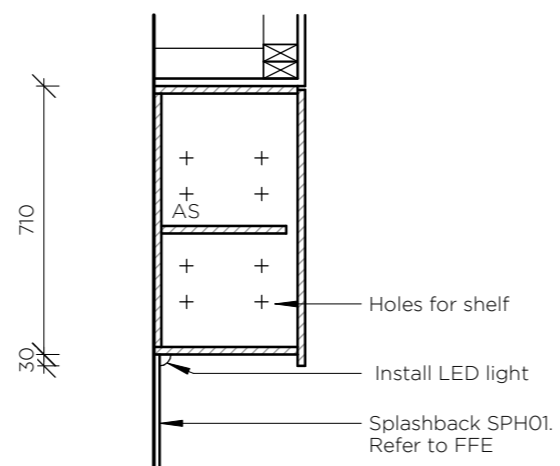
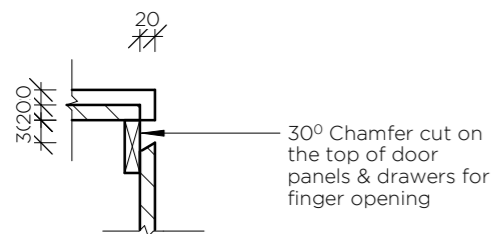
C	31/03/23	Building Permit Approval
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FIXTURES/FURNISHINGS

BBQ	Barbeque Area	S	Sink
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DW	Dishwasher	TA	Tapset
FS	Fixed Shelf	TV	TV Point
FST	Free Standing Stove	WIN	Window
GPO	Powerpoint		
RB	Robehooks		
RH	Rangehood		
RWDP	Rain Water Down Pipe		

CASEWORK FINISHES

BCH01	Piatra Grey 5003
BCH02	Calacatta Nuvo 5131
BCH03	White 200 Natural
LM01	Terril 2297
LM03	Notaio Walnut
LM04	White 200 Absolute matte
SPH01	Boardwalk

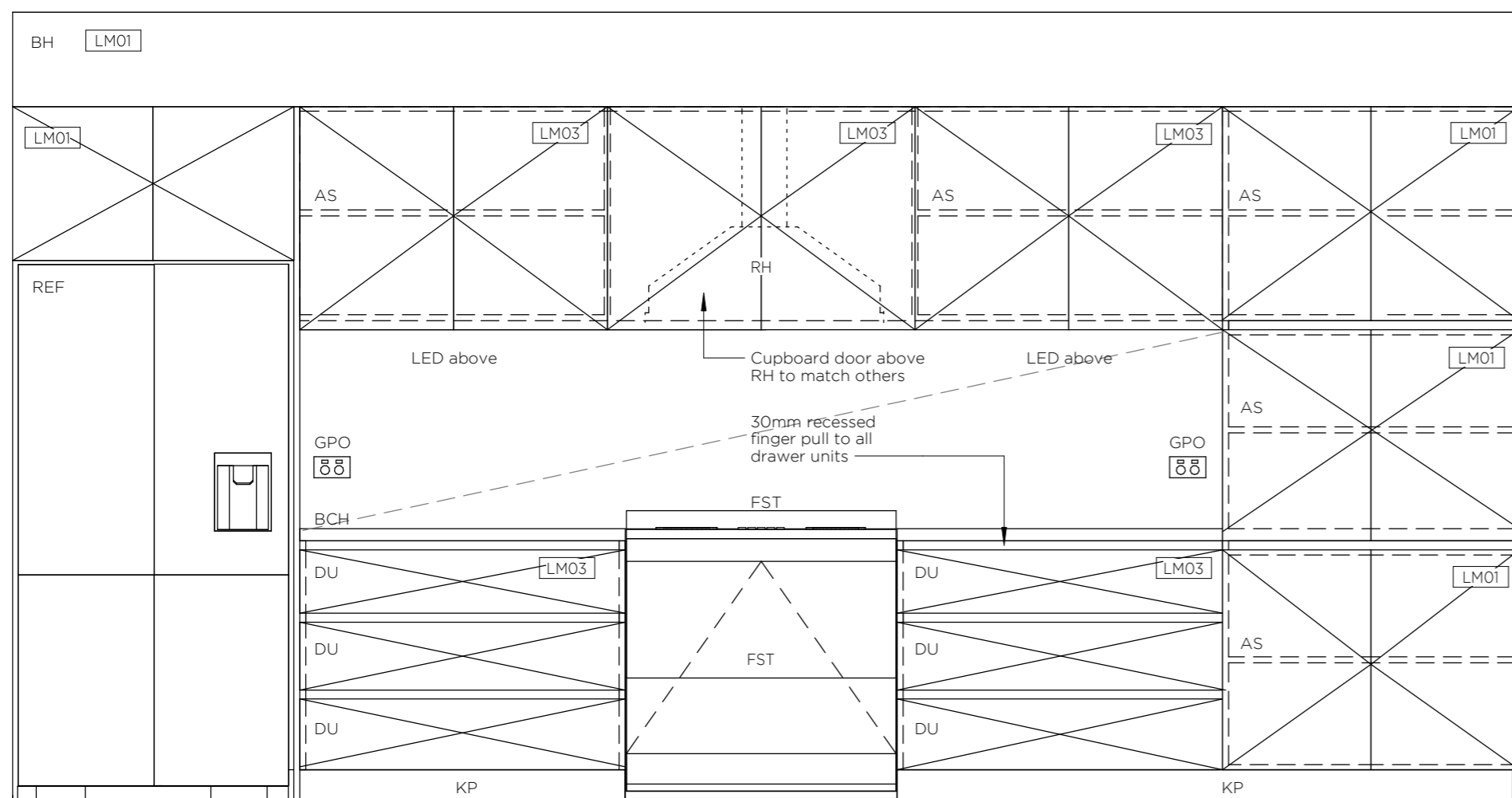
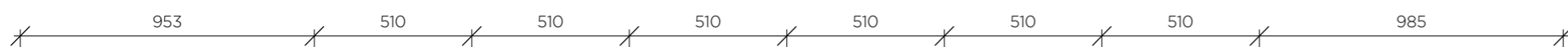


J02 Bench Top Edge Detail Section

1:10

J02 Overhead Cupboard Section

1:20



J02 Kitchen Elevation

1:20

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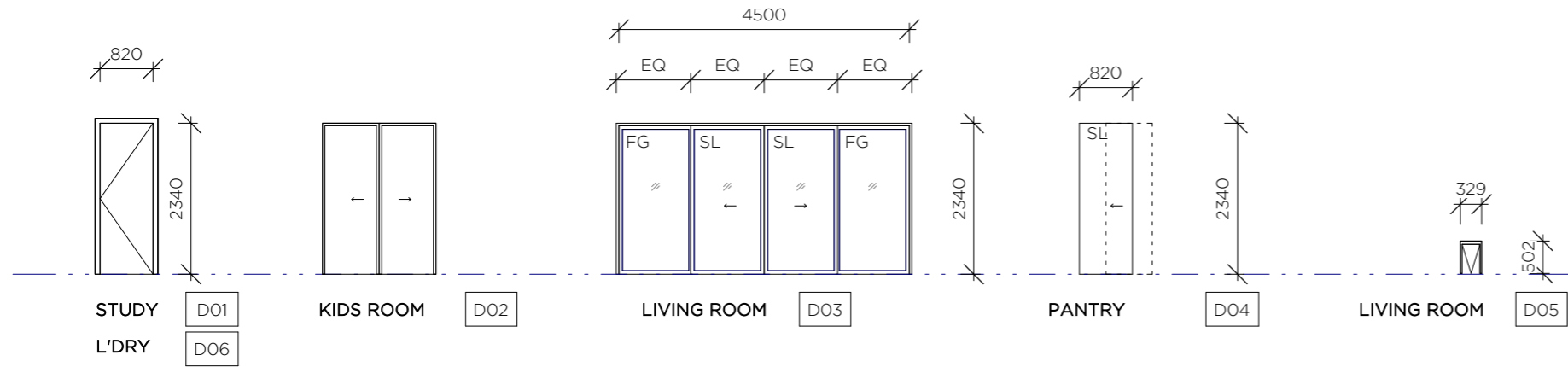
PROJECT NO
 200204

DRAWING TITLE
 Joinery Detail - J02

SCALE As indicated @ A3
DATE
DRAWN BY Author

REVISION **C** **DRAWING NO** **A502**

DOOR SCHEDULE



DOOR HARDWARE NOTE:

1. Builder to finalise door hardware to each door with client.
2. Provide door hardware in accordance with NCC and relevant Australian Standards.
3. If possible coordinate finishes of door hardware with fittings and fixtures throughout.
4. Provide door stoppers to swing doors.
5. Provide acoustic seal to cavity slider doors as required.
6. Allow top of door panel to be stained and painted.
7. Provide weather seal to external door.
8. Allow for soft-closing mechanism where applicable.

