

ARCHITECTURAL DESIGN PROJECT

7122AR-201920

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MARCH TJMU - YEAR 05

838018

Ryman

T H M SITE RESPONSIVE HOUSING

Dense affordable, sustainable & Enjoyable housing in Ticky locations.

Understanding the Brief

Sustainability

Energy Consumption

- Transportation - Regular Transport Needs.
- (Heating) Building Use - How can Architecture (Sustainable) cater to all of these challenges.
- New Building Construction.

Environmental Concerns.

Affordability & Availability

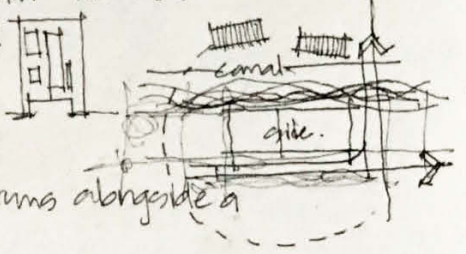
- Lack of Affordable House that can be catered to above (energy consumption) Environmental Considerations.

* over the years there were many good examples.

Precedent study

Timberyard Housing in Dublin - Ireland

as site Responsive Housing.
- Complex Housing in terms of units & planning.



SITE For the Design

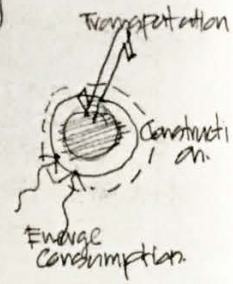
The Leedes Liverpool Canal - runs alongside a larger site.

Requirement

- Larger scale Housing Projects. (2, 3 or 4 Bedrooms per house)
- Density & Methodology.

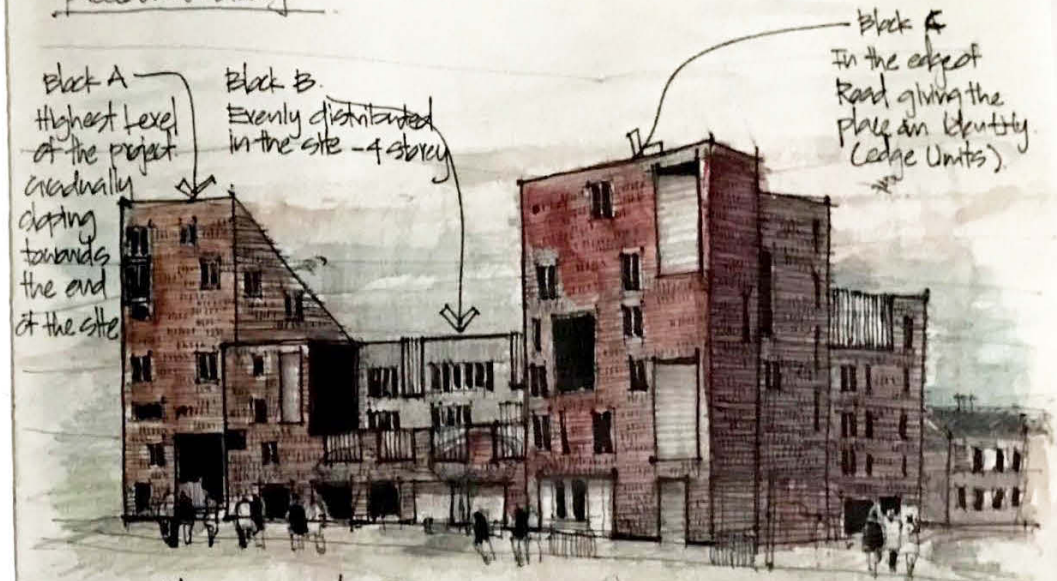
English cities

Lack of popular, dense Urban Housing typologies.
England Social Housing in 1920's & 30's.



Timberyard Housing - Dublin - Ireland

Precedent study



Block A
Highest level of the project
gradually sloping towards the end of the site

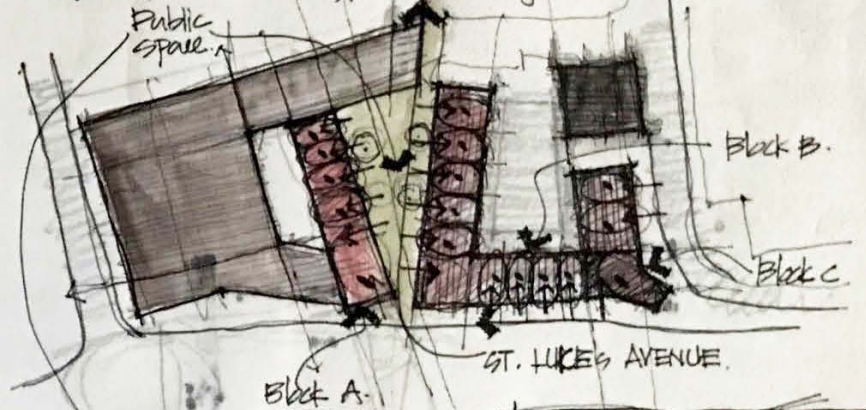
Block B
Evenly distributed in the site - 4 storey

Block C
In the edge of Road giving the place an identity (Edge Units).

The Building represents 31 slightly or extensively different Unit Types.

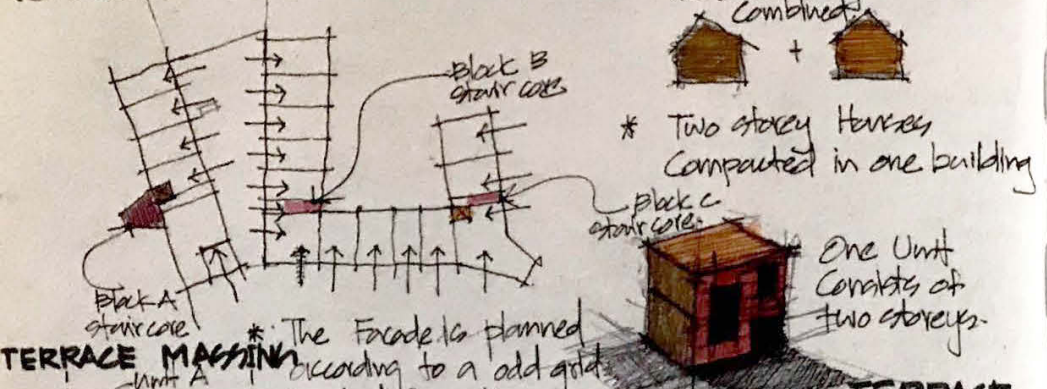
This is due to the Bounded site conditions - making the building layout a complex one.
* Continuing the Urban movement.

LAYOUT

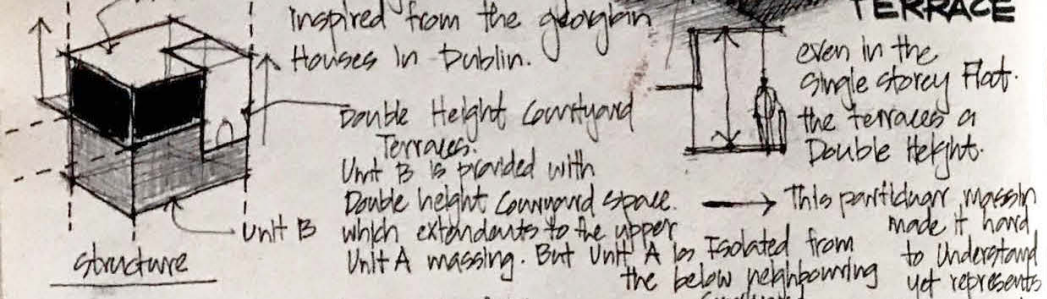


Design is allocated Centralizing on a new public space on the site of a former timberyard, Creating a residential enclave with a sense of place.

Entrance points & the Vehicle Circulation.



TERRACE MASSING

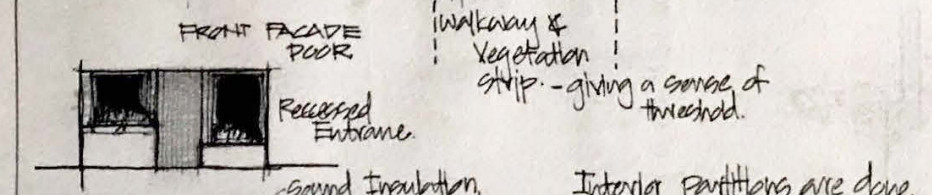
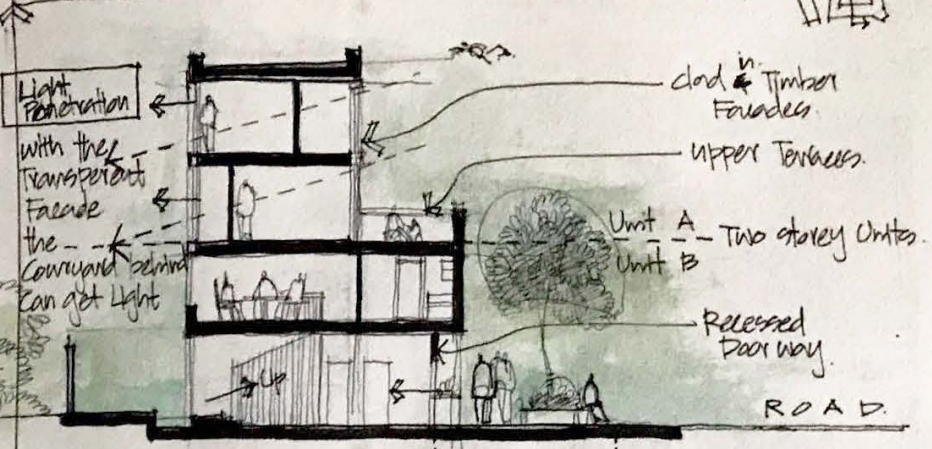


All walls are connected to floors & roofs. It provides Horizontal Load Bearing Support - Used Anchors for the Purpose.

- Use of King Beams for Horizontal support



Block B - FRONT HOUSING UNITS SECTION



Sound Insulation, Reflective material.

Interior partitions are done with oak laminated Timbers.

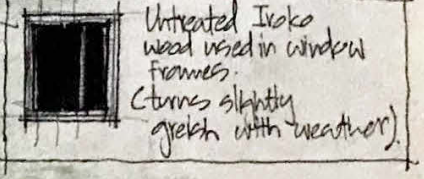
Sound

In a compact Environment Using Courtyards.

Ceilings are Finished with Smooth Concrete



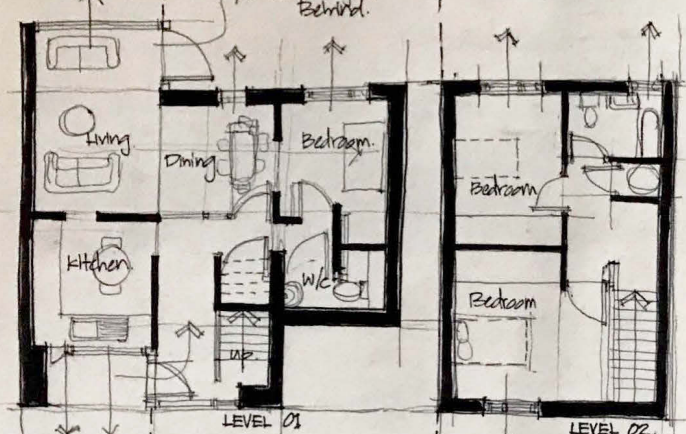
open Courtyard Terraces provided in the edge of the building.



Precedent study.
Timberyard Housing
FRONT ELEVATION

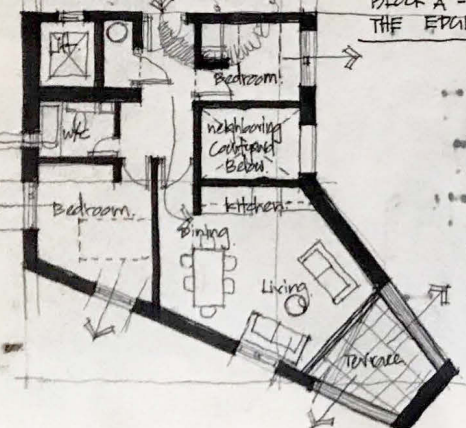
BLOCK B - THE UNITS FROM THE PUBLIC SPACE SIDE

PLAN - Unit 1



View From the Kitchen Directs to the public space where the children must be playing - sense of security.

