

*“The Unexpected
Pool Garden”*
project: “the unexpected pool garden”

AD671
Georgina
Larbie

studio16
tony roberts
+
conor

the brief: build something, with “[what is] the case for ... never demolishing another building” said by Oliver Wainwright in mind

chapters:

site

what did I see?

what was my initial reaction to it?

materials

what materials would I like to use?

application of materials

program

'program'/how does this swimming pool work?

environmental design

moments

site

this is the site:



railway line

Bellerbys
College
Brighton

Jurys Inn
Hotel

Stroudley
rd

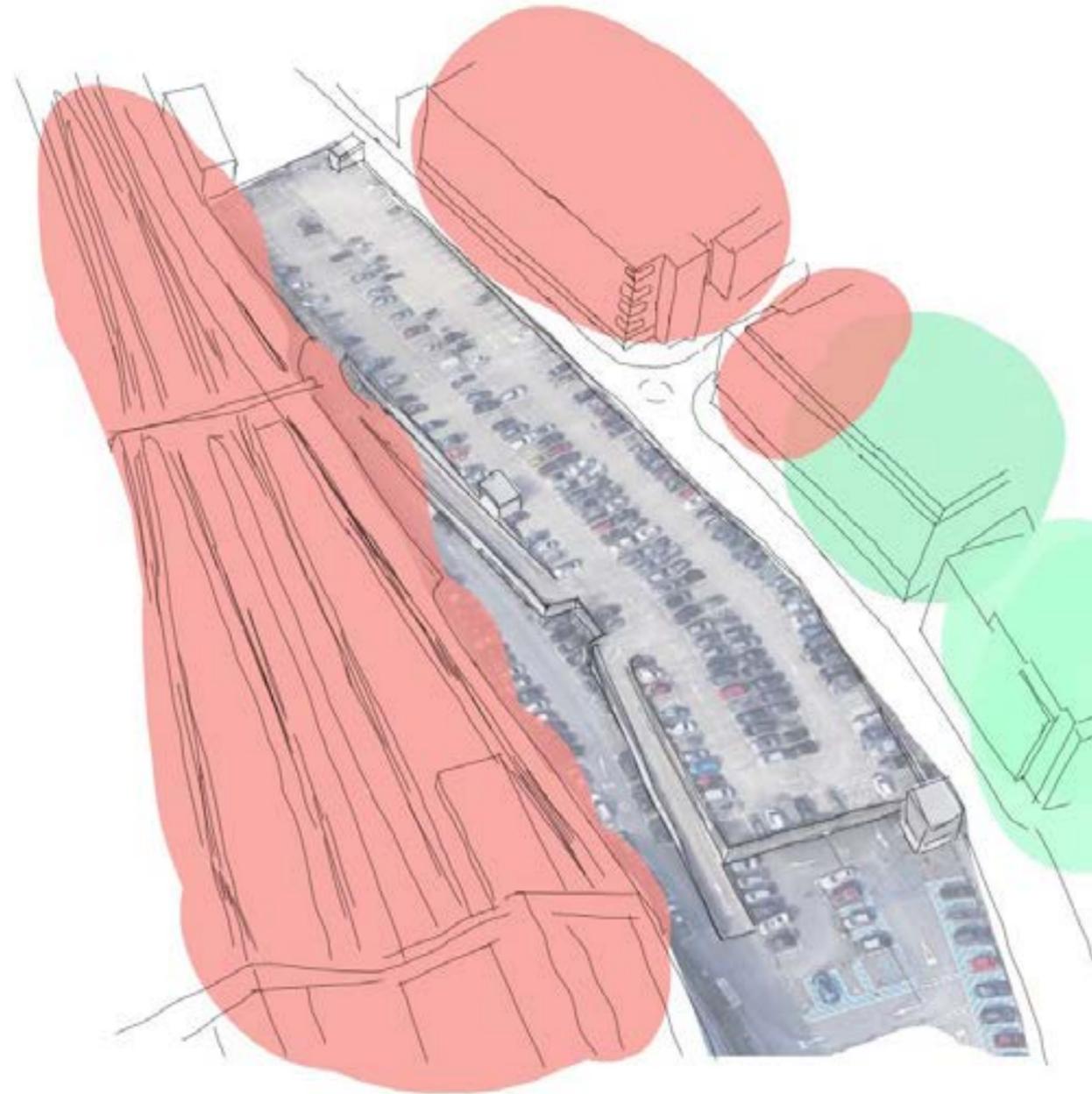
CityView
offices

Brighton
train station
carpark

sharp incline

Brighton
train station

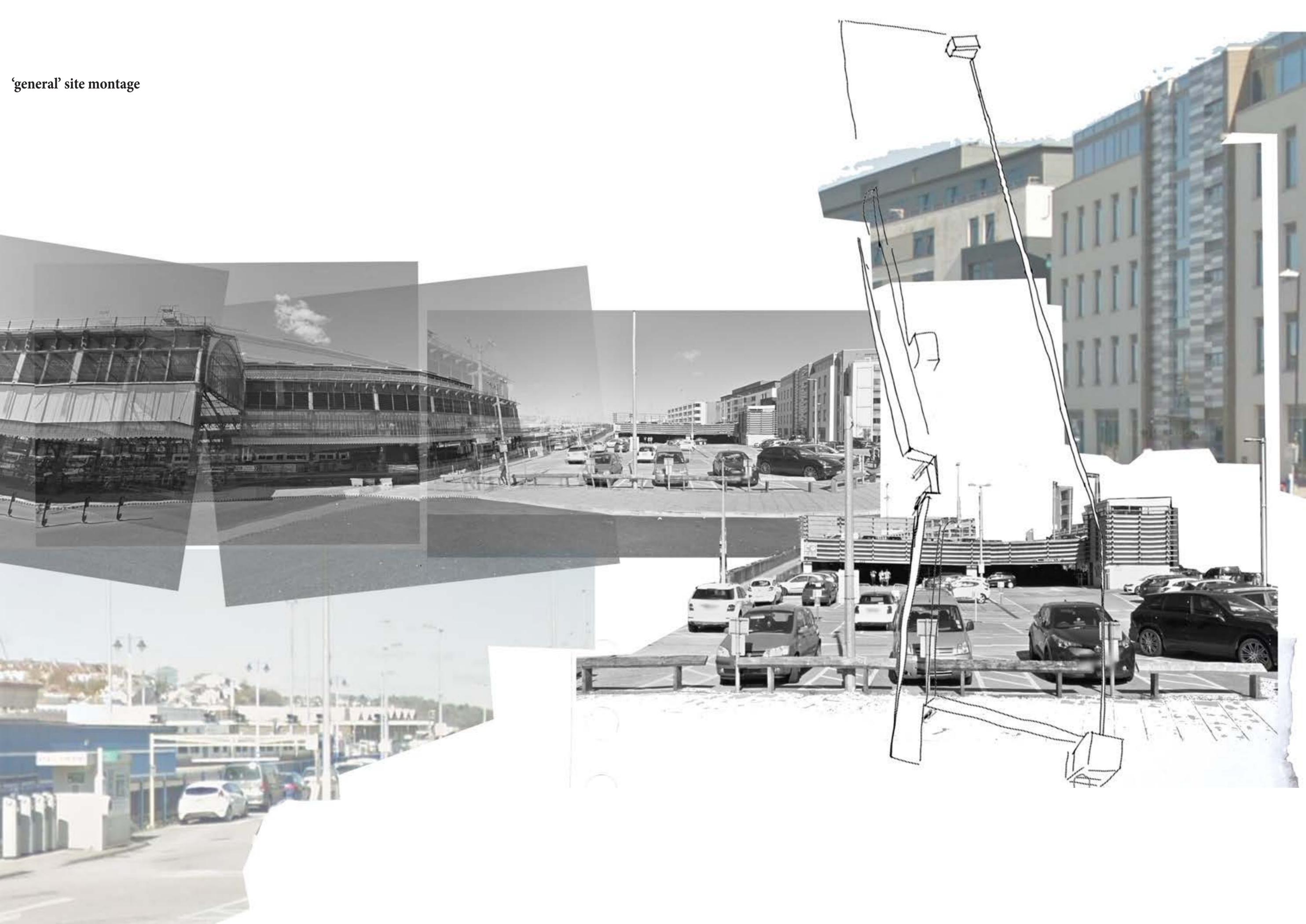
basic site inhabitation:



 public building/space

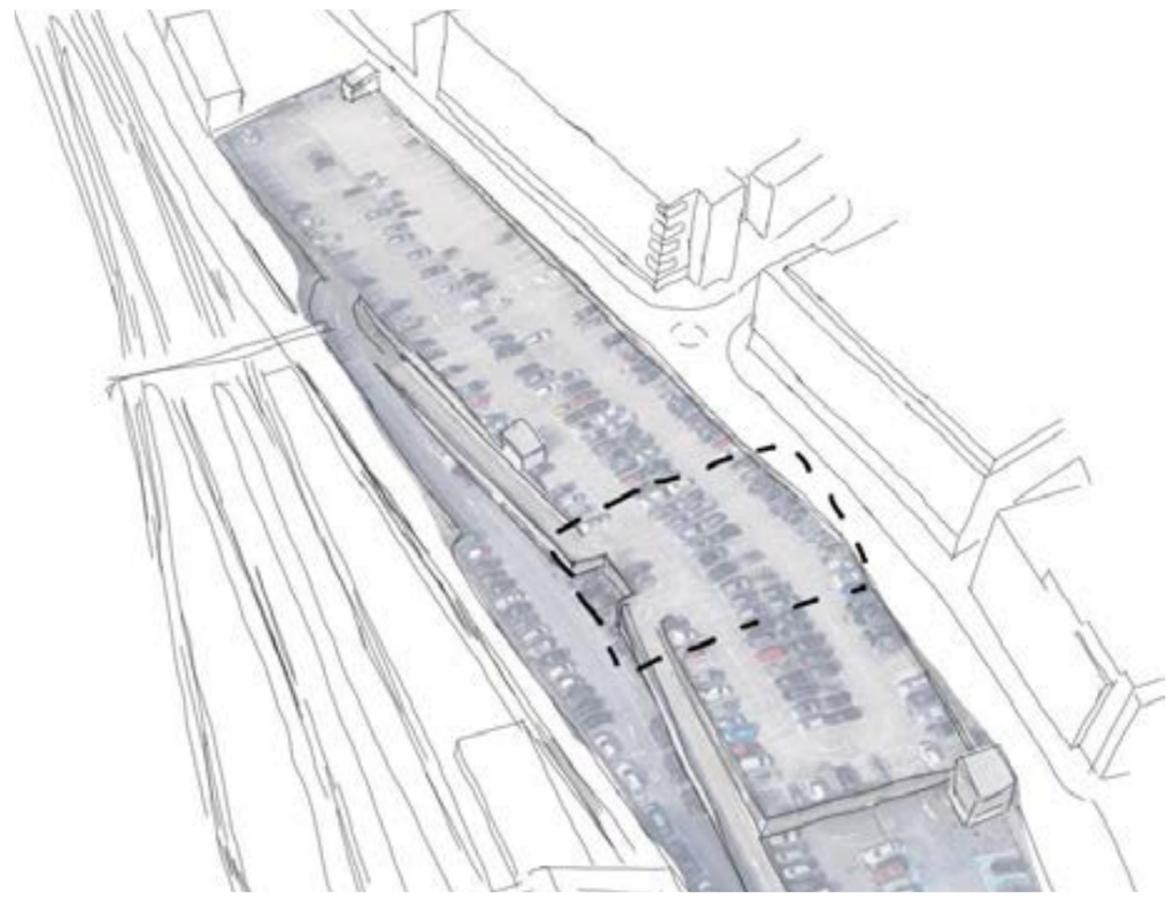
 private building/space

'general' site montage

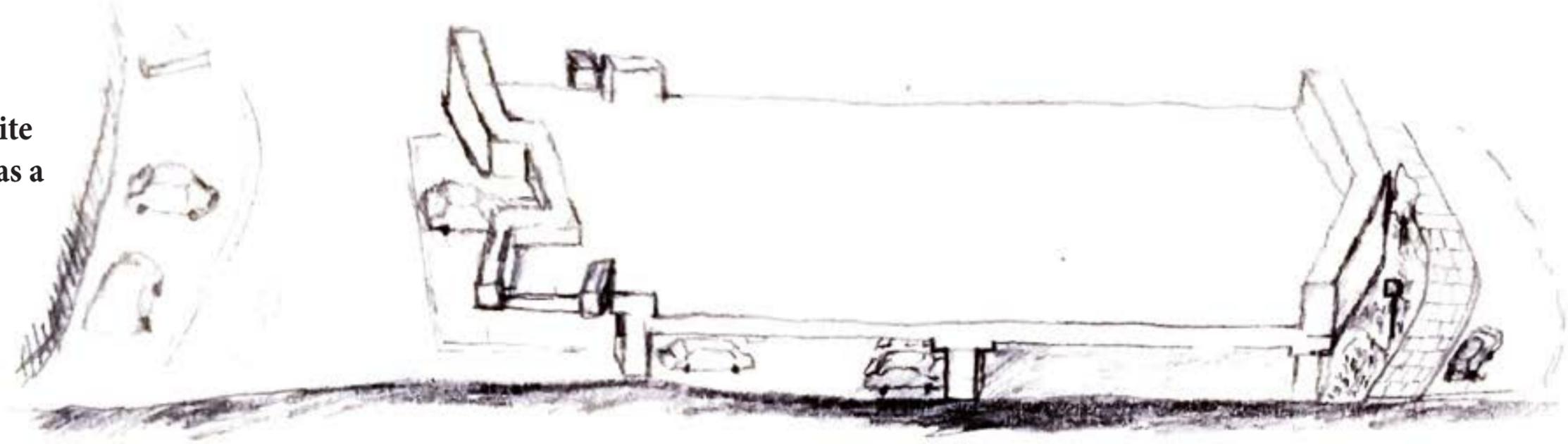




I am making the carpark my site



**specifically this part of site
(so I'll refer to this area as a
single part)**



'specific' site montage; *I am interested in building on/around the carpark*



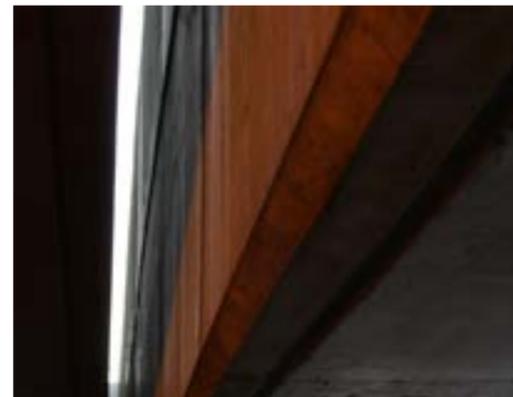
on site I noticed:

the dark spaces of the car-park contrast drastically to the it's immediate surroundings



on site I noticed:

**the structural details that
frame the dark spaces: col-
umns and edges**



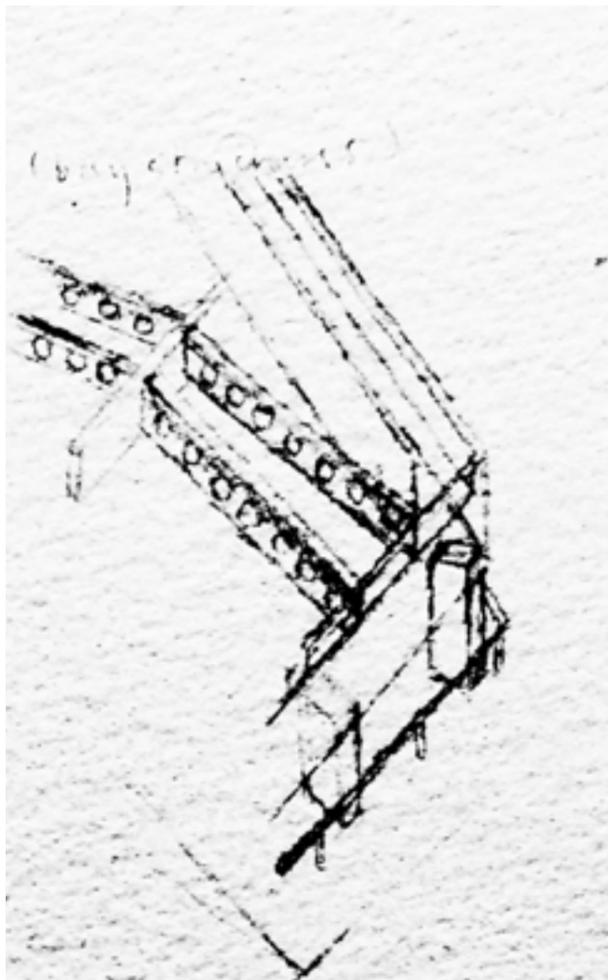
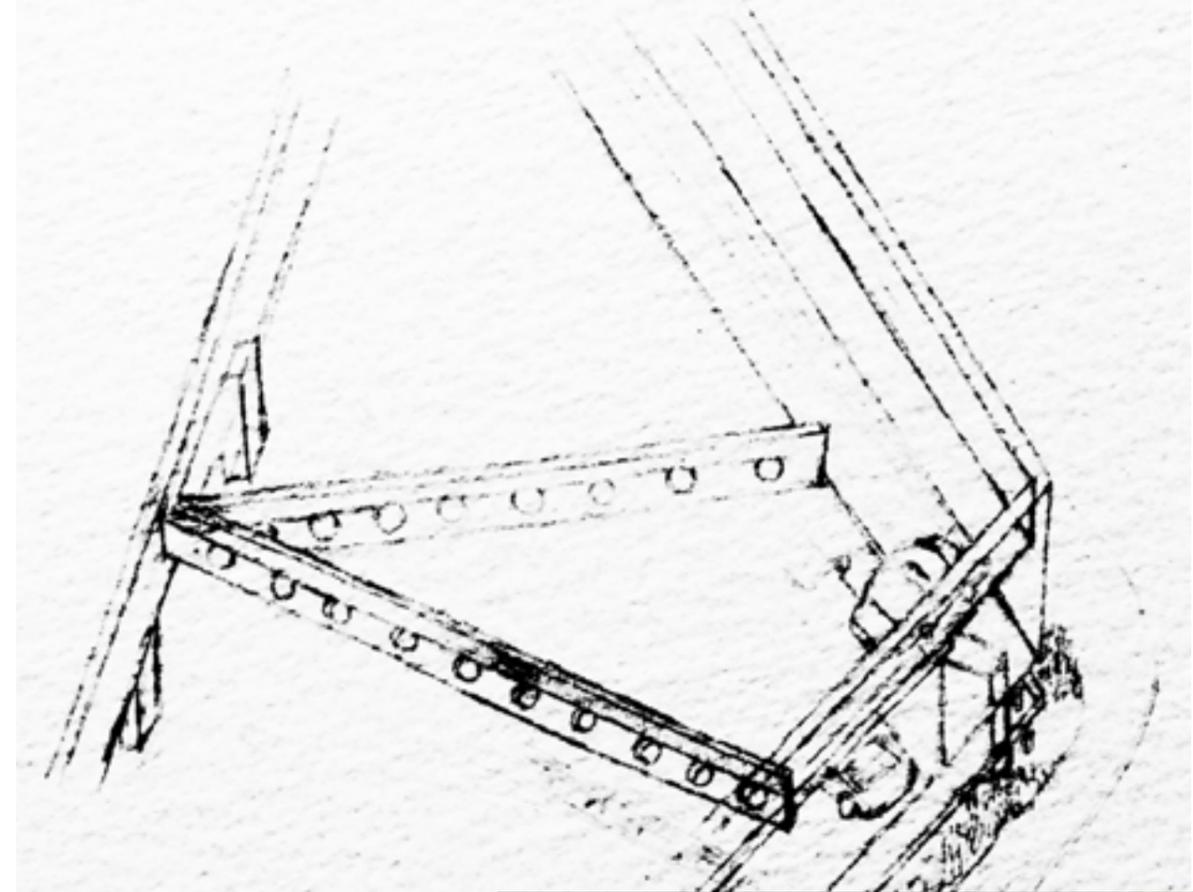
segments of ceiling, created by bisections of structural supports

further details of how the ceiling show-
cases the structures "interacting"

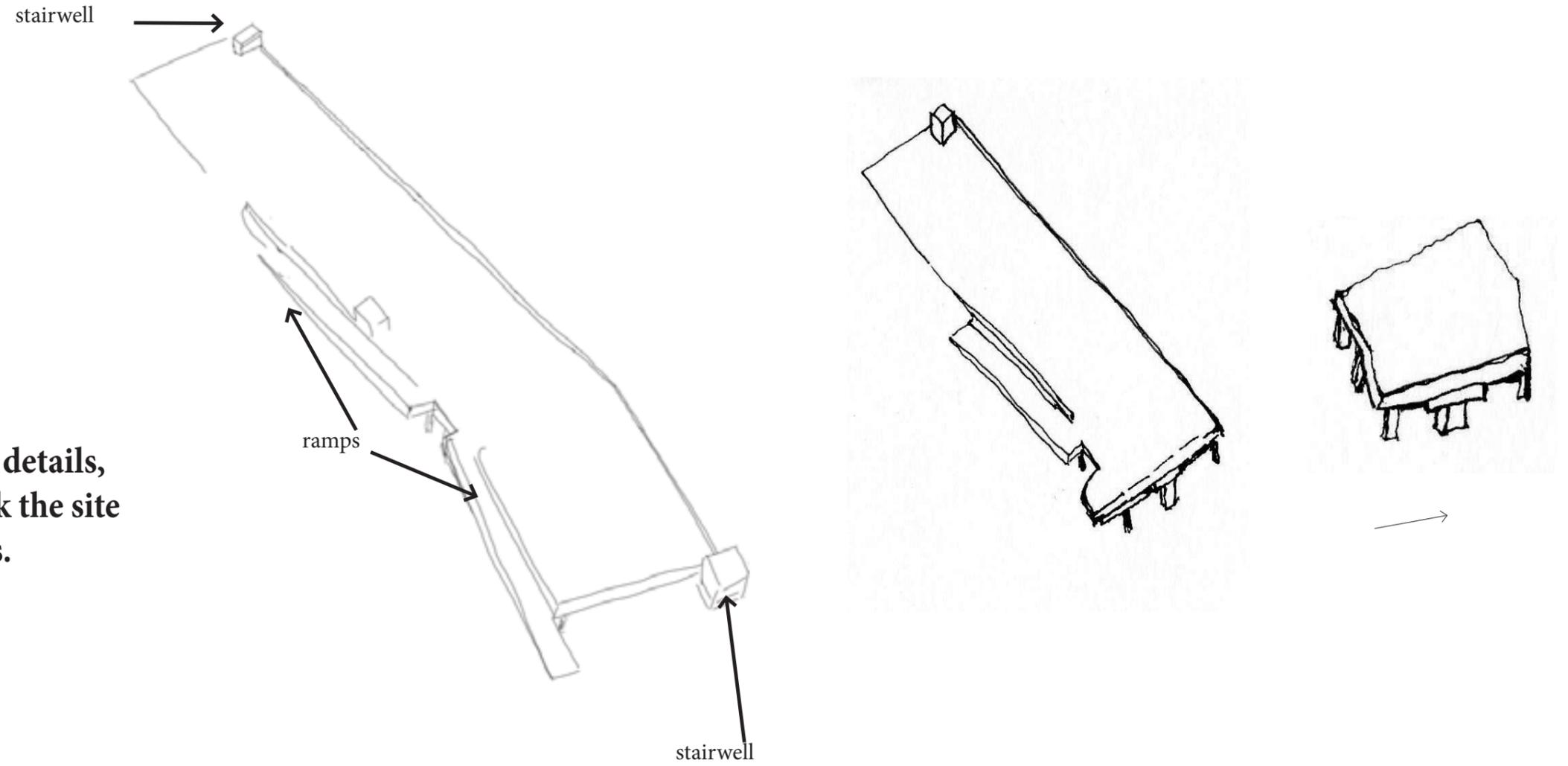
on site I noticed:

the angular placement of beams and how they interact with the limited light

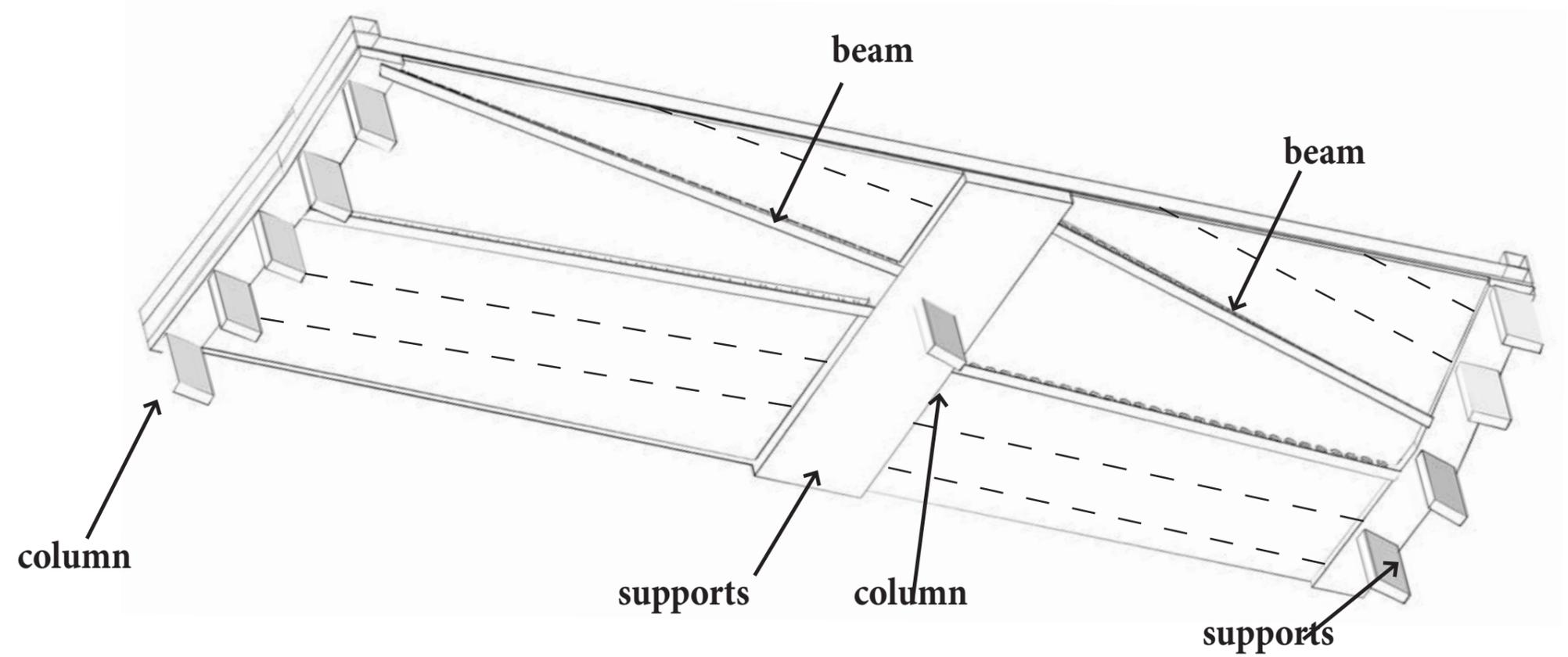
their exact placement was very interesting to me



analysing the site
to analyse site details,
I need to break the site
down into bits.



bay structure of the
part of the carpark that
I'm interested in

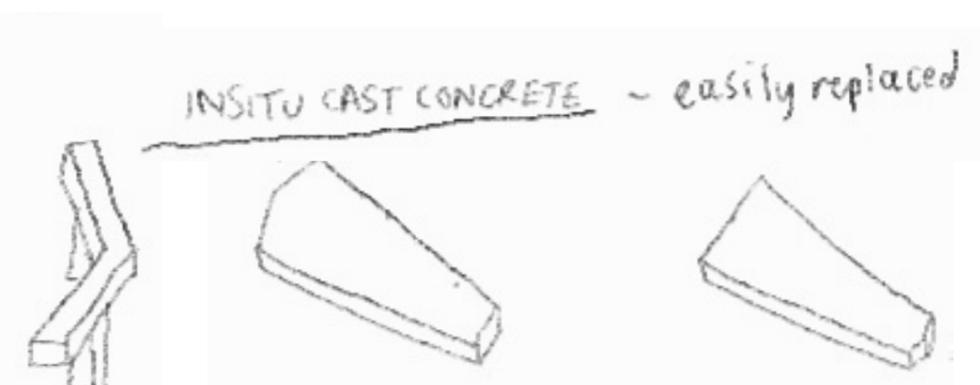
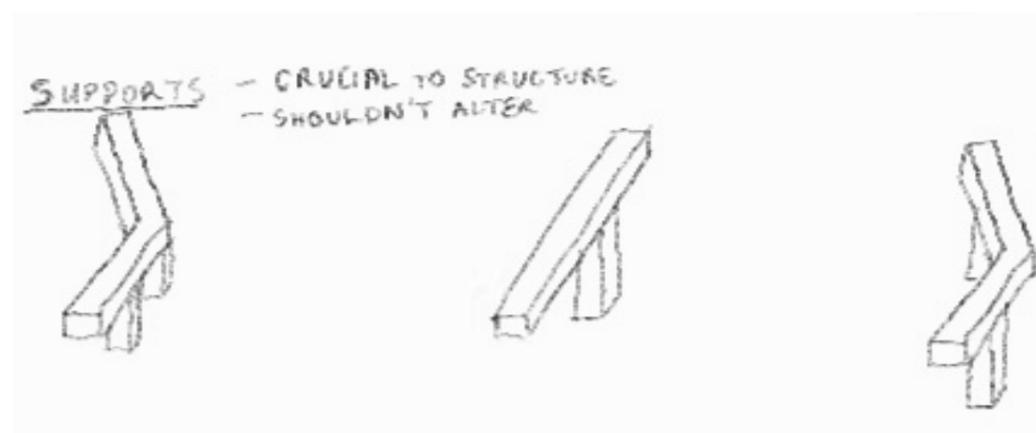
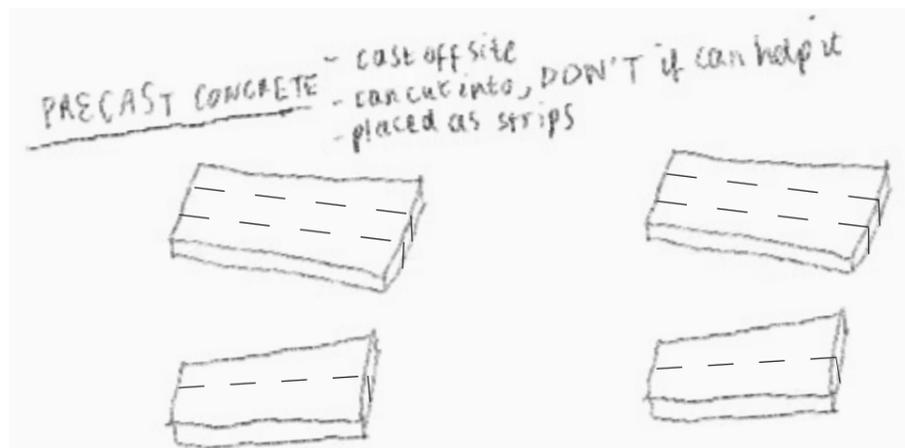
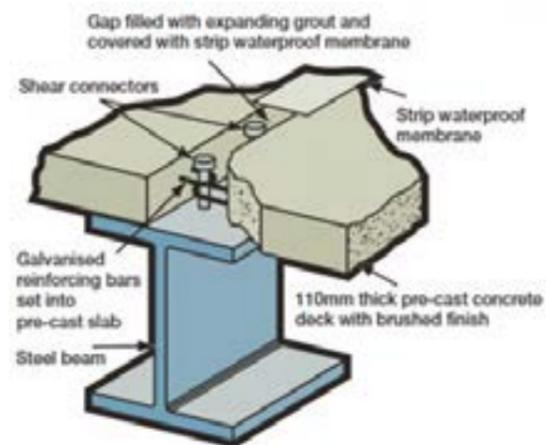


analysing the site; how do the beams work?

bay structure of the part of the carpark that I'm interested in

the beams only occur at a single point in the carpark - it's bend

the beams are also evidence of insitu concrete being used, which is imposed in slabs

