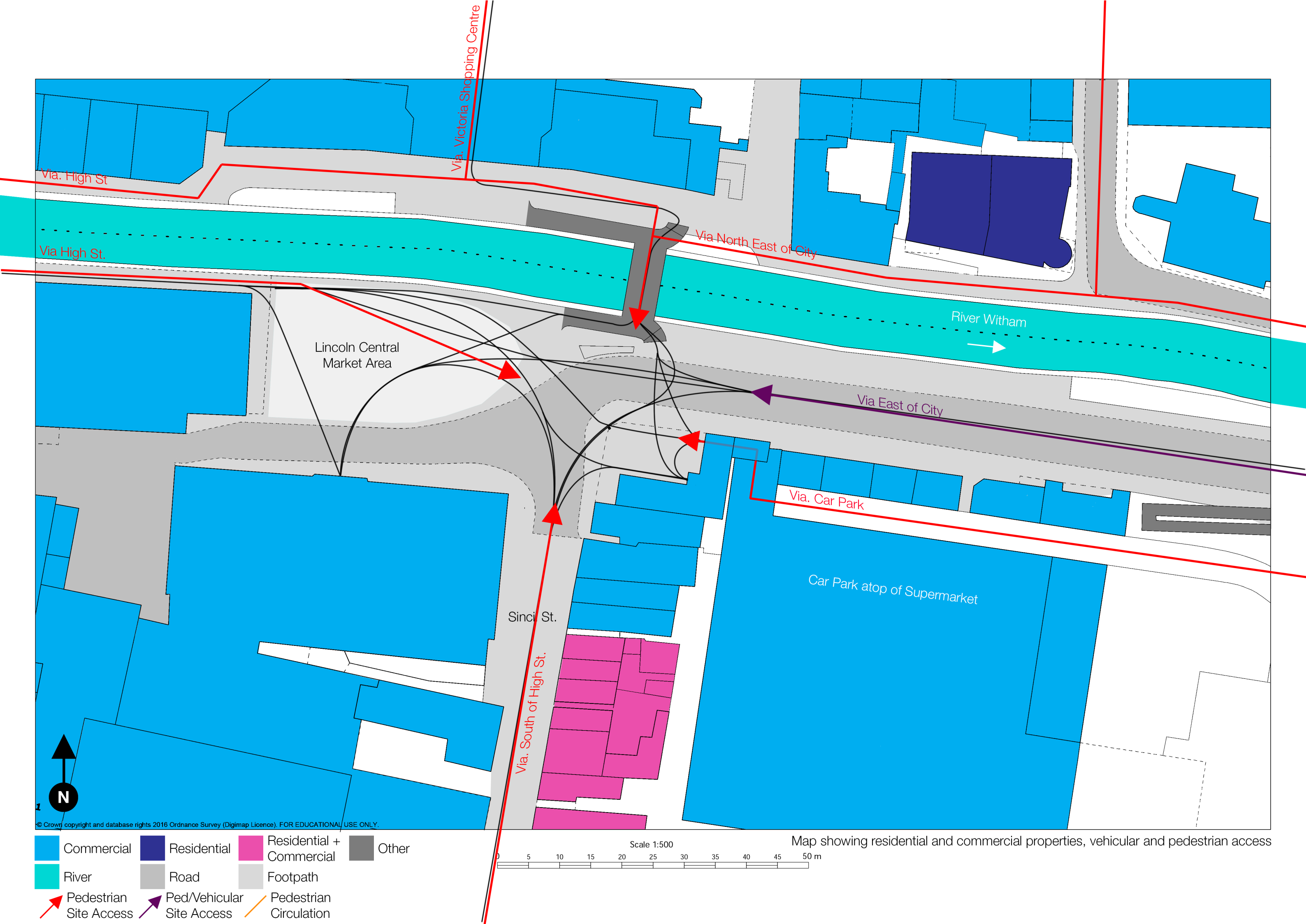


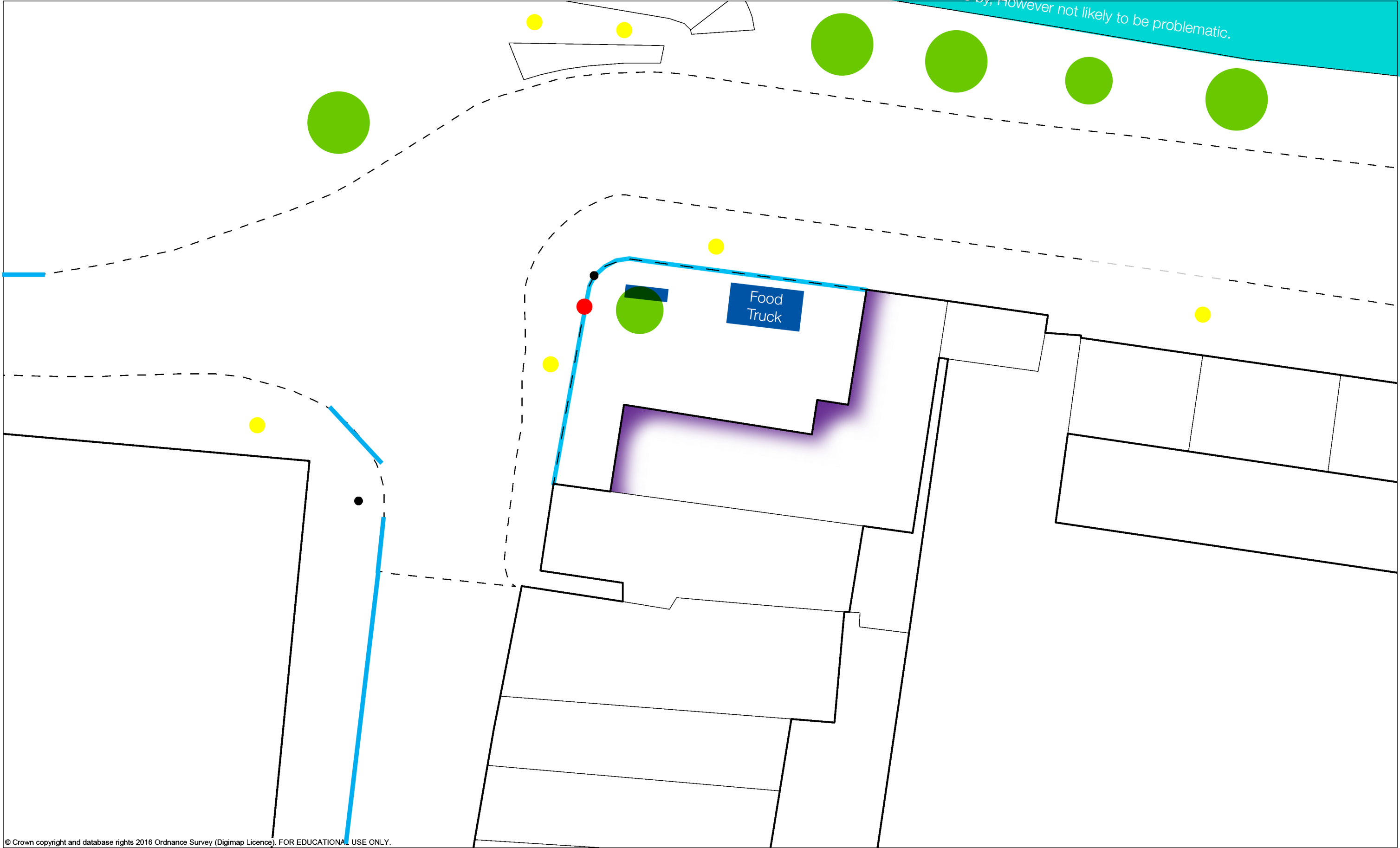


NORTH ELEVATION [1:200]



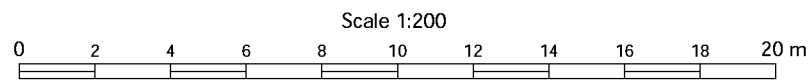
EAST ELEVATION [1:200]



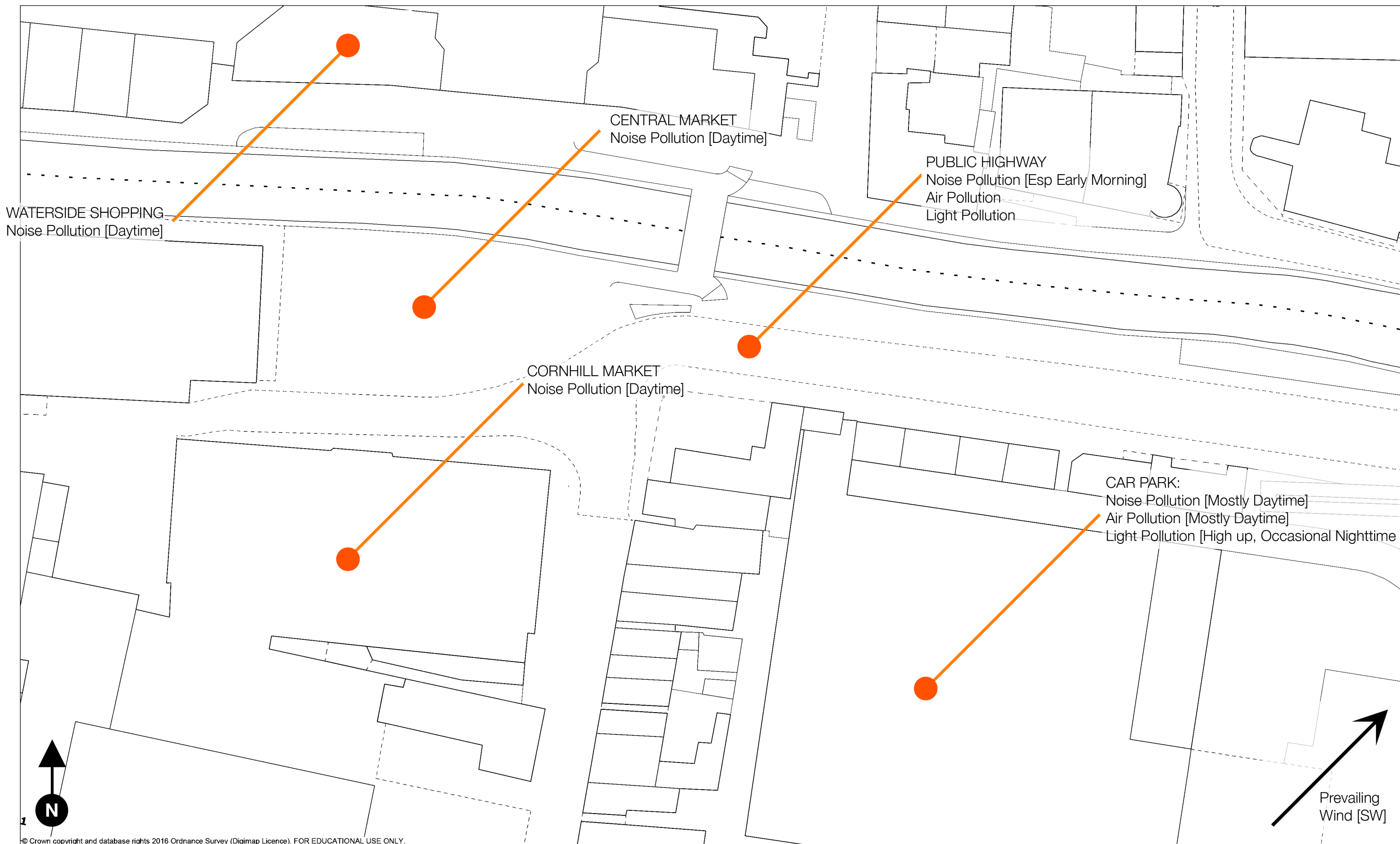


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- Shop Entrances
- Post Box
- Lamp Post
- Bollards
- Tree
- Fresh Water