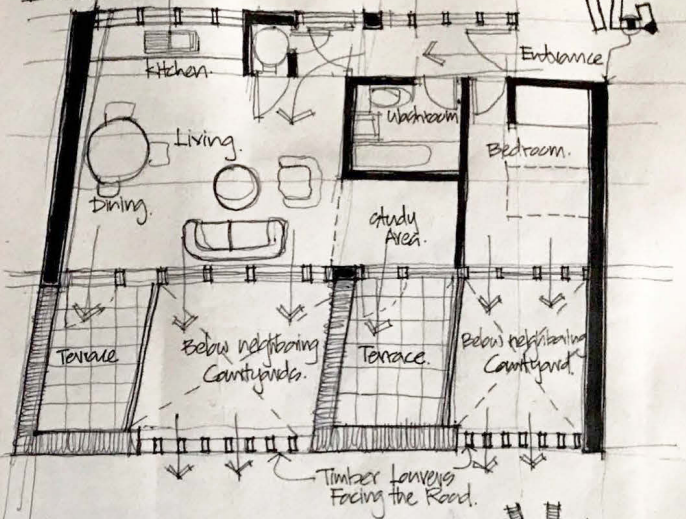
PLAN - Unit 2



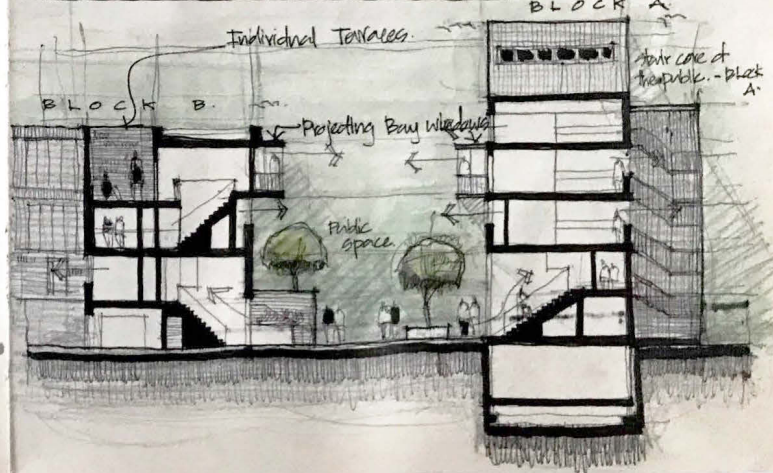
BLOCK A - THE UNITS FROM THE EDGE OF THE BUILDING

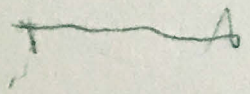
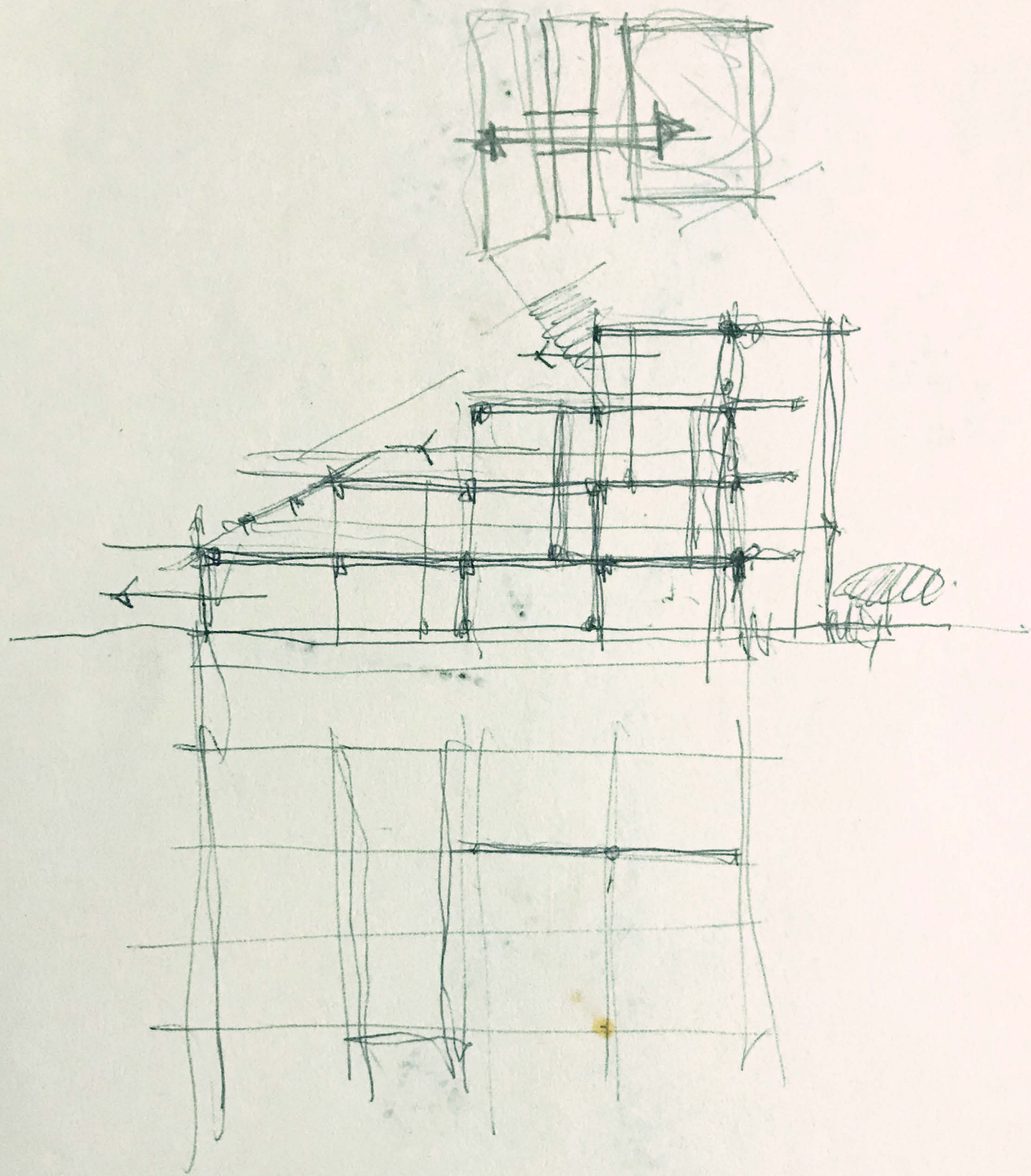
BLOCK B - THE UNITS FROM THE FRONT FACADE - UPPER FLOOR

PLAN - Unit 2

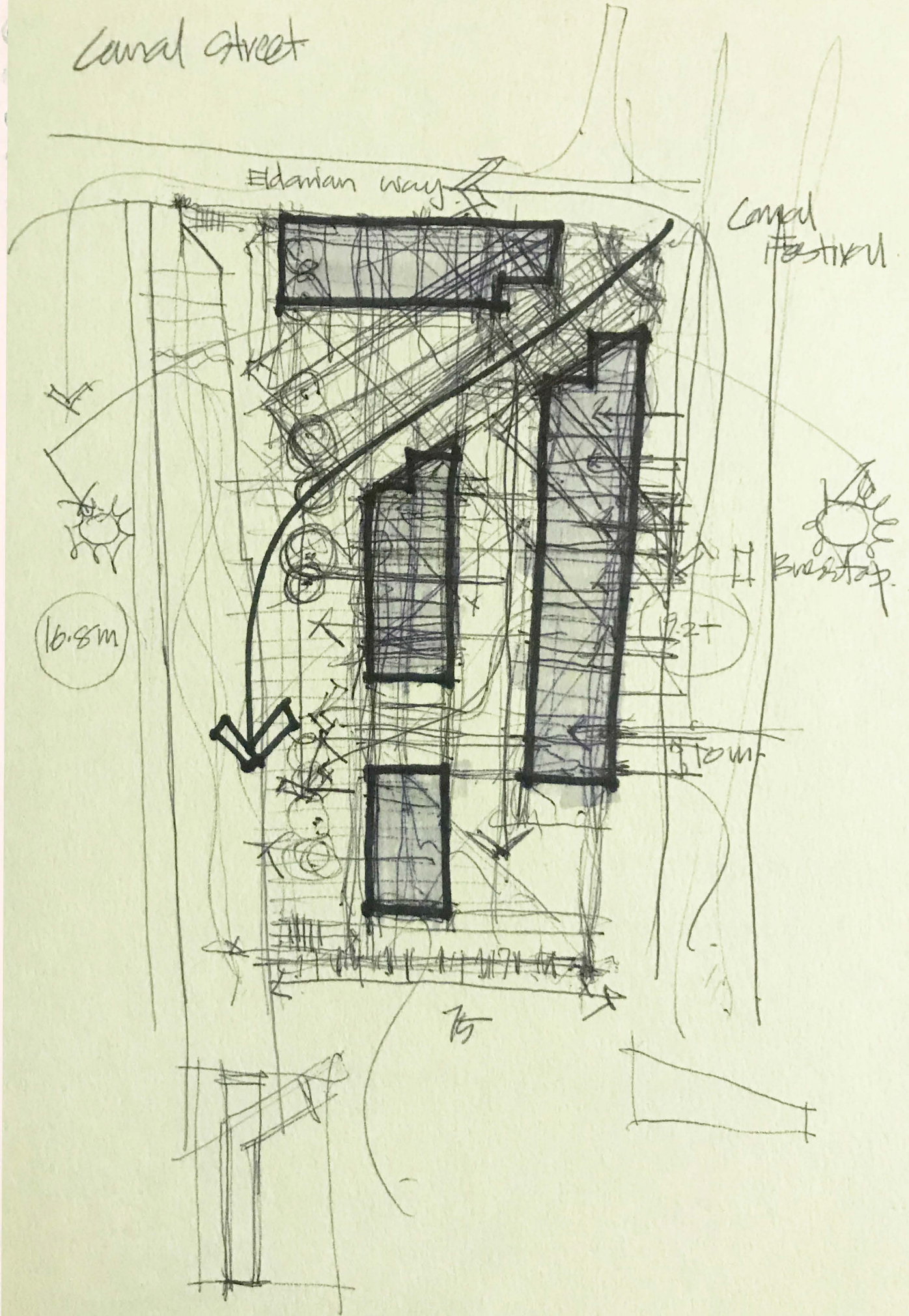


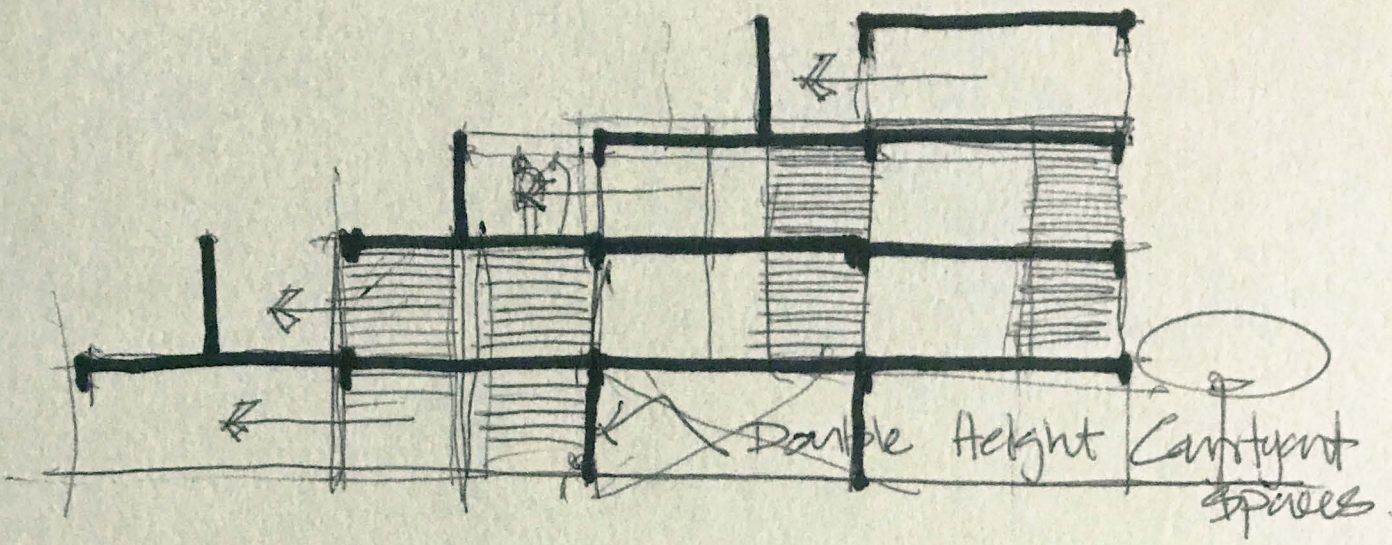
SECTION THROUGH THE PUBLIC SPACE



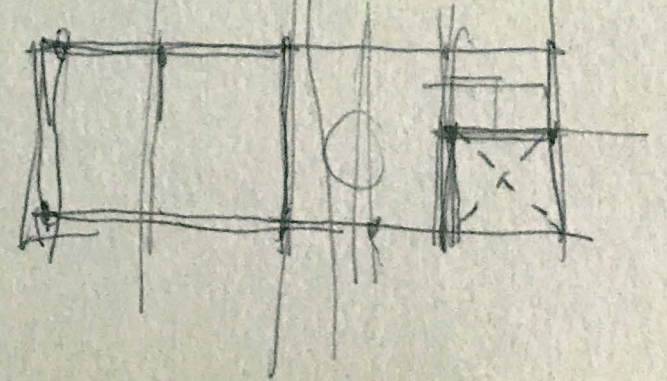
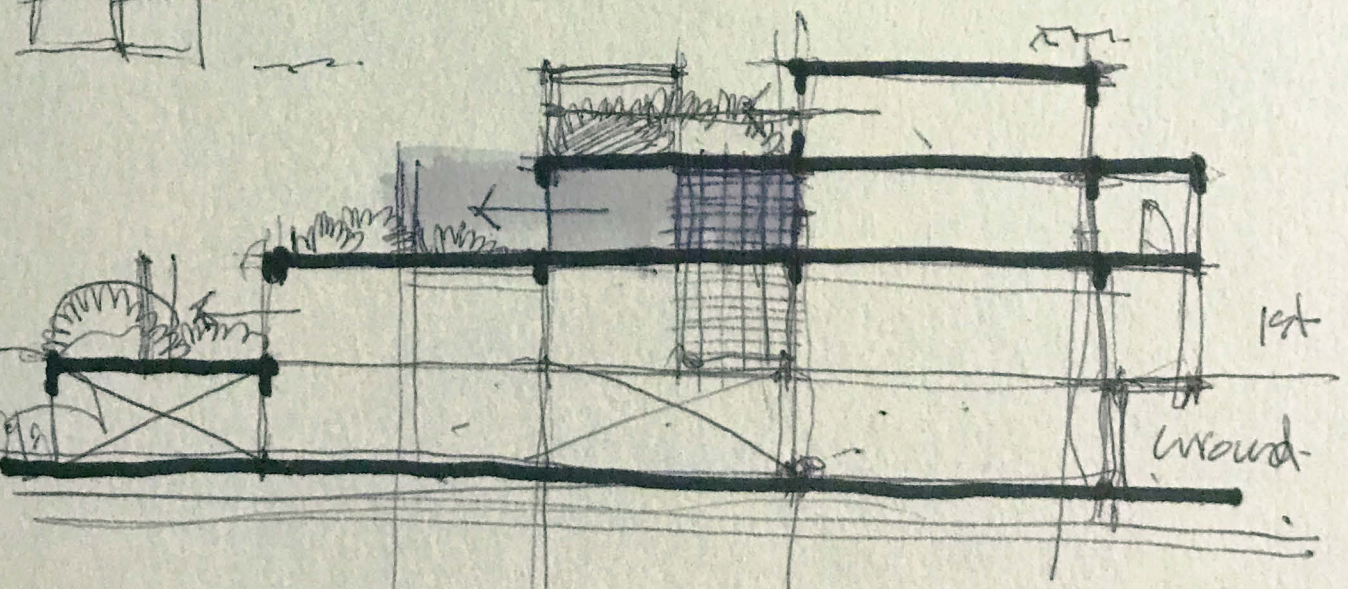


