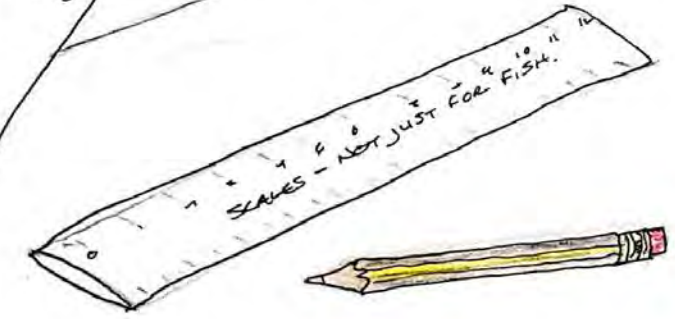
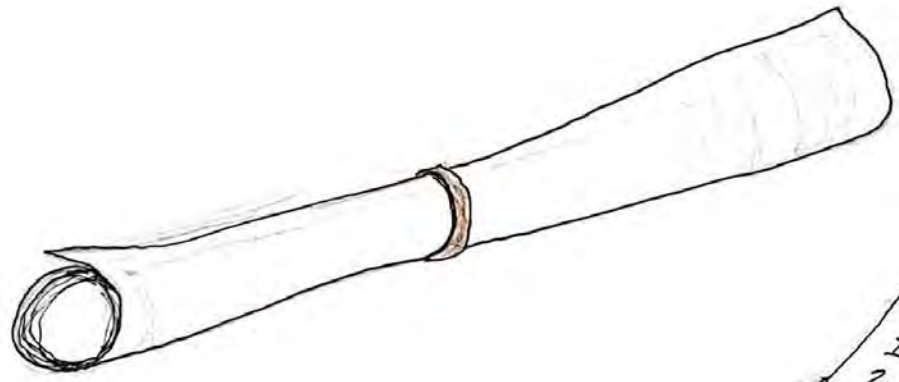


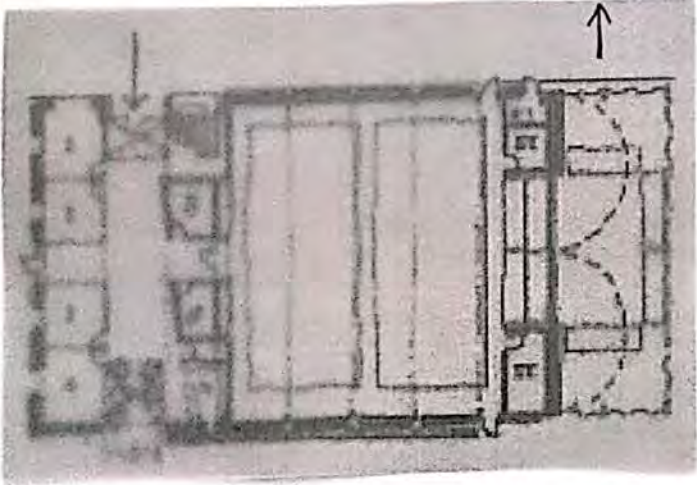
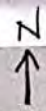
NEW COMMUNITY CENTRE IN
CLONGRIFFIN, DUBLIN.

TDS 3
PROJECT 2
ESQUISSE.



1, ARCHITECTURAL INTENT
AND AUDIT
+
3, PLANNING + ORGANISATION.

AIDAN McKENNA
D191 24287

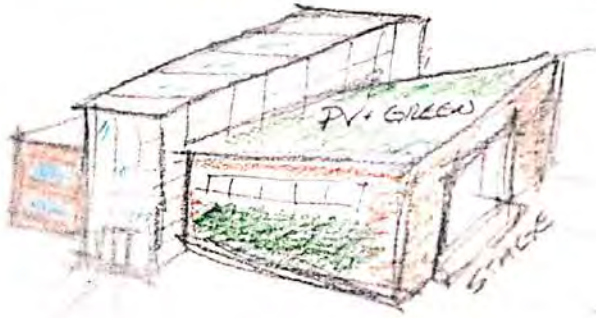
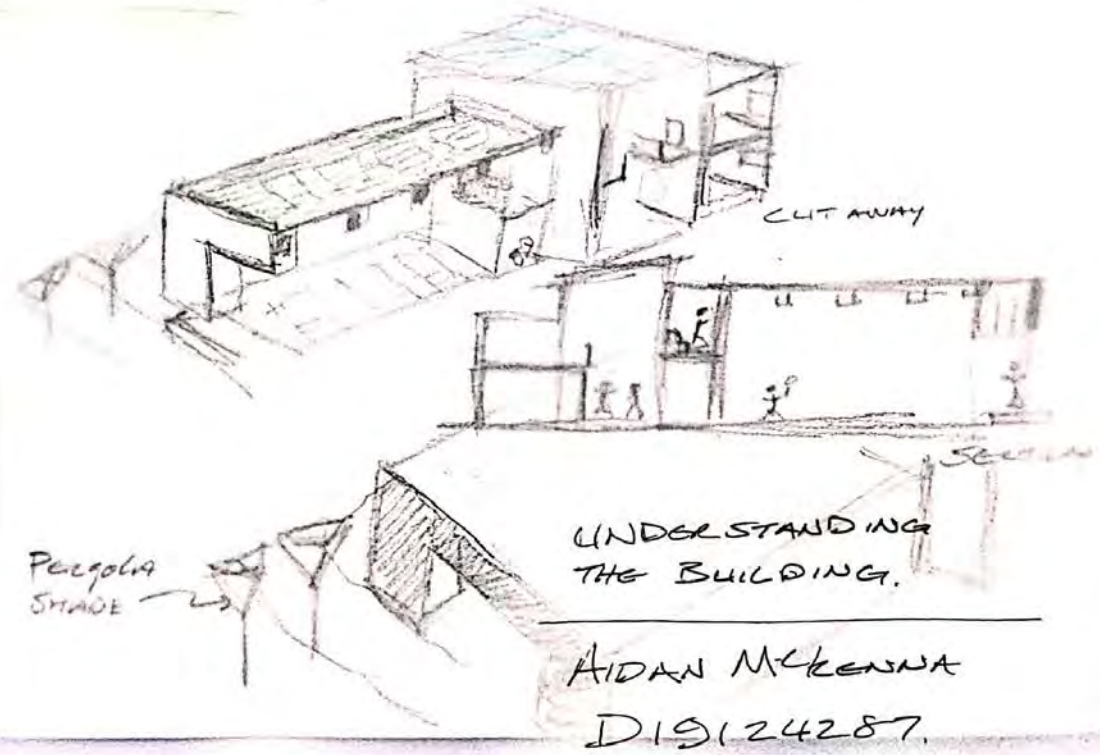
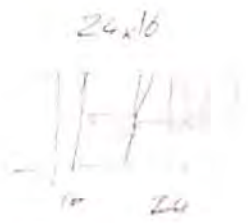
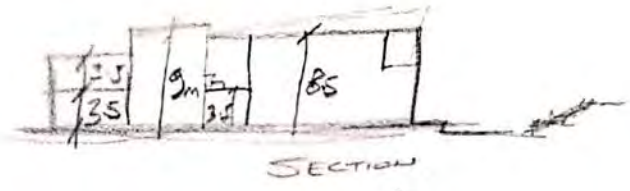


THE ARCHITECT SKETCH PLAN SHOWS FOUR ROOMS TO THE WEST, A CENTRAL ATRIUM, A FACILITIES AREA AND A MULTIPURPOSE HALL WHICH OPENS TO THE EAST.

THE INTENT OF THE ARCHITECT IS TO PROVIDE A MULTIPURPOSE COMMUNITY CENTRE COMPRISING OF VARIOUS ADAPTABLE SPACE BOTH INSIDE AND OUT TO CATER FOR THE EMERGING COMMUNITY OF CLON GRIFFIN, NORTH COUNTY DUBLIN.

THE ARCHITECT'S INITIAL SKETCHES WERE LIGHT ON DETAIL BUT THE OVERALL ASPIRATION IS CLEAR, TO CREATE A FACILITY THAT IS VERSITILE, ENVIRONMENTALLY CONSCIOUS AND SUSTAINABLE THROUGH IT'S LIFETIME.

IN ORDER TO CARRY THE PROJECT FORWARD VARIOUS GUIDELINES, STANDARDS + REGULATORY REQUIREMENTS WILL HAVE TO BE CONSIDERED AND APPLIED TO MAXIMISE THE BUILDING'S POTENTIAL WITHOUT COMPROMISING THE ORIGINAL VISION.



INITIAL SKETCHES

WEST FACING
GLAZING

ART OR MURAL

CAFÉ

CAFÉ

CENTRAL ATRIUM

GLULAM BEAM
+ POST FRAME.
+ CURTAIN WALLING.

WEST FACING
GLAZING.

LOCAL ART
OR MURALS

FIRST FLOOR
WALK WAY.

SOUTH FACING
LIVING GREEN
WALL

ANOTHER RAINY DAY!

WHILE THE
PU PANEL
MAY NOT WORK
AT 100%
THE ROOF IS
COLLECTING
THE RAINWATER
AND CHANNELLING
IT INTO PLANKING
STORAGE TANKS

RAINWATER
HARVESTING

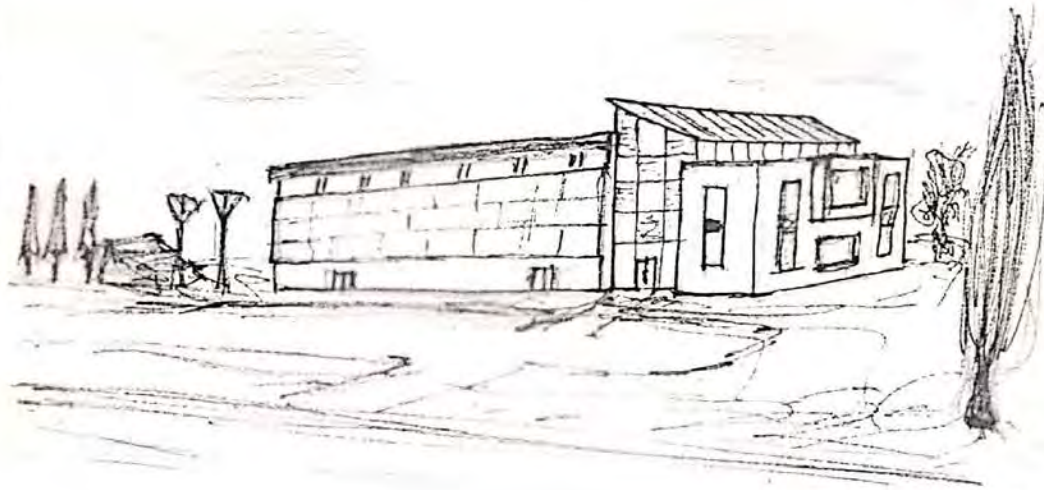
CREATE A WATER
FEATURE

THE RAINWATER
IS USED TO
IRRIGATE THE
ALLOTMENTS
AND GARDENS
DURING DRY
SPELLS.

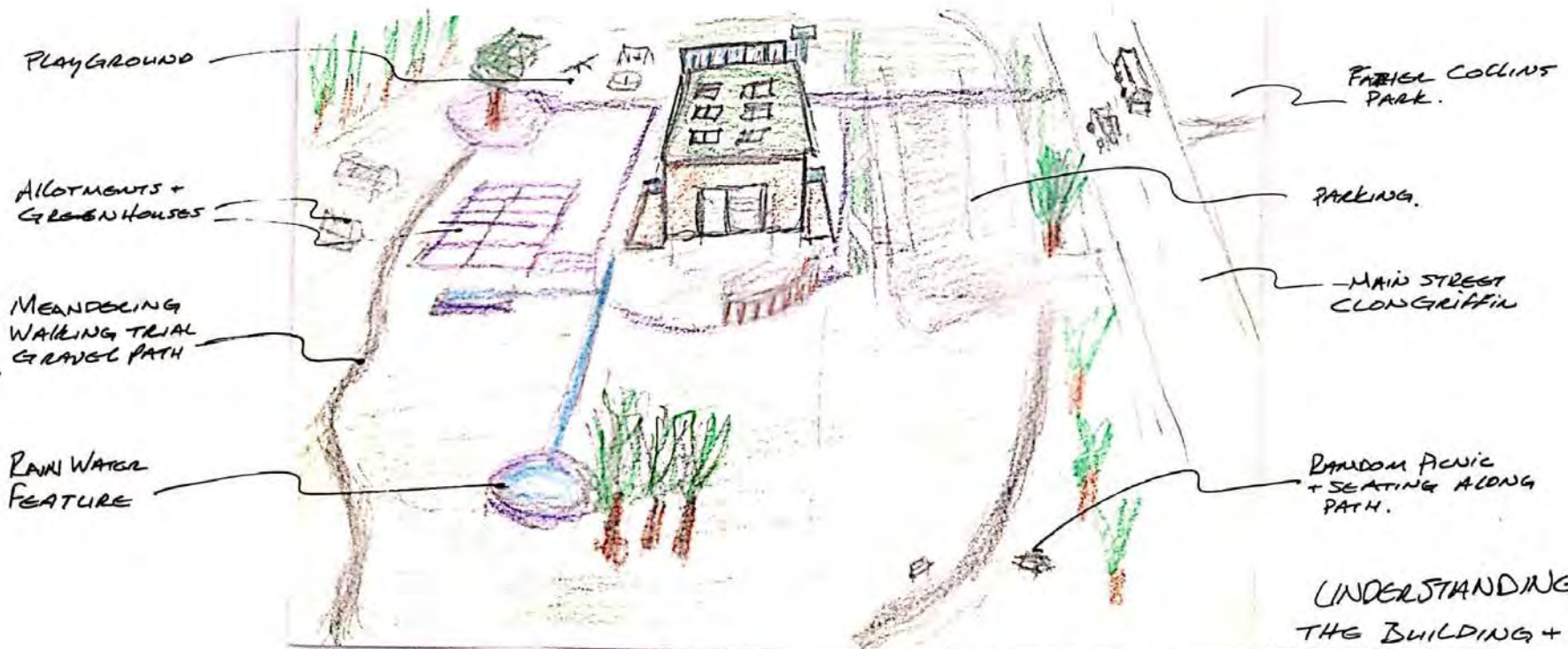
Rain Water Collector.

UNDERSTANDING
THE BUILDING + SITE.

AIDAN MCKENNA
D19124287.



STREET VIEW



PLAYGROUND

ALLOTMENTS +
GREENHOUSES

MEANDERING
WALKING TRAIL
GRAVEL PATH

RAIN WATER
FEATURE

FABIEL COLLINS
PARK.

PARKING.

MAIN STREET
CLONGRIFFIN

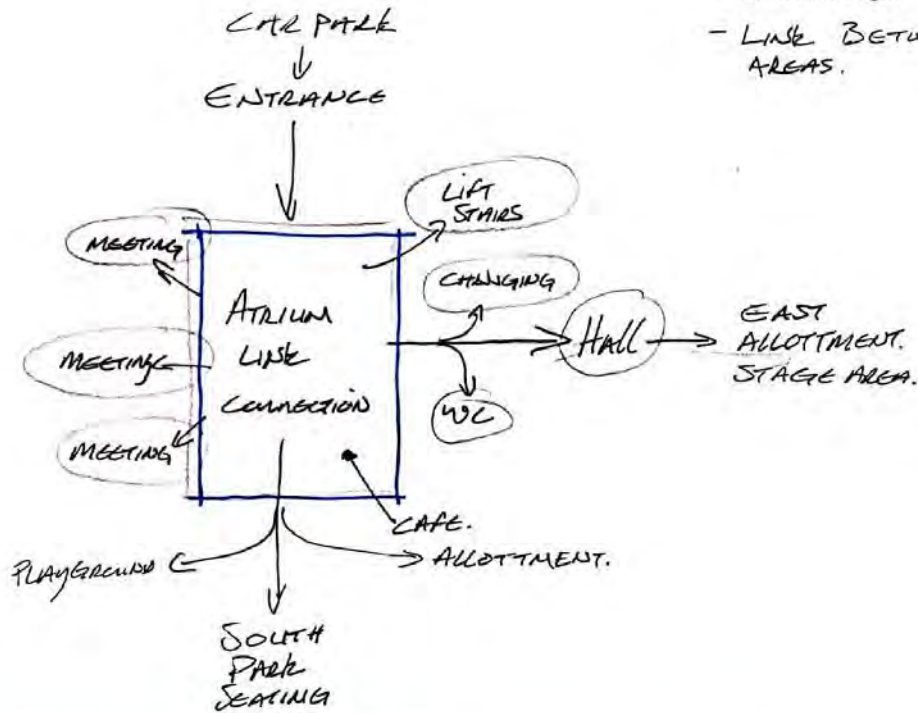
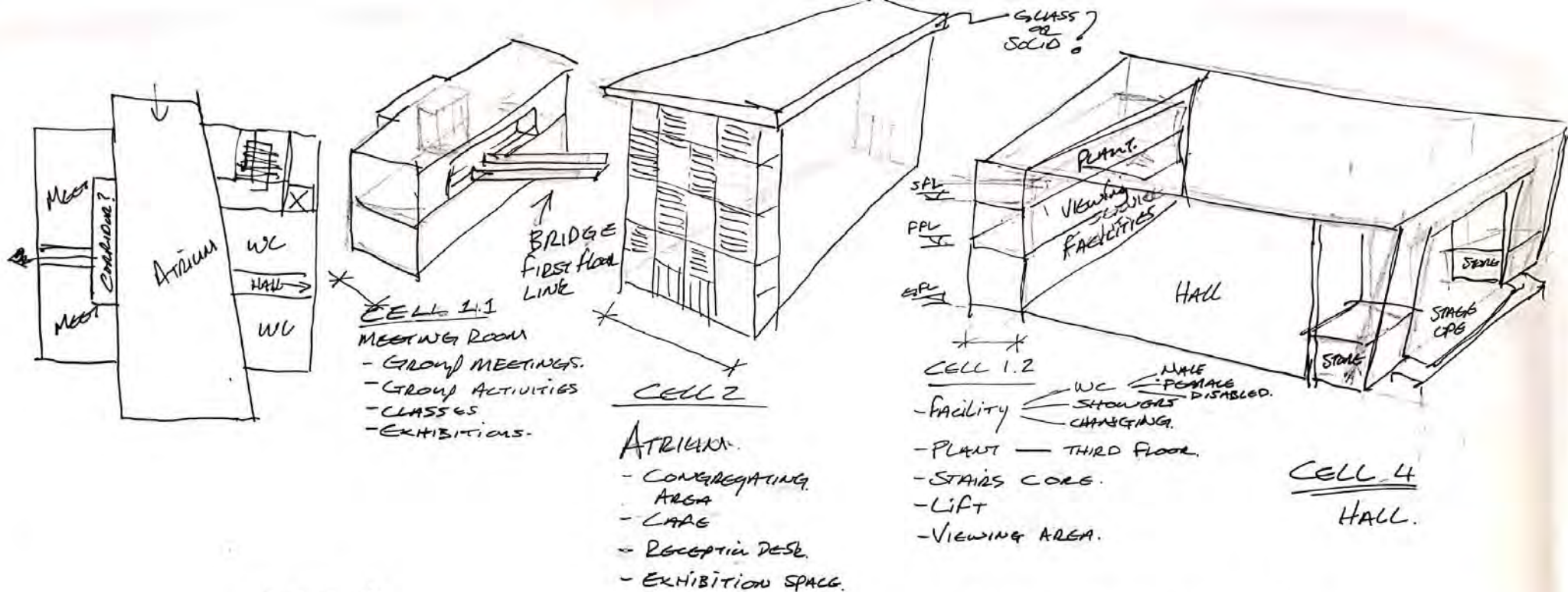
RANDOM PICNIC
+ SEATING ALONG
PATH.

AERIAL VIEW.

UNDERSTANDING
THE BUILDING + SITE.

AIDAN MCKEENA.

D19124287.



AS PER TGD PART B FIRE

- PURPOSE GROUP 5 - PLACE OF ASSEMBLY.
- OCCUPANCY FACTOR (LOAD)
= $\frac{\text{AREA OF ROOM / SPACE } m^2}{\text{FLOOR AREA PER PERSON OR LOAD FACTOR}}$

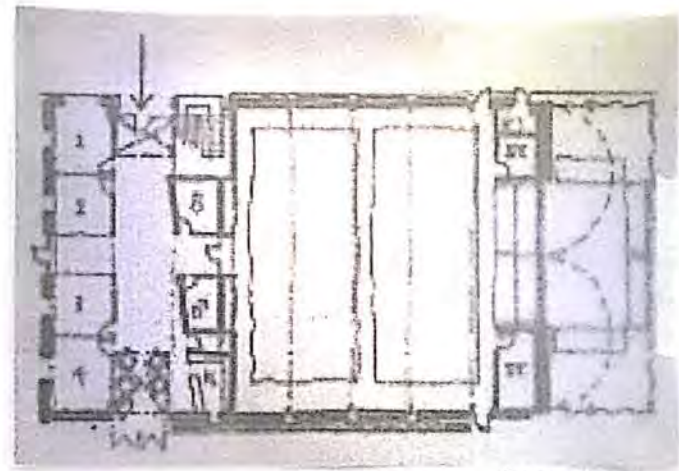
Hall @ $775 m^2 / 0.3 = 232.5$
 MEETING ROOMS @ $200m^2 / 1.0 = 200.0$
 ATRIUM @ $140m^2 / 0.3 = 41.7$

THIS WILL EFFECT ← 474.2 PERSONS.
 THE DECISIONS OF FACILITY NUMBERS,
 CAR PARKING, CORRIDOR WIDTHS, DOOR WIDTHS,
 STAIRS, ETC.

UNDERSTANDING
 THE BUILDING

AIDAN MCKENNA
 D19124287.

THE ATRIUM ALTS AS A CENTRAL FOCAL AND CONNECTING ROUTE TO THE VARIOUS ACTIVITIES AND OPPORTUNITIES AVAILABLE WITHIN THE COMPLEX



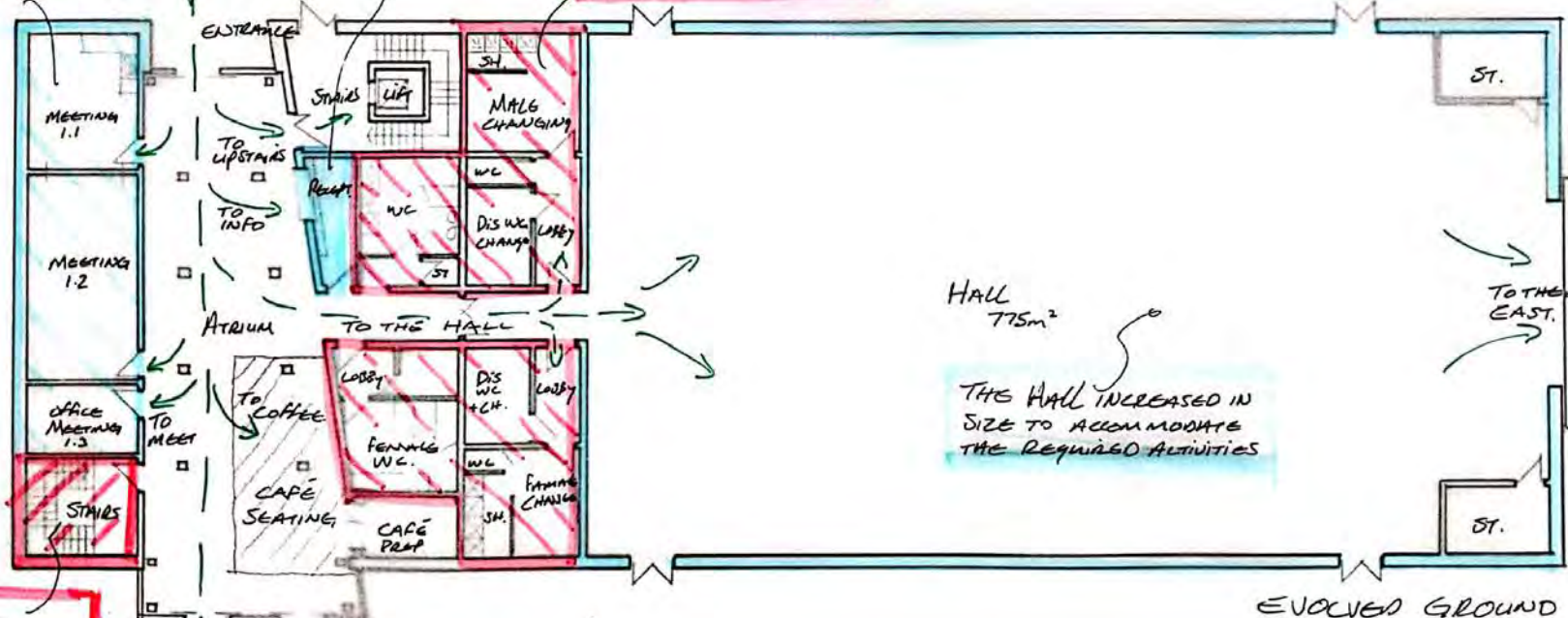
ORIGINAL ARCHITECTS SKETCH PLAN.

CARPARK + ENTRANCE

THE COMMUNITY MEETING ROOM PROVIDED EXCEED THE DESIRED AREA.

AN INFO/RECEPTION DESK WAS ADDED.

THE CHANGING AND WC FACILITIES AREA INCREASE SIGNIFICANTLY TO ACCOMMODATE THE NUMBERS OF PEOPLE.



HALL 775m²

THE HALL INCREASED IN SIZE TO ACCOMMODATE THE REQUIRED ACTIVITIES

A SECOND STAIR WAS ADD TO MEET FIRE ESCAPE REQS

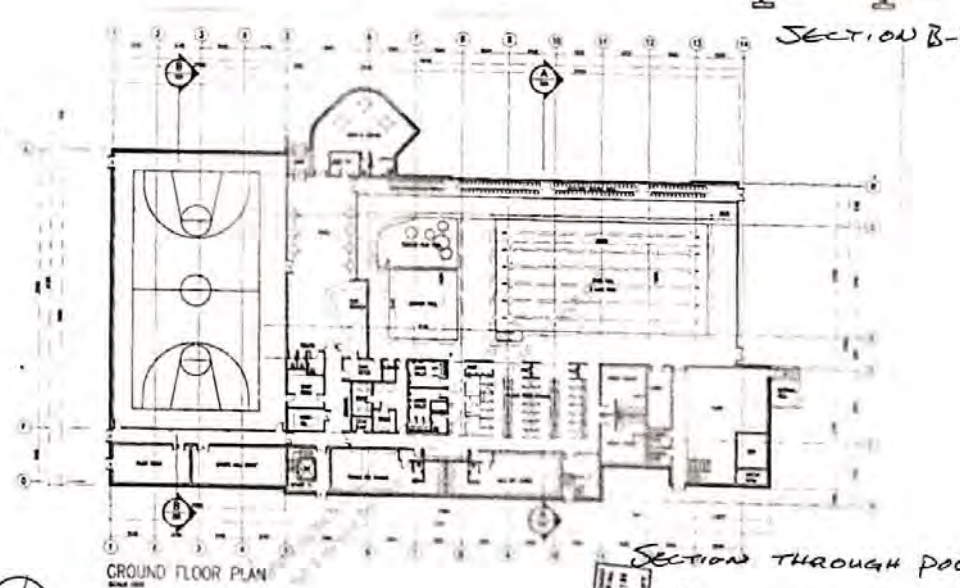
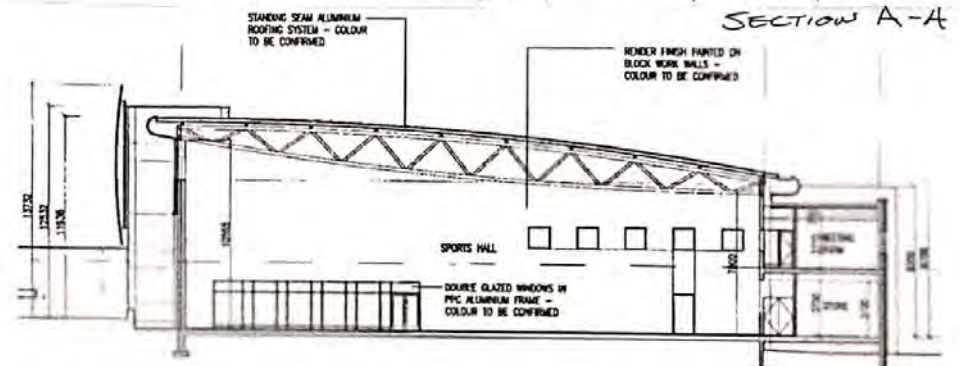
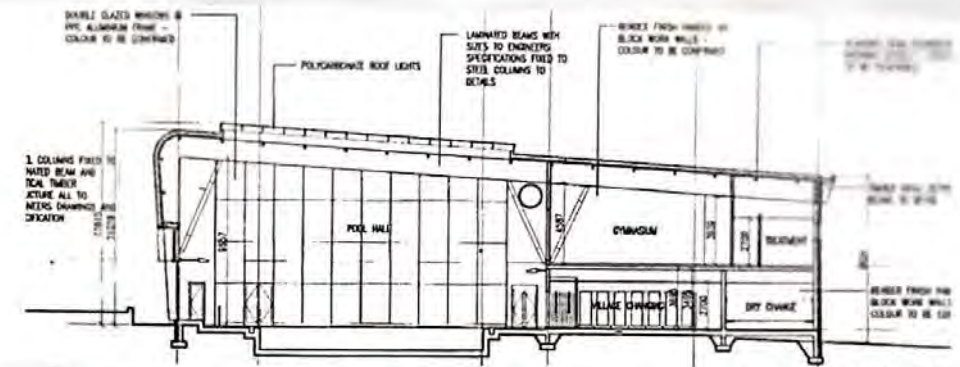
EVOLVED GROUND FLOOR PLAN 1:200.

UNDERSTANDING THE BUILDING + SITE
AIDAN McKEOWN
DIG124257

SHORELINE LEISURE + COMMUNITY CENTRE.

COMBINING A POOL, MULTIPURPOSE HALL, GYM MEETING ROOMS + CAFE. CONSTRUCTED IN THE LATE 2000'S THE BUILDING CONSIST OF THREE STRUCTURAL CONCEPTS.

- THE POOL AND GYM AREAS WITH CHANGING FACILITIES HAS A GLULAM STRUCTURAL FRAME WHICH SPANS FRONT TO BACK WITH AN INVERTED "L" SHAPE CONNECTED TO THE GROUND AT ONE END (FRONT ELEVATION) AND SUPPORT BY COLUMN/STRUCTURAL WALL AT THE OTHER. TIMBER PURLINS ARE USE AS SECONDARY MEMBER WITH TUBULAR STEEL DIAGONAL BRACE ADDING ADDITIONAL SUPPORT. THE EXTERNAL ENVELOPE IS CORRUGATED SILVER METAL SHEETS WHICH RETURNS FROM THE ROOF DOWN THE FRONT ELEVATION, MET BY DARK GREY FIBRE CEMENT BOARD AND CURTAIN WALLING GLAZING BETWEEN THE EXPOSED GLULAM.
- THE SPORTS HALL IS SPANNED BY A ^{SEMI-SPAN} STEEL BOW TRUSSES SUPPORT OFF COLUMNS WITH METAL INSULATED INFILL PANELS AND FIBRE CEMENT BOARD ABOVE.
- THE MEETING ROOMS TO THE REAR OF THE SPORTS HALL IS A STANDARD PLATFORM CONSTRUCTION.

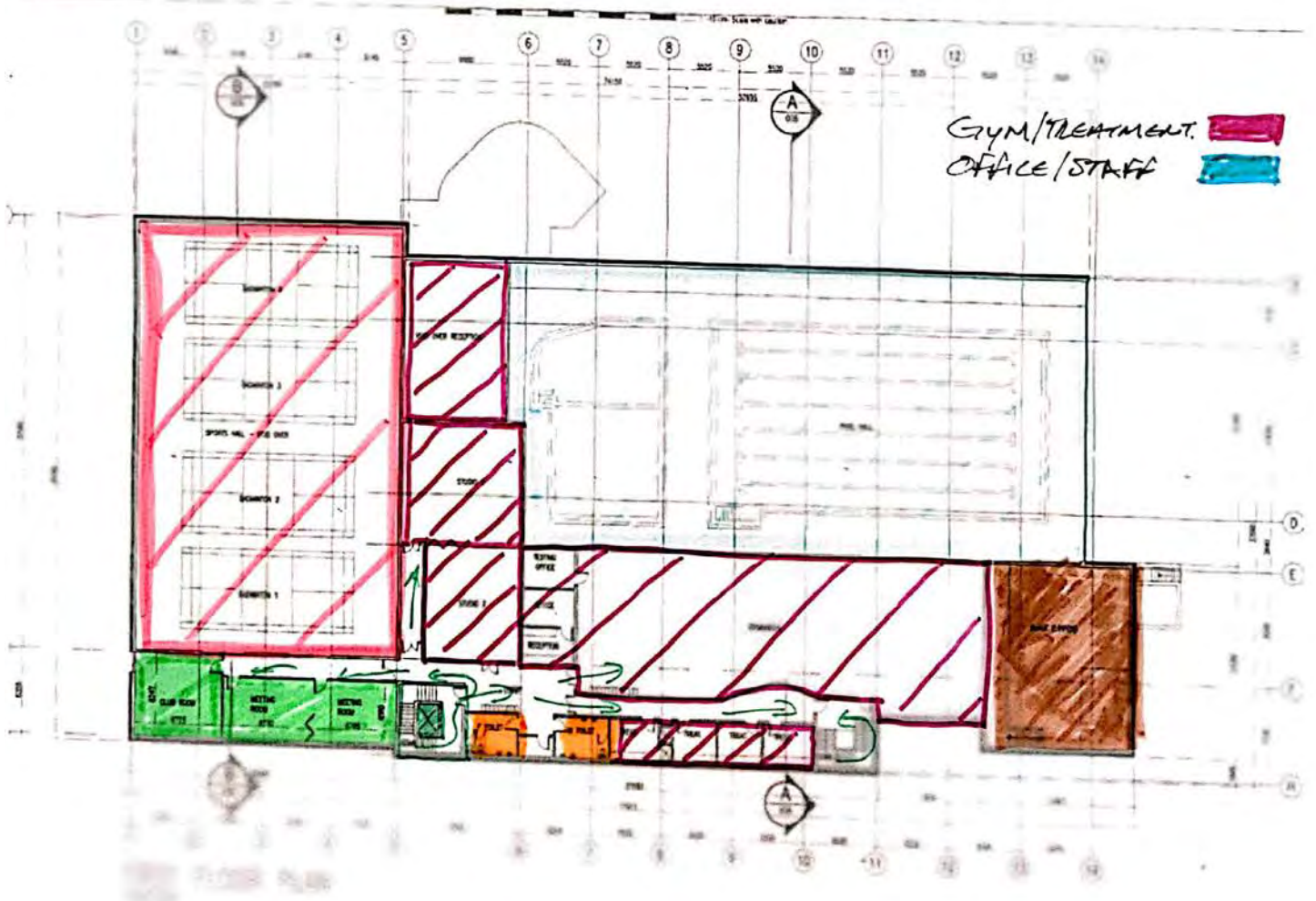
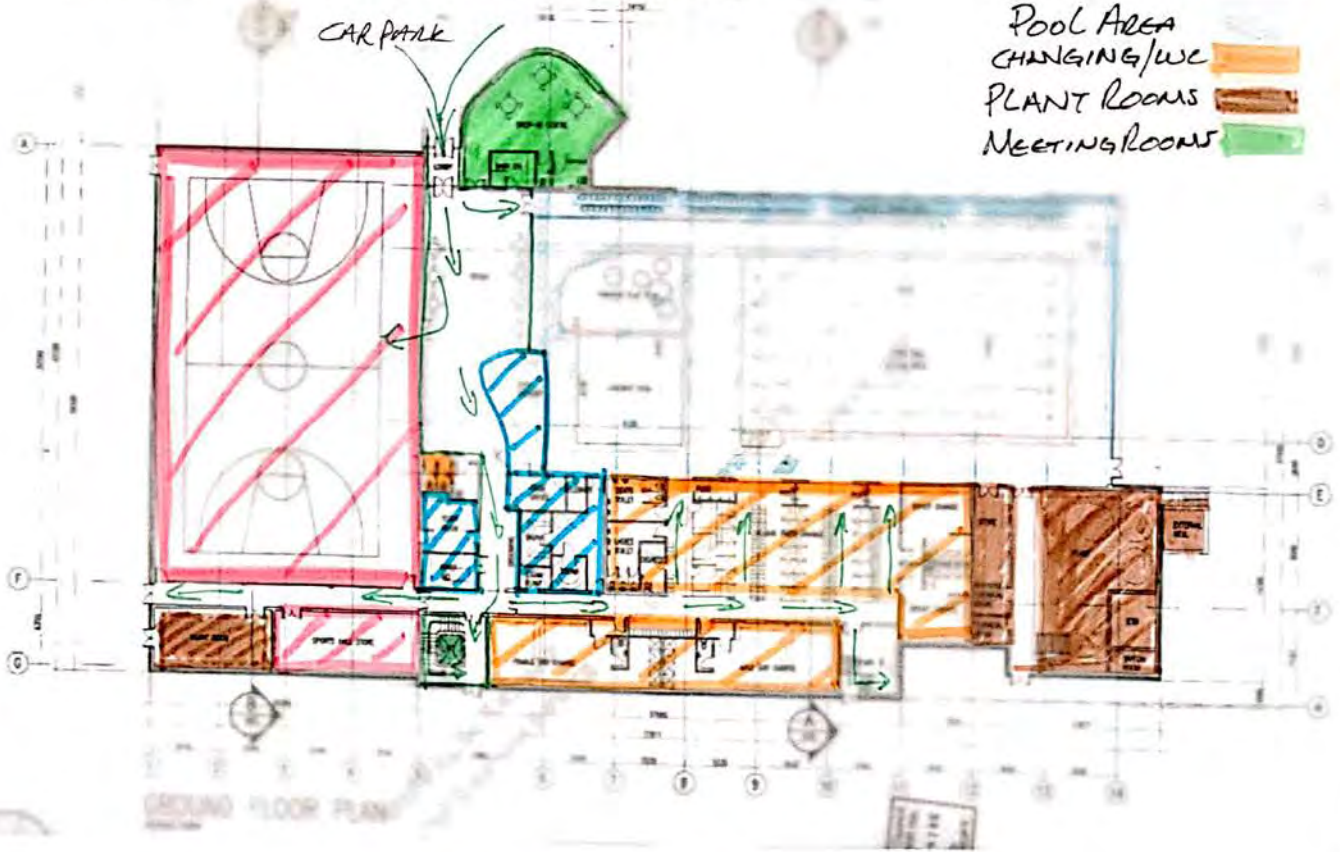


SECTION THROUGH POOL.
RESEARCH.
 AIDAN MCKENNA
 D19124287

REF Wicklow Co. Co. PLANNING ONLINE.

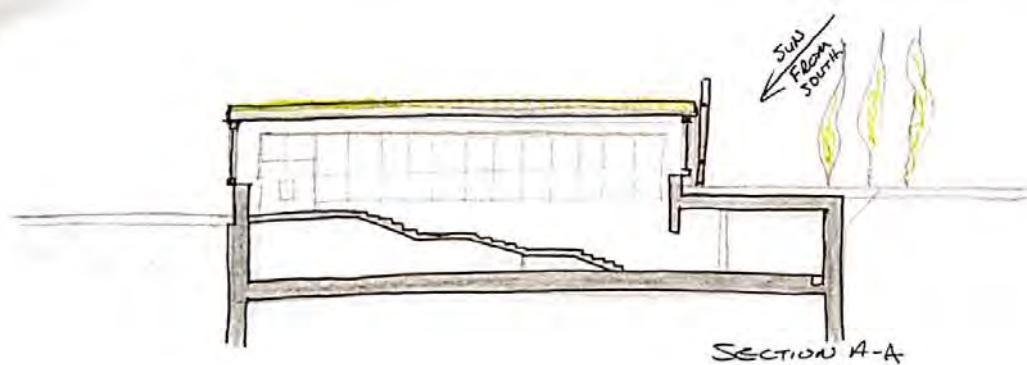
FLOW THROUGH BUILDING →

- SPORTS HALL █
- POOL AREA █
- CHANGING/WC █
- PLANT ROOMS █
- MEETING ROOMS █



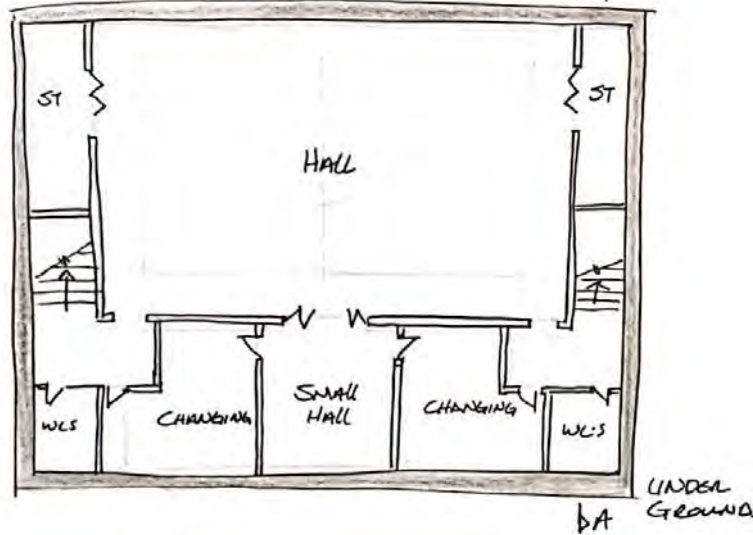
SHORELINE COMMUNITY SPORTS CENTRE.
GREYSTONES

RESEARCH.
AIDAN McLENNA
D19124287

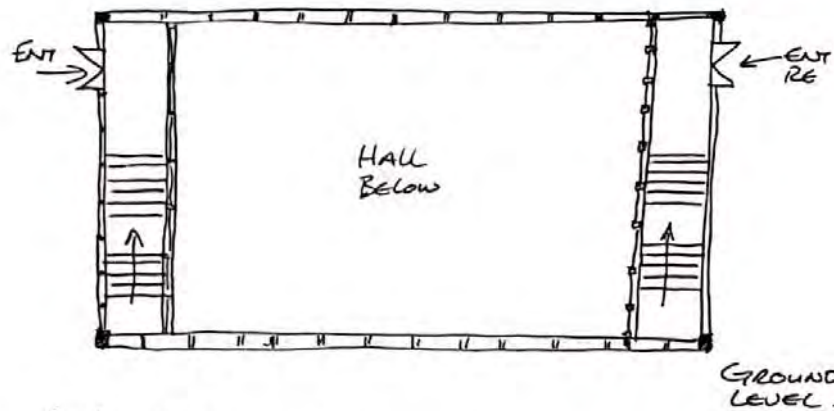


SECTION A-A

DA

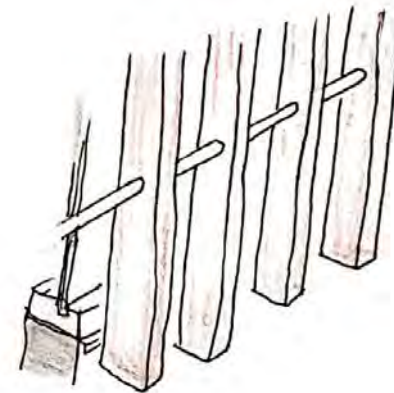
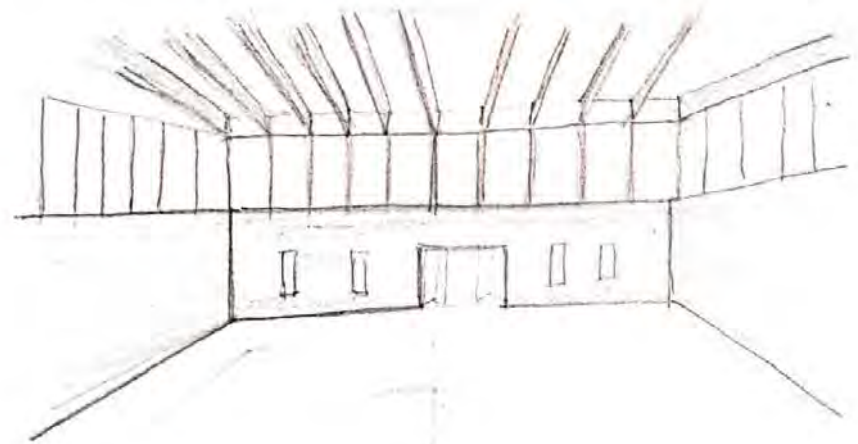


UNDER GROUND



GROUND LEVEL

Ref - DEZEEM.COM
 ARCHITECT - SOVAN MITROVIC

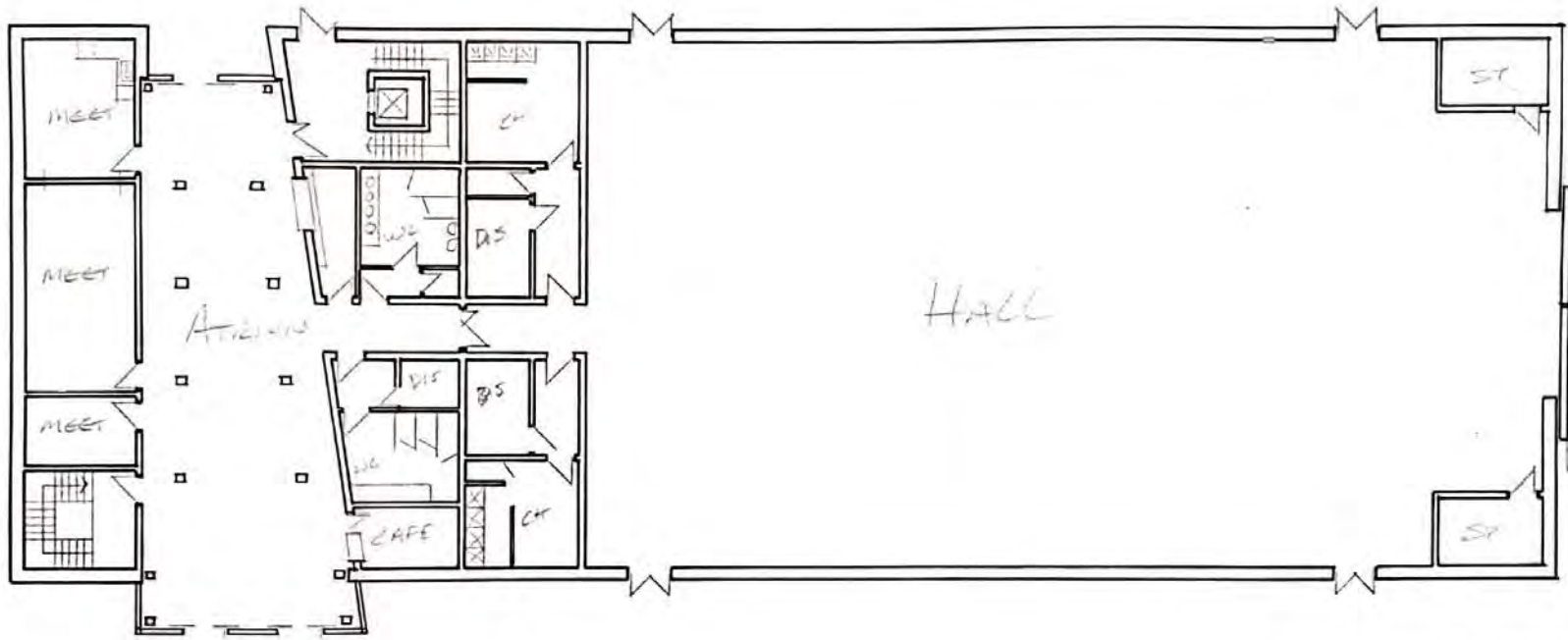


THIS UNDERGROUND SPORTS HALL IN THE SERBIAN TOWN OF OBRENOVAĆ IS TOPPED WITH A GLASS BOX COVERED WITH VERTICAL WOODEN LATHS TO PROTECT IS OVERHEATING.

GLULAM COLUMNS AND BEAMS SUPPORT THE GREEN ROOF ABOVE THE SPORTS HALL WITH TIMBER PANELING SURROUNDING THE INNER SPORT HALL. THE COLUMNS RISING ABOVE THE GROUND LEVEL PROVIDE THE GRID TO DEFINE THE GLAZING SYSTEM.

