WILLIAM JAMES DOBIE ***13488786***

YEAR TWO PORTFOLIO SUBMISSION - UNIVERSITY OF LINCOLN

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SECTION**ONE**

ARCHITECTURALDESIGN

ARC2002M**BUTCHER**

IMAGE: MARKET SQUARE, LINCOLN

s i t e











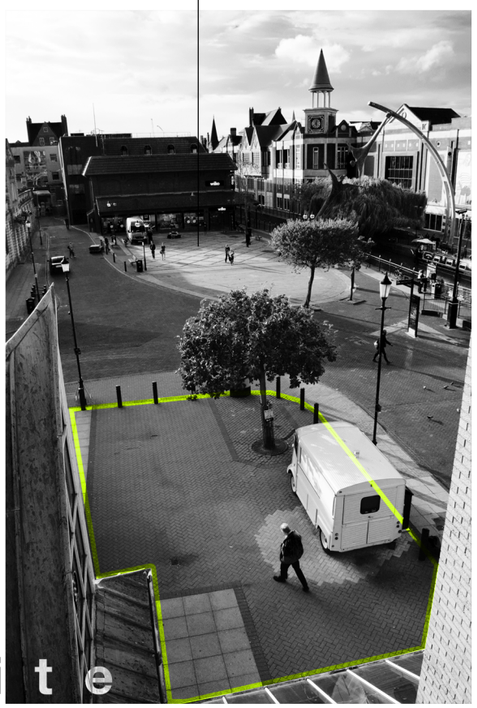
UNUSED/BROKEN LIFT SHAFT
COULD BE OF SOME USE

NATURAL OBSTRUCTIONS
MAY NEED TO CONSIODER KNOCKING DOWN

ENTRANCES TO NEARBY SHOPS
CANNOT BE USED AS A CORNER SITE

MARKET SQUARE
BRINGS IN GOOD BUSINESS,
BUT NOISY EARLY IN THE MORNING.



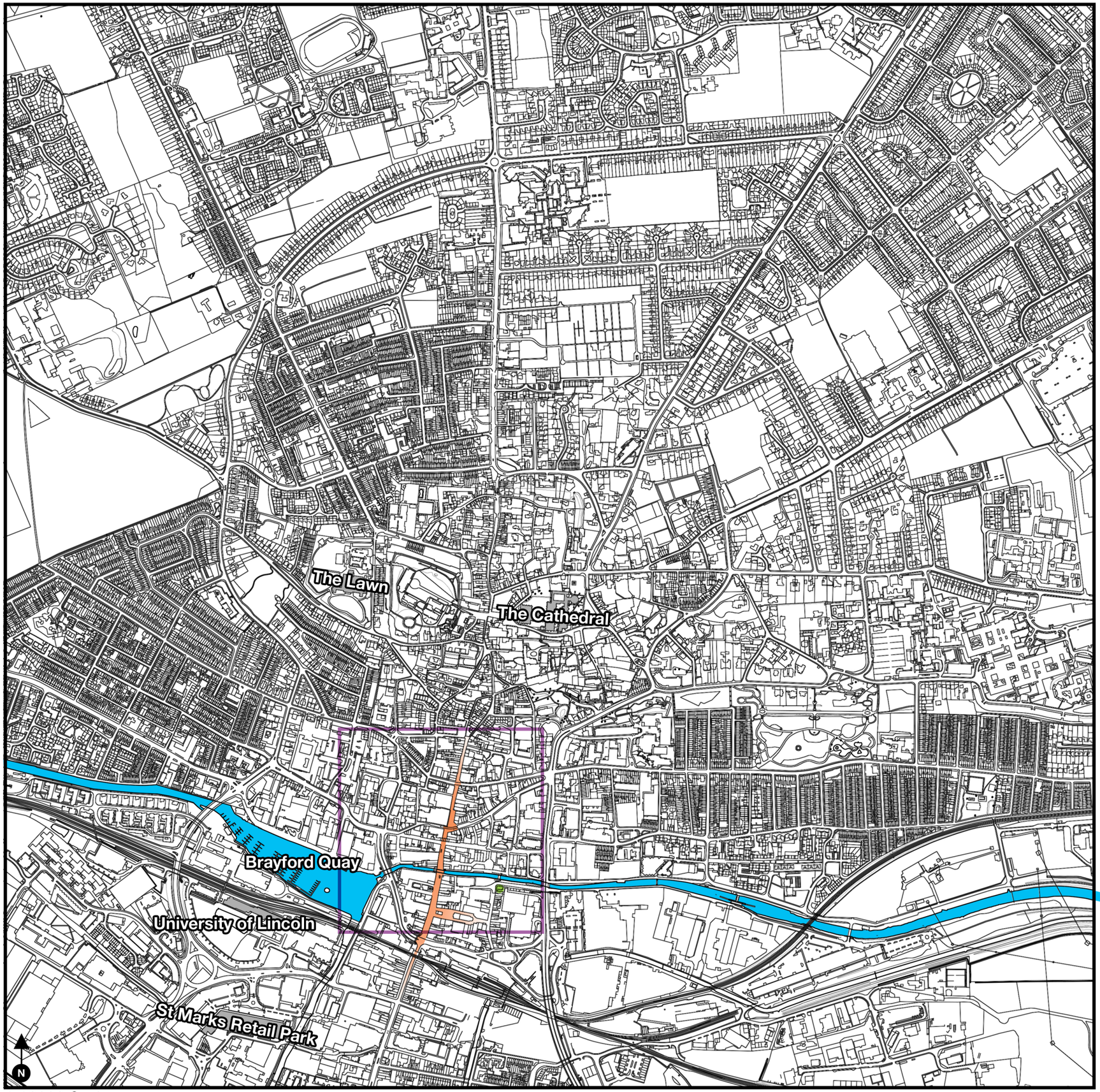


site

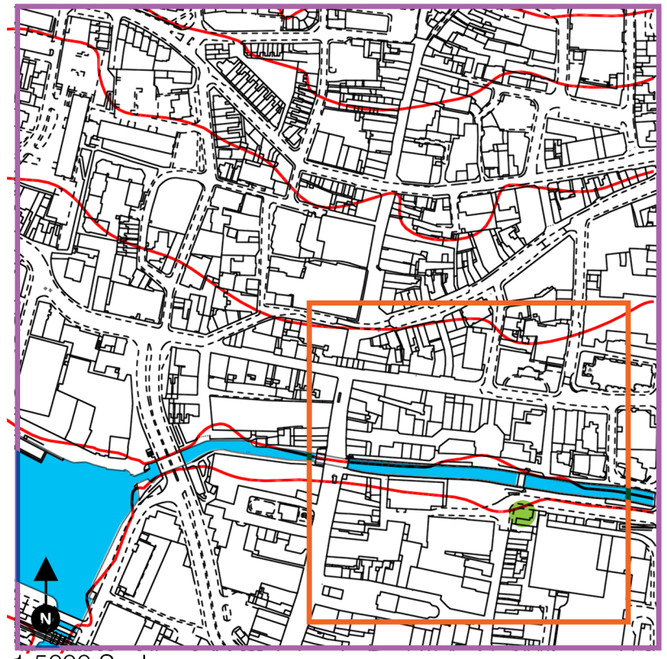
ARTIFICIAL OBSTRUCTIONS

QUIET ROAD
ONLY USED FOR DELIVERIES

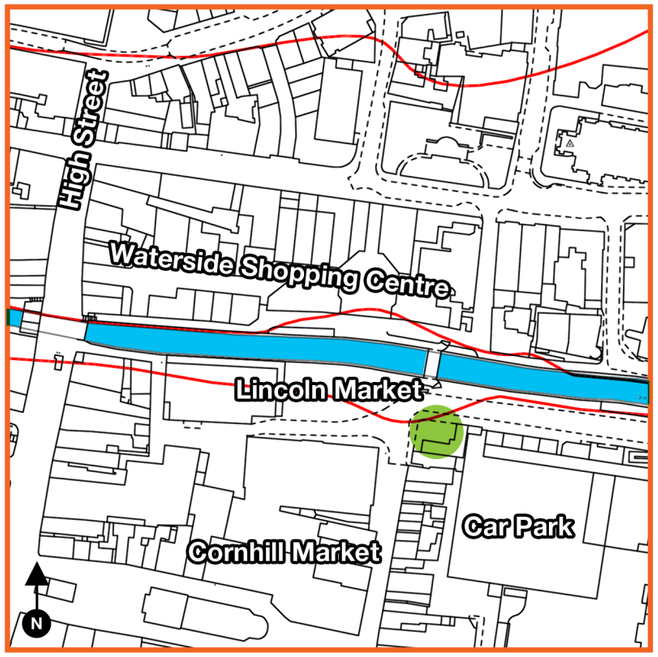
SITE IMAGES AND OBSERVATIONS



1:10000 Scale



1:5000 Scale



1:2500 Scale

Water

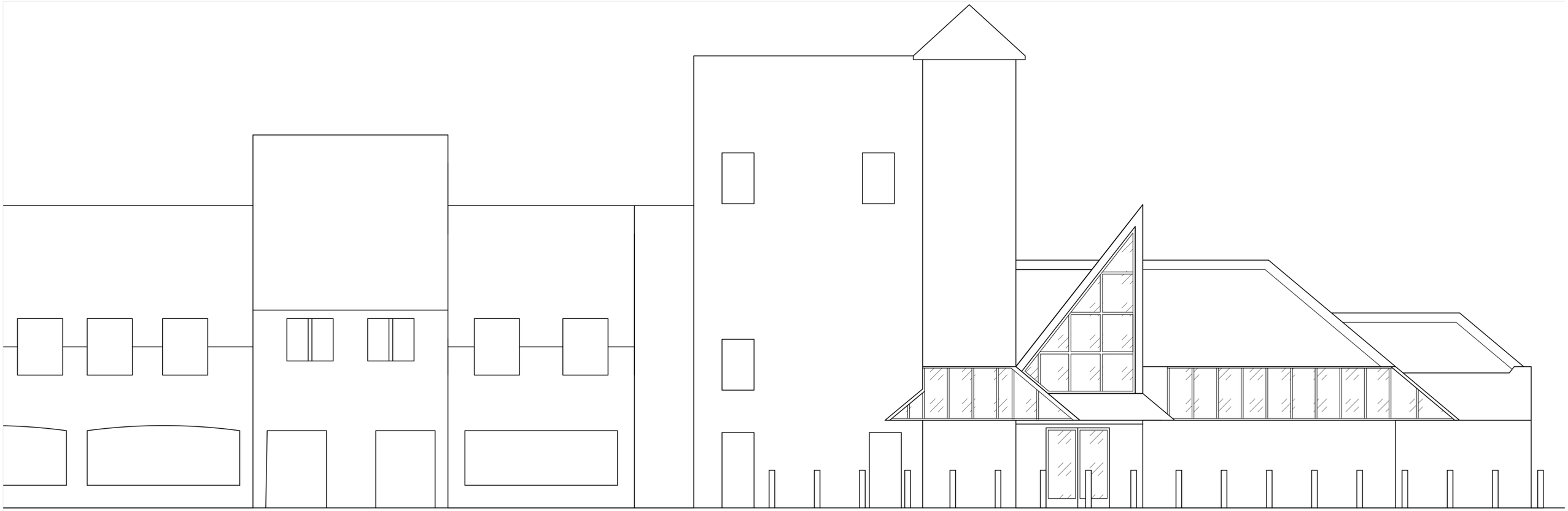
High Street

Site

Place of Interest

Land Contours

General land use around the area is commercial. There is a single residential property and a street of mixed use properties in the immediate area around the site.



NORTH ELEVATIOON [1:200]



EAST ELEVATION [1:200]

Via. Victoria Shopping Centre

Via. High St

Via High St.

Via North East of City

River Witham

Lincoln Central
Market Area

Via East of City

Via. Car Park

Car Park atop of Supermarket

Sinci St.

Via. South of High St.

N

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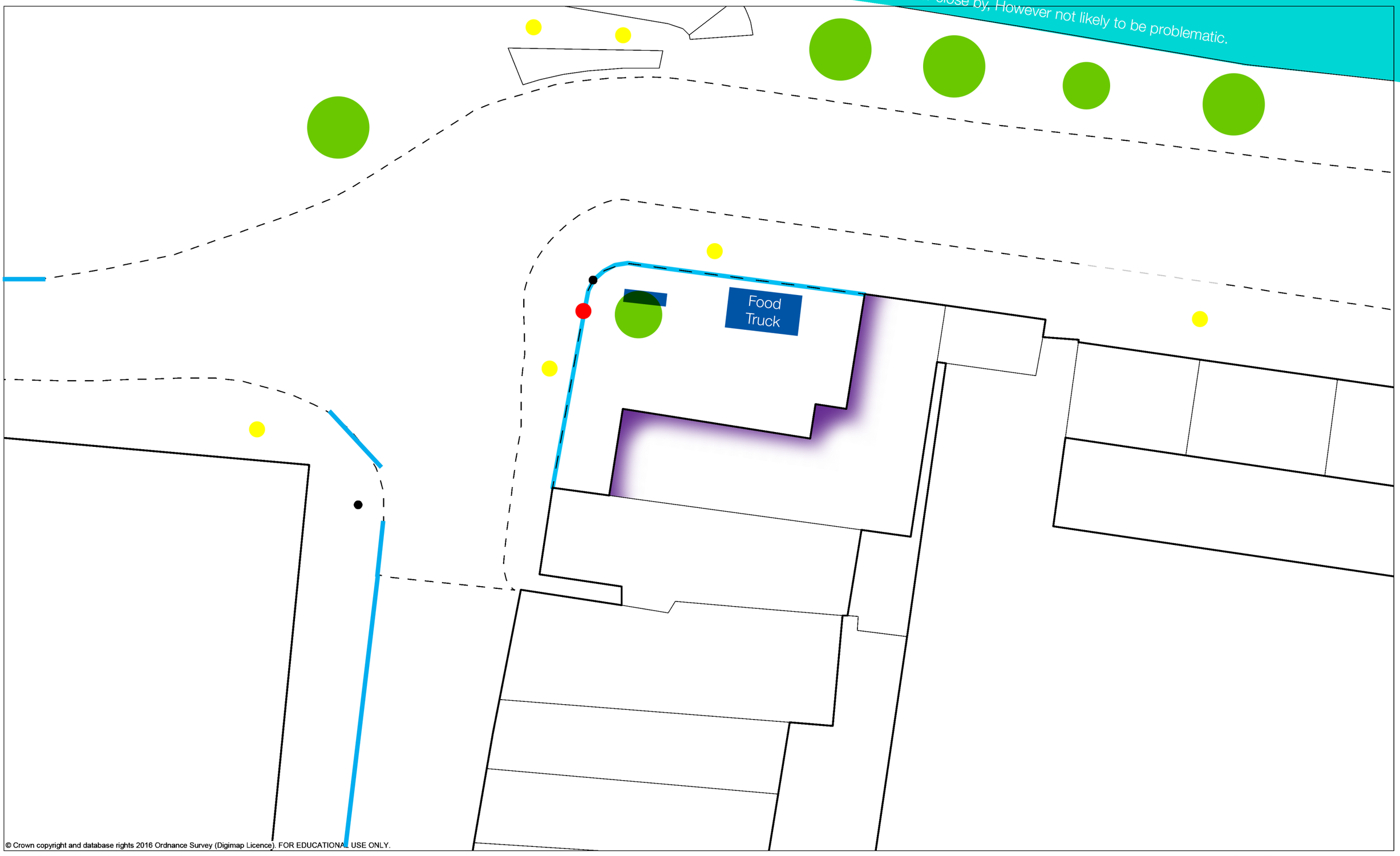
Commercial
Residential
Residential + Commercial
Other
River
Road
Footpath
Pedestrian Site Access
Ped/Vehicular Site Access
Pedestrian Circulation

Scale 1:500

0 5 10 15 20 25 30 35 40 45 50 m

Map showing residential and commercial properties, vehicular and pedestrian access

River close by, However not likely to be problematic.



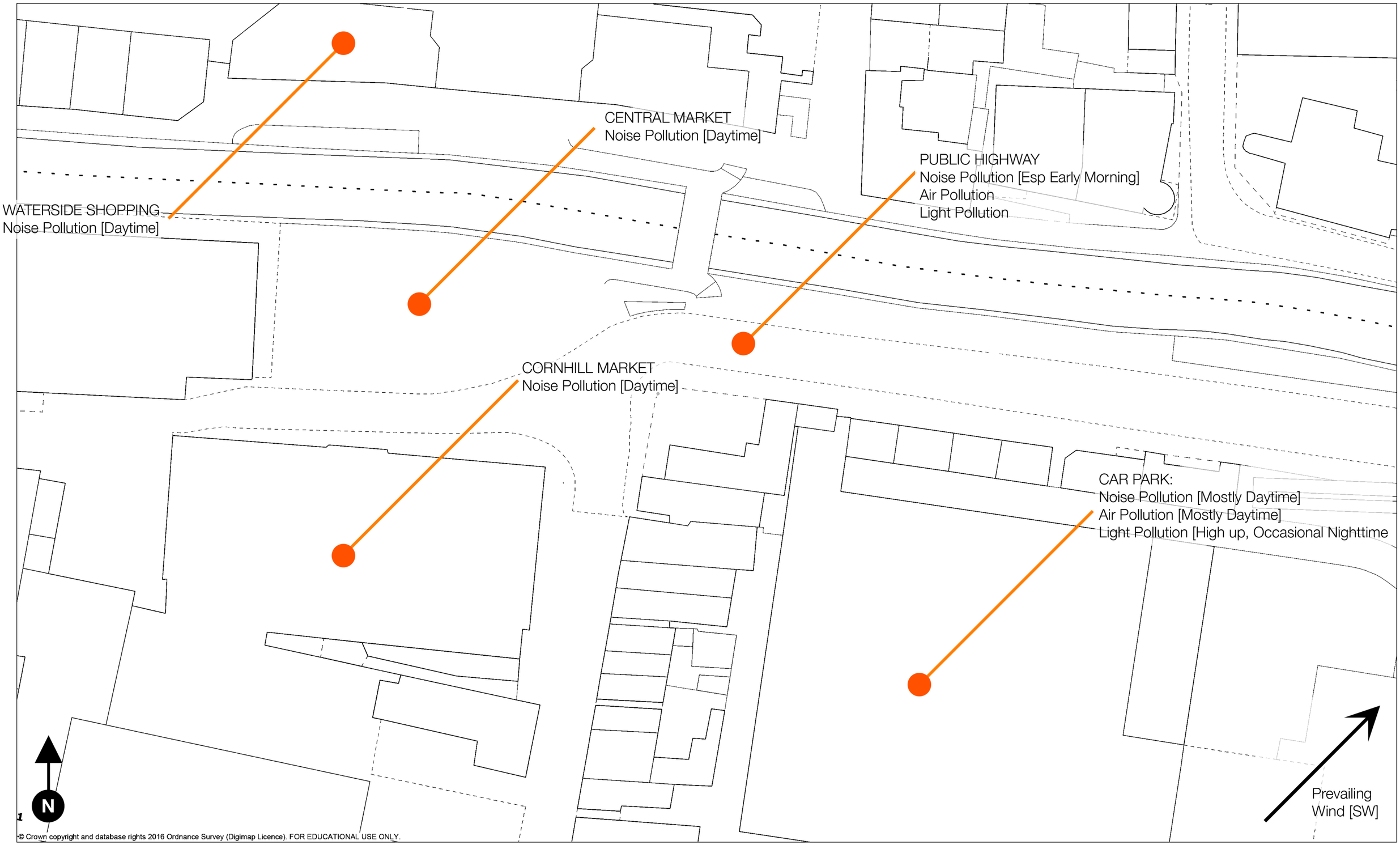
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Shop Entrances
Post Box
Lamp Post
Bollards
Tree
Fresh Water

Scale 1:200

0 2 4 6 8 10 12 14 16 18 20 m

Natural & Artificial Features around site

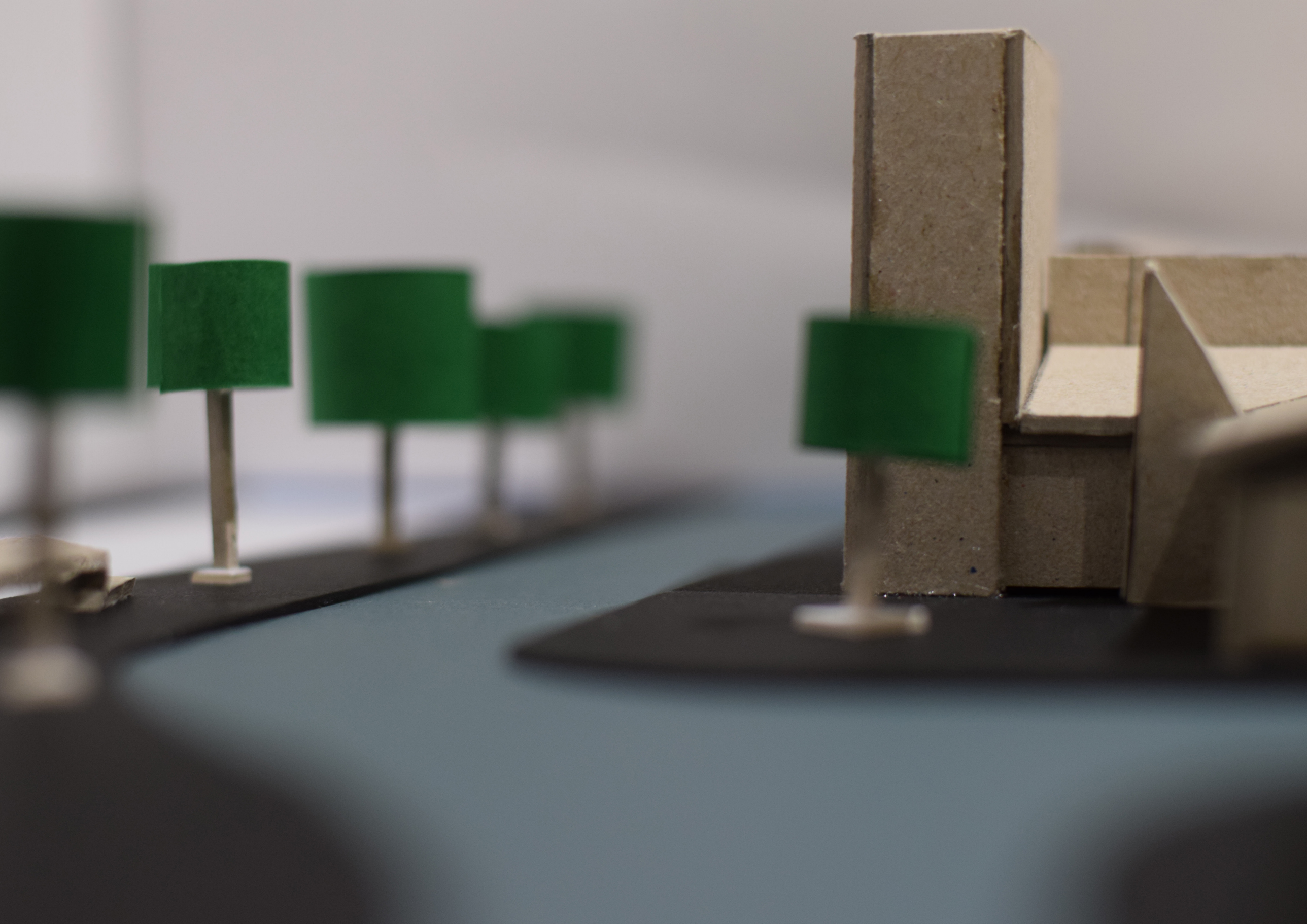


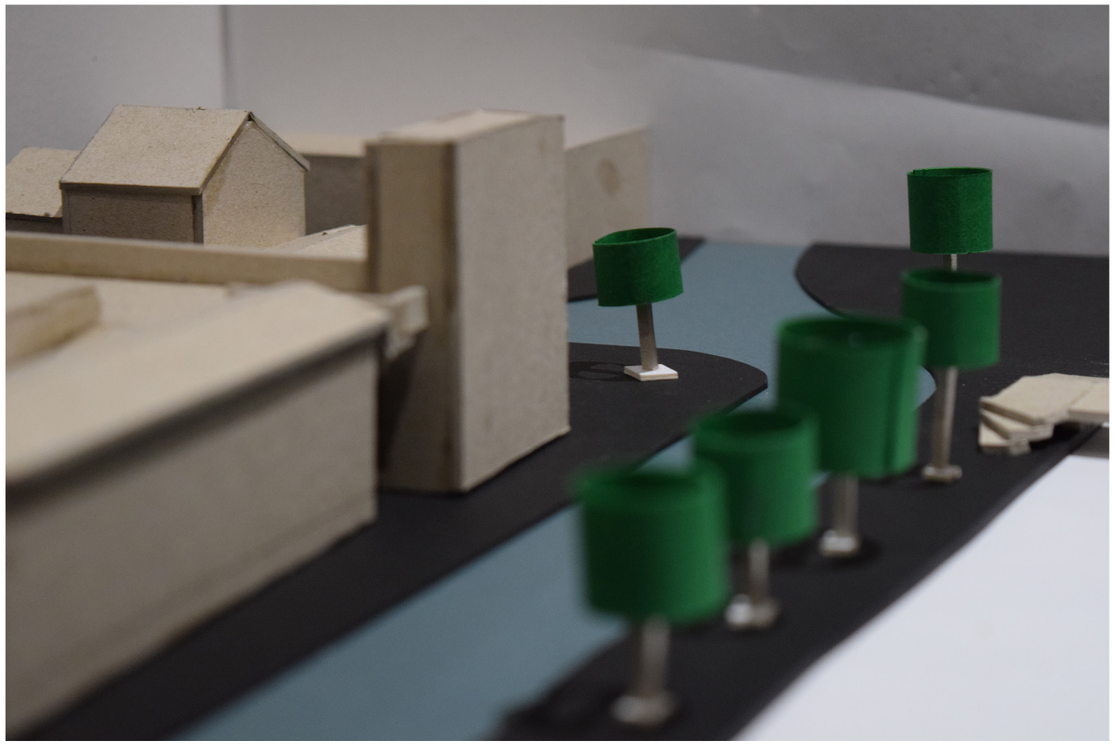
The site faces occassional Air and Noise pollution from the adjacent road on the North side. The market and surrounding shops will provide daytime bustle around the area.

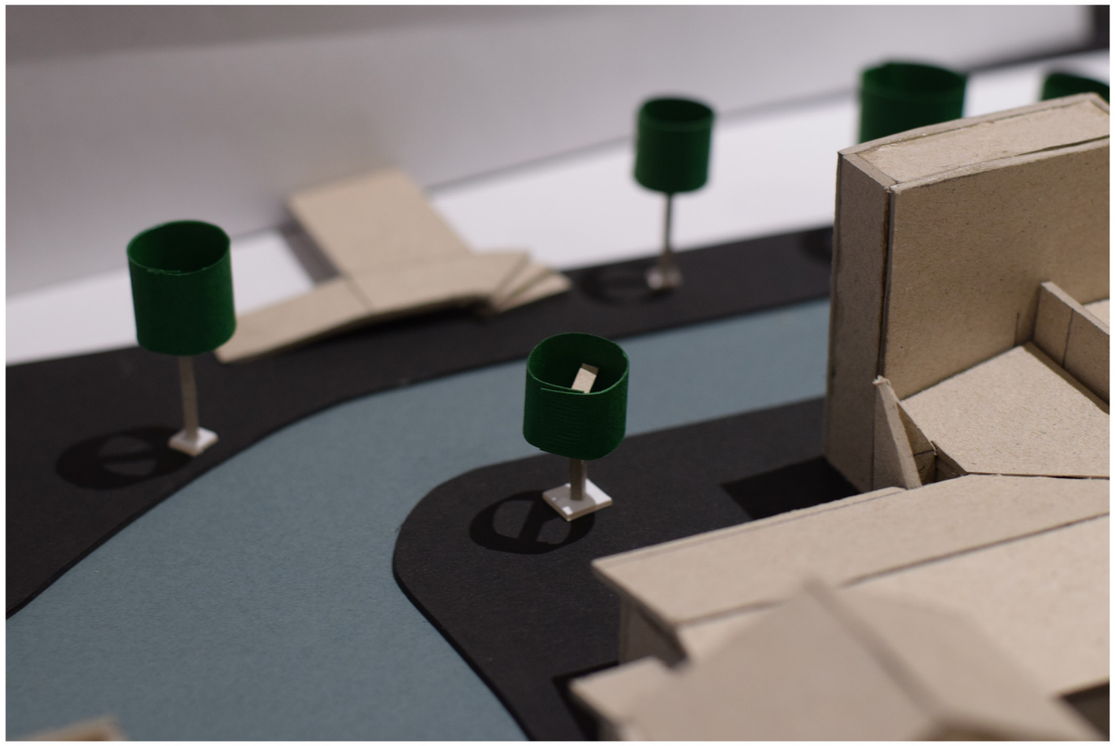
Scale 1:500

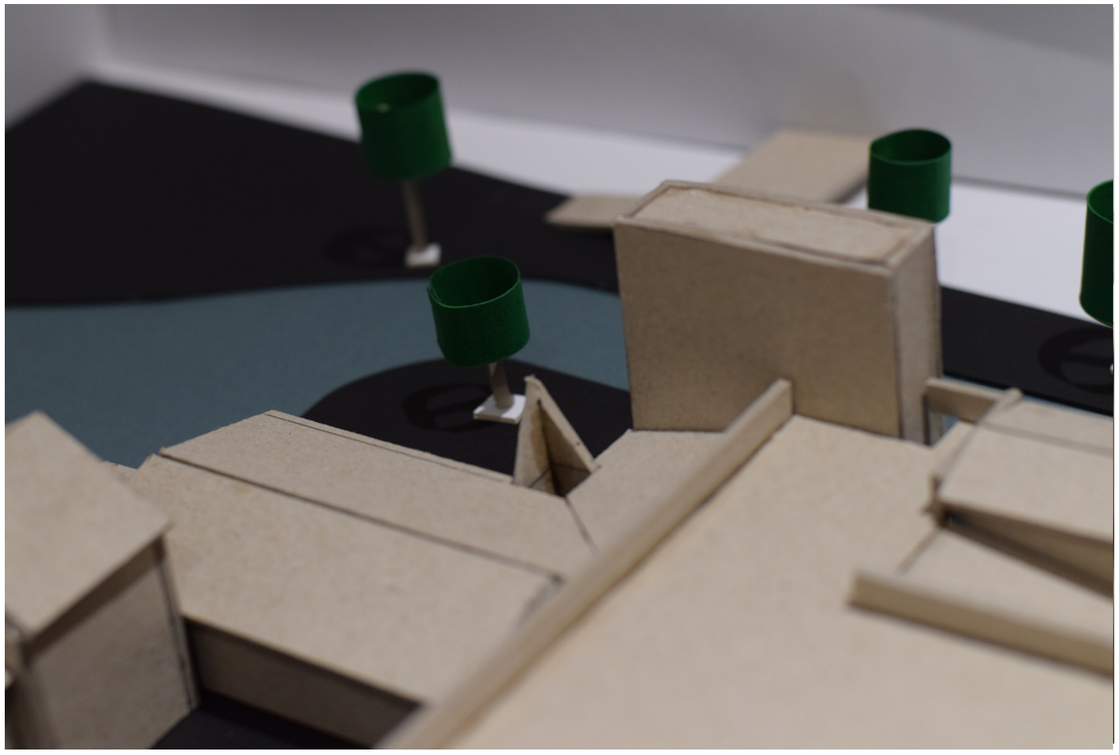
0 5 10 15 20 25 30 35 40 45 50 m

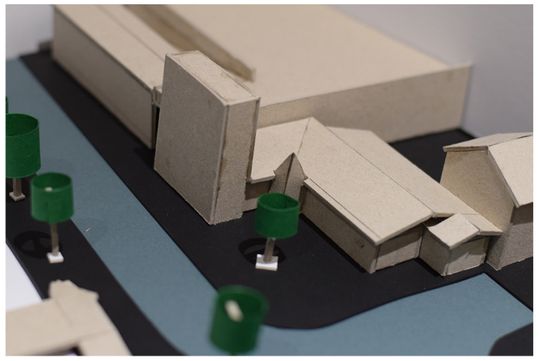
Sources of Pollution surrounding the Site

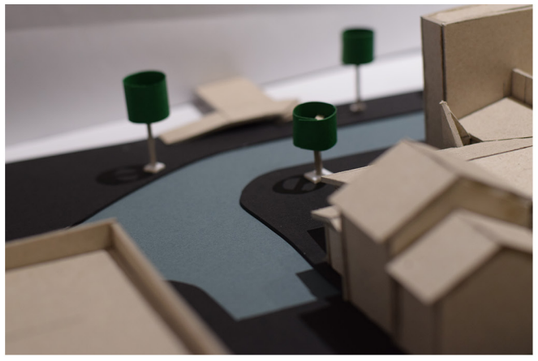


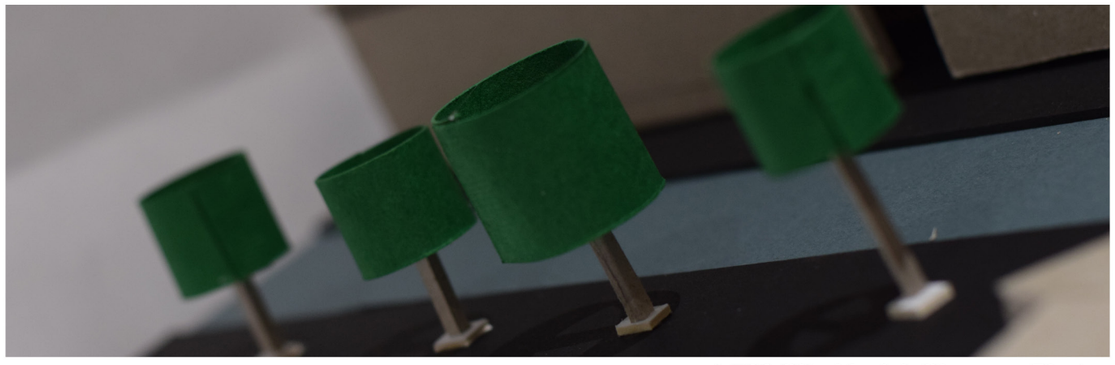




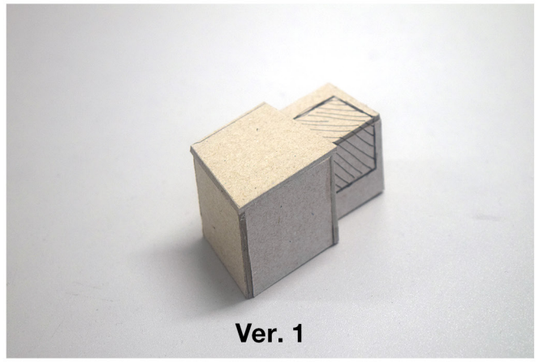




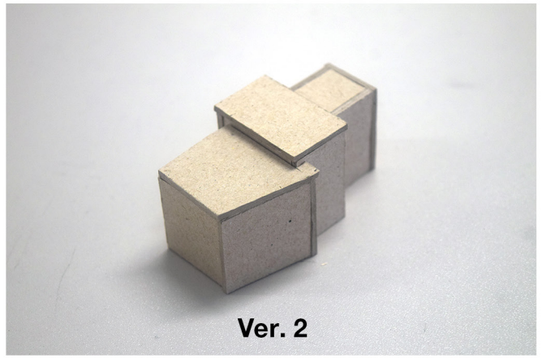




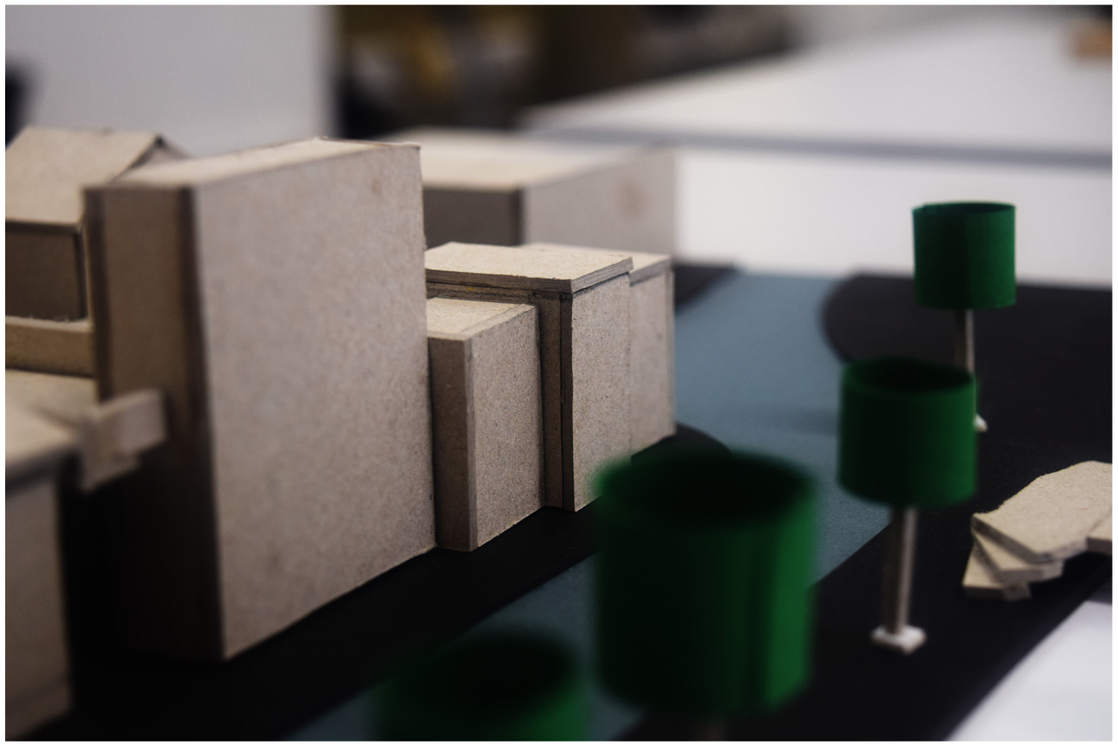
1:500 Site Model: Close up Photos



Ver. 1



Ver. 2









1:500 BLOCK MASSING MODEL

REQs:
Meat Hangers
Easy Access
Refrigerated

Meat Storage (36 Sq M)





Delivery

Meat Prep (30 Sq M)



REQs
Meat Grinder
Band Saw
Sausage Maker
Large Chopping Surfaces
Easy to Clean
Linear workflow



Sold to Customer

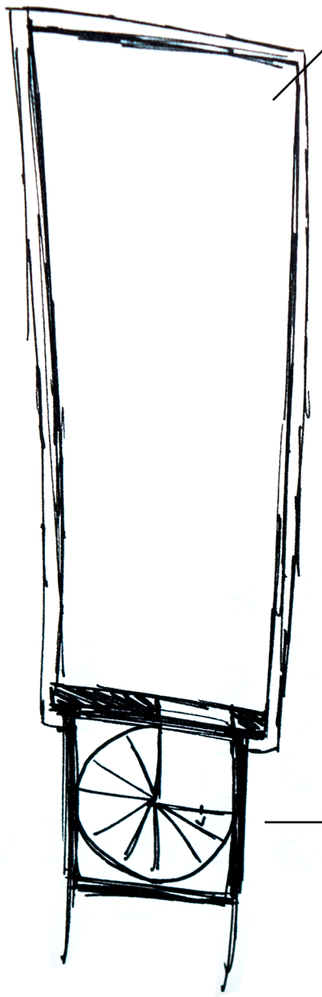
REQs:
Small Chopping Area
Countertop Space
Hand Sink

Sub Meat Prep



Retail Floor

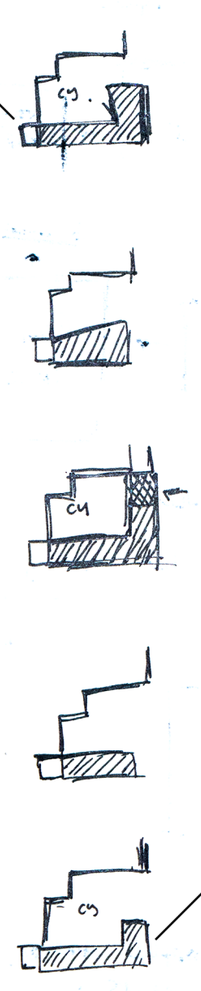
REQs:
Maximum Display Space
POS



BUTCHER FUNCTIONS
INSIDE SHAPE

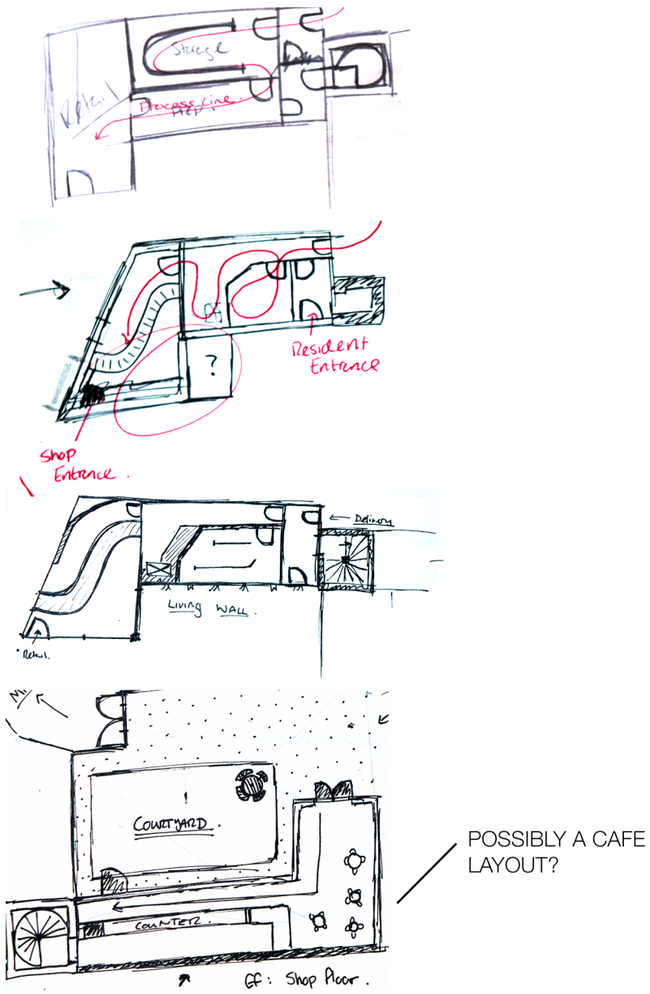
SPIRAL STAIRCASE
INSIDE OLD LIFT SHAFT
CARRIES THROUGH TO
FINAL DESIGN

INITITAL IDEA
REPURPOSE LIFT SHAFT
FOR SPIRAL STAIRCASE



L SHAPE IS THE
MOST PRACTICAL

FLOORPLAN
MASSING



POSSIBLY A CAFE
LAYOUT?