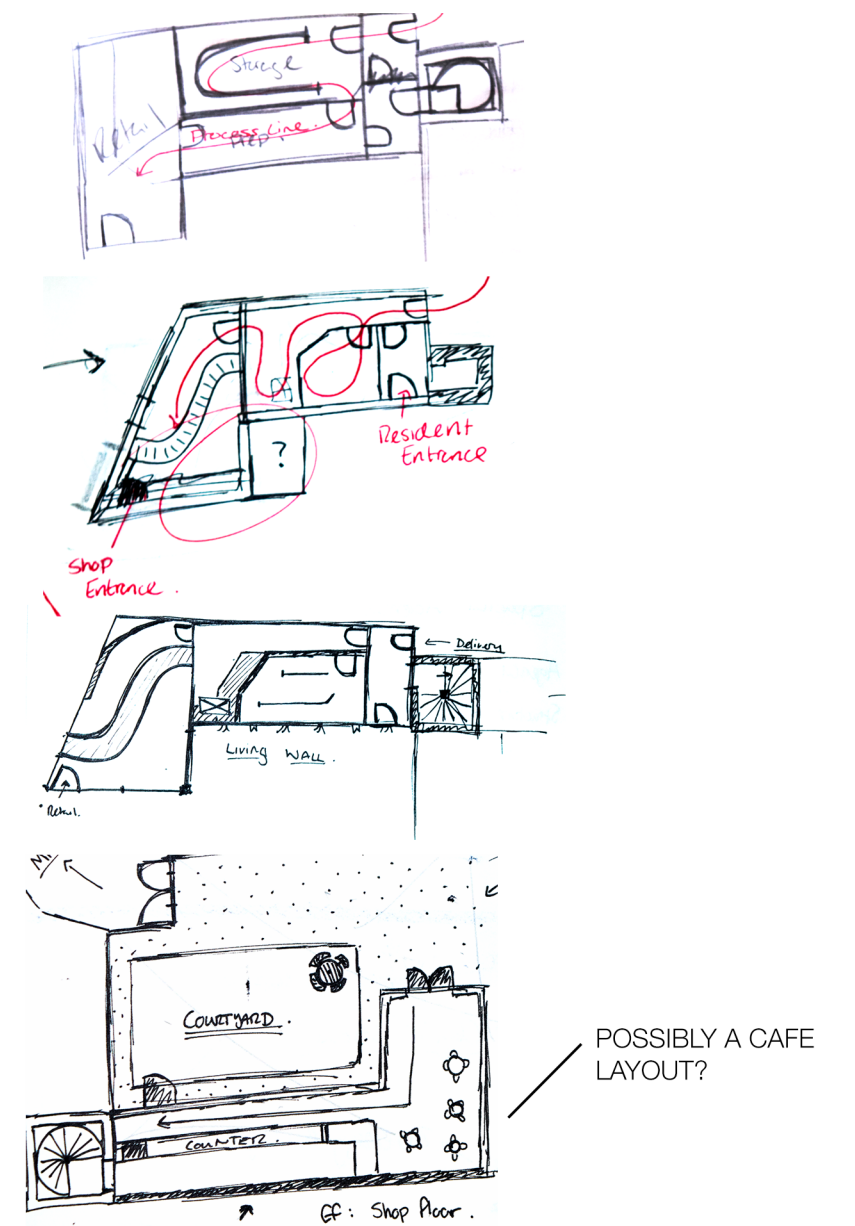
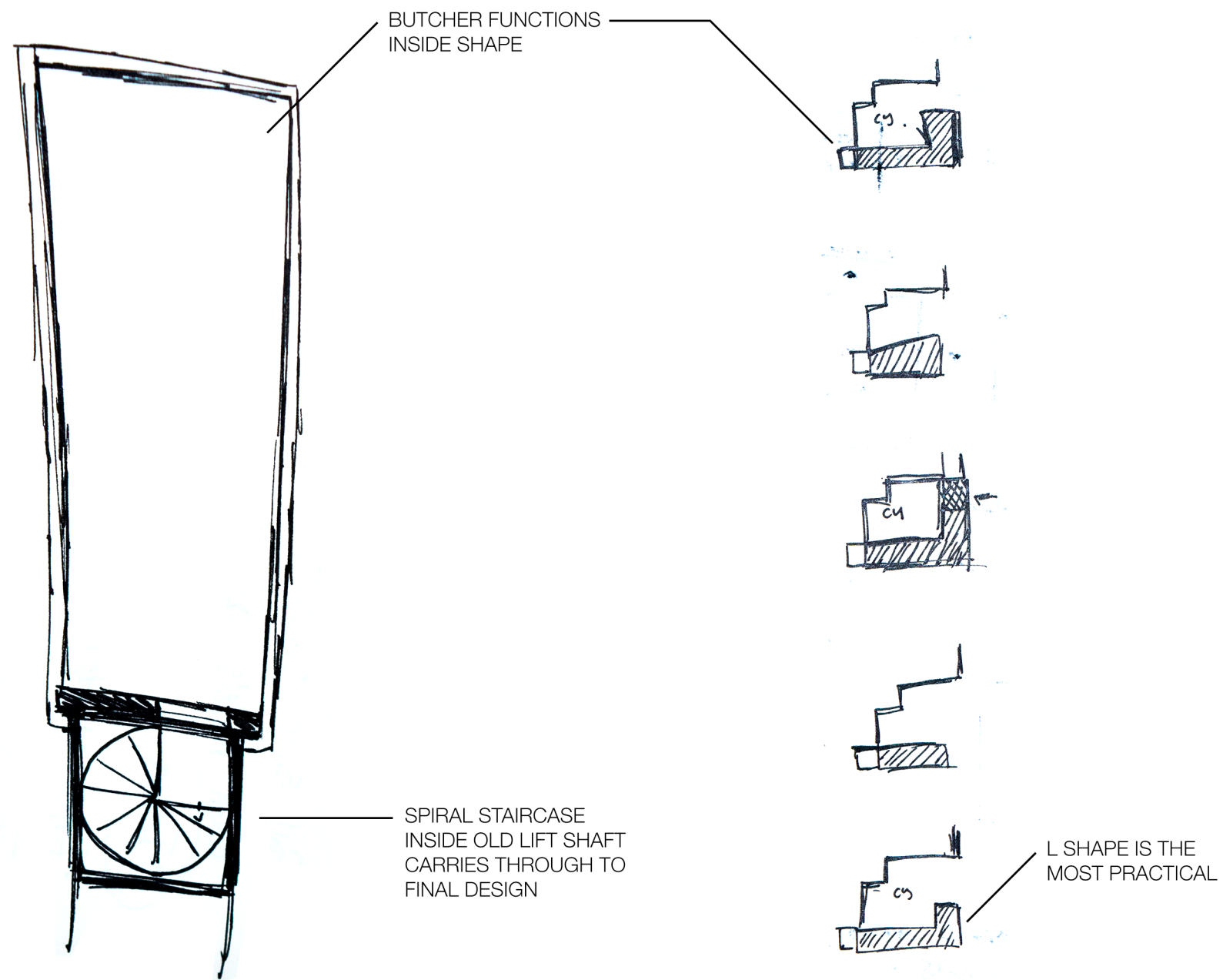


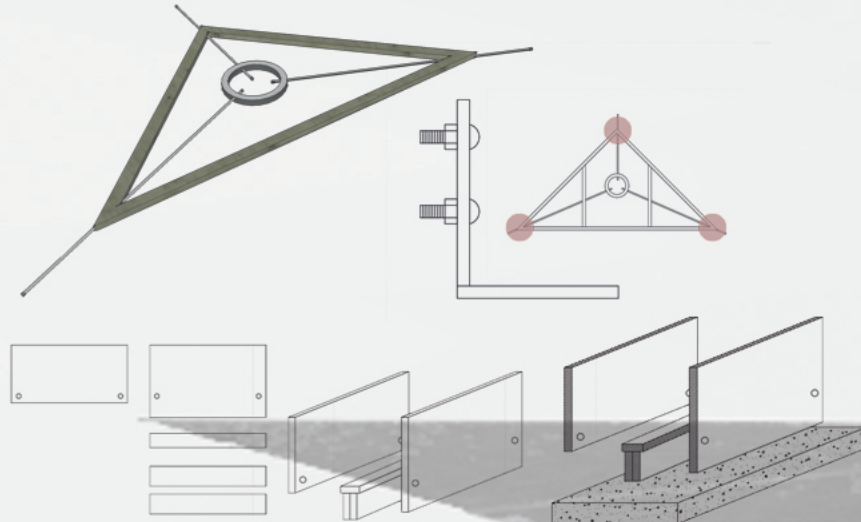
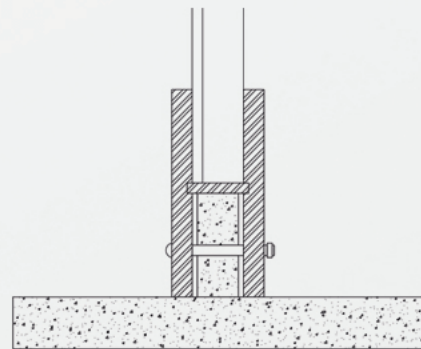
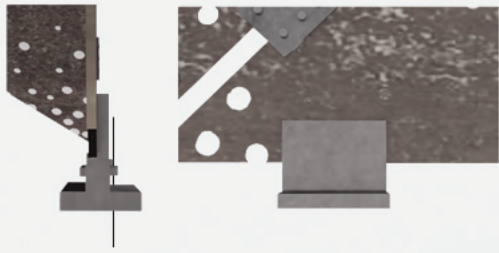
Natural & Artificial Features around site



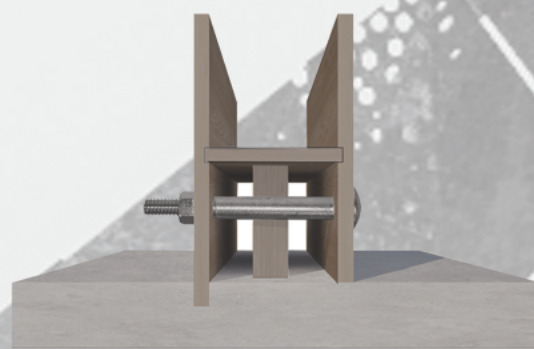
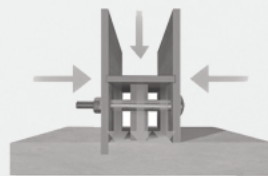
The site faces occasional Air and Noise pollution from the adjacent road on the North side. The market and surrounding shops will provide daytime bustle around the area.

Sources of Pollution surrounding the Site

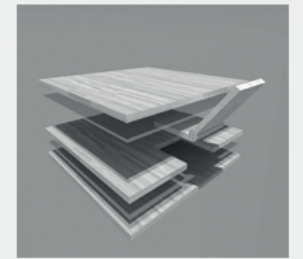
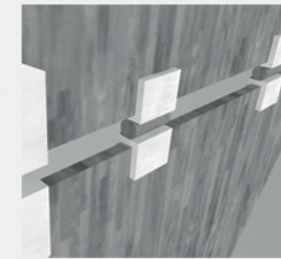
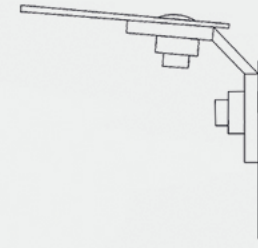
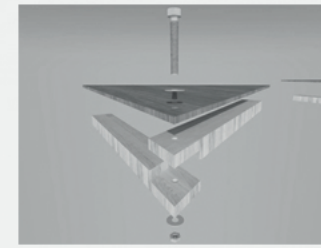




Instructions showing how exactly the footings go together in order to be formed.



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

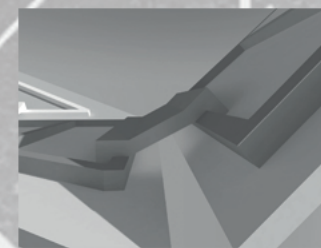
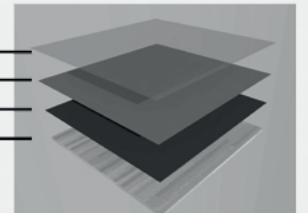


Idea 1: External plates Idea 2: External plate attached by a single hinge. attached by hinge.

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



Laquer
Poly Coat
Polyurethane
18mm Ply



Frame bolted together through plywood, using spacers and washers.