RESEARCH

AIDAN MCKENNA
 D19124287

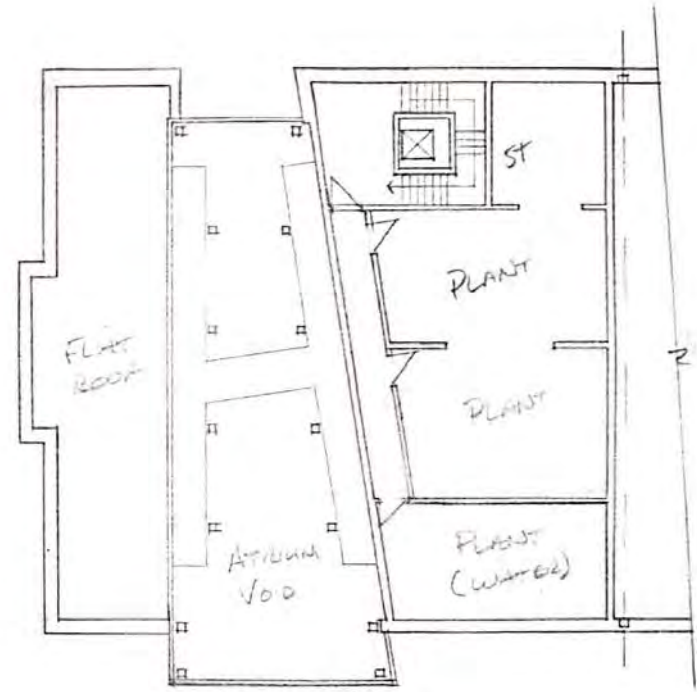


GROUND FLOOR
PLAN 1:200

ORGANISATION
AIDAN MCKENNA
D19124287

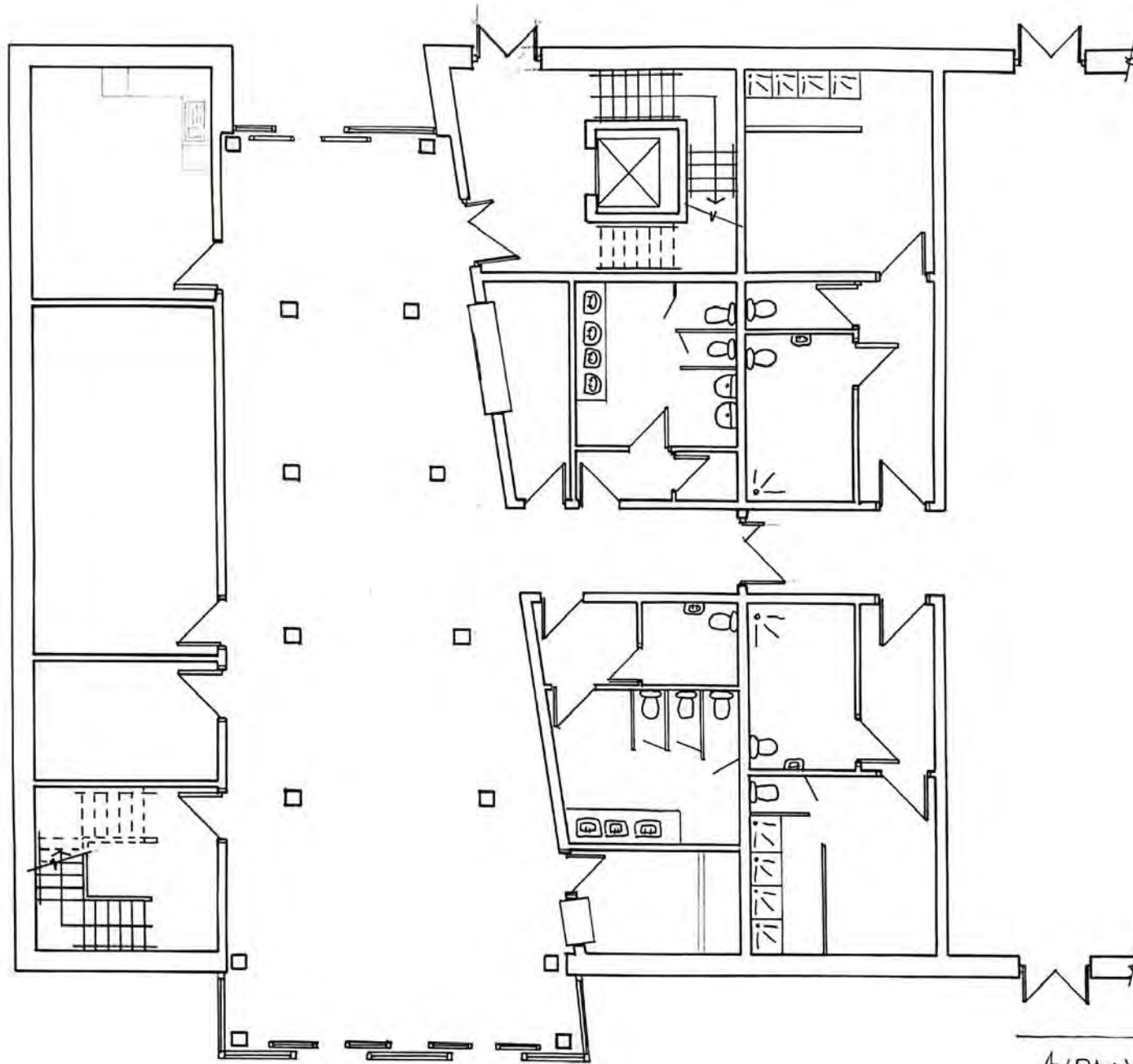


FIRST FLOOR
PLAN 1:20

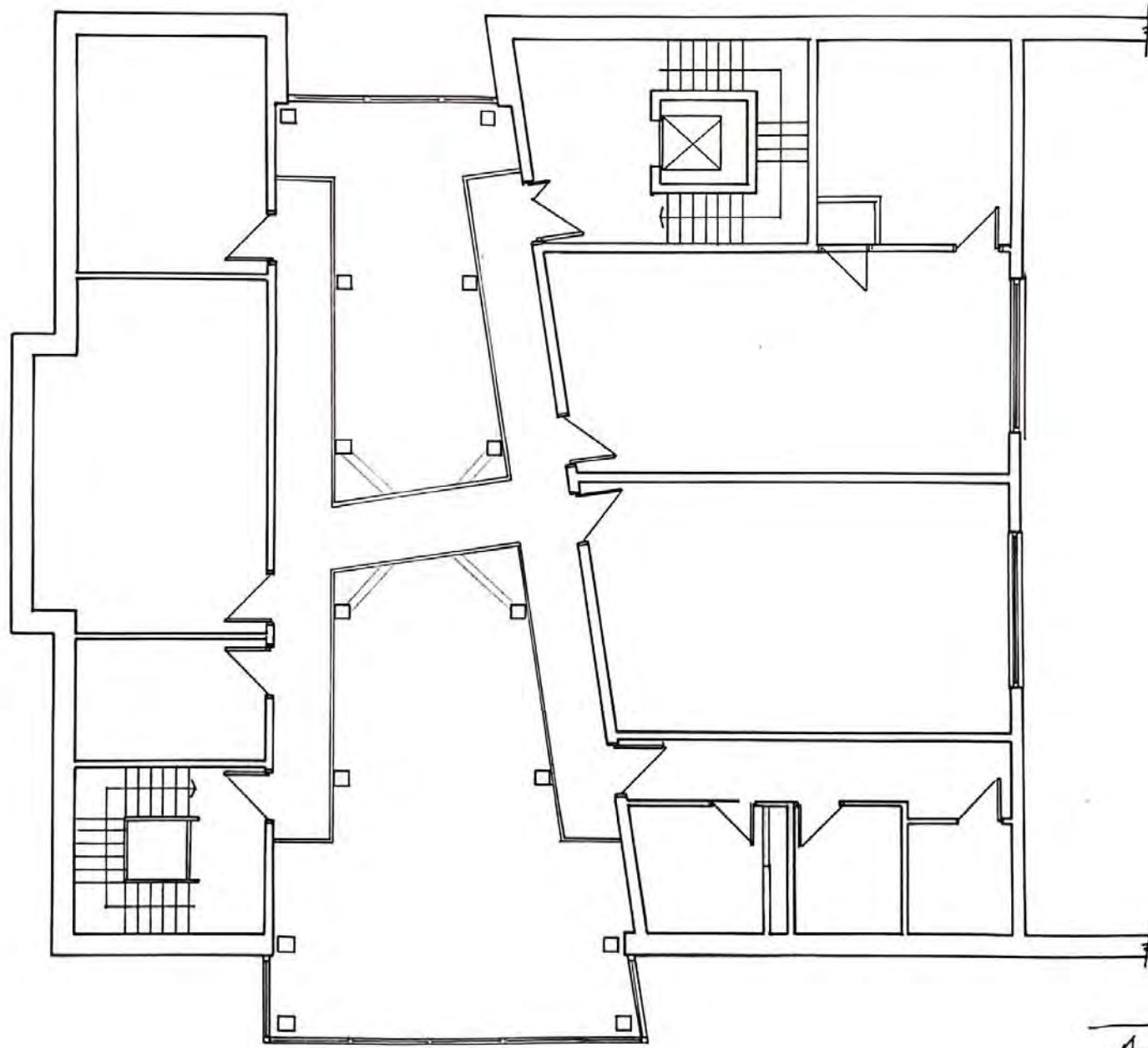


SECOND FLOOR
PLAN 1:200

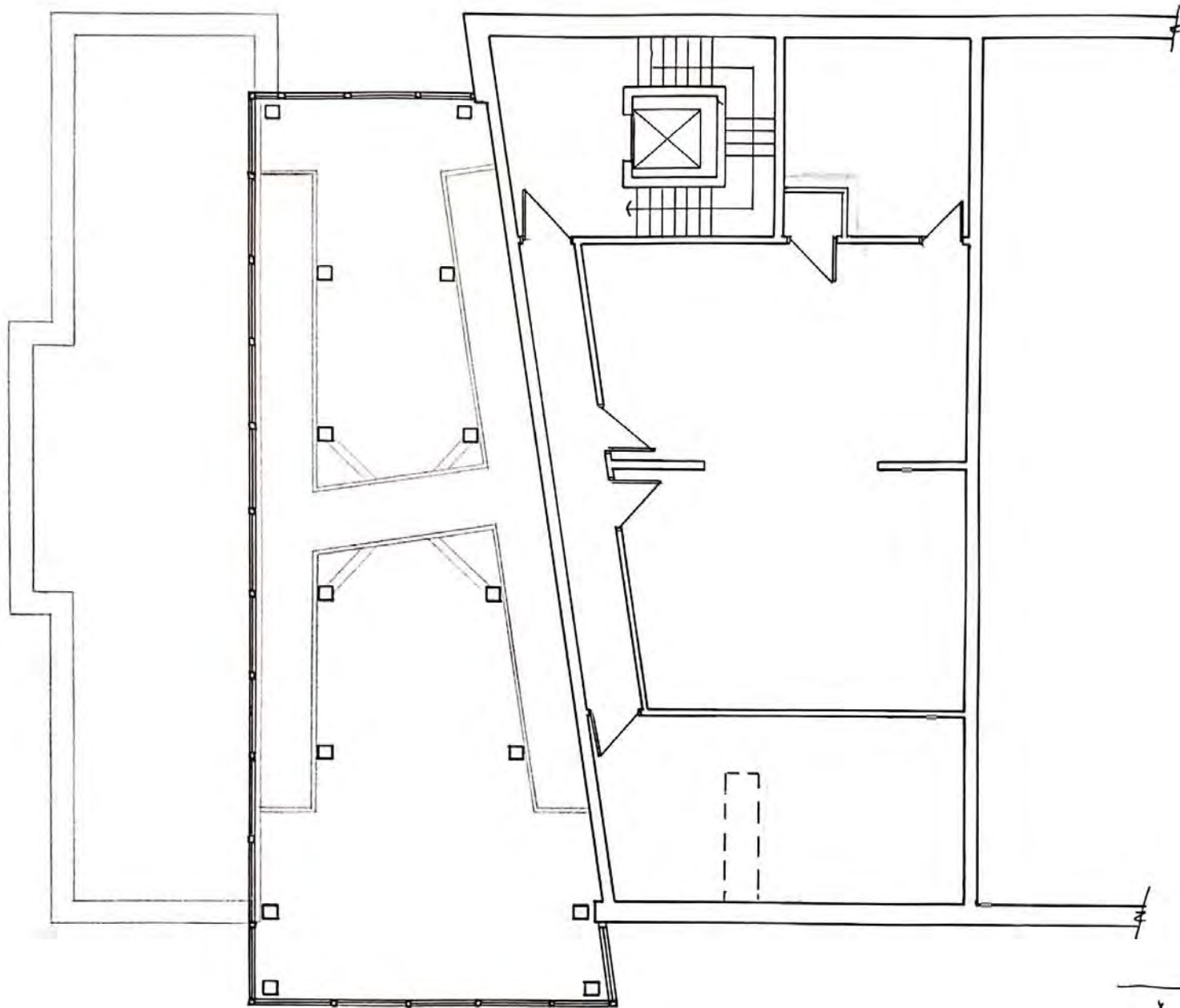
ORGANISATION
AIDAN McKenna
D19124287



AIDAN MCKELNA
DIS124287



AIDAN MCKENNA
DI 9124287

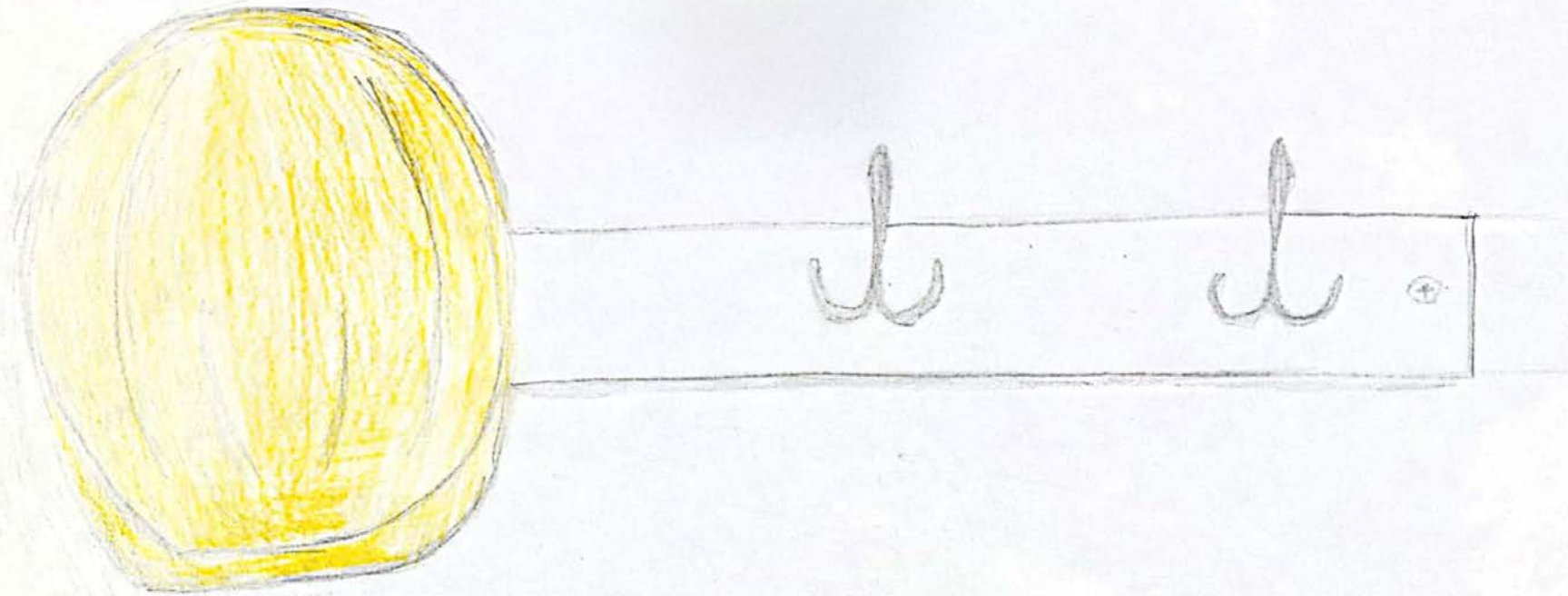


AIDAN McKEOWN
DI 9124287

Analysis of Architectural Intent and Development of Project			
Brief	Provided	Consideration	Comments
Ground Floor			
Multipurpose Hall for sports, events and temporary staging of shows/concert. Include storage and large opening to the east.	775m ² Multipurpose Hall accommodating 3 badminton courts with 1.4m perimeter walking space around. 2 by storage rooms flank the barn like door opening to the east for the site which will accommodate a temporary stage or provide a link to the outside during local market events.	Badminton courts measure 6.1 x 13.4m with addition run off area, Metric Handbook. 2 by 15m ² storage rooms will need to be appropriately fire rated, 60 minutes. With a potential occupancy of approx. 250 persons the Hall requires a minimum of 3 escape fire door at a minimum clear width of 1400mm. The Hall will act a separate fire compartment to the rest of the building, TGD Part B. The Hall should be ventilation through natural means using controlled window openings and roof vents. Low energy heating should be consider using radiant heaters or underfloor heating. Provide natural lighting through roof lights and high level perimeter window the the north and south walls, consider solar shading to the south to reduce glare. During nighttime hours low energy LED high bay directional fitting should be considered. An arch or curtain system to provide a backdrop for stage events is desirable. Acoustics will be managed using specific wall panels, flooring and ceiling diffusers.	The Hall area increased significantly to accommodate the required activities.
Toilet and Changing Facilities	Female and male changing/showering/wc facilities have been provided off the main corridor linking the Hall to the Central Atrium. Seperate male and female ambulant/disabled wc and showering facilities have also been provided.	Sanitary provision as per the Metric Handbook. Sizes and layouts of ambulant and disabled facilities as per TGD Part M. Access to each block must be via vented lobbies. WC flush capacity and other facility appliances as per TGD Part G. This entire block acts a fire compartment in it's own right. As the main corridor is a 60 minute fire rated protected corridor the access lobby construction and doors should be of 30 minute fire rating, TDG Part B. Heat recovery and controlled ventilation via heat pump. Low energy lighting fitted into acoustic suspended ceiling tiles. Services via fire rated vertical services ducts.	In order to accommodate the required amount of changing facilities this area increased significantly for the original plan.
Central Atrium	157m ² glazed Central Atrium providing a focal point as well as an access link to the various activity opportunities offered by the centre. A reception desk and cafe area provided on the ground floor. First floor cantilevered walkways with connecting bridge spanning from east to west.	As the external envelope is glazed, controlling solar overheating, glare and balancing day and night light levels is importance for occupance comfort. External solar shades or louvres modules attached to the curtain walling system will help. Low energy LED fitting and feature lights where required. The Atrium will act as a natural ventilation flue extracting stale air from adjacent rooms. Smoke extraction and fire curtains maybe required to prevent the spread of fire and smoke. The cantilevered first floor walkways and bridge will need careful consideration as will the cafe preparation area.	This area is as was envisaged.
Vertical Access and Stairways	A stairway and lift have been provide beside the entrance/north eastern end of the Atrium. A separate stairways to the south west of the Atrium was added.	The stairs and handrails comply with TGD Parts B, M & K and provide ambulant access to the first and second floor. The small lift which is not a means of escape as the public operable areas on the first floor are below the threshold to provide a larger lift. Emergency lighting and smoke ventilation as per Part B.	Only one stairs was initially proposed but TGD Part B required the addition of a second means of escape to comply with travel distances.
3 by Meeting Rooms	3 by Meeting Rooms have been provided on the Ground Floor accessible for the Central Atrium. Room 1.1 @ 25m ² include a kitchenette. Room 1.2 @ 37m ² . Room/office 1.3 @ 13m ² .	As the partition walls dividing these rooms are non-load bearing they is opportunity to amalgamate two or more rooms into one larger area. As the room exit into the Atrium which acts as the fire escape route 60 minutes walls and door must be provided. The kitchenette will require additional fire equipment, ie. fire blanket, extinguisher. TGD Part B. Consider accessibility at and around the kitchenette under TGD Part M as well as door openings and vision panels. Ventilation through natural extraction via windows and stack ventilation into the Atrium. Heating via underfloor heating are low energy heat recovery wall cassettes units. Acoustics to accommodate a wide variation of activities by carpeting floor, absorbing ceiling tiles and wall insulation. Light via windows in external wall and Atrium wall and low energy LED fittings. Services via suspended ceiling and wall service cavities.	These room exceed the desired areas.

First Floor			
Gallery / Viewing Rooms	2 by Hall Viewing /Gallery Rooms can double up as larger activity rooms for yoga, aerobics and toddler groups. Room 2.4 @ 55.6m ² and room 2.5 @ 56.6m ² are divided by a load bearing wall.	As the partition wall dividing these rooms is load bearing they are limited opportunity to amalgamate into one larger area. As the room exit onto the cantilevered Atrium walkway which acts as the fire escape route 60 minutes walls and doors must be provided. Glazing to provide viewing into the Hall will need to be fire rated to 60 minute TGD Part B. Consider accessibility under TGD Part M for door openings and vision panels. Ventilation through natural extraction into the Atrium. Heating via heat recovery wall cassettes units. Acoustics to accommodate a wide variation of activities by carpeting floor, absorbing ceiling tiles and wall insulation. Light via windows in Atrium and Hall walls and low energy LED fittings. Services via suspended ceiling and wall service cavities.	As no First Floor Plan was provided these rooms provide adequate viewing and activity accommodation. Temporary tiered seating could be considered.
Toilet Facilities	Female and male wc facilities have been provided off the First Floor walkway. A separate male and female ambulant/disabled wc	Sanitary provision as per the Metric Handbook matrix. Sizes and layouts of ambulant and disabled facilities as per TGD Part M. Access via vented lobby. WC flush capacity and other facility appliances as per TGD Part G. As the lobby exits into a separate fire compartment a 60 minute fire rated door should be provided. The lobby itself and door off it should be of 30 minute fire rating, TGD Part B. Heat recovery and controlled ventilation via heat pump. Low energy lighting fitted into acoustic suspended ceiling tiles. Services via fire rated vertical services ducts.	As no First Floor Plan was provided these sanitary facilities are adequate for the activities on the first floor.
3 by Meeting Rooms	3 by Meeting Rooms have been provided on the First Floor accessible for the Atrium walkway. Room 2.1 @ 25m ² include a kitchenette. Room 2.2 @ 43.4m ² . Room/office 2.3 @ 13m ² .	As the partition walls dividing these rooms are non-load bearing they are opportunity to amalgamate two or more rooms into one larger area. As the rooms exit onto the Atrium walkway which acts as the fire escape route 60 minutes walls and doors must be provided. The kitchenette in room 2.1 will require additional fire equipment, ie. fire blanket, extinguisher. TGD Part B. Consider accessibility at and around the kitchenette under TGD Part M as well as door openings and vision panels. Ventilation through natural extraction via windows and stack ventilation into the Atrium. Heating via low energy heat recovery wall cassettes units. Acoustics to accommodate a wide variation of activities by carpeting floor, absorbing ceiling tiles and wall insulation. Light via windows in external wall and Atrium wall and low energy LED fittings. Services via suspended ceiling and wall service cavities.	These rooms exceed the desired areas.
Second Floor			
Plant and Storage Rooms	Plant Room 3.1 @ 98.2m ² and 3.2 @ 41.3m ²	Accommodation of heat recovery, ventilation and water storage plant will require these rooms to be acoustically insulated to provide noise and vibration transfer to nearby accommodation rooms. 60 minute fire rated walls and door as well as fire and smoke seals around rising ducts and pipes. Access via 60 minute fire rated corridor. Light provided by low energy LED fittings.	These plant / storage rooms are more than adequate to house the required equipment to service this building and is separated from the majority of accommodation rooms to avoid noise interference.
Site			

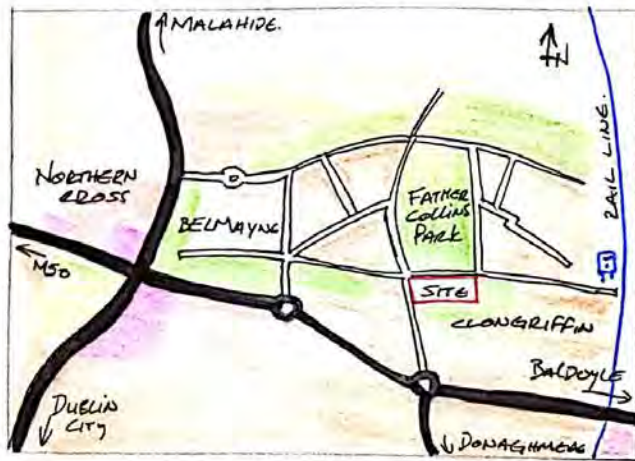
<p>Parking, playground, allotment and green houses, outdoor performance and seating area, grassed areas and paved perimeter walking trail with seating and water features.</p>		<p>Car, bike and disabled parking should be provided as per the Dublin City Council local development plan and TGD Part M for sizes. Playground equipment by specialist with rubberised ground surfaces in areas where trips and slip are a risk. Allotment and associated green houses design be landscaping specialist with focus of cultivation and soil makeup. Irrigation to be sourced from rain water harvesting collected in covered storage tanks adjacent to build. Pergola type cover over outdoor performance area with paving and stepped seating to create an auditorium type surround. Paved walking trial surface to be selected with random seating, picnic and water features throughout the remaining landscapes site.</p>	
<p>Building Envelope</p>			
<p>A mix of glazing, timber and rainscreen. The south facing elevation incorporated a living green wall</p>		<p>Regard will have to be given to the living wall irrigation, solar shading on the Atrium and long term maintenance of any natural timber cladding.</p>	
<p>Sustainability Measures</p>			
<p>The architect intent was to create an environmentally conscious and energy efficient building</p>	<p>PV roof mounted panels, rain water haresting, nZEB or better building design and construction, low embodied carbon construction methods and materials, low energy lighting and heat recovery systems and natural ventilation where possible.</p>		



SITE ASSESSMENT

Aidan McKenna

D19124287



- OPEN GREEN SPACES
- RESIDENTIAL DEVELOPMENTS
- COMMERCIAL DEVELOPMENTS.

- THE AREA CONTINUES TO BE DEVELOPED FOR RESIDENTIAL AND RETAIL.
- FATHER COLLINS PARK TO THE NORTH WHICH CONTAINS VARIOUS SUSTAINABILITY MEASURES TO BE SELF SUFFICIENT, PLAYING FIELDS, WATER FEATURES, PLAYGROUND + SKATE PARK.
- THERE IS A LOCAL AREA DEVELOPMENT PLAN IN OPERATION
SDRA 1 - DUBLIN CITY COUNCIL DEV PLAN 2016 - 2022.
- CAR PARKING REQUIREMENTS ZONE 3
CAR SPACES 1 PER 100m² GFA.
BIKE SPACES 1 PER 200m² GFA

- DUBLIN AIRPORT FLIGHT PATH TO NORTH.
↳ NOISE / SOUND POLLUTION

↗ SOUTH WESTERLY PREVAILING WINDS
↳ URBAN POLLUTION BLOWN FROM CITY

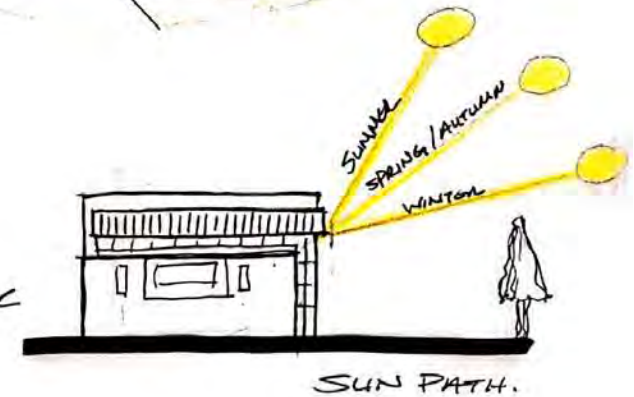
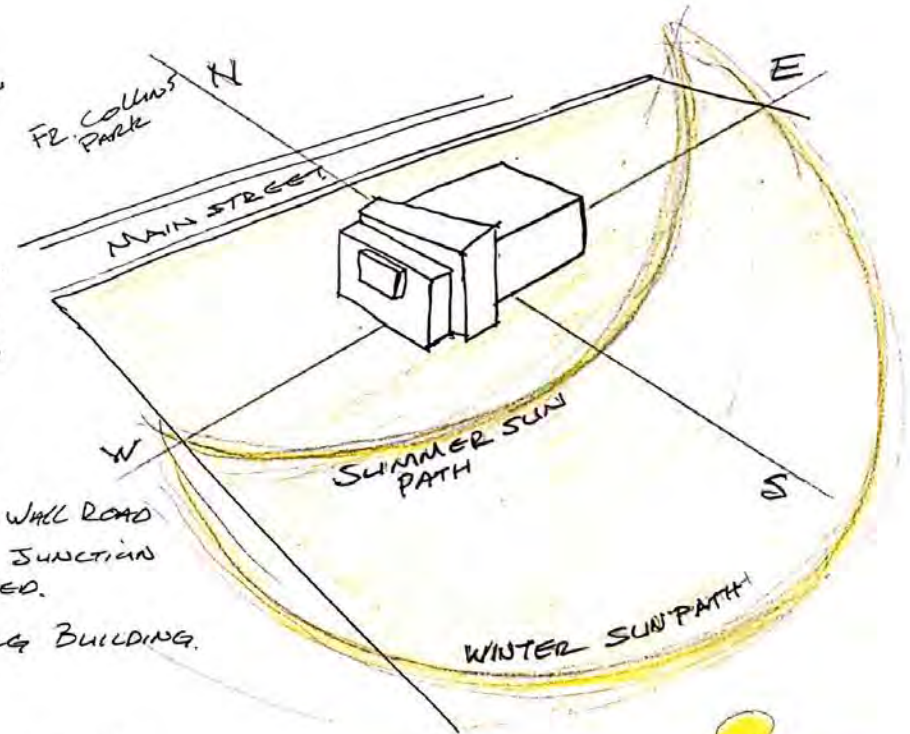
- SITE LOCATION
53.49°N - 6.16°W
BESIDE HOLE IN THE WALL ROAD AND MAIN STREET JUNCTION WHICH IS SIGNALLED.
- NO NEIGHBOURING BUILDING NEARBY.

- APPROX 5000-7000 PEOPLE CURRENTLY RESIDE LOCALLY.
PLANNED TO INCREASE TO 25,000 TO 30,000.

- NATURE OF BUILDING USE.
↳ CULTURAL + RECREATIONAL BUILDING.

- ALL SERVICES / UTILITIES LOCATED IN MAIN STREET.

- NEAREST:
HOSPITAL - BEAUMONT 8.5KM
FIRE - KILBARACK DS. 2.3KM



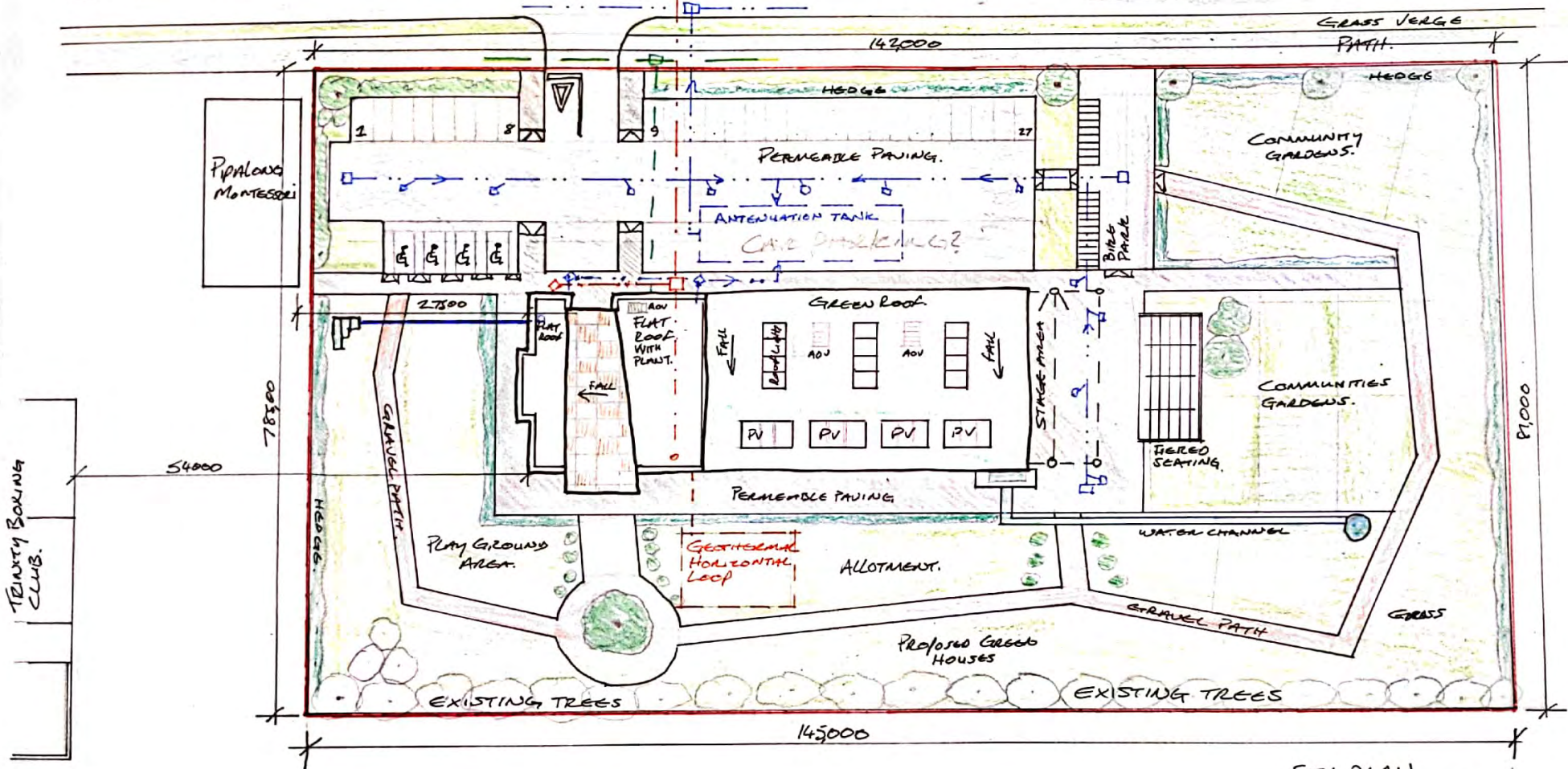
SITE ANALYSIS
AIDAN MCKENNA
D13124287.

FATHER COLLINS PARK.

MAIN STREET (EAST BOUND)

CENTRAL MEDIAN.

MAIN STREET (WEST BOUND)



TENANTY BOILING CLUB.

Pipalows Montessori

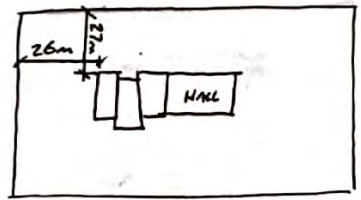
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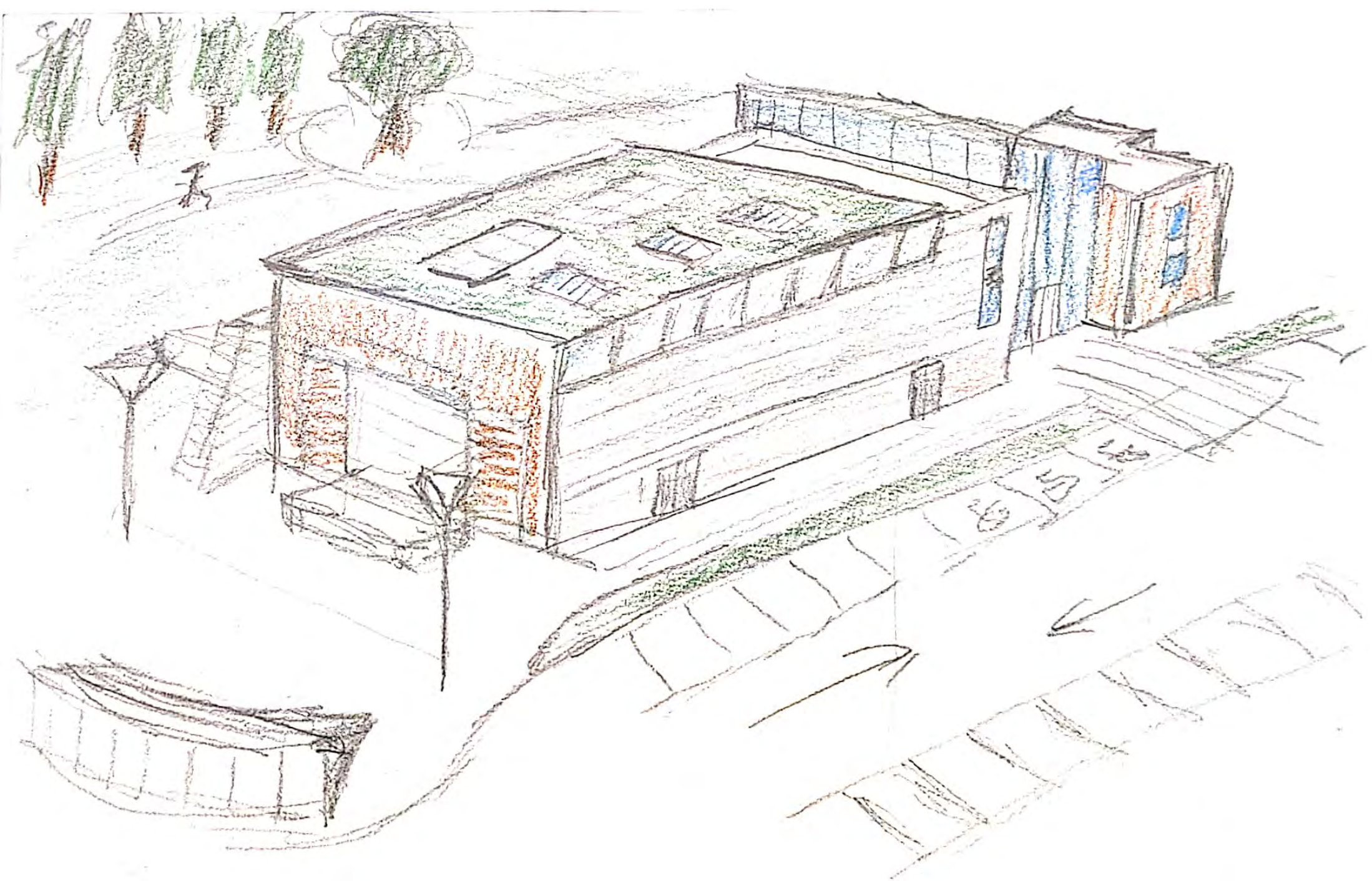
SITE PLAN 1:500

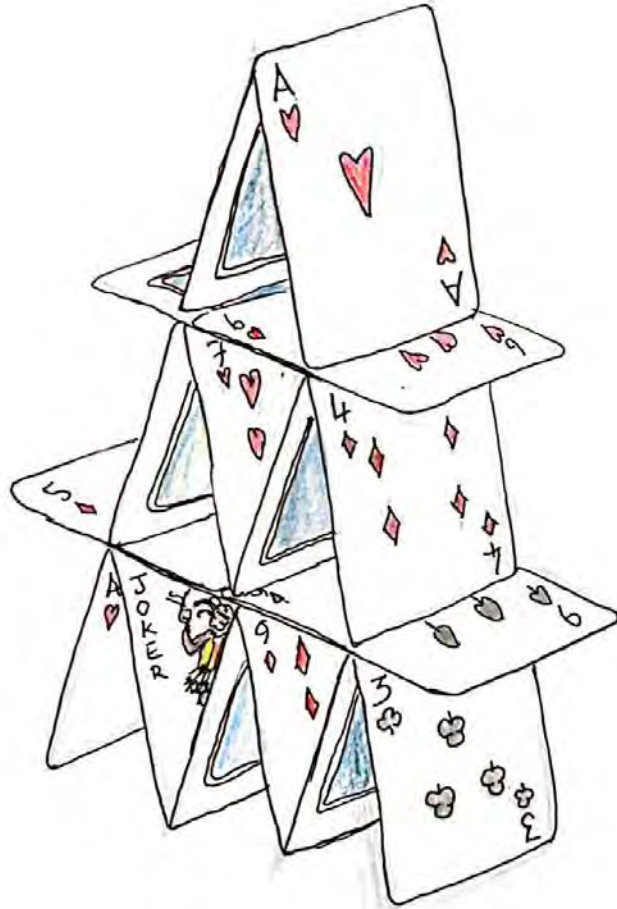


SET OUT.

- SURFACE WATER ————
- FOUL WATER ————
- BOUNDARY ————
- UTILITIES ————
- (GAS, COMS, ELEC)

SITE PLAN
AIDAN MCKENNA
D19124287.

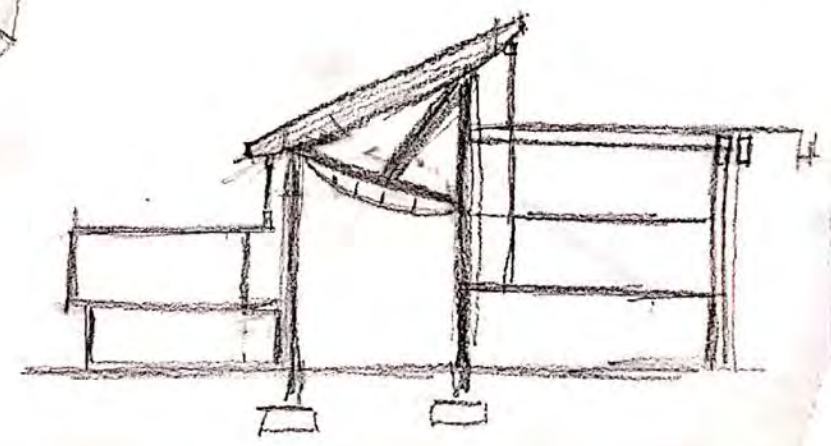
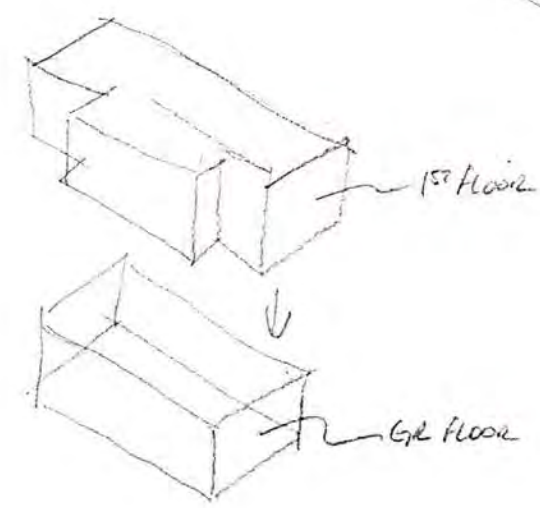
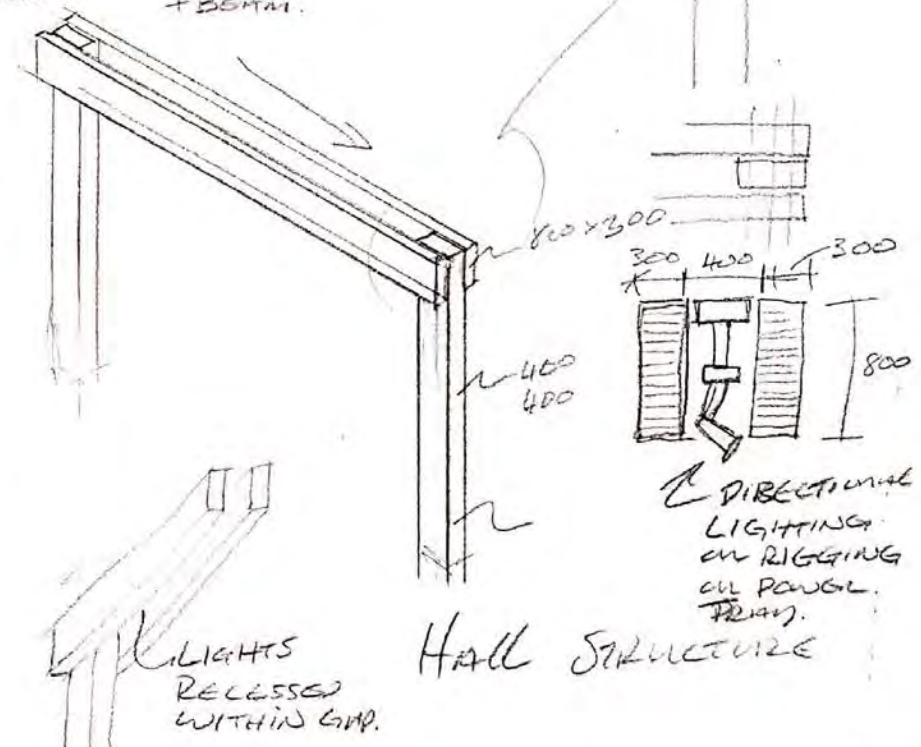
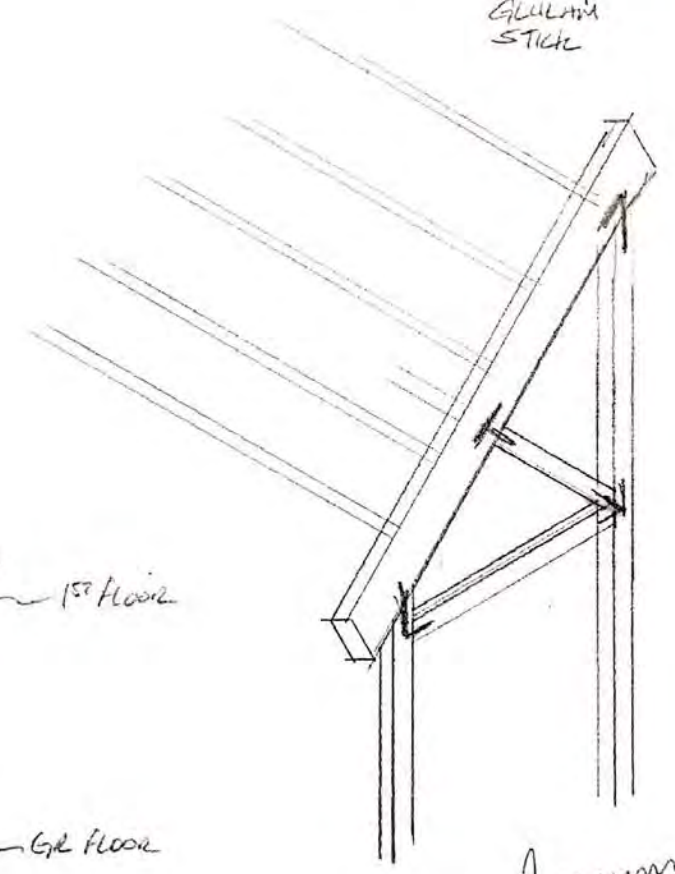
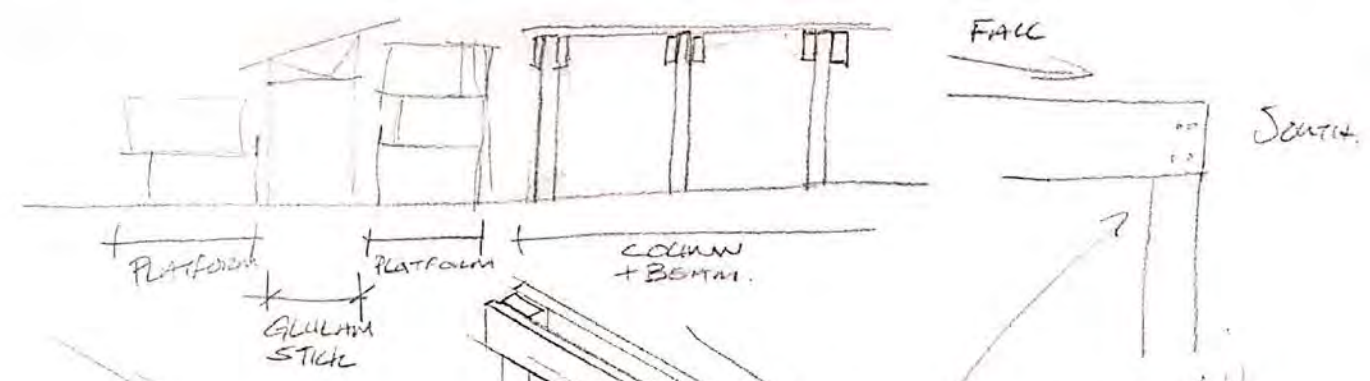
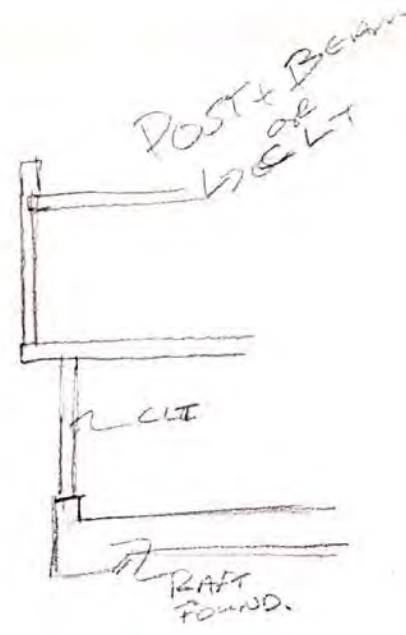




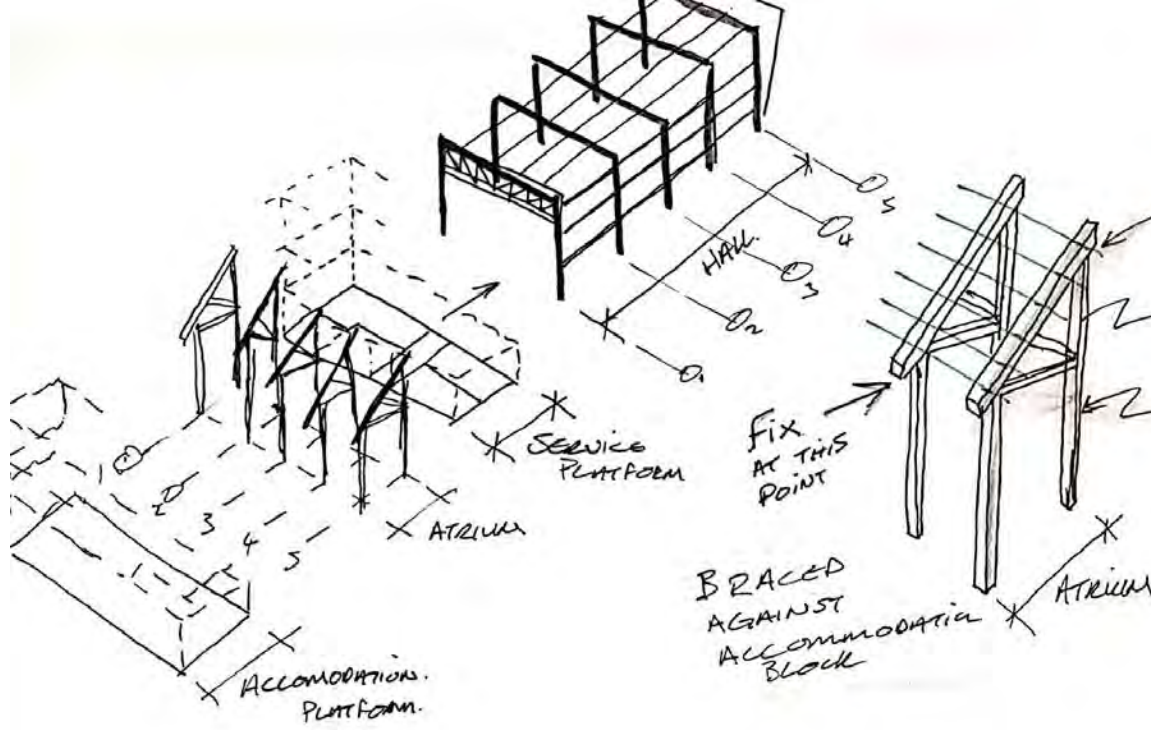
STRUCTURE

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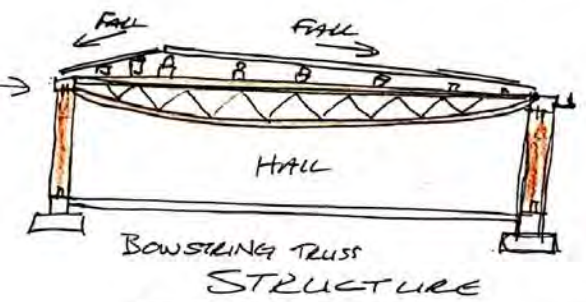
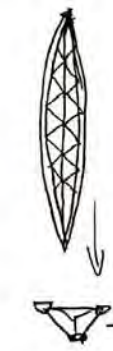
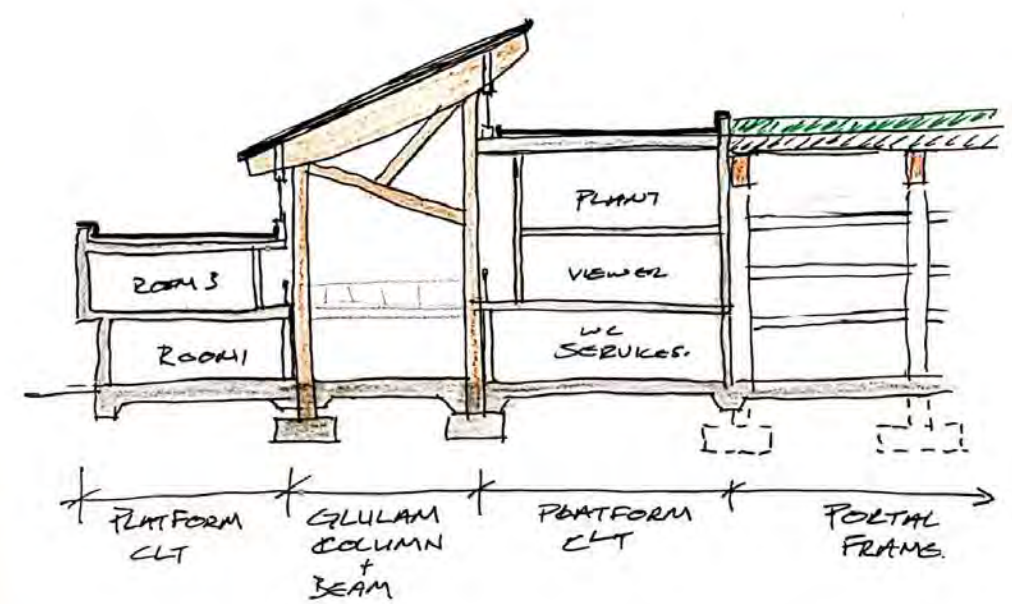
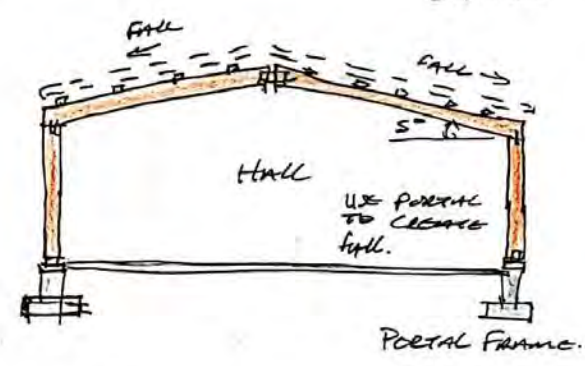
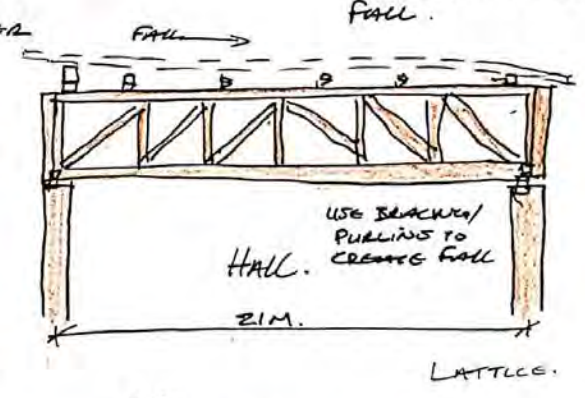
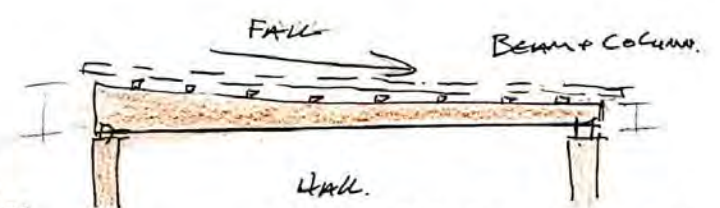
D19124287.



