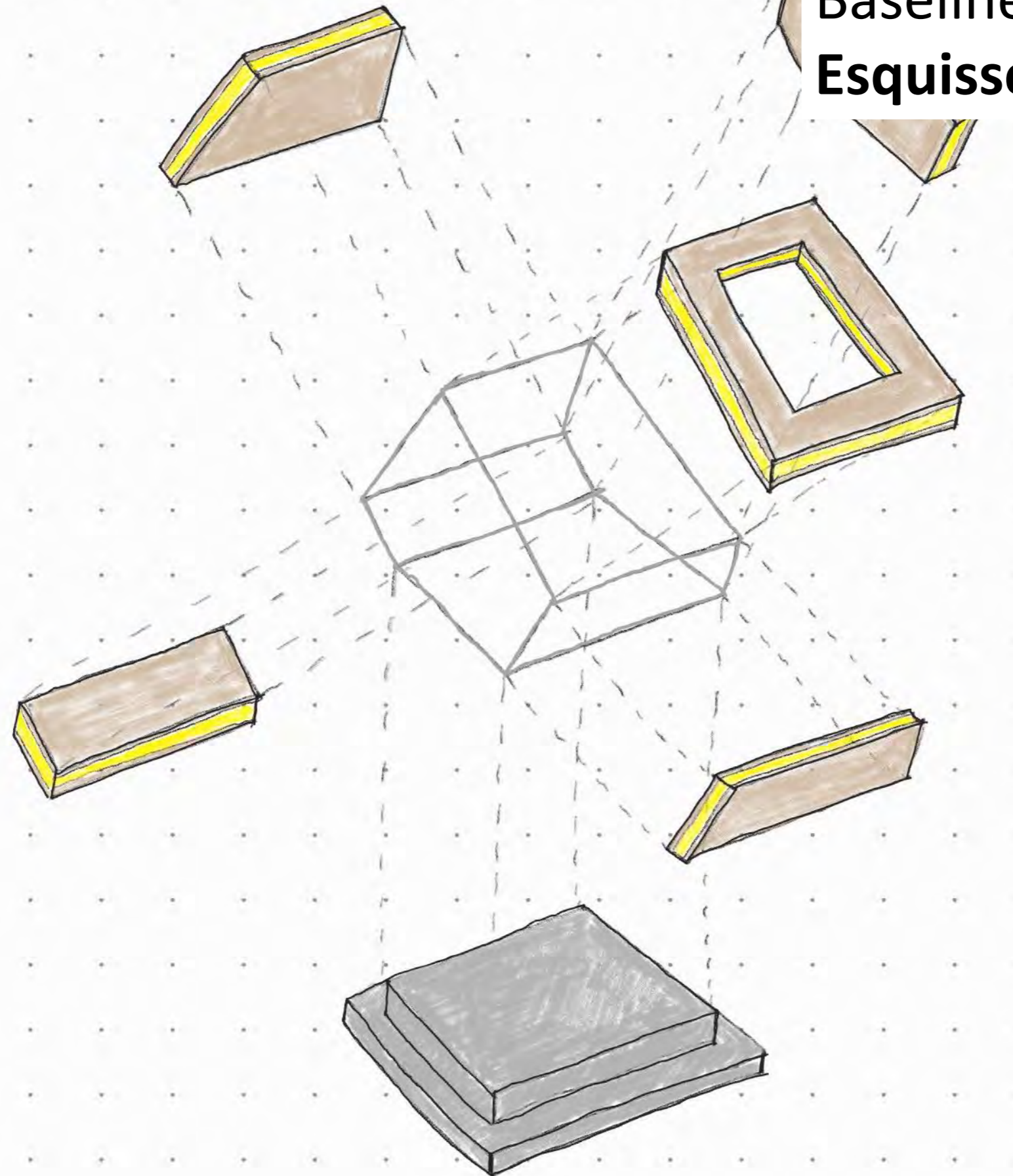


TDS - Project 1.3

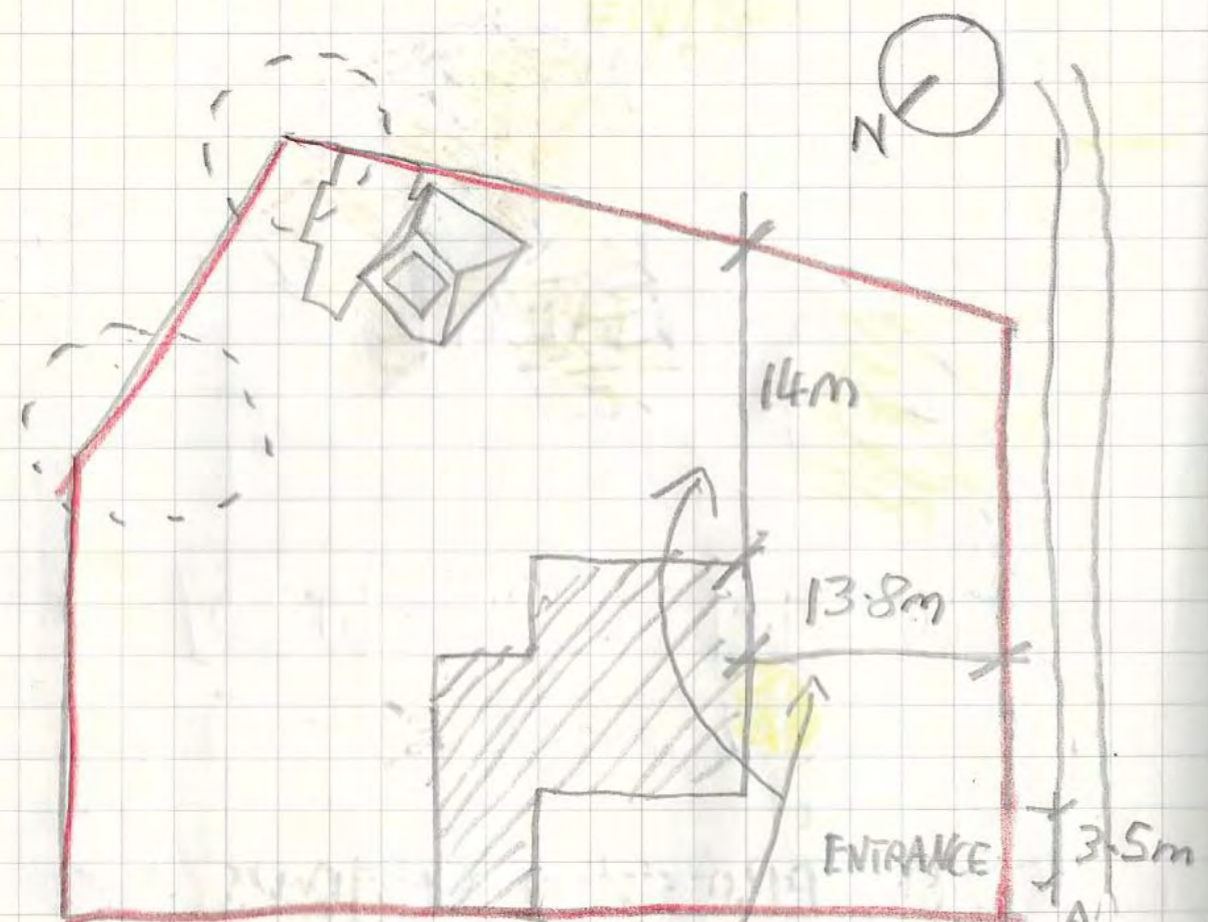
Baseline Detailing Project

Esquisse



Liam Deguara
C17336913
DT175 04

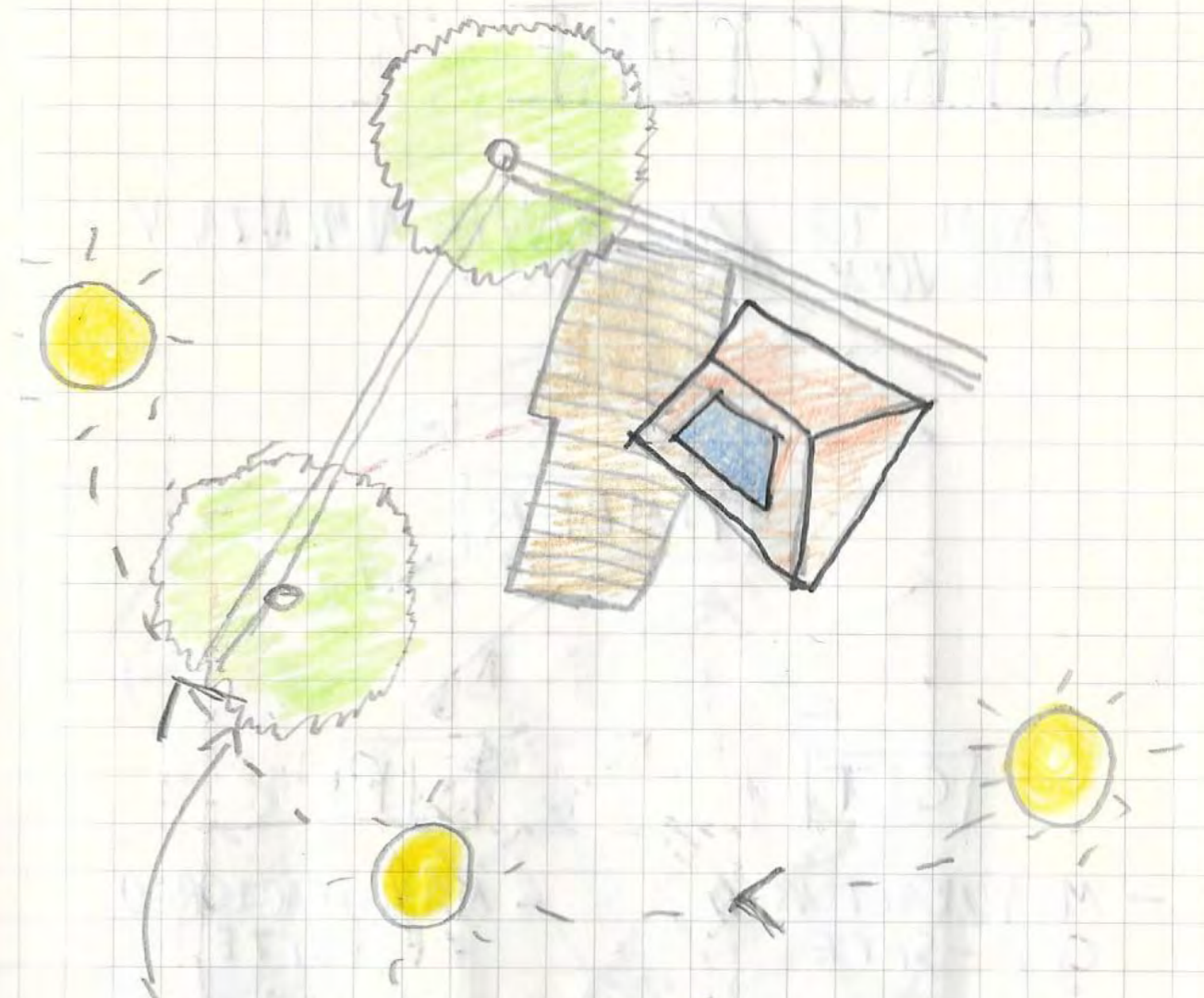
SITE ANALYSIS



SITE PLAN
NTS

SITE HAS ENOUGH SPACE TO ALLOW FOR VEHICLE ACCESS.