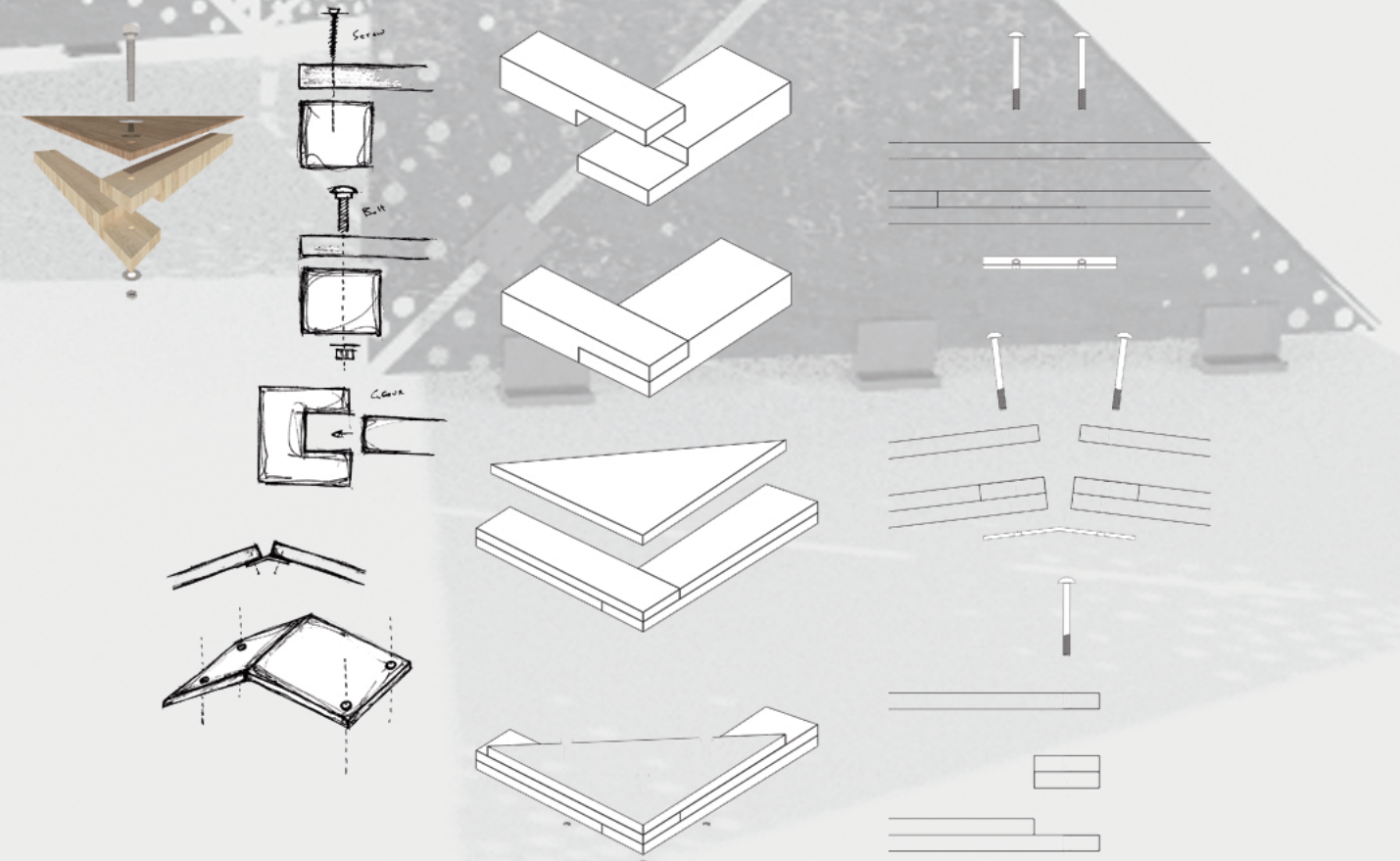
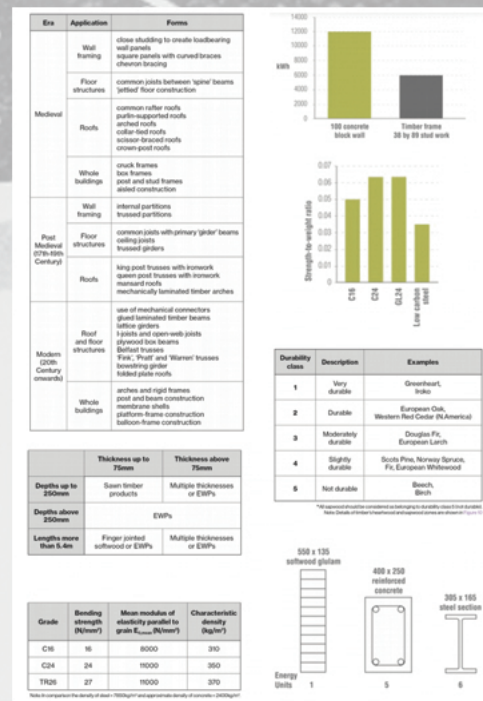


Assembly workshop, beamster Invisible studio architects.

Constellations bar, Liverpool Howard Miller design.

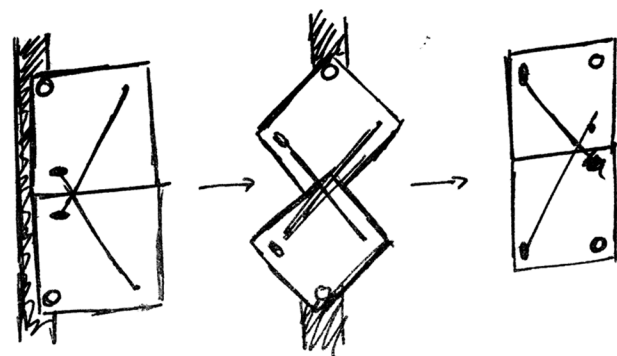
Maggies centre, Manchester Foster and Partners.

Winter gardens, Sheffield Pringle Richard Sharratt architects.

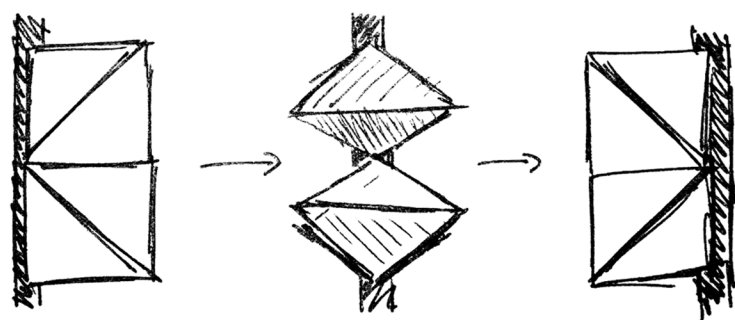


Structure:

TORRGLER DOORS

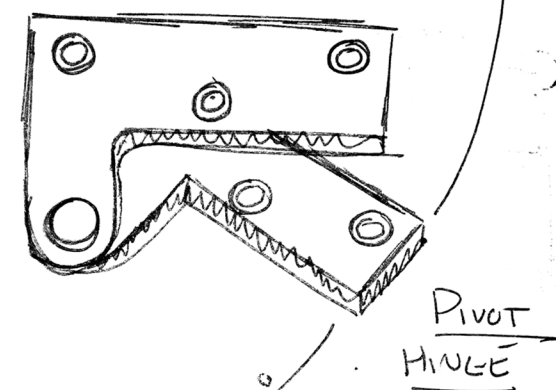
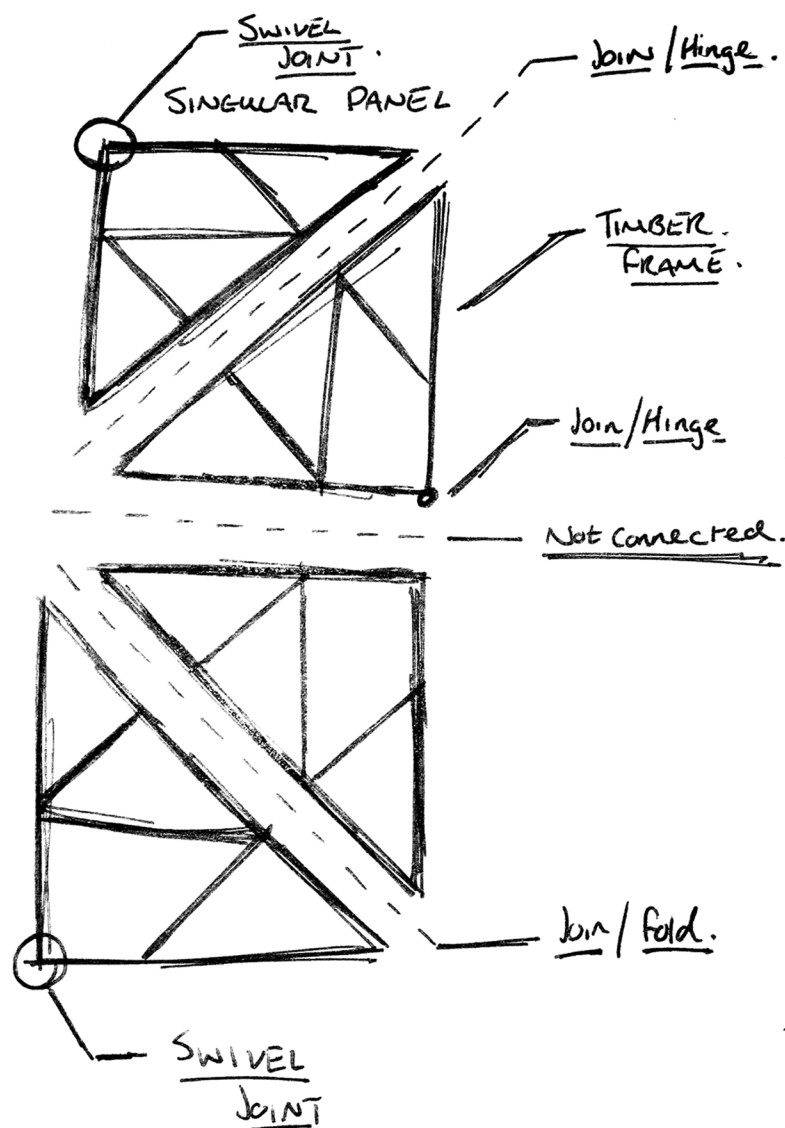


Bespoke doors that can fit into the theme.

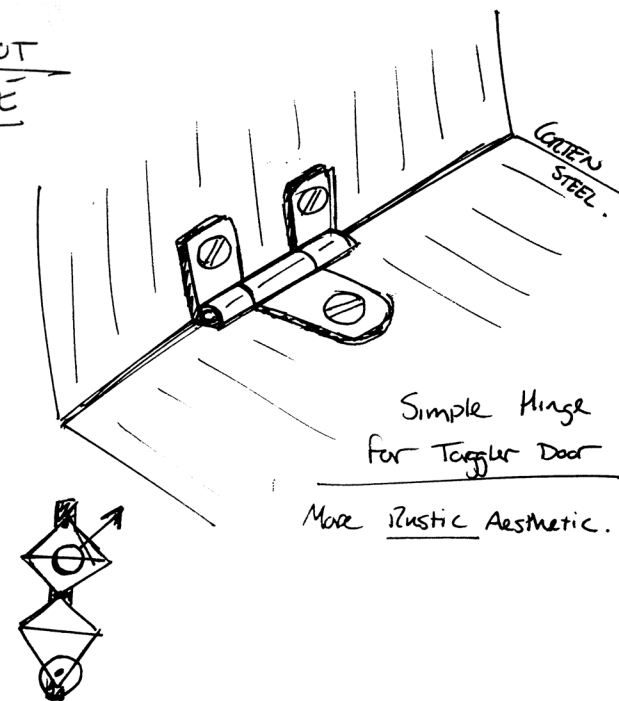
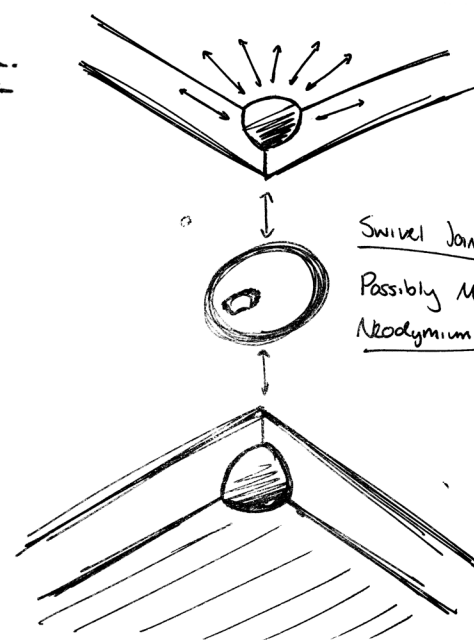


Flow of Movement.

