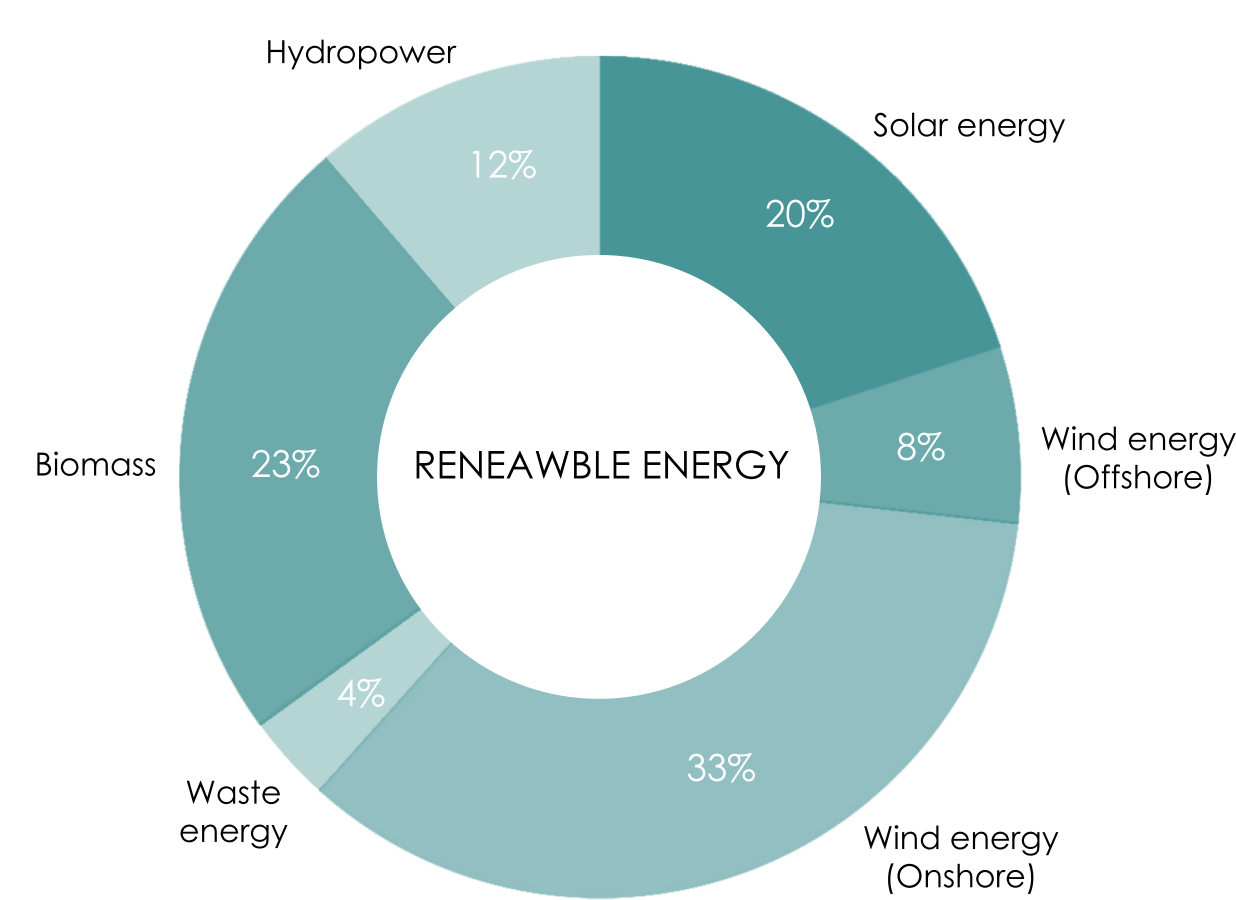


SITE LOCATION

## Sustainability



The development of man, man's environment, and his way of life, during the 20th century, significantly changed the world around him. The development of all spheres of existence, including industry, has contributed to the pollution of the habitats of all living beings on planet Earth. These events were an alarm for the architects to do everything in their power to protect the human environment. In the midst of this, the notion of sustainable architecture, as well as sustainability in general comes as a savior. Sustainable architecture seeks to minimize the negative impact of buildings on the environment, all with the aim of achieving efficiency through different phases, such as materials, energy, living space.



## Sustainable Europe

COUNTRY	RANK	EPI SCORE	10 YEAR CHANGE
Denmark	1	82.5	7.3
Luxembourg	2	82.3	11.6
Switzerland	3	81.5	8.6
United Kingdom	4	81.3	9
France	5	80	5.8
Austria	6	79.6	5.4
Finland	7	78.9	6
Sweden	8	78.7	5.3
Norway	9	77.7	7.6
Germany	10	77.2	1.2



## Germany

**Country**  
Germany

**Area**  
357,578 km<sup>2</sup>

**Population** 82,792,351 (2017)

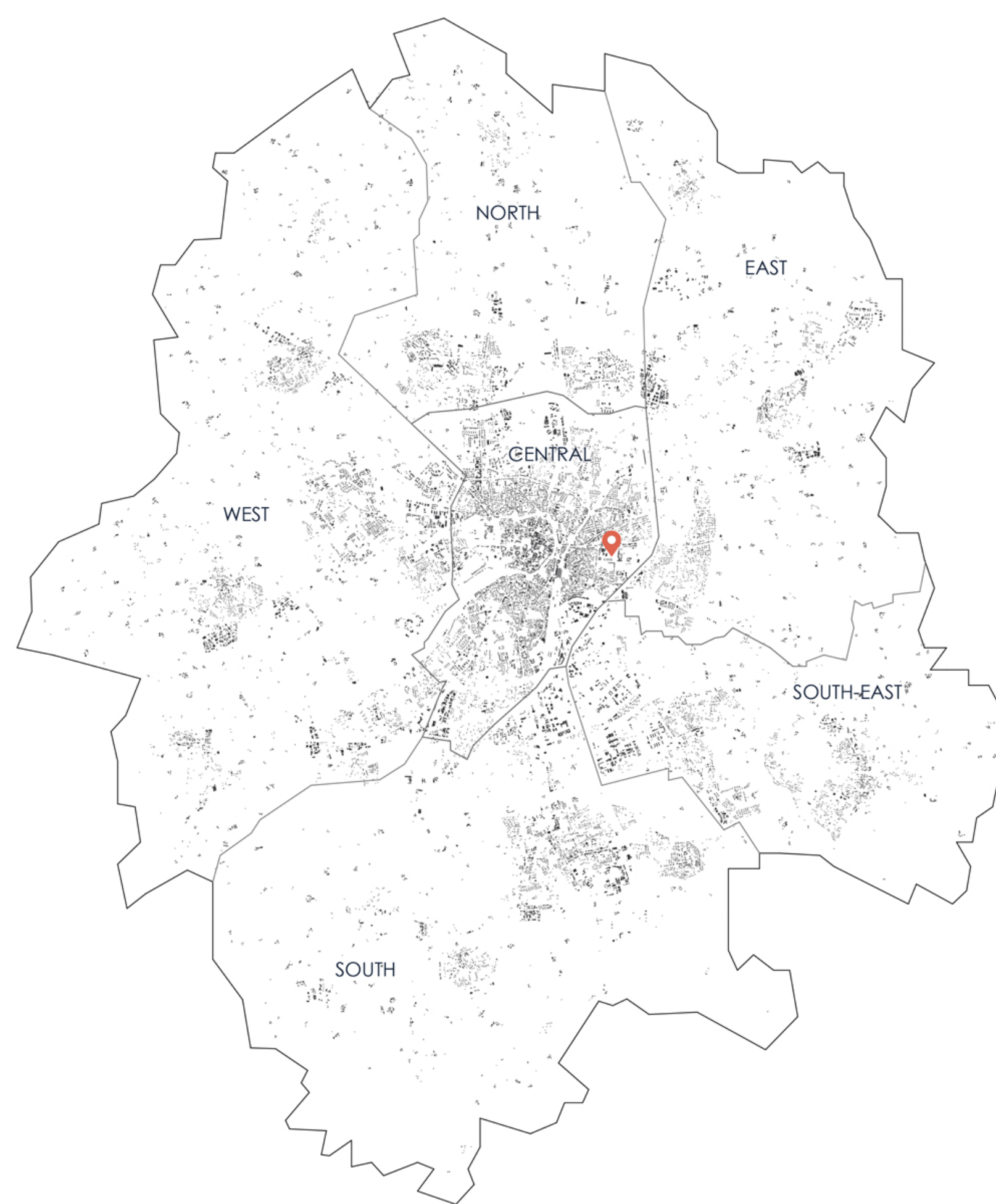
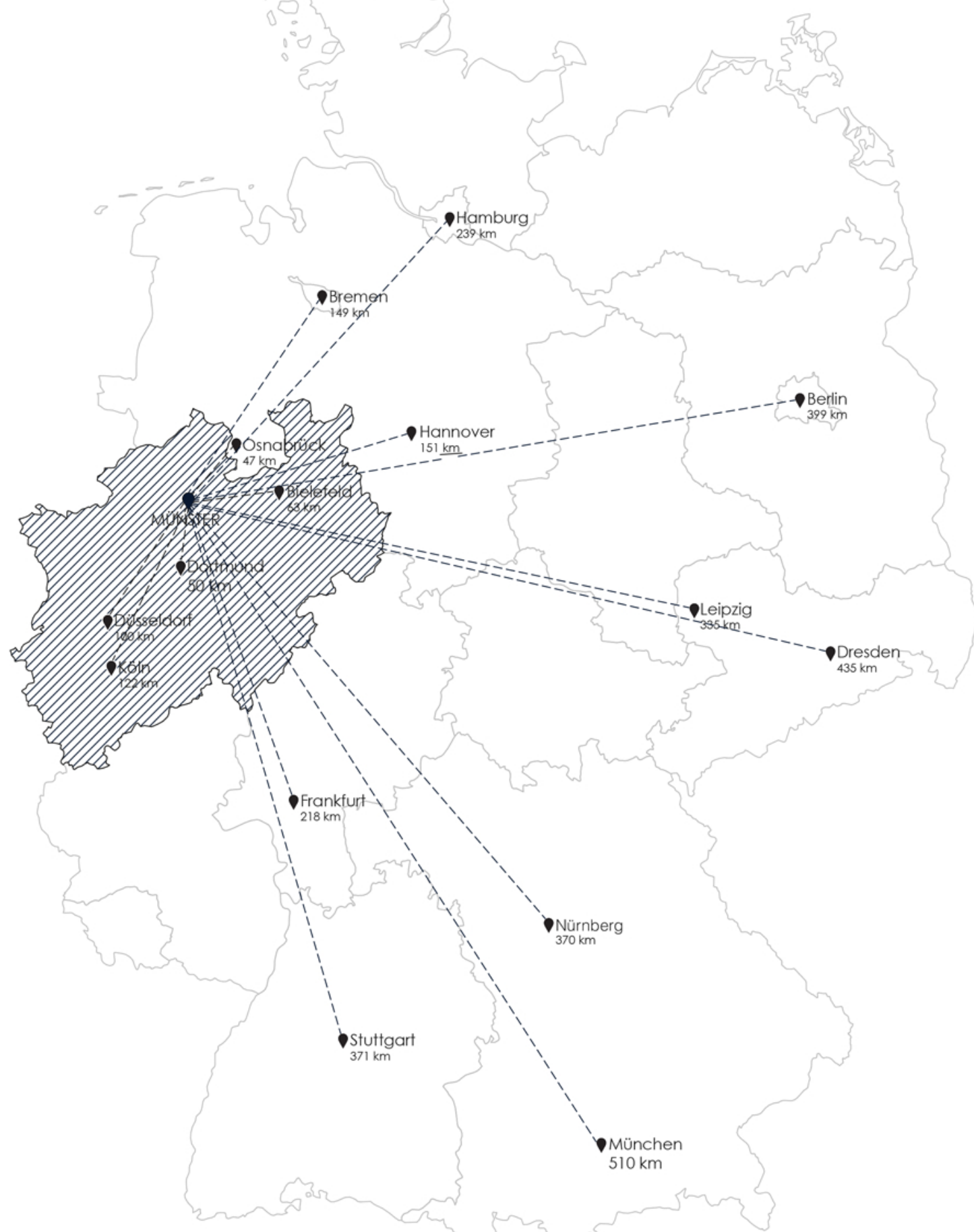
**Population density**  
233 inhabitants per km<sup>2</sup>