- ROAD PROVIDES ACCESS TO SITE FOR TRUCKS ETC.
- ROAD PROVIDES ACCESS TO SERVICES SUCH AS WATER + DRAINAGE.



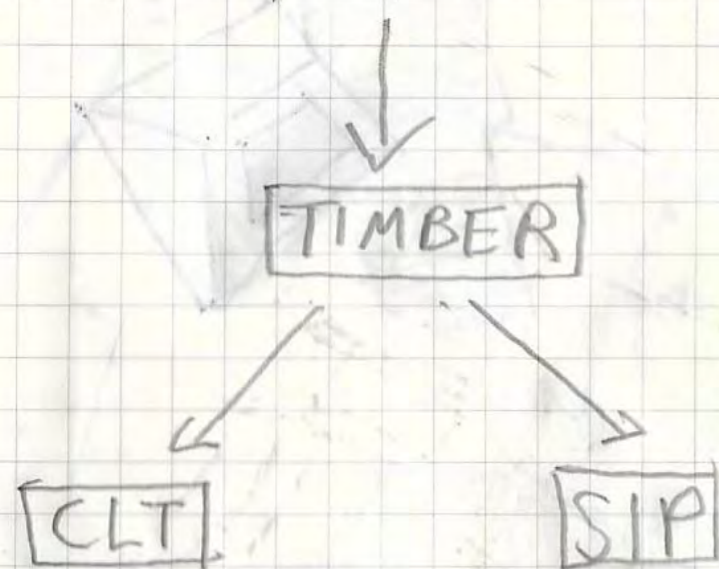
TREE PROVIDES SHADING IN AFTERNOON TO AVOID OVERHEATING

SERVICES

- WATER - MAINS
- DRAINAGE - MAINS
- ELECTRICITY - EXISTING HOUSE
- WIFI - EXISTING HOUSE
- HEATING - STOVE / SOLAR GAIN

STRUCTURE

- AIM TO USE ENVIRONMENTALLY FRIENDLY MATERIALS.



- MANUFACTURED OFF-SITE.

- MANUFACTURED OFF-SITE.

- PANELISED SYSTEM.

- PANELISED SYSTEM.

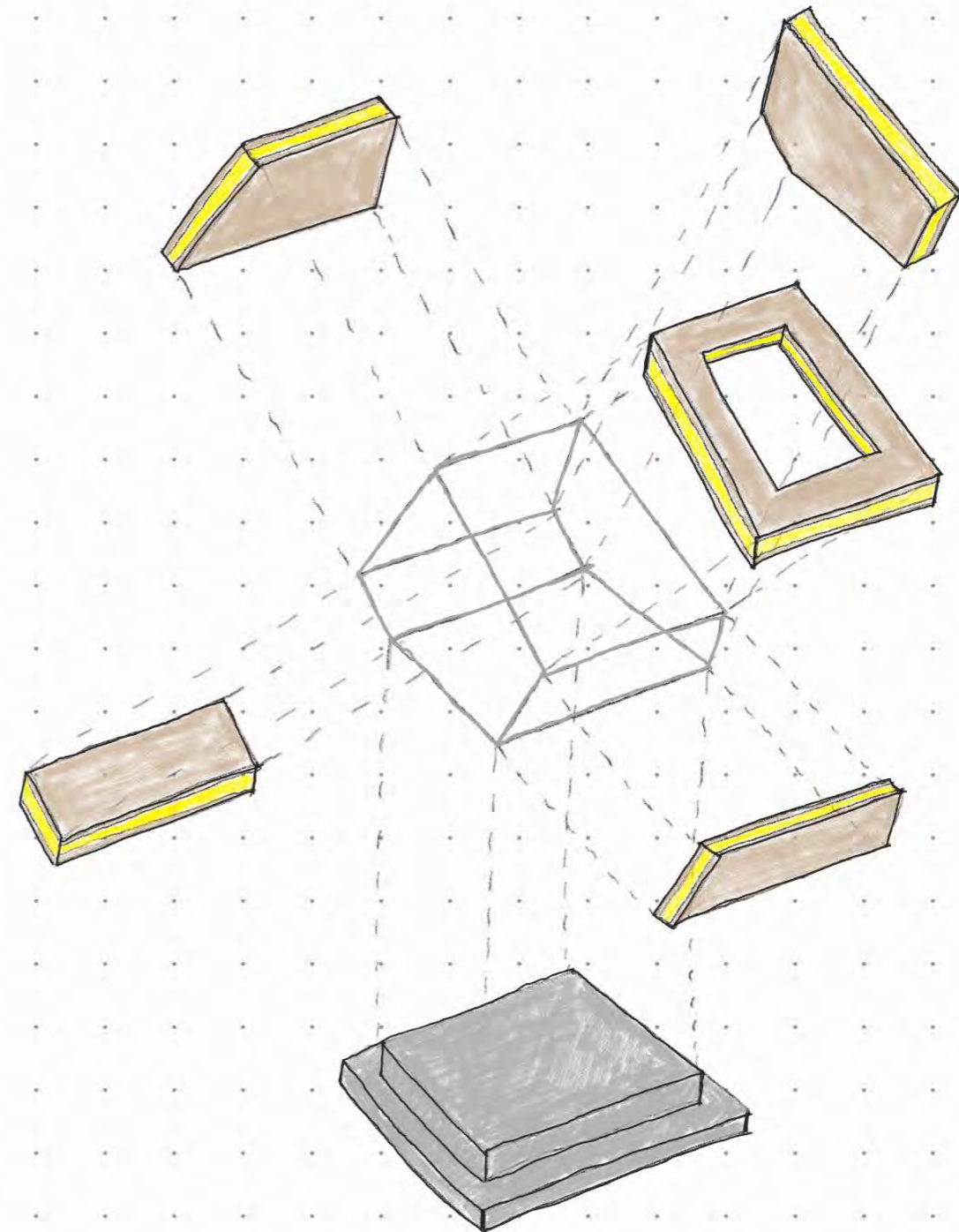
- MAY BE TOO HEAVY FOR SUCH A SMALL STRUCTURE.

- LIGHTWEIGHT STRUCTURE.

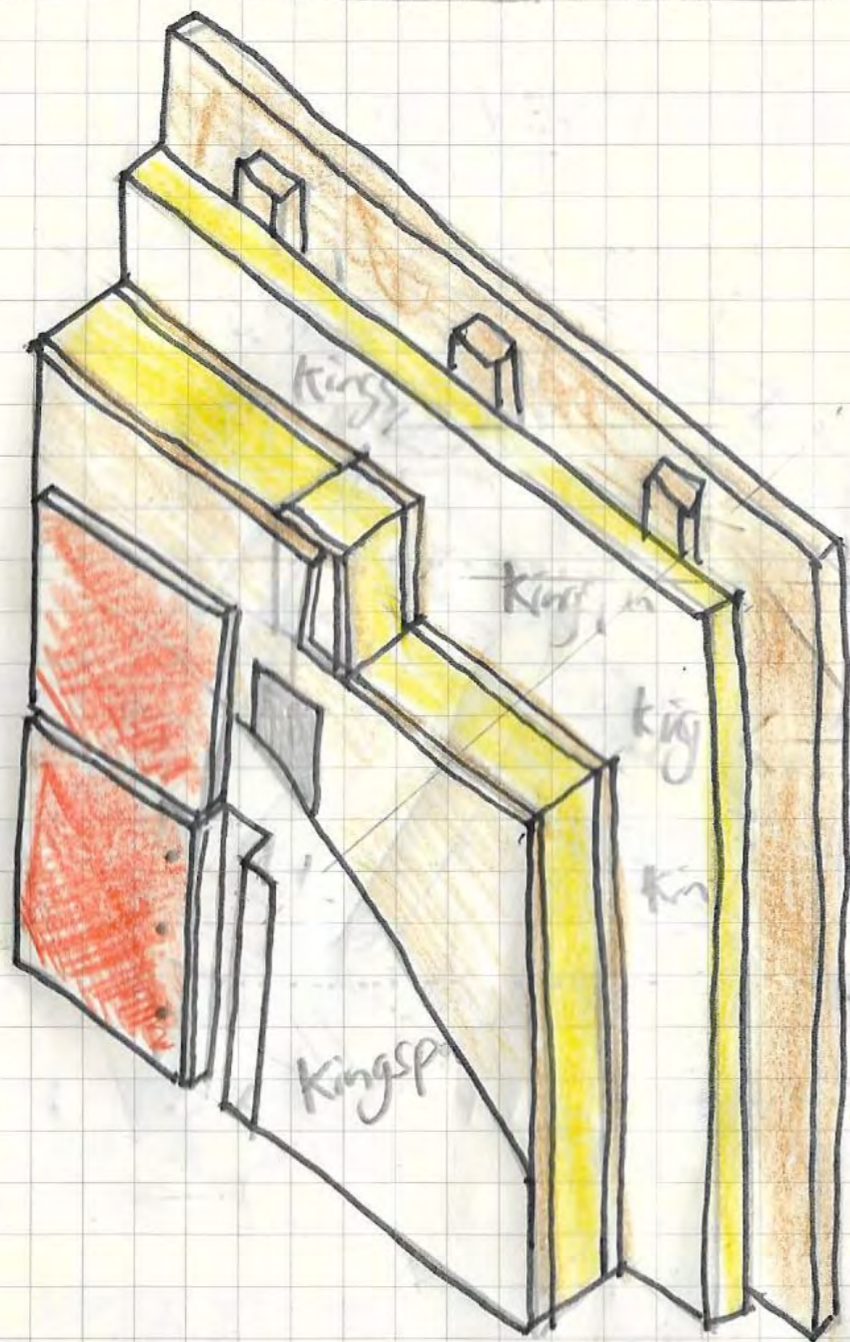
- WALL BUILD-UP MAY BE TOO THICK RESULTING IN LESS FLOOR AREA.

