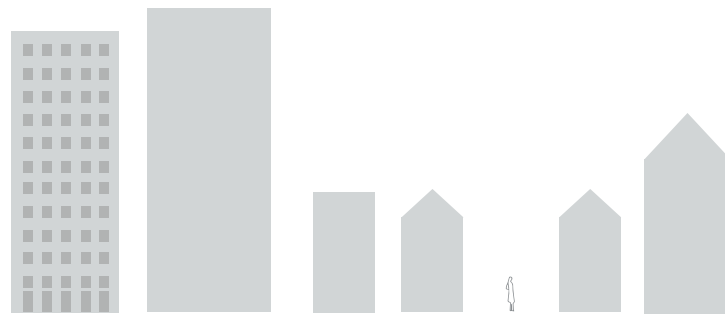


The food producing city of tomorrow

Food production versus city living

De StadsKas



By Lisa Marije de Groene

The food producing city of tomorrow

Examples of urban farming



Space&Matter



Own picture

The Urban Farmers in Den Haag

The food producing city of tomorrow

Examples of urban farming



Own picture



Own picture

Mediametic in Amsterdam

The food producing city of tomorrow

Different project, different intention

Social

The project creates or strengthens communities and social ties

Economics

The project creates jobs and supports local economic activity

Education

The project teaches food skills and promotes awareness about food

Environmental

The activities are sustainable or beneficial to the environment

Health

The project provides affordable, nutritious, fresh and healthy food

Livability

The projects increases the quality of living and life surrounding the project

Key dynamics by Farming the city (Book)

The food producing city of tomorrow

P5 Presentation

Content:

Introduction assignment

1. Why did I chose this topic?

Research

2. What are my intensions with the project?

Project Design

3. How can I achieve these goals by design?

Introduction assignment

1. Why did I chose this topic?

Introduction assignment

"The task in the Dutch Housing Graduation Studio is to design a housing project that fits in a scenario of your own making for the future of Amsterdam.

Behind the brief for an apartment building lie the bigger questions of 'how do we want to live in the future?' and 'what do our cities need?'"

What kind of challenges will cities, in particular Amsterdam, face?

The food producing city of tomorrow

Challenges facing cities

- Growing population 
- Diminished resources 
- Water management 
- Food supply 
- Energy transition 
- Climate change 

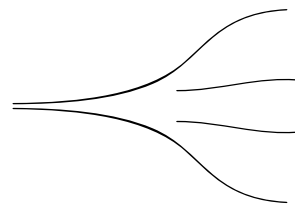
The food producing city of tomorrow

Problems facing cities

I want to focus on the food issue



Food supply



- Energy transition
- Water management
- Diminished resources
- Climate change

The food producing city of tomorrow

What does the food supply challenge mean in the Netherlands?



Own picture

The Netherlands farms food in one the most effecient ways of the world.

The food producing city of tomorrow

Agriculture today in the Netherlands has the following problems:

Land use

The countryside is getting full of industrialized farms, It's no longer a place for nature and leisure but endless agriculture with huge farms.

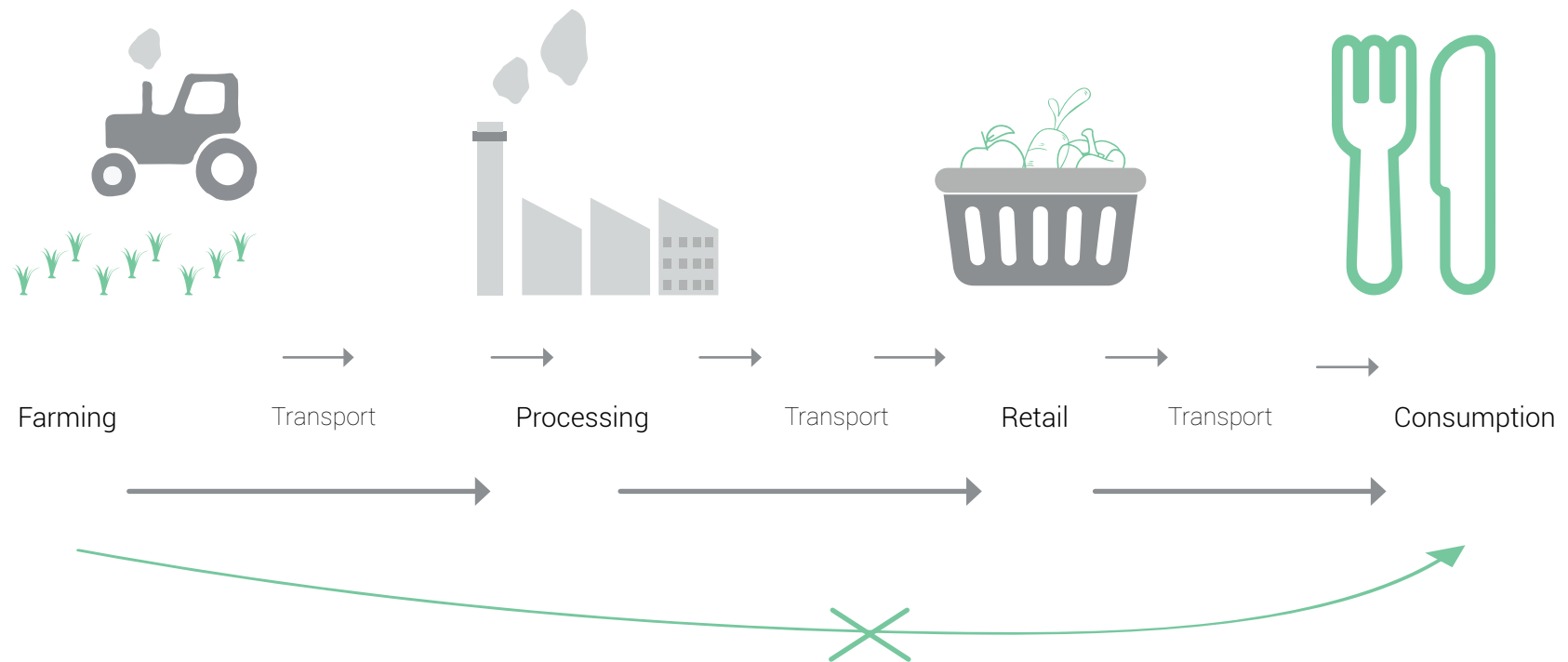


The food producing city of tomorrow

Agriculture today in the Netherlands has the following problems:

Awareness

People are completely separated from the food production which has serious consequences like food waste

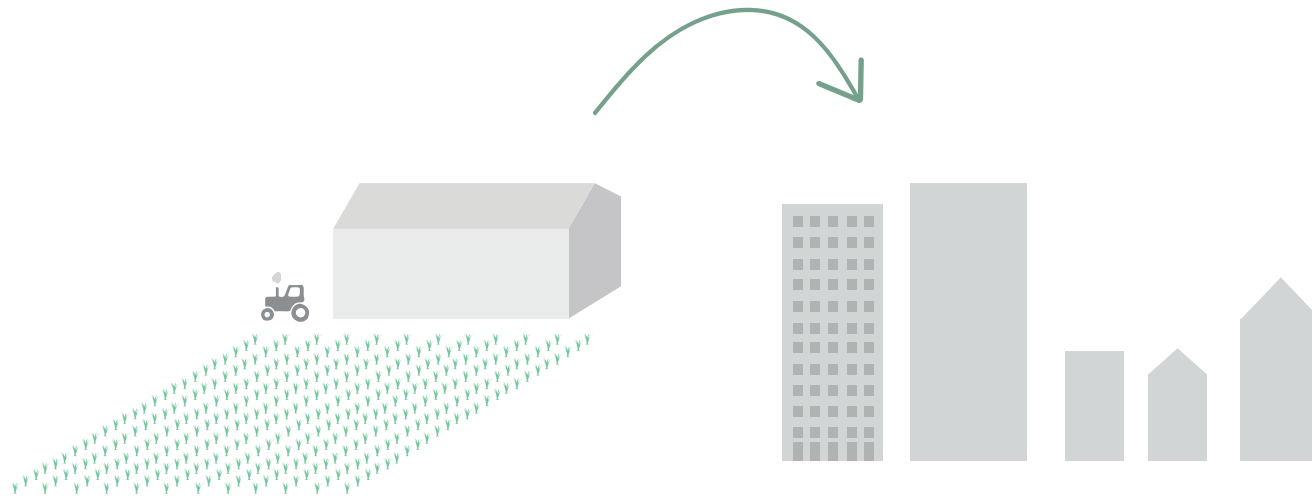


Research

2. **What** are my intensions with the project?

The food producing city of tomorrow

I want to bring this productive green to the city



The big farms will be in a smaller scale distributed over the city.

The food producing city of tomorrow

Research question

Combining the production of food with living in the city



How can food production be used as a tool to design a sustainable, lively and dense city?

The food producing city of tomorrow

The goals of the project

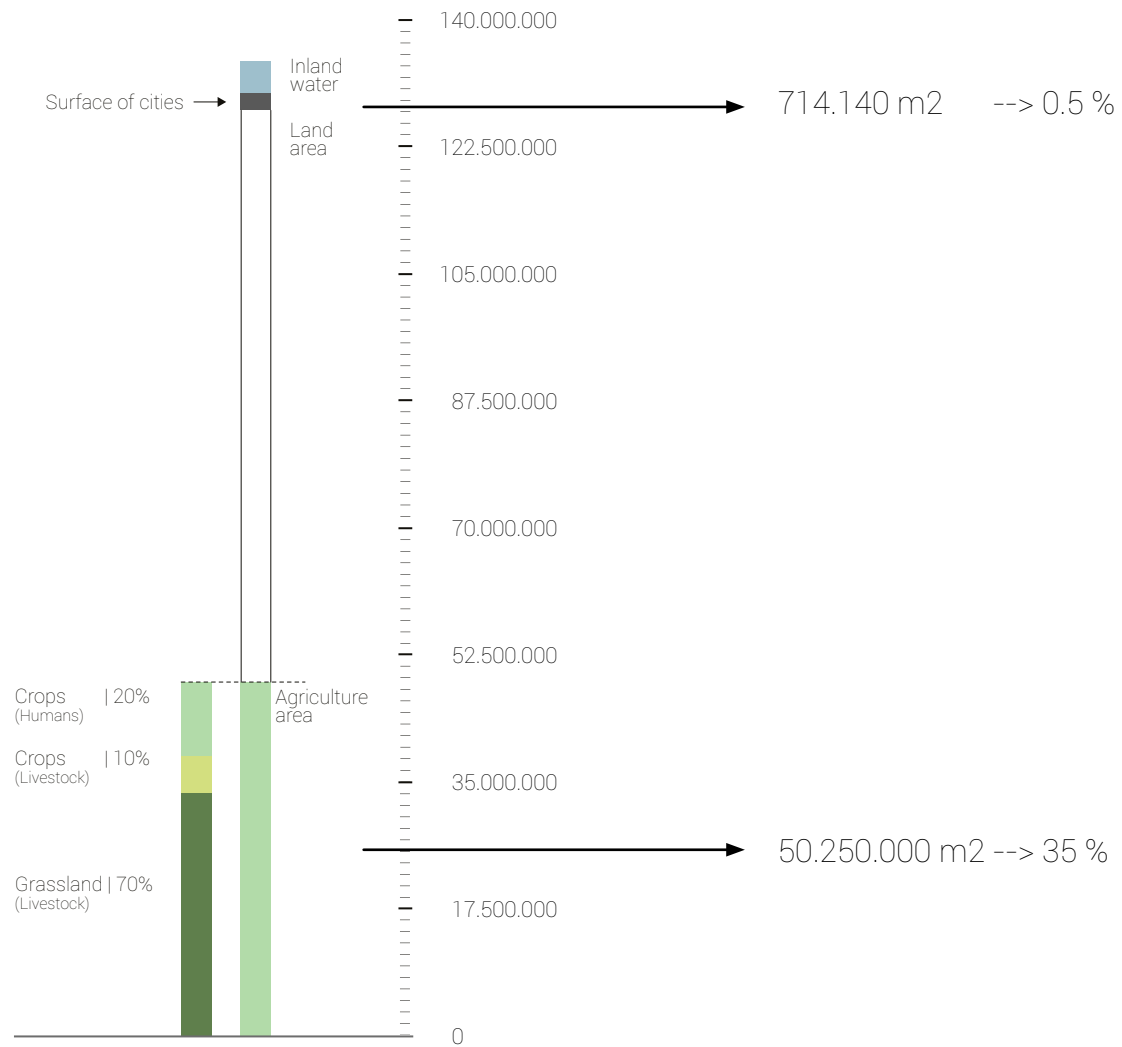
Combining the production of food with living in the city



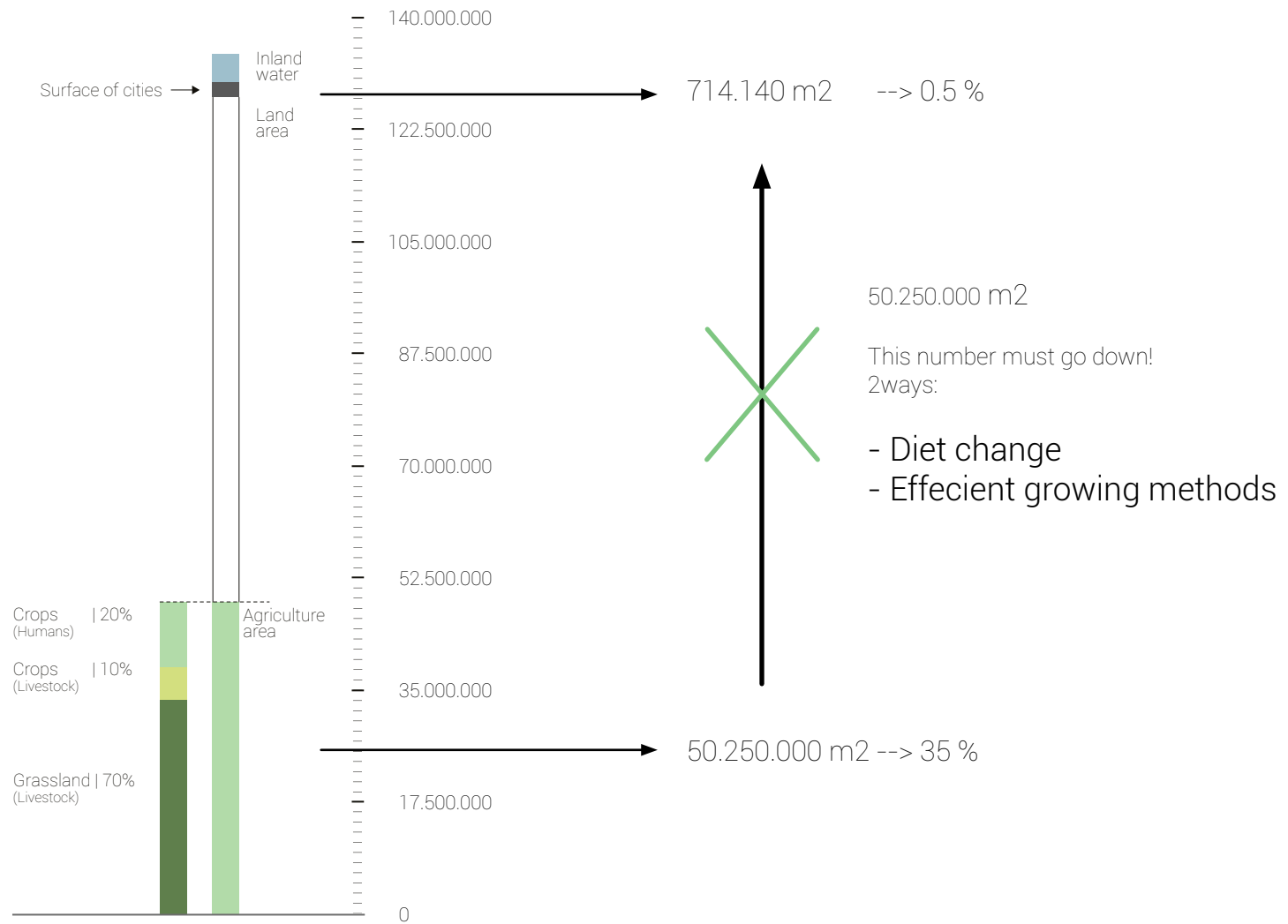
- high density apartment building
- food production to sustain everybody who lives in the building

In order to make it possible that the city of tomorrow will be able to feed it's own citizens

World land use



World land use

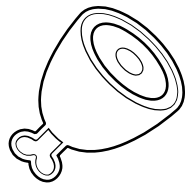


Diet change

Different types, different characteristics

U r b a n t a r i a n i s m

Big hitters:



Meat



Dairy products



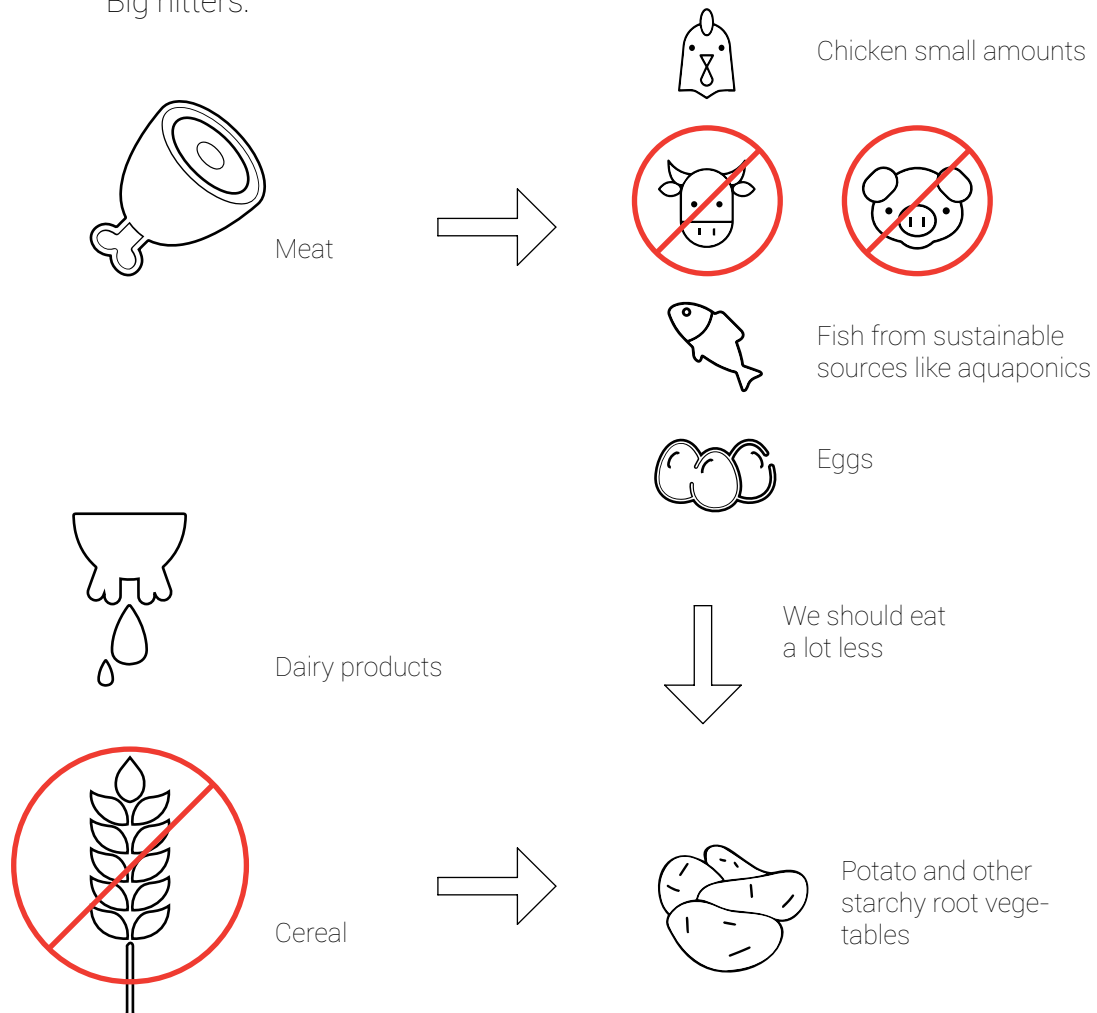
Cereal

Diet change

Different types, different characteristics

Urbantarianism

Big hitters:



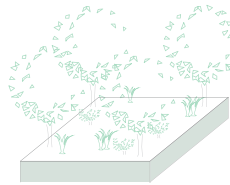
Growing methods

Different types, different characteristics

City garden

It's one of the most common forms of urban agriculture projects you see around Amsterdam.

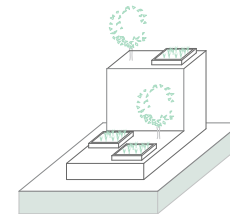
Social	++	--> City residents
Environmental	+	
Economic	-	
Efficiency	-	



Roof garden

This is open air, soil based garden on roofs or balconies.

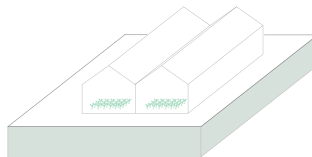
Social	++	--> Building residents
Environmental	+	
Economic	+	
Efficiency	-	



Greenhouse

Food is most efficiently grown in a green house. The Netherlands have become the forerunner in this innovative technique.

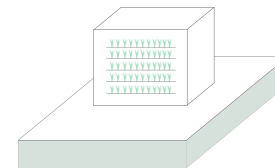
Social	-	--> Vary from -- to ++
Environmental	+	
Economic	+	
Efficiency	++	



Vertical farming

It's the most recent development in urban farming. It is the stacking of food production in a highly technical environment.

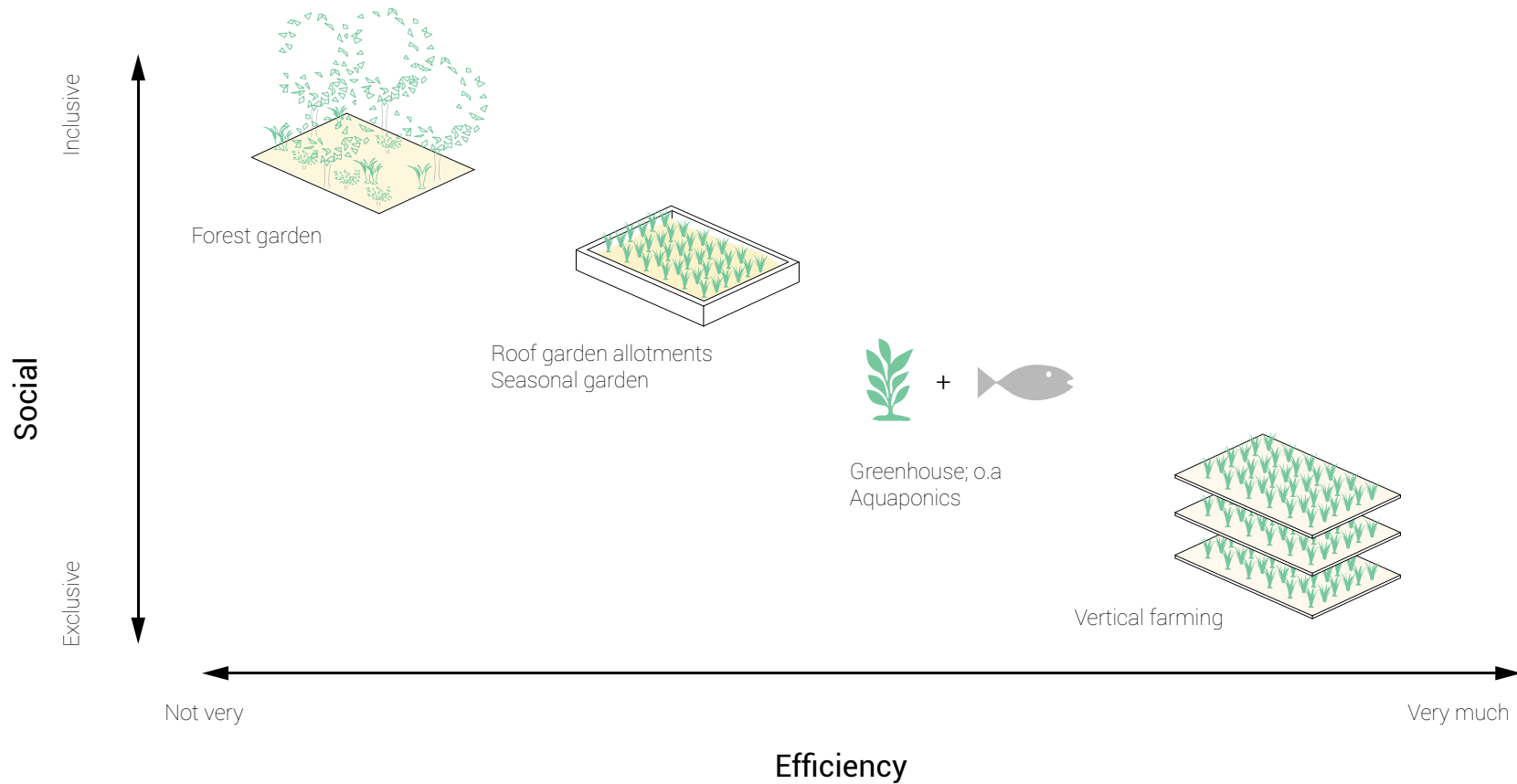
Social	-	
Environmental	-	
Economic	-	
Efficiency	++	