TORRGLER DOOR CONSTRUCTION.

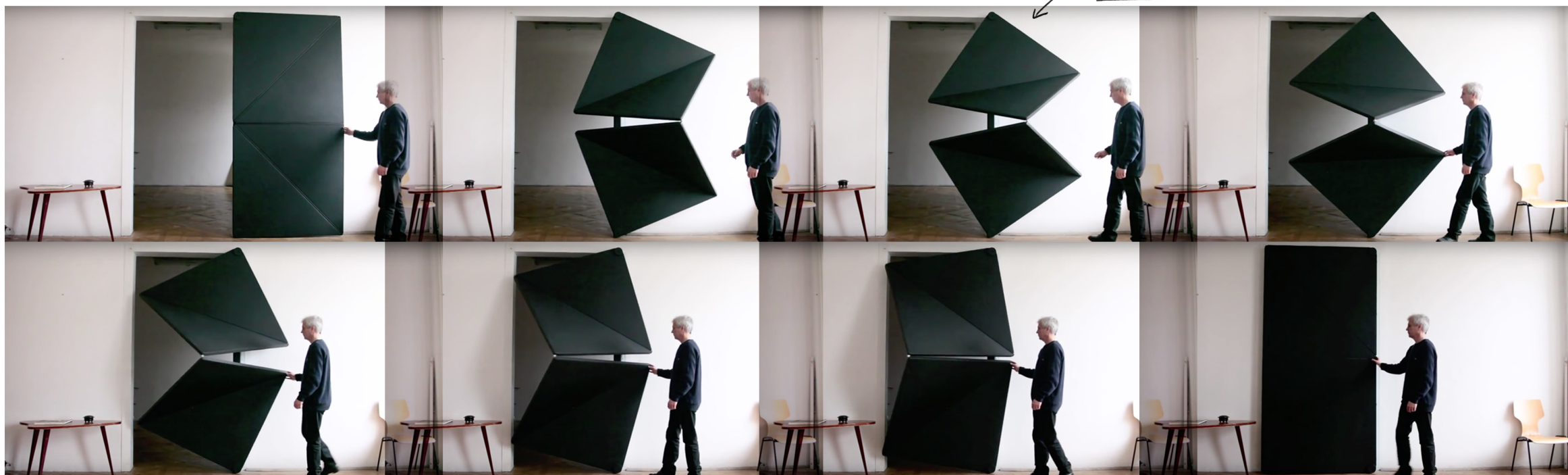


Pivot Hinge



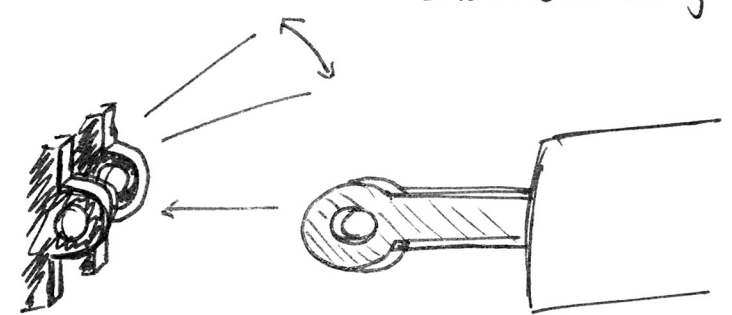
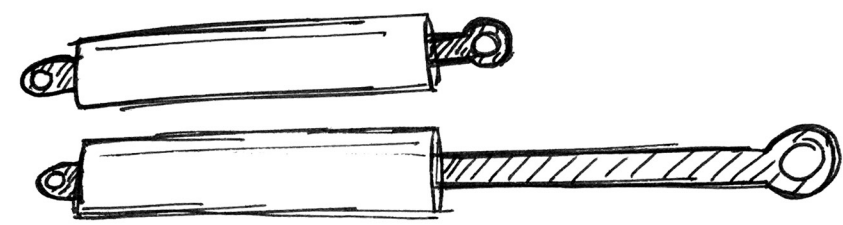
KINETIC 'TORRGLER' DOORS

TRIANGLES FIT WITHIN AESTHETIC OF PAVILLION.

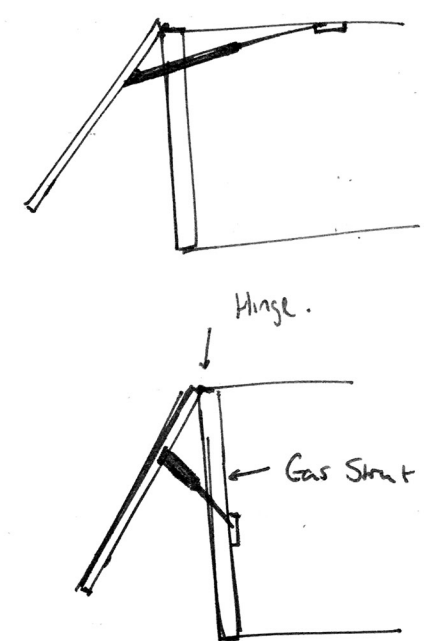
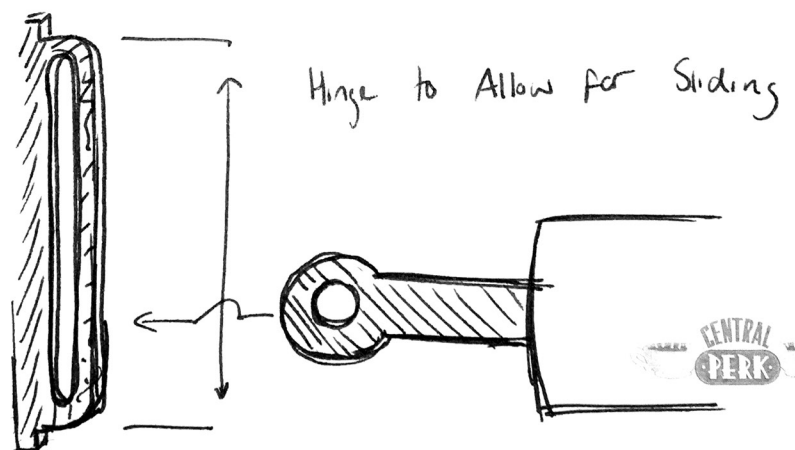




GAS STRUTS.

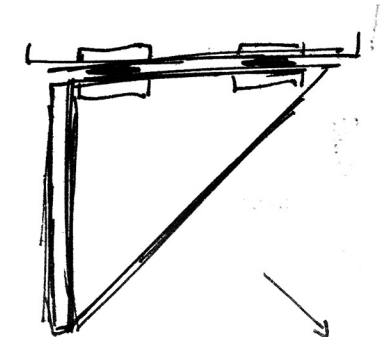


Hinge to Allow for Rotation.



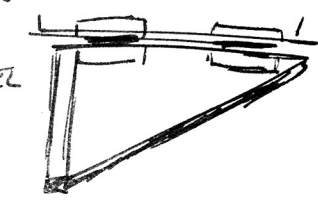
Different Mounting Positions. For Overhead Opening.

WOODEN PANEL PROPS



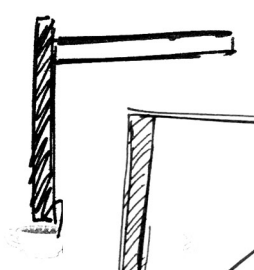
1. PANEL IS VERTICAL. PROP CLIPPED IN AND PARALLEL TO PANEL.

2. START ROTATING PANEL TO ~~BE~~ HORIZONTAL. PROP REMAINS PARALLEL WITH PANEL.



3. PANEL & PROP NOW HORIZONTAL.

4. UNCLIP PROP. IT WILL FALL DOWN FROM THE POINT OF THE TRIANGLE



5. PROP IS VERTICAL. SUPPORTING RAISED PANEL.



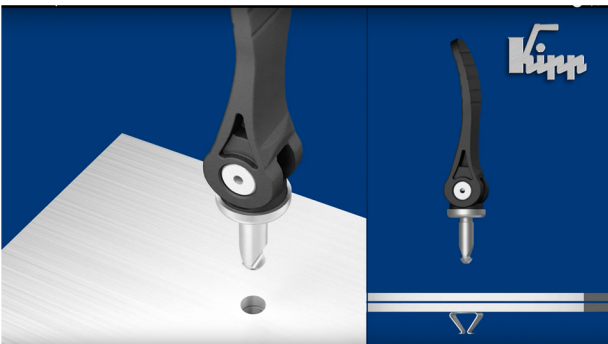
As part of my research for Make+, I came across the doors seen above. I thought they would fit the project's aesthetic really nicely and I attempted to contact the maker to see how they worked.

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.

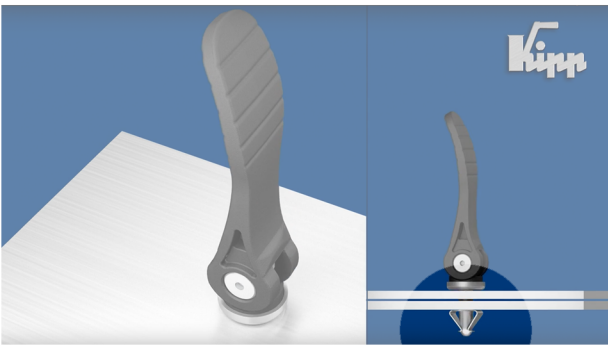
On the following page are my re-search and experiments into CAM levers and how they could be used as fasteners for the Make+ Pavillion.



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

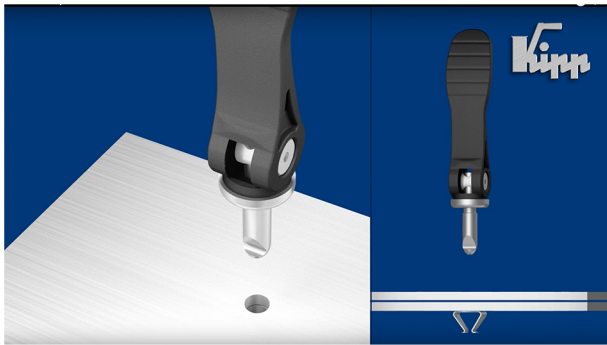
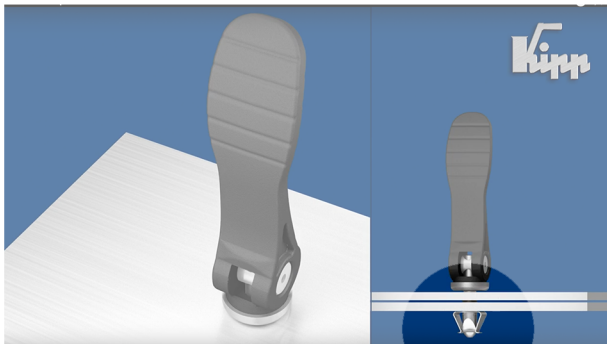
5
THE LEVER IS NOW
VERTICAL. THE
COMPONENTS
WILL NOW BE
LOOSE.