- SLIM WALL BUILD-UP RESULTING IN MORE FLOOR AREA.

STRUCTURE



EXTERNAL ENVELOPE



EXTERNAL ENVELOPE BUILDUP

OUTSIDE

- 20MM CORTEN STEEL BENCHMARK METALIC INTERLOCKING PLANK.
- ON 50MM BENCHMARK KS ALSO - OMEGA SECTION RAILS.
- KINGSPAN NILENT FOIL FACED BREATHABLE MEMBRANE. (0.5MM)
- 142MM KINGSPAN TEK CLADDING PANEL (SIP)
- 25MM KINGSPAN THERMAWALL TW55.
- 25X50MM VERTICAL BATTENS.
- 18MM BIRCH PLYWOOD

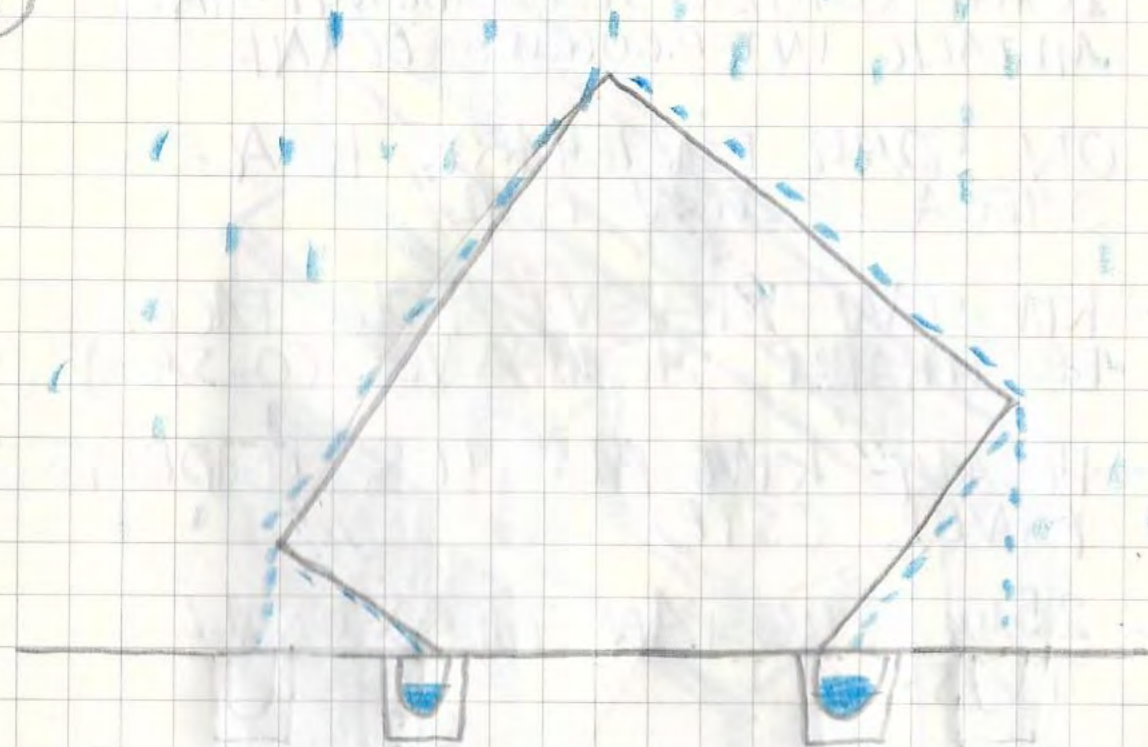
INSIDE

TOTAL THICKNESS = 280.5MM

U-VALUE = 0.15 W/m²K

WATER RUN OFF

①

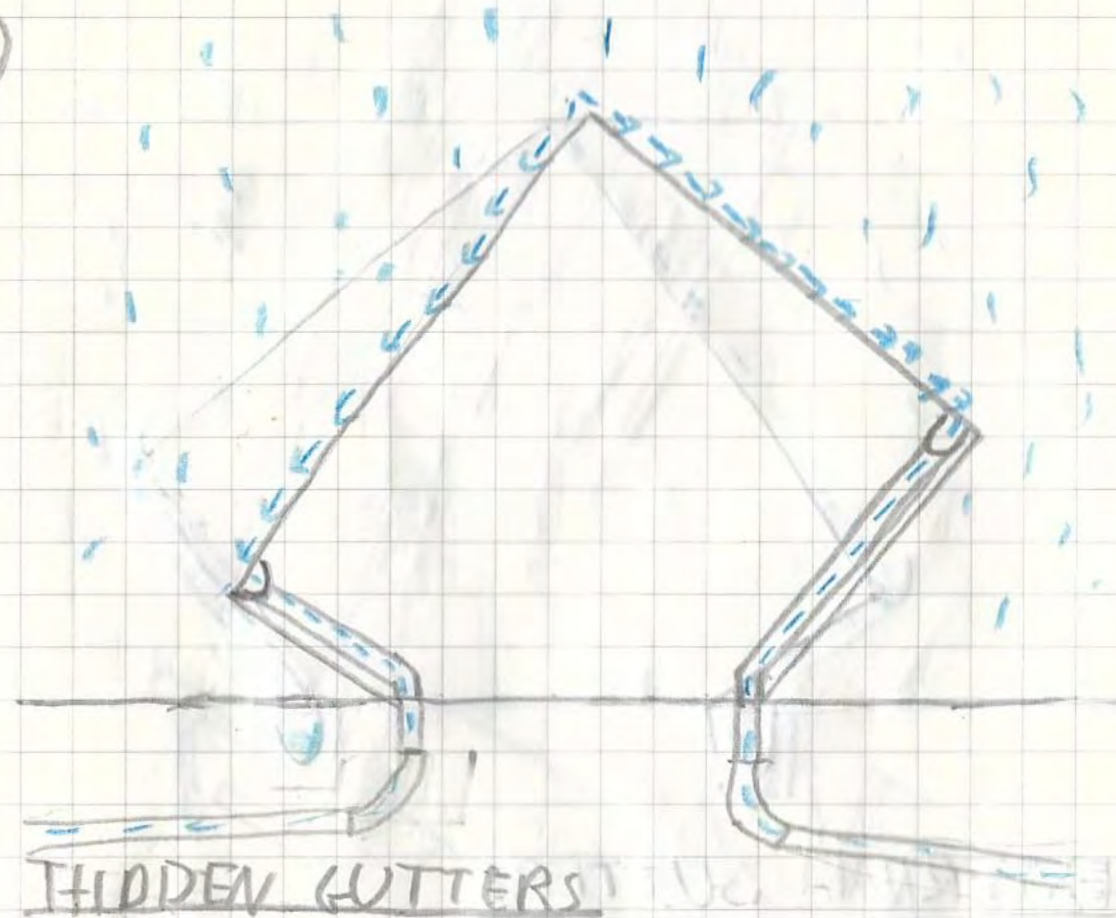


- DRAINS AROUND PERIMETER

- PROS : → NO GUTTERS + PIPES
- SIMPLE CONSTRUCTION

- CONS : → POTENTIAL FLOODING OF WATER

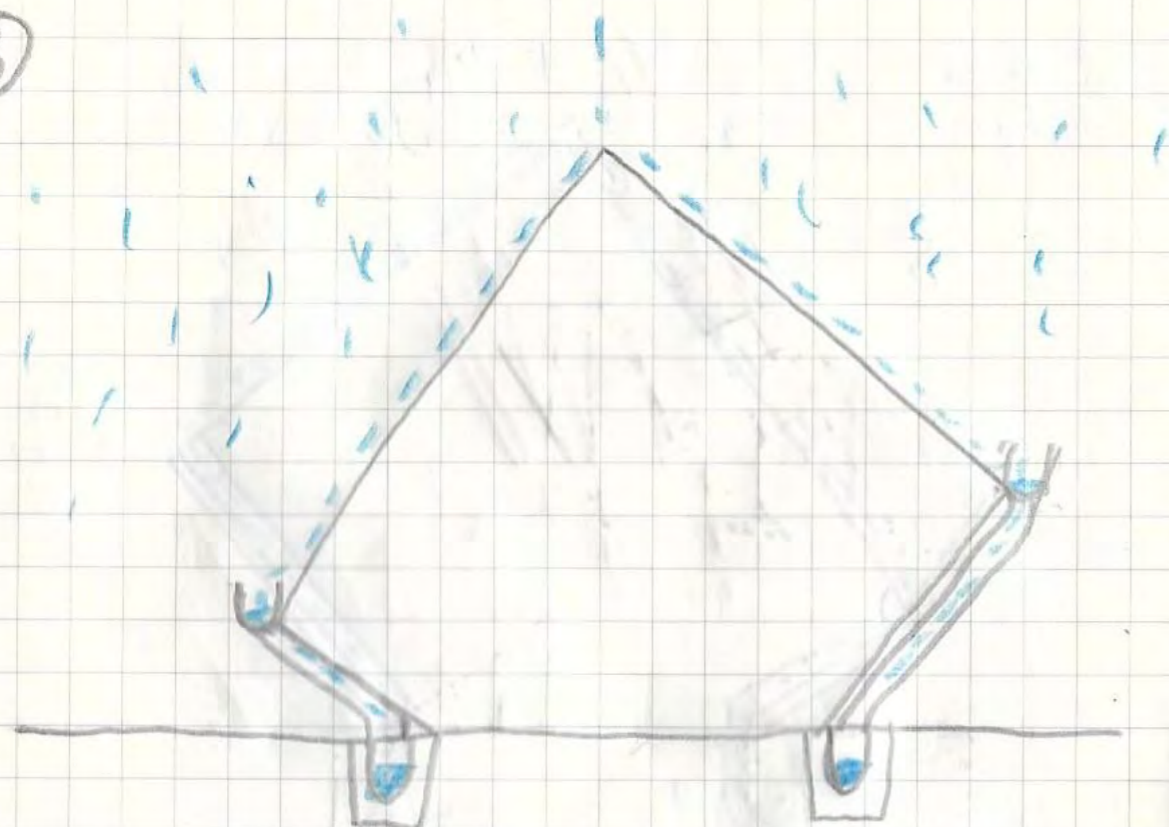
②



- PROS : → DRAIN OFF WATER BEFORE IT REACHES G.L.