G FLOORPLAN IDEAS
PROCESS LINE
CONSIDERATION

FLOORPLAN DEVELOPMENT [1:50]

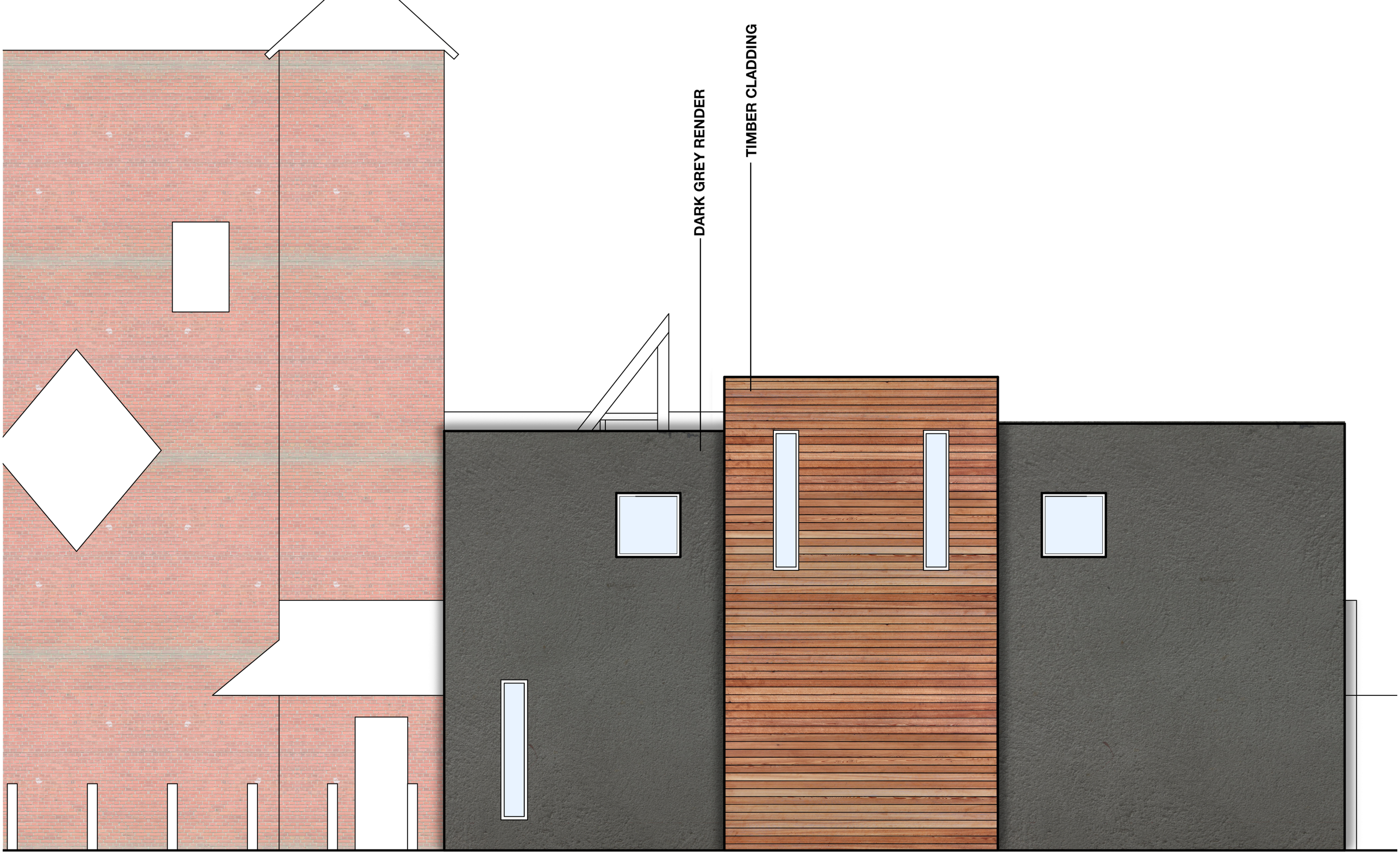


THE BUILDING USES THE EXISTING TOWER AS ITS STAIRWELL. THIS WAS TO CONSERVE SPACE ON THE LIMITED SIZE SITE. THE BUILDING CONSISTS OF THREE SECTIONS TO REPRESENT THE 3 STAGES OF PRODUCTION: STORAGE, PREPARATION AND SELLING

SOUTH ELEVATION W/ SECTION THROUGH TOWER [1:50]



EAST ELEVATION [1:50]



N

THE BUIDLING USES A TWO TONE MATERIAL SCHEME: DARK GREY RENDER AND TIMBER. THESE MATERIALS WERE CHOSEN TO CONTRAST WITH THE RED-BRICK STYLE BUILDINGS IN THE LOCAL AREA AND BRING IN A CONMTEMPORARY TOUCH.

NORTH ELEVATION [1:50]

REPOSITION MAILBOX
MOVE OFF PRIVATE LAND INTO PUBLIC SQUARE. FITS IN NICELY INTO LOCATION

ICE RINK / MARKETPLACE

REDUCED-WIDTH ROAD
TO ALLOW FOR EXTENDED PAVEMENT. REMOVES RANDOM CAR PARKING IN FAVOUR OF NEW PAVEMENT

NEW PAVEMENT
TO FIT THE PROPOSED BUILDING'S SHAPE

NEW BRICKS
FRESHEN UP WHIST STAYING FAITHFUL TO THE CURRENT LANDSCAPING: ALSO GOOD FOR DRAINAGE.

BENCH

NEW BOLLARDS
WHY: TO CLEAN UP THE AREA AND REPOSITION SLIGHTLY TO BETTER ACCOMODATE THE NEW BUILDING

CO-OP

CAR PARK

N

LANDSCAPING PLAN [1:100]

ROAD

NEW PAVEMENT

BEDROOM WINDOW
TO PROVIDE AN EXHILERATING EXPERIENCE WHEN WAKING UP
REMOTELY CLOSING BLINDS FOR LAZY DAYS

NEW PAVEMENT

ROOF DECK
RELAXATION SPACE, OFFERS VIEWS
TO THE NORTH AND SOUTH

SHOWER SKYLIGHT
LIGHT CAN FLOOD INTO THE BATHROOM WHILST MAINTAINING
PRIVACY. JUST THE ACT OF SHOWRING CAN BECOME AN EXPERIENCE.

CLOSET WINDOW
SO YOU CAN SEE YOUR CLOTHES, OBVIOUSLY

ADJACENT
BUILDING

N

ROOF THINKING
SKYLIGHTS ARE PLACED STRATEGICALLY AND USED AS A FEATURE IN THIS PROJECT.

ROOF PLAN: DECK AND SKYLIGHTS [1:50]
SECTION CUT THROUGH TOWER

ROAD

NEW PAVEMENT

NEW PAVEMENT

MEAT GRINDER

MEAT PREP

BAND SAW

SHOP FRONT

CHILLER

ENTRANCE HALL

STAFF COSY

WC

PARTITION DOOR
TO DIVIDE BETWEEN RESIDENTIAL & COMMERCIAL SPACES

DUAL ENTRANCES
ENABLES BUSINESS TO NOT INTERFERE WITH LESUIRE

TOILET
IN BUILT SINK TO SAVE SPACE

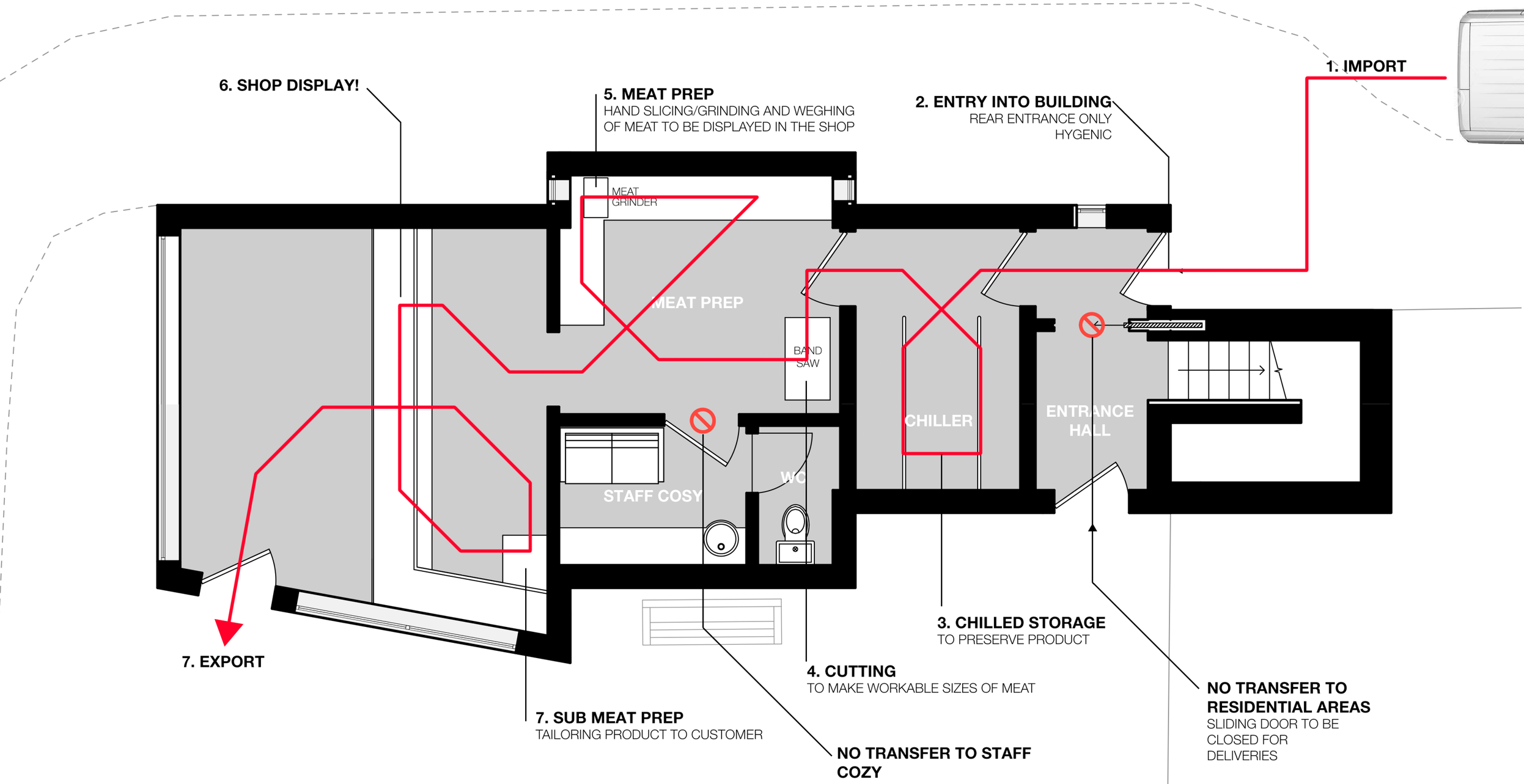
LARGE WINDOWS
TO SELL SELL SELL!

ADJACENT BUILDING

N

GROUND FLOOR THINKING
IT IS IMPORTANT TO DIFFERENTIATE BUISNESS FROM LESUIRE IN A SPACE LIKE THIS. THEREFORE A SINGLE ENTRANCE ROOM WITH TWO DOORS IN/OUT AND A SEPARATING PARTITION WAS DESIGNED TO ALLOW THIS.

GROUND FLOOR PLAN: COMMERCIAL [1:50]

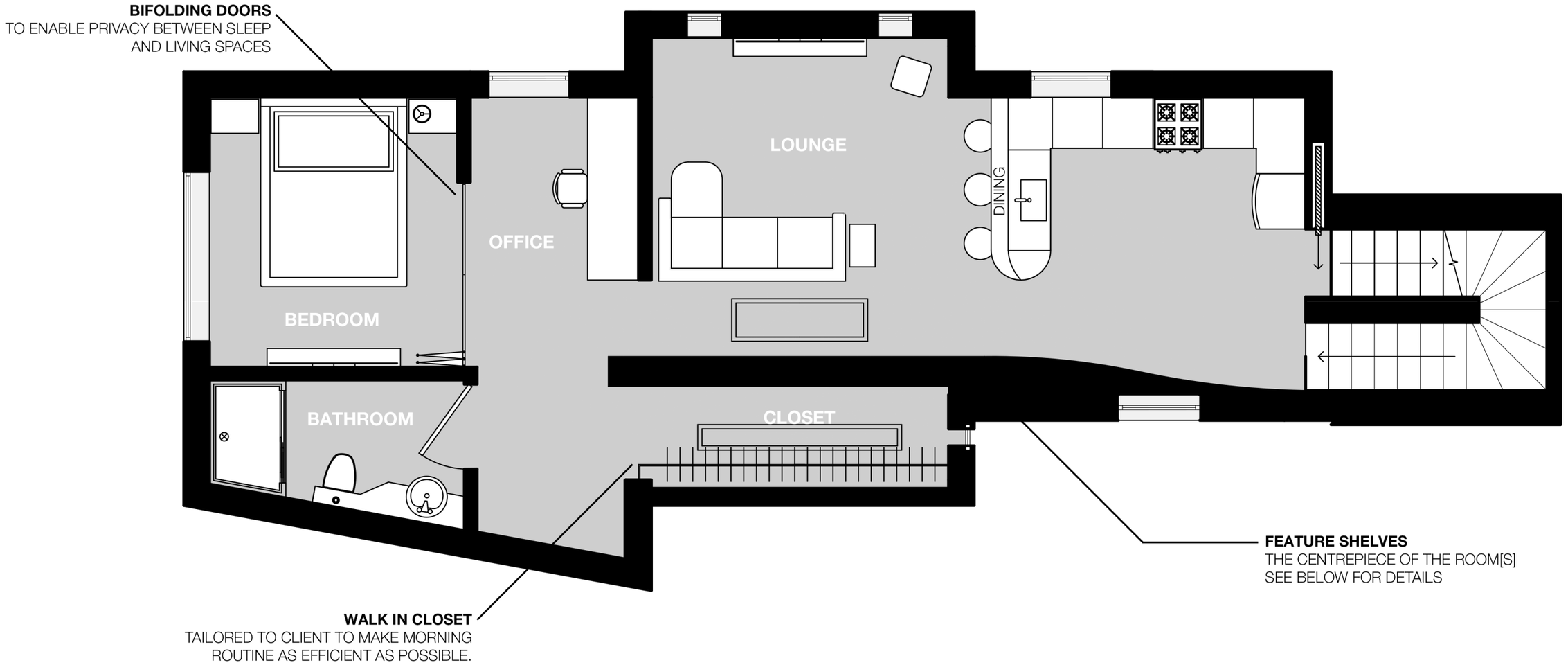


N

MEAT PROCESS IN PLAN

THE GROUND FLOOR SPACE IS DESIGNED TO EFFICIENTLY DELIVER, STORE, PREP AND SELL THE PRODUCT. THIS PAGE ILLUSTRATGES HOW IT DOES THIS

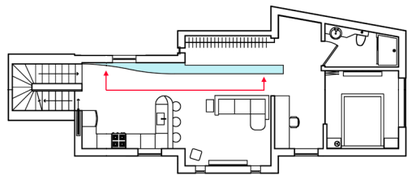
PROCESS DIAGRAM ON GROUND FLOORPLAN [1:50]



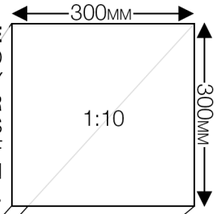
FIRST FLOOR THINKING

THE CLIENT WAS VERY FOCUSED ON ROUTINE. AS SUCH THIS PLAN WAS DESIGNED TO MAKE MORNING ROUTINE AS EASY AS POSSIBLE.
BED -> BATHROOM -> CLOSET -> LOUNGE -> KITCHEN -> DOWNSTAIRS. FROM SLEEP TO SUCCESS IN SECONDS.

FIRST FLOOR PLAN: RESIDENTIAL [1:100]

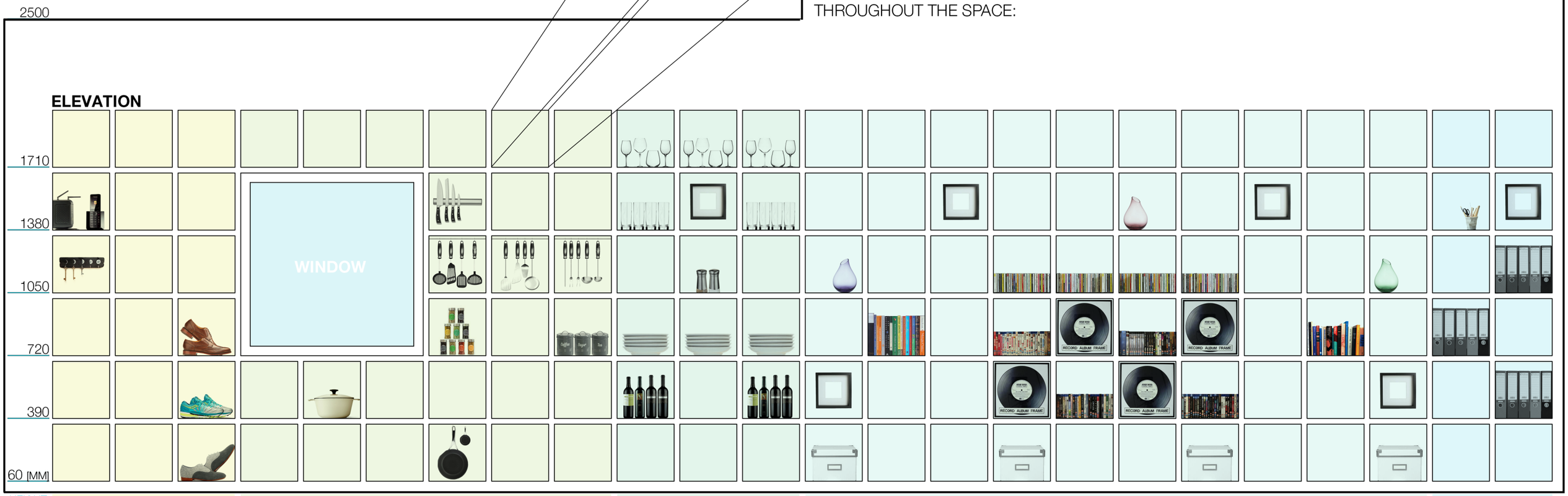


COMPARTMENT SIZE
COMPARTMENTS WERE DESIGNEDTO BE 300MM X 300MM TO FIT EVERY APPLICATION PERFECT SIZE FOR VINYLS, GLASSES, BOOKS, SHOES AND MUCH MORE. THE DEPTH OF EACH COMPARTMENT IS SHOWN IN PLAN BELOW.



SHELF THINKING
THE SHELF SPANS THROUGH THE ENTIRE LIVING SPACE FROM THE ENTRANCE, THROUGH THE KITCHEN, PAST THE DINING AREA AND CONCLUDING IN THE LOUNGE. IT IS THE CENTER OF THE PLAN, AND IS DESIGNED TO BE HIGHLY FUNCTIONAL: CARRYING WHATEVER THE CURRENT FUNCTION REQUIRES AS YOU MOVE ALONG. THE SHELF IS DESIGNED TO BE FILLED WITH THINGS; ORGANISED CHAOS DEVELOPS ITS OWN AESTHETIC. BELOW ARE EXAMPLES OF HOW THE SHELF CAN BE USED THROUGHOUT THE SPACE:

ELEVATION



ENTRANCE
SHOES
KEYS
BROADBAND HUB
PHONE BASE
MAIL

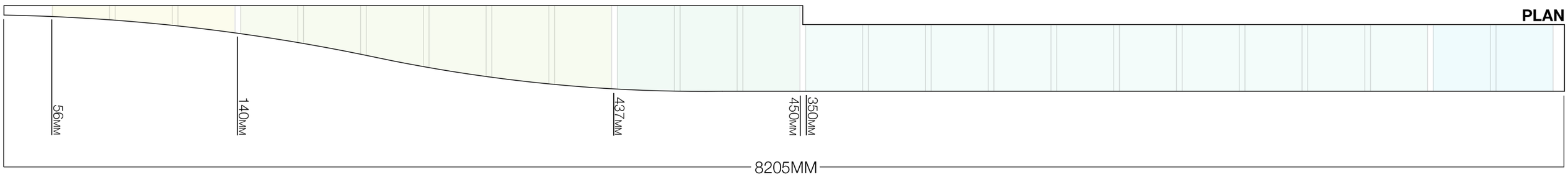
KITCHEN
HERBS & SPICES
INGREDIENTS
POTS & PANS
CROCKERY
COOKBOOKS

DINING
DINNER PLATES
DRINKING GLASSES
WINE
WINE GLASSES
NAPKINS
PHOTO FRAMES

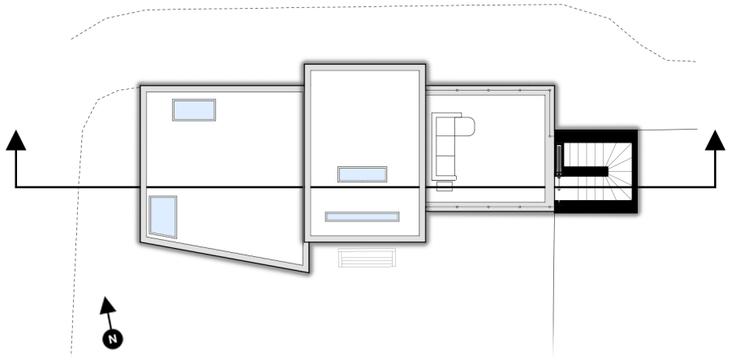
LOUNGE
BOOKS
MAGAZINES
DVDS/BLURAYS
CDS/VINYLS
PHOTO FRAMES
VASES
DECORATIONS

OFFICE
FILES
PAPERWORK
PHOTO FRAMES

PLAN



SHELF DETAIL [1:20]



NORTH SECTION 1:50

SECTION LINE SHOWN TO LEFT

LIFT SHAFT CONVERSION

ENTRANCE HALLL

KITCKEN AREA

ROOF TERRACE

DINING COUNTER

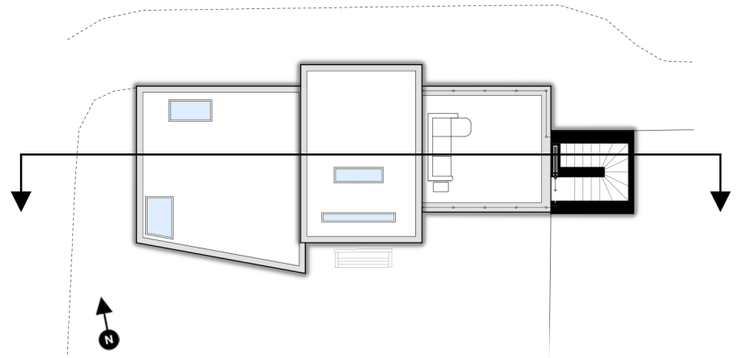
PREP AREA

LOUNMGE AREA

STUDY AREA

SHOP

SHOP



SOUTH SECTION 1:50

SECTION LINE SHOWN TO LEFT

STAIRWELL SHAFT

RESIDENTIAL ENTRANCE

KITCHEN AREA

CHILLER

PREP ROOM

LIVING ROOM AREA

FEATURE SHELF
DETAILS TO FOLLOW

BEDROOM

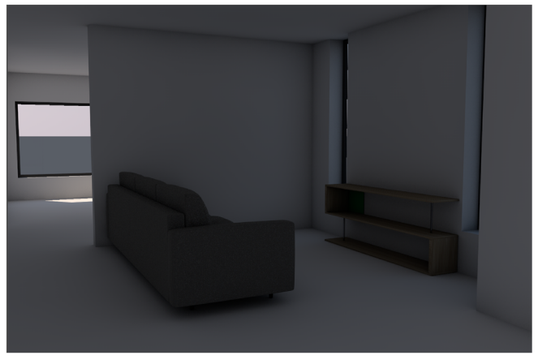
SHOP


WESTERN UNION
MONEY TRANSFER
Martin
YT02 DWW

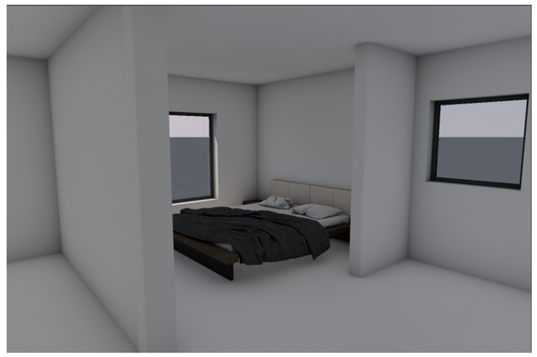



FOG
BIGECHO

MAXON
CINEMA4D



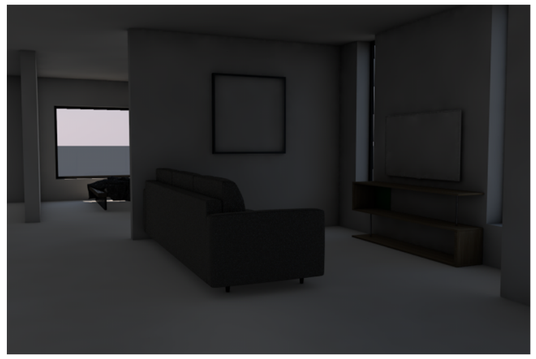
BEGINNING MODEL



ADD BACKROUND DETAIL



...



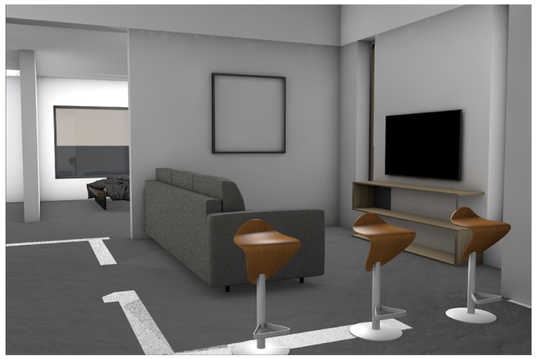
ADD TV & UNIT



INITIAL LIGHTING



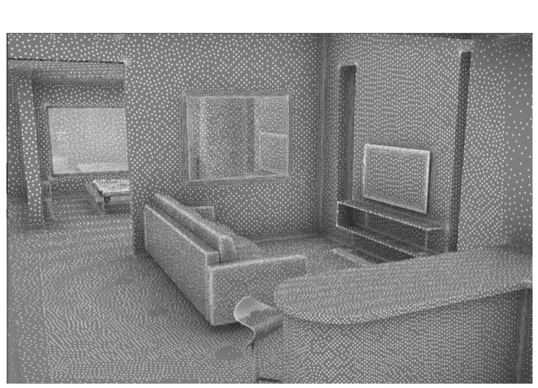
ADD BARSTOOLS



ADD CARPET TEXTURE



ADD KITCHEN COUNTER



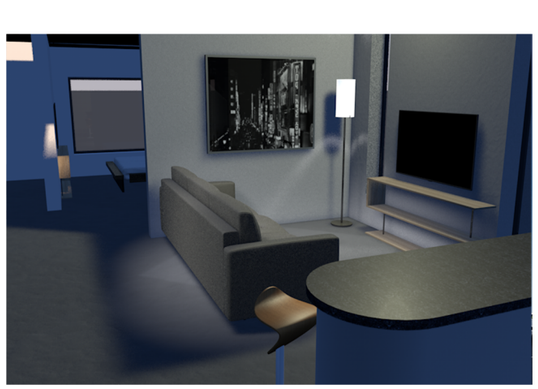
GLOBAL ILLUMINATION RENDERING



ADD GRASS



ADD LAMP LIGHT



COMBINE LAMP AND OUTSIDE LIGHT

Ps
ADOBE
PHOTOSHOP



FIX LIGHTING/ADD PLANT



ADD COLOUR



PHOTOSHOP FINSIHING TOUCHES

THIS INTERIOR WAS MODELLED AND LIT INSIDE MAXON C4D WITH FINAL TOUCHES BEING ADDED USING ADOBE PHOTOSHOP. ADVANCED RENDERING TECHNIQUES SUCH AS GLOBAL ILLUMINATION AND AMBIENT OCCLUSION ARE USED TO GENERATE THE DETAILED SHADOWS AND LIGHTING FOUND IN THIS VISUAL.

VISUAL DEVELOPMENT: APARTMENT INTERIOR

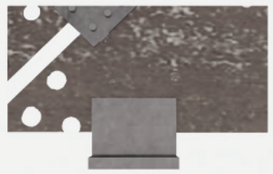
SECTION**TWO**

SUSTAINABLEDESIGN

ARC2004M**MAKE+**

IMAGE: SAMPLE PAVILLION PANEL

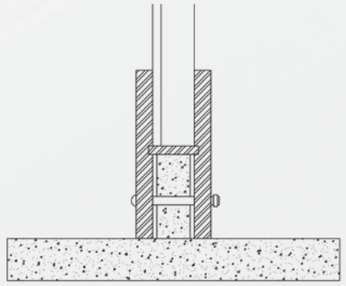


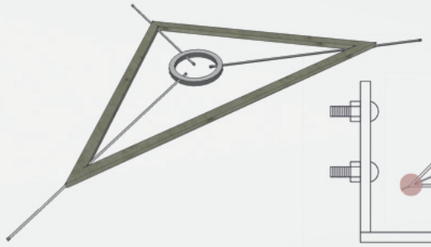


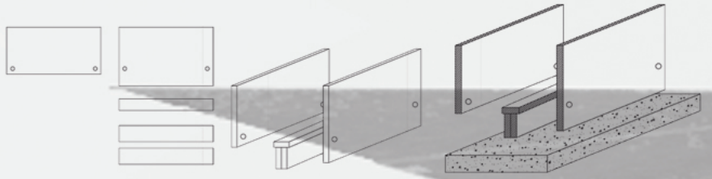




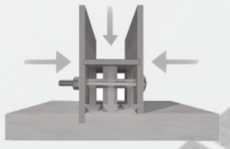


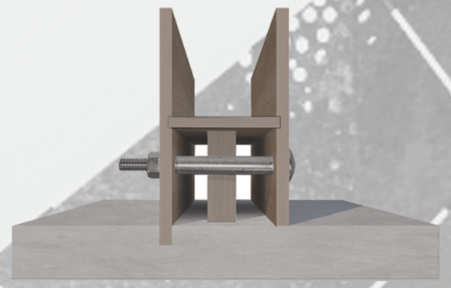




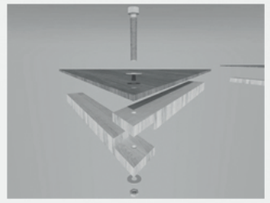


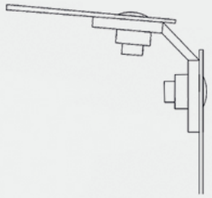
Instructions showing how exactly the footings go together in order to be formed.

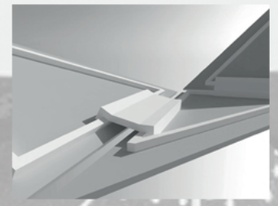


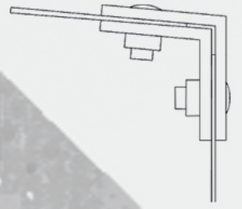


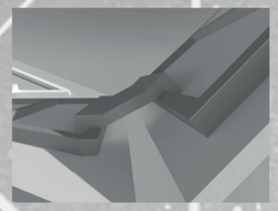
Final concept for footings design, will be taken forward to prototype.

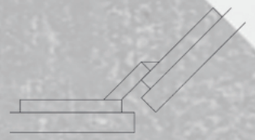




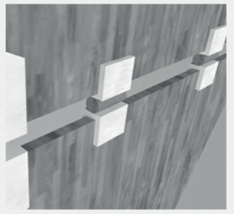




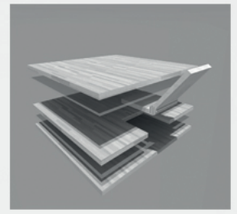




Frame bolted togehter through plywood, using spacers and washers.



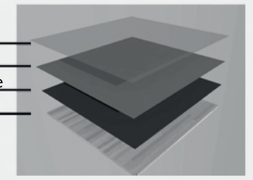
Idea 1: External plates attached by a single hinge.



Idea 2: External plate attached by hinge.

Will use idea 2, by hollowing out the plywood and then inserting the hinge, adding strength to the joint.







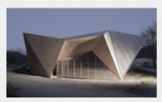
Structure:



















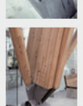










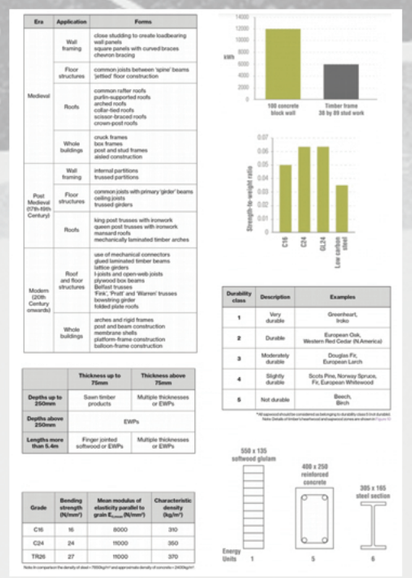


Assembly workshop, beaminster
Invisible studio architects.

Constellations bar, Liverpool
Howard Miller design.

Maggies centre, Manchester
Foster and Partners.

Winter gardens, Sheffield
Pringle Richard Sharratt architects.



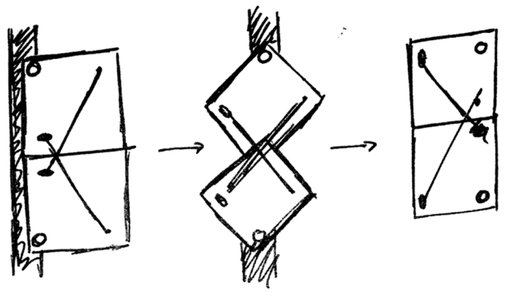
Era	Application	Forms
Medieval	Wall framing	close studding to create loadbearing wall panels square panels with curved braces chevron bracing
	Floor structures	common joists between 'spine' beams 'jettied' floor construction
	Roofs	common rafter roofs purlin-supported roofs arched roofs collar-tied roofs scissor-braced roofs crown-post roofs
	Whole buildings	cruck frames box frames post and stud frames aisled construction
Post Medieval (17th-18th Century)	Wall framing	internal partitions trussed partitions
	Floor structures	common joists with primary 'girder' beams ceiling joists trussed girders
	Roofs	king post trusses with ironwork queen post trusses with ironwork mansard roofs mechanically laminated timber arches
Modern (20th Century onwards)	Roof and floor structures	use of mechanical connectors glued laminated timber beams gang nailers I-joists and open-web joists plywood box beams Belfast trusses 'Fink', 'Pratt' and 'Warren' trusses bowstring girder folded plate roofs
	Whole buildings	arches and rigid frames post and beam construction membrane shells platform-frame construction balloon-frame construction

	Thickness up to 75mm	Thickness above 75mm
Depths up to 250mm	Sawn timber products	Multiple thicknesses or EWPs
Depths above 250mm	EWPs	
Lengths more than 5.4m	Finger jointed softwood or EWPs	Multiple thicknesses or EWPs

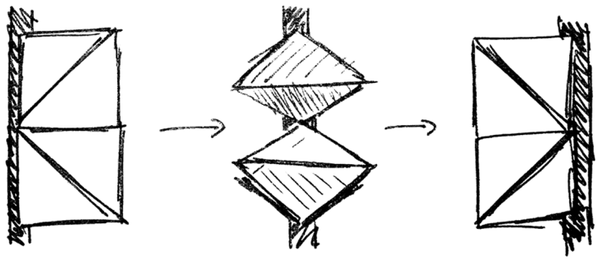
Grade	Bending strength (N/mm^2)	Mean modulus of elasticity parallel to grain $E_{0,mean}$ (N/mm^2)	Characteristic density (kg/m^3)
C16	16	8000	310
C24	24	11000	350
TR26	27	11000	370

Durability class	Description	Examples
1	Very durable	Greenheart, Iroko
2	Durable	European Oak, Western Red Cedar (N.America)
3	Moderately durable	Douglas Fir, European Larch
4	Slightly durable	Scots Pine, Norway Spruce, Fir, European Whitewood
5	Not durable	Beech, Birch

Torggler Doors

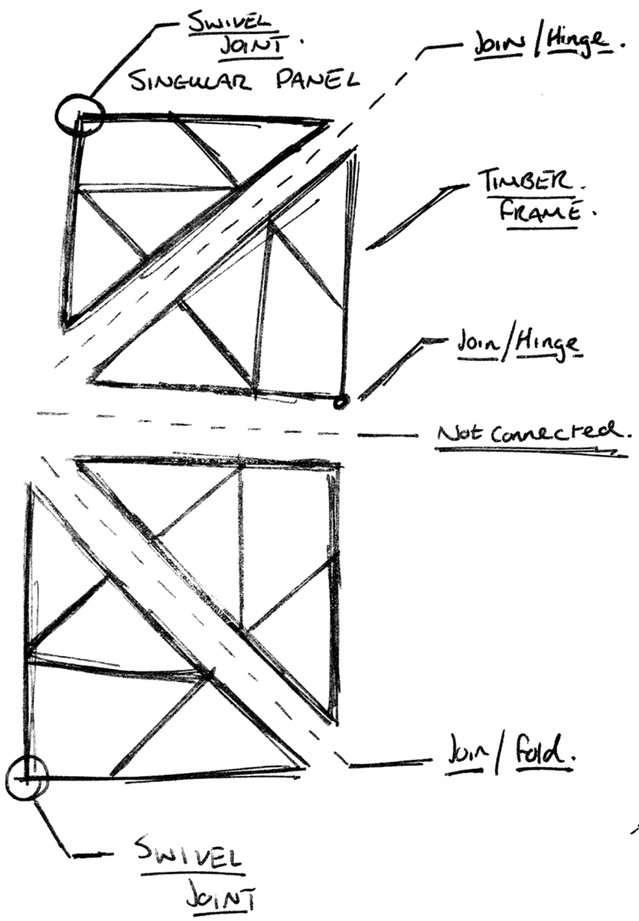


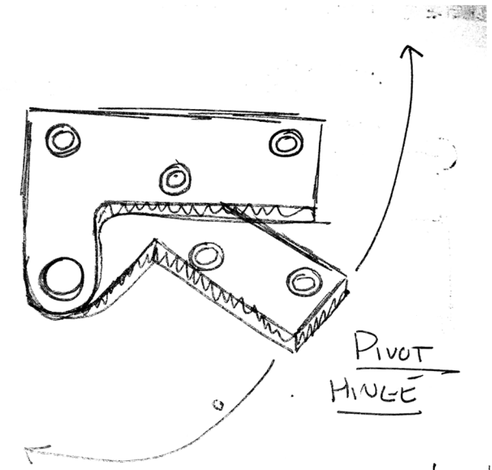
Bespoke doors that can fit into the theme.

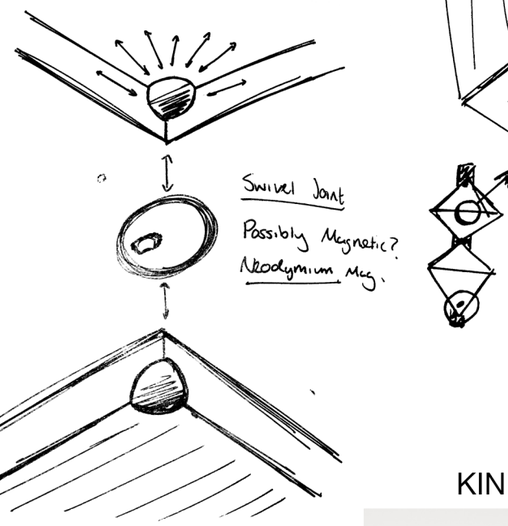


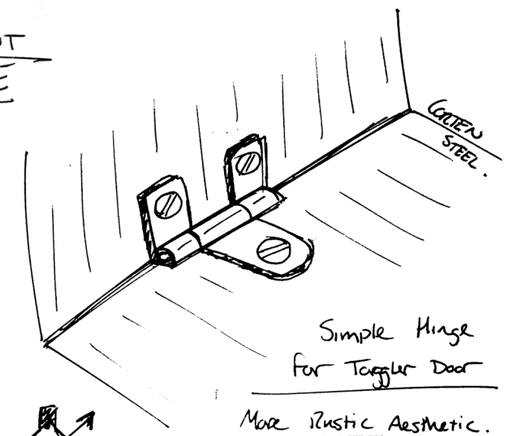
Flow of Movement.

Torrgler Door Construction.