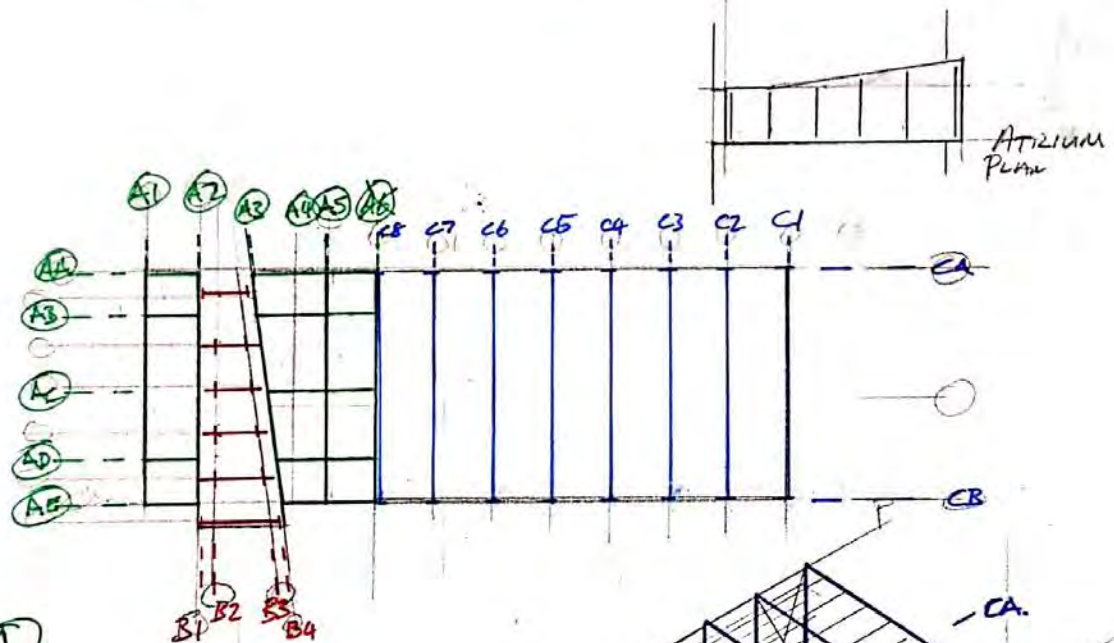
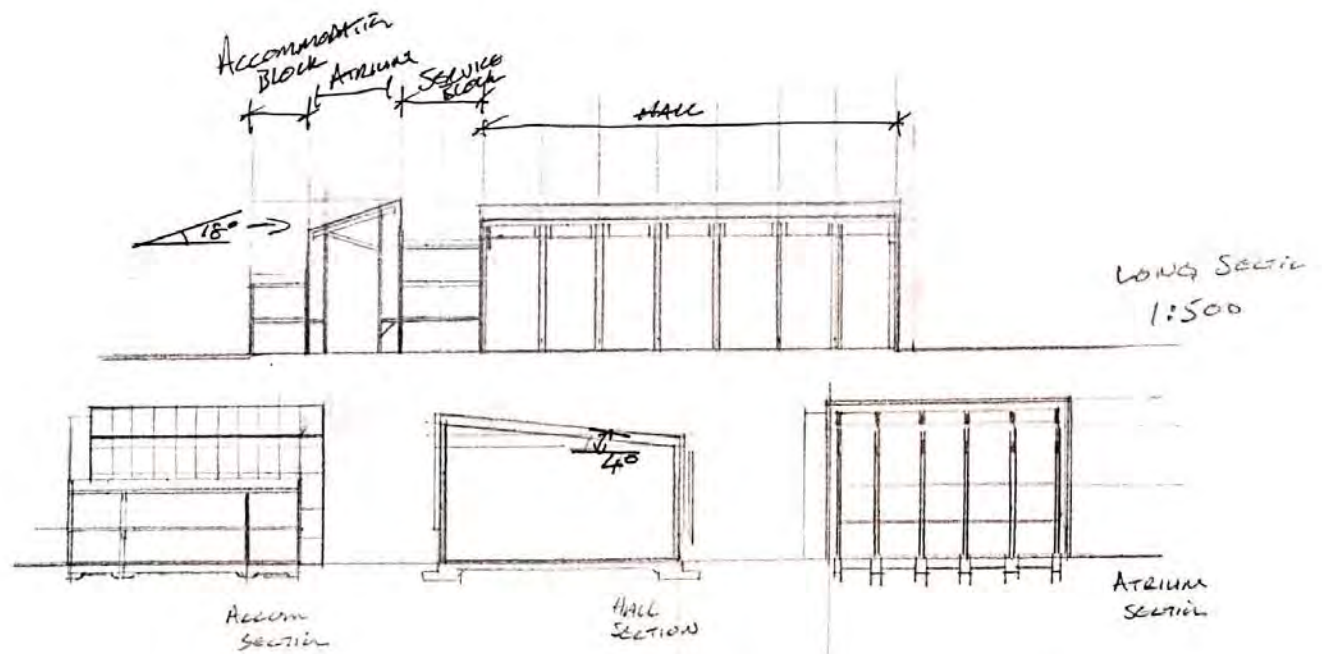
BASIC STRUCTURE.
 ADAM MCKENNA
 D19124287



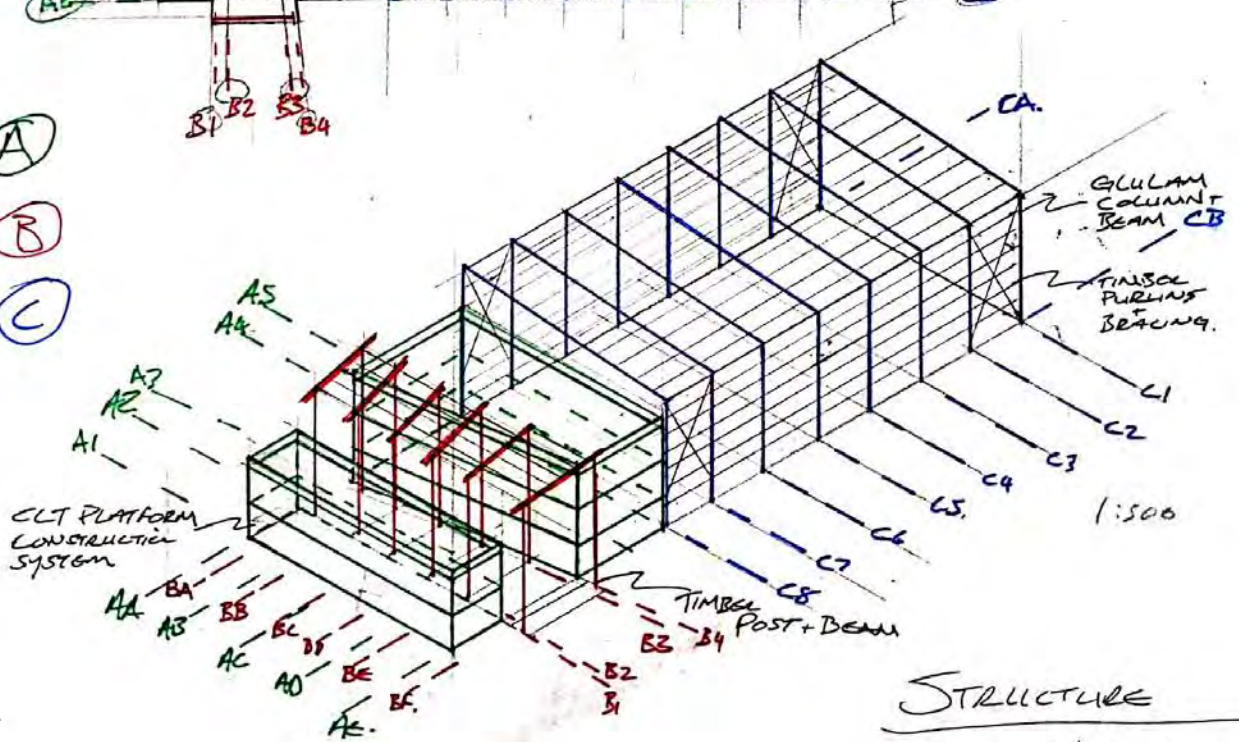
SLIDING JOINT FOR MOVEMENT.
 CANTILEVER COLUMN.
 JOINT TO ENABLE ASSEMBLY.



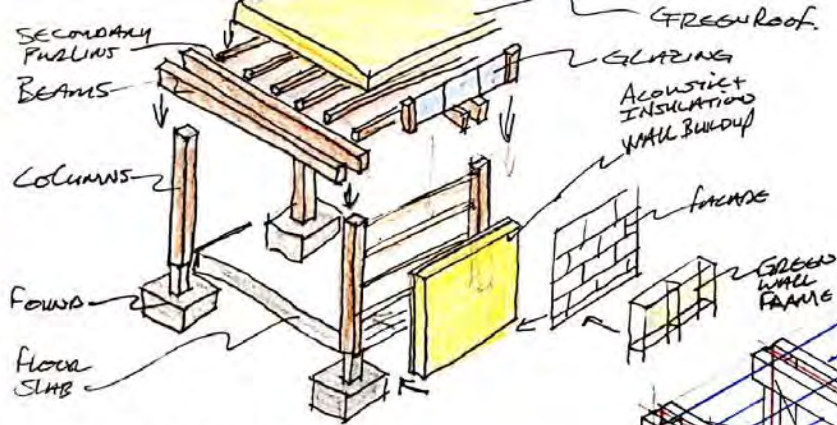
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 D19124287.



- Accom. Rooms (A)
- Atrium (B)
- HALL GRID (C)

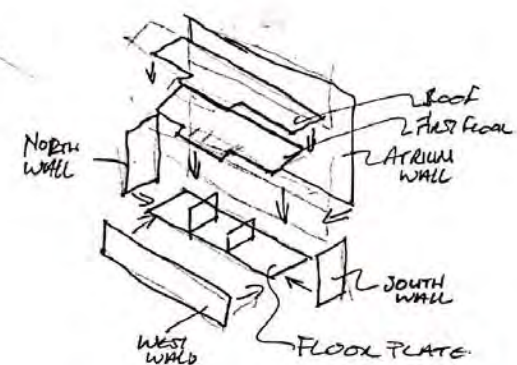
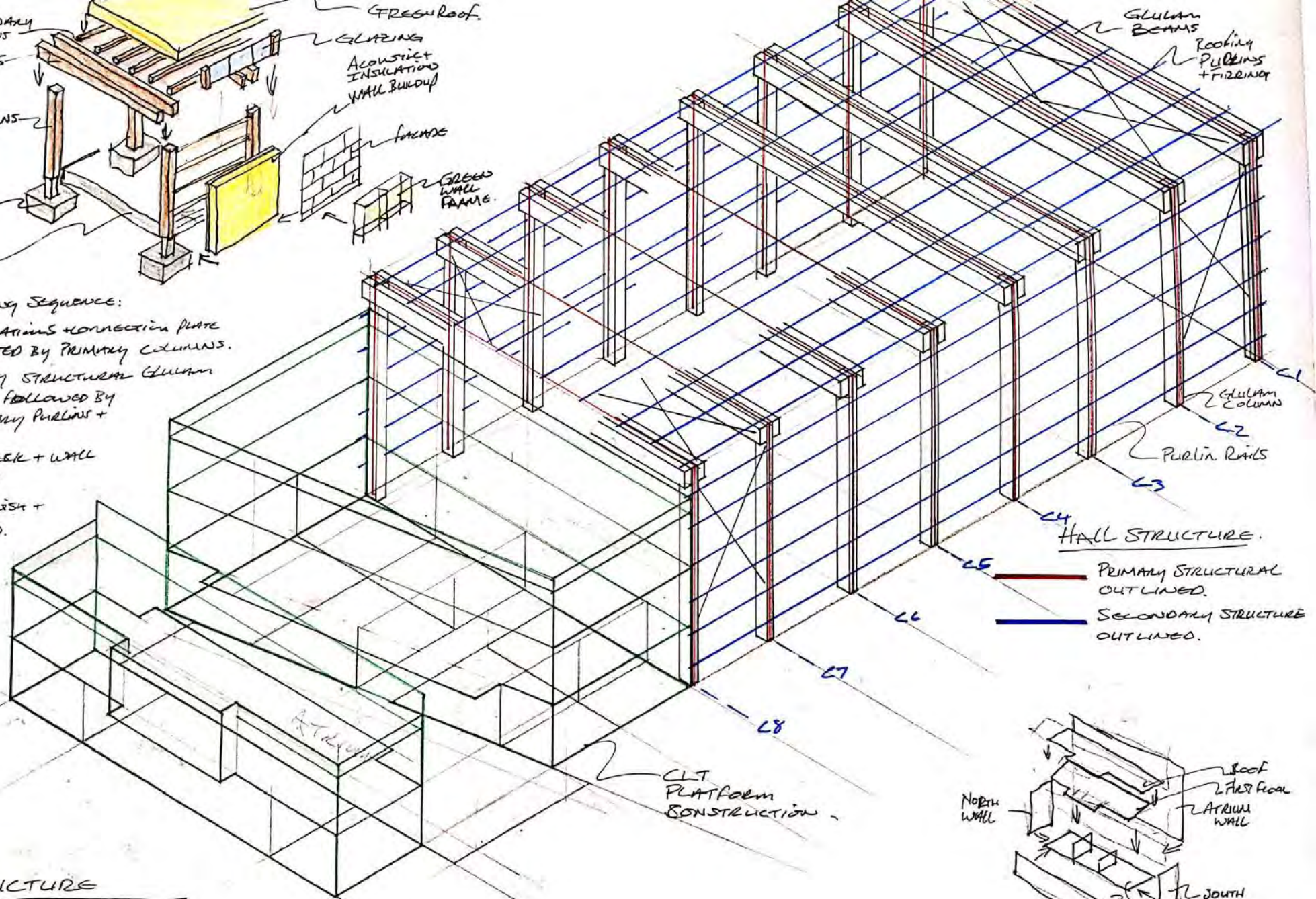


STRUCTURE
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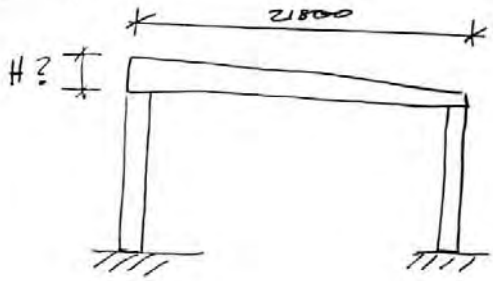


BUILDING SEQUENCE:

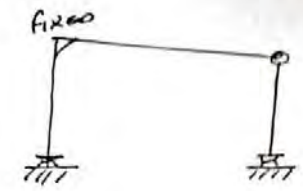
- 1 FOUNDATIONS + CONNECTION PLATE FOLLOWED BY PRIMARY COLUMNS.
- 2 PRIMARY STRUCTURAL GLULAM BEAMS FOLLOWED BY SECONDARY PURLINS + RAILS.
- 3 ROOF DECK + WALL PANELS
- 4 ROOF FINISH + FACADES.



STRUCTURE
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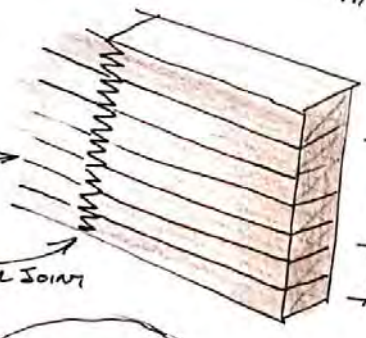
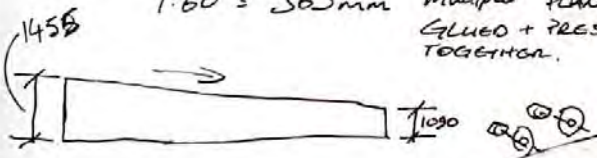


$H = L/20 = 1090\text{mm}$
 OR
 $H = L/17 = 1280\text{mm}$

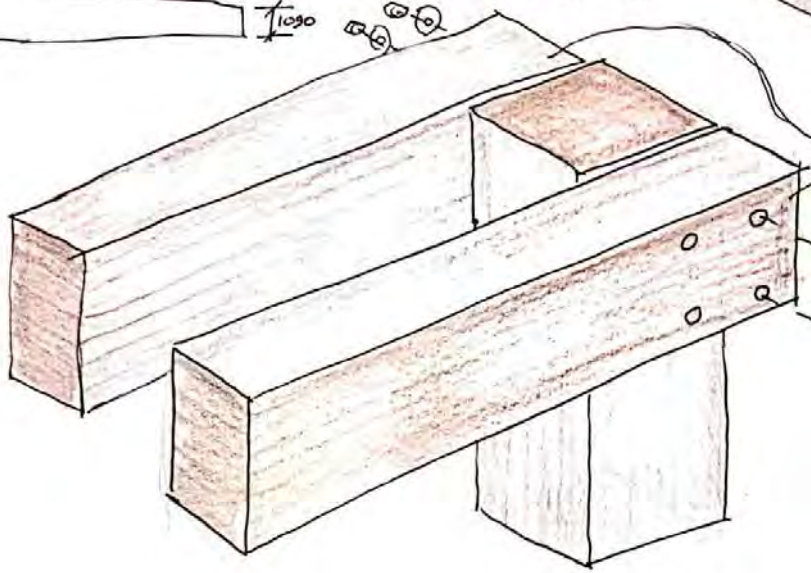


FALL REQUIRES FOR ROOF

1:60 = 365mm MULTIPLE PLANKS
GLUED + PRESSED TOGETHER.

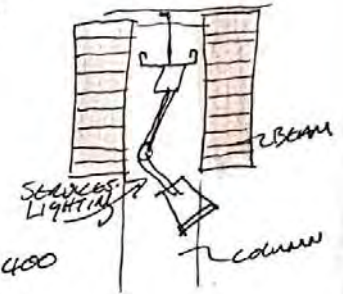


STRENGTH ZONE = BETTER QUALITY TIMBER
 LESS STRONG = QUALITY/STRENGTH NOT AS HIGH.
 STRENGTH ZONE = BETTER QUALITY TIMBER.

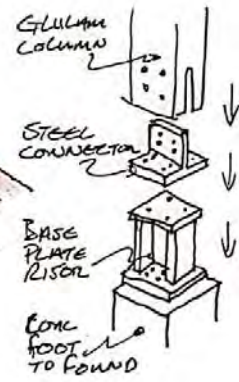
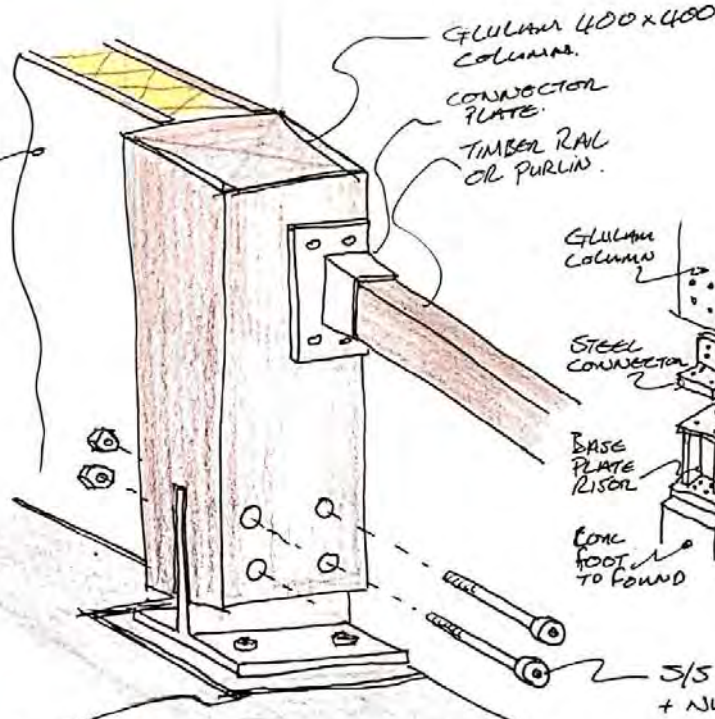


TWIN TAPERED GULAM BEAM

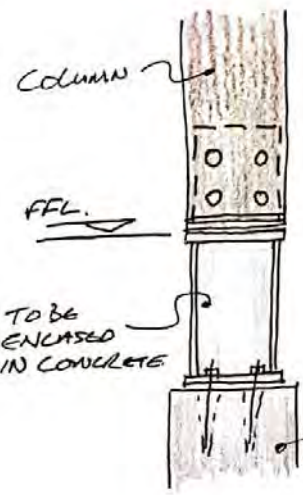
5/8 THREADED BOLTS + NUT + WASHERS.



STRUCTURAL SANDWICH SIP PANEL



AN ENGINEER WOULD DRAW THIS BETTER!

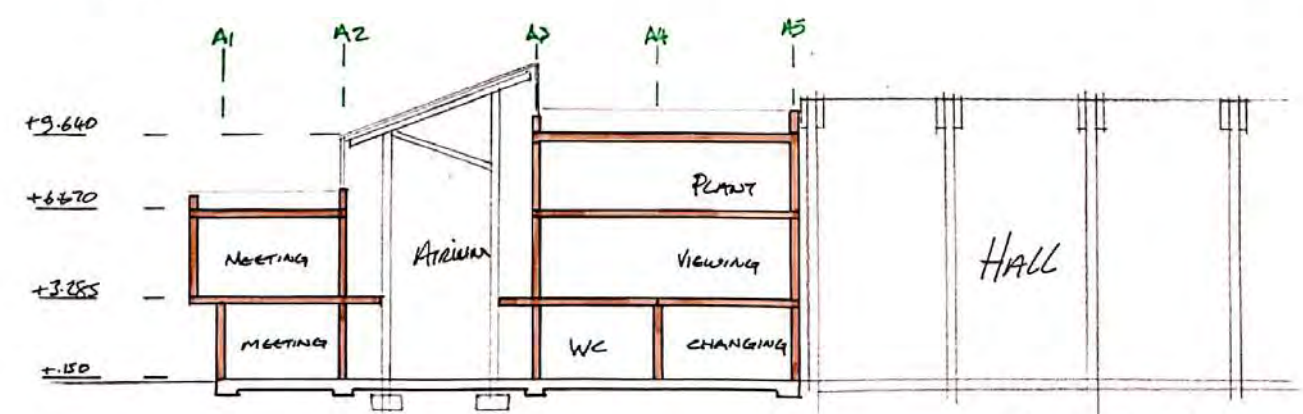
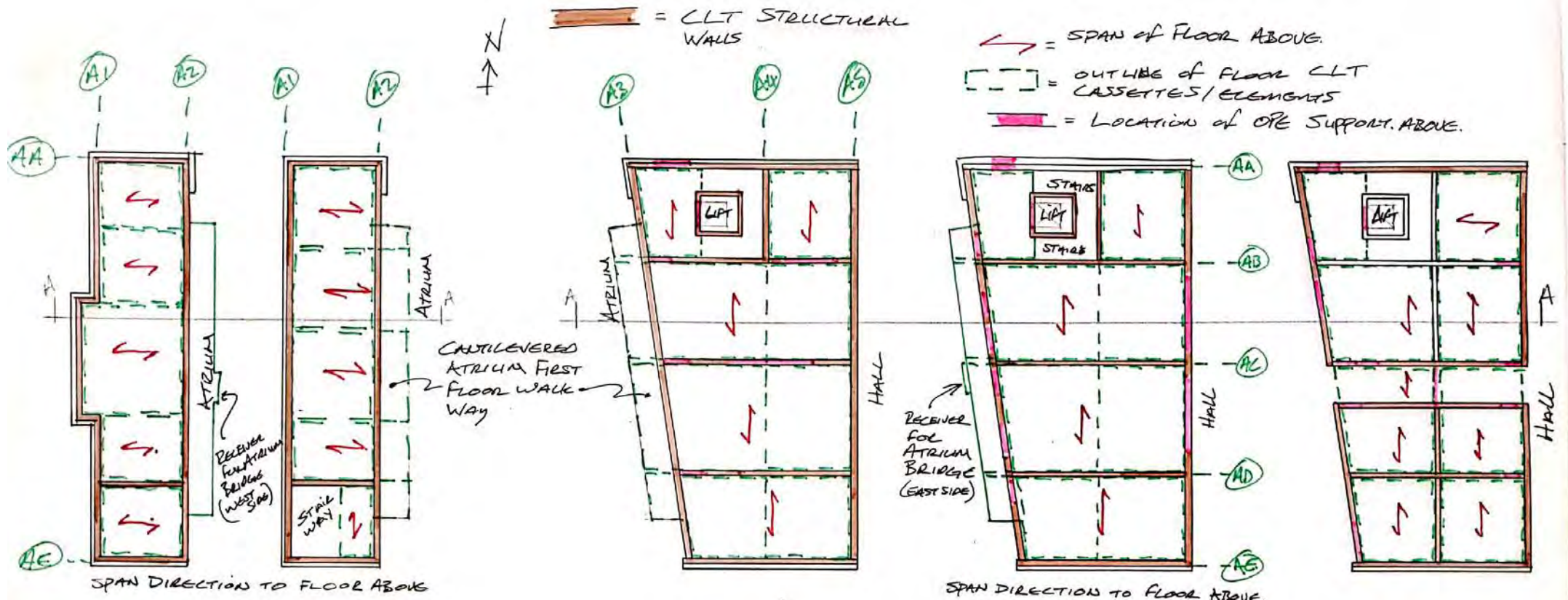


Expansion Joint

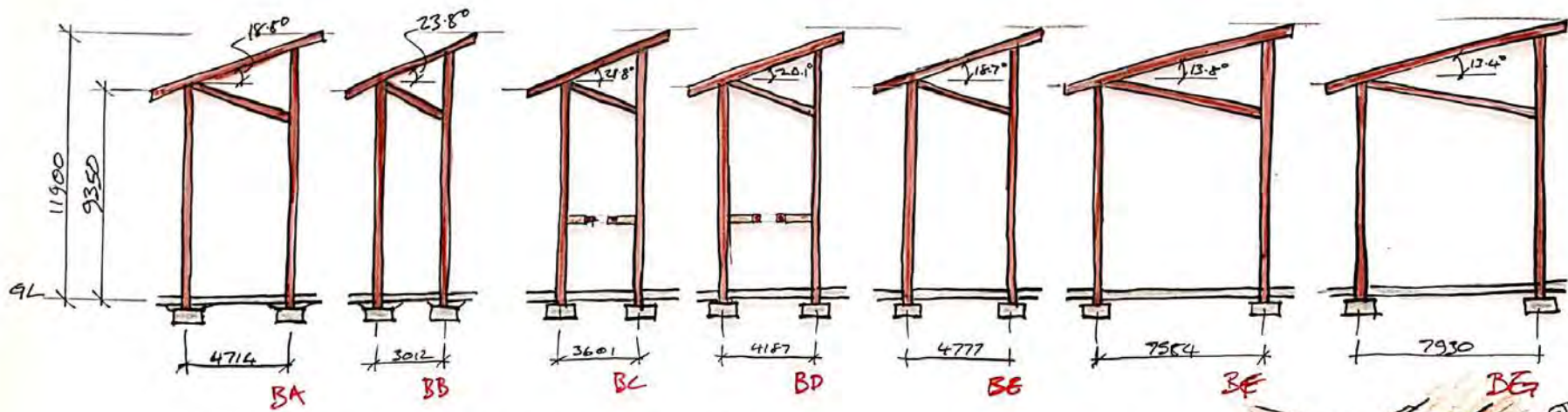
EDGE OF FLOOR SLABS.

STRUCTURES

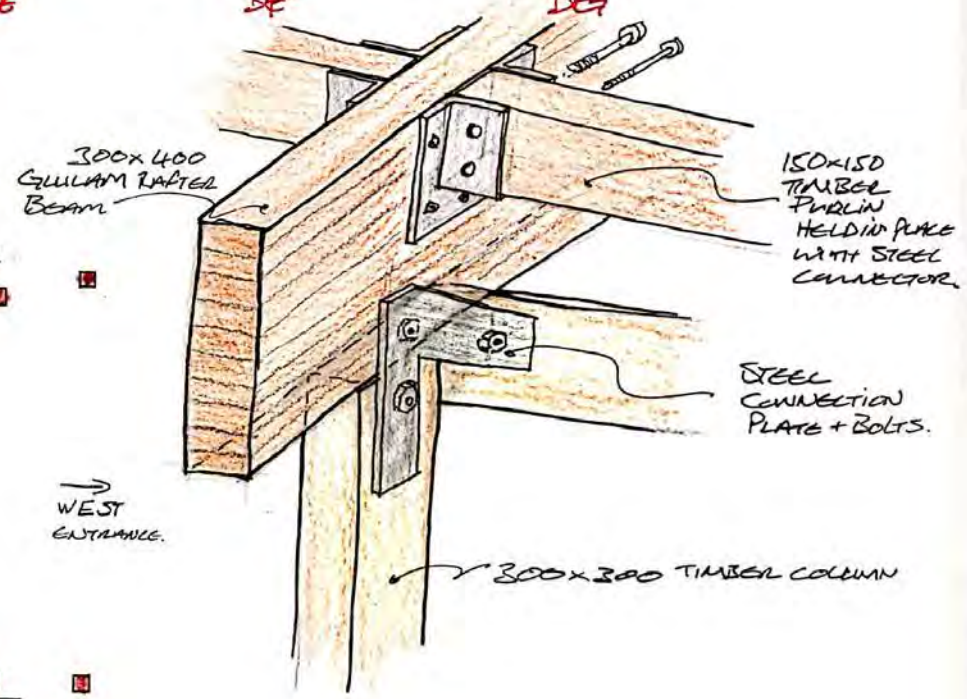
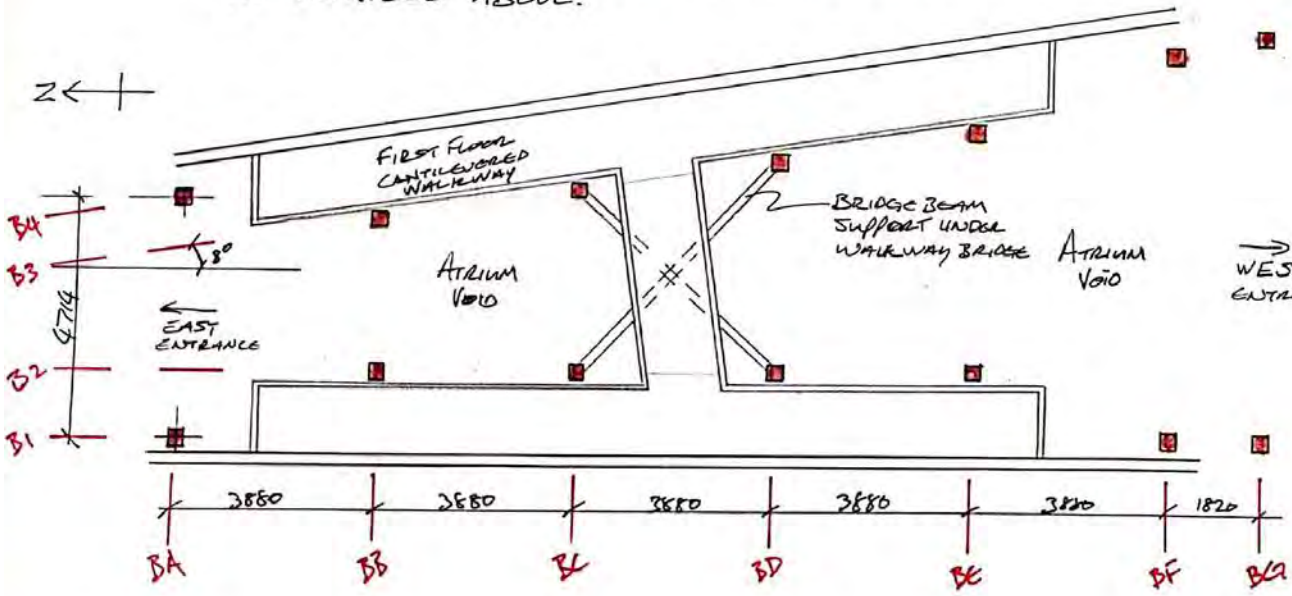
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DIGI24287



SECTION A:A.
 1:200
 STRUCTURE
 AIDAN MCKENNA
 D19124282

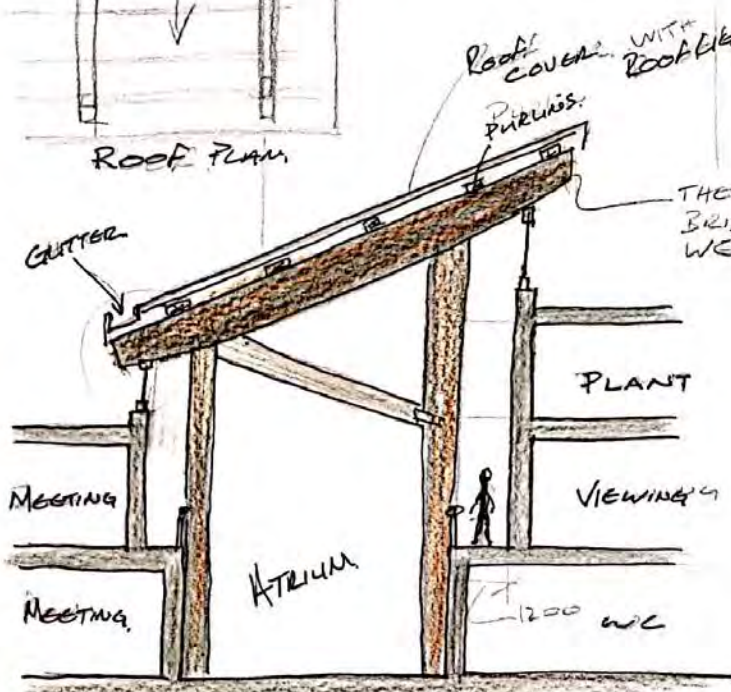
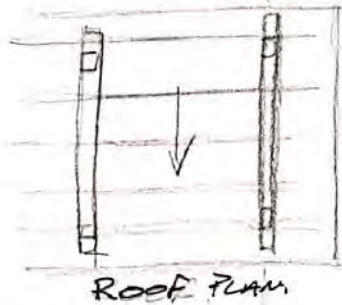
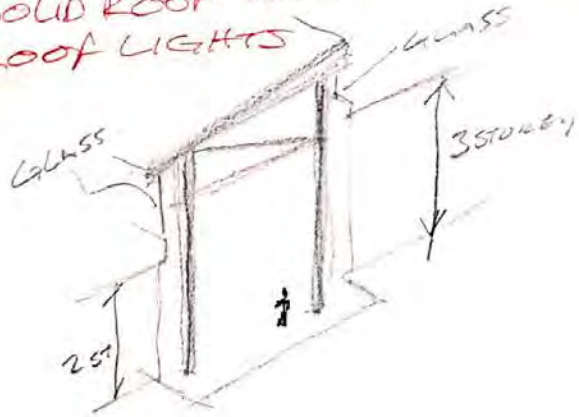


- IN ORDER TO MAINTAIN A LEVEL UPPER + LOWER RIDGE THE ANGLE OF THE RAFTER BEAMS AND HEIGHT OF THE CONNECTION WILL VARIOUS AS DETAILED ABOVE.



STRUCTURE
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Solid Roof with Roof Lights

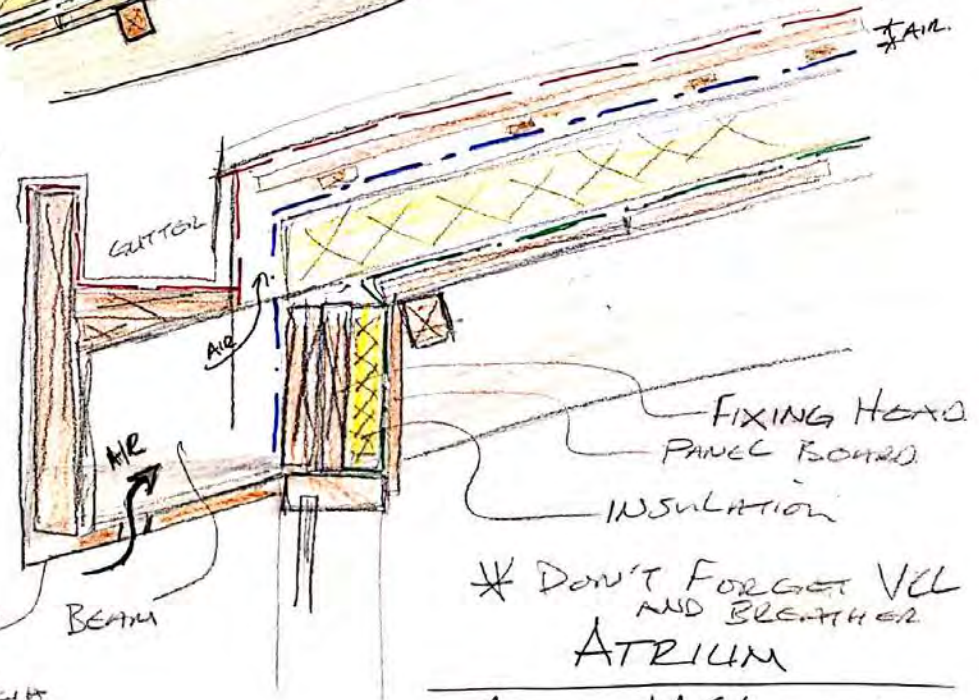
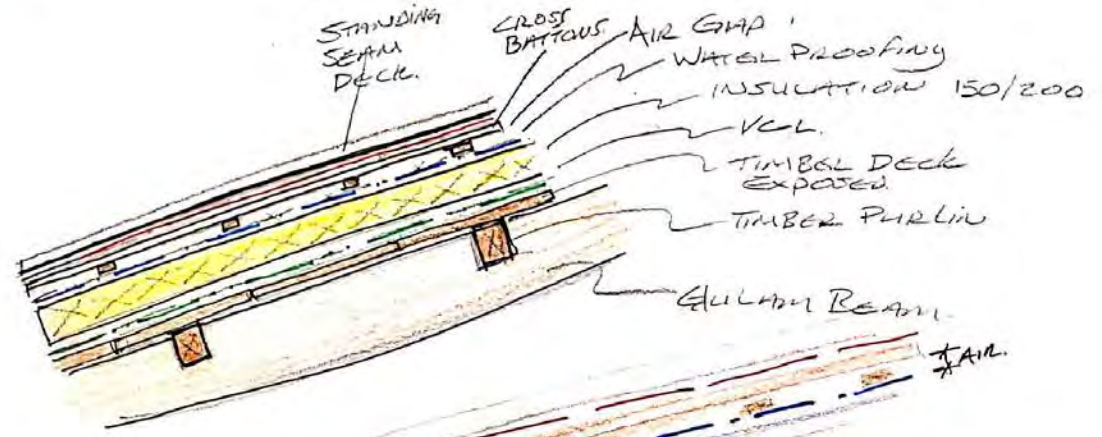
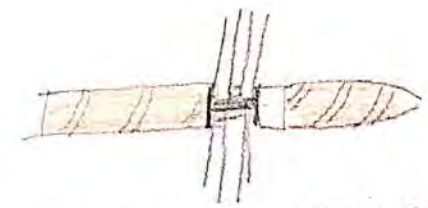


TIMBER ENAGED CURTAIN WALL.



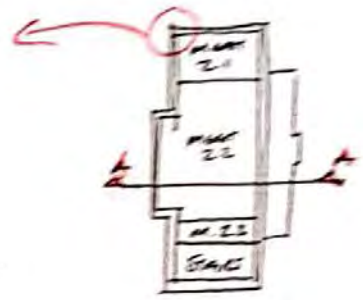
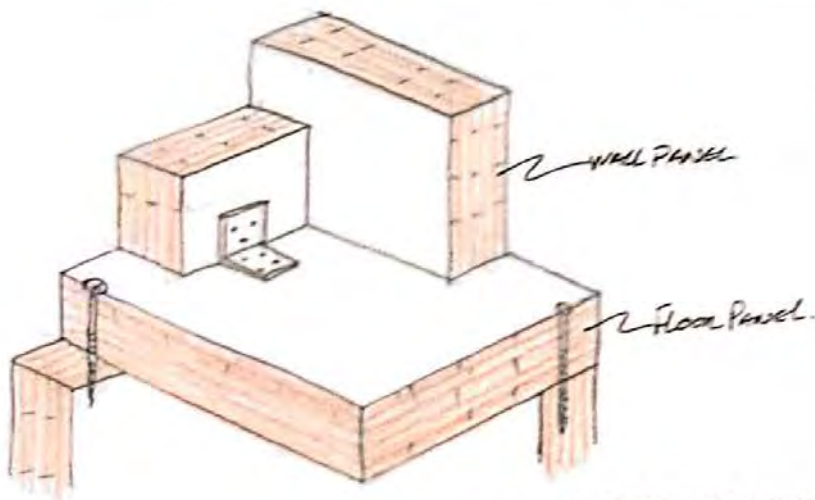
MATCH EXTENSION OR TIMBER.

GLAZING SYSTEM + CURTAIN WALLING

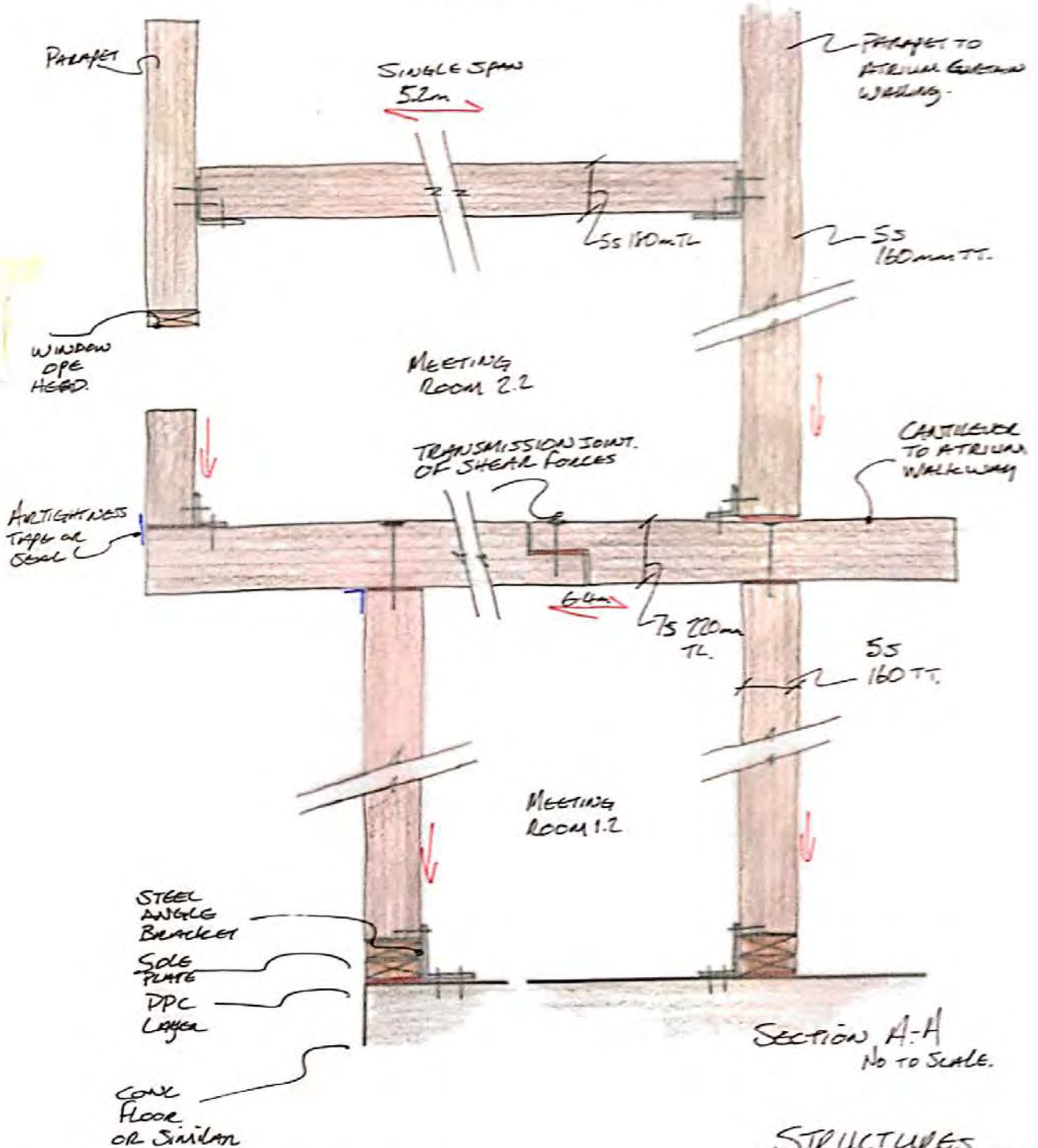


* DON'T FORGET VCL AND BREATHER
atrium

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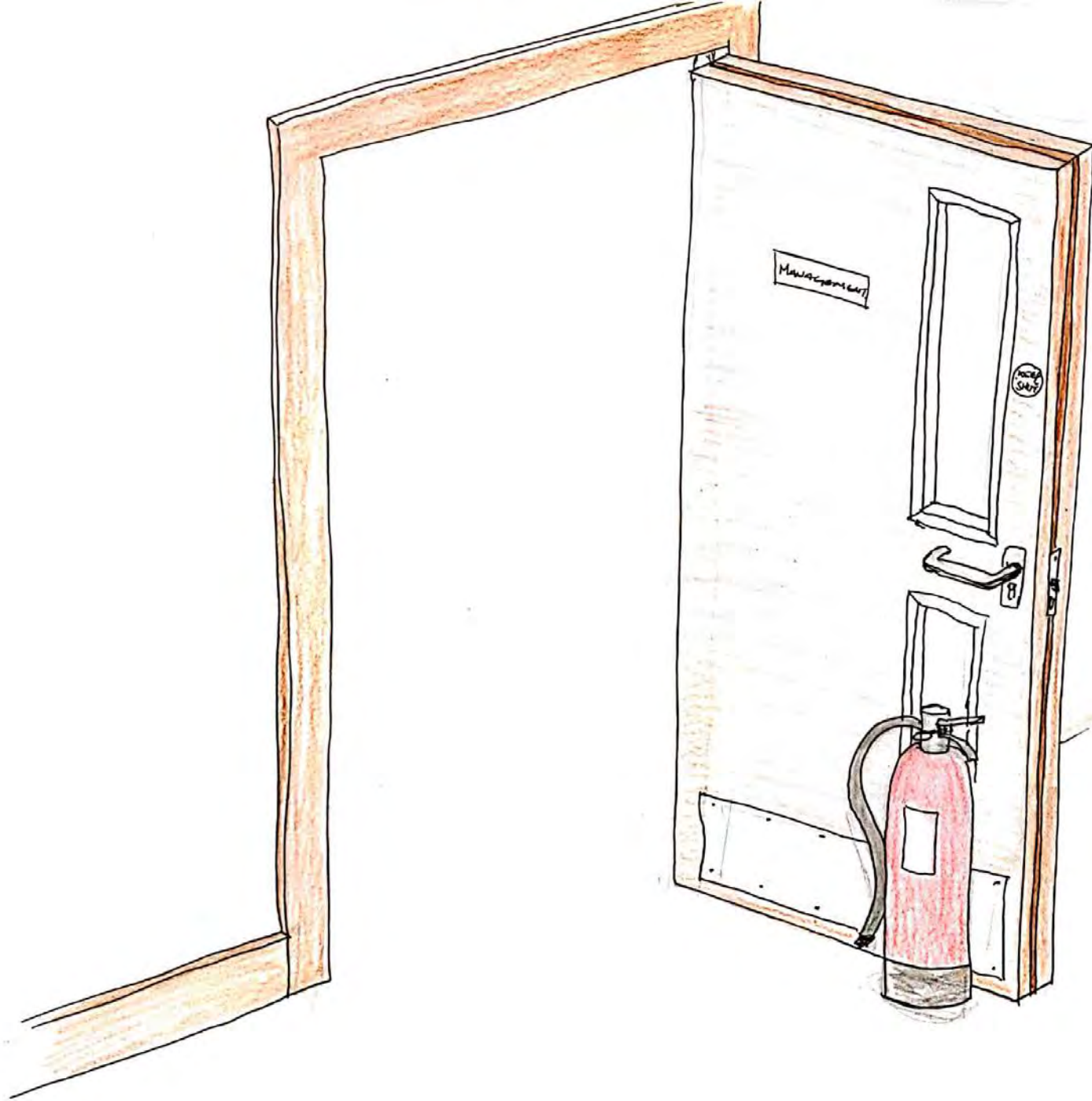
Typical CLT JUNCTIONS



All size from KLH Structural Pre Analysis Tables.

STRUCTURES

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Fire

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PART B

PURPOSE GROUP 5
 ↳ PLACE of ASSEMBLY.
 (TABLE 0.1)

AREA of ROOM (m²)
 OCCUPANCY LOAD FACTOR

↳ DO of A TABLE + MATRS.

LIMIT of TRAVEL DISTANCE AS MEANS OF ESCAPE
 18m in ONE DIRECTION.
 45m in TWO DIRECTIONS.

MIGHT NEED TO DO BRIDGES

FIRE



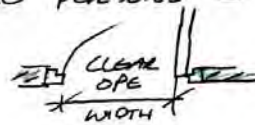
TABLE 1.3 1 TO 500 PERSONS = ^{NMIN TWO} ESCAPES ROUTES
 > 500 PERSONS = 3 ESCAPE ROUTES. → THE HALL NEED 3/4 DOORS OUT.

TABLE 1.4 WIDTHS of ESCAPES

50 PERSONS - 750mm / 150 PERSONS - 950mm
 100 " " - 880mm / 220 PERSONS - 1050mm

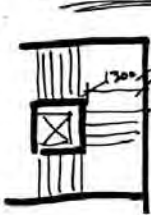
MORE THAN 220 PERSONS
 ↳ 5mm PER PERSON.

↳ 300 PERSONS = 1.5m DOOR OR CORRIDOR.



MIGHT BE A DOOR + HALF LEAF.
 = M

STAIRS



Remains constant 1.1m

TOTAL EVACUATION → PARA 1.3.5.4 + TABLE 1.6.

$P = 200W + 50 (W - 0.3) (N - 1)$

P = NO. of PERSONS → 200 (on first floor).

W = WIDTH of STAIR → 1200mm

N = NUMBER of STOREYS. → 3

$200 \times 1.2 + 50 (1.2 - 0.3) (3 - 1)$
 (1.8) (9) (2)

↳ IS THE STAIRS UP TO THE ESCAPE TASK??

OK!

520 PERSONS

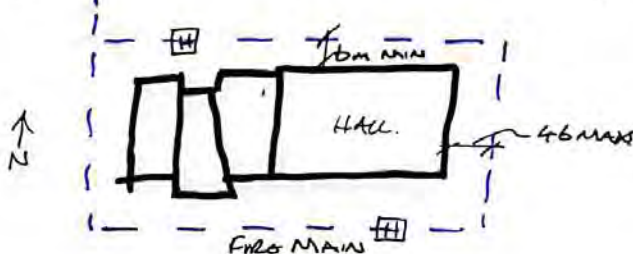
DOORS

SELF CLOSING DOOR MECH OR 60 min + 3min FIRE DOORS

HYDRANTS

S.1

SEE DIAGRAM 30 — BUILDING OVER 1000m² GROUND FLOOR NEED AT LEAST ONE HYDRANT



SEE PROVISION FOR VEHICLE S.2. ACCESS.

VENTILATION of HEAT + SMOKE S.4.3 Atticium

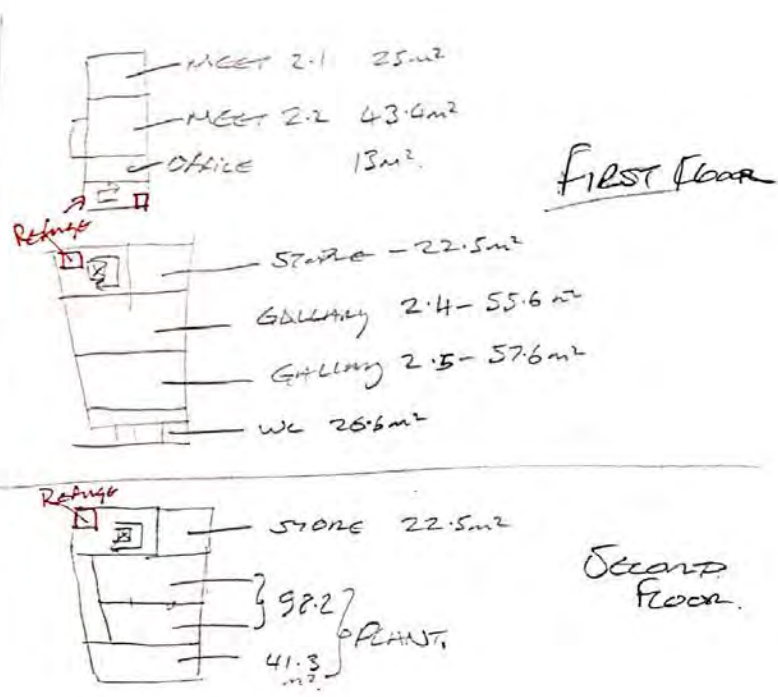
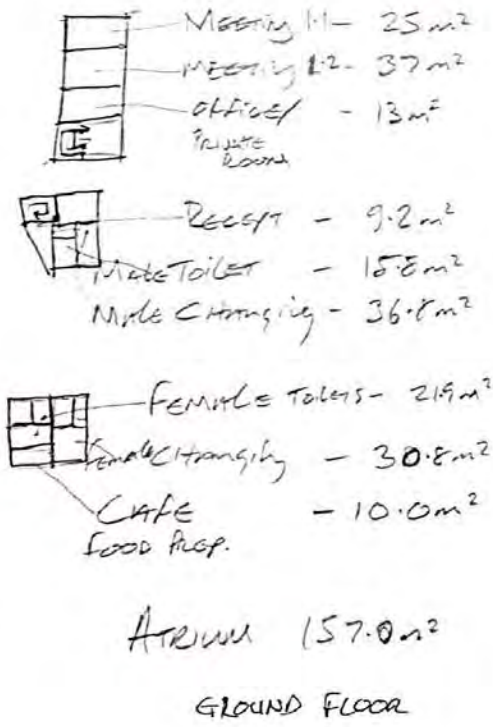
FIRE

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 D19124287.