Canal Street

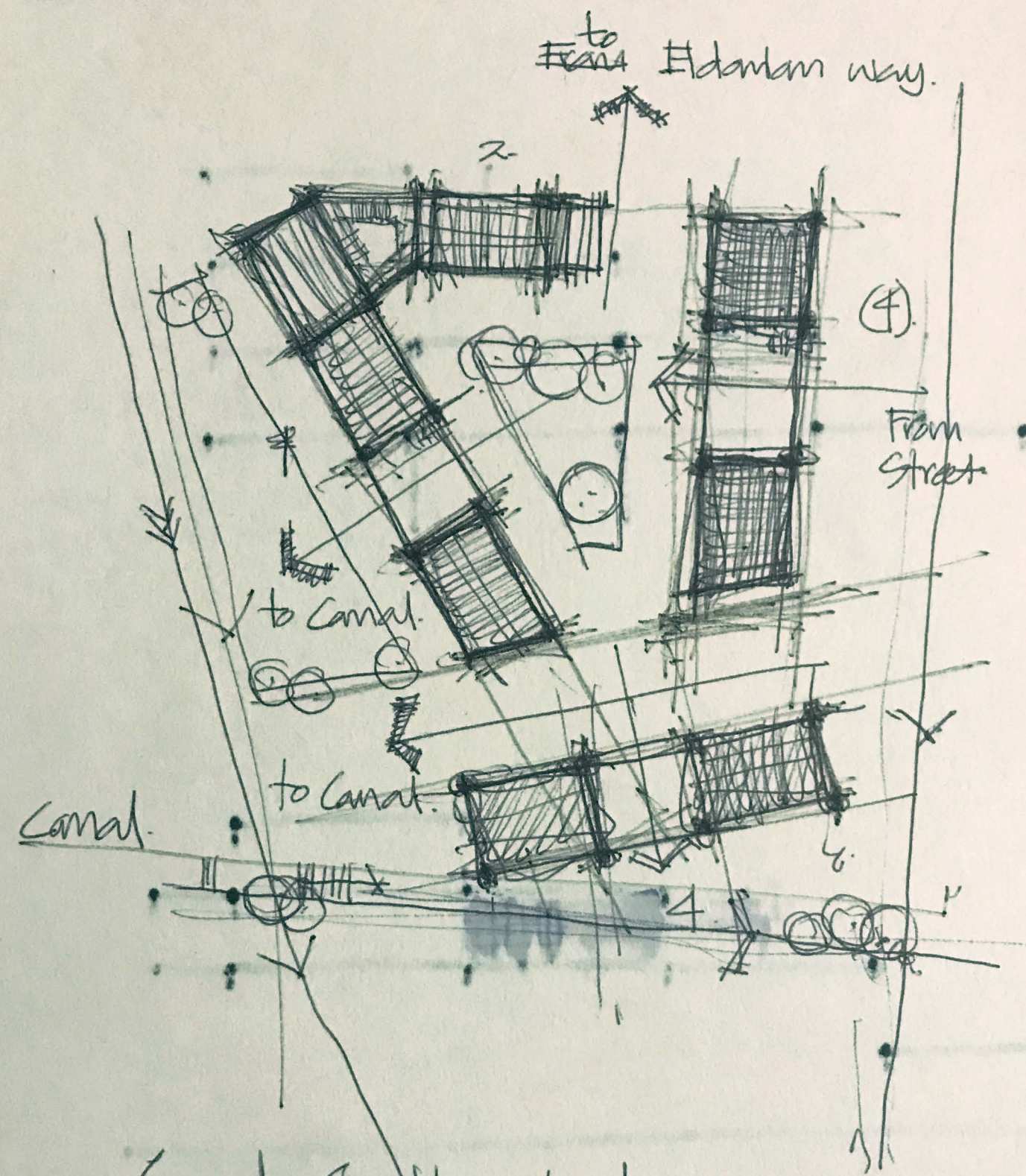




Double Height



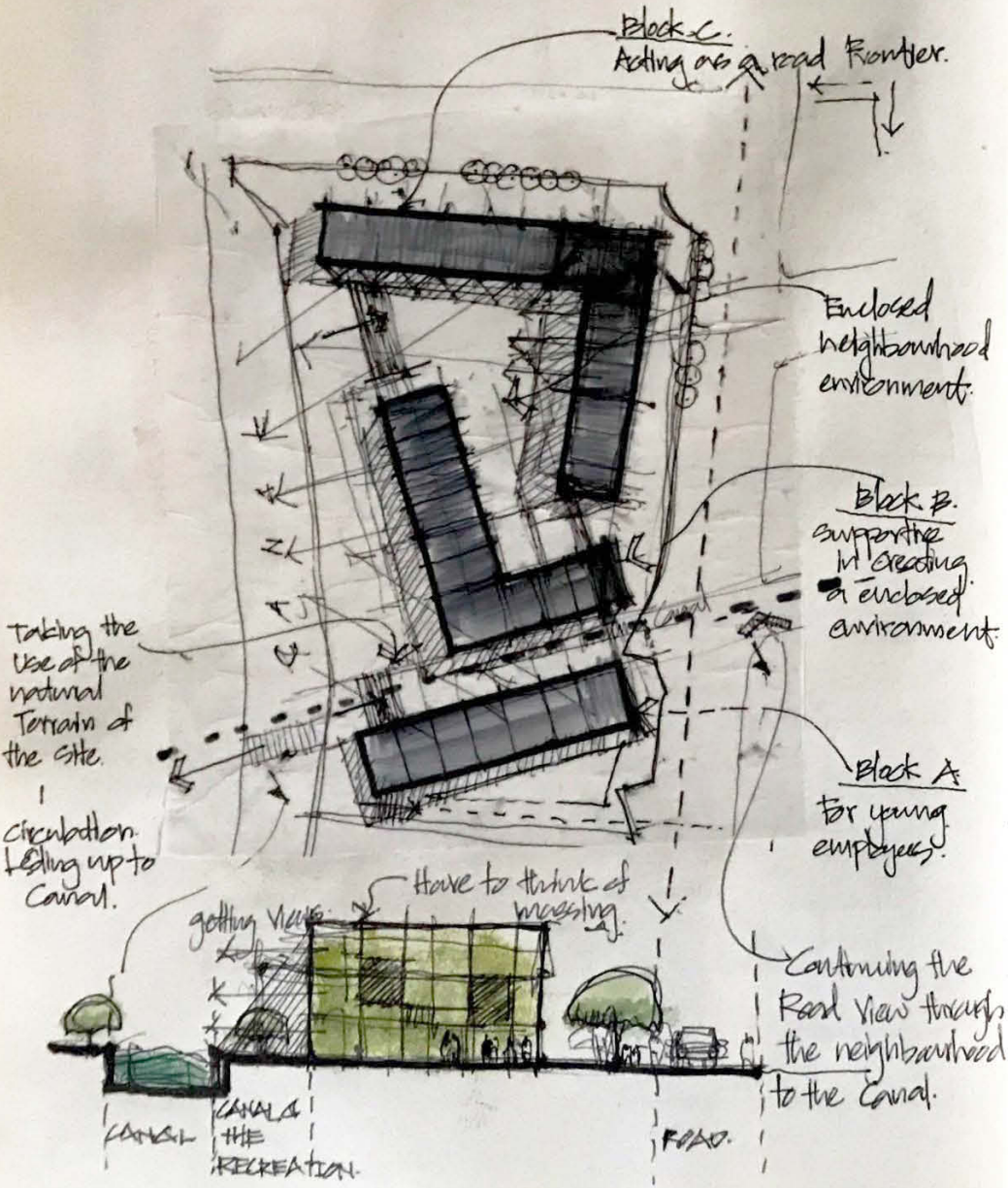
Ground Floor



Canal & the street
Connection.

- Urban Flow to the Canal

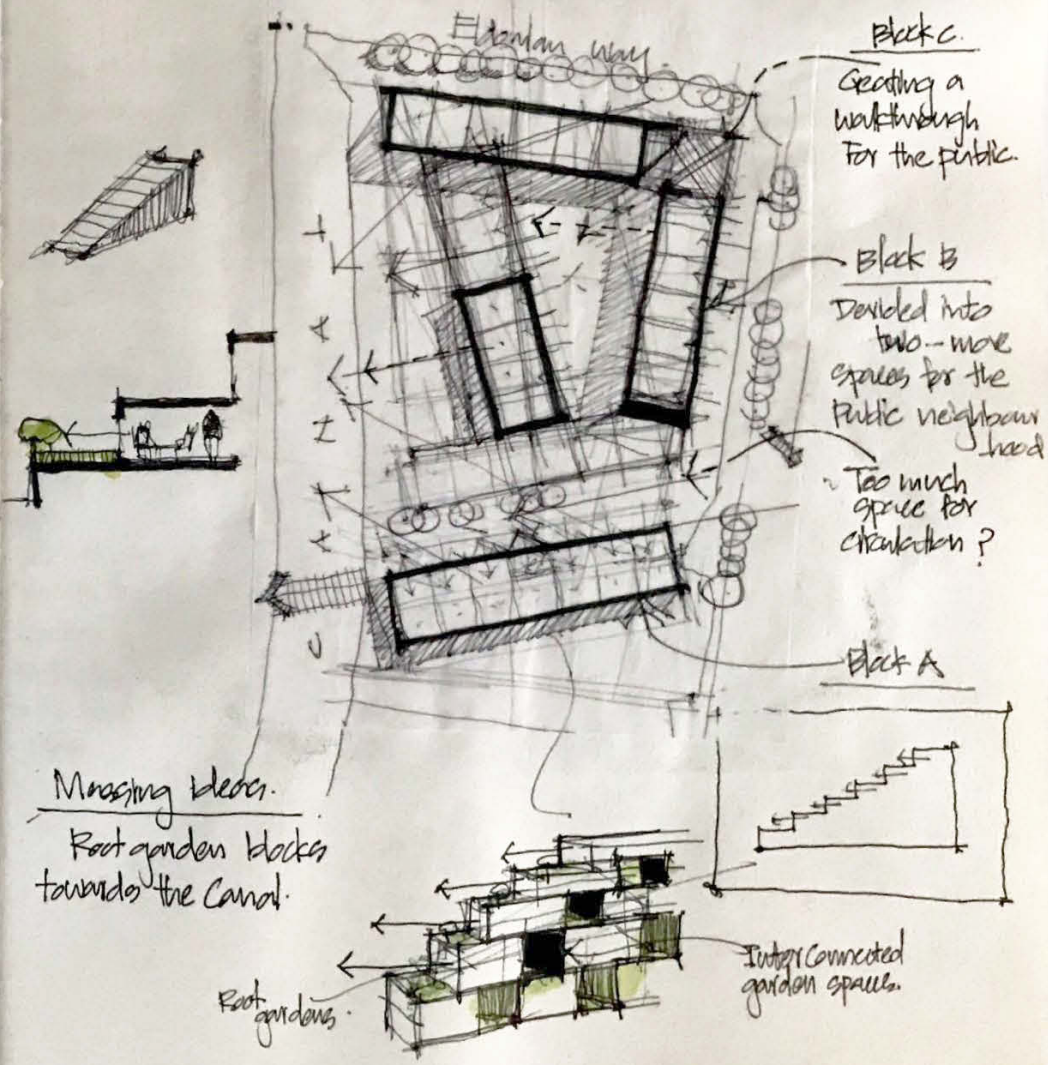
Initial planning on the site. - Layout (01).



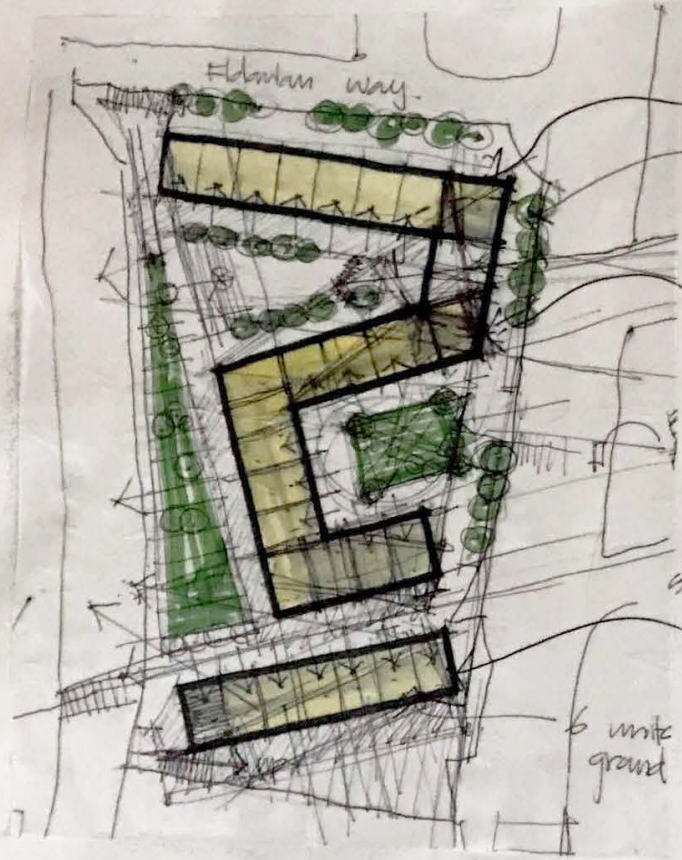
Layout (02)

Breaking out the solid pattern in order to gain more openness and maximum views towards canal.

trying figure out the Best option as Building Arrangement which can have the Maximum view.



Layout (03)



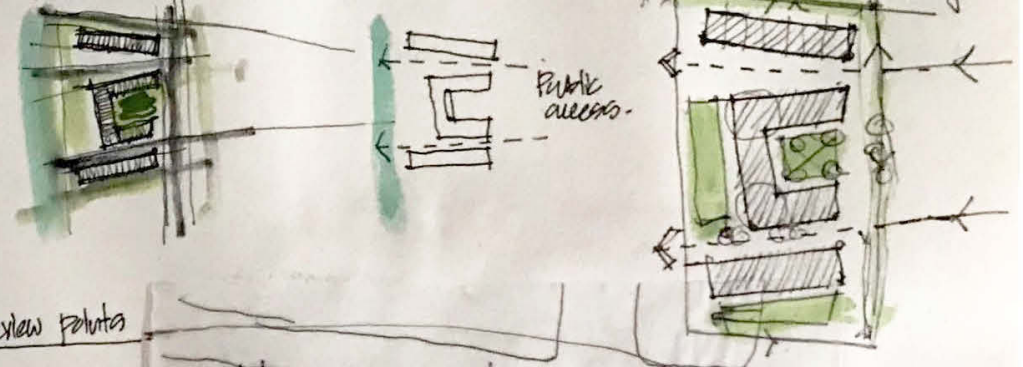
Block C.
Breaking the
Solid Corner and
open a public
Flow

Block B.
More solid &
Bold arrangement
for Block B.
creating a
street facing square
for the neighborhood.