**State**  
Nordrhein-Westfalen

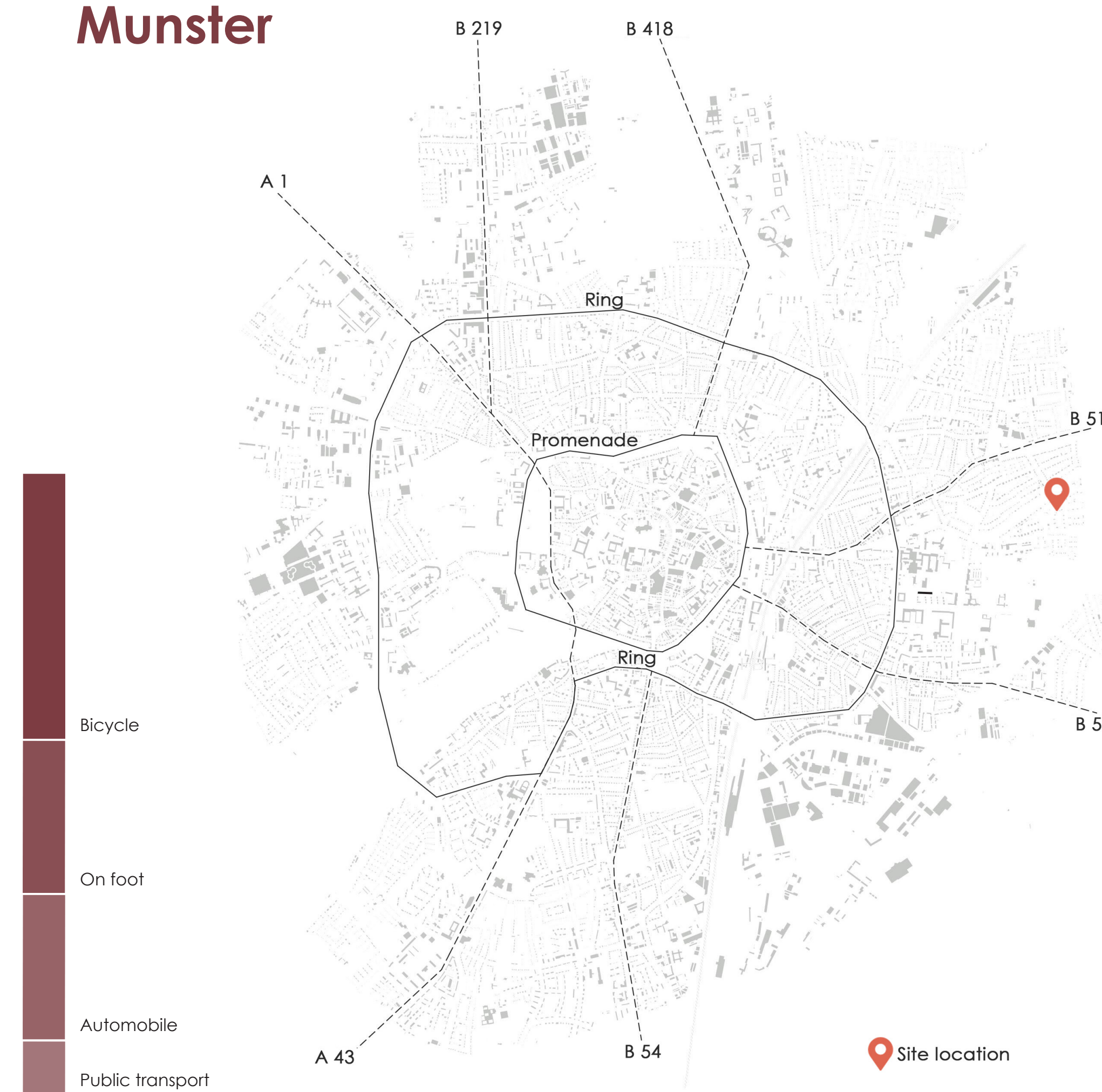
**Area**  
34,110 km<sup>2</sup>

**Population**  
17,912,134 (2017)

**Population density**  
525 inhabitants per km<sup>2</sup>



## Munster



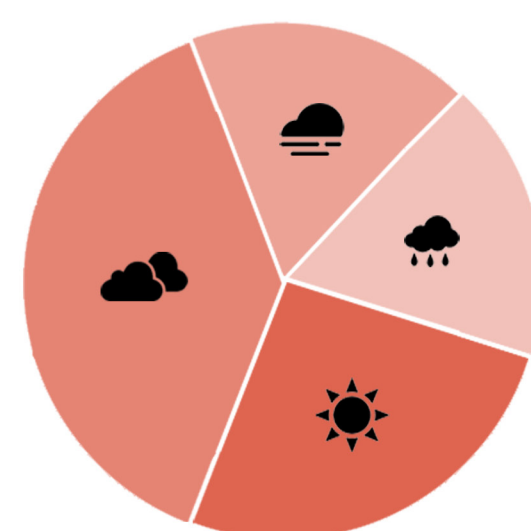
## Views



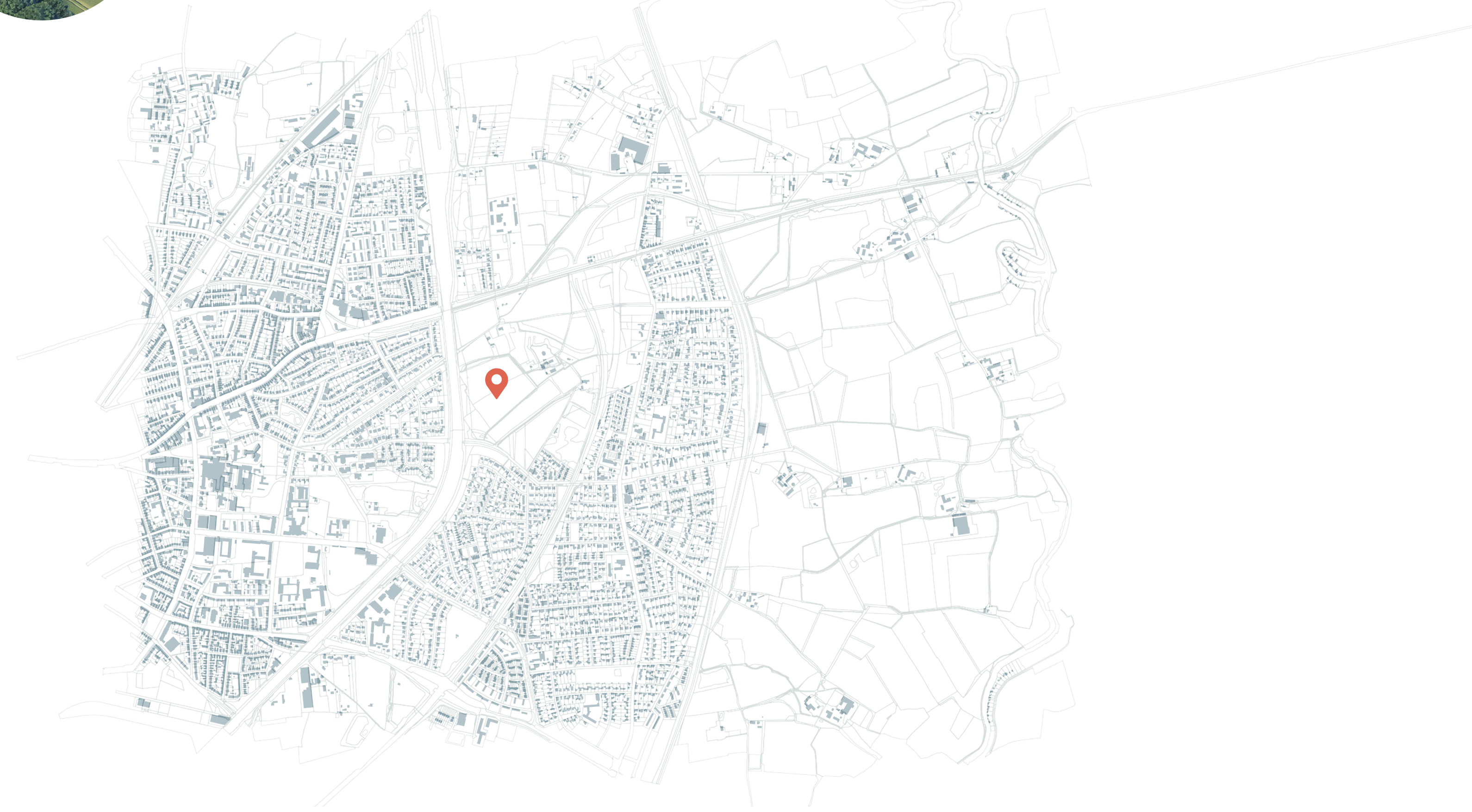
the ratio of wind by the sides of the world  
WIND ANALYSIS



INSOLATION ANALYSIS  
the ratio of sunny and non-sunny days

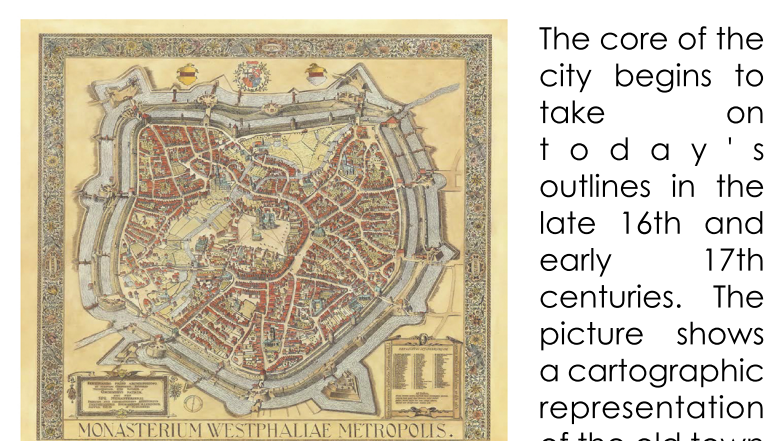


## Physicality of the site



## History

**I - ROOTS**  
Initial Münster steps  
Münster's roots can be traced back to the 6th century AD. The city officially came into existence in 753, when Frisian missionary Liudger founded the "Monasterium" cloister. Münster became a cathedral city as early as 805. The first panorama of the city dates from 1572 and shows the outlines of medieval Münster

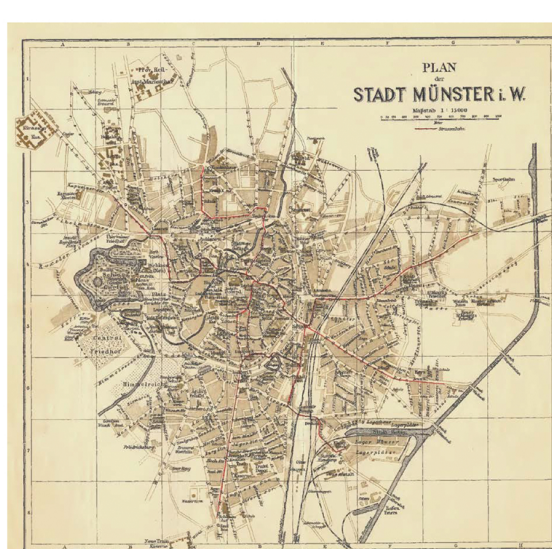
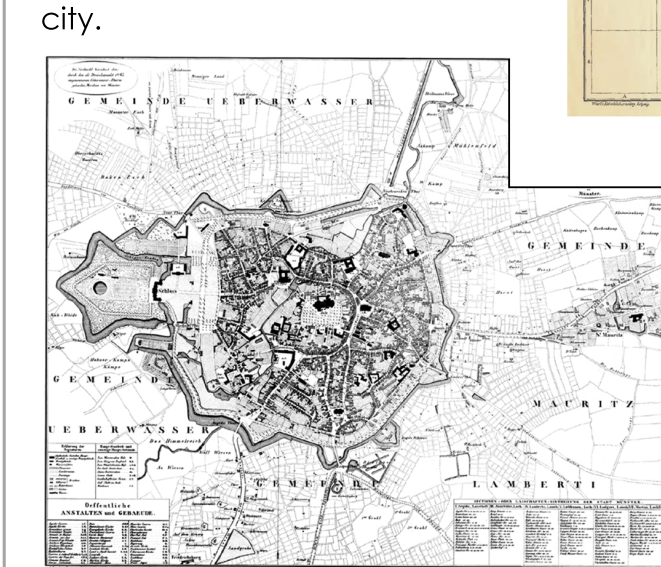


The core of the city begins to take on today's outlines in the late 16th and early 17th centuries. The picture shows a cartographic representation of the old town from 1636.

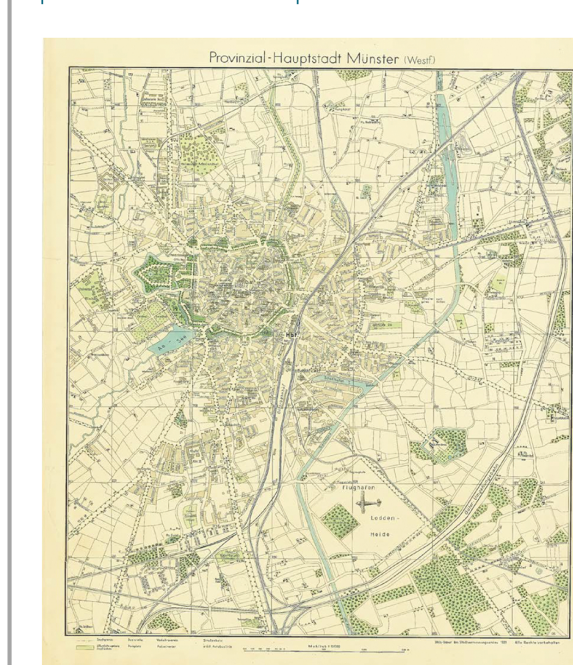
**II - END OF THE 17th CENTURY**  
plan of the fortified town center from 1657



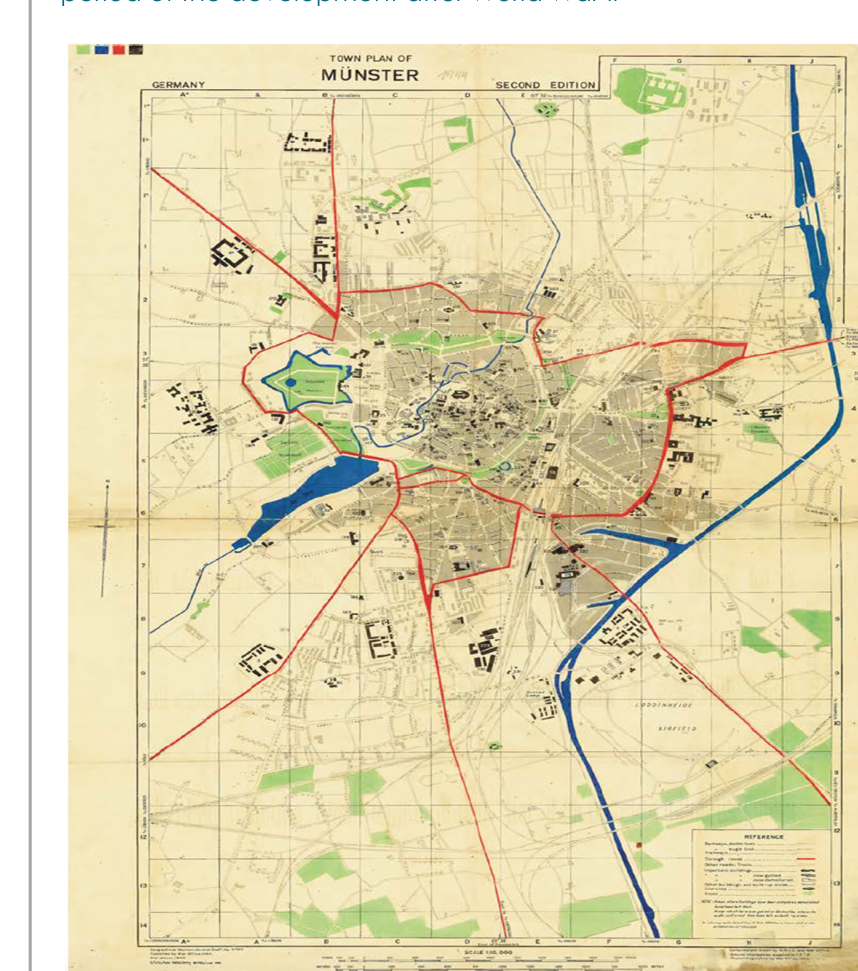
**III - 19th CENTURY EVOLUTION**  
the greatest progress of the city  
During this century, the city has made great progress. The defense of the city is improving, which is also expanding beyond the walls. Comparing maps from the beginning and the end of the 19th century, we can value this time interval as one of the most important in the history of the city.