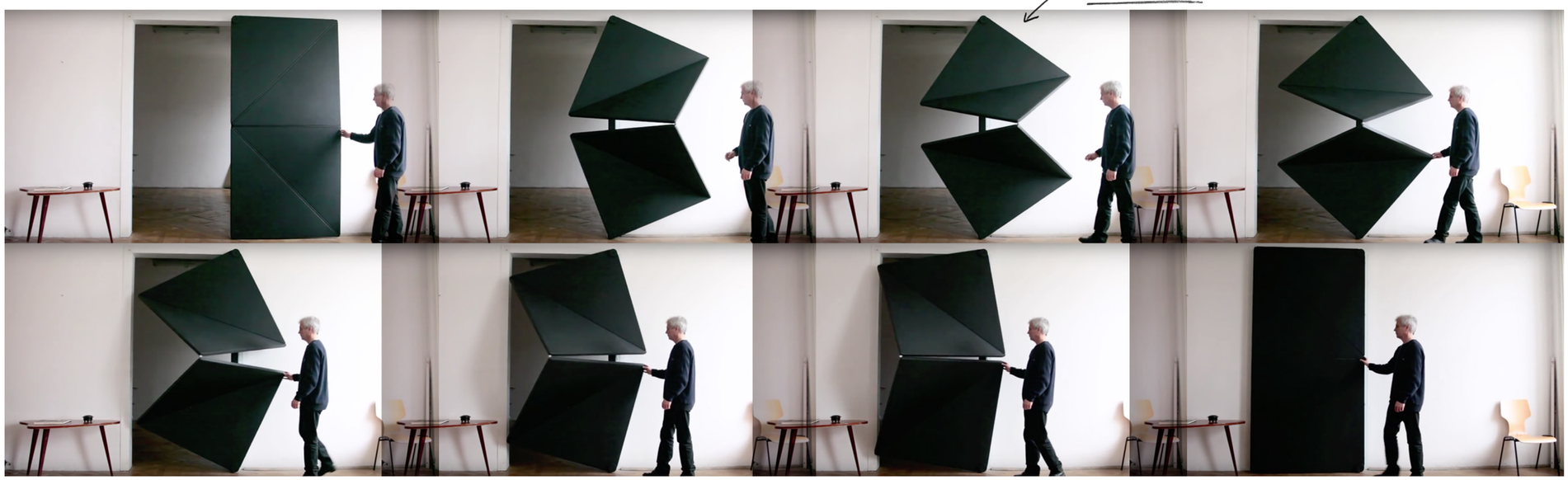








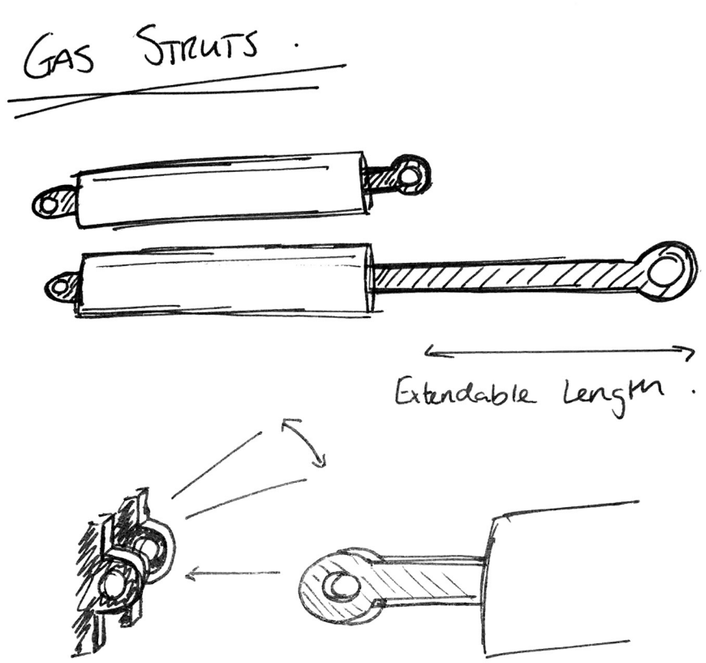
Triangles fit within aesthetic of pavillion.

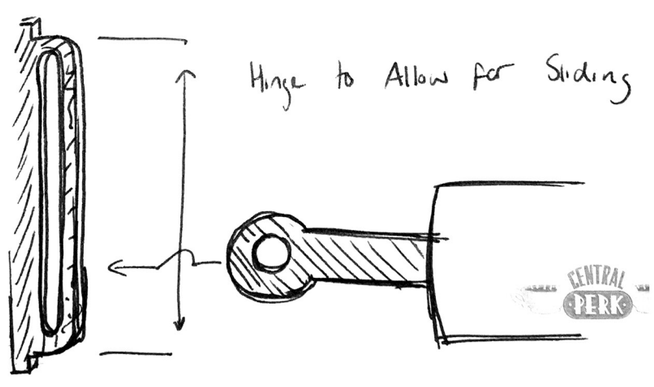


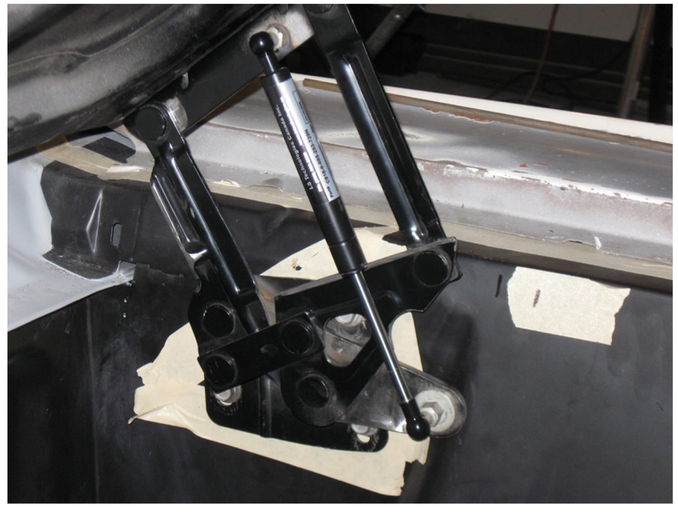
KINETIC 'TORRGLER' DOORS

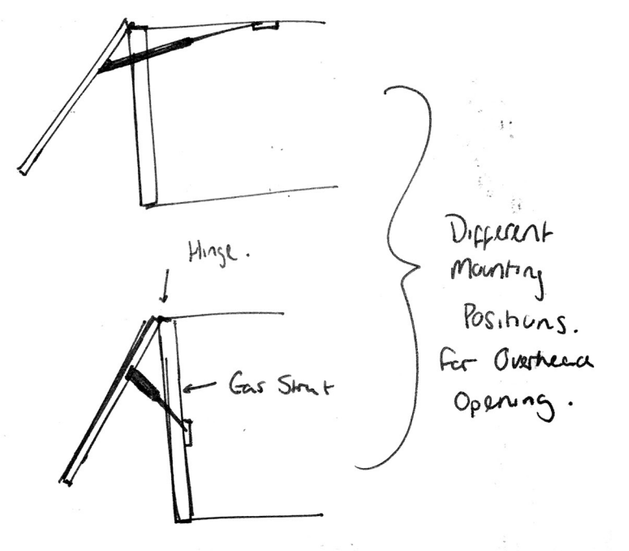




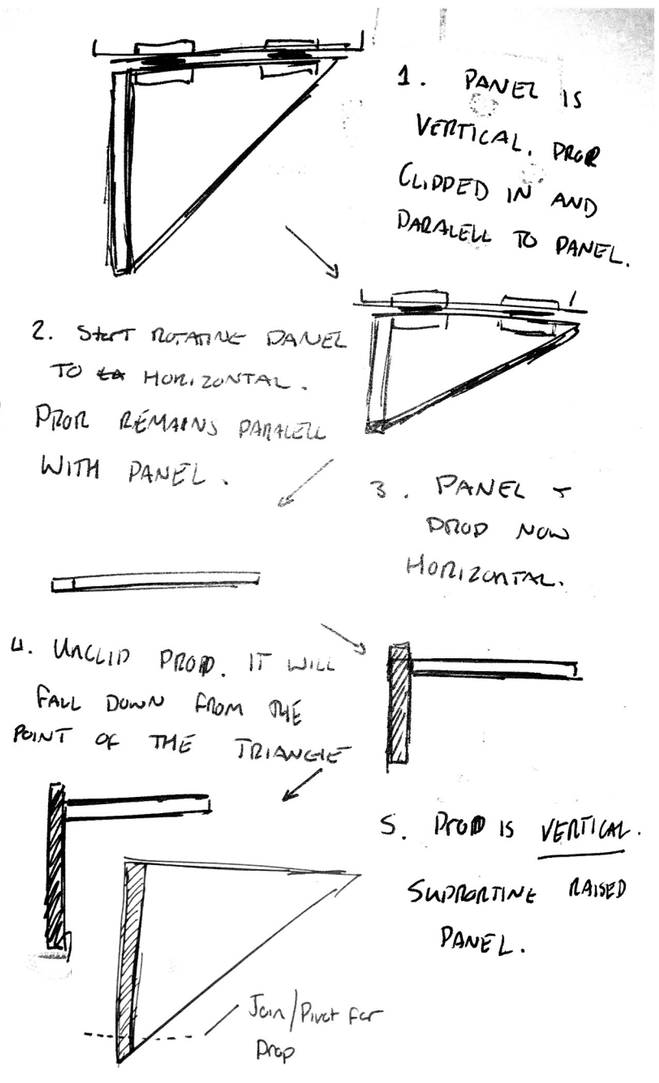








WOODEN PANEL PROPS



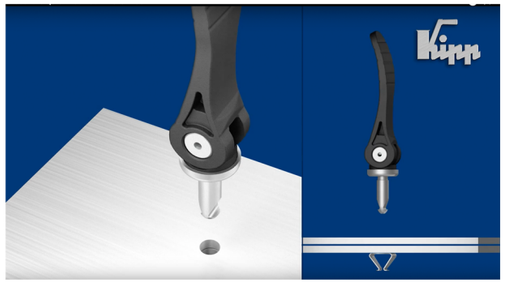
As part of my research for Make+, I came across the doors seen above. I thought they would fit the project's aesthetic really nicely and I attempted to contact the maker to see how they worked.

I was recieved a prompt email telling me not to infringe on copyright artworks and thus had to abandon this avenue.

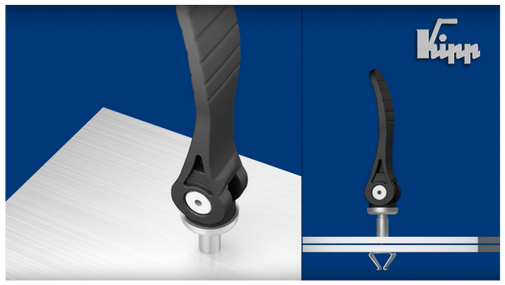
I then set my sights on Hydraulic Gas Struts, which i theorised could be a good way to hold up panel openings as entrances in a similar vein to car trunks.

though hugely practical, these would be particularly costly and a mechanical solution was eventually found.

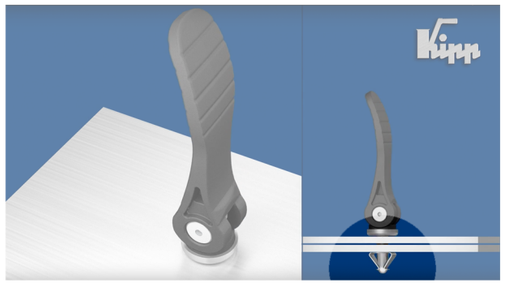
On the following page are my research and experiments into CAM levers and how they could be used as fasteners for the Make+ Pavillion.



1
CAM LEVER AND JOINING PARTS ALL SEPARATED.



2
LOWER CAM LEVER INTO PLACE



3
PUSH DOWN TO LOCK THE LEVER IN PLACE



4
PUSH LEVER TOWARDS LATERAL POSITION.



5
THE LEVER WILL CLAMP THE PARTS TOGETHER AS IT MOVES FURTHER TOWARDS THE LOCKING POINT



6
CAM LEVER WILL LOCK INTO PLACE WHEN LATERAL, LOCKING THE PARTS IN PLACE

CAM Lever illustration PHASE 1: INSTERTION

7
LIFT THE LEVER FROM THE LATERAL POSITION.



8
FLIP THE LEVER UP, THIS WILL SLOWLY START TO UNLOCK THE COMPONENTS



9
AS THE LEVER REACHES VERTICAL, THERE WILL BE A SMALL AMOUNT OF RESISTANCE



5
THE LEVER IS NOW VERTICAL. THE COMPONENTS WILL NOW BE LOOSE.



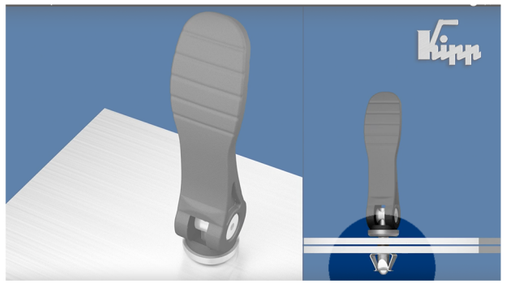
11
TWIST THE LEVER 90° ANTI-CLOCKWISE TO UNLOCK IT



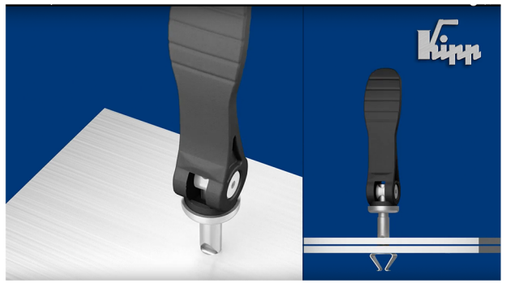
11A



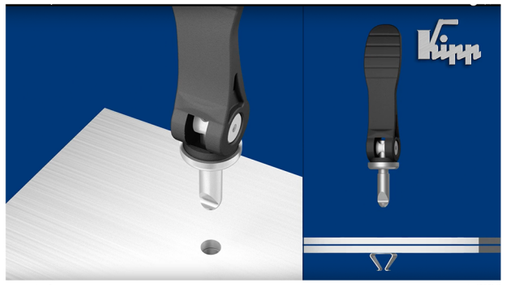
12
ONCE THE LEVER IS FULLY ROTATED, IT CAN BE PULLED UPWARDS



12A



14
THE COMPONENTS ARE NOW DIS-ASSEMBLED



CAM Lever illustration PHASE 2: REMOVAL



UNLOCKED POSITION
IN THIS STATE THE PANELS ARE LOOSE. THE THIN SIDE OF THE LEVER IS FACING DOWN



IN MOTION
THE PANELS ARE CLOSING TOGETHER. THE CAM LEVER APPLIES PRESSURE TO THE TOP PANEL.



LOCKED POSITION
THE PANELS ARE CLAMPED SHUT. THE FRICTION BEWEEN THE CAM LEVEL, THE FIRST PANEL, AND THE FIRST AND SECOND PANEL

THIS TEST MODEL IS FORMED OF TWO SQUARE PANELS OF PLY. THE LEVER IS PLY THAT HAS BEEN SAWED INTO A CAM SHAPE.

A CAM IS A ROTATING OR SLIDING PIECE IN A MECHANICAL LINKAGE USED ESPECIALLY IN TRANSFORMING ROTARY MOTION INTO LINEAR MOTION

THIS WORKS BY OFFSETTING THE POINT OF ROTATION WITHIN THE CIRCLE, OR BY USING AN EGG SHAPE.

CAM LEVEL MODEL

SECTION**TWO**

SUSTAINABLEDESIGN

ARC2004M**SYDNEY**

IMAGE: SATELLITE OF SYDNEY

EXTREMELY HOT CLIMATE
HOT AND RAINY SUMMERS

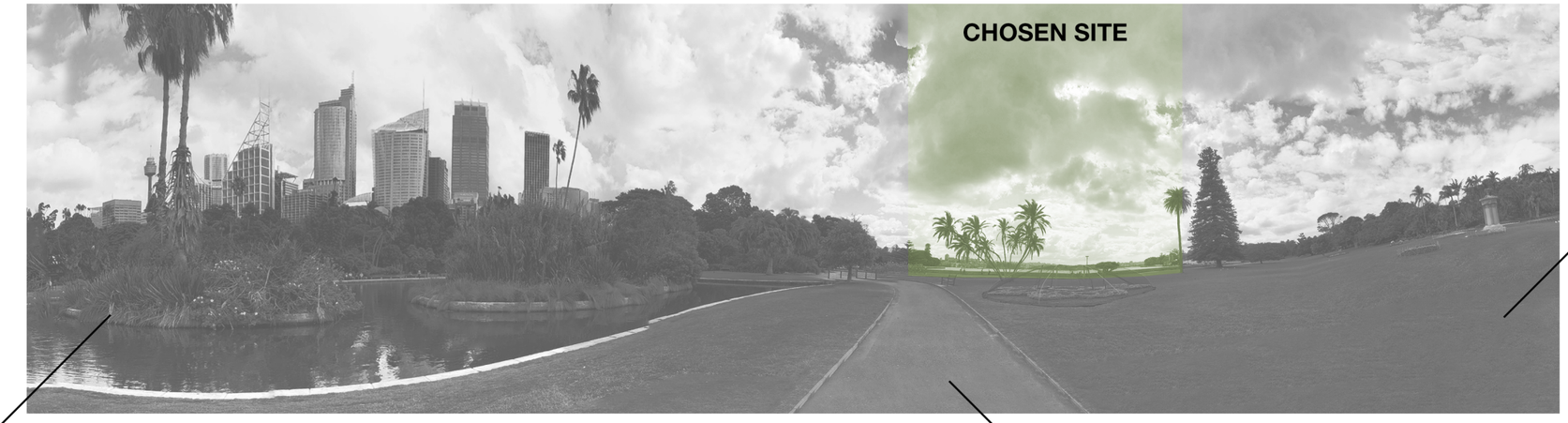
VEGETATION NEARBY
AVOID CUTTING TREES
WHERE POSSIBLE

SPECTACULAR VISTA
WINDOWS WILL BE KEY

BUSY PATHWAY
MAIN ACCESS TO BUILDING

NEAR OCEAN
HUMID CLIMATE





OPEN GRASSLAND SITE
VERY FLEXIBLOE
BUILDING SPACE

NEARNY LAKE
BUGS COULD BE AN ISSUE

NETWORK OF PATHWAYS
NO VEHICULAR ACCESS



231 DAYS

134 DAYS

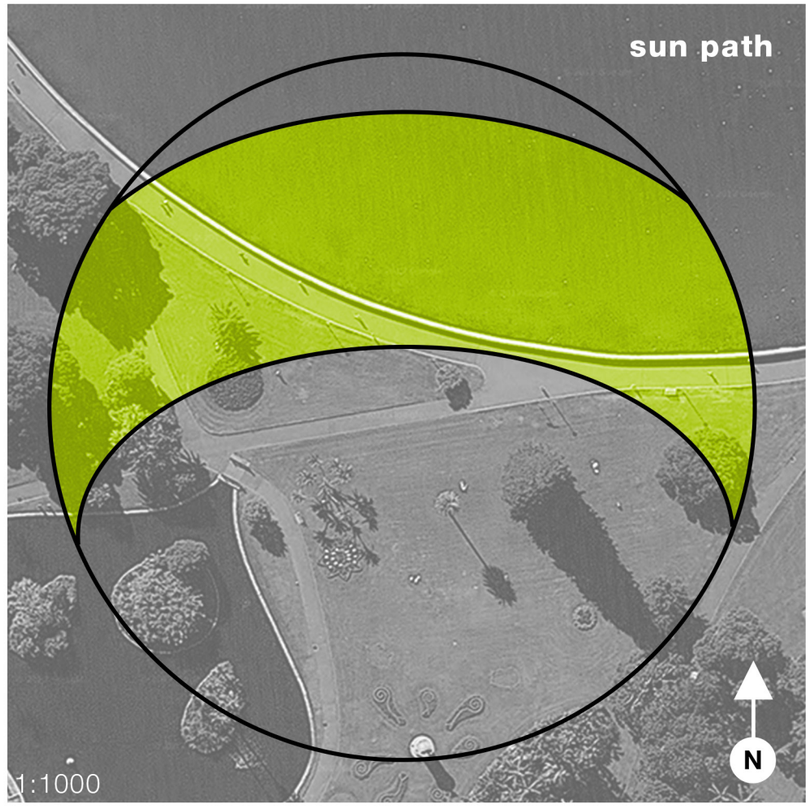
20 / YEAR

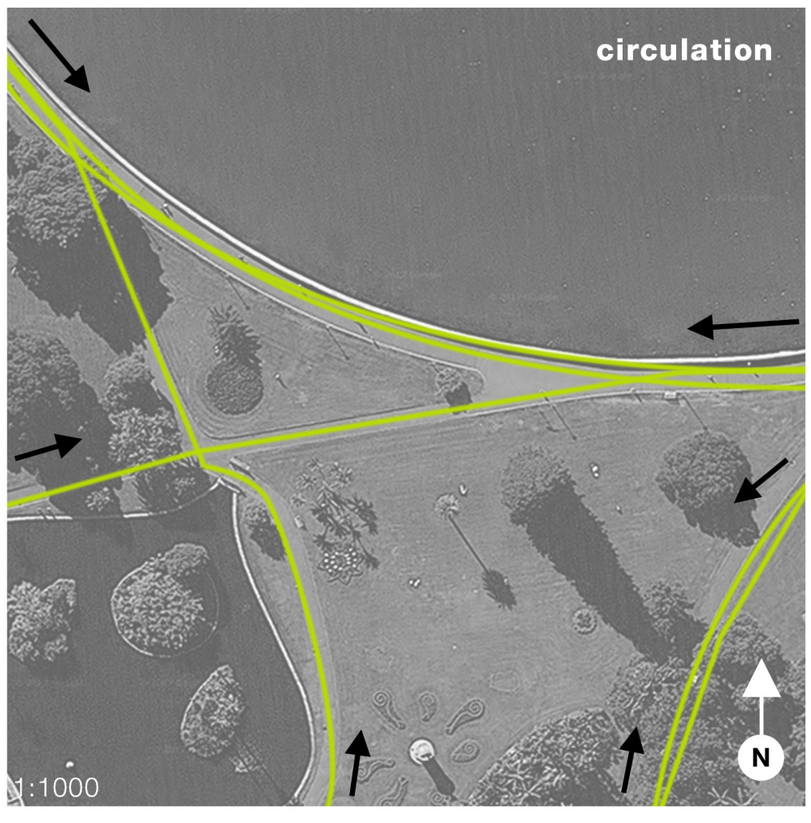
MAX AVG: 13.8 km/h

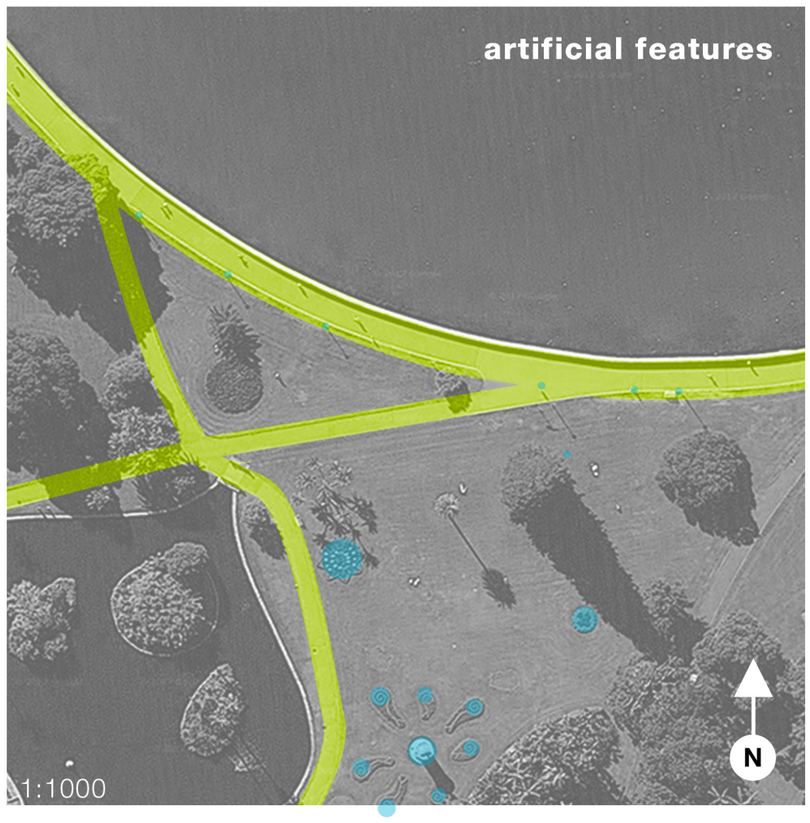
AVG HI: 22.5°C
REC HI: 45.8°C

AVG LO: 14.5°C
REC LO: 2.1°C

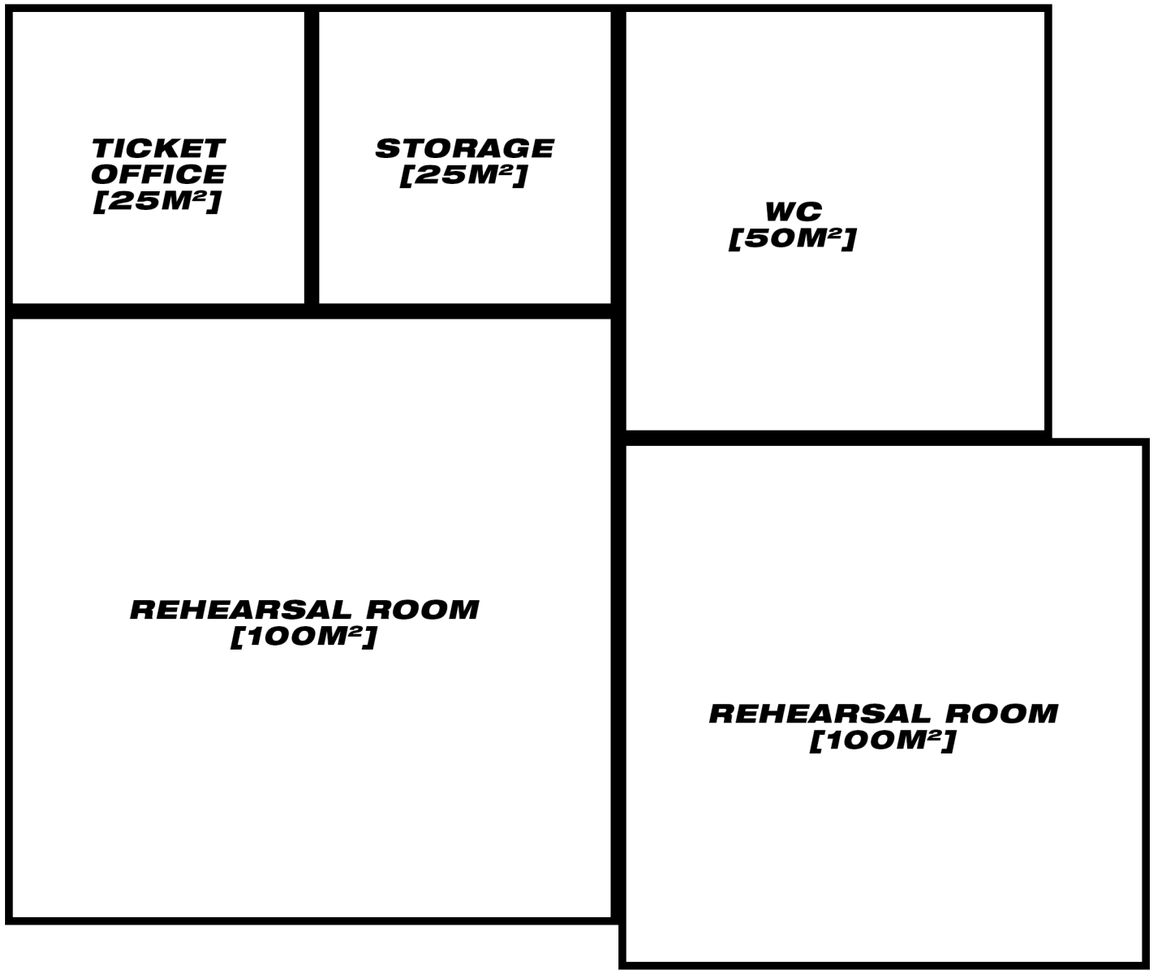








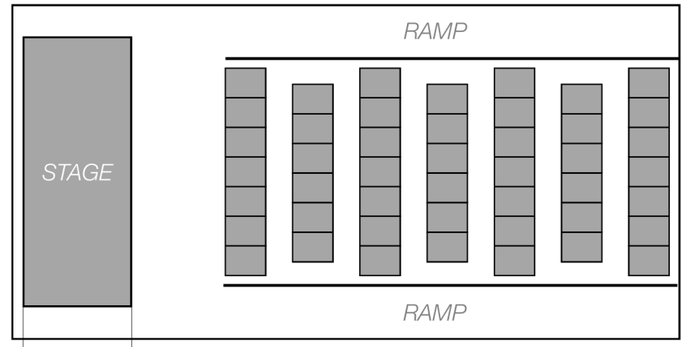
SITE ANALYSIS MAPS [1:1000]



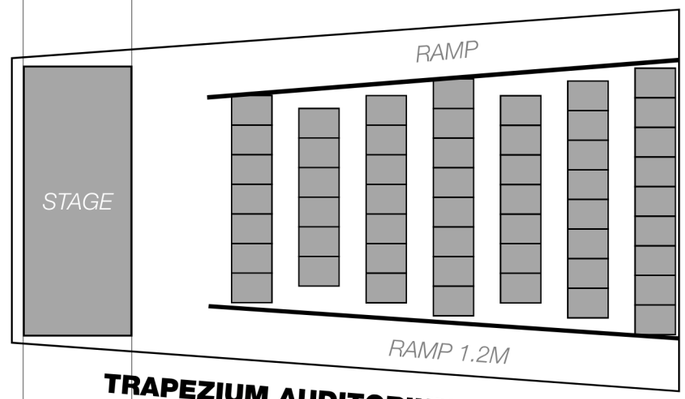
DESIGN ORIGINS

MY INTENTION WAS ALWAYS TO MAKE THE AUDITORIUM THE CENTER OF THE DESIGN. TO BEGIN, I ESTABLISHED THAT YOU CAN FIT MORE SEATS IN A 100M^2 SPACE IF IT IS A TRAPEZOID INSTEAD OF A RECTANGLE.

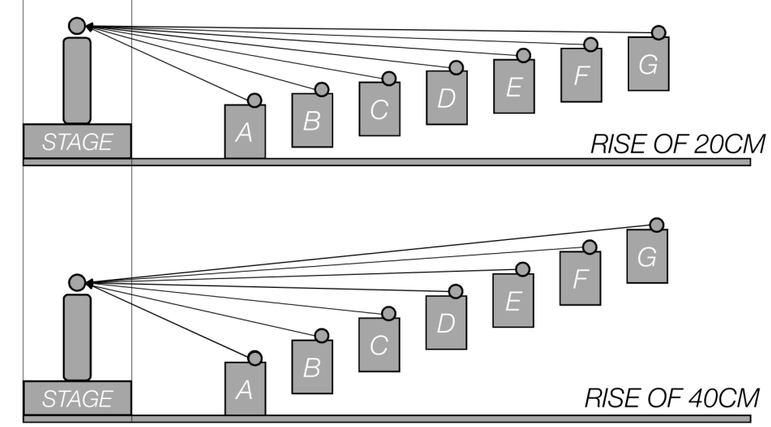
THIS SHAPE THEN FORMED THE BASE FOR THE REST OF THE FLOORPLAN: IT WAS DESIGNED AROUND THE MOST IMPORTANT SPACE.



RECTANGULAR AUDITORIUM – SEATS 46



TRAPEZIUM AUDITORIUM – SEATS 52

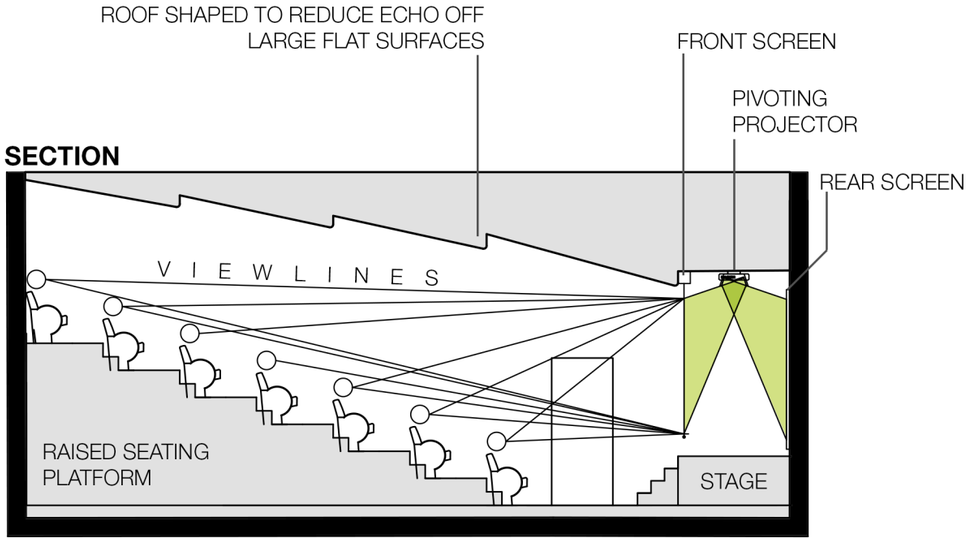


ROOM MASSING AND AUDITORIUM OUTLINE [1:100]

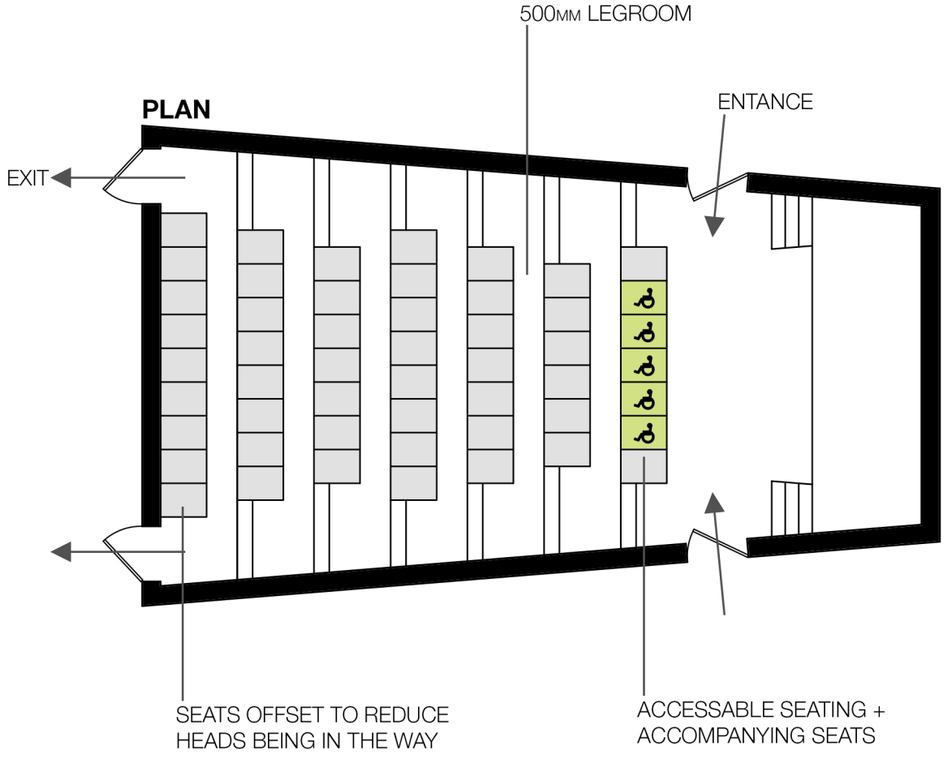
EXISTING AUDITORIA DESIGN



SECTION



PLAN



AUDITORIUM

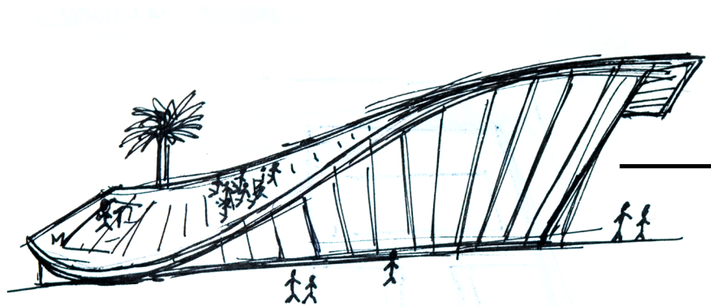
The auditorium in this building is designed for **presentations, small speeches, community classes** and also doubles as an **indie movie theatre**. To accomodate these functions there are two screens in the auditorium, in front and behind the stage. There is a short throw projector mounted on a rotatable plate that can project onto either screen. The front one for movies, the rear one for presentations.

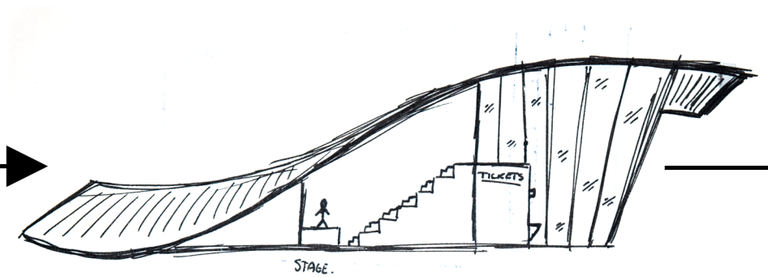
The auditoria's seating is designed so that one can see the top and bottom of the front screen no matter where they are sat. this also ensures that at any seat a speaker will be clearly visible and audible.

The auditoria's roof has been shaped to breakup the roof surface and reduce echo, and there are noise reduction panels along the left and right walls.

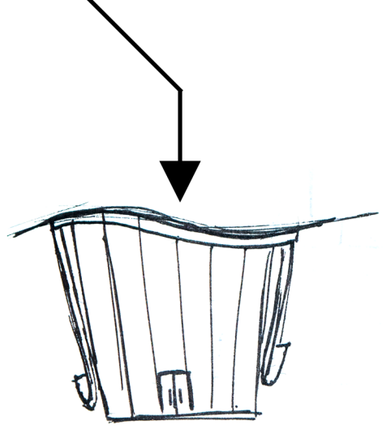
The auditorium is wheelchair accesable - with 5 designated chairs reserved for up to 3 wheelchair users to sit in front of.

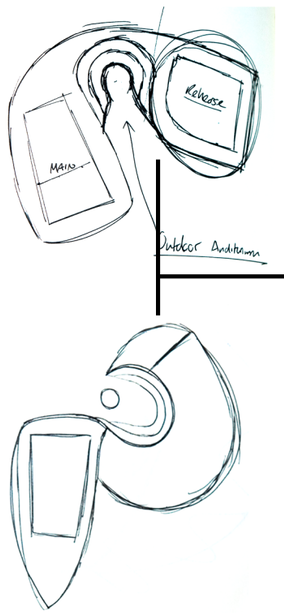
The auditorium features a dark theme on the inside. This will not interfere when used for talks or speeches, as subjects can be lit. It will benmefit the movie watching experience, however.

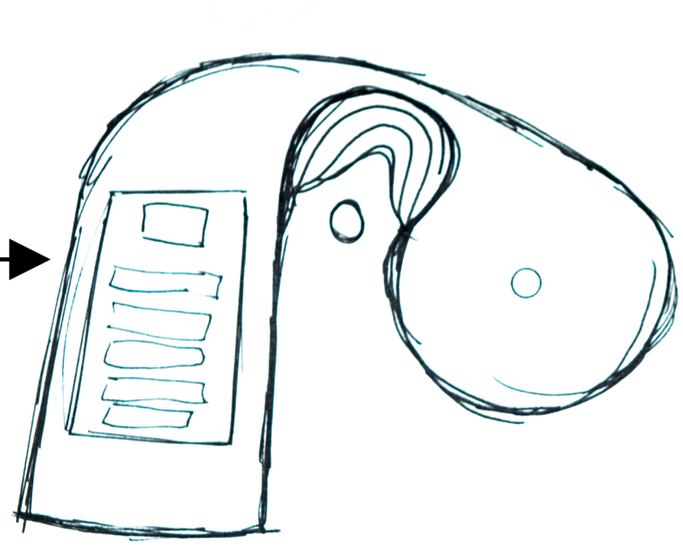


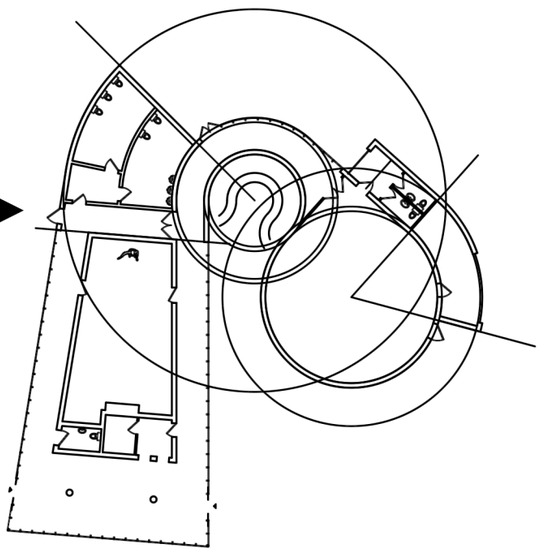

TICKETS
STAGE.