Block A.

6 units
ground

Layout (04) - chosen As ideal to the site.



Review points

The edges of
Buildings at
Road side
should be
fine-tuned
in respect to
the Road.

The elevations
on the road side
should flat &
pleasant
rather than
having
staircases
to the road
side.



Layout 03 - Another Extra step Forward

This layout was kind of breaking the Urban setup.
Layout 04 was considered much better option.



The flip was good for taking more views.

Yet it was obstructing the public flow followed by the Road network.

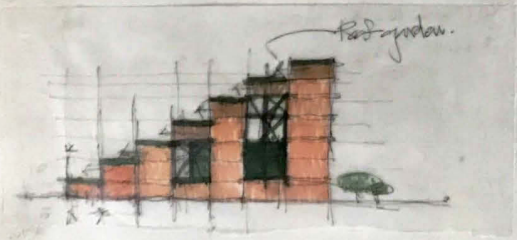
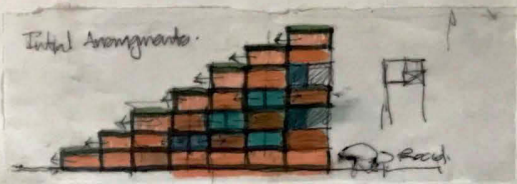
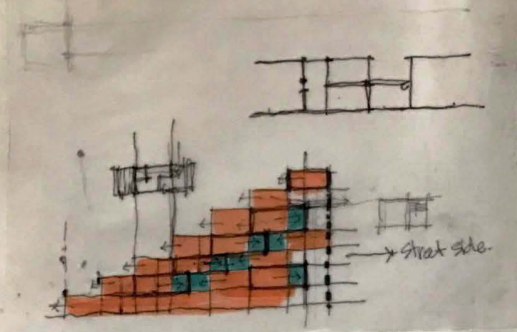
Also a Complex layout.

Layout 04 ✓

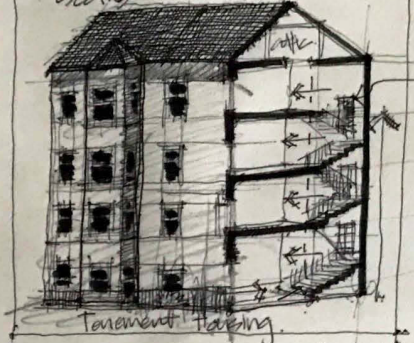
Decided that the layout 04 was ideal to the site
Working out the missing and Carry on with specifications.



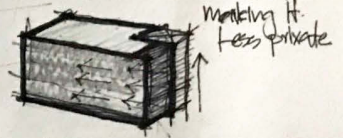
Building Prototype Planning - Section Block C.



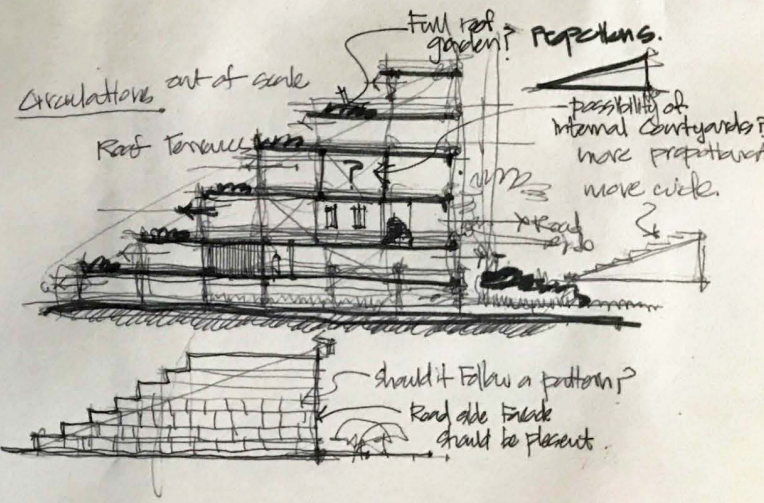
Something - Vertical Circulation methods Scottish Architecture



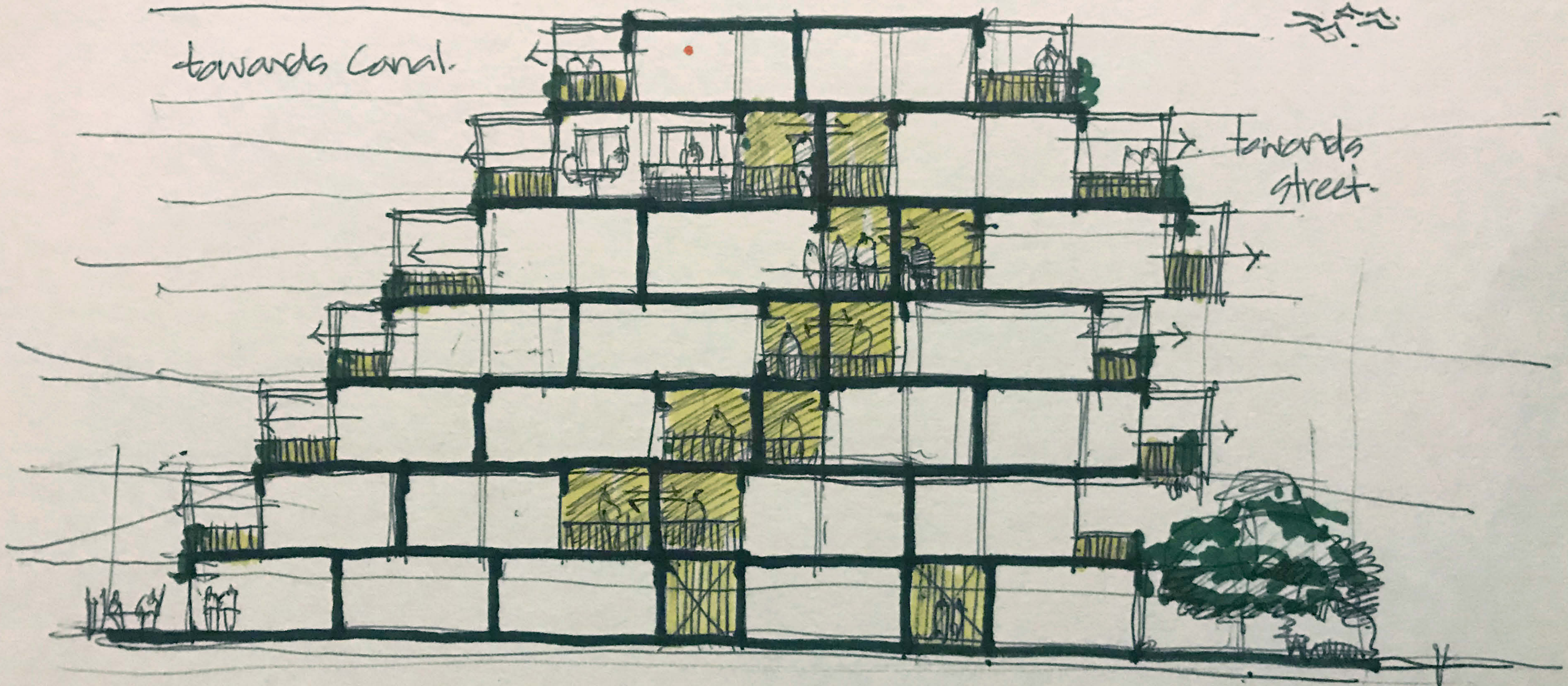
The Vertical Circulation in a tenement housing scheme - A public stair core in a edge of the building.



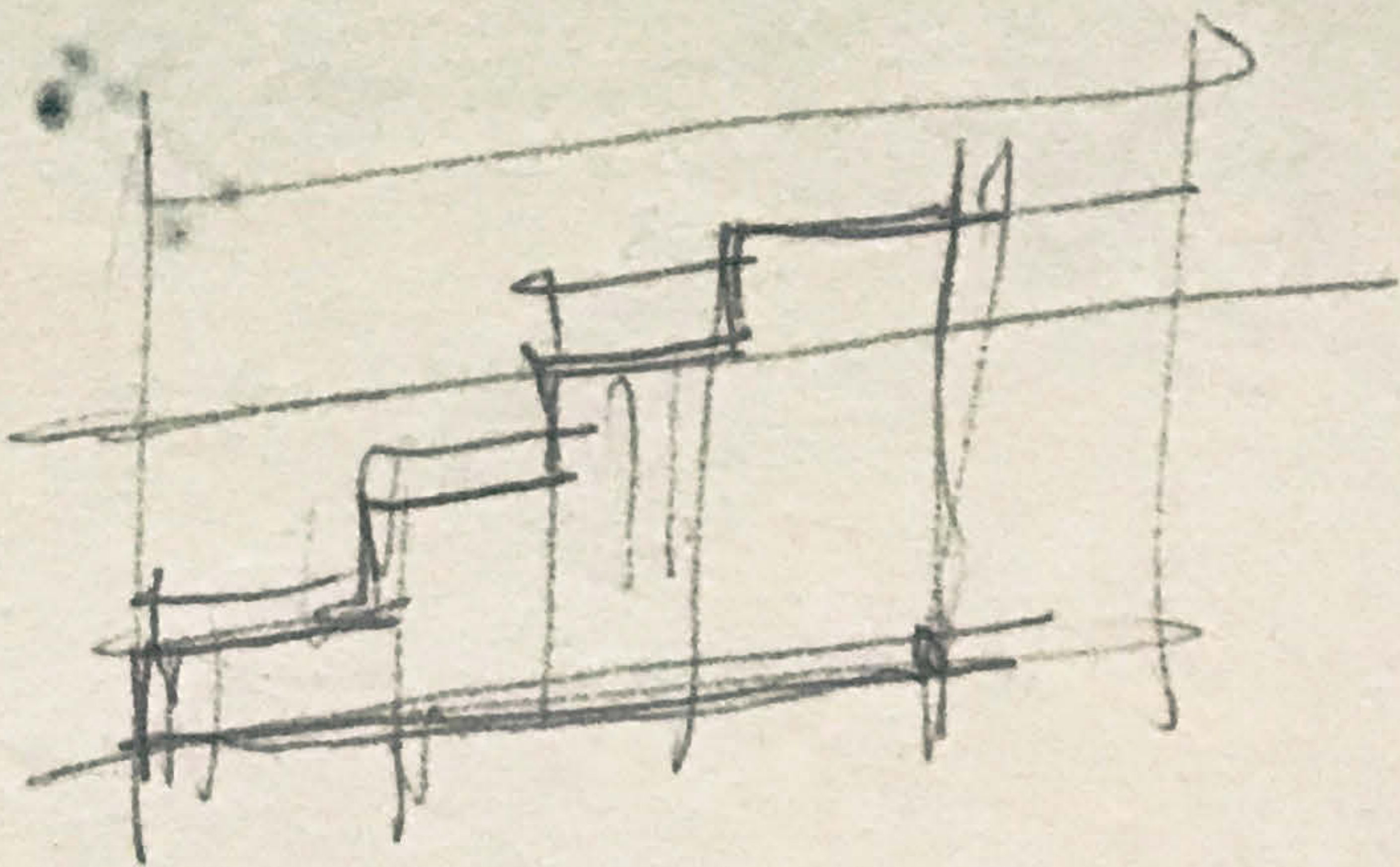
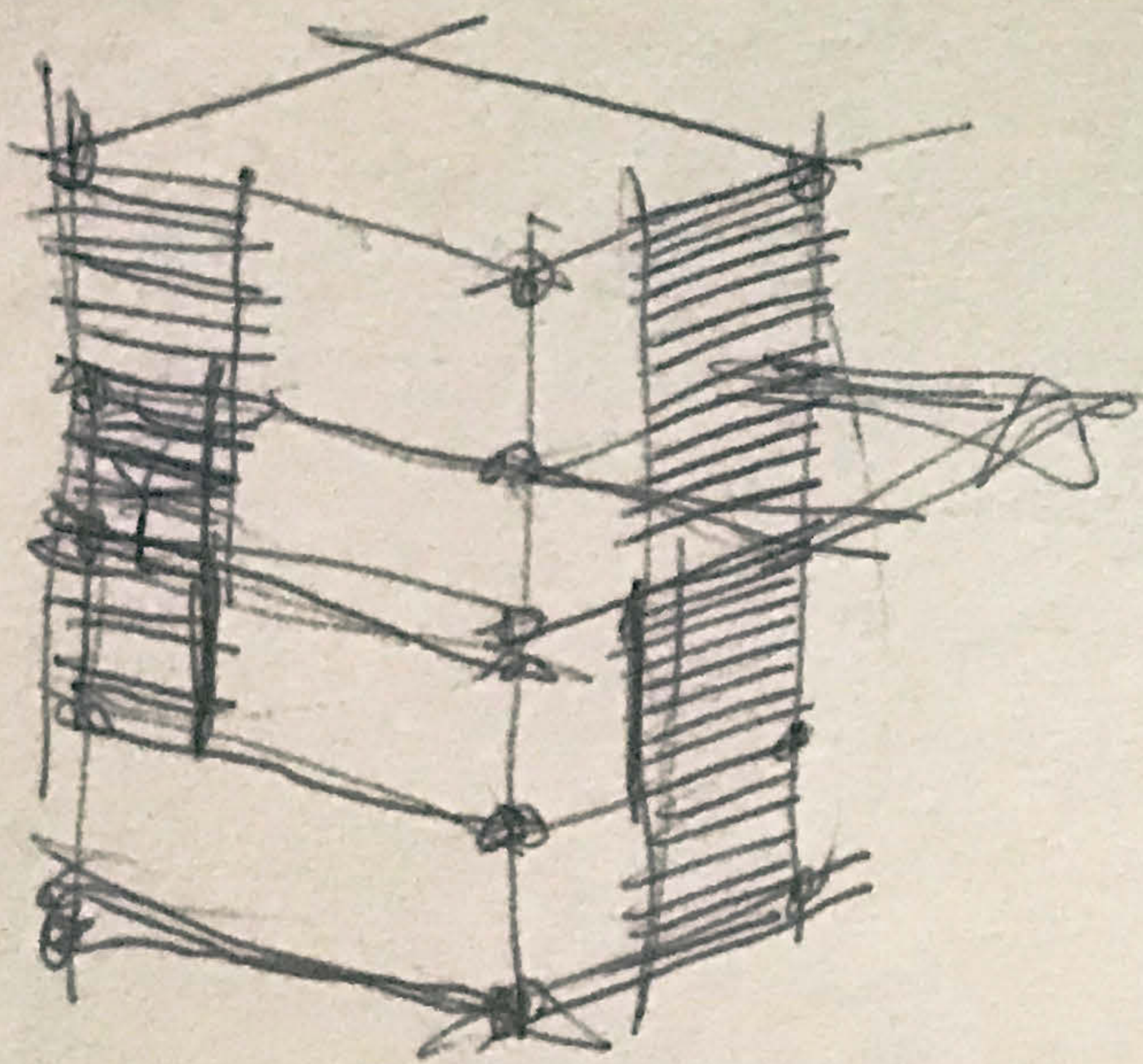
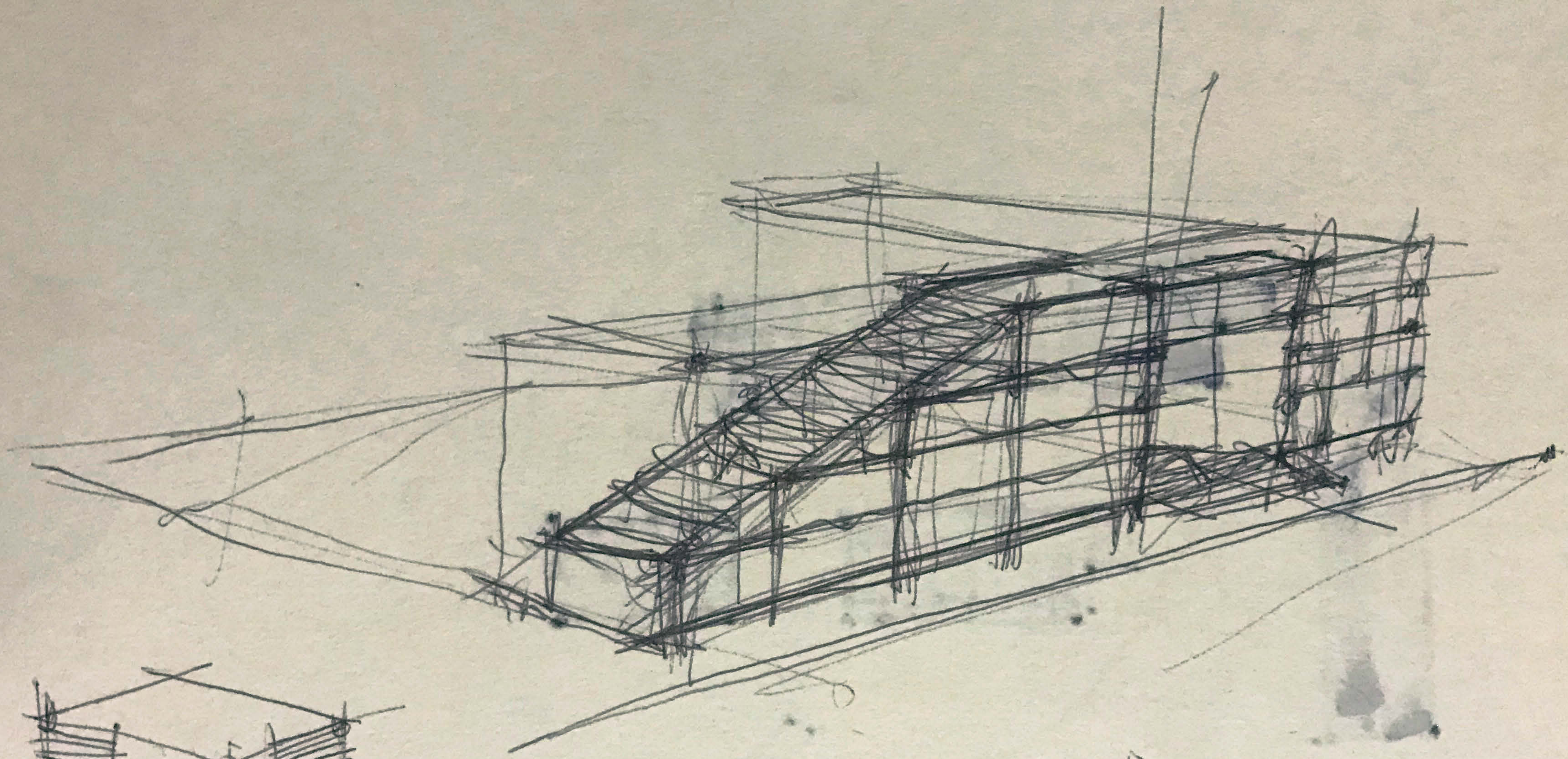
* Each Unit has a Access through a Common passageway.