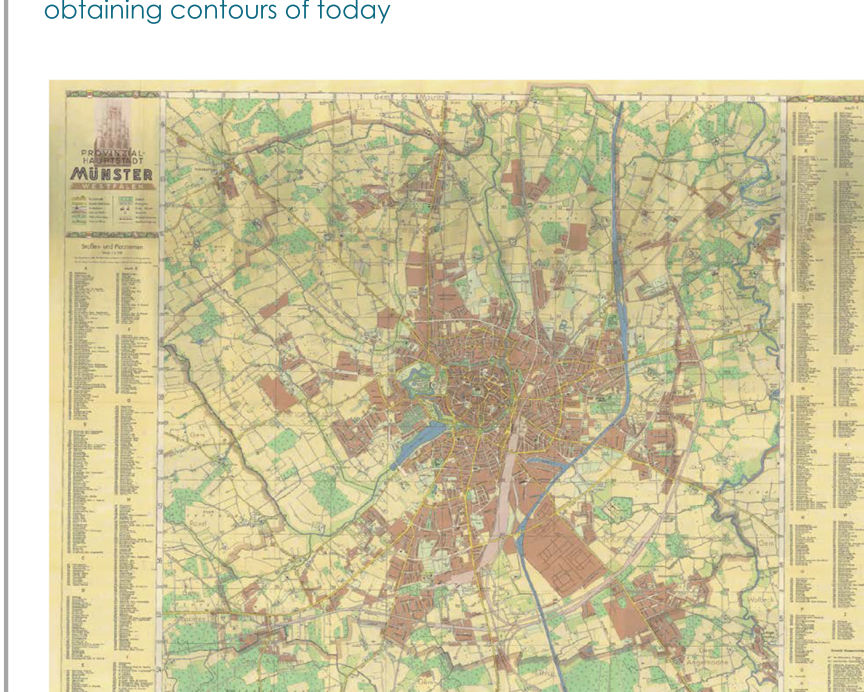
**IV - ENTERING OF THE 20th CENTURY**  
period of the development after World War



**V - MIDDLE OF THE LAST CENTURY**  
period of the development after World War II



**VI - END OF THE 20th CENTURY**  
obtaining contours of today



# Master plan

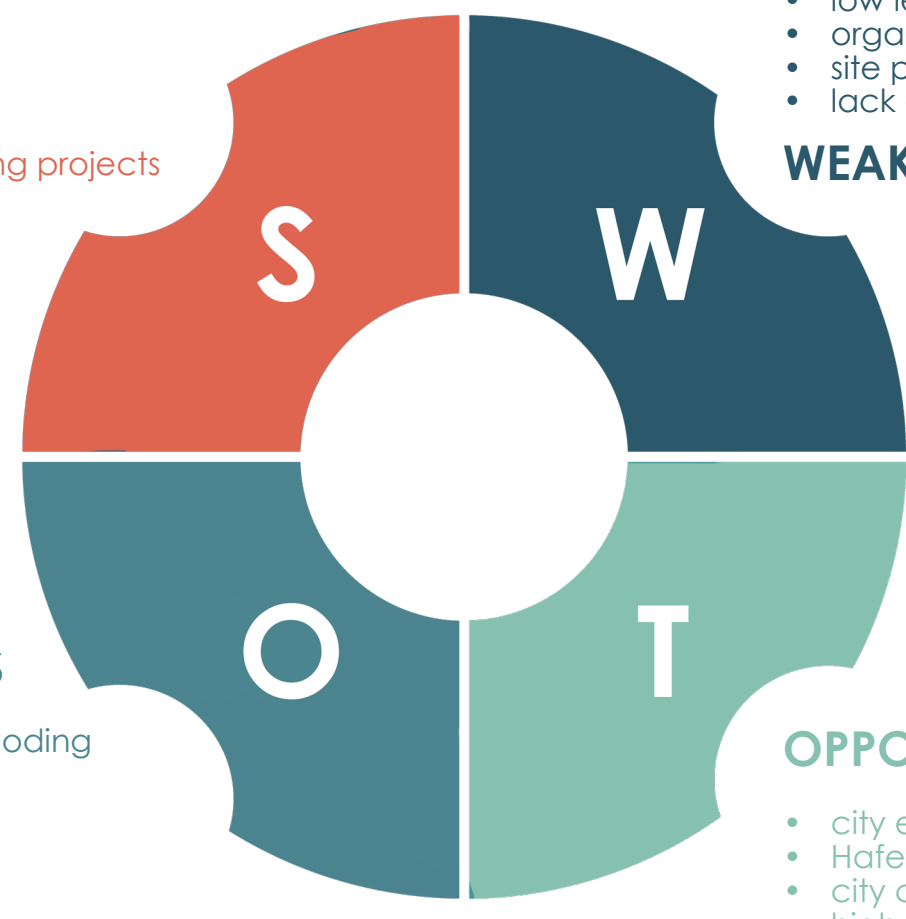


- accessibility
- aquatic elements
- site molding ability
- noise isolated area
- suitable flat terrain
- proximity of developing projects

## STRENGTHS

## THREATS

- canal flooding



- lack of connections
- low level of greenery
- organization
- site parts bad connected
- lack of features and activities

## WEAKNESSES

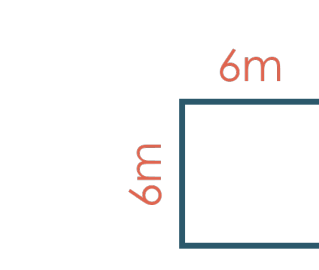
## OPPORTUNITIES

- city expansion
- Herten district vicinity
- city center proximity
- highway connection
- suitable location

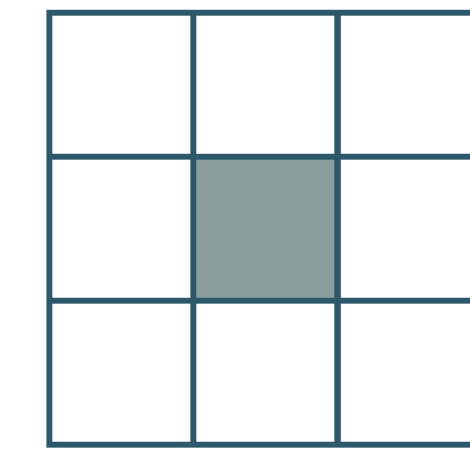


# ECO COMMUNITY

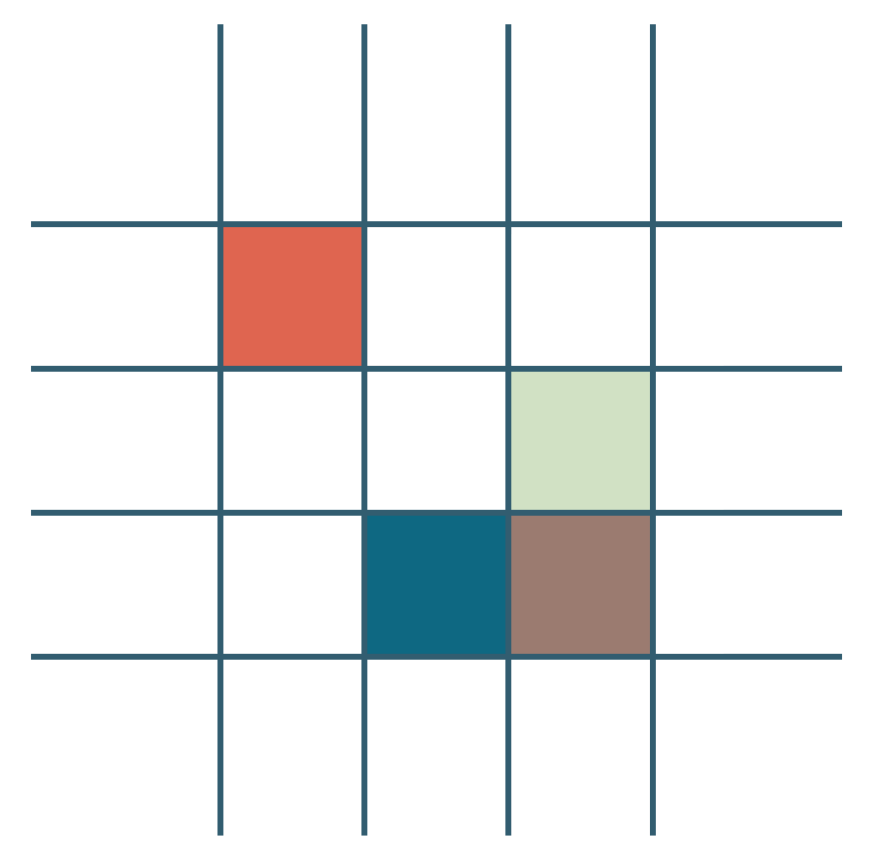
## Concept



SINGLE CUBICLE  
(optimal size for maximum light coverage)



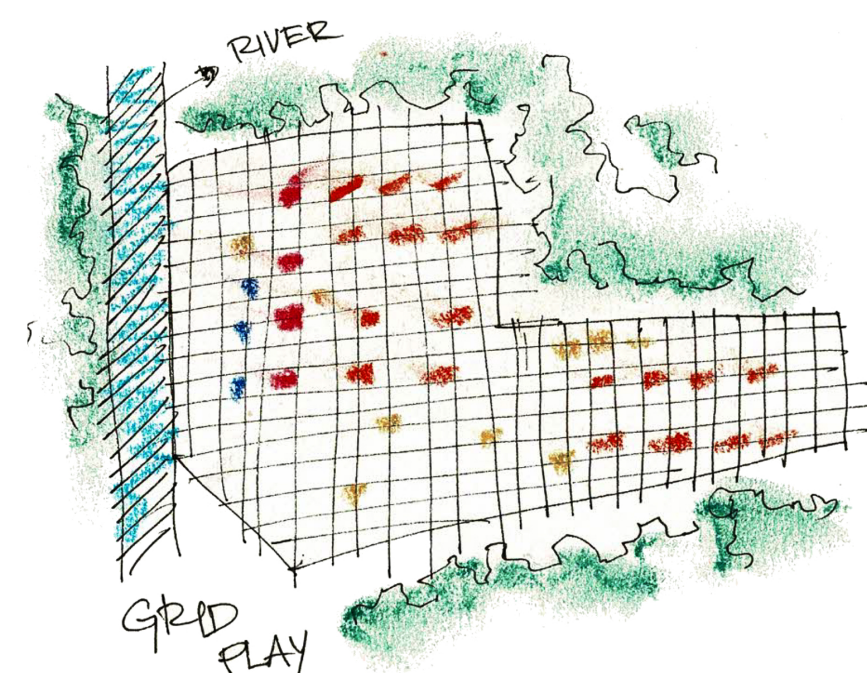
BASE MODULE BUILDING  
(middle cubical as main connection)



MASTER PLAN GRID  
(cubical as single function)



## Strategy



GRID FLAY

site concept

modul size

river position study

SUN STUDY

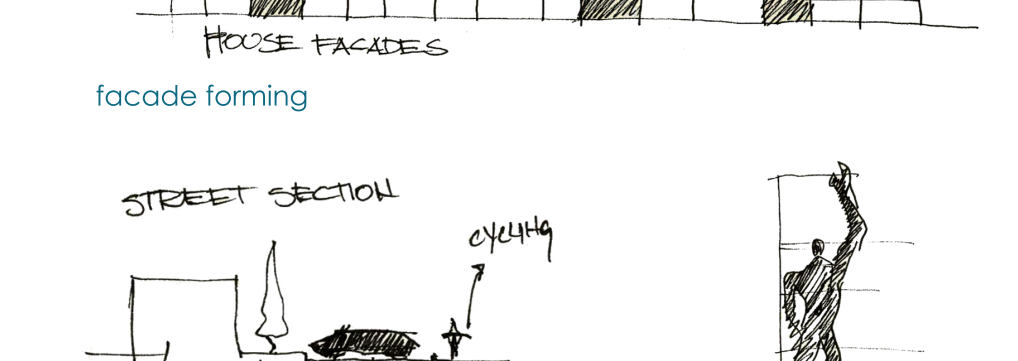
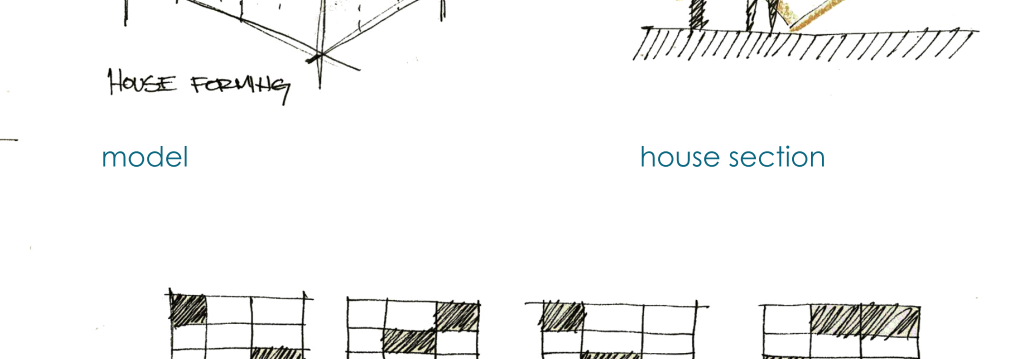
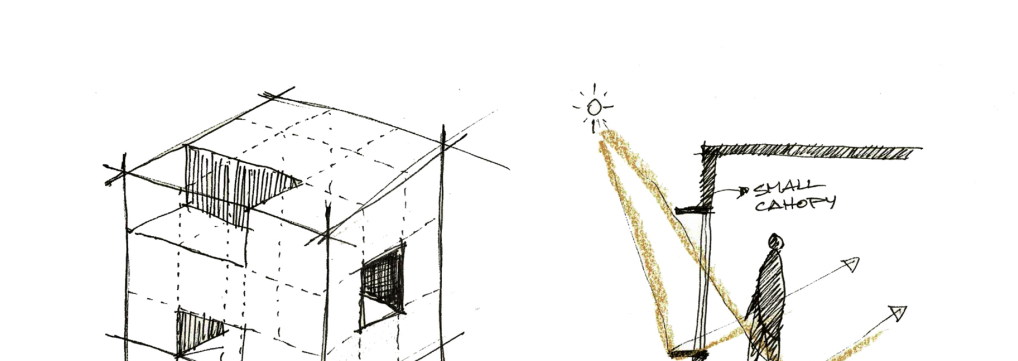
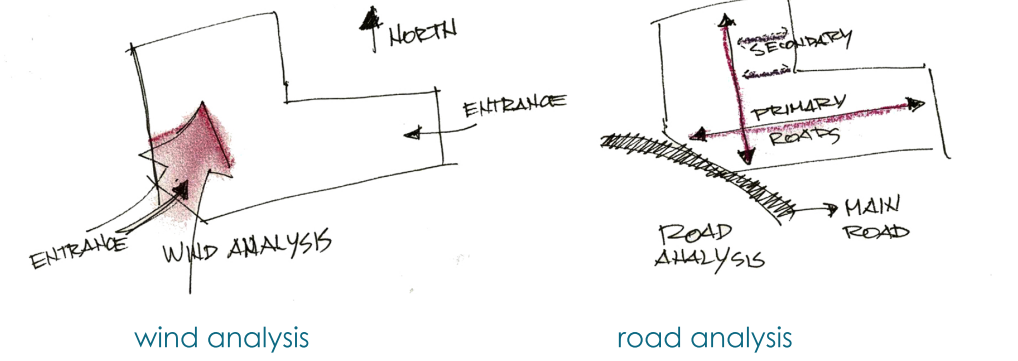
HOUSE SECTION