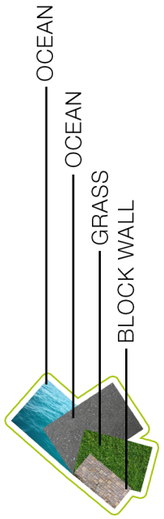



Rehearse
MAIN
Outdoor Auditorium

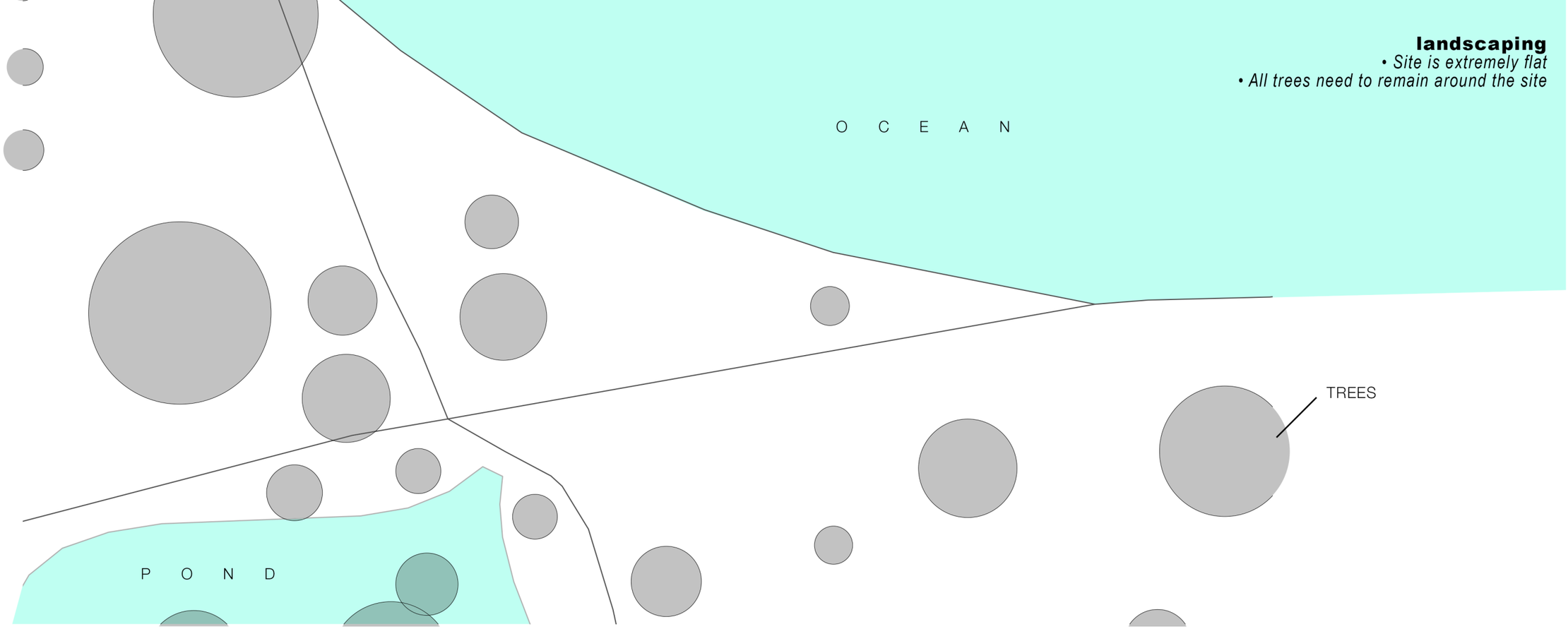




orignal landscaping [1:500]

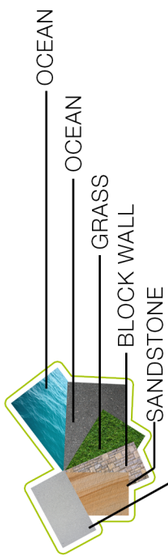




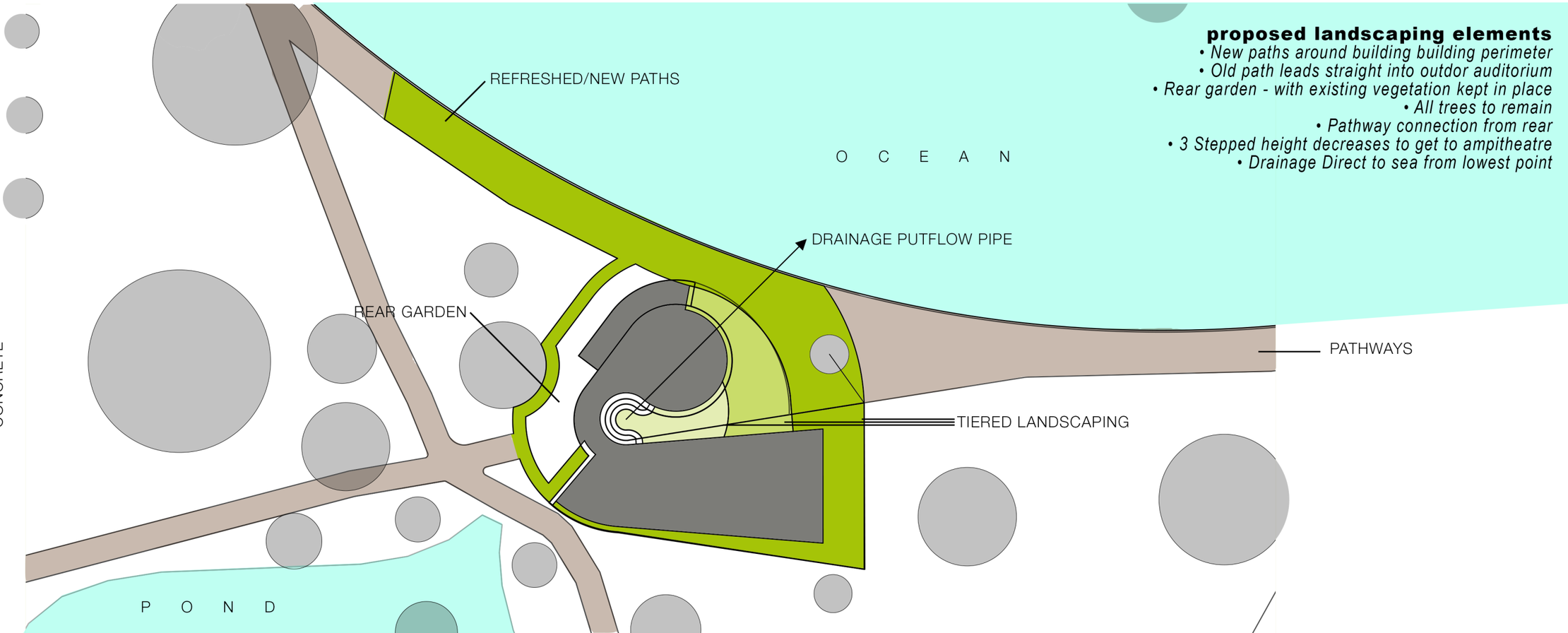


landscaping
- *Site is extremely flat*
- *All trees need to remain around the site*

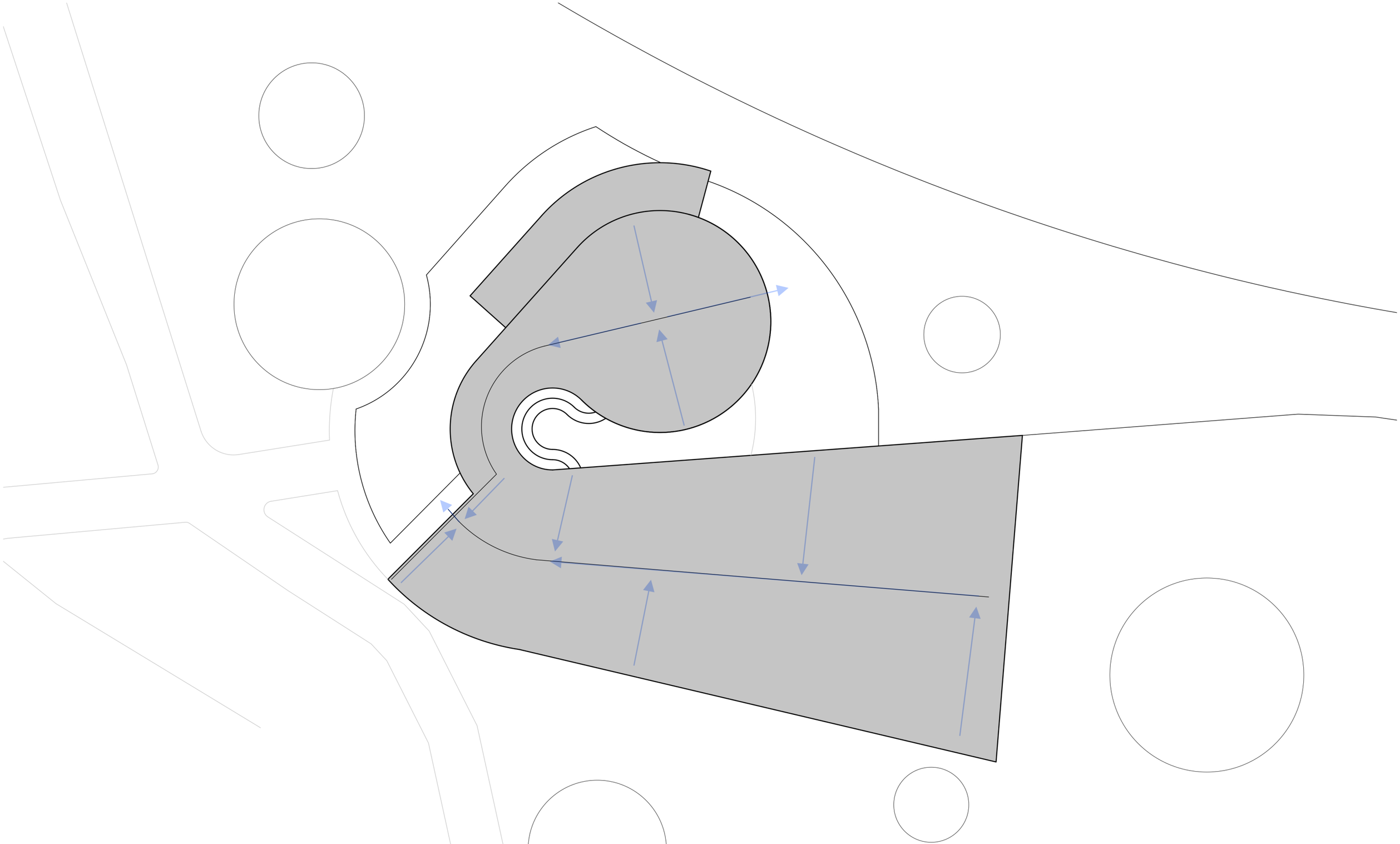
proposed landscaping [1:500]







proposed landscaping elements
- *New paths around building building perimeter*
- *Old path leads straight into outdor auditorium*
- *Rear garden - with existing vegetation kept in place*
- *All trees to remain*
- *Pathway connection from rear*
- *3 Stepped height decreases to get to ampitheatre*
- *Drainage Direct to sea from lowest point*

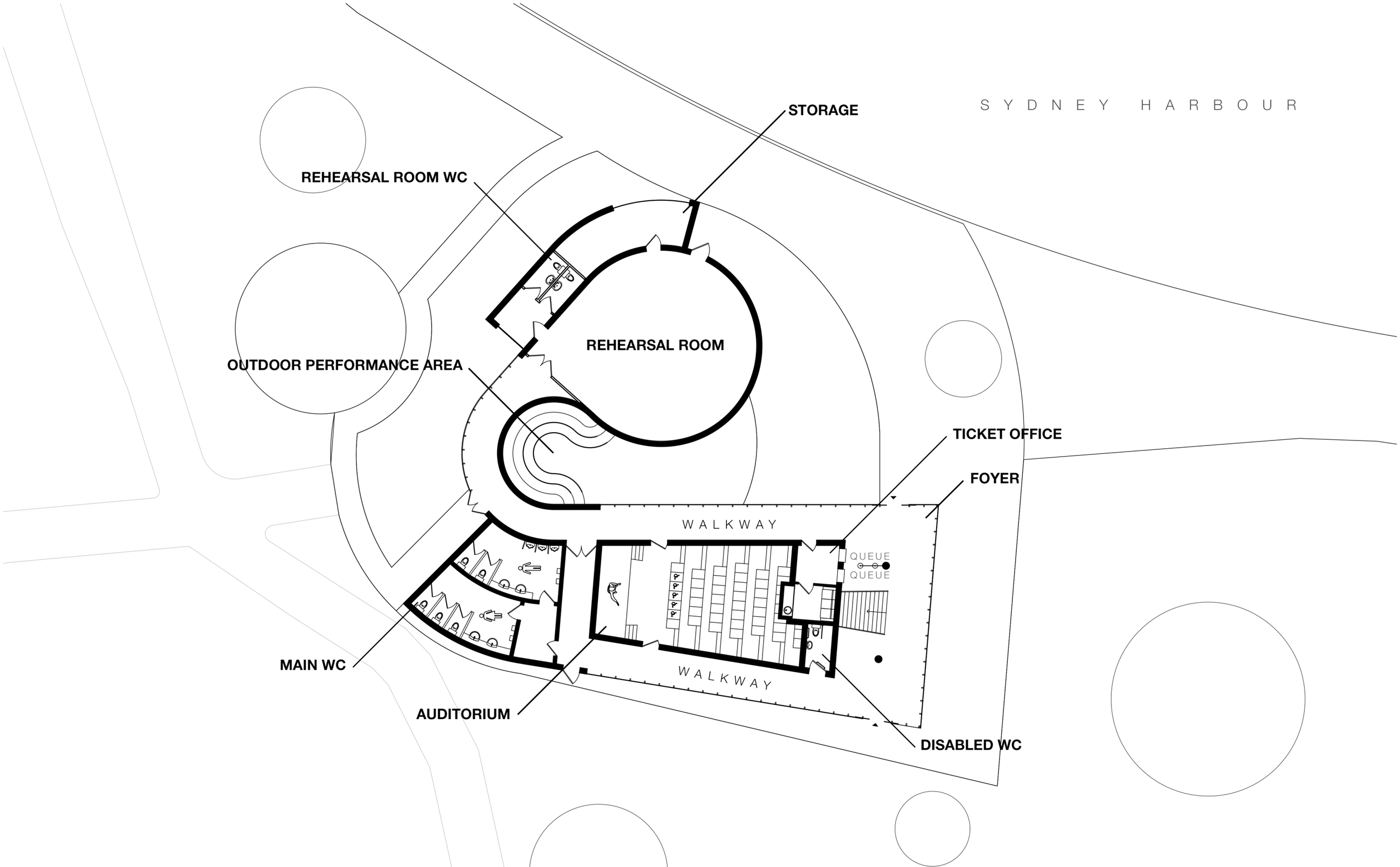


ROOF PLAN + DRAINAGE

ITHE ROOF CURVES IN SICH A WAY THAT MAKES WATER FLOW TO THE REAR OF THE BUILDING. THE ROOF CHANNELS WATTER INTO THE CENTER [WHERE IT IS HEAVILLY SUPPORTED] AND RUNS IT DOWN.

ROOF PLAN [1:200]

DRAINAGE ILLUSTRATTION



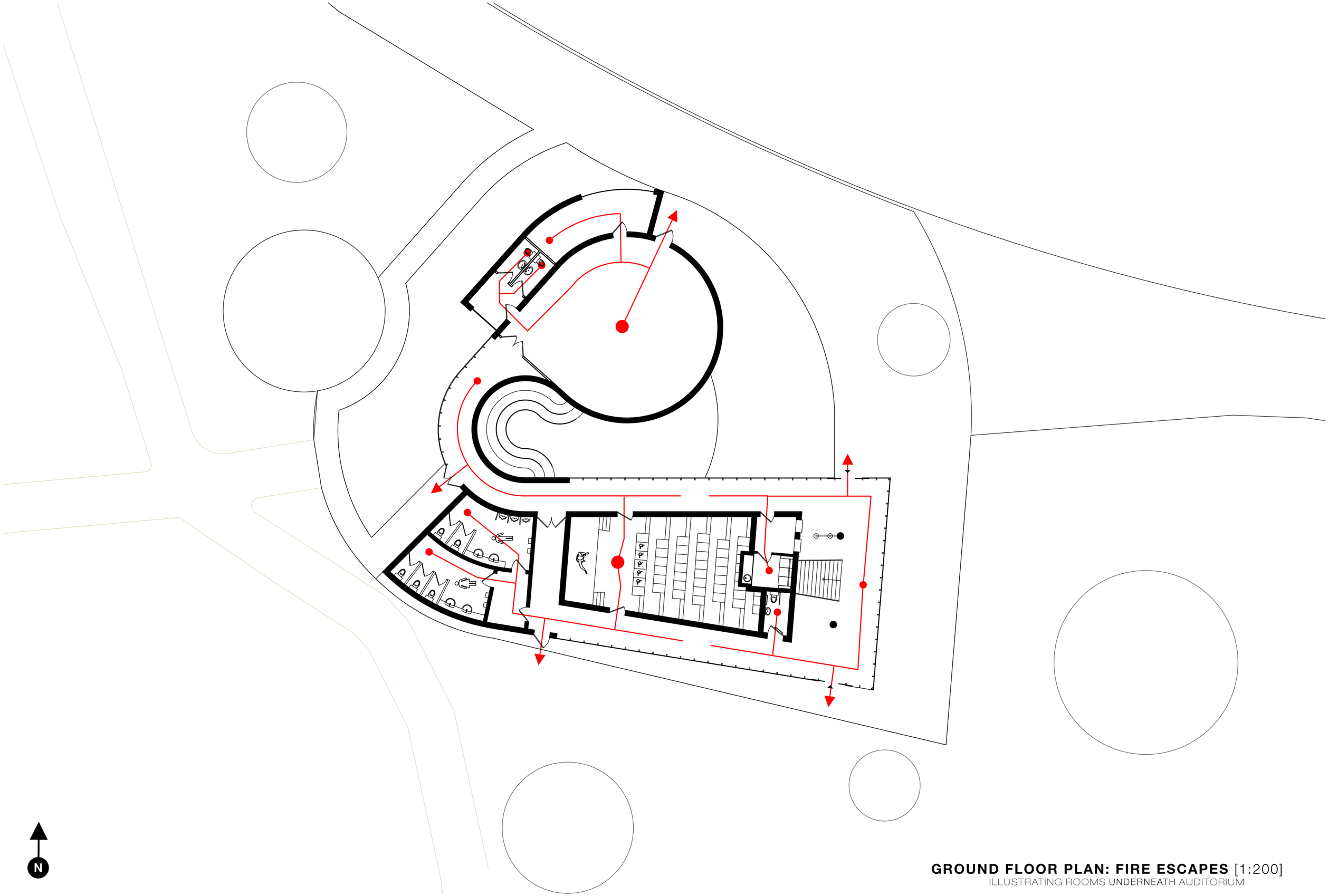
GROUND FLOOR THINKING

ITHE GROUND FLOOR SURROUNDS THE AUDITORIUM, ENCLOSING IT IN GLASS WALLS FROM 3 SIDES. THESE SPACES ARE WALKWAYS AND EMPHASIZE THE IMPORTANCE OF THE AUDITORIUM WITHIN THE SPACE

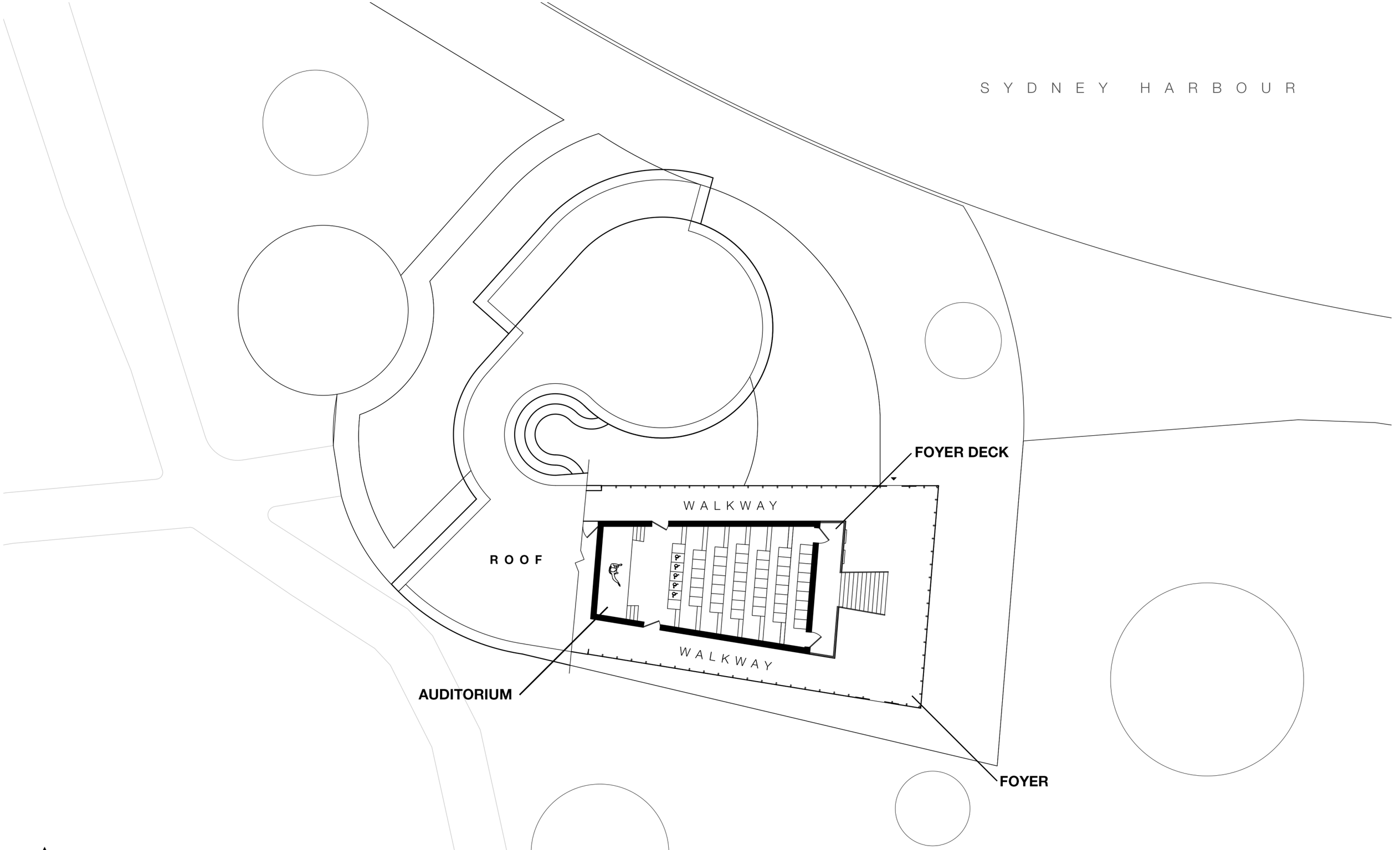
N

GROUND FLOOR PLAN [1:200]

ILLUSTRATING ROOMS **UNDERNEATH** AUDITORIUM



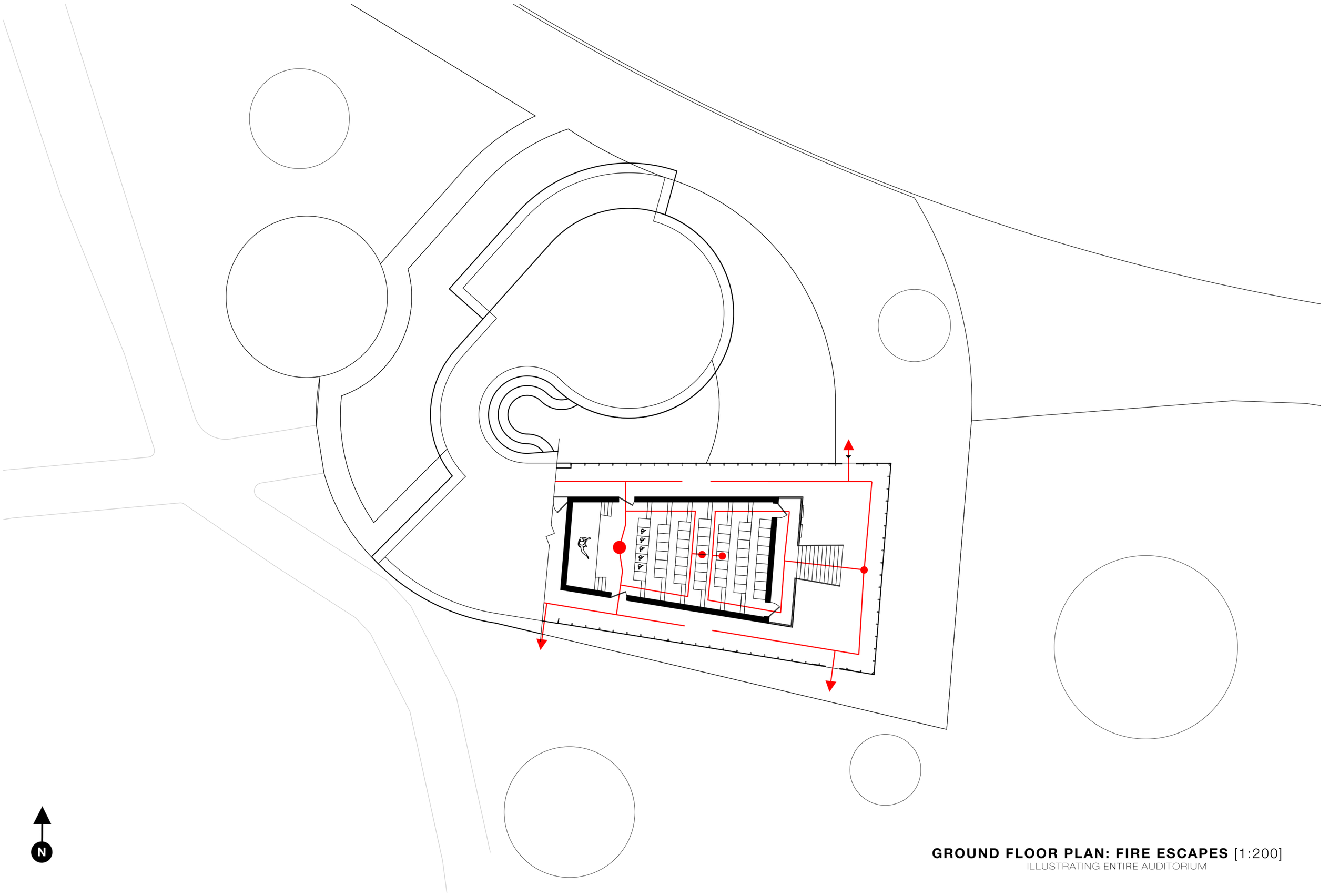
GROUND FLOOR PLAN: FIRE ESCAPES [1:200]
ILLUSTRATING ROOMS **UNDERNEATH** AUDITORIUM



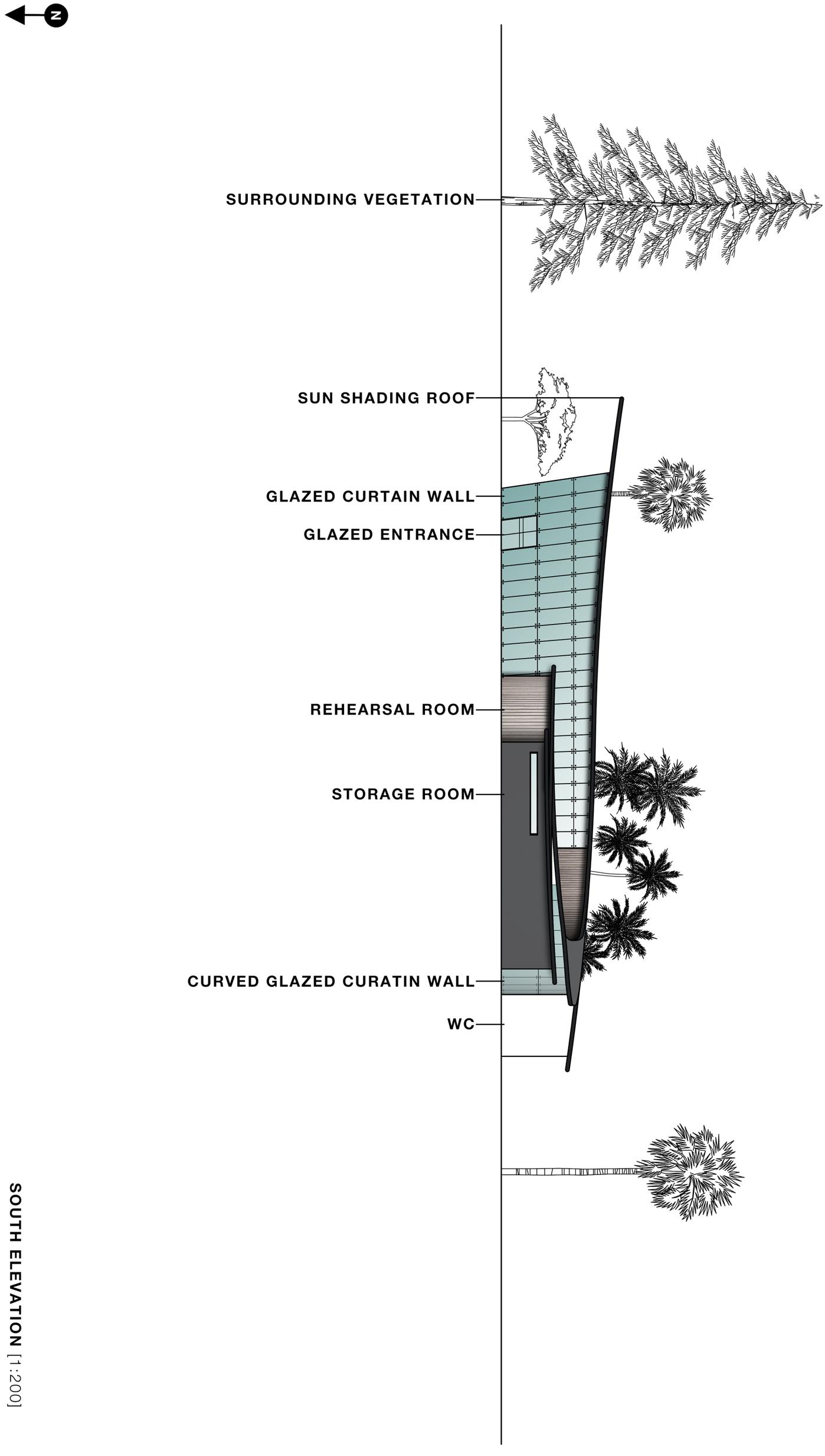
1ST FLOOR THINKING

ITHE FIRST FLOOR ONLY CONSISTS OF THE FOYER DECK, WHICH FUNCTIONS AS THE REAR ENTRANCE/EXIT TO THE AUDITORIUM. UNDER THIS DECK SITS THE TICKET OFFICE, STAFF ROOM AND ACCESSABLE WC. THE ENTIRE AUDITORIUM IS ILLUSTRATED IN THIS PLAN.

1ST FLOOR PLAN [1:200]
ILLUSTRATING **ENTIRE** AUDITORIUM



GROUND FLOOR PLAN: FIRE ESCAPES [1:200]
ILLUSTRATING **ENTIRE** AUDITORIUM



SOUTH ELEVATION [1:200]

CONCRETE ROOF

ACTS AS A THERMAL CORE. ABSORBS HEAT IN DAYTIME AND RELEASES IT AT NIGHT REGULATES TEMPERATURE.

summer

winter

PROVIDES PROTECTION DURING SUMMER MONTHS AND LETS LIGHT IN DURING WINTER MONTHS. TEMP CONTROL

SOLAR SHADING

TRIPLE GLAZING

EXPENSIVE, BUT WILL INSULATE WELL AGAINST SYDNEY SUN.

AMPITHEATRE

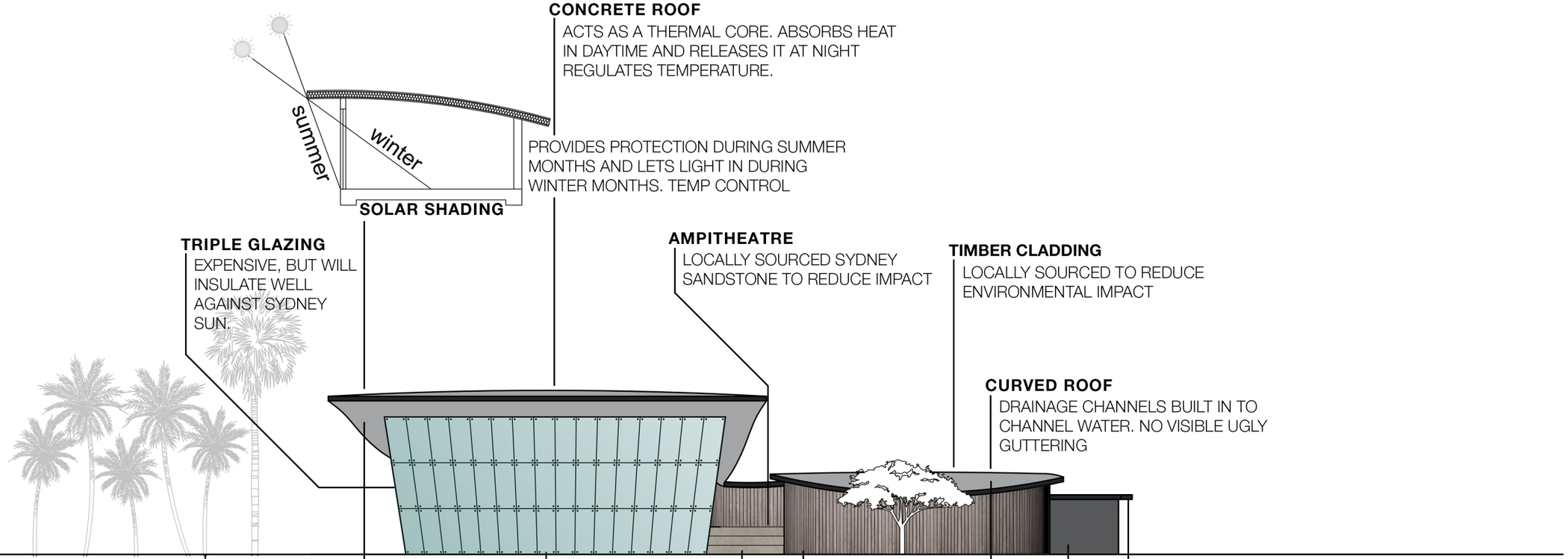
LOCALLY SOURCED SYDNEY SANDSTONE TO REDUCE IMPACT

TIMBER CLADDING

LOCALLY SOURCED TO REDUCE ENVIRONMENTAL IMPACT

CURVED ROOF

DRAINAGE CHANNELS BUILT IN TO CHANNEL WATER. NO VISIBLE UGLY GUTTERING



SURROUNDING FOLIAGE

SOLAR SHADING

GLAZED CURTAIN WAL

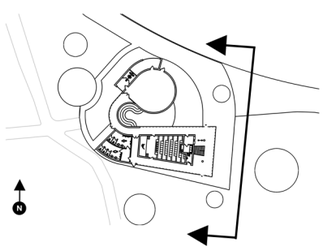
OUTDOR AMPITHEATRE

REHEARSAL ROOM

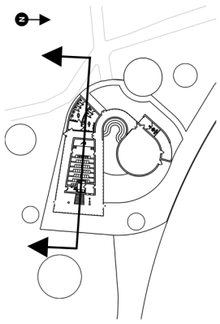
ROOF

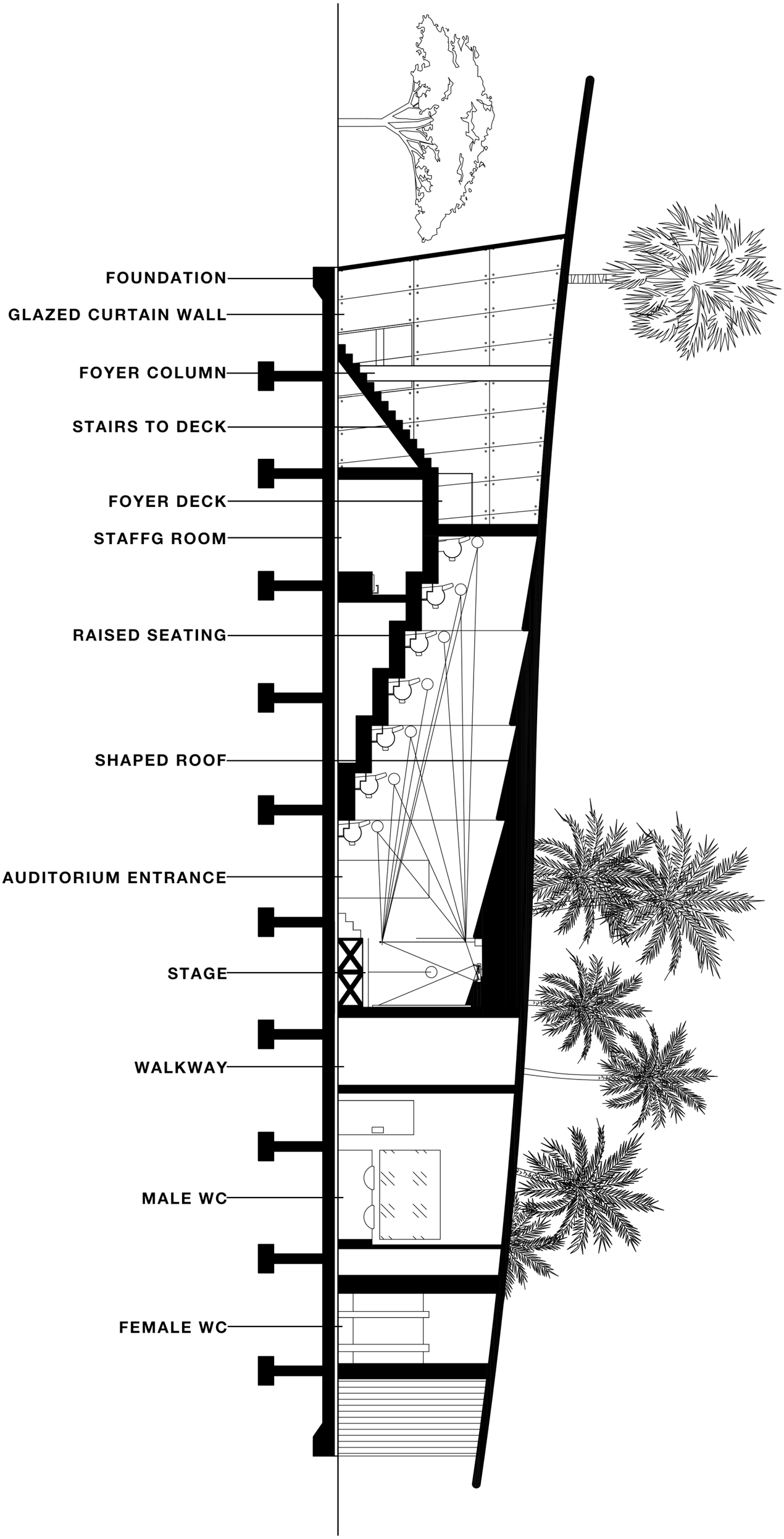
STORAGE ROOM

SOLAR SHADING

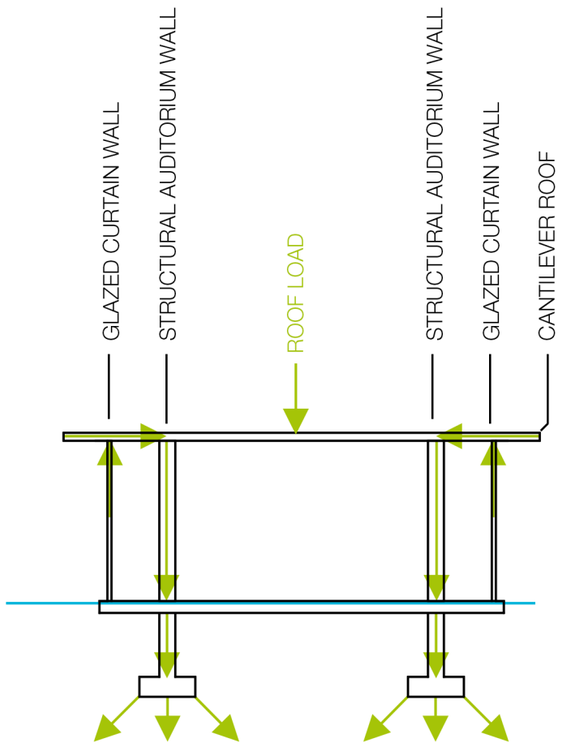


EAST ELEVATION [1:200]





LONG SECTION [1:100]

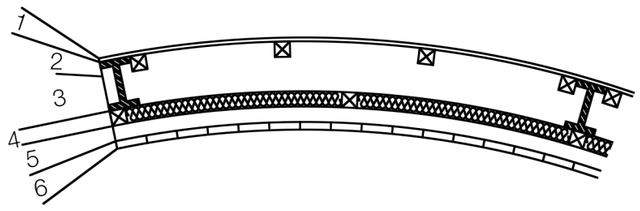


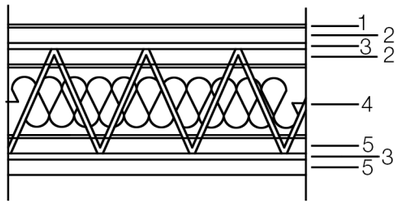
STRUCTURAL EXPLAINATION

The outer most, glazed curtain walls are not structural. The loads are transfered to the formed concrete roof which is cantilevered over the North, East and South sides. The roof transfers it's load to the steel column structural walls of the auditorium below and to two columns in the lobby. From here the load of the building is tranfered into a concrete isolated spread footings foundation under the auditorium - with a more lightweight raft foundation underneath the walkways and rehearsal room as shown in the drawing to the right.

WALL DETAIL [1:20]

1: Flexible Plasterboard
2: Flexiboard Framework
3: Structural Steel
4: Vertical Timber Frame
5: Horizontal Timber Frame
6: Vertical Timber Classing

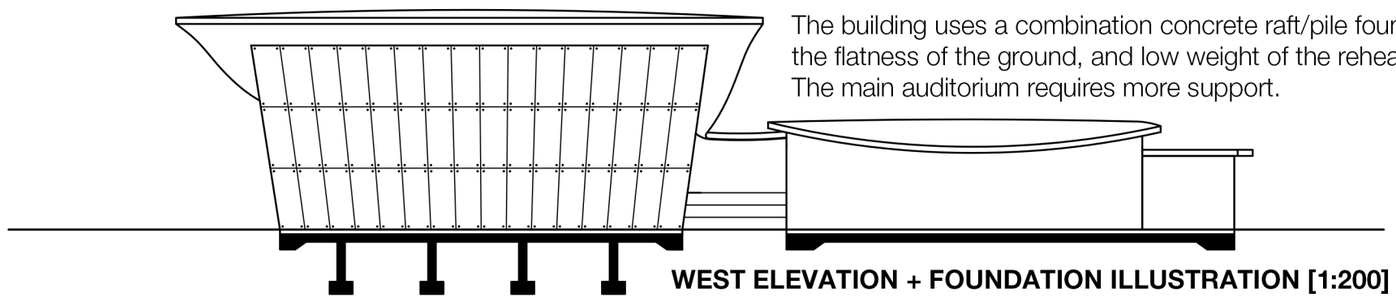




ROOF DETAILS

1: Waterproof Membrane
2: Outer Concrete Skin
3: Steel Reinforcement Truss
4: Rigid Foam Insulation
5: Inner Concrete Skin

Concrete was chosen for the roof material for two reasons, despite not being the most sustainable. Concrete acts as a thermal mass which will be essential in keeping the building passively cooled. It is also structurally appropriate for the cantilevers and shapes that are so prominant in the roof design.