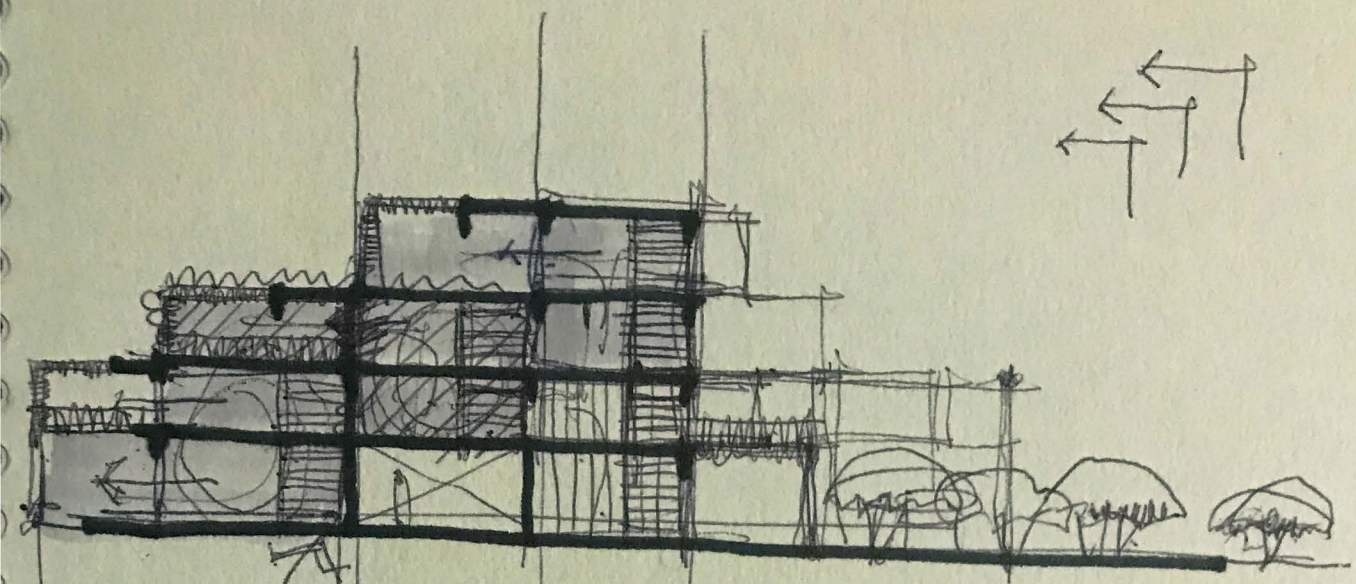


towards Canal.



towards street.





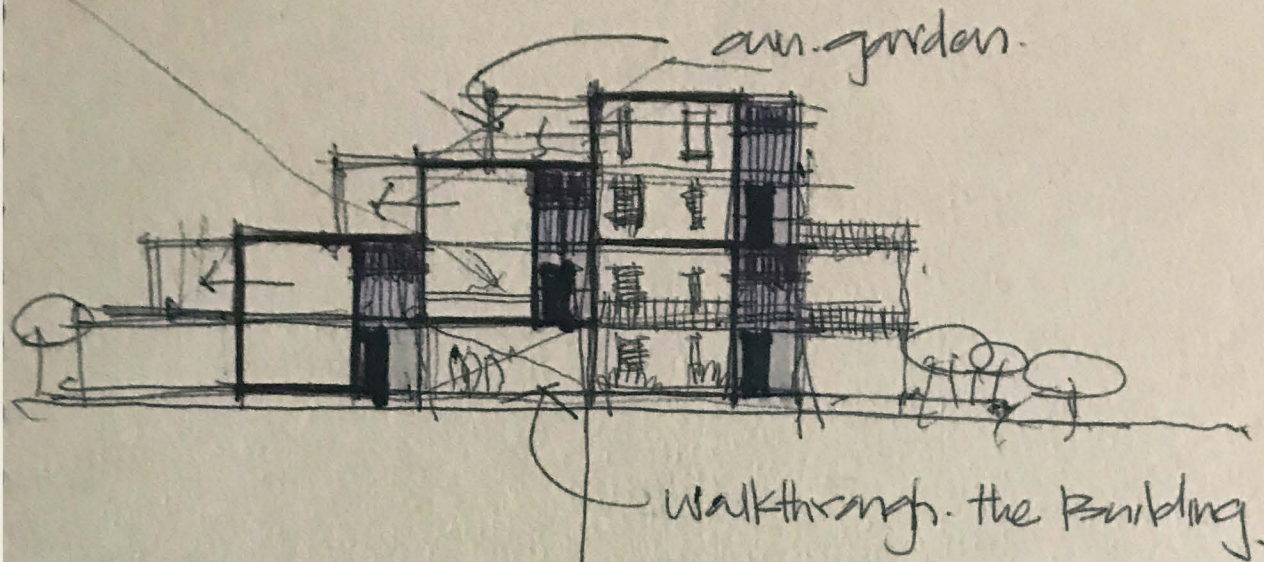
Double height space.

Ground Floor

Living

First floor

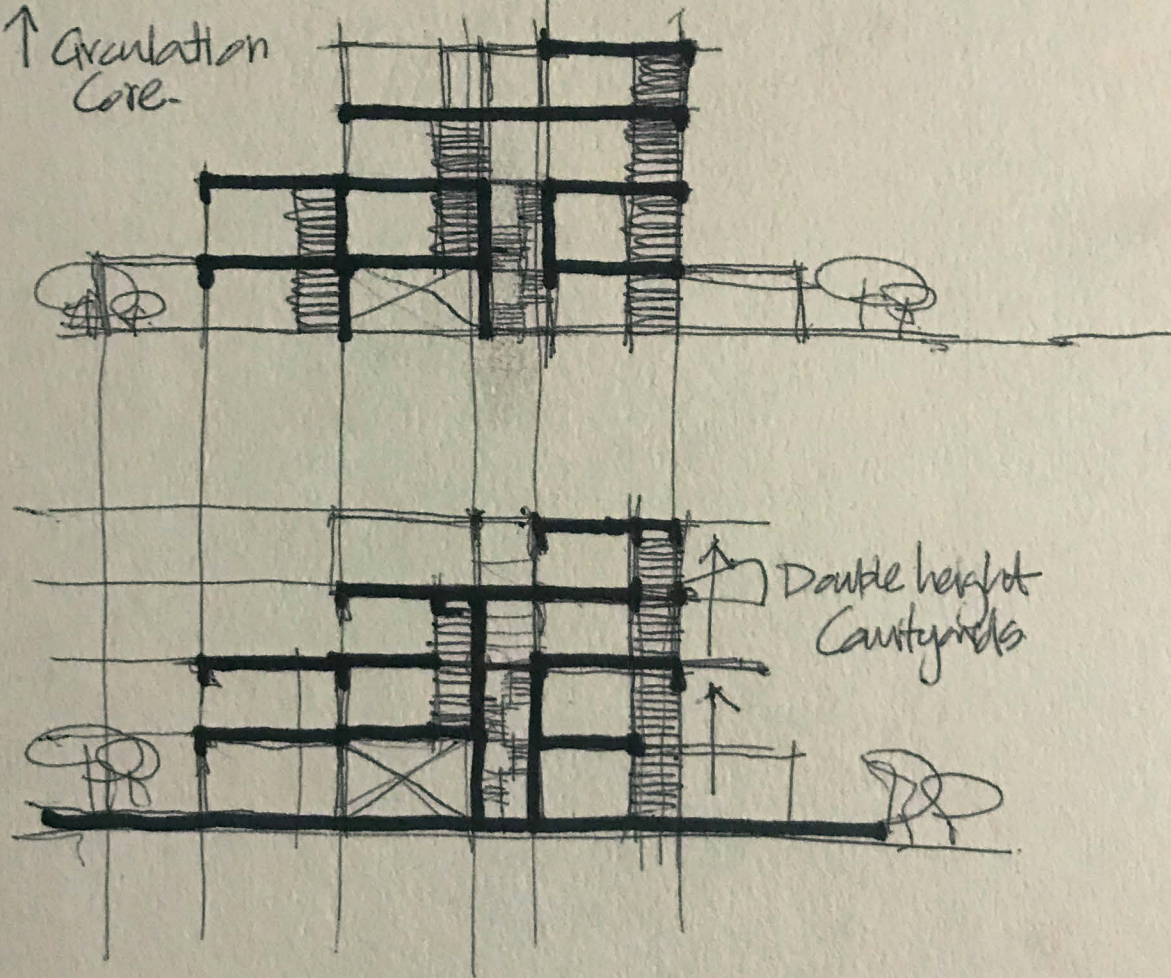
Central



sun garden.

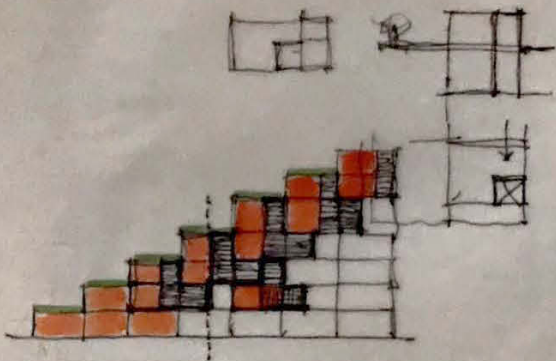
walkthrough the building.