HOUSE FORMING

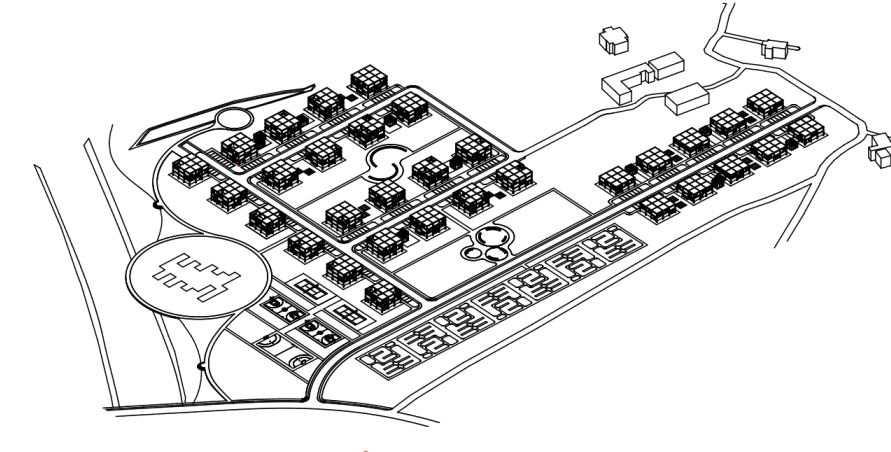
HOUSE FACINGS

STREET SECTION

FRONT YARD



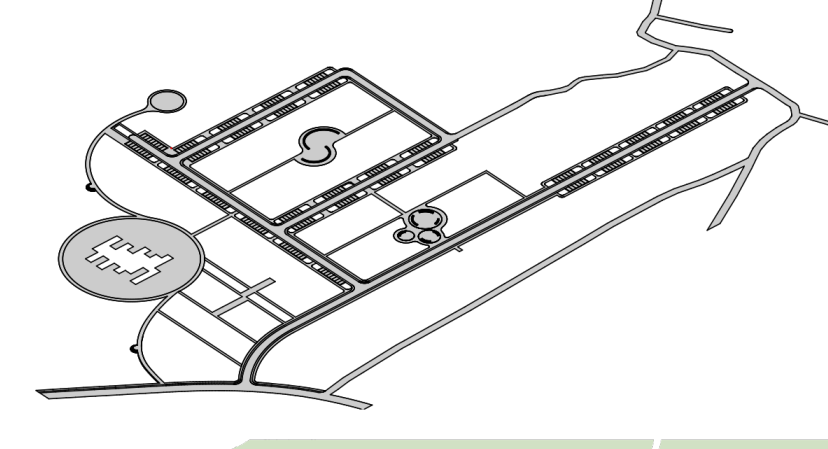
## Exploded



COMPLETE



RESIDENCE



CONNECTIONS



GREEN



GRID



EXISTING



## Master plan

## VEGETATION



Atlantic White Cedar  
(Chamaecyparis thyoides)



Freeman maple  
(Acer x freemanii)



California sycamore  
(Platanus racemosa)



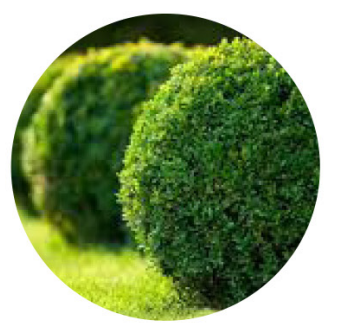
Ninebark  
(Physocarpus)



White Alder  
(Alnus rhombifolia)



Black Ash  
(Fraxinus nigra)



Evergreen shrubs



Hollies  
(Ilex aquifolium)



Junipers  
(Juniperus communis)



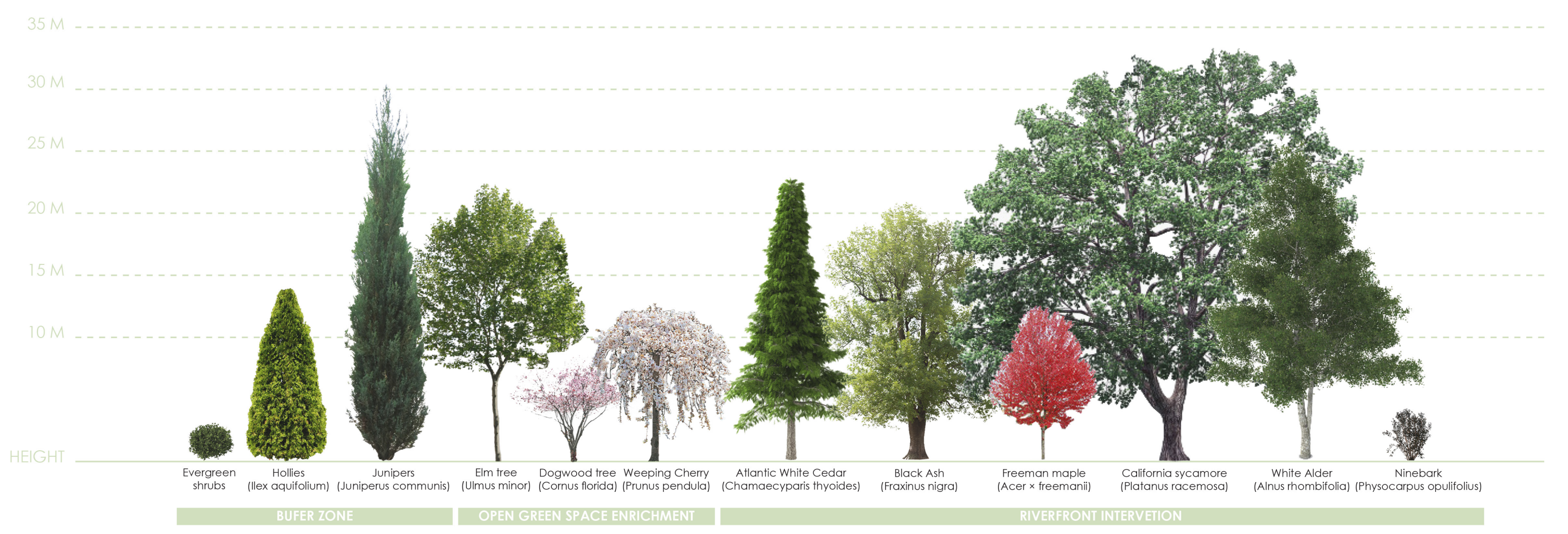
Elm tree  
(Ulmus minor)



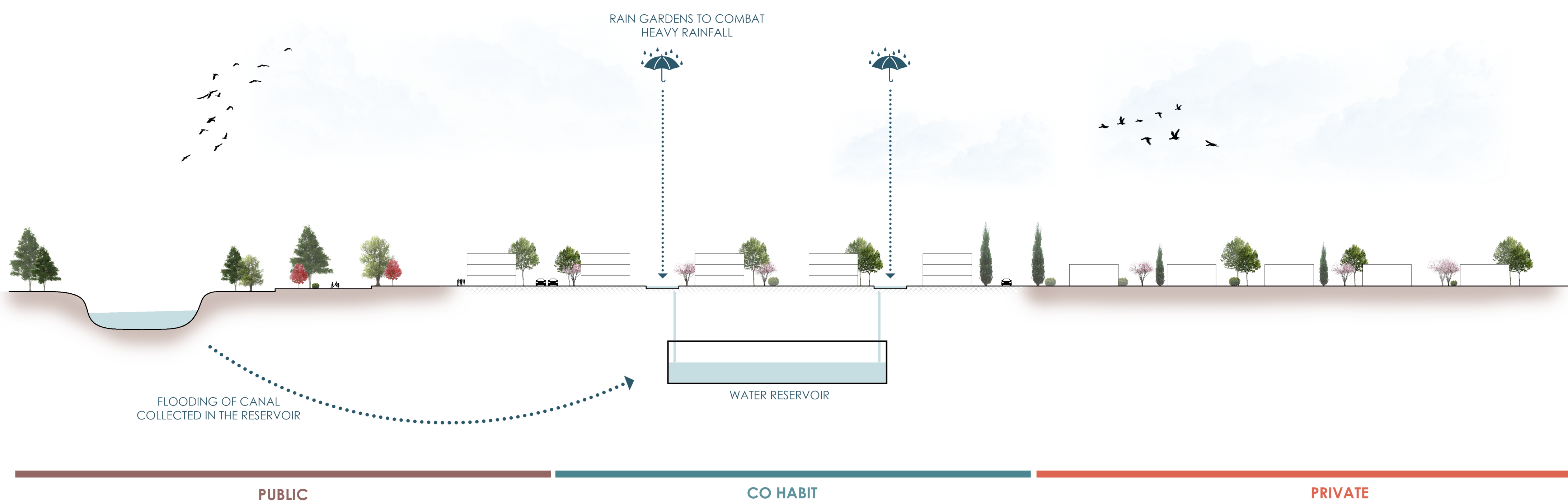
Dogwood tree  
(Cornus florida)

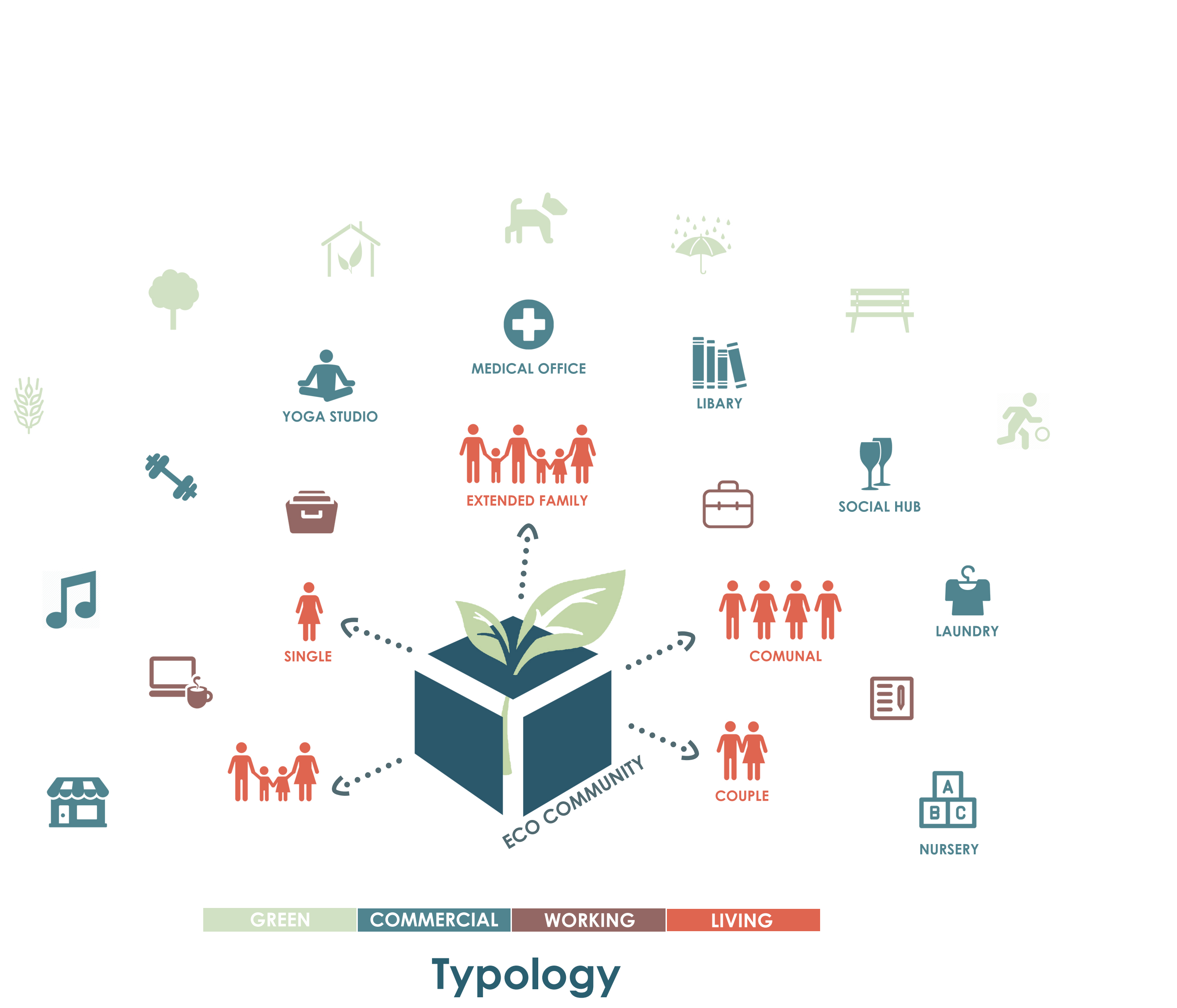


Weeping Cherry  
(Prunus pendula)