Growing methods

Different types, different characteristics

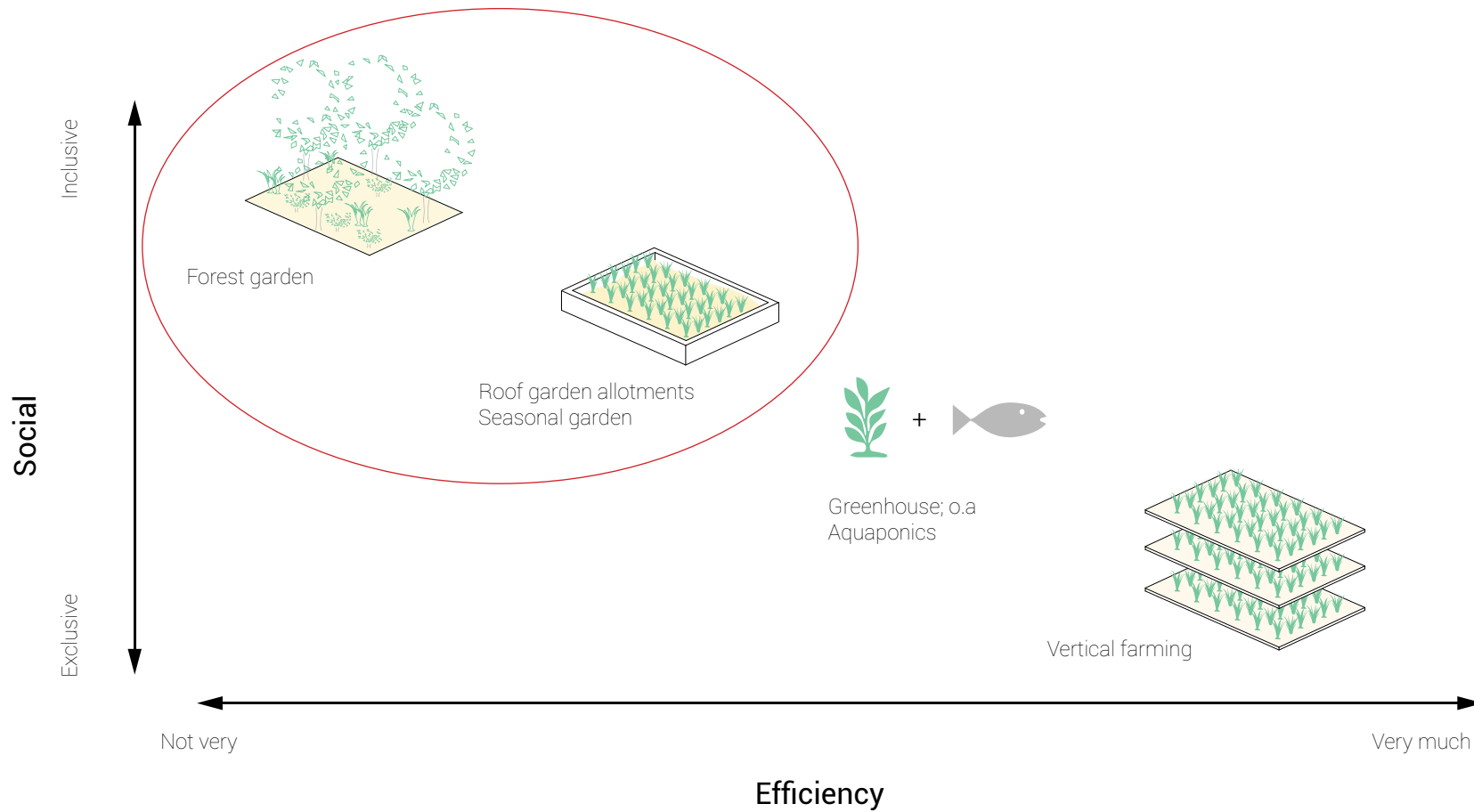
Case studies: Social or Efficient



Growing methods

Different types, different characteristics

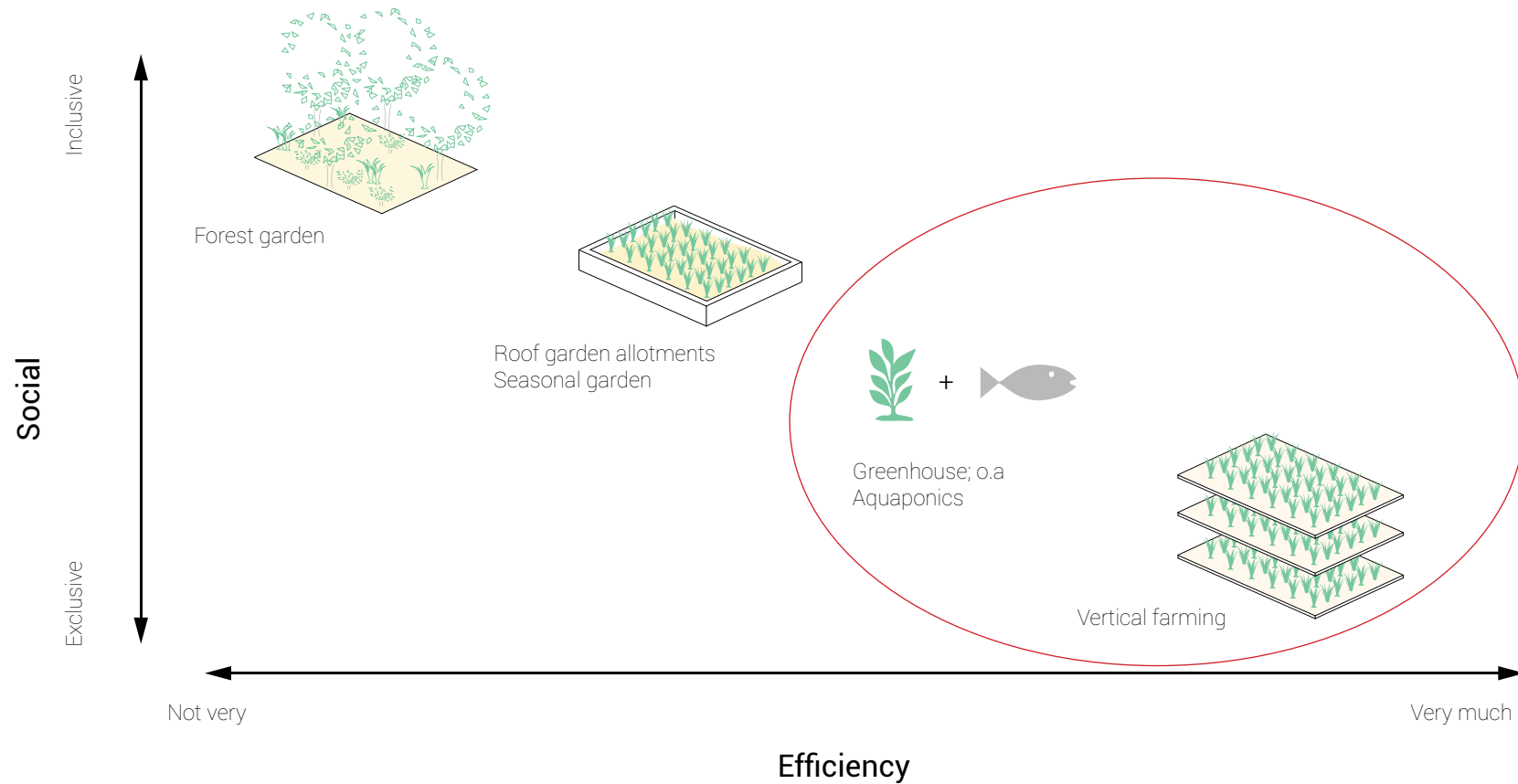
Case studies: Social or Efficient



Growing methods

Different types, different characteristics

Case studies: Social or Efficient



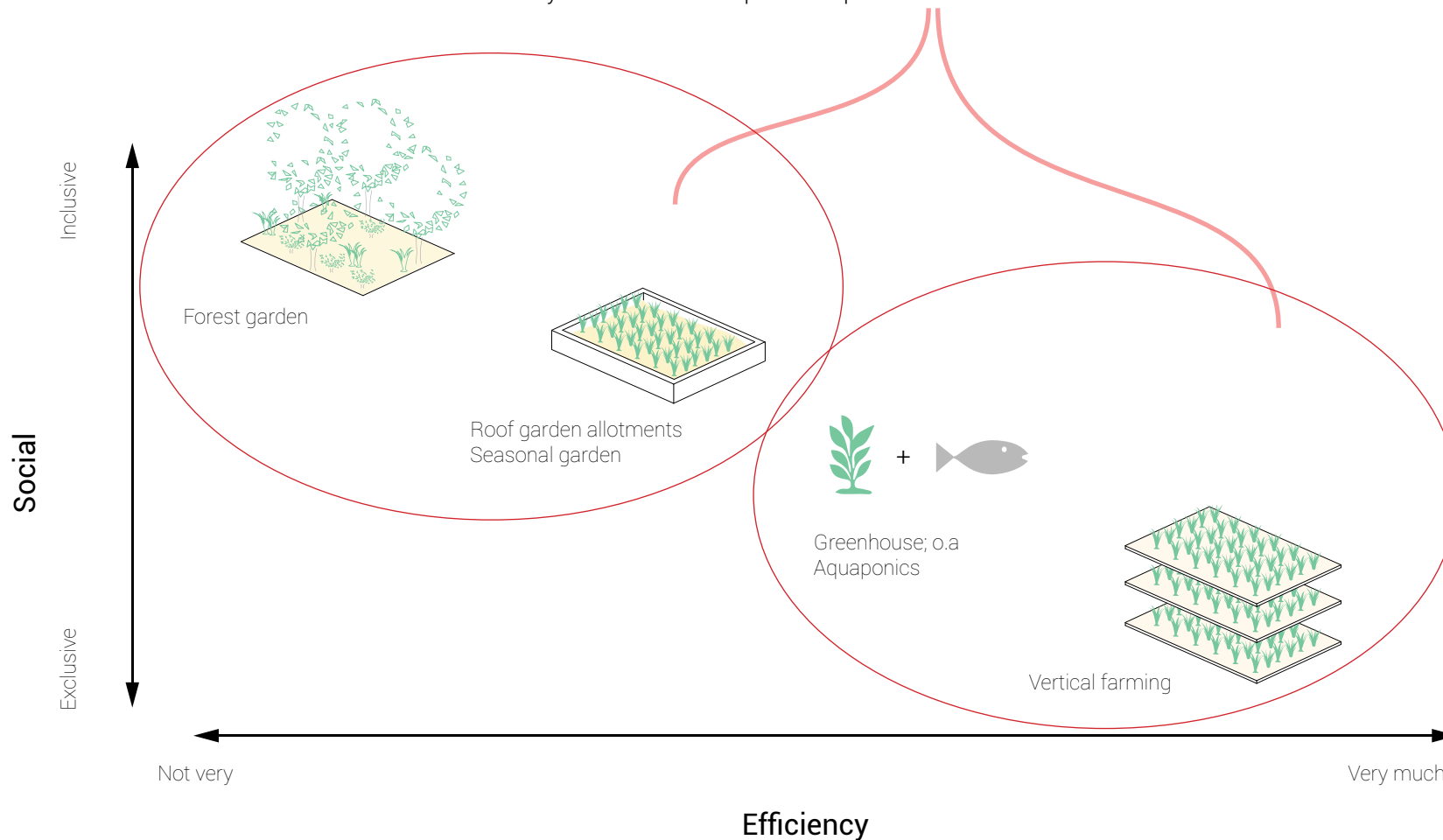
Growing methods

Different types, different characteristics

In my project I want to do both

For urban food production to become a part of the solution to the global food crisis it is necessary to combine efficiency with integration in the urban environment.

- Raise awareness so people change their diets
- Grow more efficiently so we need less space and pollute less



Prototype

Different types, different characteristics

Model



Project Design

3.How can I achieve these goals by design?

De StadsKas

Location

Pilot project



De StadsKas

Location

The belt;
Border between
the city centre and
the outskirts

Pilot project



De StadsKas

Location

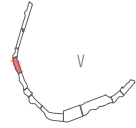
The Groenmarktkade buurt

Pilot project



De StadsKas

De Appeltjesmarkt

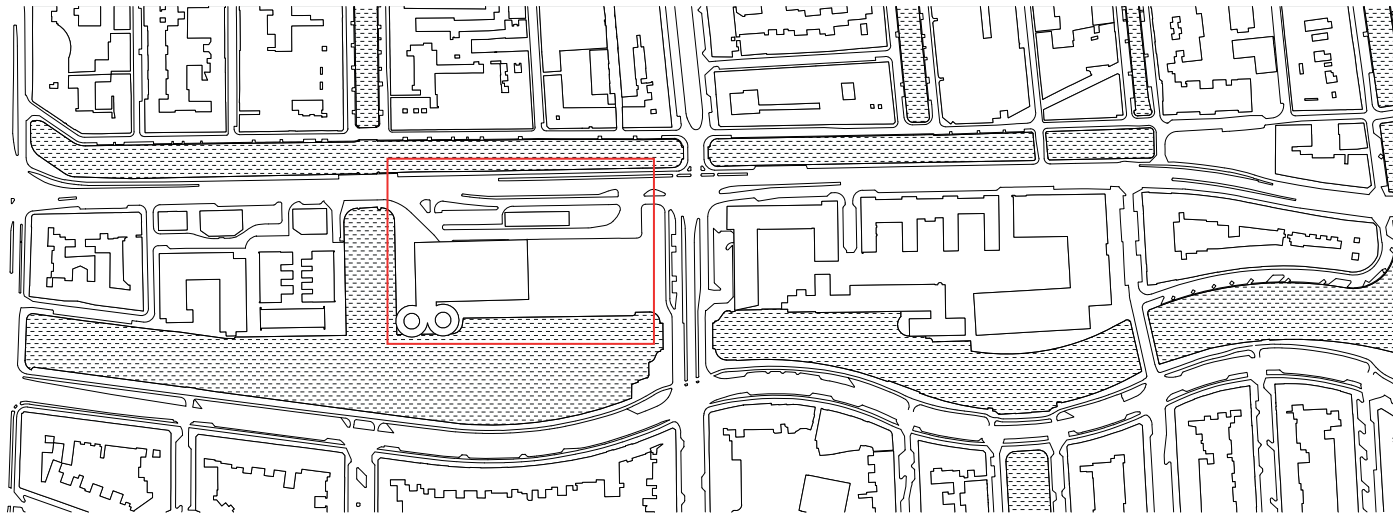


GROENMARKTKAEBUURT
THE LEAST DENSE AREA

DENSITY 5.477 PEOPLE/KM²

PRIVATE HOUSING (RENT 49%, OWNER OCCUPIED 28%)

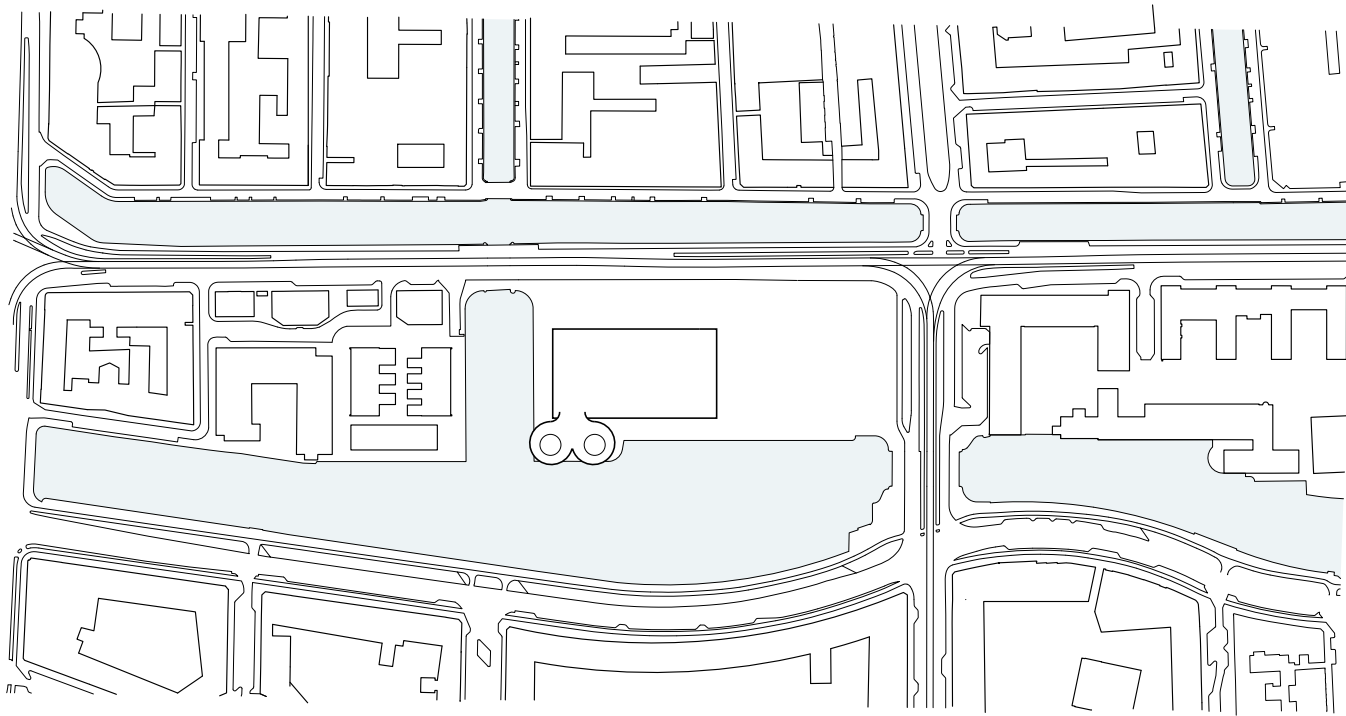
SOCIAL HOUSING 23%



De StadsKas

Site analysis

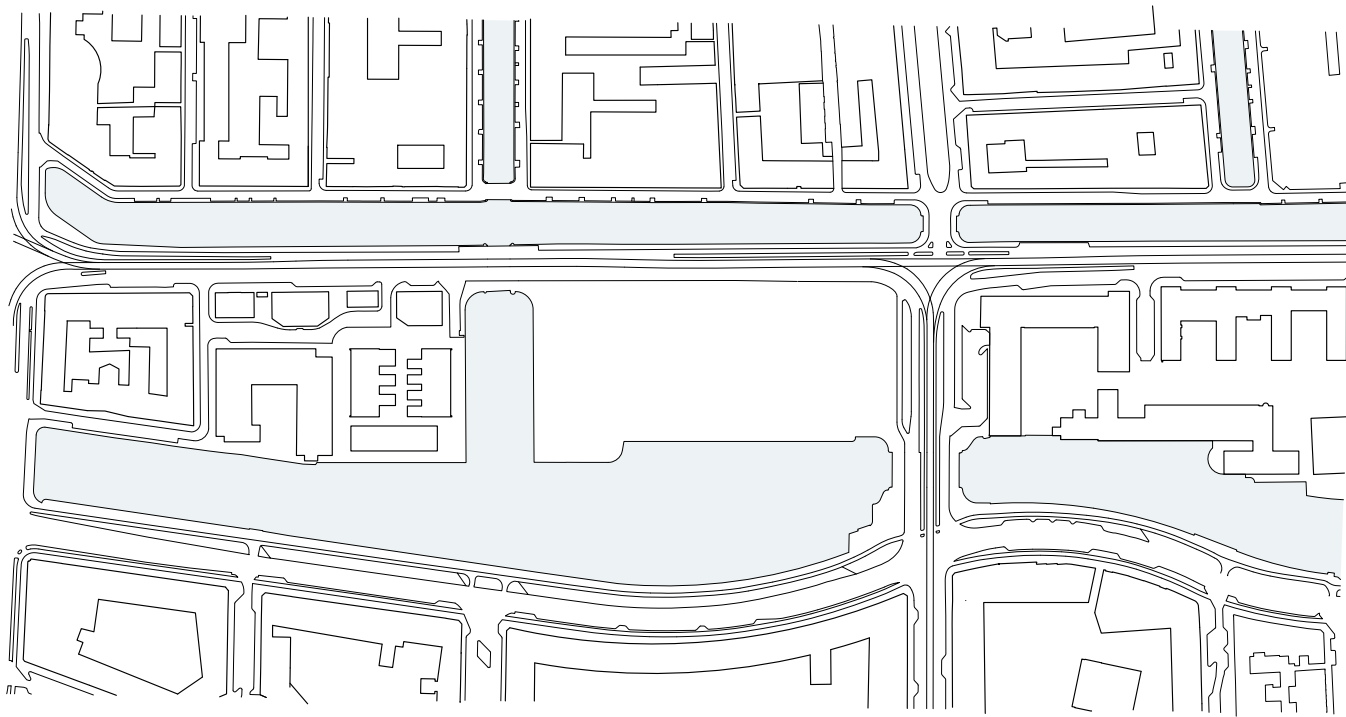
The plot



De StadsKas

Site analysis

The plot

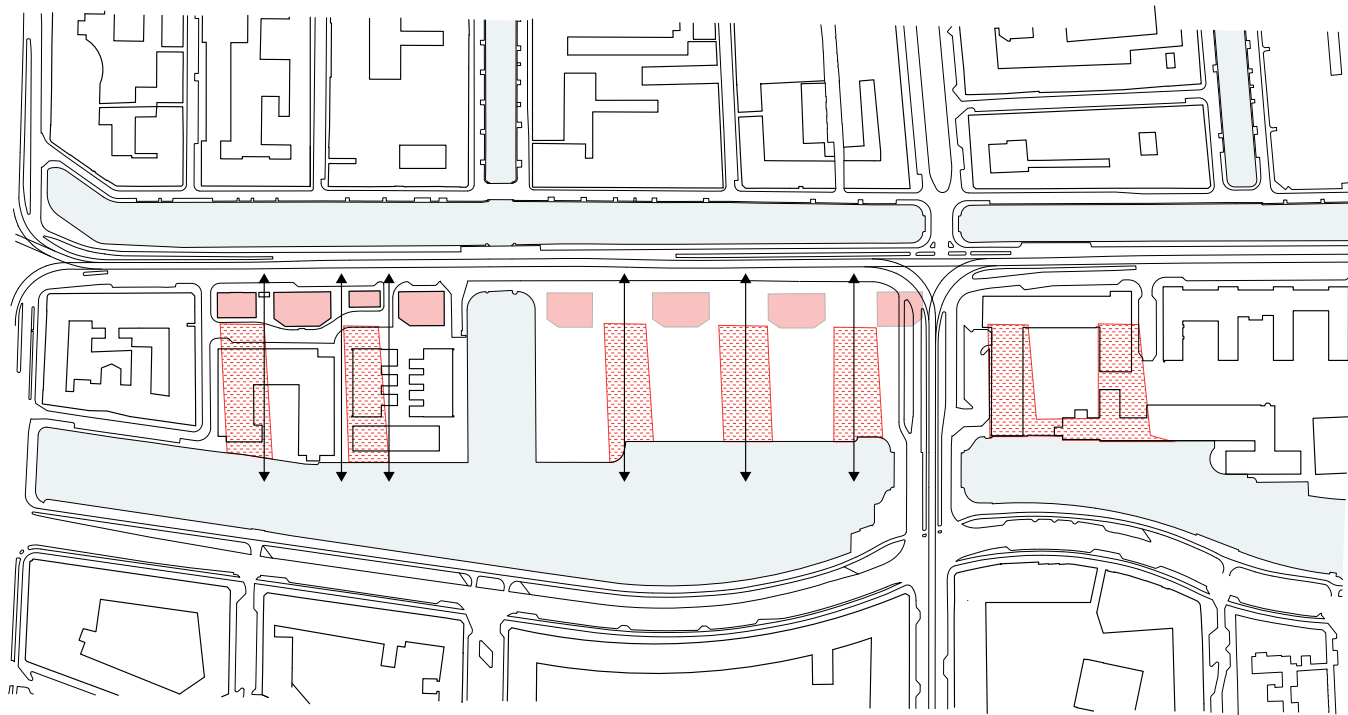


- The function doesn't fit the sustainable future this project envisions
- The project is going to be an example project, therefore its better if the design can be reproduced.