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

11A



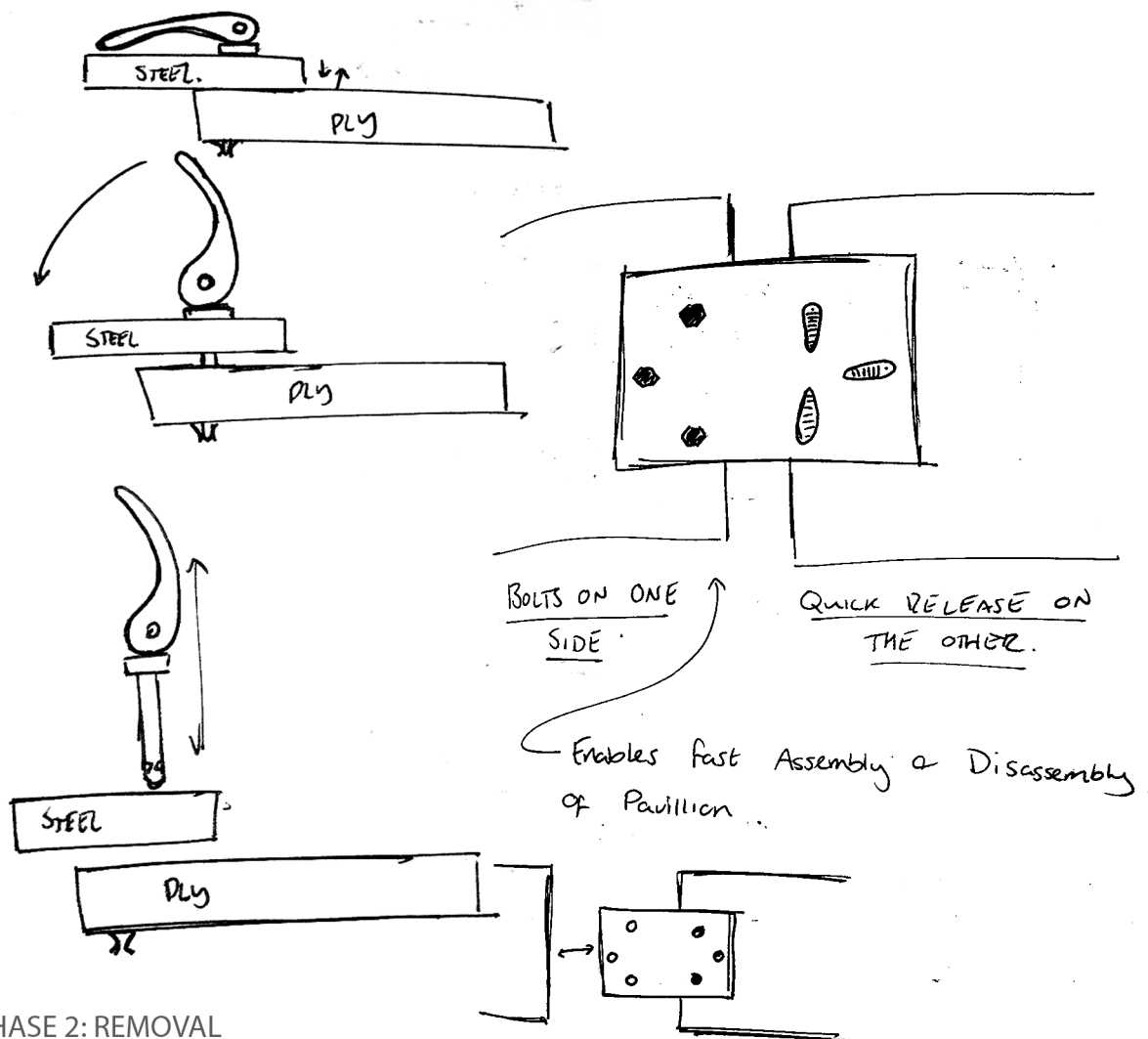
CAM Lever illustration PHASE 2: REMOVAL

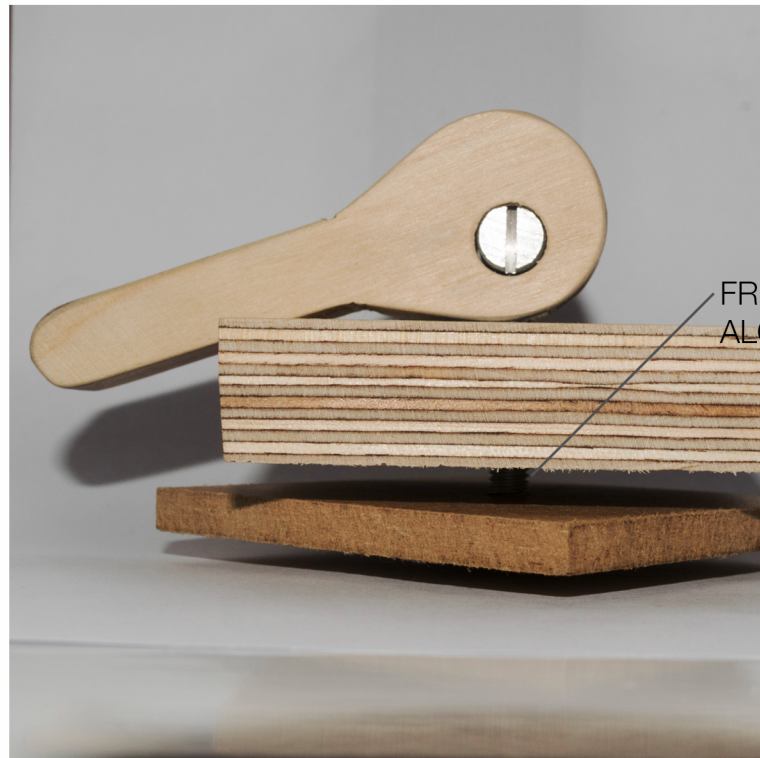


12
ONCE THE LEVER
IS FULLY ROTATED,
IT CAN BE PULLED
UPWARDS

12A

14
THE COMPONENTS
ARE NOW
DIS-ASSEMBLED





UNLOCKED POSITION

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



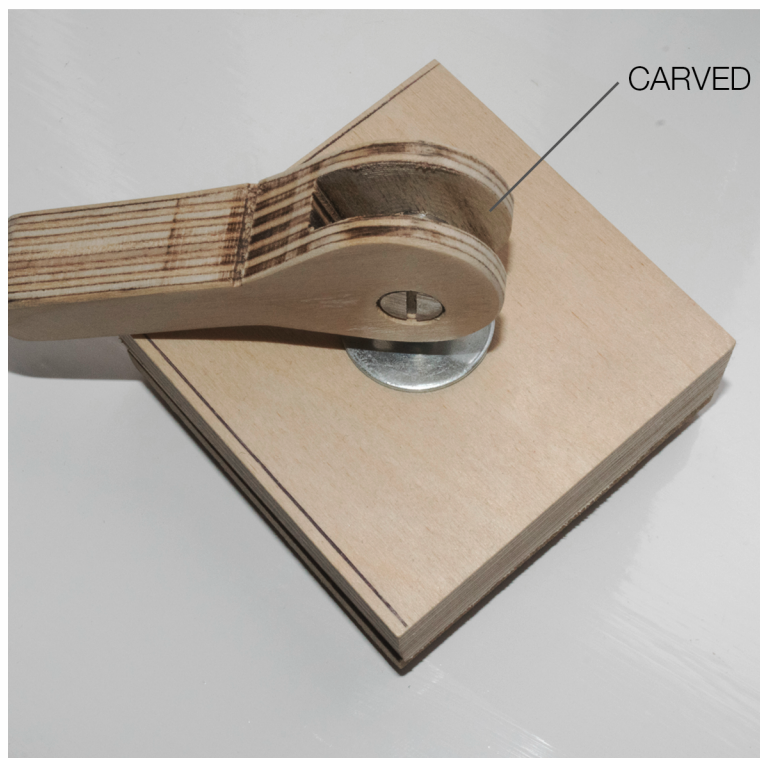
IN MOTION

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



LOCKED POSITION

THE PANELS ARE CLAMPED SHUT. THE FRICTION BETWEEN THE CAM LEVER, 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.

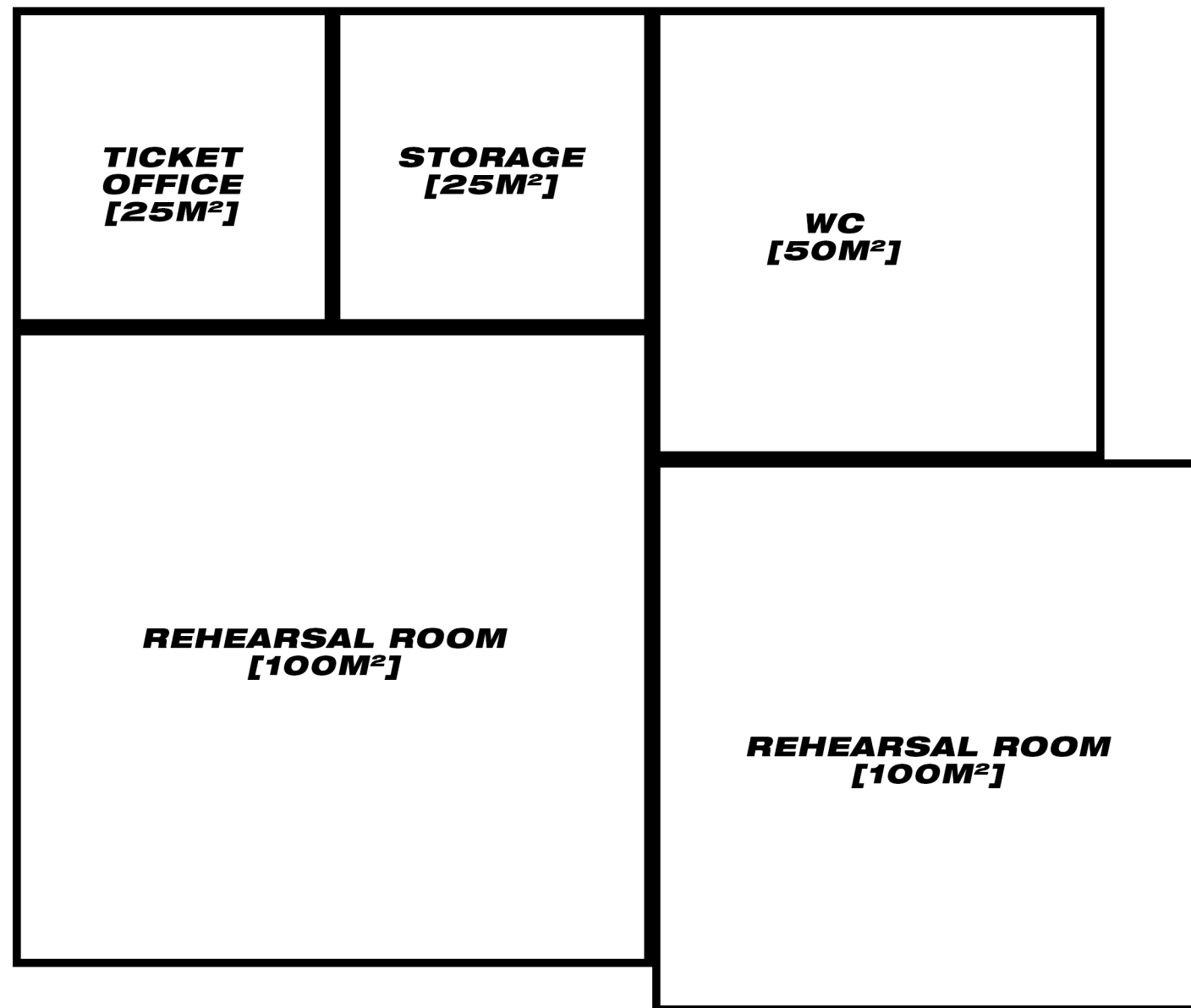


A CAM IS A ROTATING OR SLIDING PIECE IN A MECHANICAL LINKAGE USED ESPECIALLY IN TRANSFORMING ROTARY MOTION INTO LINEAR MOTION



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

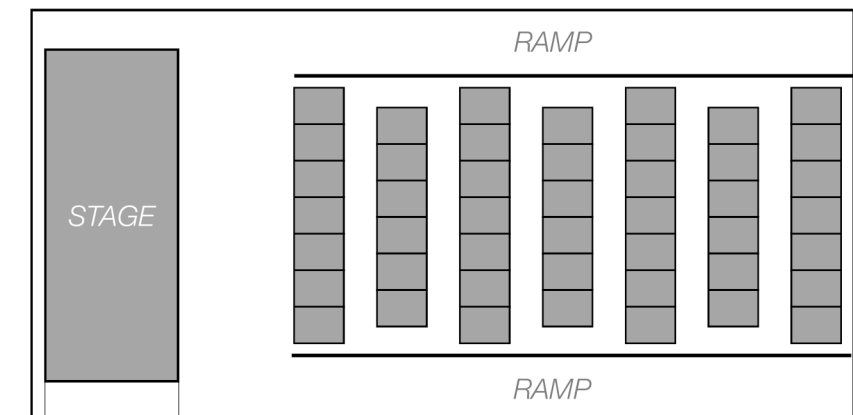
CAM LEVEL MODEL



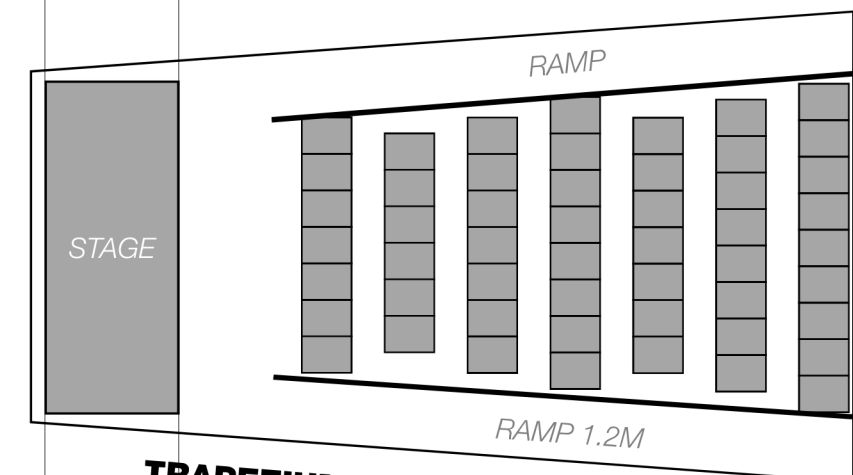
DESIGN ORIGINS

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 100M² SPACE IF IT IS A TRAPEZOID INSTEAD OF A RECTANGLE.