The building uses a combination concrete raft/pile foundation due to the flatness of the ground, and low weight of the rehearsal room side. The main auditorium requires more support.

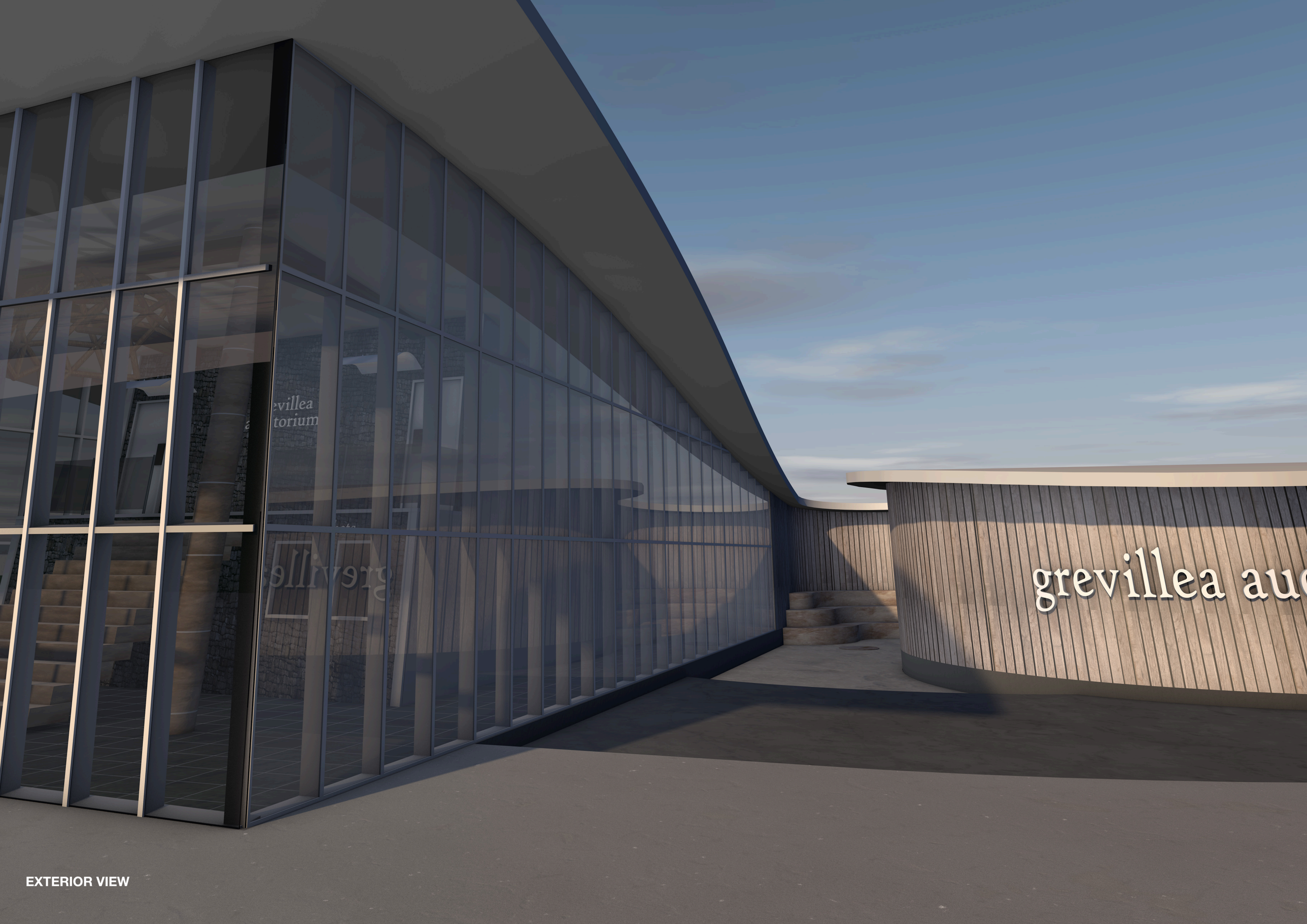
WEST ELEVATION + FOUNDATION ILLUSTRATION [1:200]



OUTDOOR PERFORMANCE AREA

THE MODEL USED IN THESE RENDERS IS THE MOST COMPLICATED I HAVE EVER CREATED. DUE TO THE NATURE OF THE GLASS WALLS. IT WAS NECESSARY TO CONTAIN THE INSIDE AND OUTSIDE MODEL IN THE SAME SCENE. THE RESULT IS THAT THIS BUILDING IS FULLY NAVIGATABLE IN 3D, IF NOT QUITE FURNISHED IN SOME AREAS.

EACH PART WAS DRAWN IN AUTOCAD, IMPORTED TO CINEMA 4D. ALL LIGHTING AND TEXTURING TAKES PLACE IN CINEMA 4D, WITH FINISHING TOUCHES ADDED IN PHOTOSHOP.



EXTERIOR VIEW

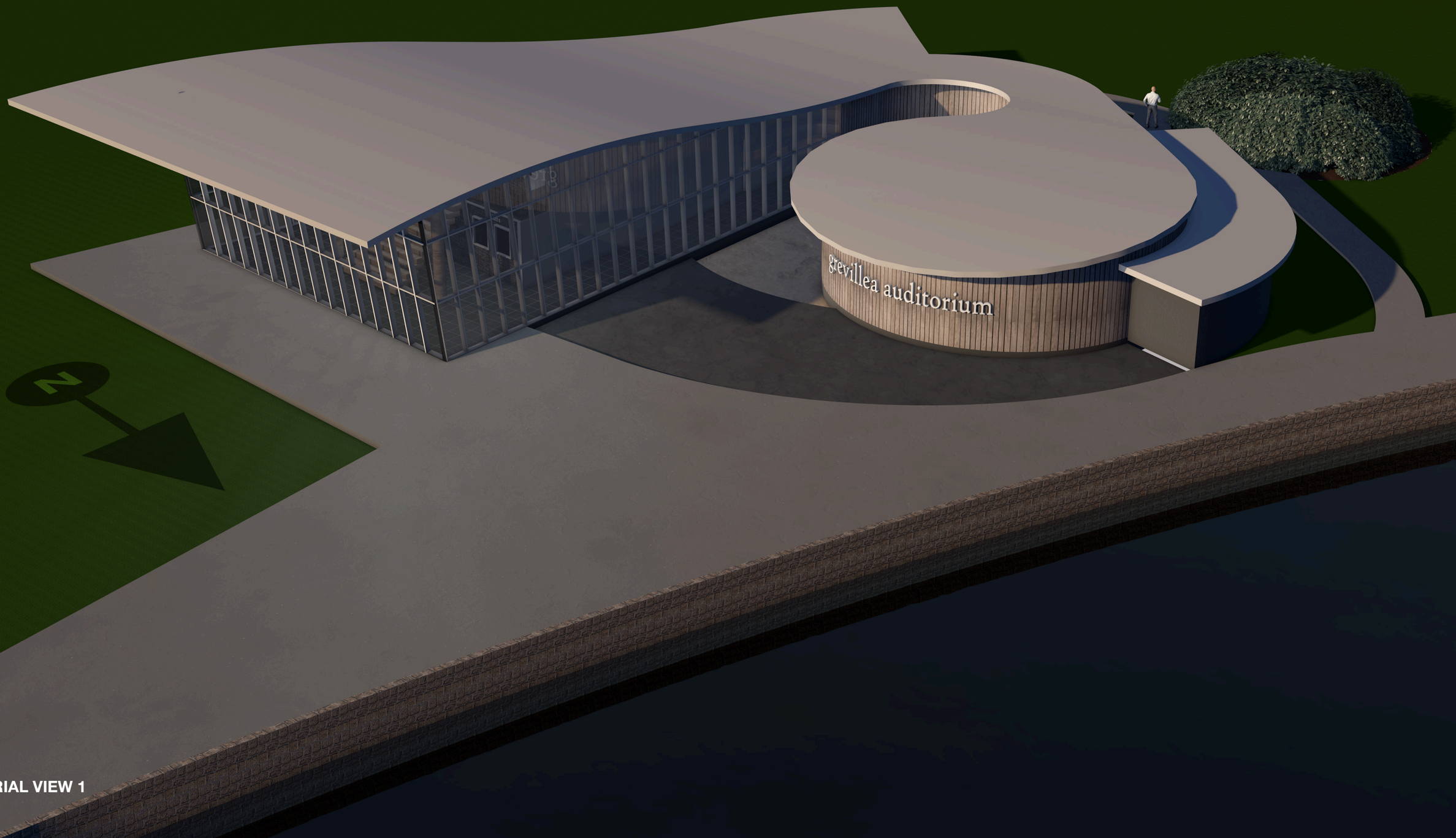


FOYER

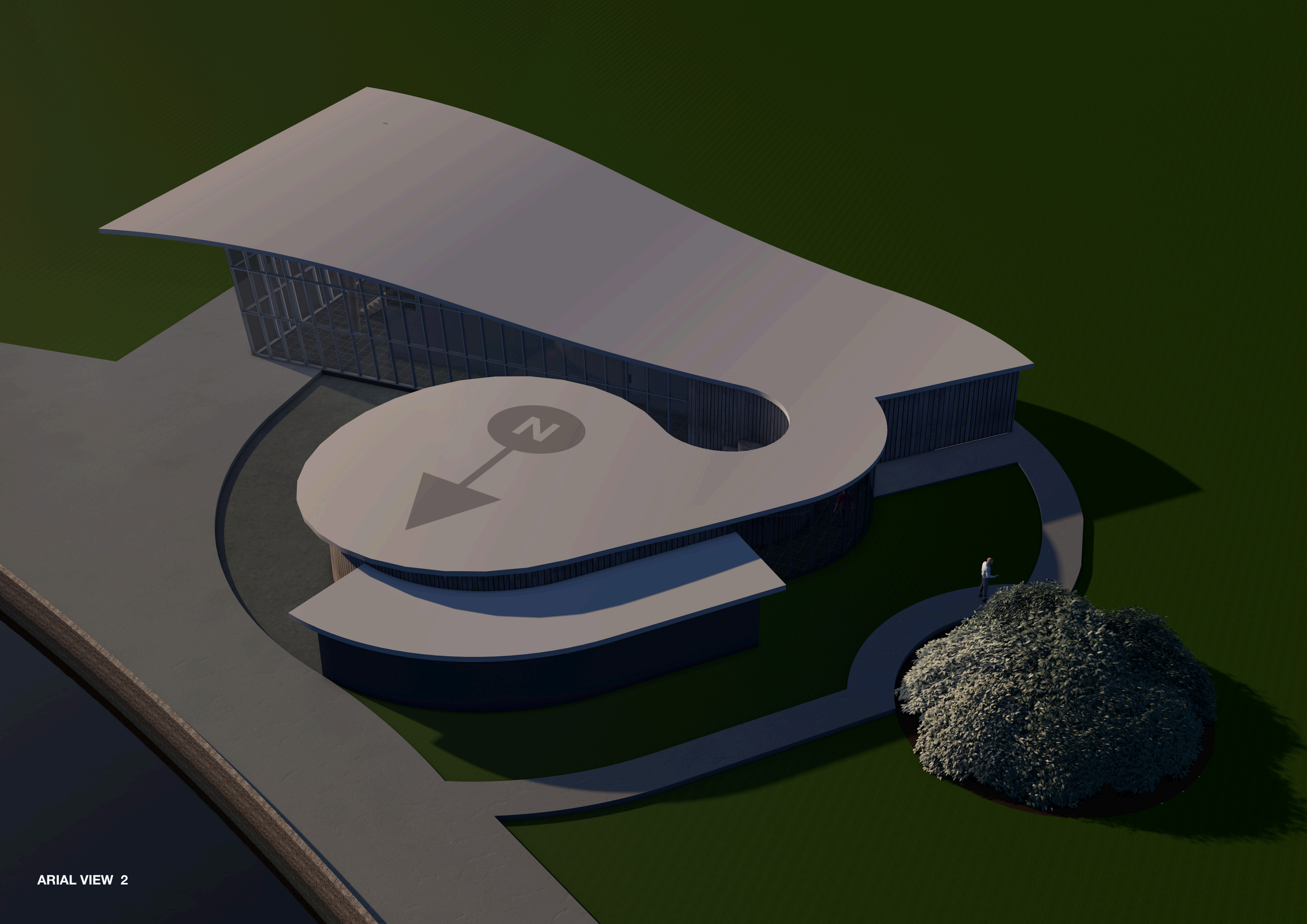
REAR GARDEN

SIGN

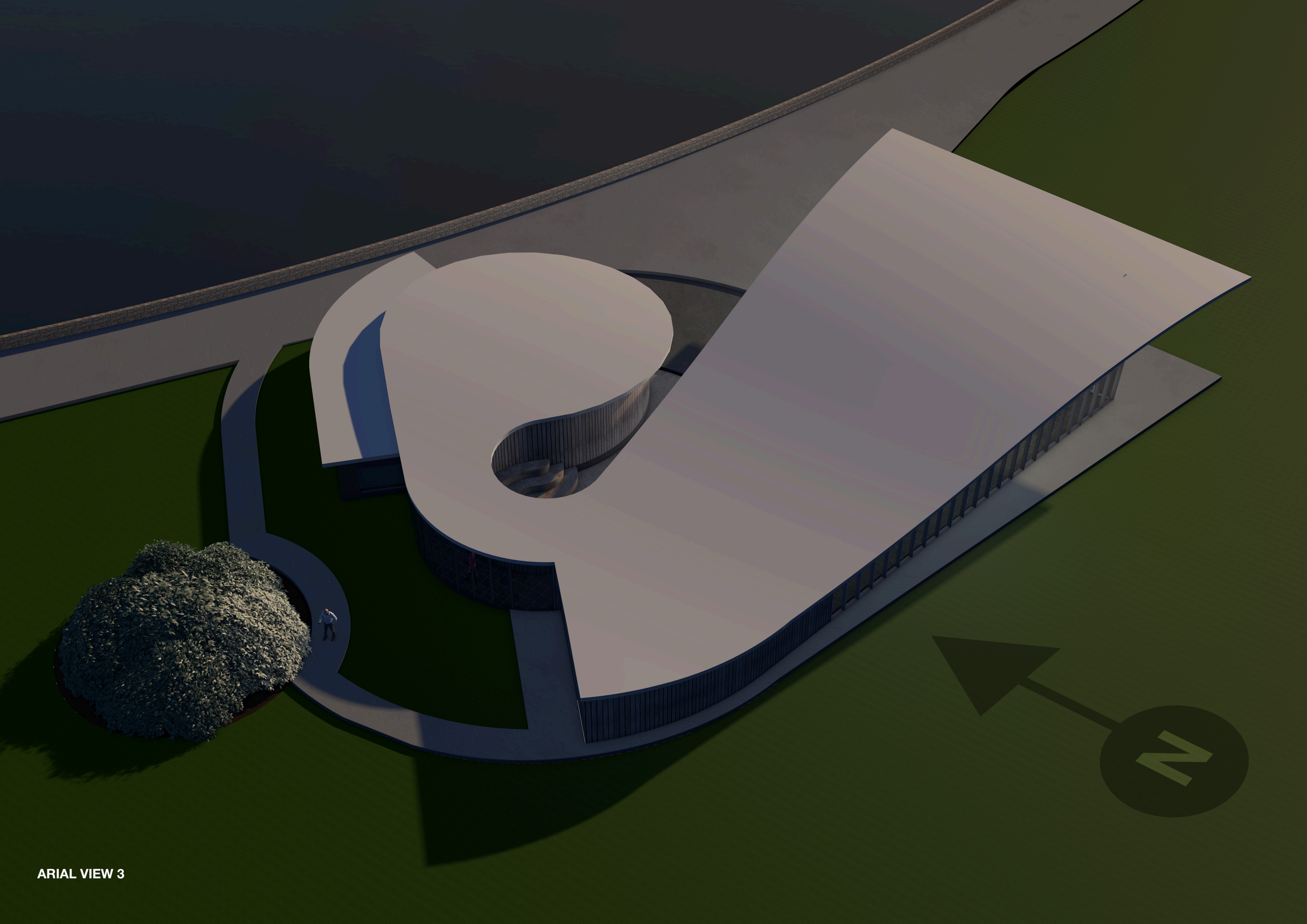
AUDITORIUM VISUAL



ARIAL VIEW 1



ARIAL VIEW 2



ARIAL VIEW 3

ORIGINAL PRESENTATION [2x A1]

william doble 13488782



greville auditorium

grevillea: an evergreen tree or shrub which bears conspicuous flowers that lack petals, most kinds of which are native to Australia.

lobby

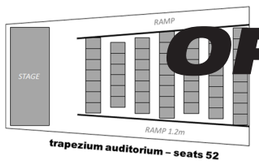
rear garden

outdoor amphitheatre

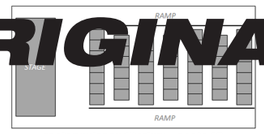
auditorium

william dobie 13488782

ORIGINAL PRESENTATION [2x A1]

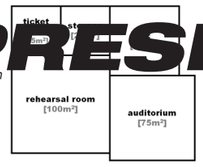


trapezium auditorium – seats 52



rectangular auditorium – seats 46

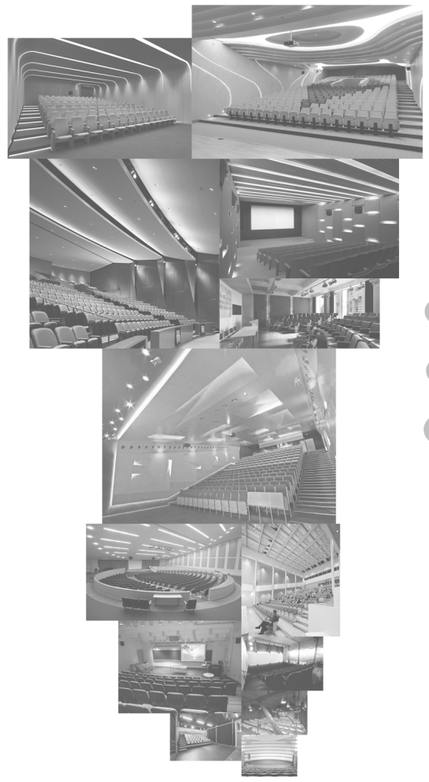
experiments with different ... theatres for ... The ... auditorium are 75m². The trapezoid auditorium can seat an extra 6 people when compared to the rectangular one

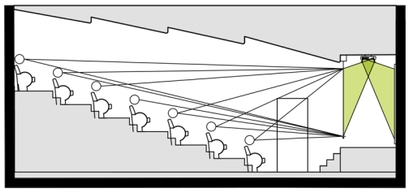


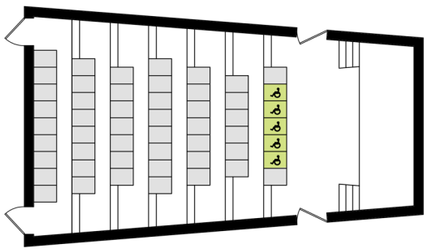
original landscaping [1:500]

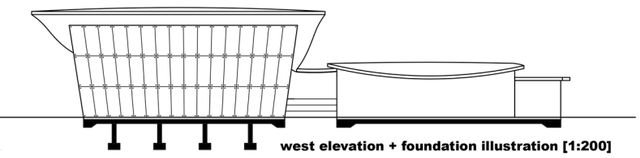
auditorium

The auditorium in this building is designed for presentations, small speeches, community classes and also doubles as an indie movie theatre. To accomodate these functions there are two screens in the auditorium, in front and behind the stage. There is a short throw projector mounted on a rotatable plate that can project onto either screen. The front one for movies, the rear one for presentations. The auditoria's seating is designed so that one can see the top and bottom of the front screen no matter where they are sat. this also ensures that at any seat a speaker will be clearly visible and audible. The auditoria's roof has been shaped to breakup the roof surface and reduce echo, and there are noise reduction panels along the left and right walls. The auditorium is also wheelchair accesable - with 5 designated chairs reserved for up to 3 wheelchair users to sit in front of.

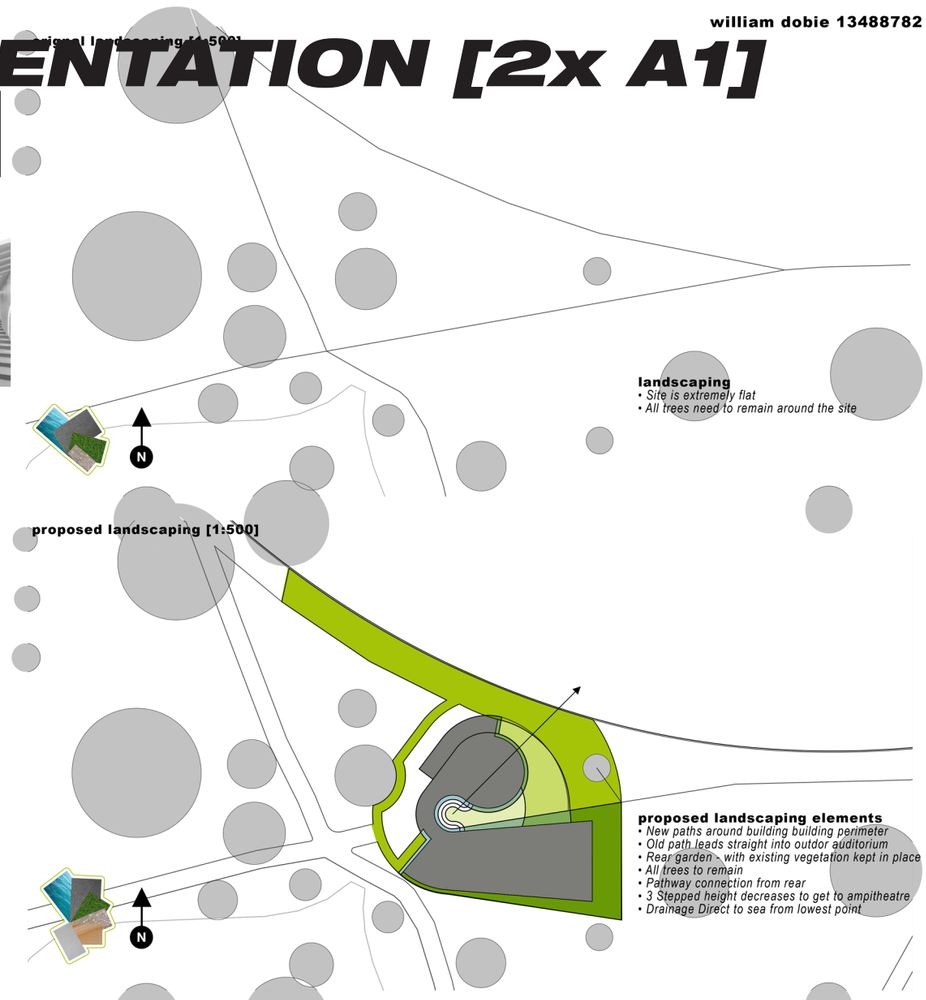








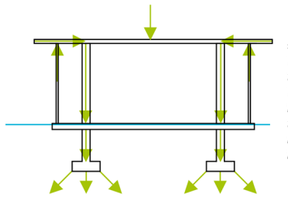
west elevation + foundation illustration [1:200]



proposed landscaping [1:500]

landscaping
- *Site is extremely flat*
- *All trees need to remain around the site*

proposed landscaping elements
- *New paths around building building perimeter*
- *Old path leads straight into outdor auditorium*
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structural explaination

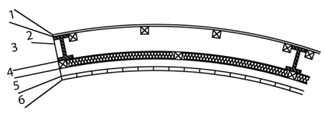
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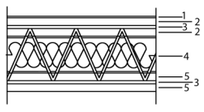
roof detail [1:10]

Concrete was chosen for the roof material for two reasons, despite not being the most sustainable. Concrete acts as a thermal mass which will be essential in keeping the building passively cooled. It is also structurally appropriate for the cantilevers and shapes that are so prominant in the roof design.

wall detail [1:20]

1: Flexible Plasterboard
2: Flexiboard Framework
3: Structural Steel
4: Vertical Timber Frame
5: Horizontal Timber Frame
6: Vertical Timber Classing

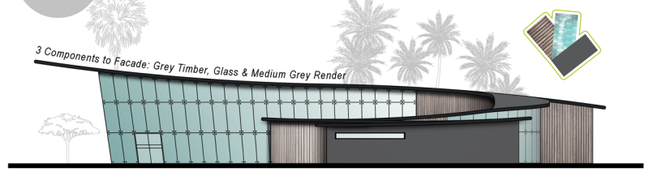




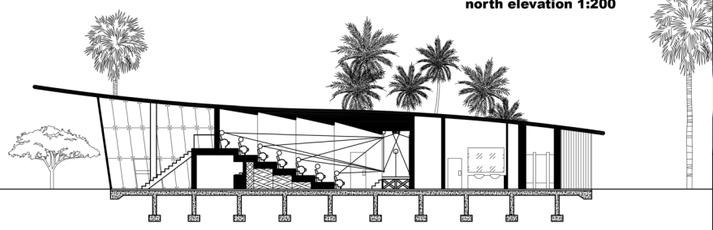
1: Waterproof Membrane
2: Outer Concrete Skin
3: Steel Reinforcement Truss
4: Rigid Foam Insulation
5: Inner Concrete Skin



north section 1:200



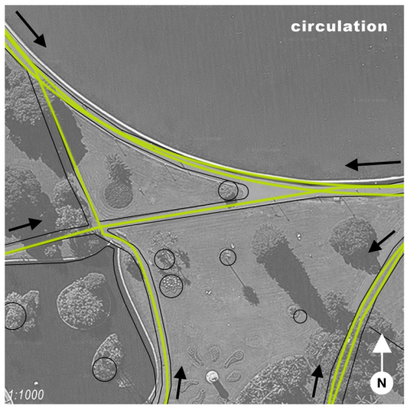
north elevation 1:200

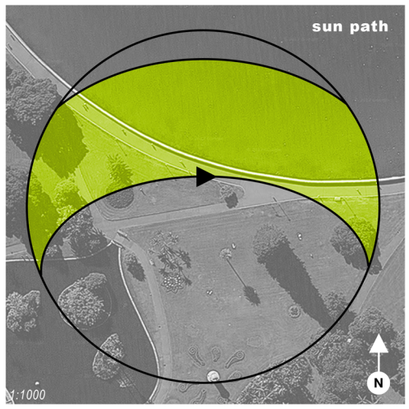


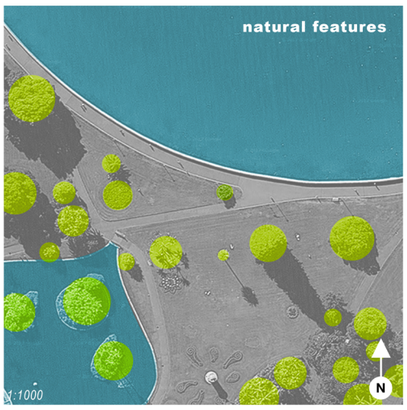


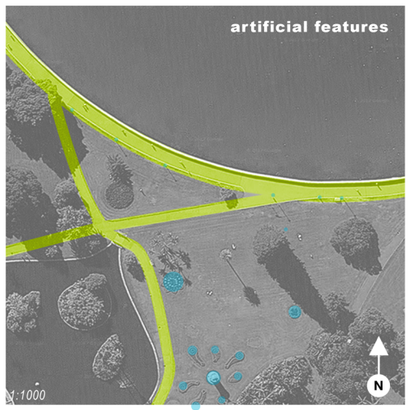


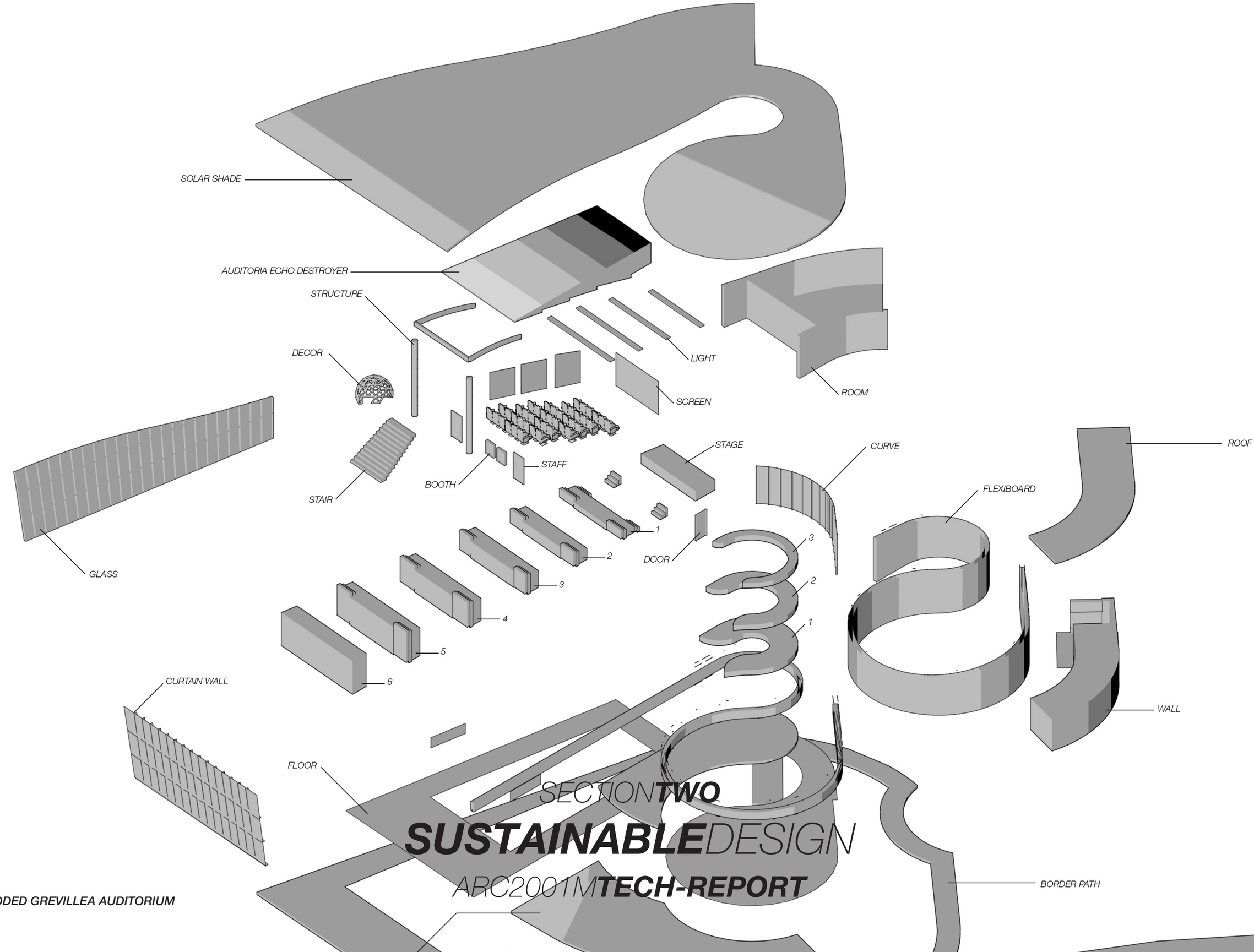












SECTION**TWO**

SUSTAINABLEDESIGN

ARC2001M**TECH-REPORT**

EXPLODED GREVILLEA AUDITORIUM

DOCUMENTS

1: TECHNICAL REPORT

WILLIAM DOBIE

SECTION**THREE**

INTEGRATEDDESIGN

ARC2003M**NEVERWHERE**

IMAGE: SITE CONTEXT: GRAPHITI THEME

S E R P E N T I N E



FEARED BY MANY
ESPECIALLY DOOR

ONE OF SEVEN SISTERS

IMPERIOUS

ONLY WEARS THIS DRESS
IT NEEDS A SPECIAL ROOM

NEITHER HAPPY NOR SAD.

TOUCH OF CLASS

EYES SHARP

BEHAVE,
OR SERPENTINE WILL TAKE YOU

CONTEXT STREETSCAPE







CONTEXT STREETSCAPE



Windows should
not be blocked

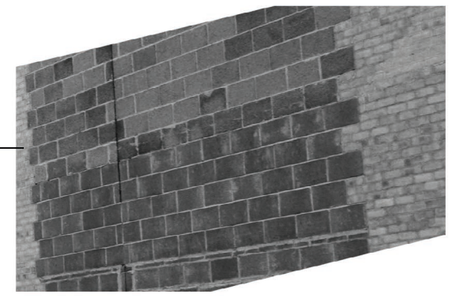
Towering Adjacent Building

Sign on Corner of Site



Adjacent Façade

Corner Street



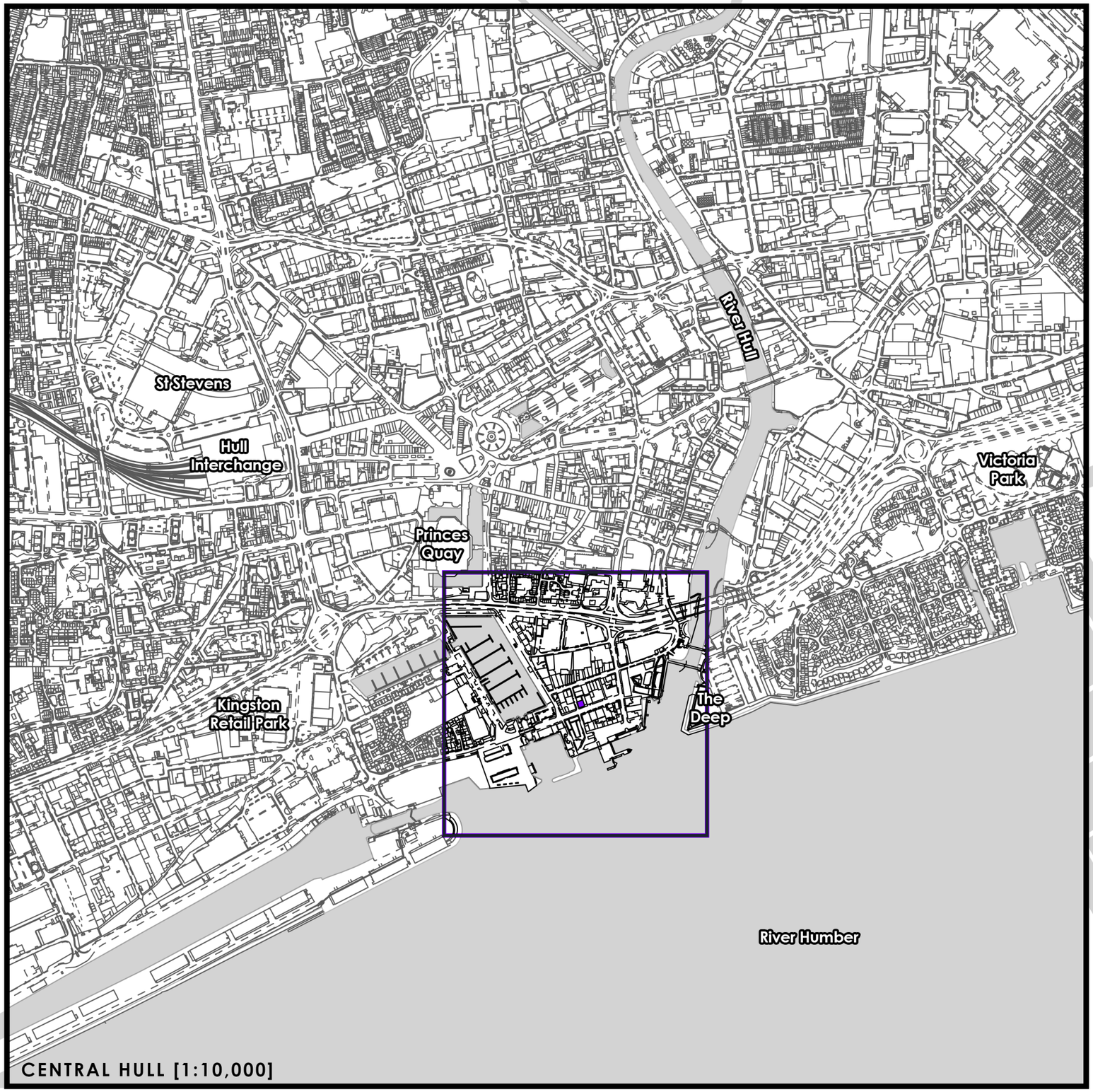
Ugly Blockwork



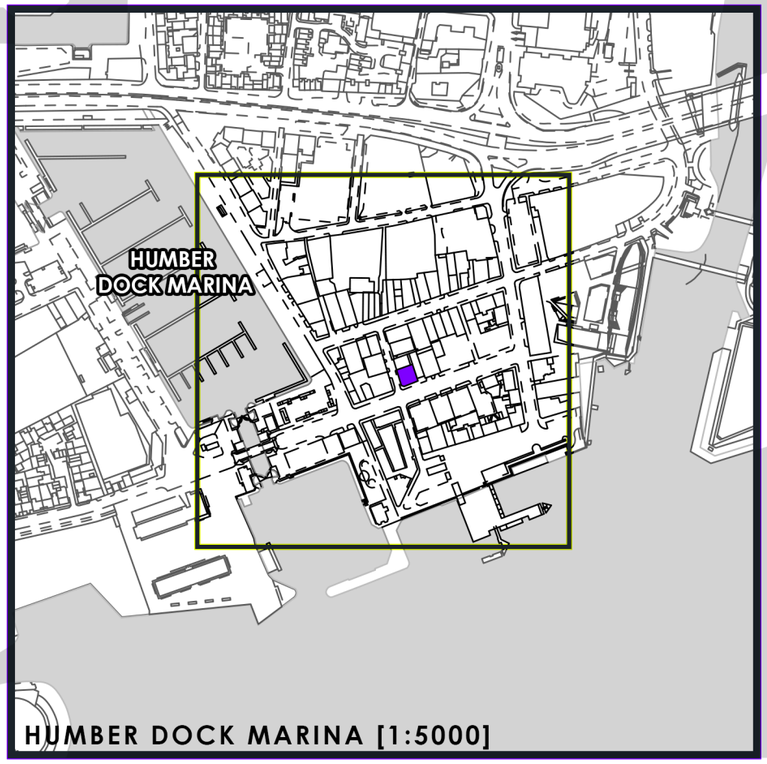
Gap in rear corner
of site

SUBJECT ANALYSIS

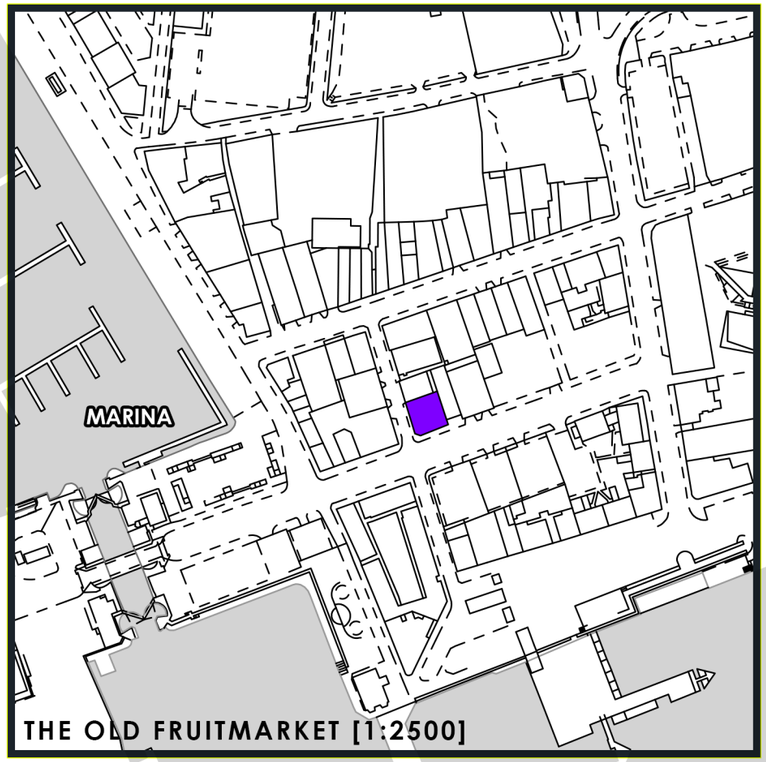
THREE SITE FACTORS THINGS TO ADDRESS WITH THE BUILDING DESIGN



CENTRAL HULL [1:10,000]

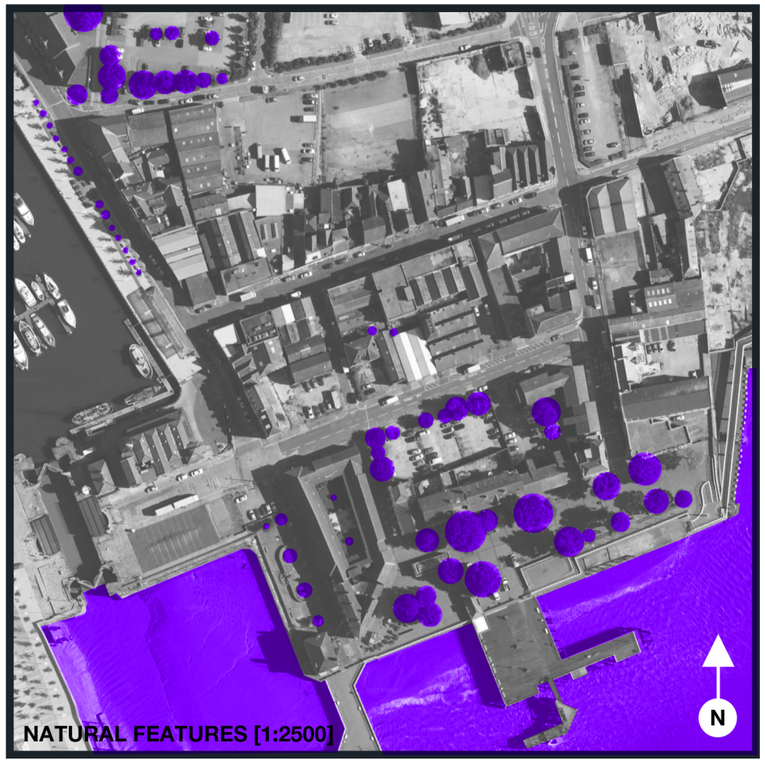


HUMBER DOCK MARINA [1:5000]