De StadsKas

Site analysis

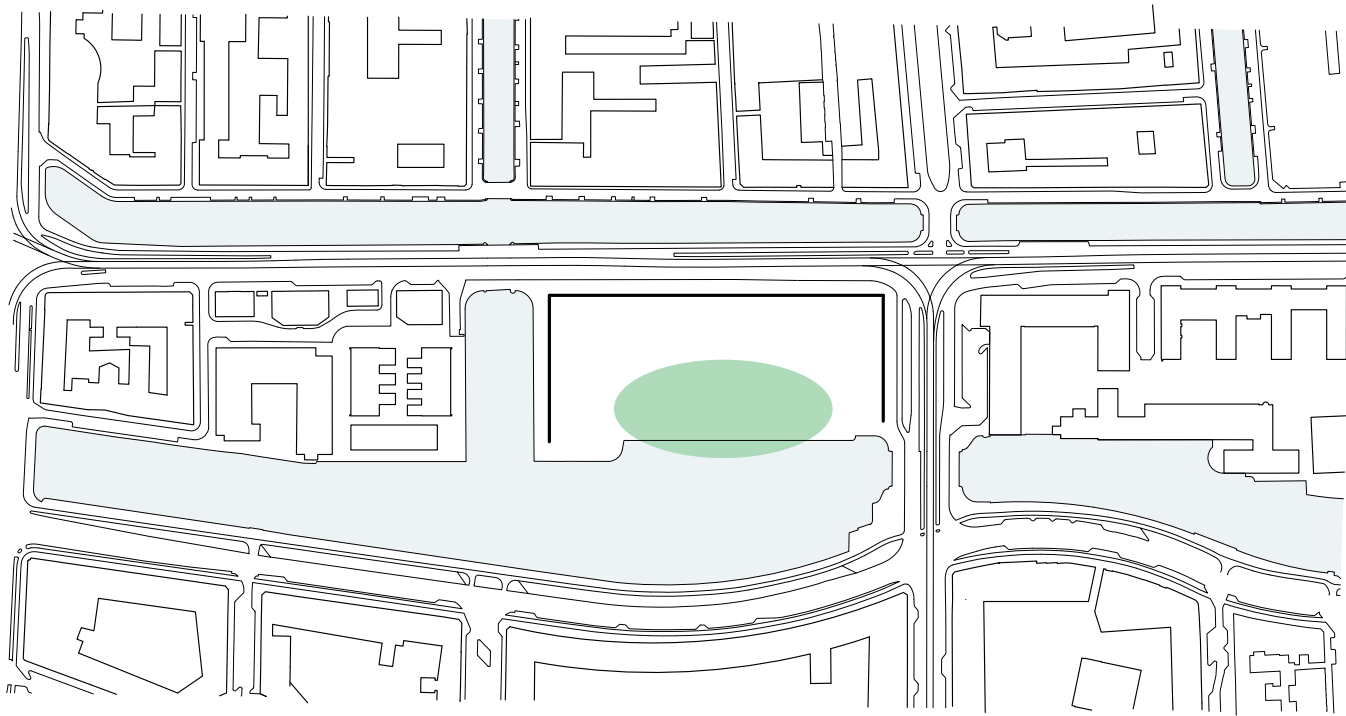
History



De StadsKas

Site analysis

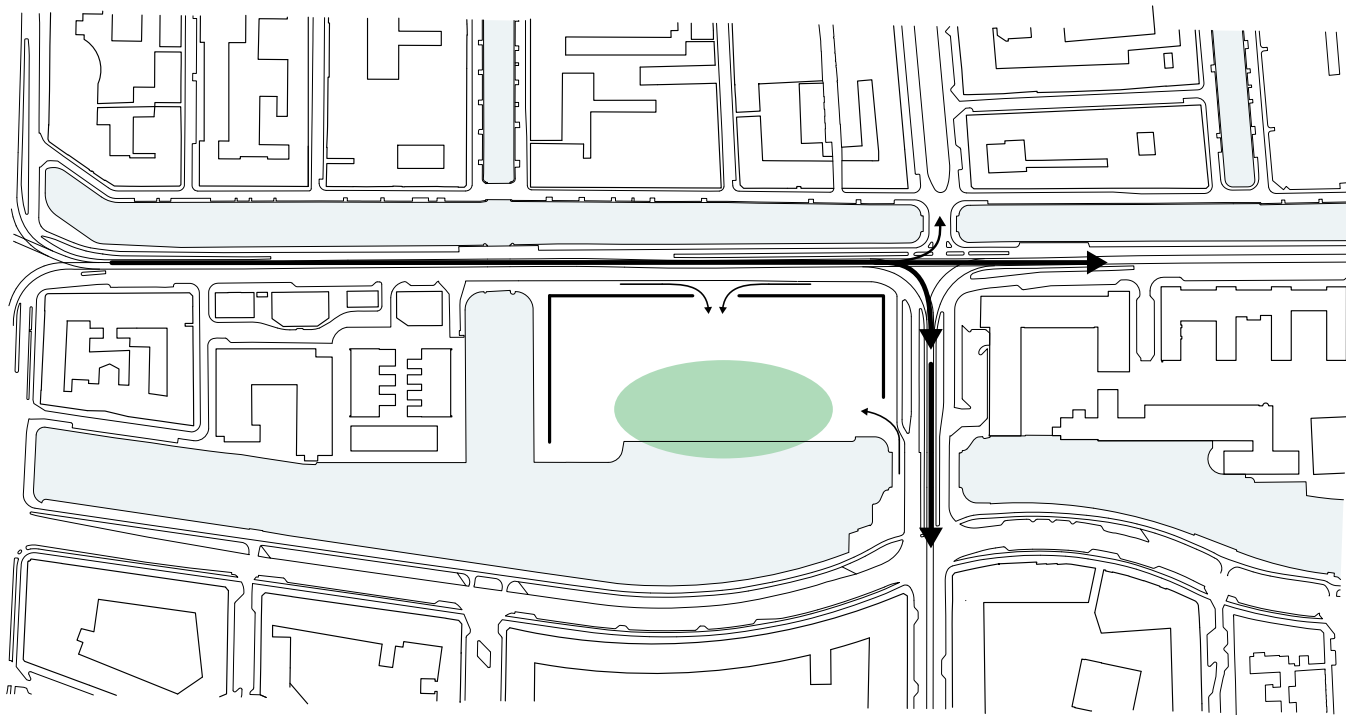
Citypark



De StadsKas

Site analysis

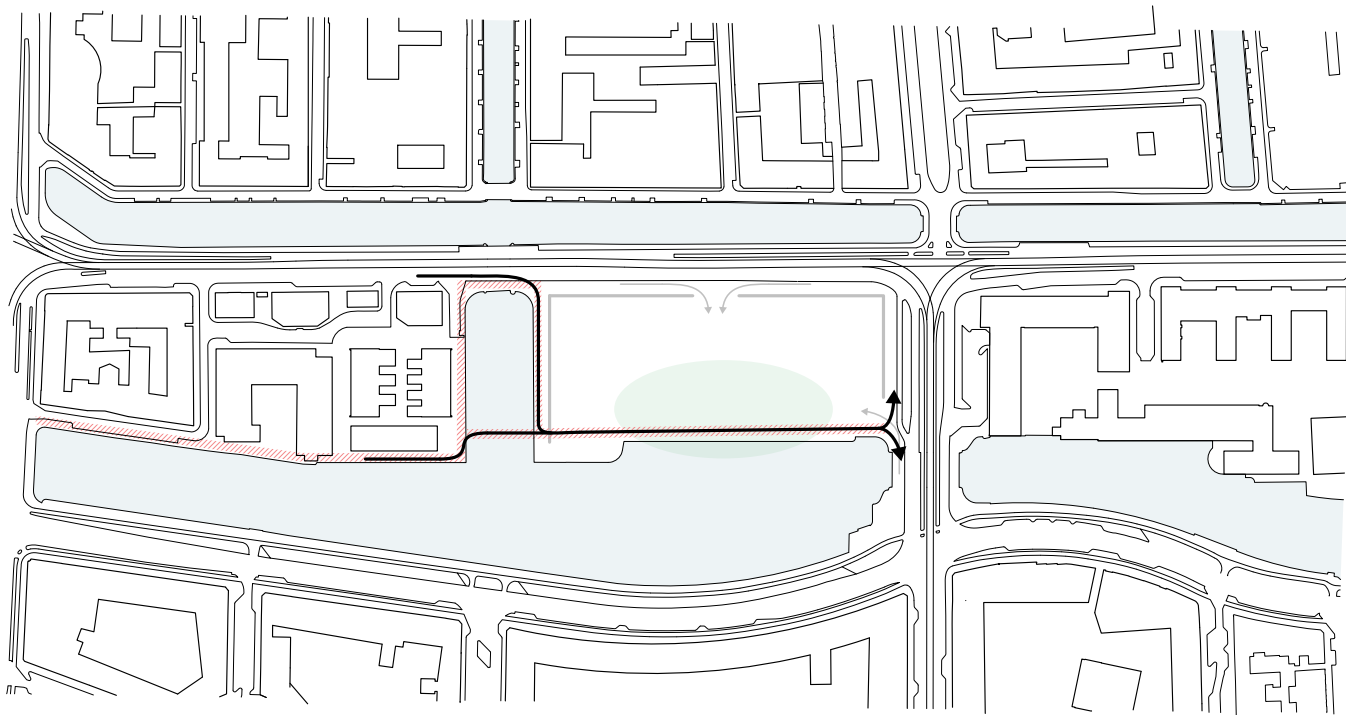
Citypark



De StadsKas

Site analysis

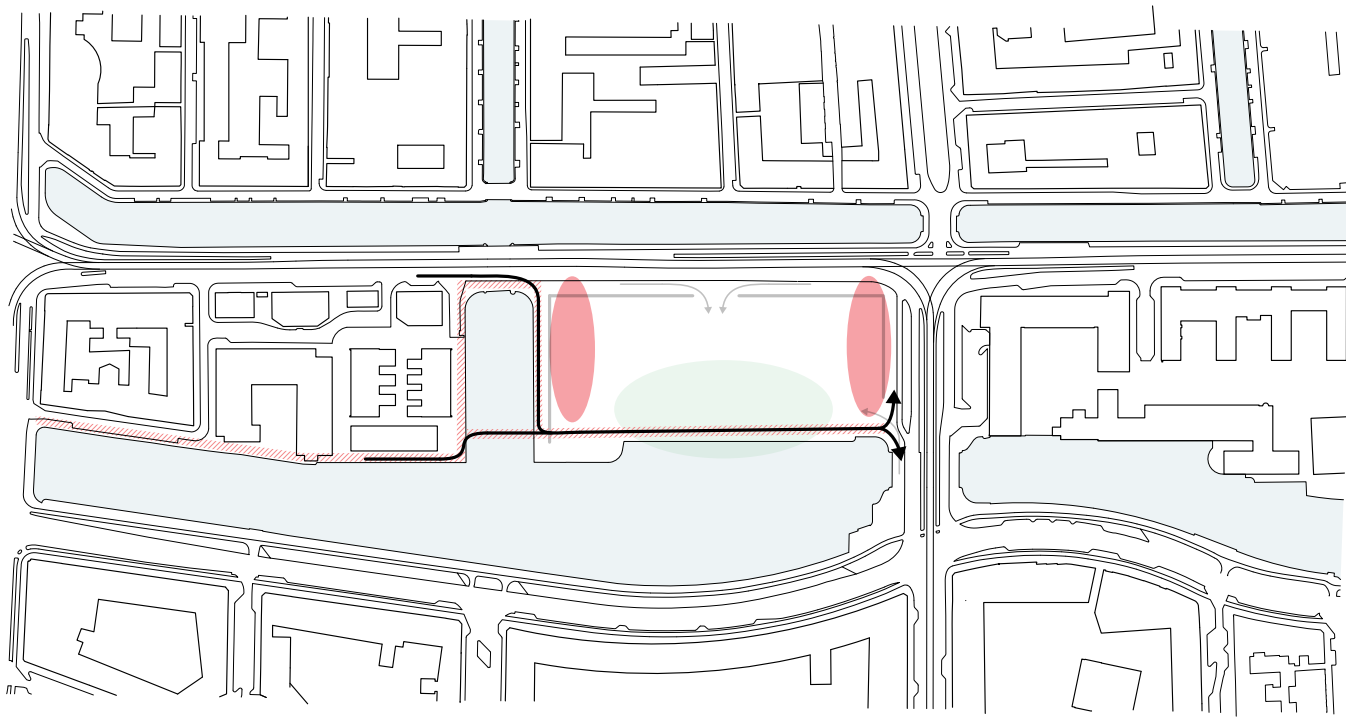
Pedestrian route



De StadsKas

Site analysis

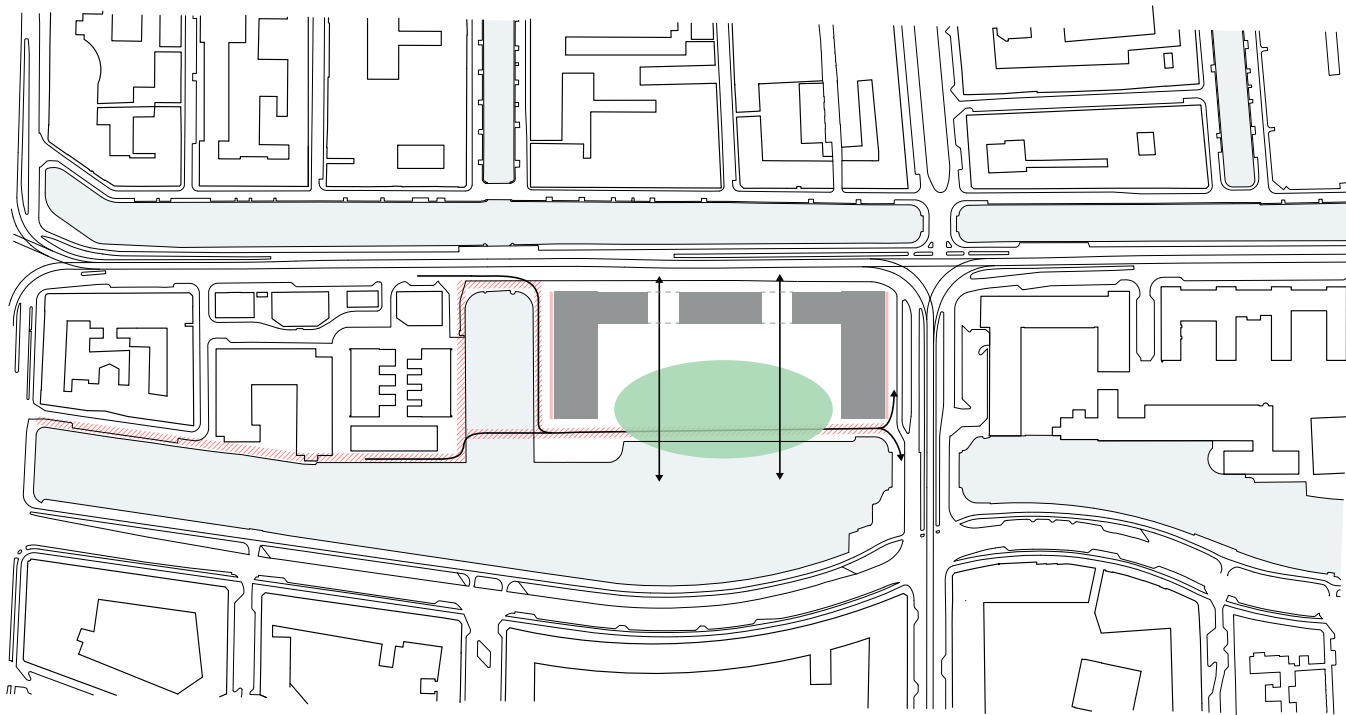
Commercial plinth



De StadsKas

Site analysis

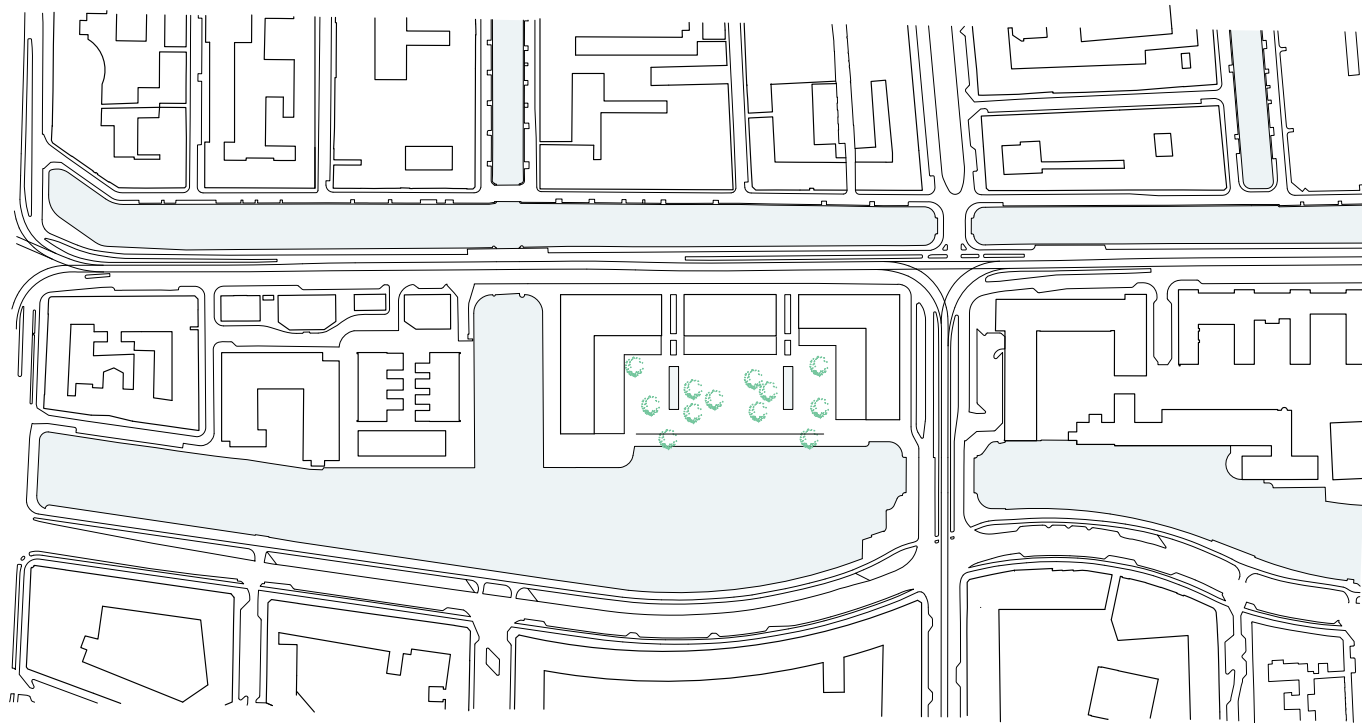
Building volume.