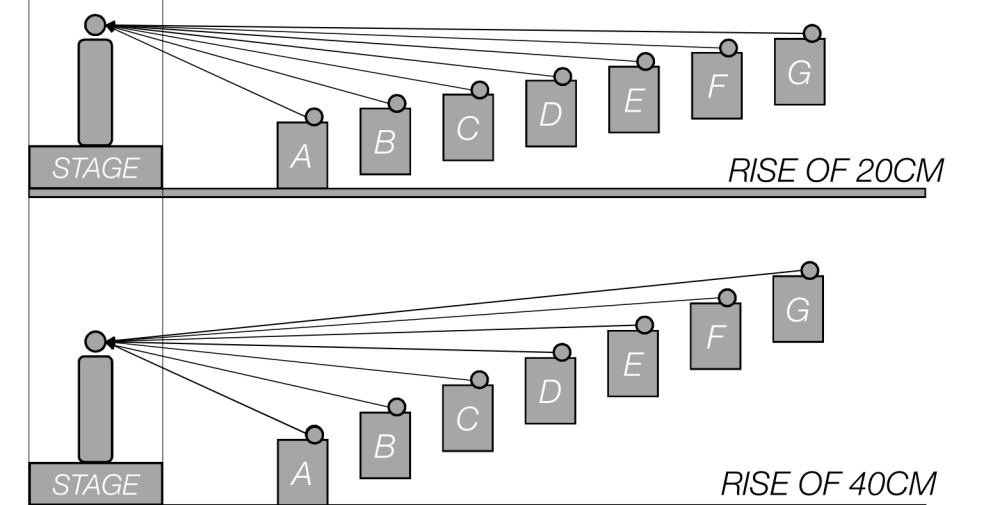
THIS SHAPE THEN FORMED THE BASE FOR THE REST OF THE FLOORPLAN: IT WAS DESIGNED AROUND THE MOST IMPORTANT SPACE.



RECTANGULAR AUDITORIUM - SEATS 46

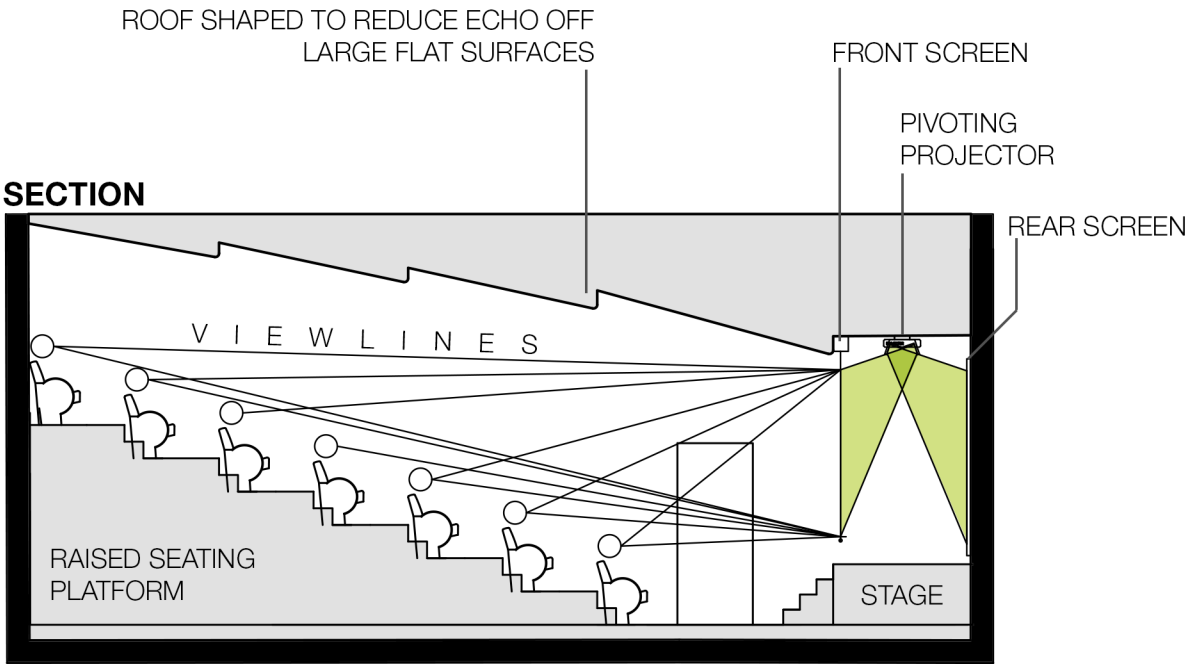


TRAPEZIUM AUDITORIUM - SEATS 52



ROOM MASSING AND AUDITORIUM OUTLINE [1:100]

EXISTING AUDITORIA DESIGN



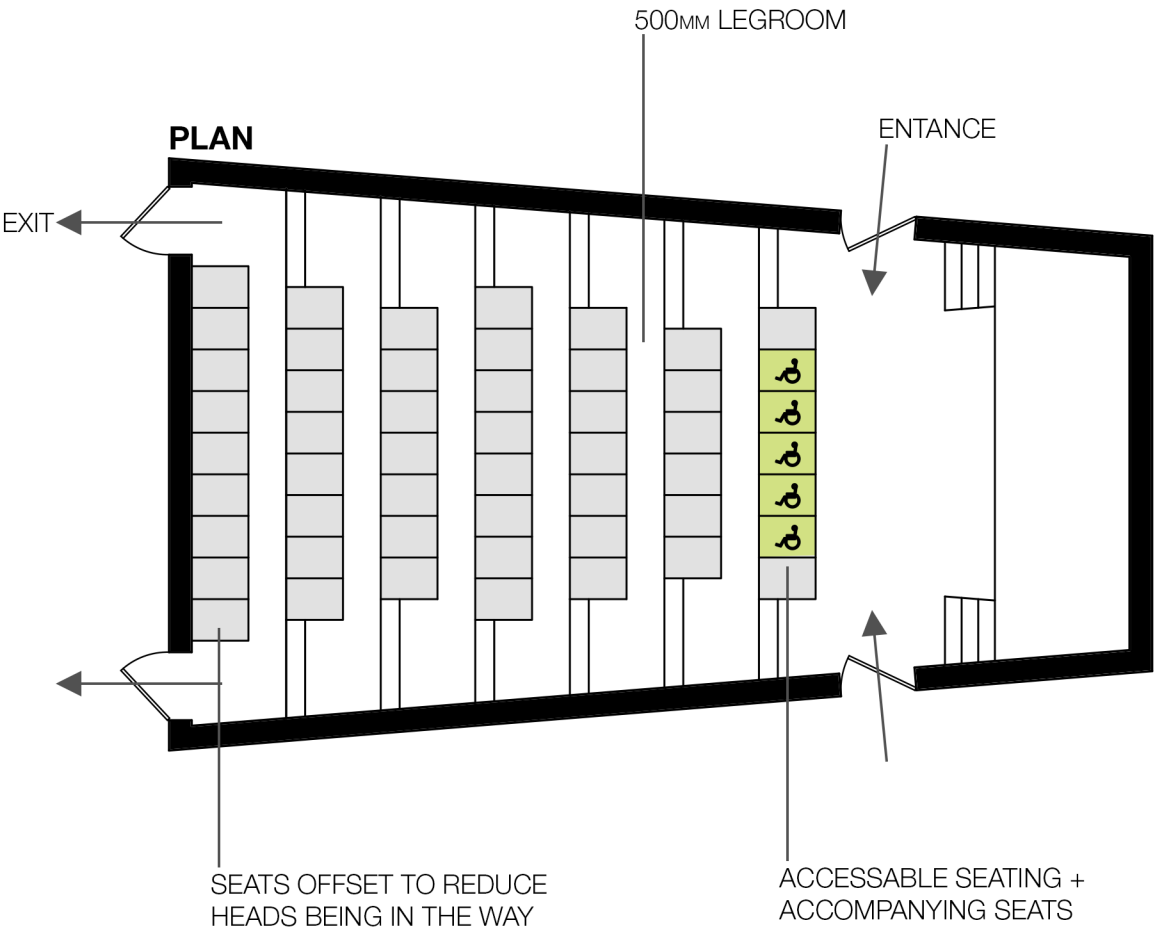
AUDITORIUM
The auditorium in this building is designed for **presentations, small speeches, community classes** and also doubles as an **indie movie theatre**. To accomodate these functions there are two screens in the auditorium, in front and behind the stage. There is a short throw projector mounted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