THE OLD FRUITMARKET [1:2500]





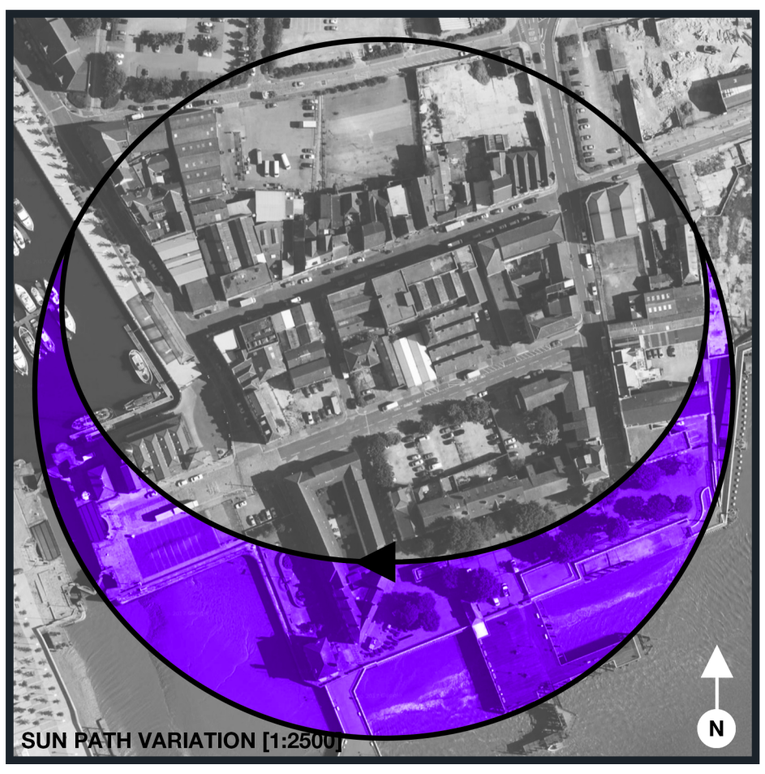
1512 H/Y

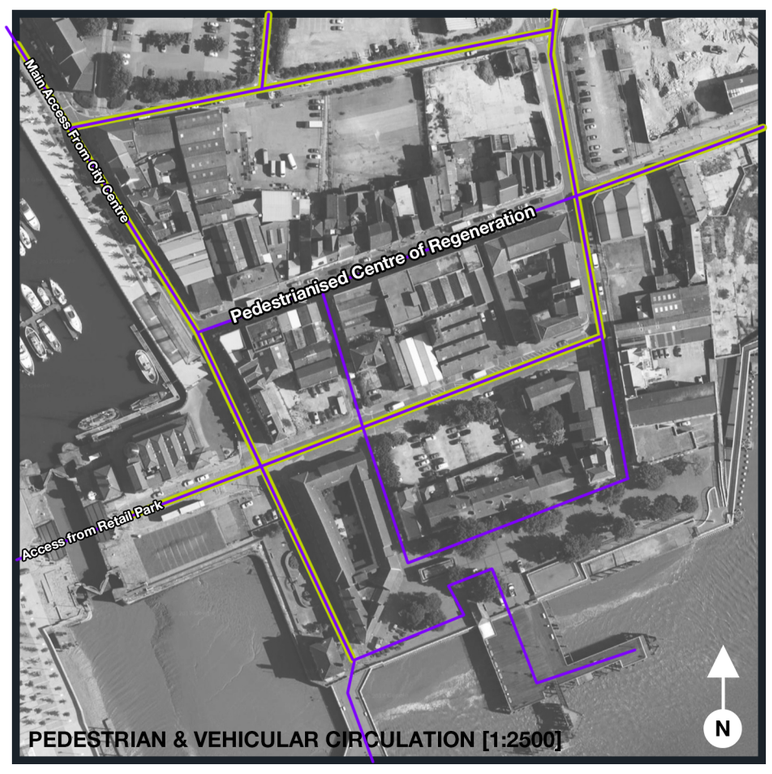
679MM/Y

MAX AVG: 13.8 km/h

AVG HI: 14.0°C
REC HI: 34.4°C

AVG LO: 6.7°C
REC LO: -11.1°C







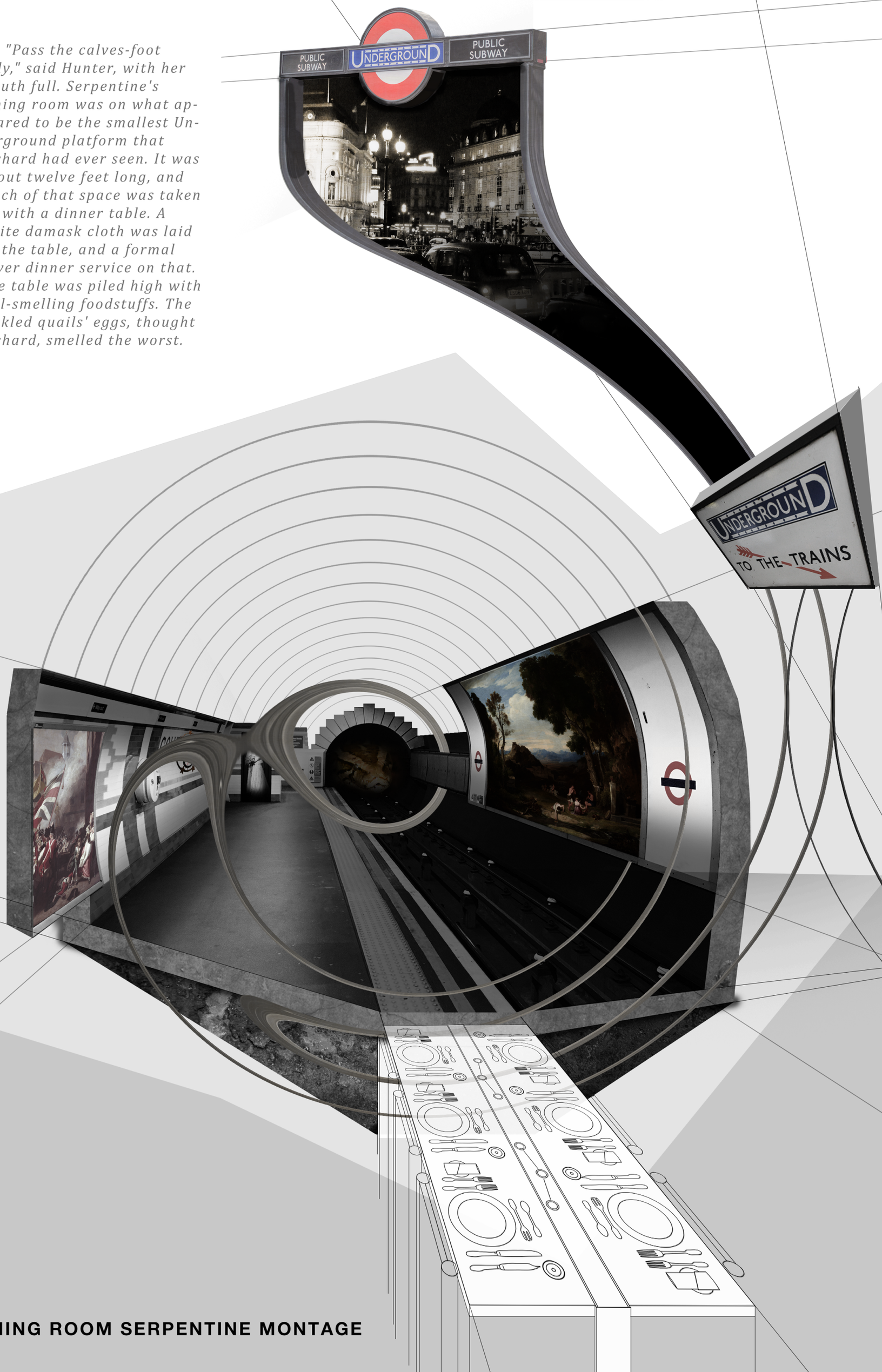
SERPENTINE'S STABLE MONTAGE

Hunter picked up another wooden bucket, this one filled with water, and hauled it across the stable floor. "I don't know what you drank," she said. "But it must have been potent." Hunter dipped her hand into the bucket and flicked it at Door's face, spraying her with water. Door's eyes flickered.

"No wonder Atlantis sank," muttered Richard. "If they all felt like this in the morning it was probably a relief. Where are we?"

Hunter flicked another handful of water at Door's face. "In the stables of a friend," she said. Richard looked around. The place did look a little like a stable. He wondered if it were for horses—and if so, what kind of horses would live beneath the ground? There was a device painted on the wall: the letter S (or was it a snake? Richard could not tell) circled by seven stars.

"Pass the calves-foot jelly," said Hunter, with her mouth full. Serpentine's dining room was on what appeared to be the smallest Underground platform that Richard had ever seen. It was about twelve feet long, and much of that space was taken up with a dinner table. A white damask cloth was laid on the table, and a formal silver dinner service on that. The table was piled high with evil-smelling foodstuffs. The pickled quails' eggs, thought Richard, smelled the worst.



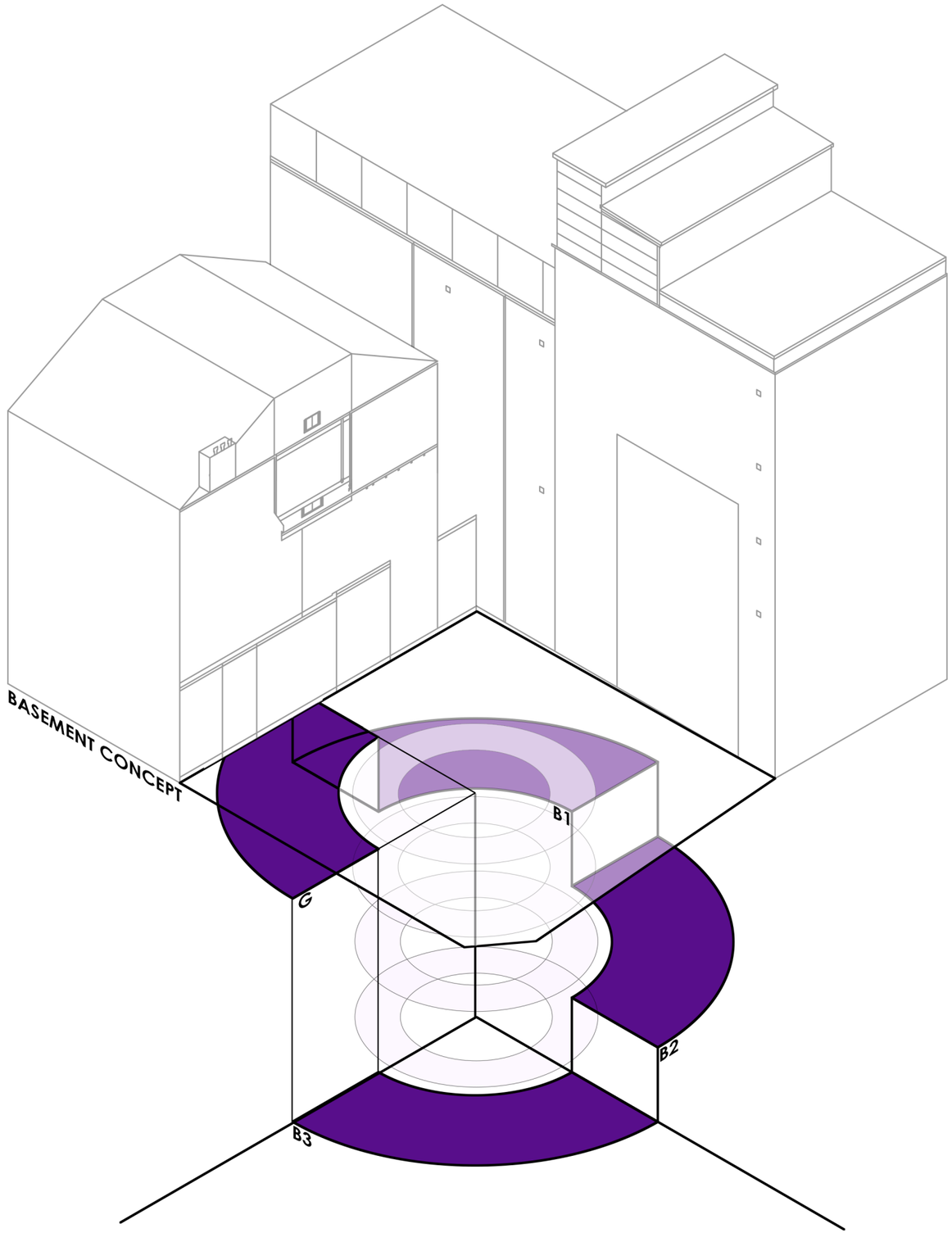
DINING ROOM SERPENTINE MONTAGE


01482
871772



ABOVE GROUND [SHOP]

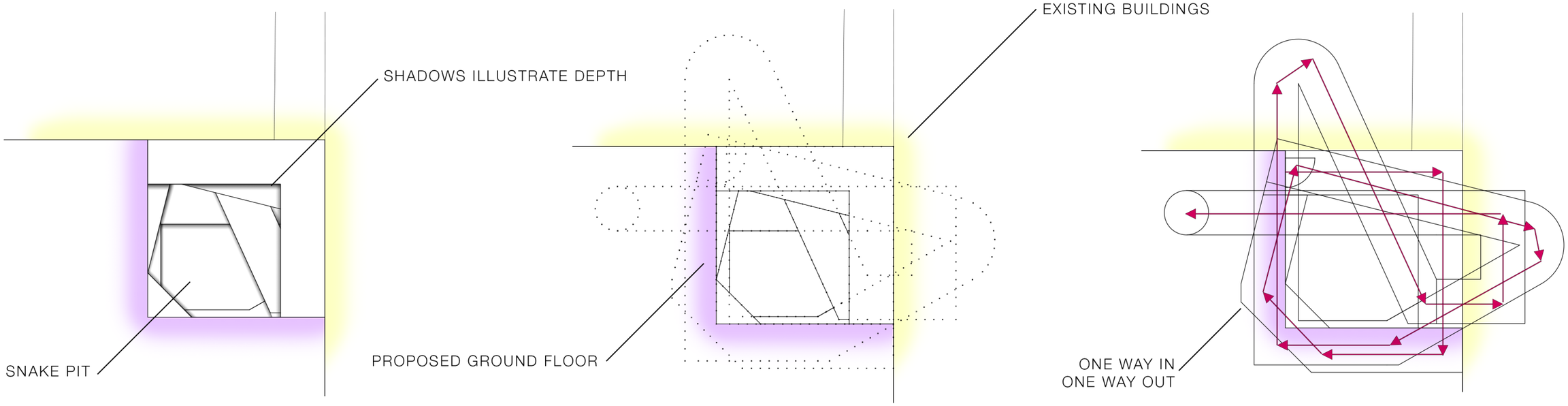
SERPENTINE'S STUDY	STAIR	STABLE		
CELLAR		DINING ROOM	STAIR	RECEPTION ROOM
REPTILE ROOM	STAIR	CHAMBER OF SECRETS		



CONCEPT
The building will cascade down through multi-layered basements through a network of tunnels reminiscent of a snake. single entrance/exit is intimidating [interpreted from narrative]

The building will also disregard the site boundary when underground, extending out in every direction.

Each floor will have different functions, with the must luxurious the furthest down.



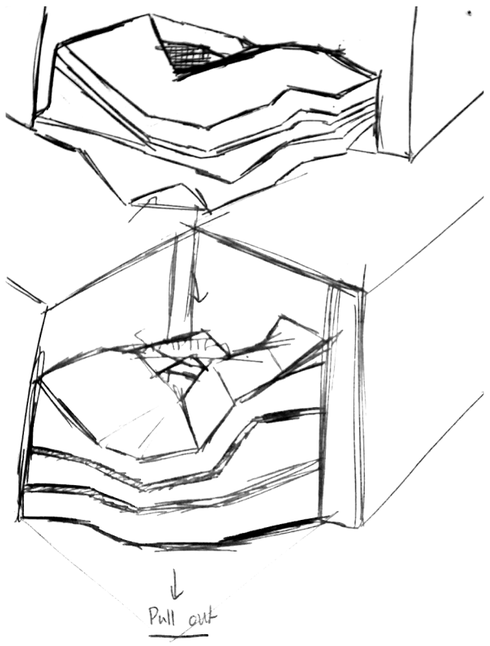
TOP DOWN VIEW

TOP DOWN VIEW + HIDDEN LINE

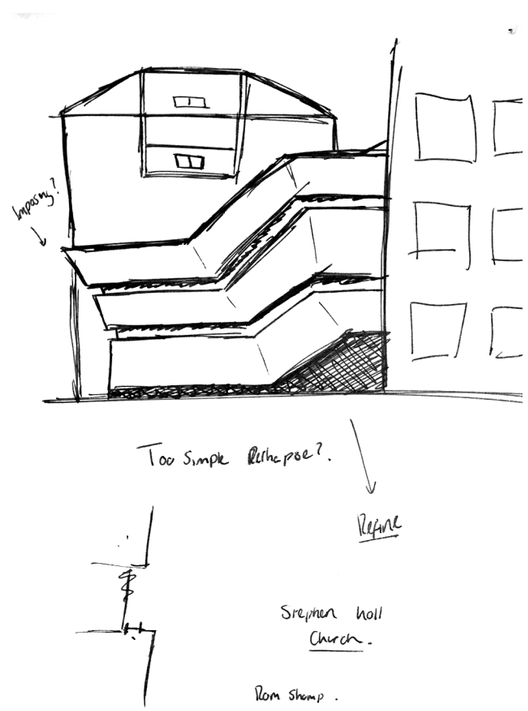
CIRCULATION

CASCADING BASEMENT CONCEPT [1:100]

THESE DIAGRAMS ARE TO SHOW THE INITIAL CASCADING CORRIDOR CONCEPT. THEY SHOW DEPTH, CIRCULATION AND HOW FAR OUT THE BASEMENTS WILL EXTEND BEYOND THE SITE. THEY REPRESENT, BUT ARE NOT ACCURATE TO THE FINAL FLOORPLAN



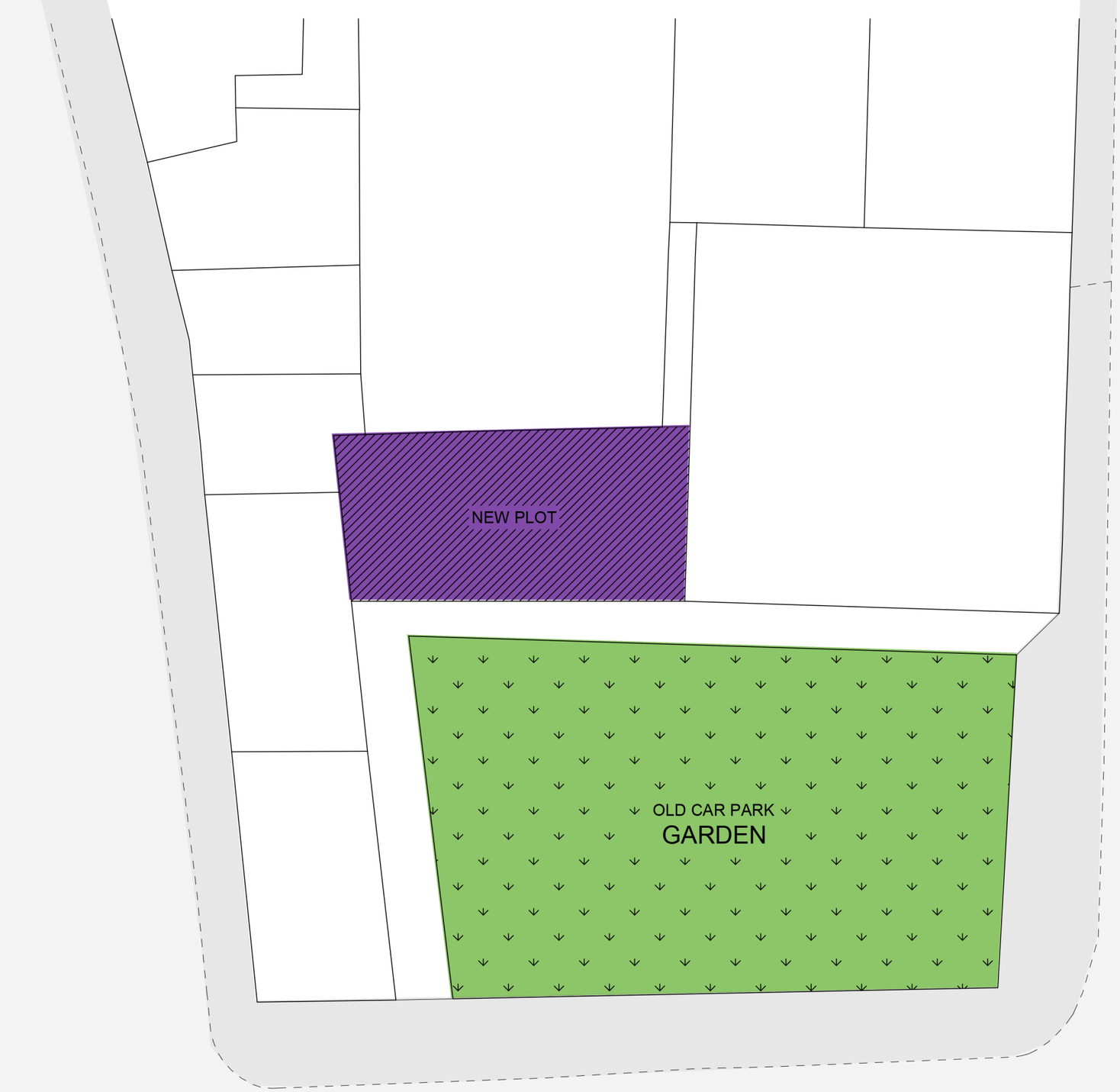


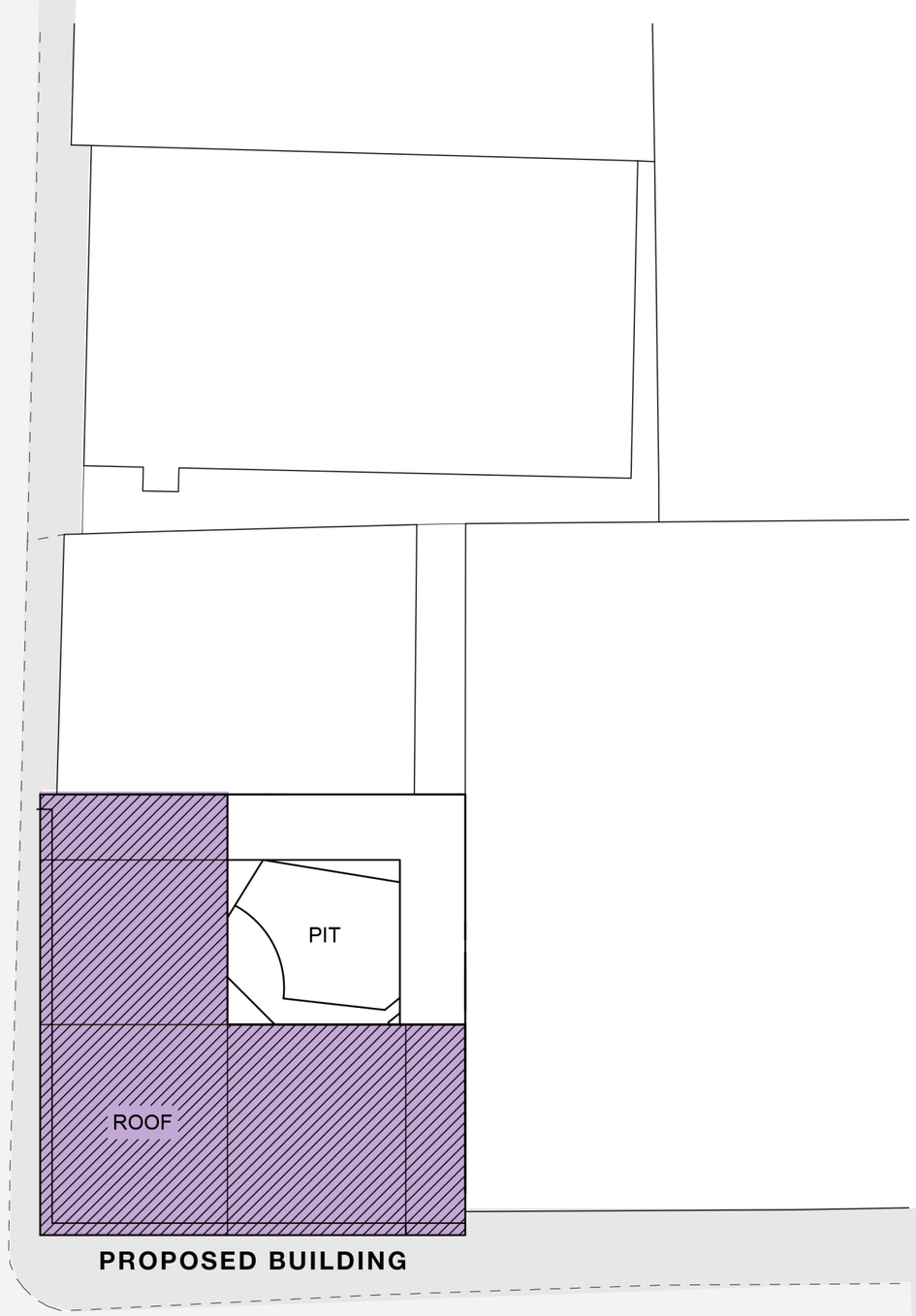


IDEA → REFINE → SIMPLIFY

GROUND FLOOR IDEA EVOLUTION [EXCERPTS FROM NOTEBOOK

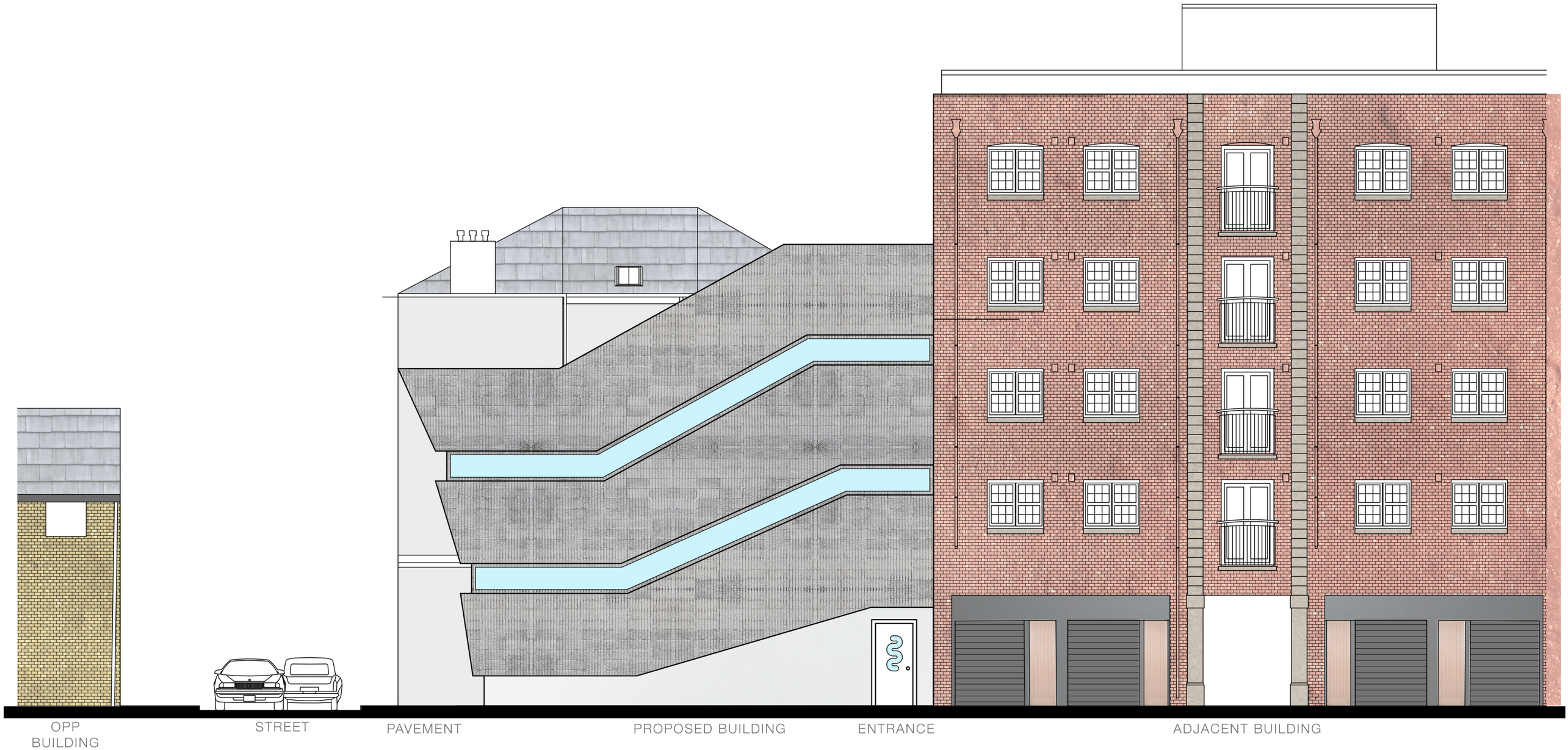
CONCEPT: BUILDING WRAPS AROUND CORNER STIE LIKE A SNAKE, THEN PROCEEDS TO CASCADE DOWNWARDS INTO BASEMENT, CARRYING THE MOMENTUM.



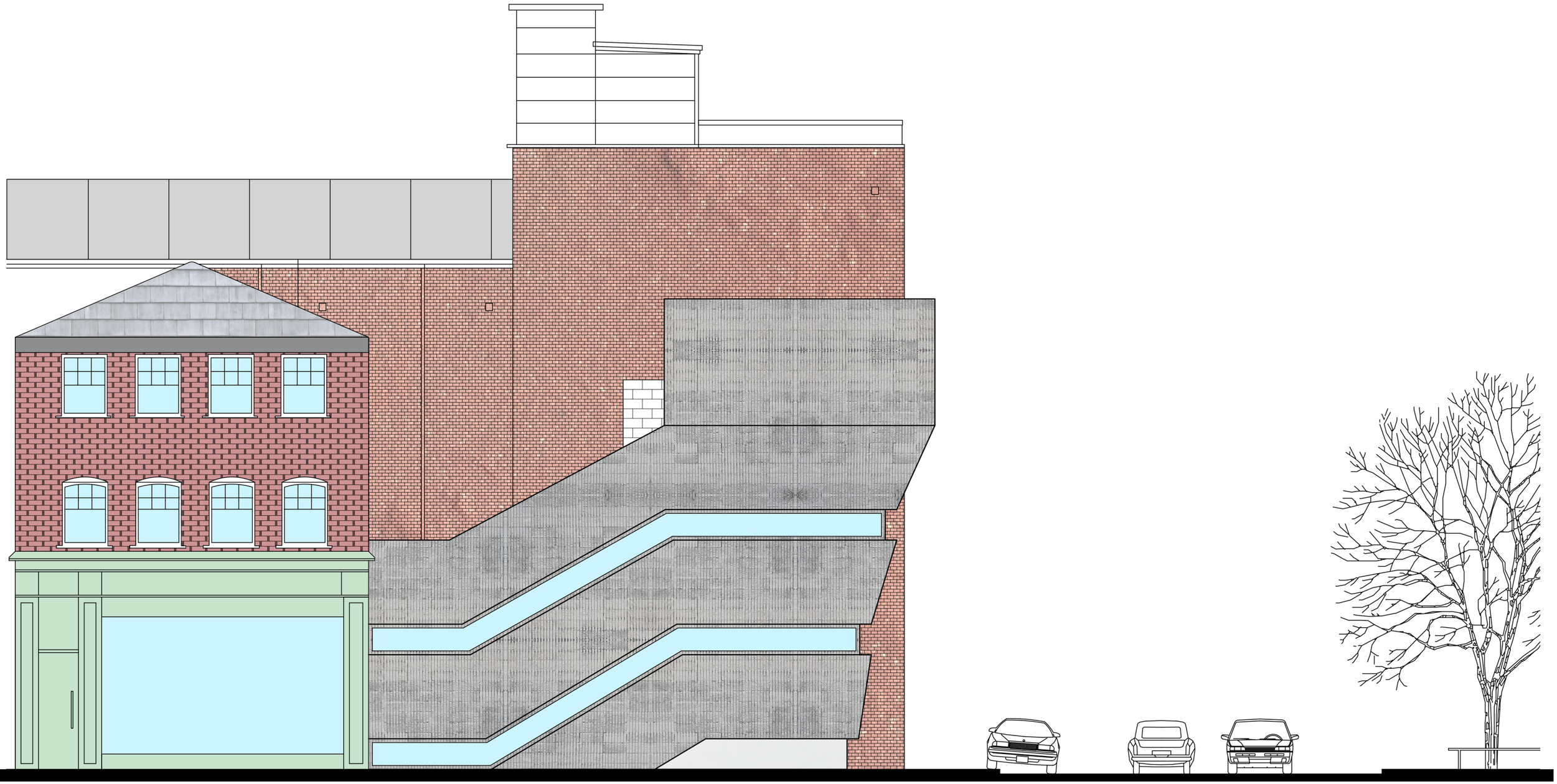


Proposal includes sections that are not located on the specified site. These regions would be part of a larger development plan: A new green space to replace the current car park, and a takeaway food establishment in a new plot to the north.

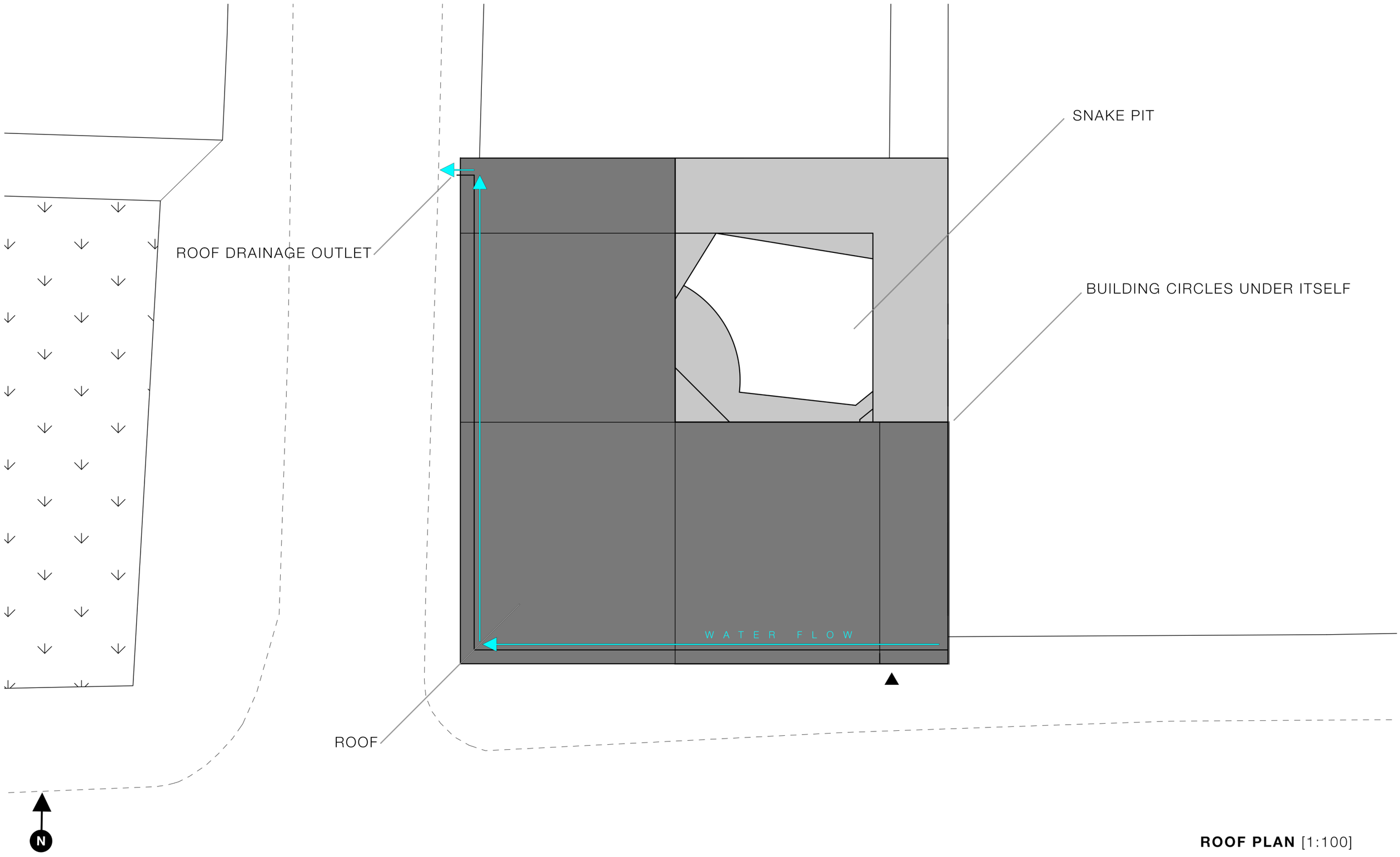
LANDSCAPE PROPOSAL AND SITE PLAN [1:200]



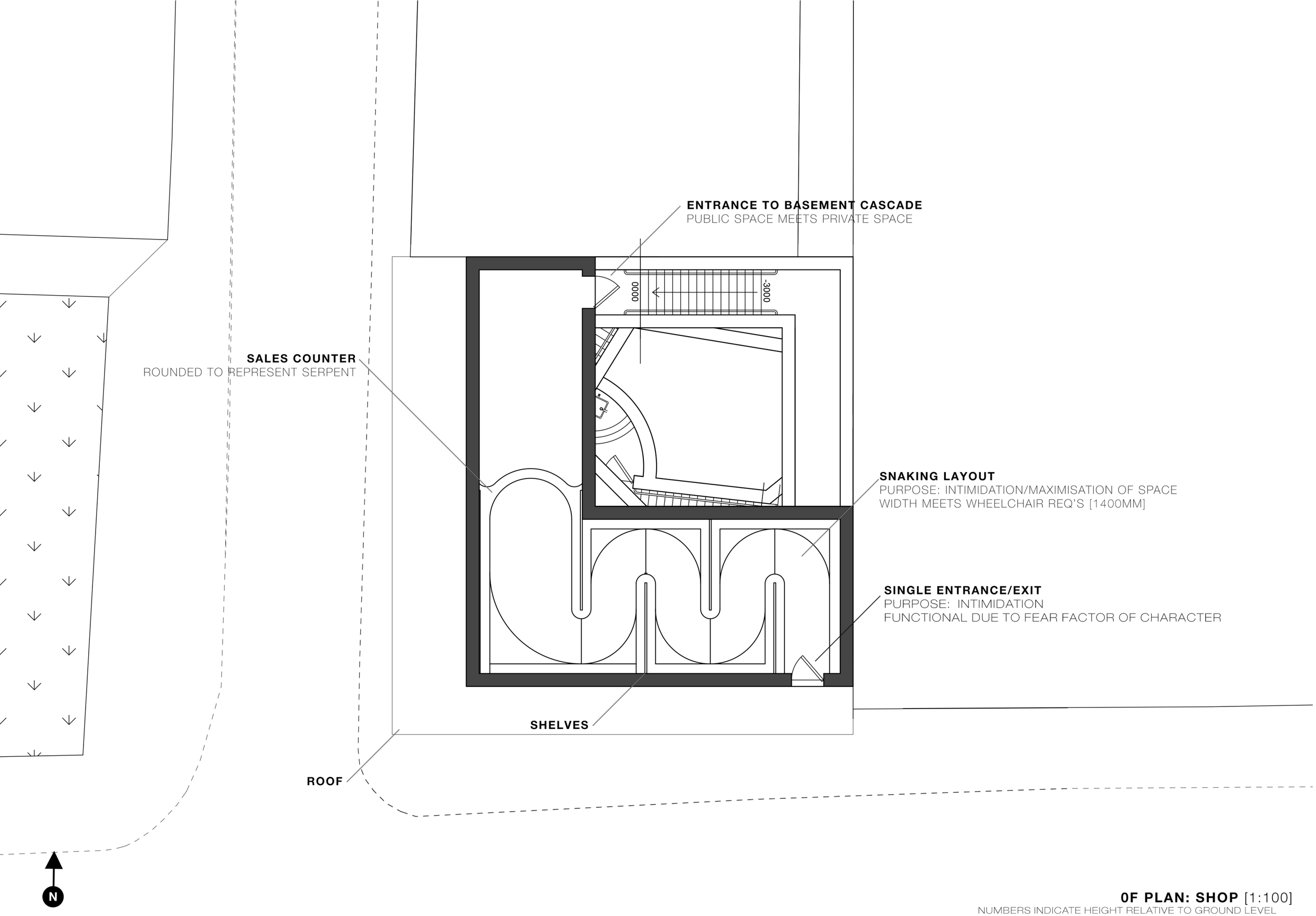
SOUTH ELEVATION, ENTRANCE [1:100]