- CONS : → COMPLEX DRAINAGE SYSTEM
- DIFFICULT TO MAINTAIN, CLEANING OUT GUTTERS?

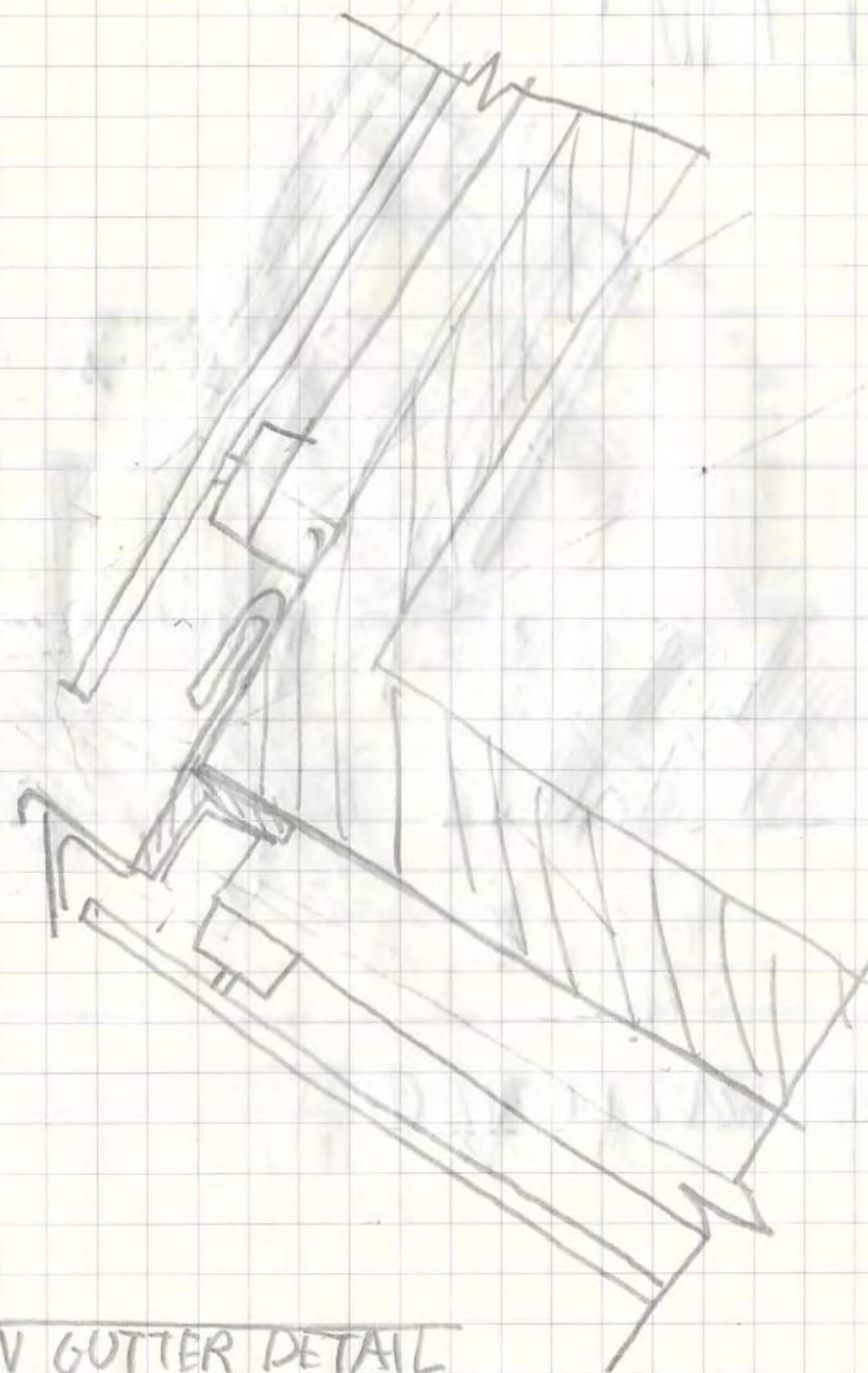
③



EXTERNAL GUTTERS

- PROS : → SIMPLE CONSTRUCTION.
→ EASY TO MAINTAIN.
- CONS : → NEGATIVELY IMPACTS THE DESIGN INTENT.