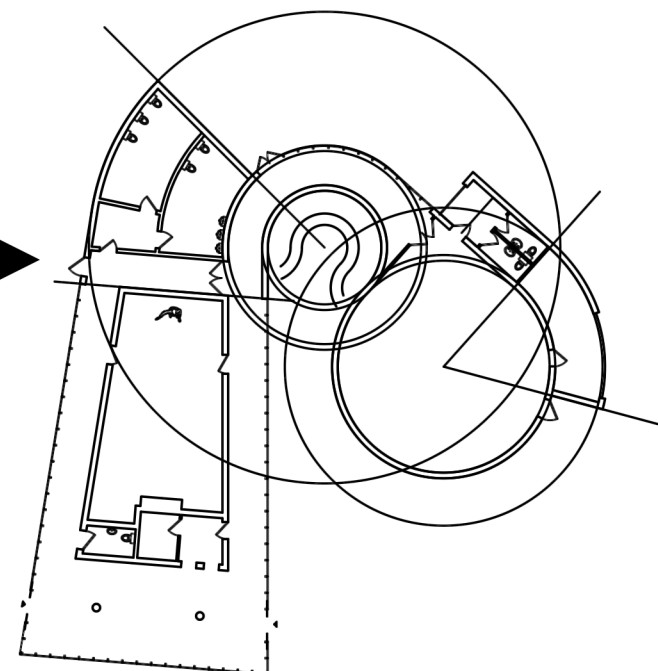
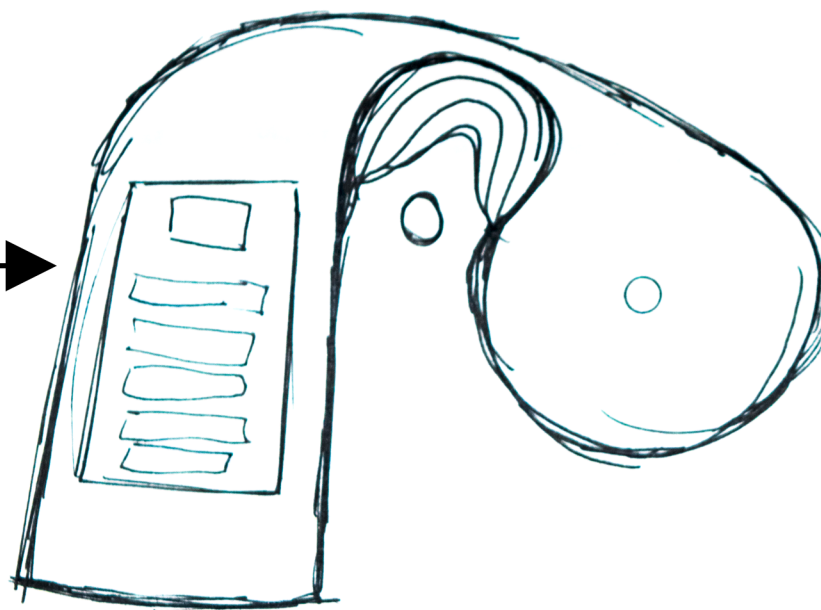
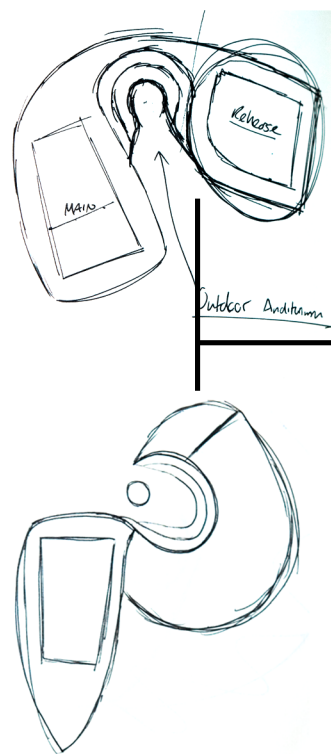
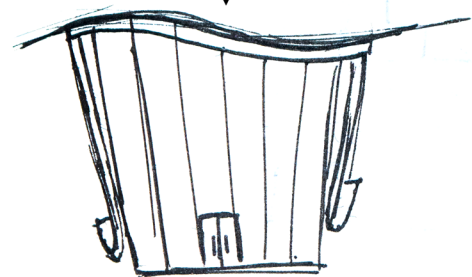
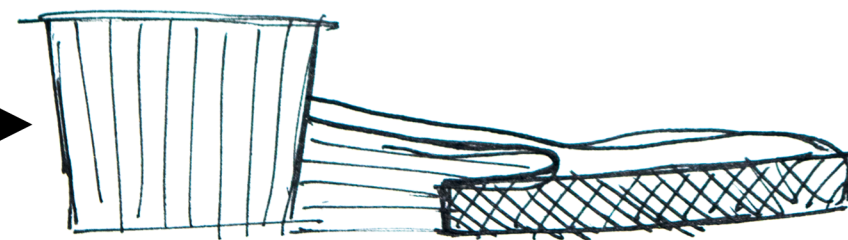
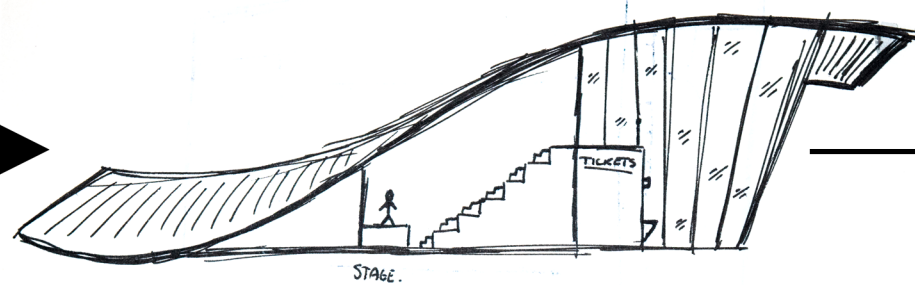
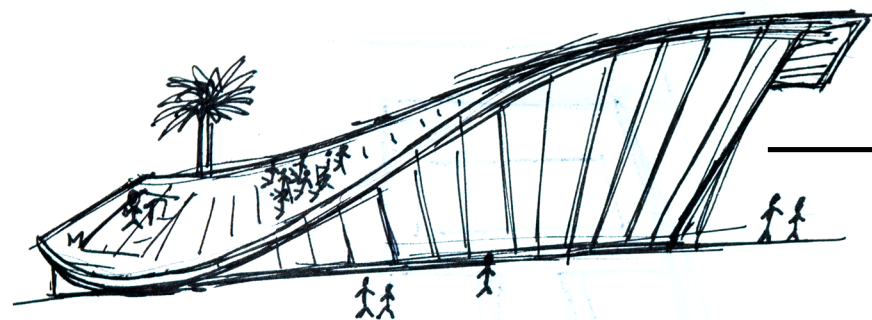
The auditoria's seating is designed so that one can see the top and bottom of the front screen no matter where they are sat. This also ensures that from any seat a speaker will be clearly visible and audible.

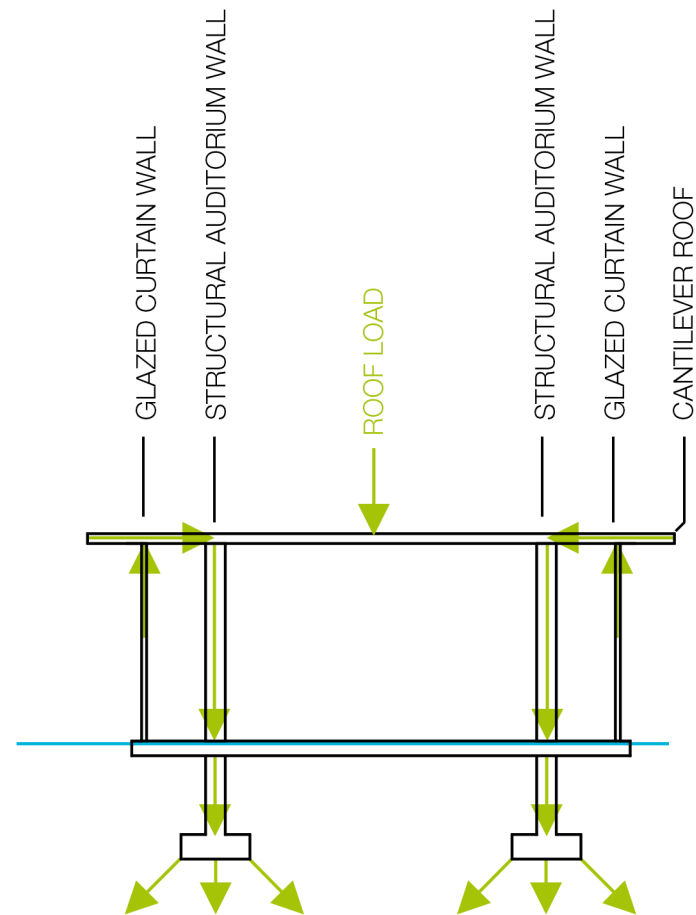
The auditoria's roof has been shaped to breakup the roof surface and reduce echo, and there are noise reduction panels along the left and right walls.

The auditorium is wheelchair accesible - 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 benefit the movie watching experience, however.





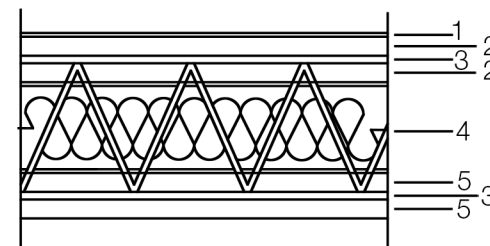
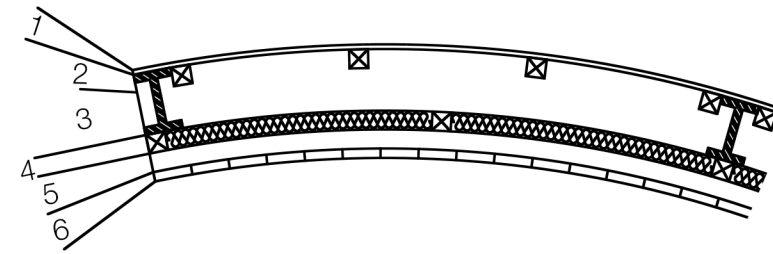


STRUCTURAL EXPLANATION

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]

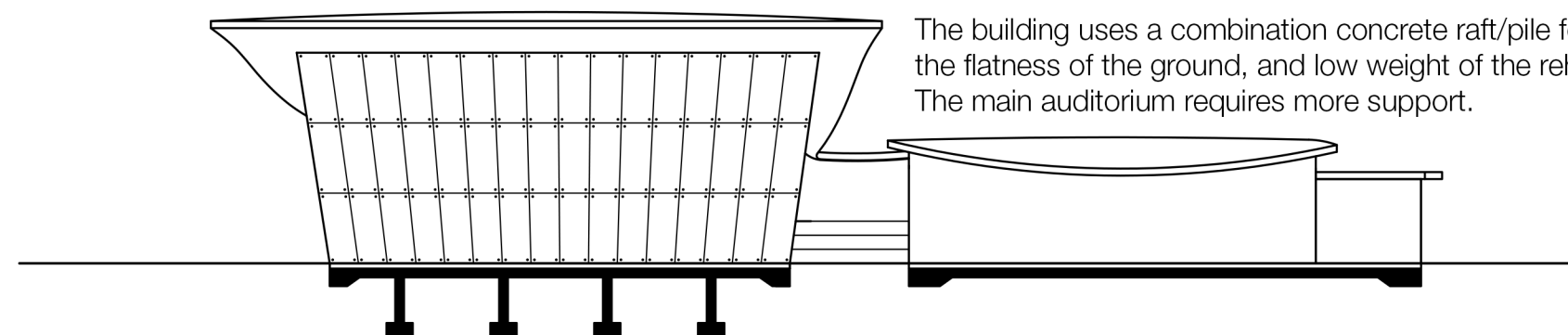
- 1: Flexible Plasterboard
- 2: Flexiboard Framework
- 3: Structural Steel
- 4: Vertical Timber Frame
- 5: Horizontal Timber Frame
- 6: Vertical Timber Classing



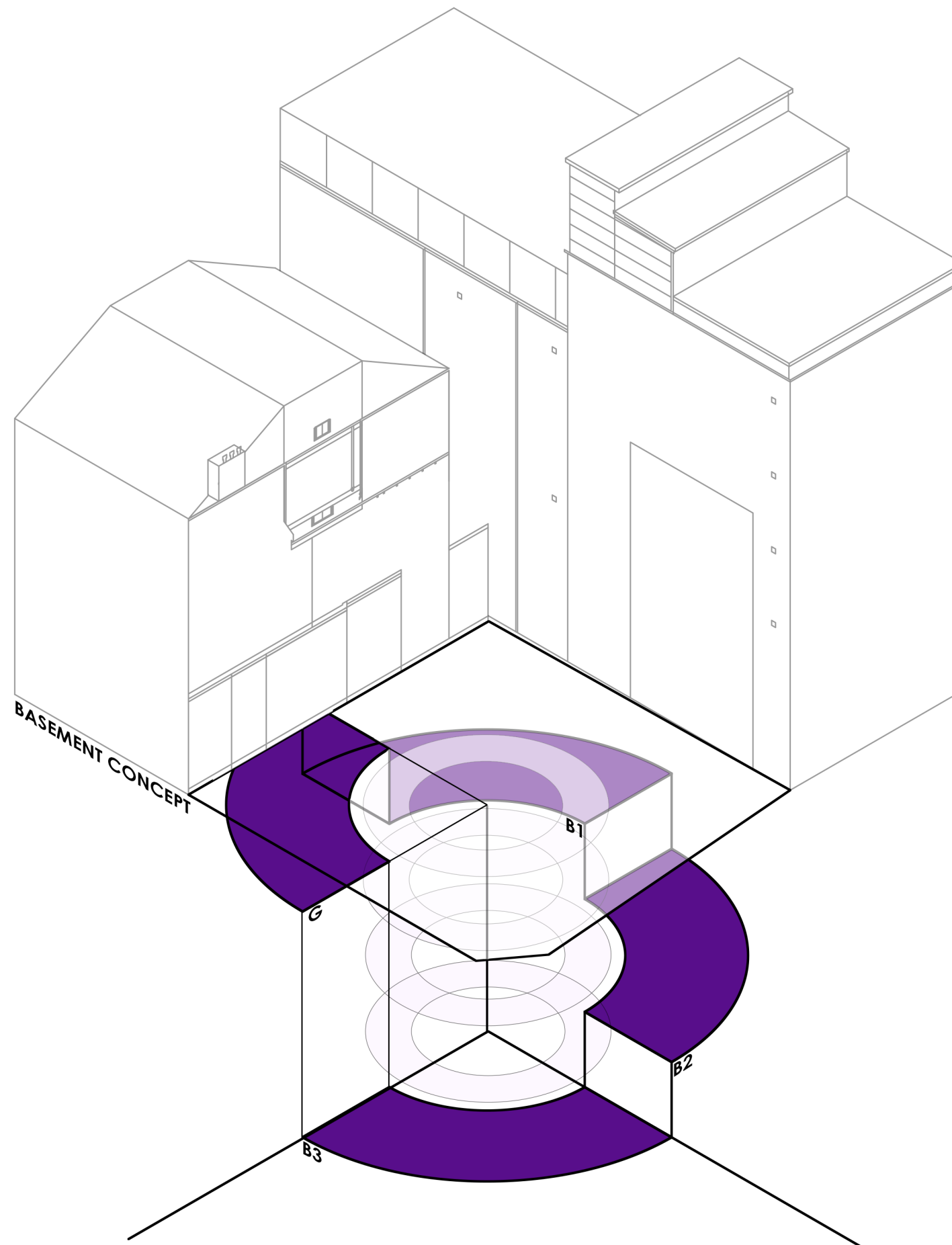
ROOF DETAILS

- 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 prominent 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.