↑ Circulation Core



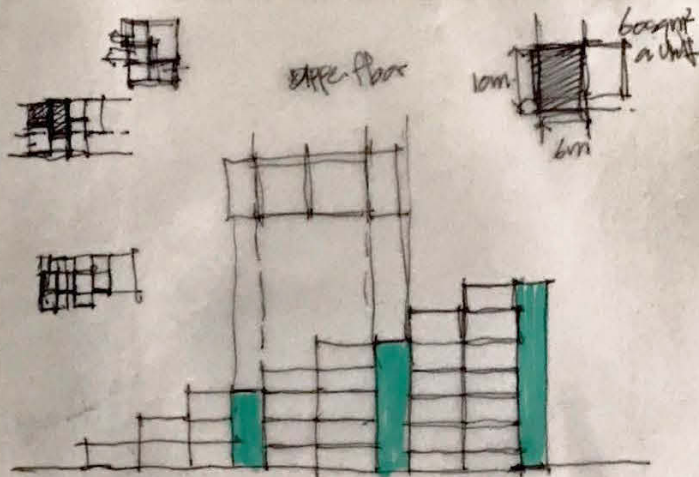
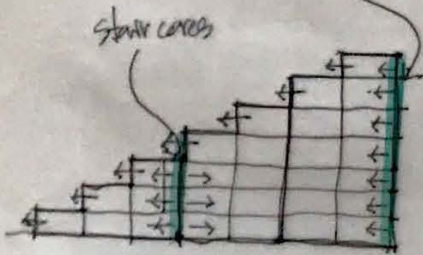
Double height Courtyards

Fying out Double
Height spaces.
Between Blocks.

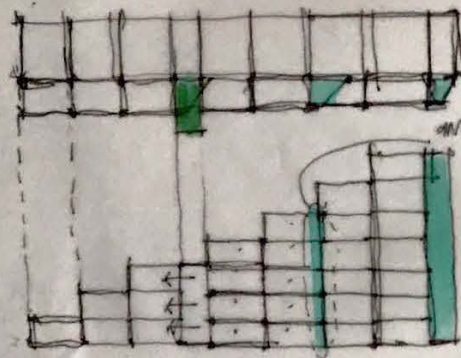


Arrangements of
Vertical Circulation

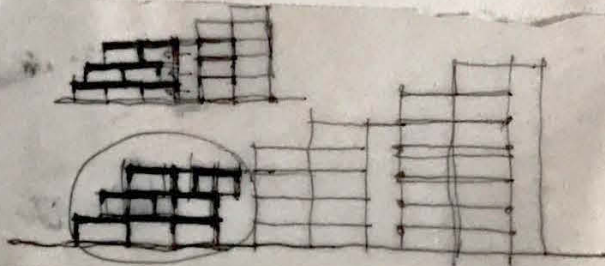
stair cores.



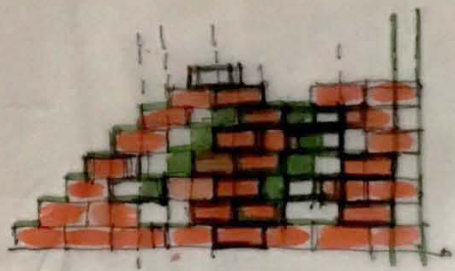
public pathway to the Canal



another one here?
will it be too
much.



Complex options.



Block A
Possibilities

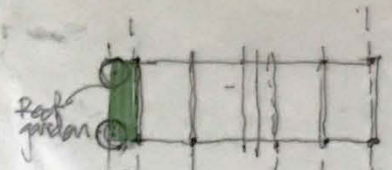
Potential Core
Arrangements



The facade
can be ugly
looking
towards
the street

Facade
should
work out
more.

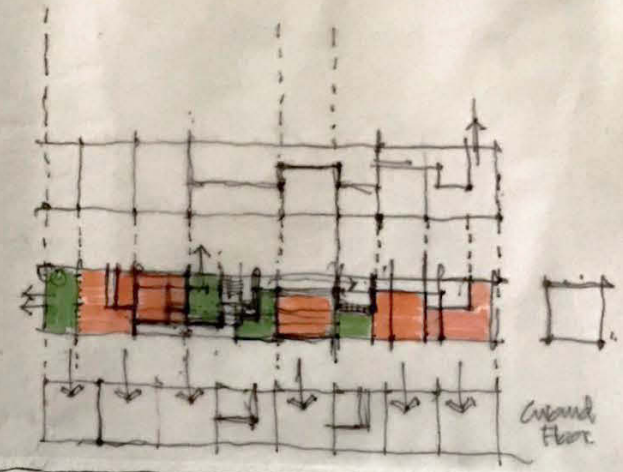
line out of scale a little → blocks.



Part
grid

Upper Floor
Arrangements.

Planning



The Building prototypes were complex & started developing the scheme through the 3D work. - Digital Building.

BACK TO SRI LANKA

View From the Quarantine Center

Ratambe Sri Lanka.

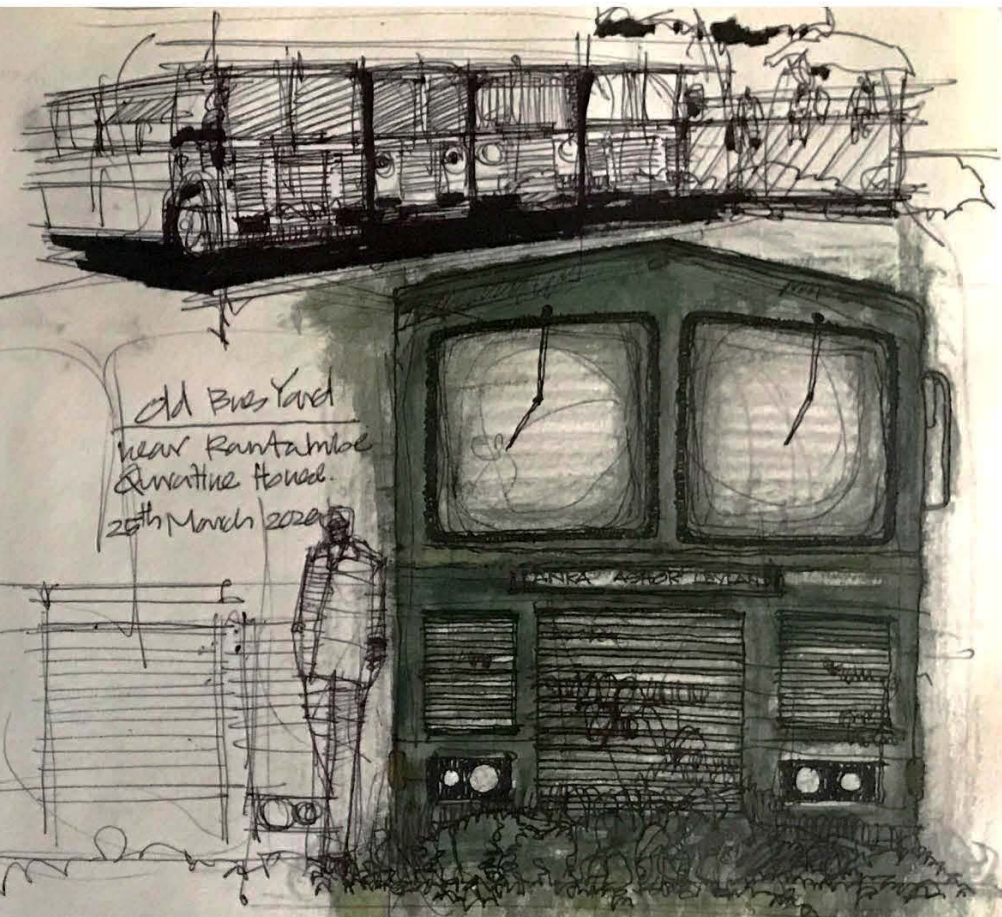
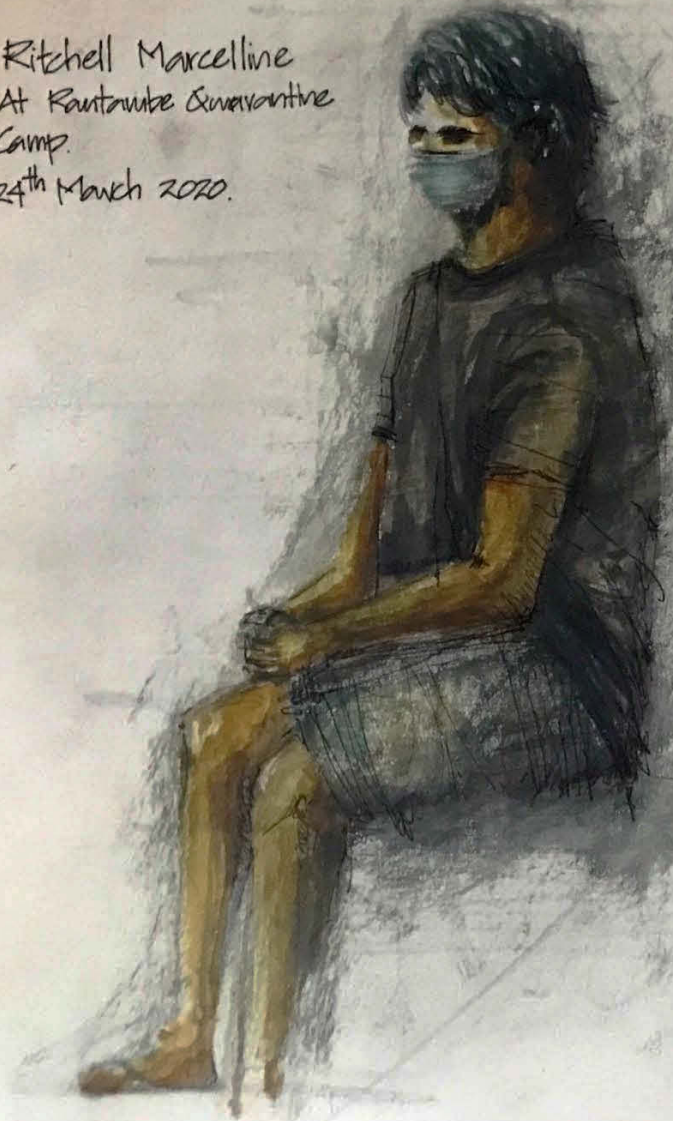
Cadet Camp - 23rd March.

18th March left Liverpool.

Arrived Sri Lanka on 19th



Ritchell Marcelline
At Rantambae Quarantine
Camp.
24th March 2020.



Old Bus Yard
near Rantambae
Quarantine Hotel.
25th March 2020

After 10 days of quarantine



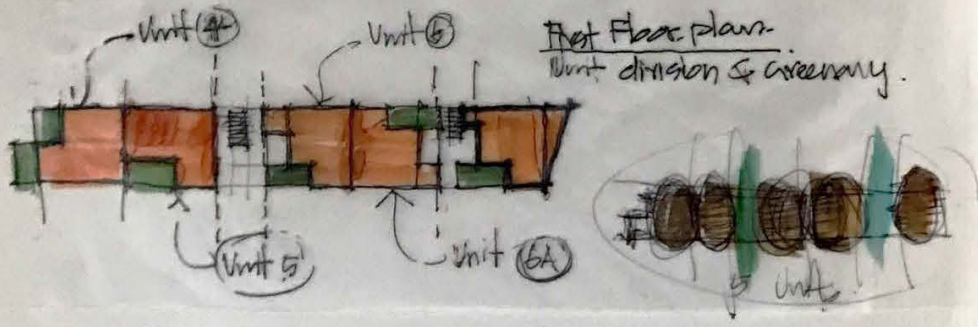
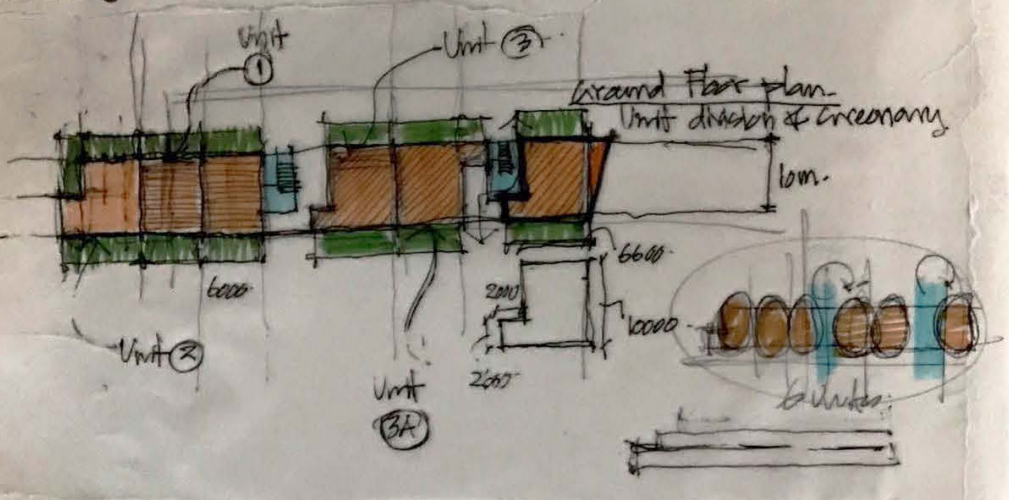
People playing
Cards.

After sometime
when the symptoms
were no where to be
seen people got friendly
with each other and started
doing many activities to
reduce boredom.

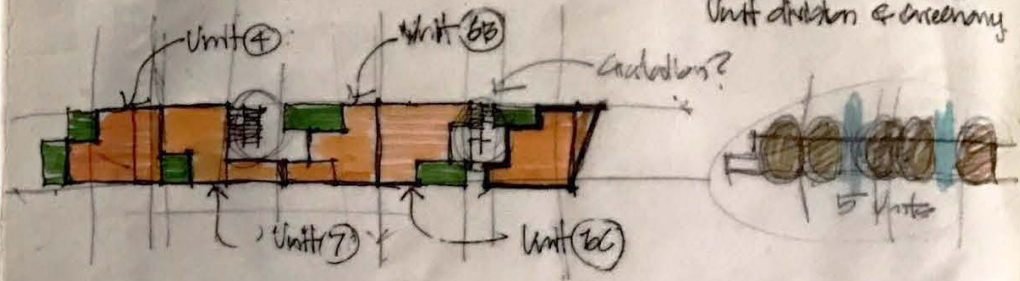
After 3d work

The scheme was figured with the help of digital 3d building & checking out the possibilities. The standard prototype of the 3d work or the building (Block A) was structured as follows.