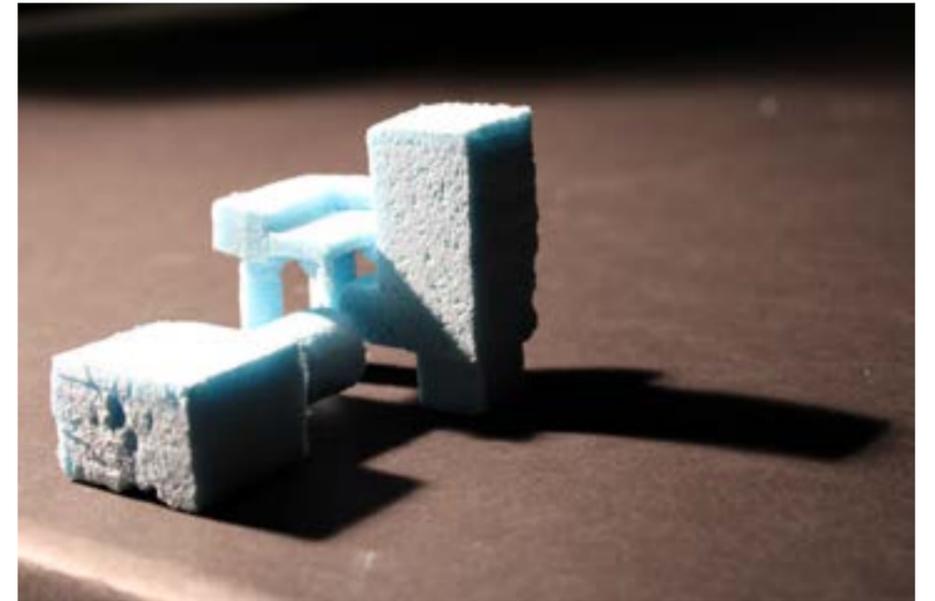
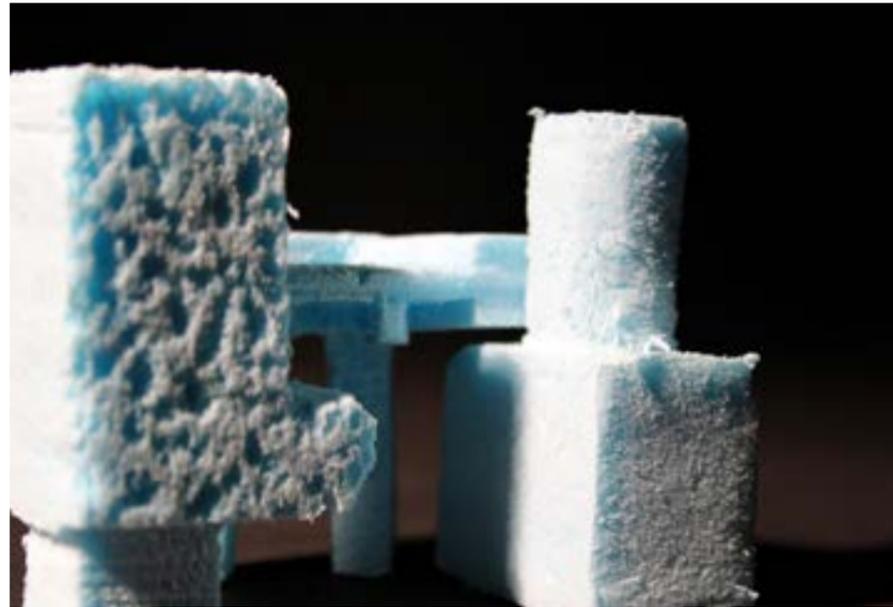


*what was my initial reaction ?
responding to site*

model (1)

**I took the site details
and made them into
small tangeable seg-
ments**

*I wanted to explore
isolating the aforemen-
tioned details*



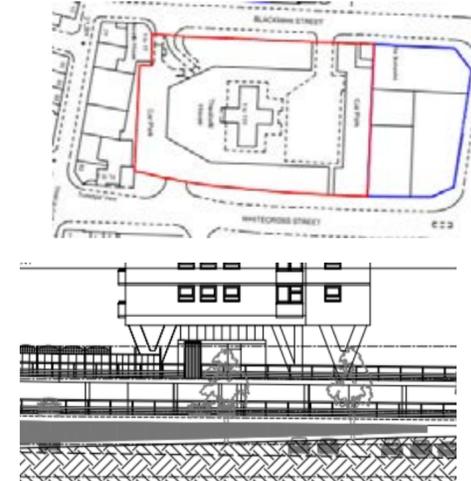
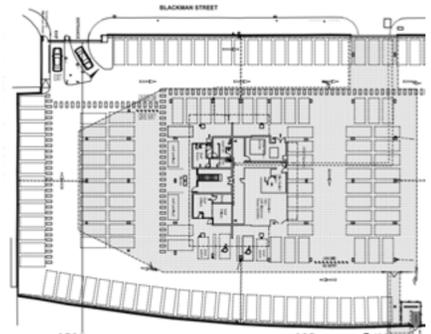
Trafalgar Street Car-park, Brighton



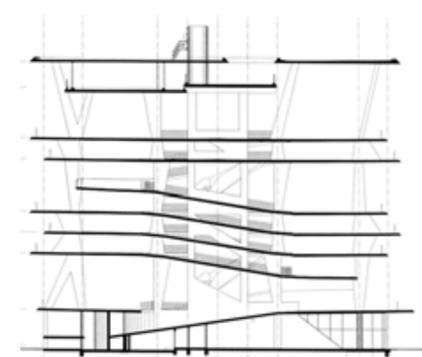
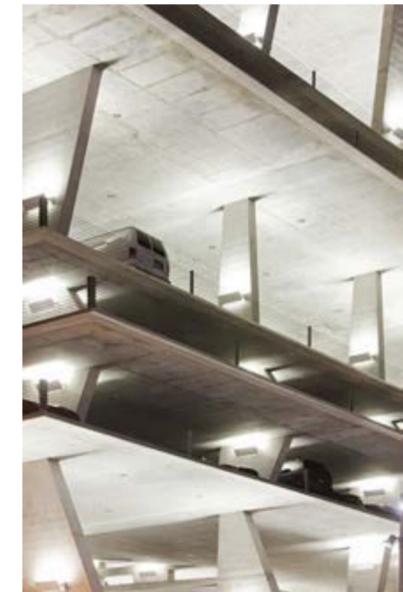
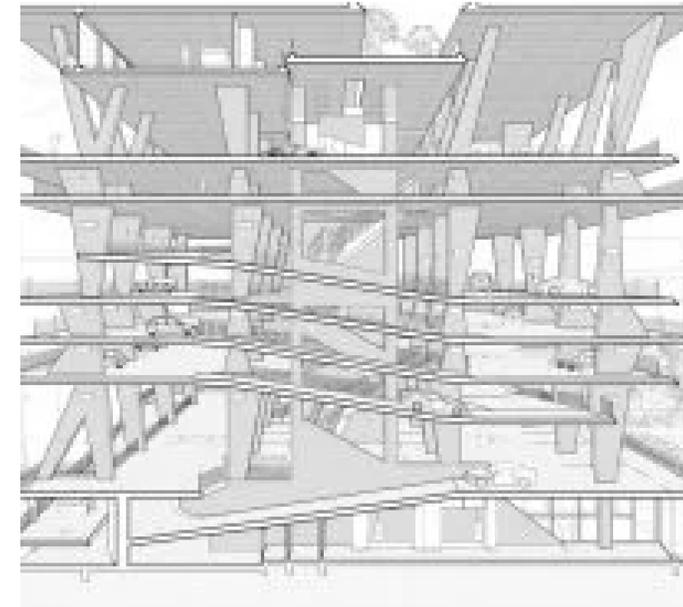
precedence (1&2)

both precedence are car-parks and appear to have 'cores'/central spaces and majorly visable structural elements

this means that I can focus on the 'same' aspects precedence that I'm interested in on site

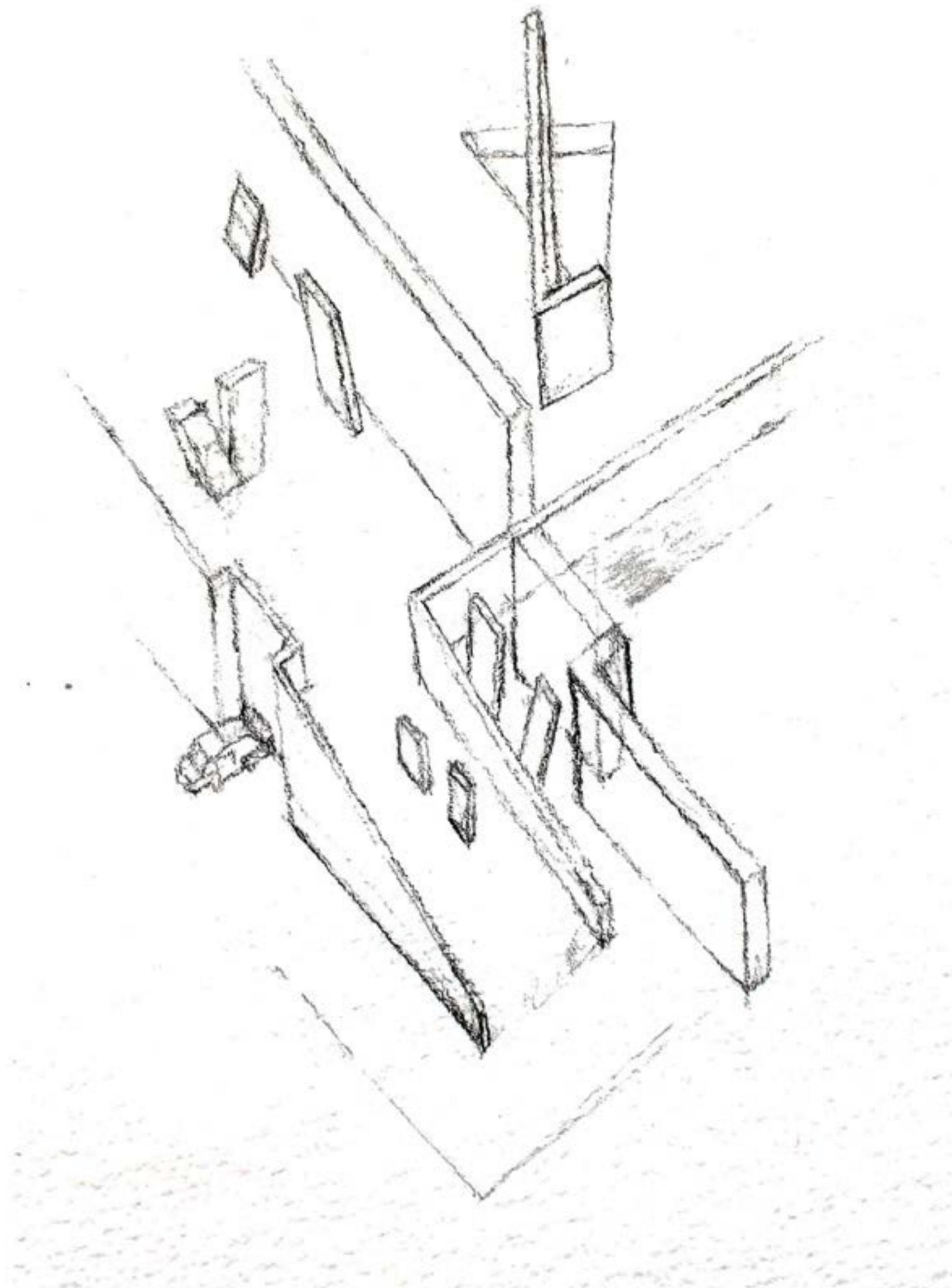


11 11 Lincoln Road Herzog & de Meuron, Miami



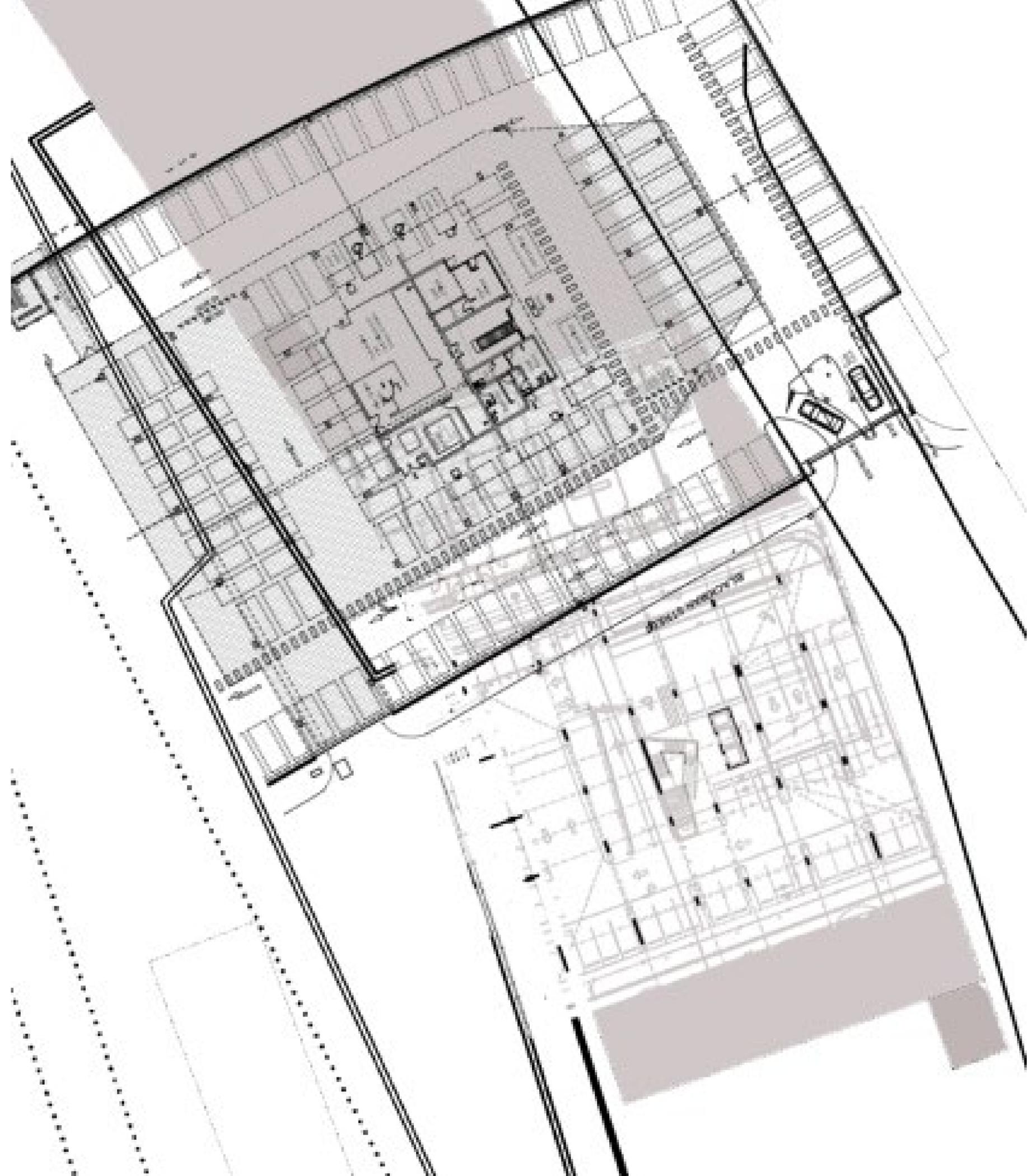
**precedence (1&2) intruding
on site as small segments**

**this is interesting but
the segments are aim-
less**



precedence (1&2)'s plans as
intruders on site

to crudely see how these
carparks would 'sit' and ex-
ist on my site



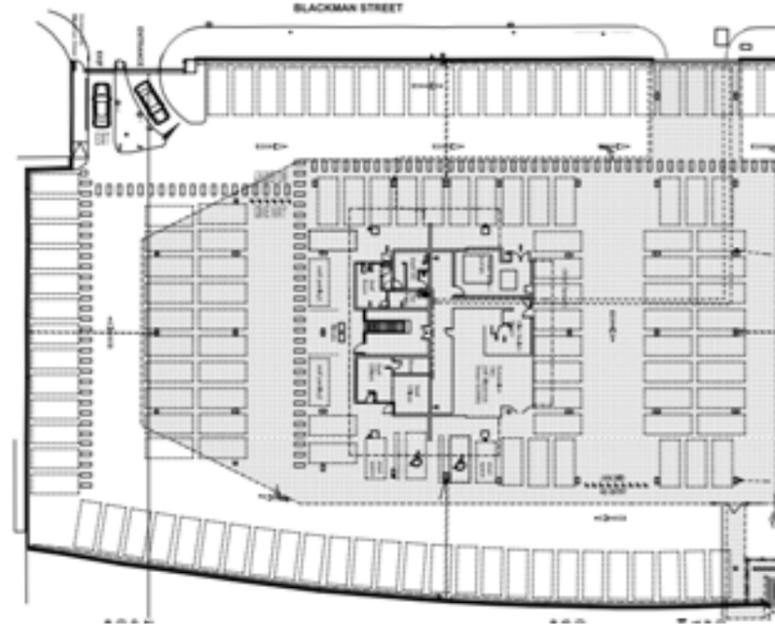
cores/holes

Trafalgar Square's structure externally appears to have a core running through the building into the carpark which would link those spaces

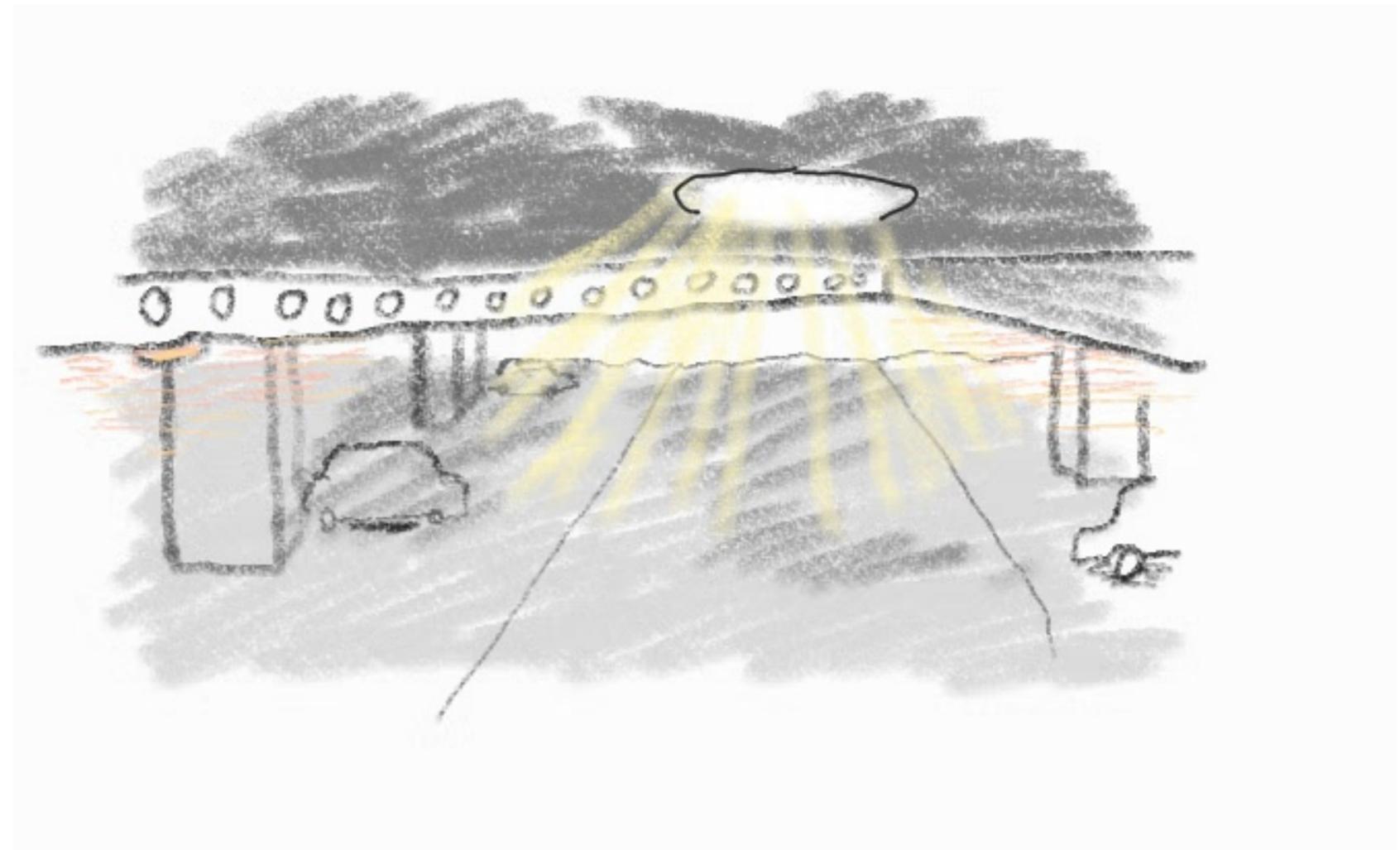
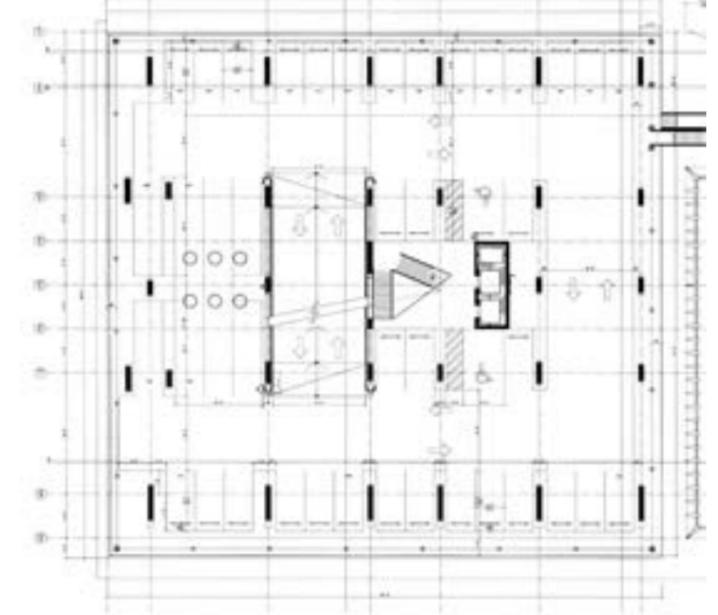
11 11's ramps and staircases do run through its centre, these can be seen on their plans

Brighton train station's carpark is dark and has *no natural light* in its centre, light could be introduced by running it *through* the structure "core of light"

Trafalgar Street Carpark, Brighton

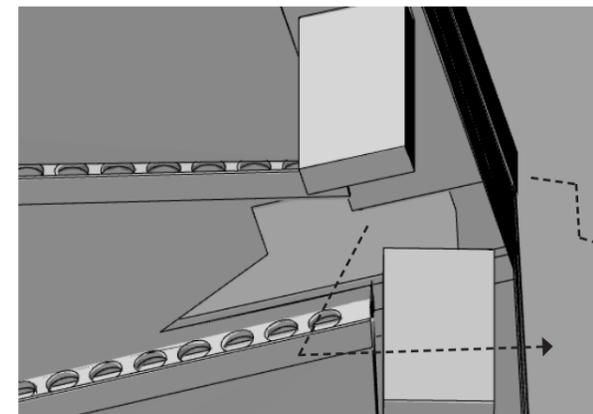
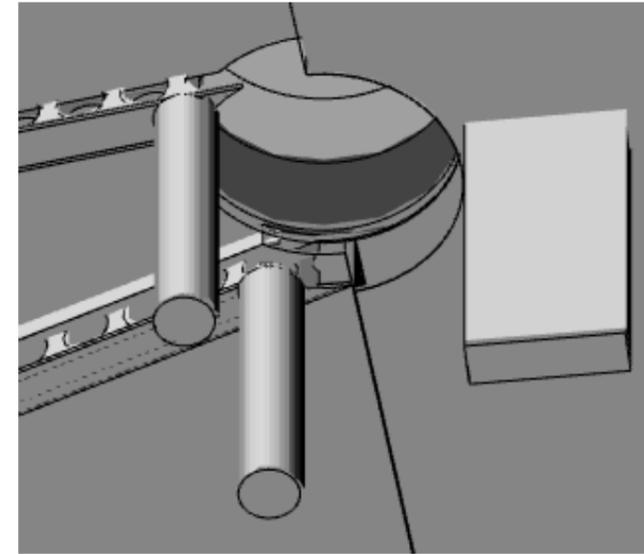


11 11 Lincoln Road Herzog & de Meuron, Miami



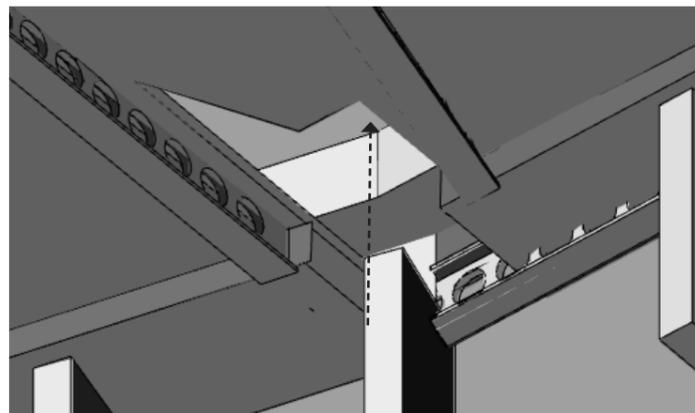
Putting holes in the carpark:
closeups of the different holes that I would put into the carpark

I want natural light to stream into the carpark, like this, I think that this would humanise the space, make it more than just a space that is there out of necessity

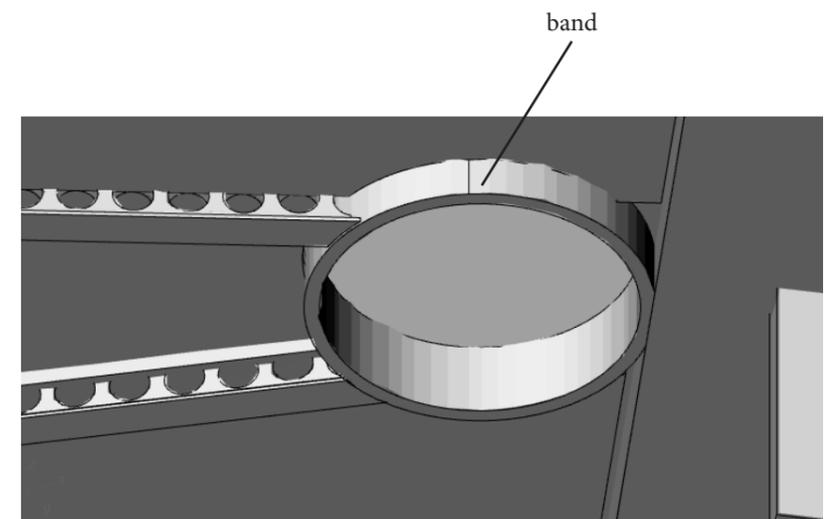
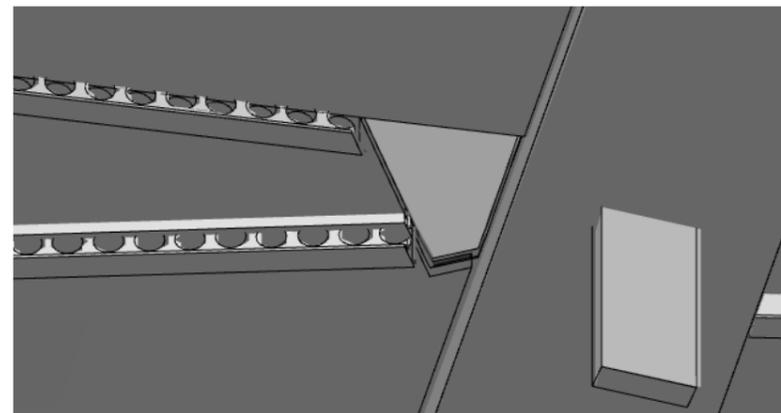


extra beam welded support for column

adds to entry route to the structure, where stairs and official entry could be introduced
 extra beam welded support for column



this would also bring visitors to the beams to enjoy and acknowledge them



Extending and elongating the bands being introduced...

materials

I want to alter the occupation of the carpark - give a duality to it.

*I want to use materials with duality to them - recycled materials if
and where possible.*



p. 84, 85: The matrix of images shows the building with its various elements and spaces. The greenhouses and theater are shown on page 84. Page 85 shows different repairs, such as concrete blocks and layers of cement.

brick precedence (1) Caritas, De Vylder Vinck Taillieu, Belgium

this project uses recycled 20th century bricks and concrete blocks and is on and around a villa psychiatric centre

I would like to reference the use and appearance of these bricks for my proposal as well as the slathered appearance of the cement



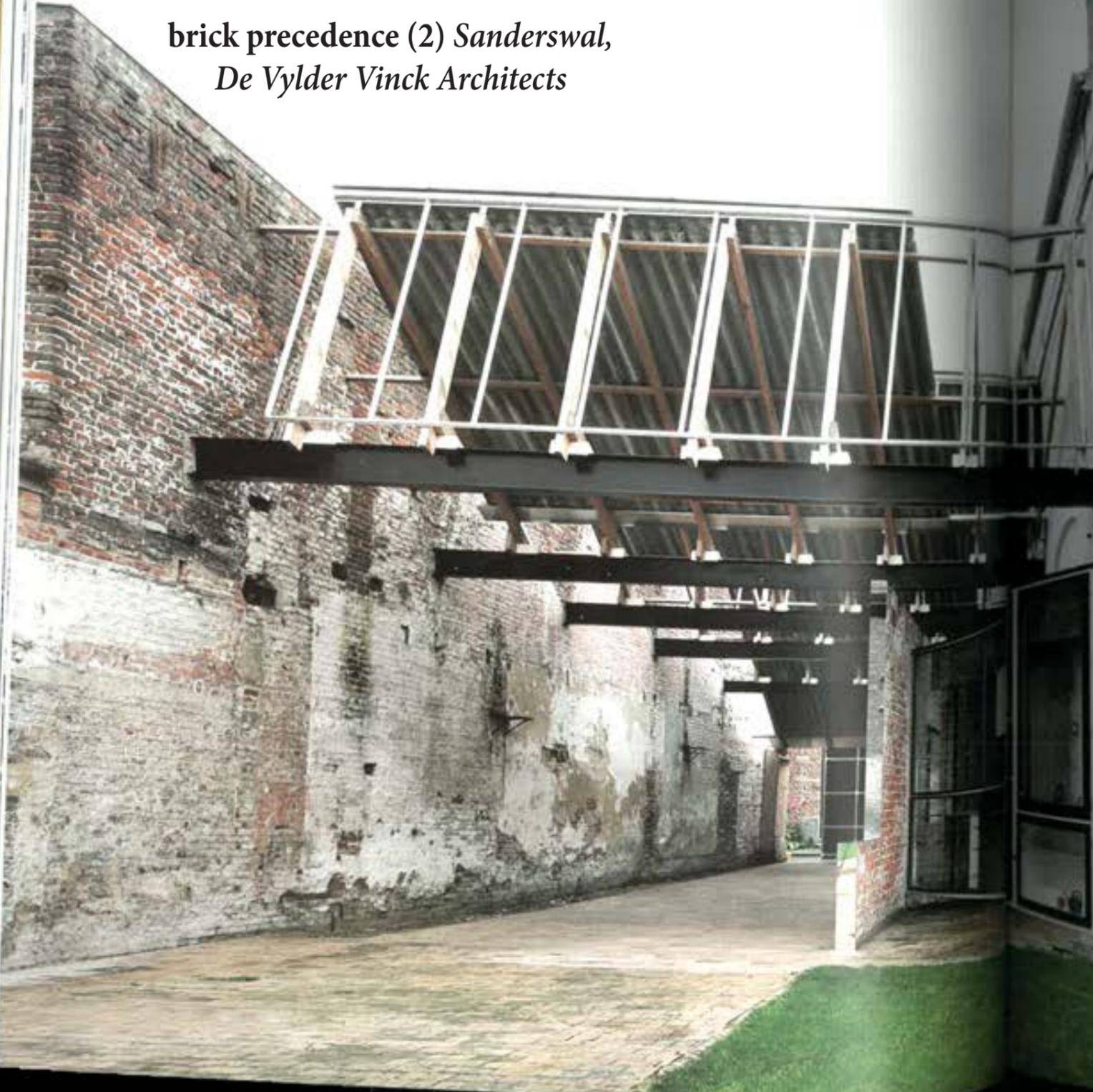
Sanderswal

Ghent, Belgium 2011-2013

サンダスウォール
ベルギー、アントワープ 2011～2013

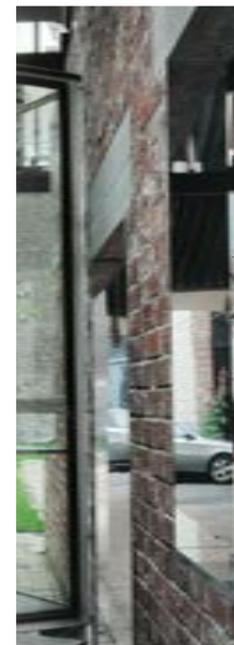


brick precedence (2) Sanderswal,
De Vylder Vinck Architects

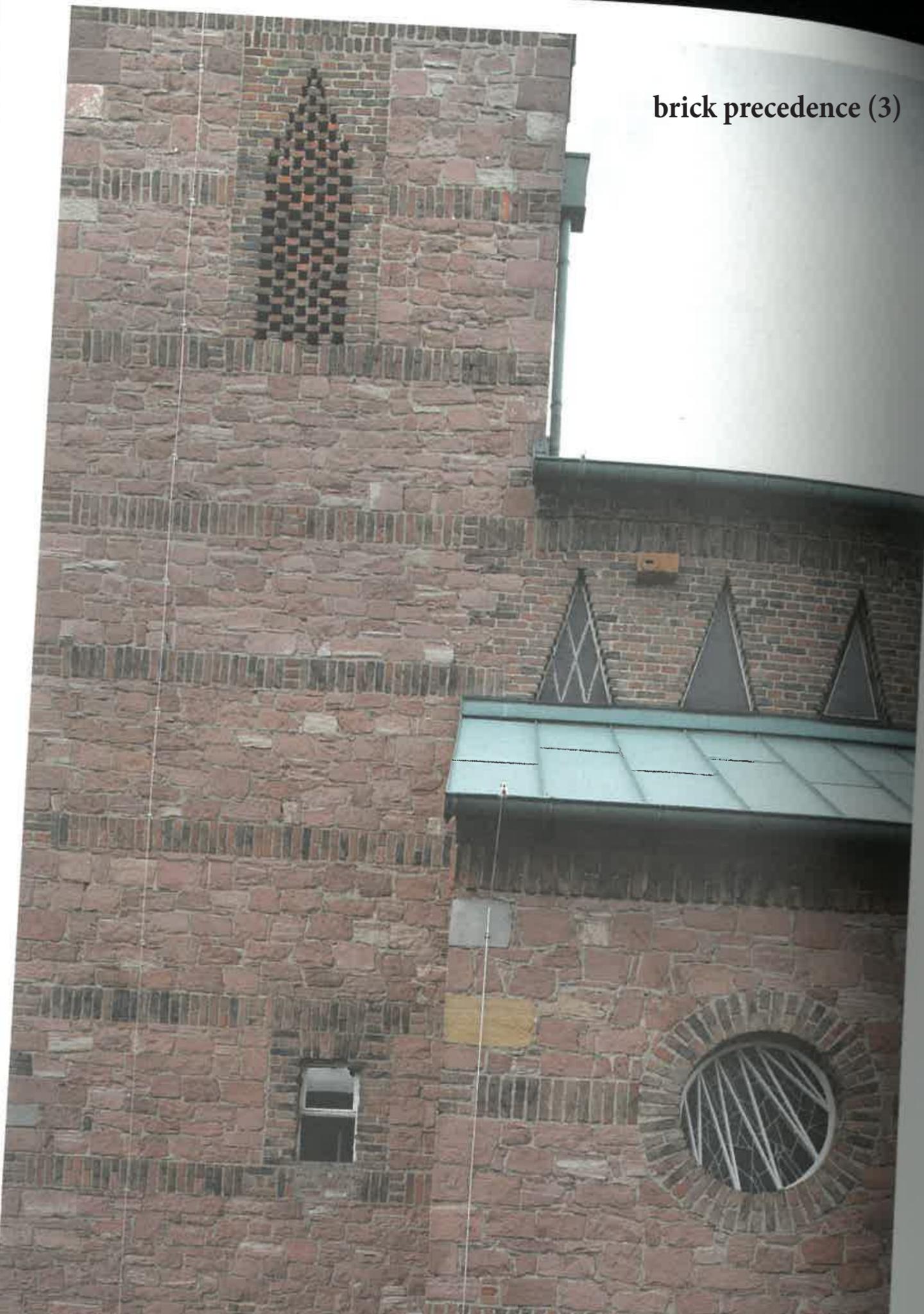


again I am
looking at brick-
work, but the
several different
textures exhib-
ited on a single
wall

I love the idea
of a single wall
being so di-
verse



brick precedence (3)

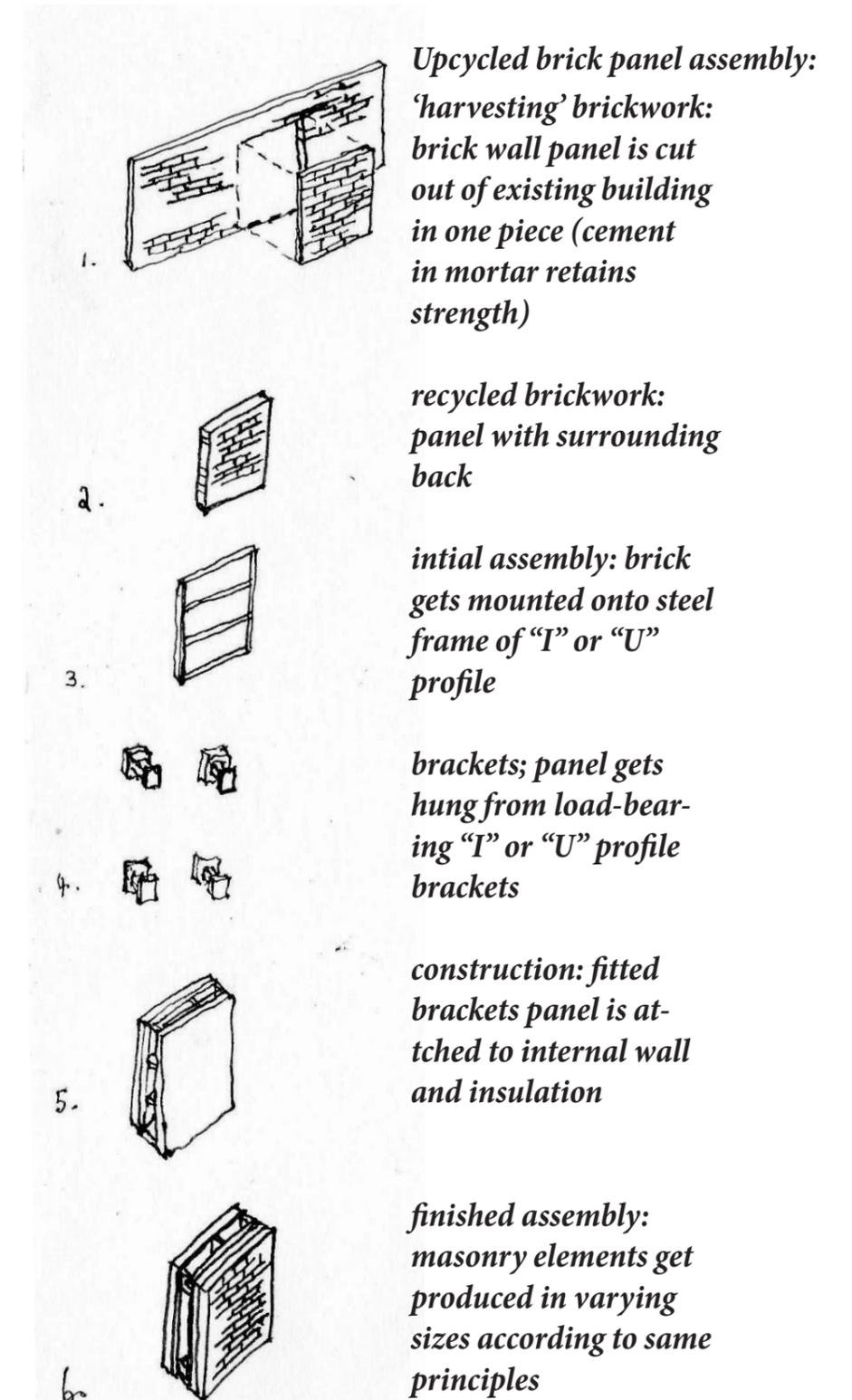
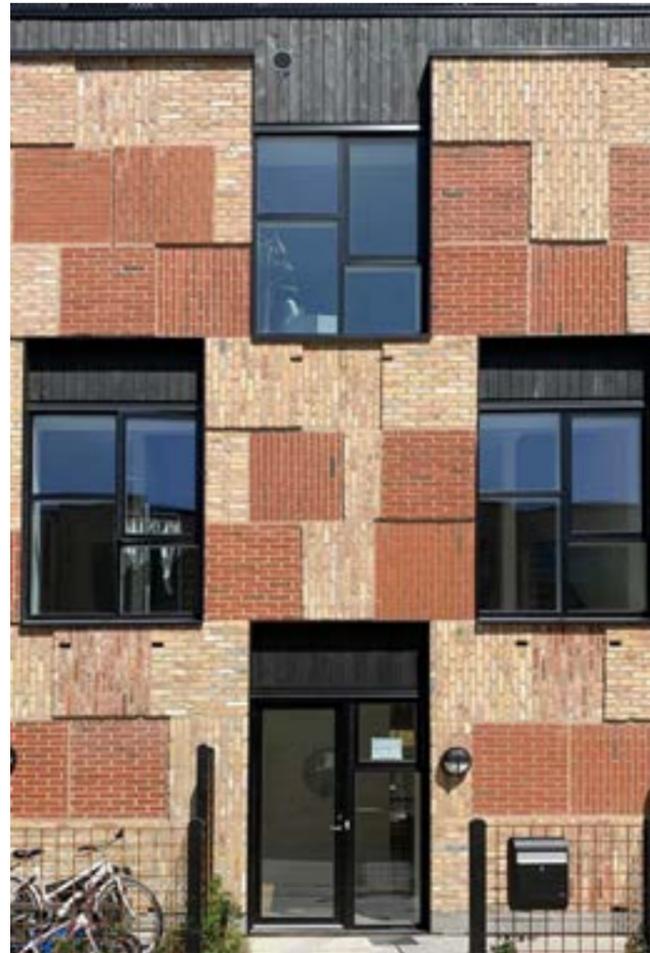


brick precedence (4) Lendager Group, apartment block, Copenhagen, Denmark

it uses three metre squared panels, fabricated from cut-out segments of old brick walls complete with their mortar

alot of older brick walls have mortar bonds stronger than their bricks so the bricks themselves can't be reused

some segments having bricks running vertically cuts CO2 emissions from the construction process, particularly in cases where retrofit – the most common re-use option in the UK



**brick precedence (5) Gijs Van
Vaerenbergh - Grotto**

This piece was built by hacking
away at a brick cuboid.

However, to achieve the appear-
ance of this sculpture I would use
fragments of broken bricks from
local demolition sites and use
them to build the the swimming
structures.

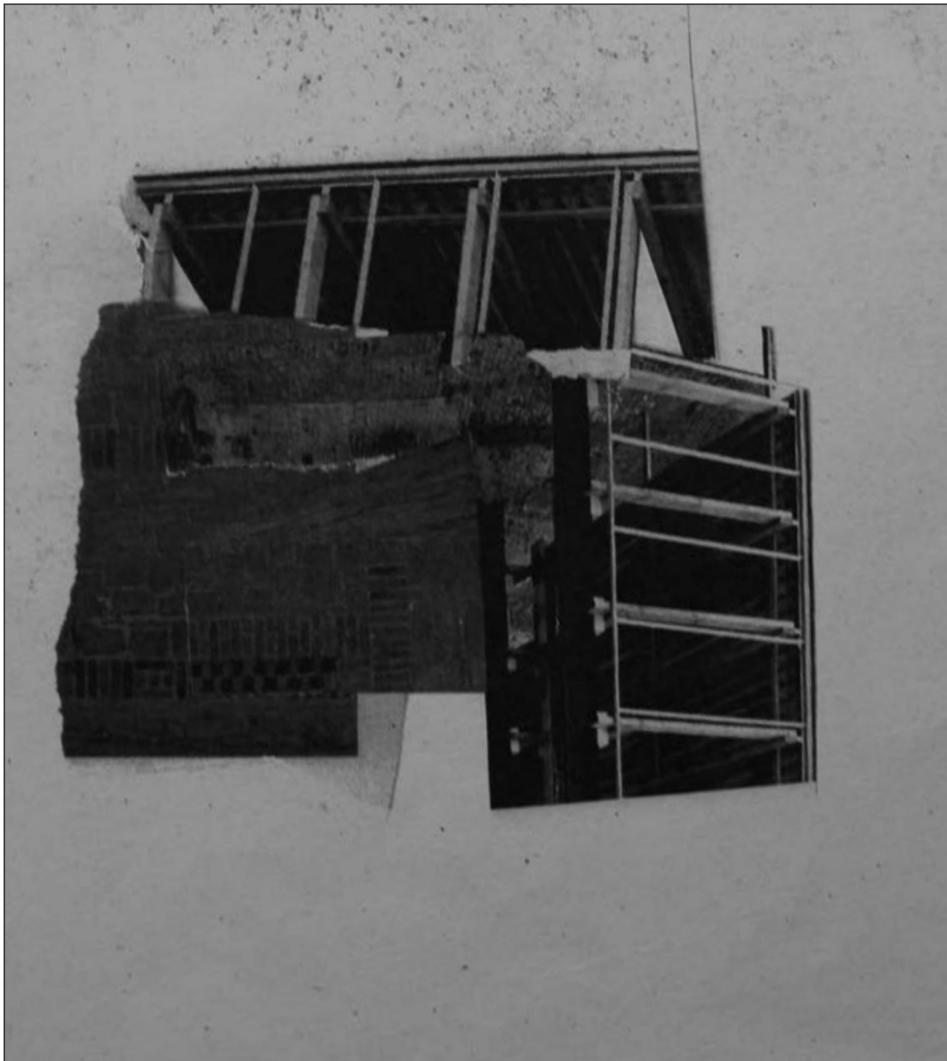


**making spaces out of the
material references with
montages**

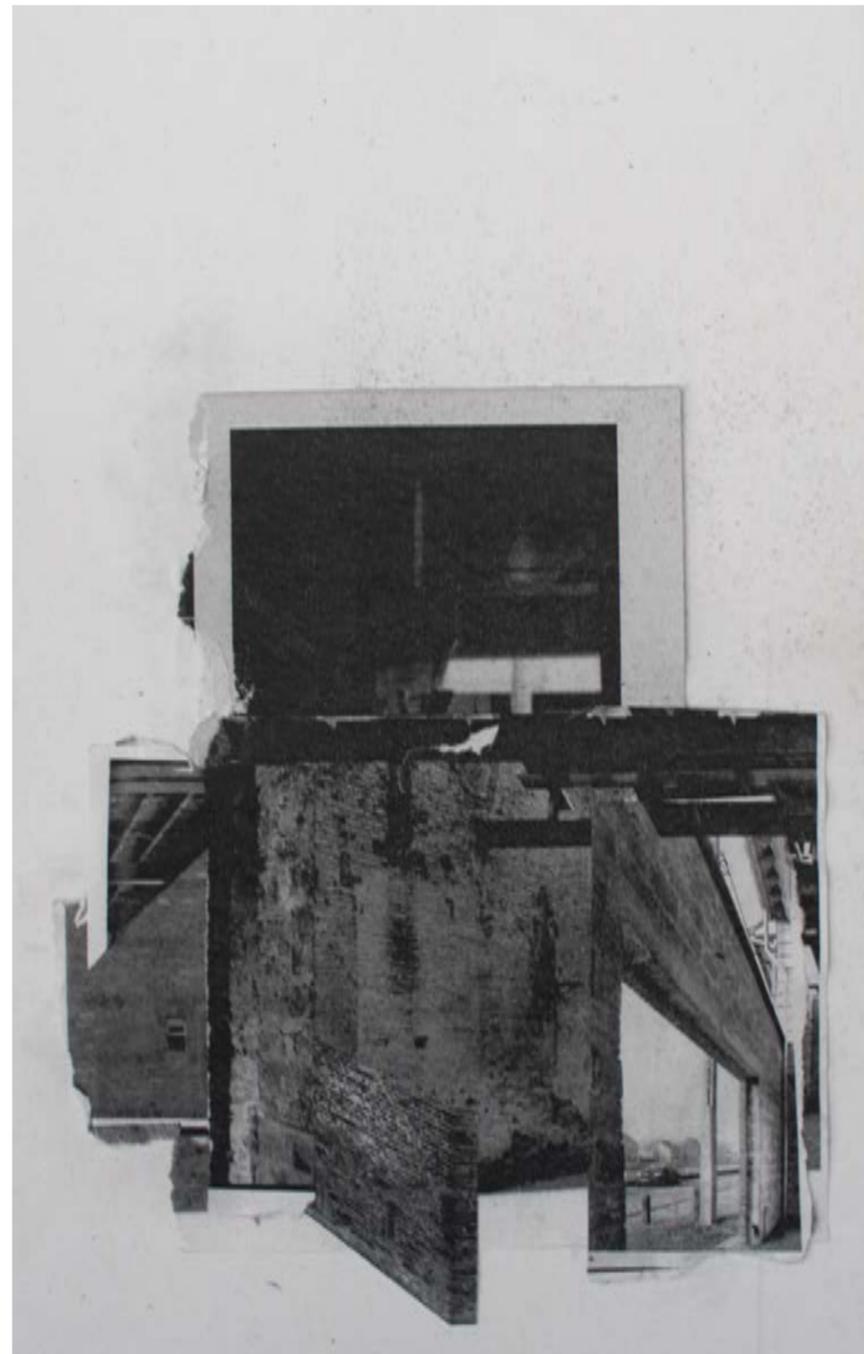
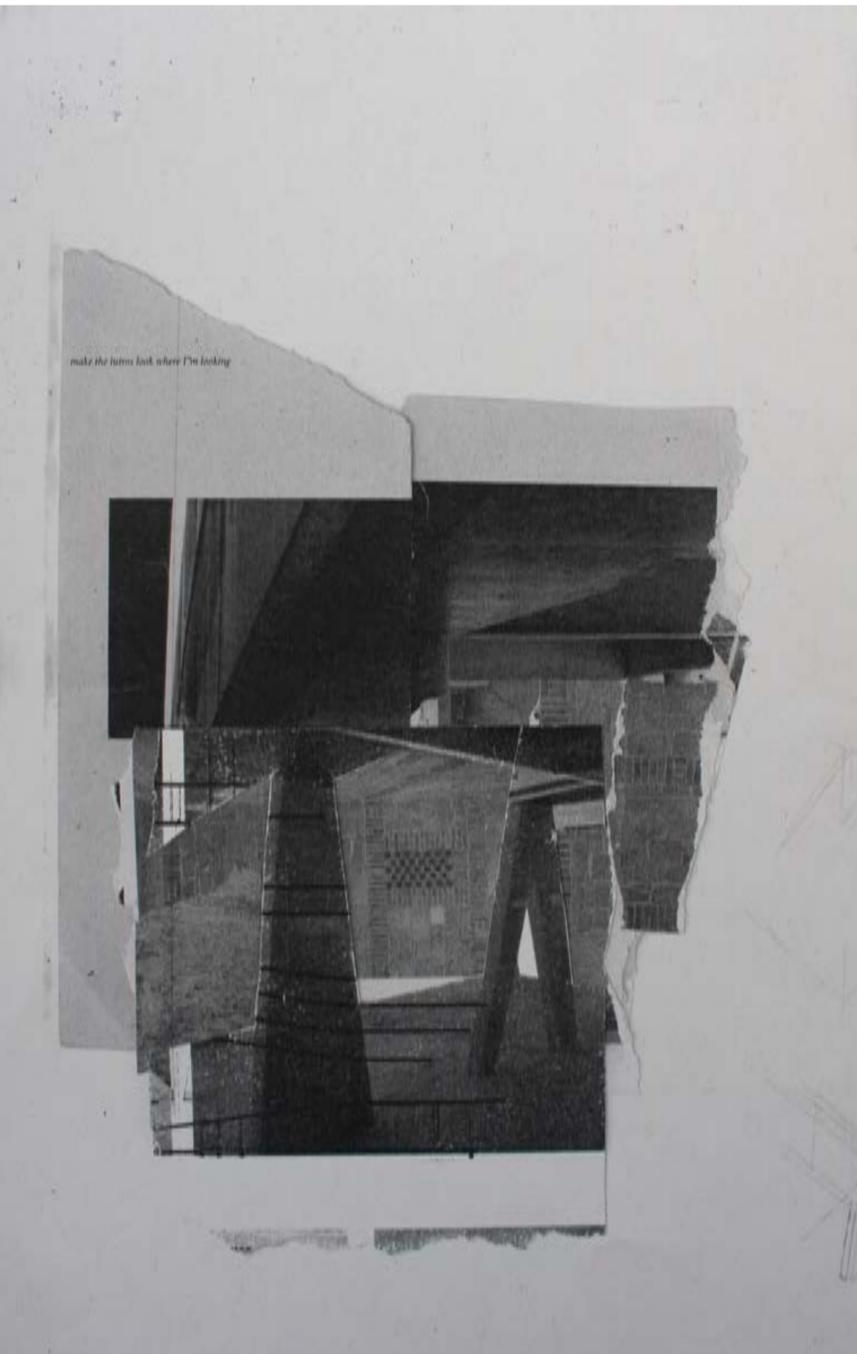
*in this project I haven't tried
to make spaces yet*

*but I aslo don't want to just
drop things onto the site*

*these are composed of brick
precedence 1,2 and 3*



making spaces out of the
material references with
montages (2)



program

I want to alter the occupation of the carpark - give a duality to it, but change it entirely.

It's program should add to the carpark's activity, if it alters it at all.

program: swimming pool

who is the pool for? the public

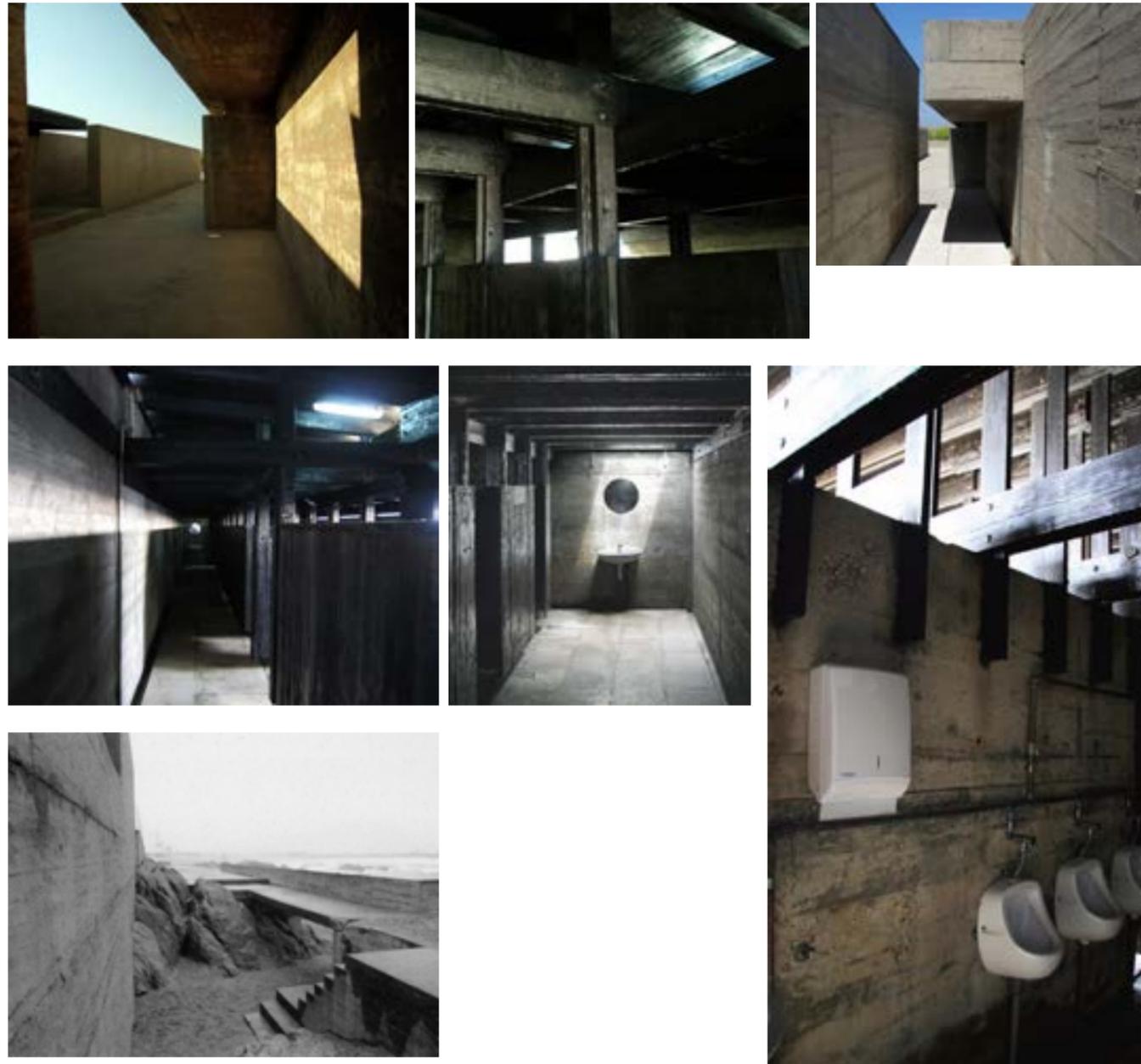
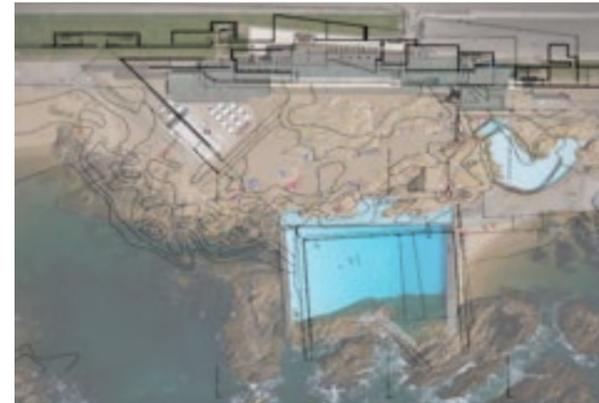
what happens there? a person would park their car, see signs of something else occurring on/ above the carpark and be intrigued by light peaking through or the pool's structure. Then they would be intrigued enough to explore, to use the swimming pools above. Or return to the site to use them.

Or with prior knowledge that the pools are there, members of the public enter from Stroudley road

precedence (3); Leca Swimming Pool, Alvaro Siza, Portugal

*intense control of light and shadow in changing areas
...there are stark areas of darkness, versus intensely bright ones*

its as if the areas of temporary use (the toilets and changing rooms) are made dark to remind visitors that where they want to be is the light



**precedence (1,2&3)'s plans
as intruders on site**

to crudely see how leca's an-
gular nature fits with the car
parks and how they all might
'sit' and exist on my site



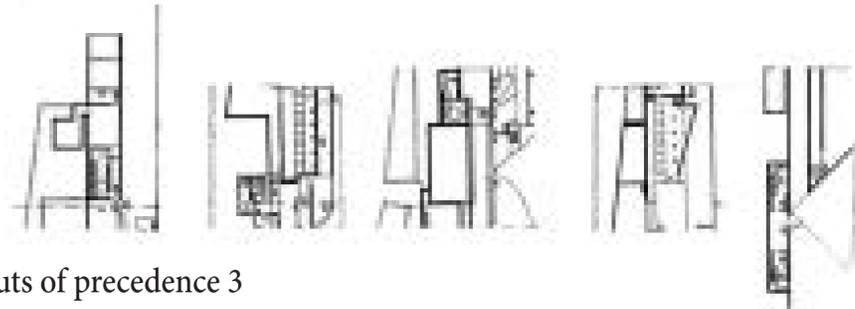
identifying structures on
leca clearly, to reference
them *to use this prece-
dence as accurately
as possible I edited
the plan onto a pho-
to of the pools*



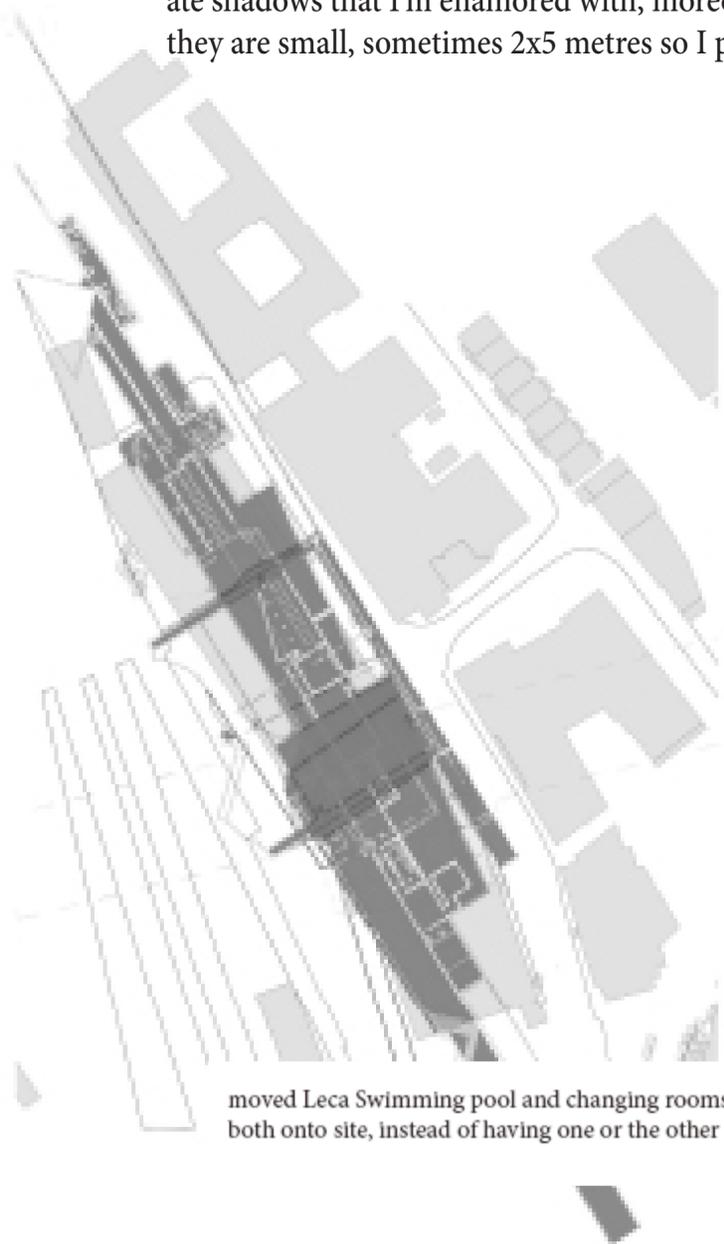
precedence 3 on site; exploring the applications of leca swimming pool

this precedence has the largest (visual) surface area of those that I've looked at so far, so I cut it up

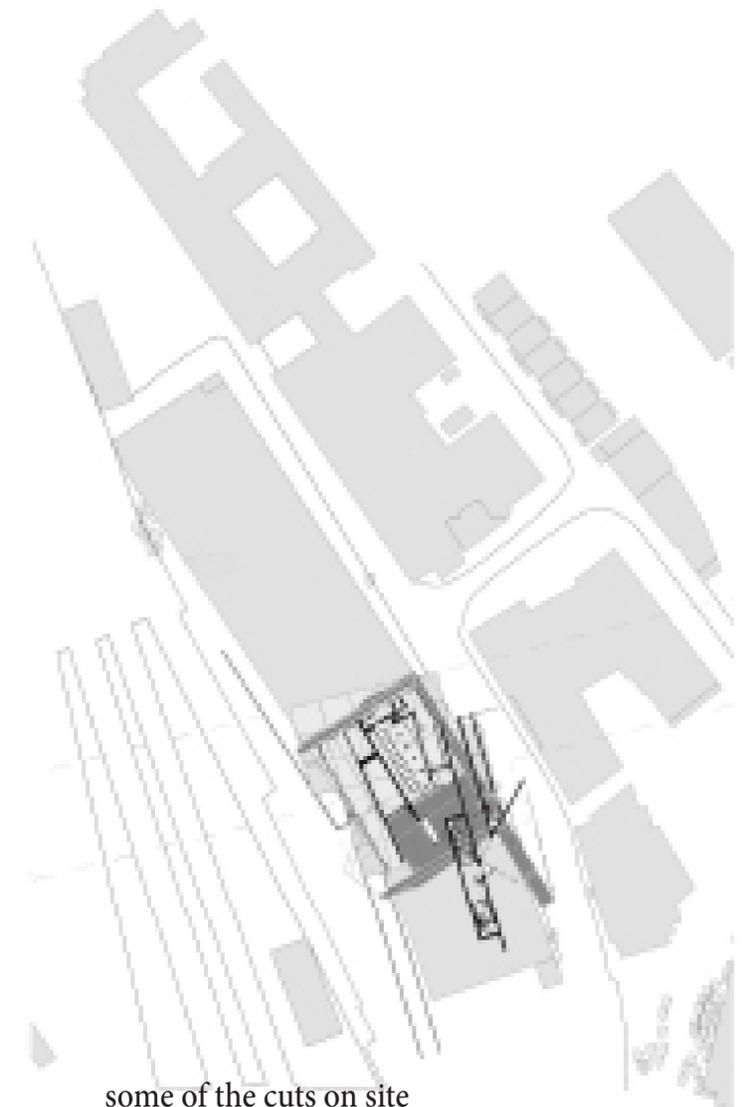
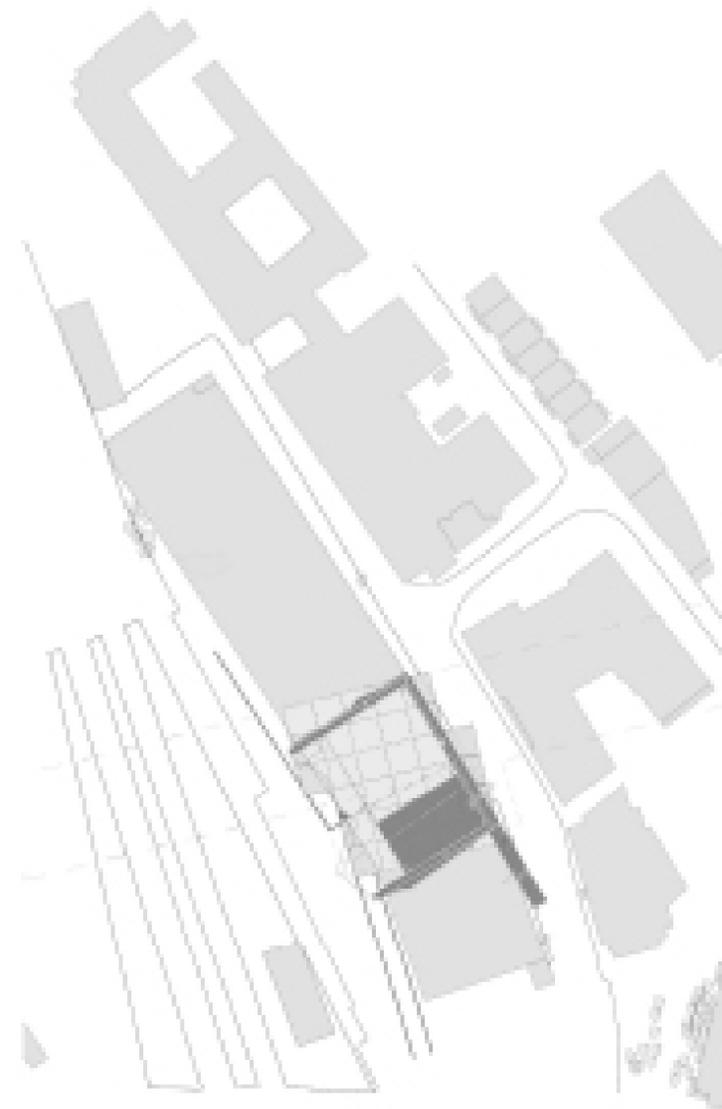
the precedence's toilets and changing rooms create shadows that I'm enamored with, moreover they are small, sometimes 2x5 metres so I placed



cuts of precedence 3



moved Leca Swimming pool and changing rooms both onto site, instead of having one or the other

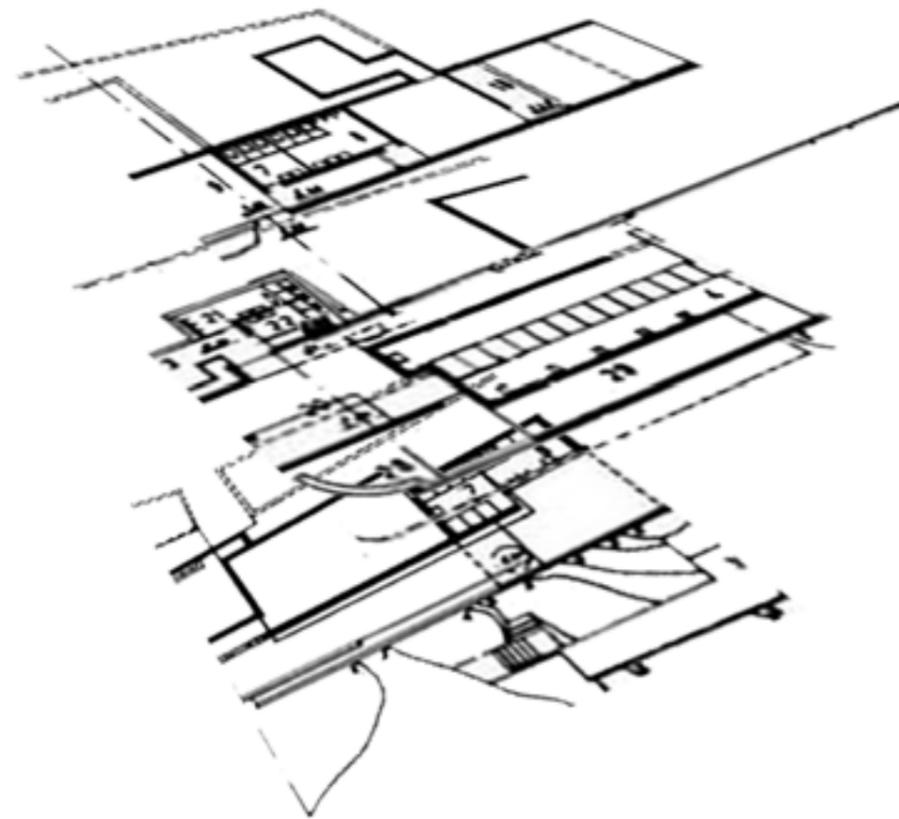
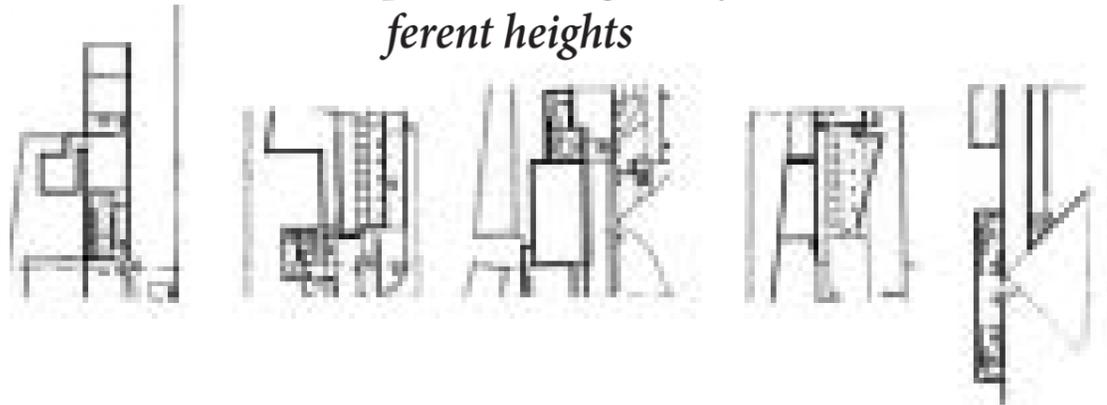


some of the cuts on site

layering precedence 3's are-
as of nterest on top of each

other
*layered, a cluster of
small rooms stacked
together was created*

*initially I was trying
to imagine the each
plan existing on dif-
ferent heights*



introducing a 2nd floor to
the carpark

*I want the swimming
pools lightly interact
with the site*

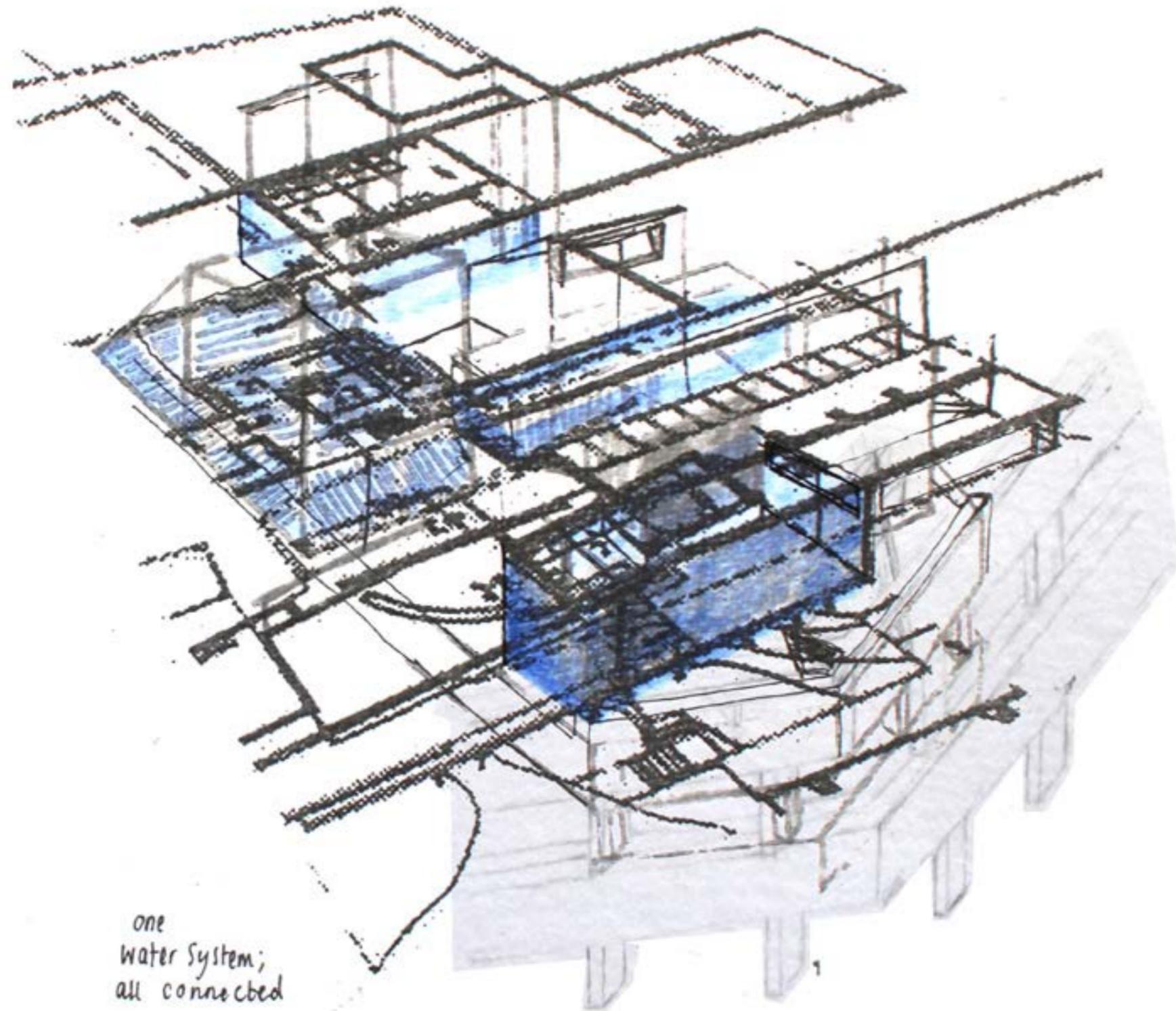
*for this reason I'm in-
troducing a replicated
carpark space of near-
ly identical structure,
that would be placed
on the carpark's first
floor*

*this allows me to only
minimally interrupt
the flow of movement
in the carpark but
continue to be in-
formed by structural
information that I've
learned about the car-
park*



I tried to isolate spaces in
the cluster for swimming
pools

*but it was very dense,
I also placed the cluster
on site*

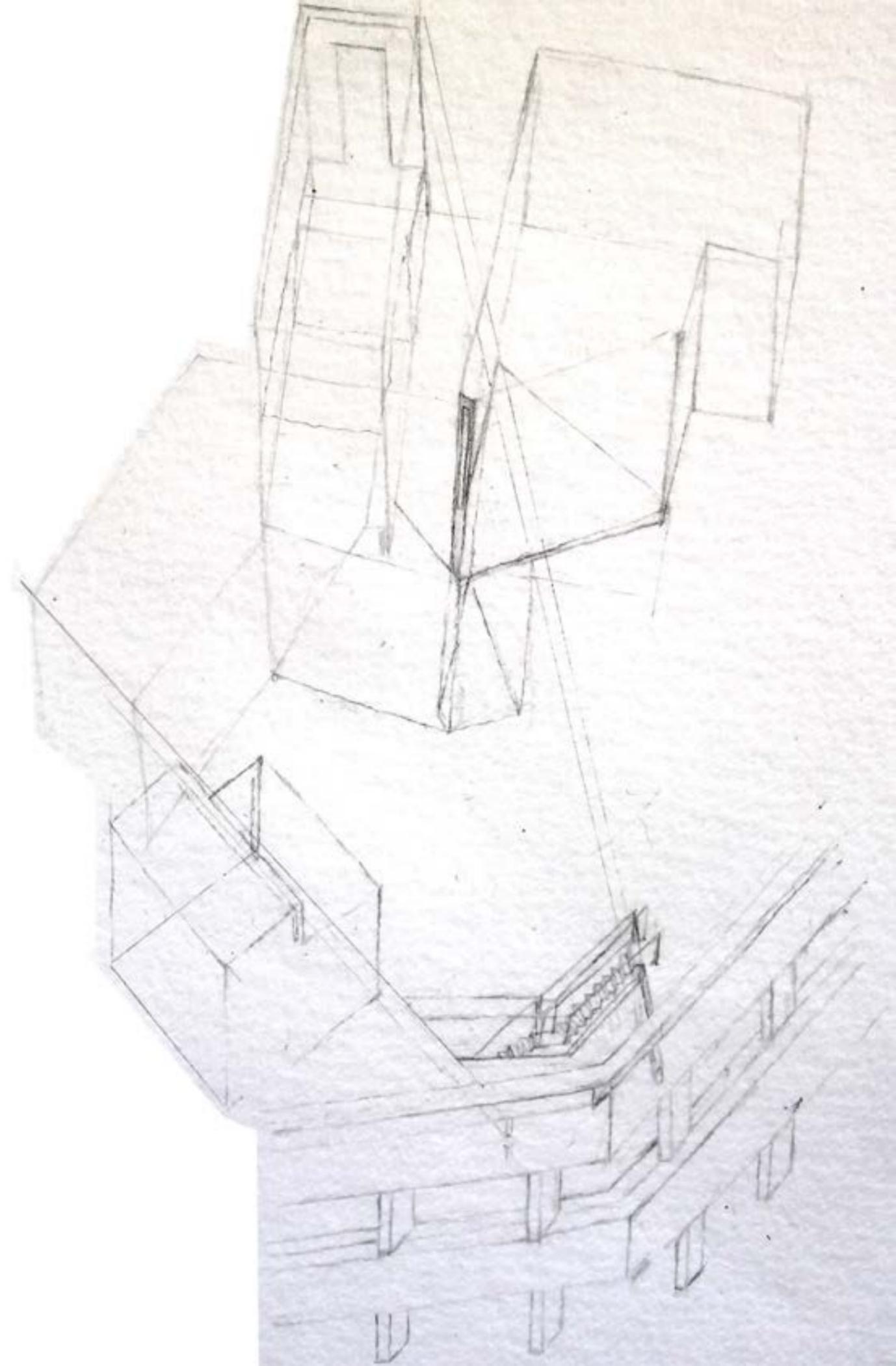


one
water system;
all connected

creating a drawing from the
clustered

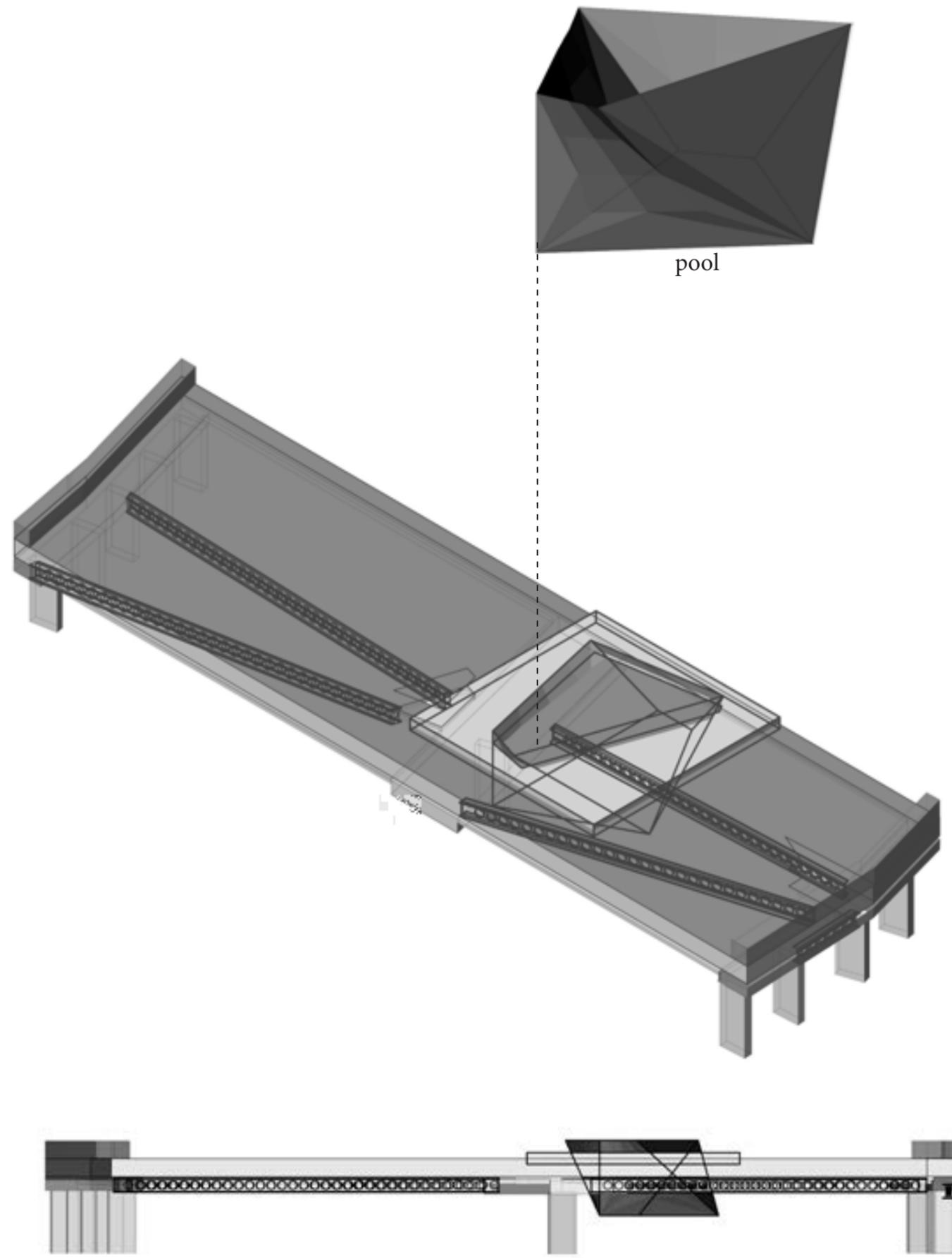
*this drawing was difficult to do, I didn't
have information to draw further than
this*

*i was trying to incorporate leca's rooms,
corridors, intimate connections between
spaces*



initial swimming pool placement (iteration 1)

they would slot into the insitu cast of concrete, make to have holes in them that specifically fit the pools



pool

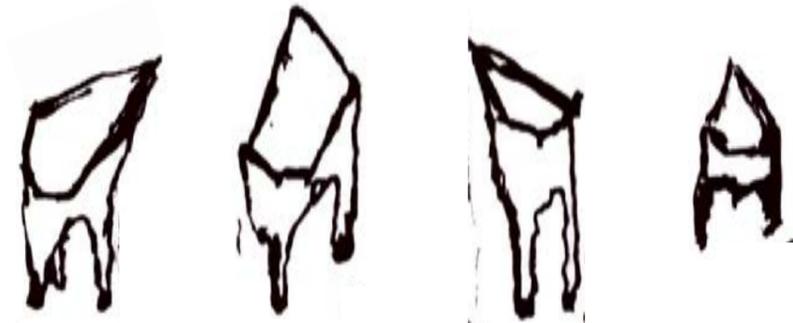
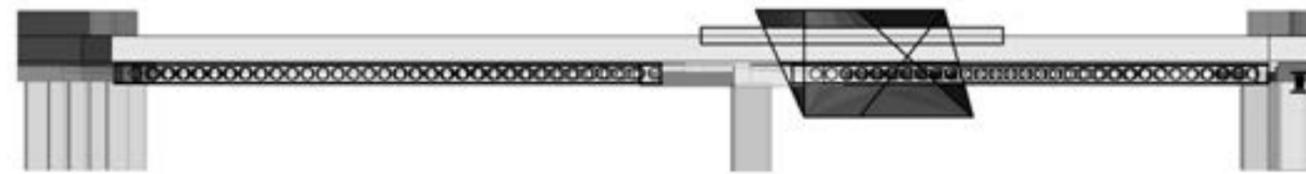
the dramatic and angular nature of Siza's pools is slightly referenced for the pool's shape

initial swimming pool placement (iteration (2)) “and so I gave them legs”

So the pools coming through the ceiling of the carpark impacts of the space that people have to move through - the floor to ceiling height is only 2.05m

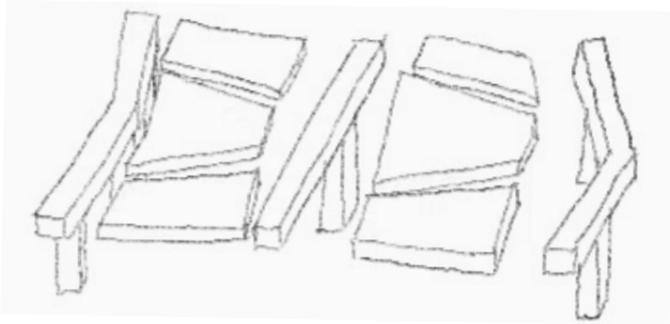
I did not want to raise the ceiling height, it seemed fiddly

so I gave the pool legs



where the pools would go

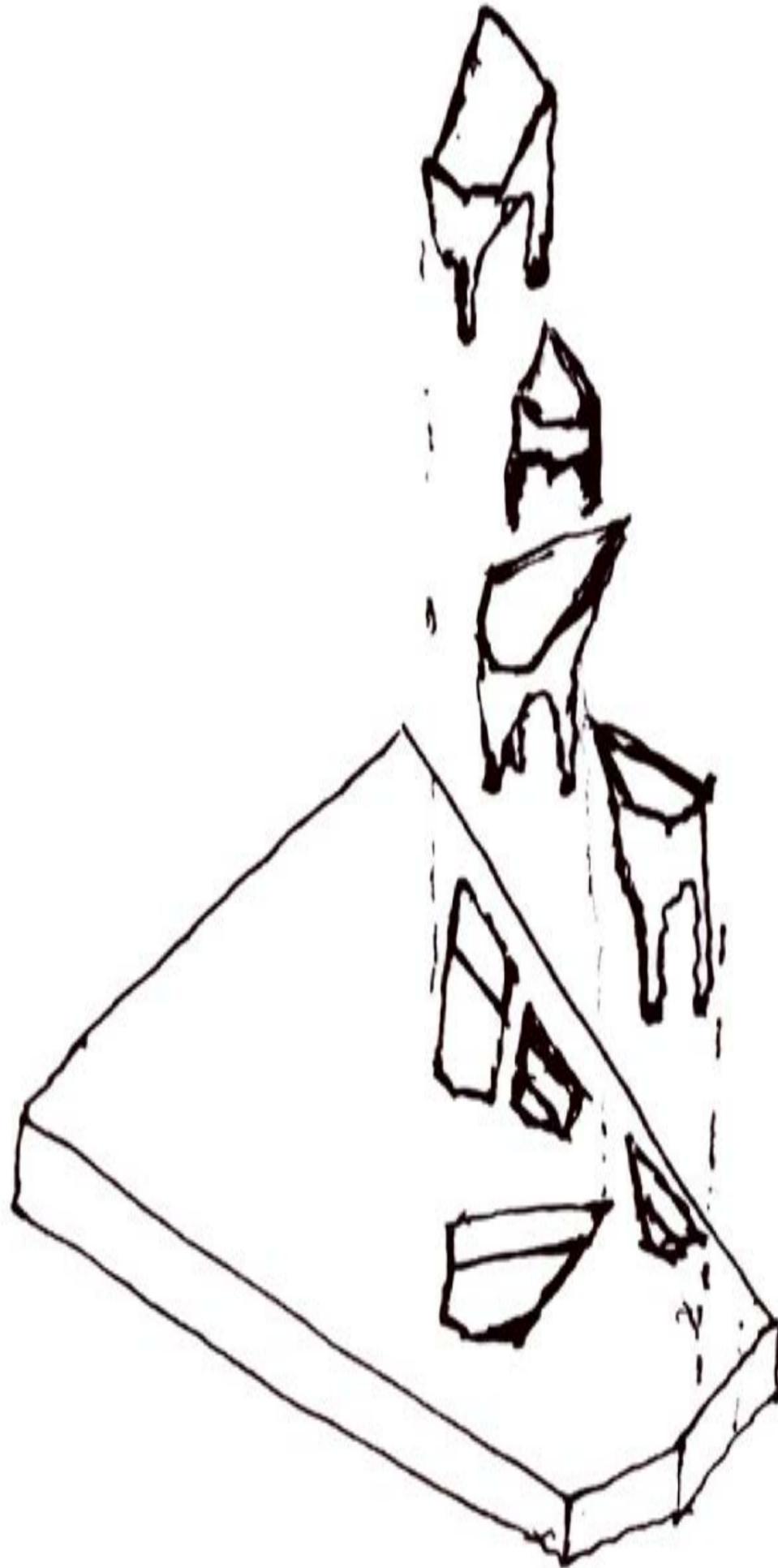
*they would slot into the
insitu cast of concrete,
make to have holes in
them that specifically fit*



*the insitu concrete casts only occur at the bend of the
length carpark while the rest of the concrete is precast*

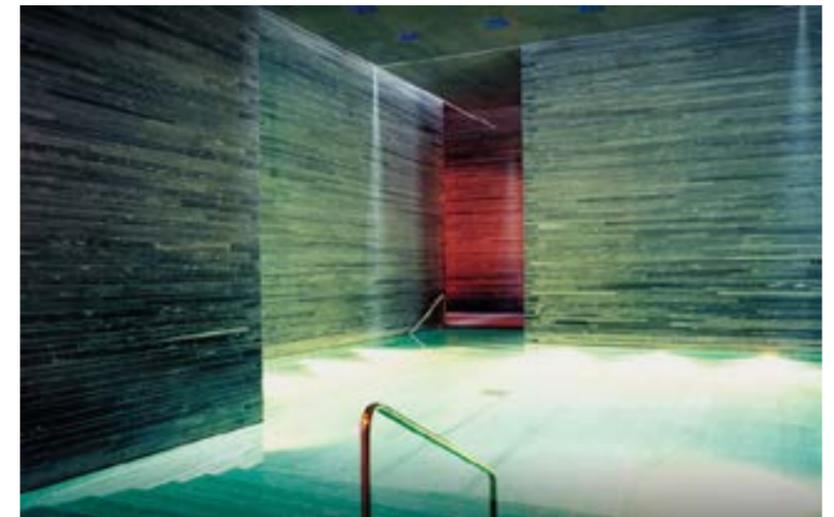
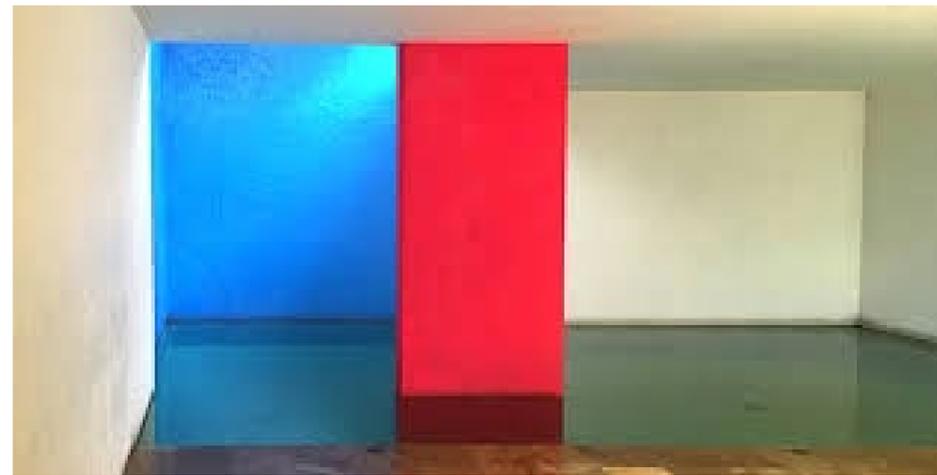
*the supports and planks of concrete are precast and too
vital to be cut through to make holes*

*the insitu concrete is the most easily replaced, so this
is where any holes would go*



pool precedence 1 & 2

*they would slot into
the insitu cast of
concrete, make to
have holes in them
that specifically fit
the pools*

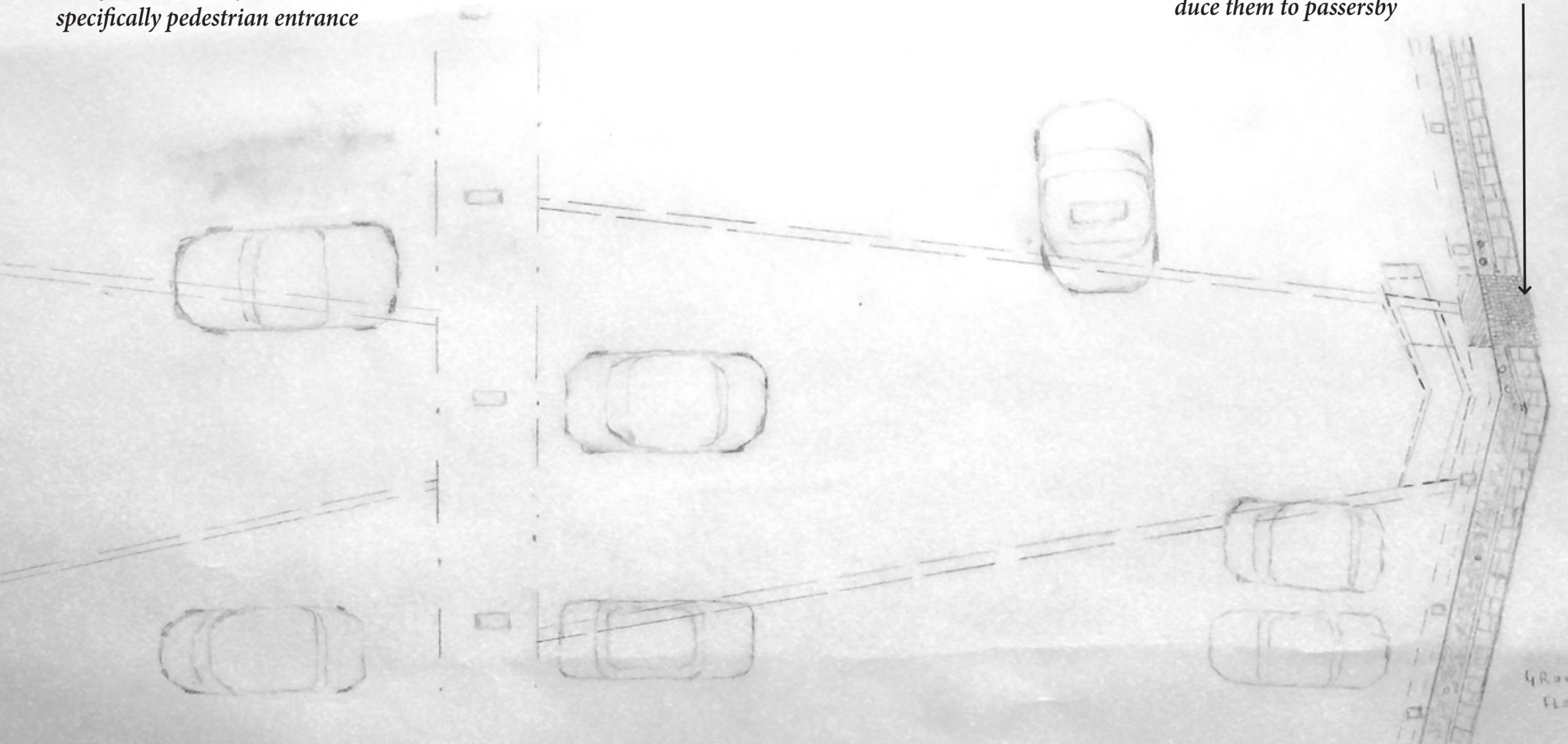


intial plan, ground floor

this shows that the occupation of the car-park is maintained from the get go

intially the only change to the carpark is the introduction of the stairs, which can be seen from Stroudley road and acts as a new specifically pedestrian entrance

I also introduce cobbles to the pavement perpendicular to the the stairs to physically and visually empathise and introduce them to passersby

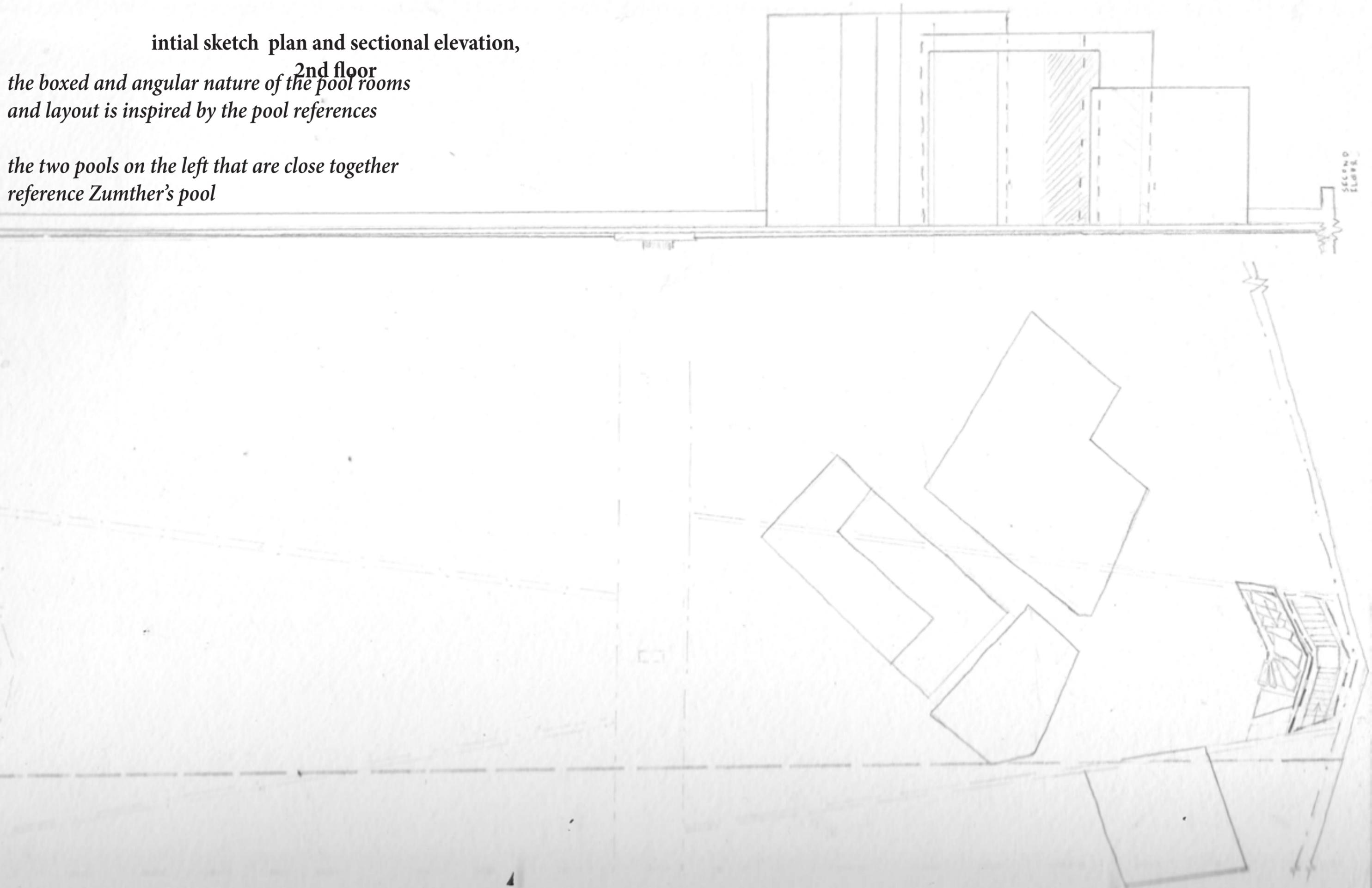


initial sketch plan and sectional elevation,

2nd floor

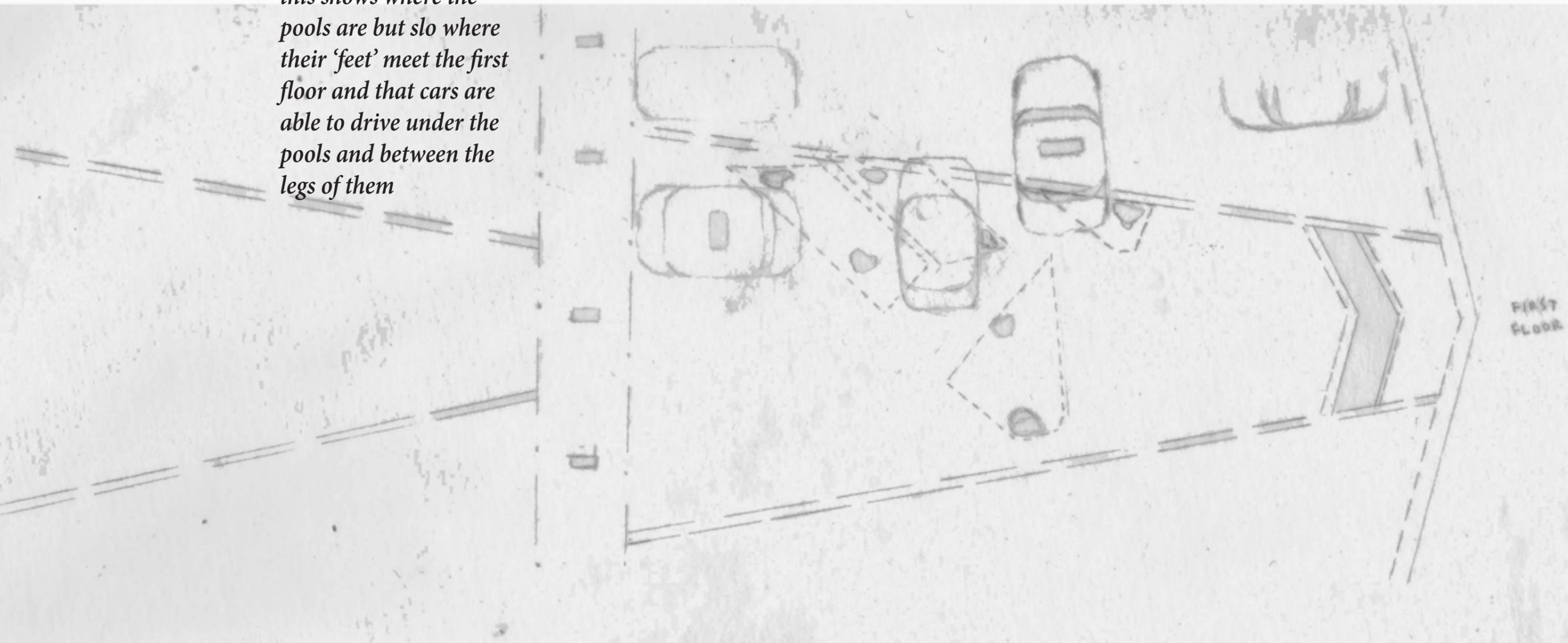
*the boxed and angular nature of the pool rooms
and layout is inspired by the pool references*

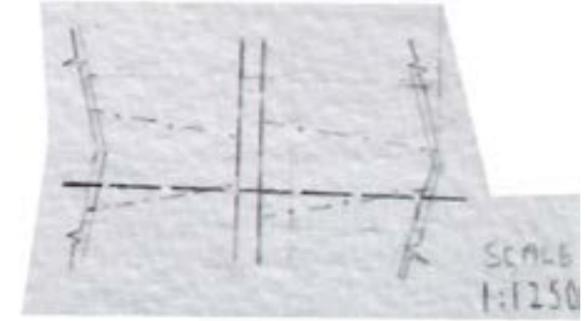
*the two pools on the left that are close together
reference Zumther's pool*



first floor plan

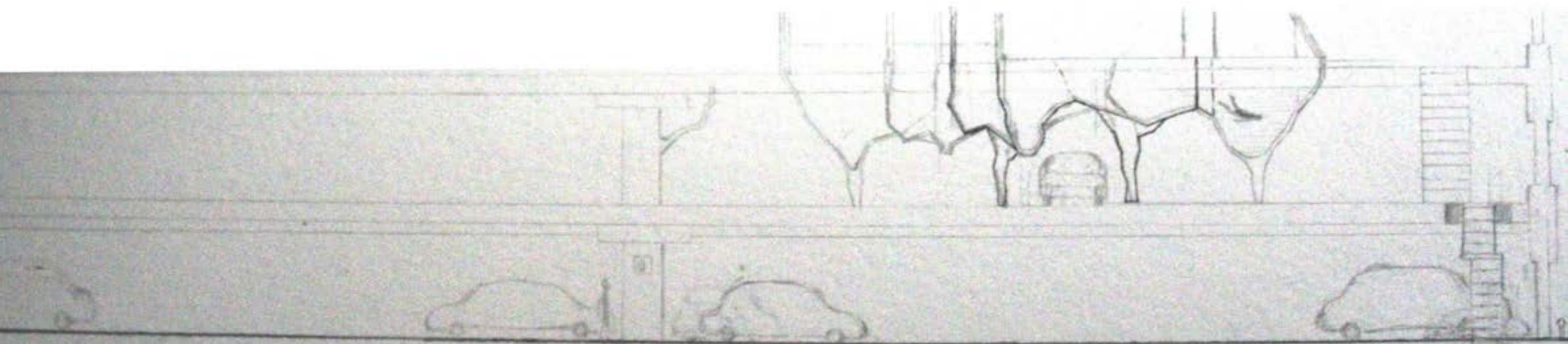
*this shows where the
pools are but slo where
their 'feet' meet the first
floor and that cars are
able to drive under the
pools and between the
legs of them*

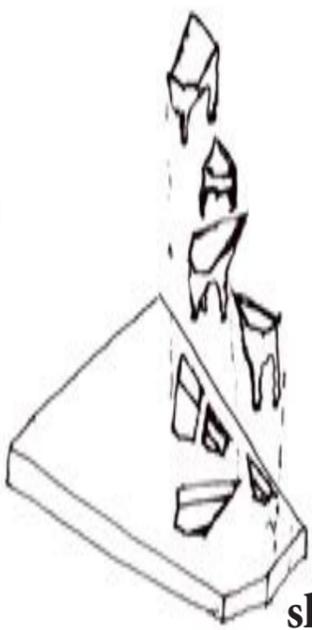




putting the pools on site;
sketch 'section'

*initial sketch to show where the
pools would go and how they would
be seen in context of the carpark*

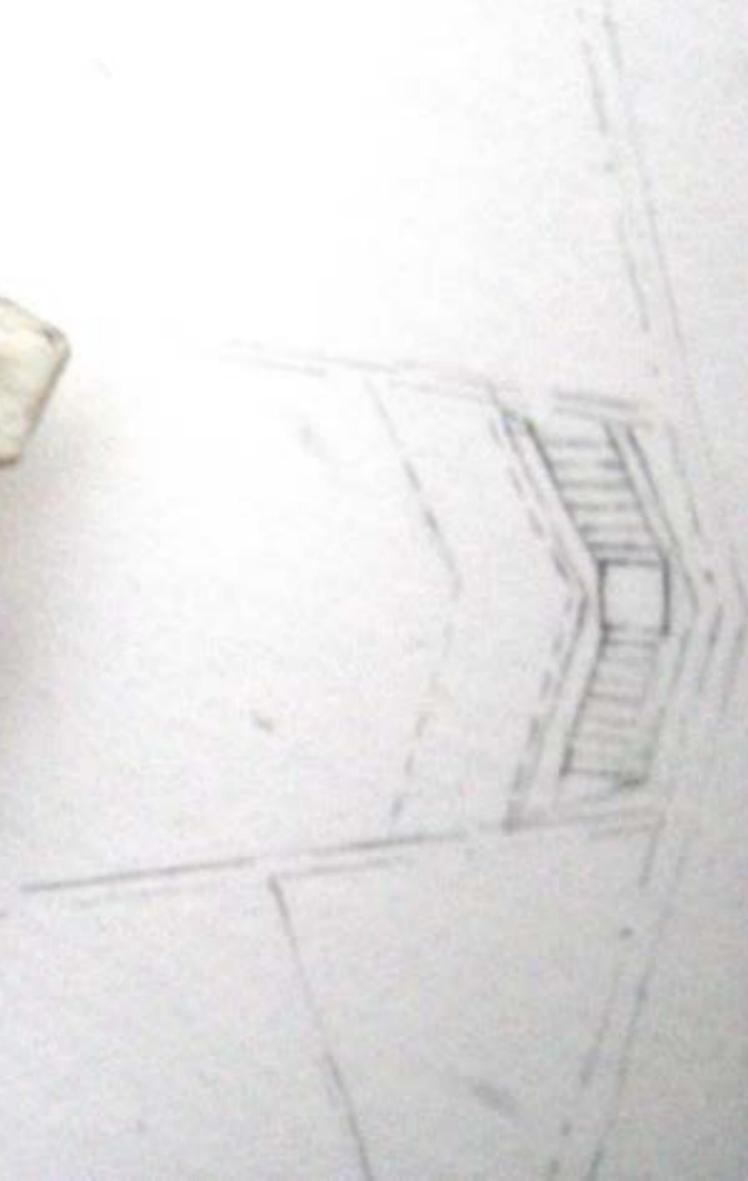




sketch model (2) made out of modelling clay

these models allowed me to give finite shape to the pools, as well as test their capacity to stand because the clay has weight

moreover, this allowed gave me a basis to draw the pools off of



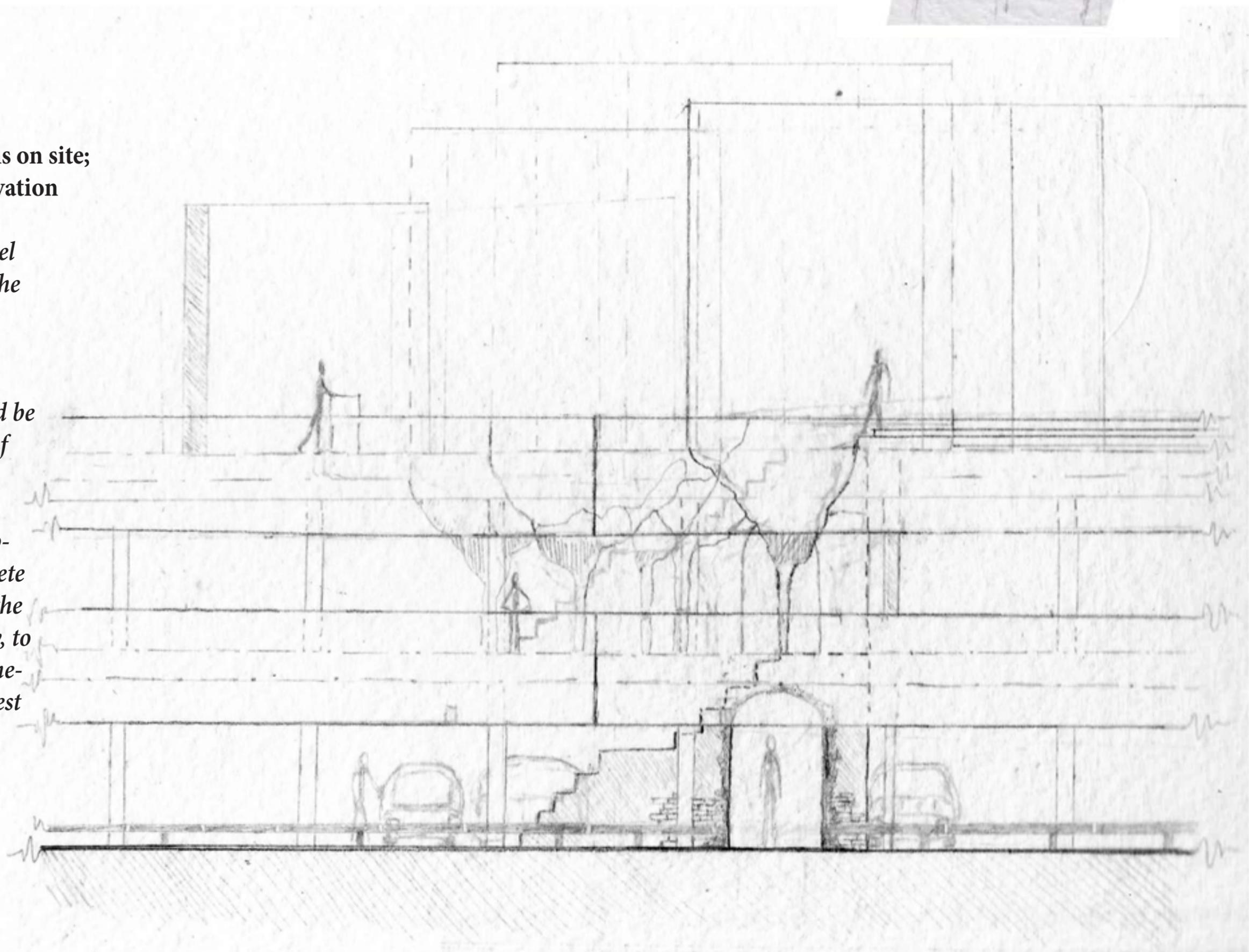
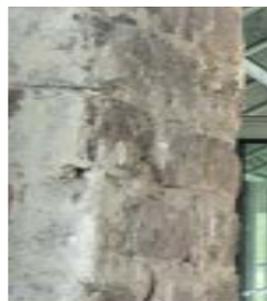


**putting the pools on site;
sectional elevation**

*this addresses how the public
would get to the pools and travel
through the carpark to reach the
2nd floor where they would be
able to enter the pools*

*Caritas and Swanderwal would be
referenced for the materiality of
the stairs*

*the entrance would have the ap-
pearance of the slathered concrete
which would set it apart from the
rest of the carpark's materiality, to
visually signal that there is some-
thing different there from the rest
of the carpark's occupation*

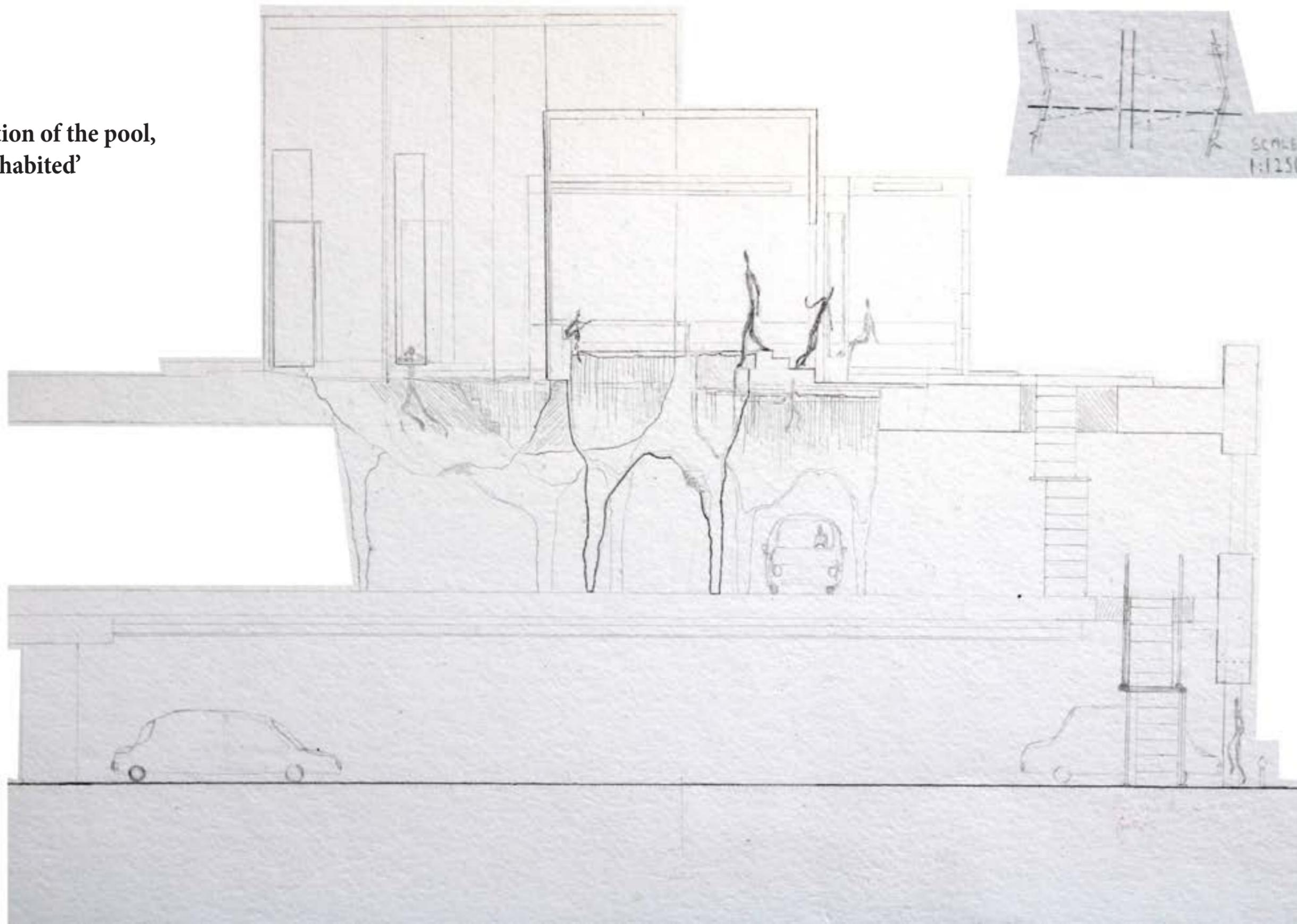


larger section of the pool,
'inhabited'

I want the pools to interrupt the car-park as little as possible, so that people on the first floor can drive through the arches of the pools

I want each room with a pool to be slightly different, so the occupation of each is slightly different

I want different floor heights as well as different amounts of light entering each room, so each pool environment is slightly different

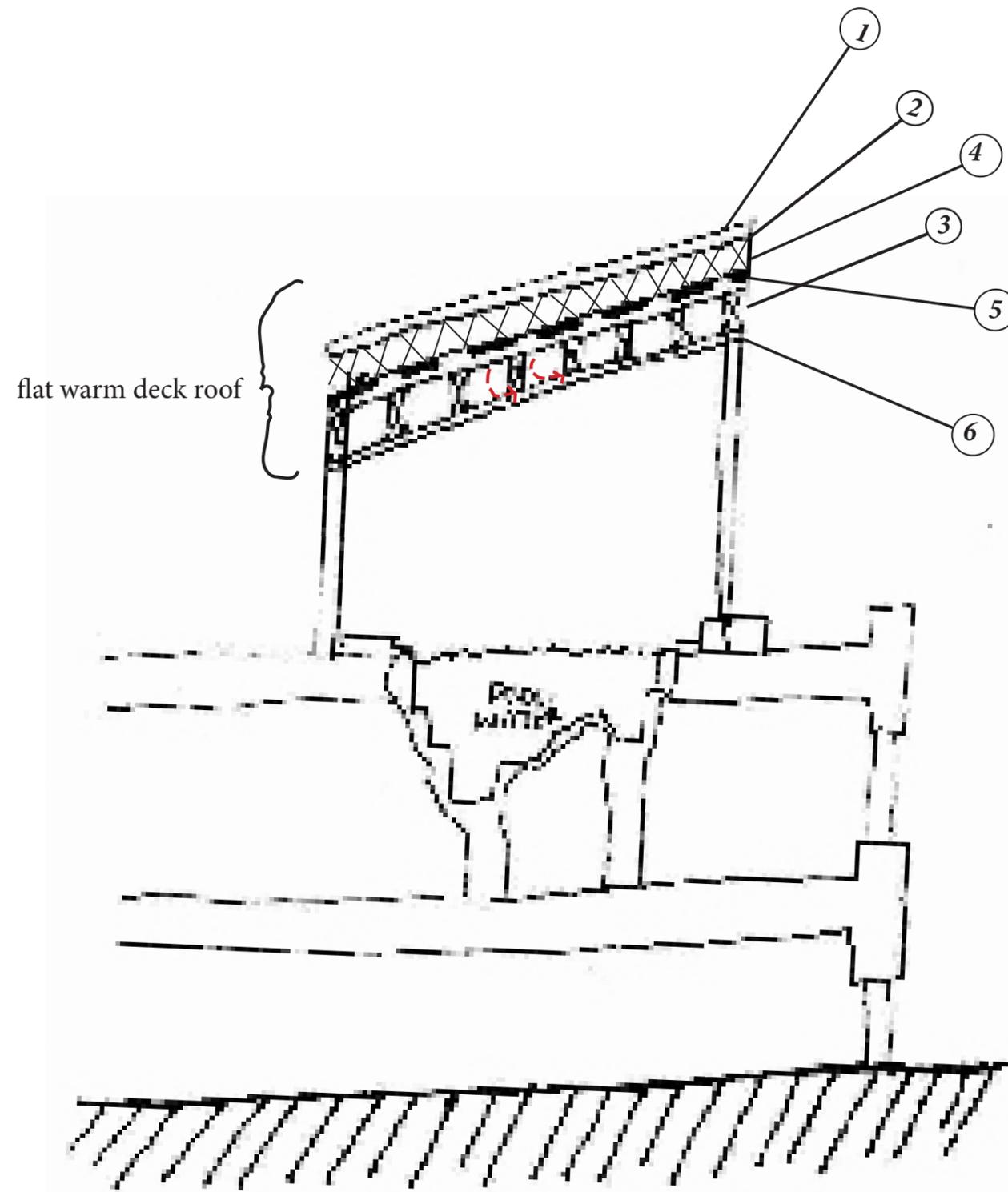


roofing diagram

With this type of roof insulation is positioned above joists and decking with a waterproof layer below, which creates 'warm'.

The air between joists which typically (for non swimming pools) means that ventilation is not necessary because the joists are the same temperature as the room and would not be prone the ventilation.

The build up of a warm roof is thicker than a cold roof.



1. waterproof membrane

2. roof decking (typically marine plywood or OSB)

3. joists

4. insulation (could be sheep's wool/recycled mattress, economical and easily accessible to Brighton, meaning a low carbon footprint)

5. vapour barrier

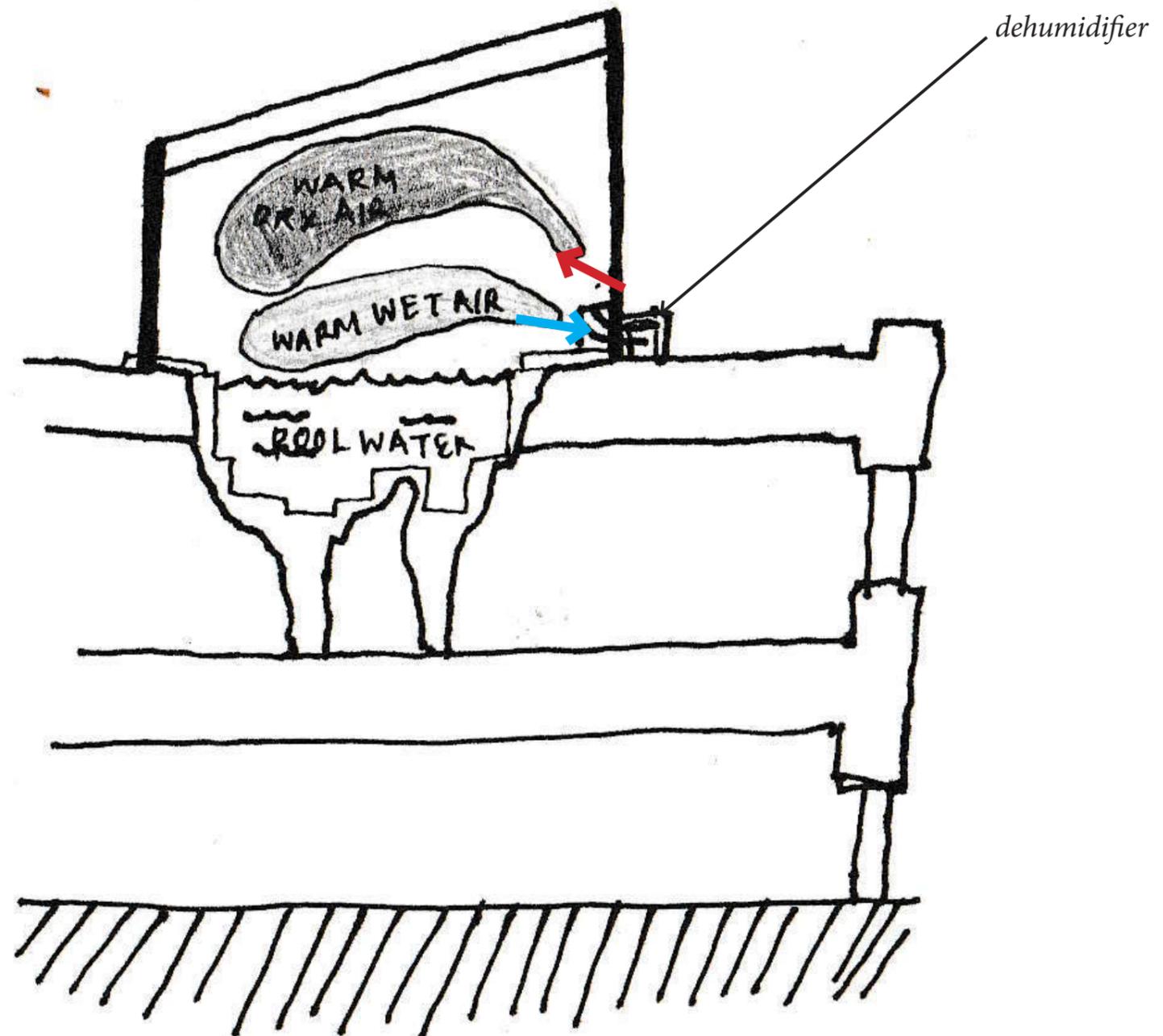
6. plasterboard

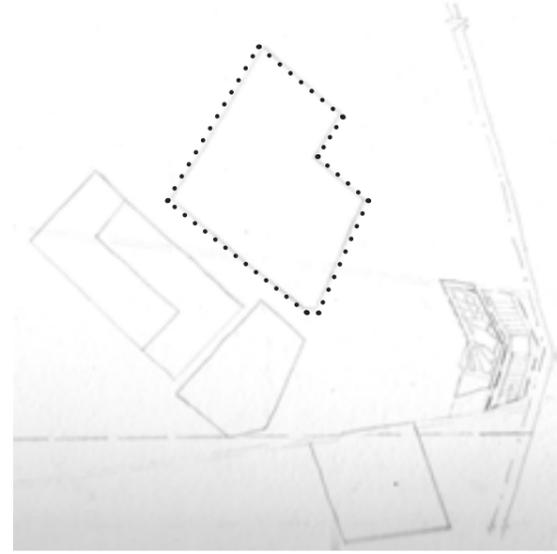
ventilation model; 'uniform'

per pool

Dehumidifiers, through the use of ducts or vents, pump warm dry air into the room and warm wet air out.

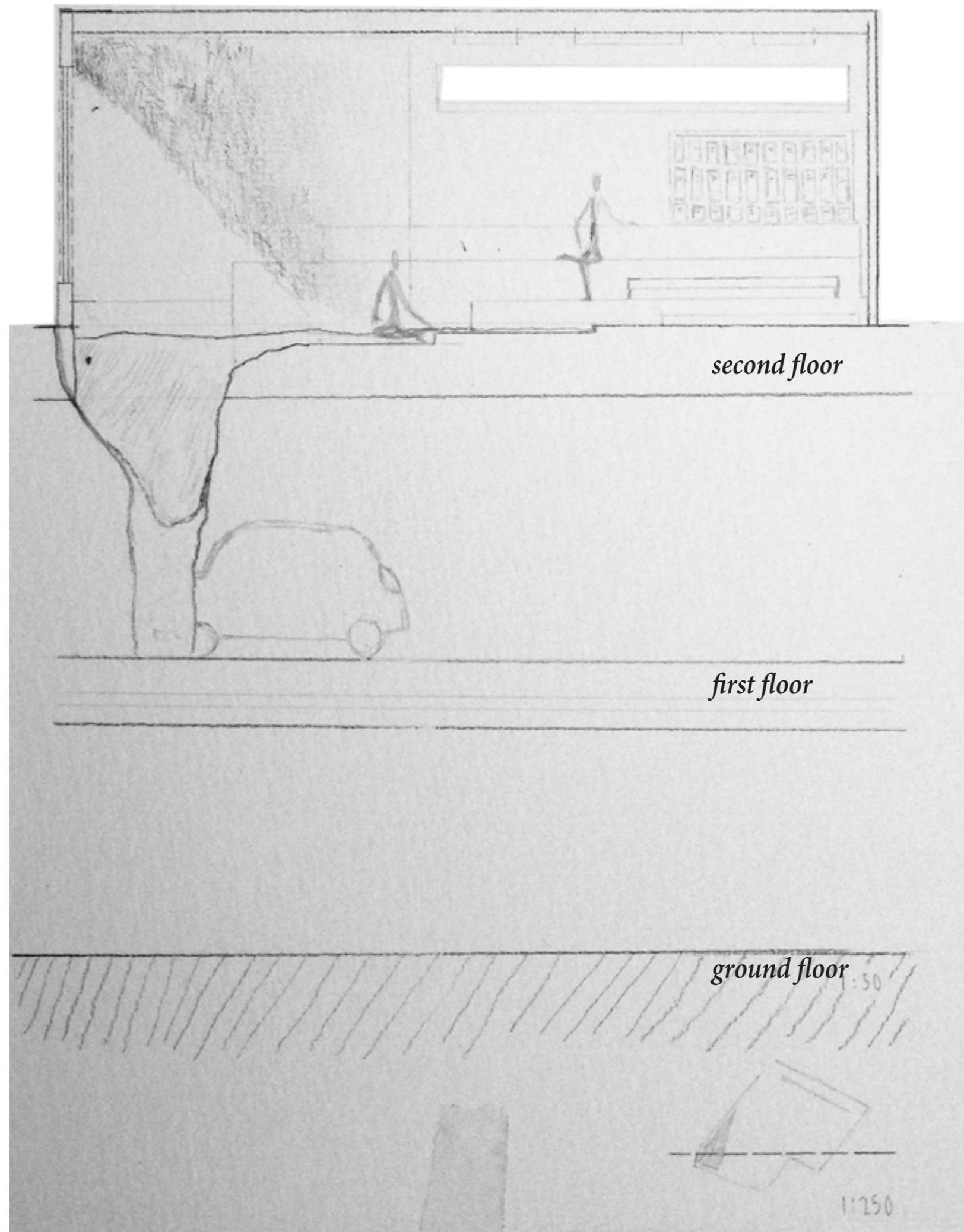
The warm wet air is turned into warm dry air and only then is it reintroduced into the room.





sketch section of one of the pools; showing lighting
I wanted to show the lighting around the pool

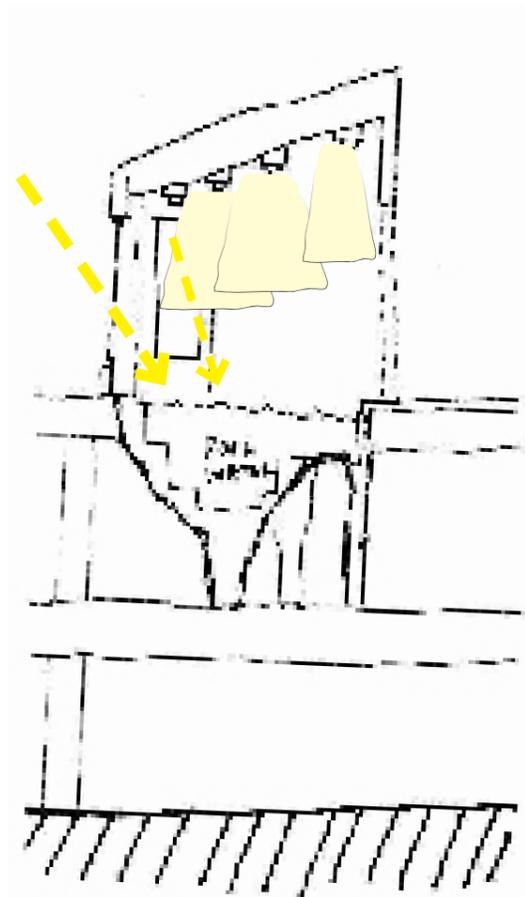
I also wanted to reveal the subtle height differences of the floor



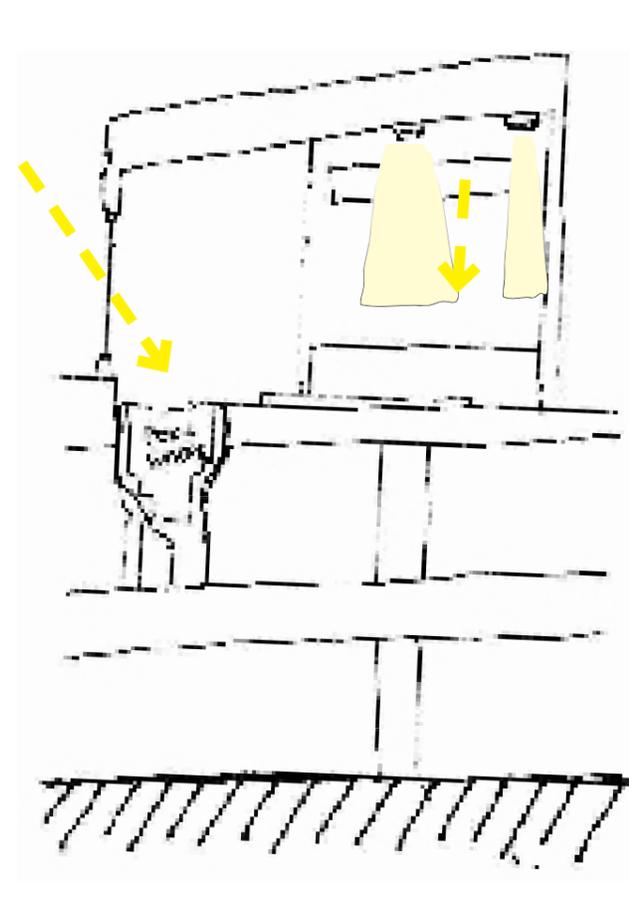
light sources and location for each pool

these diagrams aim to show the light sources (natural and artificial) of each of the pools -as each pool aims to have a different ambiance

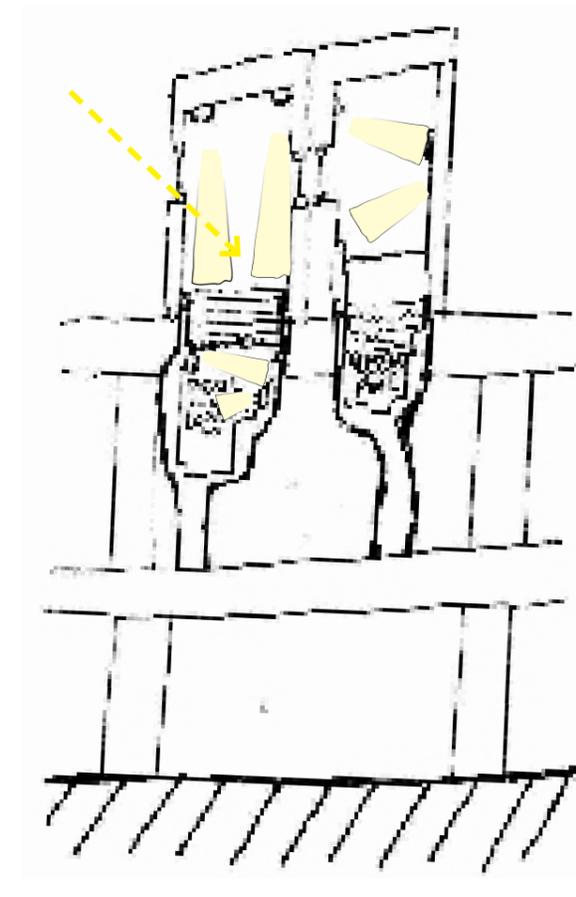
lighting is one of the ways that I am reinforcing a difference swimming experience per pool



combination of moderate natural light and moderate artificial light

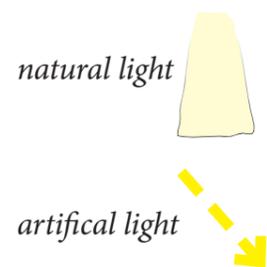


reasonable natural light over the pool but limited artificial will reach it; sitting area away from pool is composed of moderate natural and artificial light



limited natural light reaches pool, but there is artificial light above the pool and within the pool, via pool lights

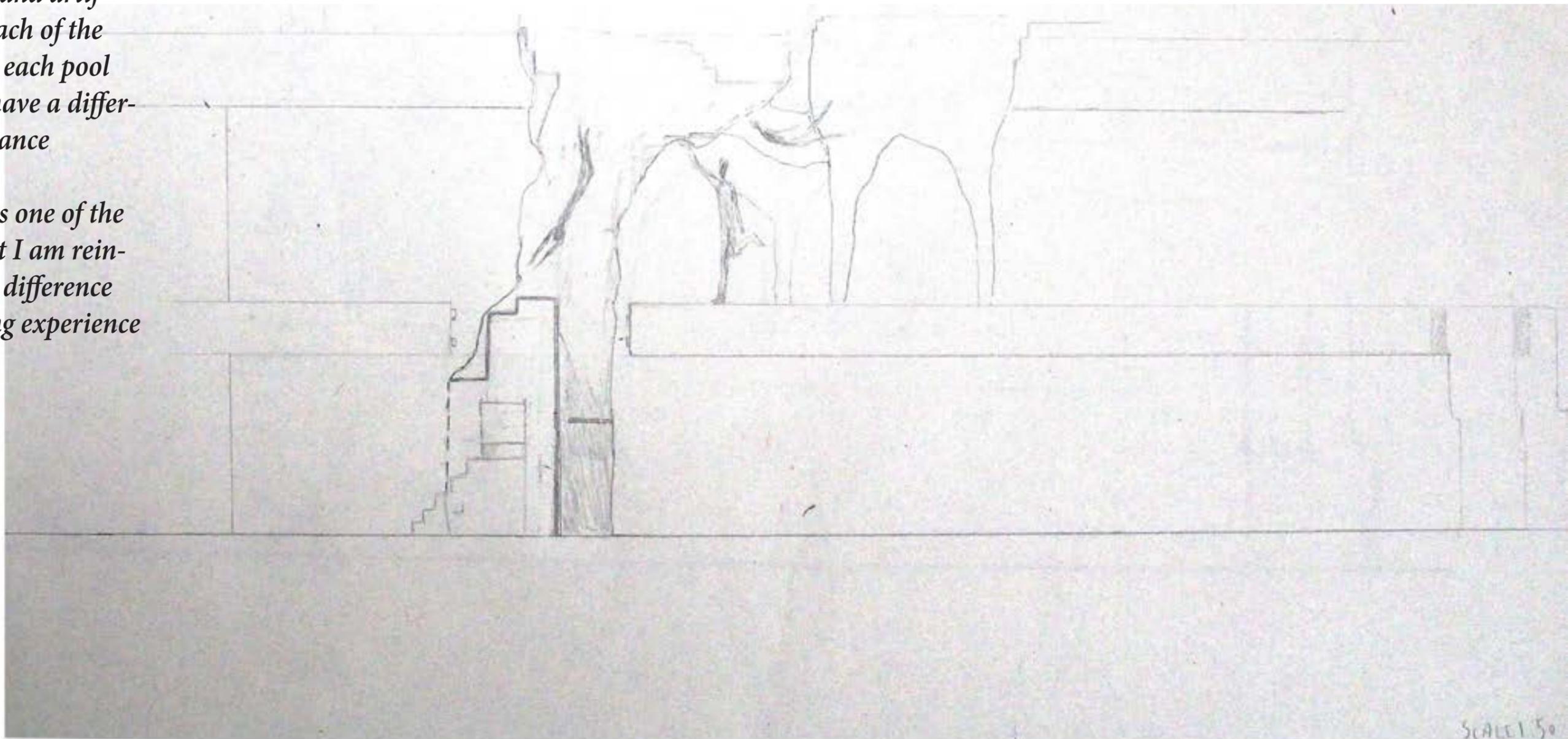
very limited natural light reaches pool, for occupants of the pool it is relatively dim, there is no direct light source to it



**light sources and location
for each pool**

*these diagrams aim to
show the light sources
(natural and artif-
ical) of each of the
pools -as each pool
aims to have a differ-
ent ambiance*

*lighting is one of the
ways that I am rein-
forcing a difference
swimming experience
per pool*





the reintroduction of light throughout the proposal

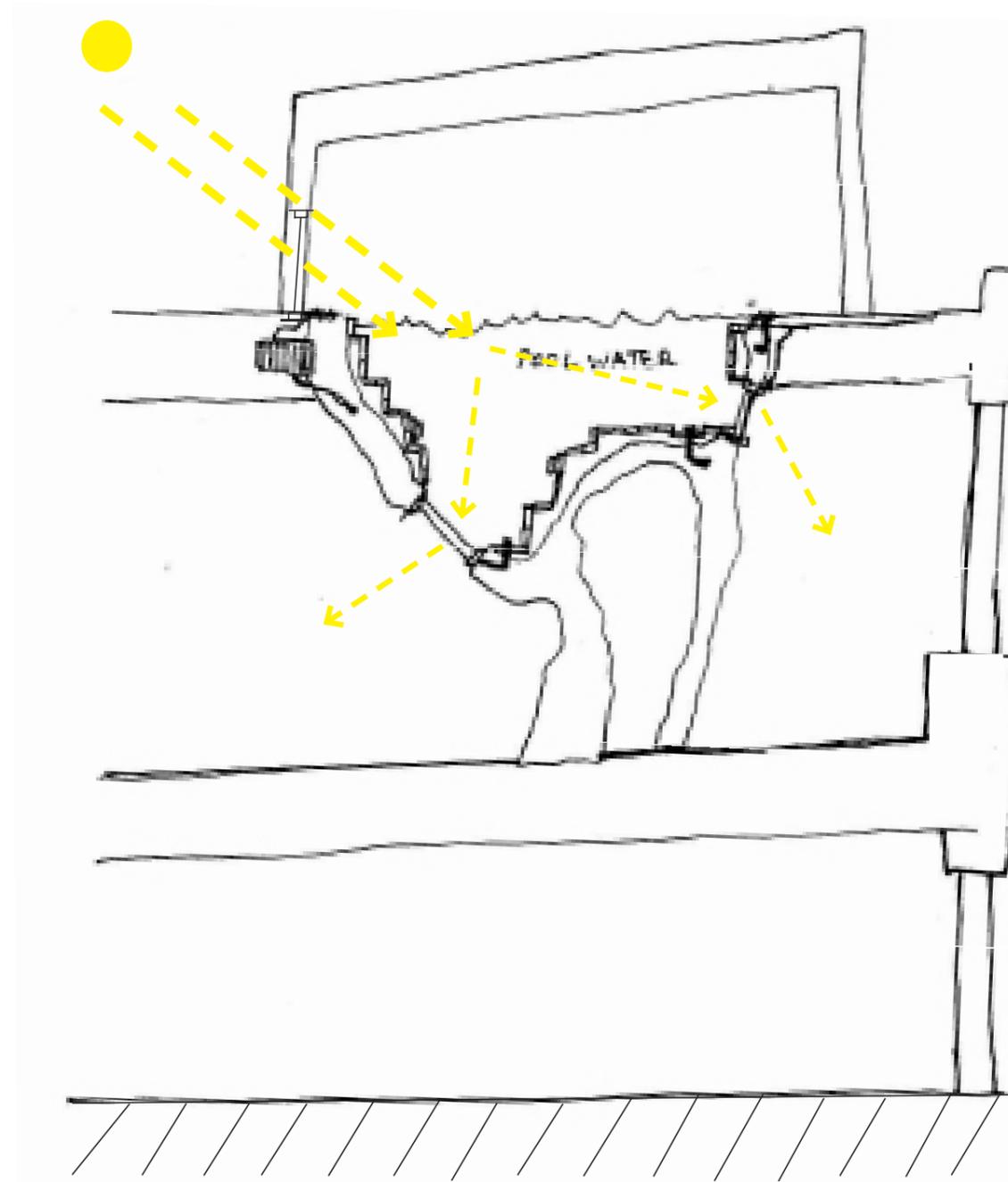
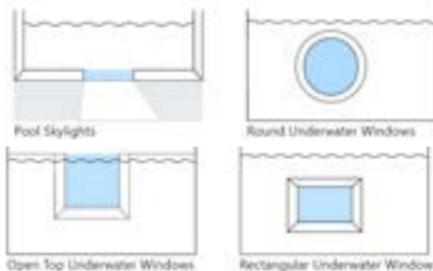
I wanted to reintroduce light into the carpark spaces - is peeking through into the carpark level below if the pool are entirely ferrocement sttructures. Unless the pool has aspects that are glass - windows. Or it is entirely transparent. Swimmings tend to have transparent walls or windows but are not entirely transparent.

I want to mimic how light enters the pool, as seen in these pool precedence.

Each of the pools have different lighting aspects to them, thus do not create the same experience.

Part of the project is about reintroucing light into the carpark spaces.

Examples of where windows of possible pool windows:

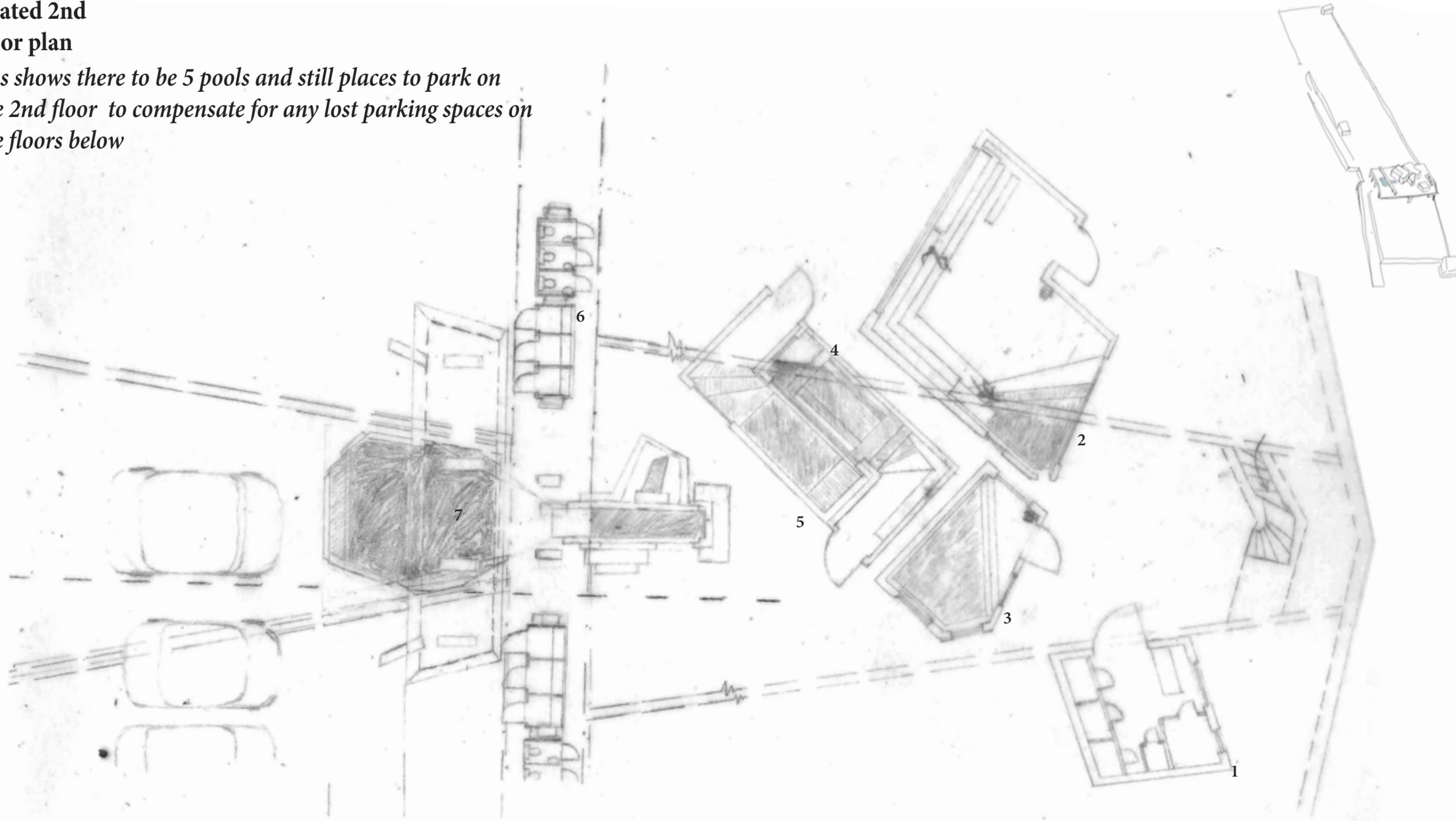


Initially upon entering the carpark, there is limited light - merely soft yellow artificial light.

This project began with details and the idea of making small changes to the car-parks in-use spaces. By introducing pool skylights, light can begin to flow thorough the carpark, it can spread. Moving through the carpark could become a lense intensely dark (segrated from the rest of the world) experience.

**updated 2nd
floor plan**

*this shows there to be 5 pools and still places to park on
the 2nd floor to compensate for any lost parking spaces on
the floors below*



*1. 'front' desk + changing rooms
and toilets*

*2. largest 'room' with smallest
pool, but the most space for peo-
ple to use the pool while talking to
people not using the rooms*

*3. a pool room entirely dedicated
using the pool but no sitting space
for other members of the public
to talk/watch the pool users while
they use the pool - the most private
pool room/experience*

4. dark

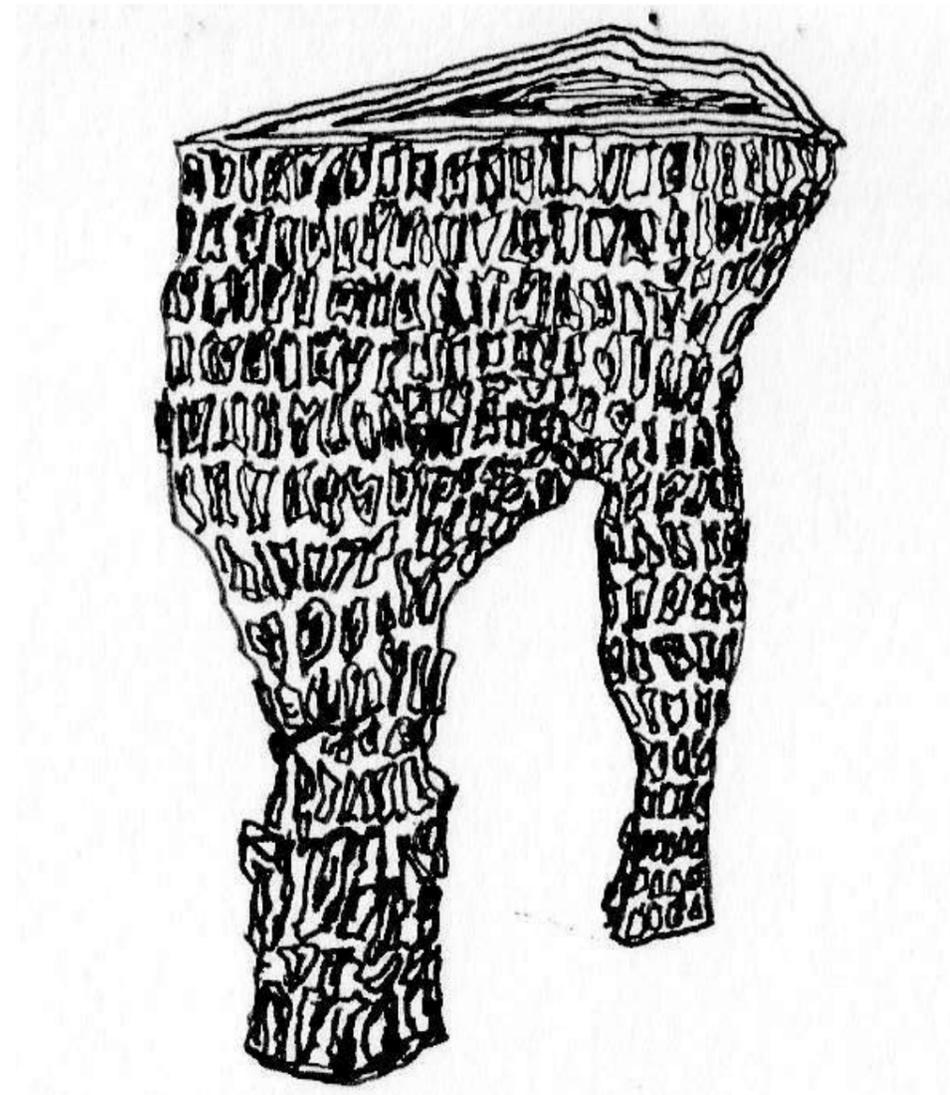
5. dark

6.

7. shallow pool, a children's pool

applying material precedence to the pool shape

I would use fragments of broken bricks to create the shape of the pool

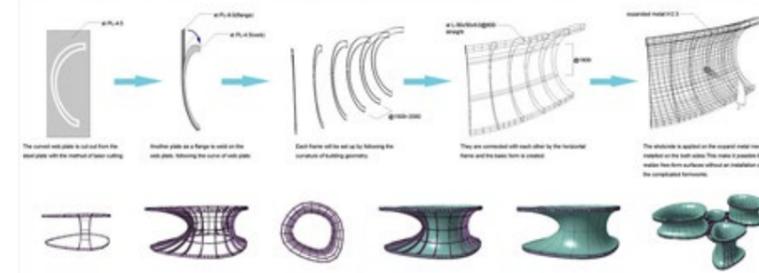
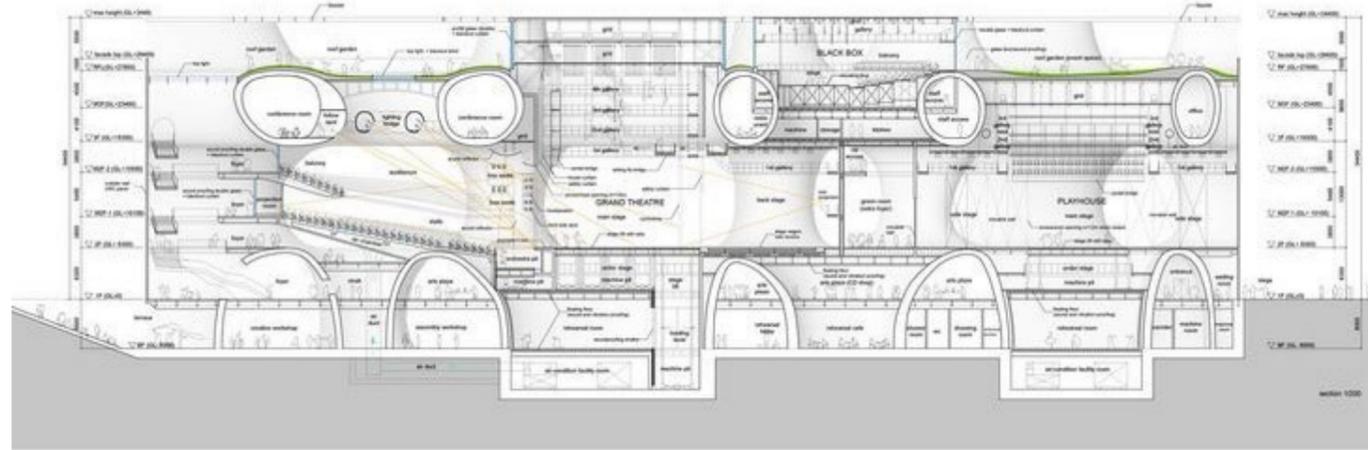


material reference (6) Toyo Ito's Opera House, Tokyo
PART 1

"I aimed to create the architecture of this opera house in such a way that the inside and outside are continuous in a like manner to how bodies are connected to nature through organs such as the mouth, nose, and ears," Ito is quoted saying in Dezeen magazine.

For me seeing the continuous form of Ito's opera house is turning point for the project. In section the form that the pools take (that can be seen on the first floor) ends when it reaches the second floor, which is a shame.

I want my proposal to have a semi-continuous nature to its shape, or be more significantly continuous than it is at this point.

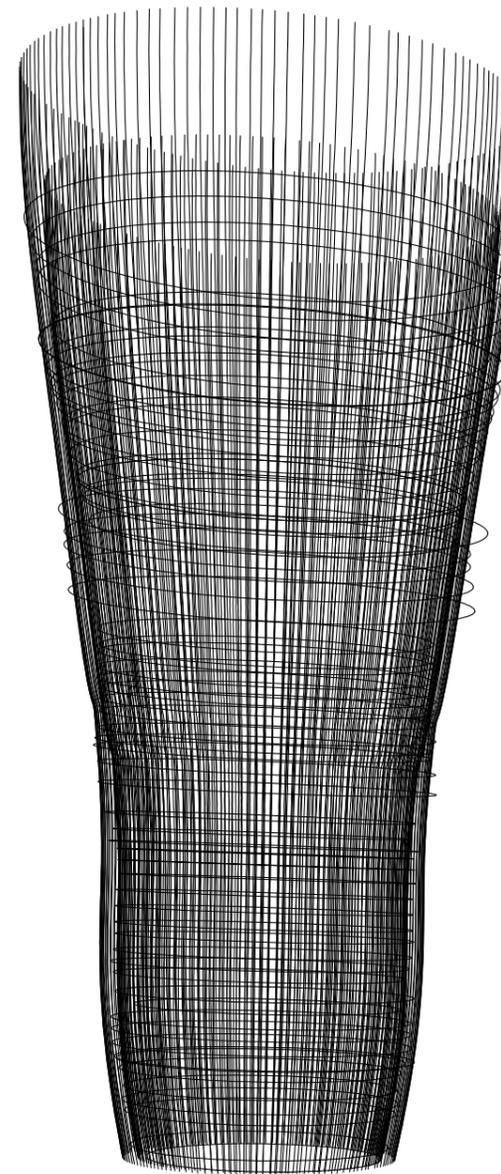


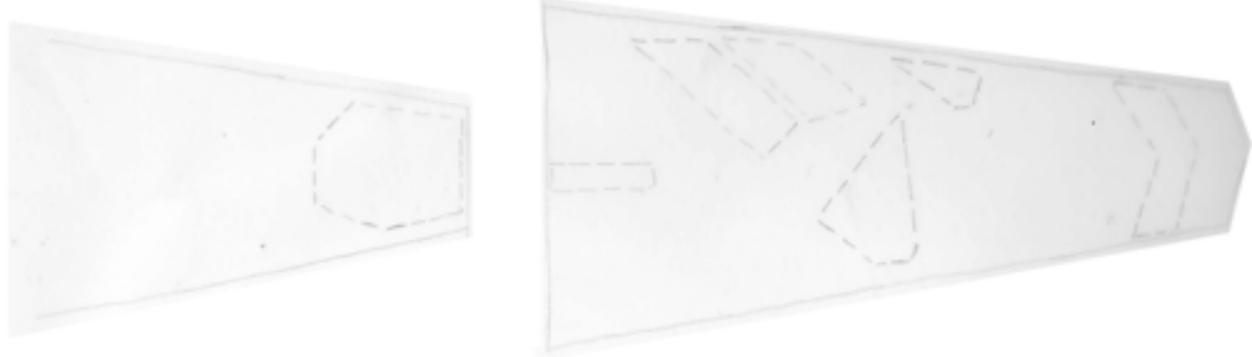
material reference response
- digital model (6) Taichung
Metropolitan Opera House,
Toyo Ito, Tokyo PART 2

*Ito used sprayed concrete
(shotcrete) throughout the
structure of the the opera
house. A temporary steel
framework is assembled and
fixed with metal mesh which
sits between the frameork and
the concrete.*

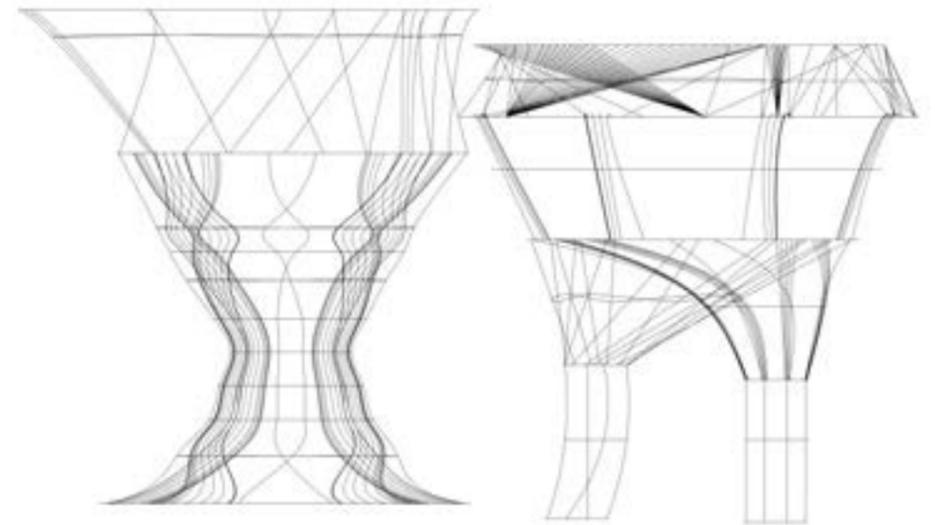
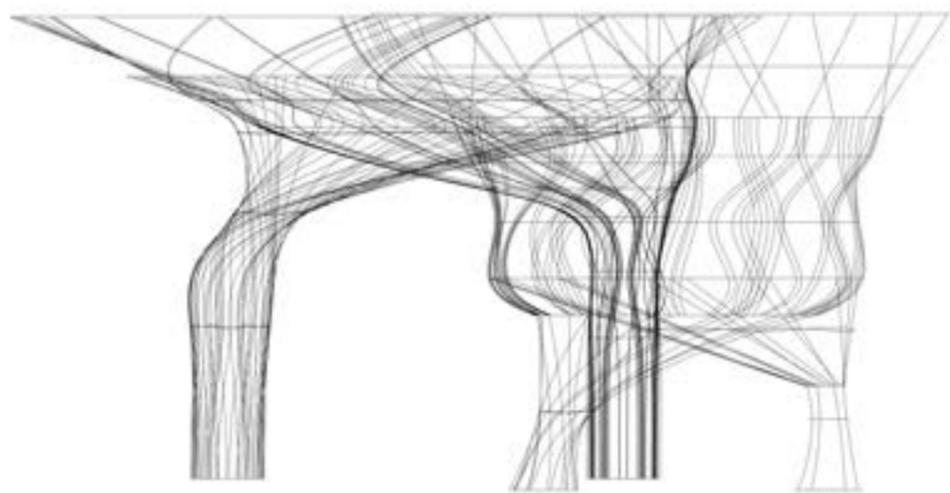
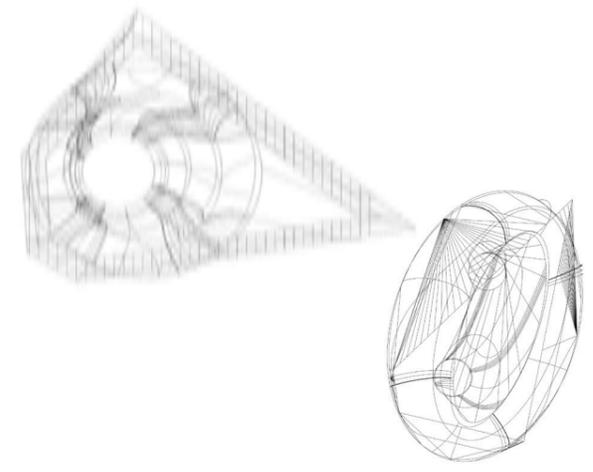
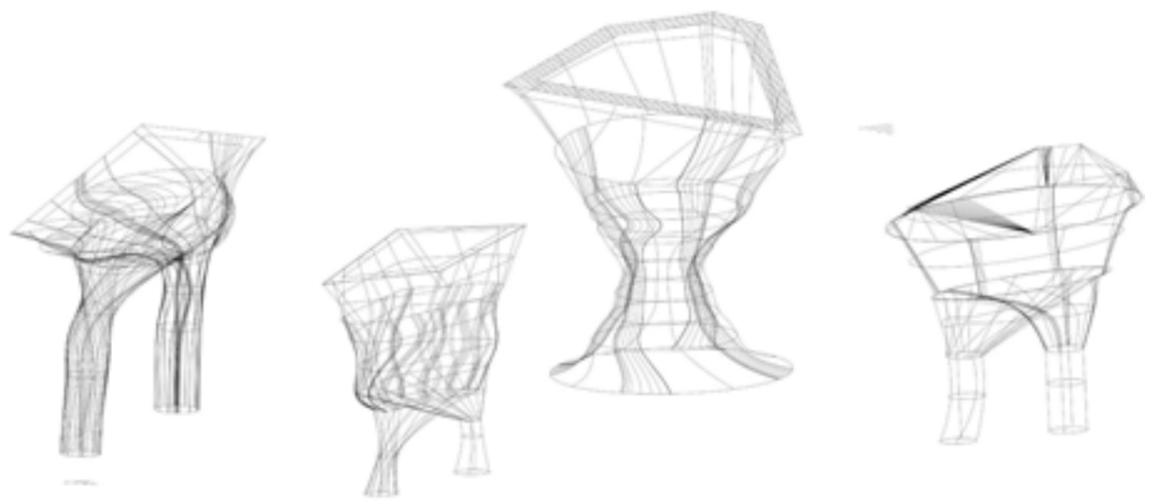
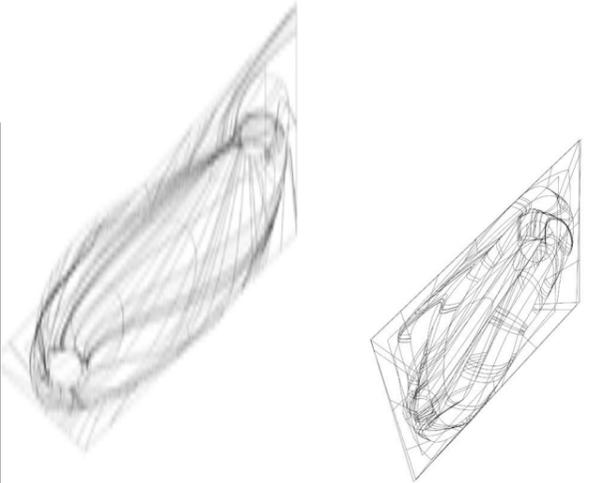
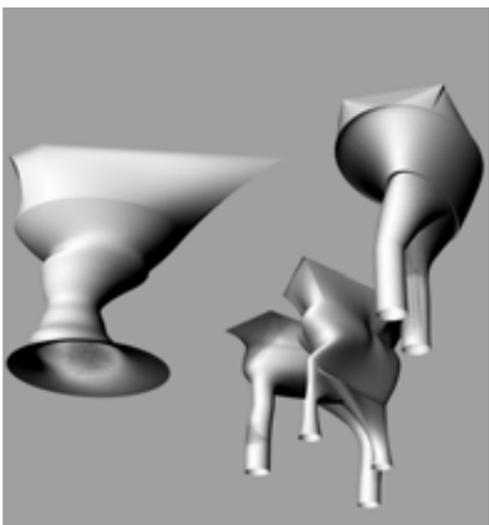
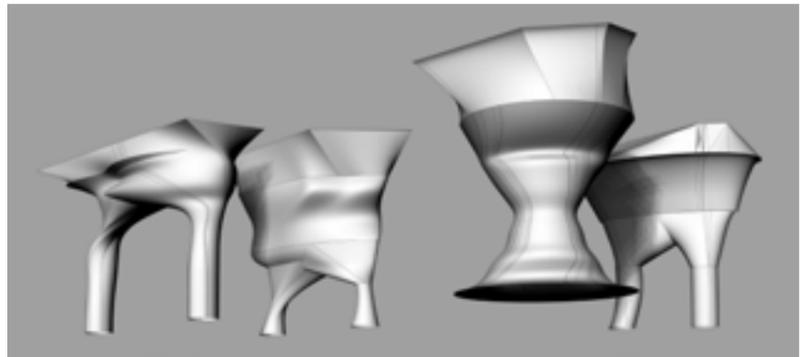
*This method allows for unique
shapes to be made. I think that
it is applicable to shapes that
I'm trying to create for the
pools, so created a basic model
of what the wire mesh would
look like for one of the pools.*

*This precedence really made
me step back to appreciate the
forms that I decided to work
with/create.*



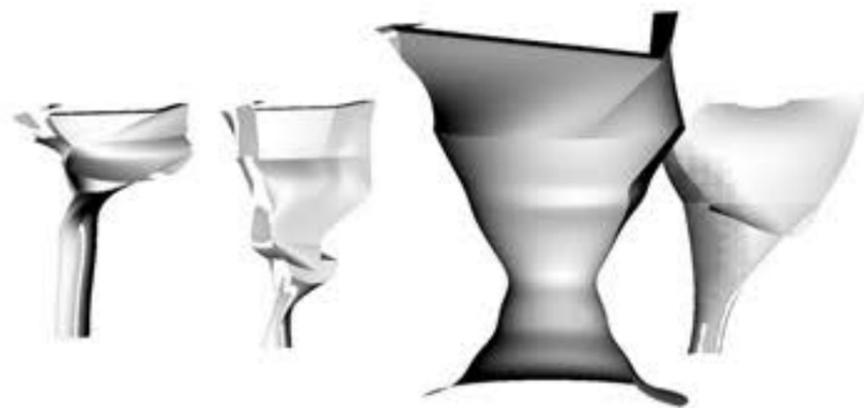


**digital models of the pools;
shape refinement**
*I made Rhino
models of the
pools*

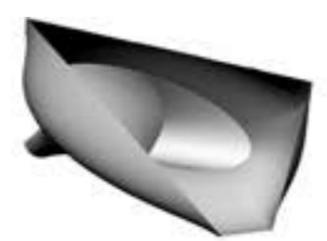


**digital models of the pools;
shape refinement**

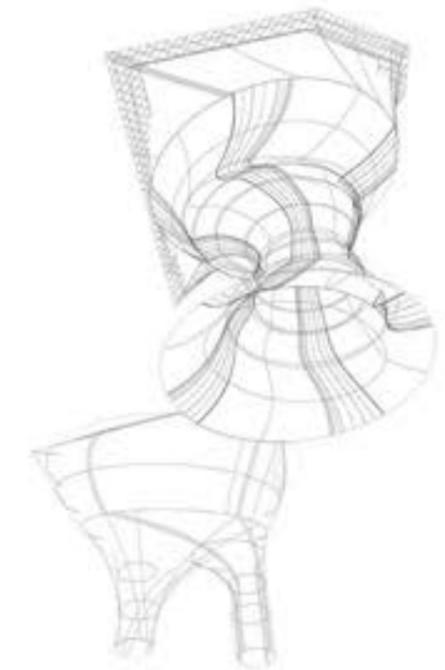
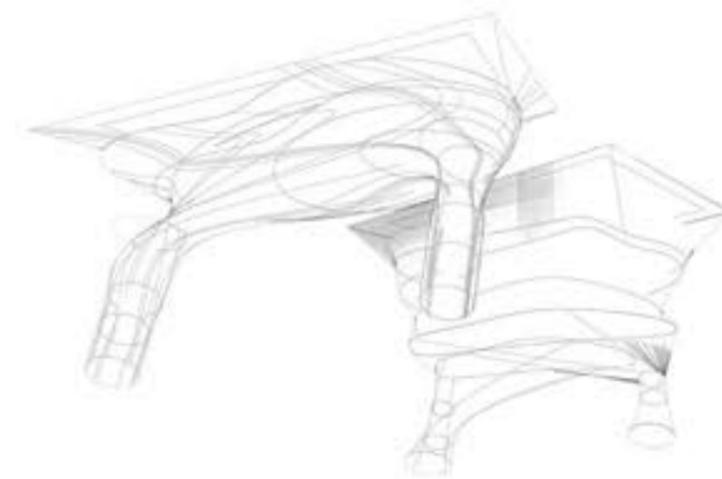
*I made Rhino
models of the
pools*



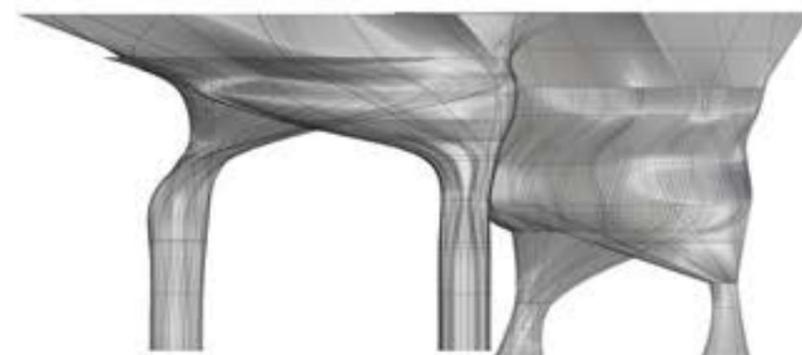
*section through each pool, to show their in-
ternal structure*



plan



worm's eye



elevation

second clay model - of external structures that surround the pool structures



*by introducing
a dome skylight
structure to
previous pages
models, light is
reintroduced to
the project and
the pool rooms*



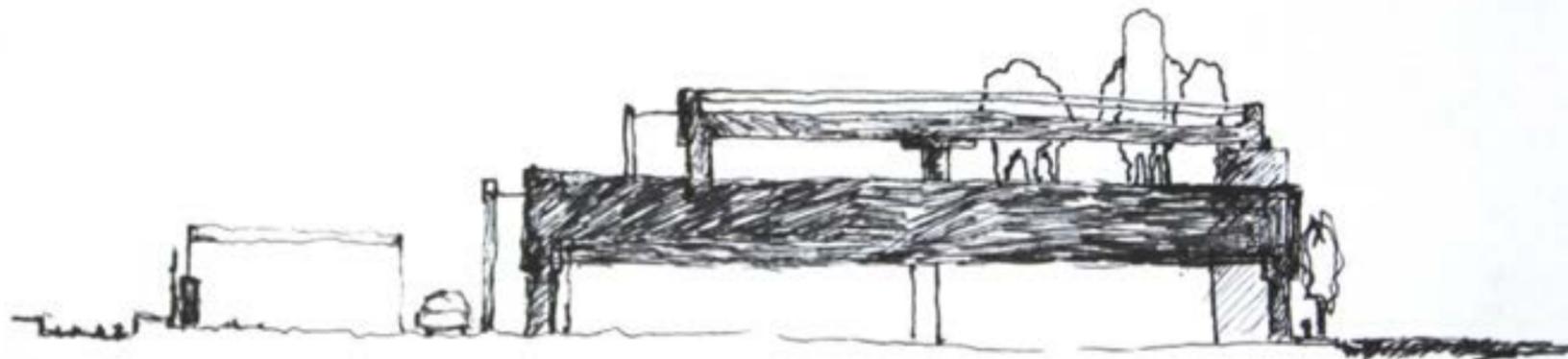
+



=



*updated (refined) program
: an equilibrium of 'pools'*

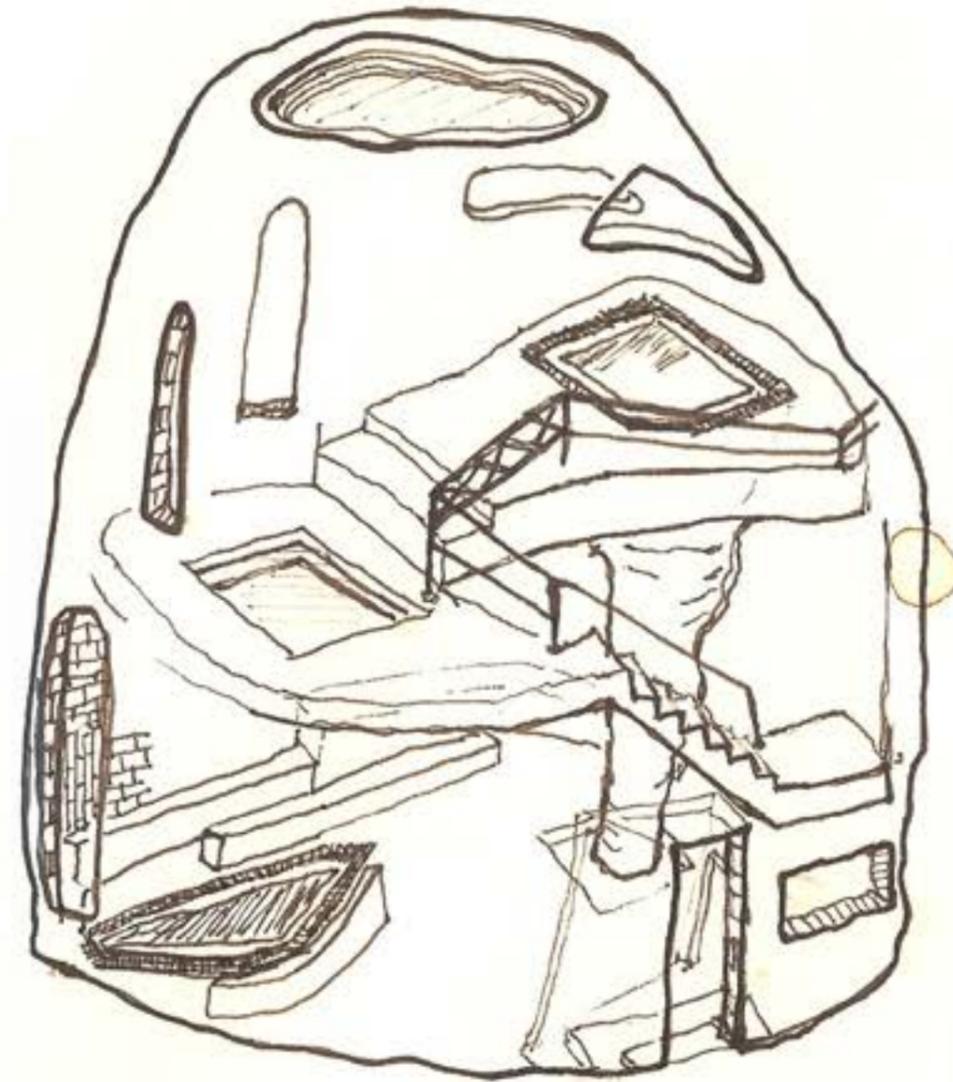
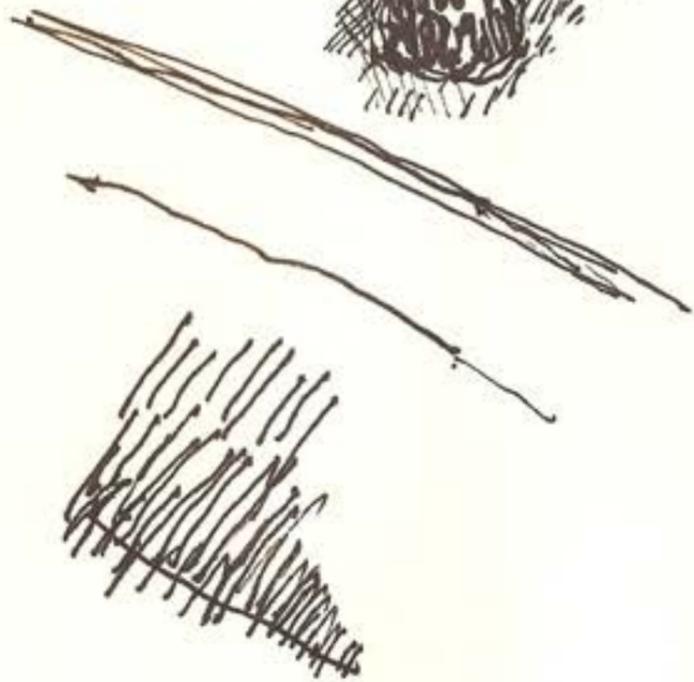
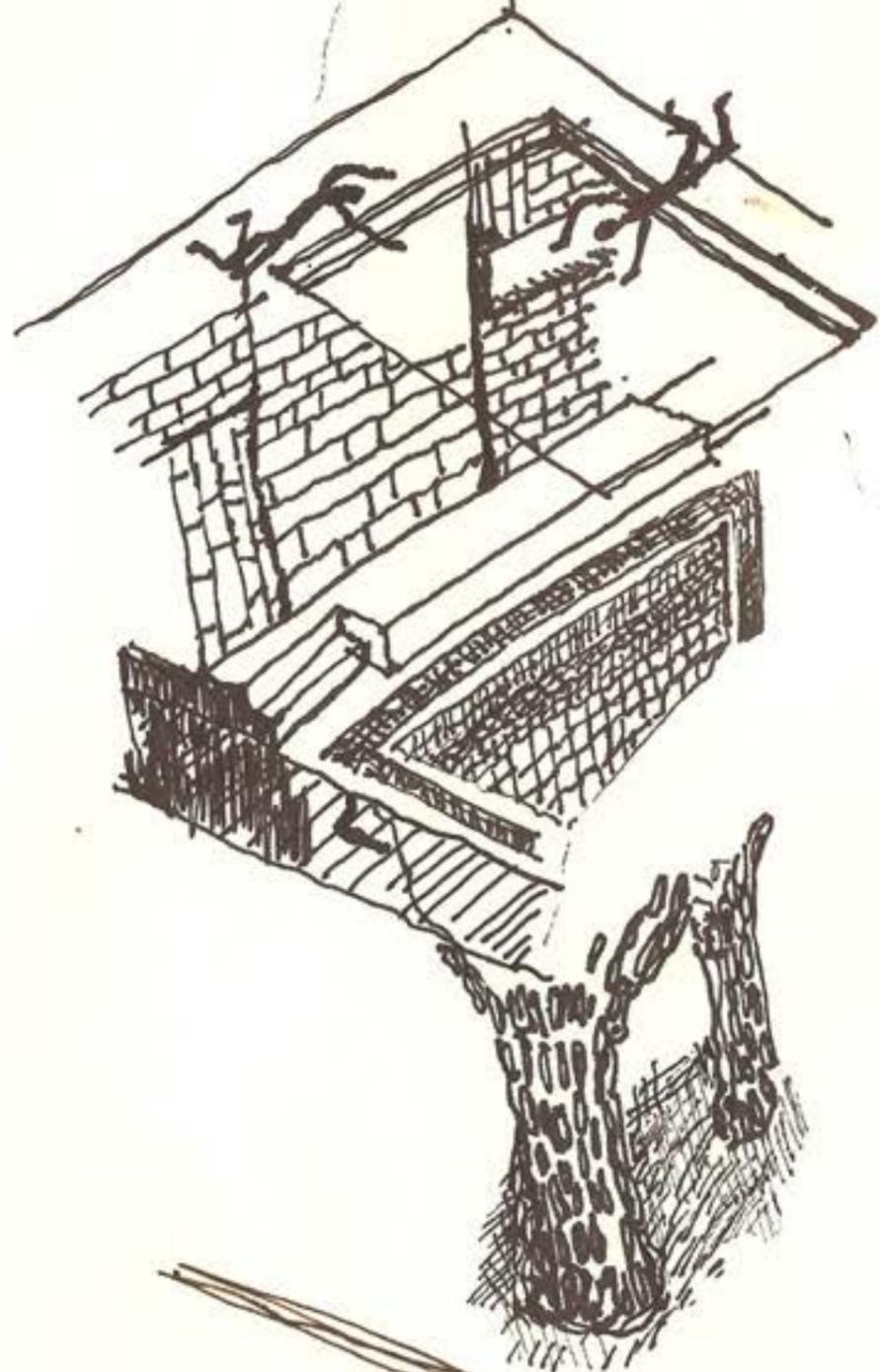


: an equilibrium of 'pools'

*this proposal's aim to redefine public pools to
have the capacity to small, intimate and some-
what private*

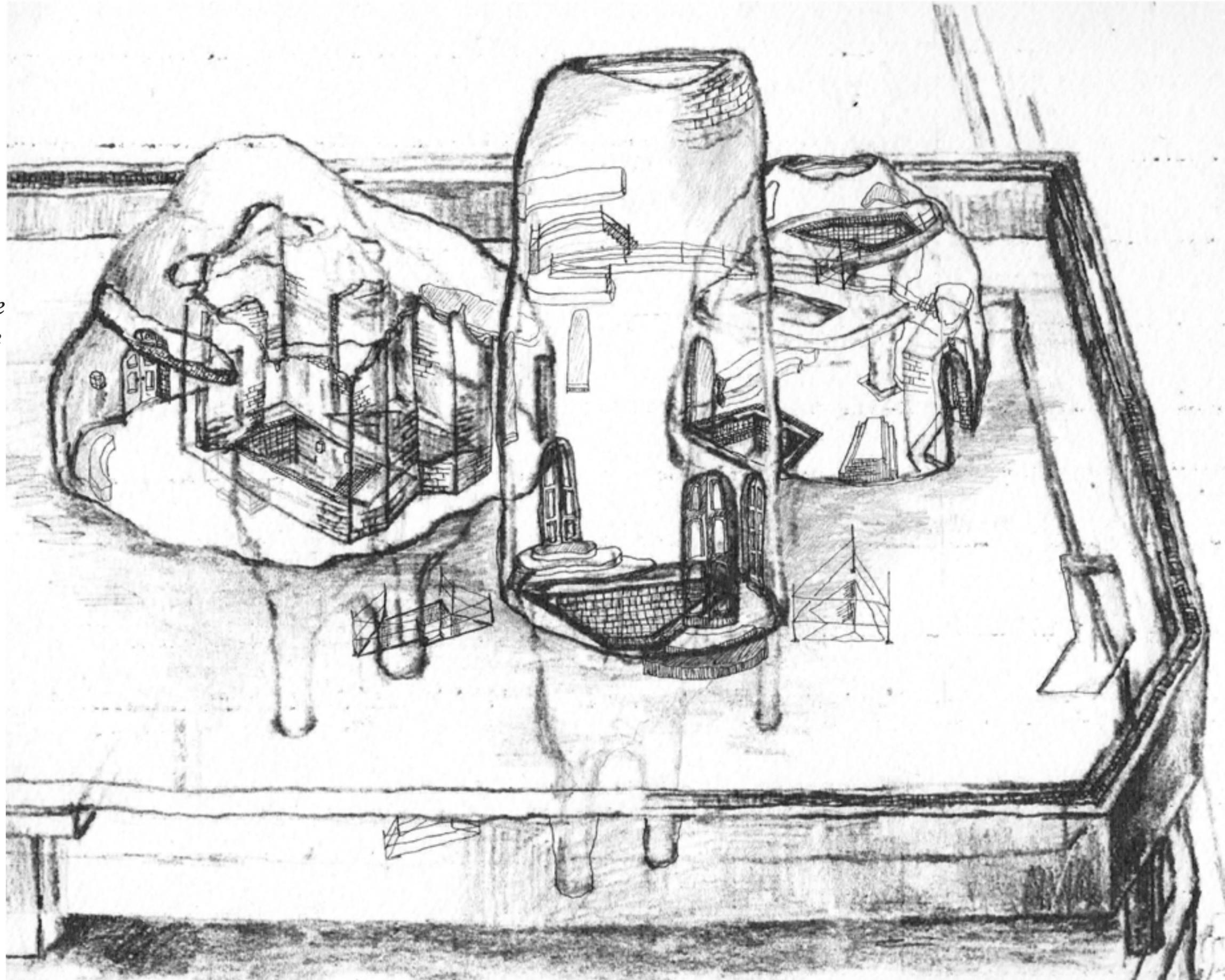


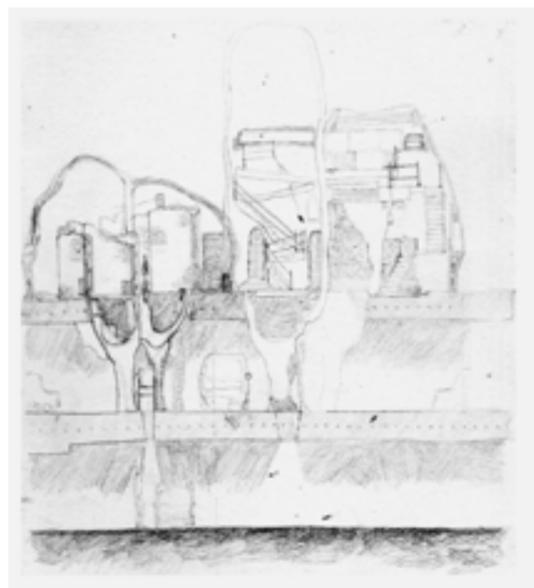
at least be in charge



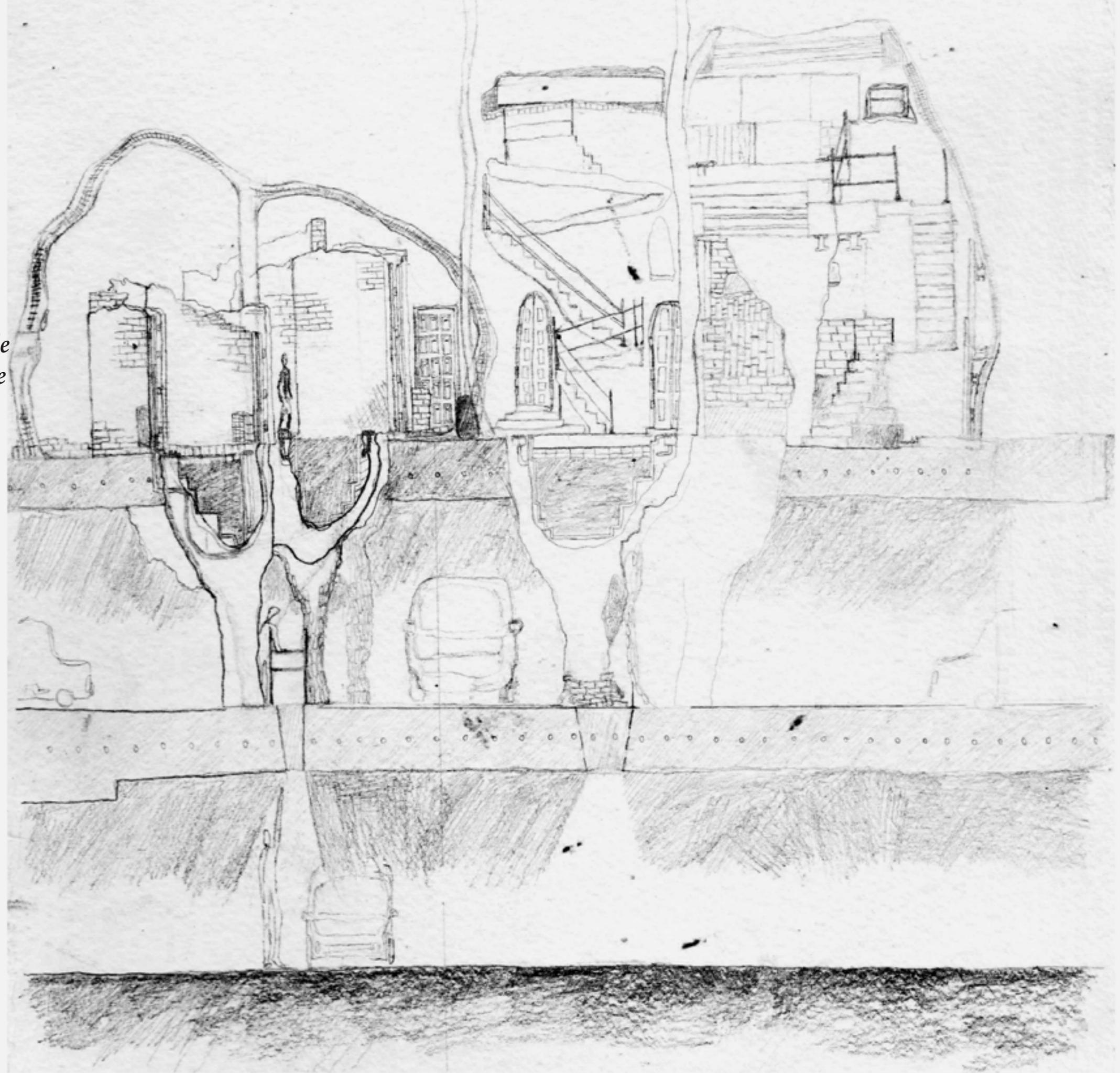
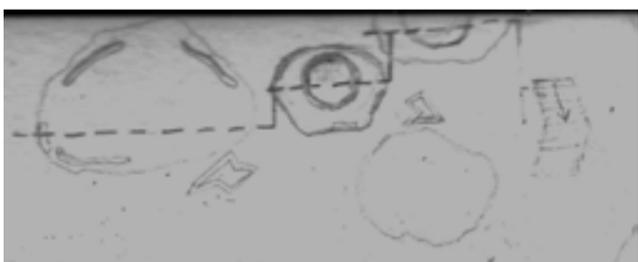
digital models
of the pools

*there is noticeable
lack of any type
of symmetry*





detailed section
the is noticeable
lack of any type
of symmetry



THIRD FLOOR

what is important?

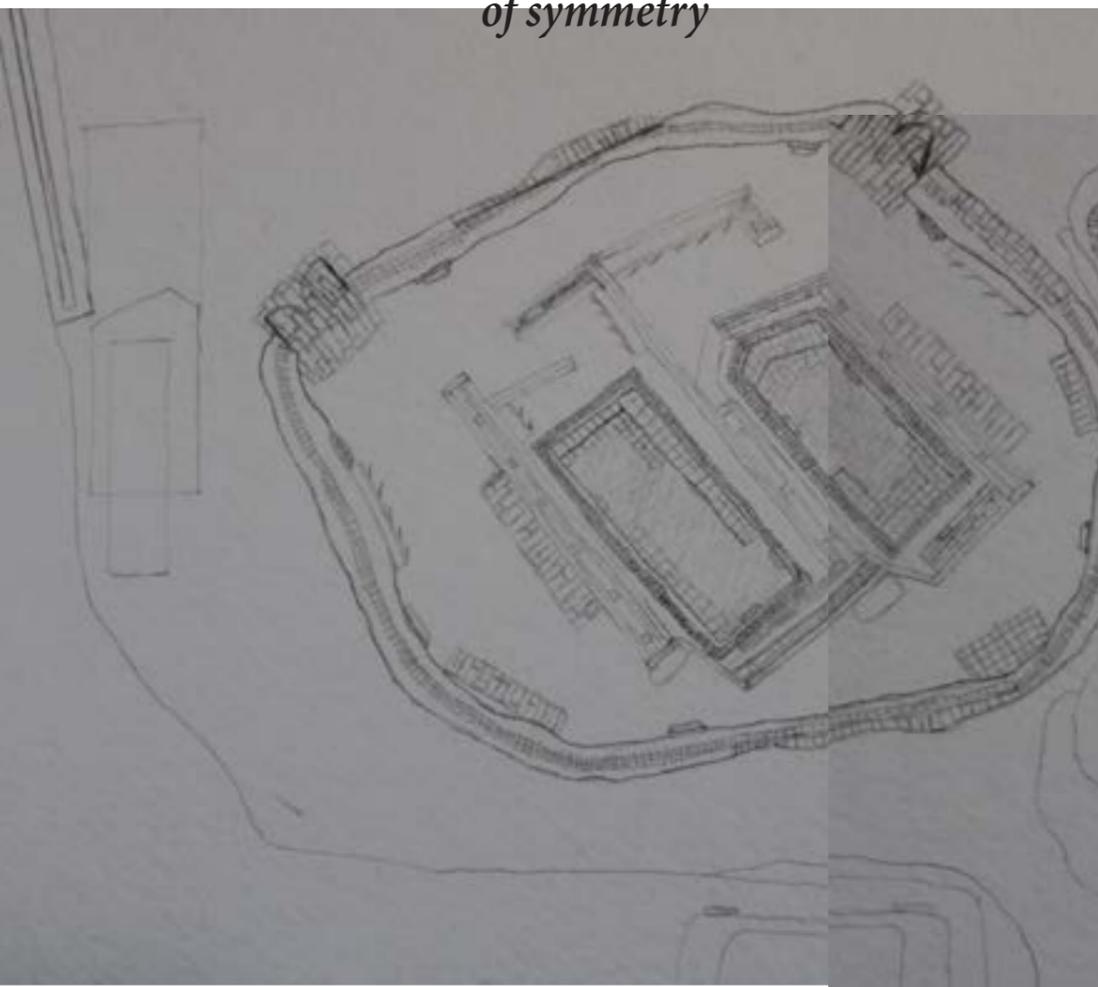
SECOND FLOOR

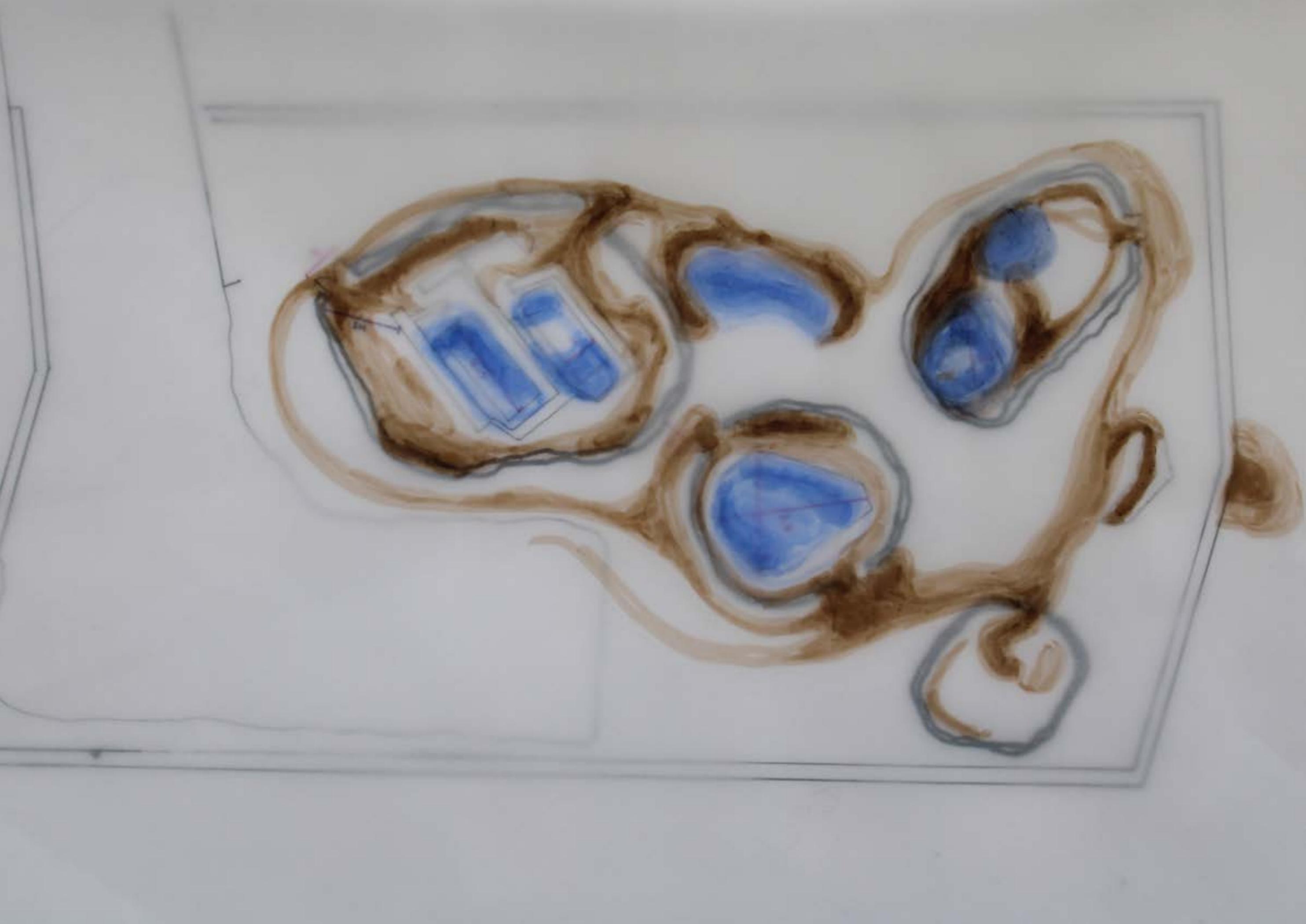
FIRST FLOOR

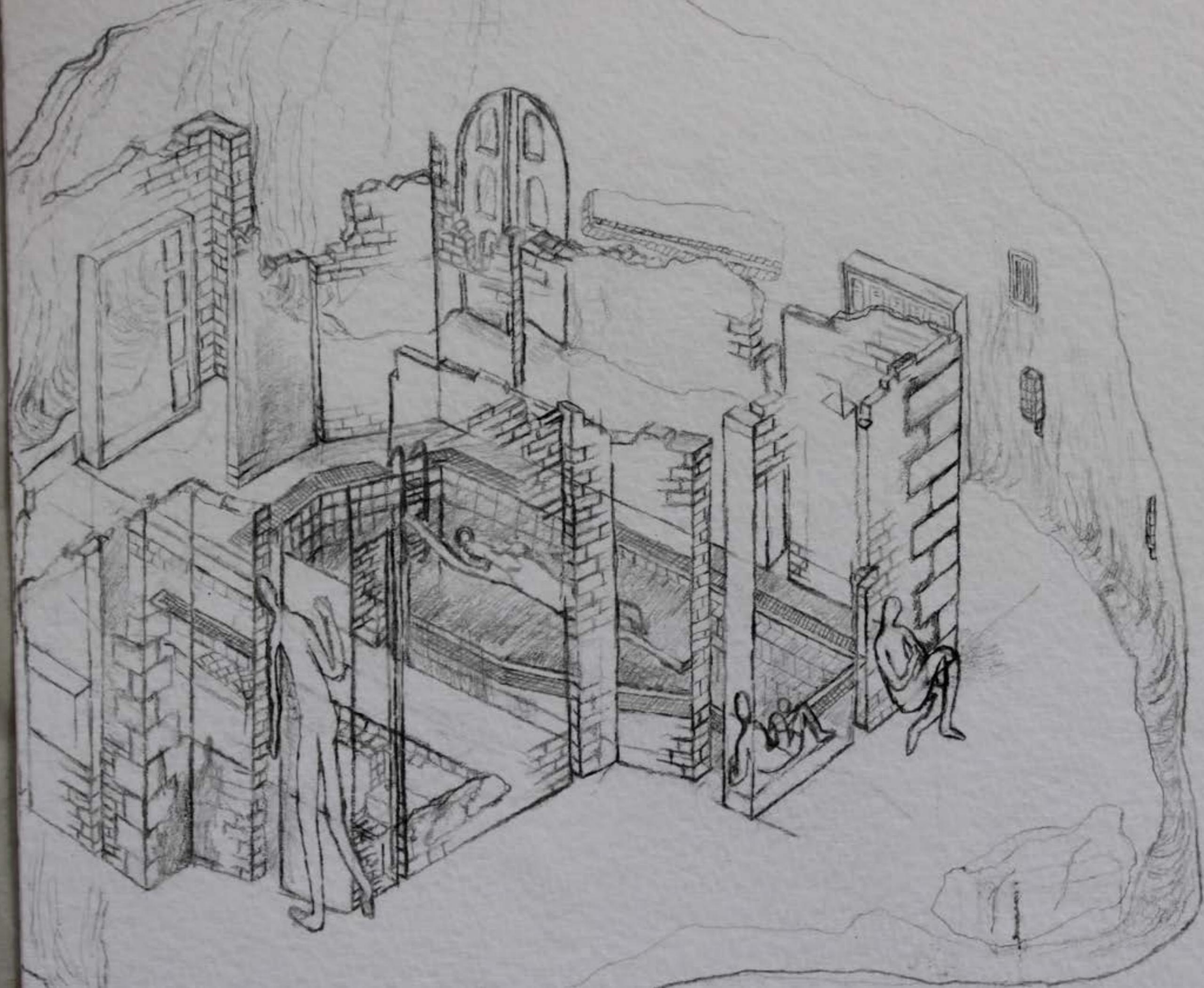
GROUND FLOOR

overall plan
the is noticeable
lack of any type
of symmetry

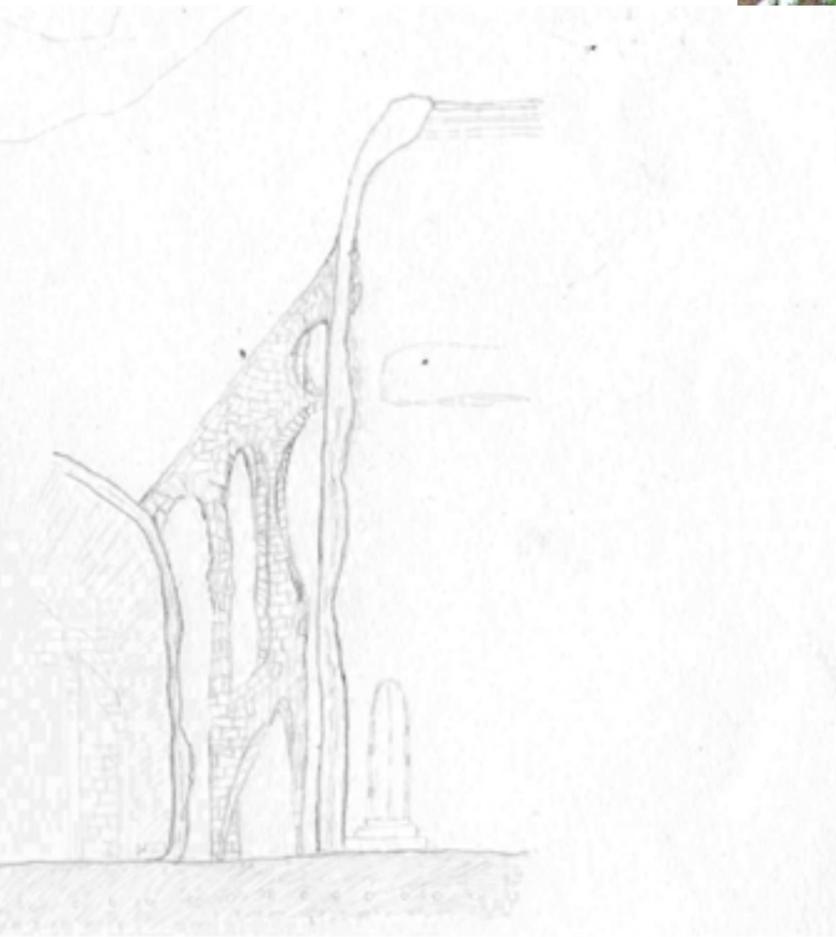
close ups of each pool room,
~~the~~ is noticeable
labelled
lack of any type
of symmetry



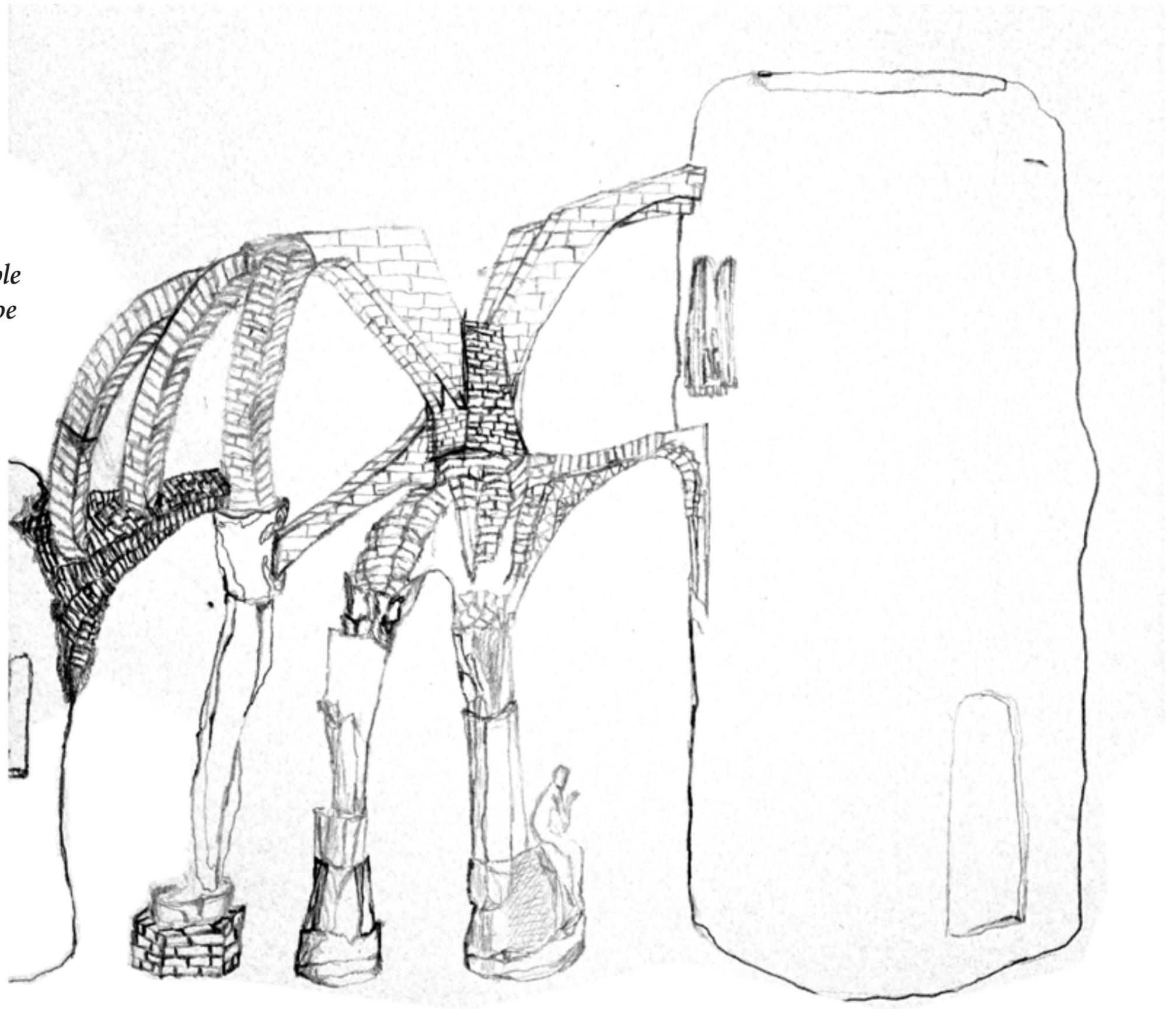




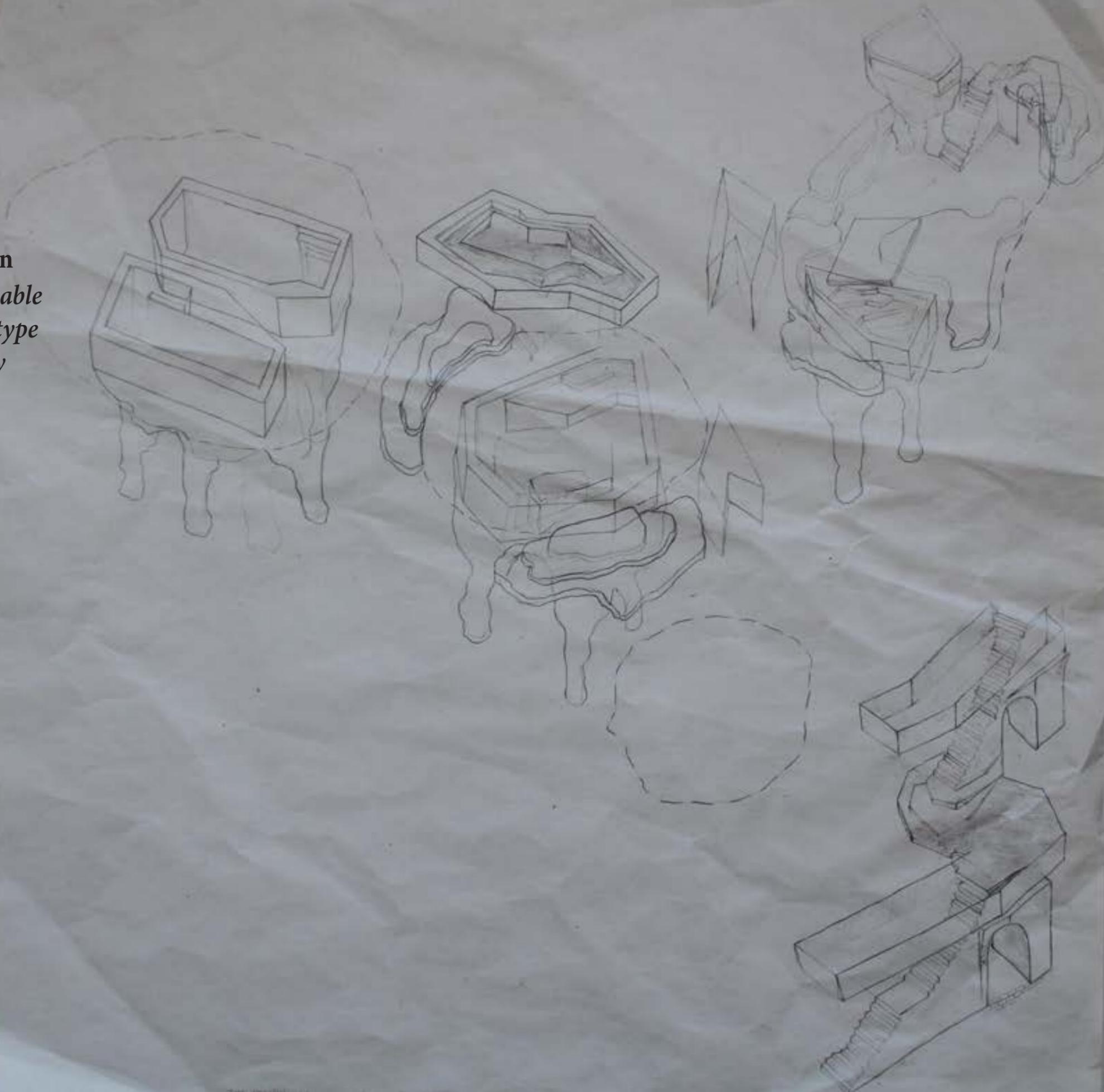
introducing GUADI's vaults,
while noting I've not drawn a vault



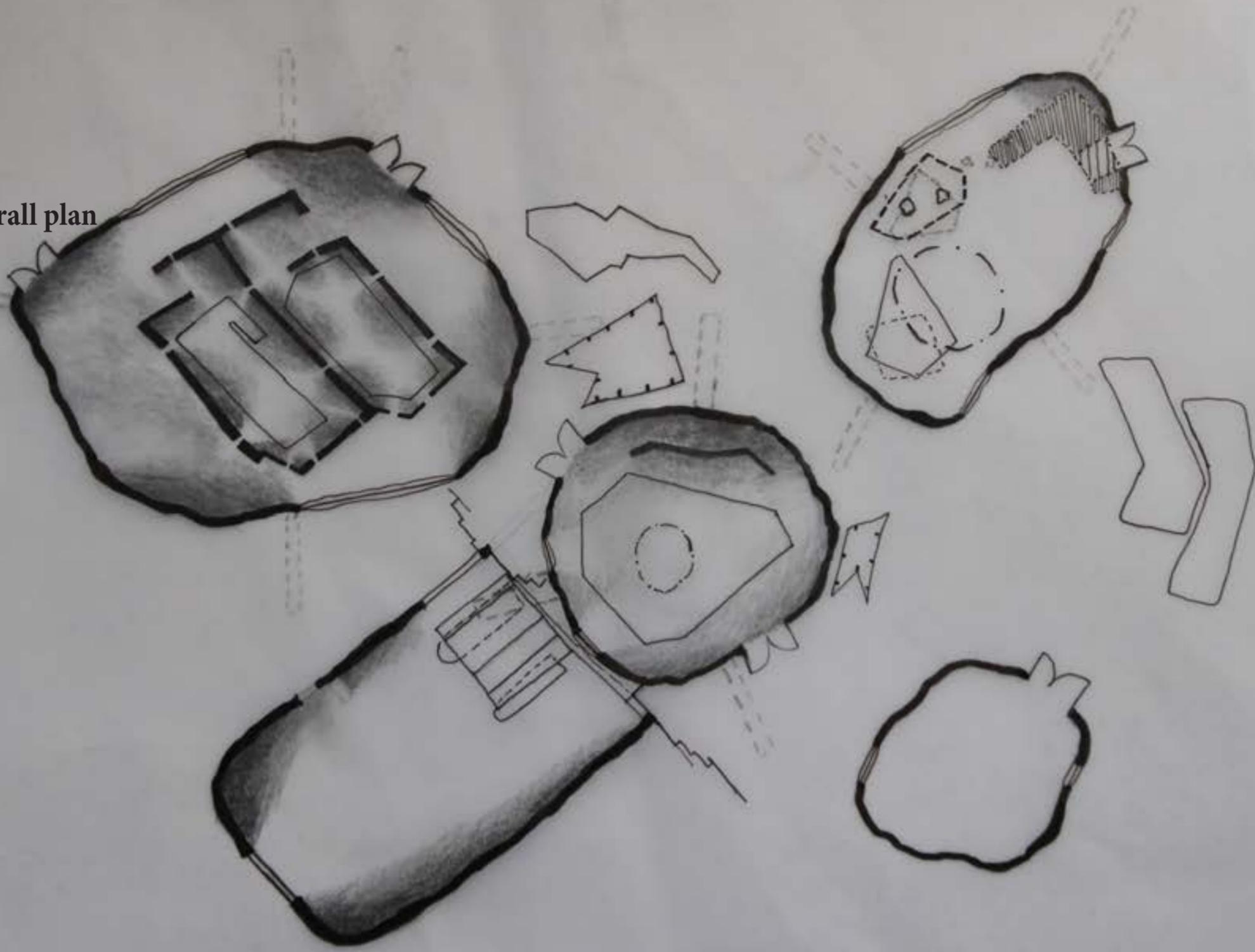
overall plan
the is noticeable
lack of any type
of symmetry



overall plan
the is noticeable
lack of any type
of symmetry

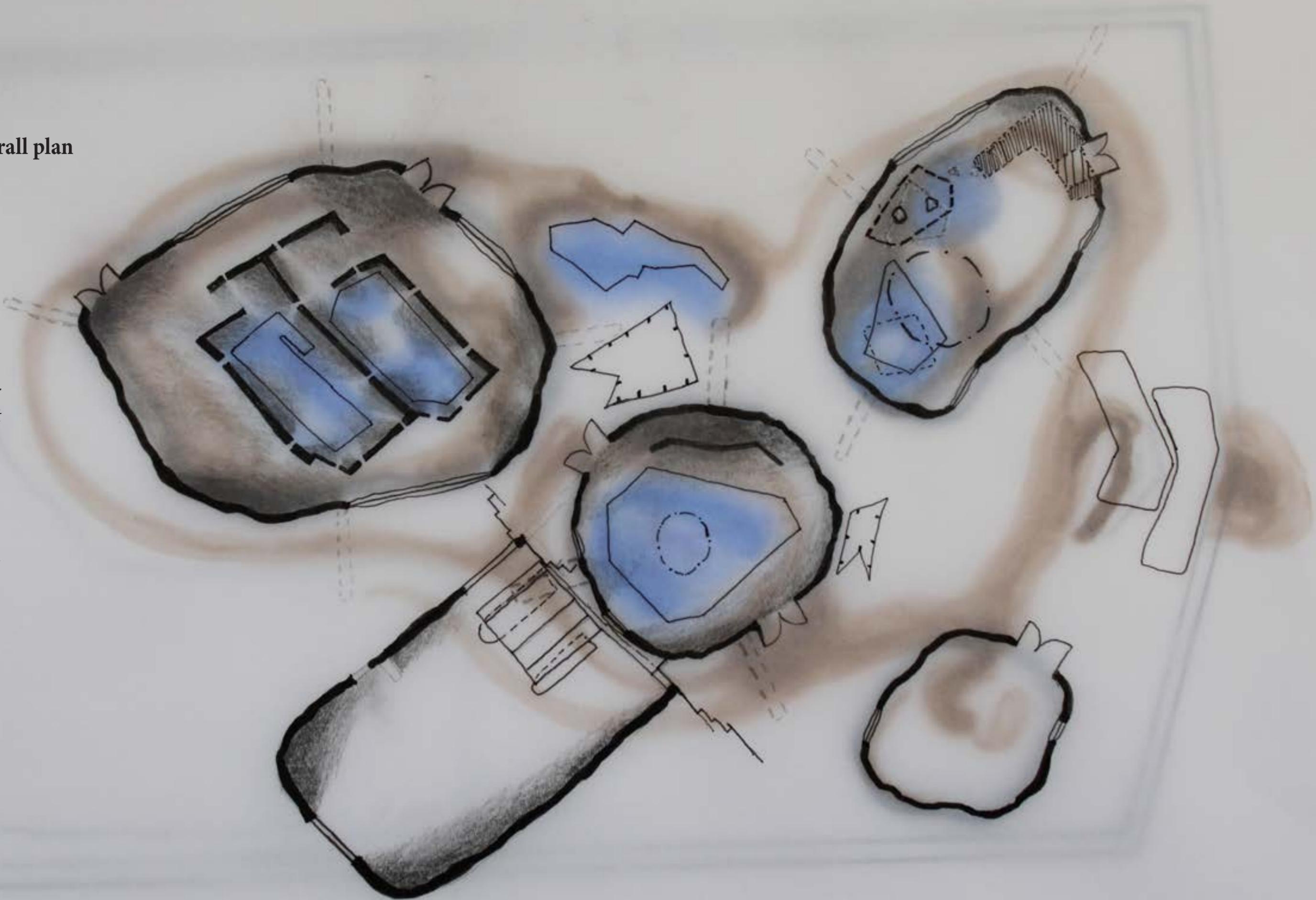


overall plan
the is noticeable
lack of any type
of symmetry

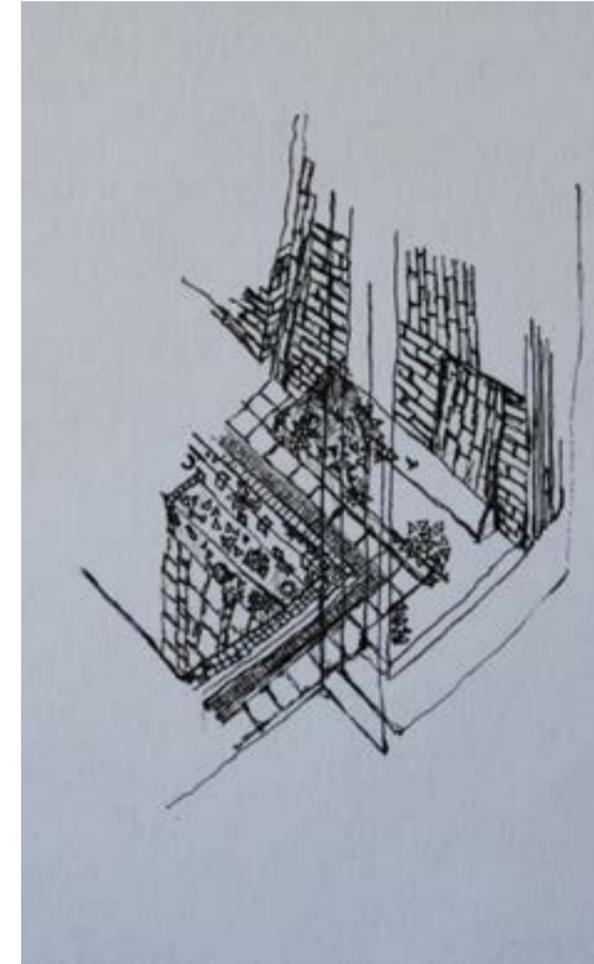


overall plan

the amount of light in each pool is purposely meant to correspond with the amount of movement density



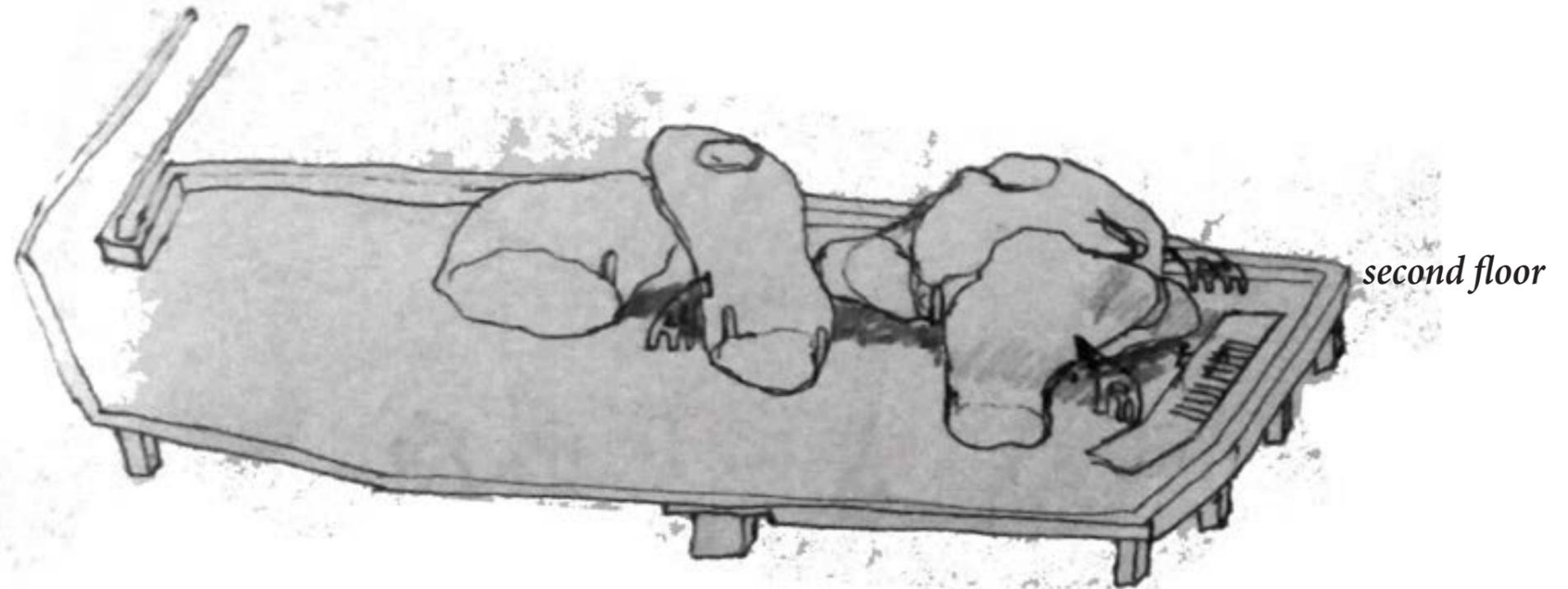
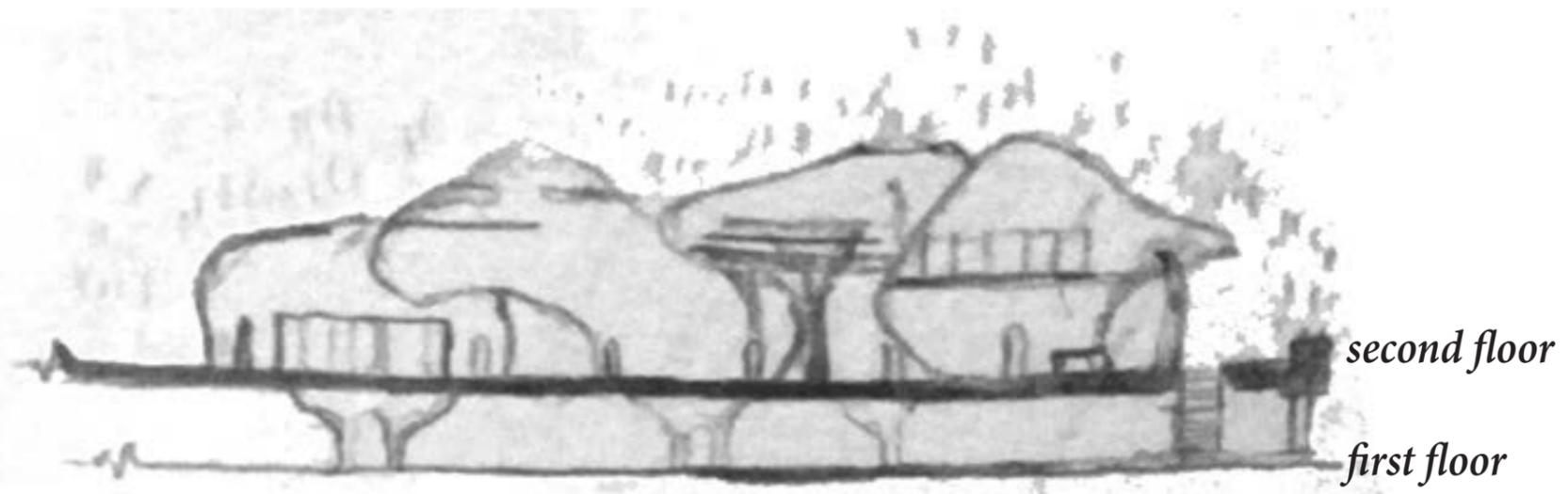
references



moments

“but what if it rains?”
*I hadn't thought
about if it rained,
about how ex-
posed the public
would be once
they leave or exit
the pool rooms*

*so given than the
exterior of the
rooms is some-
what flexible and
decided to angle
each*



3rd clay model
*here test out my
idea to slant the
shell structures
to create a cov-
er from the ele-
ments*

*I've done this
without changing
any of the pro-
gram of the shells*