De StadsKas

Urban ensemble

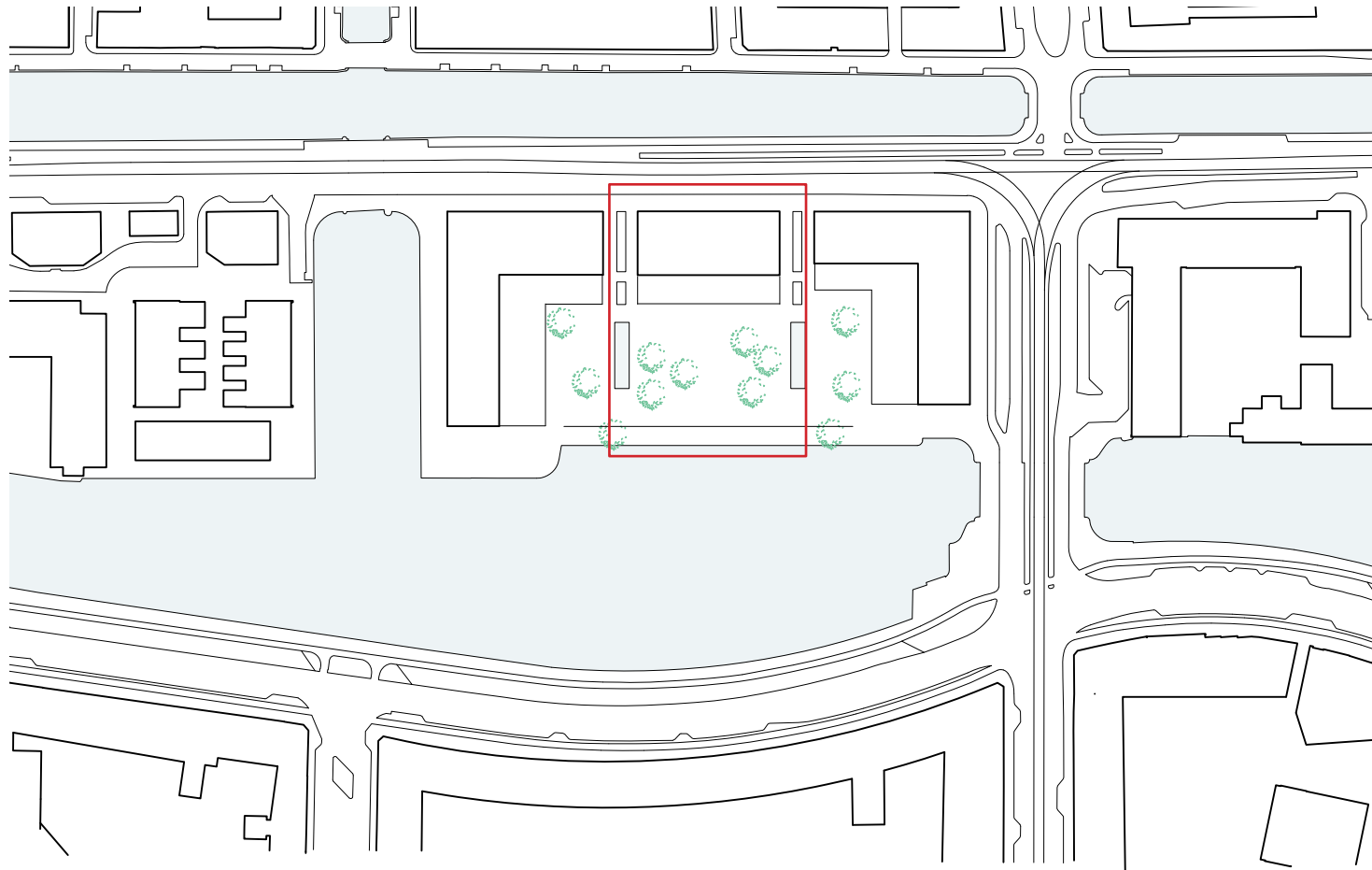
Plan



De StadsKas

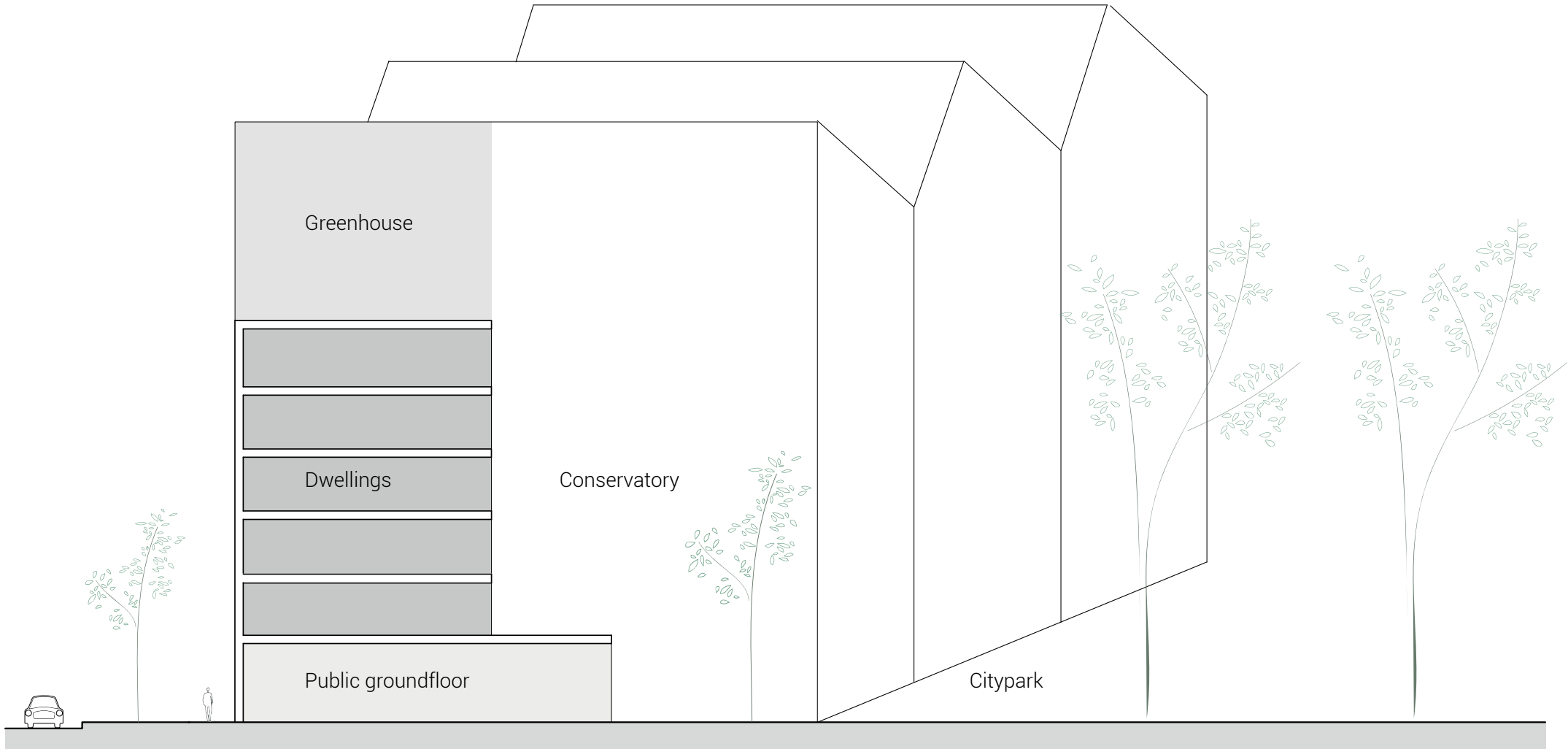
Urban ensemble

Plan



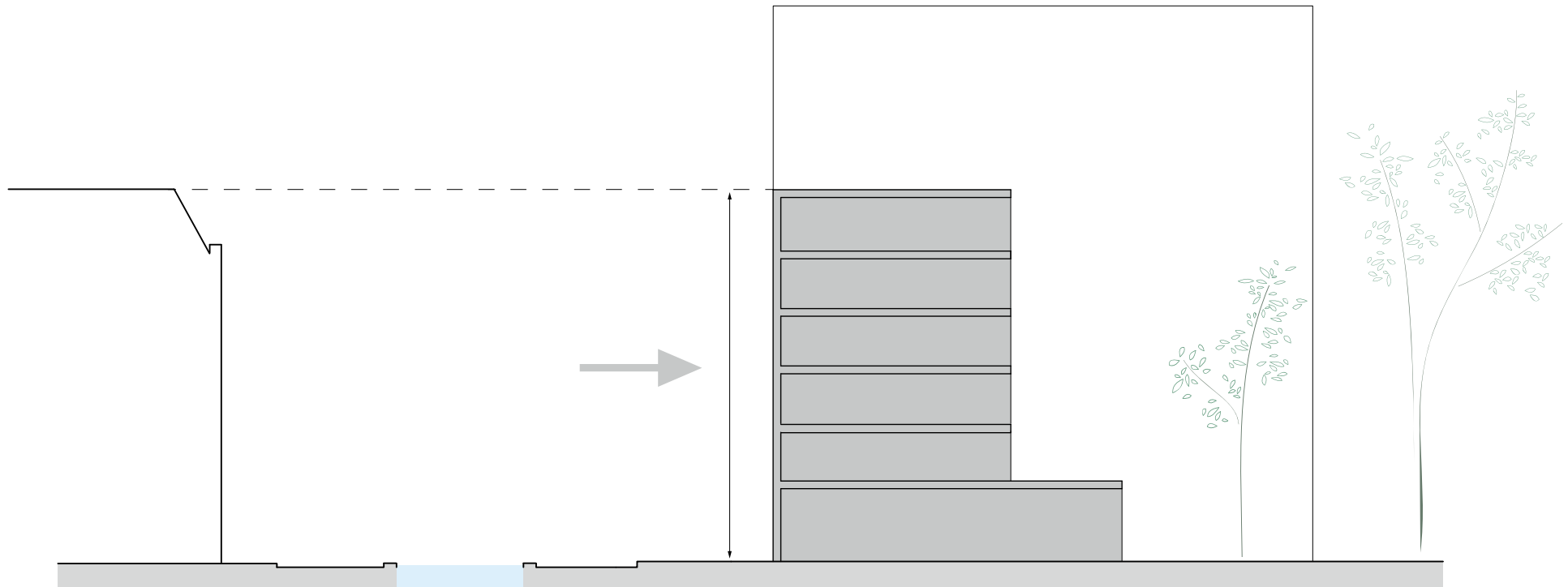
De StadsKas

Functions of the building



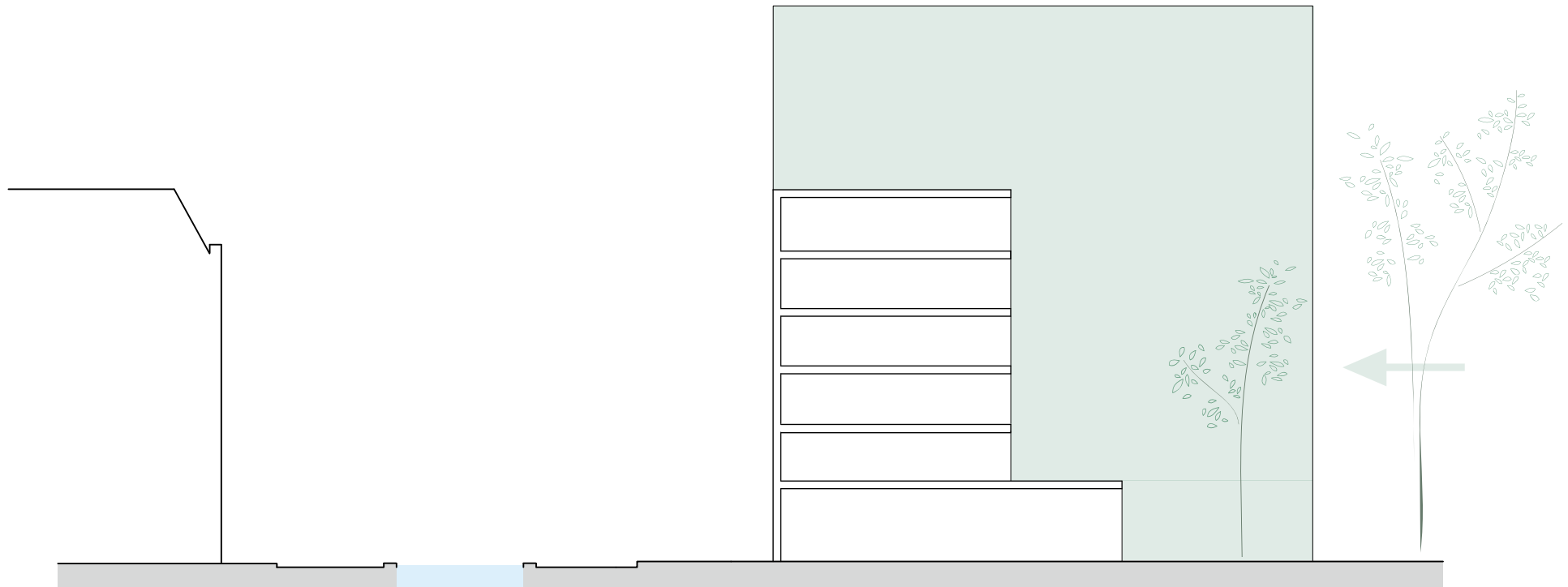
De StadsKas

City vs Green



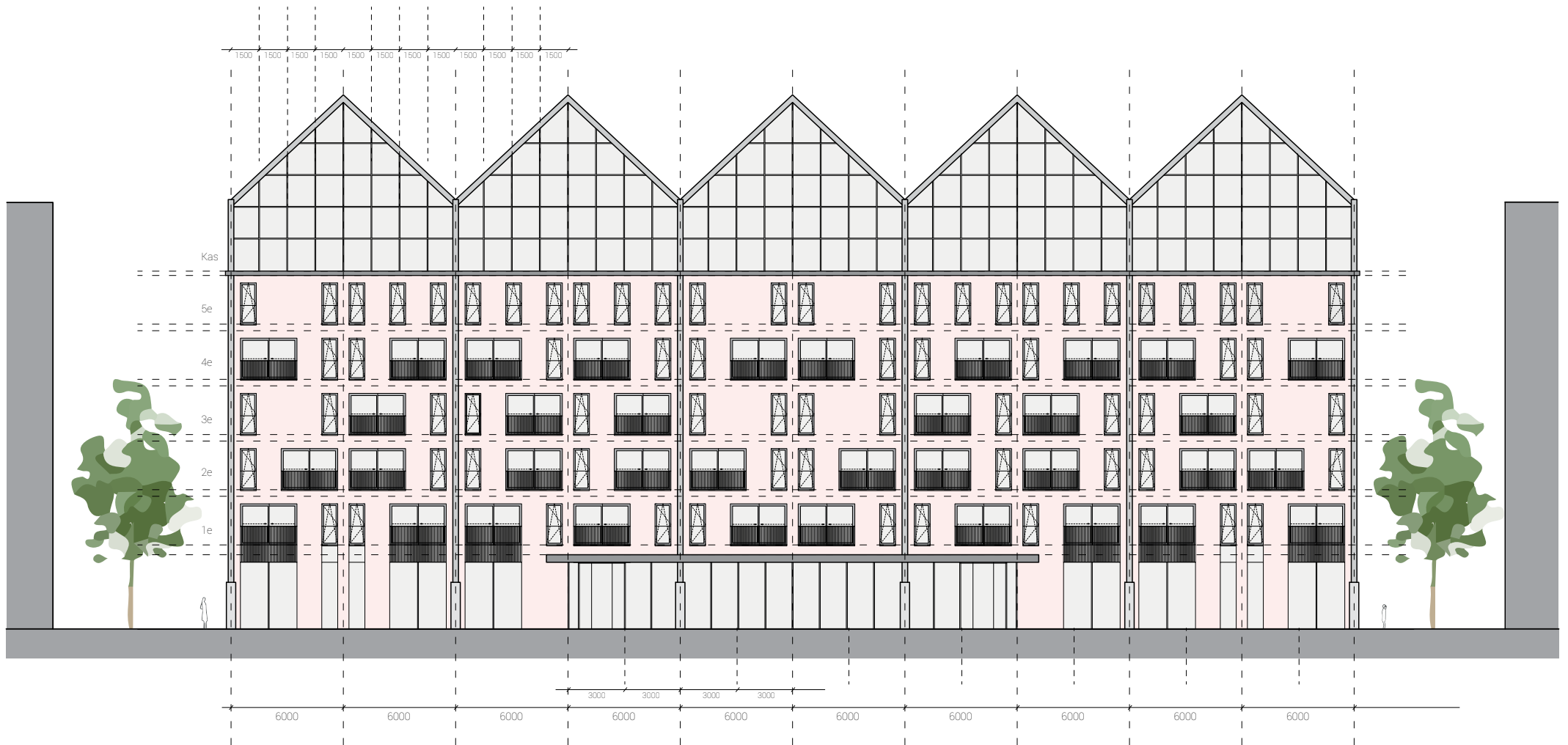
De StadsKas

City vs Green



De StadsKas

City facade



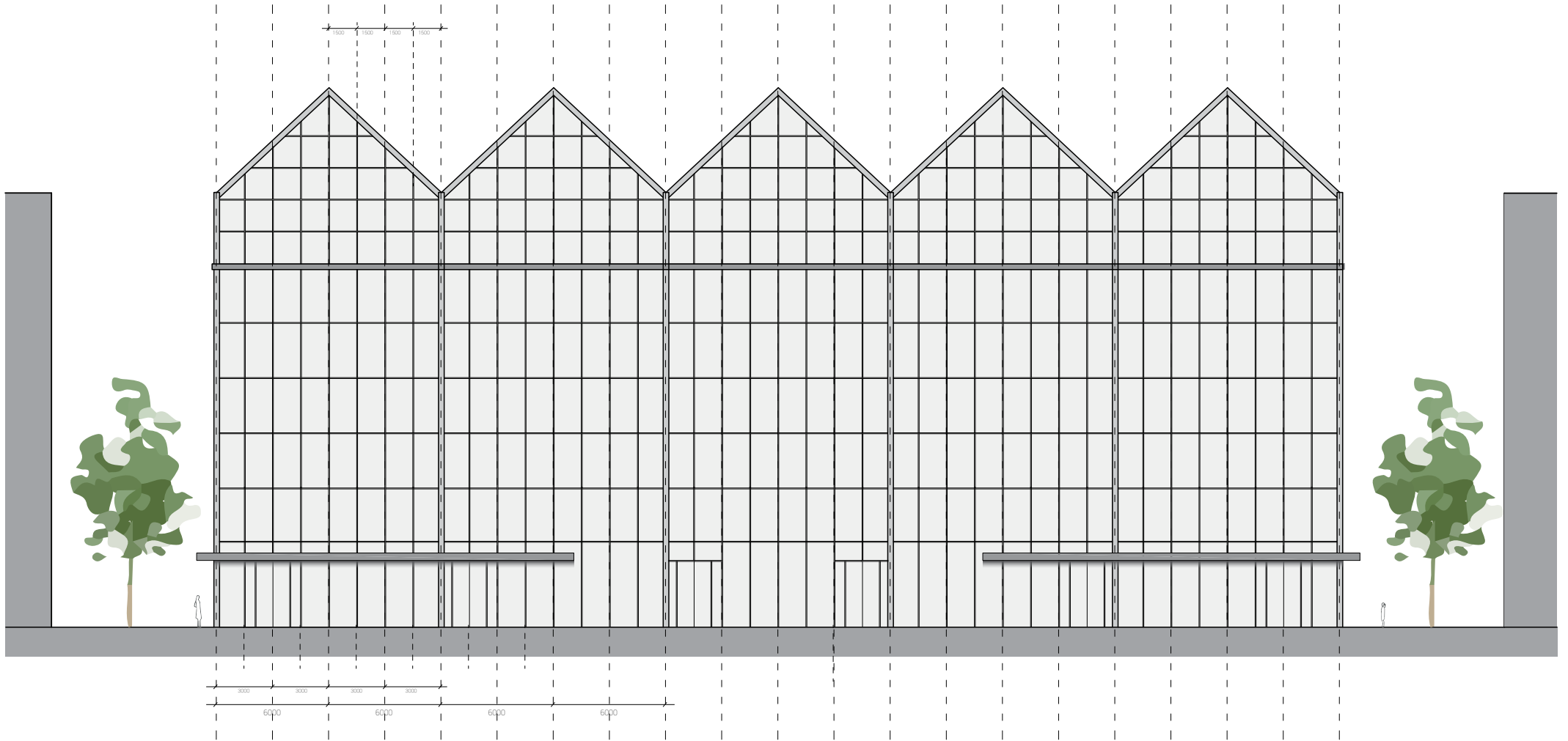
De StadsKas

City facade



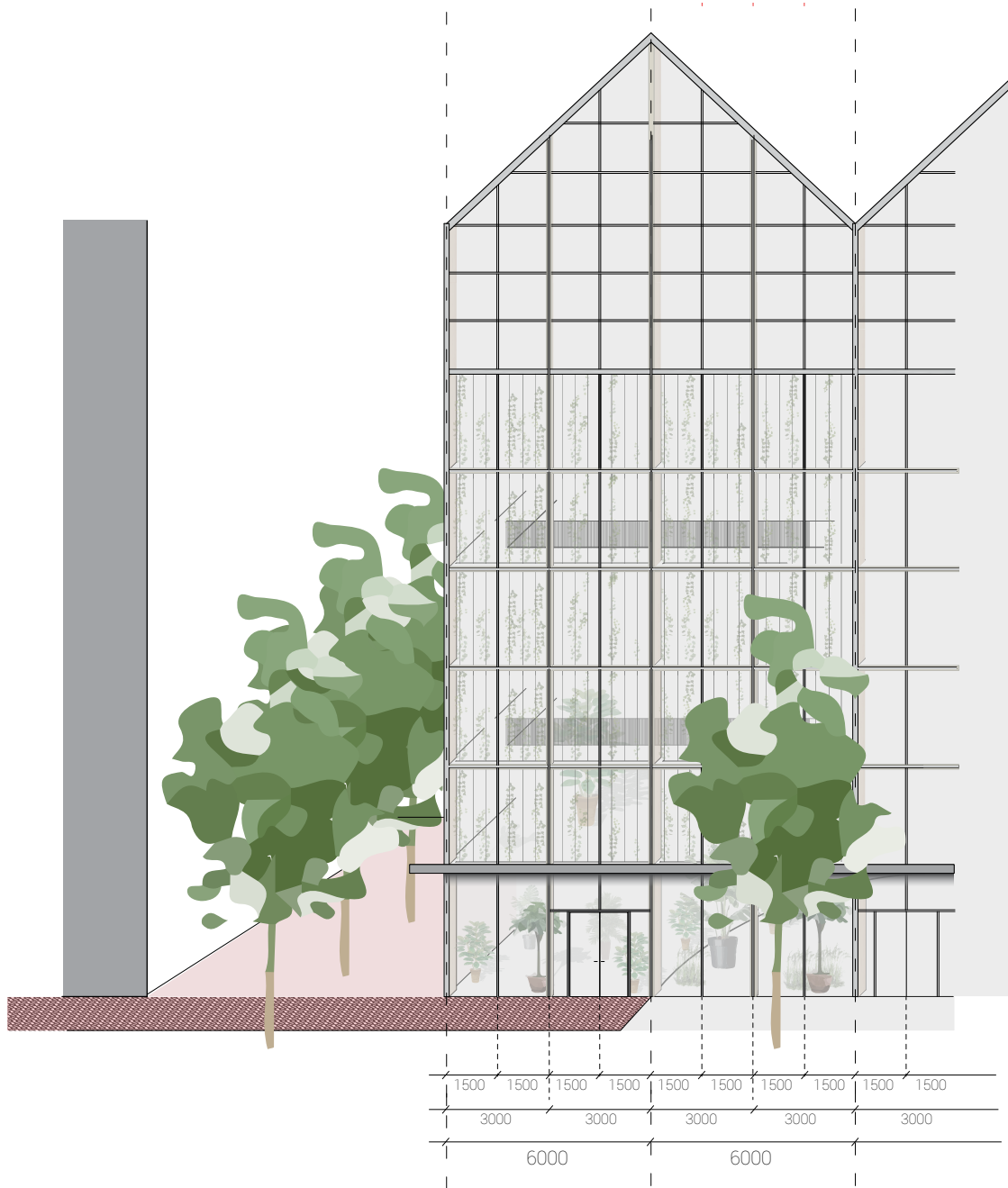
De StadsKas

Park facade



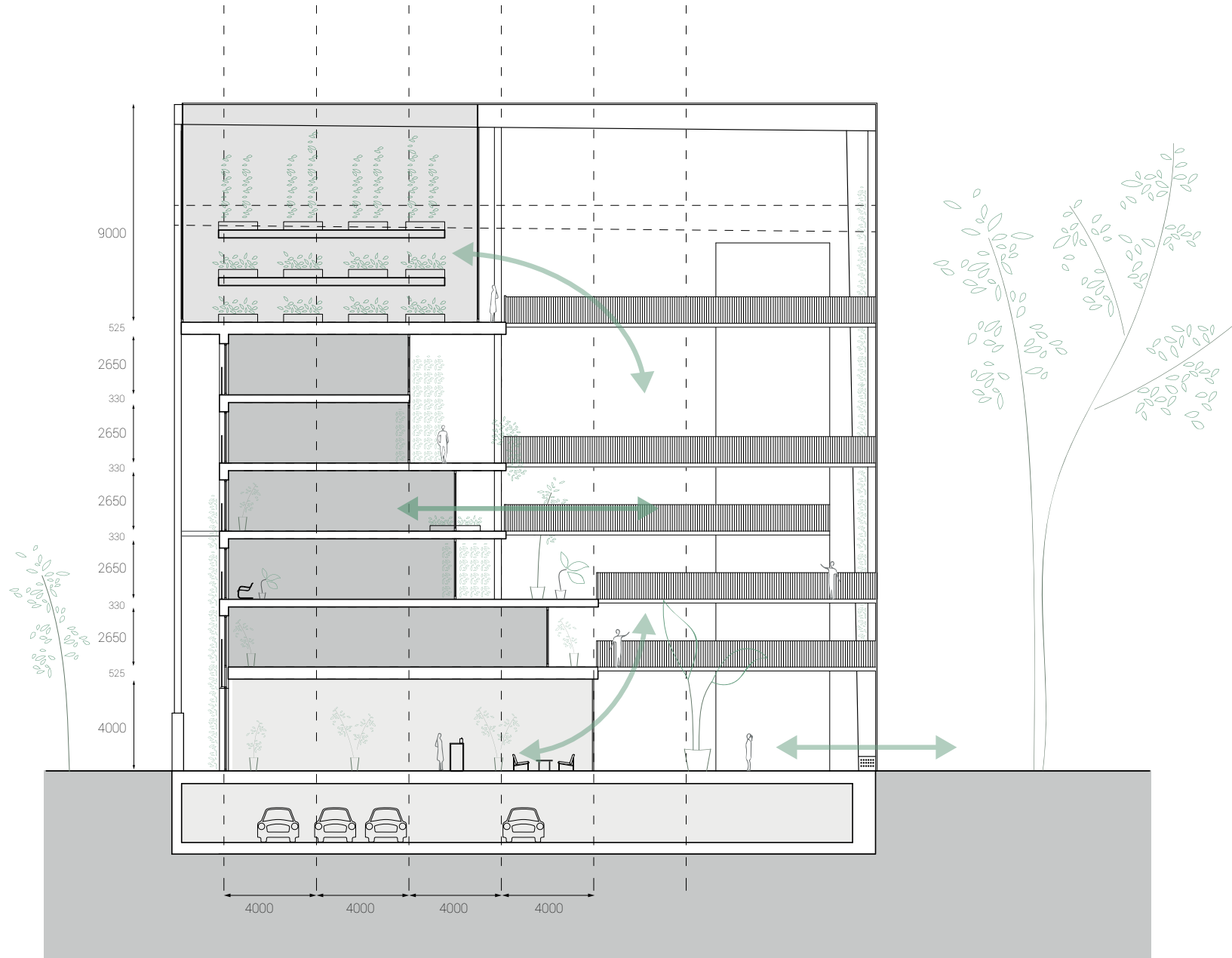
De StadsKas

Park facade



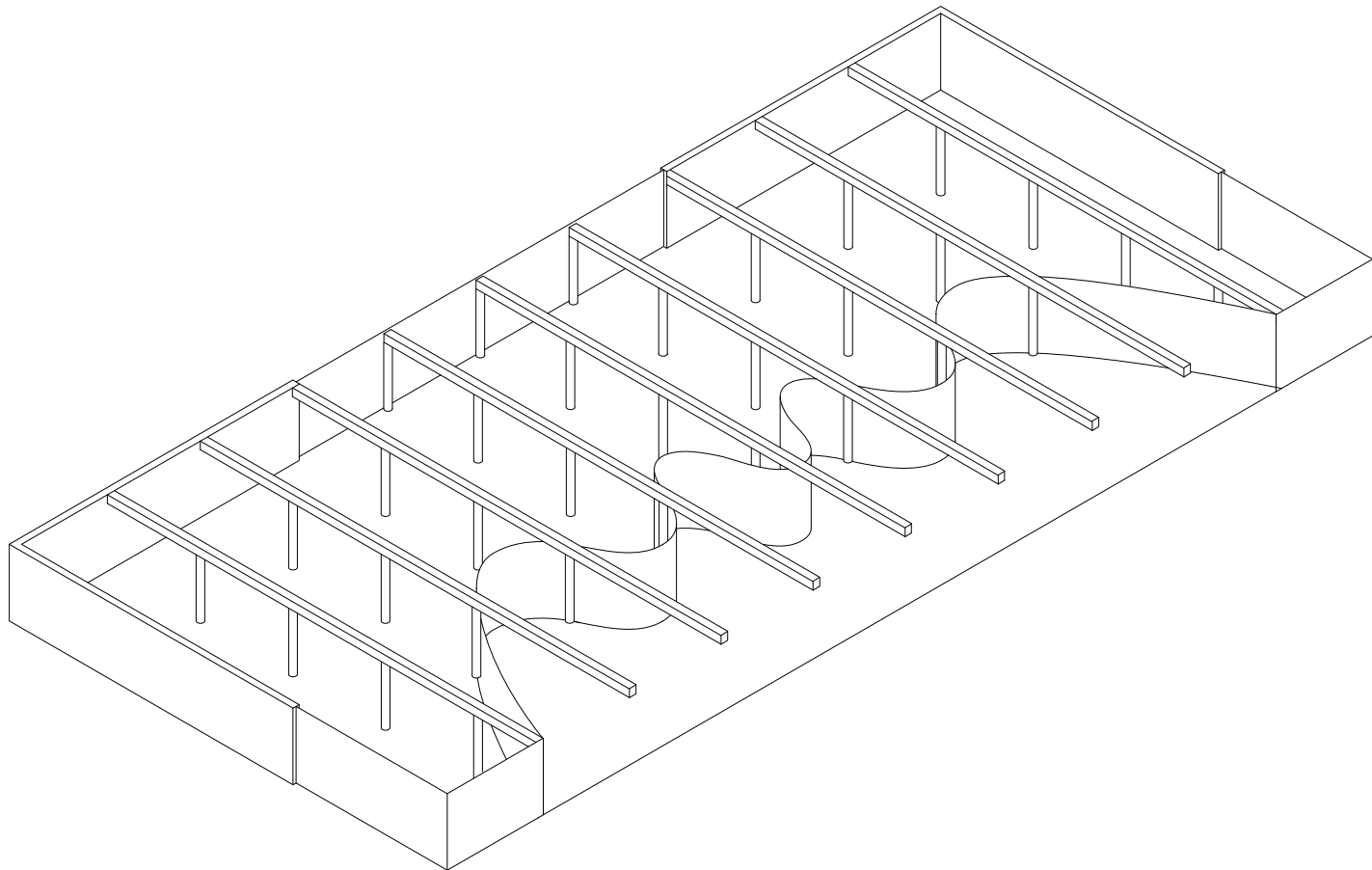
De StadsKas

Section



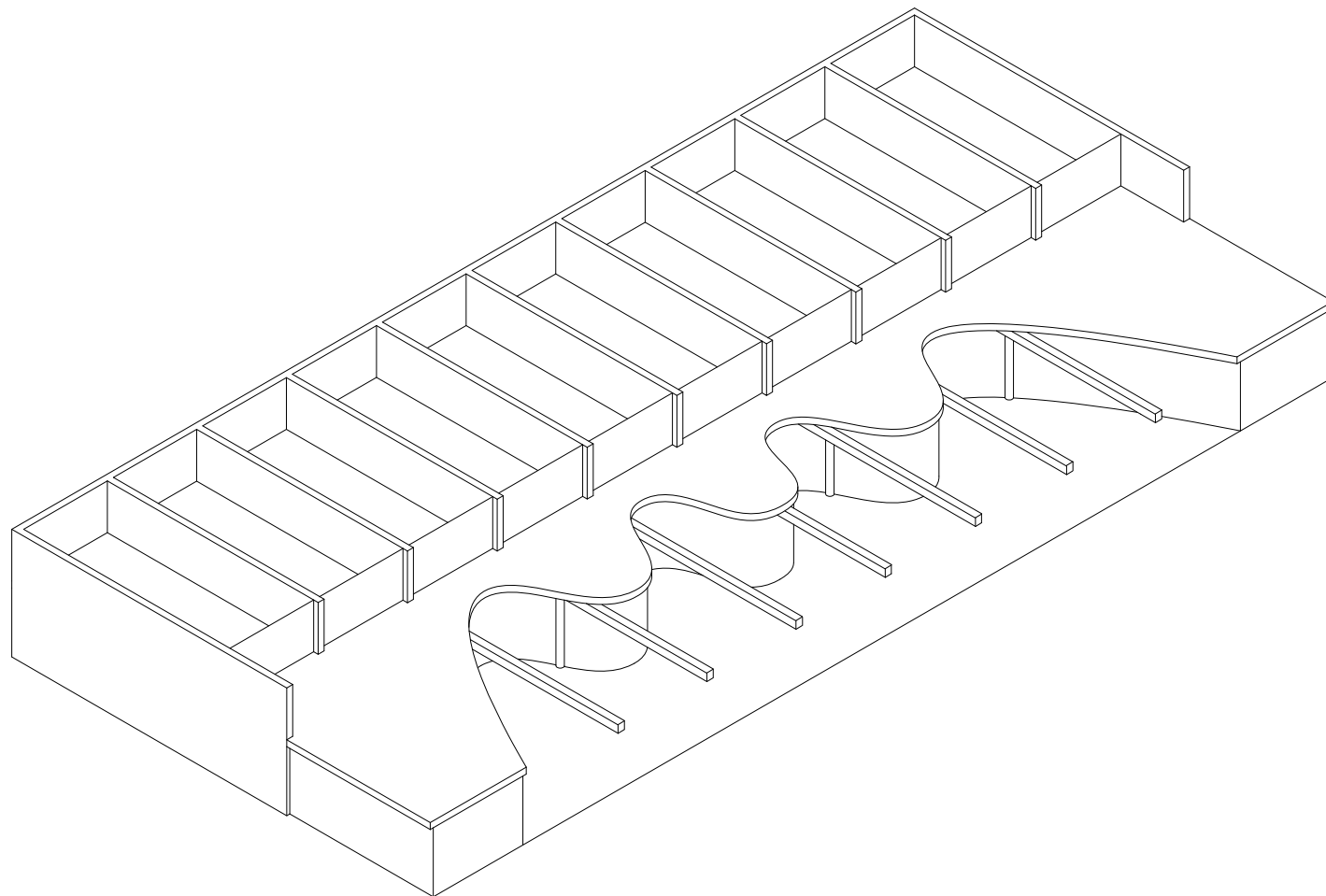
De StadsKas

Building structure;
Groundfloor



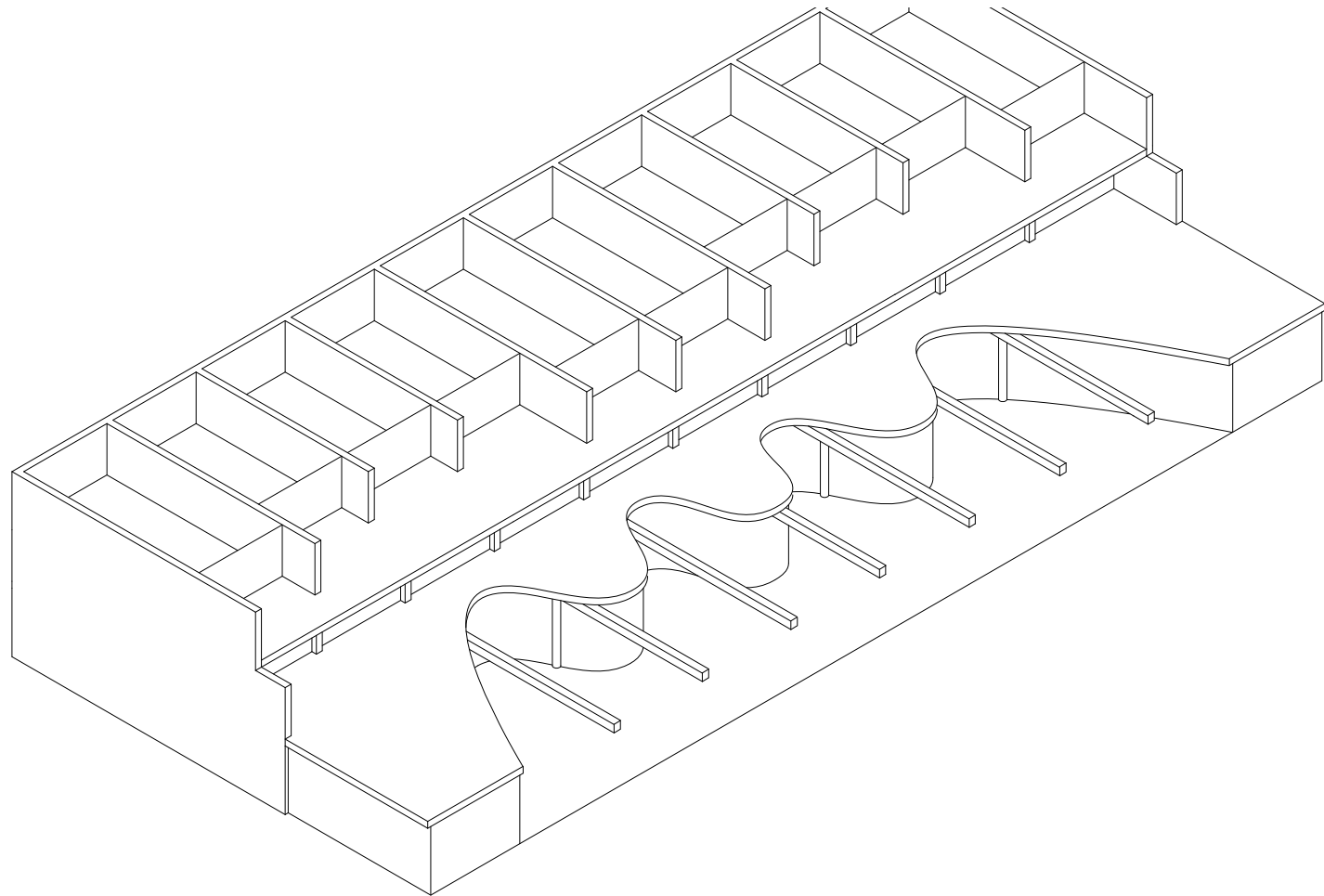
De StadsKas

Building structure;
First floor



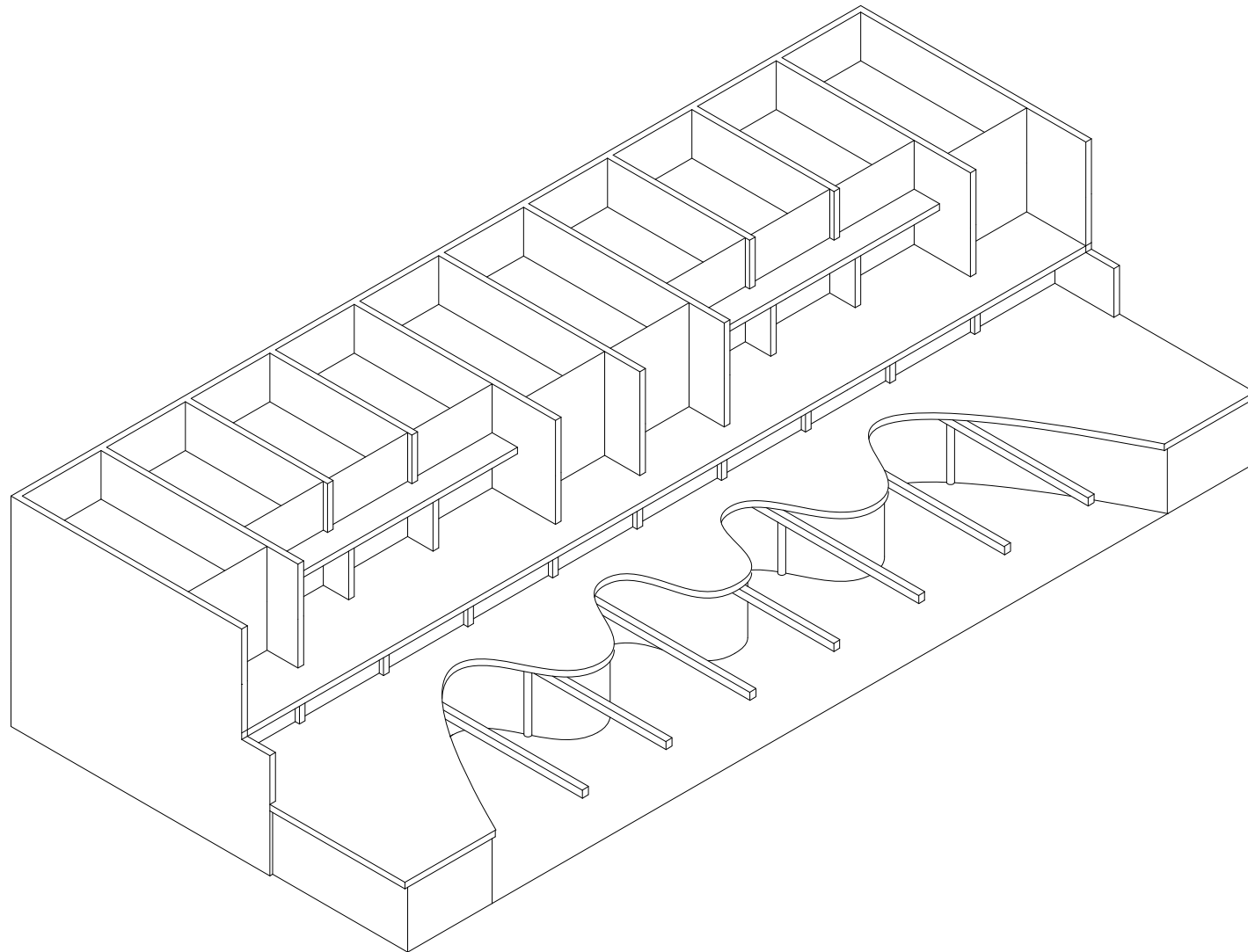
De StadsKas

Building structure;
Second floor



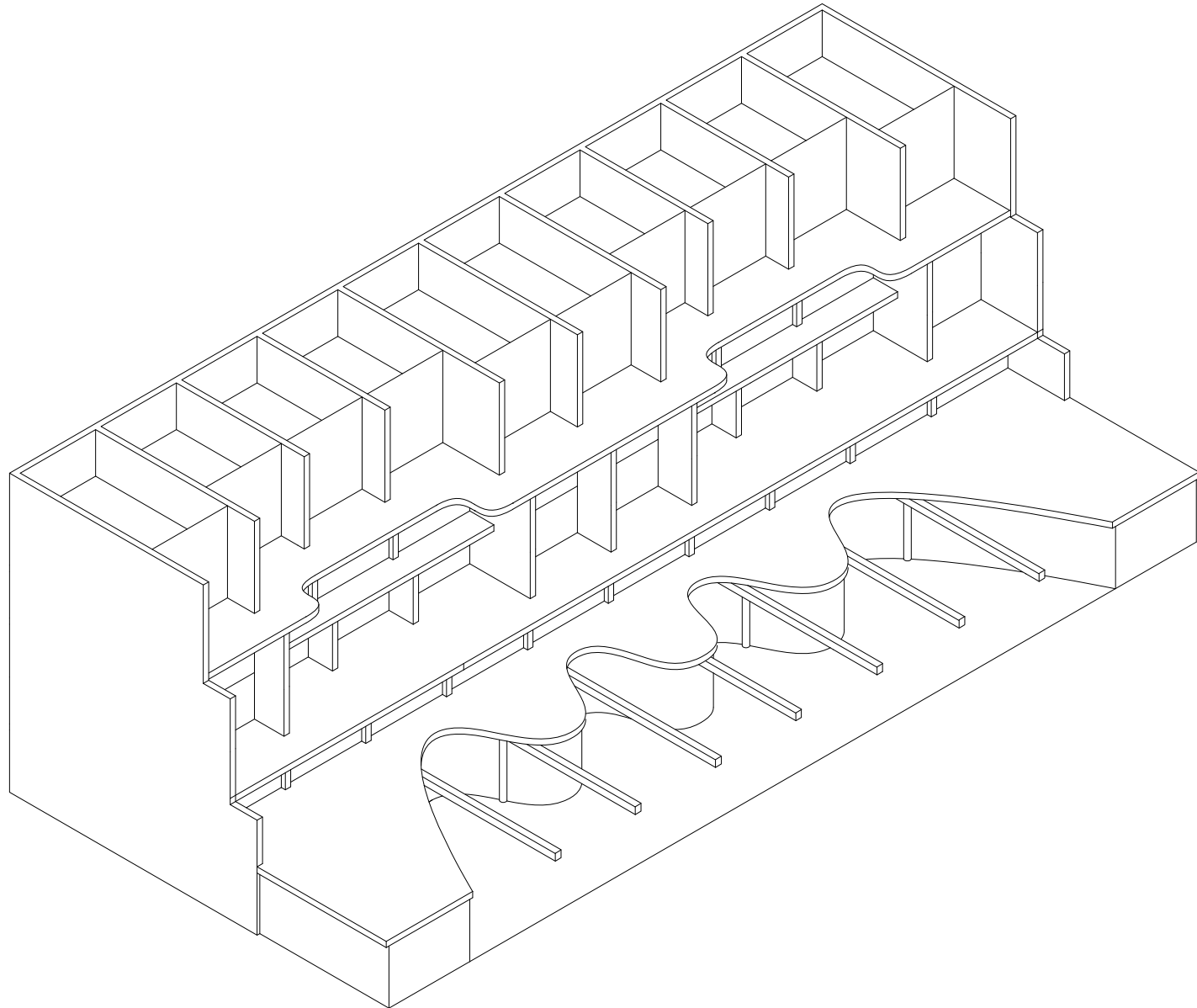
De StadsKas

Building structure;
Third floor



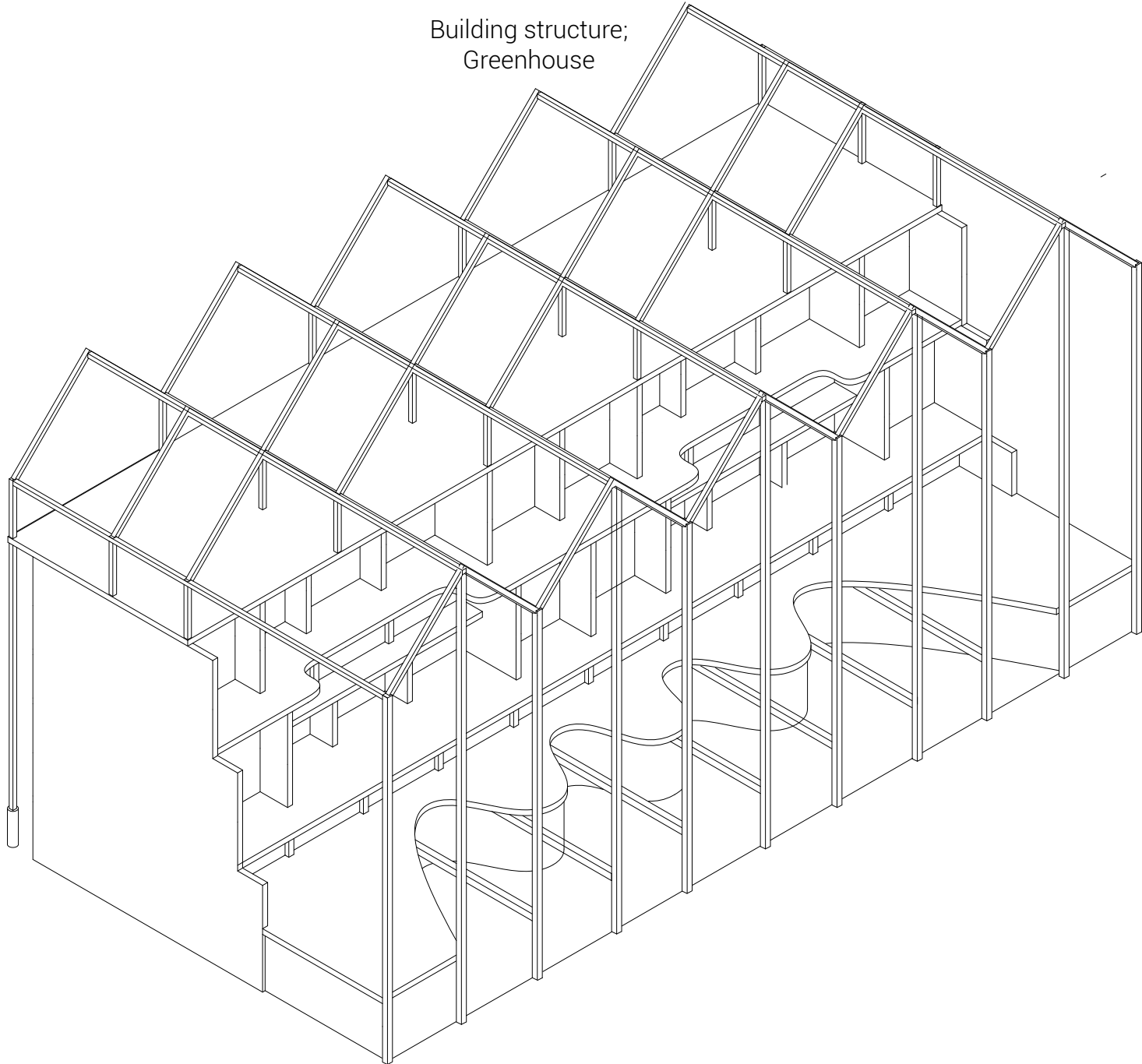
De StadsKas

Building structure;
Fourth & fifth floor



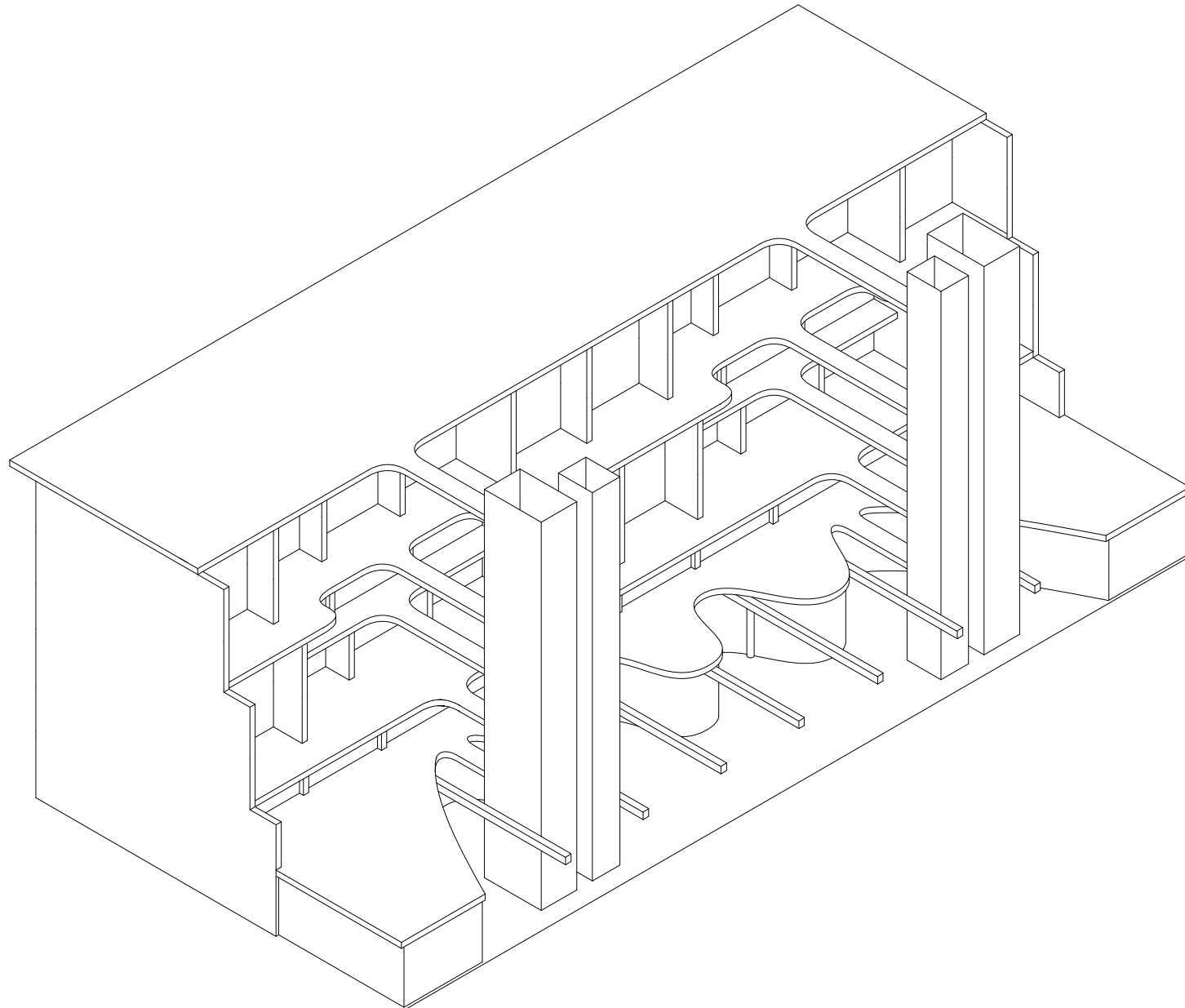
De StadsKas

Building structure;
Greenhouse



De StadsKas

Building structure;
Vertical circulation



De StadsKas

Section;
Different types of green

Greenhouse

Technical &
Efficiency

Dwellings

Livability

Groundfloor

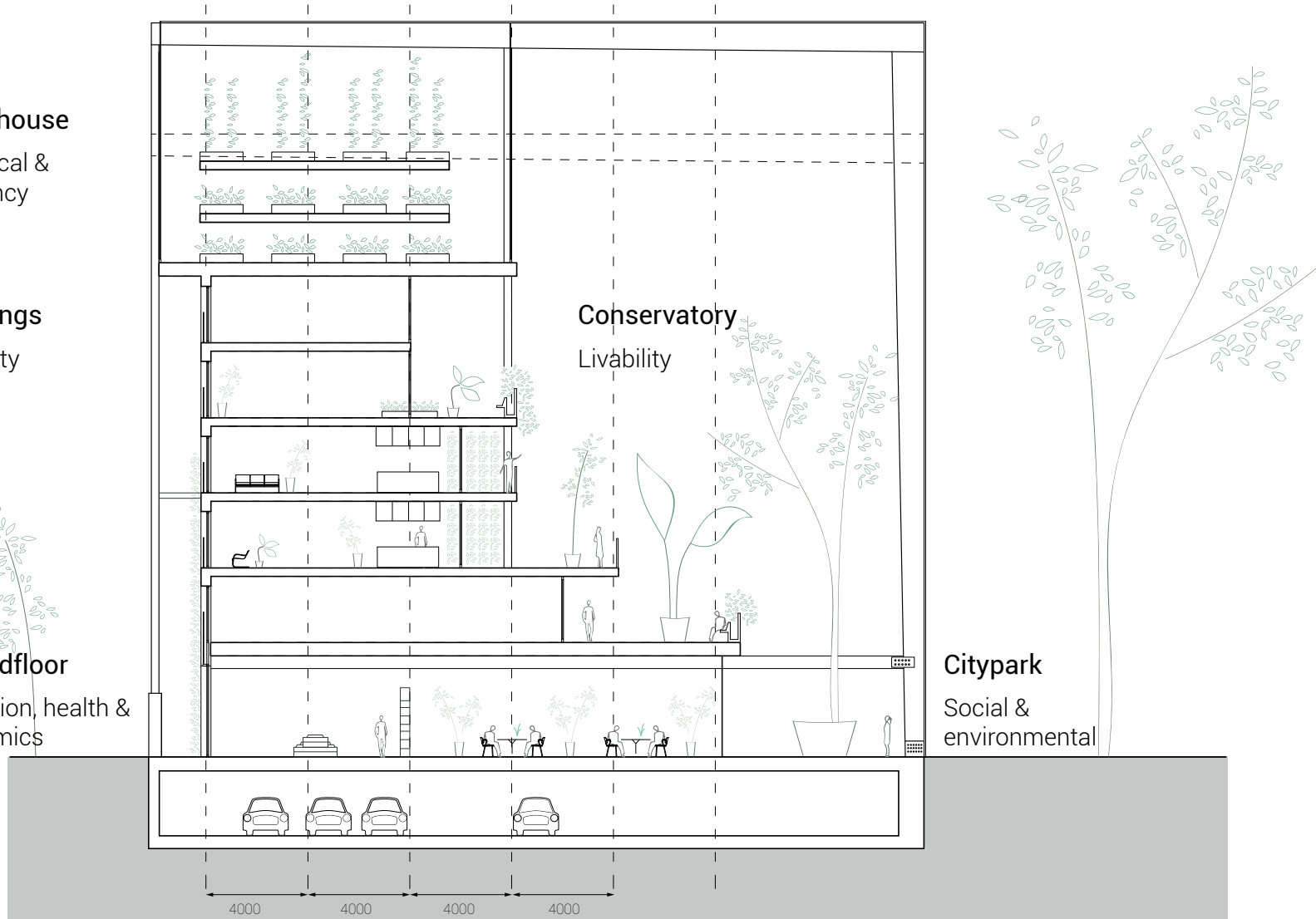
Education, health &
economics

Conservatory

Livability

Citypark

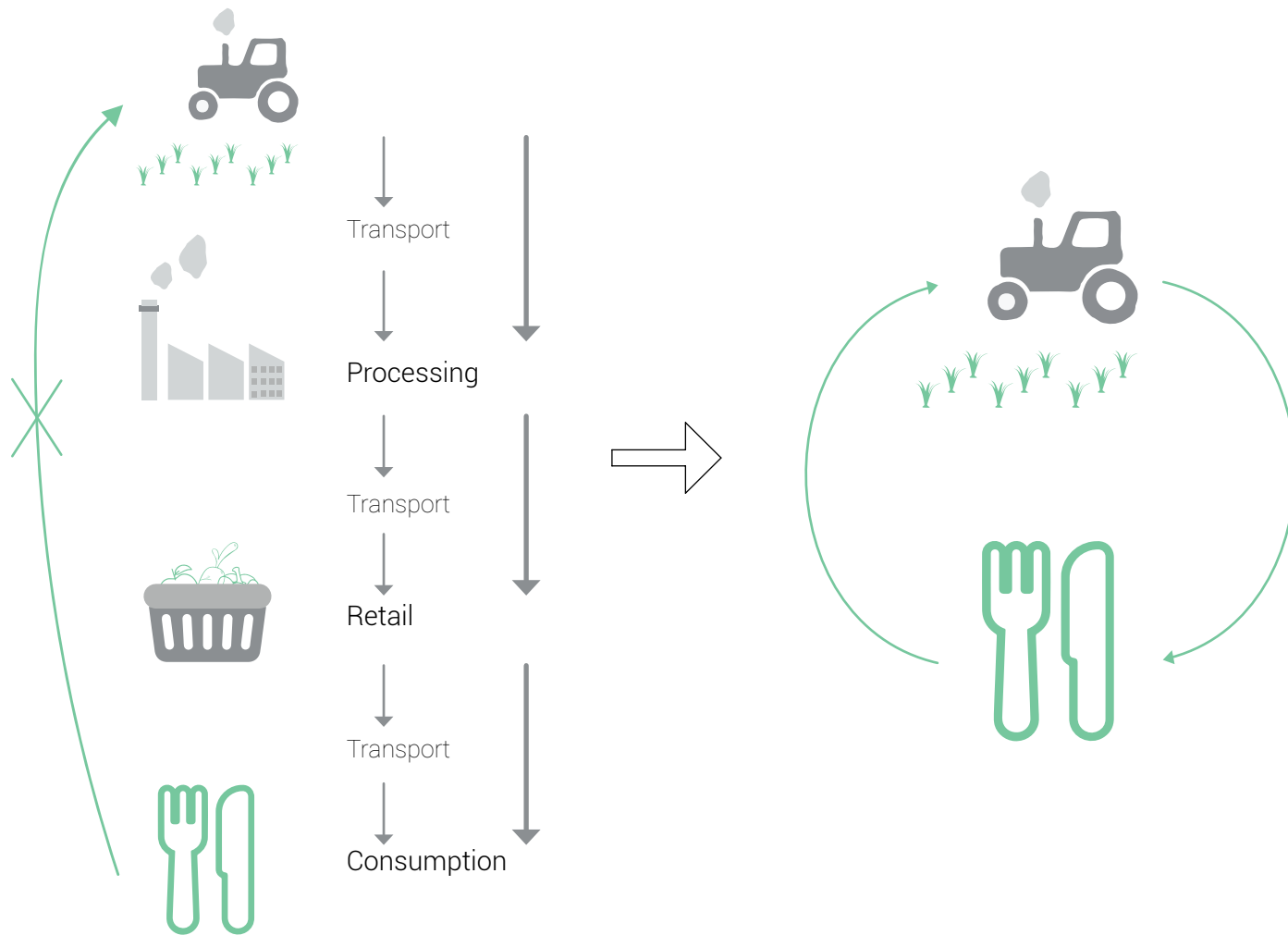
Social &
environmental



De StadsKas

The greenhouse

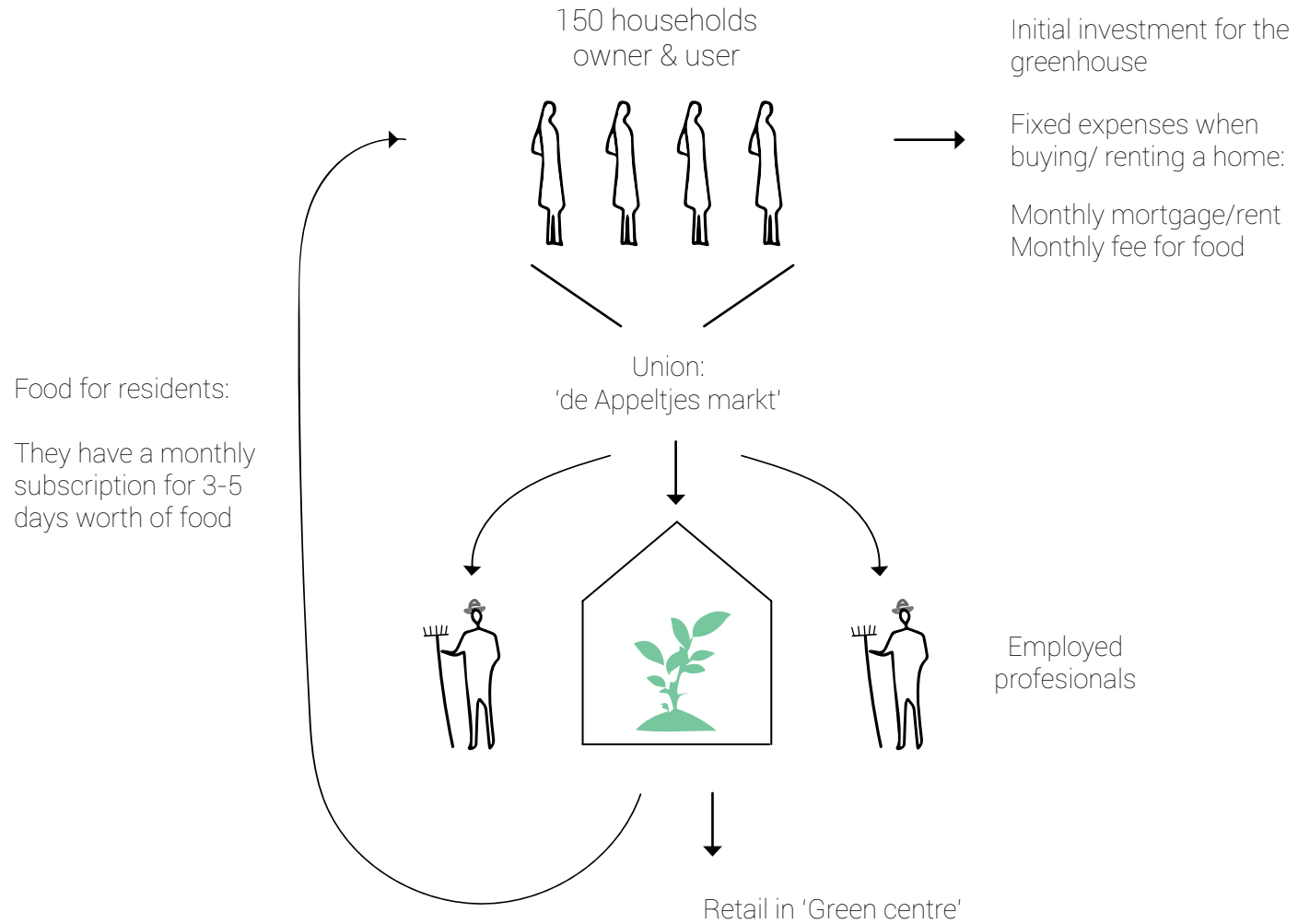
Circular food consumption



De StadsKas

The greenhouse

Circular food consumption



De StadsKas

The greenhouse

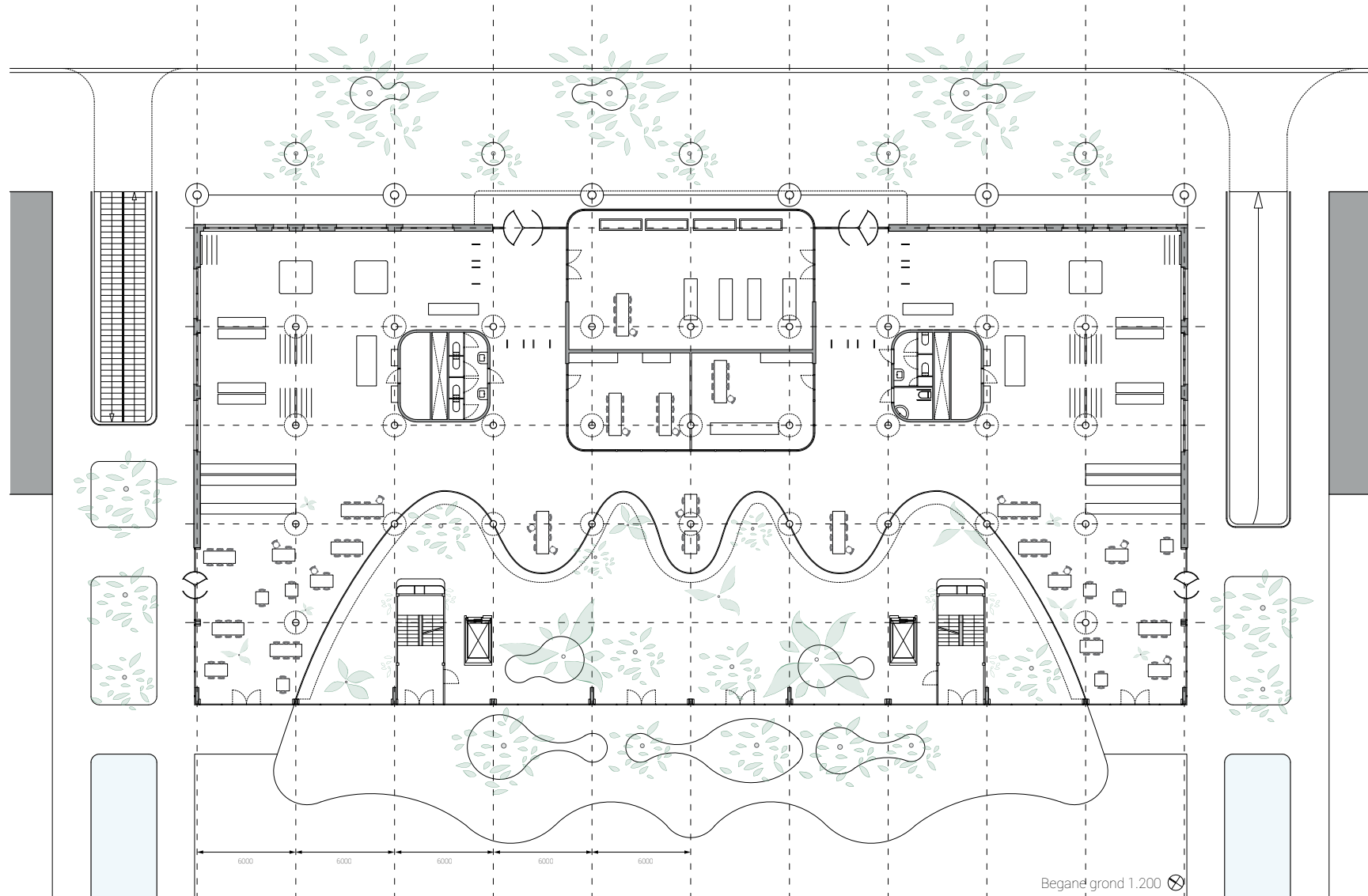
Based on the New Urban Foodprint Calculation Model

Program for 1 person:

25 m ²	Greenhouse	-->	Fruit, vegetables, legumes & potato's
2 m ²	Fish Production		
3m ²	Orchard	-->	Fruit

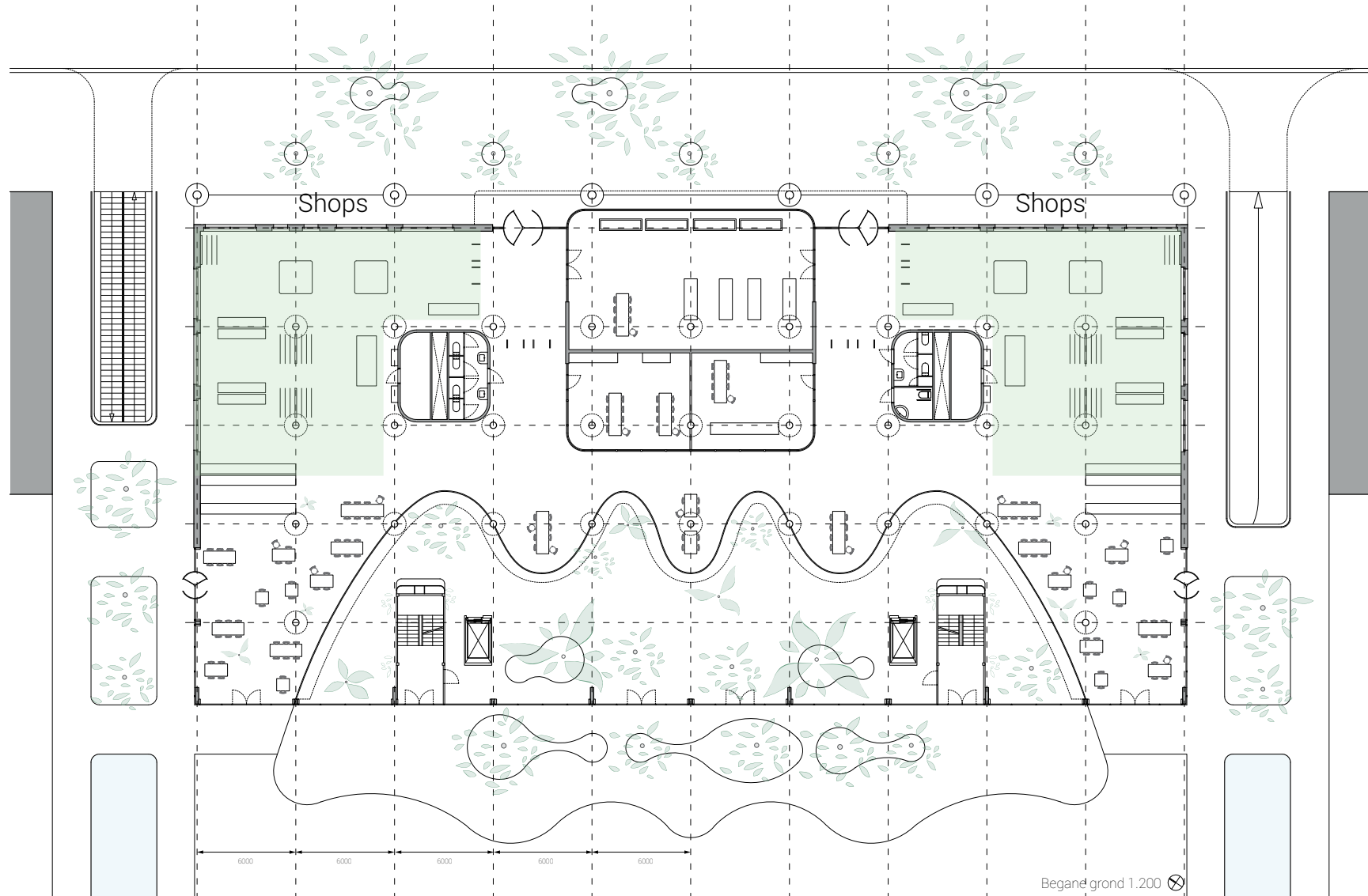
De StadsKas

Floorplan;
Groundfloor



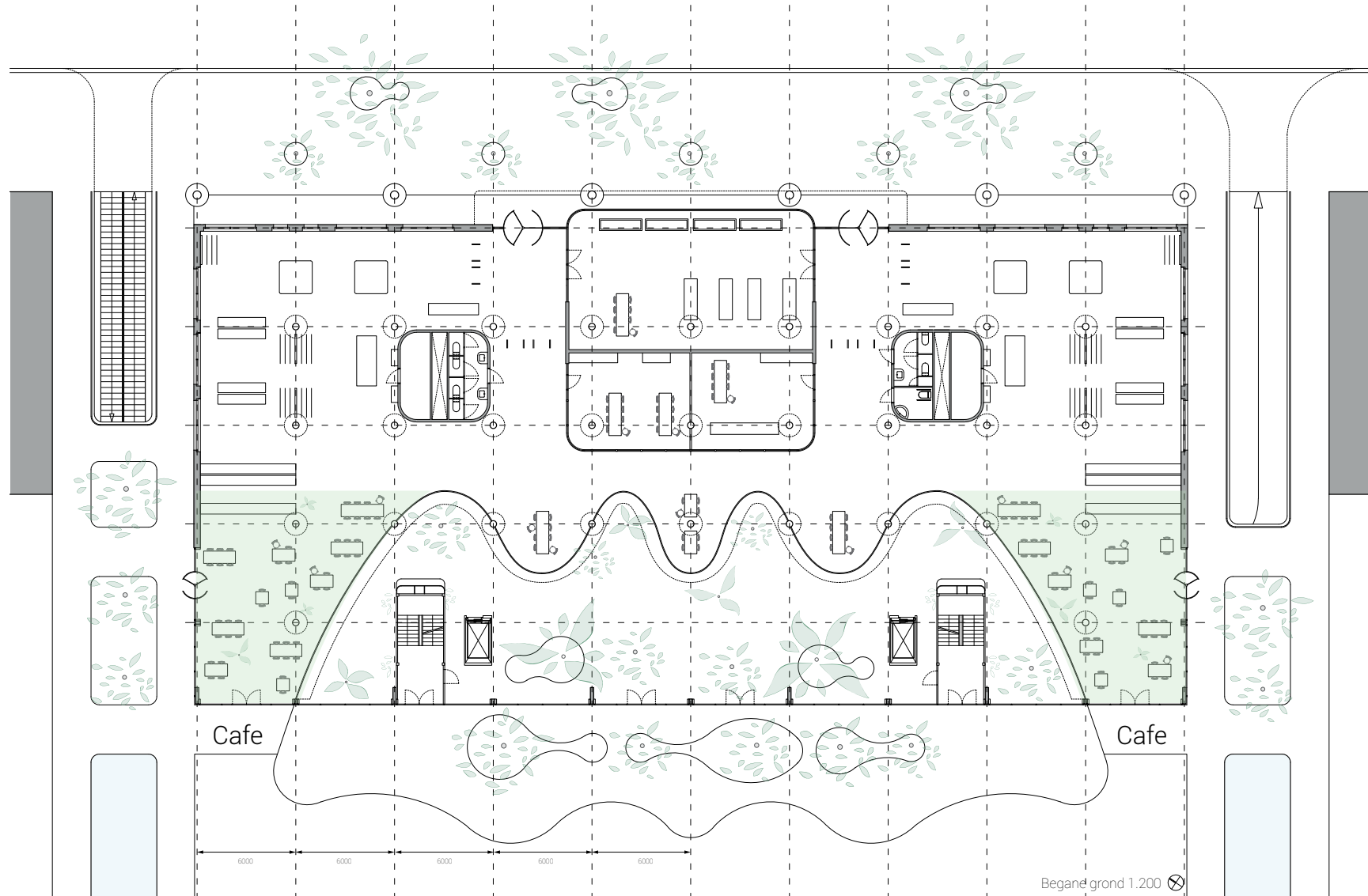
De StadsKas

Floorplan;
Groundfloor



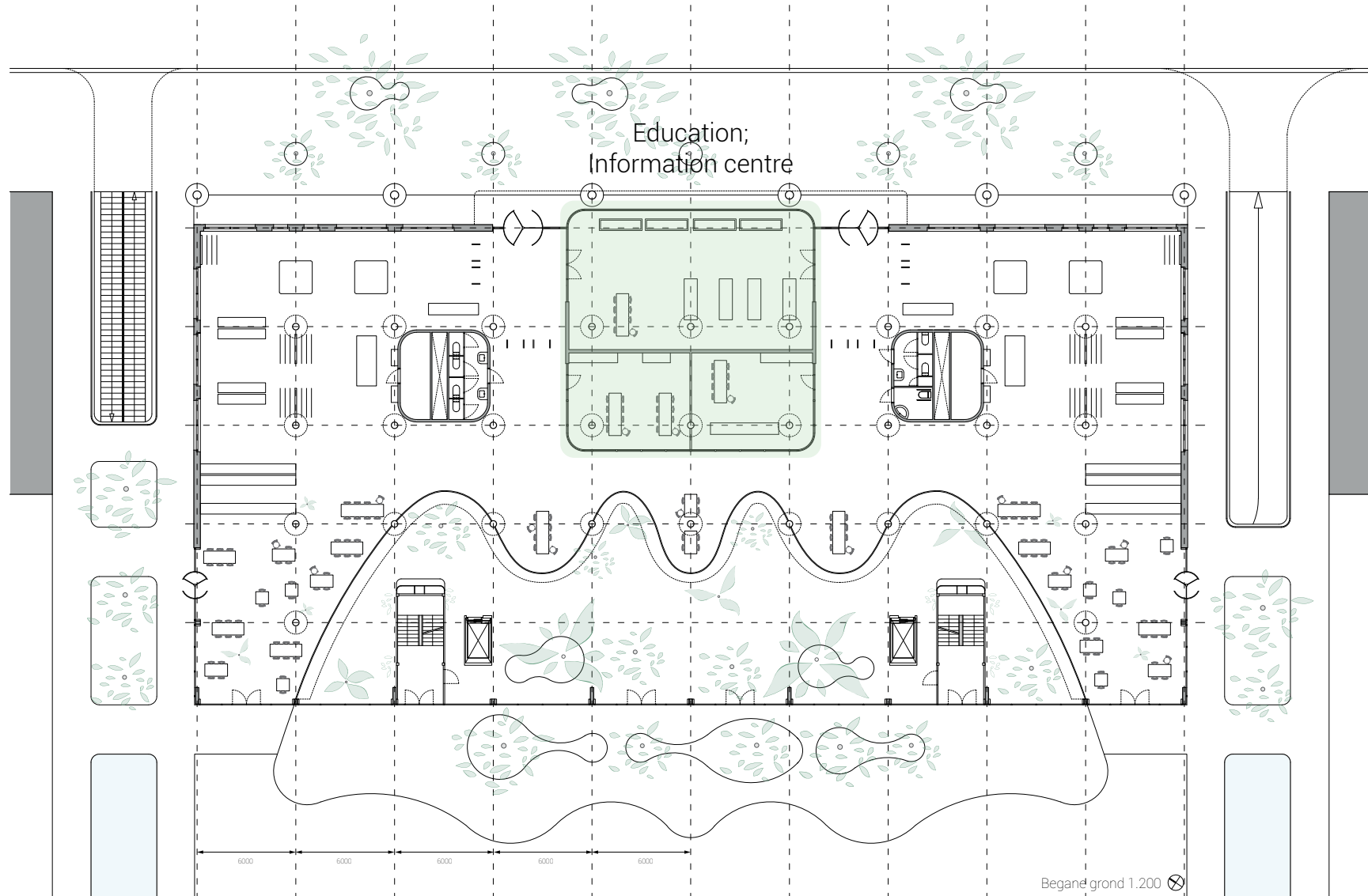
De StadsKas

Floorplan;
Groundfloor



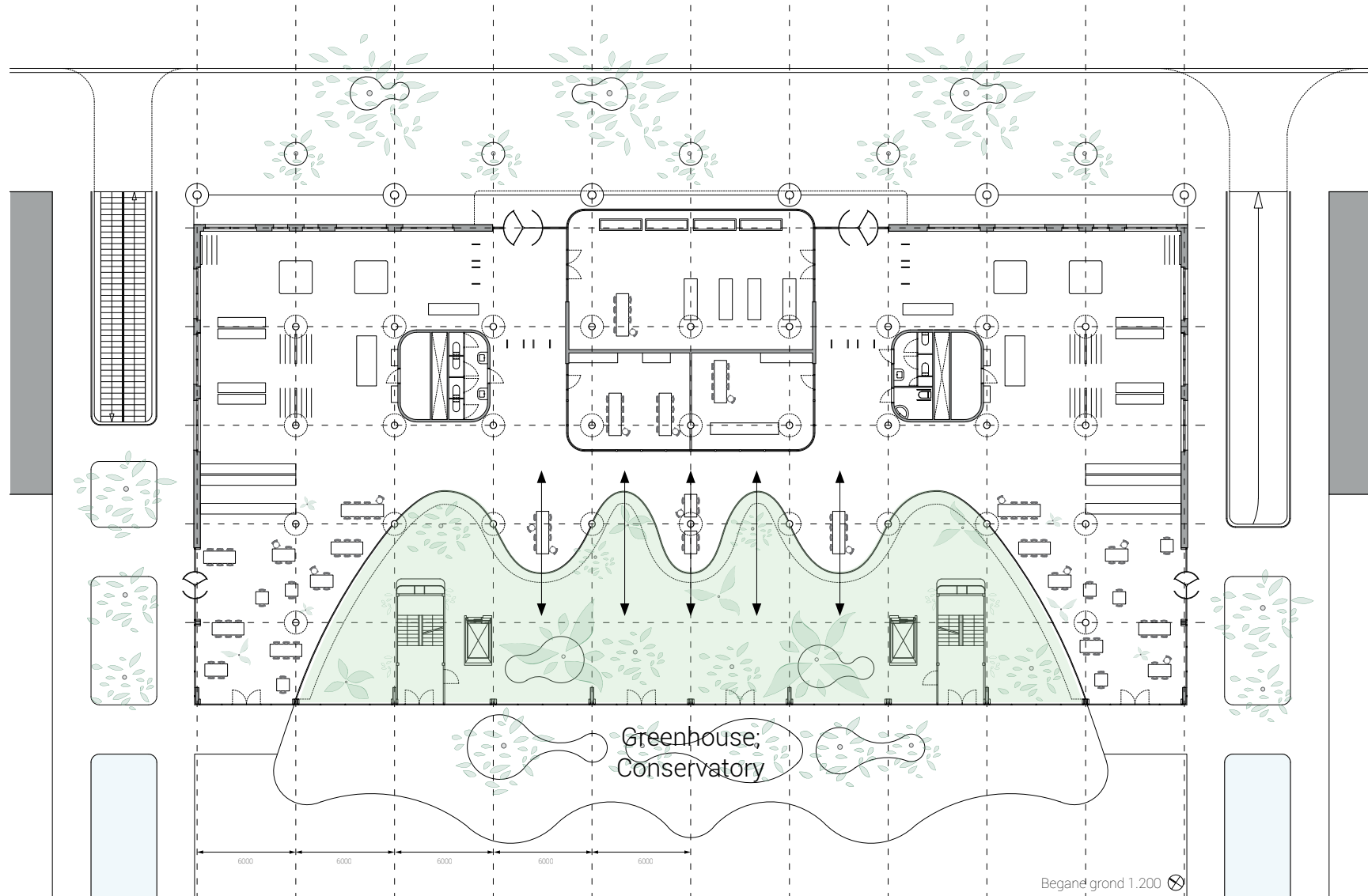
De StadsKas

Floorplan;
Groundfloor



De StadsKas

Floorplan;
Groundfloor



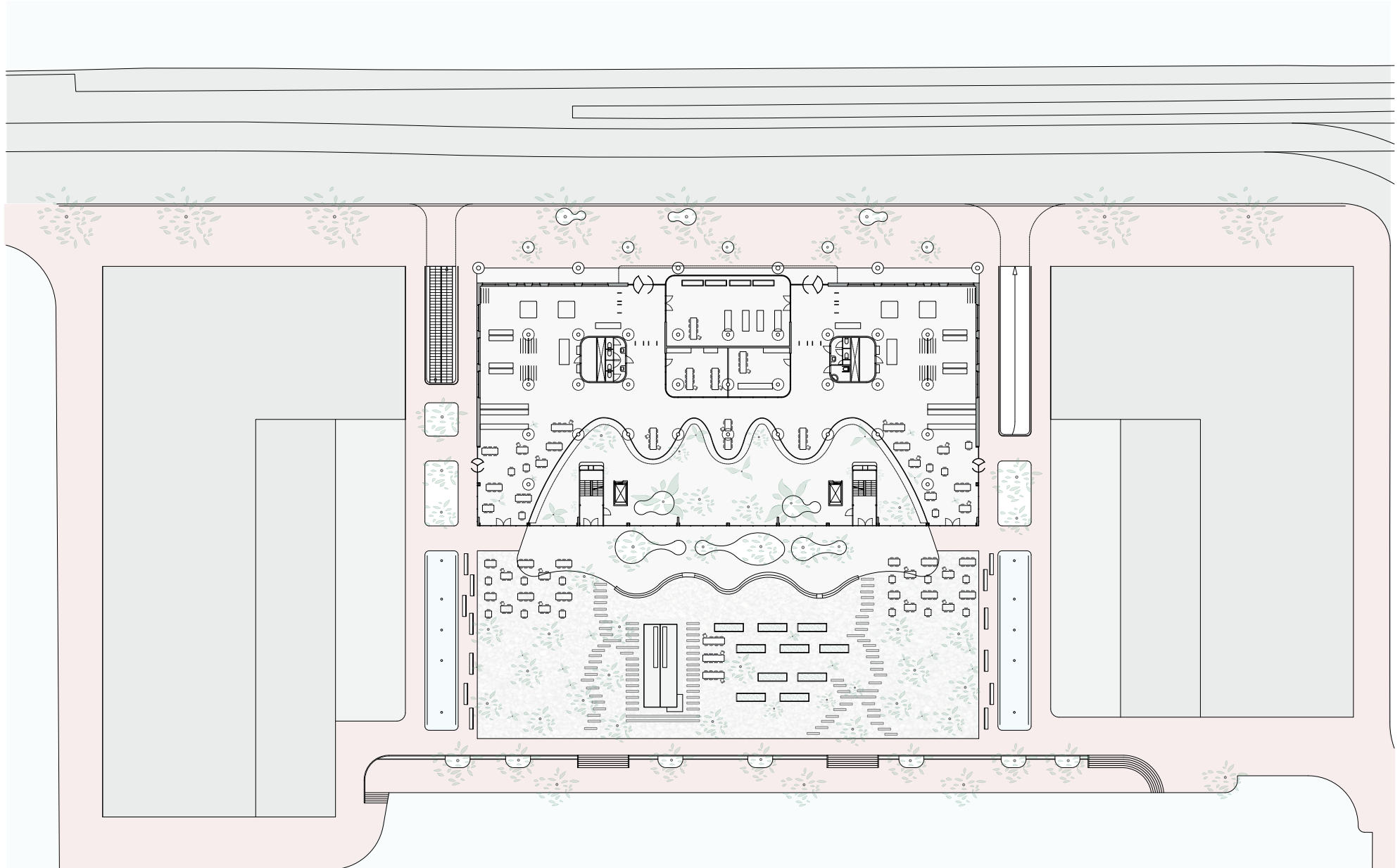
De StadsKas

Perspective;
Groundfloor



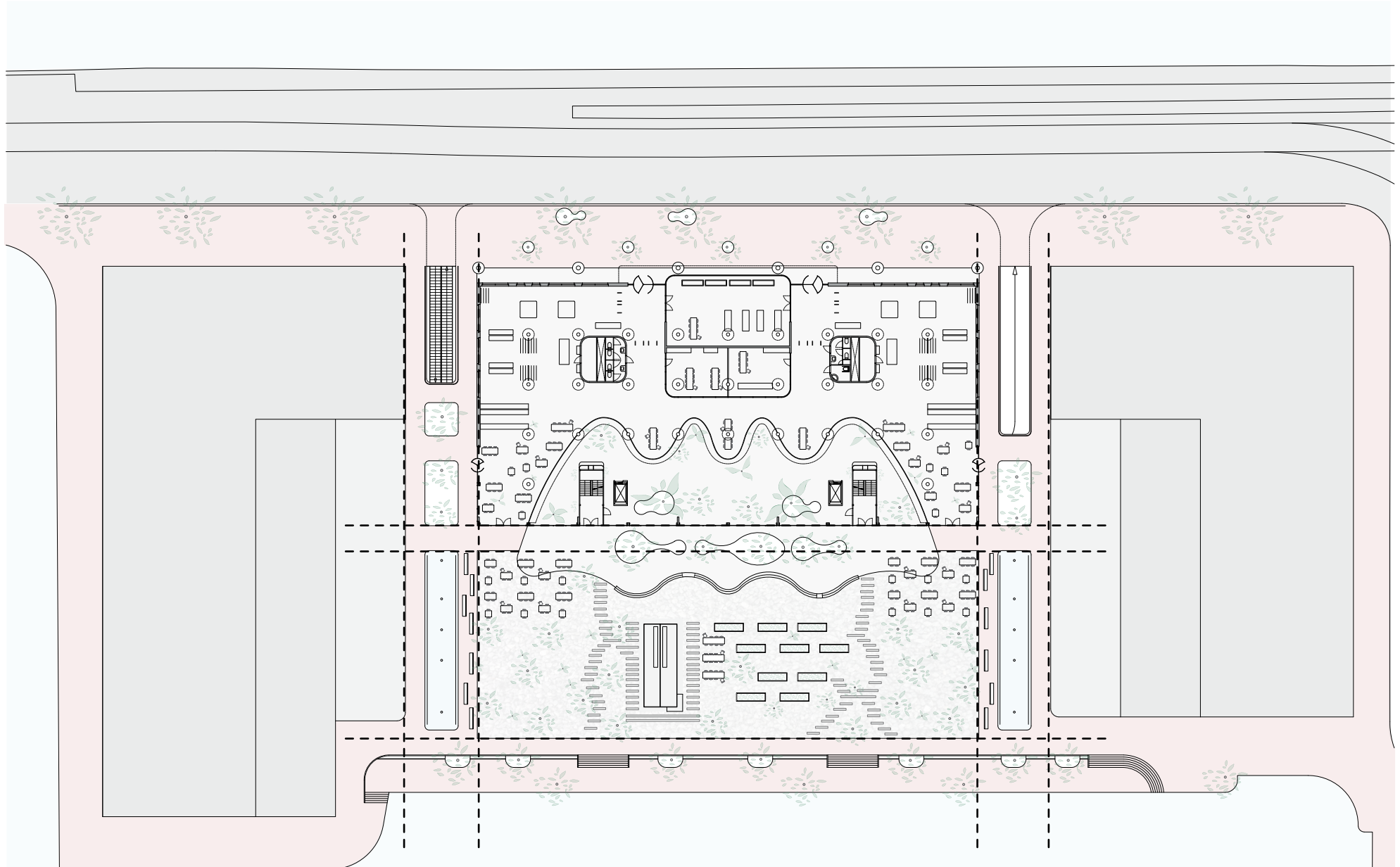
De StadsKas

Floorplan;
Square



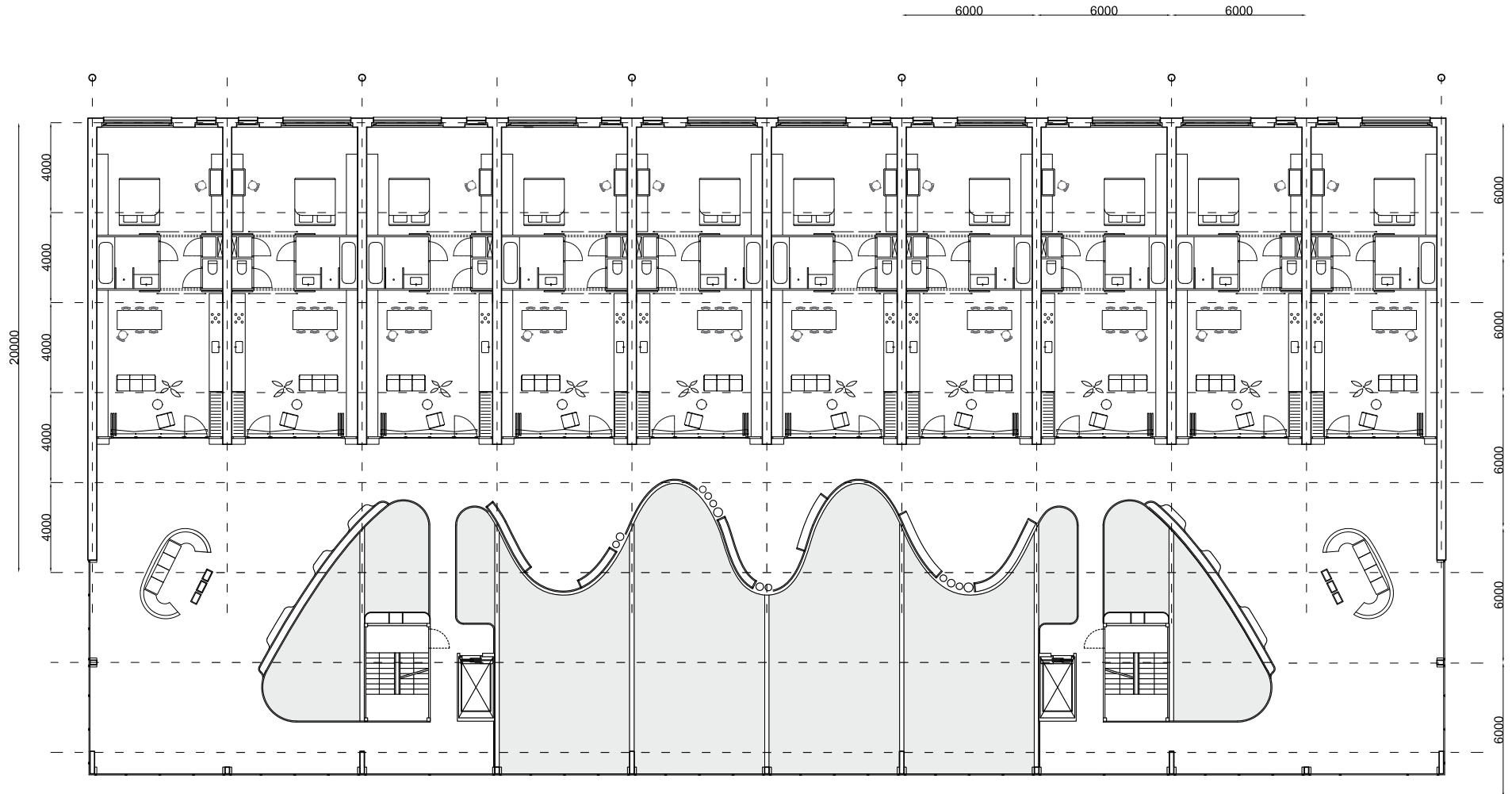
De StadsKas

Floorplan;
Square



De StadsKas

Floorplan;
First floor



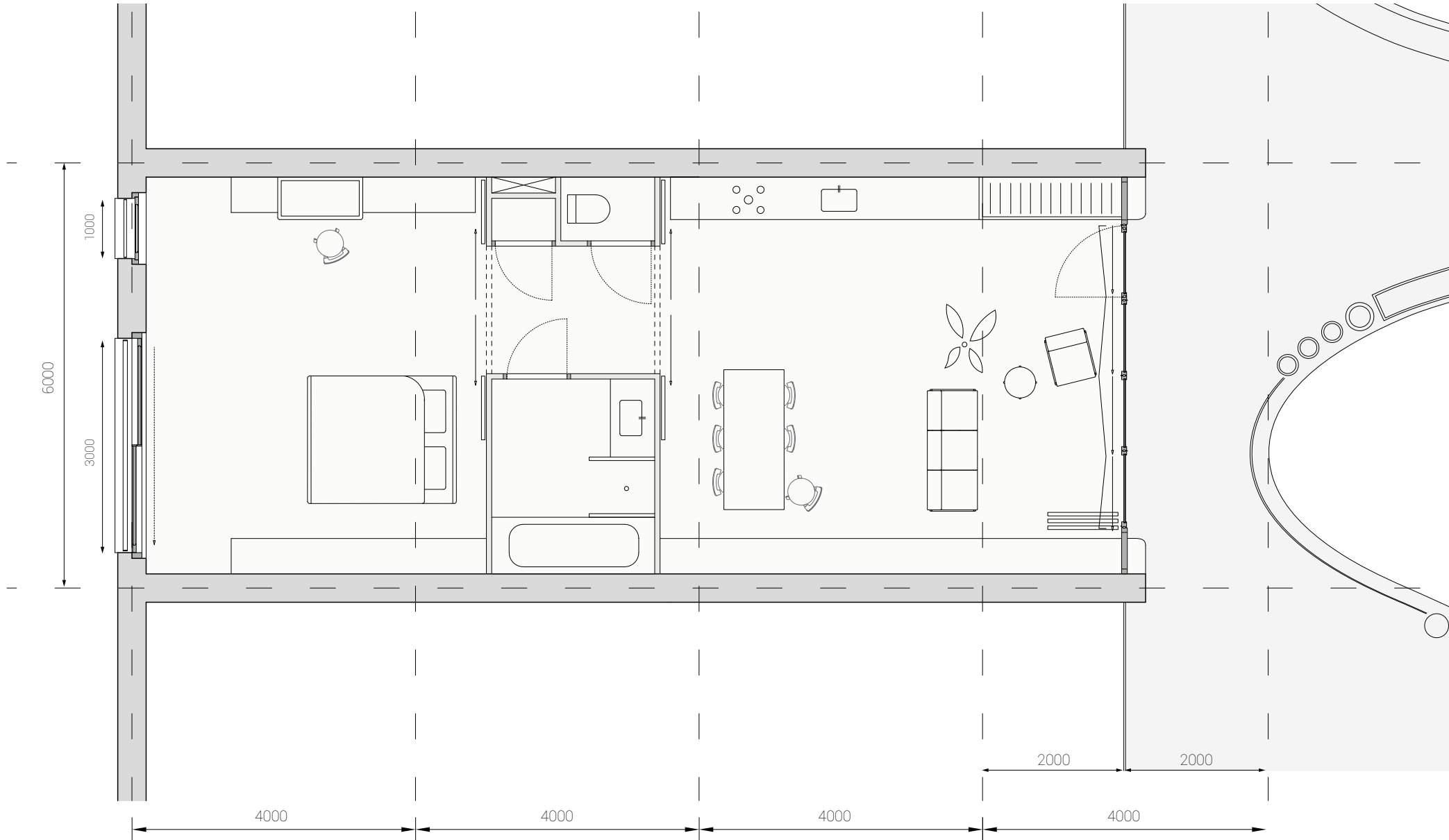
De StadsKas

Perspective;
First floor



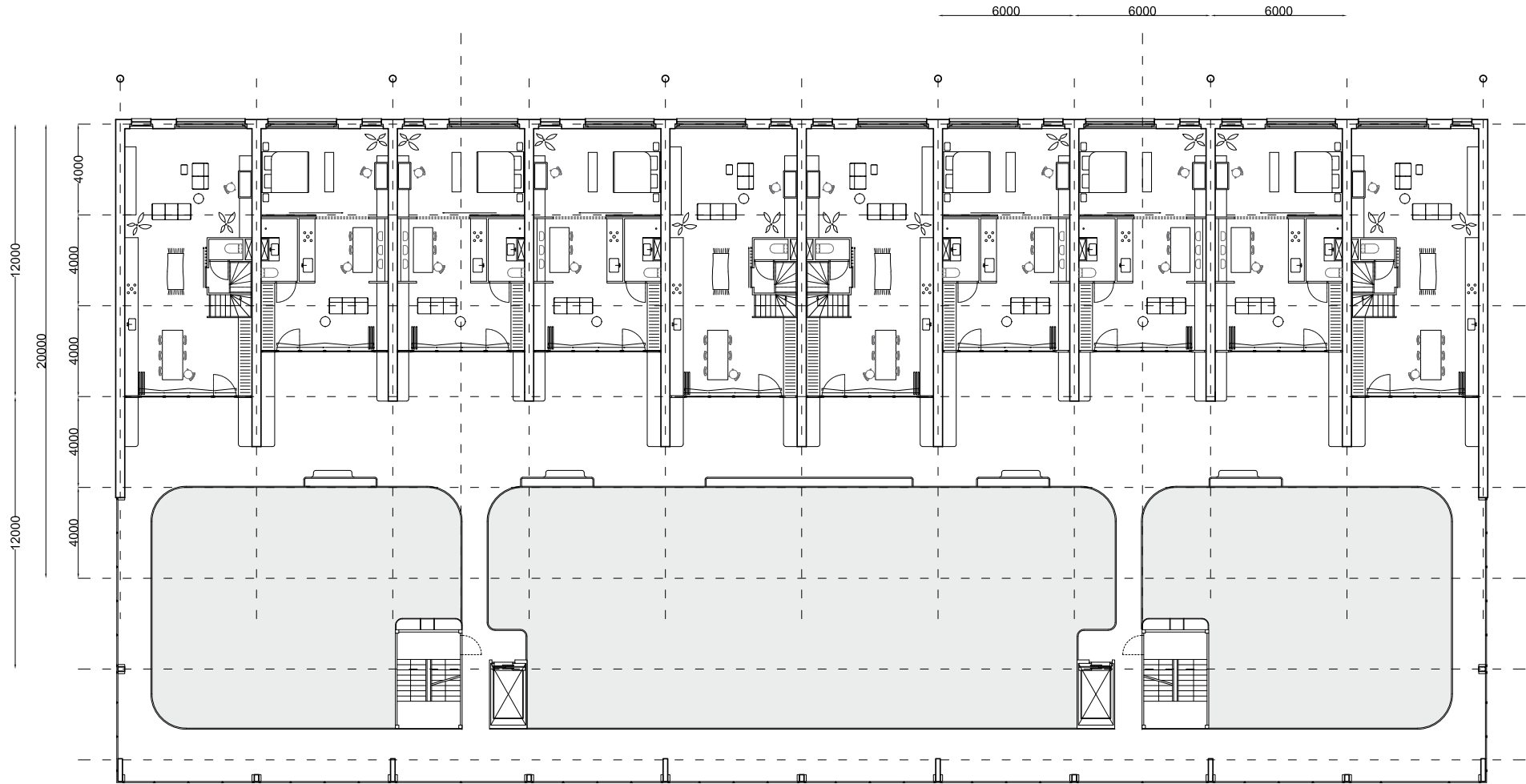
De StadsKas

Floorplan;
Apartment 85m²



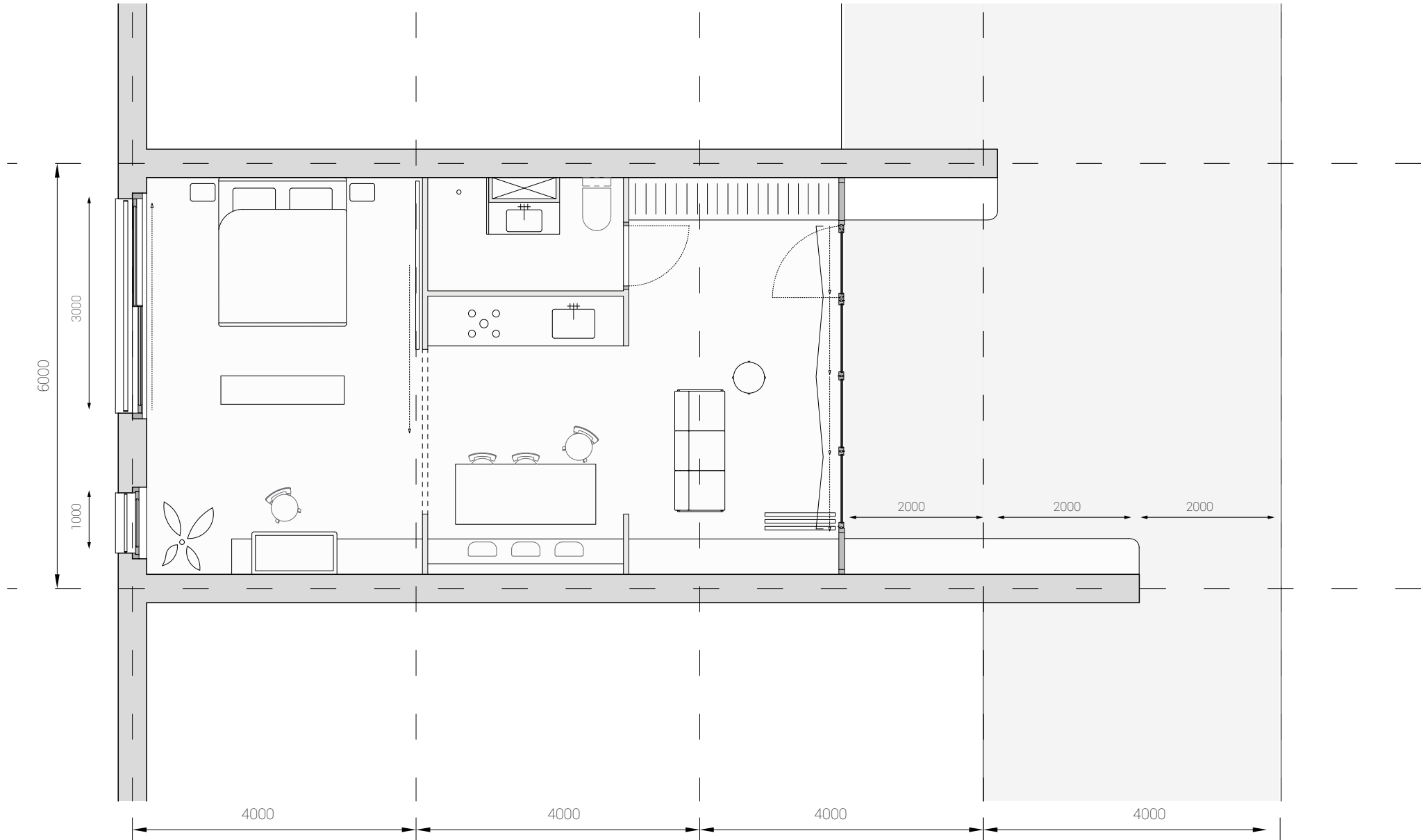
De StadsKas

Floorplan;
Second floor



De StadsKas

Floorplan;
Studio 50m²



De StadsKas

Perspective;
Studio 50m²



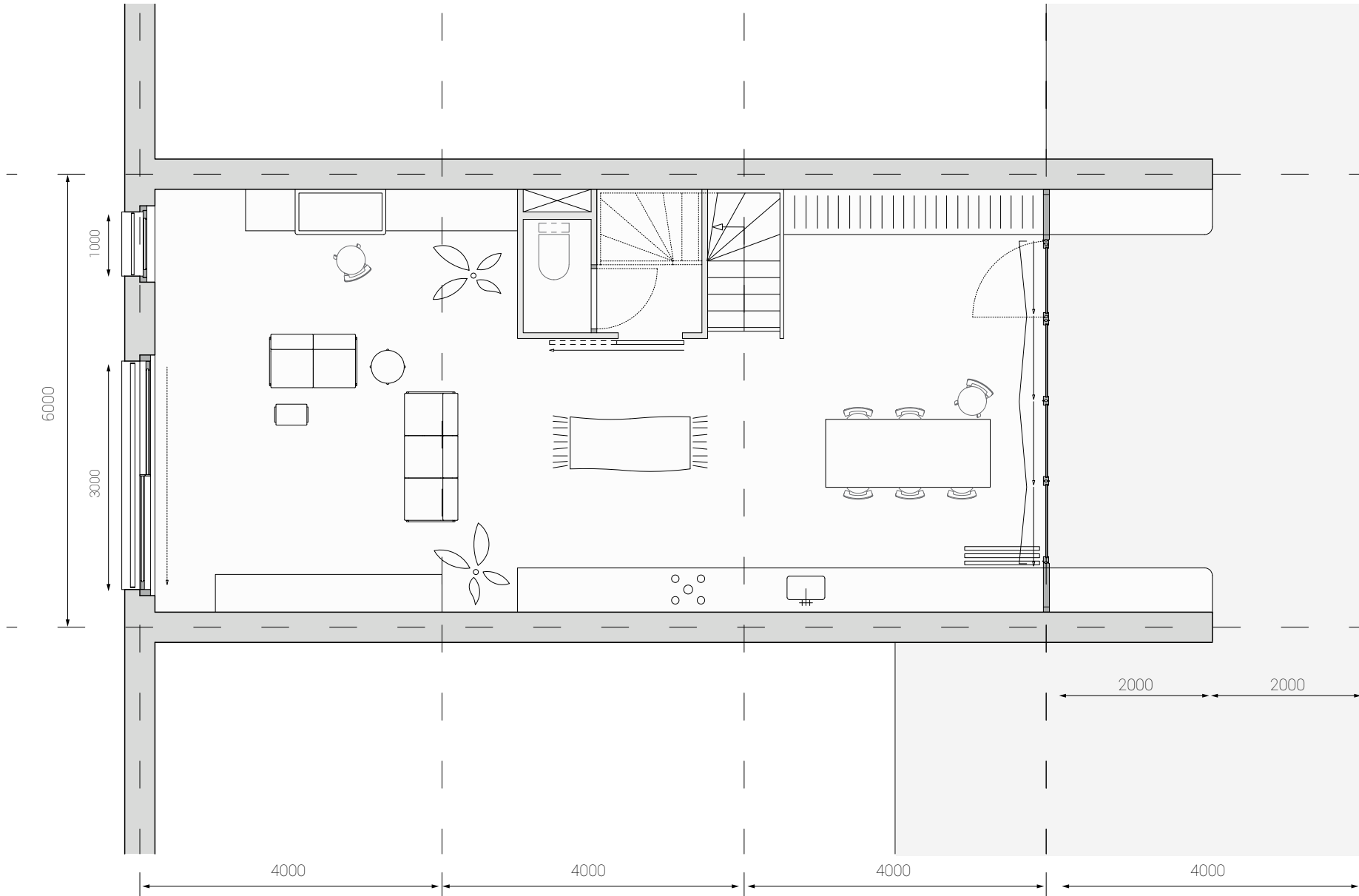
De StadsKas

Perspective;
Studio 50m²



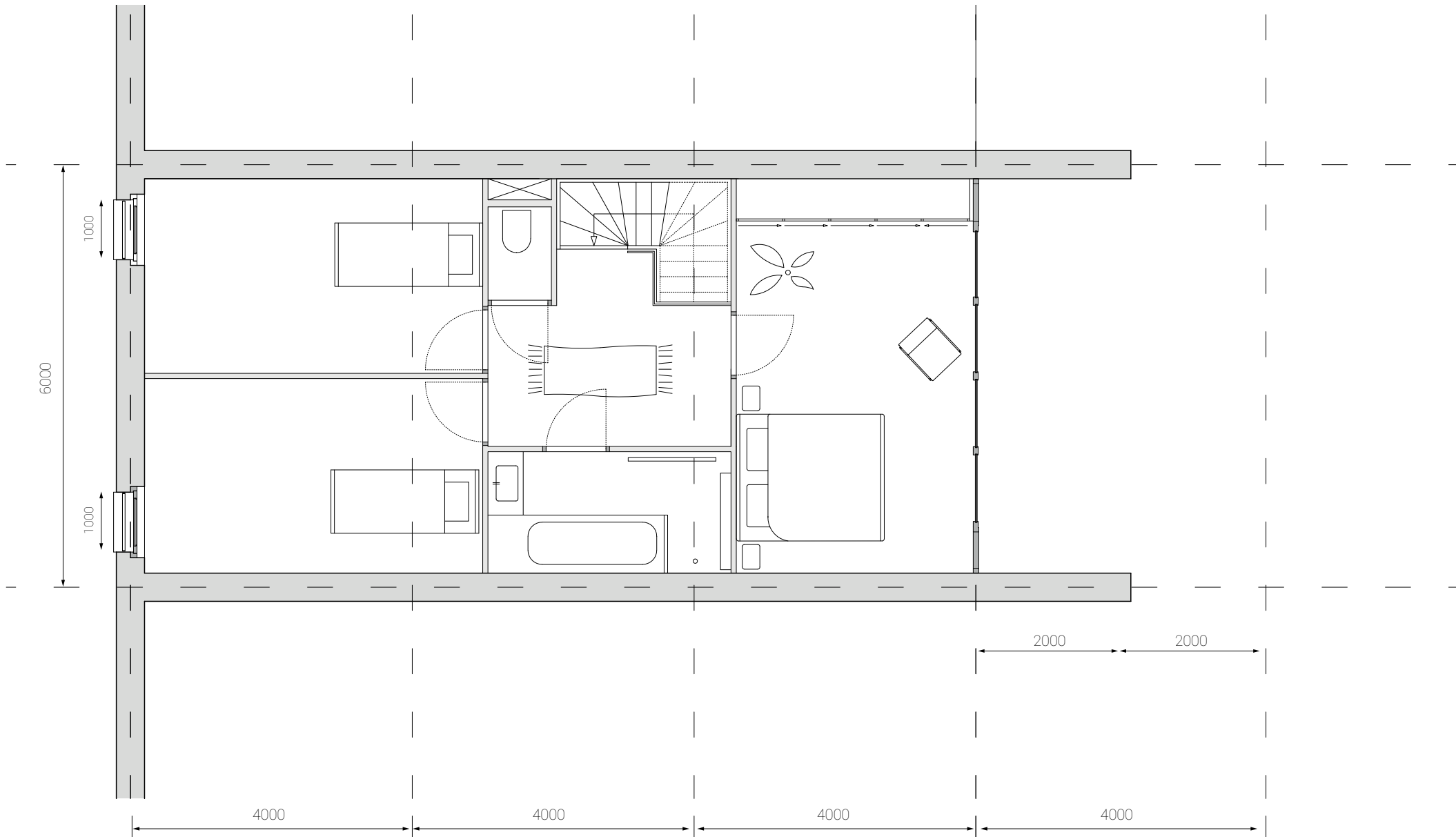
De StadsKas

Floorplan;
Maisonnette 2nd 145m²



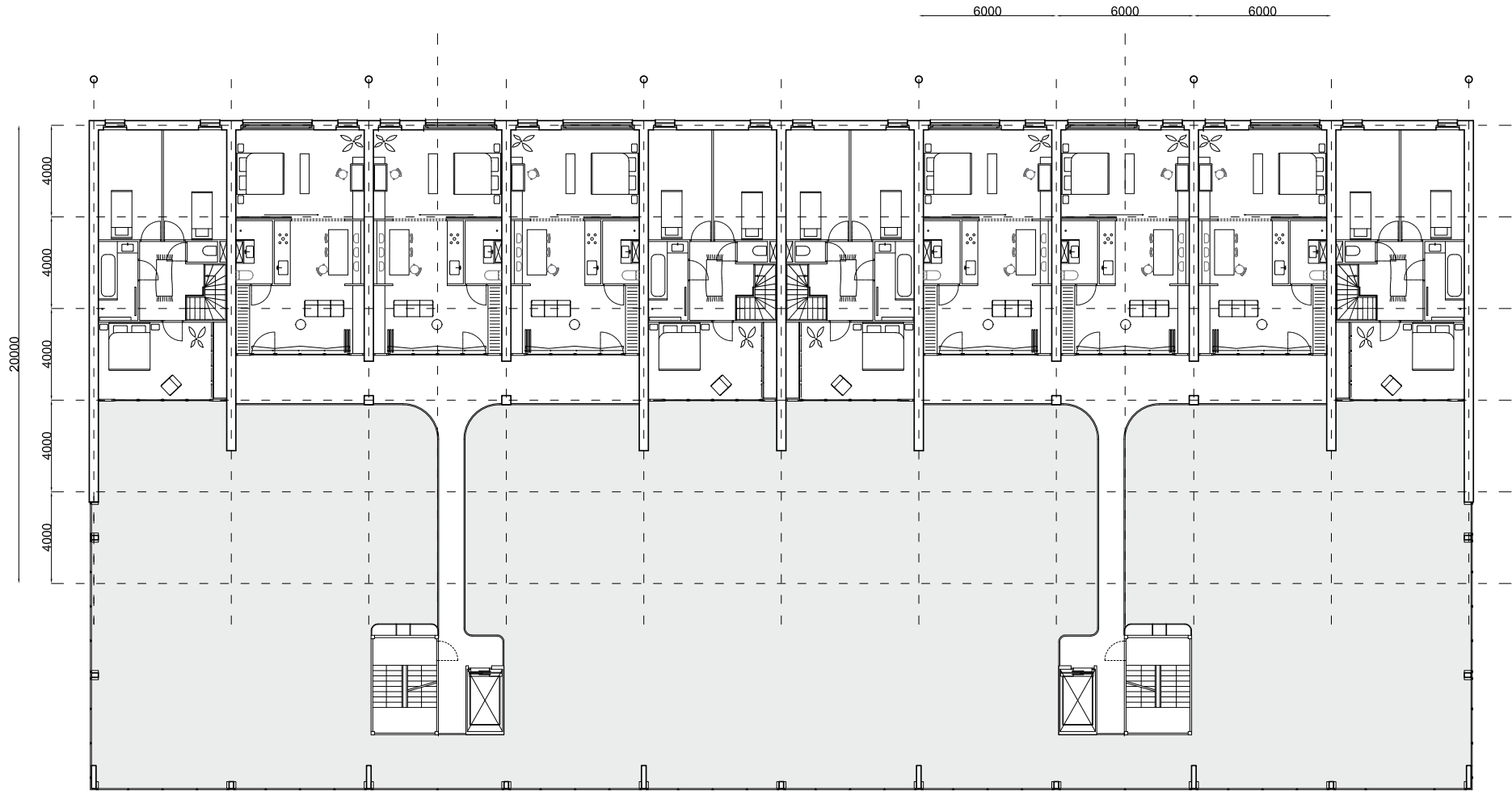
De StadsKas

Floorplan;
Maisonnette 3rd 145m²



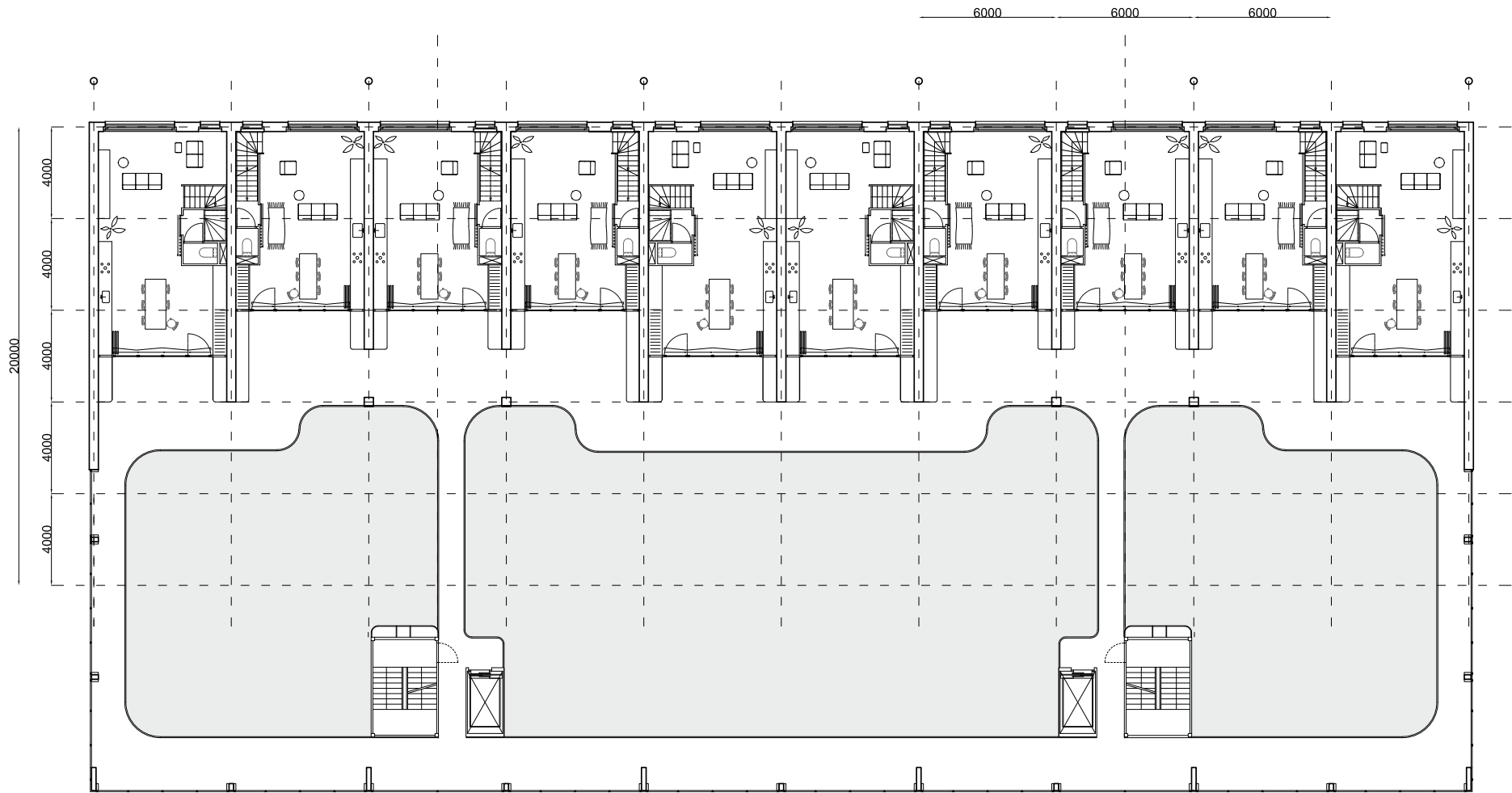
De StadsKas

Floorplan;
Third floor



De StadsKas

Floorplan;
Fourth floor



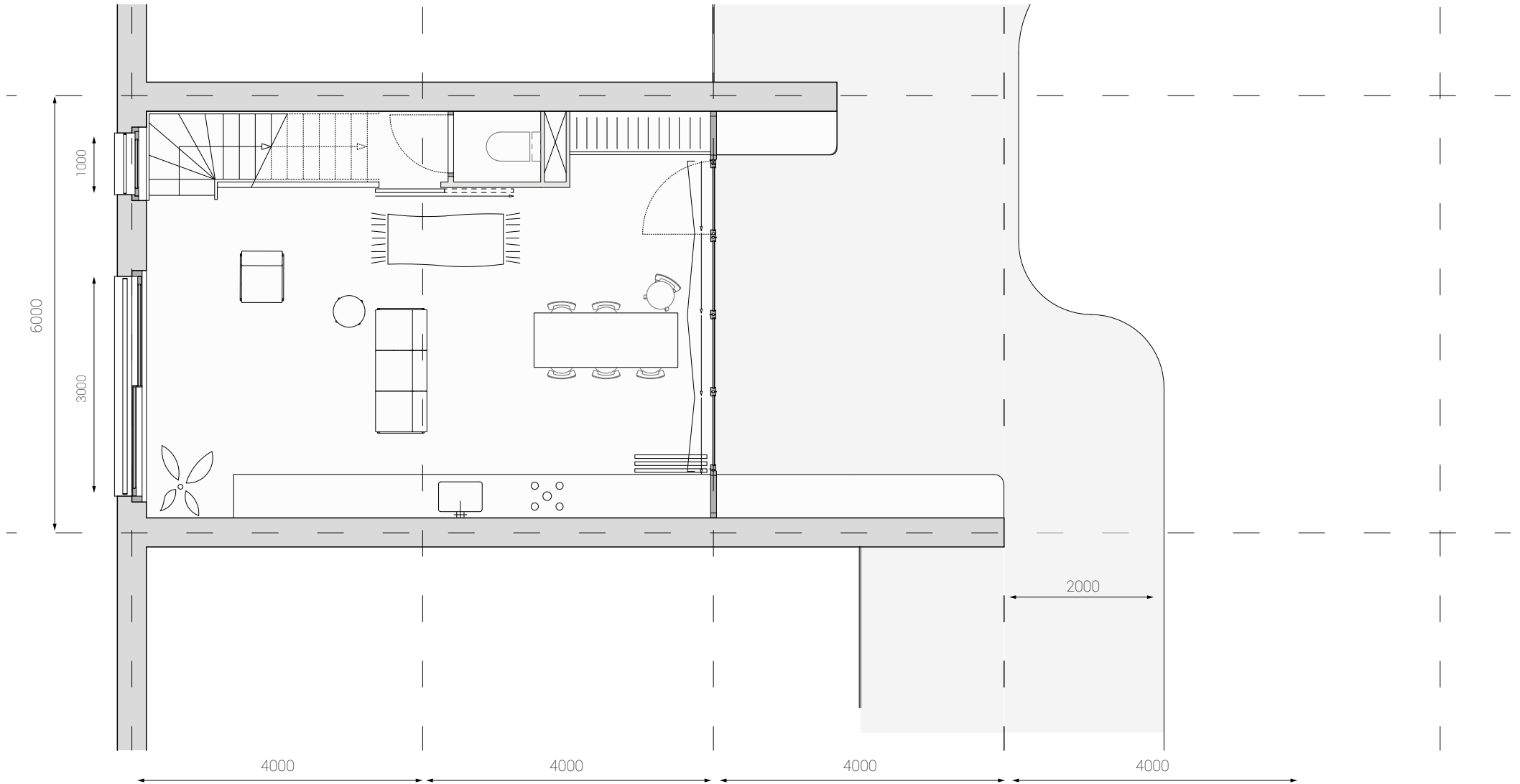
De StadsKas

Perspective;
Fourth floor



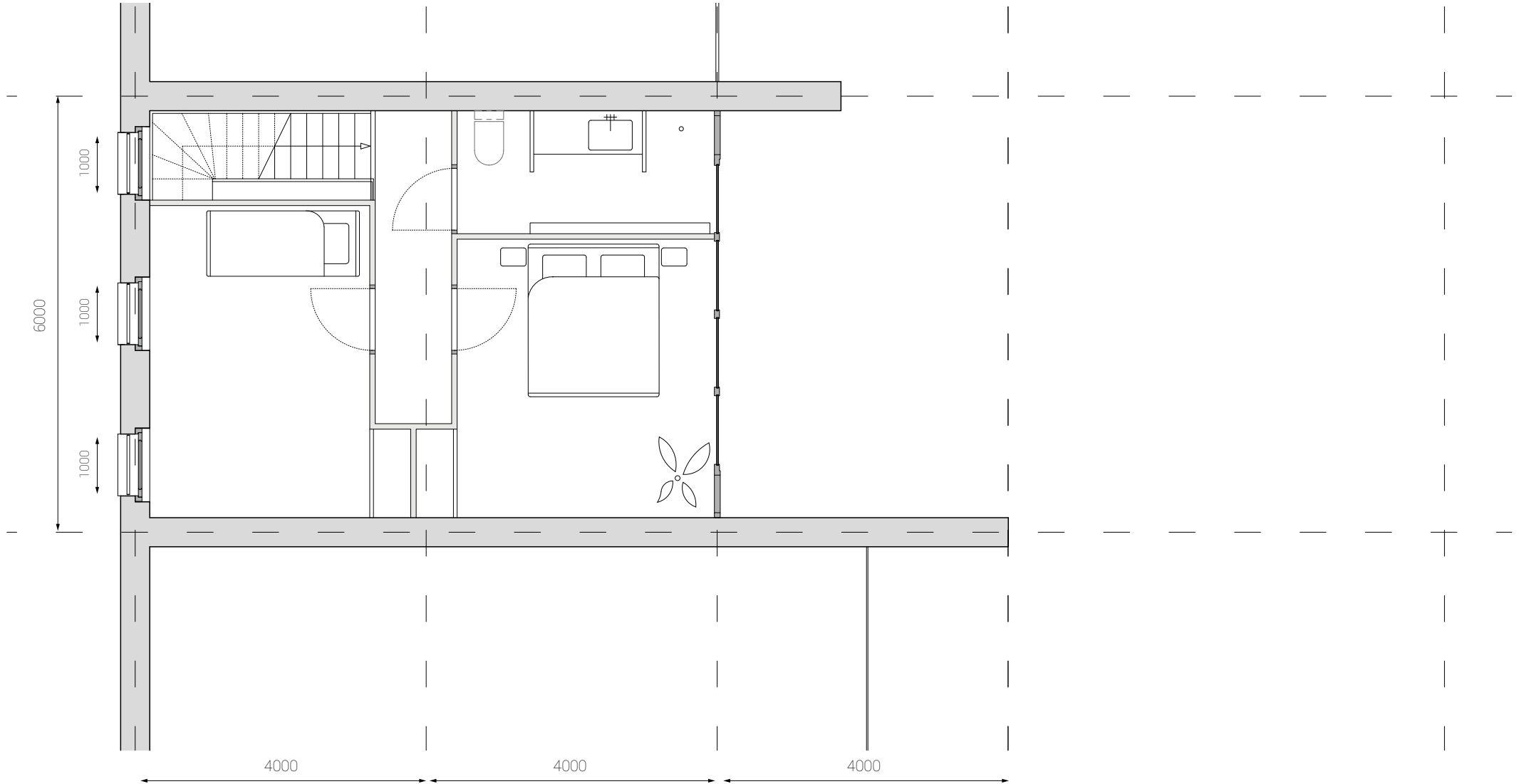
De StadsKas

Floorplan;
Maisonnette 4th 90 m2



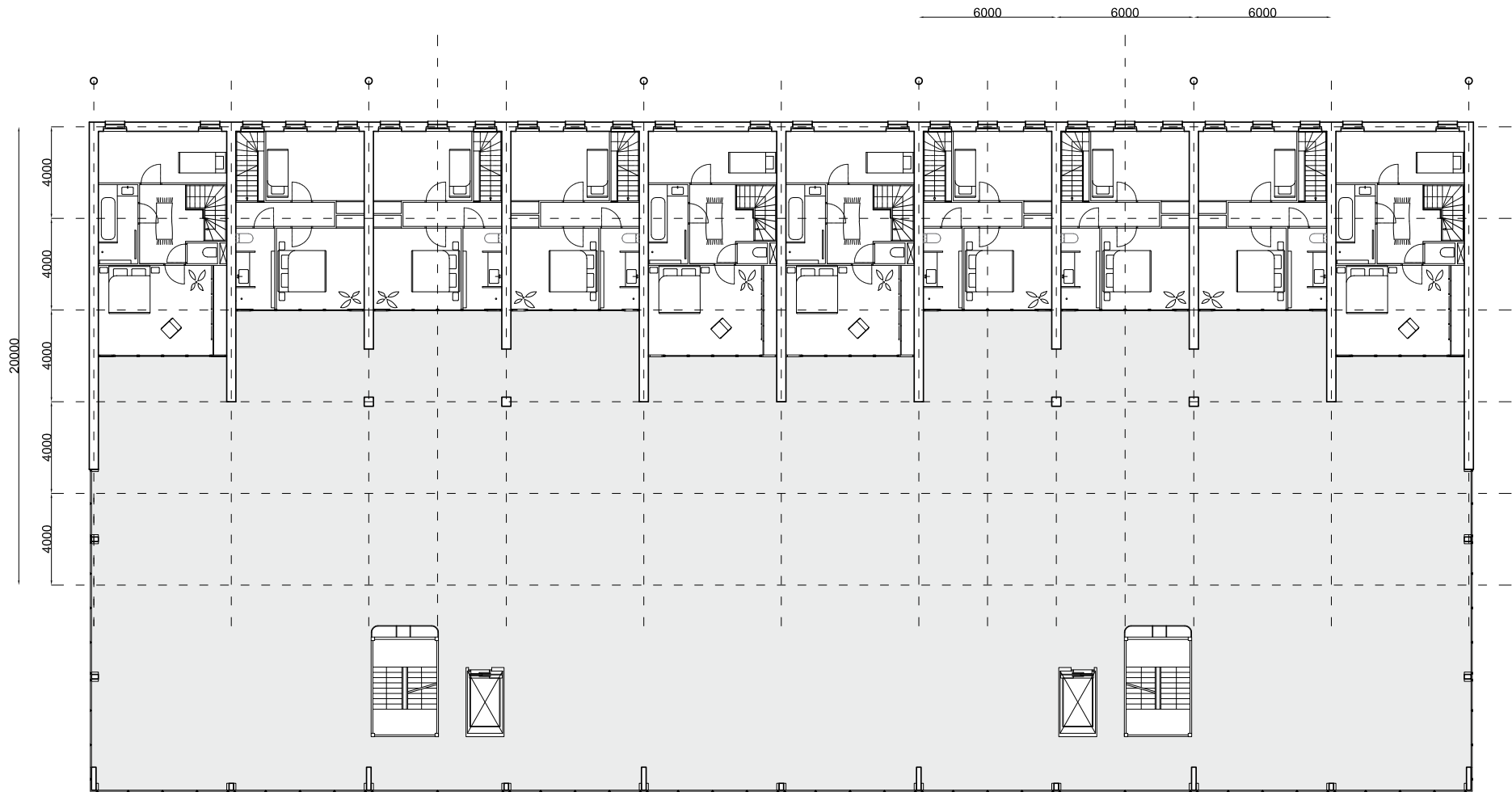
De StadsKas

Floorplan;
Maisonnette 5th 90 m2



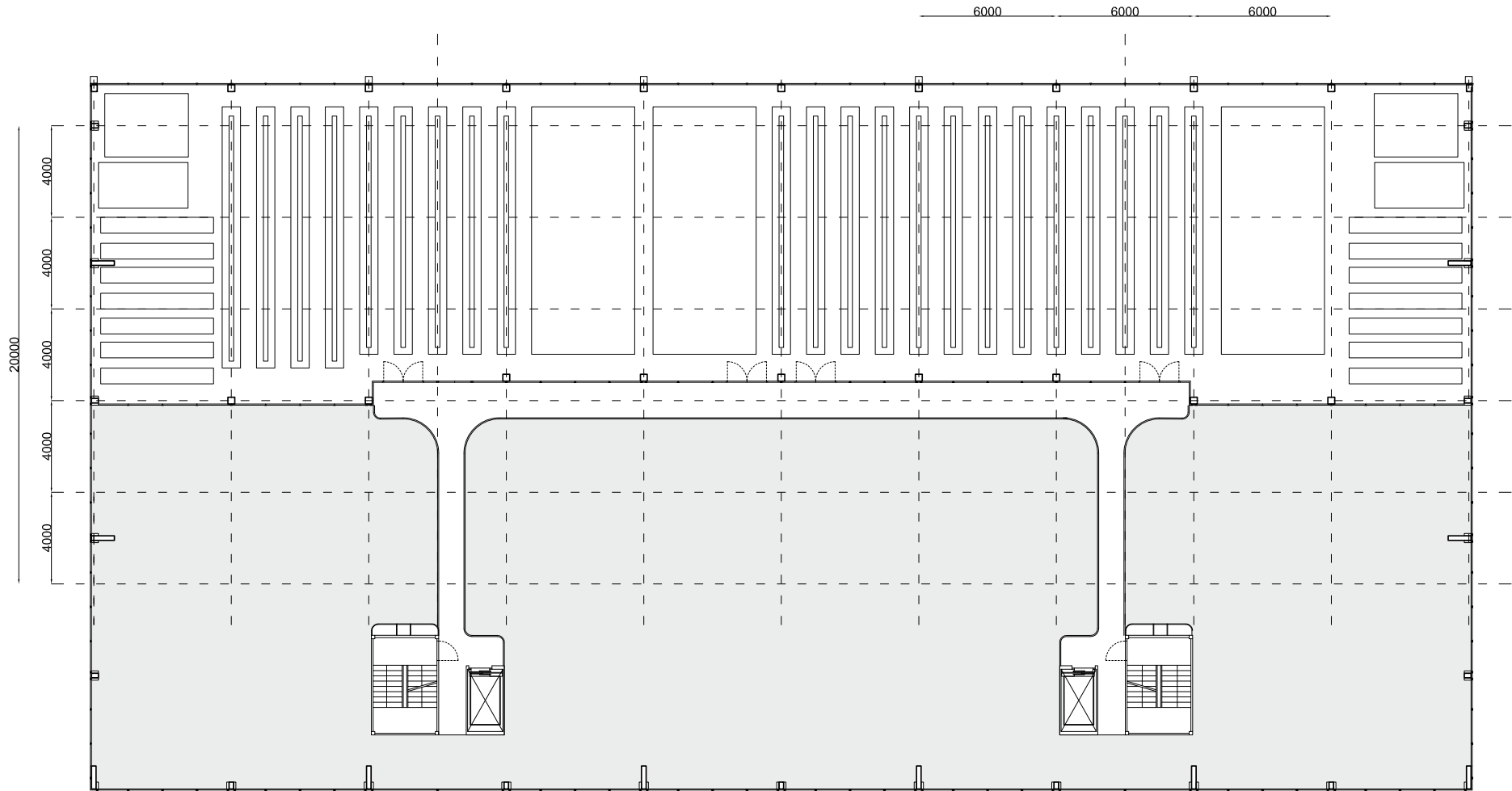
De StadsKas

Floorplan;
Fifth floor



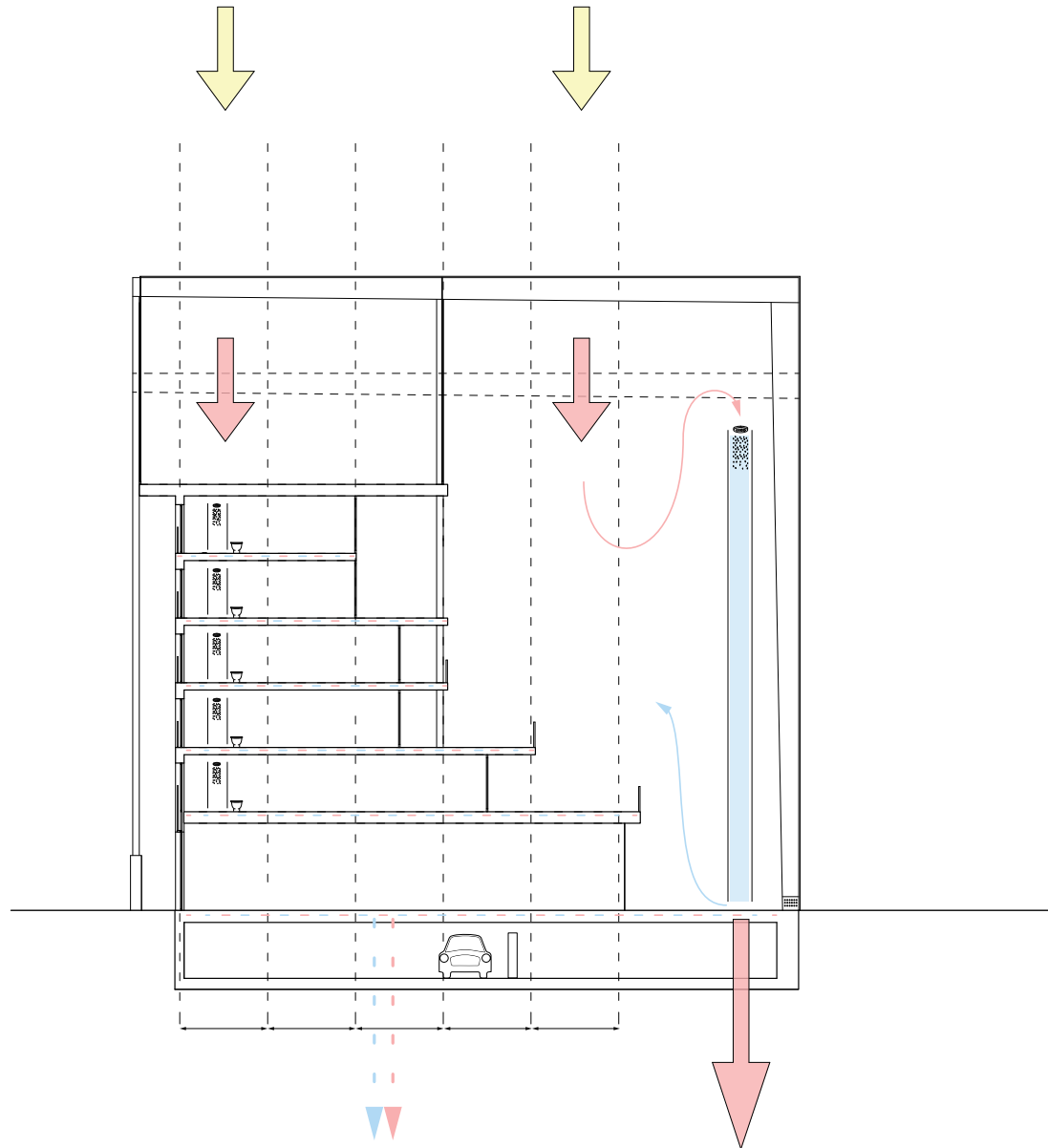
De StadsKas

Floorplan;
sixth floor Greenhouse



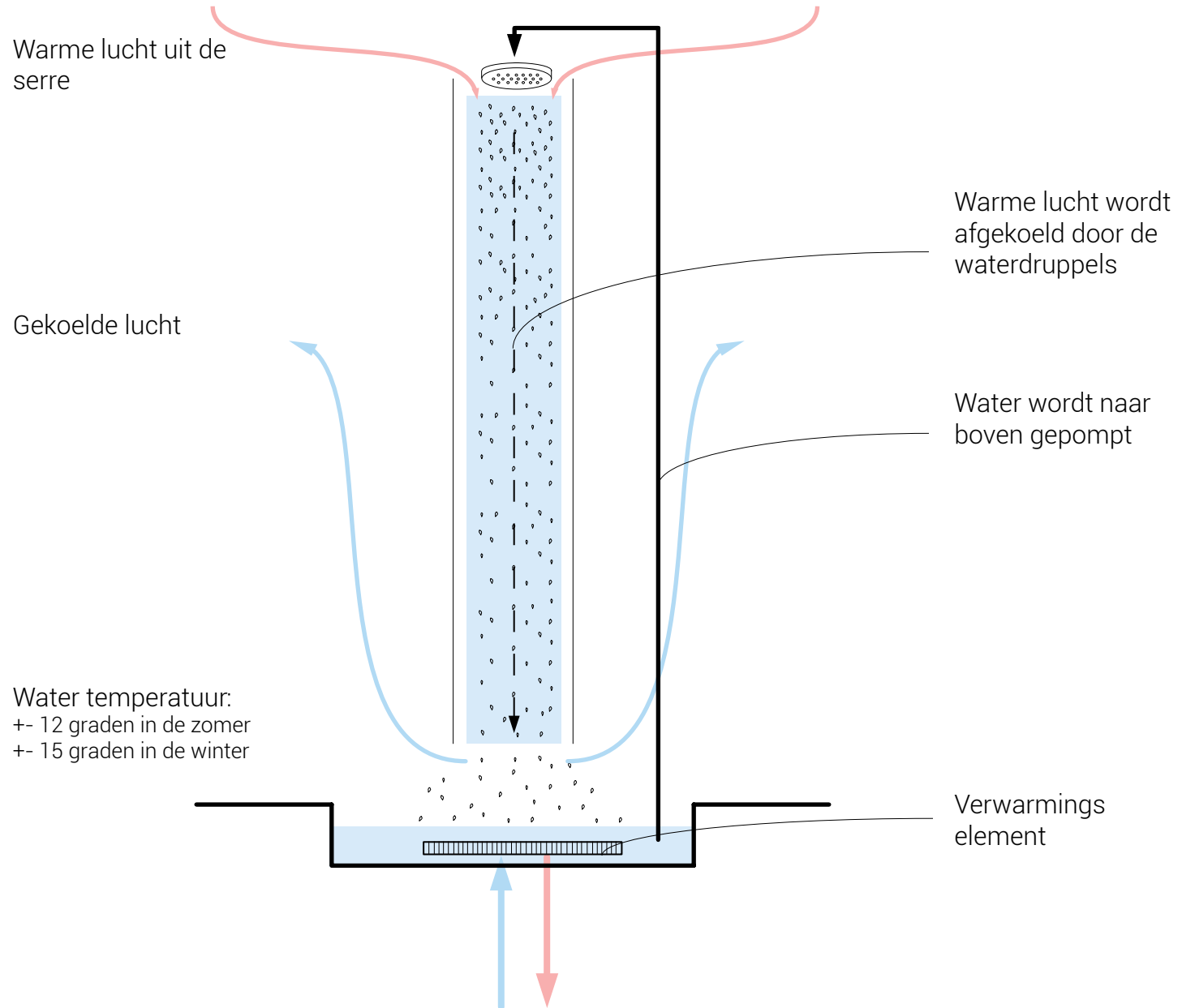
De StadsKas

Climate



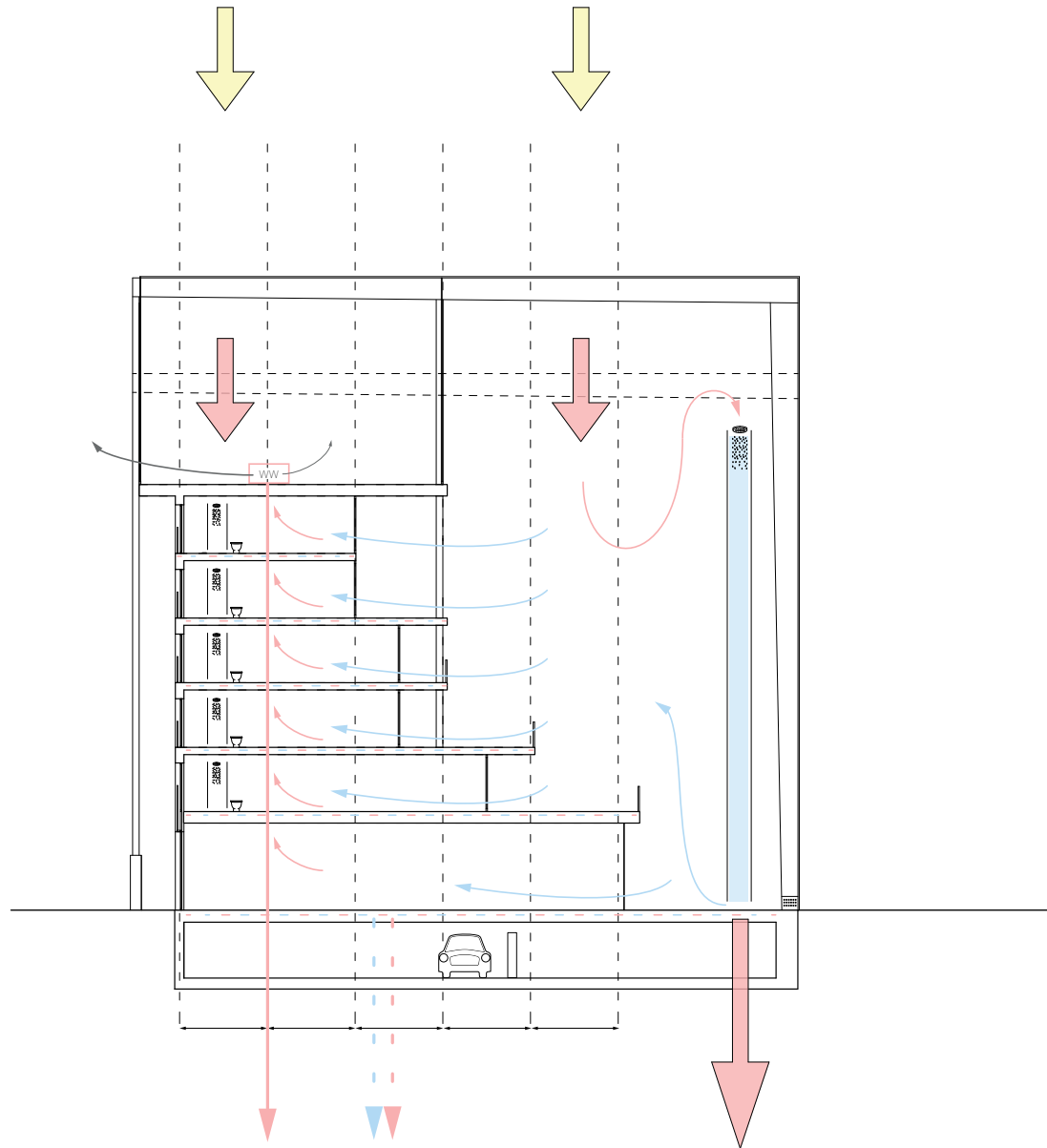
De Stads Kas

Climate;
Climate Cascade



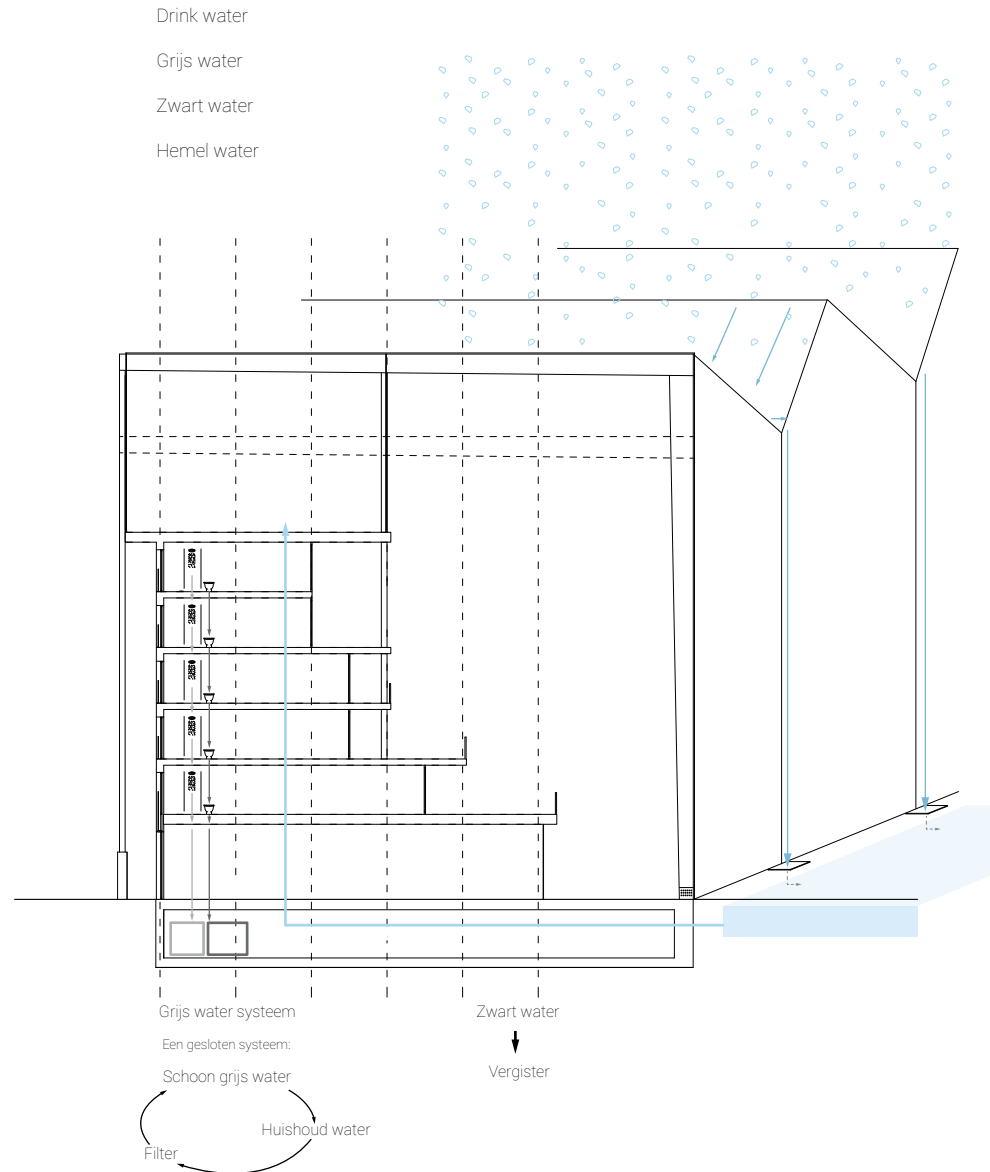
De Stads Kas

Climate



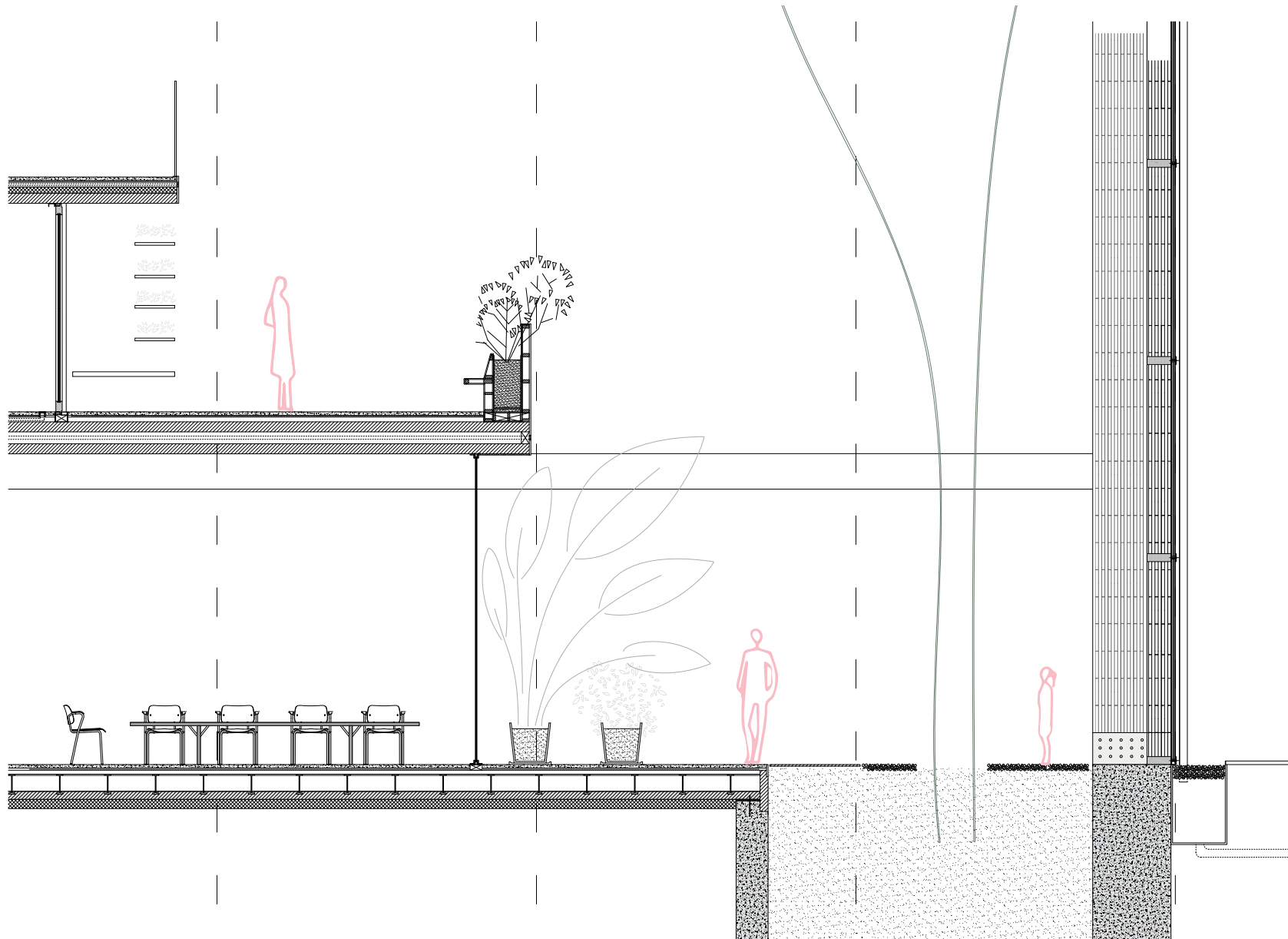
De Stads Kas

Climate;
Water



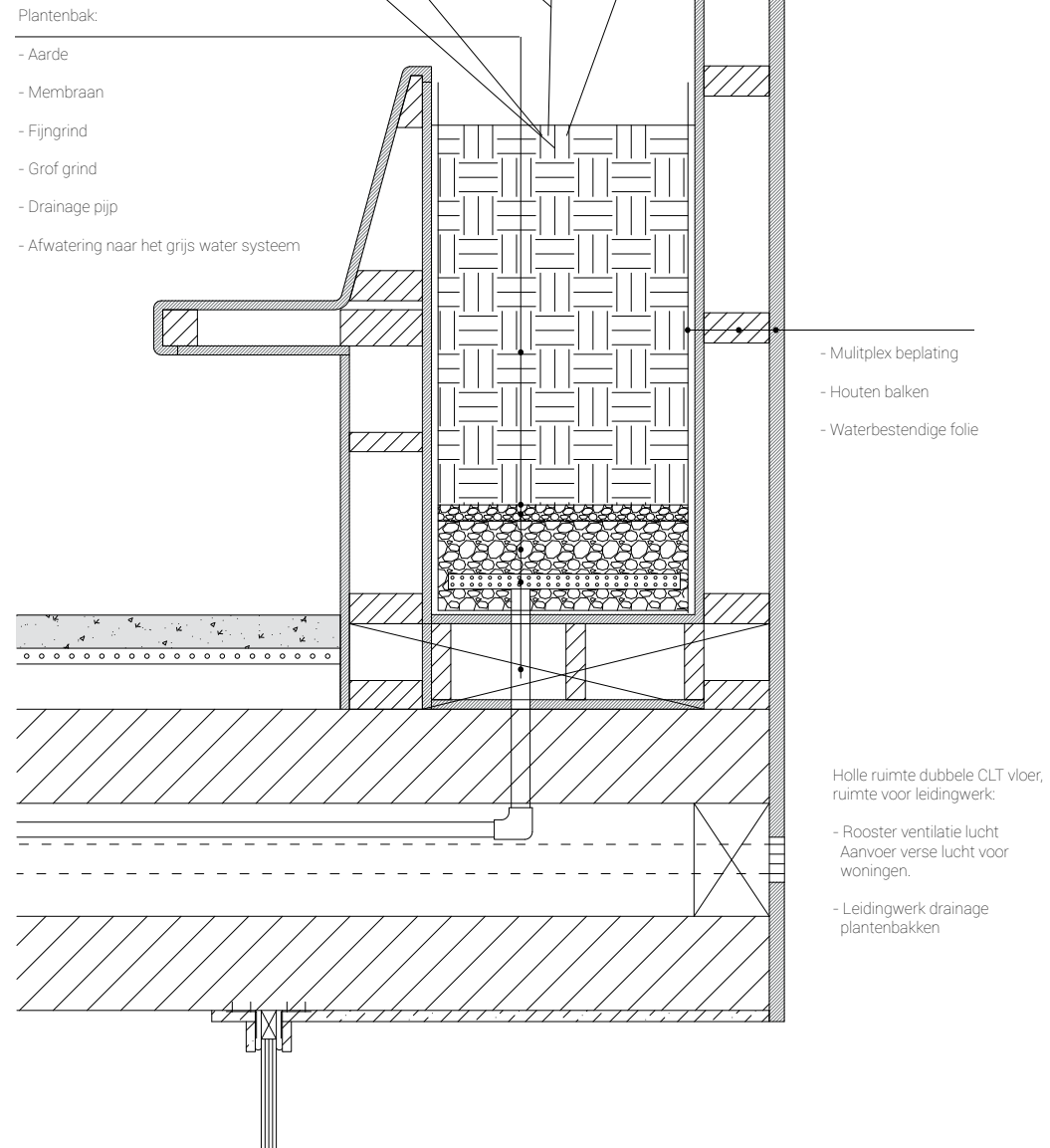
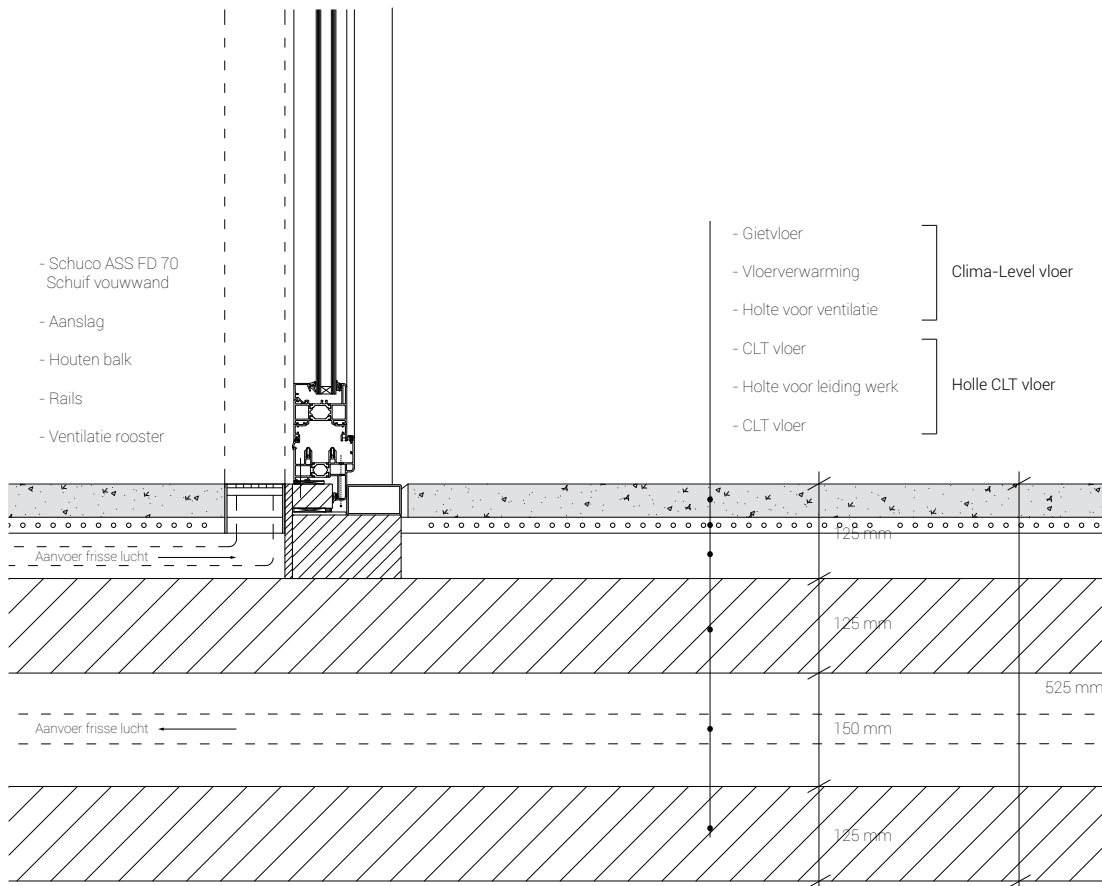
De Stads Kas

Structure;
1.20 Section



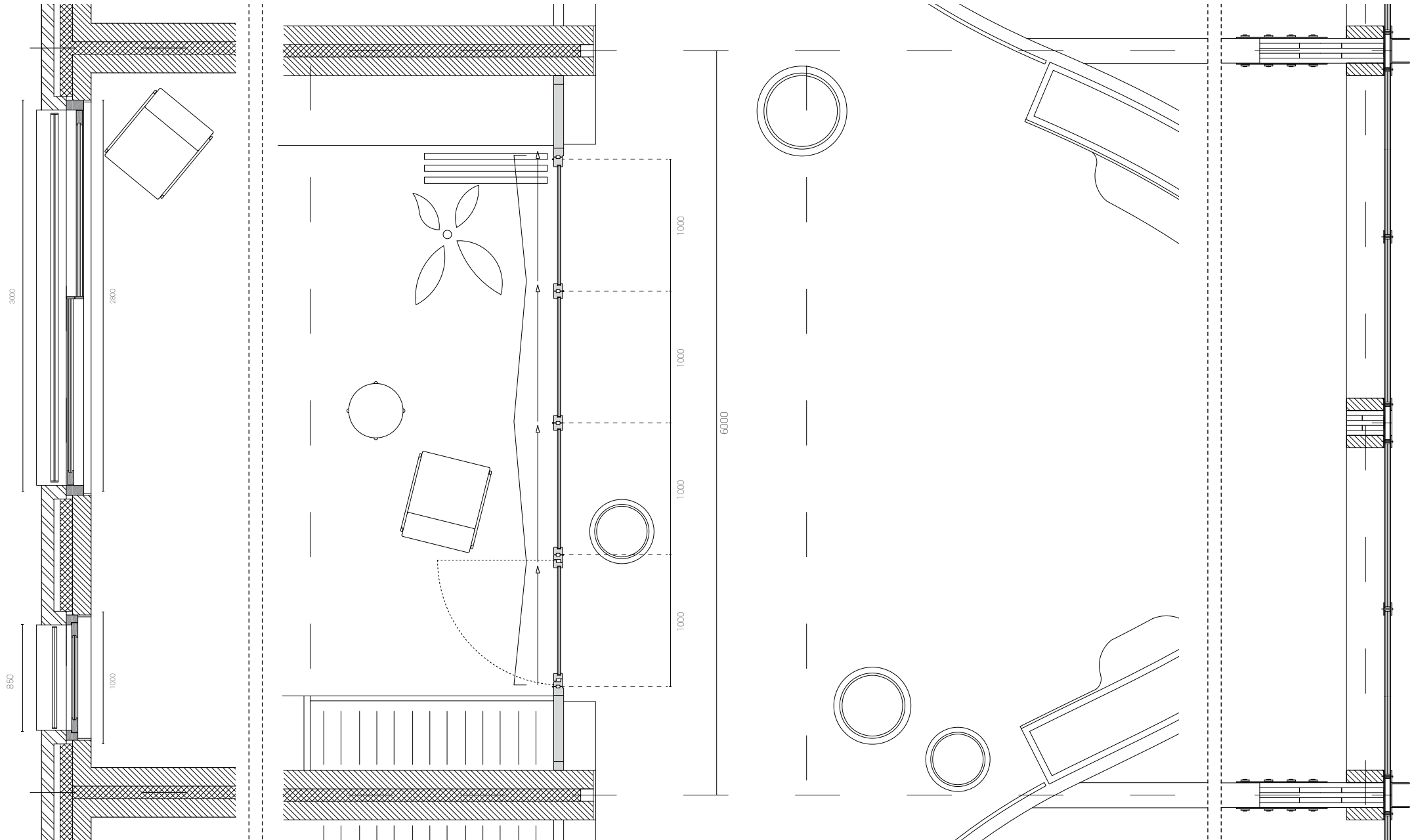
De Stads Kas

Structure;
1.5 Details



De Stads Kas

Structure;
Plan section 1.20



De Stads Kas

Zoom-in's Facades; Park Facade



De Stads Kas

Zoom-in's Facades; City Facade



De StadsKas

Thank you!



De StadsKas

Thank you!



De StadsKas

Thank you!



De StadsKas

Thank you!



De StadsKas

Thank you!