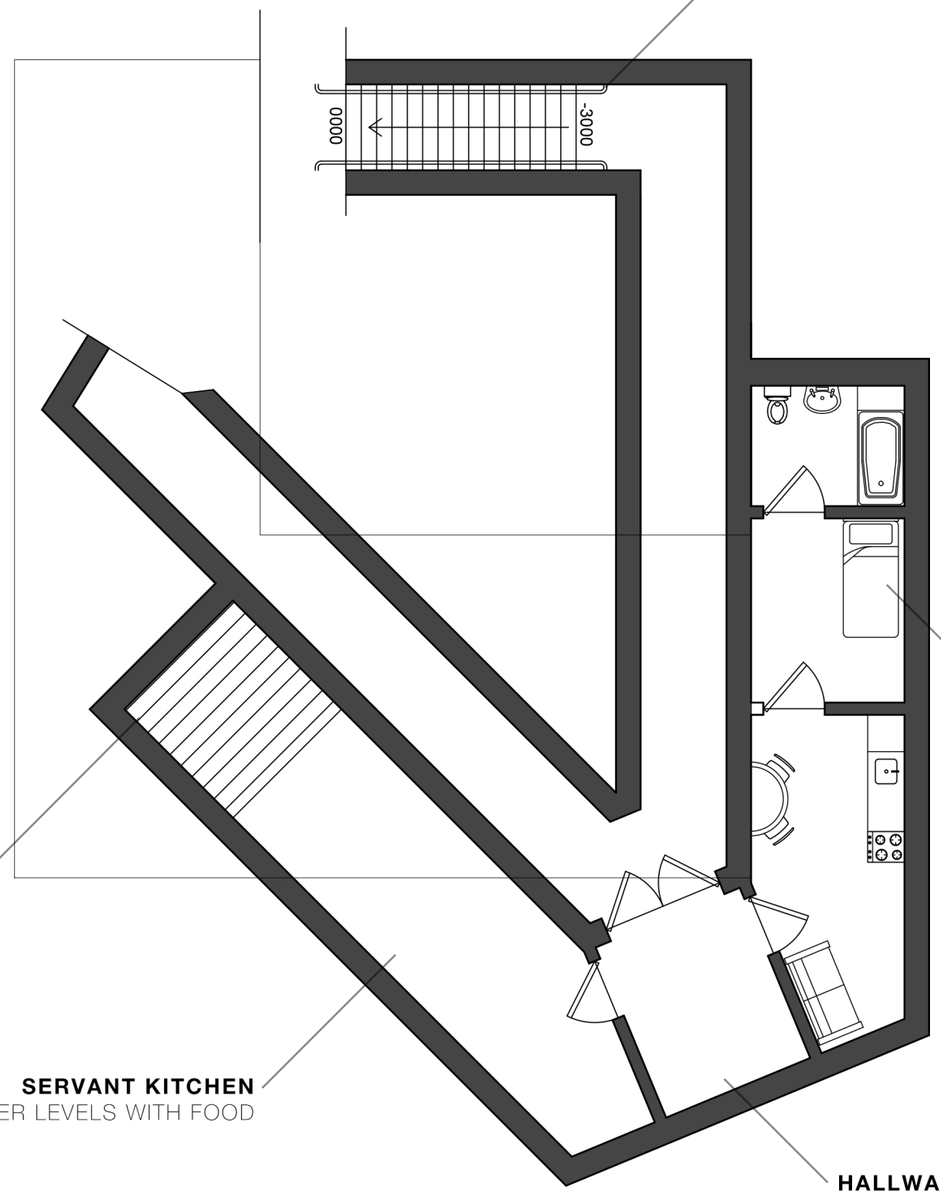
WEST ELEVATION [1:100]



ROOF PLAN [1:100]



0F PLAN: SHOP [1:100]
NUMBERS INDICATE HEIGHT RELATIVE TO GROUND LEVEL



HANDRAILS
FITTED TO EVERY STAIRCASE ACCORDING TO PART M REGULATIONS

STAFF FLAT
INTENTIONALL SMALL AND BASIC

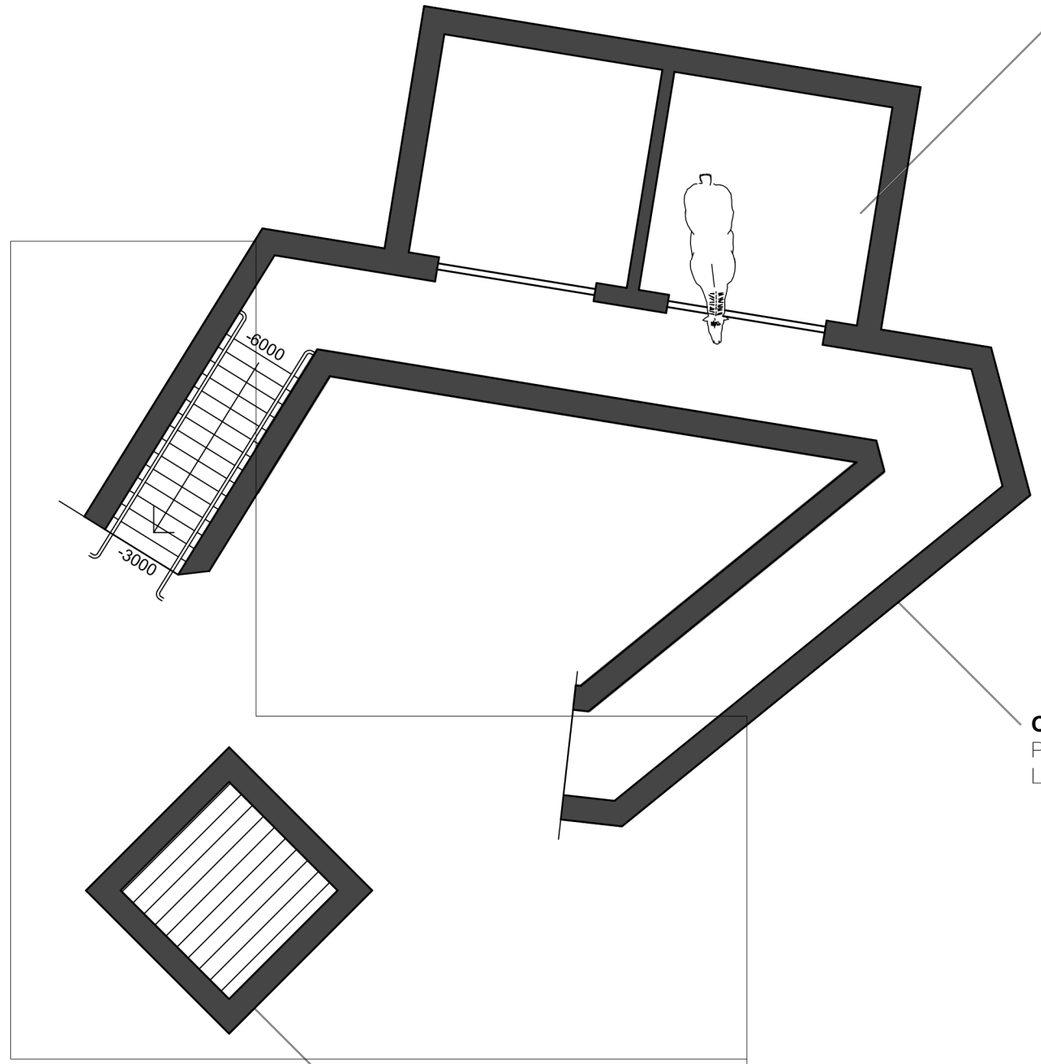
ELEVATOR TO -3F
PURPOSE: TO CARRY FOOD BETWEEN LEVELS QUICKLY

SERVANT KITCHEN
PURPOSE: TO SERVE LOWER LEVELS WITH FOOD

HALLWAY
PURPOSE: TO DISTINGUISH BETWEEN LIVING AND WORKING AREAS

N

-1F PLAN: STAFF QUARTERS [1:100]
NUMBERS INDICATE HEIGHT RELATIVE TO GROUND LEVEL [MM]



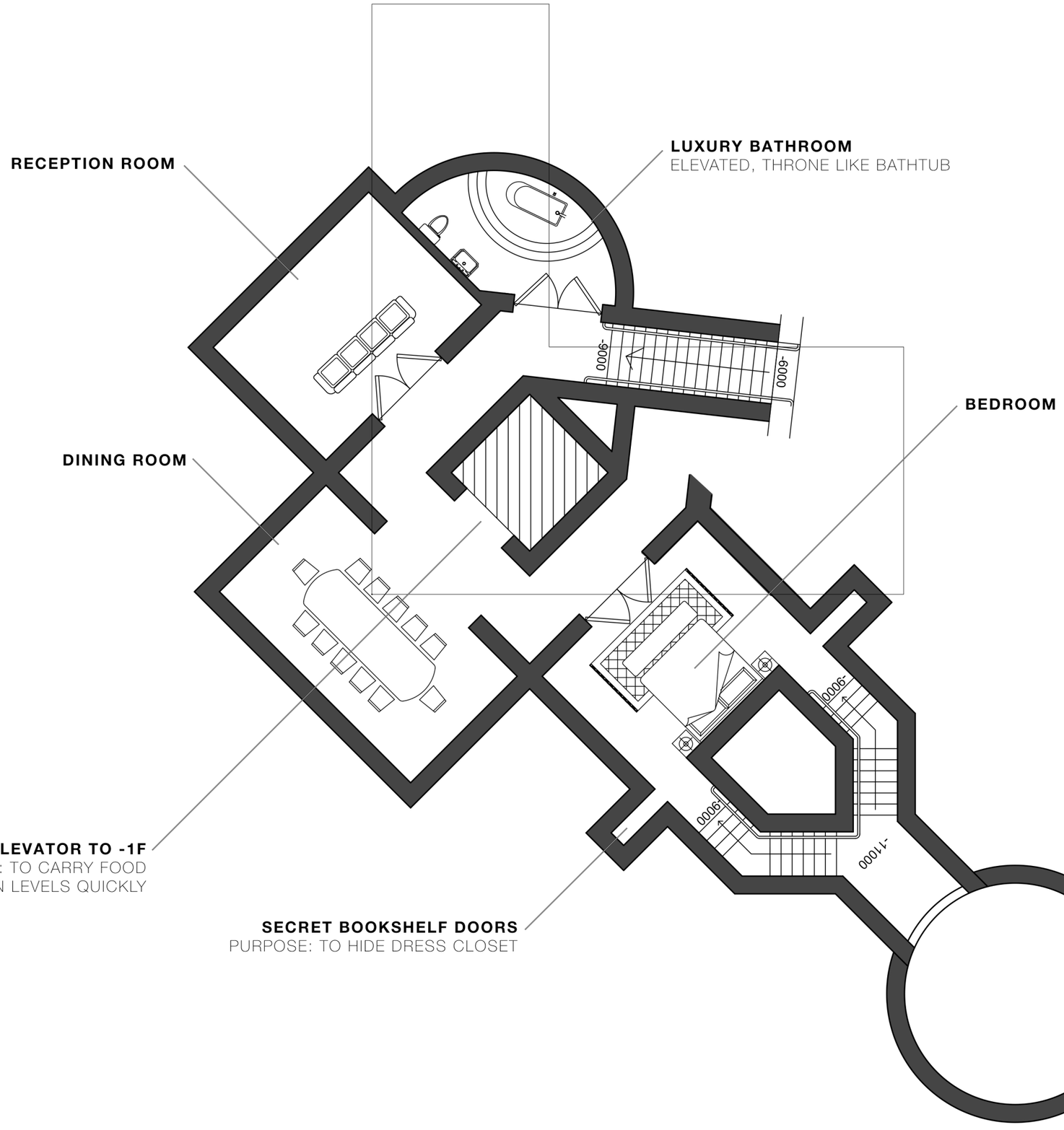
STABLE
NARRATIOVE LINK, HORSE FOR ILLUSTRATION.

CASCADING LAYOUT
PURPOSE: TO CARRY PERSONS AROUND THE BUILDING LONGWINDEDLY. INTIMIDATION. REPRESENTS A SERPENT

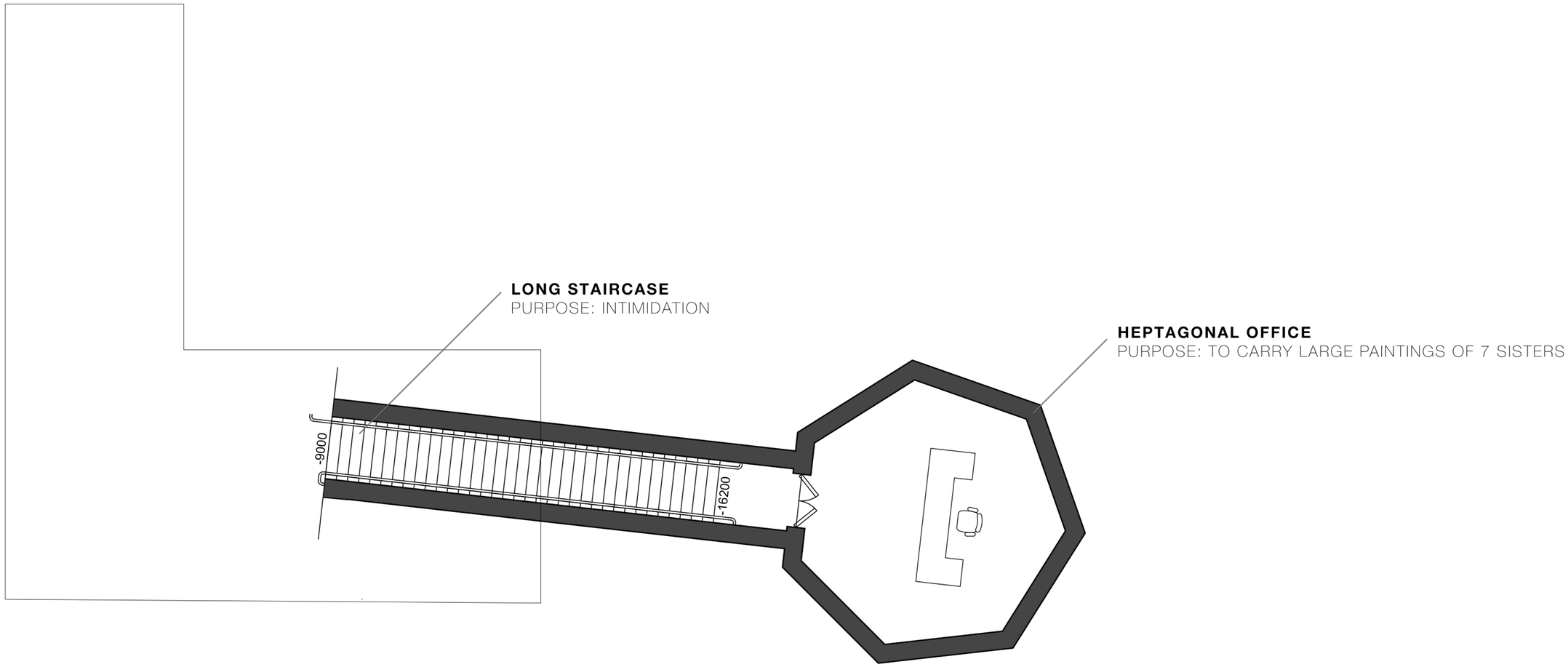
ELEVATOR SHAFT
DOES NOT STOP AT THIS FLOOR

N

-2F PLAN: STABLE [1:100]
NUMBERS INDICATE HEIGHT RELATIVE TO GROUND LEVEL [MM]

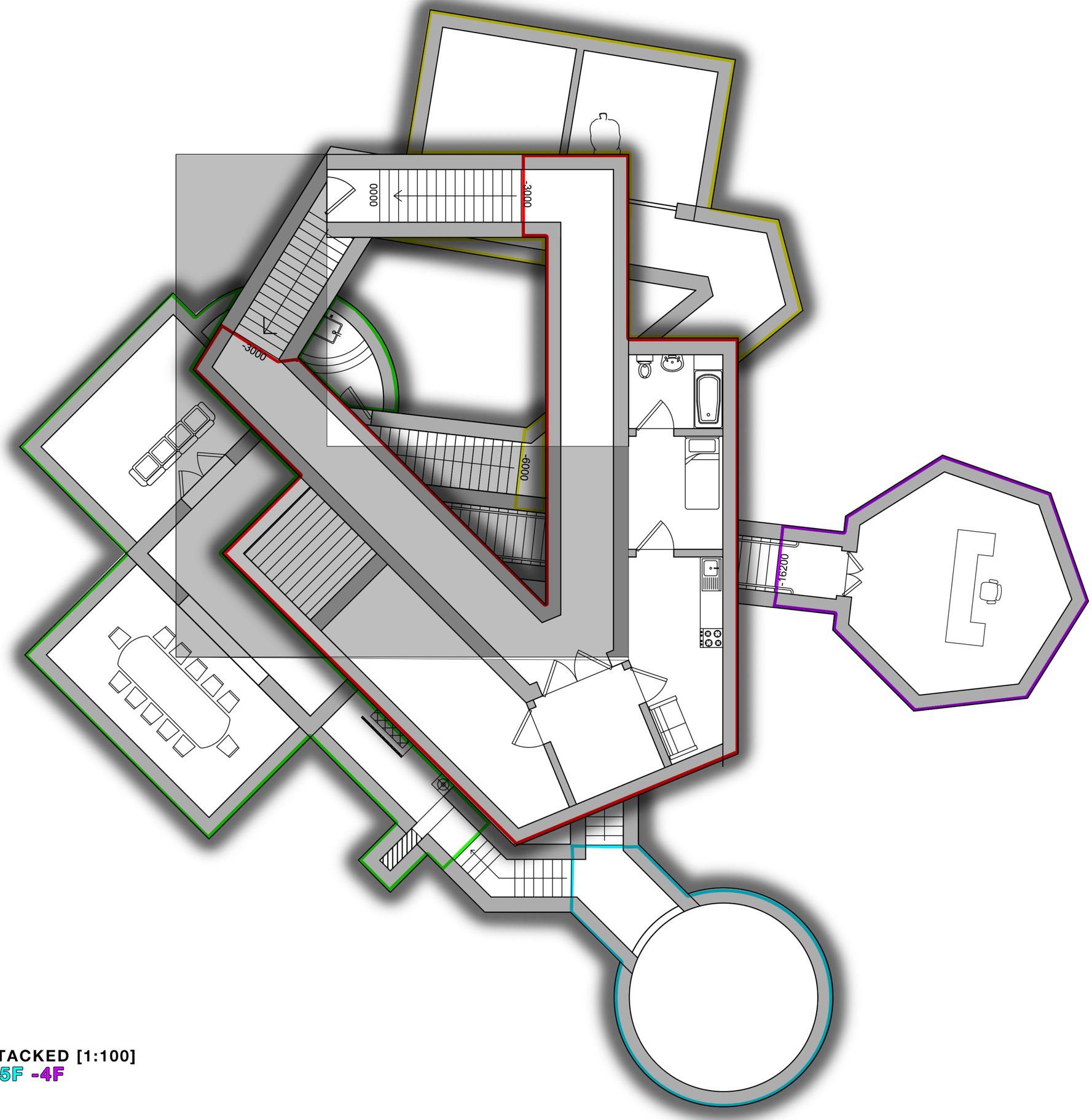


-3F PLAN: ERPENTINE'S QUARTERS [1:100]
NUMBERS INDICATE HEIGHT RELATIVE TO GROUND LEVEL [MM]



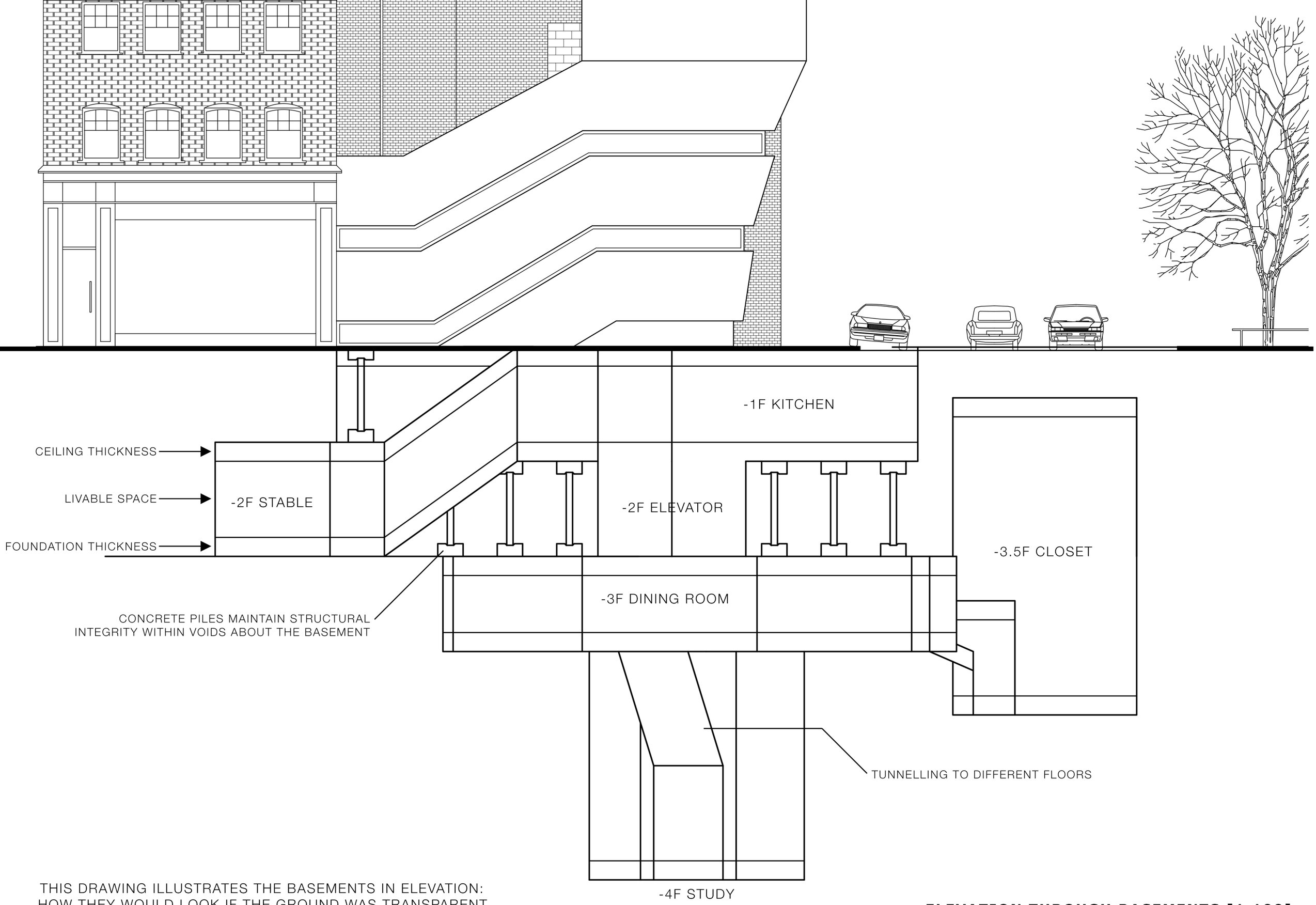
N

-4F PLAN: STUDY [1:100]
NUMBERS INDICATE HEIGHT RELATIVE TO GROUND LEVEL [MM]



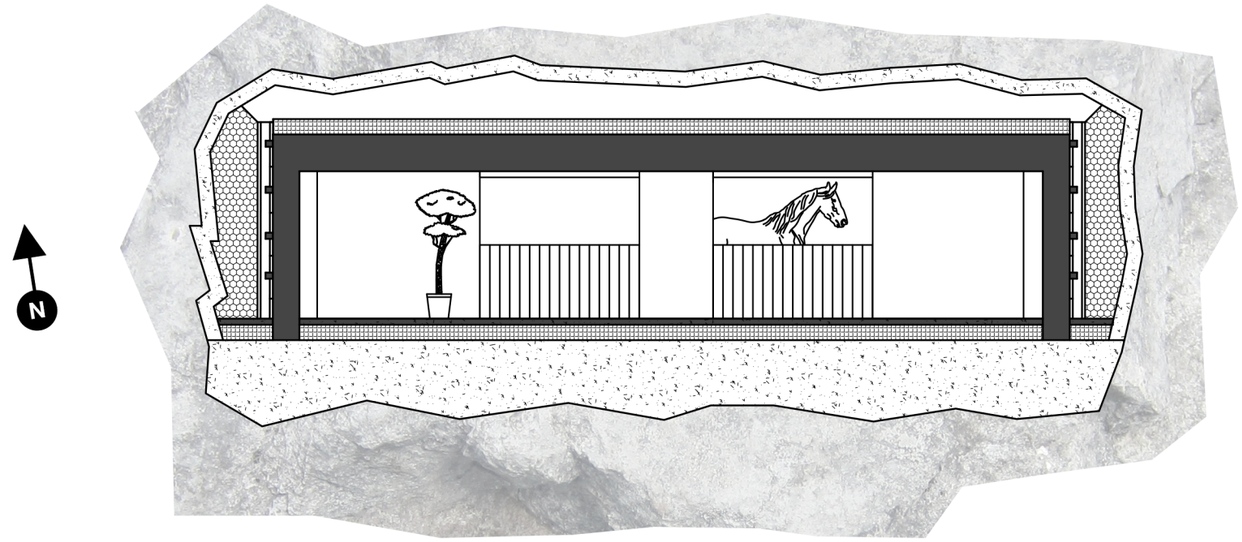
BASEMENT PLANS STACKED [1:100]

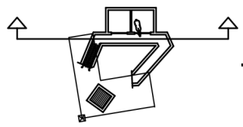
-1F -2F -3F -3.5F -4F



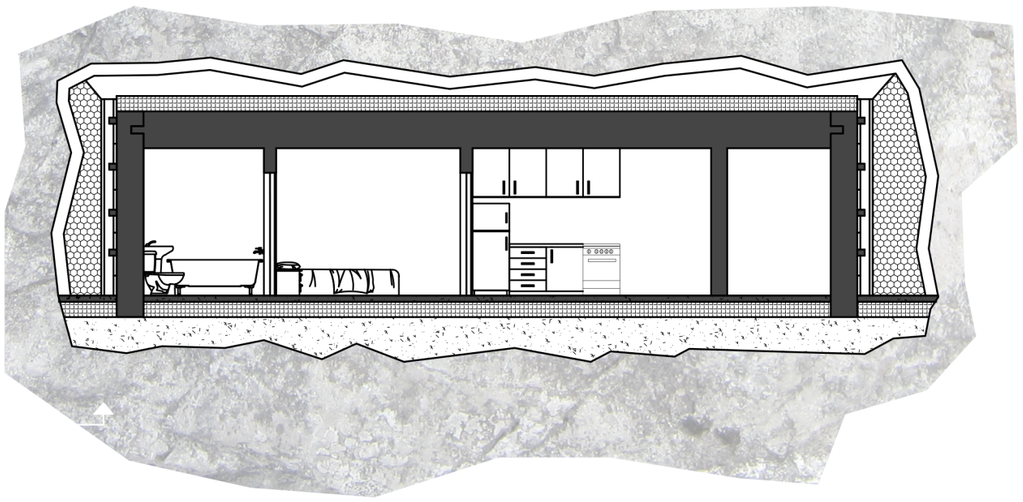
THIS DRAWING ILLUSTRATES THE BASEMENTS IN ELEVATION:
HOW THEY WOULD LOOK IF THE GROUND WAS TRANSPARENT.

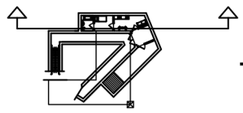
ELEVATION THROUGH BASEMENTS [1:100]





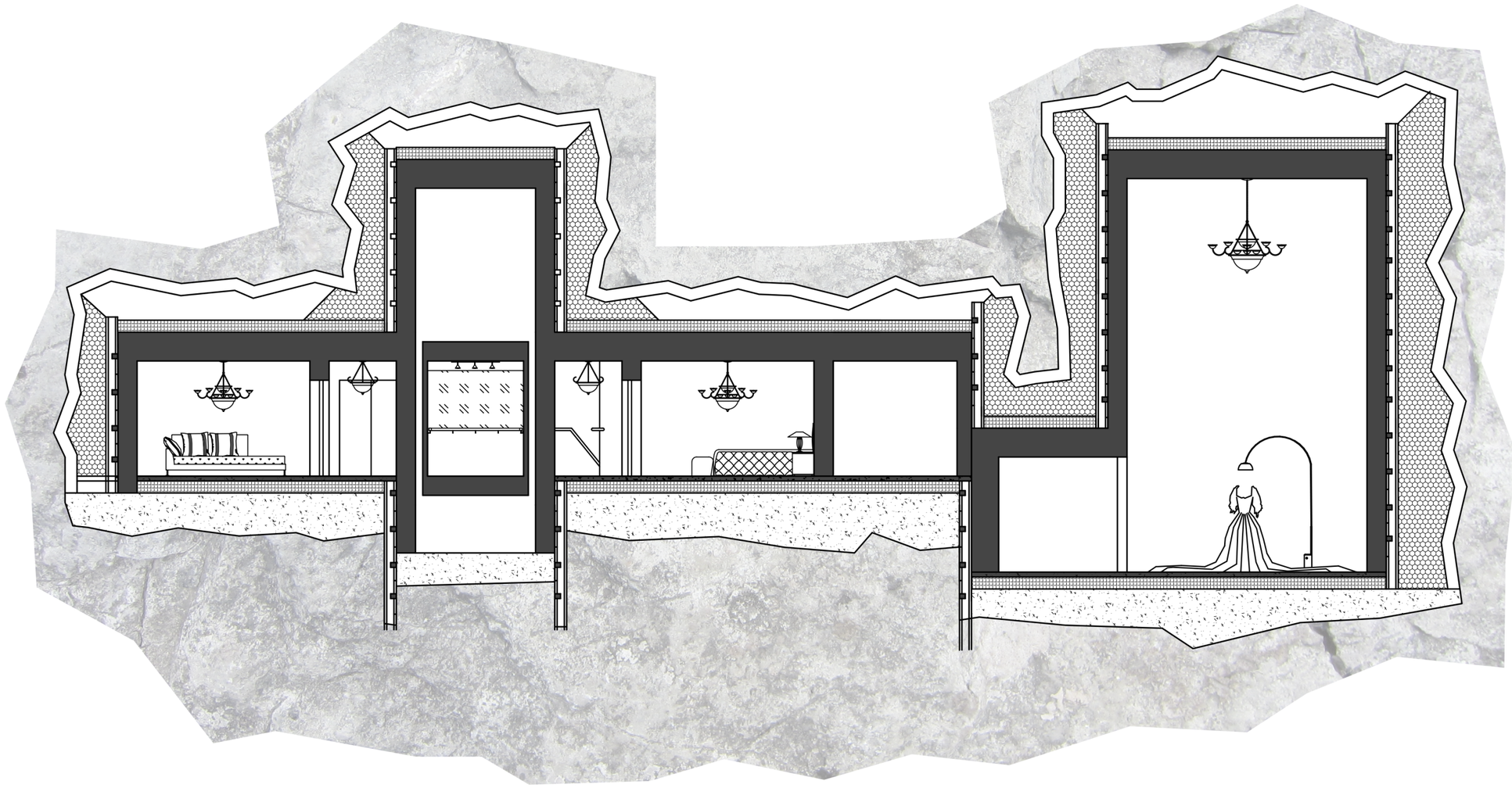
-2F SECTION: STABLE [1:100]

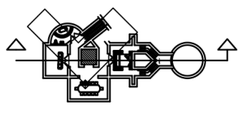




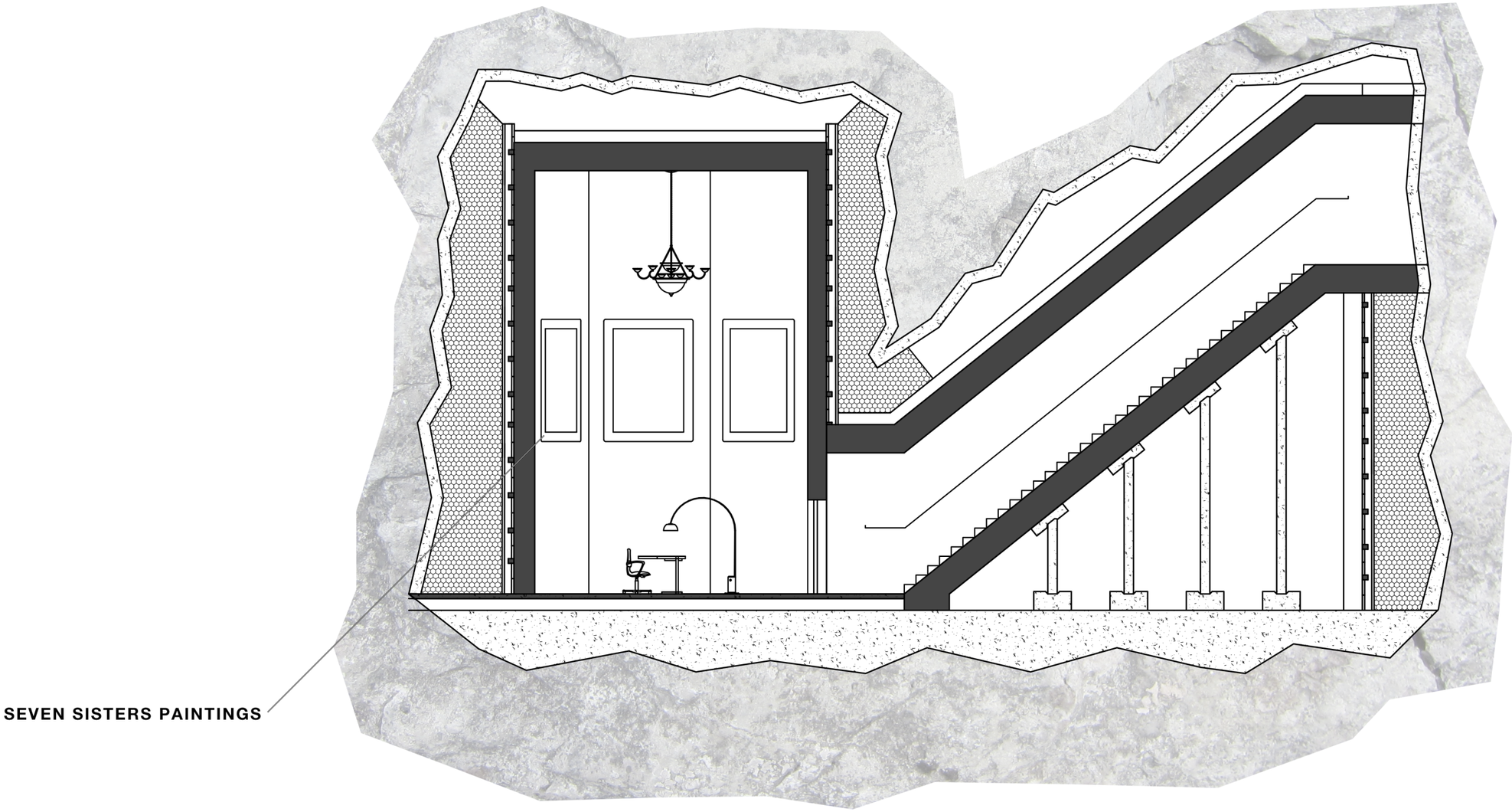
-1F SECTION: STAFF QUARTERS [1:100]

-1F & -2F SECTION

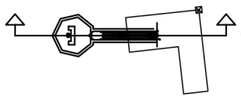




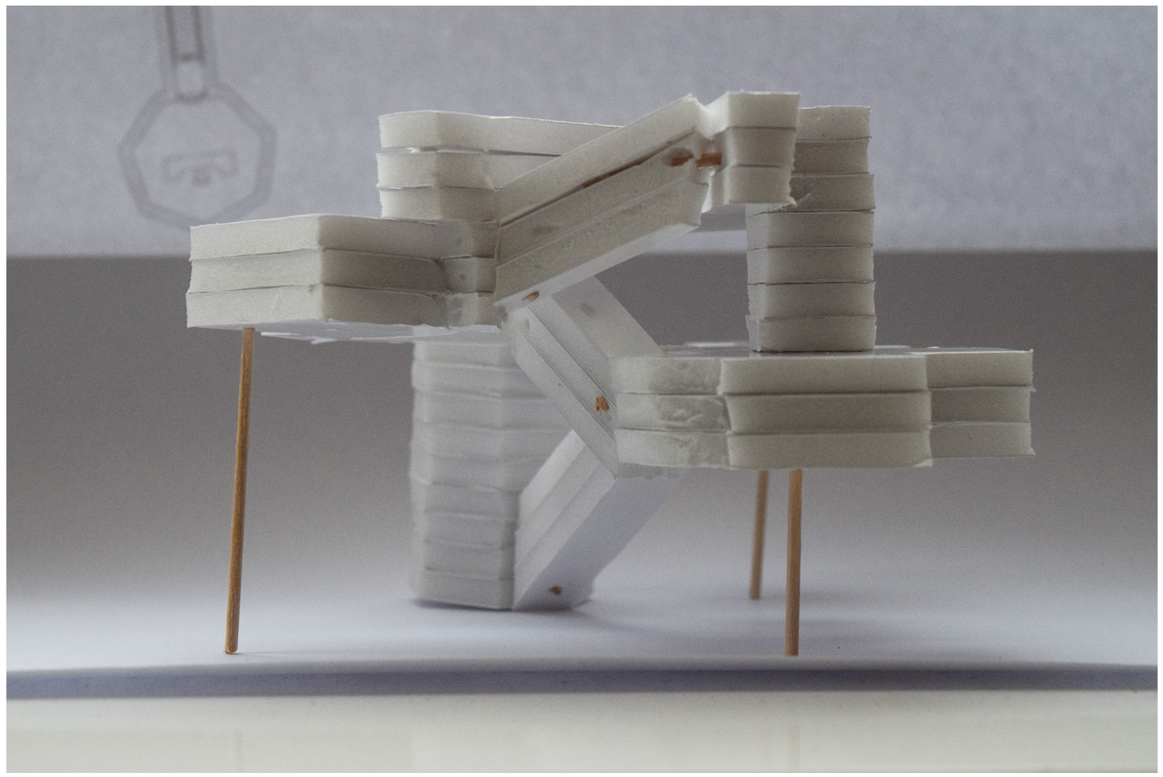
-3F SECTION: SERPENTINE'S QUARTERS[1:100]

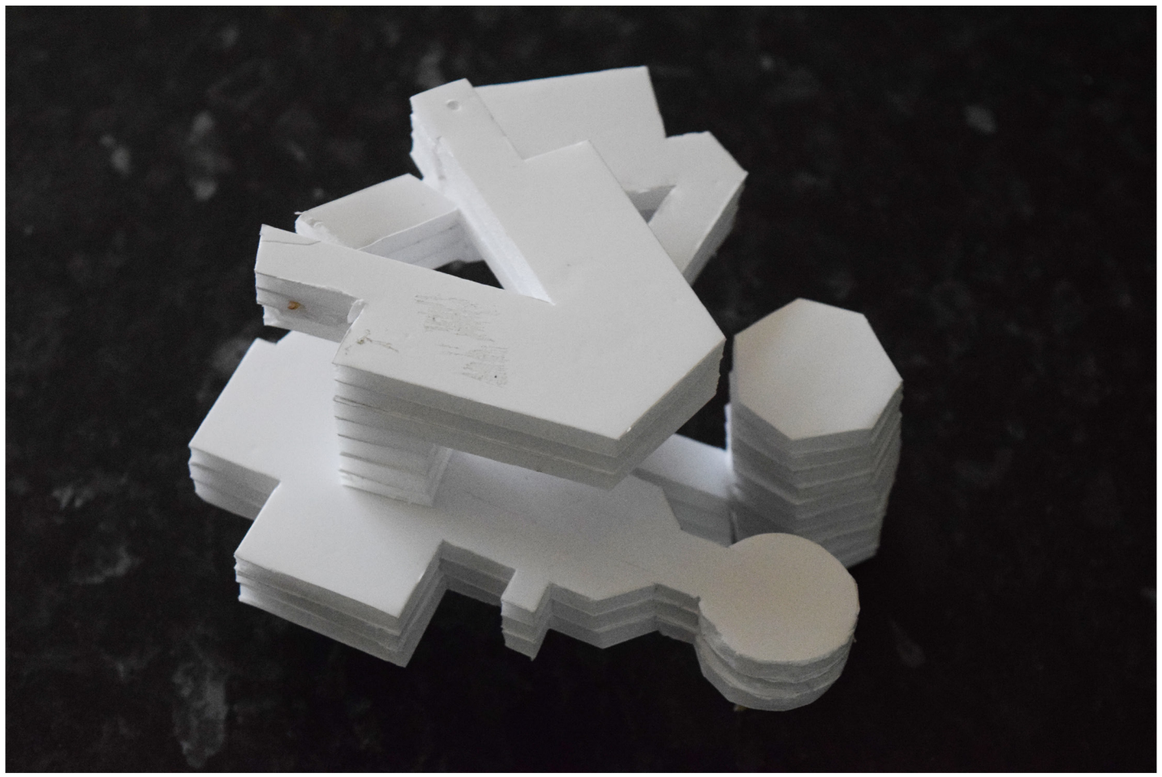


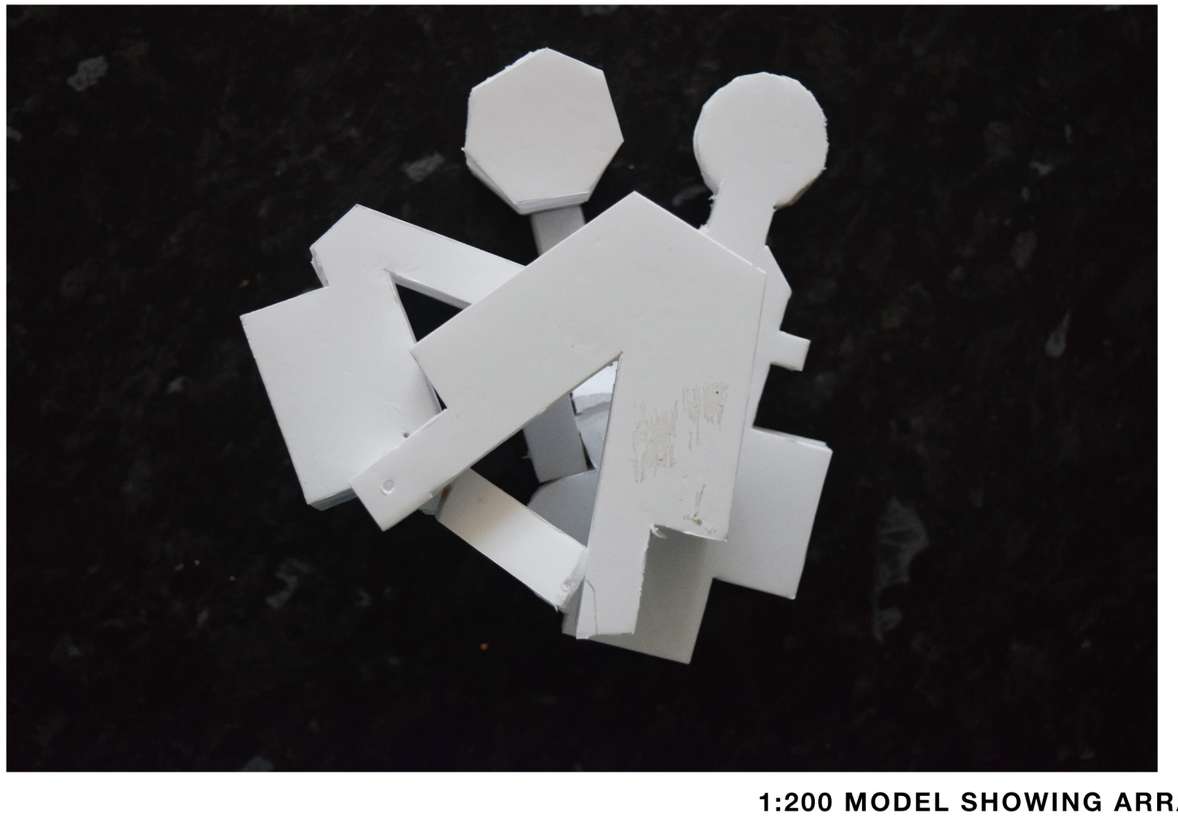
N



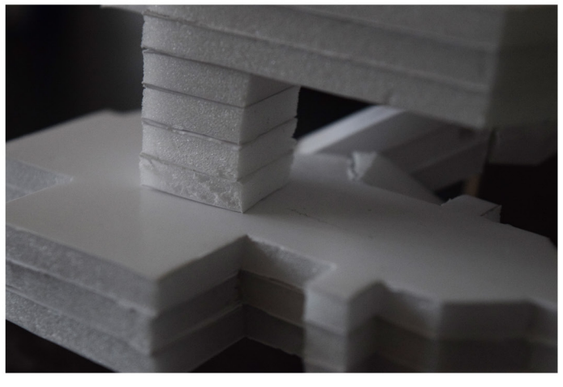
-4F SECTION: SERPENTINE'S STUDY [1:100]