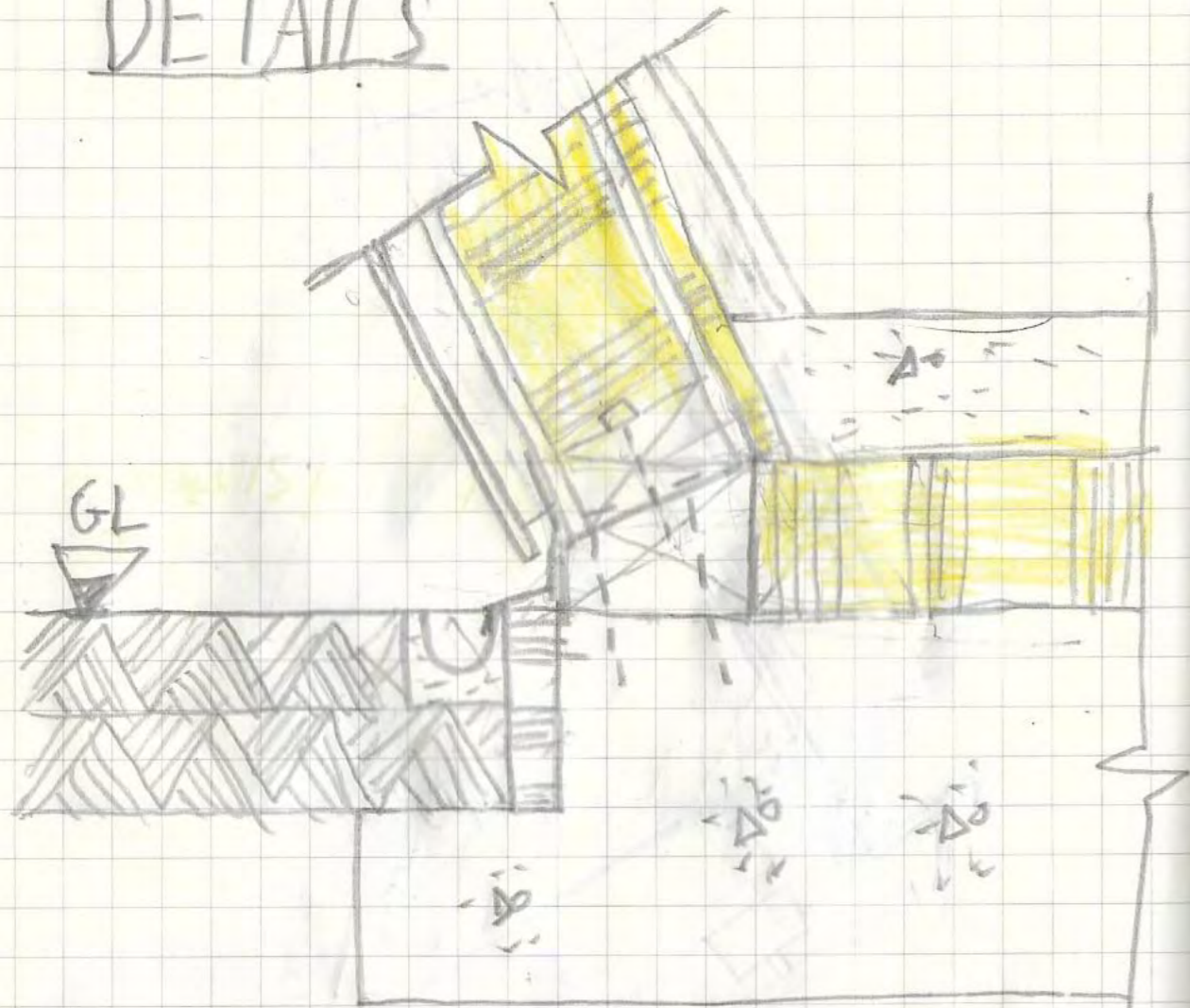
WATER RUN OFF
FOR PROTECTING WALLS



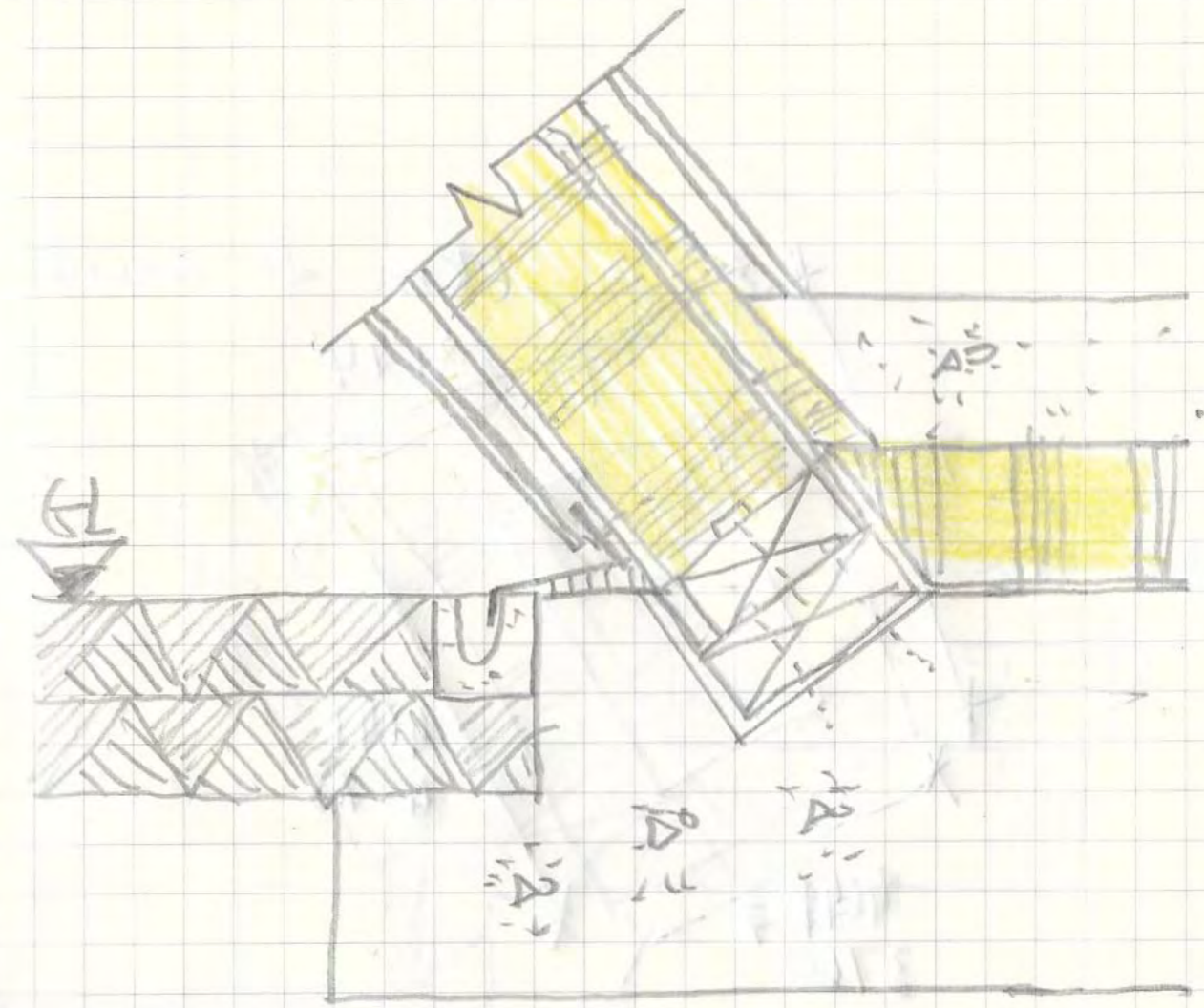
HIDDEN GUTTER DETAIL NTS

- OPTED FOR OPTION ② BECAUSE IT DOES NOT EFFECT DESIGN INTENT AS MUCH AS ALL OTHER OPTIONS.