GENERAL INFO

- ASSEMBLY + RECEPTION - GROUP 5

TOTAL AREAS →	TOTAL GROUP FLOOR	1372.4m ²
HALL - 775m ²	FIRST FLOOR	352.4m ²
	SECOND FLOOR	183.2m ²
		<u>1907.7m²</u>

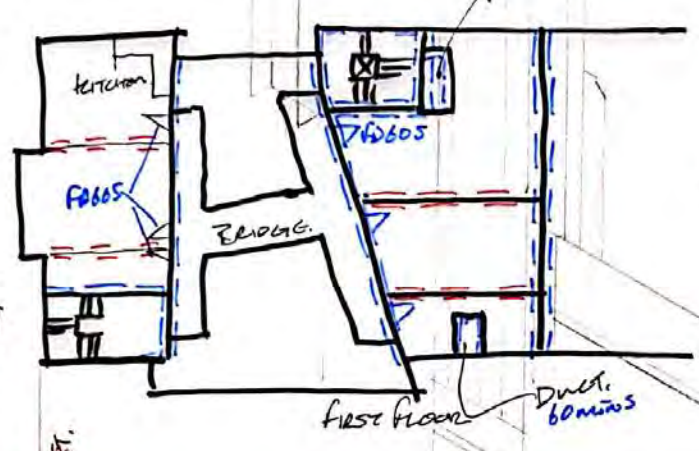
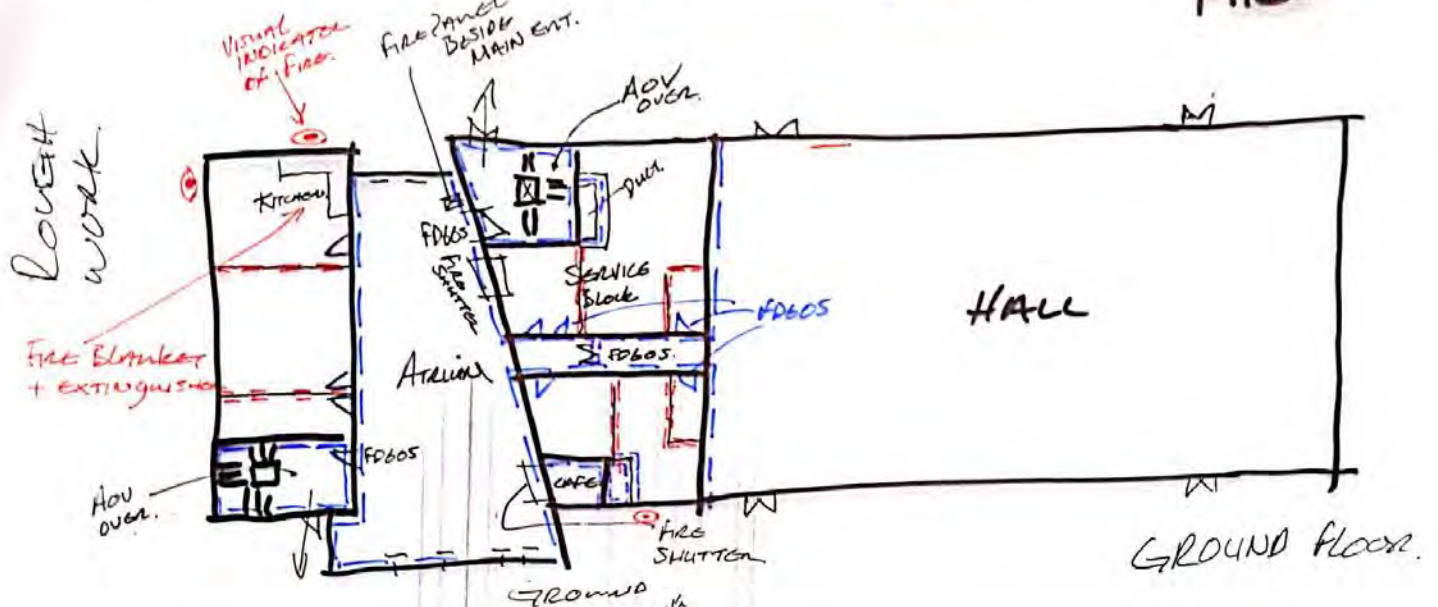


OCCUPANCY		AREA	LOAD FACTOR	PEOPLE PERSONS.	PLANT + STORAGE	NON-FIRE RISK
TRAVEL DIST 18	HALL	0.3	-	233.3	5.0 OR 30.0	
TRAVEL DIST 45	Meeting	1.0	-		1 DIRECT MORE THAN 1 DIRECT	ROOM WITH IN ROOM 9435
TRAVEL DIST 18	ATRIUM	0.7	-	109		
?	DINING CAFE	1.0	-			
	TOILETS/CHANGE	1.0	-			
TOTAL.						

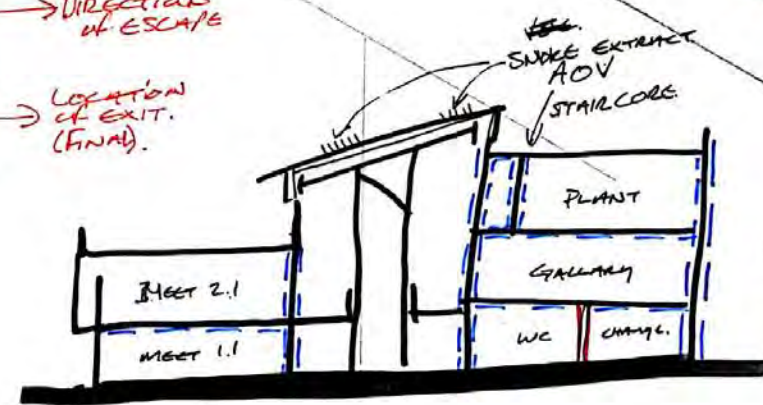
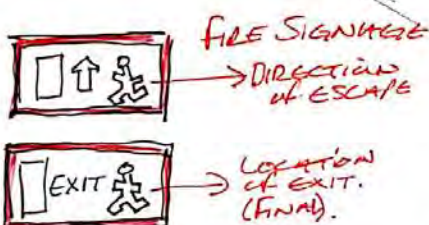
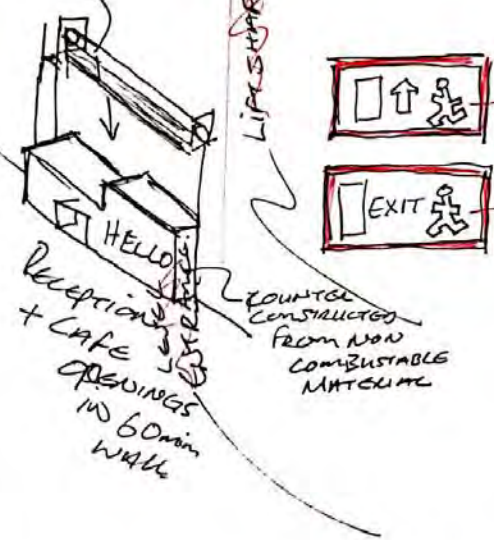
Room	TRAVEL DIST		PERMITTED ESCAPE DIST.
	ACTUAL	DIRECT DIST	

30 MIN 60 MIN

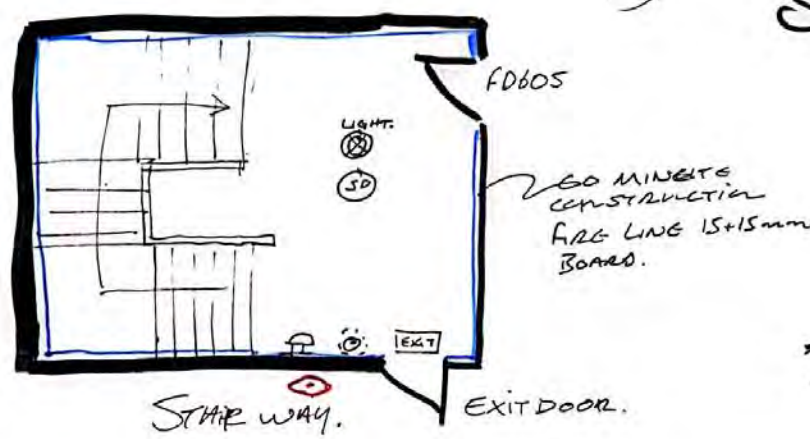
FIRS.



- LEGEND
- ⊙ MANUAL CALL POINT BREAK GLASS BOX.
↳ AT ALL EXITS.
 - 🔊 SOUNDER.
↳ AT ALL EXITS + HALL
 - 👁️ VISUAL WARNING DEVICE -> EXTERNAL INDICATOR
 - ⊠ IP INDICATION PANEL ALARM PANEL.
↳ AT MAIN ENT.
 - ⊙ HD HEAT DETECTOR.
↳ KITCHEN CAPE
 - ⊙ SD SMOKE DETECTOR
↳ EVERY WARE.
 - ⊗ EMERGENCY LIGHT BATTERY + MAINS.
↳ EVERY ROOM + EXIT/ESCAPE ROUTES.



SECTION



DOOR LABEL.
FD 605 = FIRE DOOR.
60 MINUTES FIRE RATING.
S = SMOKE SEAL + SELF-CLOSING MECH.
INTRUSION SEAL
SMOKE SEAL / BRUSH.

FIRE
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TRAVEL DISTANCES ANALYSIS.

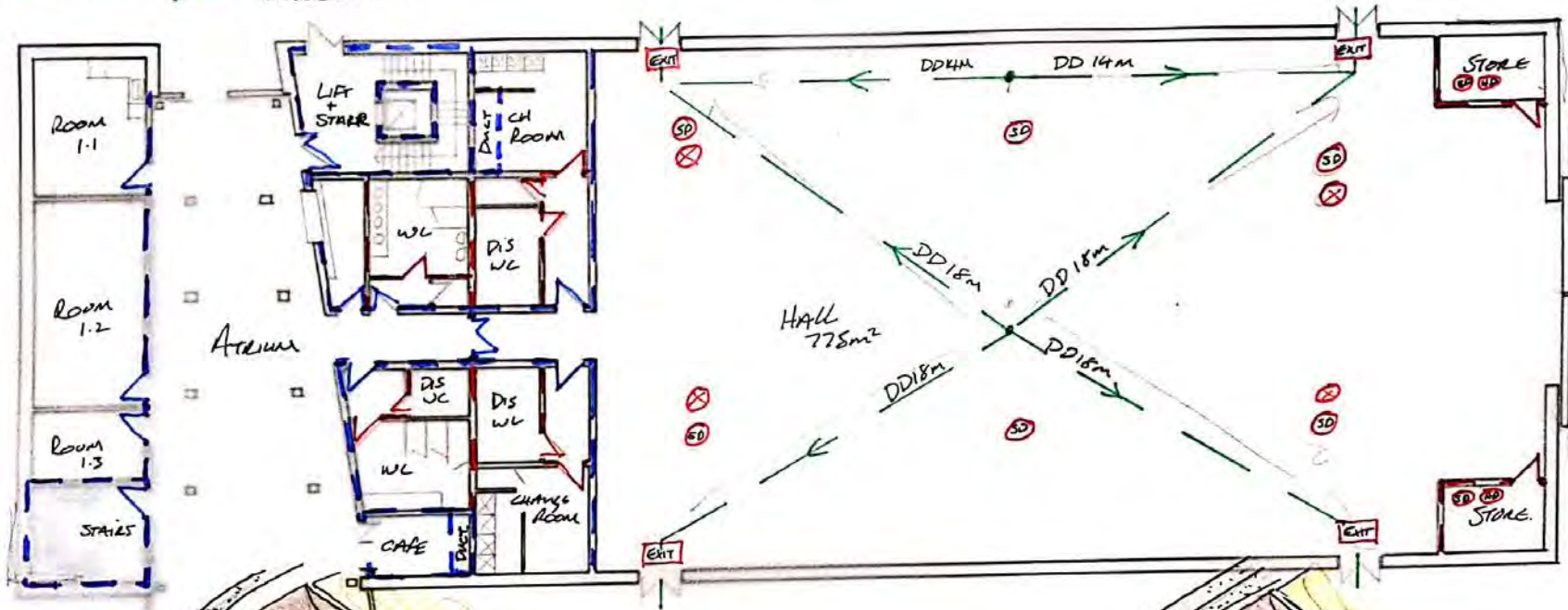
	ROOM	AREA	LOAD FACTOR	ACTUAL DIRECT DISTANCE	PERMITTED TRAVEL DIST.
Ground Floor.	ROOM 1.1	25m ²	1.0	11m D.D.	45m (2 ROUTES)
	ROOM 1.2	37m ²	1.0	19m D.D.	45m (2 ROUTES)
	ROOM 1.3	13m ²	1.0	13m D.D.	45m (2 ROUTES.)
	ATRIUM	157m ²	0.7	10m D.D.	45m (2 ROUTES)
	RECEPTION	9.2m ²	1.0	18m D.D.	45m (2 ROUTES)
	CAFE (FOOD PREP)	10m ²	1.0	9m D.D.	45m (2 ROUTES)
	MALE CH. LOBBY			18m D.D.	45m (2 ROUTES)
	FEMALE CH. LOBBY			18m D.D.	45m (2 ROUTES)
	HALL	775m ²	0.3		45m (7 ROUTES)
First Floor.	ROOM 2.1	25m ²	1.0	18m D.D.	45m (2 ROUTES)
	ROOM 2.2	43.4m ²	1.0	15m D.D.	45m (2 ROUTES)
	ROOM 2.3	13.0m ²	1.0	9.5m D.D.	45m (2 ROUTES)
	GALLERY 2.4	55.6m ²	1.0	18m D.D.	45m (2 ROUTES)
	GALLERY 2.5	56.6m ²	1.0	16m D.D.	45m (2 ROUTES)
	WC LOBBY			19m D.D.	45m (2 ROUTES)
Second Floor	PLANT AREA 1	98.2m ²		17m D.D.	18 (1 ROUTE)
	PLANT AREA 2	41.3m ²		18m D.D.	18 (1 ROUTE)

FIRE
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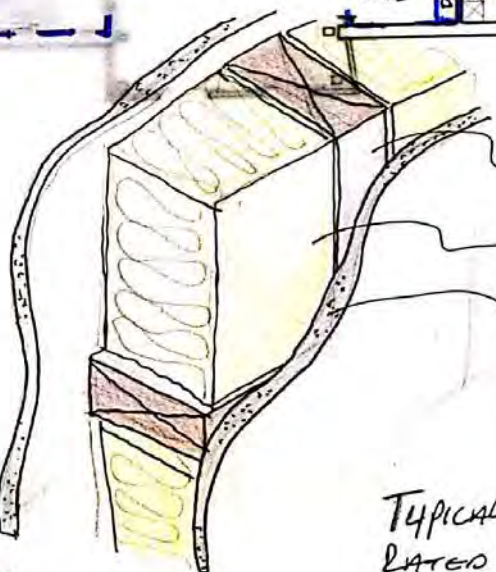
LEGEND

- 60min FIRE RESISTANT CONSTRUCTION
- 60min FIRE RESISTANT CONSTRUCTION
- / 60min FIRE DOOR
- / 30min FIRE DOOR
- ESCAPE ROUTE + DIRECTION

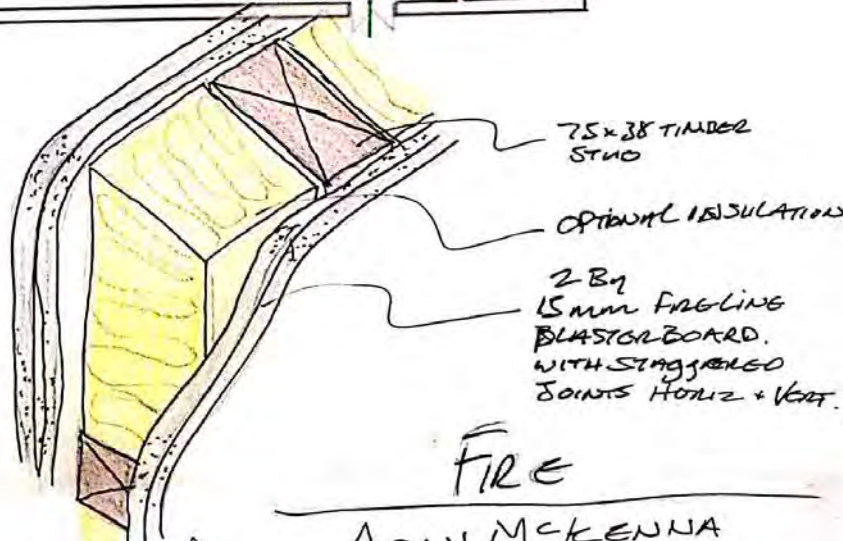
- X EMERGENCY LIGHT.
- SD SMOKE DETECTOR
- EXIT FIRE EXIT SIGNAGE.
- HS HEAT SENSOR



- NOTE:**
- STAGGER JOINTS,
 - SEAL JOINTS WITH PAPER JOINT TAPE
 - 2mm SKIM COAT PLASTER OVER JOINTS or 1 coat of Primer Dry Wall Paint.
 - Drywall TIMBER SCREWS FIX PLASTER BOARD TO STUD.



Typical 30min fire rated partition wall (NON LOAD BEARING)





Typical 60min fire rated partition wall

Fire
 Aidan McKenna
 D19124287.

LEGEND:

-  MANUAL CALL POINT
-  BREAK GLASS UNIT.
-  SOUNDER
-  VISUAL WARNING DEVICE
-  INDICATION PANEL
-  ALARM PANEL
-  HEAT SENSOR
-  SMOKE DETECTOR
-  EMERGENCY LIGHT WITH BATTERY BACKUP
-  FIRE EXIT DIRECTION SIGNAGE
-  FIRE EXIT SIGNAGE.

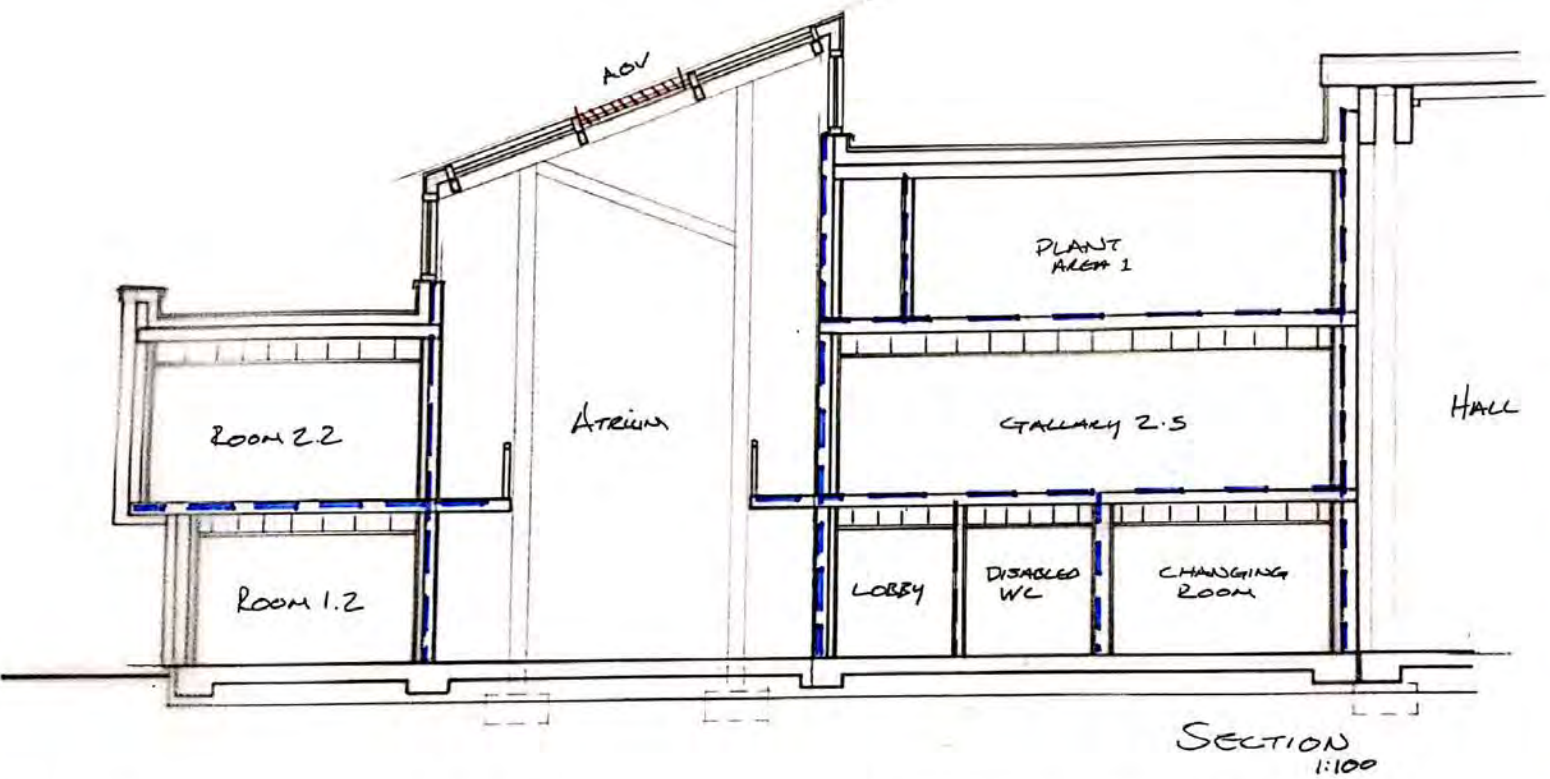
 60MIN FIRE RESISTANT CONSTRUCTION

 30MIN FIRE RESISTANT CONSTRUCTION.

FD605 60 MIN FIRE DOOR WITH SMOKE SEAL

FD305 30 MIN FIRE DOOR WITH SMOKE SEAL

 ESCAPE ROUTE START POINT, DIRECTION



SECTION 1:100

GENERAL INFORMATION ON FIRE:-

- BUILDING DESCRIPTION - Assembly + Recreation Group 5.

- TOTAL BUILDING AREAS (NET)

HALL - 775m ²	→ 775.0m ²
GROUND FLOOR (EXCL HALL)	- 597.4m ²
FIRST FLOOR	- 352.1m ²
SECOND FLOOR	- 183.2m ²
TOTAL AREA	→ 1907.7m²

BUILDING OCCUPANCY:-

ROOM AREA	LOAD FACTOR	NUMBER OF PERSONS
HALL	- 0.3 / 775m ²	→ 233
MEETING ROOMS	- 1.0 / 278.7m ²	→ 278
ATRIUM	- 0.7 / 109.9m ²	→ 769
TOILETS/ CHANGING	- 1.0 / 1200m ²	→ 120
PLANT/ STORAGE	- .3 / 110m ²	→ 30
TOTAL PERSONS		661

FIRE
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 D19124287

LEGEND:

- MANUAL CALL POINT
BREAK GLASS UNIT.
- SOUNDER
- VISUAL WARNING
DEVICE
- INDICATION PANEL
ALARM PANEL
- HEAT SENSOR
- SMOKE DETECTOR
- EMERGENCY LIGHT
WITH BATTERY BACKUP
- FIRE EXIT DIRECTION
SIGNAGE
- FIRE EXIT SIGNAGE.

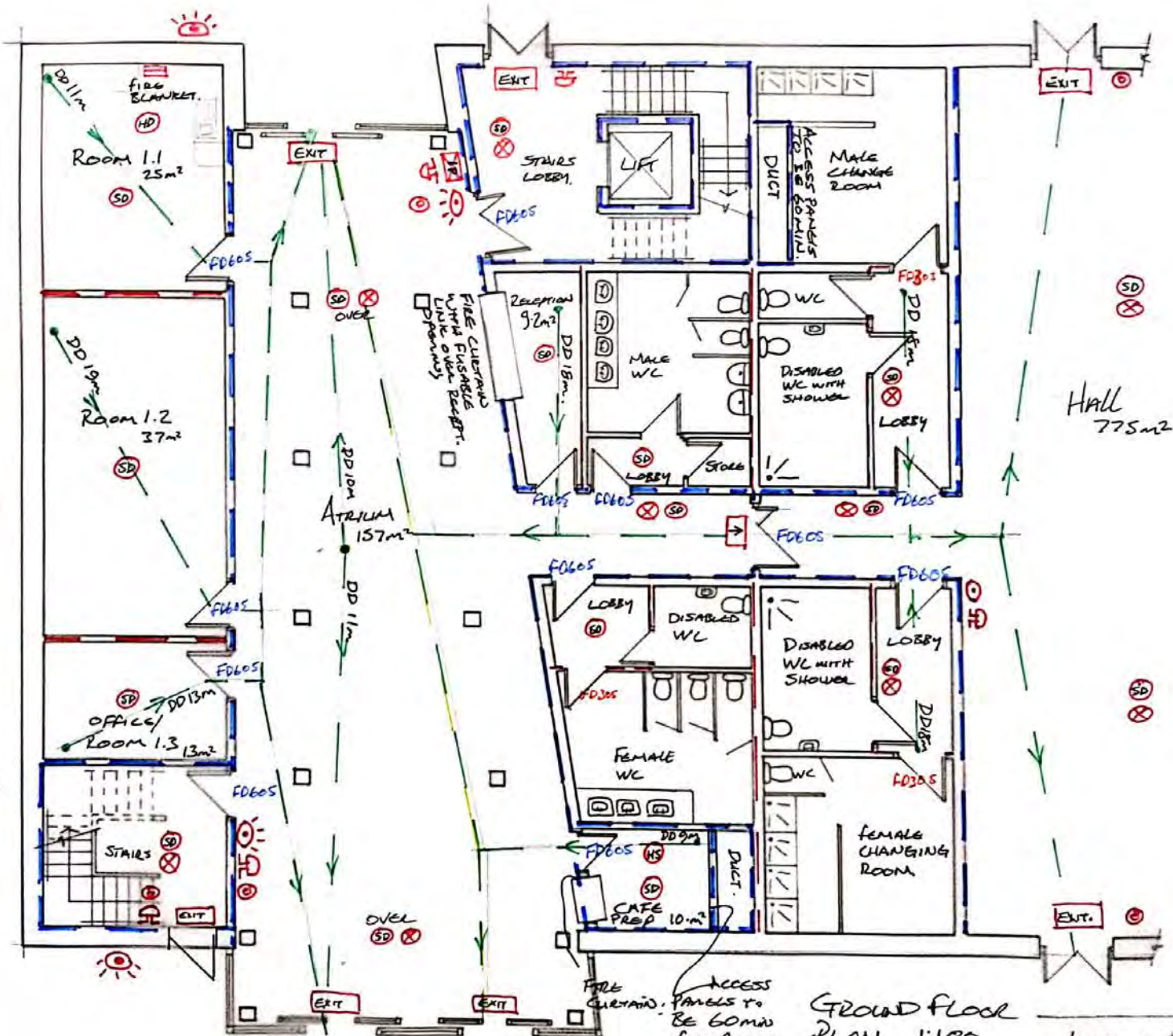
60min FIRE RESISTANT
CONSTRUCTION

30min FIRE RESISTANT
CONSTRUCTION.

FD60S 60 MIN FIRE POOL
WITH SMOKE SEAL

FD30S 30 MIN FIRE POOL
WITH SMOKE SEAL

ESCAPE ROUTE START
POINT, DIRECTION



AUTO DOOR CONNECTED
TO FIRE PANEL TO OPEN
ON EVENT ACTIVATION.

ACCESS
PANELS TO
BE 60min
FIRE RATED
MATERIAL

GROUND FLOOR
PLAN 1:100

FIRE.
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D9124287

LEGEND:

- MANUAL CALL POINT
- BREAK GLASS UNIT.
- SOUNDER
- VISUAL WARNING DEVICE
- INDICATION PANEL
- ALARM PANEL
- HEAT SENSOR
- SMOKE DETECTION
- EMERGENCY LIGHT WITH BATTERY BACKUP
- FIRE EXIT DIRECTION SIGNAGE
- FIRE EXIT SIGNAGE.

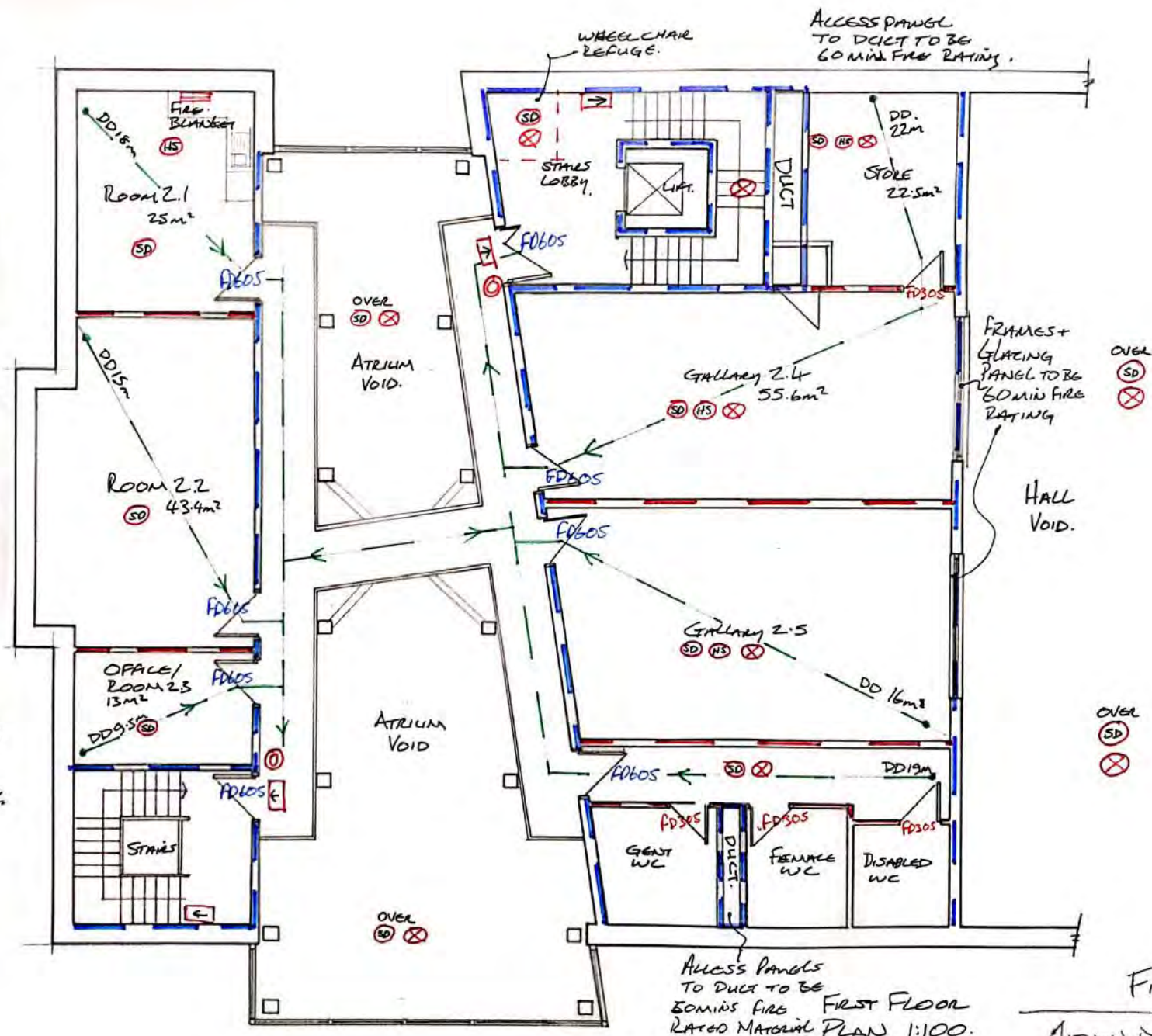
60MIN FIRE RESISTANT CONSTRUCTION

30MIN FIRE RESISTANT CONSTRUCTION.

FD60S 60 MIN FIRE POOL WITH SMOKE SEAL

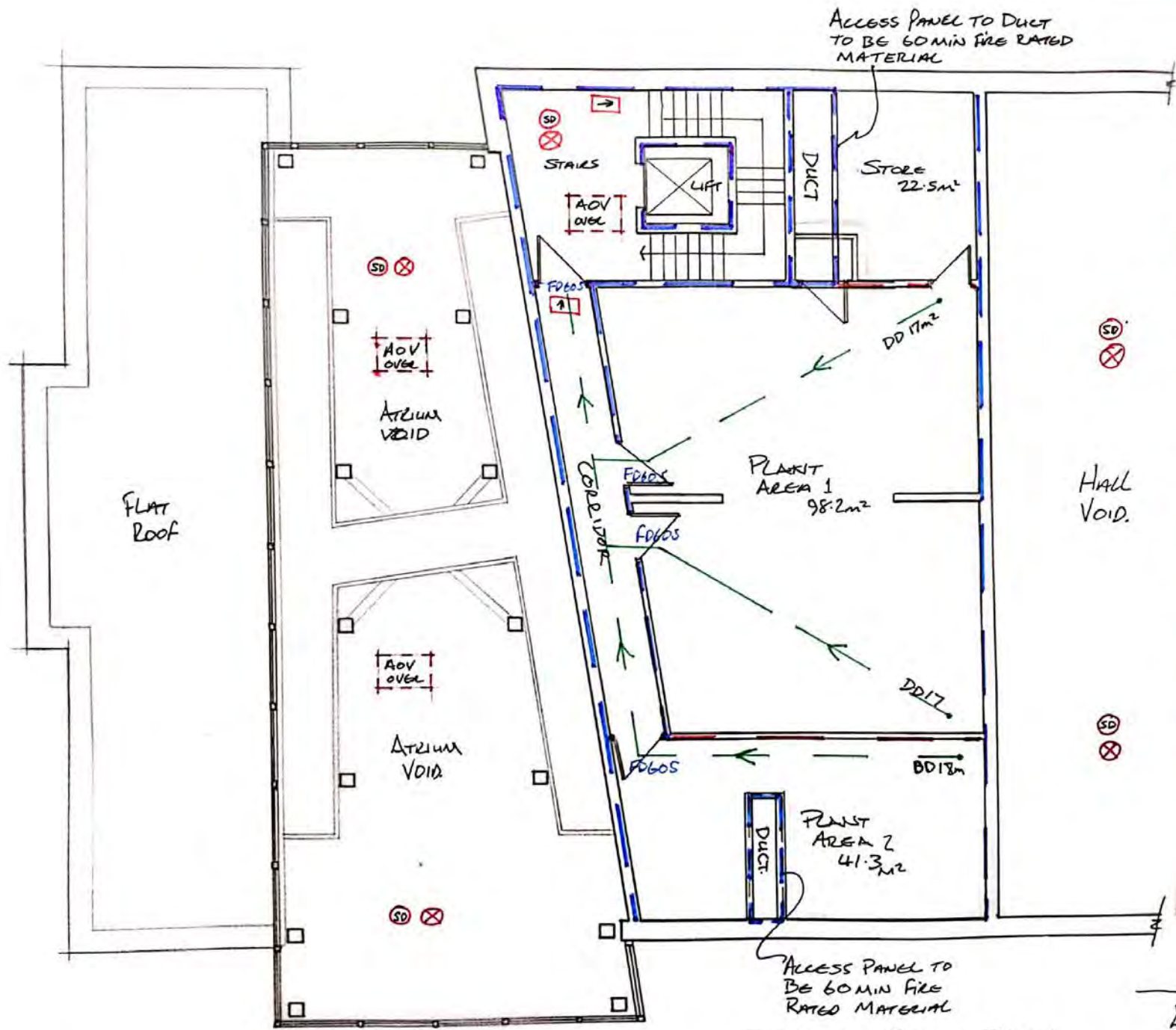
FD30S 30 MIN FIRE POOL WITH SMOKE SEAL

ESCAPE ROUTE START POINT, DIRECTION



Access Panels To DUCT TO BE 60min fire RATING MATERIAL PLAN 1:100.

FIRE.
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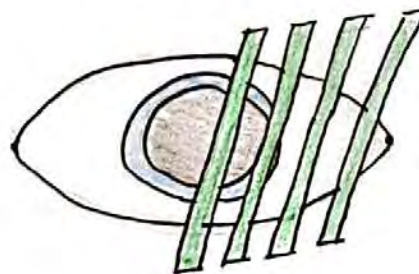


SECOND FLOOR PLAN
1:100

- ### LEGEND:
- MANUAL CALL POINT
BREAK GLASS UNIT.
 - SOUNDBELL
 - VISUAL WARNING
DEVICE
 - INDICATION PANEL
ALARM PANEL
 - HEAT SENSOR
 - SMOKE DETECTION
 - EMERGENCY LIGHT
WITH BATTERY BACKUP
 - FIRE EXIT DIRECTION
SIGNAGE
 - FIRE EXIT SIGNAGE.
 - 60MIN FIRE RESISTANT
CONSTRUCTION
 - 30MIN FIRE RESISTANT
CONSTRUCTION.
 - FD60S 60 MIN FIRE POOL
WITH SMOKE SEAL
 - FD30S 30MIN FIRE POOL
WITH SMOKE SEAL
 - ESCAPE ROUTE START
POINT, DIRECTION

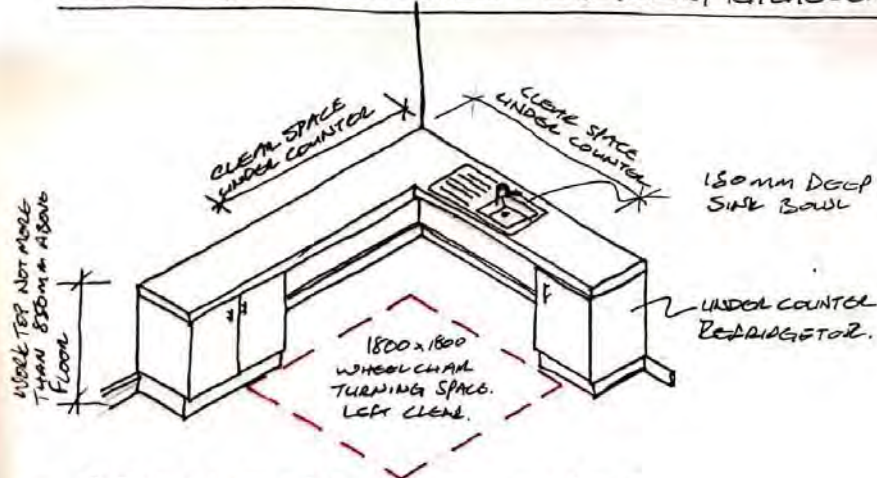
FIRE.

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ACCESSIBILITY
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D19124287

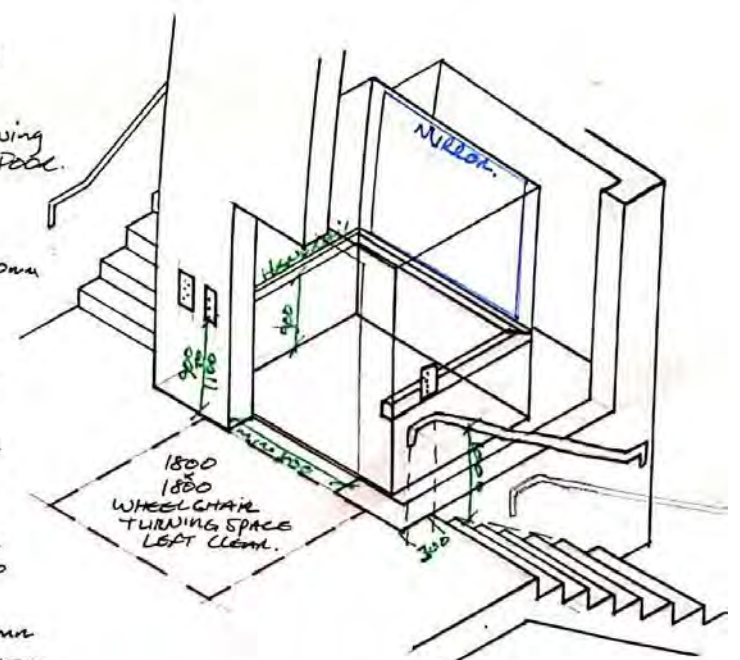
SHARED SELF-SERVICE CANTEN/KITCHENETTE.



- CLEAR KNEE SPACE UNDER WORKTOP MIN 700mm ABOVE FLOOR LEVEL
- SEE DIAGRAM 2 & PART M TGD.

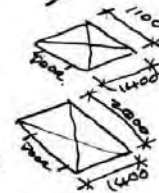
LIFT TGD PART M DIAGRAM 13.

- 1800x1800 CLEAR TURNING SPACE IN FRONT OF LIFT POOL.
- LIFT DOORS CLEAR WIDTH 800mm
- CALL BUTTON 900 TO 1100mm OF FLOOR + 500mm FROM RETURN WALL
- TACTILE INDICATE FOR FLOOR NUMBER ADJACENT TO CALL BUTTON.
- LIFT FLOOR NOT TO BE A PAVE COLOUR + SLIP RESISTANT.
- HALF LENGTH MIRROR ON OPPOSITE WALL TO LIFT DOOR.
- PROVIDE HANDRAIL 900mm OFF FLOOR LEVEL OF LIFT.



- LIFT SIZE → SMALL LIFT
- LARGER LIFT

↳ IF PUBLIC AREA (NET EXCL WX)
 ⇒ 200m² PER FLOOR PROVIDE LARGER LIFT AS ABOVE.
 ↳ FIRST FLOOR NET AREA 130m²
 ↳ SMALL LIFT



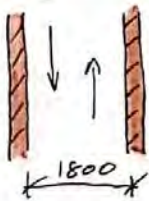
STAIRS + RAILINGS.

- AT LEAST ONE STAIR SHOULD BE SUITABLE AS MEANS OF ESCAPE FOR AMBULANT DISABLED
 ↳ BOTH SUITABLE.
- GOING AT LEAST 300mm
- NO SINGLE STEPS
- MINIMUM WIDTH BETWEEN WALLS 1200mm
 ↳ BETWEEN HANDRAILS 1000mm
- PERMANENTLY CONTRASTING NOSE STRIP ON EACH THREAD.

- SEE DIAGRAM 14 PART M TGD.

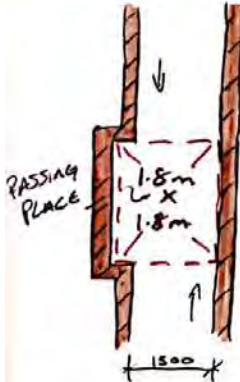
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CORRIDORS / PASSAGEWAYS.



- A CORRIDOR OF 1800MM ALLOWS TWO WHEELCHAIRS TO PASS.

↳ CORRIDOR TO HALL = 2100

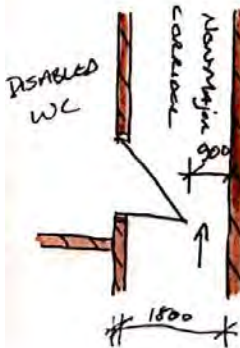


- A CORRIDOR OF 1500MM ALLOWS ONE WHEELCHAIR TO PASS AN ABLE BODIED PERSON.

- THEREFORE PROVIDE A PASSING PLACE OF 1800 x 1800 CLEAR EVERY 25M OF CORRIDOR.

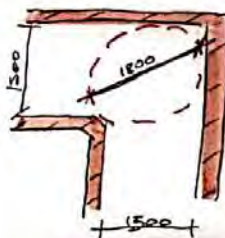
- MIN UNOBSTRUCTED CORRIDOR SHOULD BE 1200MM. NOT PROJECTIONS, RADIATORS, COLUMN, ETC SHOULD INTERFERE IN THIS WIDTH.

↳ NO INSTANTS ON GROUND FLOOR



- WHERE A DOOR SWINGS INTO A NON-MAJOR CORRIDOR ALLOW 900MM CLEAR WIDTH BETWEEN DOOR FULLY OPEN AND CORRIDOR WALL FOR PASSAGE.

↳ INSTANTS MARKED



- TURNING CIRCLE OF 1800MM DIA. AT A CORRIDOR JUNCTION CAN ACT AS A PASSING PLACE OR ALLOW A WHEELCHAIR USER TO TURN AND RETURN IN THE OTHER DIRECTION.

↳ NO INSTANTS

SANITARY FACILITIES

- NUMBER OF FACILITIES NEEDED DEPENDS OF BUILDING USE, NO'S OF PEOPLE ETC. SEE PART G TGD.

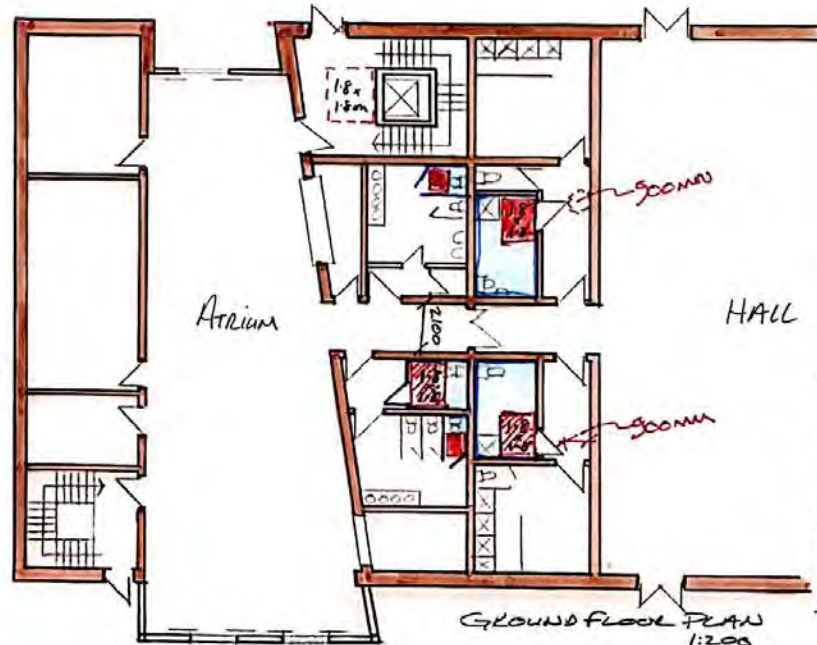
- A PROVISION OF A 1.8 x 1.8m CLEAR TURNING CIRCLE IS REQUIRED WITHIN WC FOR DISABLED USE IN A BUILDING THIS SIZE > 200M².

- PROVIDE OF AMBULANT WC ON EACH FLOOR AT RATIO OF 4:1.

- DISABLED WC ON ALL ACCESSIBLE FLOORS

- FOR MINIMUM REQUIREMENT SEE PART M TGD DIAGRAM 15A

- APPLIANCES SUCH AS TAPS SHOULD BE OPERABLE WITH CLOSED FIST.



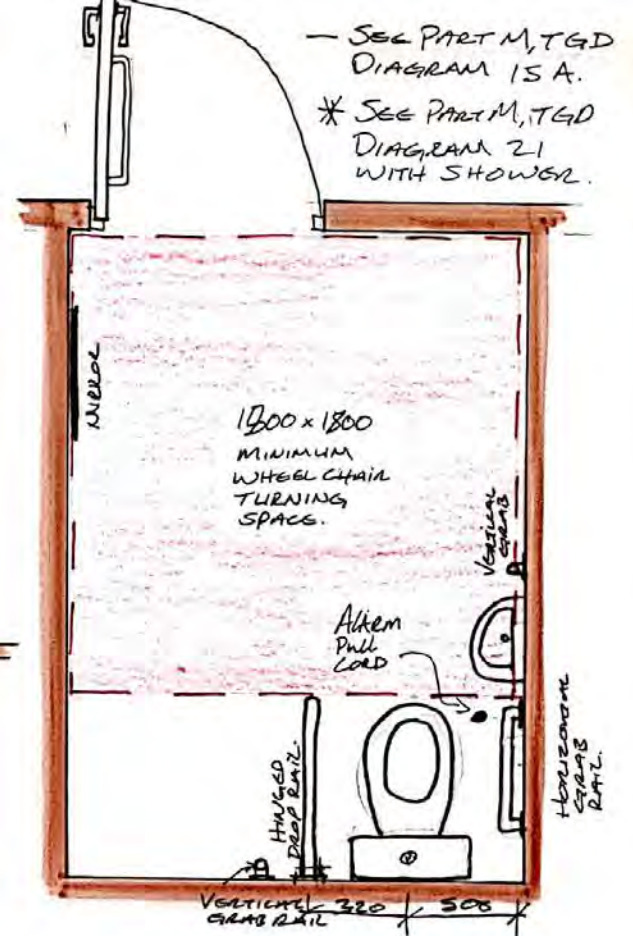
GROUND FLOOR PLAN 1:200



- MIN. UNOBSTRUCTED HIGH 2100MM.

- MIN LIGHT LEVEL AT FINISHED FLOOR SHOULD BE MIN. 100 LUX.

↳ NO INSTANTS



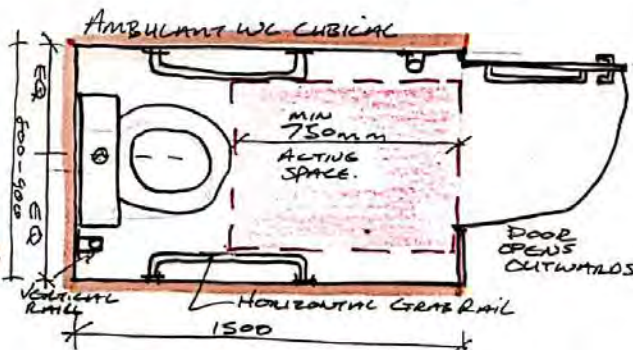
- SEE PART M, TGD DIAGRAM 15 A.

* SEE PART M, TGD DIAGRAM 21 WITH SHOWER.

1800 x 1800 MINIMUM WHEELCHAIR TURNING SPACE.

Alkem Pull Cord

VERTICAL GRAB RAIL 300 x 500



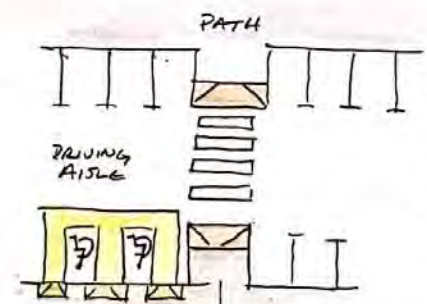
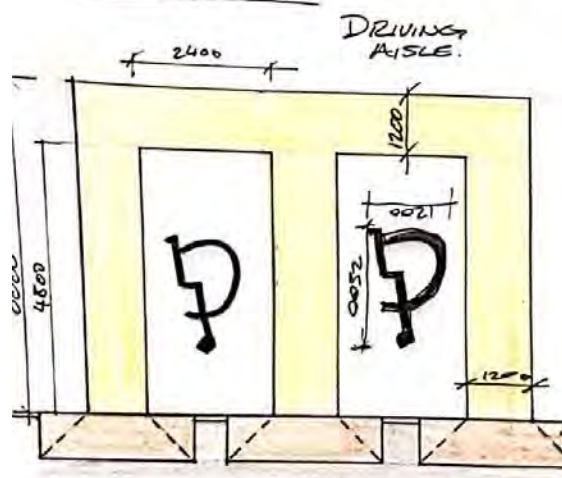
AMBULANT WC CUBICAL

MIN 750mm ACTIVE SPACE.

DOOR OPENS OUTWARDS.

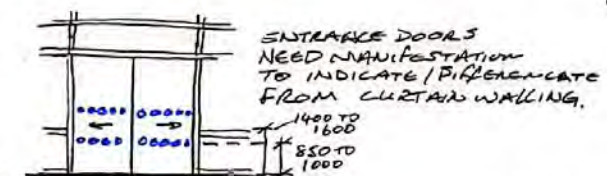
PART M ACCESSABILITY

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DIS124287.

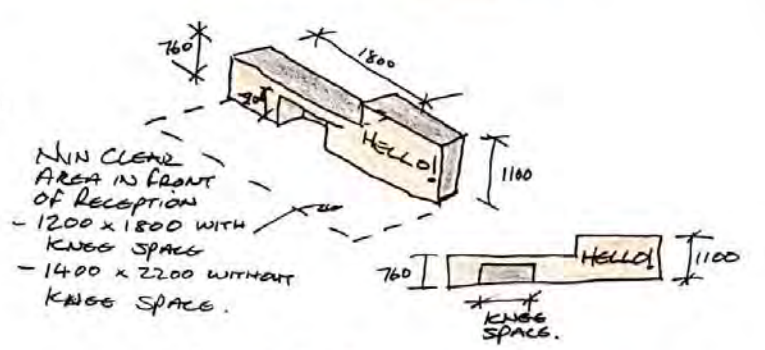


WHERE A PEDESTRIAN CROSSING IS PROVIDED. TACTILE PAVING + DROPPED KERBS SHOULD BE USED A TRANSITION FROM PATH TO DRIVING AISLE SURFACES.

PEDESTRIAN CROSSING ACROSS CAR PARK, TO ATRIUM



ACCESSIBLE RECEPTION

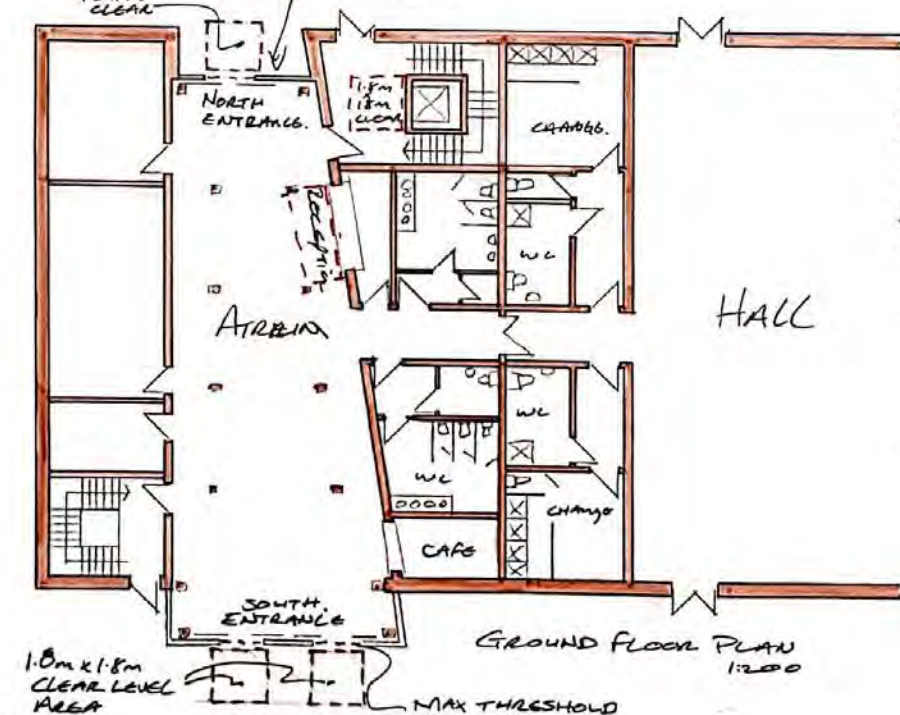


RECEPTION / ATRIUM TO AID CIRCULATION + ACCESSABILITY PROVIDE SIGNAGE, ACCEPTED SYMBOLS, PICTOGRAMS TO FACILITIES: - WCs, HALL ACTIVITY AREAS, LIFT / STAIRS.