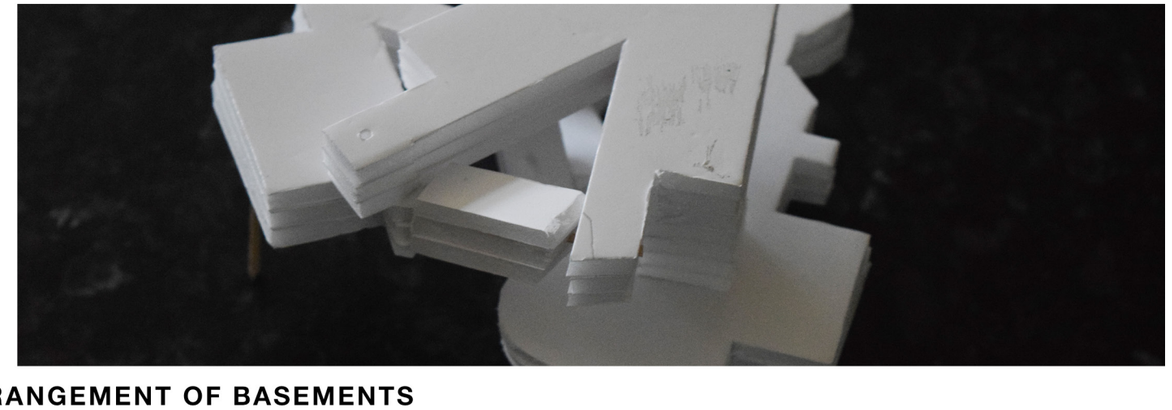




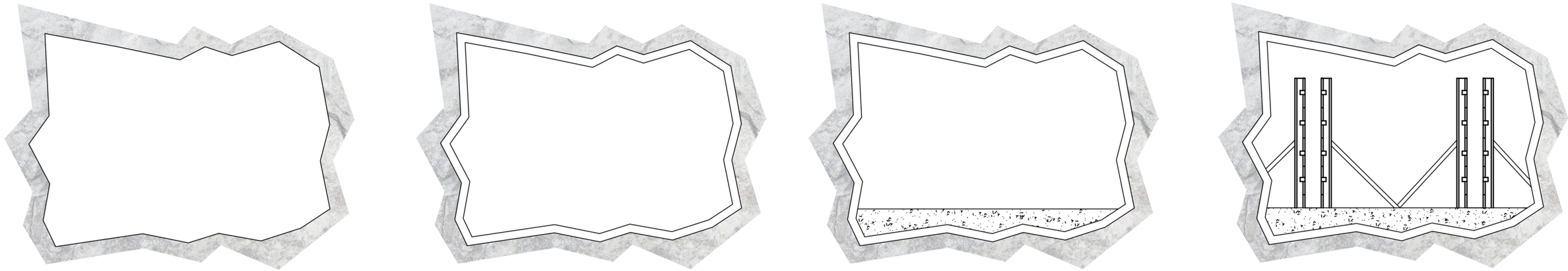




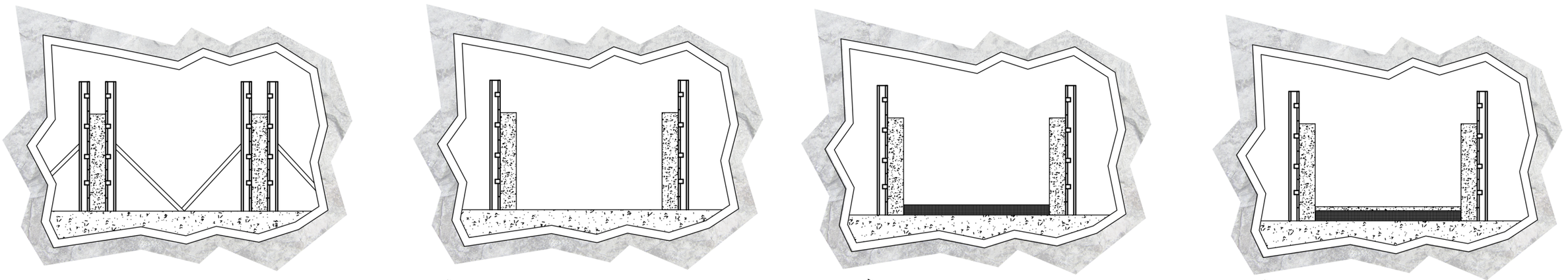




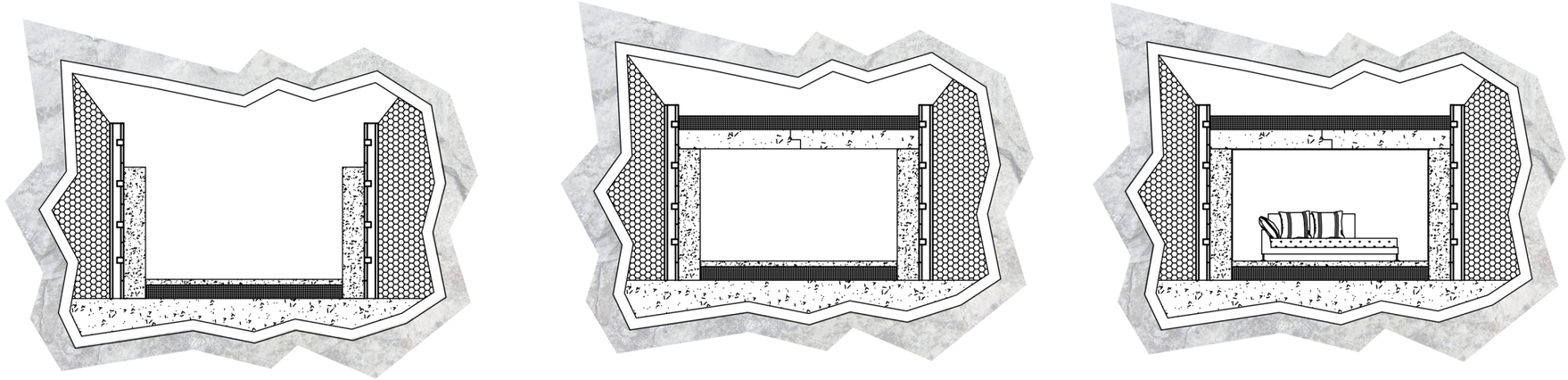
1:200 MODEL SHOWING ARRANGEMENT OF BASEMENTS



1: TUNNEL SPACES → **2: SPRAY CONCRETE**
FOR INITIAL STRUCTURAL STABILITY
→ **3: POUR CONCRETE** → **4: BUILD TIMBER IN-SITUE FRAMES**
SUPPORT WITH EXTRA BEAMS



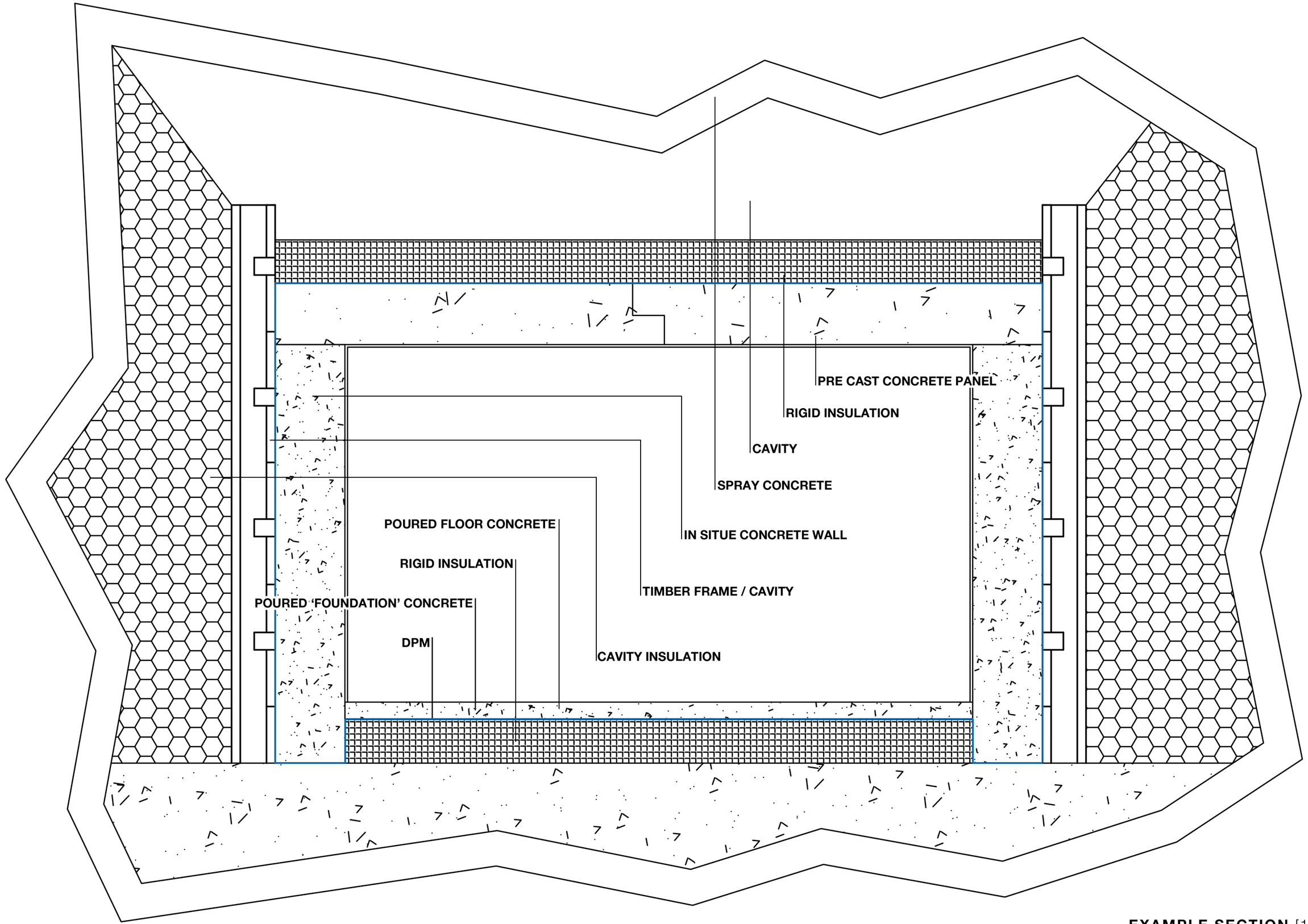
5: POUR CONCRETE → **6: REMOVE INTERIOR FRAMES** → **7: LAY RIGID INSULATION**
IN AMOUNGST CROSS FRAME
→ **8: POUR CONCRETE FLOOR**



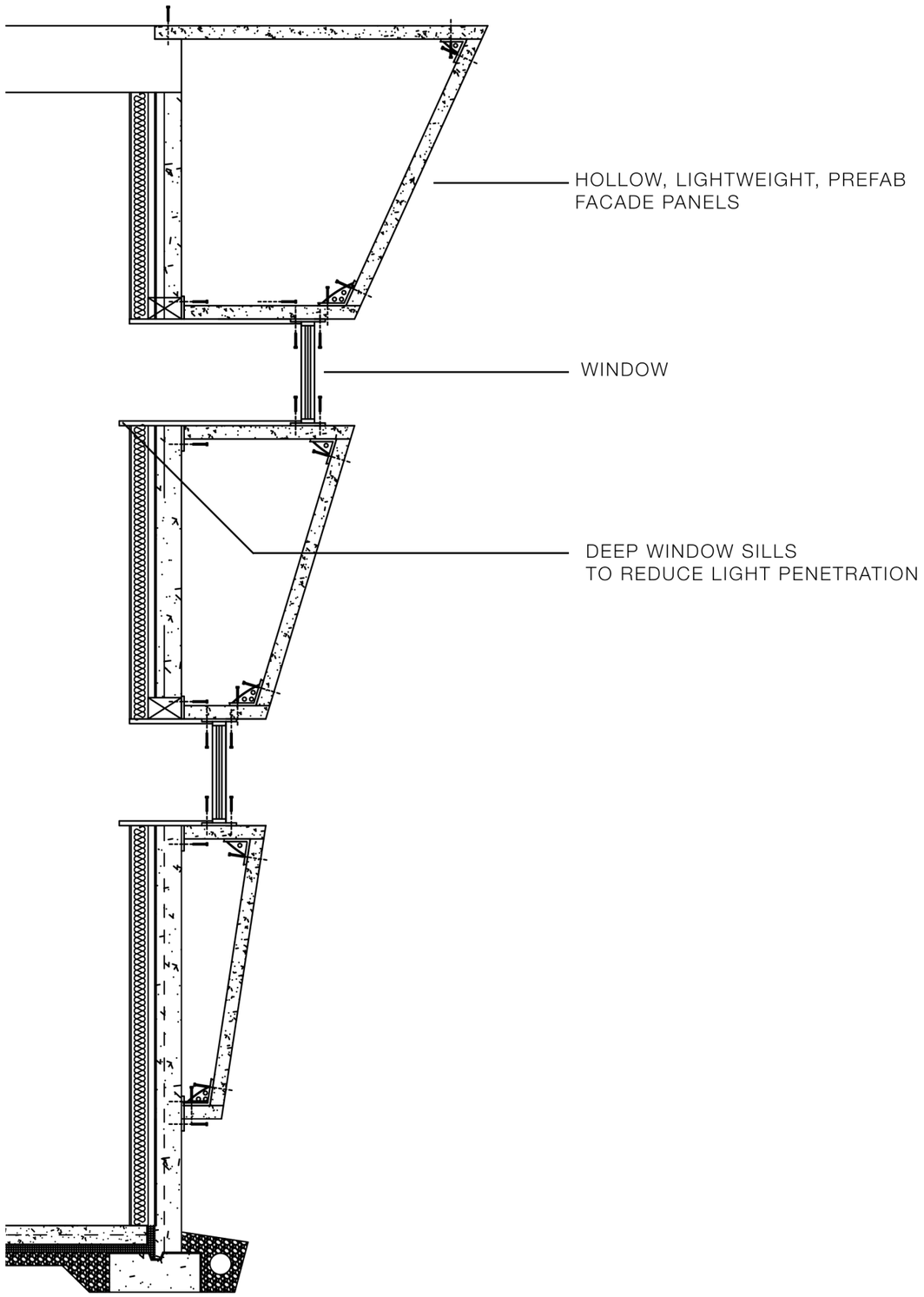
9: SPRAY EXPANDING INSULATION → **10: INSERT PREFAB CEILING** → **11: FURNISH!**

THE BASEMENTS OF THIS BUILDING EXTEND FAR BEYOND THE CONVENTIONAL LIMITS OF THE SITE. IN FORDER TO ACHIEVE THIS, TUNNELING NEEDS TO BE USED TO CREATE THE SAPCES, THEN STRUCTURAL SUPPORT IS ADDED AFTERWARDS USING A VARIETY OF CONCRETES AND INSULATION

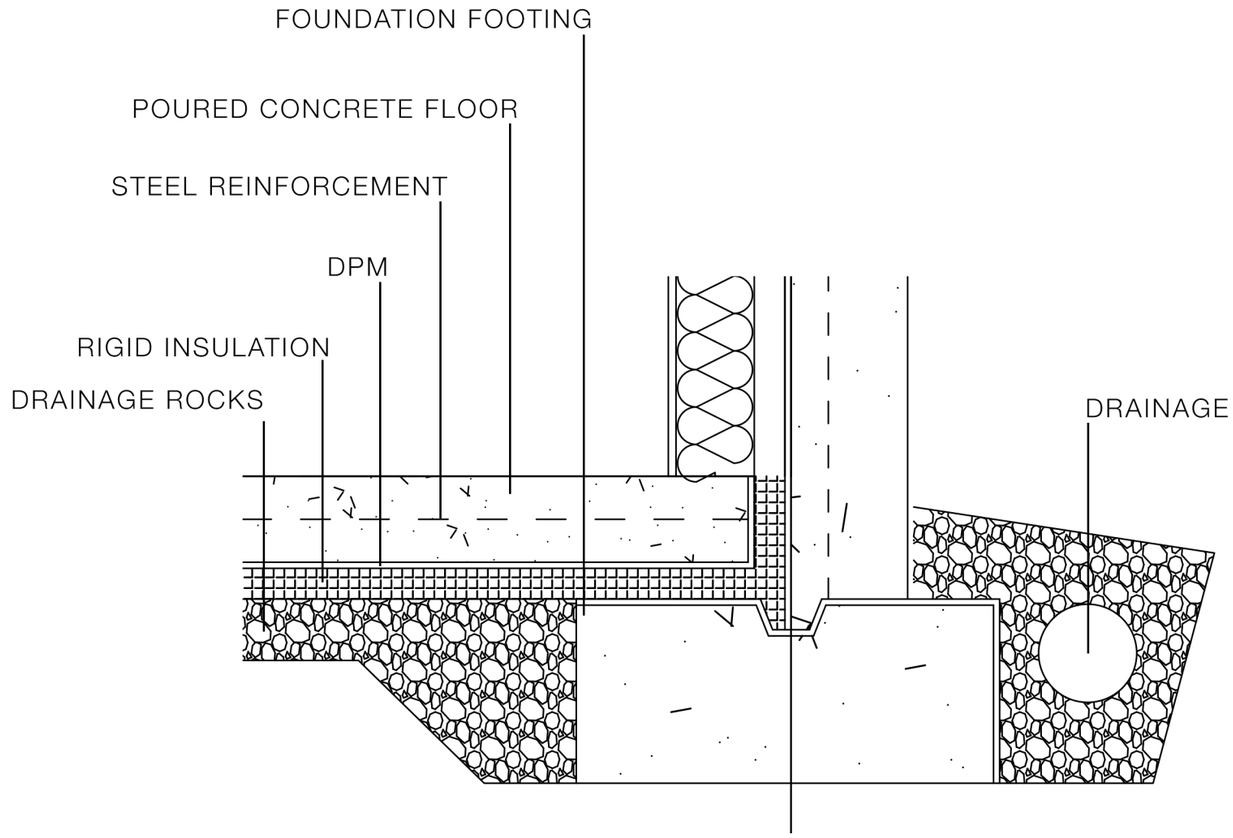
EXAMPLE CONSTRUCTION STEPS [1:100]



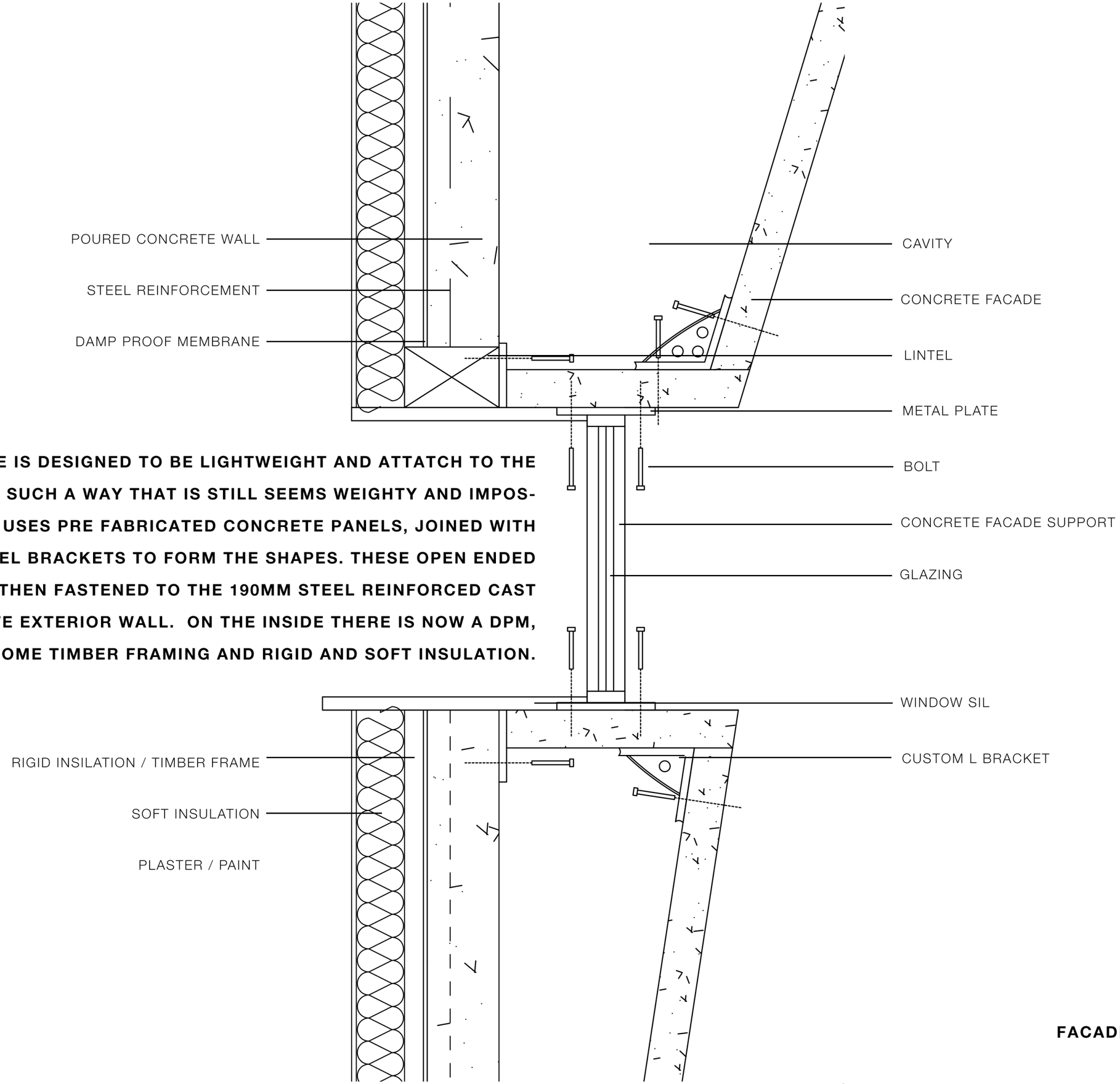
EXAMPLE SECTION [1:20]



FACADE SECTION [1:40]



WALL / FOUNDATION JOIN [1:20]



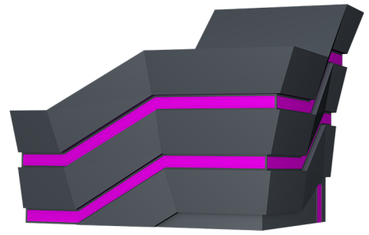
THE FACADE IS DESIGNED TO BE LIGHTWEIGHT AND ATTATCH TO THE BUILDING IN SUCH A WAY THAT IS STILL SEEMS WEIGHTY AND IMPOSING. IT USES PRE FABRICATED CONCRETE PANELS, JOINED WITH CUSTOM STEEL BRACKETS TO FORM THE SHAPES. THESE OPEN ENDED SHAPES ARE THEN FASTENED TO THE 190MM STEEL REINFORCED CAST CONCRETE EXTERIOR WALL. ON THE INSIDE THERE IS NOW A DPM, SOME TIMBER FRAMING AND RIGID AND SOFT INSULATION.

FACADE DETAIL [1:20]

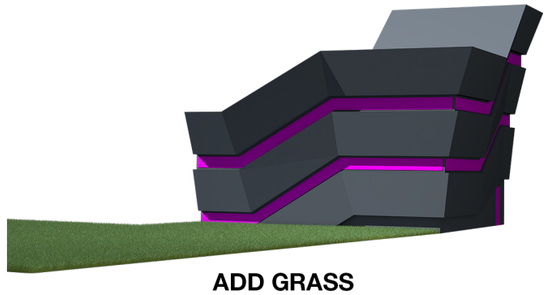


FINAL EXTERIOR RENDER

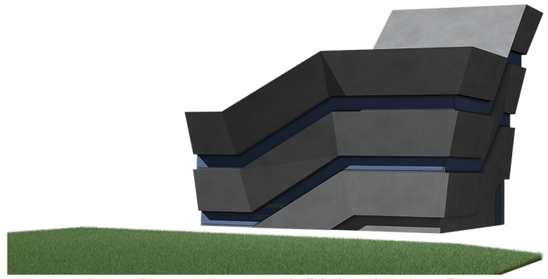
MAXON
CINEMA4D



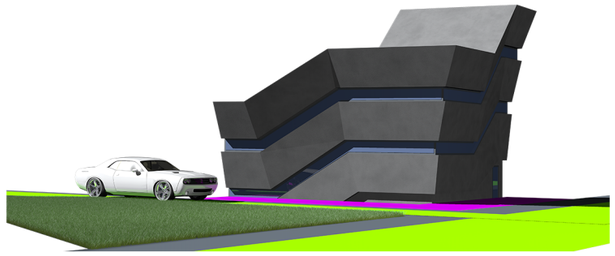
FIRST 3D MODEL



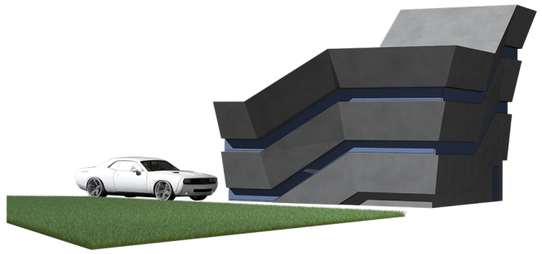
ADD GRASS



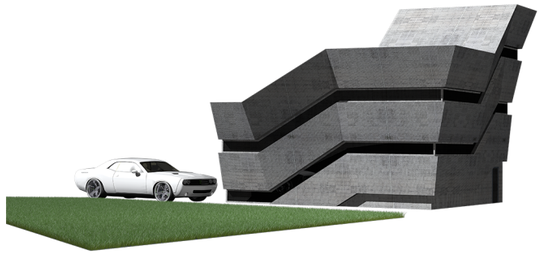
FIRST TEXTURES [CONCRETE]



ADD CAR, ALIGN GROUND



...



ADD FINAL TEXTURES



ADJUST LIGHTING



ADD DRAINAGE DETAIL

Ps
ADOBE
PHOTOSHOP



BASE PHOTO



ADD GRASS



TIDY UP EDGES



ADD SKY



ADD PAVEMENTS & ROADS



FIX NEIGHBOURING GARAGES



ADD IVY & GRAPHITI



FINAL TOUCHES [TEXTURE OVERLAYS]

VISUAL DEVELOPMENT: EXTERIOR

SHOP RENDER: STACKS OF STUFF

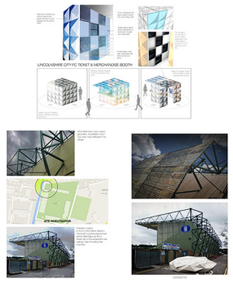


STAIRWELL RENDER: INTIMIDATION



BATHROOM RENDER: A TOUCH OF CLASS

DISPLAYBOARD EVOLUTION 2015 - PRESENT WILLIAM DOBIE



2015



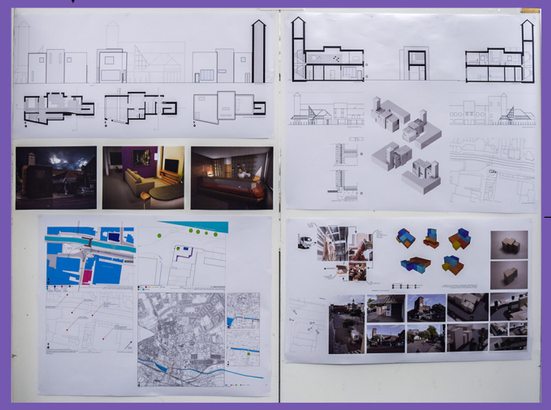
EARLY 2016



MID 2016

1ST YEAR

2ND YEAR



LATE 2016



EARLY 2017



MID 2017



LATEST

SECTIONTHREE

INTEGRATEDDESIGN

ARC2001MCURRICULUM-VITAE

IMAGE: TWO YEARS OF CRIT BOARDS

DOCUMENTS
1: CURRICULUM VITAE
WILLIAM DOBIE

SECTION**FOUR**

DESIGNAND**SOCIETY**

ARC2001M**GROUPWORK**

IMAGE: UNIVERSITIE'S PRIVATE-PUBLIC CAMPUS

DOCUMENTS

1: SINCIL BANK: HOUSING STRUCTURES

WILLIAM DOBIE, LUKE PARKHUSRT, ELLIOT FOSTER, MICHAELLA LOPEZ

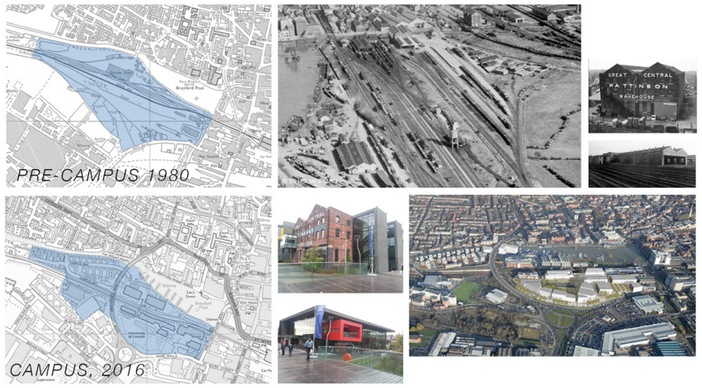
2: PRIVATE AND PUBLIC REALM: UNIVERSITIES

MALENE RIISE, LAUREN JONES, DEMI MCCOID, WILLIAM DOBIE, LUKE ASPEY

PRIVATE PUBLIC PRESENTATION

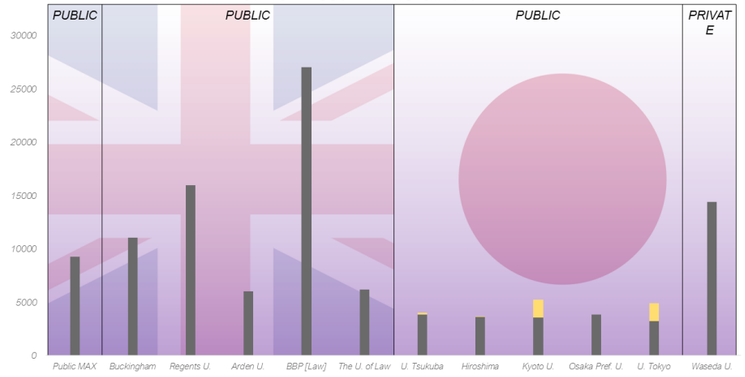


CAMPUS HISTORY



PRIVATE & PUBLIC UNIVERSITIES

TUITION FEES IN THE UK & JAPAN

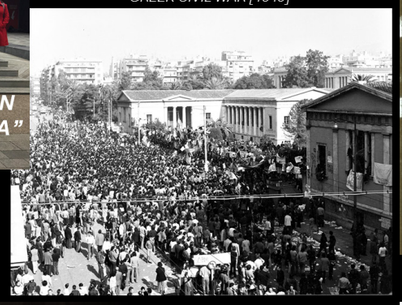




SU PROTEST [LINCOLN 2017]

FREEDOM OF SPEECH

GREEK CIVIL WAR [1949]





UNIVERSITY ASYLUM - GREEK JUNTA INVASION [NOV 17 1973]

SECURITY & GUN LAWS

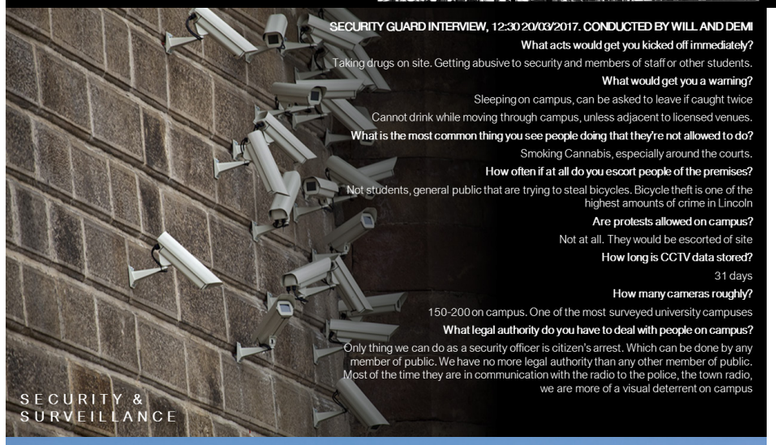




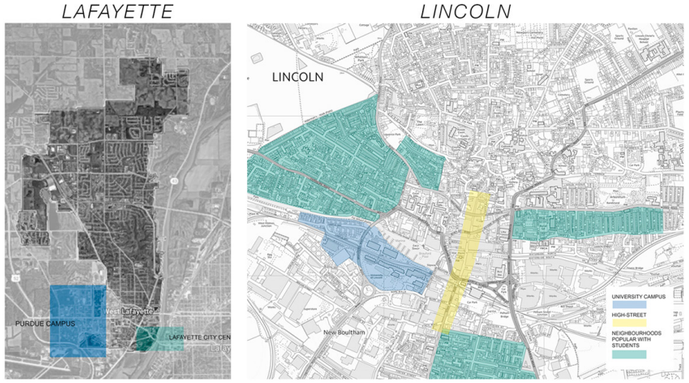
"YOU CAN'T BUILD PEACE WITHOUT A PIECE"



"RID THE PIECE, KEEP THE PEACE"



LOCATION WITHIN CITY







Social Capital

Connections between people in a community

Ranges from short convocations to social events and leisure activities

Contributes towards sense of community



How is Social Capital Influenced?

Context	Life cycle needs
Movement structure	Ownership and Personalisation
Local facilities	Lifestyle differences
Mixed use	Public space
Mixed tenure	Natural surveillance

SINCIL BANK PRESENTATION

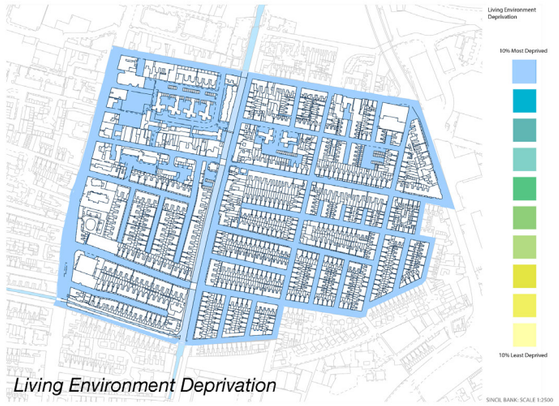
Context

Industrial Past

Housing built around industry

Industry shut down

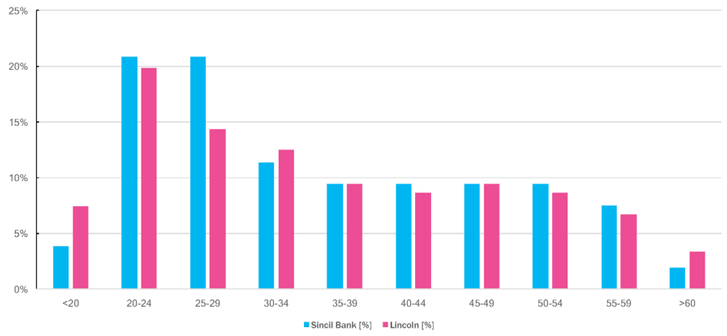




Context ***Living Environment Deprivation***



Life Cycle Needs



Population Make Up for Sincil Bank & Lincoln

Questionnaire Results



Ownership

Lack of ownership contributes towards neglect and antisocial behavior.

No sense of territorial responsibility.

Blinds Shut to increase privacy, but reduces natural surveillance



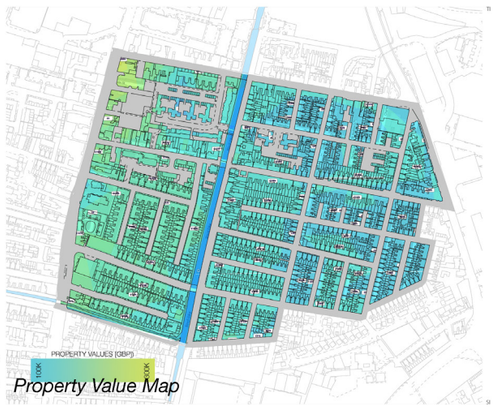
Personalisation

If there was more public space there would be higher social capital.

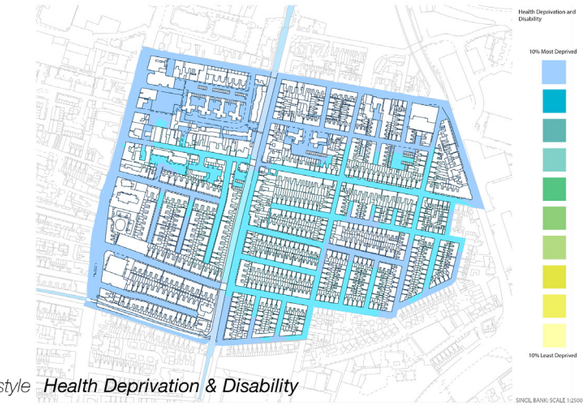
More public space = More interaction between members of the community.

Only public space in the area we looked at promotes antisocial behaviour because its not well maintained.

Public & Private Land



Mixed Tenure ***Property Value Map***



Lifestyle ***Health Deprivation & Disability***

Natural Surveillance

...limits the opportunity for crime by taking steps to increase the perception that people can be seen.



Conclusion

Where does Sincil Bank have potential?

Movement Structure	***Local Facillities***	***Context***
Access	***Mixed Use***	***Ownership***
Footpaths	***Life Cycle Needs***	***Personalisation***
Natural Surveillance	***Public Space***	***Mixed Tenure***
		Lifestyle Differences

William James Dobie - 13488786 - University of Lincoln

SECTION**FOUR**

DESIGNAND**SOCIETY**

ARC2001M**ESSAY**

IMAGE: GRANARY SQUARE, KINGS CROSS
SRC: GOO.GL/E4LZ1H

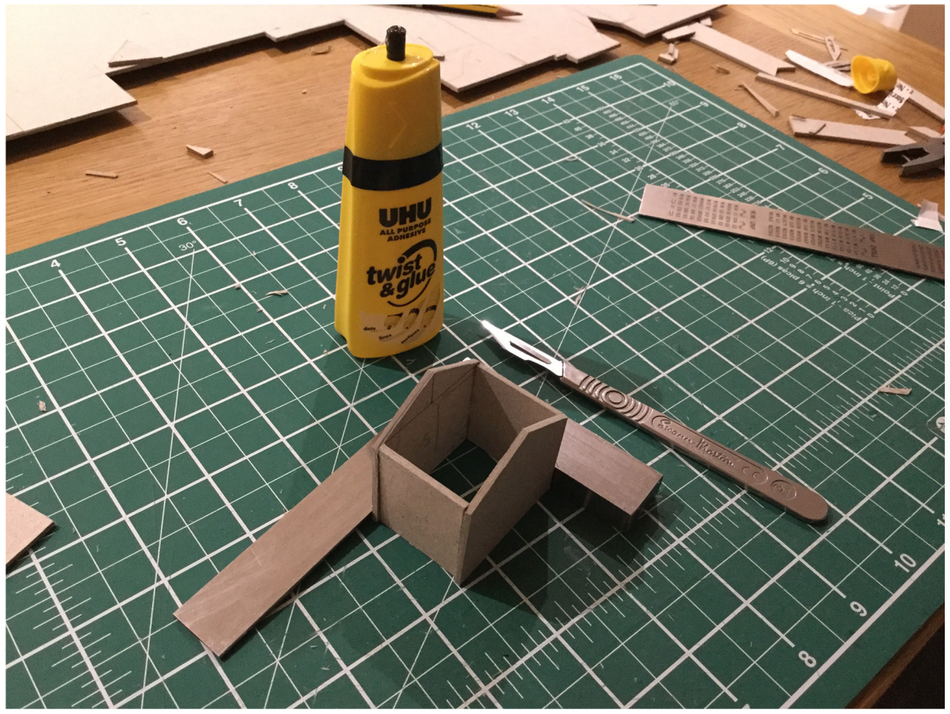
DOCUMENTS

1: THE IMPACT OF PRIVATISATION OF PUBLIC SPACE ON SOCIETY IN LONDON AND THE REST OF THE UNITED KINGDOM

WILLIAM DOBIE







Card Model Making Pictures