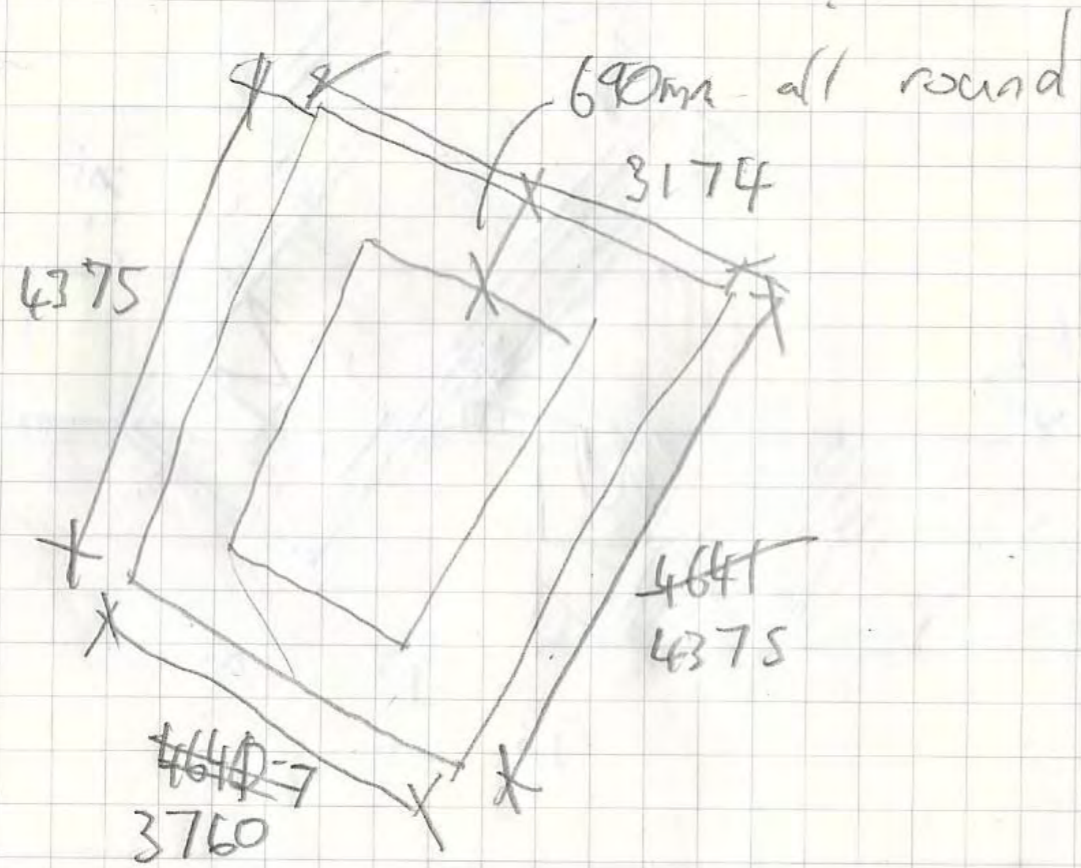
DETAILS



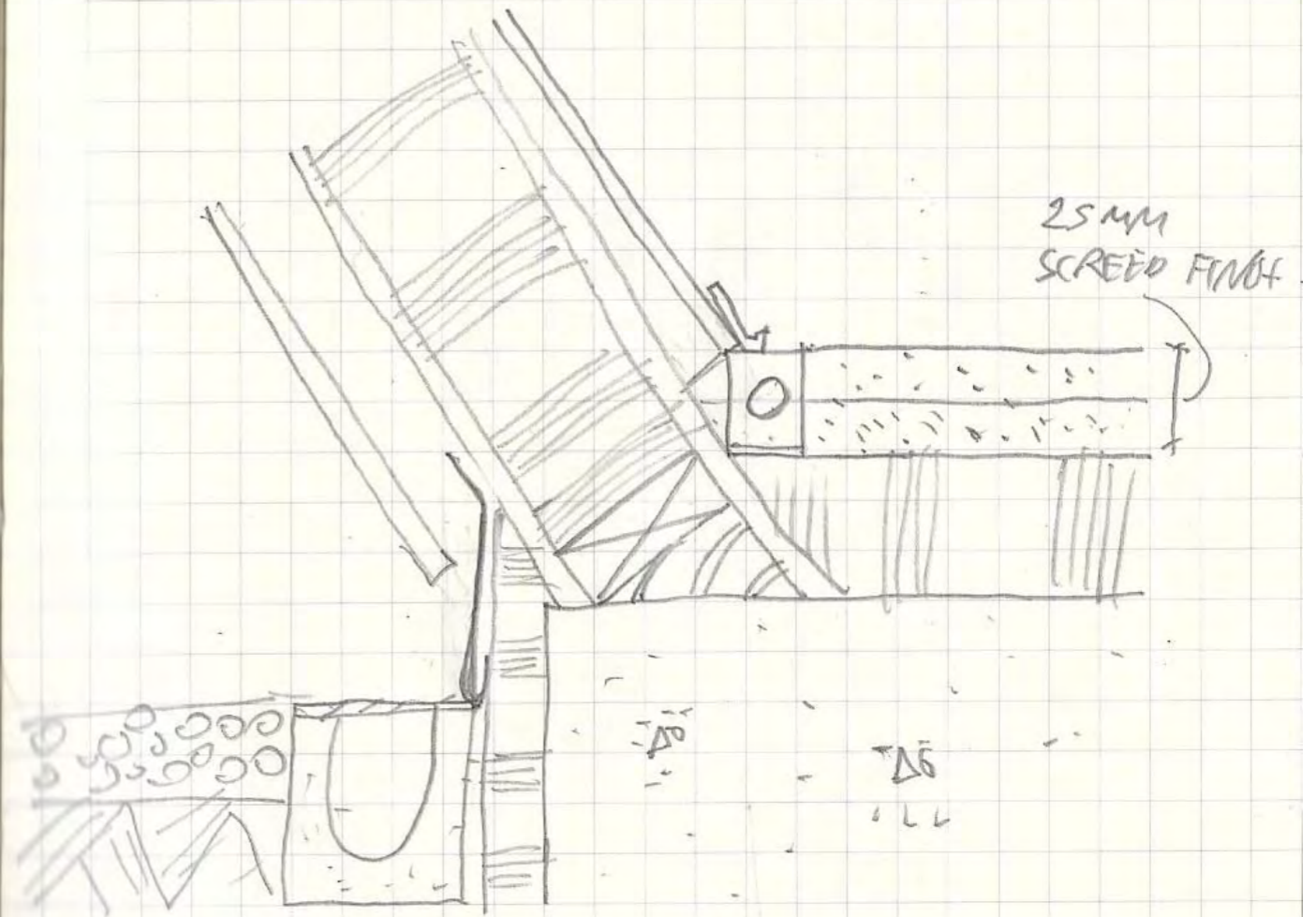
FLOOR - WALL DETAIL ①
NTS



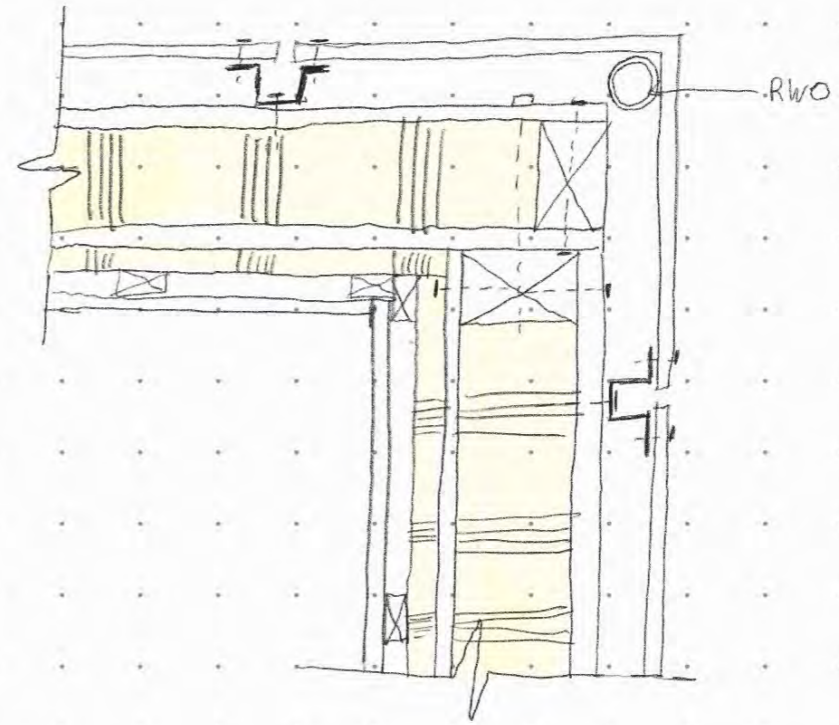
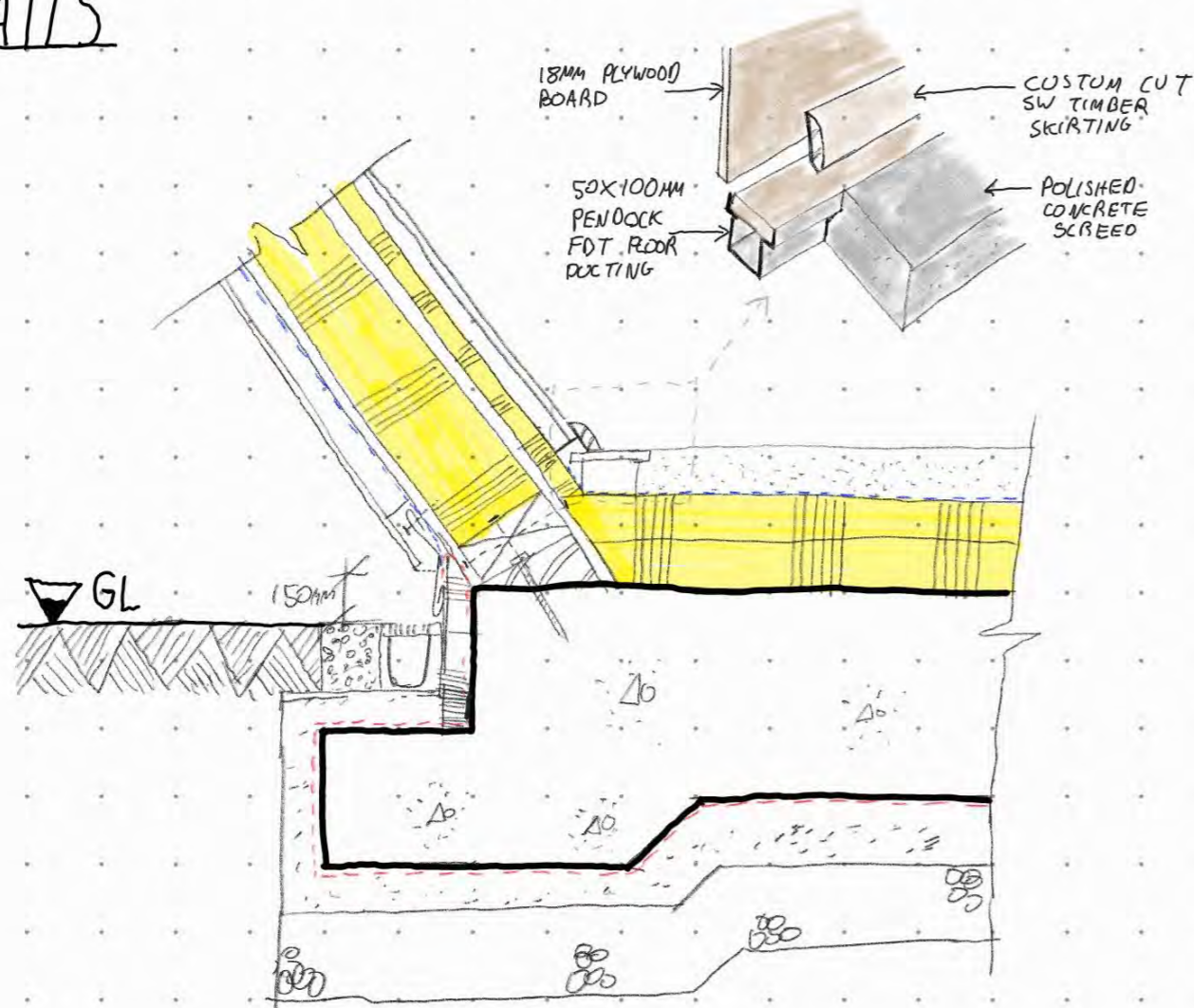
FLOOR - WALL DETAIL ②
NTS