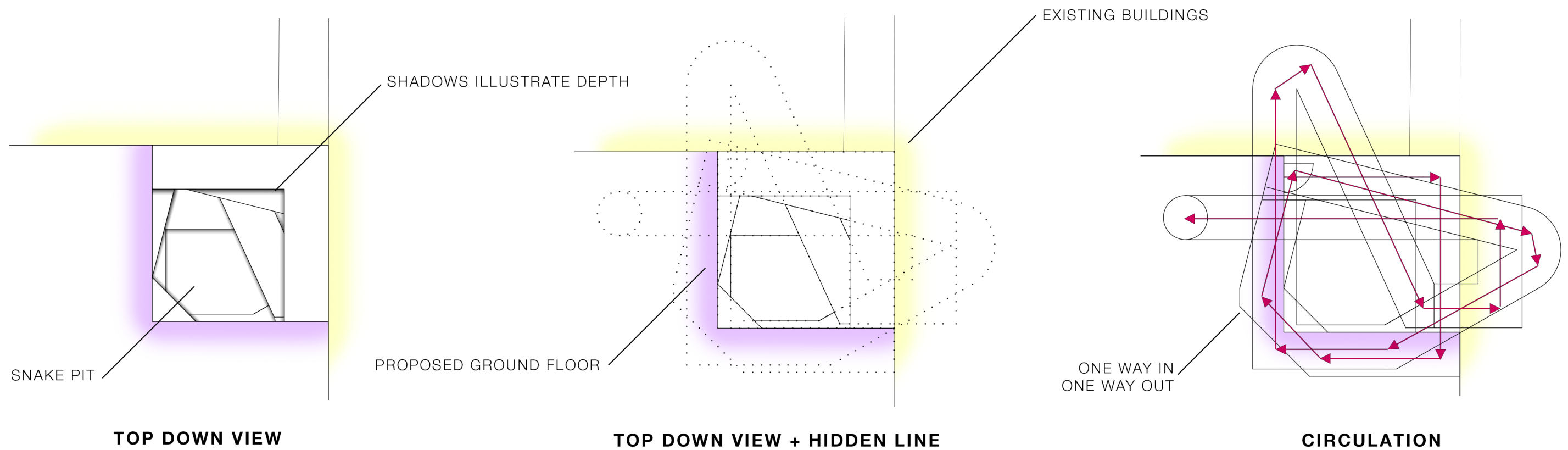


CONCEPT

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]

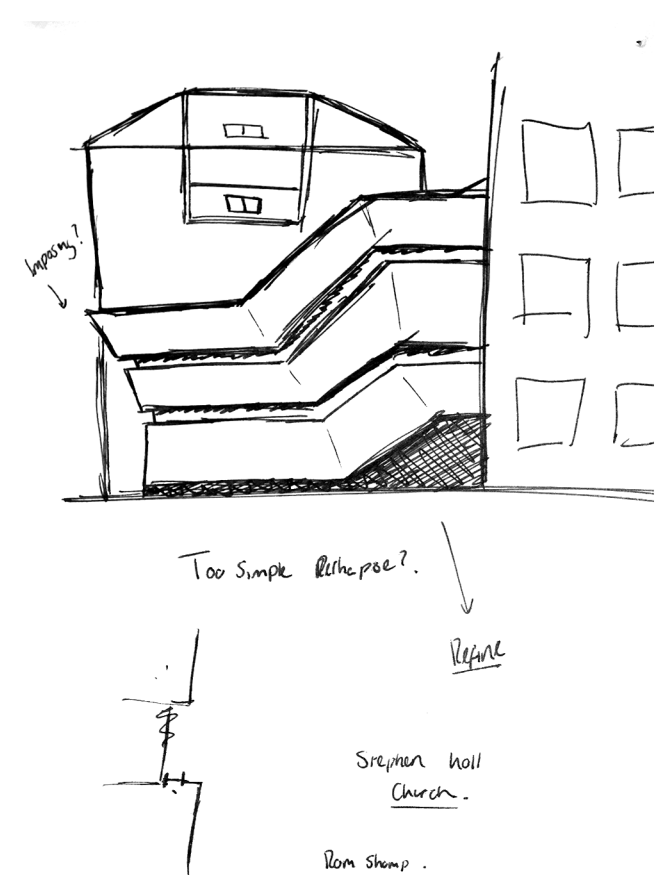
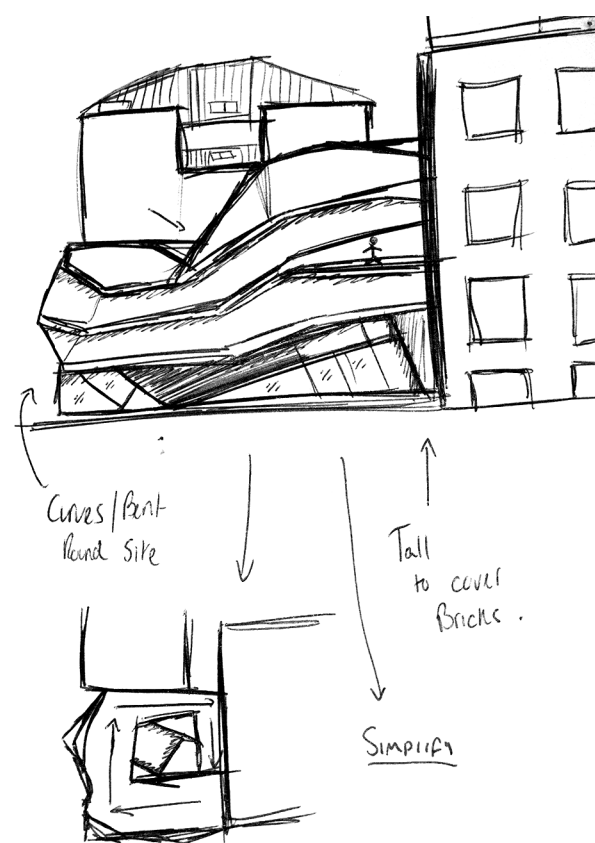
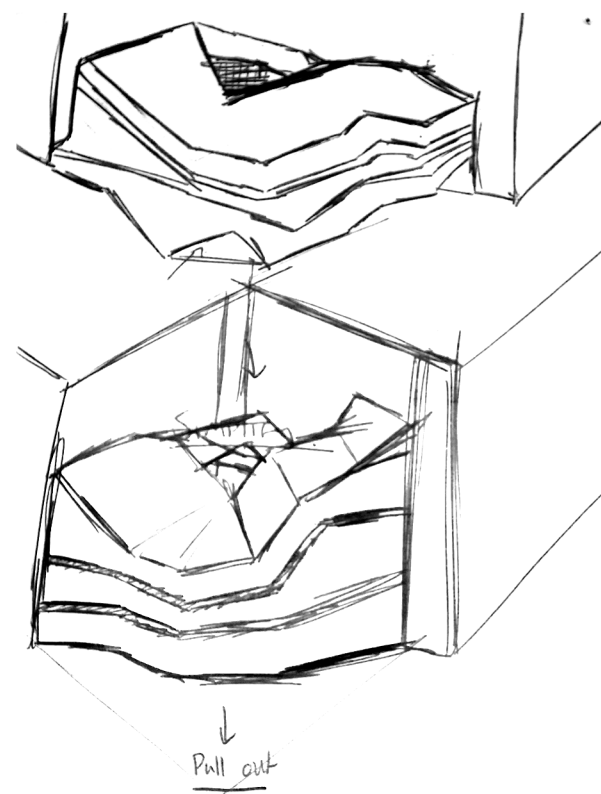
The building will also disregard the site boundary when underground, extending out in every direction.

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



CASCADING BASEMENT CONCEPT [1:100]

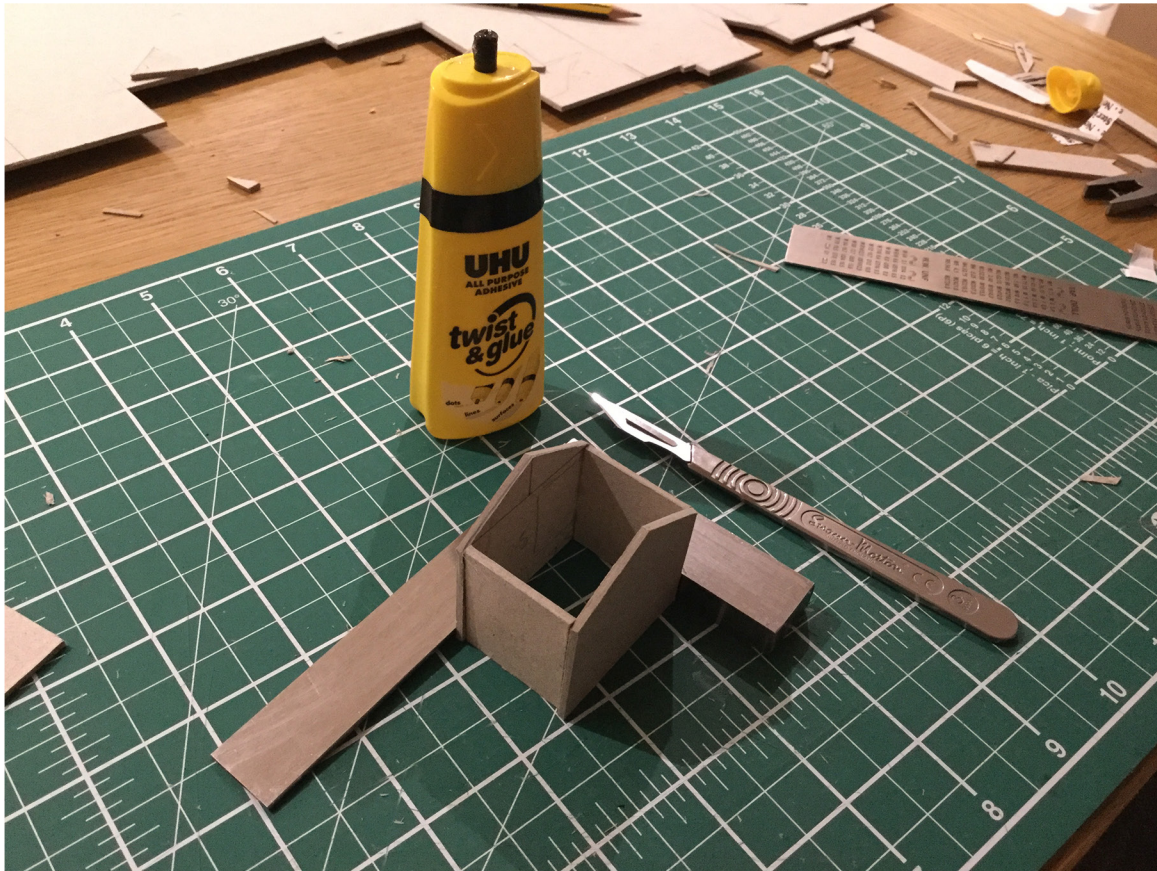
THESE DIAGRAMS ARE TO SHOW THE INITIAL CASCADING CORRIDOR CONCEPT. THEY SHOW DEPTH, CIRCULATION AND HOW FAR OUT THE BASEMENTS WILL EXTEND BEYOND THE SITE. THEY REPRESENT, BUT ARE NOT ACCURATE TO THE FINAL FLOORPLAN



I D E A —————> R E F I N E —————> S I M P L I F Y

GROUND FLOOR IDEA EVOLUTION [EXCERPTS FROM NOTEBOOK]

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



Card Model Making Pictures