## SECTION

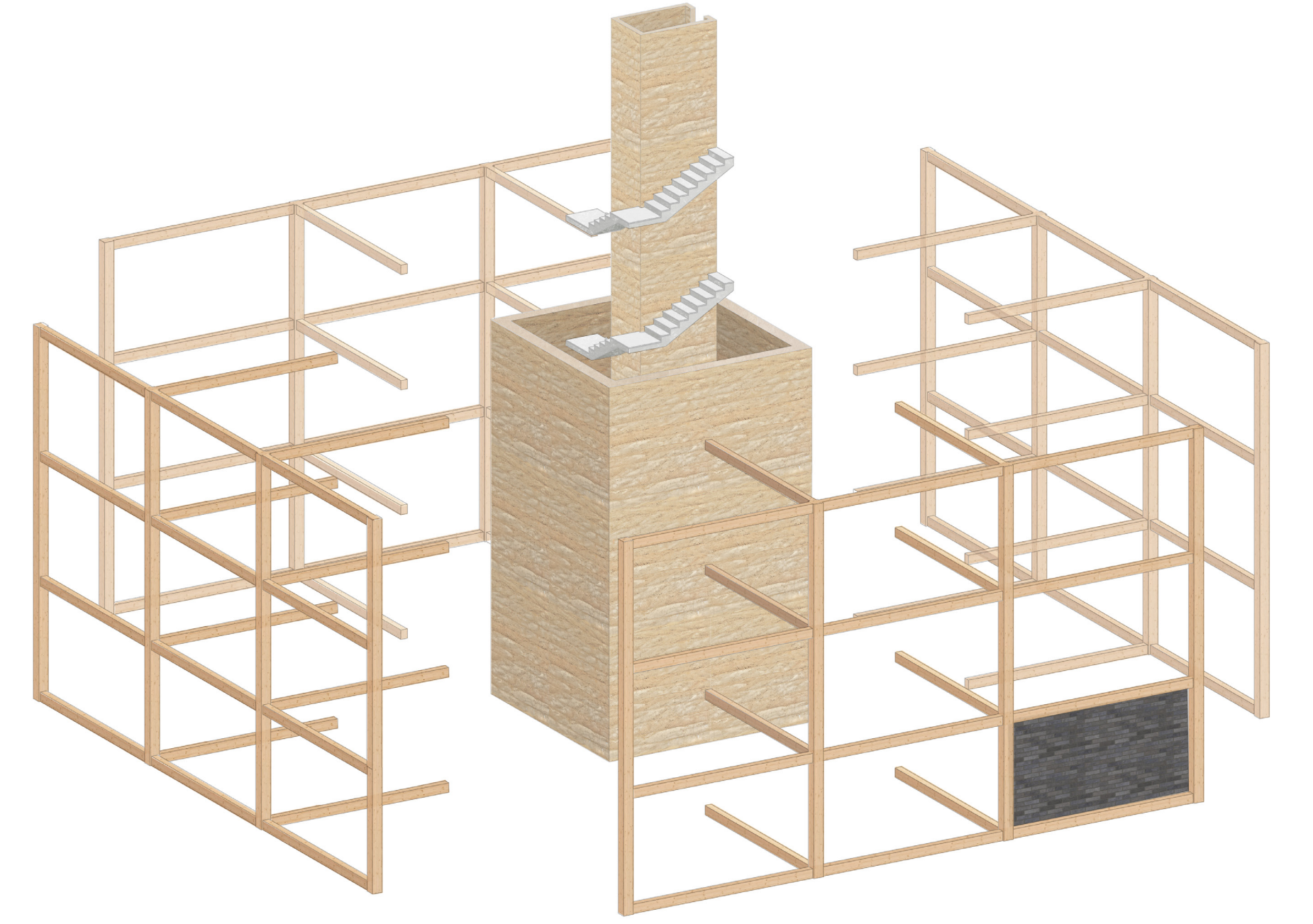
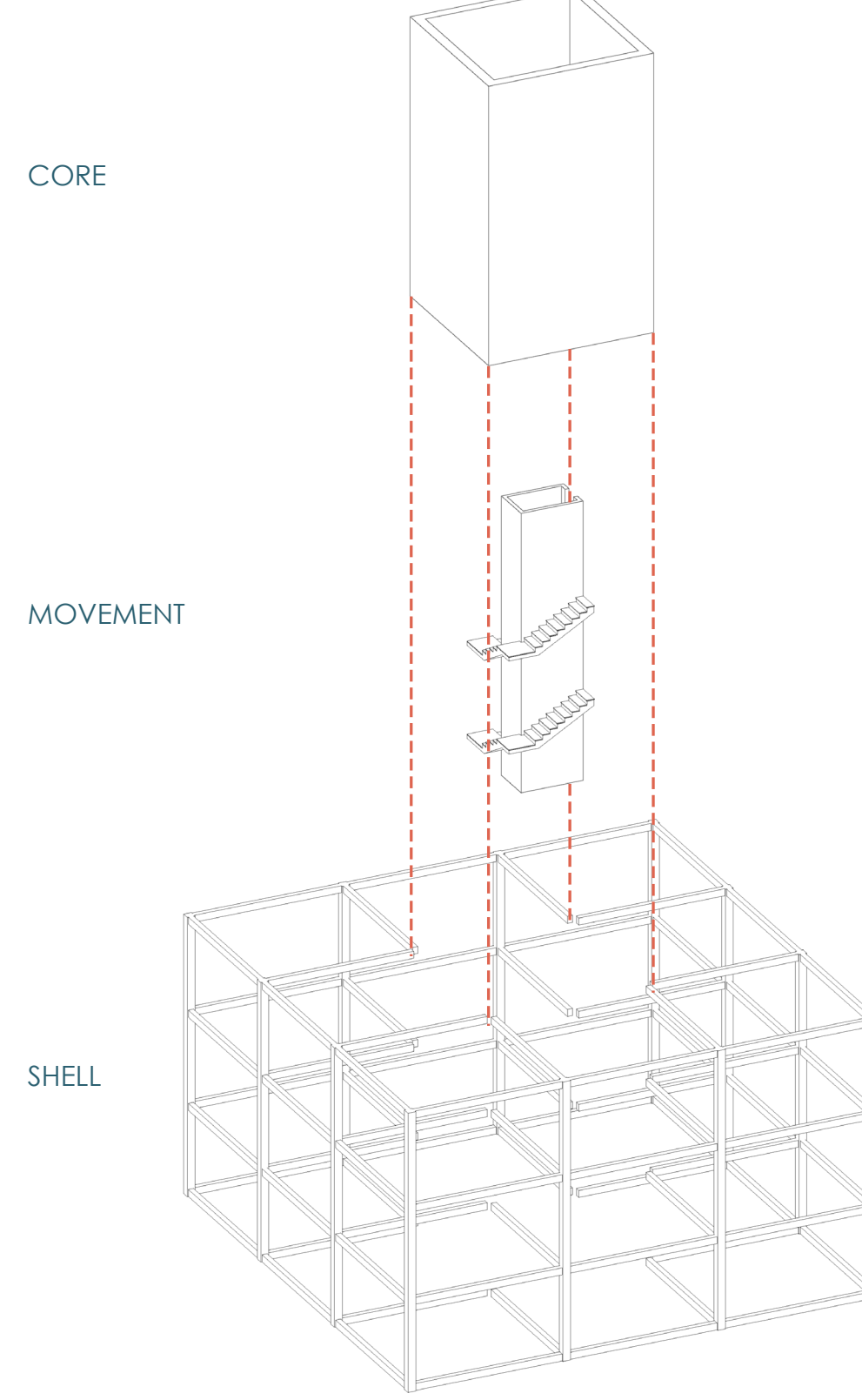
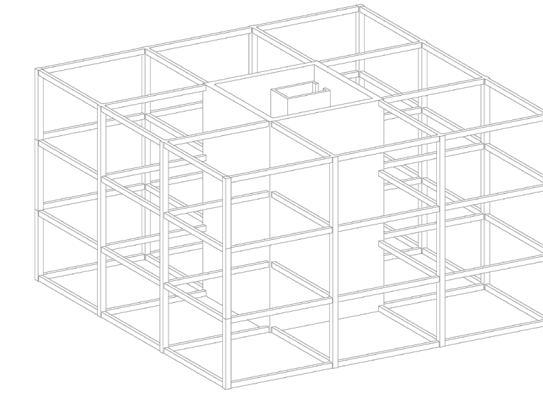




BASE MODULE is fixed construction for all future units in the community consist of:

- CORE
- MOVEMENT (CONNECTION)
- SHELL

Core is the main support made out of rammed earth concrete. Inside of it is the main connection for the whole building, all the movement happening. It is surrounded by shell made out of wood supporting all proposed units of housing.

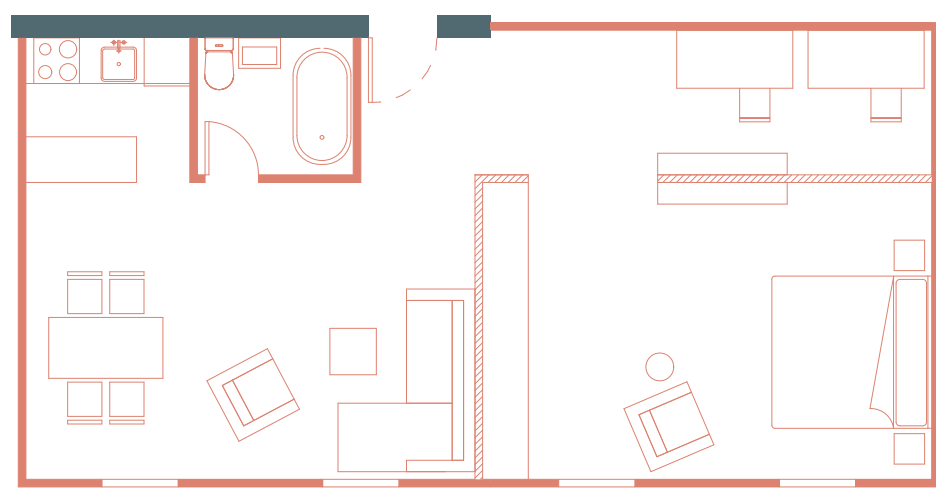


## LIVING

CATALOG OF PROPOSED HOUSING LIVING UNITS



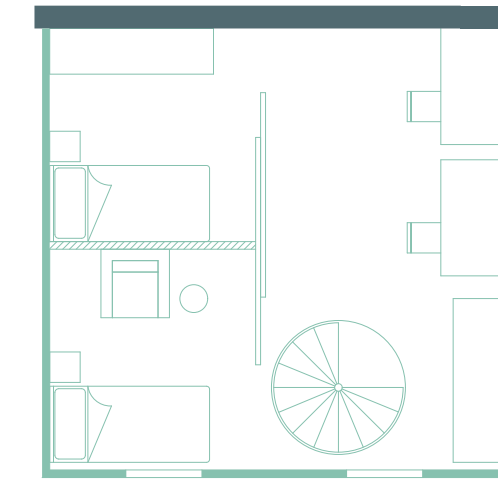
TYPE01  
SINGLE LIVING / 36m<sup>2</sup>



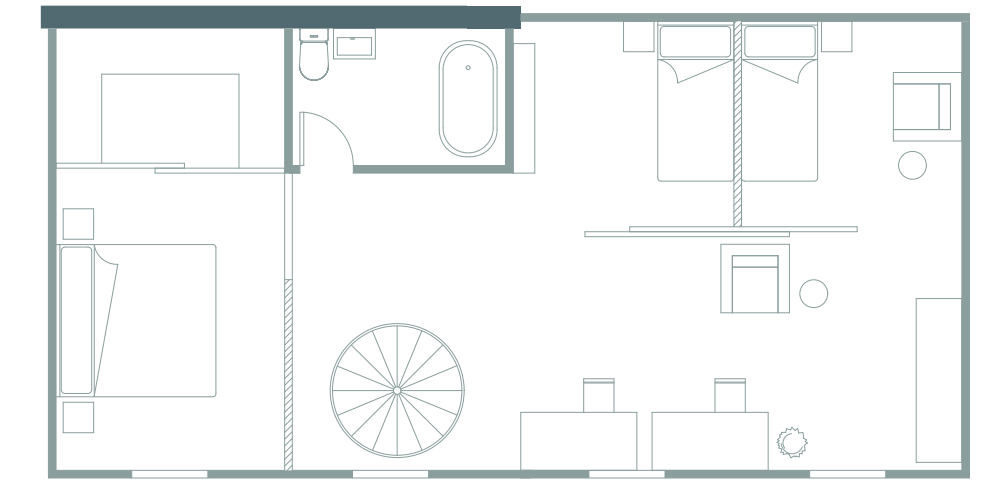
TYPE02  
COUPLE LIVING / 72m<sup>2</sup>



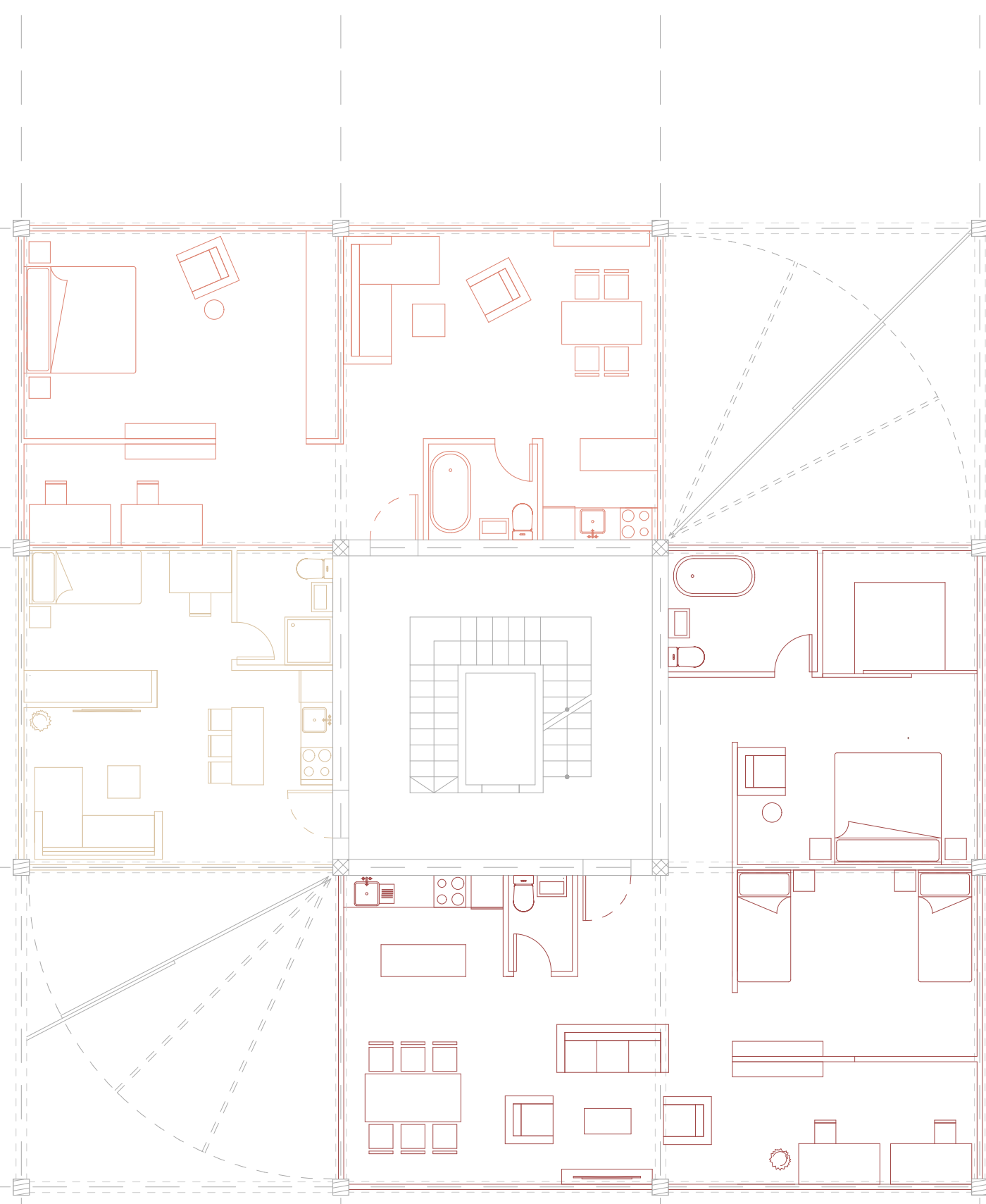
TYPE03  
FAMILY LIVING / 108m<sup>2</sup>



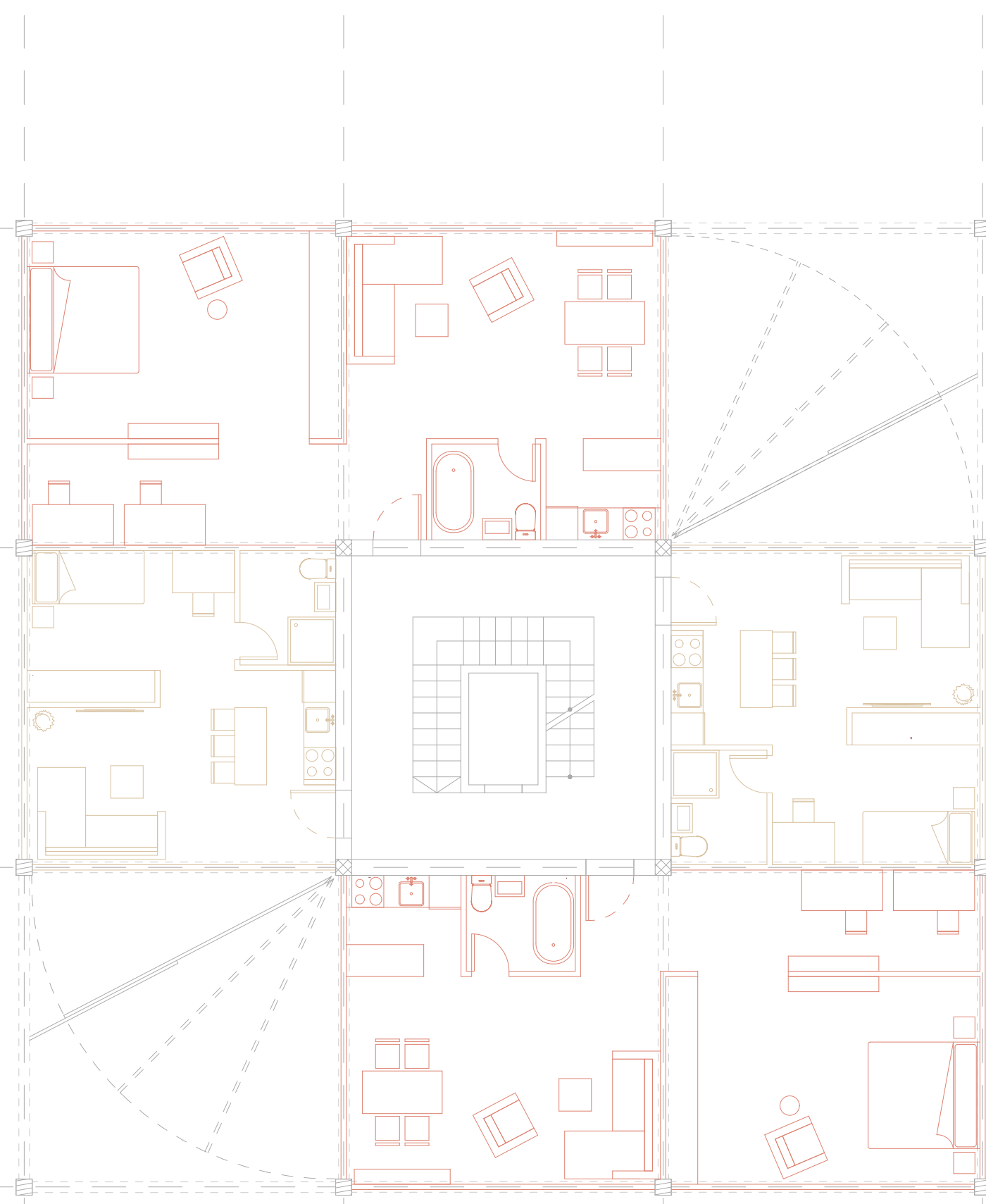
TYPE04  
EXTENDED FAMILY LIVING / 108m<sup>2</sup>



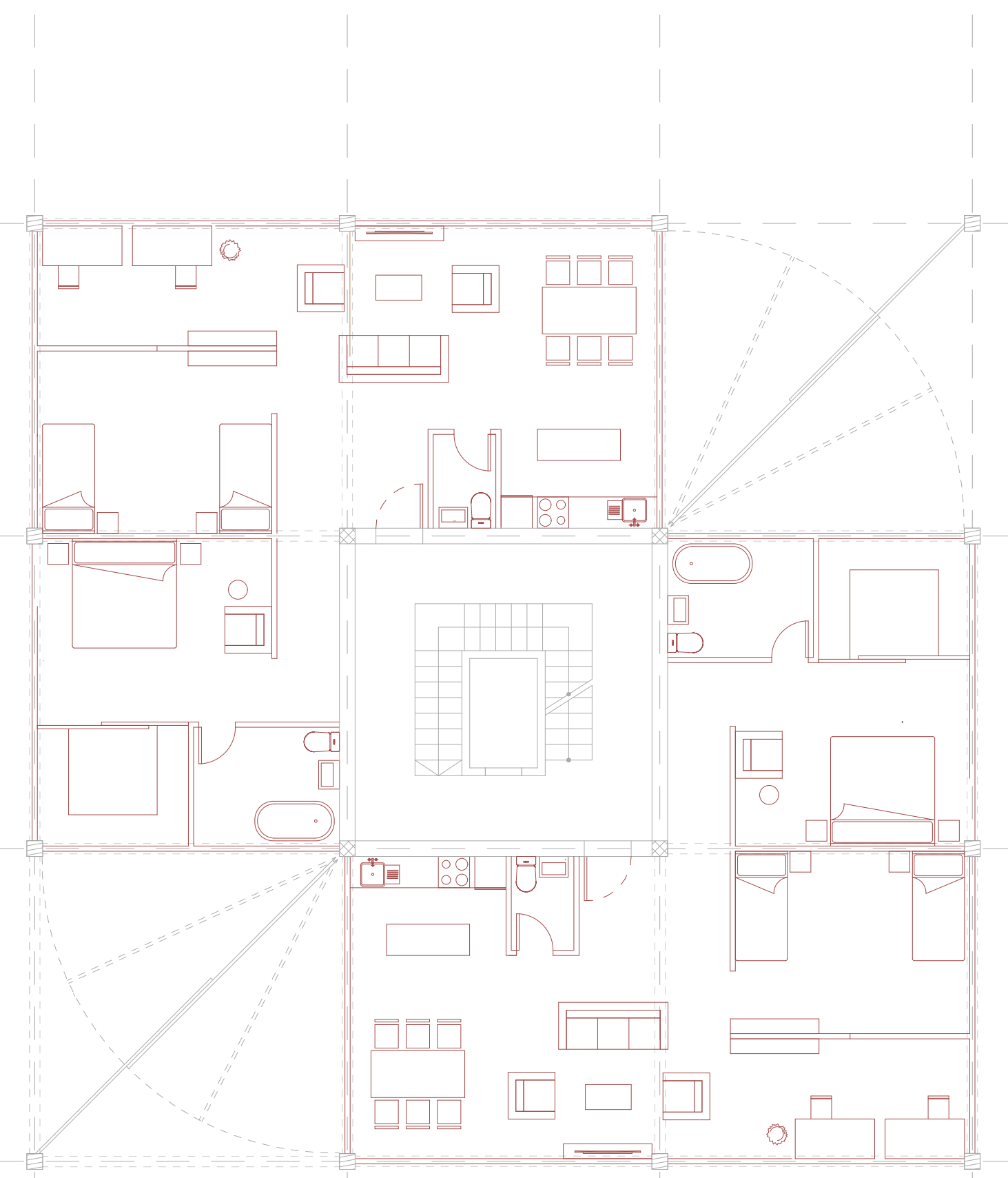
TYPE05  
COMMUNAL LIVING / 144m<sup>2</sup>



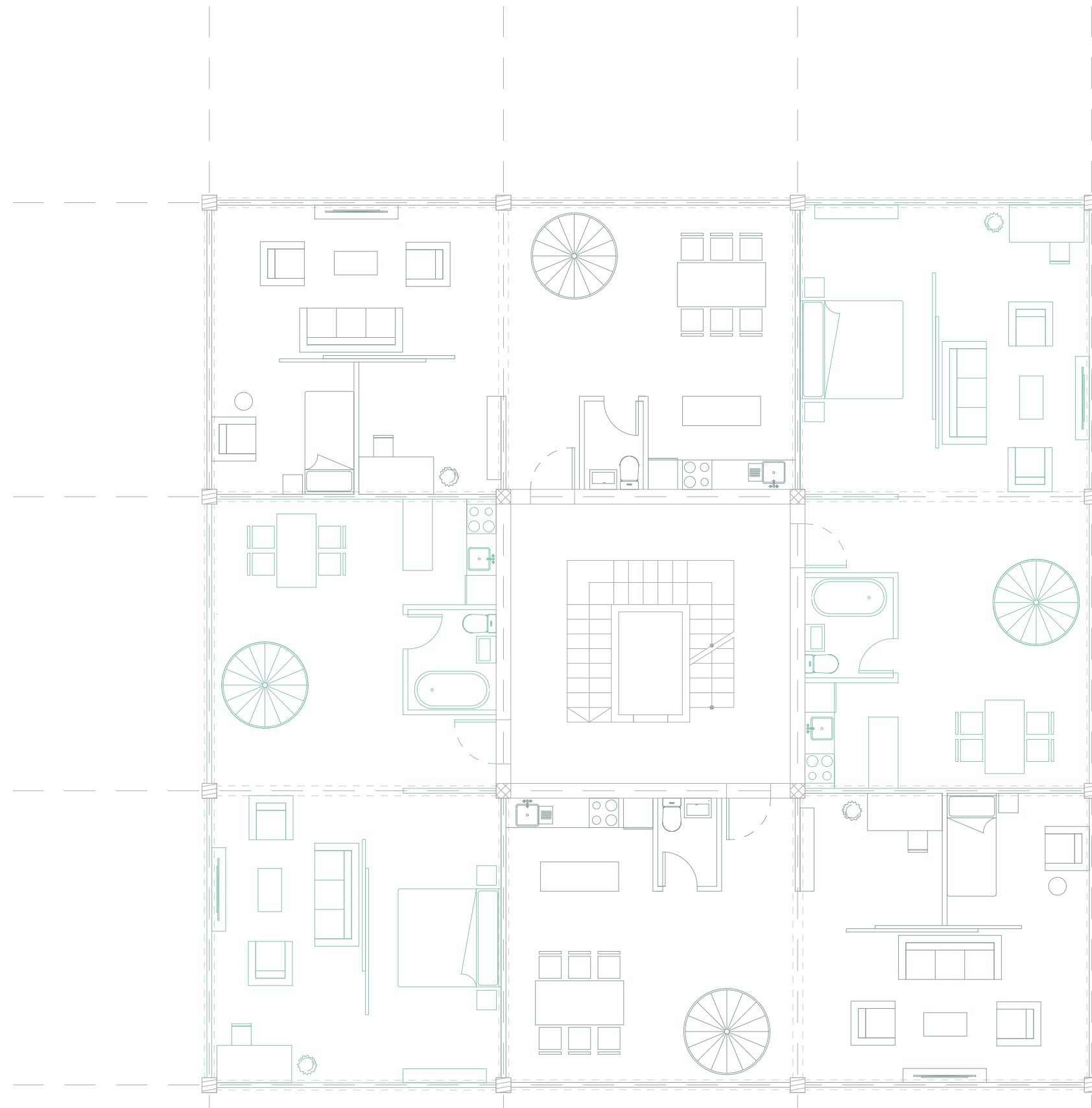
TYPICAL FLOOR PLAN #1



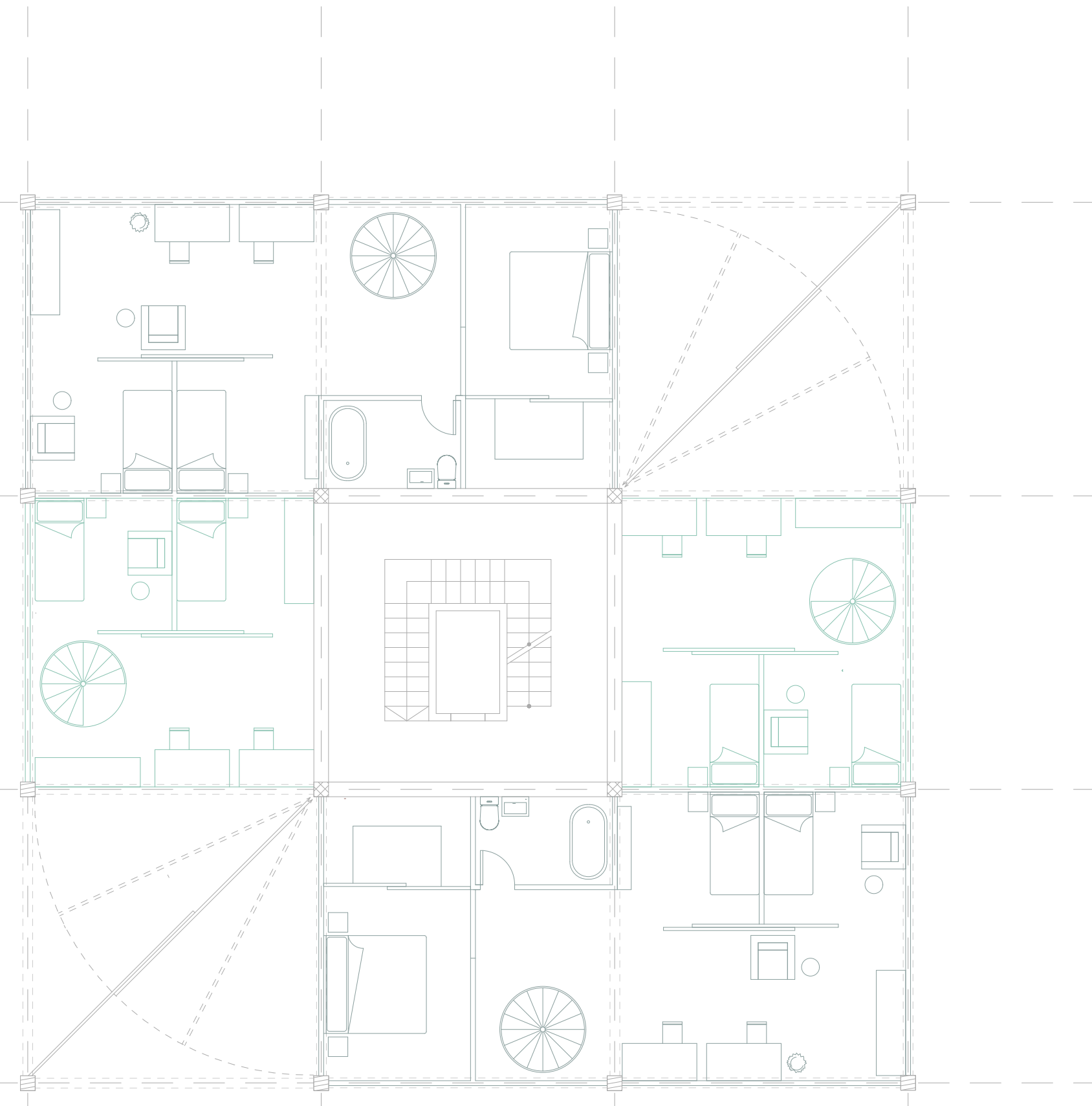
TYPICAL FLOOR PLAN #2



TYPICAL FLOOR PLAN #3



TYPICAL FLOOR PLAN #4



TYPICAL FLOOR PLAN #4 UPPER

# GREEN

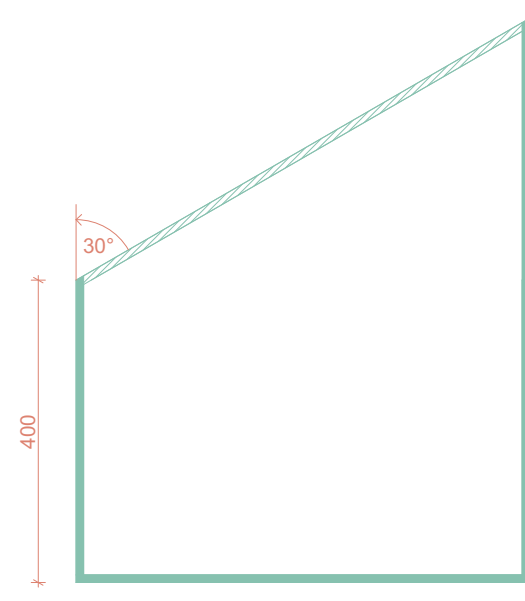
Green space is a big part of this project, the goal was to preserve as much as possible. Along with saving the existing we introduced new types of green space with different functions that will both enrich the project and give more quality of life to residents.

There are five types of proposed green space:

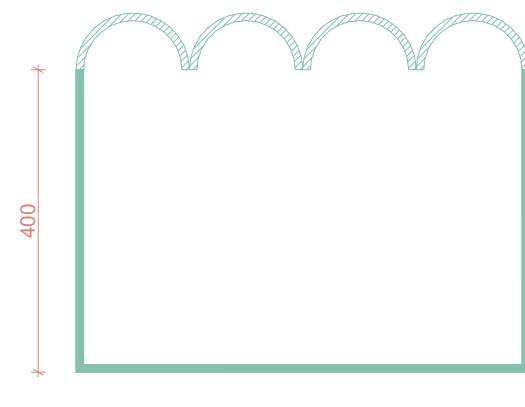
- OPEN GREEN SPACE
- FUNCTIONAL GREEN SPACE
- GREEN HOUSE
- RAIN GARDEN
- URBAN FARMING

Proposed green space can be found in all parts of the site depending on the type we are talking about. Urban farming is located on the south edge of the project acting as a buffer between our community and neighbourhood. Green house and rain gardens are planned along with proposed housing meant for living as green pockets located between for close use.

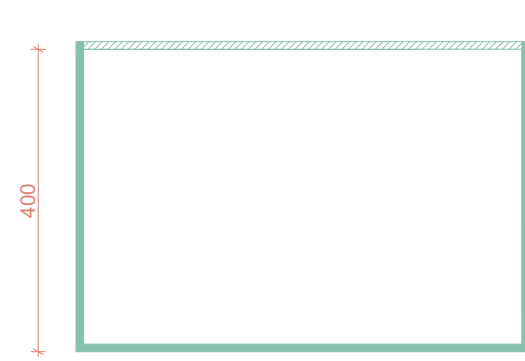
**TYPE01**  
OPTIMAL HEAT  
(direct south sunlight)



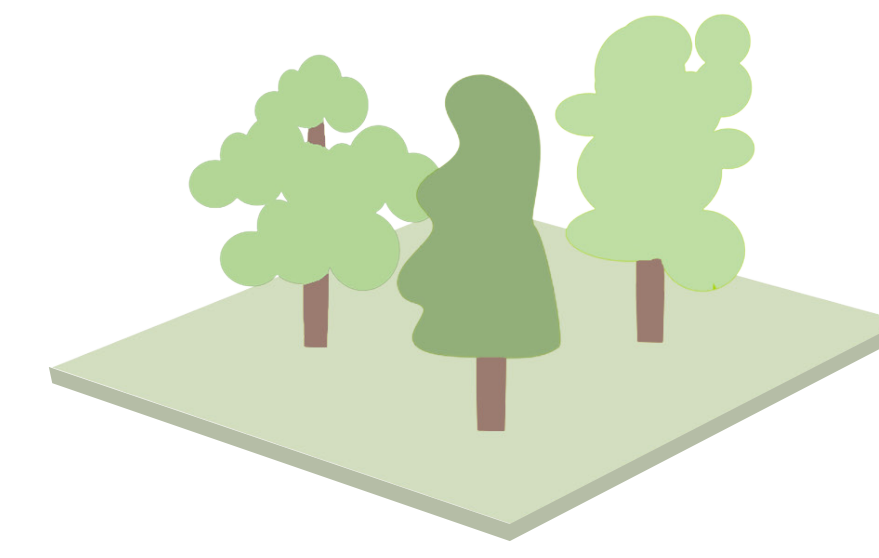
**TYPE02**  
INTENSE HEAT  
(full sunlight)



**TYPE03**  
MODERATED HEAT  
(bright noon sunlight)



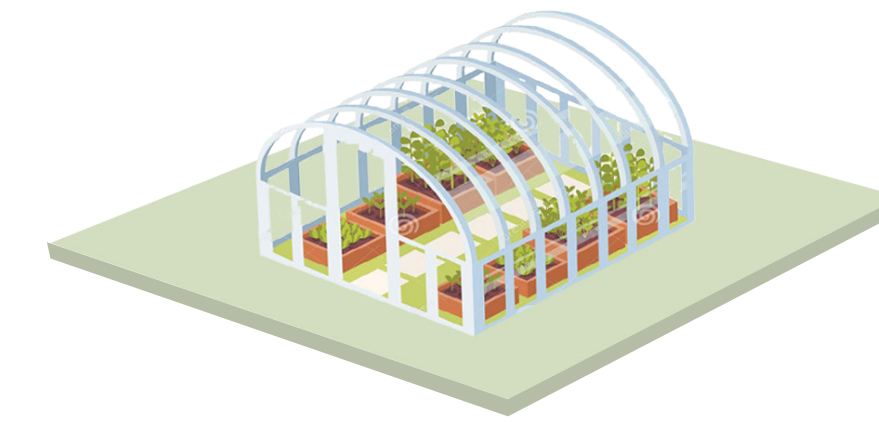
Green house



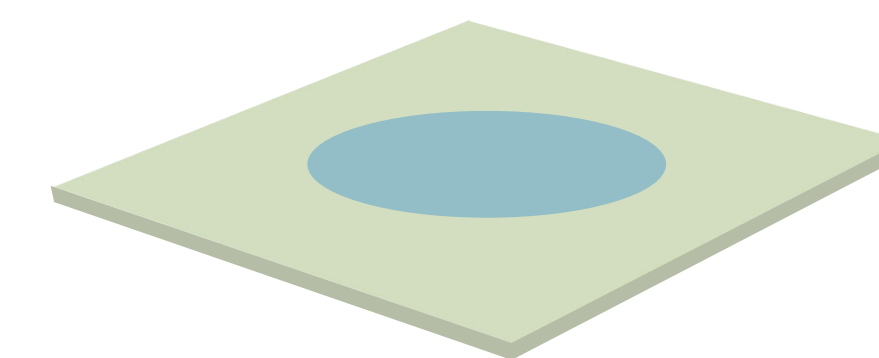
OPEN GREEN SPACE



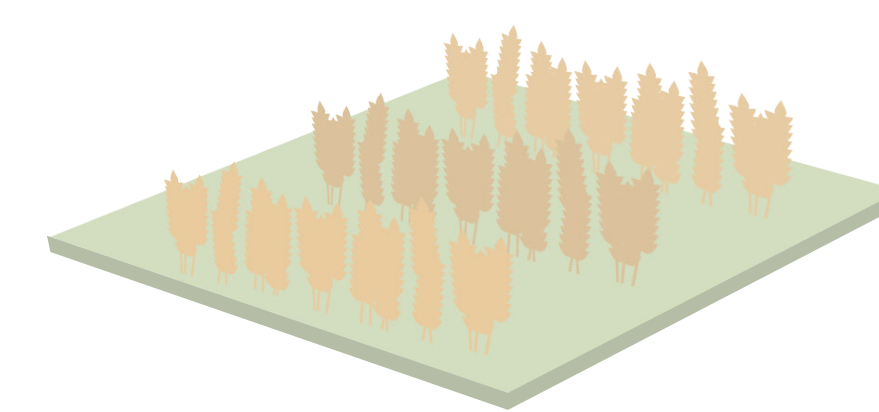
FUNCTIONAL GREEN SPACE



GREEN HOUSE

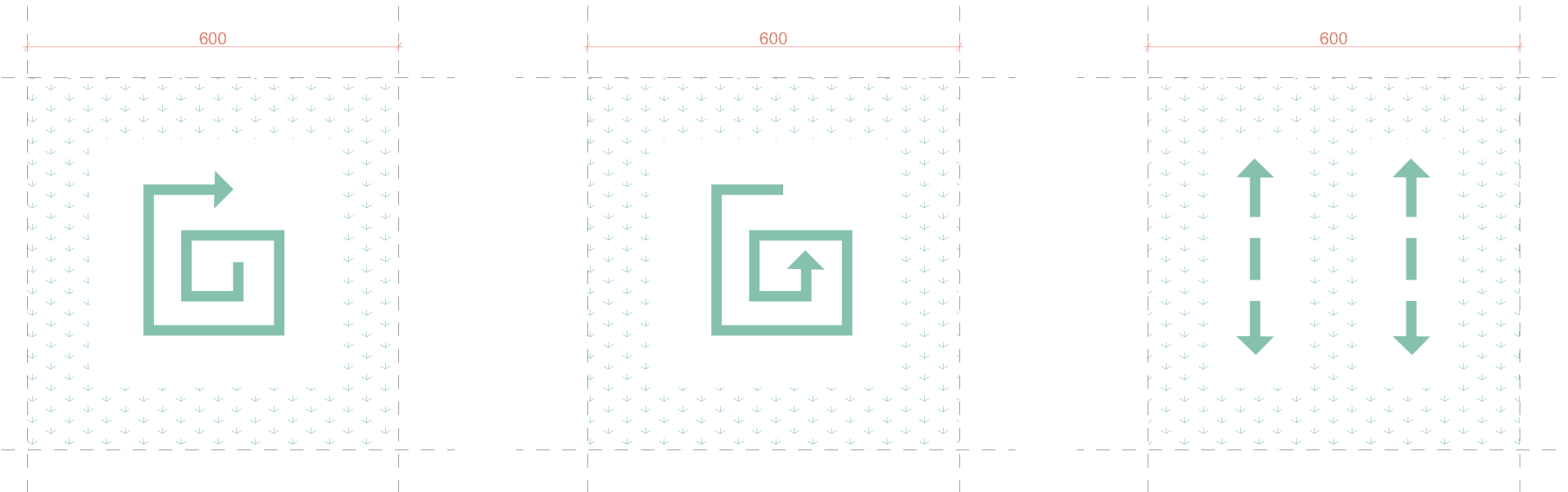


RAIN GARDEN



URBAN FARMING

## Rain garden



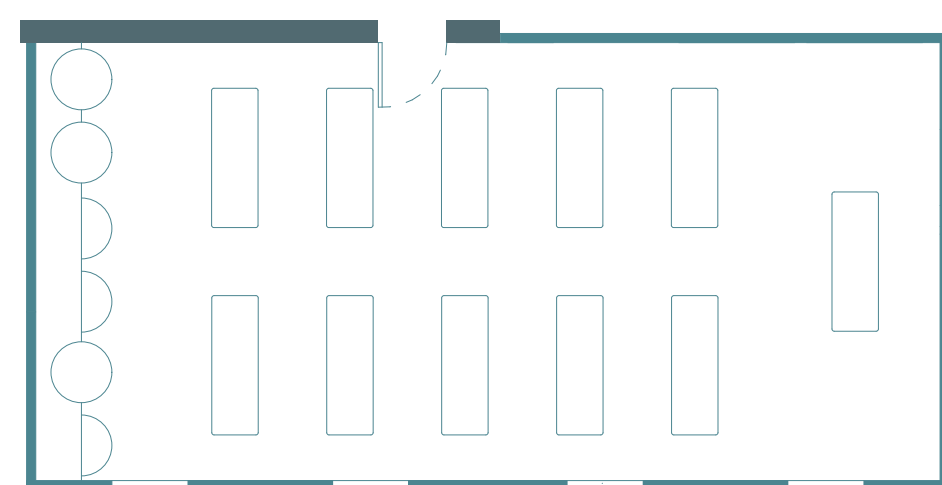
**TYPE01**  
SPIRAL (OUTSIDE)  
start/end water circulation

**TYPE02**  
SPIRAL (INSIDE)  
start/end water circulation

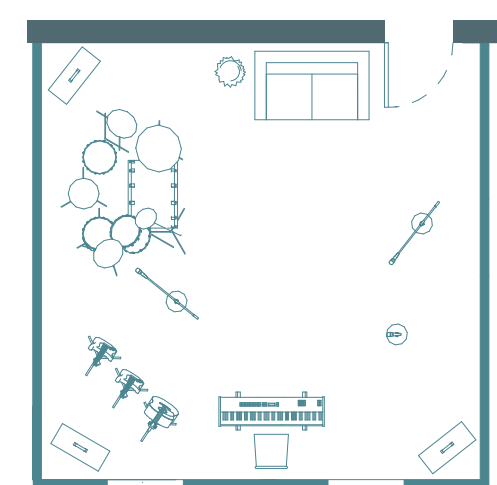
**TYPE03**  
BRIDGE  
start/end water circulation

# COMMERCIAL

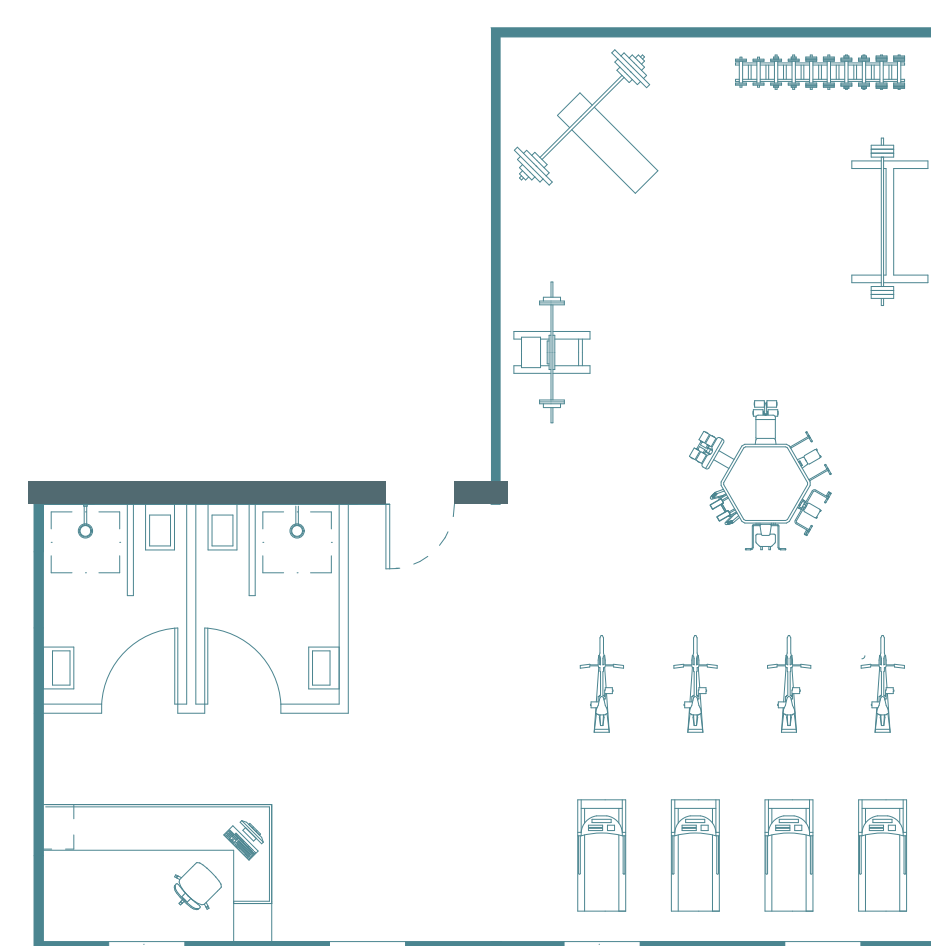
CATALOG OF PROPOSED HOUSING LIVING UNITS



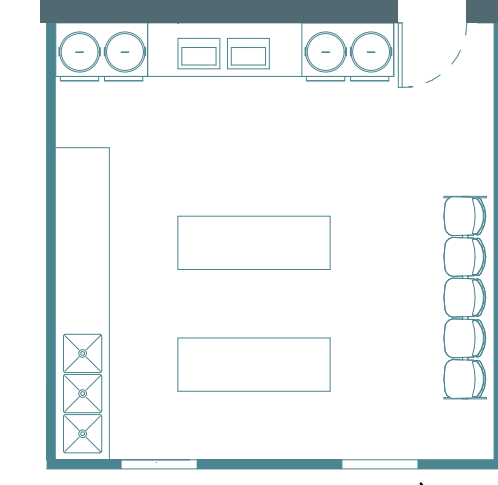
**TYPE01**  
YOGA STUDIO / 72m<sup>2</sup>



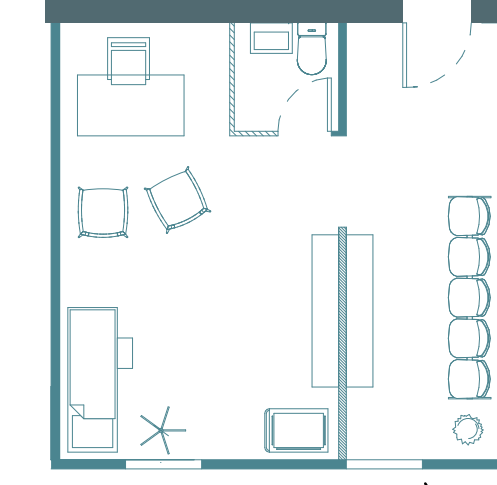
**TYPE02**  
MUSIC ROOM / 36m<sup>2</sup>



**TYPE03**  
GYM / 108m<sup>2</sup>



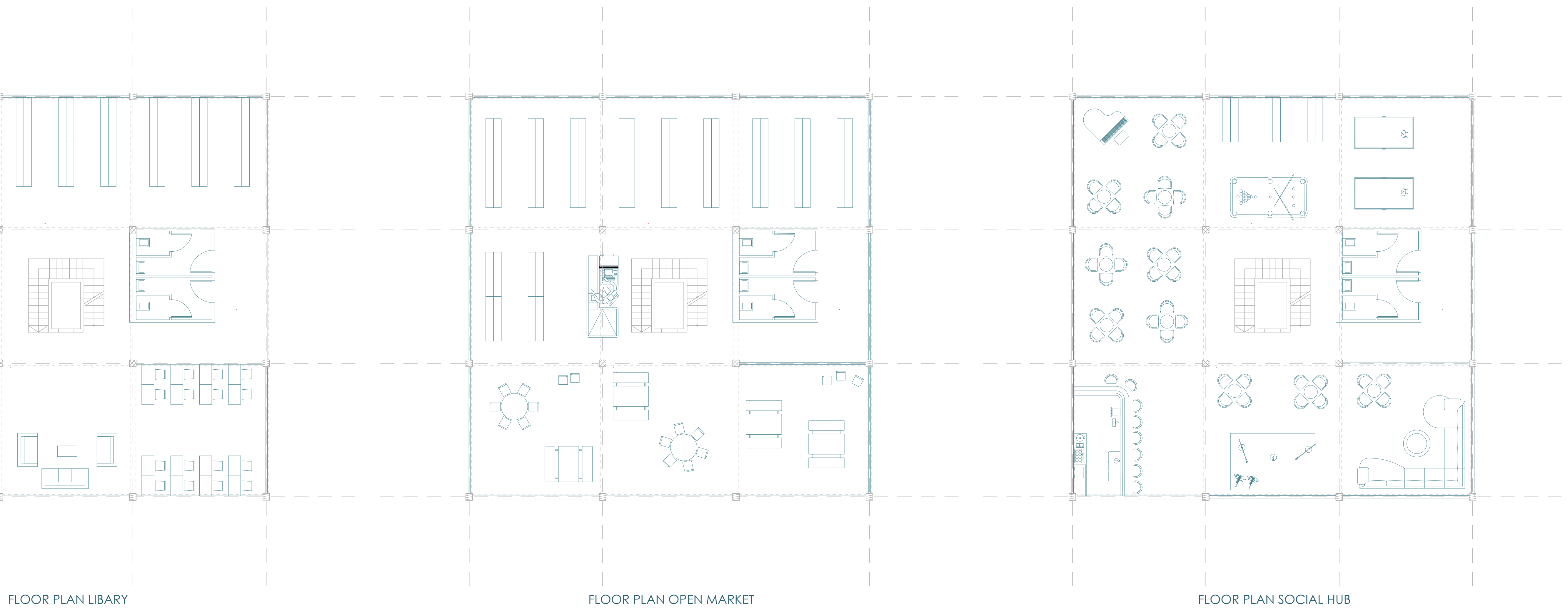
**TYPE04**  
LAUNDRY ROOM / 36m<sup>2</sup>



**TYPE05**  
MEDICAL OFFICE / 36m<sup>2</sup>



**TYPE06**  
NURSERY / 108m<sup>2</sup>

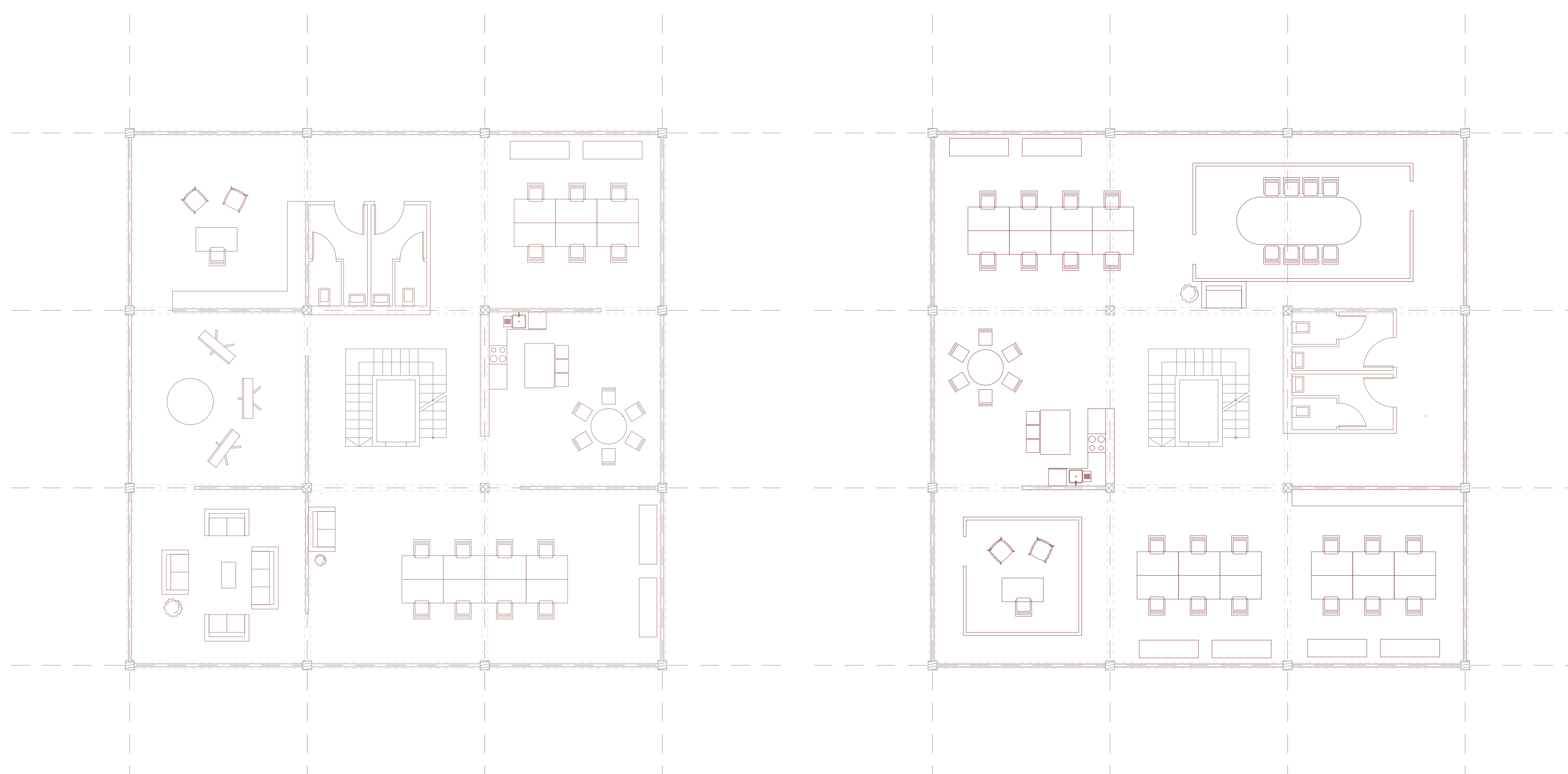


FLOOR PLAN LIBRARY

FLOOR PLAN OPEN MARKET

FLOOR PLAN SOCIAL HUB

WORKING



TYPICAL FLOOR PLAN #1

TYPICAL FLOOR PLAN #2

# Visualisation



Master plan



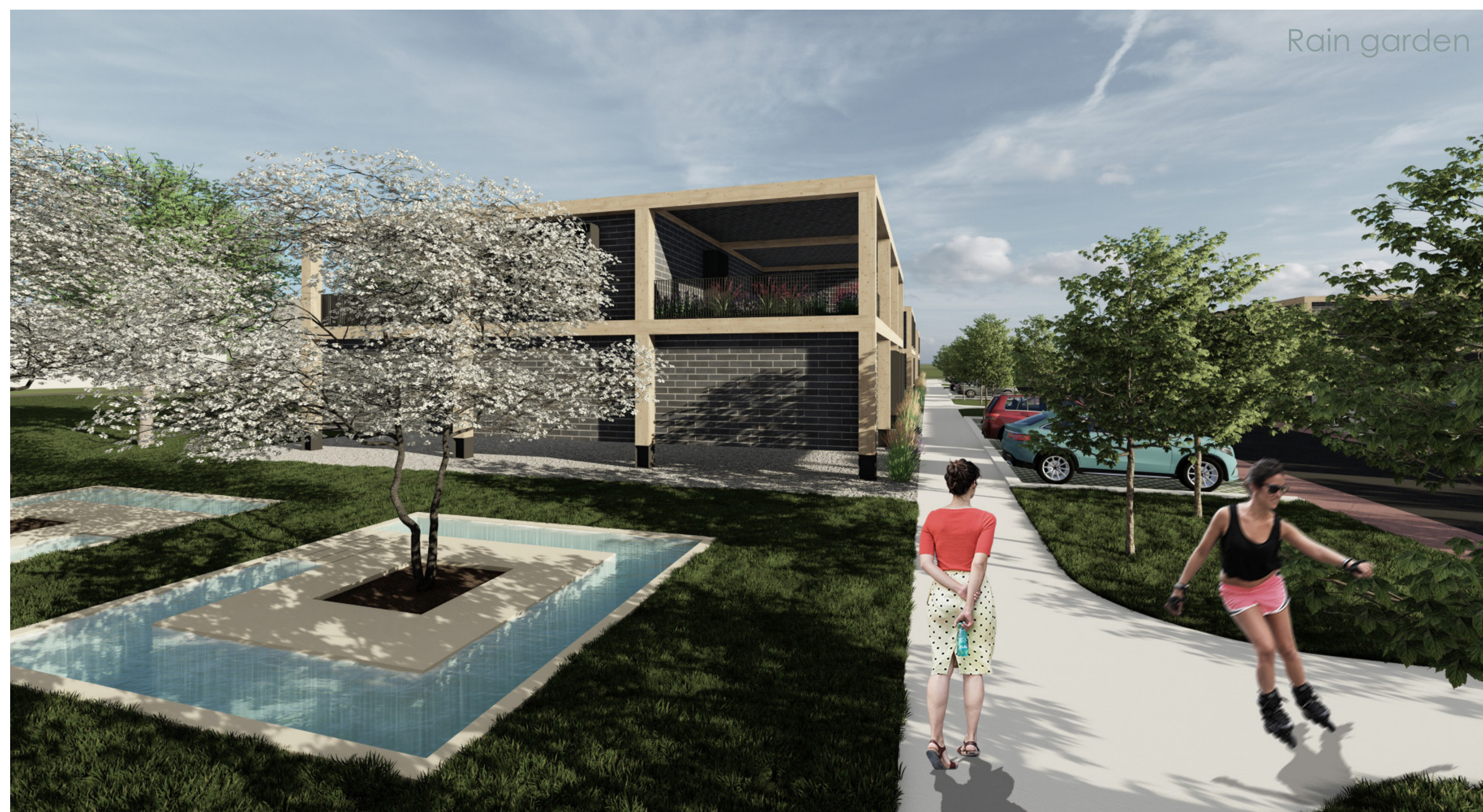
Co-habit



Residence



Green house



Rain garden



Housing with green pockets



Social