Window = 3685 X 2484 X 3685 X 3070

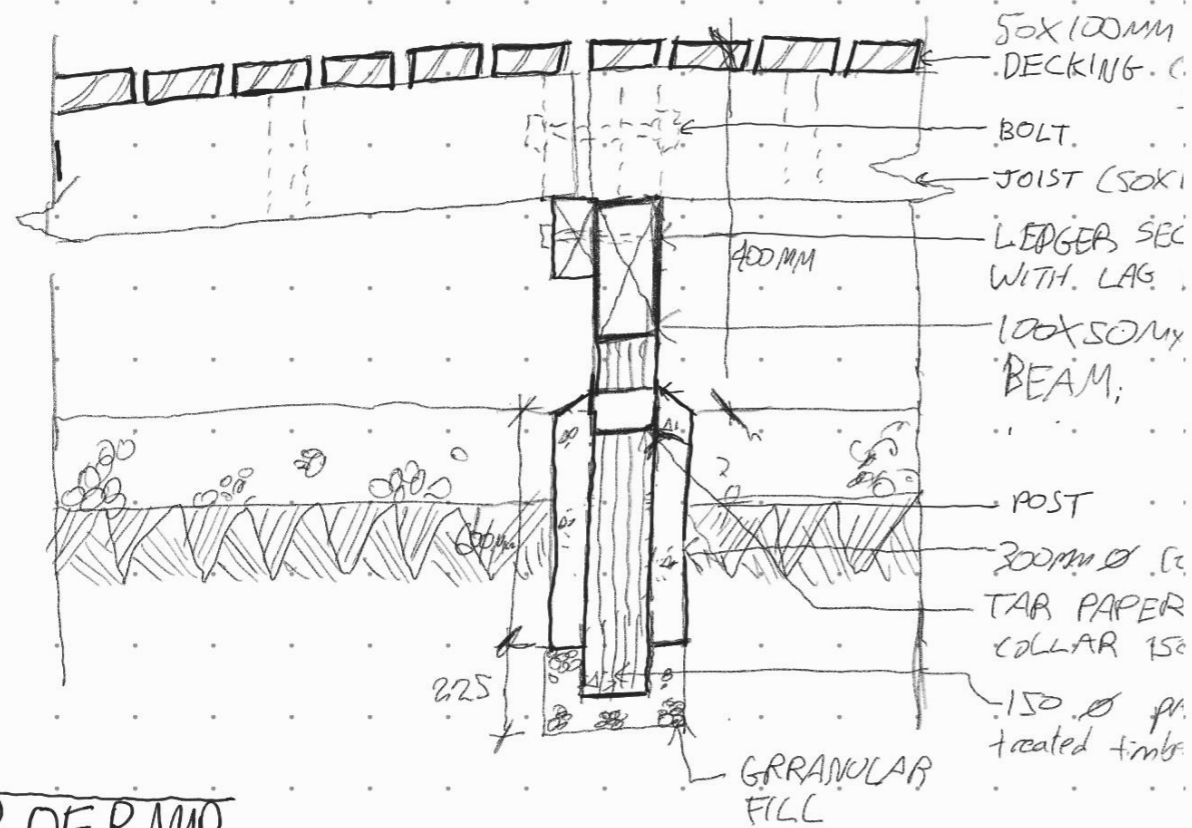


DETAILS

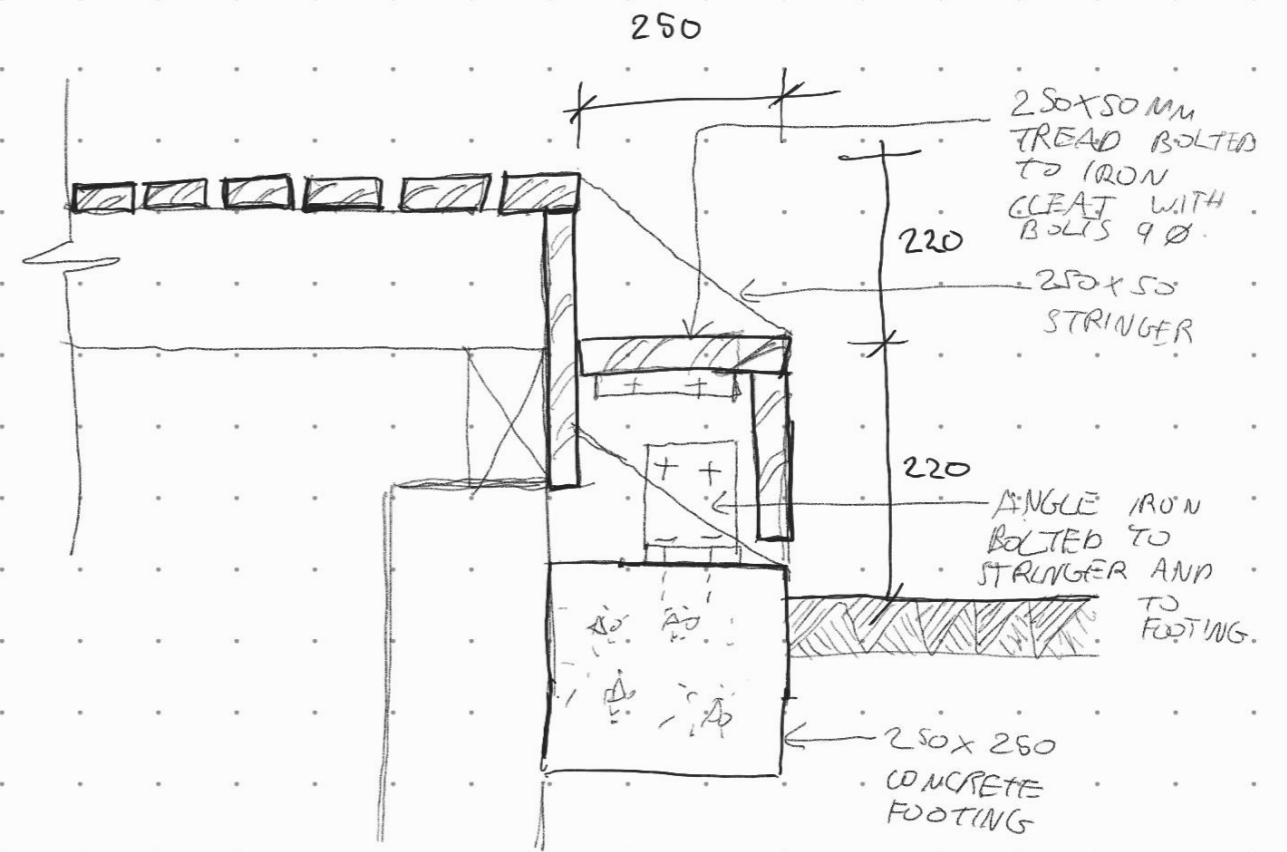


FLOOR SPEC

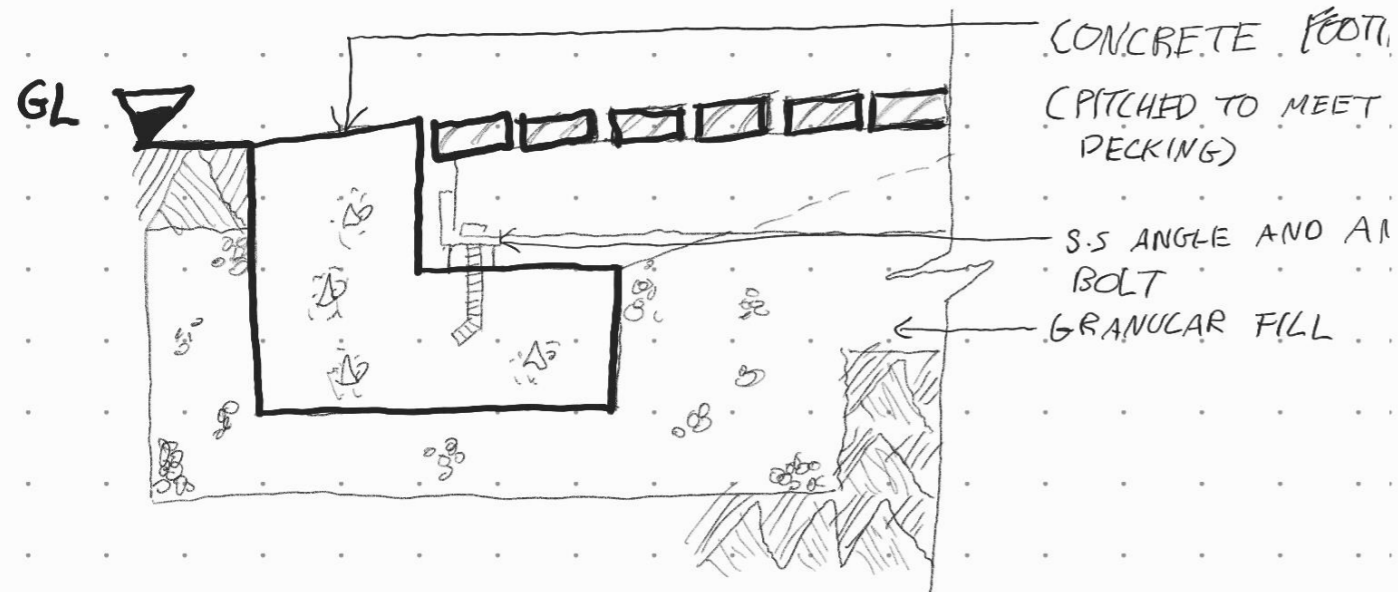
- 50MM ROADSTONE POLISHED CONCRETE FLOOR SCREED
- MOISTURE BARRIER
- 120 + 120MM GUTEX THERMOSAFE-WD WOODFIBRE INSULATION
- 300MM CAST-IN-SITU CONCRETE RAFT FOUNDATION
- RADON BARRIER
- 50MM SAND BLINDING
- 150MM HARDCORE



TOP OF RAMP
NTS

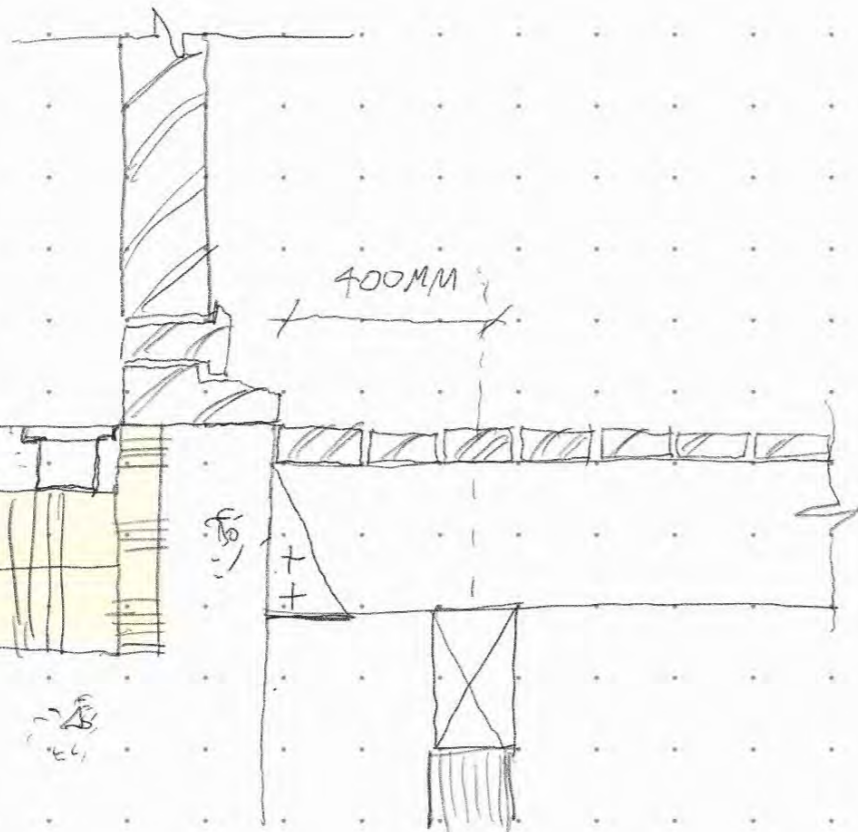
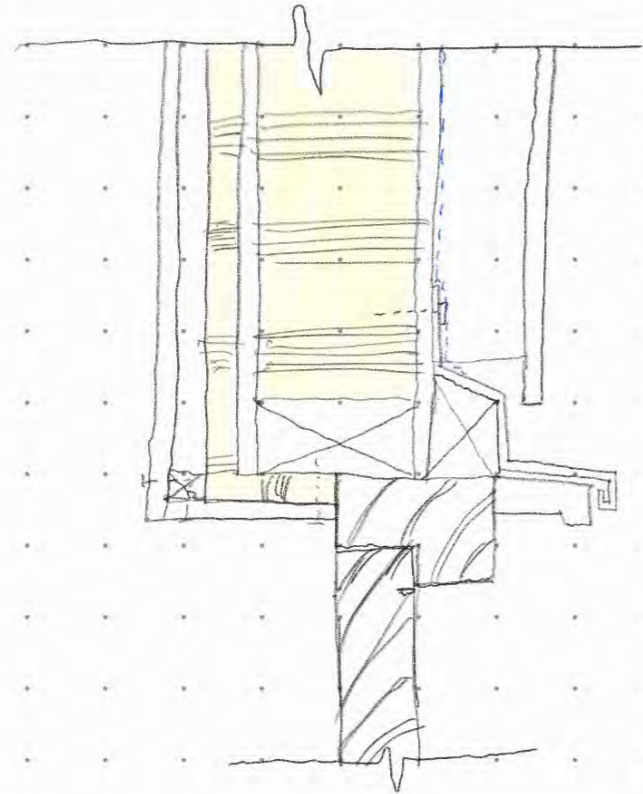


STEP DETAIL
NTS

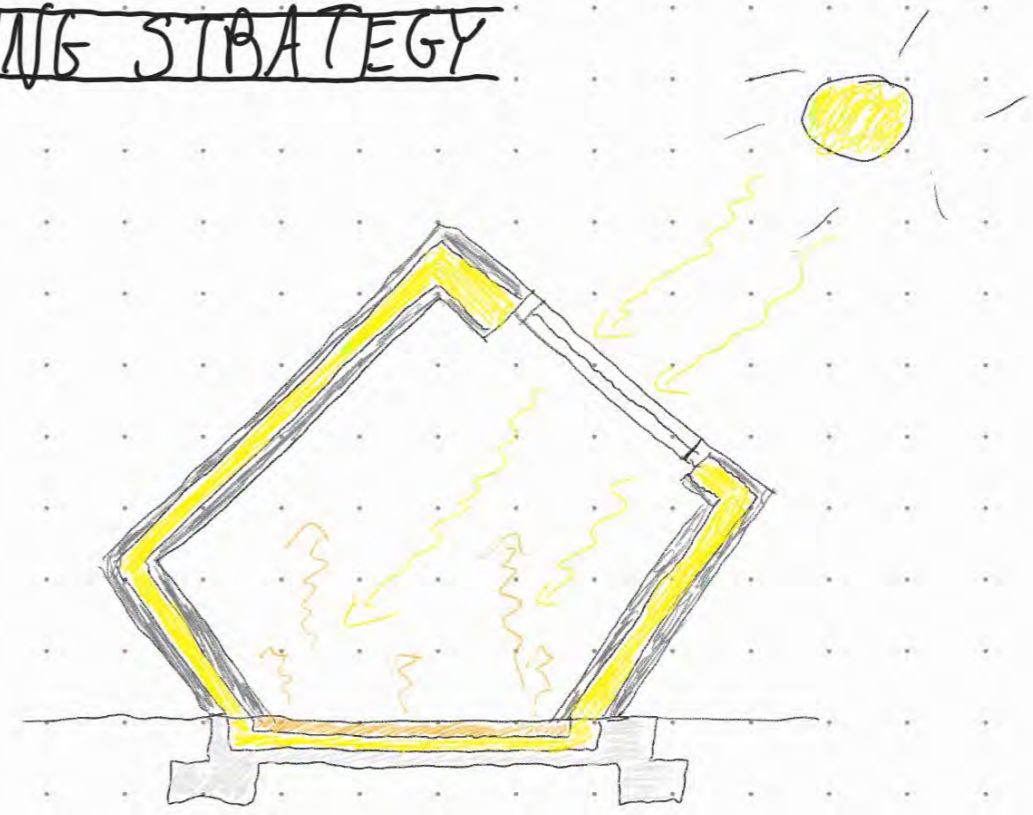


RAMP FOOTING
NTS

HEATING STRATEGY

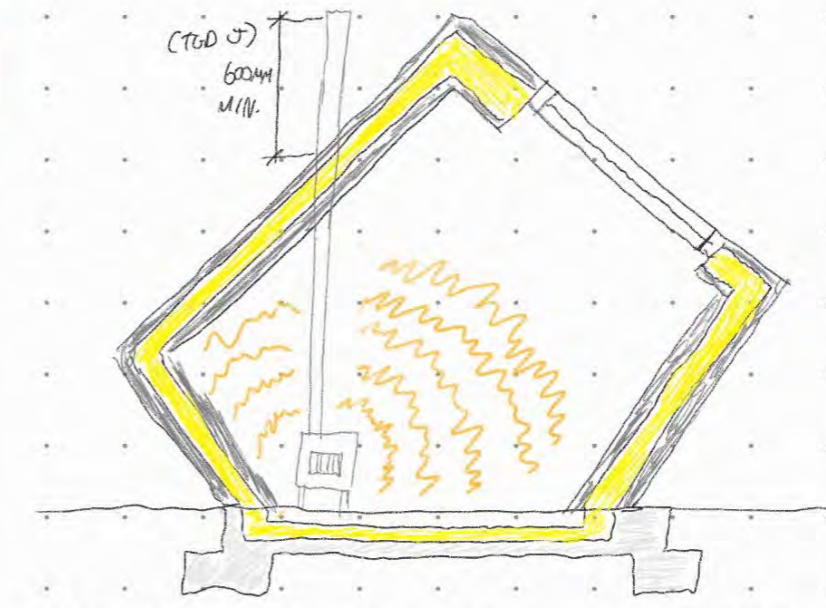


DOOR SECTION
NTS



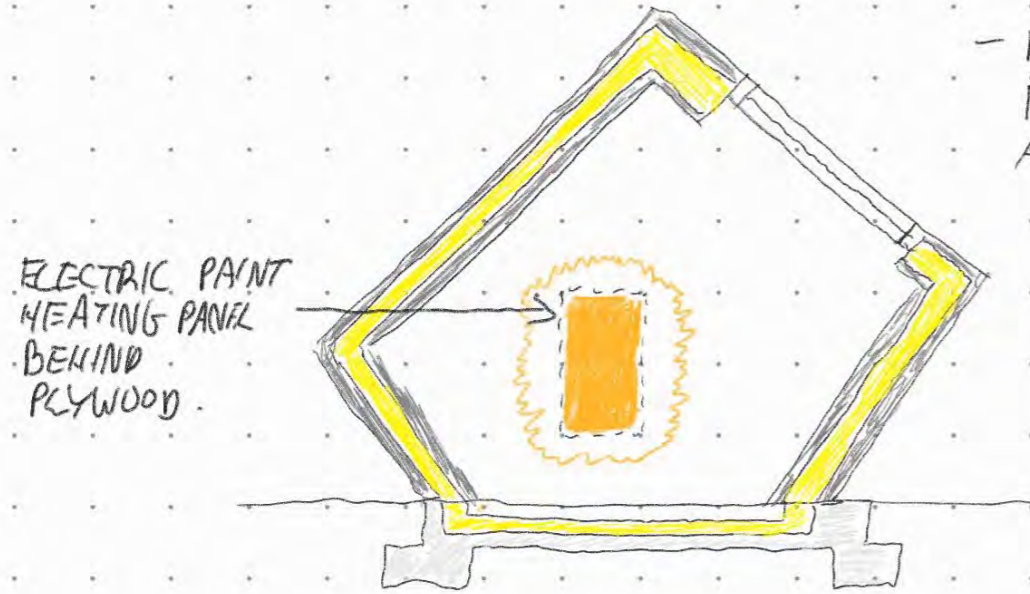
- SOLAR GAIN FROM LARGE ROOFLIGHT
WILL PROVIDE PASSIVE HEATING
FROM CONCRETE SCREED ABSORBING
THE SUNS HEAT.

ISSUE



- STOVE MAY NOT BE SUITABLE FOR
PASSIVE HOUSE CONSTRUCTION INCREASING
RISK OF OVERHEATING.

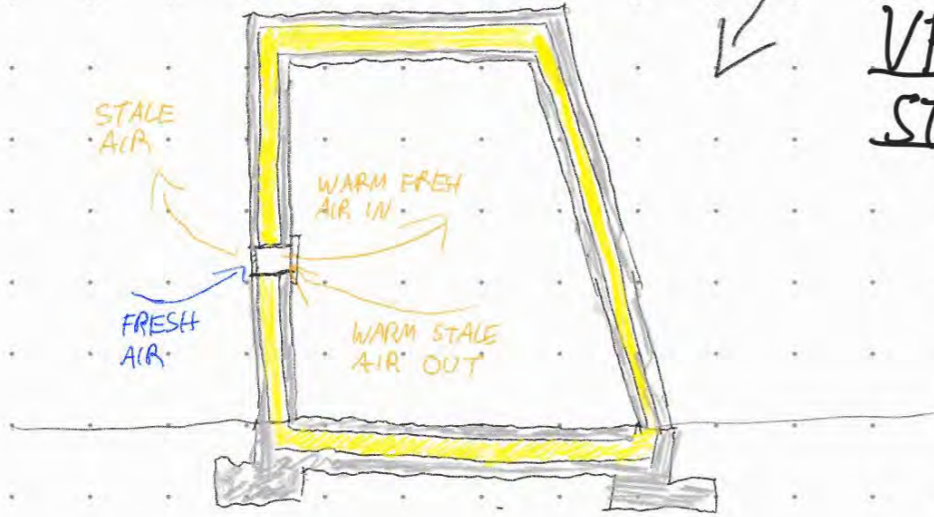
SOLUTION



ELECTRIC PAINT HEATING PANEL BEHIND PLYWOOD.

- PROVIDES MORE FLOOR SPACE FOR A SMALL OFFICE.

- ELECTRIC PAINT WILL PROVIDE HEATING ON A COLD WINTER DAY WHEN LUNDOS CANT PROVIDE ENOUGH HEAT.

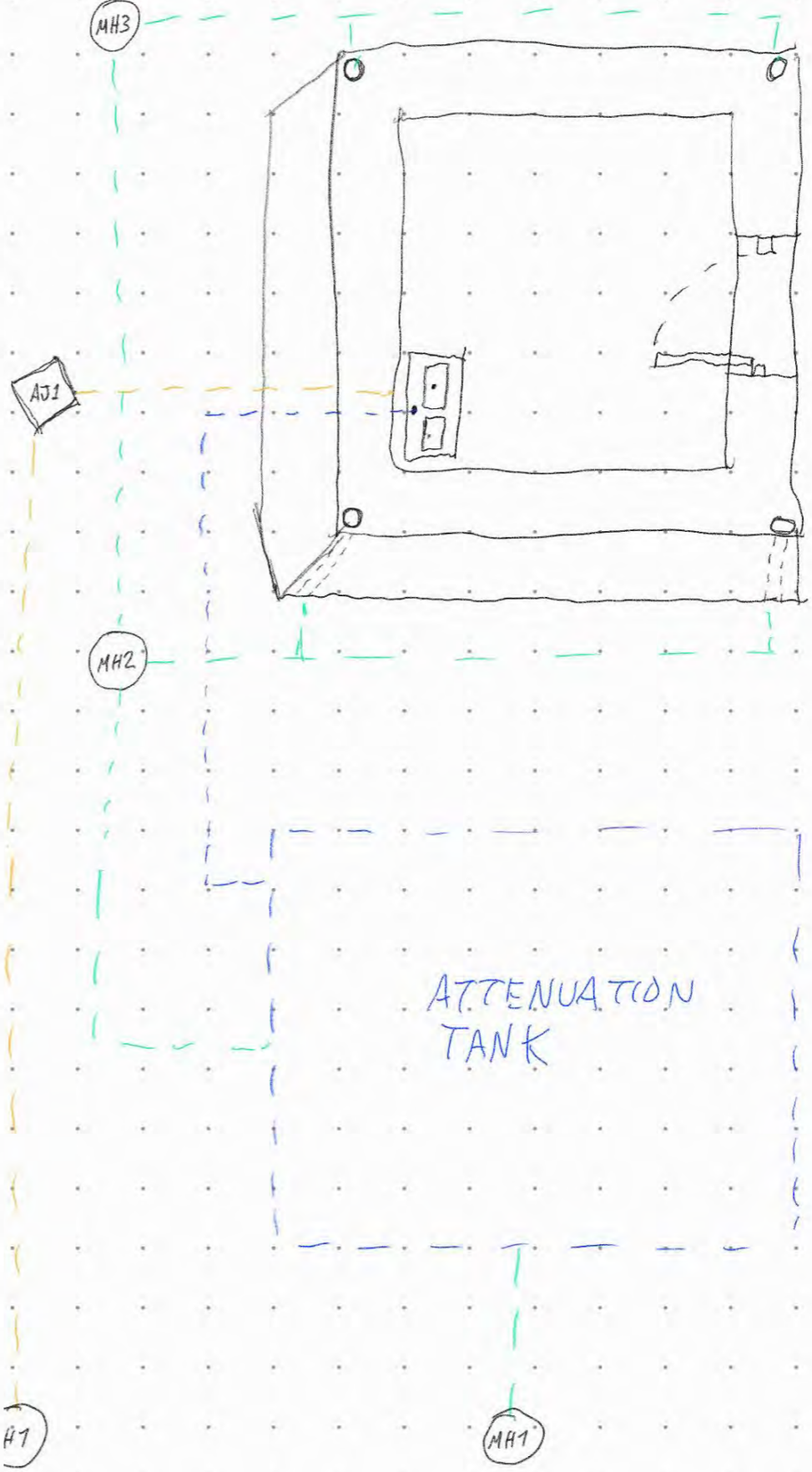


VENTILATION STRATEGY

- LUNDOS VENTILATION WITH HEAT RECOVERY WILL PROVIDE THE PRIMARY HEATING SOURCE AS WELL AS VENTILATION.

SERVICES

- 100Ø FOUL WATER DRAINAGE @ 1:60 FALL
- 50Ø WATER SUPPLY
- 100Ø SURFACE WATER DRAINAGE @ 1:700 FALL



AJ1

MH3

MH2

MH1

ATTENUATION TANK