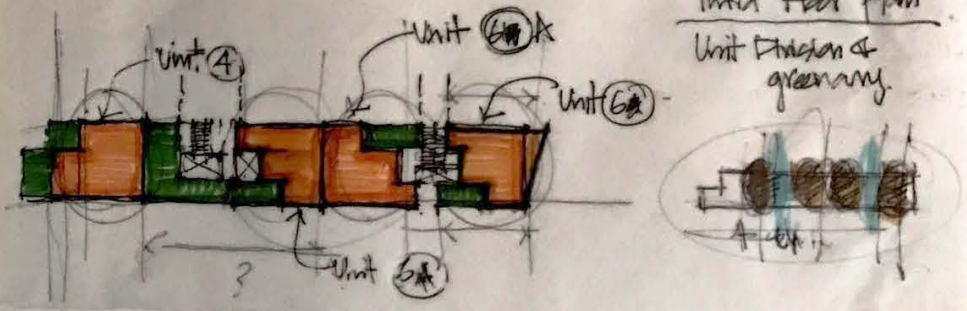
Planning overall layout - Initial stages



Second Floor Plan. Unit division & greenery.

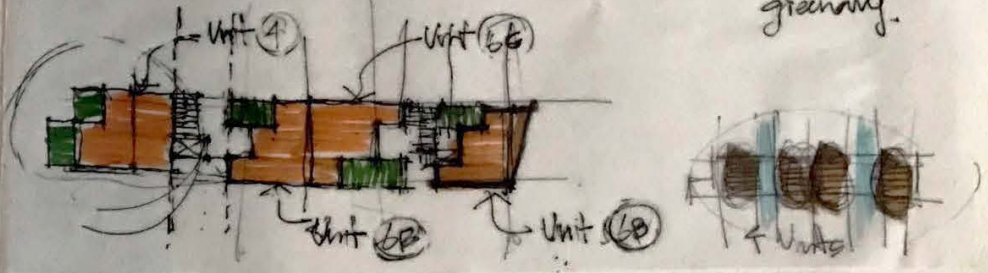


Third Floor Plan. Unit division & greenery.

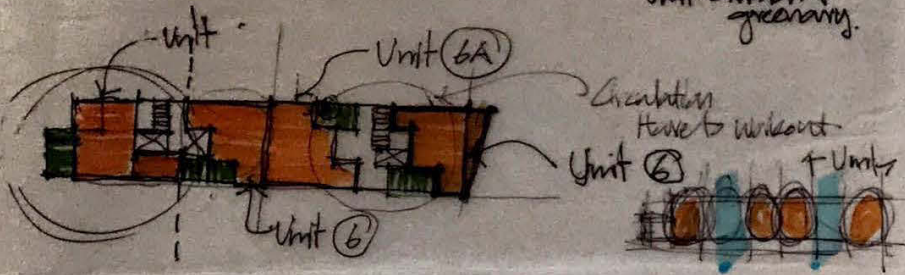


Units getting more complicated. More varieties - should reduce the varieties.

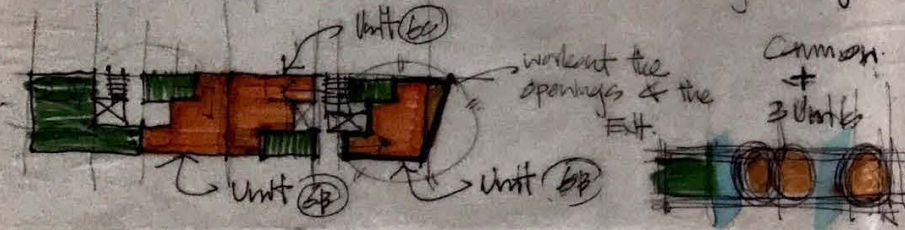
Fourth Floor Plan. Unit division & greenery.



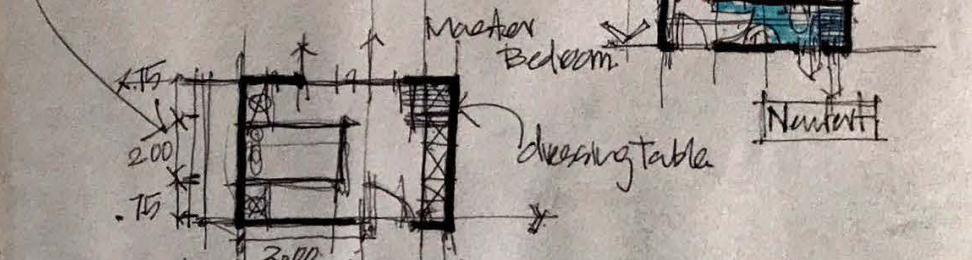
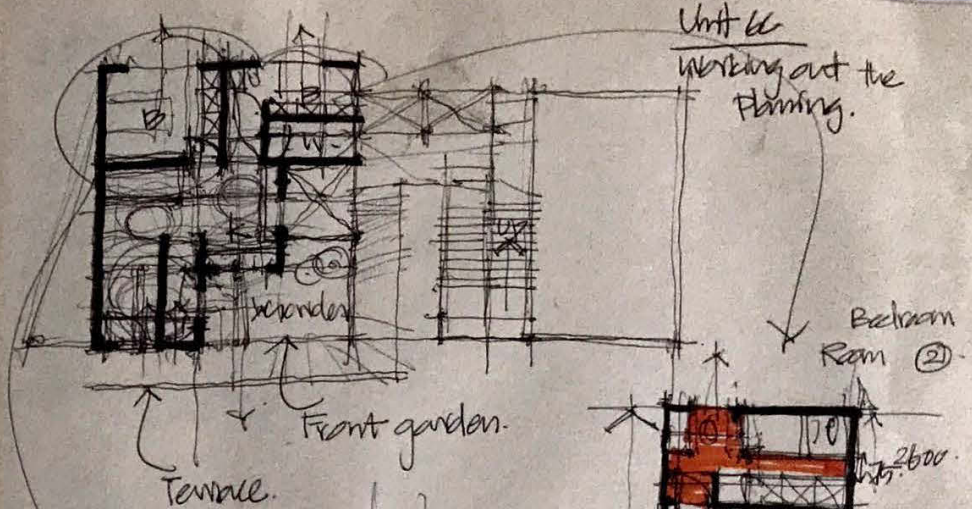
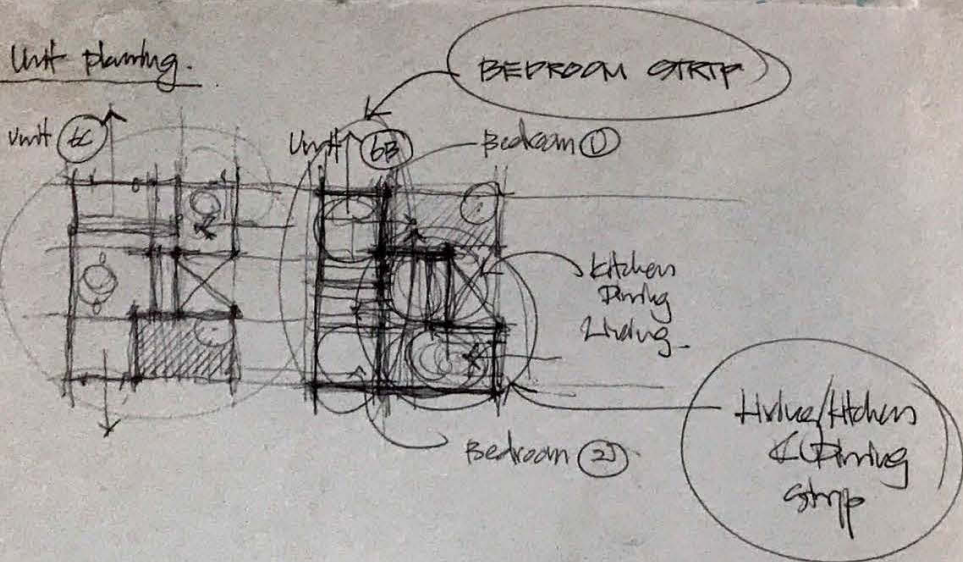
Fifth Floor Plan
Unit Division & greenery.



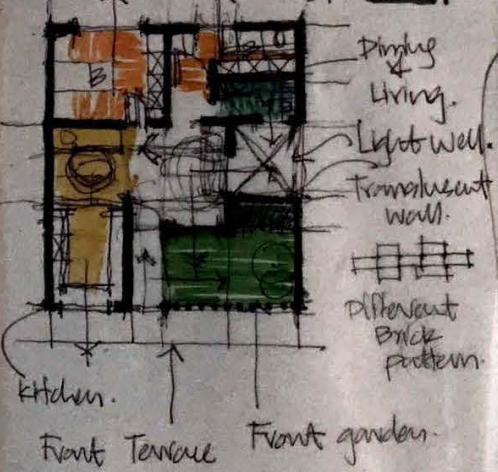
Sixth Floor Plan
Unit Division & greenery



Unit planning.

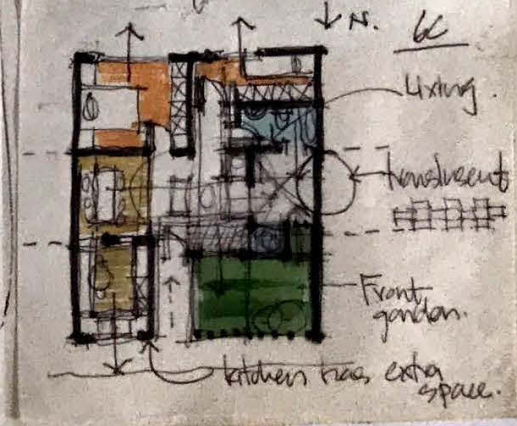


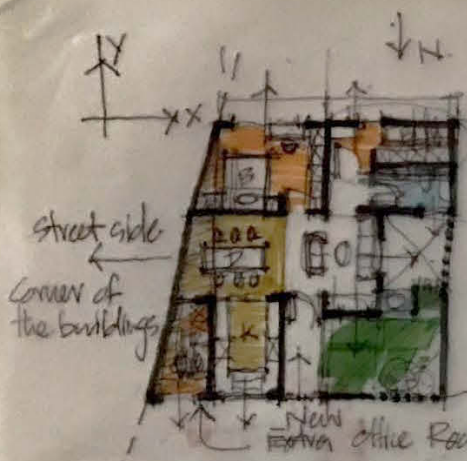
Comparison with the Harbest References.
Unit specification



Extension
 → Roof garden / Front garden
 1248 sqm / 9.88 sqm.
 2.6 sqm.
 14.64 sqm.
 - total used space. (3)
 73.68 sqm²

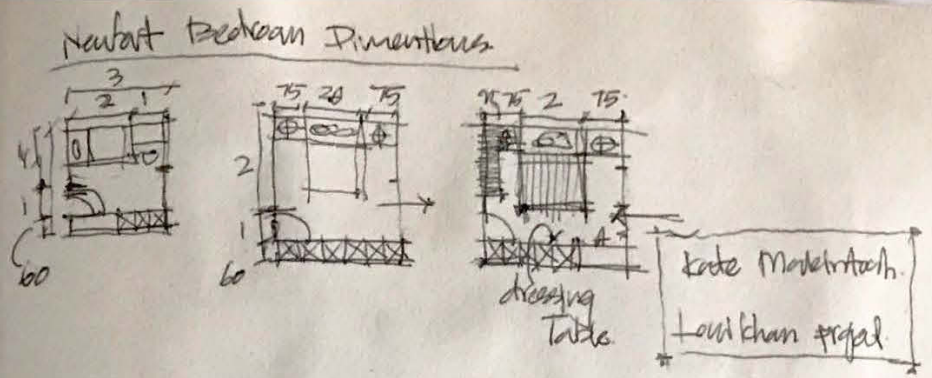
One storey Apartment Unit
 → 29.64 sqm
 → 21.60 sqm
 → 7.8 sqm
 } 59.04 indoor space.



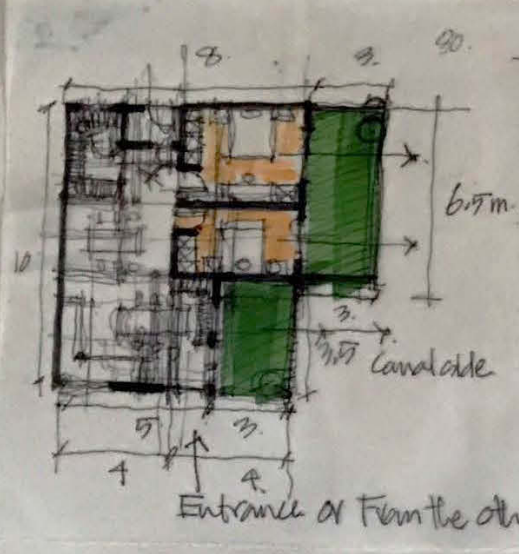


Unit 6B
 Extra space from the bc consequent + 16 sqm
 Unit 6 is the minor version of this along the Y axis.
 New Office Room / Study Room

- Unit 6C & (4)
 Unit 6B is the mainly repeated Unit.
 In different Building this Units are located either as it is or mirrored versions of the same Unit.



* Contains Roof gardens * Relatively more equilateral.
 Unit 04 is the Unit that is Facing the Canal.



Unit 4
 Initial Planning

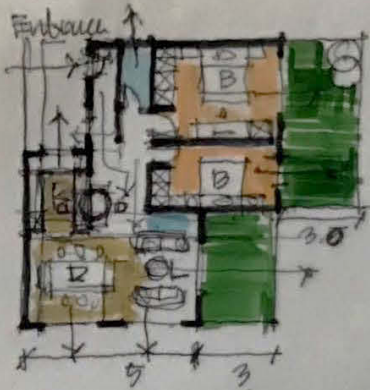
① Unit 04 can be considered as the New Type
 ① According to the new updated Arrangement.



Unit 05 is located just before Unit 04. - behind Unit 04.

After the Review - April 07th 2020 - Online Review
 Does the living room should have more view space you have given two bedrooms the most space in terms of orientating it towards the Canal.