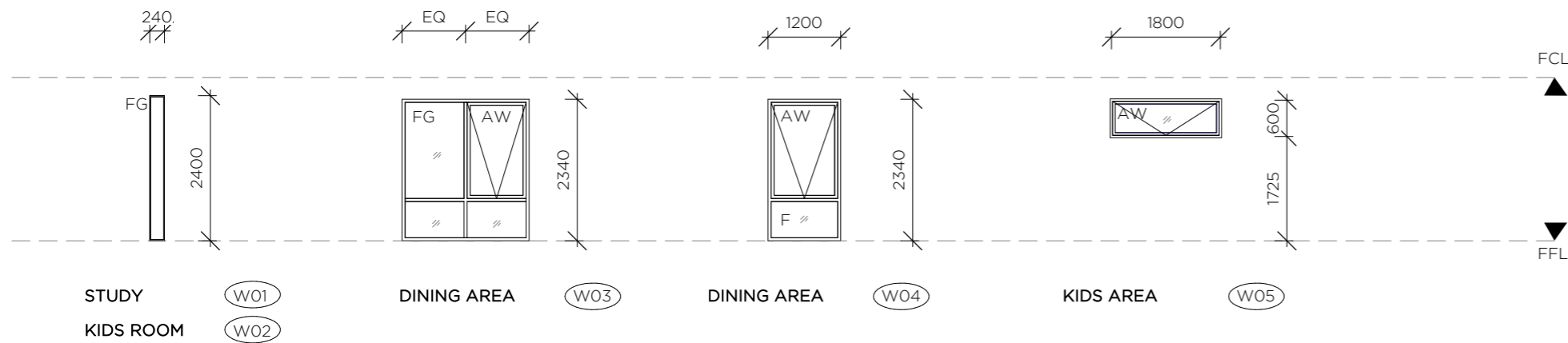
WINDOW NOTE:

1. Glazing to be installed in accordance with AS 1228.1
2. Refer to Energy Rater for glazing detail to achieve required energy rating.
3. Provide grade A safety glass as noted and as required by AS 1228.1 including shower screens
4. Windows sizes are nominal only. All windows to be measured and confirmed on site prior to fabrication.
5. All new window & door frames to match existing.
6. Provide fly screens to all openings.
7. Window description below:

fixed glass	FG
sliding	SL
awning	AW
casement	CAS
obscure	OB

NOTES	40mm internal flush door panel Paint finish.	40mm internal flush door panel. Surface mounted sliding door mechanism. Overhead mechanism to be powdercoated metal. Allow acoustic seal around opening. Paint finish	Aluminium powdercoated sliding door. Zero-threshold to deck. Provide weatherseal as required. Provide safety markings and decals. Decals to be wider than 20mm in height, and located nom 1100mm in height Required 4.2 total system U-Value. Required 0.69 total system SHGC.	40mm internal flush door. Cavity slider. Paint finish. Sliding mechanism to be top hung. Provide marine ply grade panels to wet areas. Door without architraves. Joinery wall to be integrated around door.	Pet Size: Up to 45kg Frame Dimensions: 329mm x 502mm Flap Opening: 260mm x 413mm Cut Out Size: 277mm x 451mm Maximum Pet Shoulder Width: 260mm Paint finish.
-------	---	---	---	--	---

WINDOW SCHEDULE



NOTES	Frameless infill glass panel Nom Grade A Safety Glazing Clear silicone around glam	Powdercoated aluminium, Dune finish, framed window with matching winder Nom Grade A Safety Glazing Required 4.2 total system U-Value. Required 0.69 total system SHGC.	Powdercoated aluminium, Dune finish, framed window with casement winder Nom grade Grade A Safety Glazing Required 4.2 total system U-Value. Required 0.69 total system SHGC.	Window built into existing brick veneer wall Powdercoated aluminium, Dune finish, framed window with casement winder Nom grade Grade A Safety Glazing Required 4.2 total system U-Value. Required 0.69 total system SHGC.
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REVISION HISTORY

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PROJECT NO
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DRAWING TITLE
 Schedules - Door & Window

SCALE 1 : 100@ A3
DATE
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DRAWING NO A401



Plumbing Fixture Schedule

Keynote	Category	Equipment	Manufacturer	URL	Code	Count
S	Sink	Memo Hugo Double Bowl Sink No Taphole Stainless Steel	Reece	https://www.reece.com.au/product/sinks-troughs-c-2512/sinks-c-778/undermount-sink-c-779/memo-hugo-double-bowl-sink-no-taphole-stainless-2402706	2402706	1
TA	Tap	York Pull-out Gooseneck Kitchen Mixer	Innova	https://www.bestlink.com.au/product/model-bl311r-bk/	BL3111R	1

Specialty Equipment Schedule

Keynote	Category	Equipment	Manufacturer	URL	CODE	Count
FST		90cm Dual Fuel Pyrolytic Freestanding Cooker With Easybake +steam And Airfry, Dark Stainless Steel	WESTINGHOUSE	https://www.westinghouse.com.au/cooking/freestanding-cookers/wfep917dsd/	WFEP917DSD	1
ST		Cook Top-4 Unit				1
BIN	Bins	Domestique 90l Twin Slide Out Concealed Waste Bin	Renovator Store	https://www.renovatorstore.com.au/elite-concealed-kitchen-waste-bin-for-a-900mm-cupboard.html	ELITEPOB-600-2-0861	1
REF		Freestanding Quad Door Refrigerator Freezer, 90.5cm, 538l, Ice & Water	Fisher and Paykel	https://www.fisherpaykel.com.au/cooling/refrigeration/contemporary-refrigeration/freestanding-quad-door-refrigerator-freezer-90.5cm-538l-ice-and-water-rf605qnuvb1-26552.html	RF605QNUVB1	1
RB	Robe Hooks	Otto Robe Hook - Matte Black	ABI	https://www.abiinteriors.com.au/product/otto-robe-hook-matte-black/	SKU11670	3
DW	Dishwasher	Serie 6 Built-under Dishwasher 60 Cm Black Inox	Bosch	https://www.bosch-home.com.au/productlist/SMP66MX03A#/Togglebox=accessories/Togglebox=manuals/Togglebox=accessoriesOthers/	SMP66MX03A	1
RH		Sirius 85cm Stainless Steel Undermount Rangehood	EANDS	https://www.eands.com.au/sirius-sl926dlm850-85cm-stainless-steel-undermount-rangehood	SL926DLTM850	1

Lighting Fixture Schedule

Keynote	Category	Figure	Manufacturer	URL	Code	Count
PO2		Clayton Ceramic Pendant in White	Beacon	https://www.beaconlighting.com.au/ledlux-contemporary-led-1200mm-up-down-pendant-in-black?q=pendant	SKU020725	1
		Dotless Led Strip	Modern Lights	https://www.modernlights.com.au/9w-24v-dc-5000k-480led-per-metre-cob-dotless-led-strip.html	10W 24V DC 6000K 480LED PER METRE COB DOTLESS LED STRIP	1
DL		LEDlux Colour Switch Downlight in White	Beacon	https://www.beaconlighting.com.au/ledlux-vivid-colour-switch-downlight-in-white	SKU170571	18
PO1	Living Pendants Lights	LEDlux Colour Switch Downlight in White	Beacon	https://www.beaconlighting.com.au/clayton-ceramic-pendant-in-white	SKU011255	2

Casework Schedule

Family	Benches	Benches	Joinery Bulkhead	Panels	Panels (inner)	Skirting	Splashback
J01	Notaio Walnut		White 200 Absolute matte	Notaio Walnut		White 200 Absolute matte	
J02	Piatra Grey 5003		Terril 2297	Terril 2297	Notaio Walnut	White 200 Absolute matte	Boardwalk
J03	Calacatta Nuvo 5131			Notaio Walnut		White 200 Absolute matte	
J04	Piatra Grey 5003	White 200 Absolute matte	Terril 2297	Notaio Walnut		White 200 Absolute matte	
J05	White 200 Natural			White 200 Absolute matte		White 200 Absolute matte	
J06	White 200 Natural			Classic Oak 8537			
J07	White 200 Natural						

Ceiling Material Takeoff

Keynote Finish	Product	Area	Manufacturer	Comments
PA02	Lexicon Quarter	161 m ²	Dulux	

Floor Material Takeoff

Keynote Finish	Product	Area	Manufacturer	Comments
CP01	Autumn Carpet	36 m ²	Choices Flooring	
PA01	Black Paint	1 m ²	Dulux	
DK01	Estate brown	44 m ²	Ekodeck	
CT01	Large Format Tiles	100 m ²	CT Supplies	Large format concrete tiles, builder to confirm

Wall Material Takeoff

Keynote Finish	Product	Area	Manufacturer	Comments
PA01	Black Paint	3 m ²	Dulux	Paint for all walls, skirting boards to match finish
	Default New Material	10 m ²		
BR01	Monash Grey	36 m ²	PGH Bricks & Pavers	Bricks to match existing bricks
PA01	White verdict half	110 m ²	Dulux	Paint for all walls, skirting boards to match finish

Roof Material Takeoff

Keynote Finish	Product	Material: Area	Manufacturer	Comments
PC01	Klip Lok 700 Lysaght Dune Finish	38 m ²	Colorbond	

REVISION HISTORY

- C** 31/03/23 Building Permit Approval
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Proposed Extension
32 Edgbaston Way, Mulgrave

PROJECT NO

200204

DRAWING TITLE

FFE

SCALE @ A3

DATE

DRAWN BY Author

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REVISION

C

DRAWING NO

A804

APPENDIX



1. Enter building name and description below - identifying the particular part(s) covered by this assessment.

32 Edgbaston Way, Mulgrave

Storey	Floor Construction	Area
Ground	Direct Contact	149m²
Air Movement	Suspended	
Standard	Area of storey	149m²
	Area of glazing	30.1m² (20% of area of storey)

Wall Insulation Option Chosen for 3.12.1.4
No wall insulation concession used

Climate Zone
6

Constants	C_U	C_{SHGC}
	6.418	0.153
Allowances	$C_{(g)ly}$	$C_{SHGC} \times Area$
	6.4	22.8

Number of rows for table below **7** *Click arrow beside 'ID'. Select only '7' on the drop-down list*

Glazing Elements, Orientation Sector, Size and Performance Characteristics							Shading		Calculation Data			Calculated Outcomes				
TOWS ID	Glazing element	Orientation	Size			Performance		P&H or Device		Exposure		Size	Conductance - PASSED		Solar heat gain - PASSED	
	Description (optional)	Facing Sector	Height (m)	Width (m)	Area (m ²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)	P (m)	H (m)	P/H	Es	Area used (m ²)	U x area / Winter Access	Element Share of % of Allowance Used	SHGC x Es x Area	Element Share of % of Allowance Used
	1 W03	S	2.34	2.10		4.20	0.69				0.61	4.91	1.04	16% of 100%	2.1	12% of 79%
	2 W05	W	0.60	1.80		4.20	0.69				1.40	1.08	0.23	4% of 100%	1.0	6% of 79%
	3 W04	W	2.34	1.20		4.20	0.69	1.25	2.40	0.52	0.82	2.81	0.59	9% of 100%	1.6	9% of 79%
	4 D03	W	2.34	4.50		4.20	0.69				1.40	10.53	2.23	35% of 100%	10.2	57% of 79%
	5 EXW Study	N	2.40	2.78		4.20	0.69	0.60	2.40	0.25	0.48	6.67	1.41	22% of 100%	2.2	12% of 79%
	6 EXW Entry	N	2.40	1.71		4.20	0.69	1.84	2.40	0.77	0.27	4.10	0.87	14% of 100%	0.8	4% of 79%





REGENERATIVE HOUSE

The sustainable analysis and redevelopment of an existing architectural building located in Glen Iris to meet the first 10 imperatives of the Living Building Challenge.

Academic - 2021

Individual work

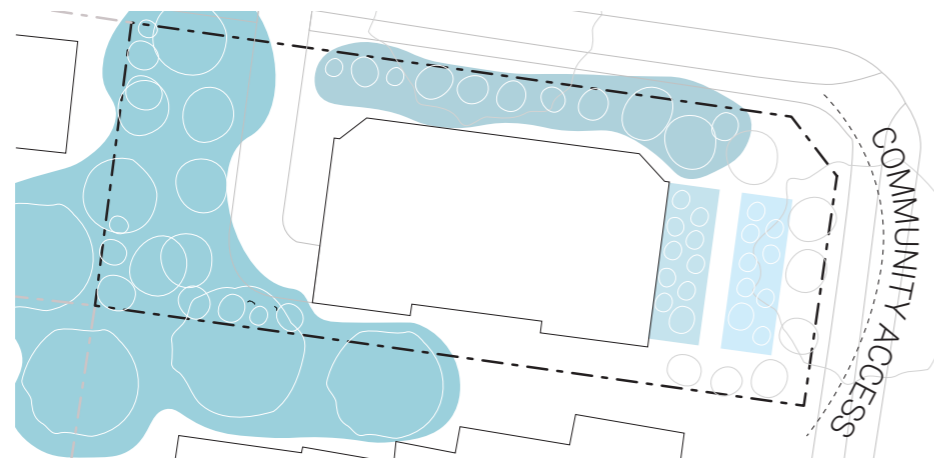
Glen Iris



House selected: Banksia House – 3 bedroom + study

<https://www.yourhome.gov.au/house-designs>





CONSIDERING URBAN AGRICULTURE

- **Zone 1:** Frequent visits – Kitchen garden, herbs, salad crops, small fruits, compost bin
- **Zone 2:** Semi-cultivated – Orchards, vines, pumpkins, sweet potatoes, grapes
- **Zone 3:** Occasional visits – Low-maintenance fruit and nut trees
- **Zone 4:** Wild area – Native ecosystems, trees, plants, bush food, no intervention



CONSIDERING ECOLOGY OF PLACE

Removing non-native and exotic vegetation, retaining native melaleuca trees, and planting new native trees, including dense shrubs, nectar-rich plants, and larger rocks. No petrochemical fertilizers or pesticides will be used.

- Removing non-native and replanting
- Retaining existing melaleuca trees
- Planting new native trees
- Large rocks



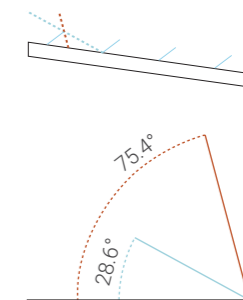
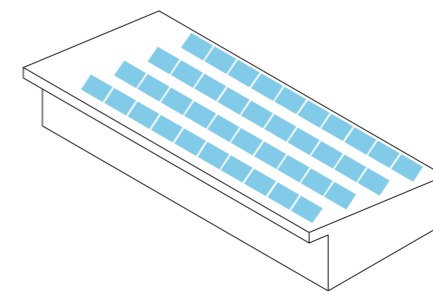
CONSIDERING TRANSPORT

The provision for EV charging and a garage designed with 4 bike storage options, using AS 2890.3 as a reference guide.



CONSIDERING HABITAT EXCHANGE

696 m² of land will be purchased from the Trust for Nature to be set aside in perpetuity for ecological preservation.



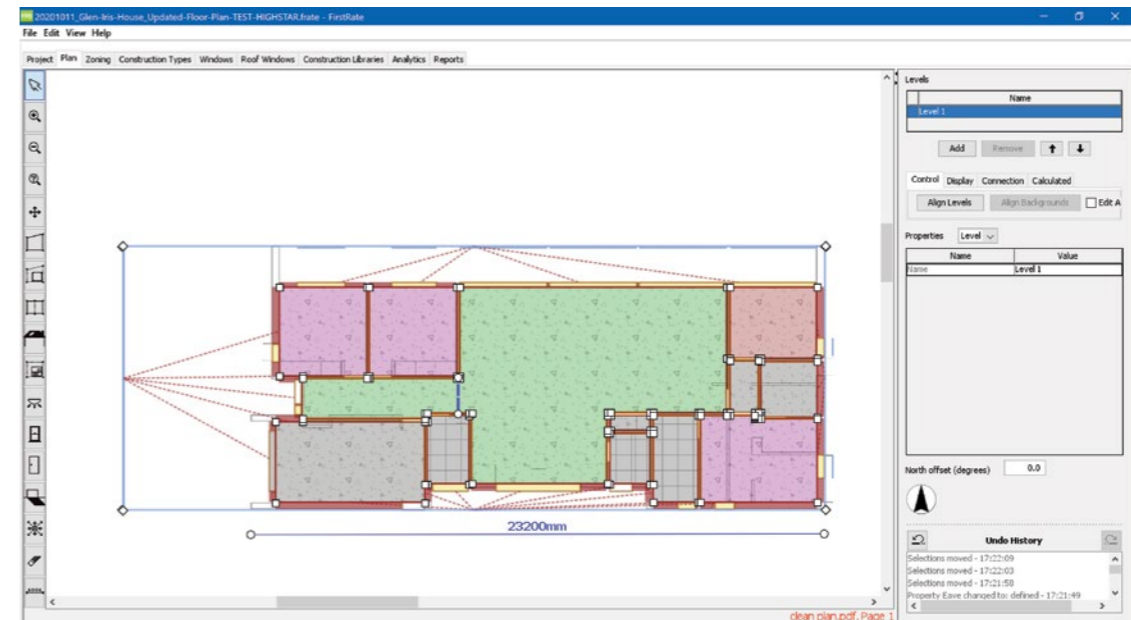
CONSIDERING ENERGY

A 10 kW solar system, occupying 100 m² of roof space, paired with a 10 kWh battery (42 kWh daily), is designed to meet the energy needs of a 4.5-star rated house in Melbourne (average 23 kWh, increasing to 35 kWh in winter). Excess energy can be sold, used for an electric car, or stored in the battery (with a 10-year break-even period).

Solar panels were positioned on the north-facing steep roof for optimal winter solstice exposure.

Zone	Heating (MJ/m2)	Total Heating (MJ)	Cooling (MJ/m2)	Total Cooling (MJ)
Living 4	27.7	281.8	33.2	337.9
Bedroom 15	15.3	248.5	0	0
Bedroom 3	0.1	0.8	0	0
Bedroom 2	2.5	31.7	0	0
Kitchen/Living 14	16.8	1363.6	14.1	1145.7
		1926.4		1483.6

Zone	Heating (MJ/m2)	Total Heating (MJ)	Cooling (MJ/m2)	Total Cooling (MJ)
Living 10	283.6	2995.4	17.8	187.9
Bedroom 5	43.8	620.1	28.8	408.2
Bedroom 3	33.4	425.3	6.9	87.6
Bedroom 2	90.3	1148.7	23.7	302.2
Kitchen/Living 14	82.2	6556.7	34.2	2773.1
		11846.2		3759



Baseline design

6.3

104.5

79.3

25.2



With Changes

9.1

23.4

23.4

10.6



CONSIDERING ENERGY REDUCTION THROUGH FIRSTRATE 5 ANALYSIS

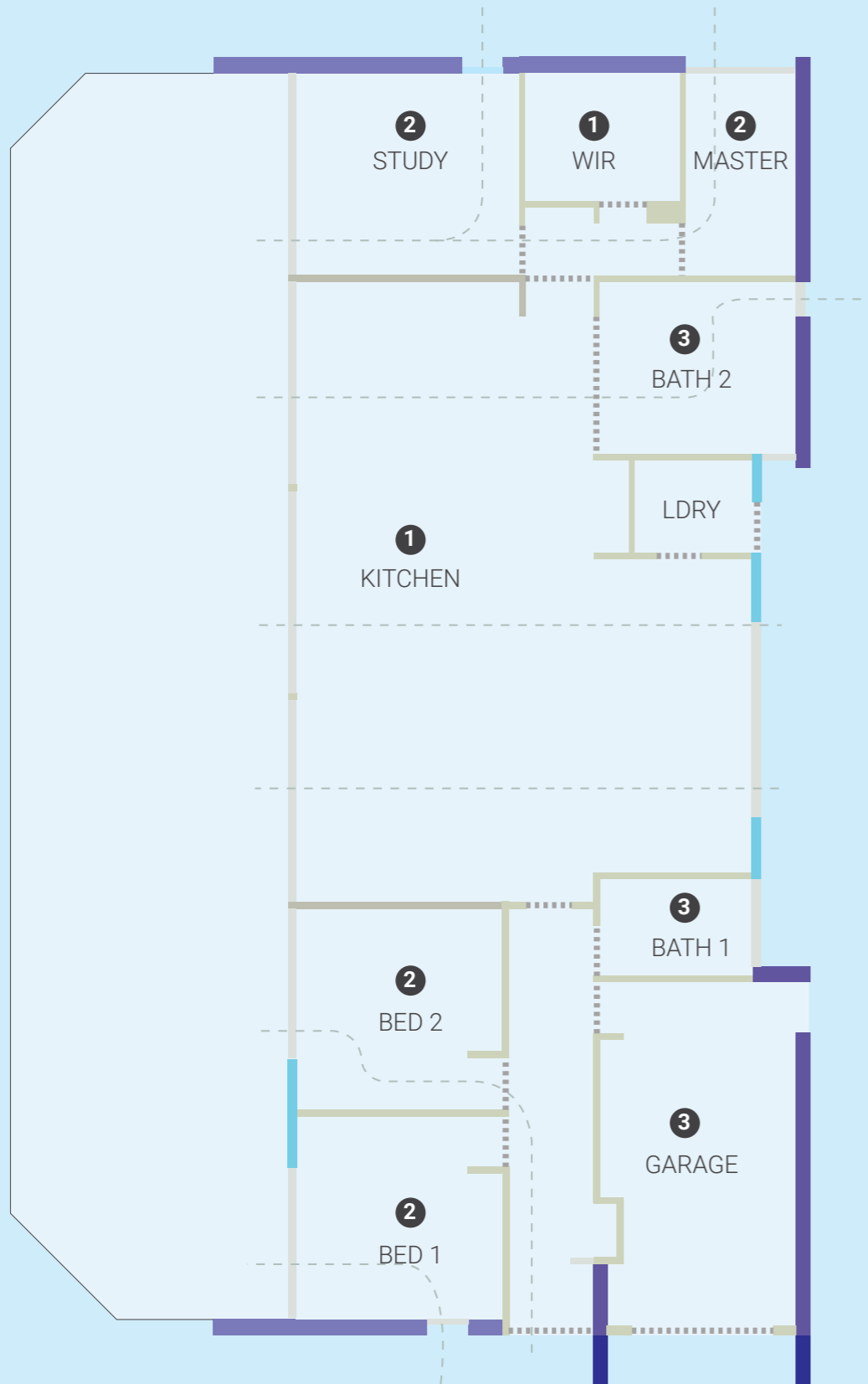
Firstrate 5 was used to analyze the baseline energy use for heating and cooling. Adjustments were made (see right) to achieve a 9.1 star rating.

78.15% reduction in heating and cooling use

100% - $\frac{3410}{15605.2}$

STRATEGIES TO REDUCE HEATING AND COOL ENERGY CONSUMPTION

- East windows shaded by deciduous
- Increased eave overhang
- Carpet in south study for heat retention
- Expanded polystyrene insulation
- Ceiling fans in Bedroom 2/5, Kitchen, Living Room
- Wall Insulation: R3 to R3.5
- Swapped study with master bedroom
- Thicker Roof: R8.0
- Reverse brick veneer for thermal mass
- New walls and swing doors to create thermal zones
- Double glazing



1:130 @ A3

WINDOWS		WALLS		FLOORS		ROOFS		OPERATION	
Material	Material type	unit	Waste	Qty	Initial Embodied Energy	Initial Embodied Emissions			
Ceramics	Mud bricks	m ²	1.05	110	61.6	3696			
Timber	Hardwood (structural)	m ³	1.05	1.64	34.975	2098.478			
Timber	Softwood (framing)	m ³	1.02	3.89	42.498	2549.895			
Timber	Plywood Panels	m ³	1.02	2.9	31.683	1900.95			
Insulation	Expanded polystyrene	m ³	1.1	9.371	67.659	4059.517			
Composite	Cemintel	m ³	1.02	4.56	49.818	2989.08			
Timber	Plywood Panels	m ³	1.02	4.56	49.818	2989.08			
					338.051	20283			
Paint	water_based	m ³	1.05	84.4	8.102	486.144			
Plaster	10 mm	m ³	1.05	84.4	17.471	1048.248			
					25.573	1534.392			
Insulation	Fibreglass	m ³	1.1	9.371	20.33507	1220.1042			
					20.33507	1220.1042			
					GJ/m ²	kgCO ₂ -eq/m ²			

CONSIDERING MATERIAL SELECTION + EMBODIED EMISSIONS STRATEGY

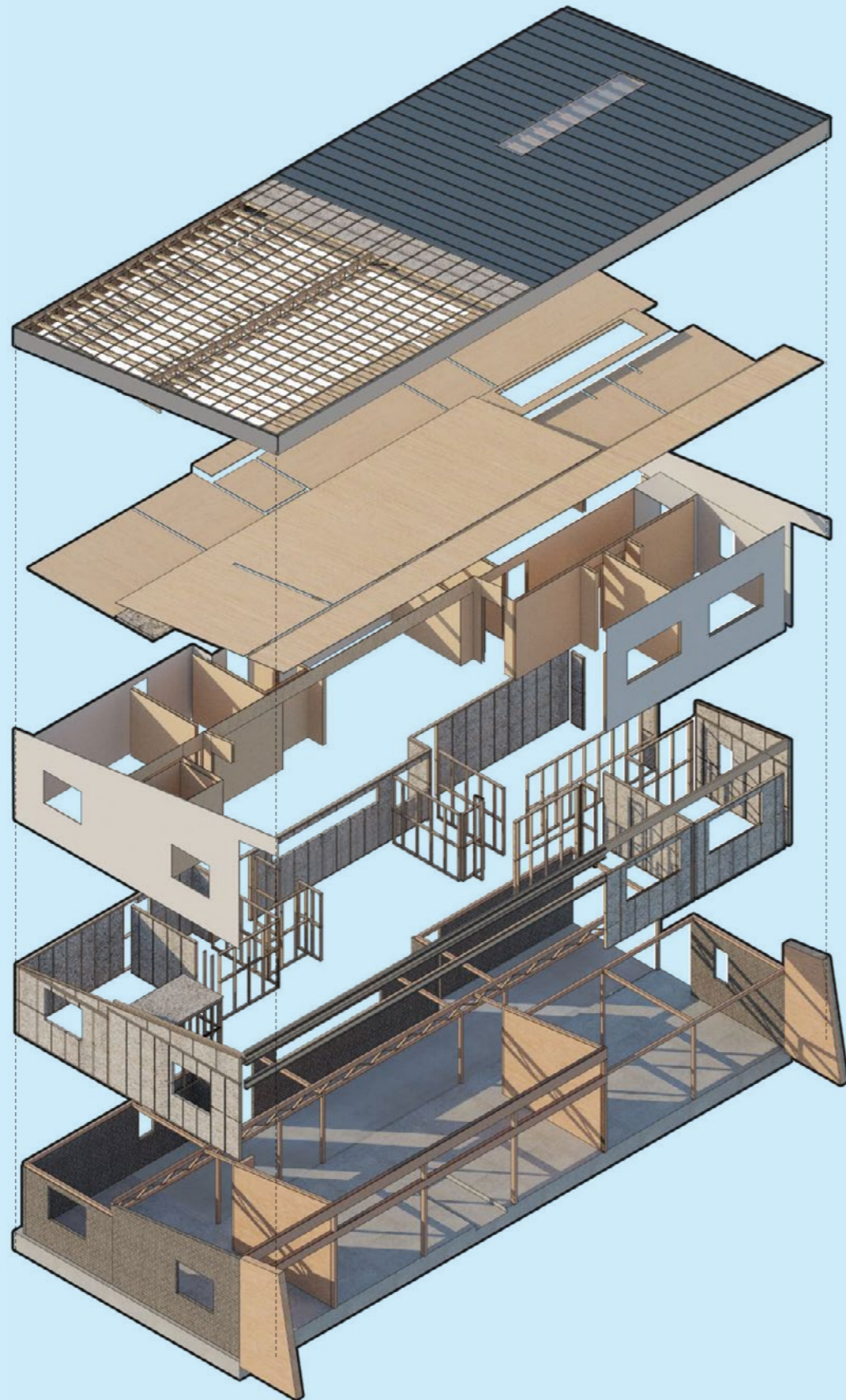
Embodied emissions analysis of the baseline design informed efforts to reduce emissions and energy through structural redesign and the use of mud bricks. While minimizing emissions was prioritized, some materials with higher embodied energy and emissions, such as plywood, were chosen over alternatives like paint, plaster, and fiberglass insulation.

1. Plywood chosen for reuse, despite higher emissions and similar lifespan.
2. Polystyrene insulation cuts heat conductivity from 0.044 to 0.36 W/m-K.

Data sourced from Victoria Bunster, Future Building Initiative Lab.

WALL TYPOLOGY, CROSS VENTILATION AND

- Double Mud Brick
- Mud Brick with plywood interior
- Weatherboards with mud brick interior
- Weatherboards with plywood interior
- Mud Brick
- Timber Stud (Insulated) with plywood
- Window to calculations
- Swing doors
- Cross Ventilation
- ① Heating required always
- ② Heating required moderately
- ③ Zones that don't need heating



Reinforced concrete in waffle formation: Reduces IEE by 31% to 77555 kgCO₂-eq/m². Recyclable concrete.

Mud bricks: Labor-intensive, locally sourced on-site or nearby, with lower IEE.

Rammed Earth: Lower IEE than brick walls, offering a place-based solution.

Cemintel: Lower IEE, durable, self-absorbing, and low maintenance.

Bamboo plywood: Higher IEE at 8977 kgCO₂-eq/m², but recyclable and deconstructable.

Hardwood space frame system: Deconstructable walls, adaptable design, climate responsive.

Timber frames: Locally sourced, lower IEE than metal frames, termite-protected.

Blown in borate treated cellulose insulation: Lower IEE than fiberglass, recyclable, placed only where needed.

IEE : Intimal Embodied Energy / Emissions

Rainwater Harvesting: 256 sqm roof, 132 mm/hr rainfall (5 min). Gutter: 125 x 70 mm, 5x 90 mm downpipes.

Leaf Shedding Gutters: Prevent debris from entering the water system.

Permeable Paving: Used for driveways and walkways to reduce stormwater runoff.

Flow: Low-flow fixtures installed for taps and showerheads to conserve water.

Landscaping: Drought-tolerant native plants and xeriscaping techniques employed to minimize water use.

Efficiency: Water-efficient dishwashers and washing machines included to reduce water consumption.

Ozzi Kleen Greywater Treatment System: Treats greywater for all uses except drinking and basin water, in accordance with EPA requirements.

Rainwater Filtering: Rainwater is naturally filtered through leaf-shedding gutters, strainer baskets, and first flush diverters.

Tank Capacity: A 56,000L tank is used to support three cycles per year, with 166,144L of rainwater collected annually.

Individual Water Use	Duration	L	Use/Week	L/Use/Week	Annual
Bath	1 per week	150	0.1	15	780
Dual Flush Toilets	6 per day	3.5	42	147	7644
WELS 3 showerheads	8 min	72	7	504	26208
Cooking / Drinking Water / Basin	1 per day	10	7	70	3640

Household Water Use	Use	L	Use/Week	L/Use/Week	Annual
Front Loader Washing Machine	1 per use	60	3	180	9360
Dishwasher	1 per use	15	3	45	2340

Household Summer Water Use	Use	L	Use/Week	L/Use/Week	3 m
Garden Watering with Hose	30 min	20	1	20	260
10m Drip Irrigation System	2 hours	4	1	480	6240

Calculating the tank	
Annual rainfall (mm/sqm)	649
Water loss factor	0.9
Roof area (sqm)	256
Rain Harvested	166144
Tank size (3 refills)	56000

Total	Annual L Individual	Annual L Household
Individual	38272	153088
Household		11700
Household 3m		6500
		171288

Grey water and rainfall combined	Annual L
80% Greywater Annually Treated Household	119652
Annual Treated Greywater / Rainwater	285796
Annual Legally required water	3640

Water savings L
114508

CONSIDERING WATER RUSE THROUGH COMMON PRACTICES

Common practices on how to reduce potable water use integrated into the design

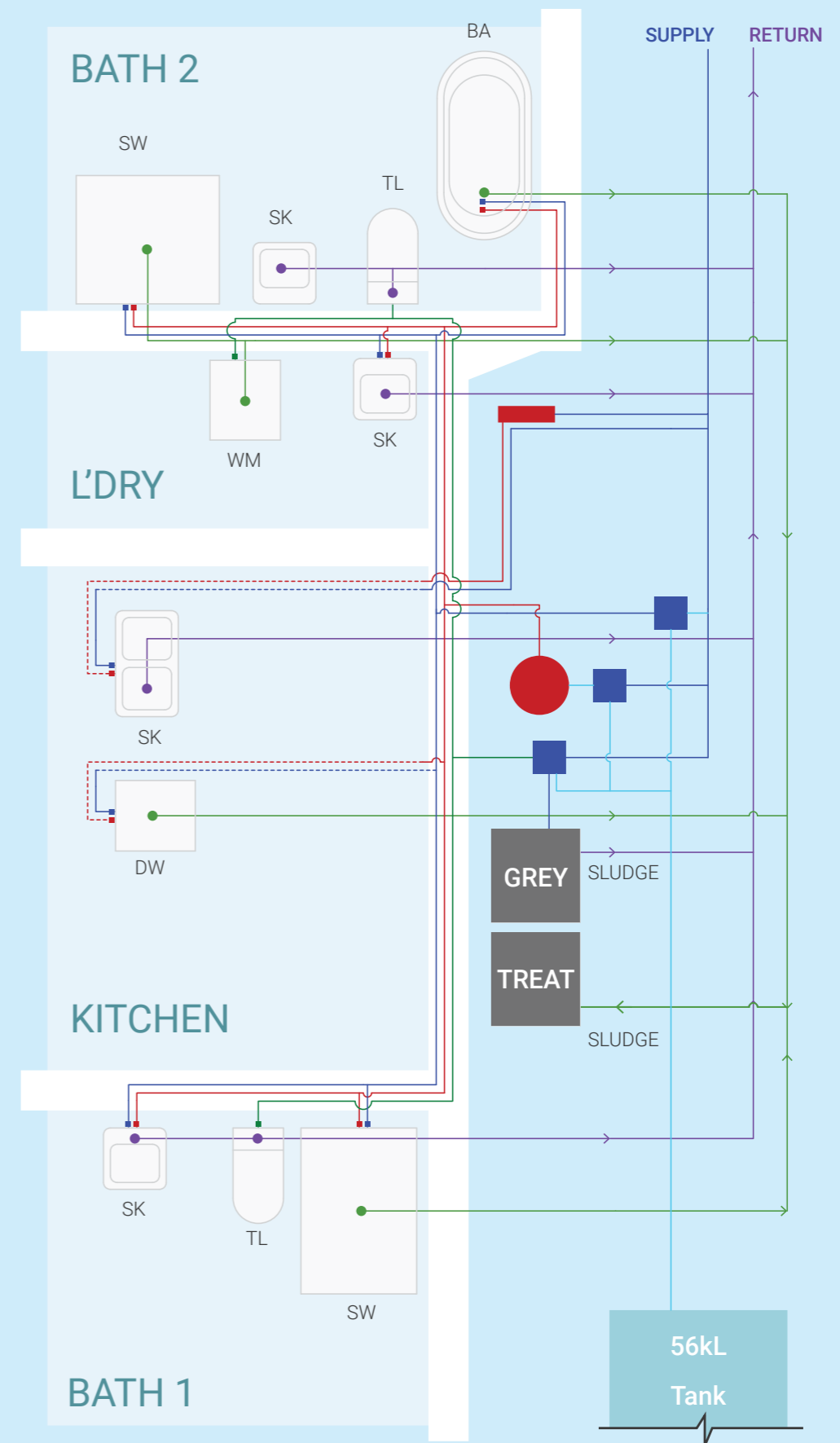
WATER CALCULATIONS

Household water usage was calculated from three factors: individual, household, and summer use. Tank, gutter size, and downpipe count were determined based on rainfall. Contributions from greywater and rainwater were subtracted from the annual water demand, reducing reliance on potable water. As required by the EPA, drinking water cannot be sourced from greywater treatment systems.

CONSIDERING WATER REUSE THROUGH GREY WATER

A greywater treatment system is integrated into the design to maximize water reuse. The system separates blackwater and greywater, supplying greywater for approved uses in accordance with EPA guidelines through dedicated hot and cold PEX pipes. It also incorporates rainwater and mains water, as greywater alone cannot meet the household's full demand. Diverters are strategically placed to prevent cross-contamination between the systems.

- | | | |
|---|--|---|
|  Hot water supply |  Greywater return |  Boiler |
|  Cold water supply |  Sewerage return |  Diverter |
|  Rainwater supply |  Pipes in slab | |

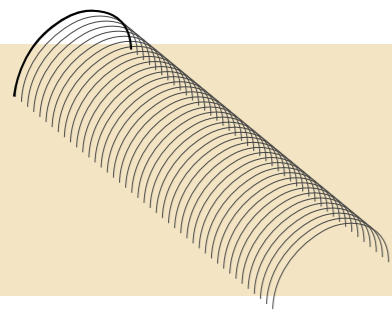
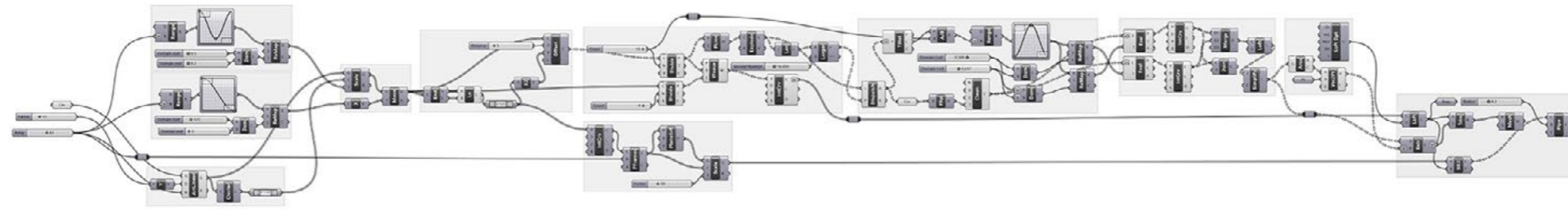




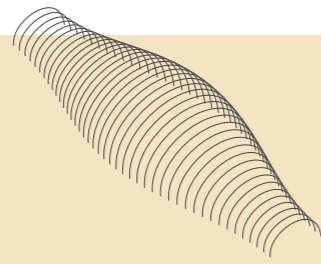
SMALLER SAMPLES



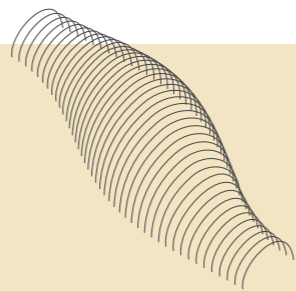
BEACH SHELL



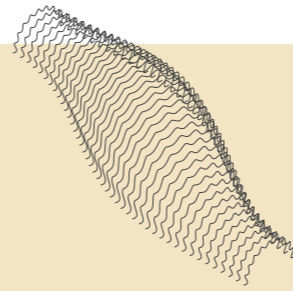
Curves were linear arrayed



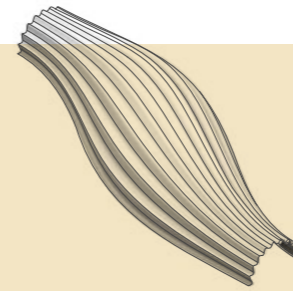
Curves were scaled from the curves inner midpoint, further scaled using a parabolic range



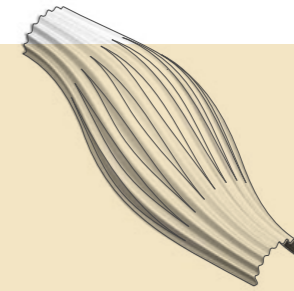
Curves were translated using parabolic range



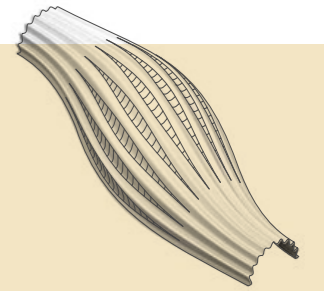
Points equally distributed along curve, points duplicated and offset, points weaved together



Lofting together



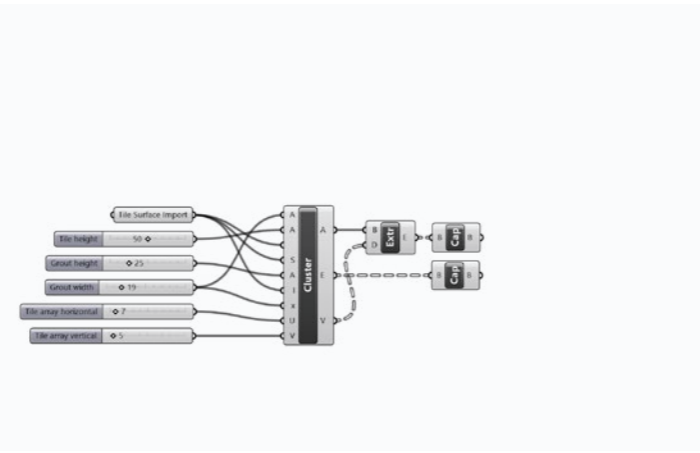
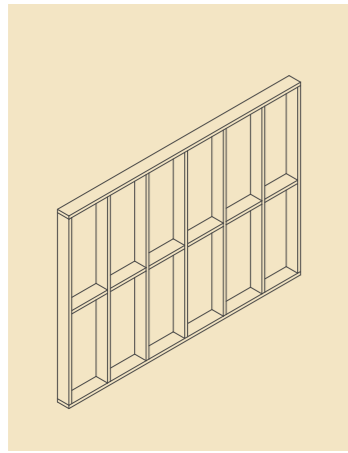
Evaluated points with limits were constructed with a parabolic range



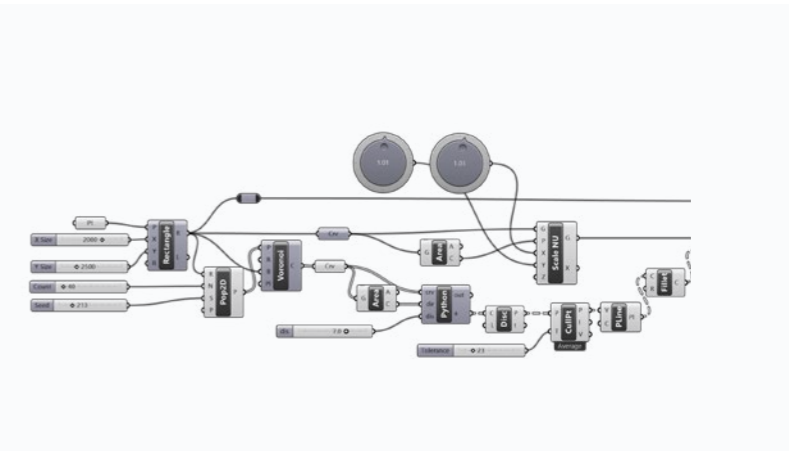
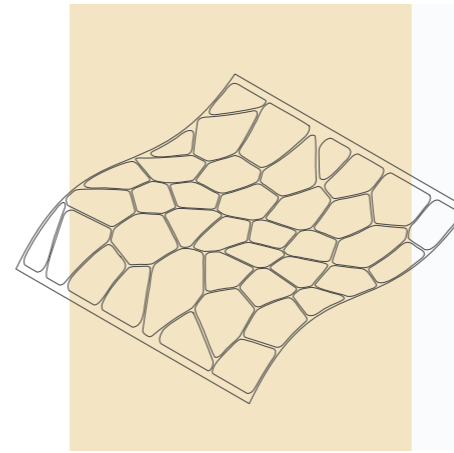
Piping and simplify along weaved curves



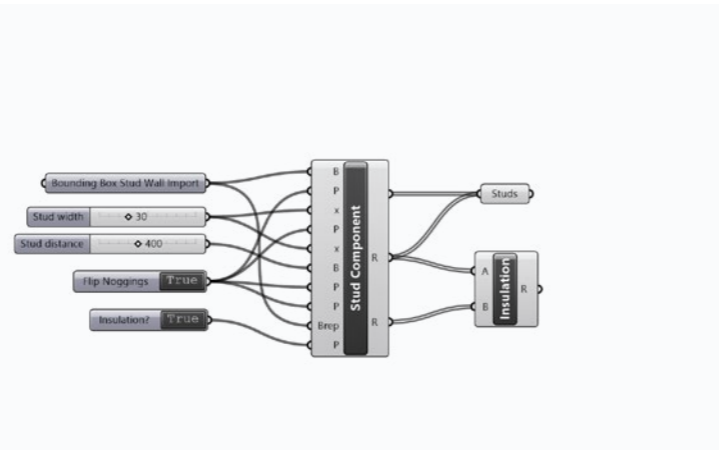
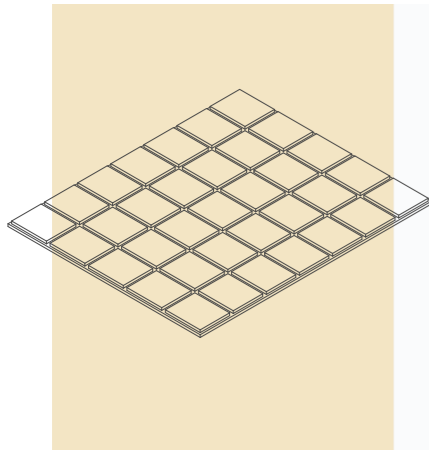
GRASSHOPPER USE



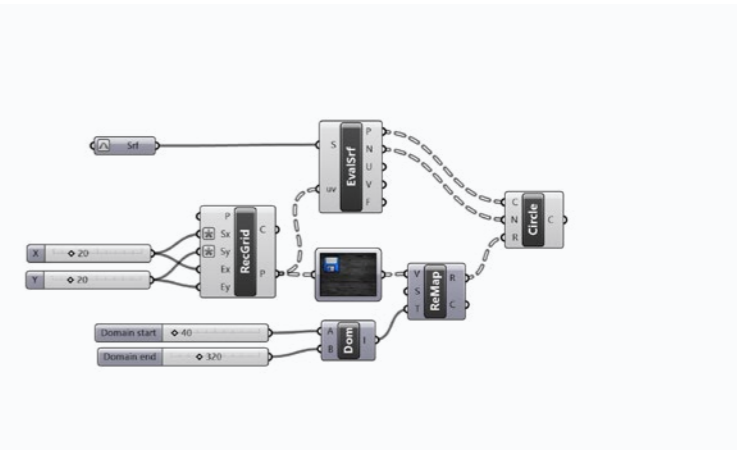
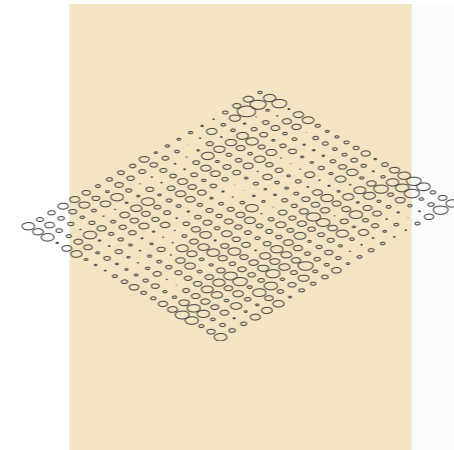
Grasshopper - Stud Wall Component



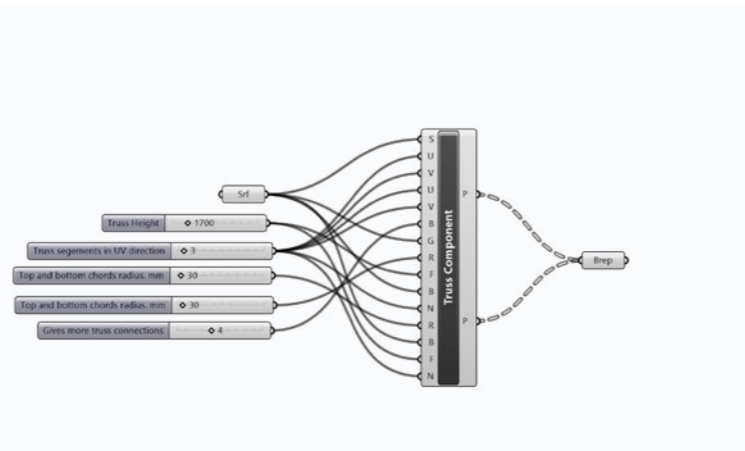
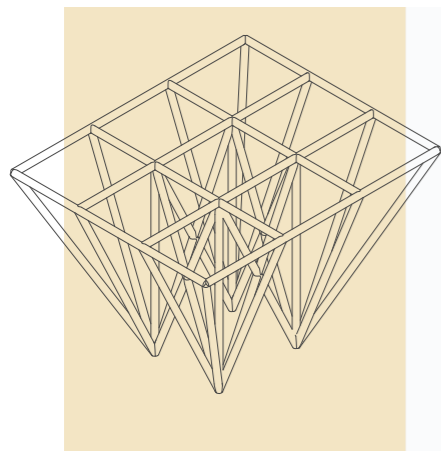
Grasshopper - Voronoi and smorph



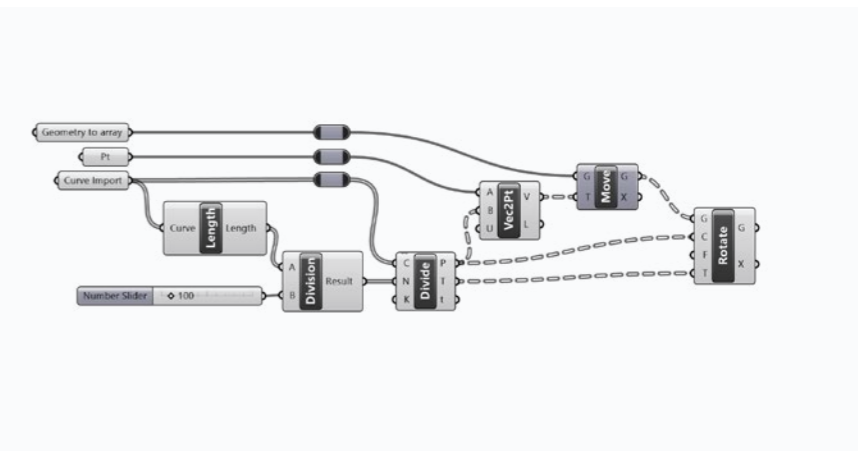
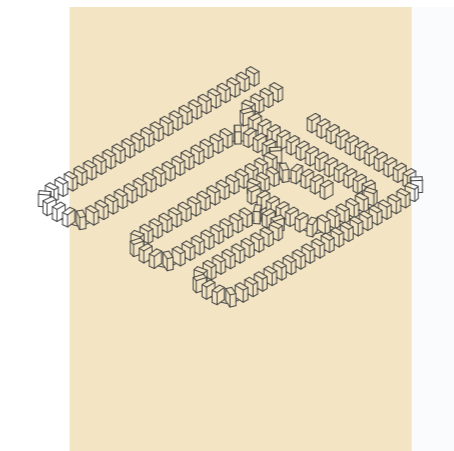
Grasshopper - Tile and grout Component



Grasshopper - Visual image definer

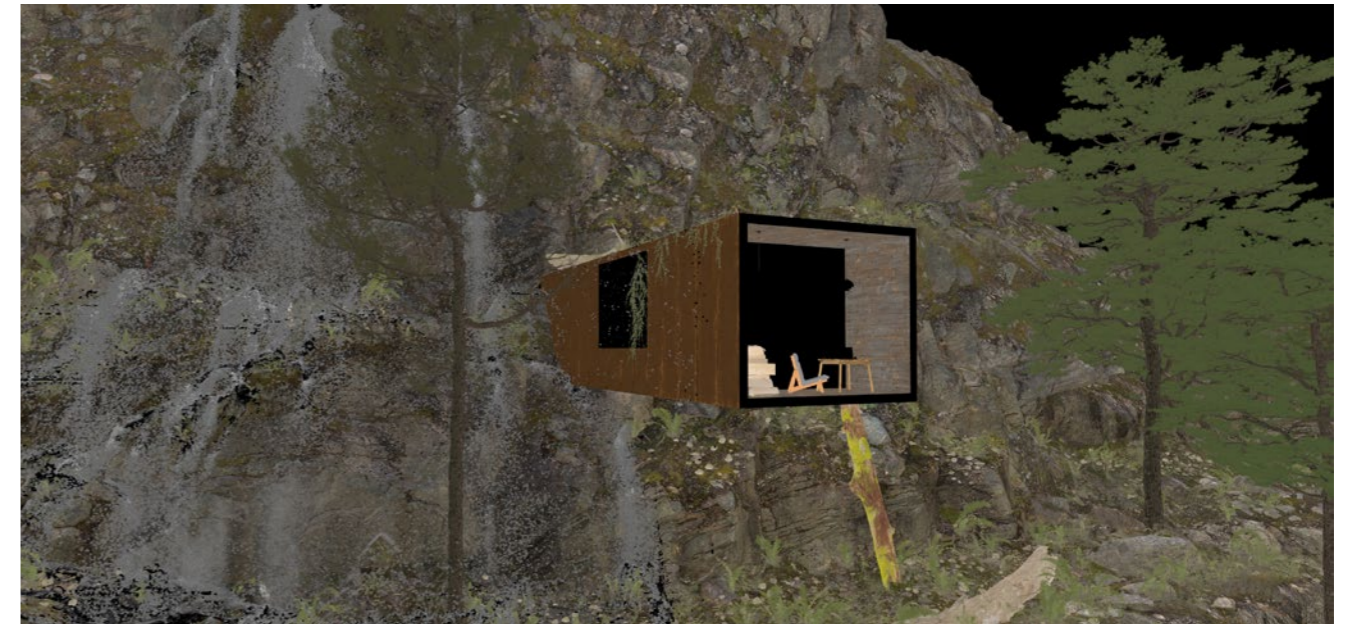
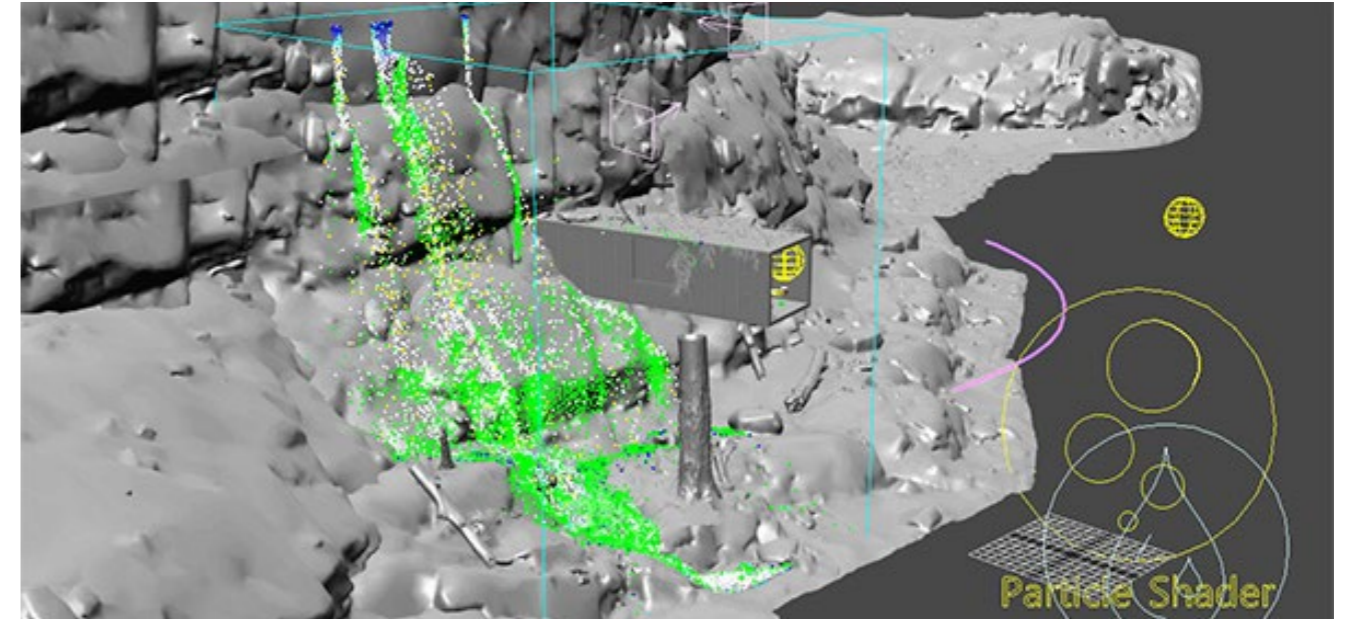


Grasshopper - Truss Component

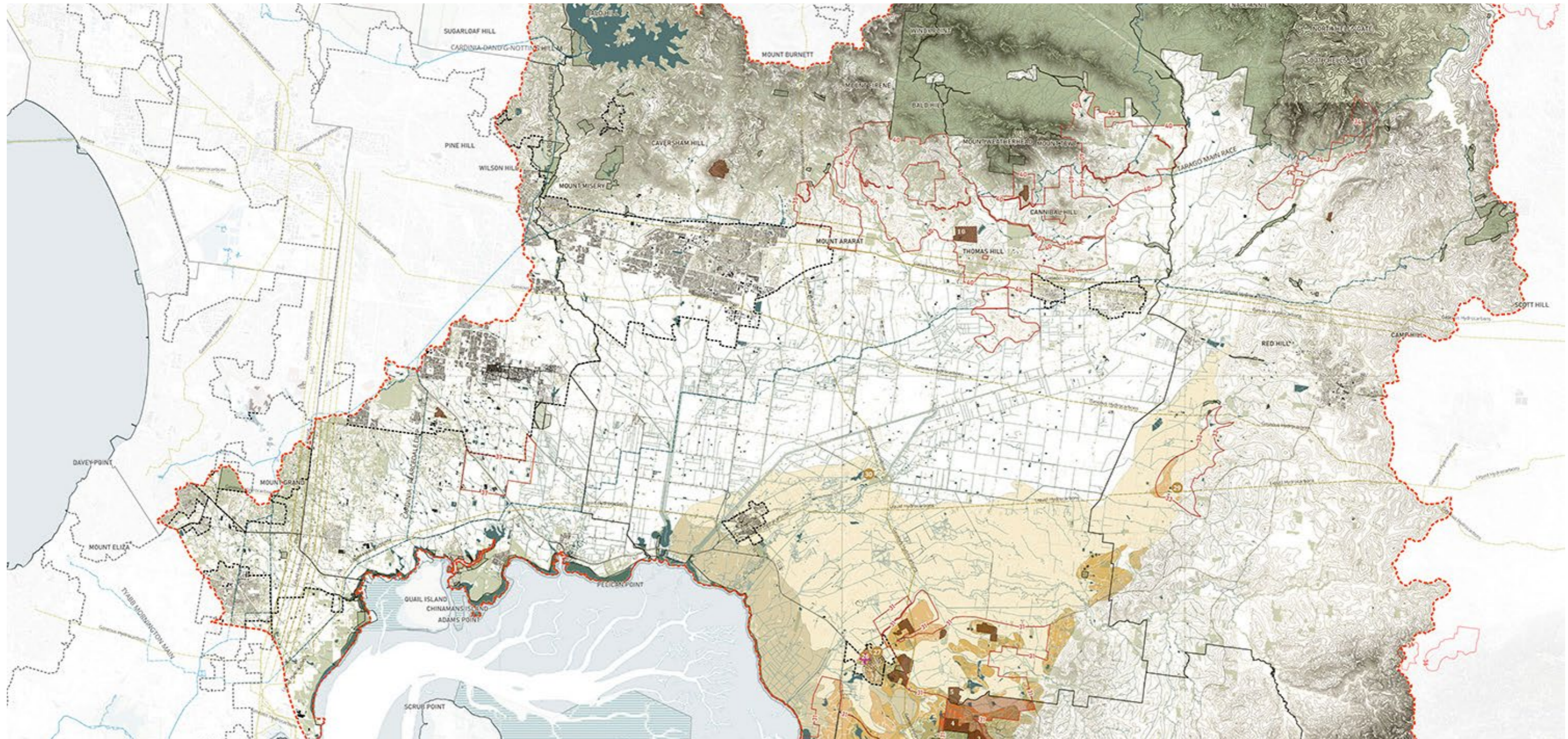


Grasshopper - Position BREP along curve

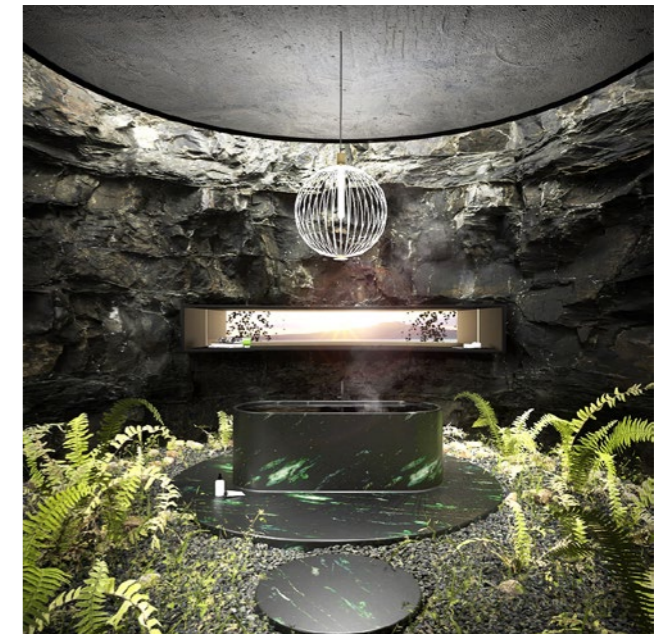
SIMULATIONS



Quarry Industry QGIS Mapping (SE Basin) (Individual work)



V-RAY RENDERS



PHOTOGRAPHY



THANK YOU