DESIGNATED ON SITE PARKING Bay. AS PER PART M TRFD 1:100 I.I.S. - DIAGRAM 8. NO. OF SPACE = 5% TOTAL NUMBER OF CAR PARKING SPACE PROVIDED ON SITE.

APPROACH TO BUILDING

- LEVEL ACCESS WHERE POSSIBLE.
- GENTLE SLOPE 1:20 OR LESS
- MIN. CLEAR WIDTH 1500mm
 - ↳ PROVIDE PASSING SPACE EVERY 25M. SPACE 2m x 1.8 CLEAR.
- WHERE GENTLE SLOPE PROVIDE LEVEL RESTING LANDING EVERY 500mm RISE.
- PROVIDE LEVEL PLATFORM/AREA 1.8m x 1.8m CLEAR IN FRONT OF ENTRANCE.
- MANUAL ENTRANCE DOOR NEED SOFT CLOSE + EASY OPEN OR AUTO PUSH BUTTON OPENING.
- AUTO DOORS PREFERABLE



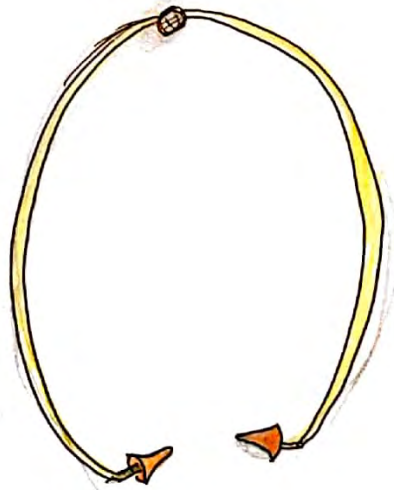
INTERNAL DOORS. SELF CLOSING DOORS NEEDED TO CONTROL FIRE, SMOKE + ACOUSTICS BUT CAN HINDER MOBILITY. - WHERE DOOR MUST CLOSE USE SOFT CLOSERS + EASY PUSH OPEN MECHANISMS - HOLD OPEN OR MAGNET HOLD OPEN LINKED TO FIRE ALARM PANEL. ESPECIALLY IN HIGH ACCESS AREAS. IE - HALL. - CLEAR WIDTH OF DOORS

- ↳ STRAIGHT ON = 800mm
- ↳ AT RIGHT ANGLES TO ACCESS ROUTE WHICH IS ≥ 1500mm - 800mm
- ↳ AT RIGHT ANGLES TO ACCESS ROUTE WHICH IS ≥ 1200 - 825mm

PART M ACCESSABILITY

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HALL →



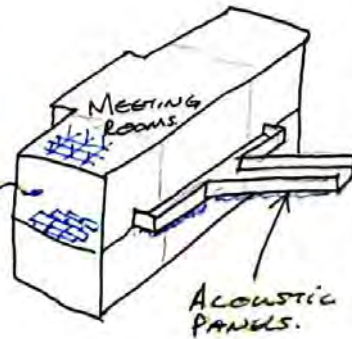
FREE
EAR-
PLUGS
TAKE ONE
←

ACOUSTICS
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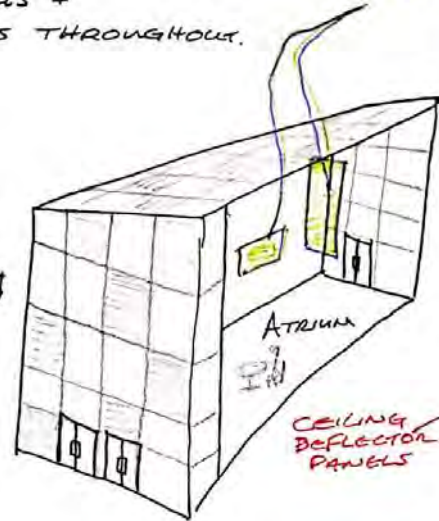
MEETING ROOMS:-

- TO CATCH FOR A WIDE RANGE OF ACTIVITY WITHIN EACH ROOM
- ↳ CARPET (HEAVY DUTY) FLOOR SURFACES,
- INSULATE PARTITION WALLS + ACOUSTIC CEILING TILES THROUGHOUT.

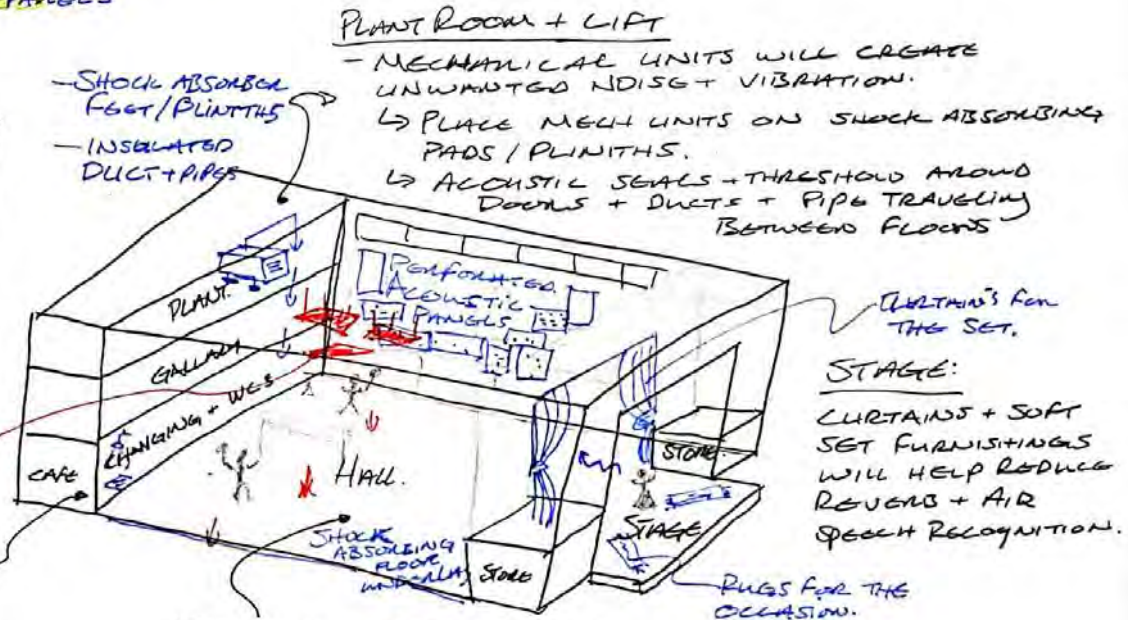
ACOUSTIC CEILING TILES + INSULATION PARTITION WALLS + CARPET TILES



FABRIC BANNERS + ART. PANELS



- SHOCK ABSORBER FEET / PLINTHS
- INSULATED DUCT + PIPES



PLANT ROOM + LIFT

- MECHANICAL UNITS WILL CREATE UNWANTED NOISE + VIBRATION.
- ↳ PLACE MECH UNITS ON SHOCK ABSORBING PADS / PLINTHS.
- ↳ ACOUSTIC SEALS + THRESHOLD AROUND DOORS + DUCTS + PIPE TRAVELLING BETWEEN FLOORS

CURTAINS FOR THE SET.
STAGE:
CURTAINS + SOFT SET FURNISHINGS WILL HELP REDUCE REVERB + AIR SPEECH RECOGNITION.

ATRIVM:-

- AS THE ATRIVM EXTERIOR SKIN IS GLAZED CONSIDER DOUBLE / TRIPLE GLAZING PANELS WITH WIDER AIR GAPS TO REDUCE EXTERNAL NOISE PENETRATION.
- FABRIC ARTISTIC WALL PANELS OR HANG FABRIC BANNER WITH HELP ABSORB AIRBOURNE SOUND
- ACOUSTIC WALL PANELS + FIXED TO SOFITS OF BRIDGE + OVERHANGING WALKWAY.

CHANGING ROOM + WC + CAFE PROP.

- ↳ AS SOFT SURFACES ARE NOT APPLICABLE TO WET AREAS INSULATED PARTY WALLS + PARTITION AND ACOUSTIC CEILING TILES WILL HELP ABSORB AIRBOURNE NOISE

THE HALL WALLS + FLOOR

- ACTIVITIES SUCH AS SPORT WILL GENERATE IMPACT + AIRBOURNE SOUND.
- ↳ BY USING ACOUSTIC WALL PANELS WITH PERFORATION WITH A HIGH DENSITY MATERIAL WOOL ACOUSTIC INSULATION BOARD WILL REDUCE AIRBOURNE NOISE AND HELP REDUCE REVERB TOO
- ↳ SOUND RESISTANT UNDERLAY BENEATH FLOOR FINISH WITH SHOCK ABSORBING STRIPS BETWEEN BATTENS AND SCARRED WILL HELP IMPACT SOUND

ACOUSTICS

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Types of Sound

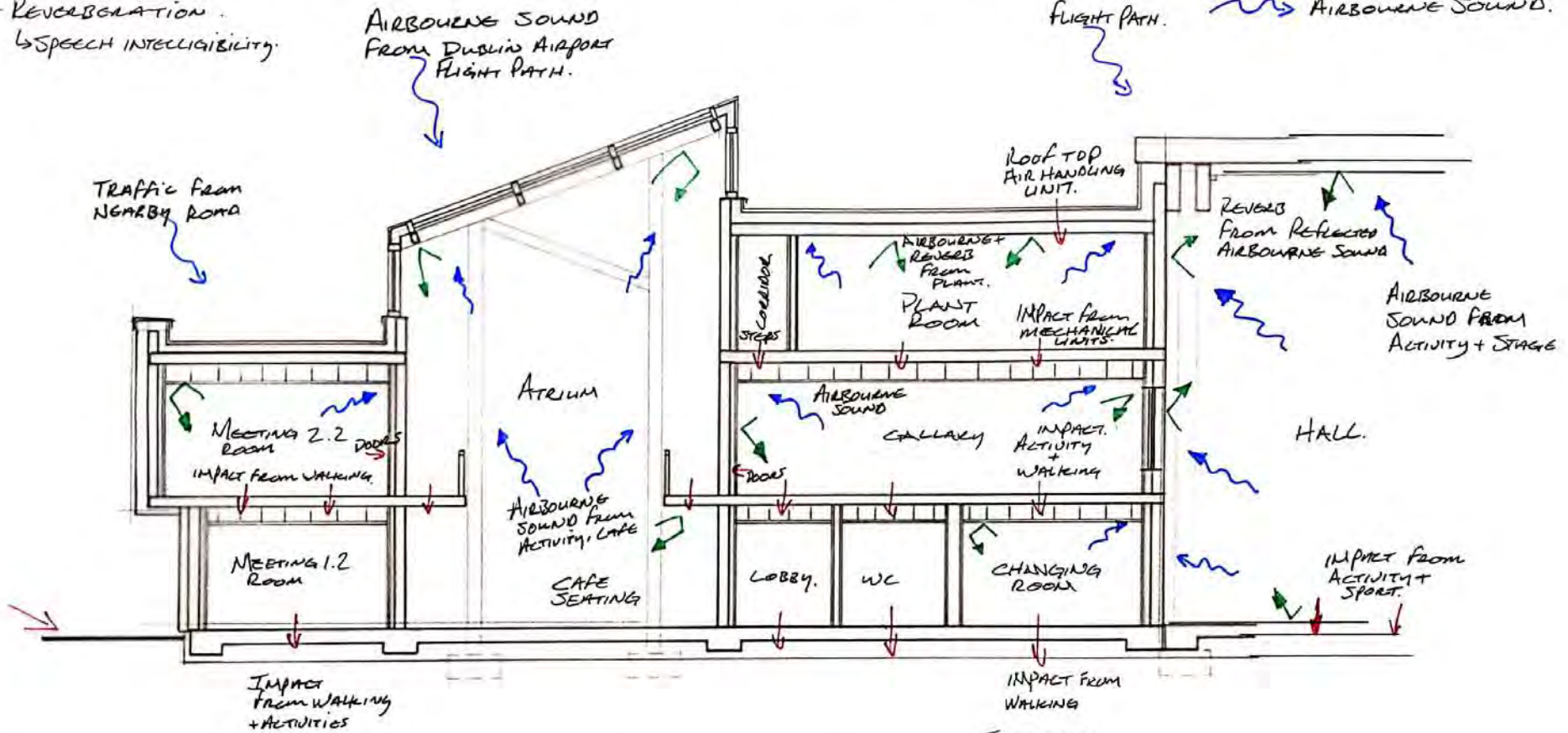
- NOISE
- VIBRATION
- REVERBERATION
 - ↳ SPEECH INTELLIGIBILITY.

REF: - TGD PART E SOUND.

BS 8233 GUIDANCE OF ACOUSTIC STANDARDS.

LEGEND:

- IMPACT SOUND
- ↻ REVERBERATION
- ~ AIRBOURNE SOUND.



SECTION 1:100.

ACOUSTICAL ENVIRONMENT.

TO OPTIMISE THE COMFORT OF OCCUPANTS, ACOUSTIC NEEDS CAREFUL CONSIDERATION AT AN EARLY STAGE OF THE DESIGN PROCESS

GOALS:

1. TO REDUCE UNWANTED NOISE + VIBRATION IN THE BUILDING.
2. REDUCE SOUND TRANSMISSION FROM ONE SPACE TO ANOTHER
3. CONTROL THE AMOUNT OF REVERB IN A SPACE BUT INCREASING SPEECH INTELLIGIBILITY.

NOISE:- UNWANTED SOUND, AIRBOURNE FROM FANS, MECHANICAL EQUIPMENT, TRAFFIC, UNWANTED SPEECH FROM ANOTHER ROOM OR SPACE.

VIBRATION:- STRUCTURAL BOURNE IMPACT NOISE FROM EQUIPMENT OR ACTIVITY.

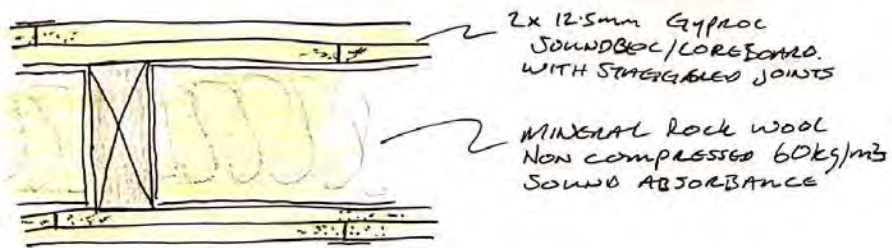
DIRECT IMPACT.

INDIRECT AIRBOURNE NOISE RADIATING FROM SOURCE OR IMPACT.

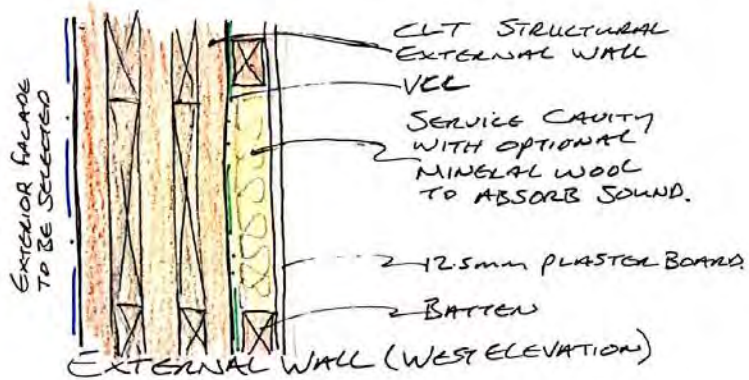
REVERBERATION:- SOUND THAT IS HEARD AS IT DIES AWAY.
 → HARD SURFACES = MORE REVERB
 → SOFT SURFACES = LESS REVERB

ACOUSTICS

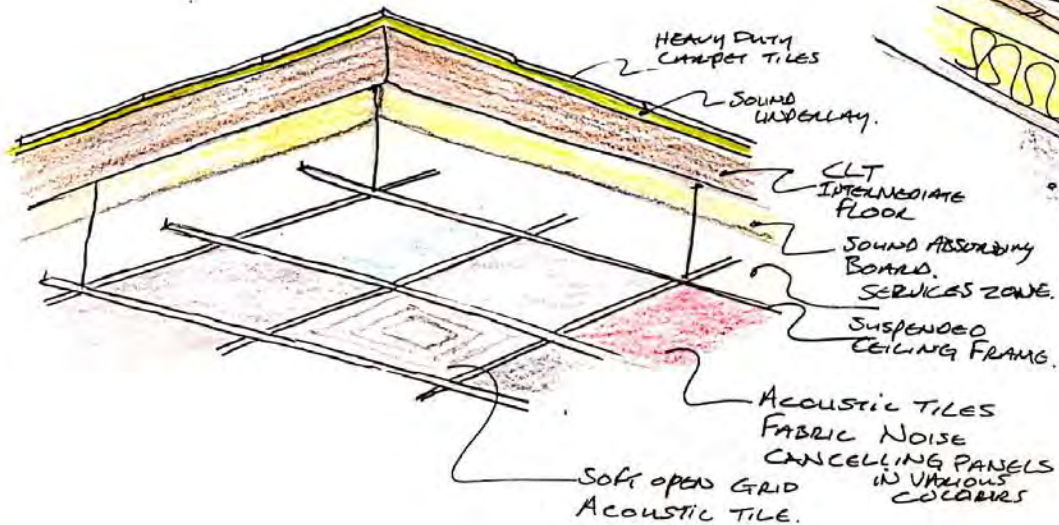
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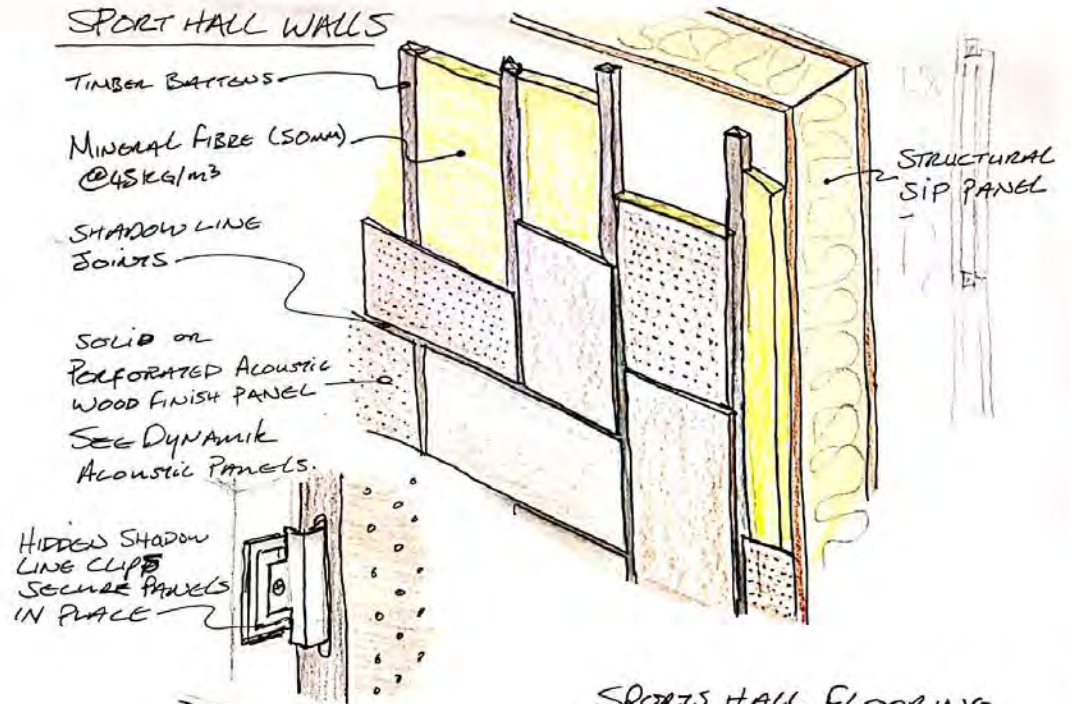
INTERMEDIATE PARTITION WALLS



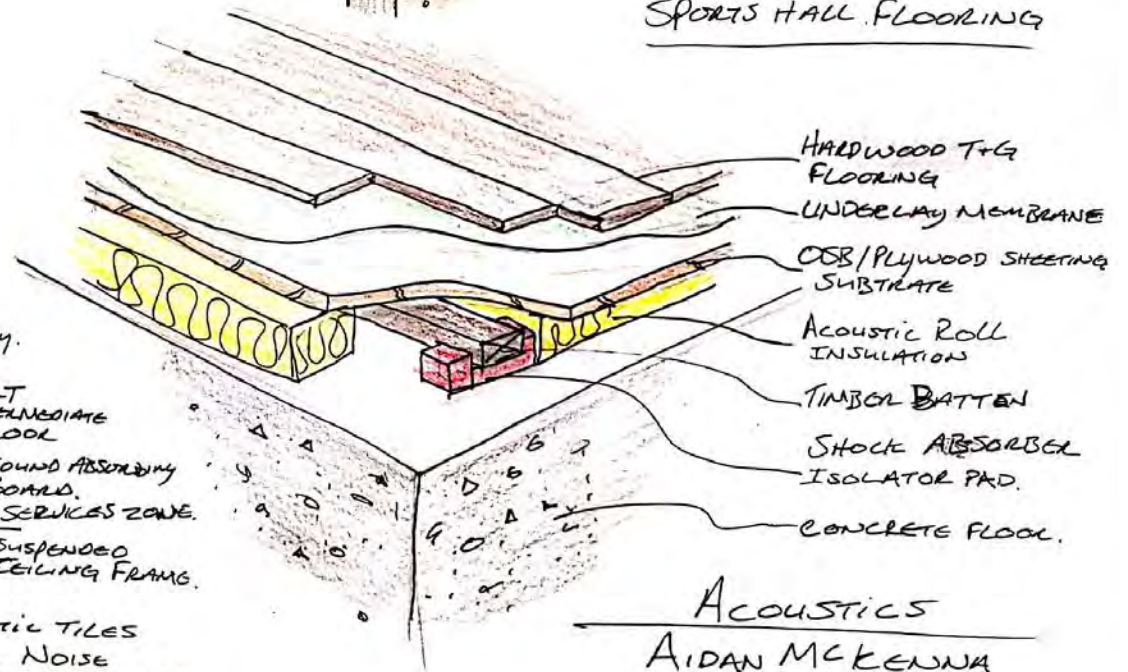
MEETING ROOM CEILING:



SPORT HALL WALLS

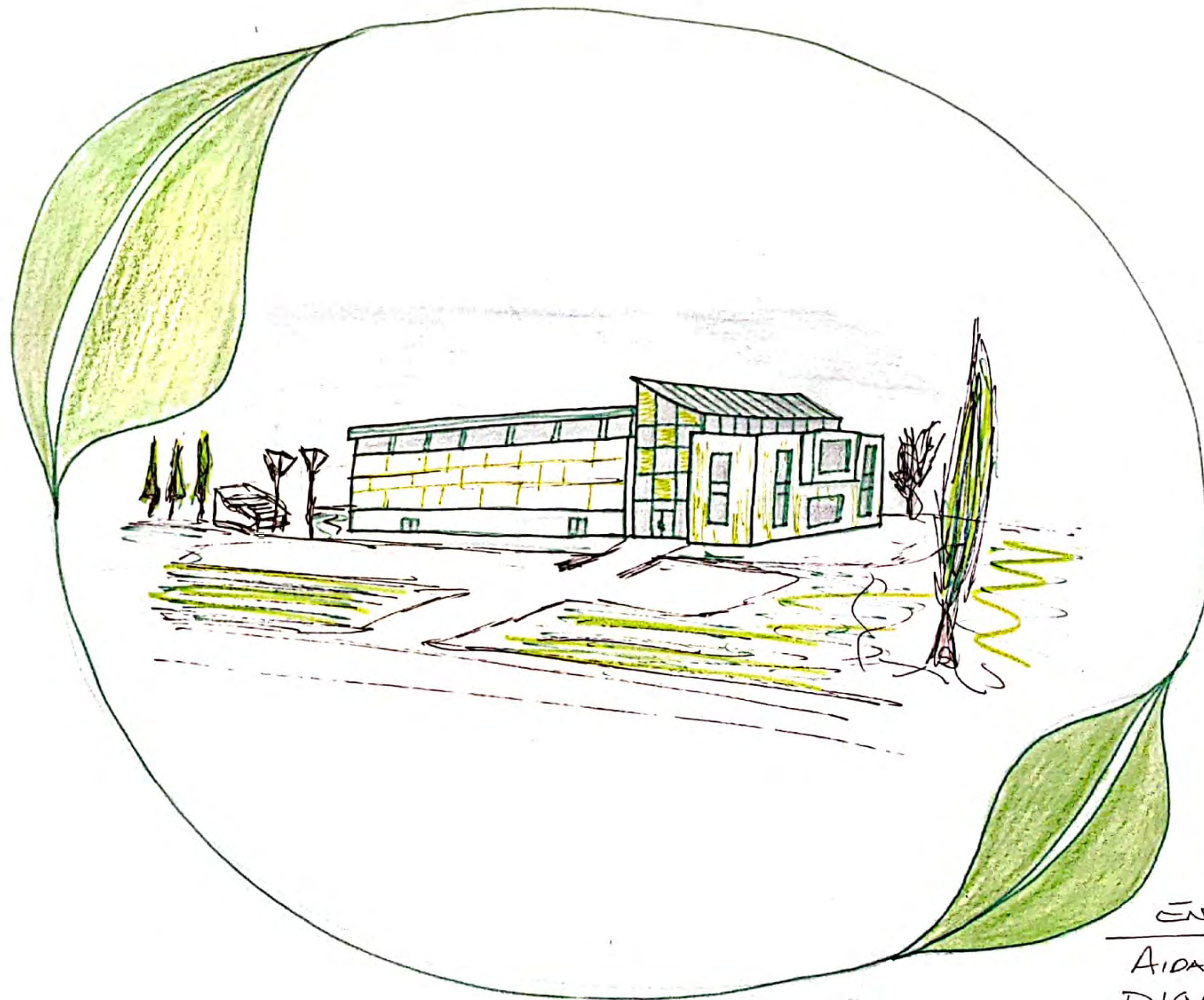


SPORTS HALL FLOORING

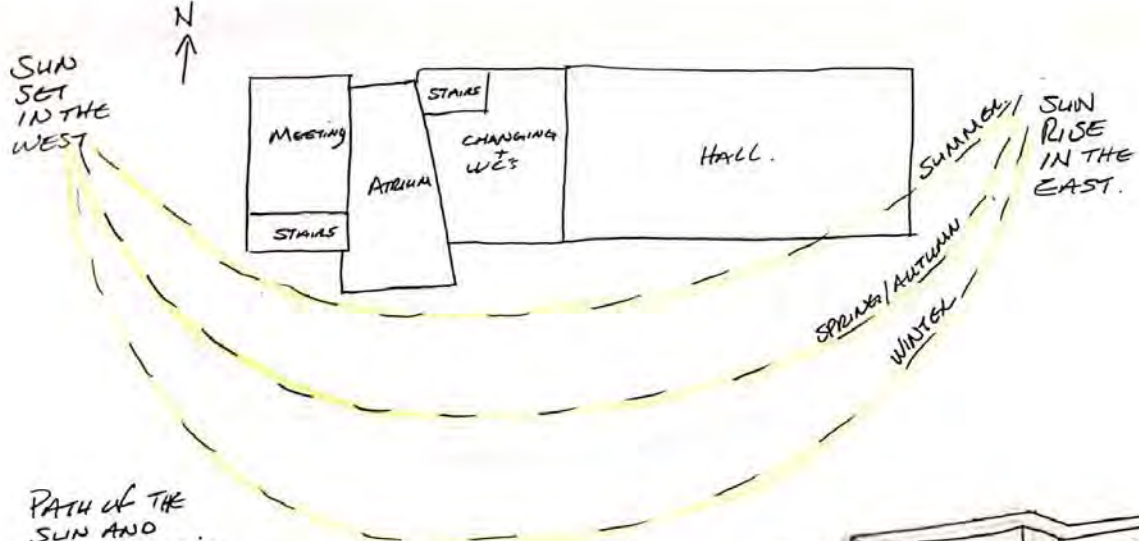


ACOUSTICS

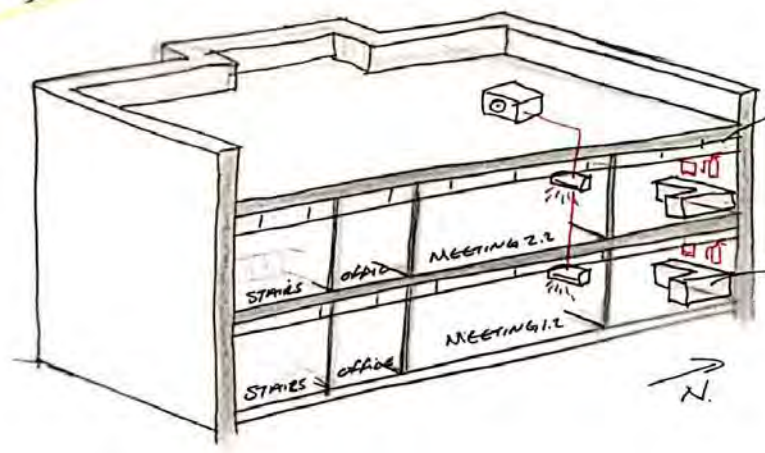
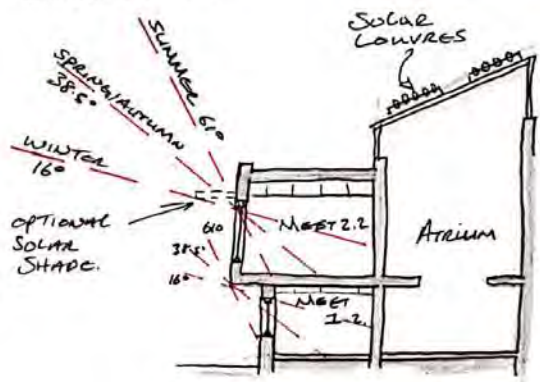
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ENVIRONMENTAL
AIDAN McKENNA
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PATH OF THE SUN AND ORIENTATION



SERVICES
 300MM SUSPENDED CEILING WITH ACOUSTIC ABSORBANT TILES. VOID AWAYS THE TRANSFER OF VENTILATION, HEATING, ELEC AND OTHER SERVICES. ALL WALLS TO HAVE SERVICE CAVITIES.

KITCHENETTE
 TO COMPLY WITH PART M ACCESSABILITY AND TO BE PROVIDED WITH SMOKE EXTRACT AND EXTINGUISHER AS PER PART B FIRE.

VENTILATION / HEATING
 NATURAL VENTILATION USING AIR INTAKE SLIPS INTEGRATED INTO GLAZING FRAMES. CONTROLLABLE LOUVRED VENT PANELS ABOVE INTERNAL DOOR TO ALLOW AIR MOVE INTO ATRIUM IN A CONTROLLED MANNER. SUPPLEMENTAL HEAT + COOLING PROVIDED BY A/C WALL OR CEILING UNIT WITH AIR HANDLING UNIT ON FLAT ROOF.

LIGHTING
 NATURAL DAYLIGHT TO BE SUPPLEMENTED BY LOW ENERGY LED LAMPS + FITTINGS SUPPLIED BY PV PANEL LOCATED ON HALL ROOF.

SUN LIGHT PATH + DAYLIGHT STRATEGY

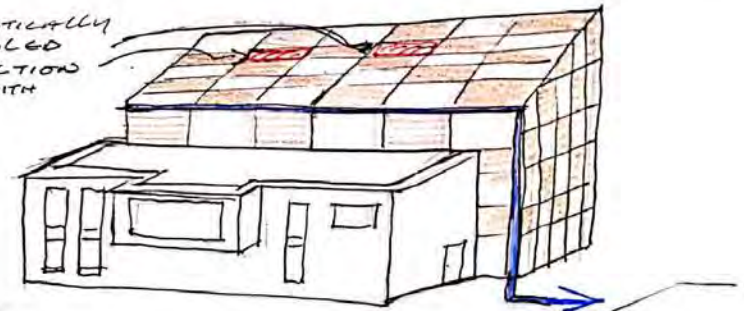
- EXCESSIVE SUNLIGHT GLARE CAN BE REDUCED WITH THE INTRODUCTION OF EXTERNAL SOLAR SHADES - EITHER SOLAR BLINDS, BRISE SOLEIL OR EXTERNAL LOWERS, TO THE SOUTH AND EAST.
- IN THE ABOVE SKETCH, MEETING ROOM 2.2 MAY REQUIRE A SOLAR SHADE TO REDUCE GLARE + POTENTIAL OVERHEATING.
 - SOLAR LOUVRES FITTED TO THE ATRIUM WITH REDUCE GLARE + OVERHEATING.

ENVIRONMENTAL.
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LIGHTING

LOW ENERGY LED LIGHT FITTINGS THROUGHOUT CENTRAL ATRIUM ON DAYLIGHT SENSORS WITH POWER SUPPLEMENTED BY PV PANEL ELECTRICITY.

AUTOMATICALLY CONTROLLED EXTRACTION VENT WITH FANS

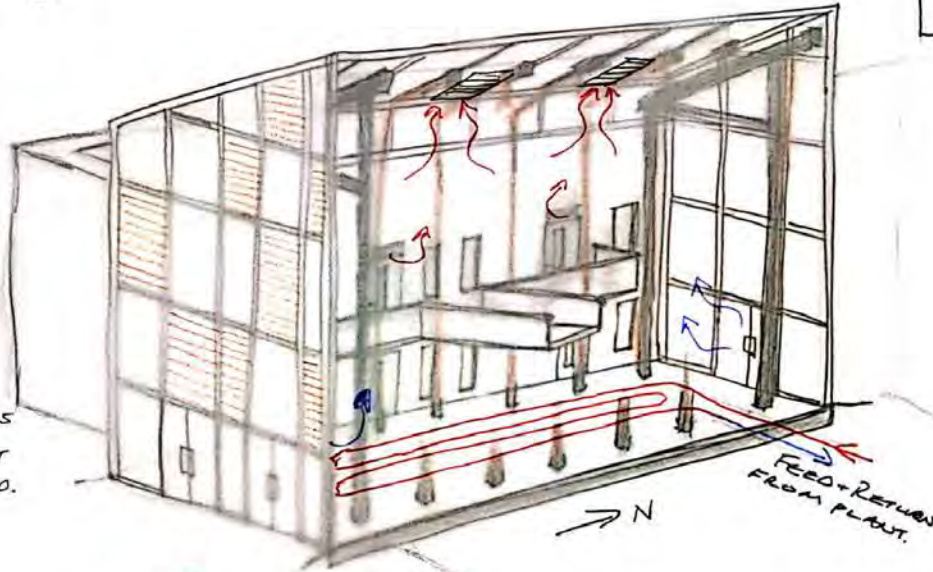


N ←

RAINWATER FROM ATRIUM FACADE TO SUDS 50,000 ATTENUATION TANK.

DAYLIGHTING STRATEGY

EXCESSIVE SUNLIGHT GLARE + OVERHEATING CAN BE REDUCED BY INTRODUCING SHADING LOUVRES ON A PORTION OF THE SOUTH + WEST FACE GLAZING. ALTERNATIVELY AUTO BLINDS ACTING A SOLAR BLACKOUT BLINDS CAN BE INSTALLED.

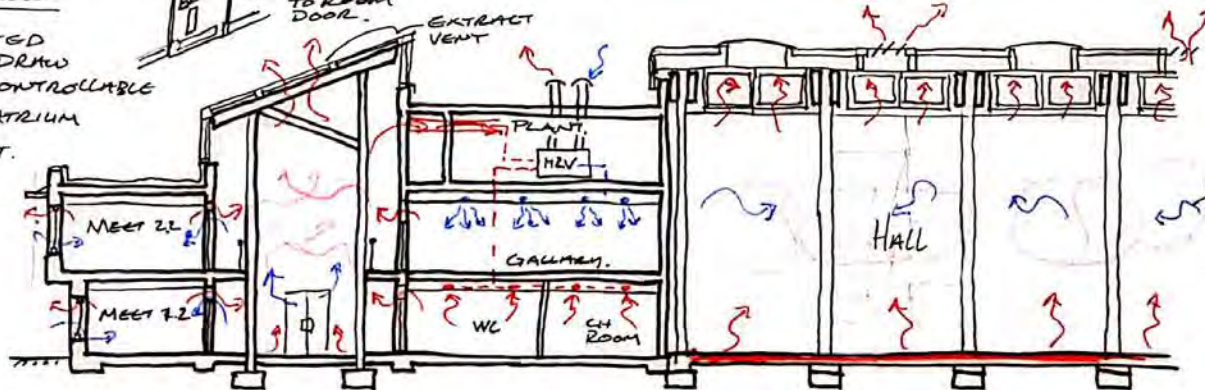
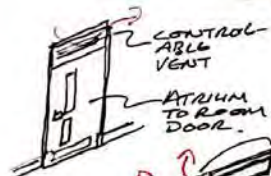


UNDERFLOOR HEATING (OPTIONAL)

TO BE SUPPLIED BY GEOTHERMAL HEAT PUMPS + BUFFER TANK LOCATED IN PLANT ROOM. TEMPERATURE REGULATED BY ENVIRONMENTAL CLIMATE CONTROL SENSORS + SYSTEM.

NATURAL VENTILATION

AIR INTAKE INTEGRATED INTO WINDOW FRAME DRAW AIR IN TO ROOMS. CONTROLLABLE VENT ABOVE DOOR TO ATRIUM DRAW STALE AIR OUT. THE ATRIUM FITTED WITH EXTRACTION VENTS/FAN PROMOTE THE MIXING OF AIR AS IT ACT AS A STACK.



FRESH AIR FROM WEST ELEVATION

AIR FROM THE ATRIUM CAN ALSO BE RECOVERED THROUGH THE HEAT RECOVERY VENT SYSTEM.

ENVIRONMENTAL

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LIGHTING + APPLIANCES.

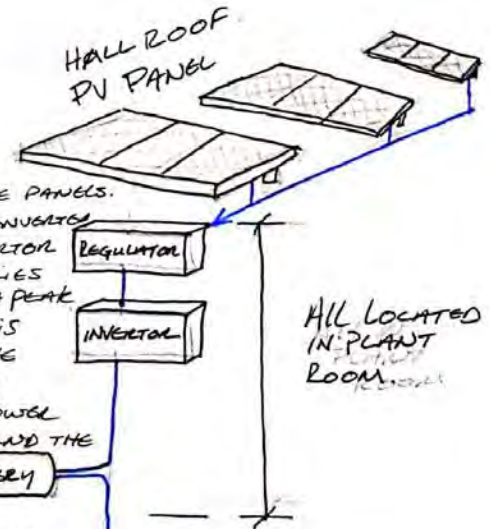
LOW ENERGY LED LIGHT FITTINGS THROUGHOUT WITH PIR SENSORS TO REGULATE USE. ALL APPLIANCES AND ELECTRICAL EQUIPMENT TO BE A+ ENERGY RATING OR BETTER. ALL POWERED VIA PV PANELS ON HALL ROOF AND SUPPLEMENTED BY ELECTRICITY FOR RENEWABLE SOURCES.

SANITARY WARE + WATER CONSERVATION

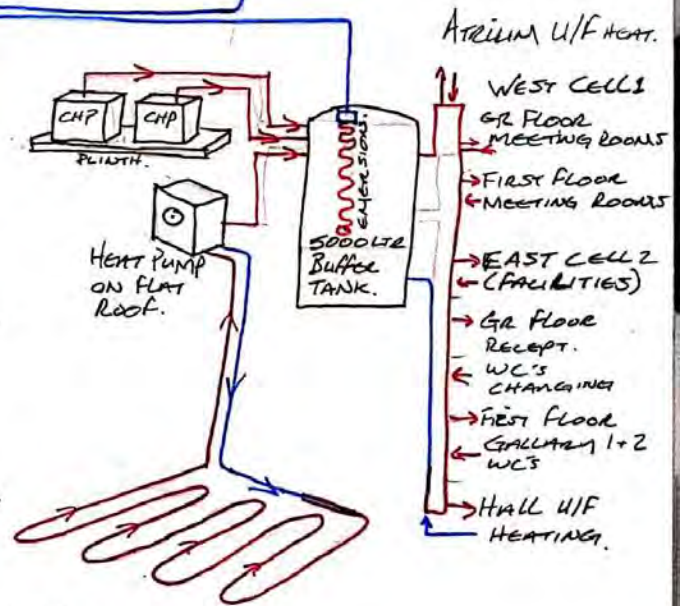
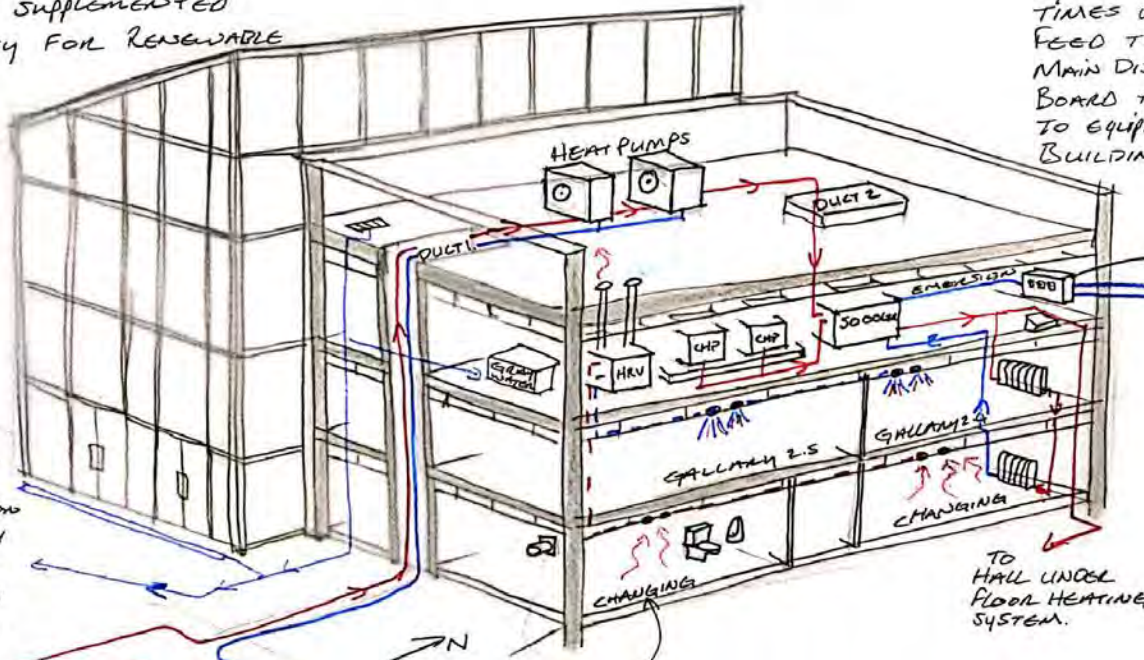
WATERLESS URINALS
PUSH BUTTON SHOWER + TAPS
DUAL FLUSH GLTR WC CISTERNS.
RAIN WATER / GREY WATER FILTRATED FOR NON CONSUMPTION USE.

PV SYSTEM DIAGRAM.

SOLAR ENERGY IS CONVERTED TO ELECTRICITY VIA THE PANELS. THIS DC CURRENT IS CONVERTED TO AC BY AN INVERTOR STORED IN BATTERIES SYSTEM FOR USE AT PEAK TIMES WHERE IT IS FEED THROUGH THE MAIN DISTRIBUTION BOARD TO SUPPLY POWER TO EQUIPMENT AROUND THE BUILDING.



RAINWATER
EXCESS RAINWATER ROUTED THROUGH SLODS ACCUMULATION TANK SYSTEM WITH HYDRO BRAKE SLOW RELEASE TO STORM DRAINAGE SYSTEM



VENTILATION + HEAT RECOVERY VENTILATION

HOT AIR IS EXTRACTED FROM ROOMS SUCH AS WC, GEAR PREP, CHANGING ROOMS. RATHER THAN PUSHING THIS AIR OUTSIDE ITS ENERGY IS PUSHED THROUGH HRV. THE HRV ALSO SUPPLIES CLEAN FRESH AIR THAT IS HEAT DURING THE EXCHANGE PROCESS TO OTHER ROOM, IN THIS CASE THE GALLERIES.

HORIZONTAL GEOTHERM SYSTEM DIAGRAM.



GEOTHERM SYSTEM CIRCULATES FLUID THROUGH THE GROUND LOOP FIELD EXTRACTING HEAT FROM THE GROUND. THAT ENERGY IS TRANSFERRED TO A GEOTHERM HEAT PUMP. THE UNIT COMPRESSES AND EXTRACTS THE HEAT WHICH IS COMBINE WITH OTHER SYSTEMS TO PROVIDE HEAT FOR RADS, UNDER FLOOR HEATING AND HOT WATER.

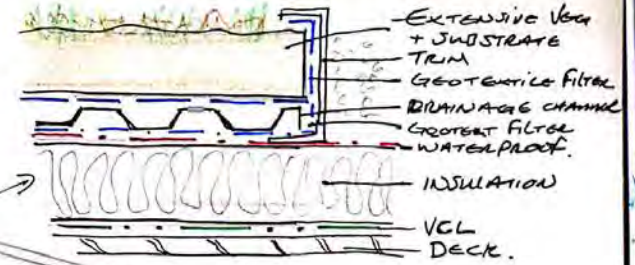
ENVIRONMENTAL.

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019124287.

LIGHTING
 LOW ENERGY LED LIGHTING ON PIR SENSORS POWERED BY ROOF PV PANELS. HIGH LEVEL WINDOWS ON SOUTH + NORTH ELEVATIONS WITH ROOFLIGHTS.

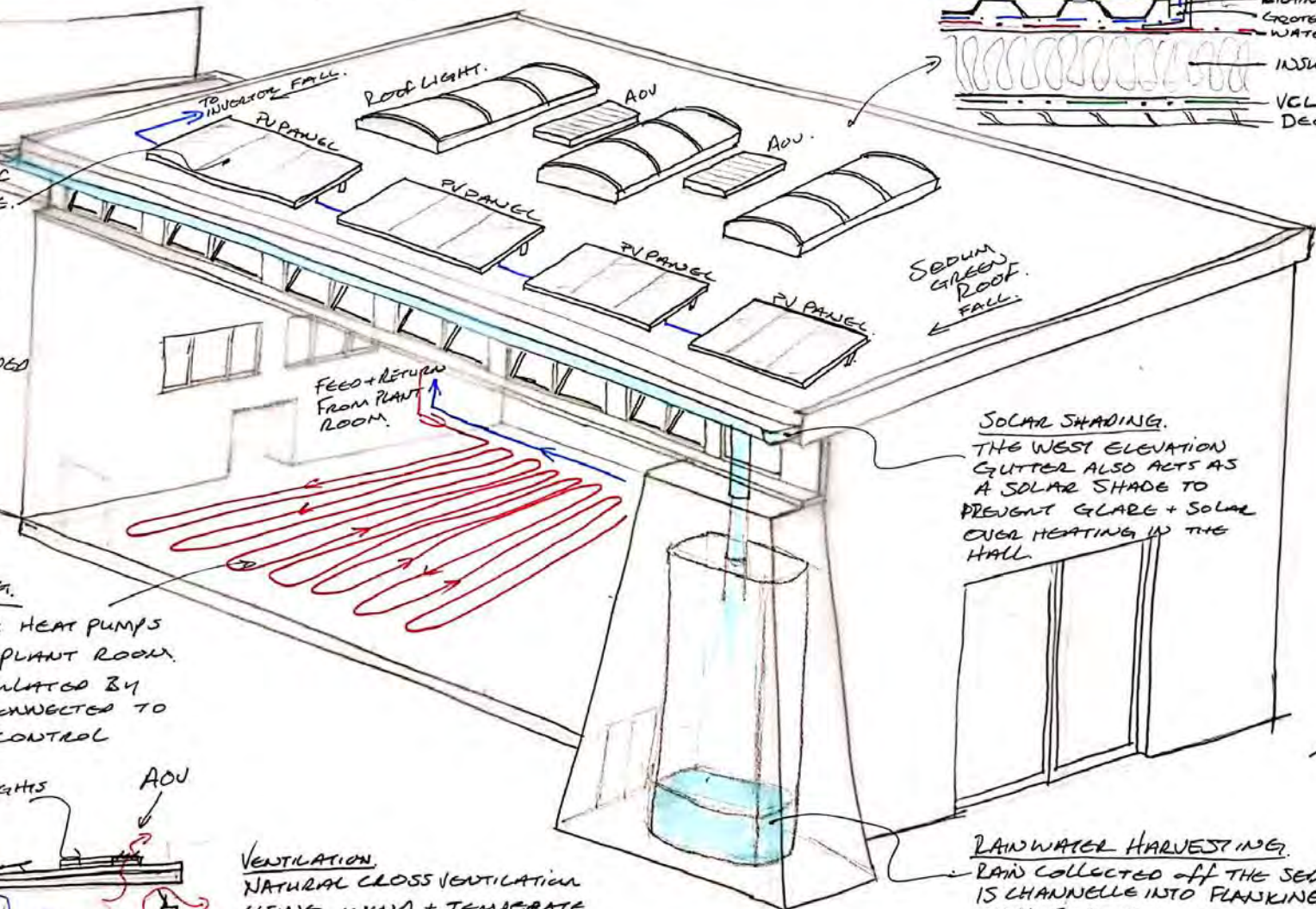
NZEB
 NEAR ZERO ENERGY BUILDING HAVE VERY HIGH ENERGY PERFORMANCE, USE LOW AMOUNTS OF ENERGY WHICH IS SOURCED THROUGH WHERE POSSIBLE, ON SITE RENEWABLE SOURCES.

EXTENSIVE GREEN ROOF.



PV PANELS.

INSTALLED ON HALL ROOF TO SOUTH FACING ANGLE. PANEL TO BE CONNECTED TO MAIN POWER DIST. BOARD VIA REGULATOR + INVERTER. ADEQUATE BATTERY STORAGE SYSTEMS TO BE PROVIDED ALL HOUSE IN PLANT ROOM.



UNDER FLOOR HEATING.

TO BE SUPPLIED VIA HEAT PUMPS + BUFFER TANK IN PLANT ROOM. TEMPERATURE REGULATED BY SENSORS IN HALL CONNECTED TO ENVIRONMENTAL CONTROL SYSTEM.

SOLAR SHADING.

THE WEST ELEVATION GUTTER ALSO ACTS AS A SOLAR SHADE TO PREVENT GLARE + SOLAR OVER HEATING IN THE HALL.

RAINWATER HARVESTING.

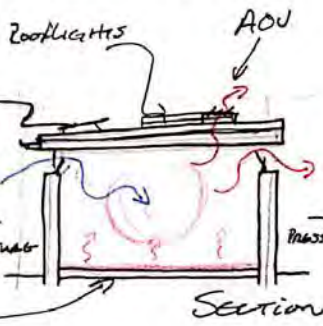
RAIN COLLECTED OFF THE SEDUM ROOF IS CHANNELLED INTO FLANKING STORAGE TANK FOR USE ON-SITE TO IRRIGATE ALLOTMENT, GARDENS AND WATER FEATURES.

PV PANELS

WINDOWS OPEN AUTOMATICALLY CONTROLLED BY ENVIRO. SYSTEM.

UNDER FLOOR HEATING

AIR MOVING FROM + PRESSURE TO - PRESSURE.



VENTILATION

NATURAL CROSS VENTILATION USING WIND + TEMPERATURE DIFFERENT TO CREATE AIR-FLOW. HIGH LEVEL WINDOWS OPEN VIA ACTUATORS CONNECTED TO ENVIRONMENTAL SENSORS WITHIN HALL TO REGULATE AIR QUALITY, TEMP. AND HUMIDITY.

COMMUNITY HALL CUT AWAY

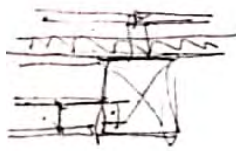
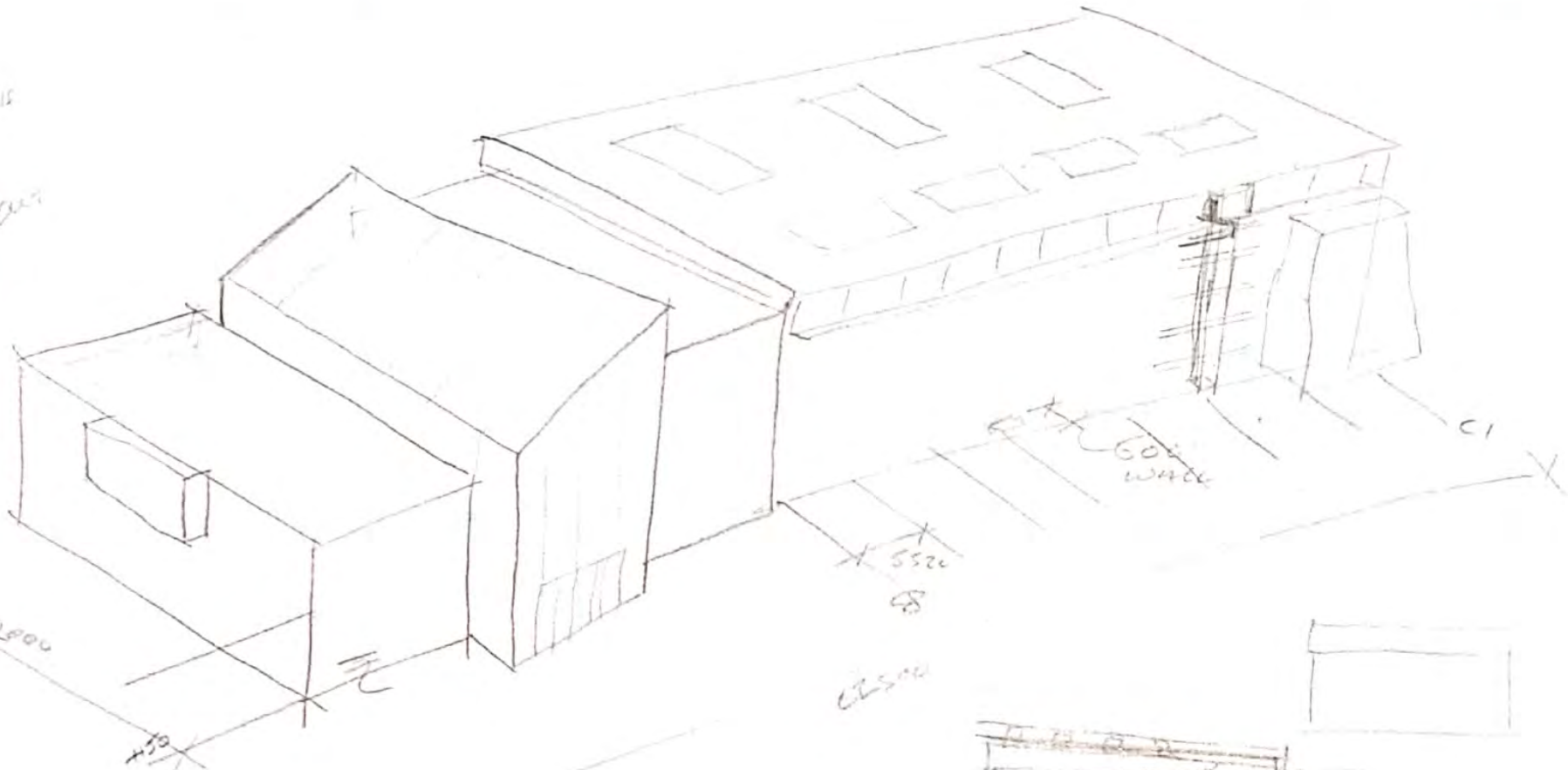
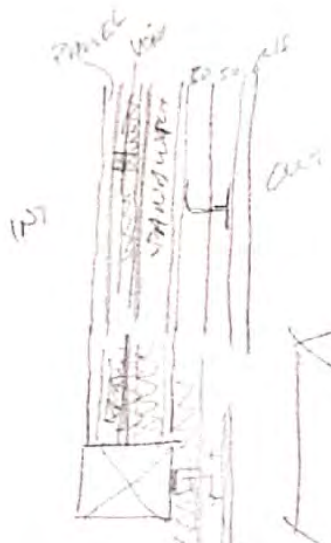
ENVIRONMENTAL.

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 0191271287

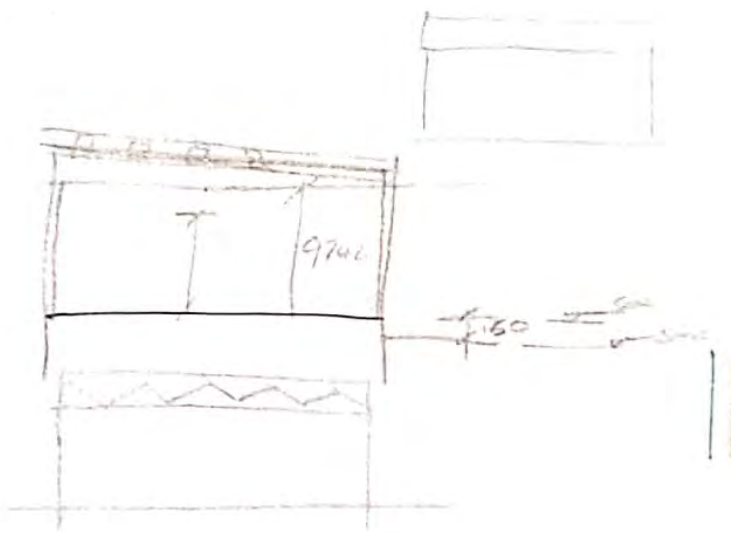


EXTERNAL ENVELOPE

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D19124287.



LEVELS, GRIDS
+
REF PLANS.

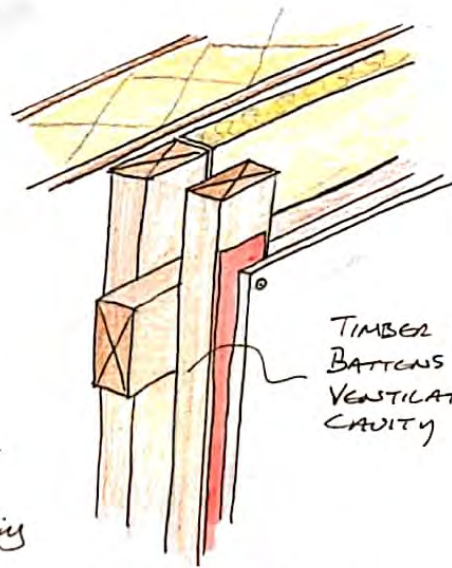


AIDAN MCKEOWN
DIGI24287.

INPEK - IN-ROCK

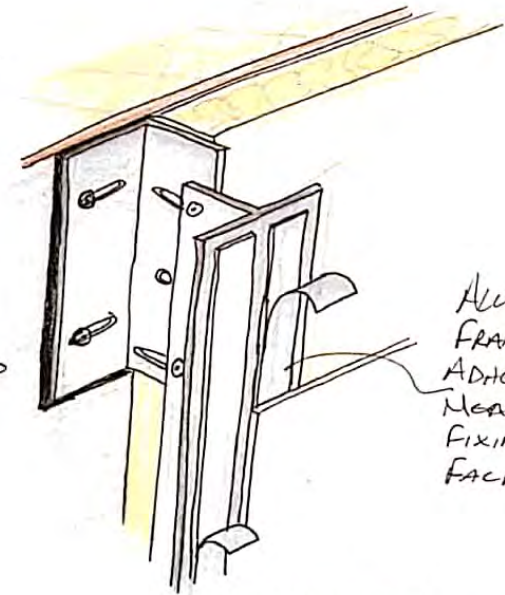
MADE FROM COMPRESSED FIBRES OF BASALT, REINFORCED WITH THERMOSETTING SYNTHETIC BINDERS AND PRESSED UNDER PRESSURE + HIGH TEMPERATURES. THE PANELS CONSIST OF AT LEAST 20% RECYCLED MATERIALS WITH A LIFE EXPECTANCY OF +60 YEARS. THEY ARE ALSO 100% RECYCLABLE AND ARE CERTIFIED AS A+/A BY THE BRE GLOBAL.

AVAILABLE IN A VAST ARRAY OF COLOURS, SIZES AND FIXING METHODS THEY OFFER A HIGHLY EFFICIENT, SUSTAINABLE, RAINSCREEN WEATHERING SYSTEM.



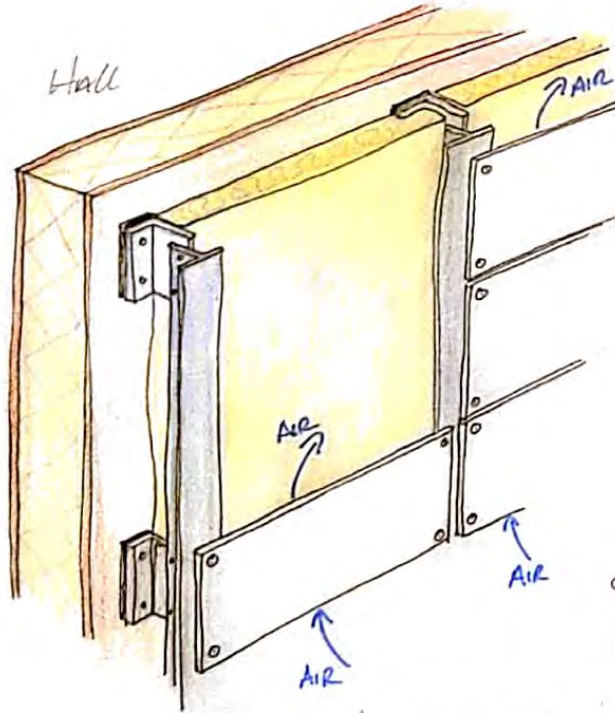
TIMBER CROSS BATTENS TO ALLOW VENTILATED CAVITY

PANELS ATTACHED VIA SCREWS.



ALUMINIUM FRAME WITH ADHESIVE TAPE MEANS NO VISIBLE FIXINGS ON FACADE.

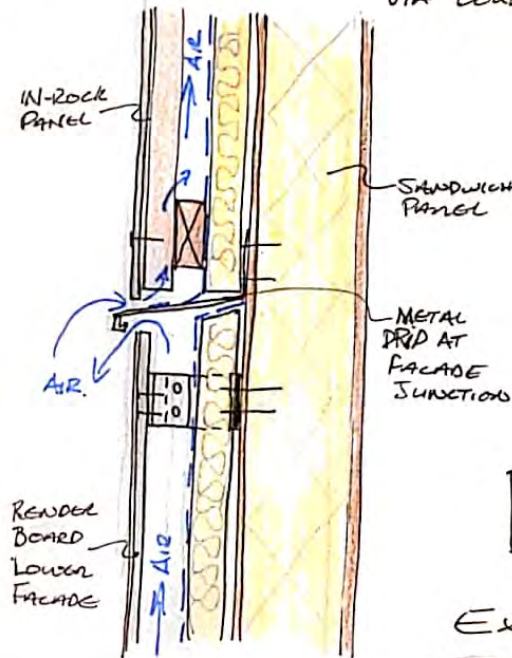
PANELS ATTACHED VIA DOUBLE SIDE ADHESIVE.



TYPICAL PANEL MOUNTING DIAGRAM

INPEK - IN-ROCK PANEL SCREWED/RIVETTED TO ALUMINIUM SUBFRAME WITH 50MM MIN VENTILATED AIR CAVITY. RAINSCREEN DUO INSULATION BOARDS FIXED TO STRUCTURAL SIP SANDWICH PANEL.

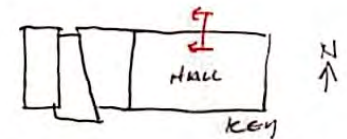
THE ALUMINIUM FRAME IS ATTACHED TO SIP PANEL WITH A SCREWS WITH THERMAL BREAK PAD BETWEEN.



CHANGE IN FACADE JUNCTION.

FIRE

- NON FLAMMABLE
- NO SMOKE IN A FIRE
- NO DRIPPING OF MATERIAL UNDER HEAT
- EURO FIRE CLASS A2-S1
- NON COMBUSTIBLE



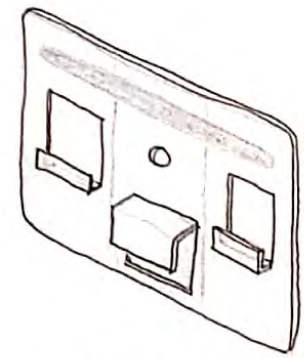
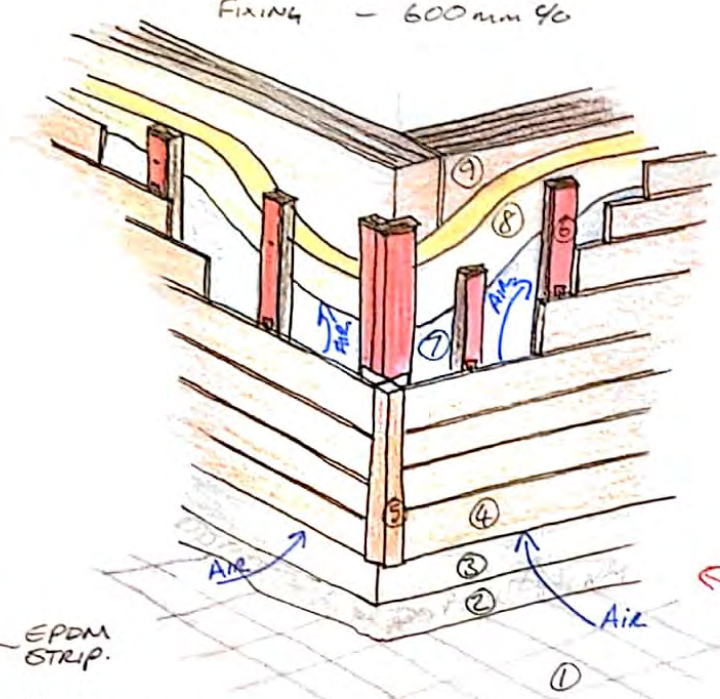
EXTERNAL ENVELOPE.

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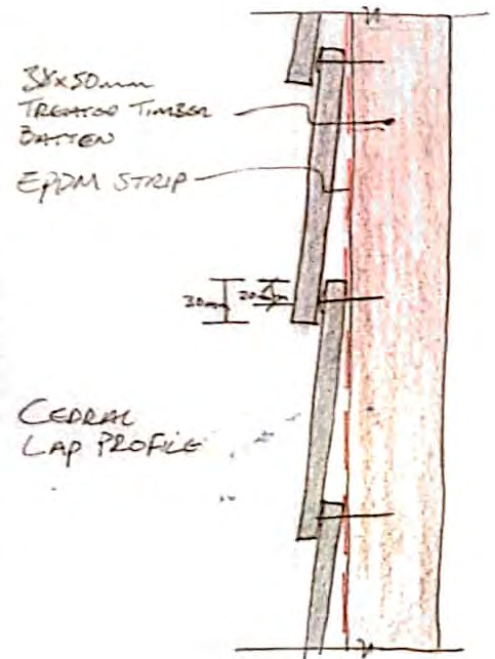
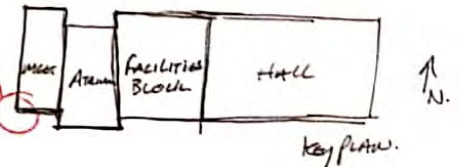
CEDRAL

FREELY AVAILABLE THROUGH TEGRAL BUILDING PRODUCTS IN IRELAND CEDRAL IS A FIBRE CEMENT BOARD MANUFACTURED IN BELGIUM WITH THE VISUAL APPEARANCE OF TIMBER IT IS A LOW MAINTENANCE, SUSTAINABLE ALTERNATIVE TO UPJCS. IN A WIDE RANGE OF COLOURS IT CAN BE FIXED HORIZONTALLY OR VERTICALLY, LAPPED OR CLICK T+G. THE SYSTEM INCLUDES A FULL RANGE OF CORNER JOINTS, END PROFILES AND PERFORATED VENT CLOSEURE STRIPS.

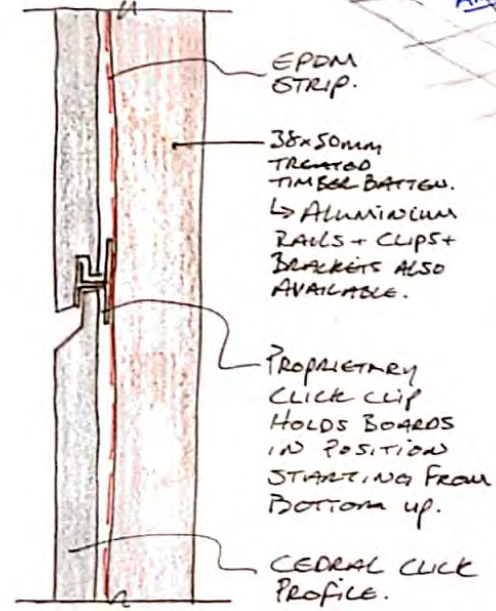
DIMENSIONS OF CLICK T+G PROFILE
 LENGTH - 3600mm
 WIDTH - 186mm
 THICKNESS - 12mm
 FIXING - 600mm @



CEDRAL PROPRIETARY BOARD CLIP FOR USE WITH T+G BOARDS. + CEDRAL COLOURED SCREWS.



LAPPED BOARDS



CLICK T+G BOARDS

CORNER DIAGRAM OF CLICK T+G PROFILE.

- 1, EXTERNAL PAVING.
- 2, GROUND DRAIN WITH STONE FILL.
- 3, SAND/CEMENT PLINTH.
- 4, SELECTED CEDRAL CLICK T+G PROFILE BOARDS
- 5, ALUMINIUM SQUARE CORNER COLOURED TO MATCH.
- 6, EPDM STRIP ON TREATED TIMBER BATTENS 600%
- 7, BREATHABLE MEMBRANE.
- 8, MINERAL WOOL INSULATION.
- 9, CLT STRUCTURAL WALL.

FIBRE CEMENT

A LIGHT WEIGHT, LOW CARBON FOOT PRINT, COMPOSITE MATERIAL, MADE FROM PORTLAND CEMENT, CELLULOSE FIBRES, SYNTHETIC FIBRES, SAND + WATER. IT IS STRONG, DURABLE AND VERSATILE ACROSS A WIDE RANGE OF APPLICATIONS.

EXTERNAL ENVELOPE.

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CLT

Parapet

Quins
LITE
THEM
Beets

SCREEN
50

200
WOOD
FRISSE
WALL

CLT

200
PLASTER

SCREEN
UNDER FLOOR HEAT 75?

SLAB/RAAF 100

150

300

?

Free
stop

WHY NOT
SHOW CLT
INTERNALLY?

CLT DETAILS

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DIS124287

FLAT ROOF BITUMEN CAPPING GLEET ADHERED TO REINFORCED PVC UNDERLAYER MEMBRANE (BAUNDER THERMOFOIL) DRESS UP AND UNDER PARAPET CAPPING.



PRESSED METAL PARAPET CAPPING POWDER COATED TO SELECTED COLOUR ON TIMBER SUBSTRATE FIXED TO CLT RISER.

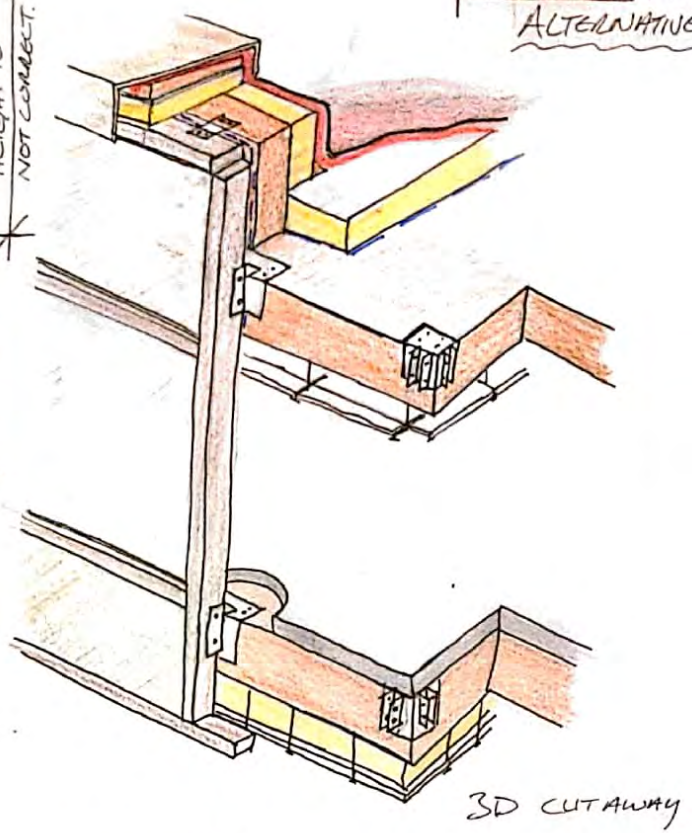
XPS TAPERED FOIL BACKED INSULATION AT 1:60 FALL ON VCL MEMBRANE.

ALTERNATIVE

ADDITIONAL MINERAL WOOL INSULATION 50MM PANELS FOR INCREASE SOUND INSULATION

SELECT CURTAIN WALLING SYSTEM + INSULATED SPANDREL PANEL WITH METAL FIXING PLATE BRACKET FIXED TO CLT STRUCTURE

SOFTWOOD FRAME TO PROVIDE STRUCTURE FOR 2x 15mm PLASTER BOARD HEAD



MEETING ROOM 2.2

SELECTED CURTAIN WALLING DOUBLE LOW-E GLAZING UNIT.

SOFTWOOD FRAME WITH TIMBER EILL + PLASTER BOARD FINISH.

FIRE STOP

CLT SINGLE SPAN FLOOR UNIT WITH 65mm SCREEN ON VCL MEMBRANE.

MINERAL WOOL INSULATION SLAB MECHANICALLY FIX TO SOFFIT OF CLT PROJECTION WITH VENTILATED AIR GAP TO T+G CEDRAL BOARD SOFFIT

AIR

AIR



EXTERNAL ENVELOPE

FIRST FLOOR GLAZE PROJECTION 1:10

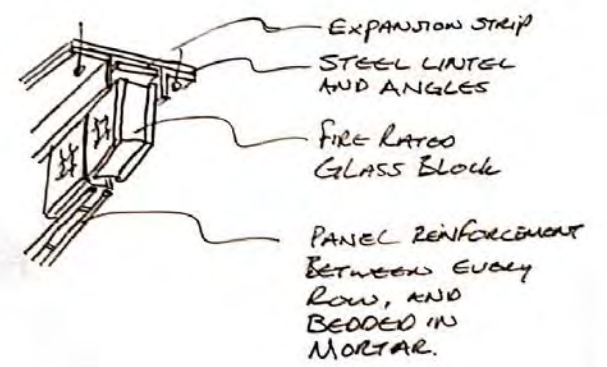
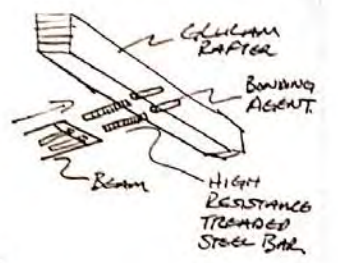
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300x400mm GLULAM
RAFTER BEAM

100x150 TIMBER
STRUT

"RESIX"
HIDDEN CONNECTION
SYSTEM TO LARCE
DETAIL

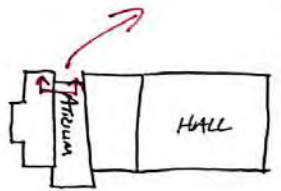
300x300mm GLULAM
TIMBER COLUMN



PROPRIETARY GUTTER FITTED
TO SELECTED CURTAIN
WALLING SYSTEM TO
MANUFACTURER'S DETAILS

BAUDEX THERMOFOIL -
FLAT ROOF BITUMEN
CAPING SHEET ADHERED
TO REINFORCED PVC
UNDERLAYER MEMBRANE
DRESS UP AND UNDER
GLAZING DRIP.

ACOUSTIC SUSPENDED
CEILING WITH
ADDITIONAL MINERAL
WOOL INSULATION
TO CLT SOFFIT.

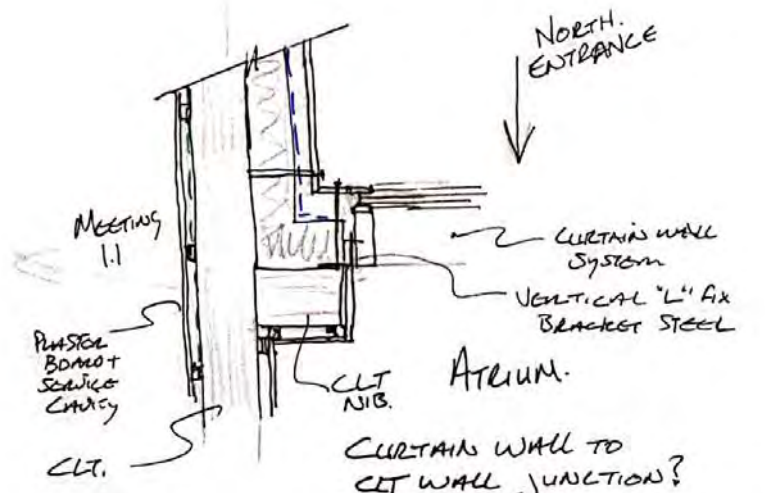
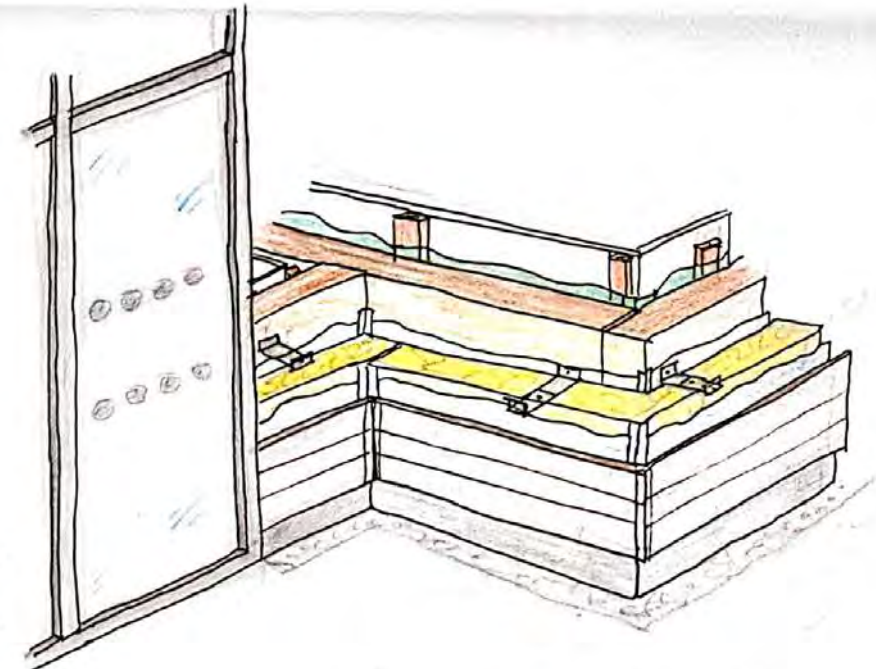
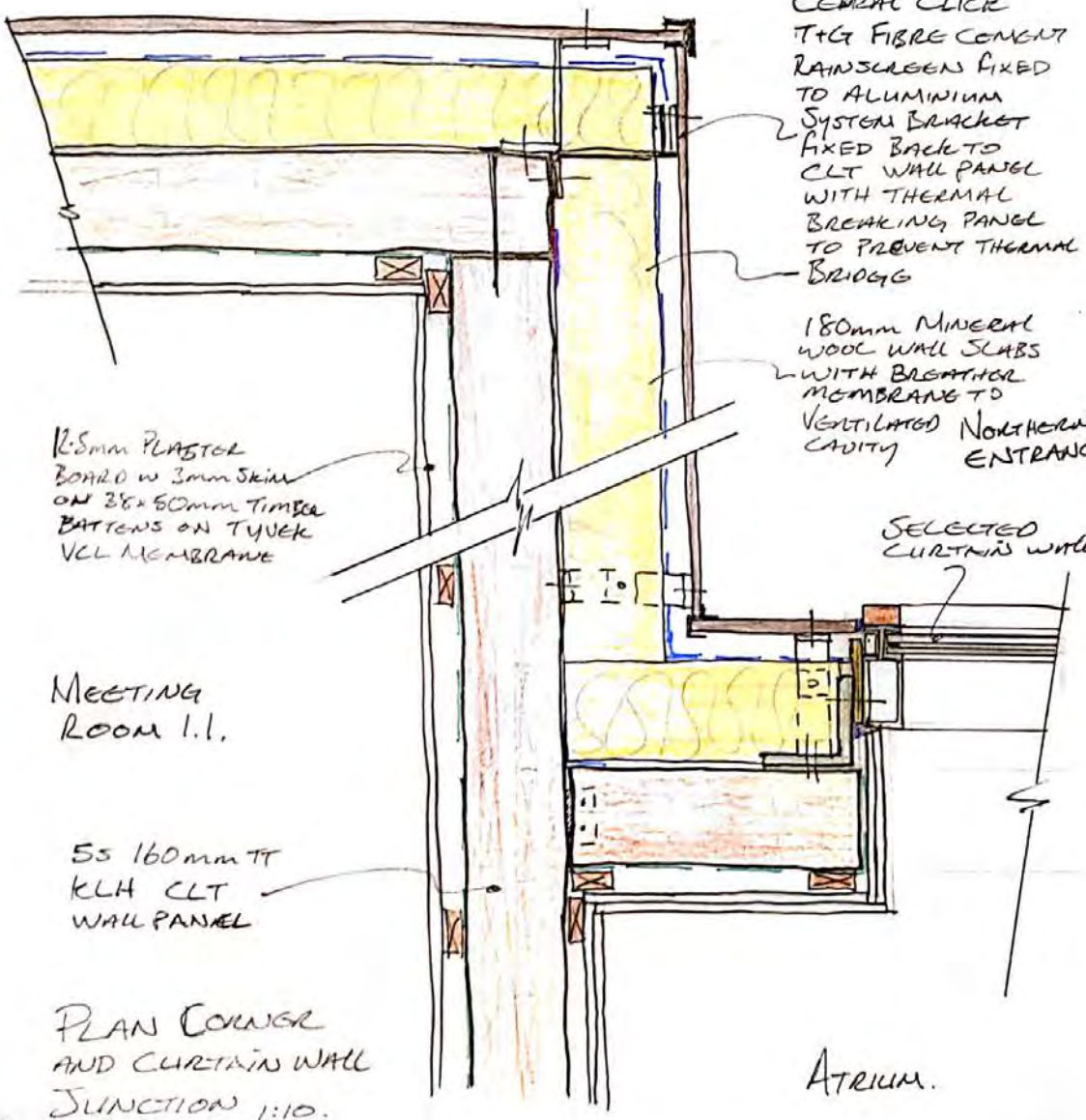
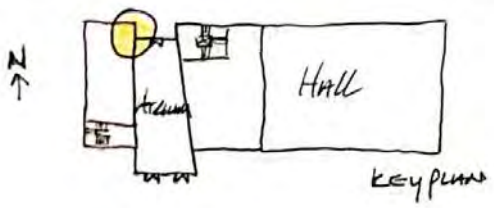


MEETING
ROOM
2.1
GLASS BLOCK
WALL OPE
60min FIRE

ATRIUM

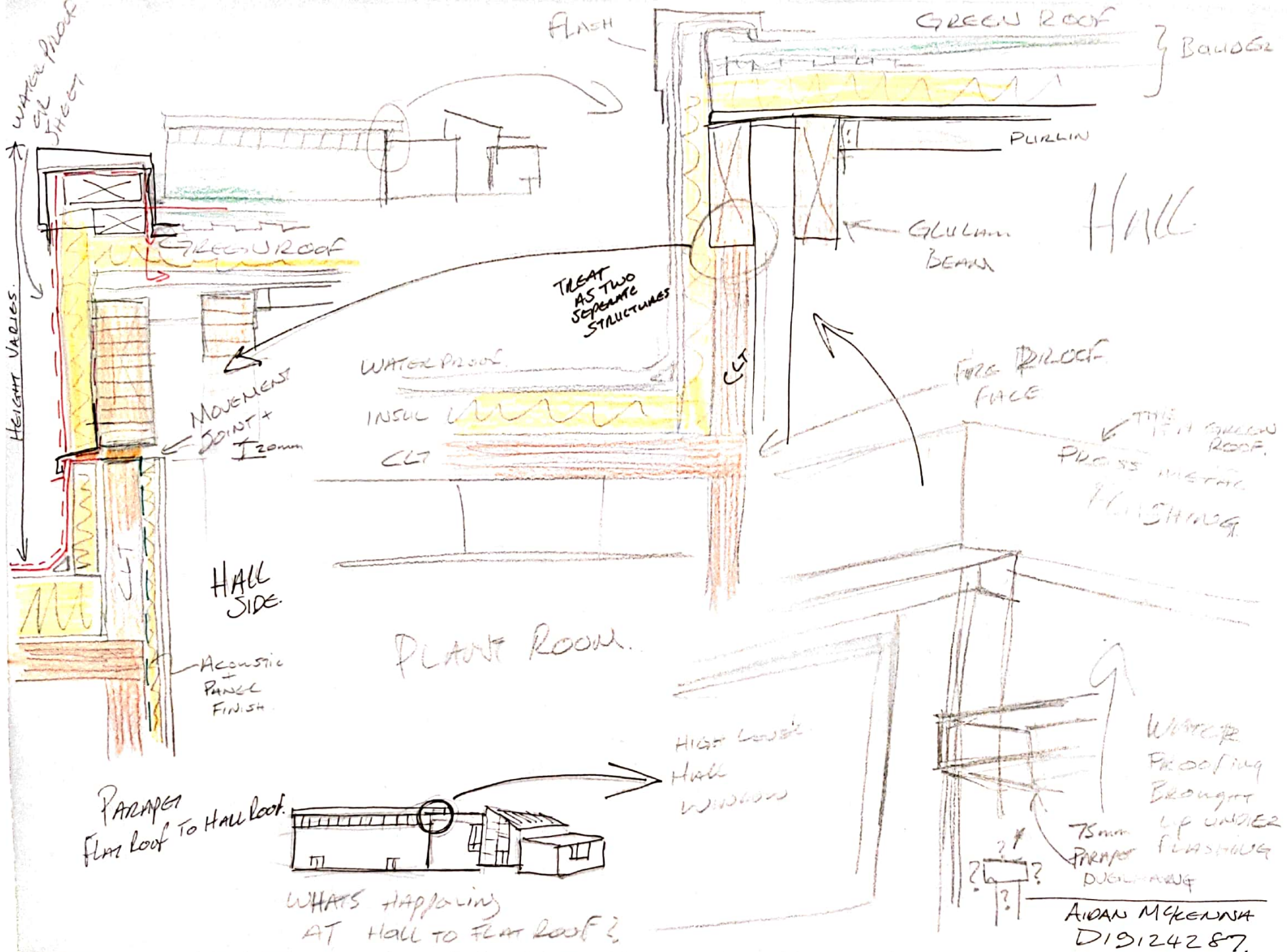
ATRIUM ROOF
CURTAINS WALLING
JUNCTION TO
PARAPET. 1:10

EXTERNAL ENVELOPE
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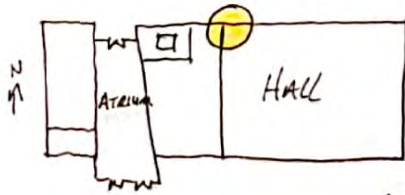


EXTERNAL ENVELOPE.

AIDAN M^U Kenna
019124287



AIDAN MCKENNA
 D19124287.

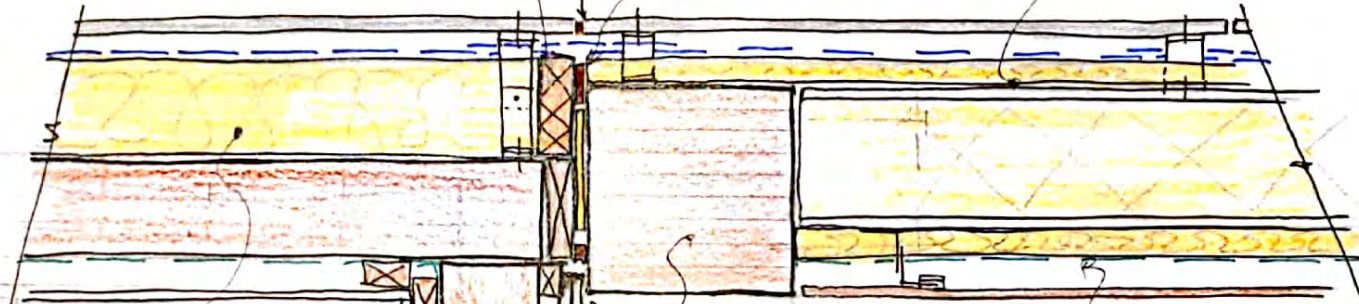


INPER IN ROCK PANEL SCREWS -
OR RIVETTED TO ALUMINIUM SUBFRAME
WITH 50MM MIN VENT CAVITY.
BREATHER MEMBRANE ON DUB
RAINSCREEN INSULATION FIXED
TO STRUCTURAL SIP SANDWICH
PANEL.

OUTSIDE.

FIRE STOP

MASTIC
EXPANSION
JOINT.



160mm KLH CLT
WALL PANEL WITH
180mm RAINSCREEN
INSULATION BREATHER
MEMB., AIR GAP 50mm
INPER IN ROCK PANEL

CHANGING
ROOM
(HUMID)

12.5mm PLASTER BOARD
WITH 3mm SKIN ON
38x50mm TIMBER
BATTENS ON TYVEK
VCL MEMBRANE
ON 160mm CLT
WALL PANEL.

400x
400
GLULAM
COLUMN

MASTIC
EXPANSION
JOINT.

60 min FIRE WALL
2x15mm FIRE LINE
PLASTER BOARD WITH
STAGGERED JOINTS
AND SKIN 3mm
FINISH.

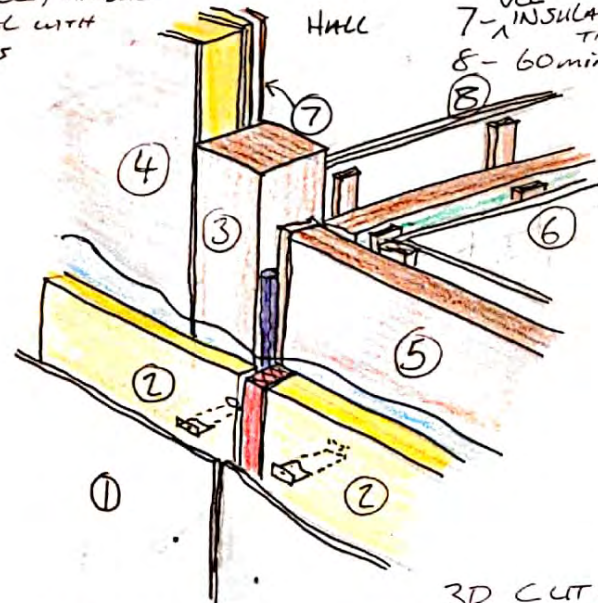
50mm Acoustic Mineral Wool
WALL BATT, VCL, TIMBER
ACOUSTIC PANEL WITH
PERFORATIONS

HALL
AREA

GLULAM
BEAM OVER

GLULAM
BEAM OVER

- 1 - INPER IN ROCK PANEL
- 2 - INSULATION
- 3 - GLULAM COLUMN
- 4 - SIP PANEL
- 5 - CLT WALL PANEL
- 6 - VCL, BATTENS, PLASTER BOARD.
- 7 - VCL INSULATION, Acoustic TIMBER PANEL.
- 8 - 60 min FIRE RATED 15mm x 2 PLASTER BOARD.

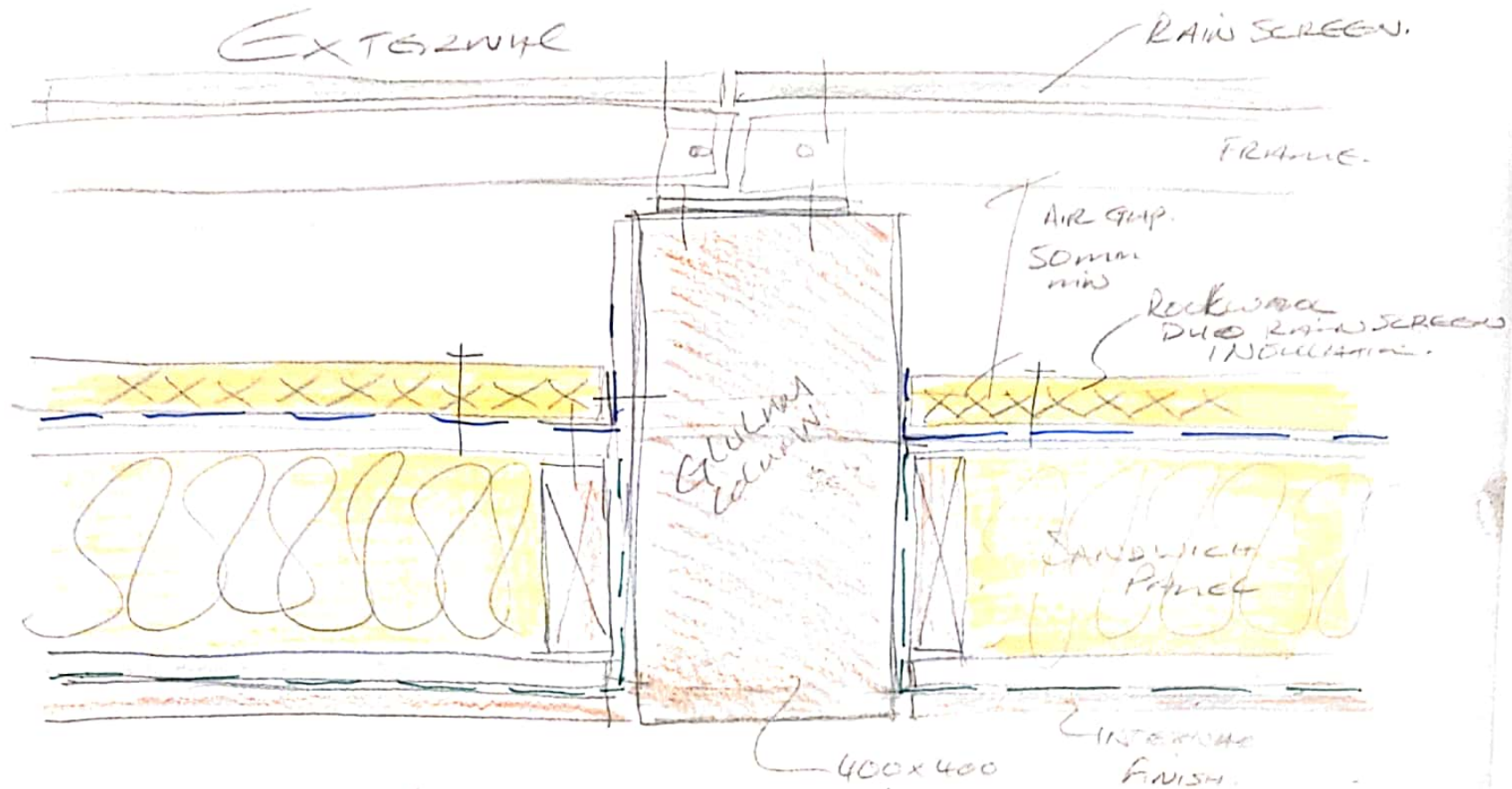


3D CUT AWAY

OUTSIDE.

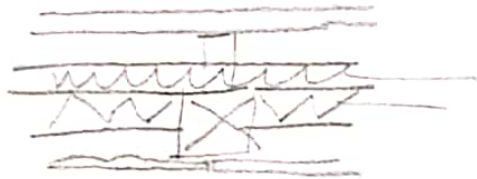
EXTERNAL ENVELOPE.

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HALL

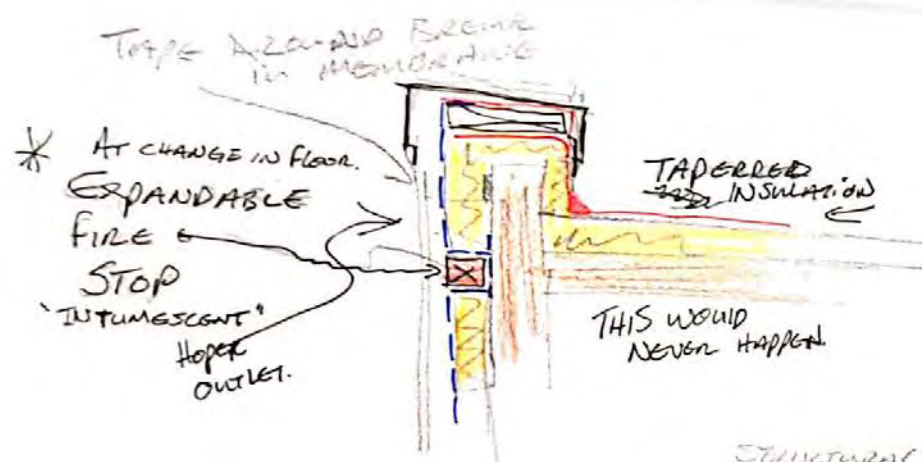
* SOUND ABSORPTION



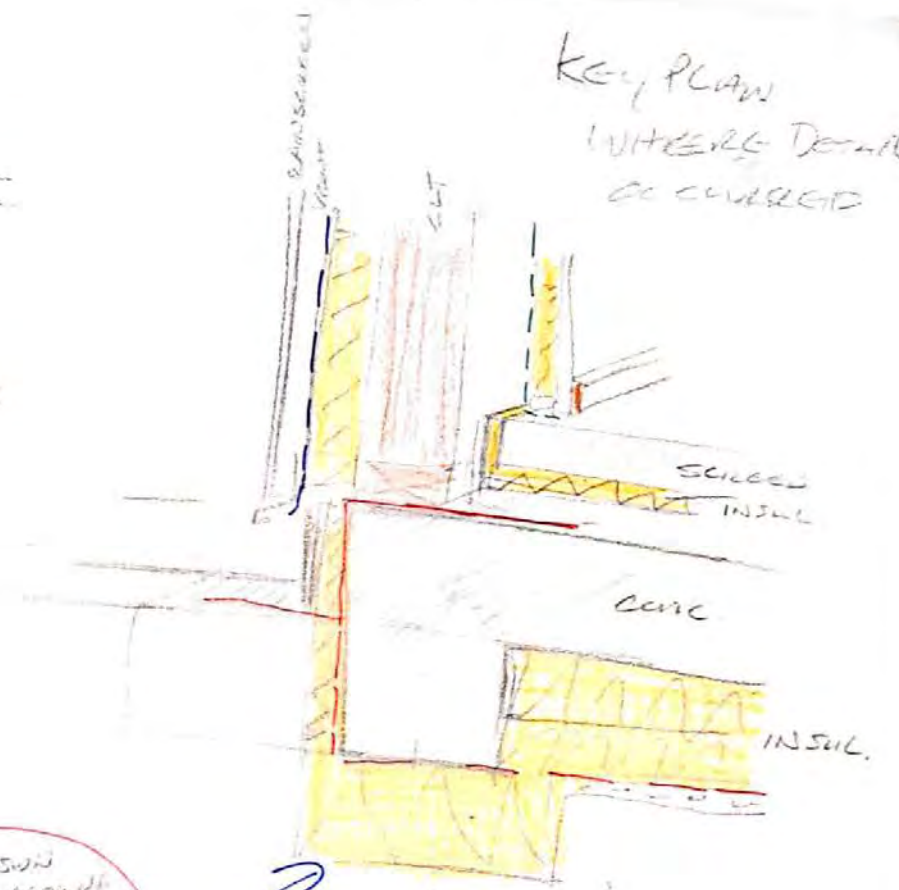
CONTRACTION?
EXPANSION?

WALL BUILD UP
HALL. HALL WALL DETAIL

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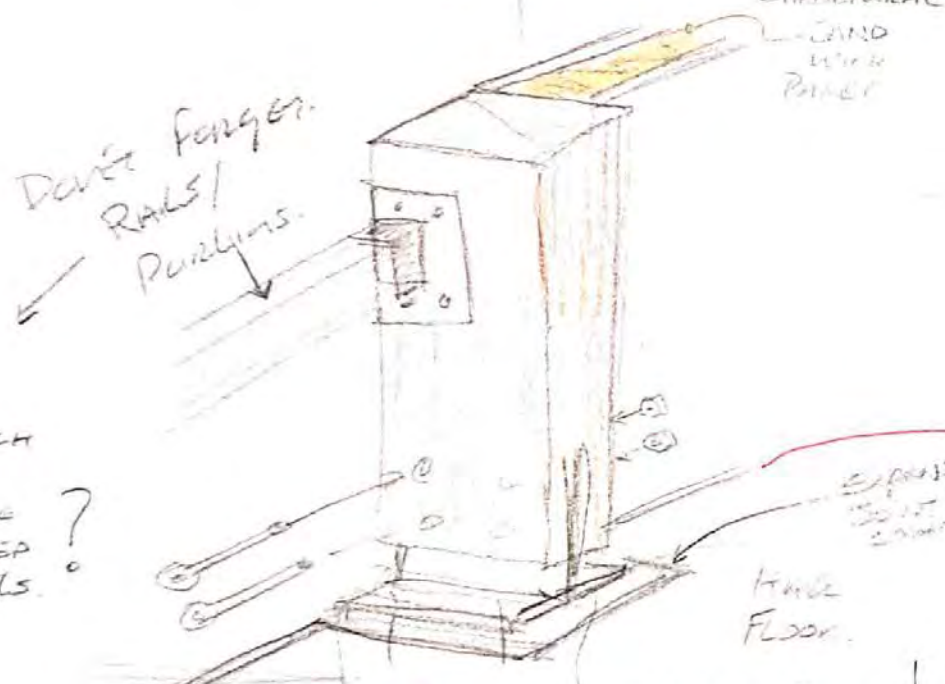


KEY PLAN
INTERIOR DETAIL
OF CORNER



Don't forget
RAILS/
Purlins.

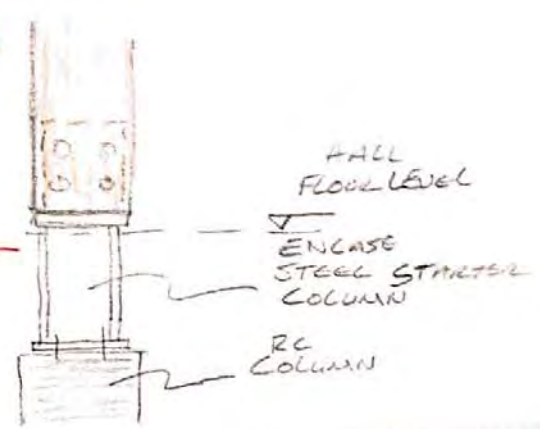
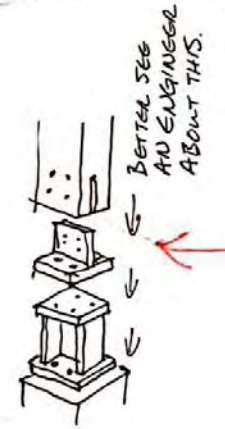
WILL THE SANDWICH PANEL REPLACE THE NEED FOR RAILS?



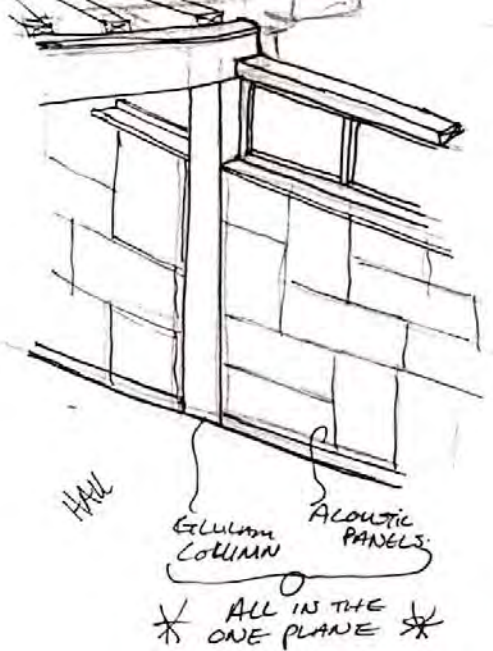
EXPANSION JOINT ABOVE CORNER BASE

EDGE OF FLOOR.

STEEL FOOT PLATE BOLT TO RC PAD + LIFT AND



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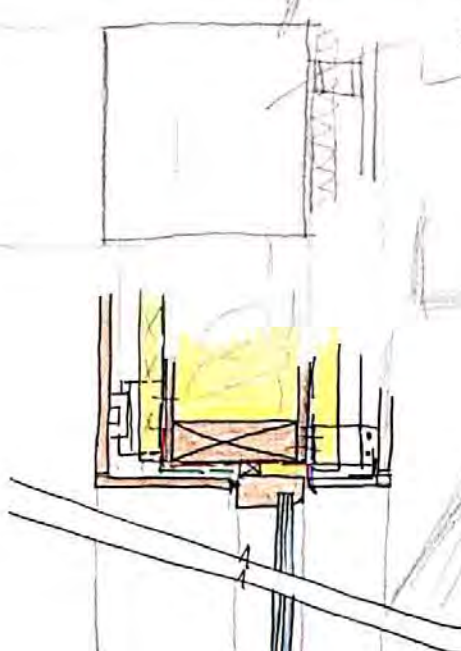
HALL

ALUMINUM COLUMN
ACOUSTIC PANELS

* ALL IN THE ONE PLANE *

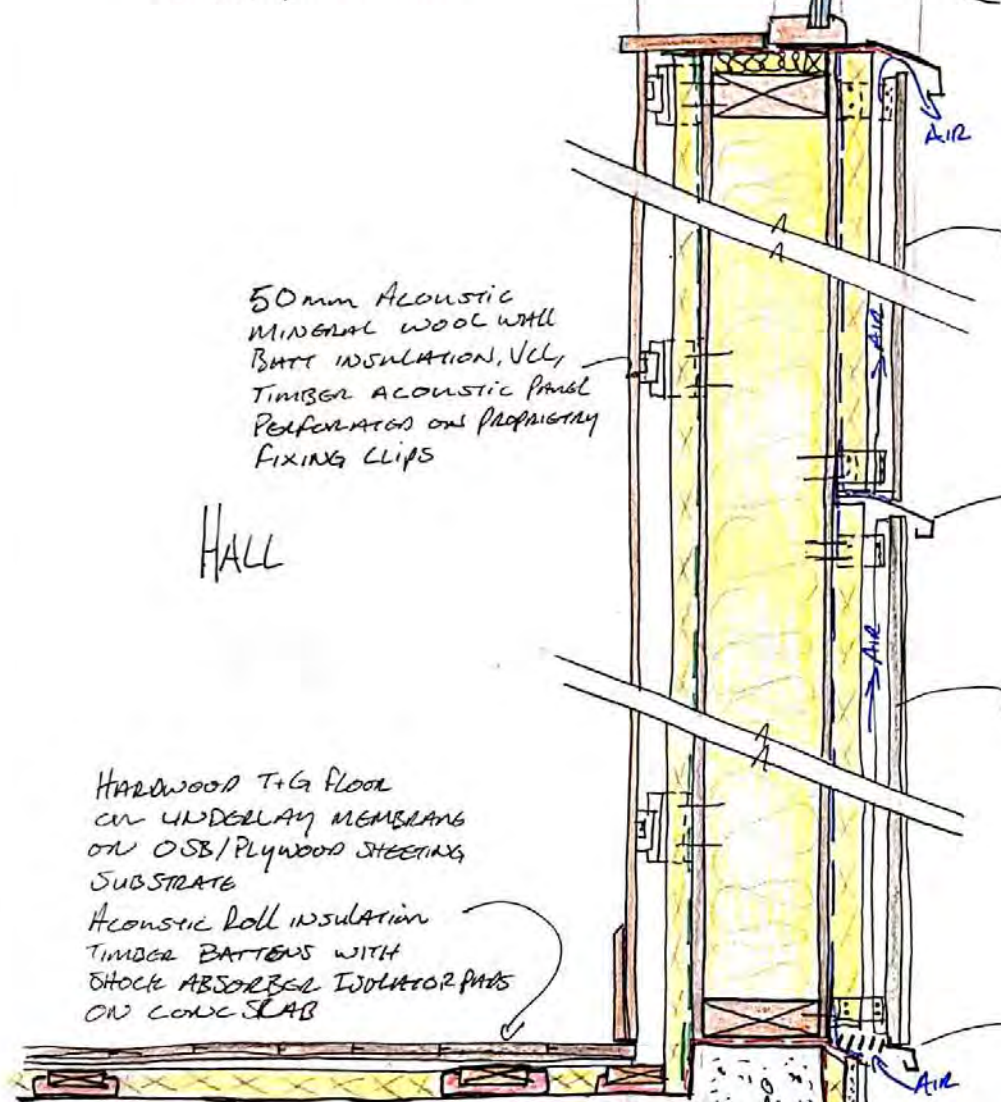
COLUMNS IN PLAN

RAINWATER GUTTER TO FUTURE DETAIL



DOUBLE GLAZED WINDOW UNIT

↳ IT SHOULD BE AN OPERABLE UNIT FOR CROSS VENTILATION IN HALL.



50mm ACOUSTIC MINERAL WOOL WALL BATT INSULATION, VCL, TIMBER ACOUSTIC PANEL PERFORATED ON PROPRIETARY FIXING CLIPS

HALL

HARDWOOD T+G FLOOR ON UNDERLAY MEMBRANE ON OSB/PLYWOOD SHEETING SUBSTRATE

ACOUSTIC ROLL INSULATION TIMBER BATTENS WITH SHOCK ABSORBING ISOLATOR PADS ON CONCRETE SLAB

INLET IN-ROCK RAINSCREEN FIBRE CEMENT PANEL SCREWED OR RIVETED TO ALUMINIUM SUBFRAME WITH 50mm VENTILATED AIR GAP. BREATHER MEMBRANE, MINERAL WOOL RAINSCREEN DUO INSULATION FIX TO SIP PANEL.

PRESS METAL DRIP POWDER COATED OUTSIDE.

LIME RENDER OR RENDER BOARD ON ALUMINIUM SUBFRAME AS ABOVE.

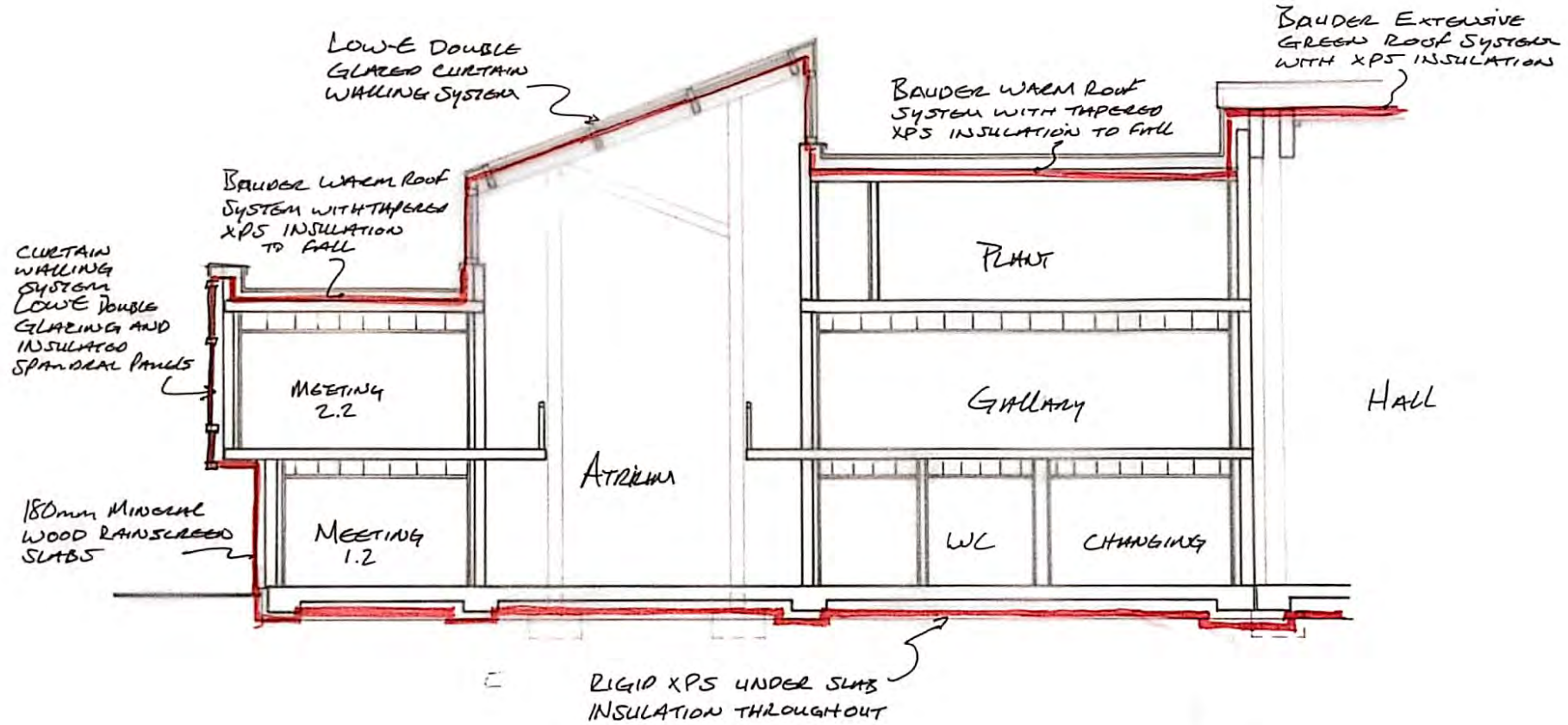
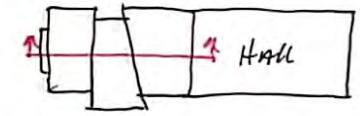


PRESS METAL DRIP + PEST MESH STRIP.

PERMEABLE PAVING.

EXTERNAL ENVELOPE

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IT IS IMPORTANT TO ACHIEVE A HIGH LEVEL OF INSULATION AROUND THE ENTIRE BUILDING. THE DIAGRAM ABOVE SHOWS IN RED THE PROPOSED THERMAL LINE AROUND THE BUILDING ENVELOPE.

EXTERNAL ENVELOPE

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CLT WALLS

MATERIAL	THICKNESS (m)	CONDUCTIVITY (w/mk)	RESISTANCE (m ² kw)
RSO	—	—	0.400
FIBRE CEMENT	0.012	0.45	0.026
AIR SPACE	0.050	—	0.180
MINERAL WOOL	0.150	0.035	5.142
CLT WALL	0.160	0.120	1.333
AIR SPACE	0.035	—	0.180
PLASTER BOARD	0.015	0.43	0.0348
RSI	—	—	0.130

* WELL WITHIN ACCEPTABLE TGD REQUIREMENTS $\therefore 1/7.425 = 0.134 \text{ w/m}^2\text{k}$

SIP PANEL WALL

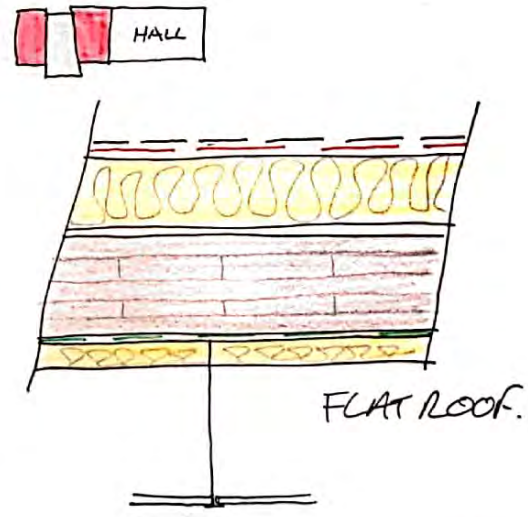
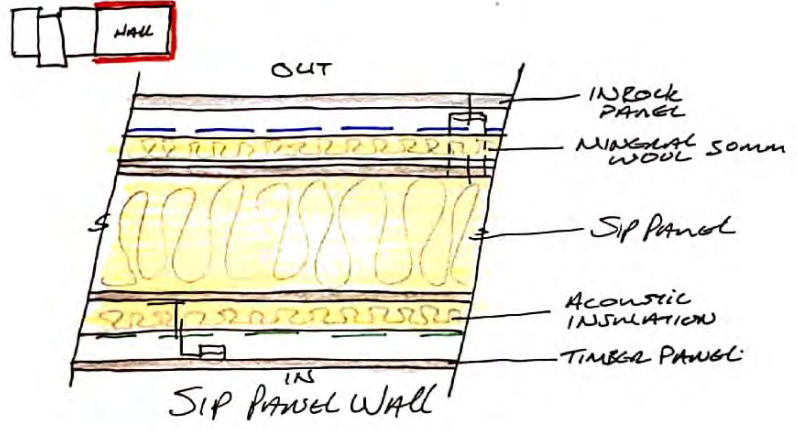
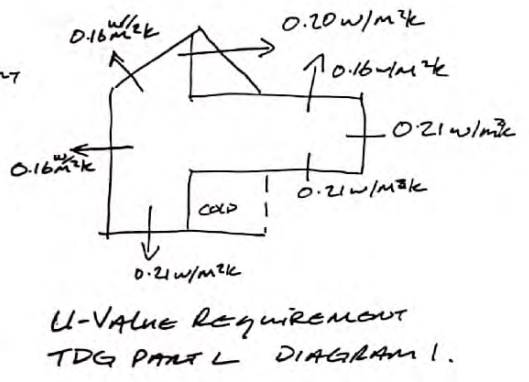
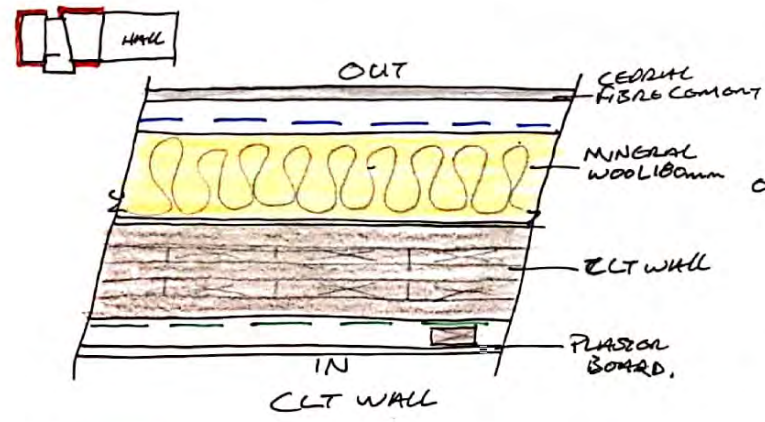
MATERIAL	THICKNESS	CONDUCTIVITY	RESISTANCE
RSO	—	—	0.400
FIBRE CEMENT	0.012	0.450	0.026
AIR SPACE	0.050	—	0.180
MINERAL WOOL	0.050	0.035	1.428
INSULATED SIP PANEL	0.250	0.033	7.575
MINERAL WOOL	0.050	0.035	1.428
AIR SPACE	0.030	—	0.180
TIMBER PANEL	0.015	0.130	0.115

* THE SIP PANEL COULD BE REDUCED IN THICKNESS $\therefore 1/11.332 = 0.088 \text{ w/m}^2\text{k}$ ONCE CONFIRM BY ENGINEER AS IT IS STRUCTURAL.

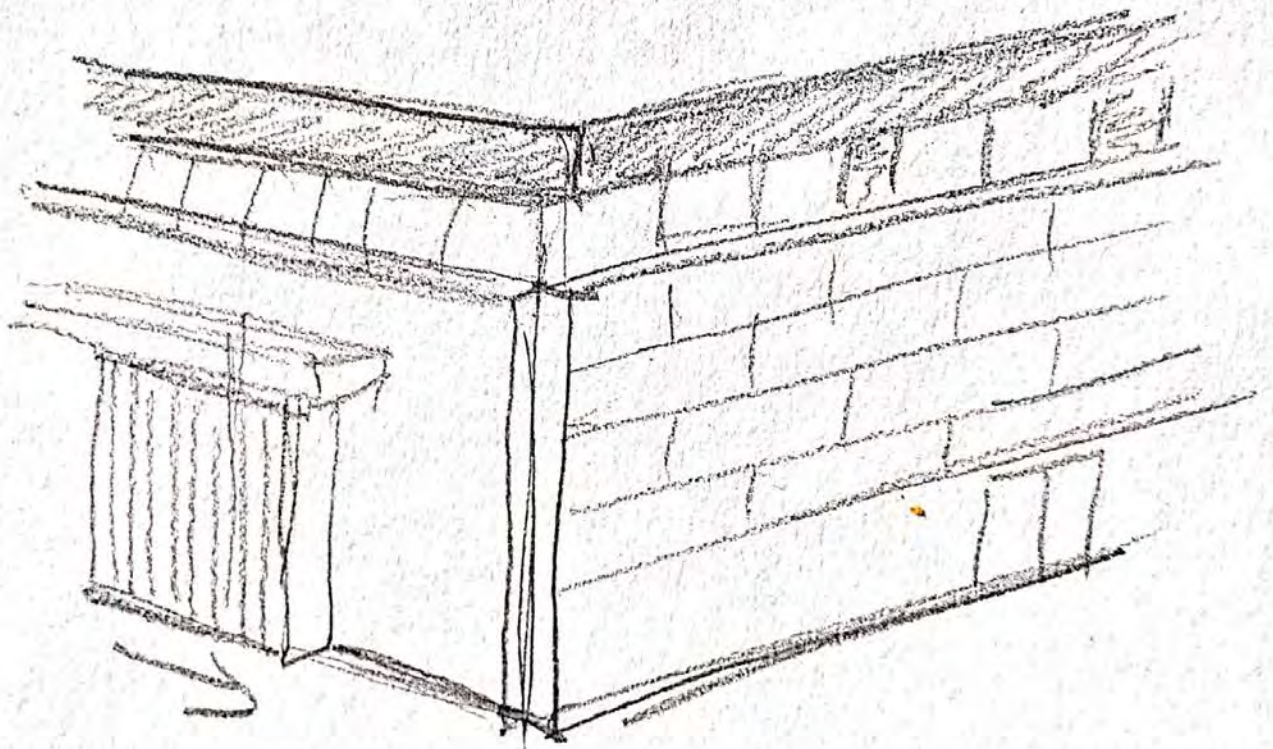
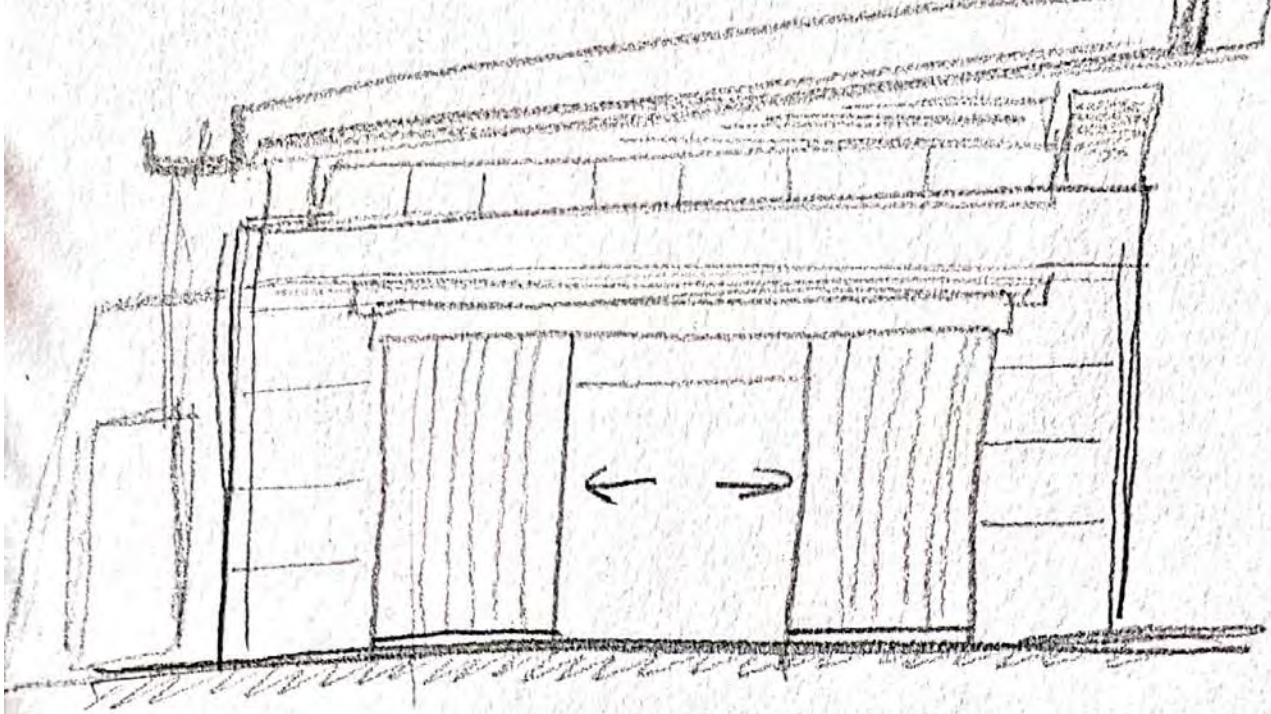
FLAT CLT ROOF

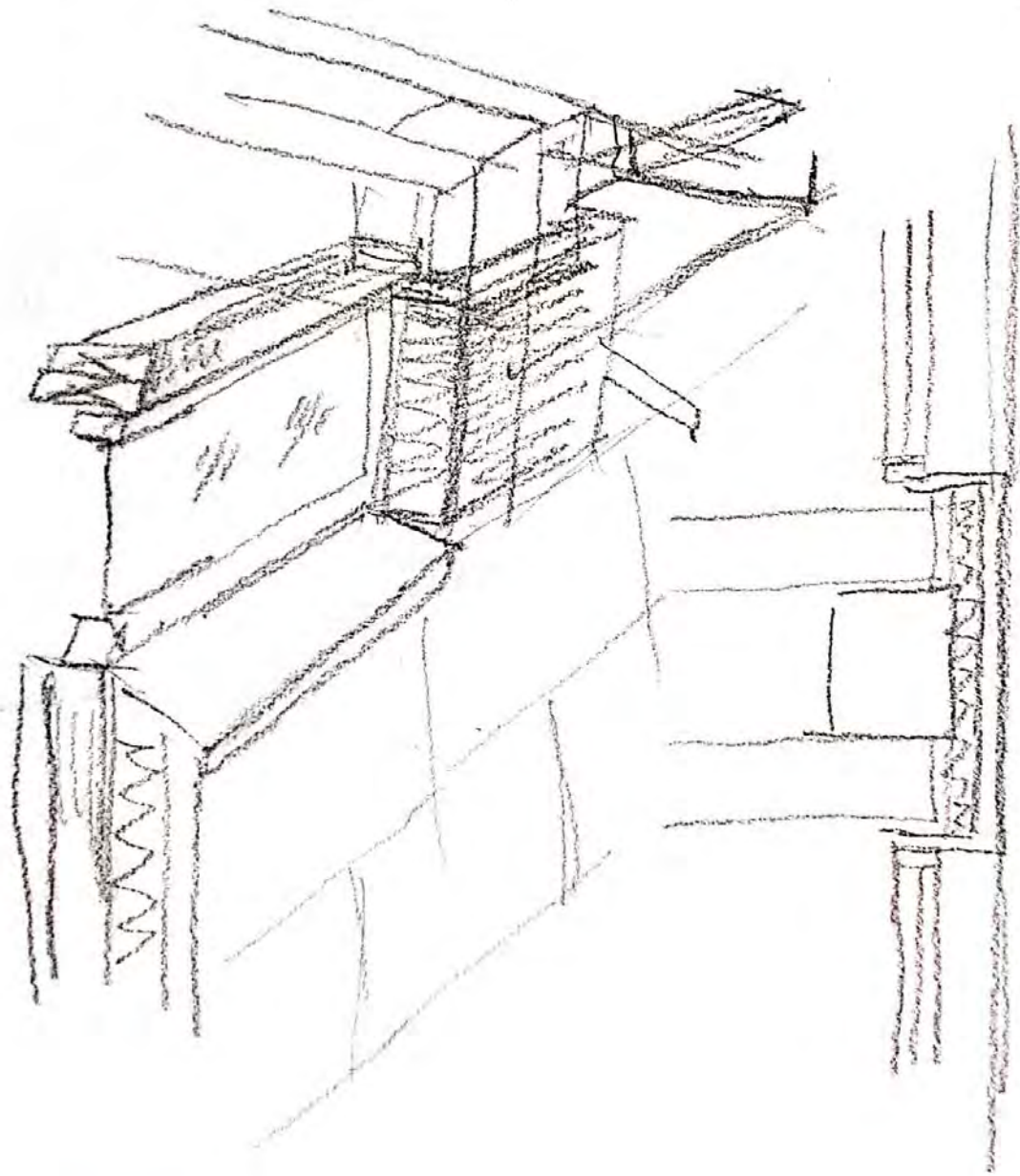
MATERIAL	THICKNESS	CONDUCTIVITY	RESISTANCE
RSO	—	—	0.400
SINGLE PLY MEMBRANE	—	—	—
XPS INSUL	0.160 min.	0.034	4.705
CLT	0.200	0.120	1.666
MINERAL WOOL	0.050	0.035	1.428
RSI	—	—	0.130

* WELL WITHIN ACCEPTABLE GUIDELINES. $\therefore 1/8.331 = 0.12 \text{ w/m}^2\text{k}$
 * THE XPS INSULATION IS TAPERED TO A MIN THICKNESS OF 0.160m.



EXTERNAL ENVELOPE.
 AIDAN MCKENNA
 D19124287

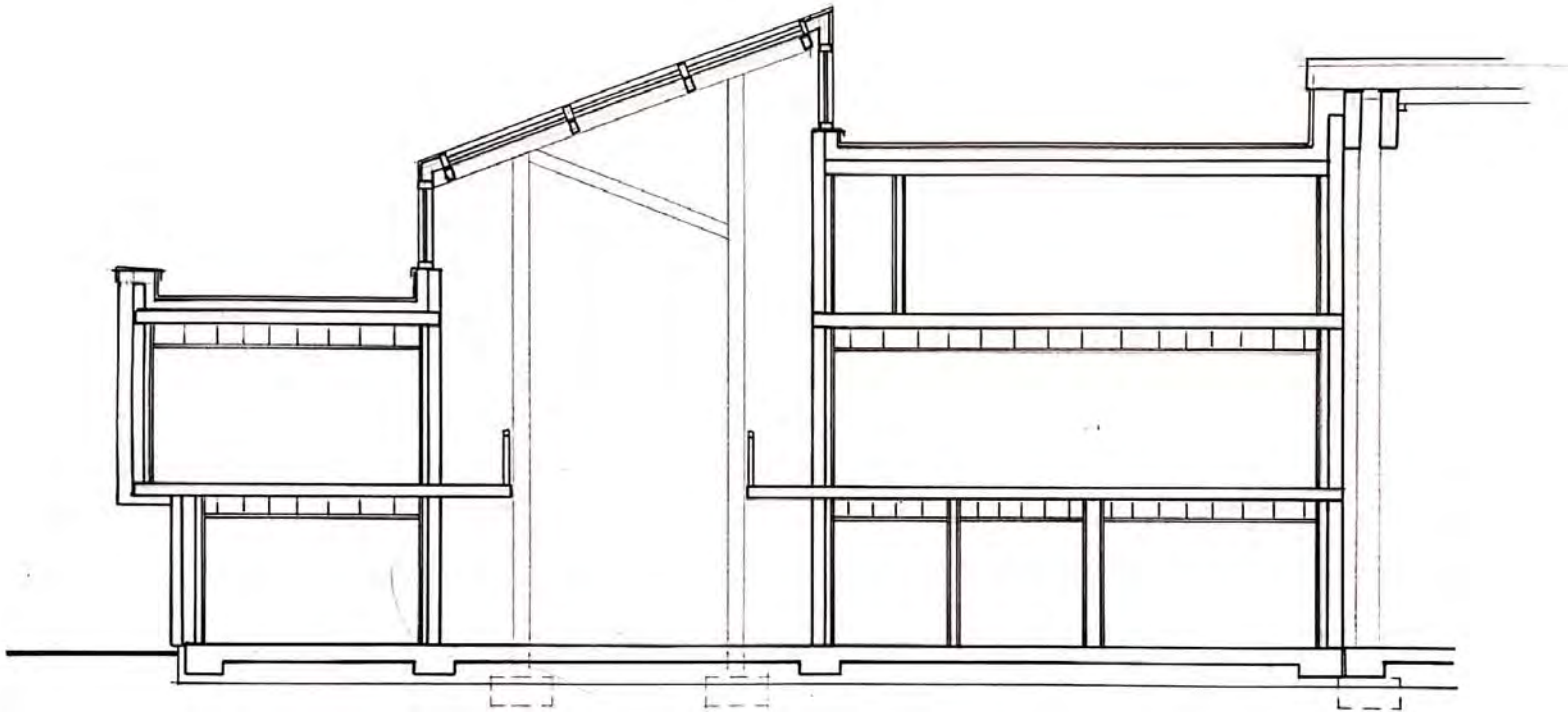






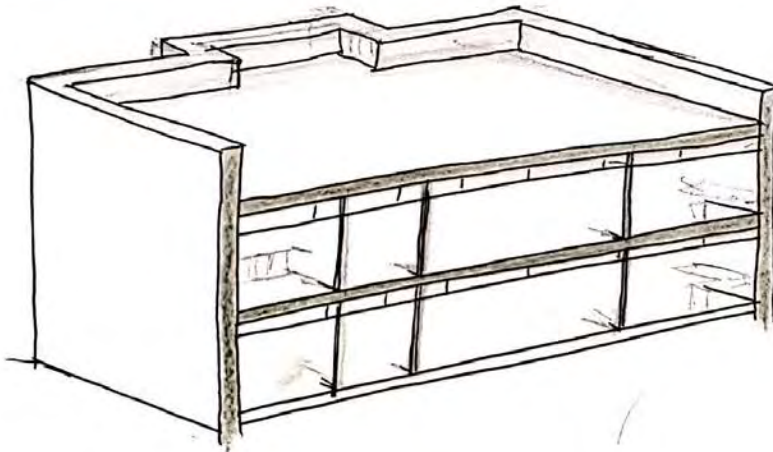
UNDERLAY DRAWINGS
+
ROUGH STUFF

Aidan MCKENNA
D19124287

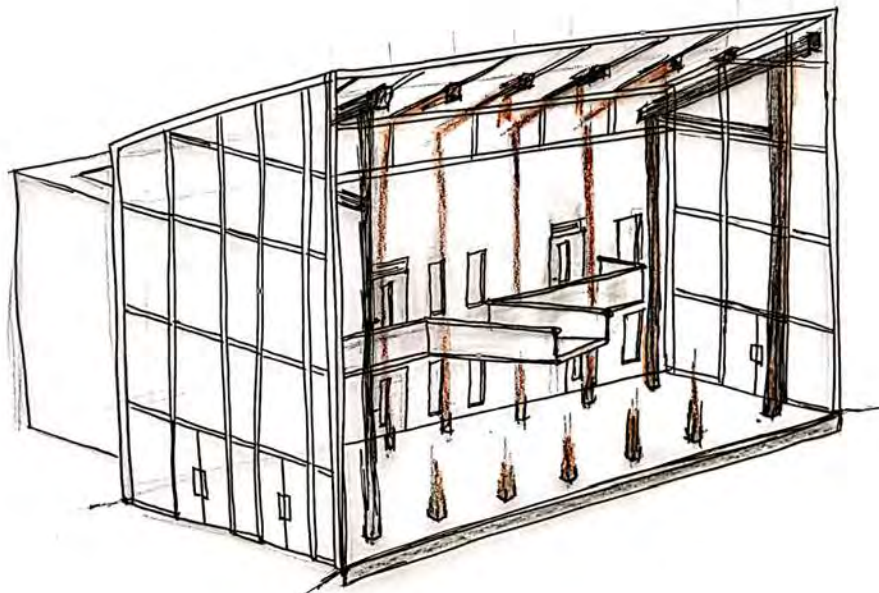


AIDAN MCKENNA
DIS124287

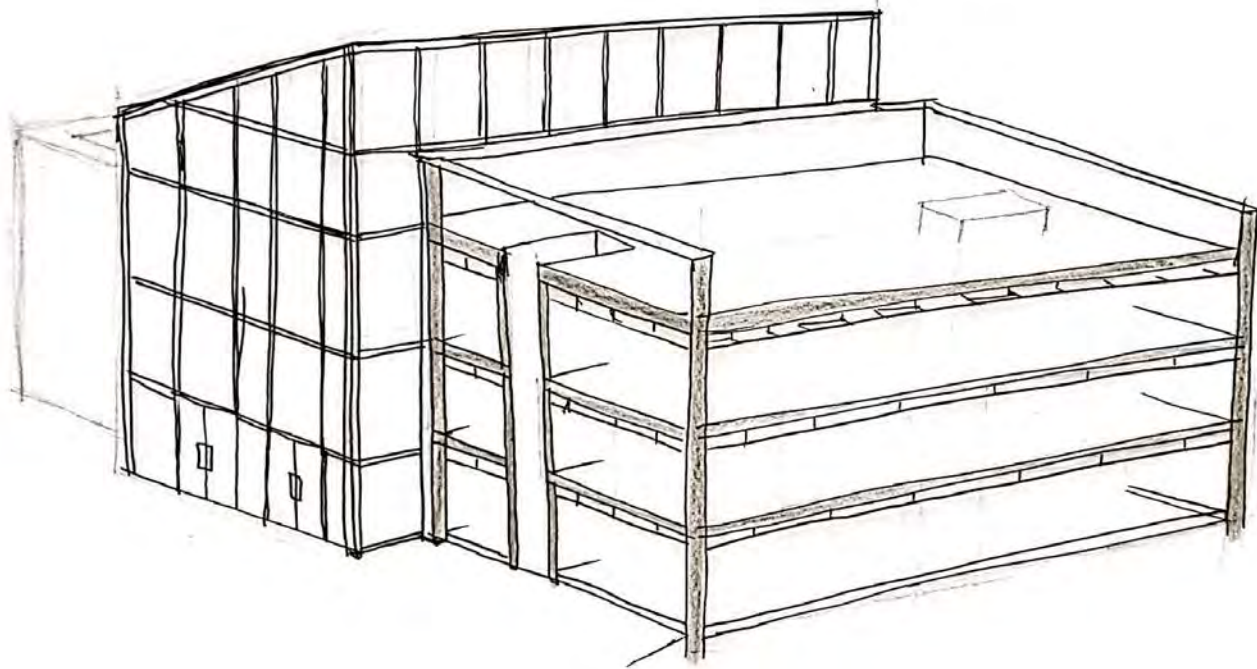
• LILY WHITE



AIDAN MCKEONA
DIG124287

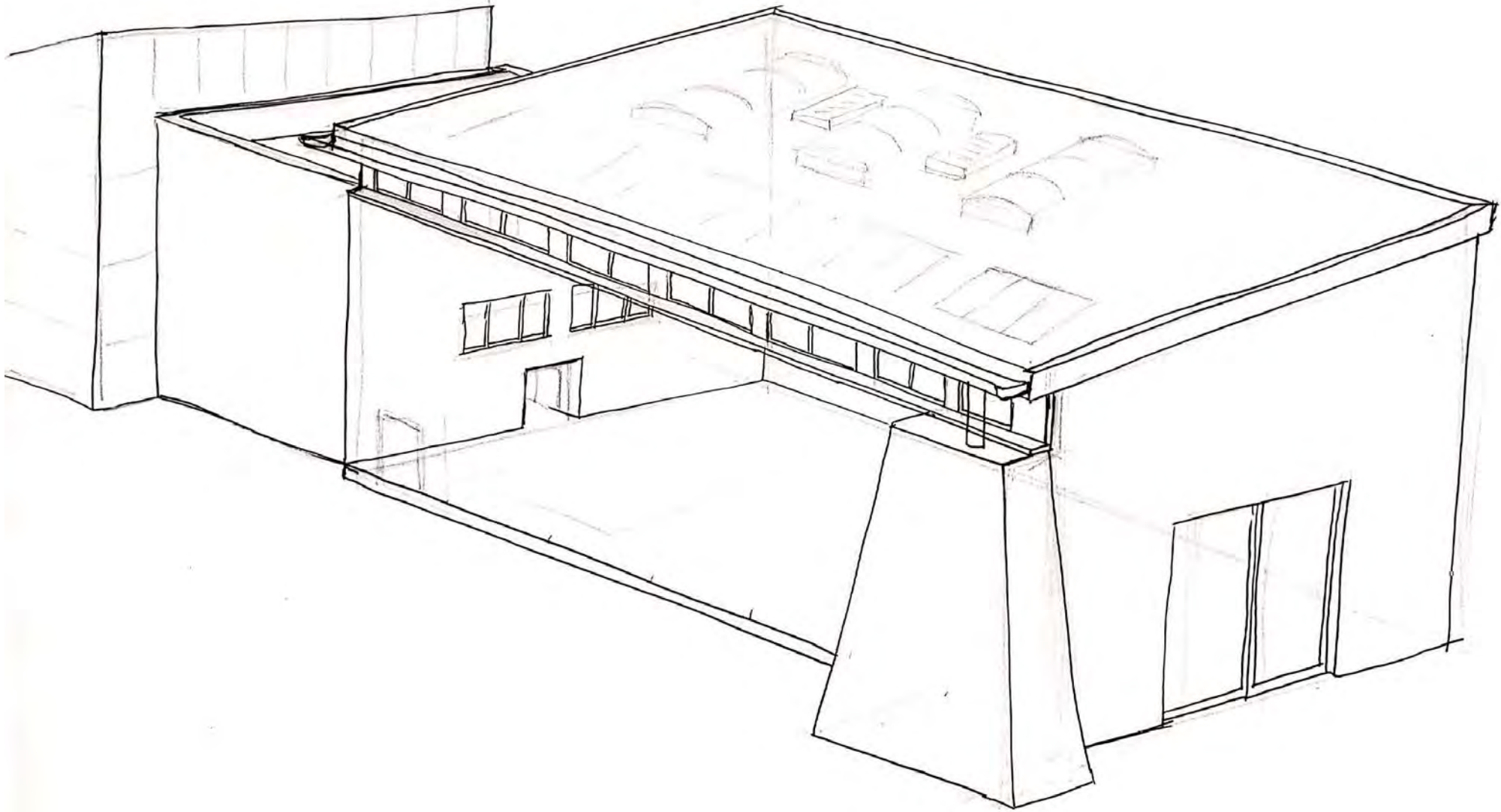


AIDAN MCKENNA
D19124287.



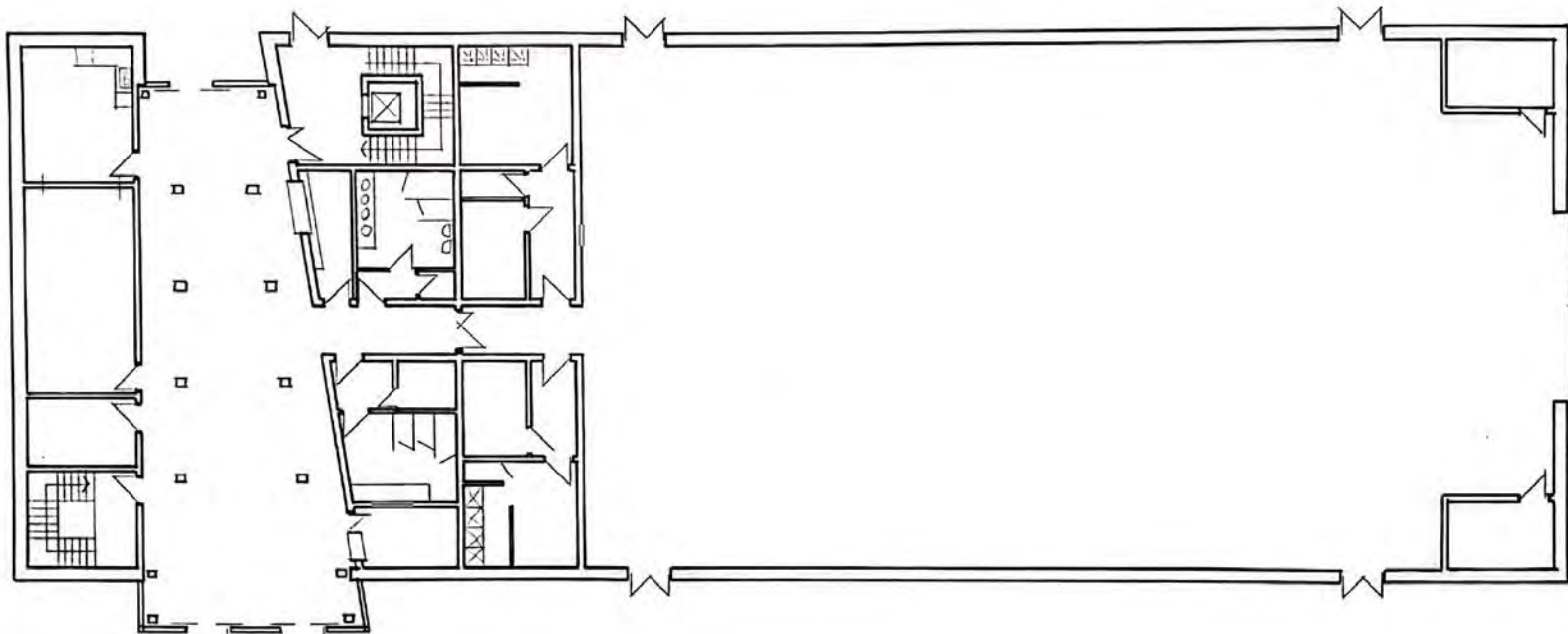
AM

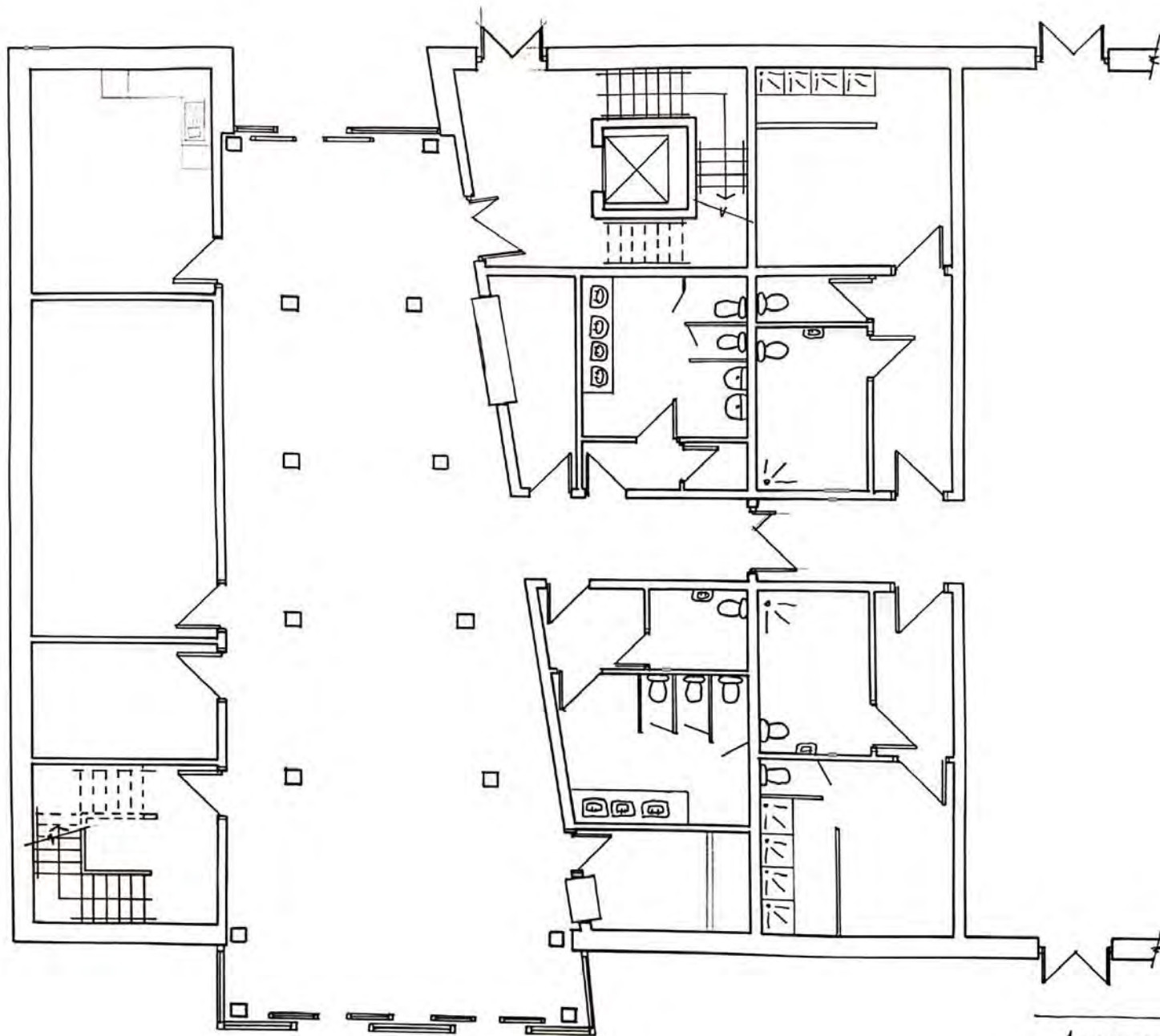
AIDAN MCKENNA
D19124287.



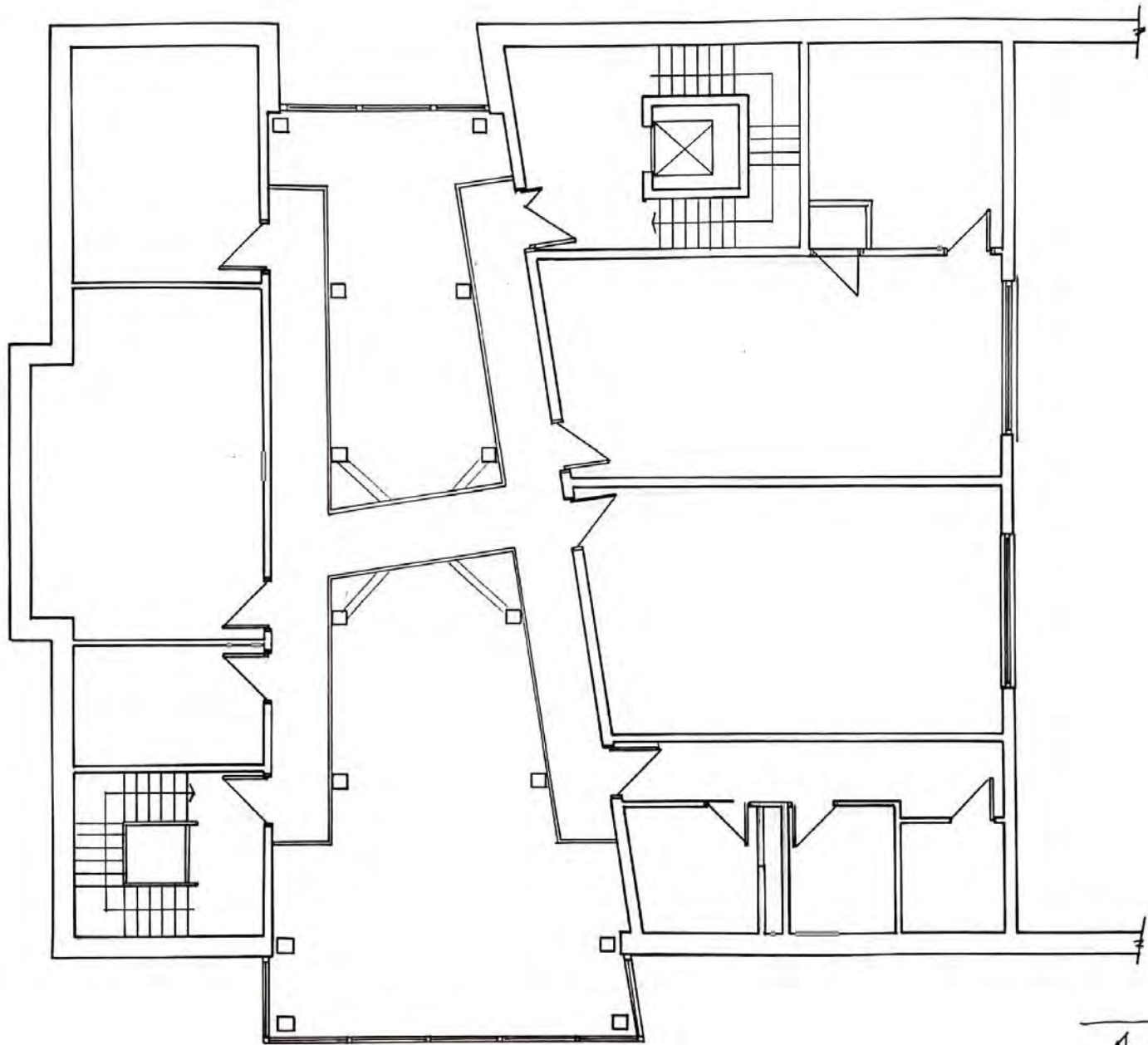
10

AIDAN MCKENNA
D191274287

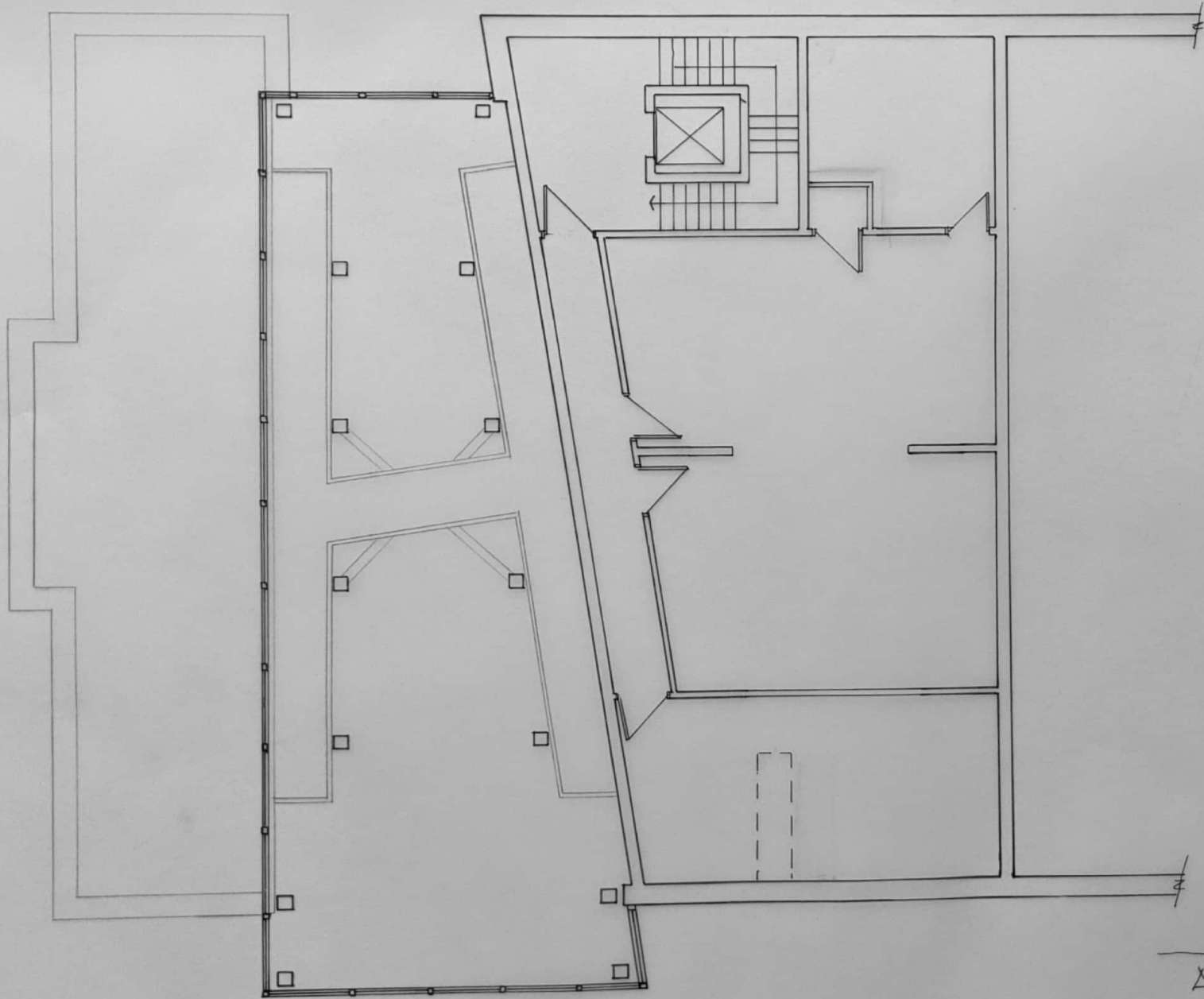




AIDAN MCKENNA
DIS124287



AIDAN MCKENNA
D19124287



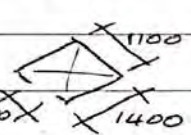
AIDAN McKENNA
DI9124287

PART M

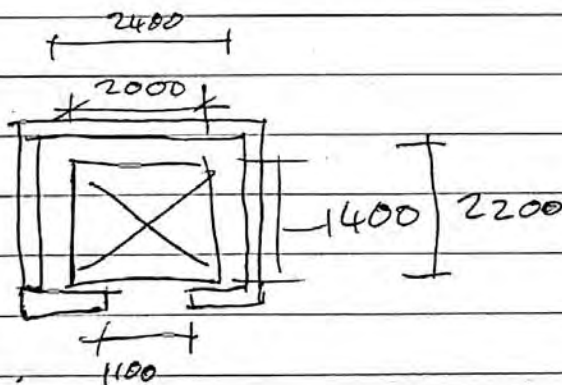
- SHARED SELF SERVICE CANTEEN
- PAGE 89 SECTION 1.5 DIAG 28

LIFT

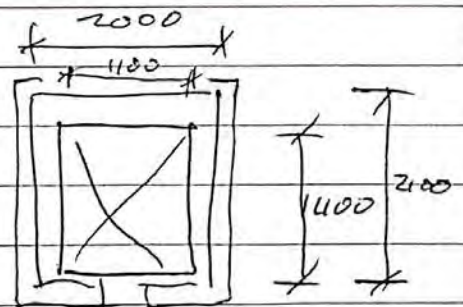
- 1800mm x 1800mm CLEAR in front of lift.
- CLEAR 800mm LIFT OPE DOOR.
- MIN INTERNAL DIM 1100 x 1400
- LARGER LIFT in PUBLIC BUILDINGS.
- $\hookrightarrow > 200m^2$ FLOOR AREA
- Car Form with 15. EN 81-1, 81-2, 81-70



- Control Buttons MIN HEIGHT 900
- Directional MAX " " 1100.
- SIGNAGE + TACTILE FLOOR NUMBERS.
- CONTROL ^{column} in FLOORS
- HALF MIRROR in LIFT CAR 900 TO 950 OFF FLOOR
- \hookrightarrow + HANDRAIL.



Large Car.



Small Car

Part M + IWA.

sect 1:1

pg 18 Approach to Building. (Place of Assembly)

→ Level access should be provided where possible, gent slopes access route should be as shallow as possible.

↳ Gradient steeper ^{less} than 1:50

(But less steep than 1:20)

↳ 1:20 or less preferred

— Avoid danger of inadvertently walking into traffic route, mark with tactile paving.

— Car Parking 1.1.5

set down area 1.1.6

Part M

Level Access

Min clear width

← 1500 →

↳ provide passing
space 2000 x 1800
Euse 25m

Gent. Slope

DITTO

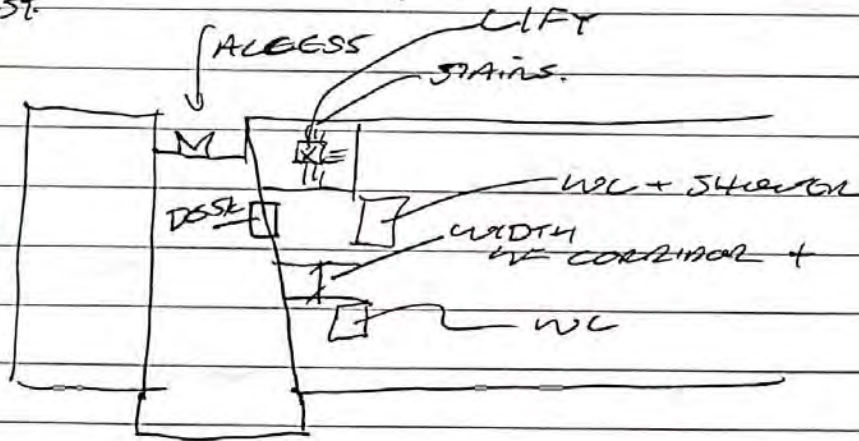
- Level Landing AFTER
EVERY RISE of 500mm

1:50

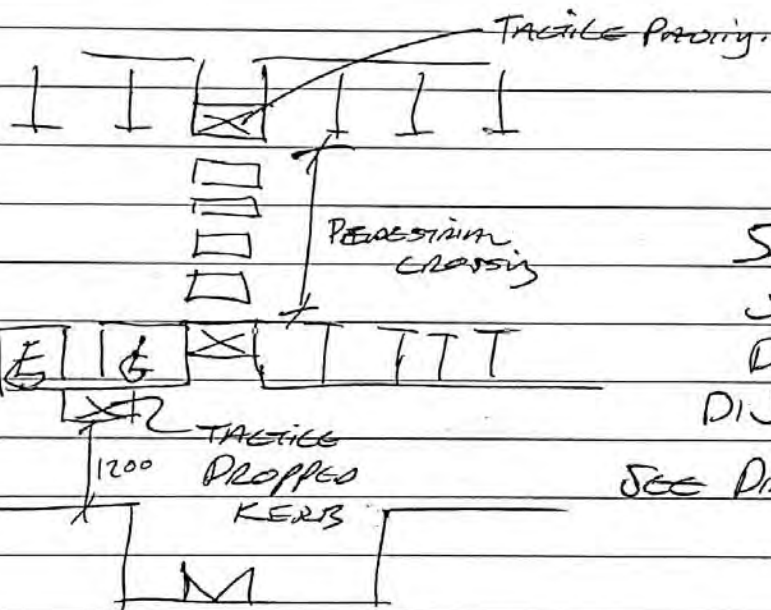
1:20

Point of Interest

CAR PARKING



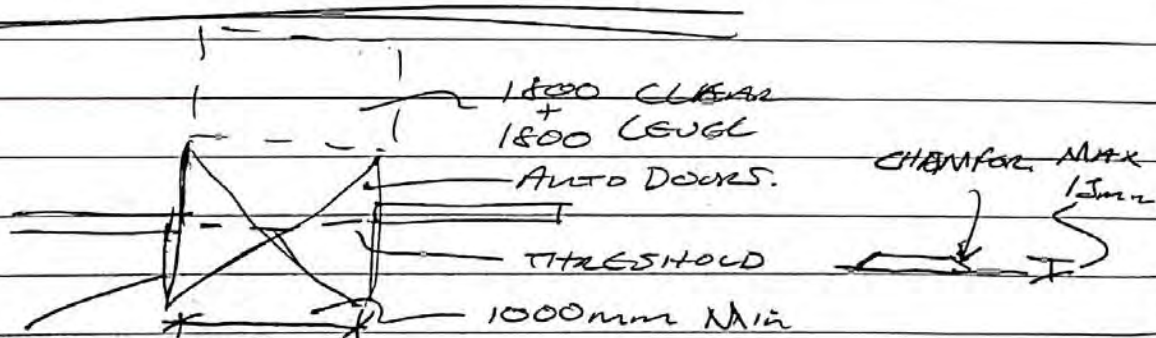
Parking



5% of SPACE SHOULD BE DESIGNATED DISABLED.

SEE DIAGRAM 8

ENTRANCE



MANUAL DOORS NEED CONTROLLER SOFT CLOSE } OR AUTO PUSH BUTTON OPEN. + EASY PUSH OPEN.

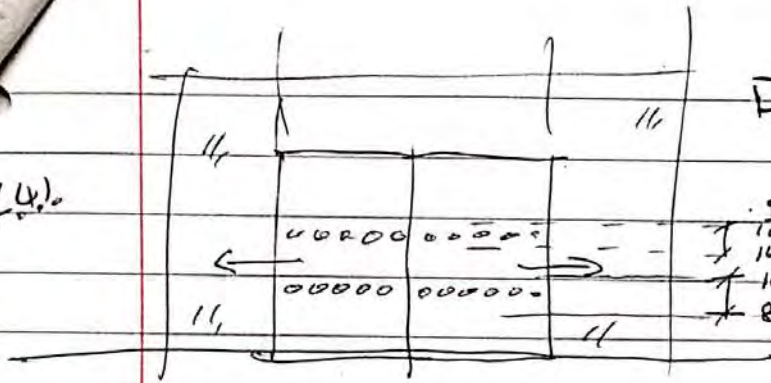
AUTO DOOR PREFERABLE

Auto open in event of FIRE - connect of fire control panel (LI)

* AS-FIRE DOORS ARE CLEAR GLASS EFFECTIVE CLEAR WIDTH + VISION IS OK.

DOOR MANIFESTATIONS

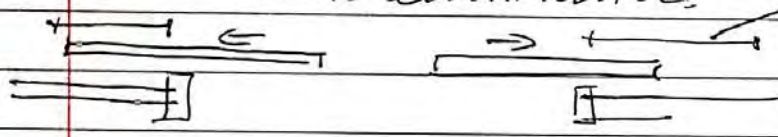
1200



DOORS NEED

- 1600
 - 1400
 - 1000
 - 850
- OR A LOGO.

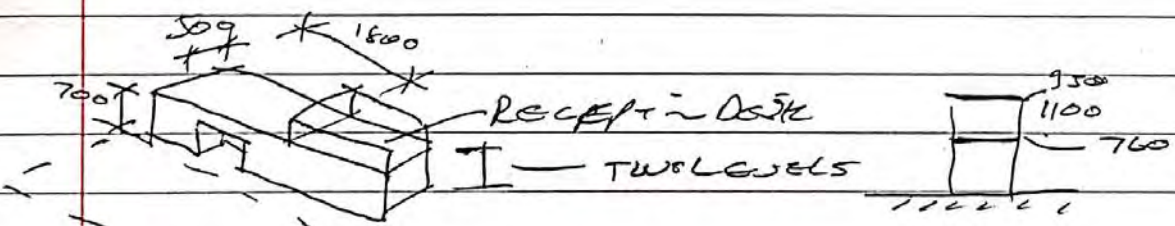
clearly differentiated from certain wall.



GUARD AS PER BS 6262:2005

Circulation within Reception

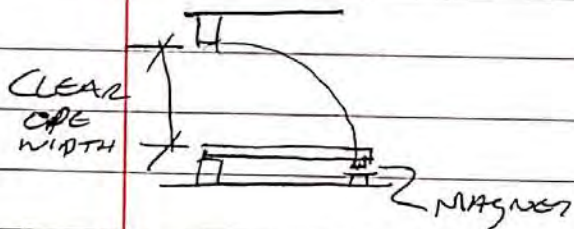
- SIGNS, ACCEPTED SYMBOLS OR PICTOGRAMS TO STAIR/LIFT, WC'S, ACTIVITY DIRECTIONS.



MIN 1200/1800
OR
NO KNOCK SPACE
1400 x 2200

INTERNAL DOORS.

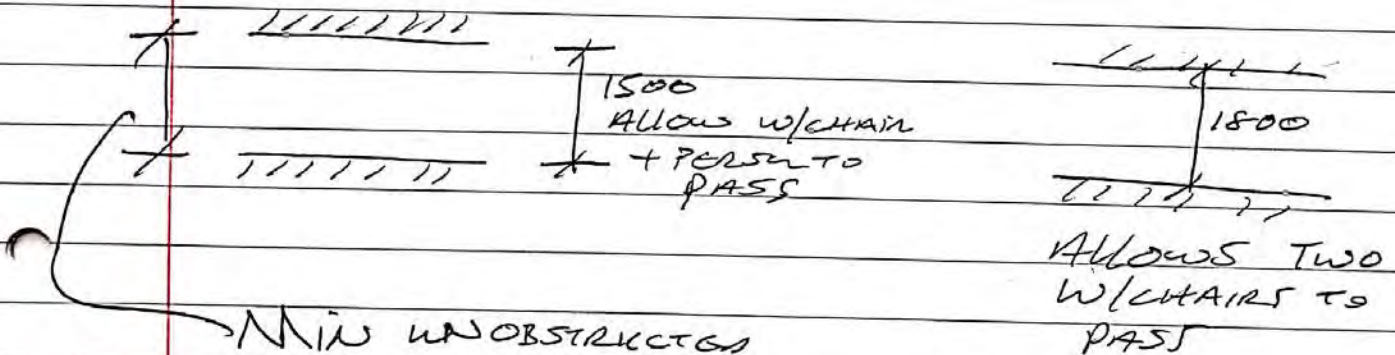
SELF CLOSING DOOR NEEDED FOR PART B.
BUT HINDERS MOBILITY.



↳ HOLD OPEN OR
 MAGNET HOLD OPEN
 LINK TO FIRE PANEL
 in HIGH ACCESS AREAS
 for PUBLIC (HALL)

↓
 CONSIDER FIRE CONTROL
 SMOKE + ACOUSTICS.

CORRIDORS / PASSAGEWAYS



MIN UNOBSTRUCTED
 WIDTH OF 1200mm

↳ NOT OBSTRUCTED BY
 RADS, COLUMNS
 ETC.

Diagram
 1.3

IF CORRIDOR IS < 1800mm WIDE
 PROVIDE PASSING PLACES

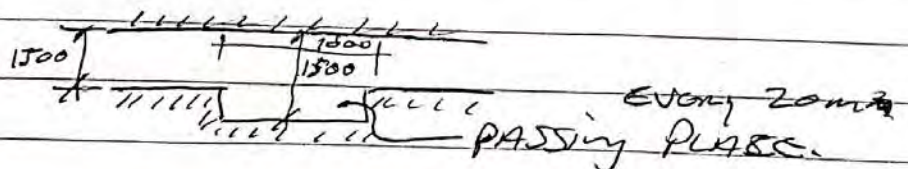
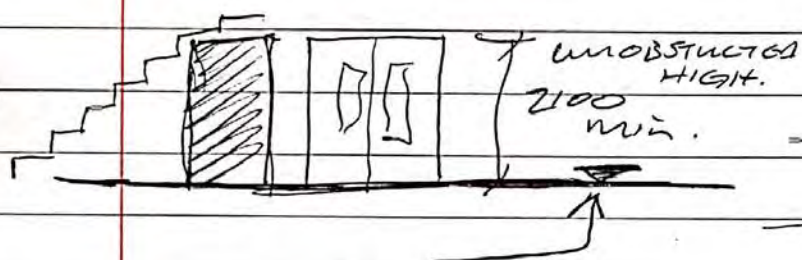
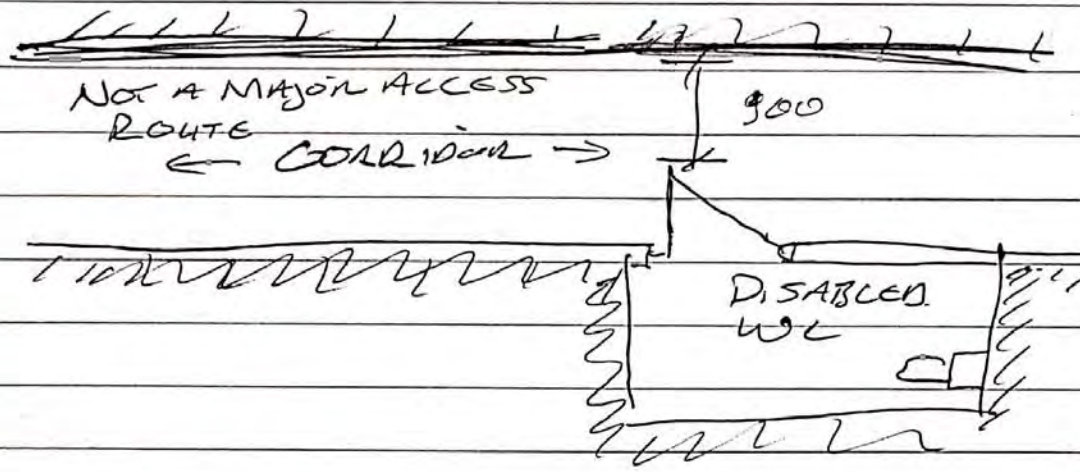
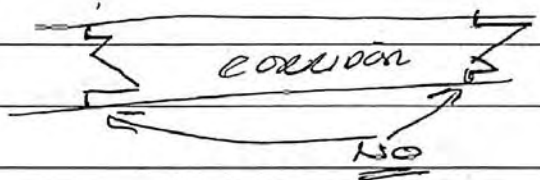


Diagram
1.3.



Min Light Level
AT FLOOR OF
100 LUX



WIDE SWING
ALWAYS IN
SAME SIDE.

PART M

WCS

- NO. of WC NEEDED SEE PART G.
↳ DEPEND ON USE, NO of people etc.
- PROVIDE A 1800mm DIA TURNING CIRCLE WITHIN WC.
- BUILDING OVER 200m² NEED WHEELCHAIR ACCESSIBLE WC (UNISEX) WITH TURNING CIRCLE 1800 DIA.
- PROVIDE AMBULANT WC ON EACH FLOOR
- PROVIDE DISABLED WC ON EACH FLOOR ABOVE / BELOW WHERE VERTICAL ACCESS IS PROVIDED.

4 to 1 ratio.

Min WC requirement as per PART M
TED
1.4.4 + 1.4.6
Min WC + SHOWER 1.4.4 + 1.4.8

- CHANGING FACILITY & COMBINED AS PER 1.4.9
↳ WHERE NOT PRACTICAL SEE INDIVIDUAL UNISEX + ACCESSIBLE SHOWER 1.4.8

- DISABLED WC DOOR & SHOWER PREFERABLY OPEN OUT OR INCREASE AREA WITHIN CRITICAL

- APPLIANCES (TAPS, SHOWER ETC) SHOULD BE OPERABLE WITH CLOSE FIST.

EMERGENCY ASSISTANCE ALARM

- REACHABLE PULL CORDS WITH VISIBLE / AUDIBLE INDICATOR.
- LIGHT LEVELS 200 - 300 LUX AT FLOOR LEVEL.
- NON SLIP FLOOR FINISH + LEVEL.
- WC ^{PAN} ~~pan~~ TO COMPLY WITH IS EN 997.2003.

DIAGRAM 15A. * = WC
15B → smaller.

- DOOR _{on wall} ^{on wall} OPPOSITE WC PAN.

* THIS BUILDING REQUIRES *
1800 x 1800 TURNING WC.

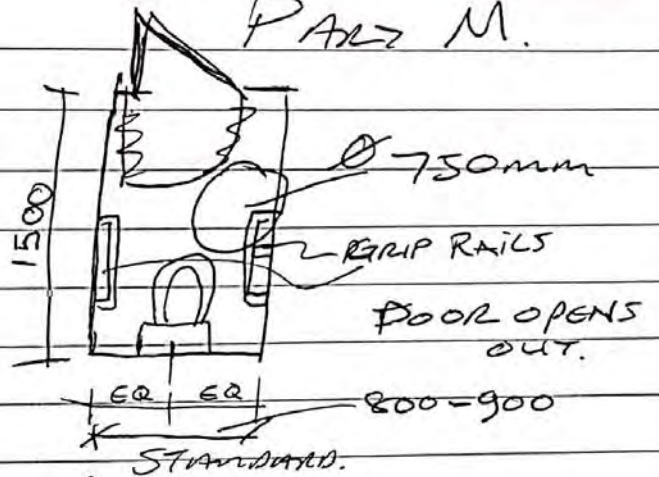
AMBULANT DISABLED WC

- FOR PEOPLE ON CRUTCHES OR OTHER MOBILITY IMPAIRMENTS A LARGER THAN STANDARD MANOEUVRING SPACE IS REQUIRED

PART M.



Ø450
CLEAR
SPACE



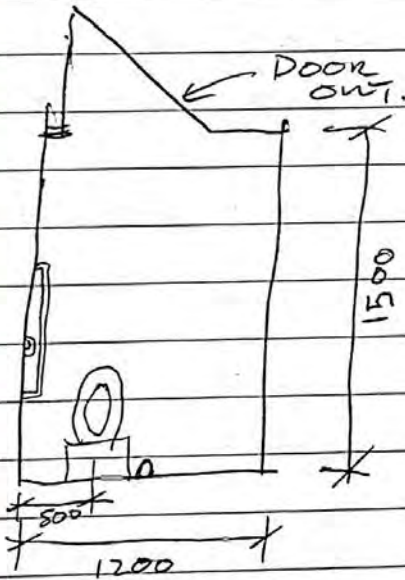
STANDARD

WC
CUBICAL

AMBULANCE
CUBICAL.

(CRUTCHES)

DIAGRAM 19.
1.4.6.2



ENLARGED
AMBULANCE
CUBICAL
(GUARD DOG)

SEE DIAGRAM 19.
1.4.6.3

INSTANTS

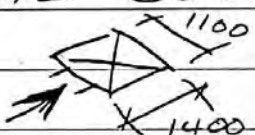
LIFT

A PASSANGER LIFT IS THE MOST ACCESSIBLE MEANS OF VERTICAL CIRCULATION + ALLOW PEOPLE WIDE A WIDE RANGE OF ABILITIES TO TRAVEL CONVENIENTLY FROM FLOOR TO FLOOR.

STAIRS - AT LEAST ONE STAIRS SHOULD BE SUITABLE FOR AMBULANT DISABLE PEOPLE - MEANS OF ESCAPE. (REF TO PART B)

LIFT → 1.8 x 1.8 CLEAR MANOEUVRING AREA in front of LIFT.

- LIFT DOORS CLEAR 800 mm MIN.

- MIN LIFT SIZE  = SMALL LIFT.

- IF PUBLIC AREA (NET) > 200 m² PER FLOOR PROVIDE A LARGER LIFT 2000 mm WIDE x 1400 DEEP.

~~*~~ CHECK AGAIN

- CALL BUTTON HEIGHT 900 TO 1100 mm HIGH 500 mm FROM ANY RETURN WALL.

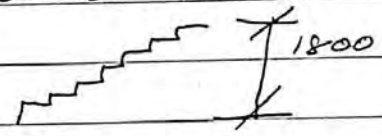
- TACTILE INDICATOR FOR FLOOR NUMBER ADJACENT TO BUTTON



LIFT

- LIFT FLOOR NOT A DARK COLOUR + SLIP RESISTANT.
 - VISUAL + AUDIBLE INDICATING WARNING ARRIVAL OF LIFT.
 - HALF LENGTH MIRROR ON OPPOSITE WALL TO LIFT DOOR + HAND RAIL
- SEE DIAGRAM 13

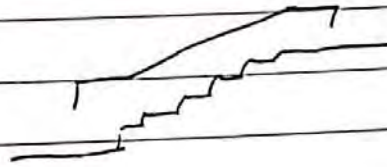
STAIRS

- MIN WIDTH 1200mm WALL TO WALL
 - LANDING AT TOP + BOTTOM OF EACH FLIGHT.
 - ↳ AT LEAST 1200 UNOBSTRUCTED LENGTH OR WIDTH OF FLIGHT WHICH EVER IS GREATER.
 - NO SINGLE STEPS.
 - THE RISE OF A FLIGHT SHOULD NOT BE GREATER THAN 1800
- 
- ALL STEPS NOSING SHOULD HAVE PERMANENTLY CONTRASTING MATERIAL ON THE THREAD.
 - GOING AT LEAST 300mm
 - NO TAPERED THREADS OR OPEN RISERS
 - CONTINUOUS HANDRAIL ON EACH SIDE OF FLIGHT. MIN WIDTH BETWEEN HANDRAILS > 1000mm.

STAIR

- NON SLIP SURFACE on TREADS + MIN. 100 LUX LIGHT on SURFACE

Diagram 14 - HANDRAIL PROJECTION + HEIGHT.



Audience Sitting (VIEWING AREA??)

TABLE 3	CAPACITY	PERM SEATS	REMOVABLE SEATS.
	UP TO 600	1% OF TOTAL SEATS	REMAINDER TO MAKE 6

EXISTING WITHOUT FIXED SEATS

- WHEEL CHAIRS ACCESS TO RAISED / STAGE VIA RAMP / LIFT + PROVIDE SIGNAGE.

- PROVIDE HEARING ENHANCEMENT SYSTEM.

1.5.5 D WORKTOP FOR STAGE SELF SERVICE FACILITIES. (KITCHENETTE)

SEE DIAGRAM 28

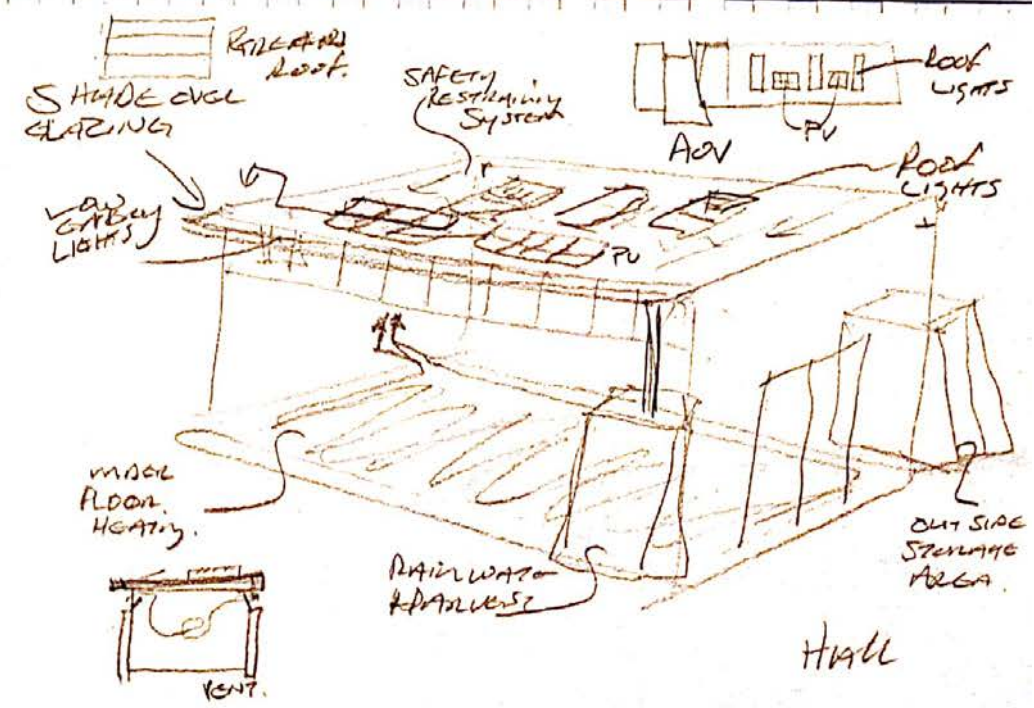
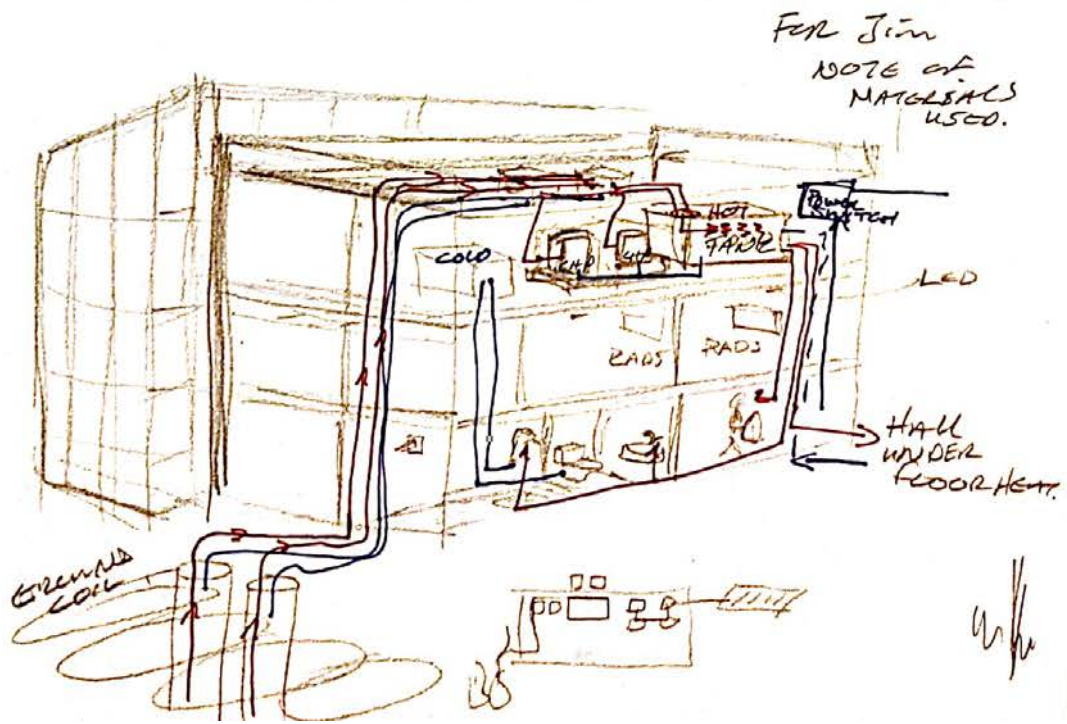
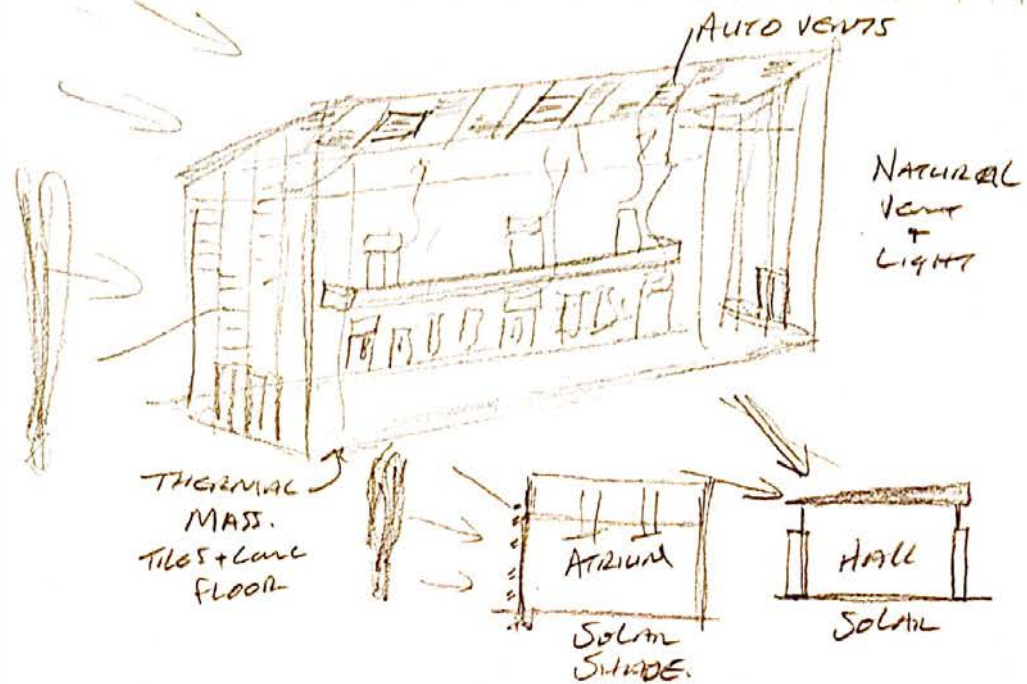
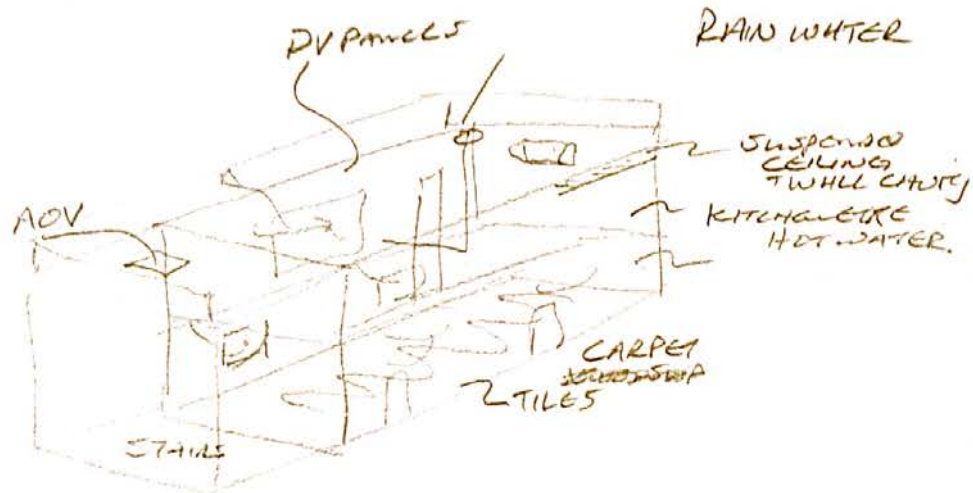
WORK A DRAWING.

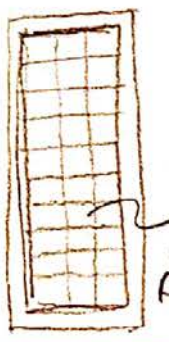
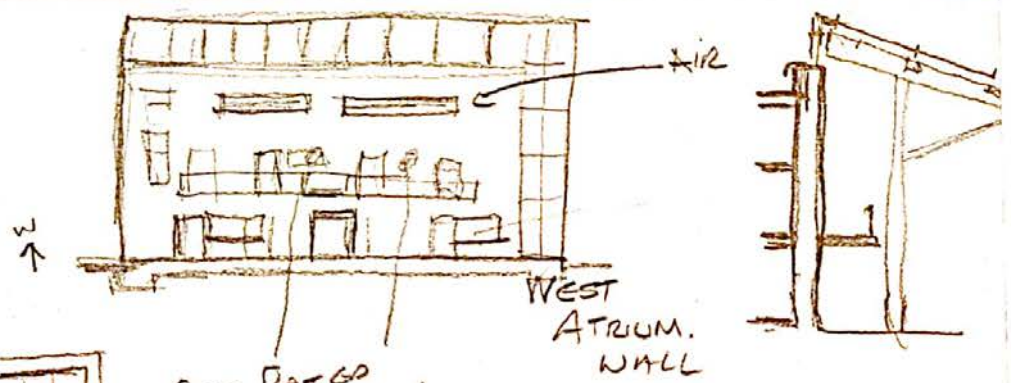
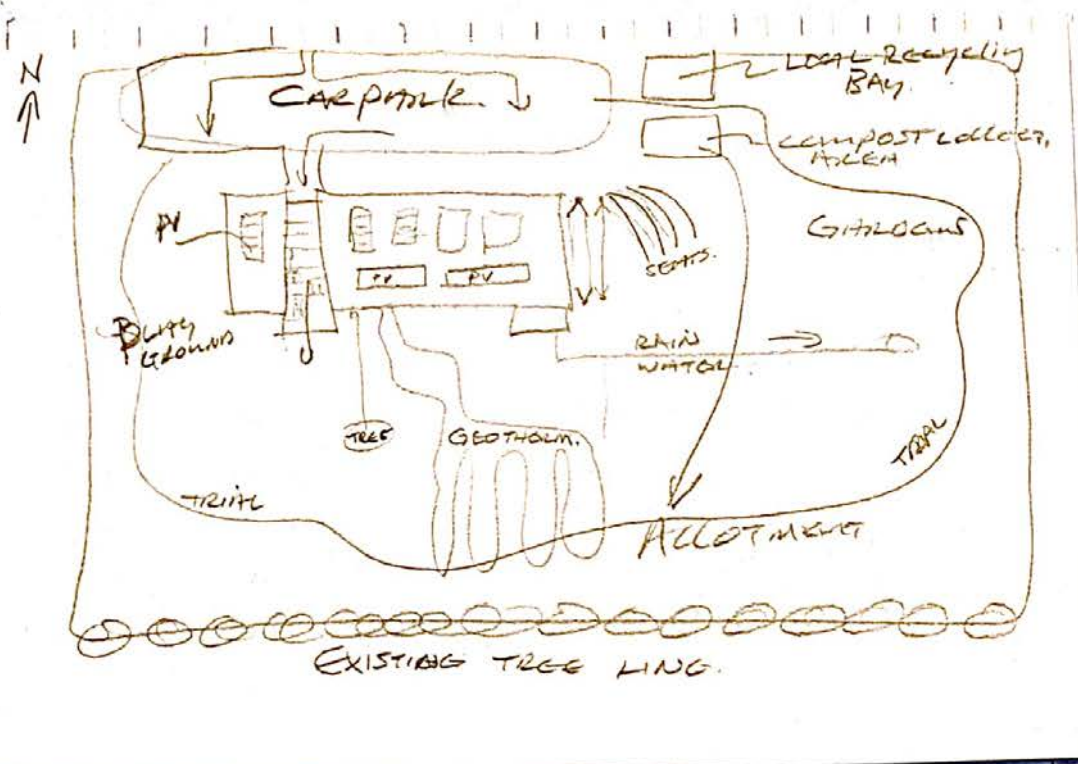
Part M

OTHER THINGS

Diagram 30 (pg 93)

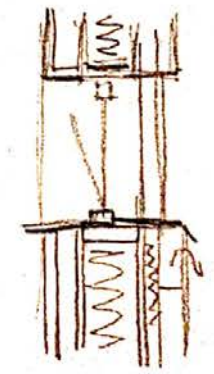
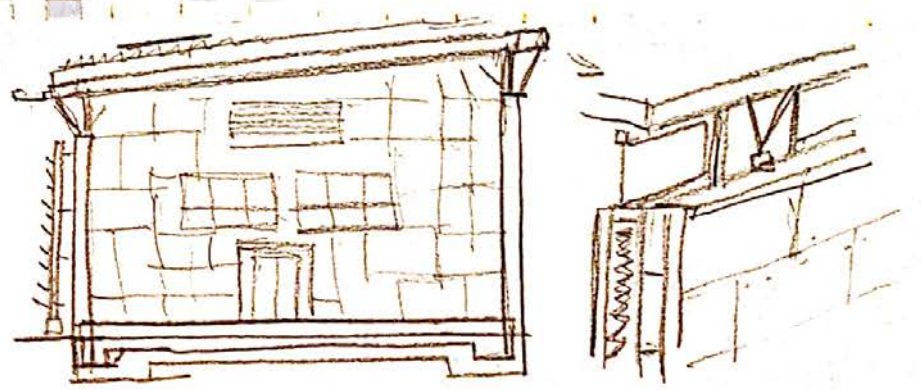
SOCKET
HEIGHTS.

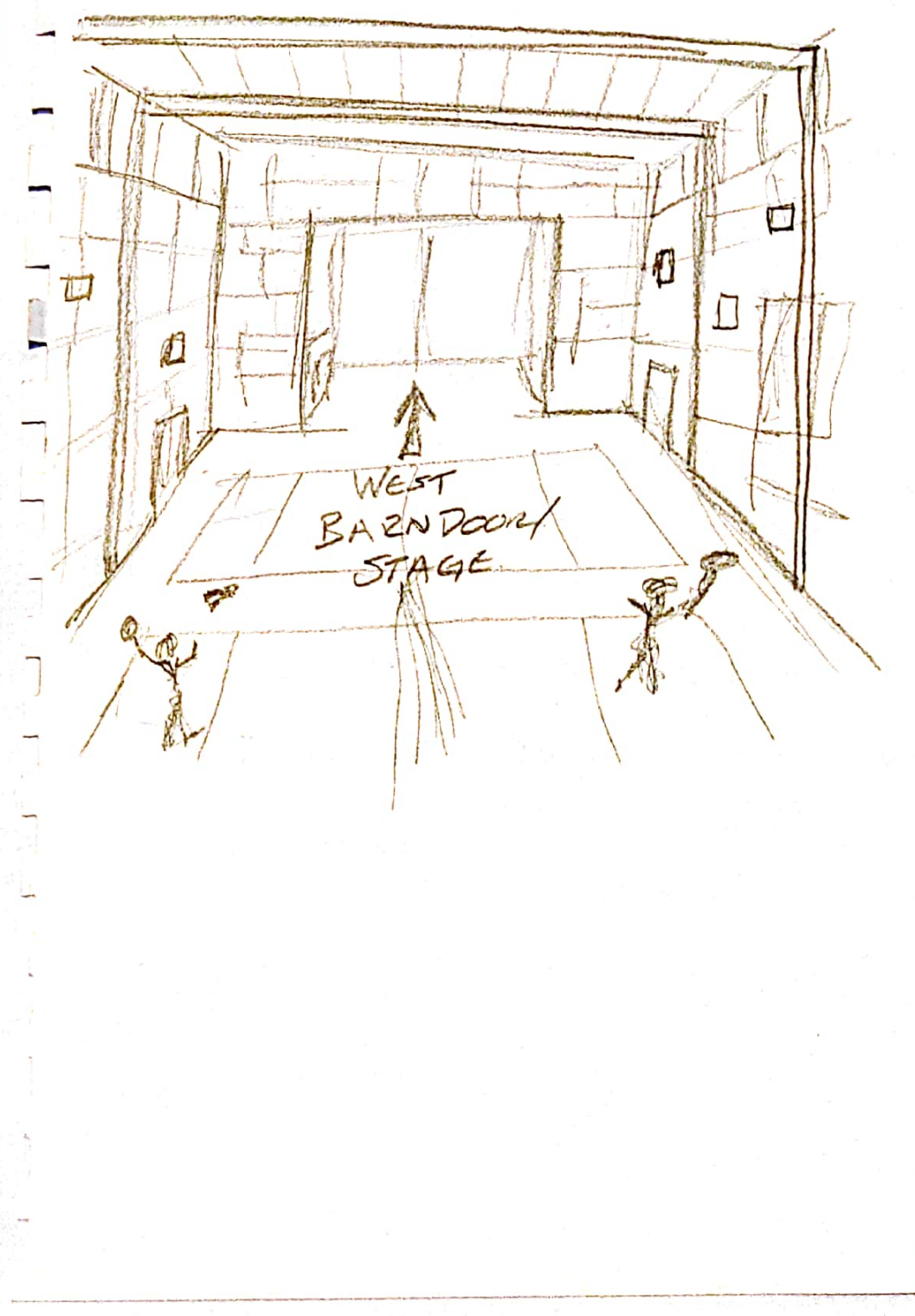


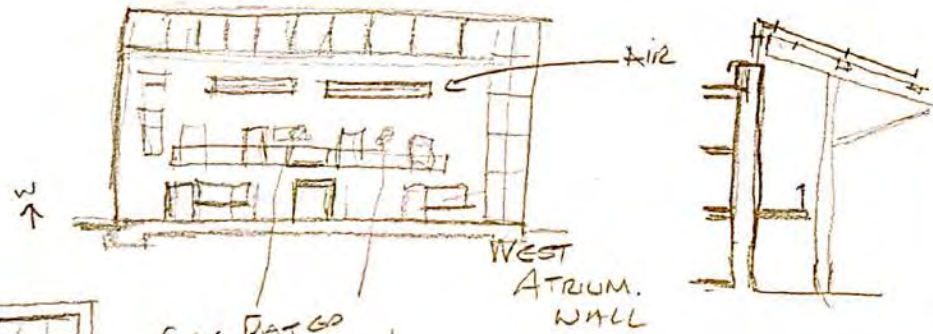


FIRE RATED
 GLASS BLOCK
 OPEN IN ATRIUM
 WILL ALLOW LIGHT
 INTO ROOM WITH IN
 NATURAL LIGHT.
 IE:- GALLERY ROOMS
 2.4, 2.5

} NEED A
 DETAIL.





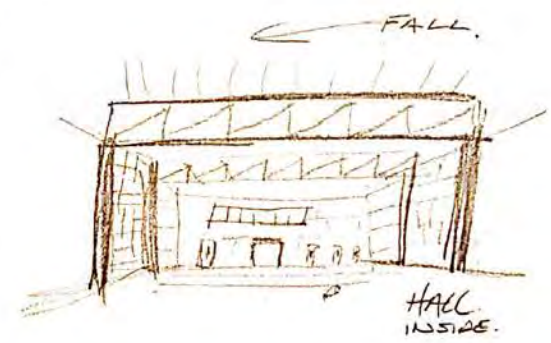


FIRE RATED
 GLASS BLOCK
 OPEN IN ATRIUM
 WILL ALLOW LIGHT
 INTO ROOM WITH IN
 NATURAL LIGHT.
 IE:- GALLERY ROOMS
 2.4, 2.5

NEED A
 DETAIL.

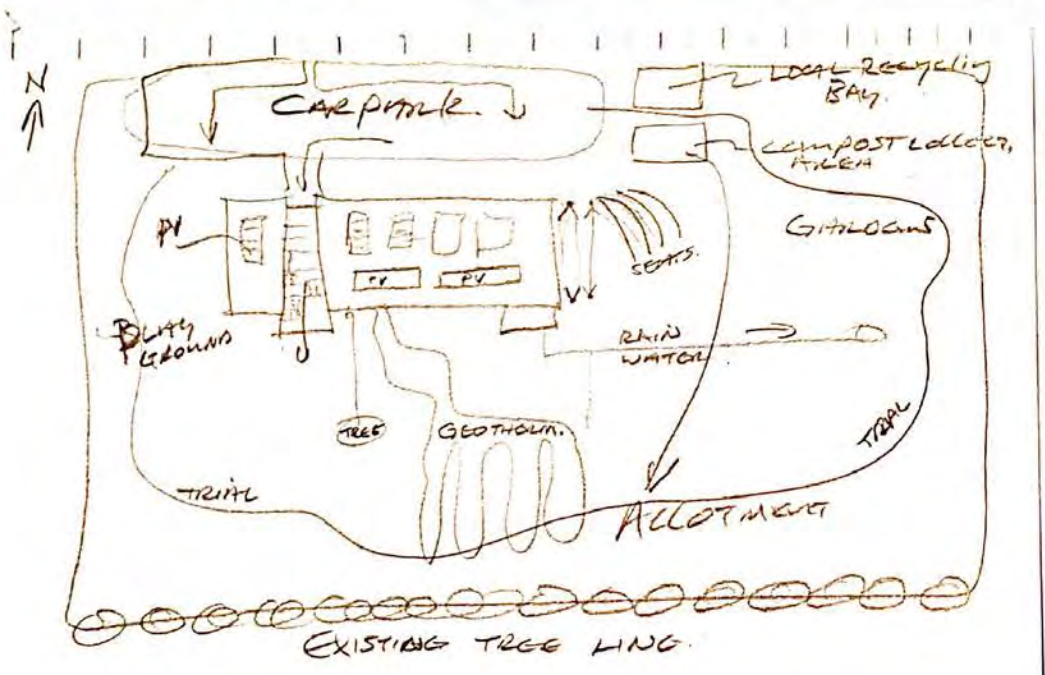


EAST ATRIUM WALL



FALL

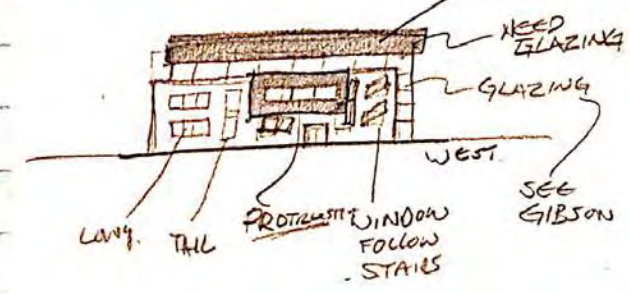
HALL INSIDE



NORTH ELEVATION

GLAZING + OPEN

GLASS OR GREEN?



WEST

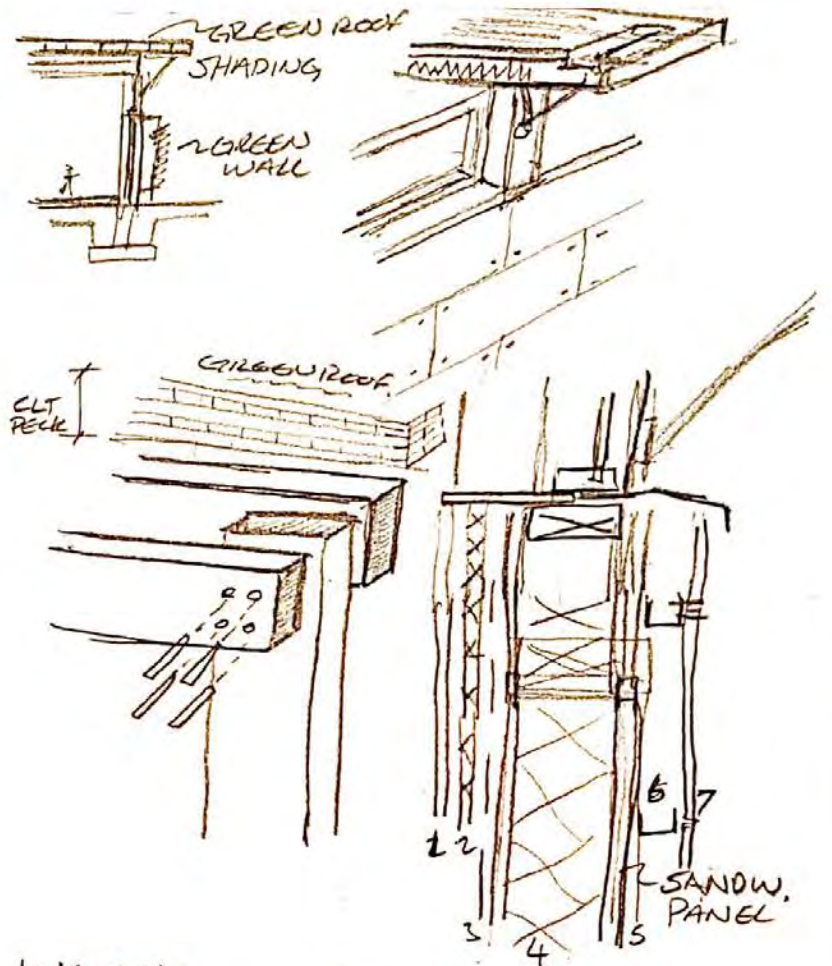
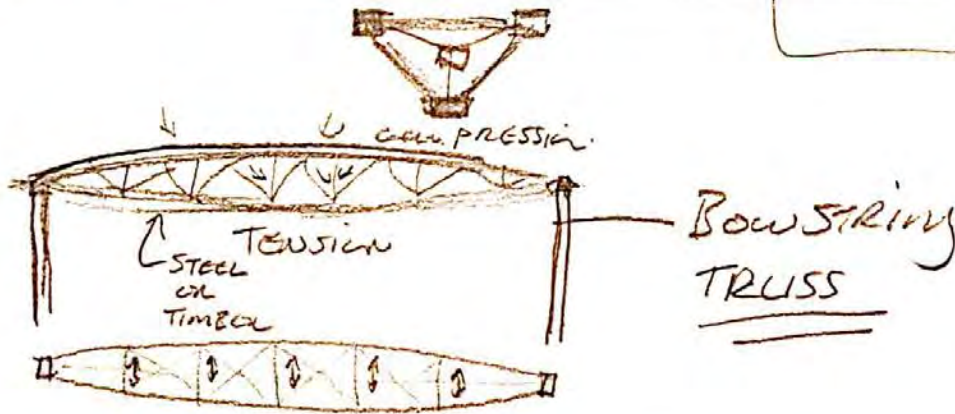
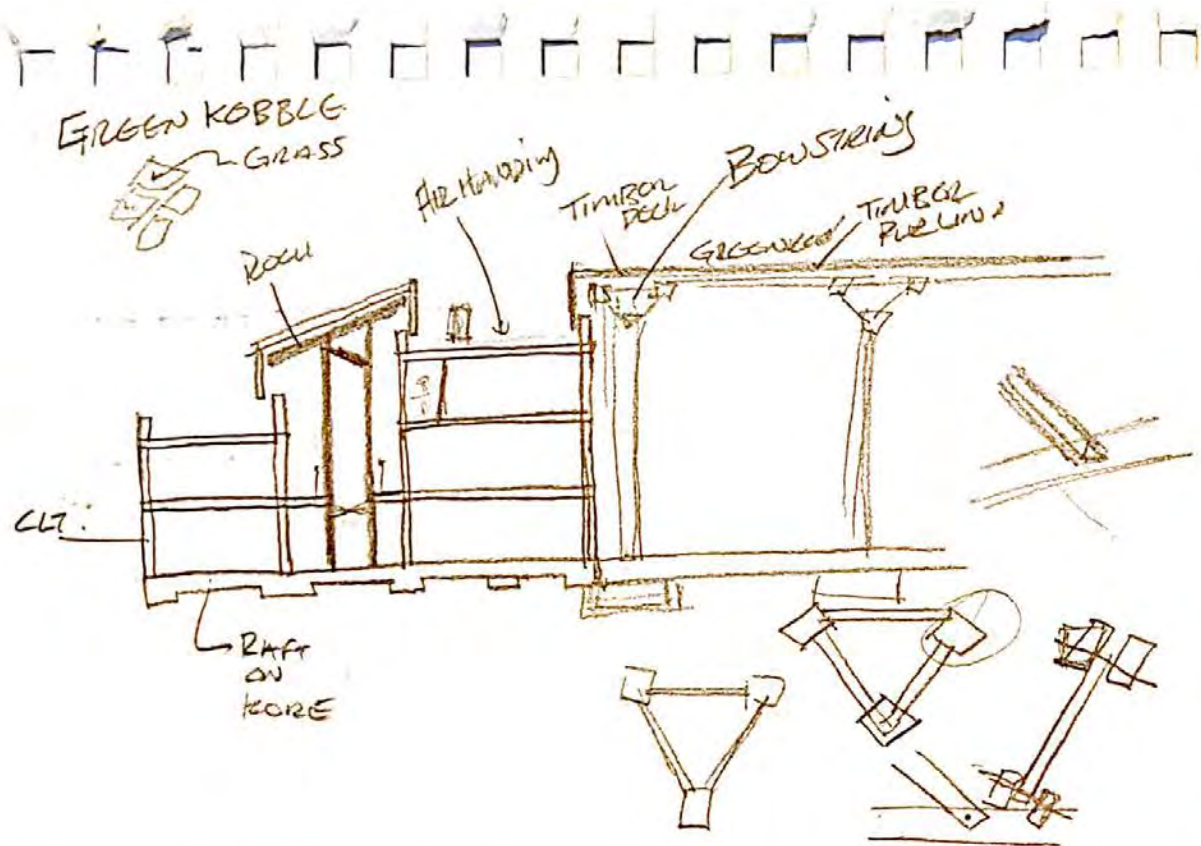
NEED GLAZING

GLAZING

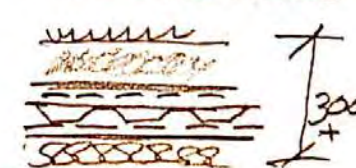
SEE GIBSON

LONG. TRAIL

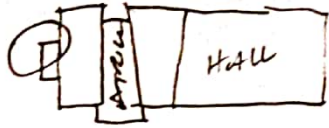
PROTECTIVE WINDOW FOLLOW STAIRS



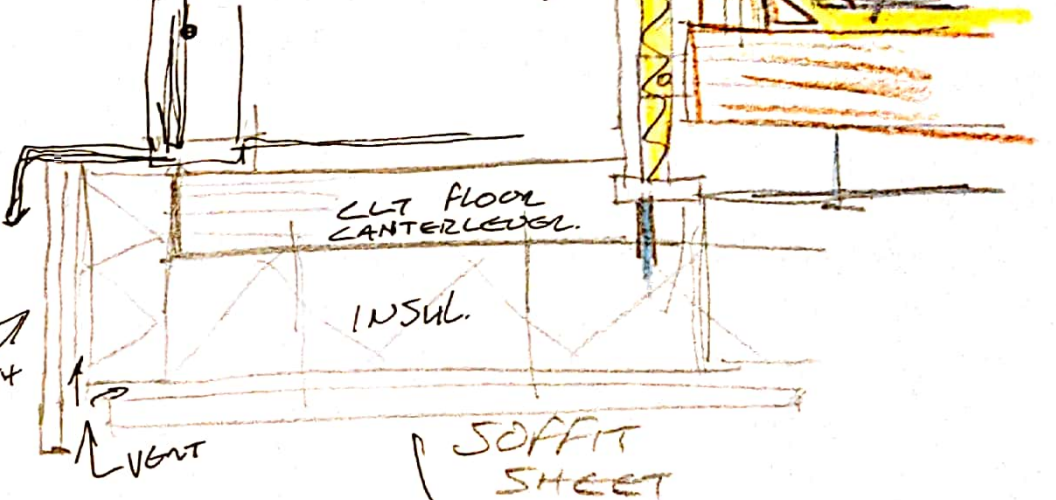
WEIGHT
of GREEN?
ROOF
ON STRUCTURE



- 1- ACOUSTIC PANEL
- 2- " " INSUL
- 3- VCL
- 4- SANDWICH PANEL
- 5- BREATHER
- 6- AIR CAVITY
- 7+ RAIN SCREEN



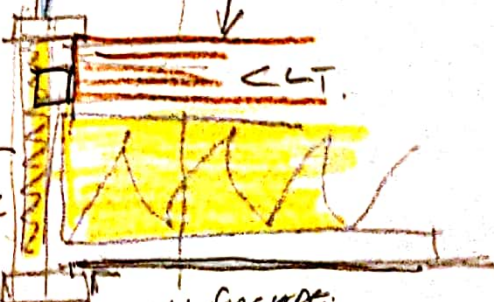
CURTAIN WITH PARAPET PROJECTION
INSUL



FINISH
VENT



SCREED



All CURTAIN WALL FACADE

600-1200

CLT FACE

FIRST FLOOR PROJECTIA

Mullion