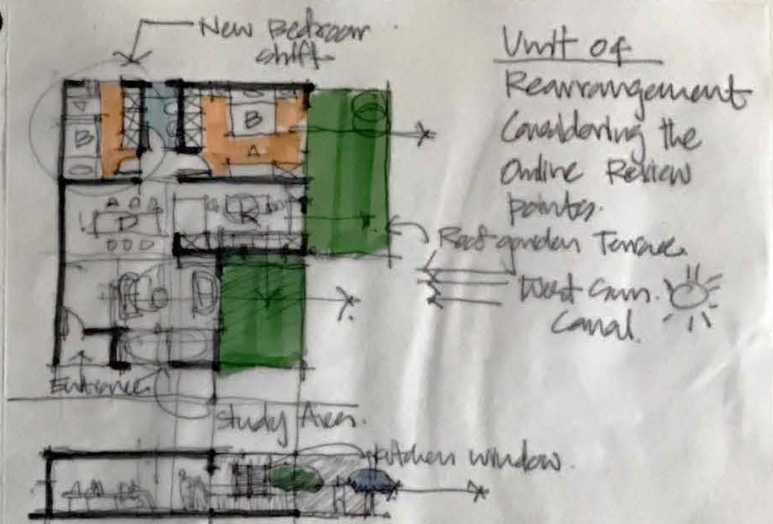
More space to the living room should be blend to get more views from the living room rather than to the Bedrooms.



Unit 07

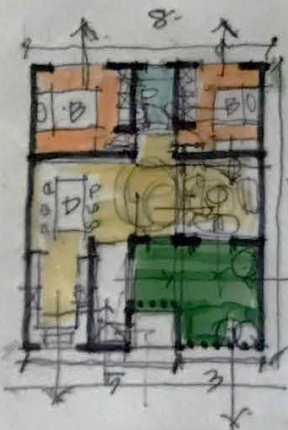
- at the ^{Top} upper level of the Buildings.
- facing the Canal.
- consist of Roof gardens as Unit 04.
- Entrance is from the opposite side to Unit 04.

Unit ①



Unit of Rearrangement
Considering the Online Review points.
Roof garden Terrace
West Can. Canal. ☀️

Unit (2)



Unit 05

More living & garden spaces.

- Individual gardens for each Unit.
- Internal - Having an outdoor open space gives light to interiors.
- * Think about the ways to get Sun light into the gardens.

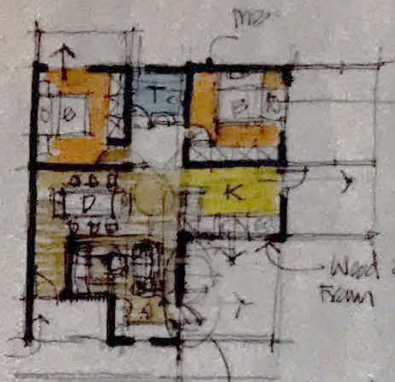
Units layout indicates some extra spaces other than units which is used as public used spaces.



NEW UNIT ARRANGEMENTS

Unit 01

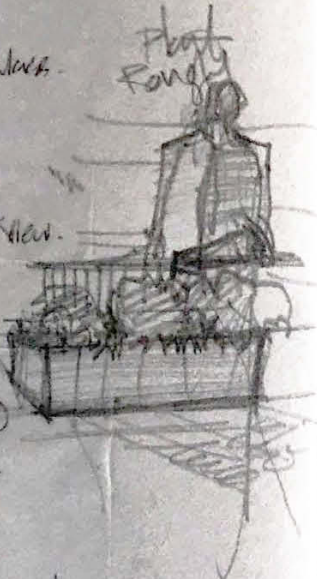
Units in the Front Facing the Canal



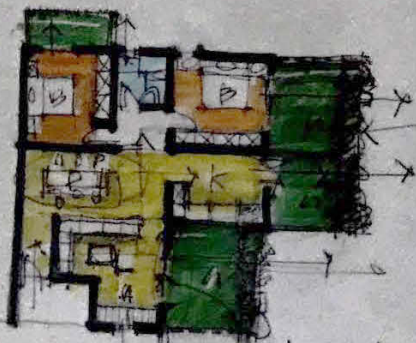
Wood & transparent glass frame

open facade through the Canal view.

Plant Rough



Unit 01 Final.



Plant Rough

Wide opening study Areas.

Hand rail



2.

Unit 02

Adjacent to the Unit 01 (Just before)



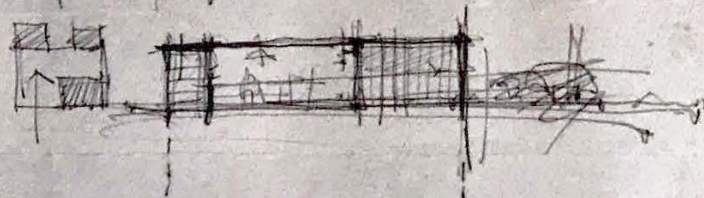
Balconies

Half-unit with wireless strips

Semi-Outdoor Indoor Space / Gardens

wooden chairs

Plant Rough



3.

Unit 03

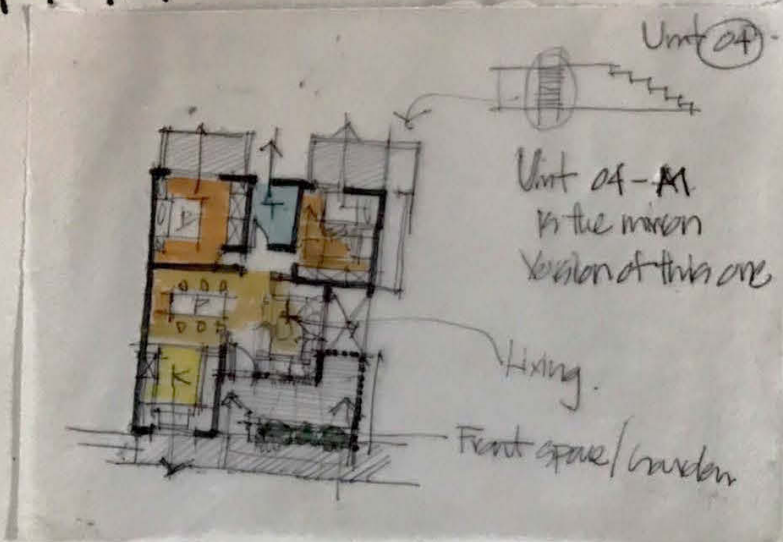
In the middle block (C).1



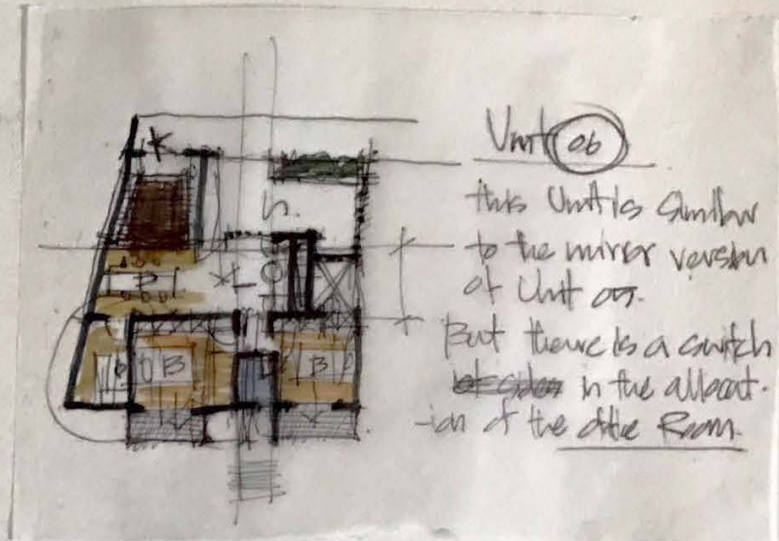
Canal side

Plant Rough

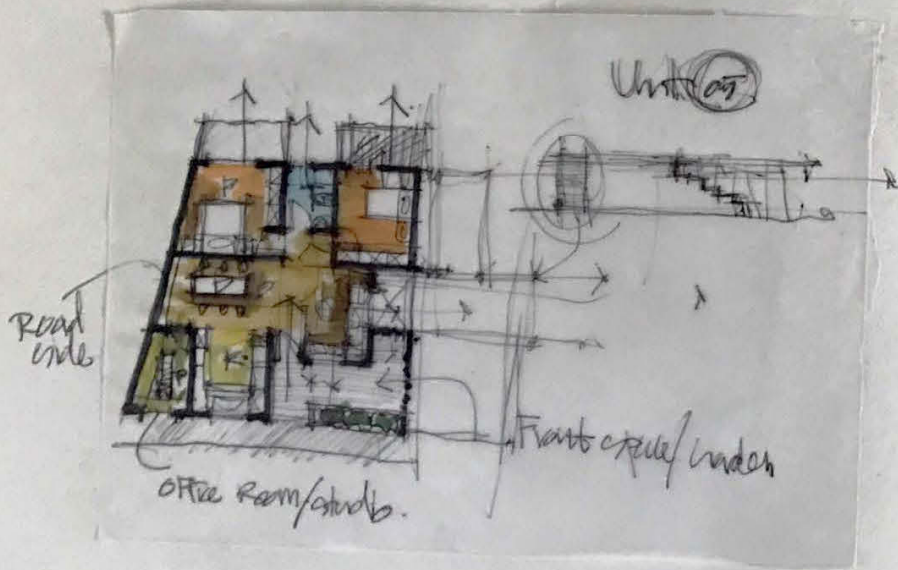
4. / 4M.



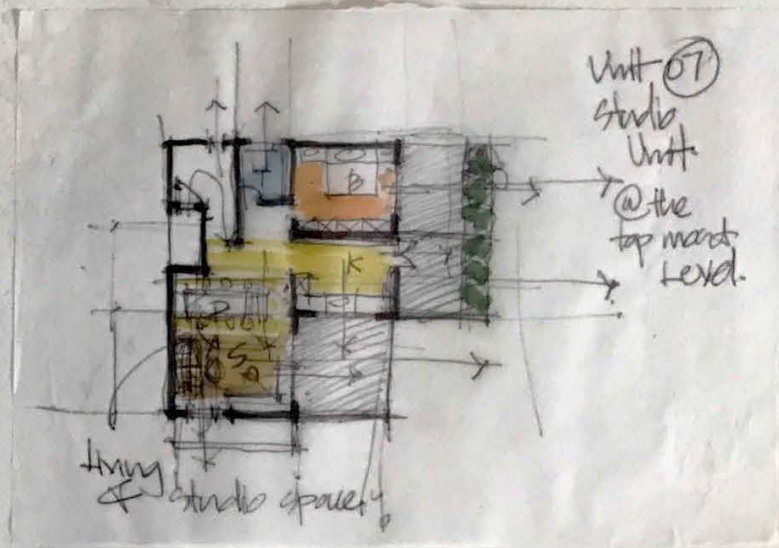
6.



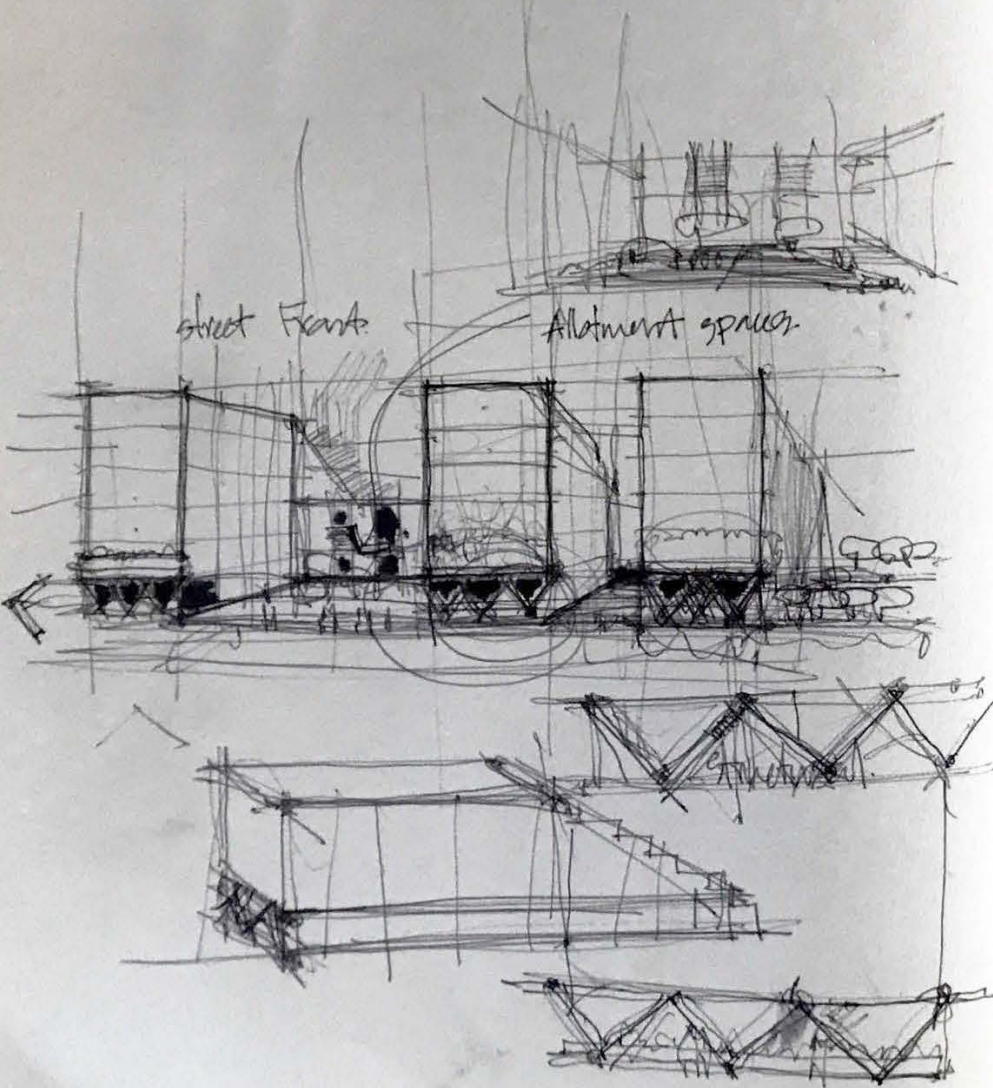
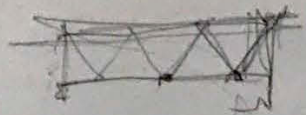
5.



7.



8.



living area specification:

