

Heesterveld - In gelul kan je niet wonen

A case for affordability in 1980's Dutch housing



Walk-up entrance at Heesterveld, Beeldbank Amsterdam

Thijs Blom / 4476425

Studio / New Heritage

Tutors / Uta Pottgieser (Arch.) & Ger Warries (BT)

May 19th, 2021

Contents

Intro

Heesterveld
New Heritage

Research

Cultural value
Heritage value
Affordability

Design

Building analysis

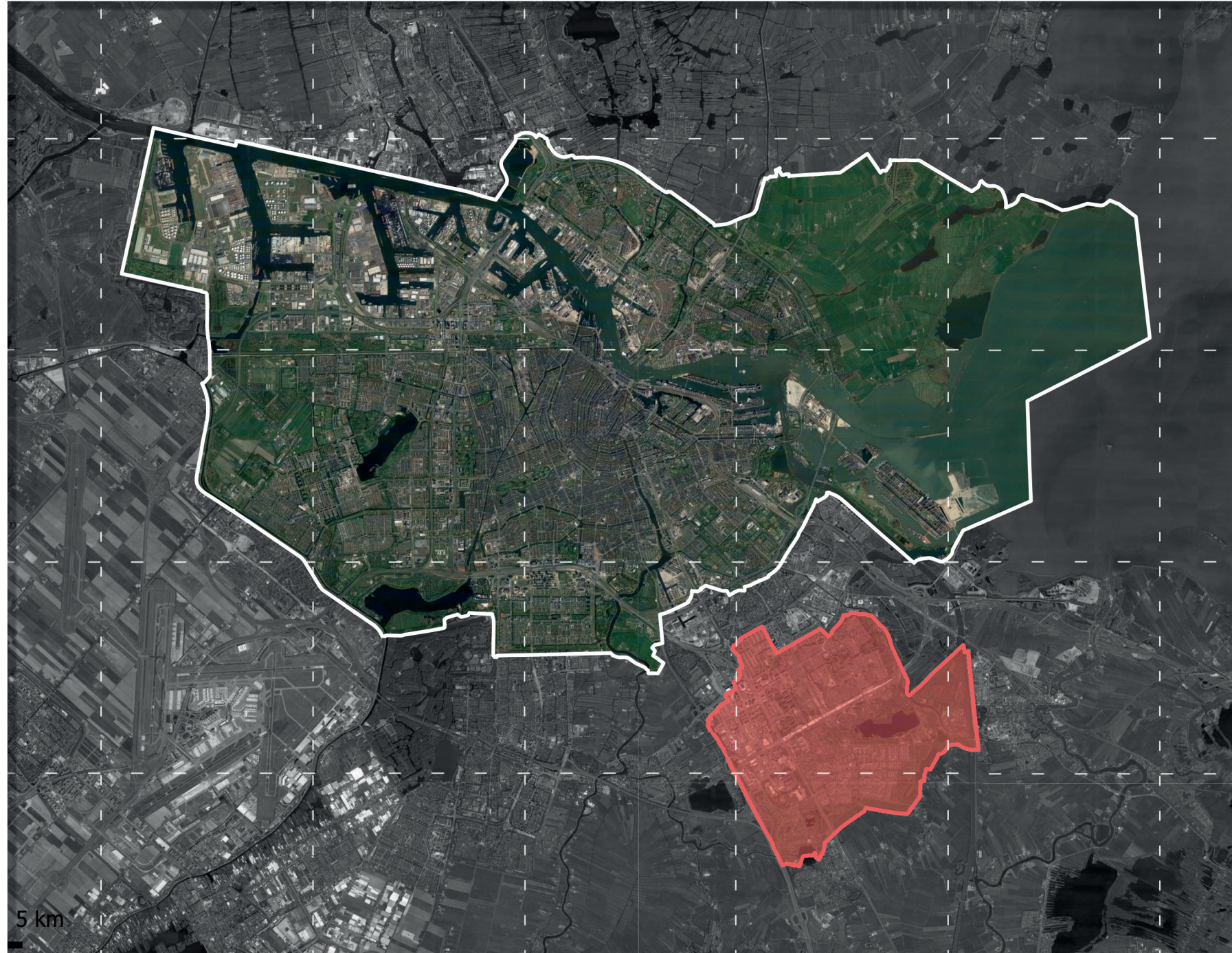
Design principles

Life on the ground
Life in between
Life on top

Reflection

Intro

Heesterveld / Amsterdam



Municipality of Amsterdam / 1:200.000, Bijlmermeer in red

Intro

Heesterveld / H-Buurt

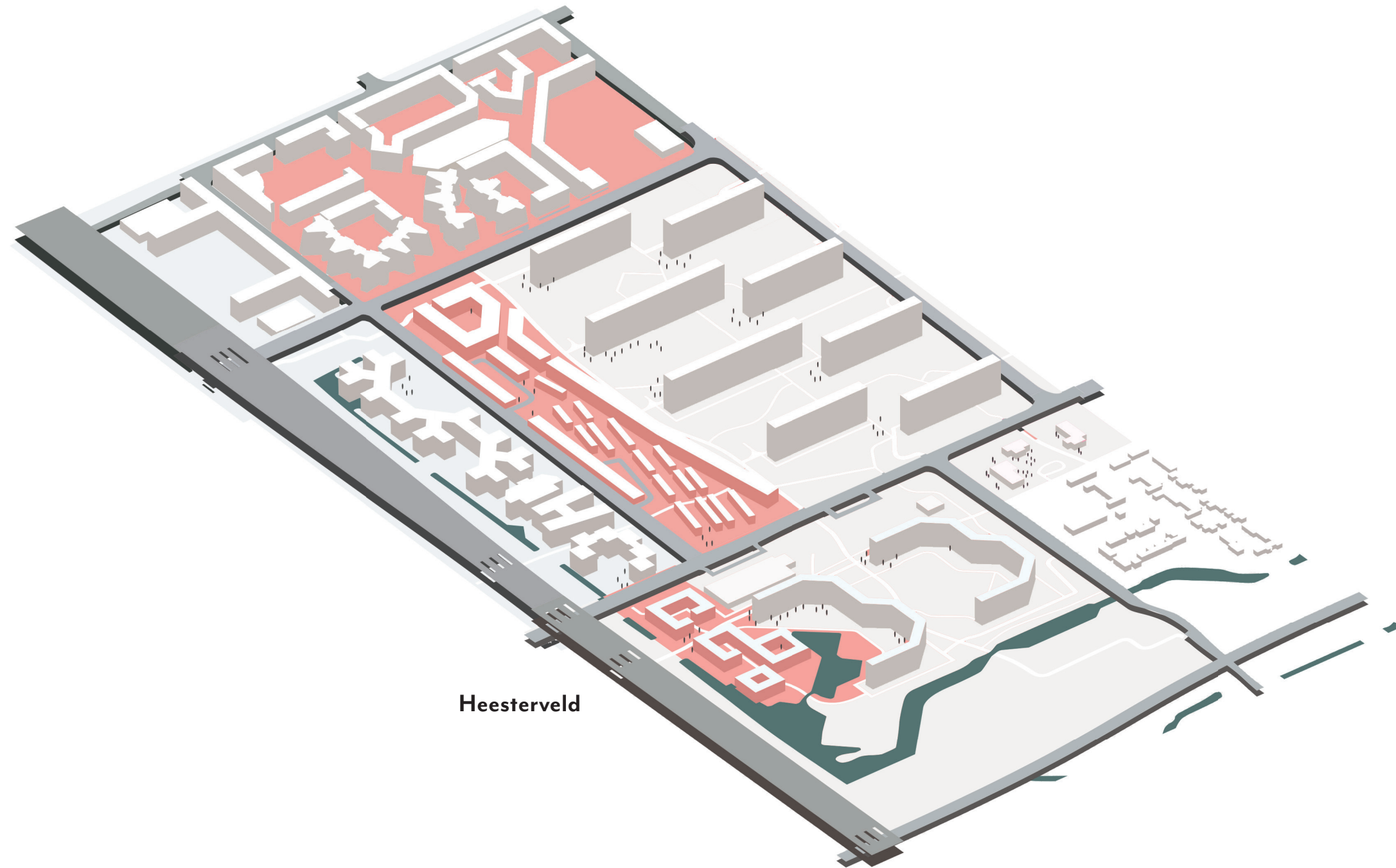


Image by Jonathan Verhoef

Intro

Heesterveld



1982
Frans van Gool

Four blocks
317 dwellings

Intro

New heritage

Is this heritage and to what extent does it merit preservation?



Courtyard at Heesterveld, Beeldbank Amsterdam



Courtyard at Heesterveld, Beeldbank Amsterdam

Research

Value?

{ Cultural value
anecdotal }

{ Heritage value
self determined }

Cultural & Heritage value

relate to

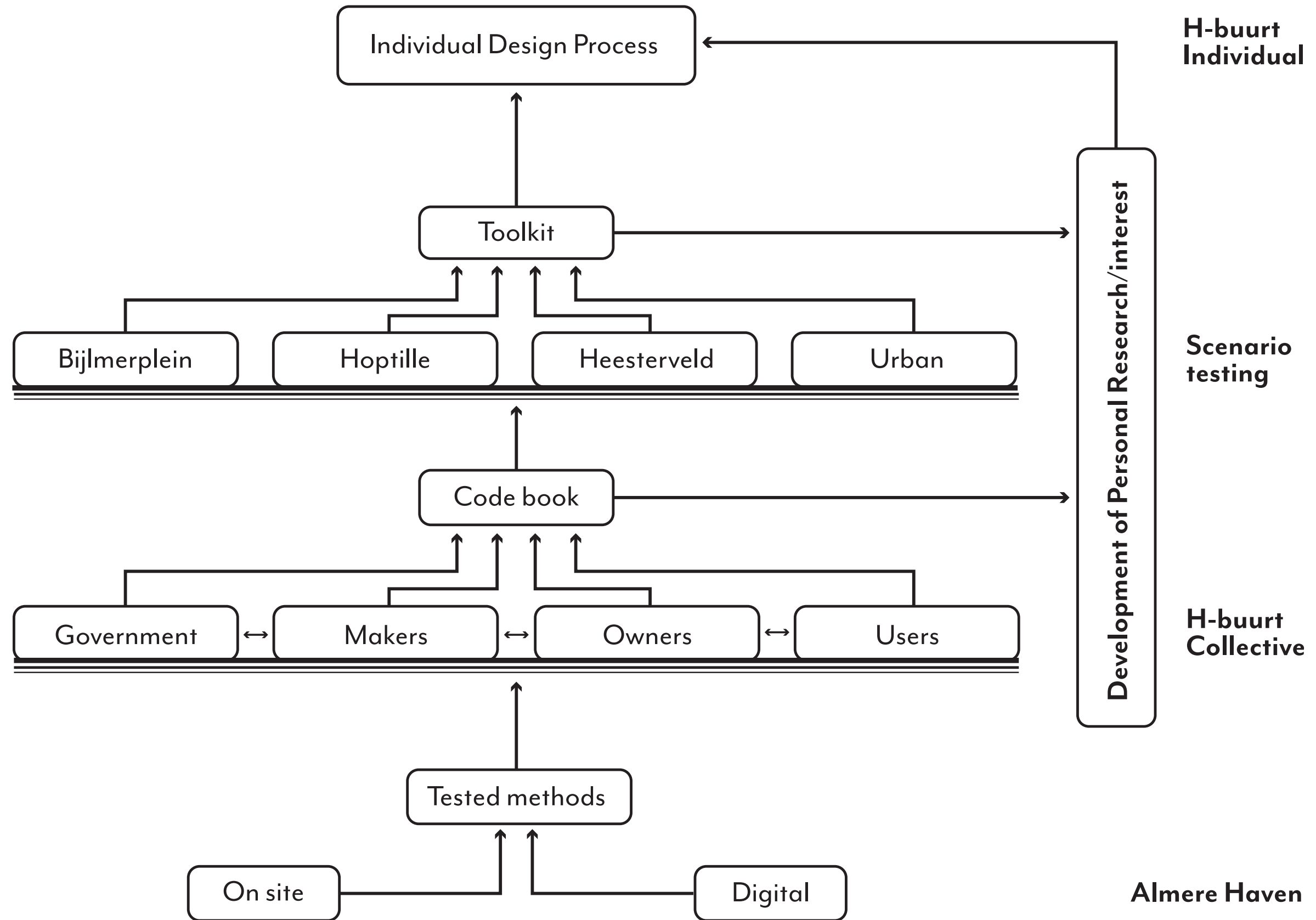
Attributes



Design interventions

Research

Cultural value / Methodology



Research

Cultural value / Fieldwork

What do you think of this image?



PHOTO 1 | BIJLMERPLEIN



PHOTO 2 | BIJLMERPLEIN



PHOTO 3 | HOPTILLE



PHOTO 4 | HOPTILLE



PHOTO 5 | HEESTERVELD

Research

Cultural value / Fieldwork

What do you think of this image?



PHOTO 1 | BIJLMERPLEIN



PHOTO 2 | BIJLMERPLEIN



PHOTO 3 | HOPTILLE



PHOTO 4 | HOPTILLE



PHOTO 5 | HEESTERVELD

Research

Cultural value



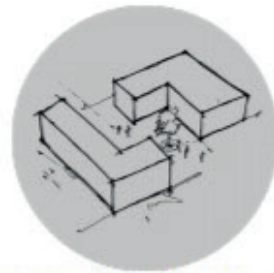
I heard that there used to be a pig roaming around here, and that there was a guy who had a barbeque that the entire pig would fit into. It was a terrible neighbourhood, so in the end they said “we have to demolish and rebuild, then it will be better”.

Research

Cultural value / Toolkit



1. 80's Architecture



2a. Diversity - in Public Space



2b. Diversity - Dwelling scale



2c. Diversity - In function



2d. Diversity - Cultural



3. Elevated level



4. Feeling of Safety



5. (In)formal economy



6a. Greenery - Lack of quality



6b. Greenery - Abundance of



7. Low - mid - high-rise



8a. Maintenance - Building



8b. Maintenance - Urban



9. Mistrust



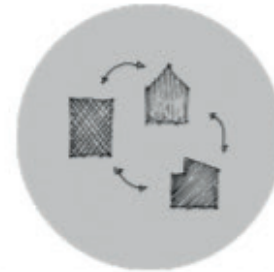
10. Nuisance of garbage



11. Sense of ownership



12. (Street)art



13. Three distinctive identities



14. Unintended use of public space

Themes H-buurt

Research

Heritage value / Framework

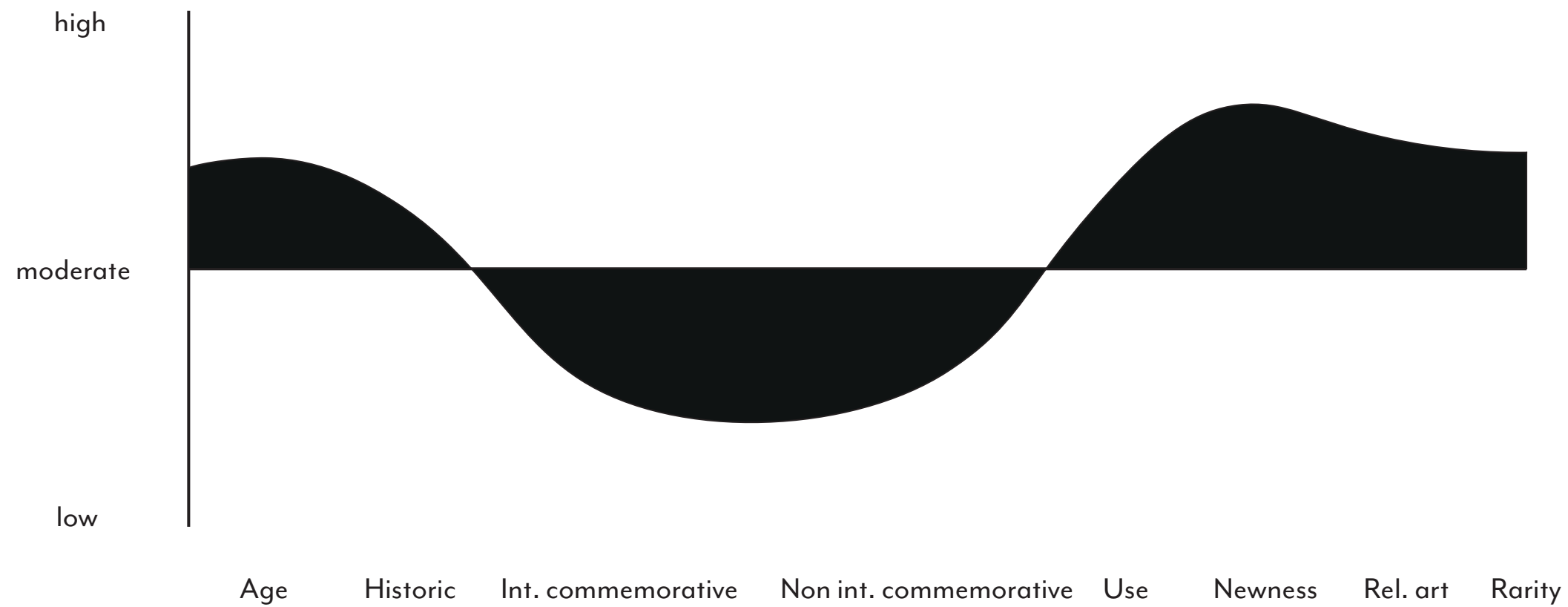
Riegl values

Brand layers

	Age value	Historical value	Intentional commemorative value	Non intentional commemorative value	Use value	Newness value	Relative art value	Rarity value
Surroundings		Anti-Bijlmer movement						
Site					Parking to courtyard			
Skin	Concrete aging	PoMo architecture Prefab façade system	Coloured façades			Coloured façades	Coloured façades	Coloured façades
Structure					Concrete tunnel construction			
Space plan								
Surfaces								
Services					Access system Shops			
Stuff		Window & doors			'Hijsbalk'			
Spirit of place			Signs creative community					

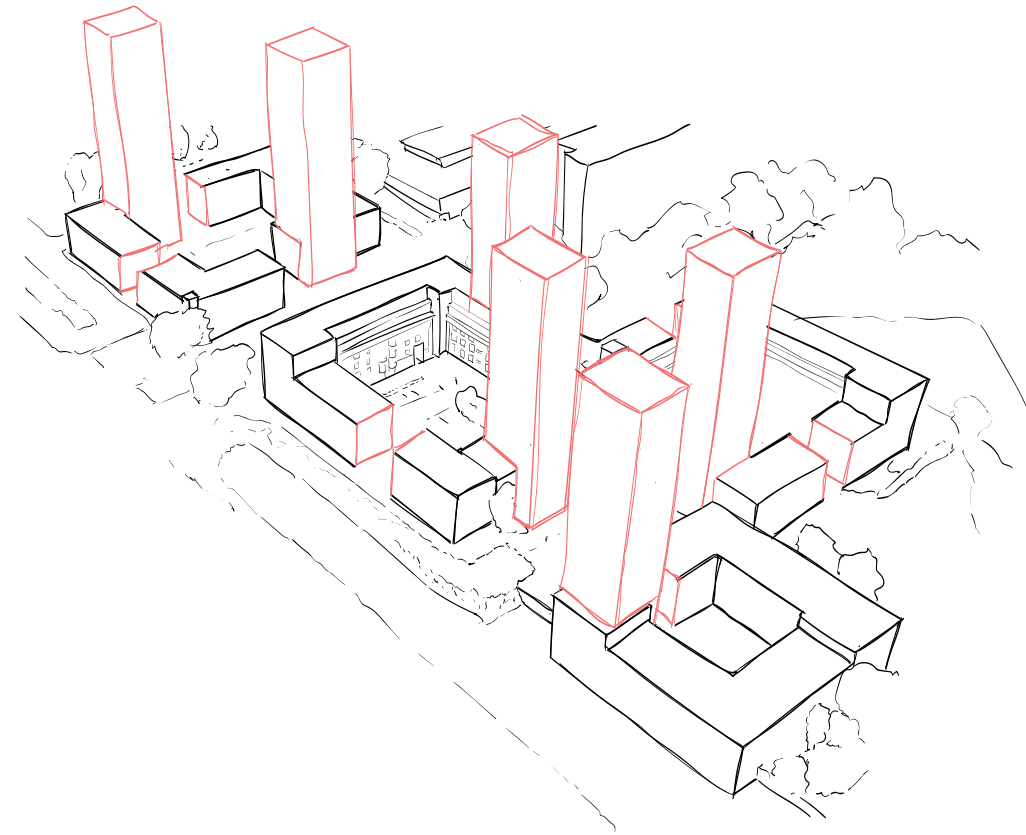
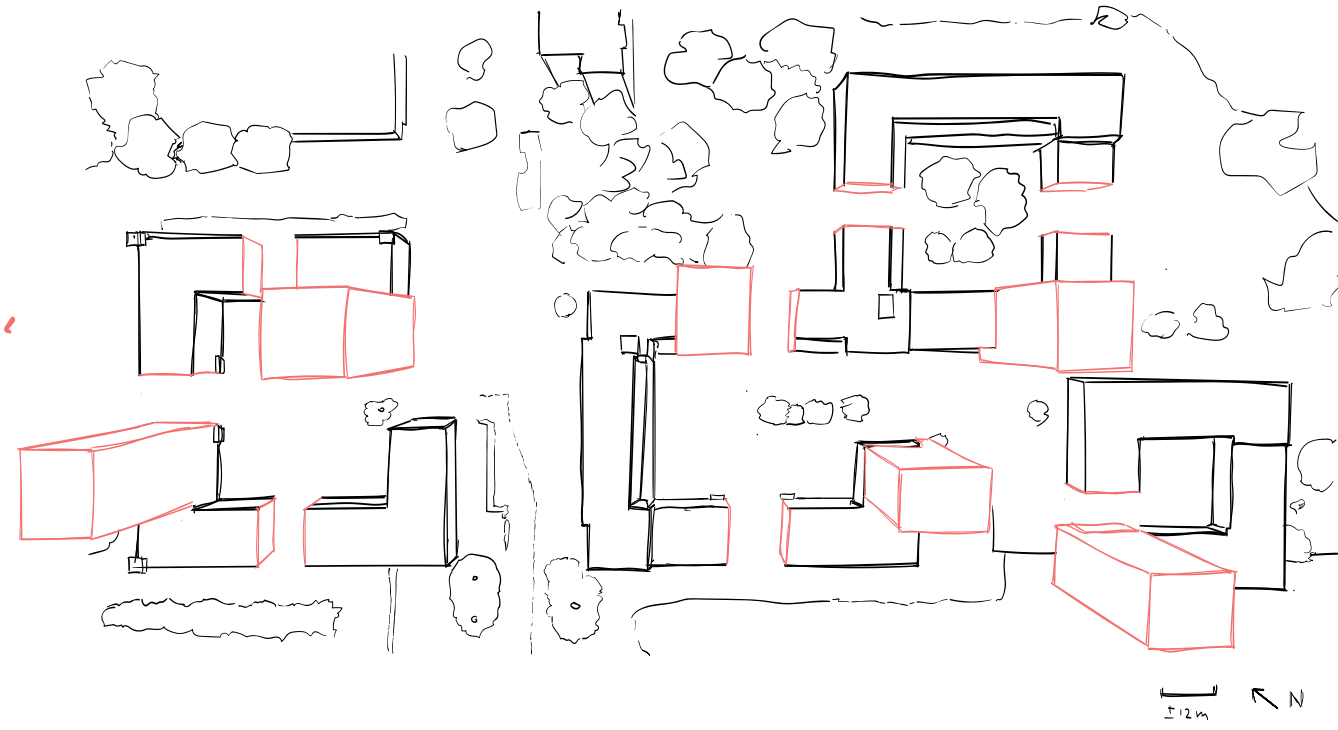
Research

Heritage value / Interpretation



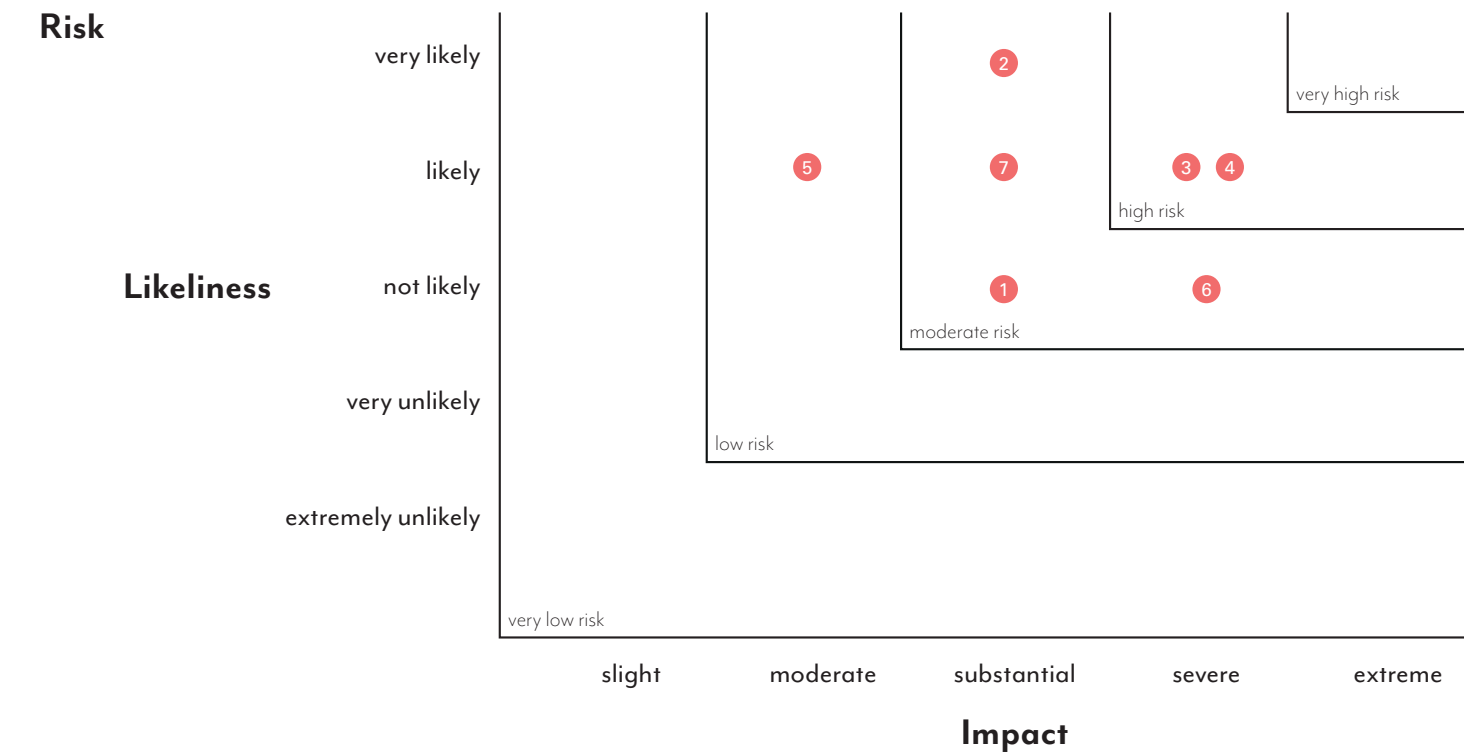
Research

Heritage value / Interpretation

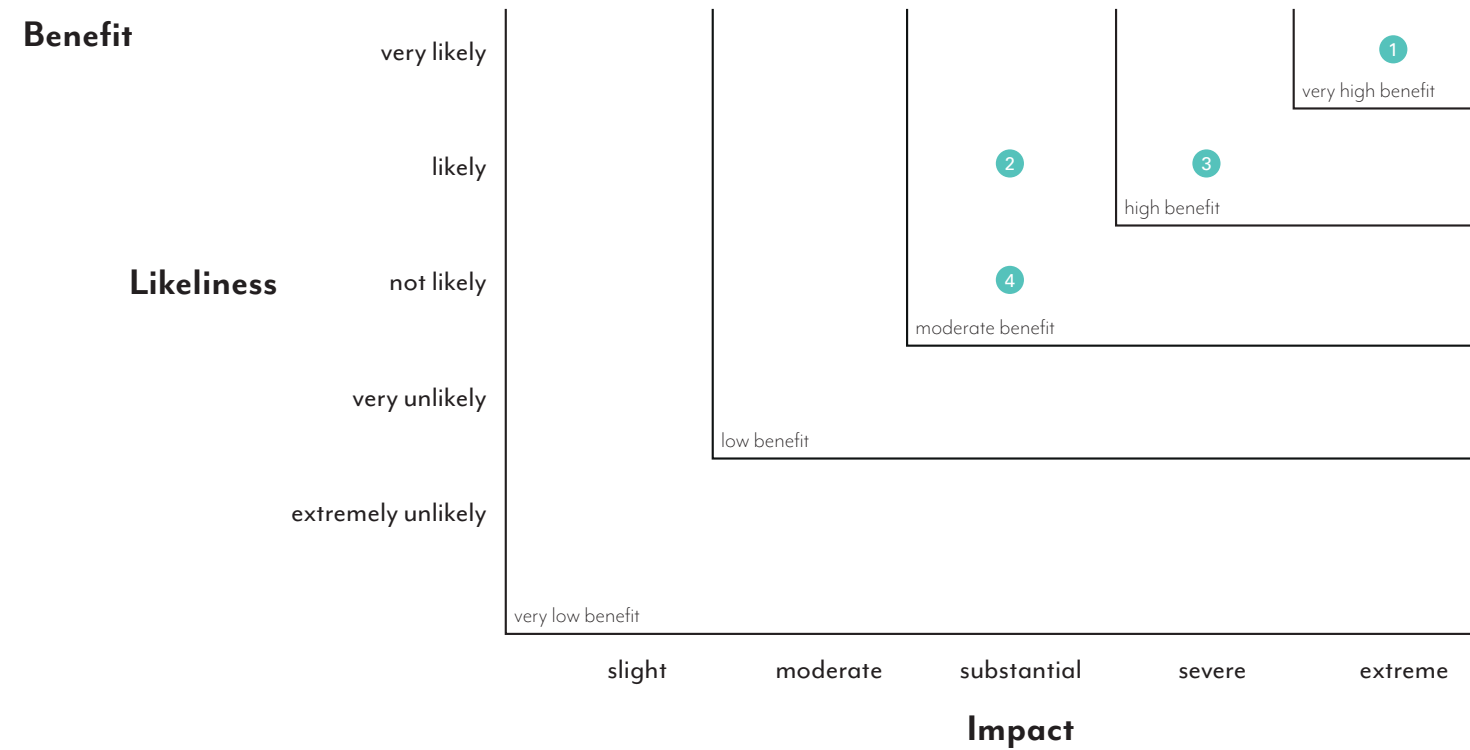


Research

Heritage value / Interpretation



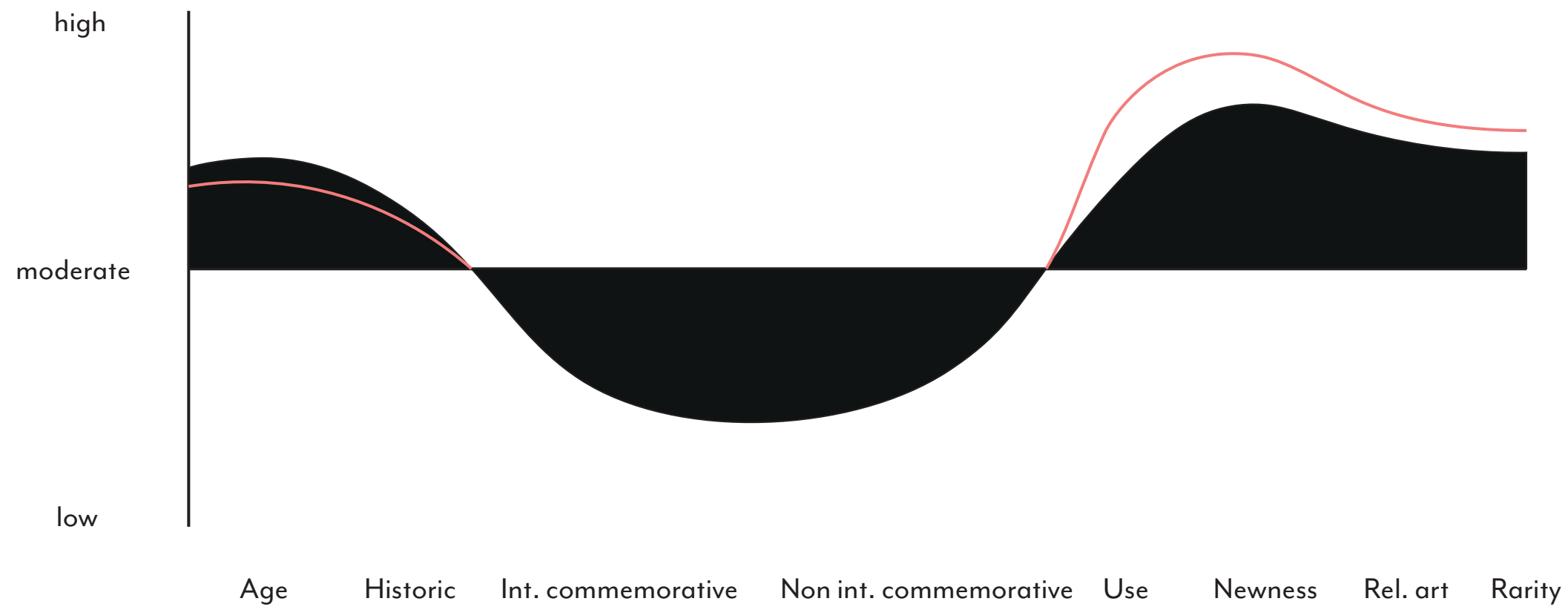
- 1 Loss of Anti-Bijlmer historical value
- 2 Change of focus point
- 3 Loss of human scale
- 4 Technical feasibility
- 5 Weakening community feeling of blocks
- 6 Addition of poorly supervisable spaces



- 1 Adding housing stock
- 1 Improved sightlines
- 1 Added diversity in dwelling types
- 1 Strengthened façade rythm

Research

Heritage value / Interpretation



Research Affordability

Affordability is the balance in cost and quality.

=

Economy

Ecology

Social

Why is this the problem to solve?

Research Affordability

Het woningtekort dicteert hoeveel huizen erbij moeten komen. Maar hoe groot is het nu echt?

Analyse

24 augustus 2020 • Leestijd 7 - 9 minuten • [Herinner mij later](#)

Het enorme tekort van 331.000 woningen laat maar ruimte voor één conclusie: in hoog tempo woonblokken uit de grond stampen. Maar het is moeilijk te bepalen hoe groot de behoefte aan huizen precies is. En kunnen we woonruimte beter verdelen?

<https://decorrespondent.nl/11524/het-woningtekort-dicteert-hoeveel-huizen-erbij-moeten-komen-maar-hoe-groot-is-het-nu-echt/20527528340000-d2e15b45#:~:text=of%20langer%20leegstaan.,ln%202017%20hadden%20285.000%20huishoudens%20een%20woning%20nodig.,is%20het%20opgelopen%20naar%20331.000.>

Het Parool 1911 Omroep

Plus

Hoe professionele bendes de sociale huursector misbruiken

Professionele bendes hebben zich gestort op Amsterdamse sociale huurwoningen van Ymere. De nieuwe vorm van fraude toont aan hoe aantrekkelijk het is de sociale huursector te misbruiken.

Ton Damen 11 maart 2019, 10:27

<https://www.parool.nl/nieuws/hoe-professionele-bendes-de-sociale-huursector-misbruiken-b31f87e3/>

	2017	2020	2025	2030	2035	2040
	x 1.000					
Vraag van huishoudens in BAR	285	307	298	289	283	279
Vraag van nieuwe huishoudens (saldo)	64	61	47	31	16	6
Totale vraag	349	368	345	320	299	285
Aanbod (beschikbare leegstand > 1 jaar)	107	108	102	109	125	150
Gewenste woningvoorraad	7.928	8.136	8.408	8.608	8.725	8.789
Verwachte woningvoorraad	7.686	7.875	8.160	8.387	8.533	8.620
Woningtekort	-242	-261	-248	-221	-192	-169
als % van de woningvoorraad	-3,2%	-3,3%	-3,0%	-2,6%	-2,2%	-2,0%

<https://www.parool.nl/nieuws/hoe-professionele-bendes-de-sociale-huursector-misbruiken-b31f87e3/>

Research Affordability



▲ Foto ter illustratie. © ANP

'Energiearmoede groeit in Nederland'

Het aantal mensen dat de energierekening niet kan betalen, dreigt te verdubbelen. Dat meldt *Trouw* op basis van een onderzoek van bureau Ecorys. Ruim 650.000 huishoudens kunnen hun maandelijkse energierekening niet of nauwelijks betalen.

<https://www.ad.nl/binnenland/energiearmoede-groeit-in-nederland-a0a345a1/>

AGENDA VOOR NEDERLAND VOOR 2030

5x anders

1. HUISHOUDENS GAAN 65% ENERGIE BESPAREN (O.A. DOOR ISOLATIE EN ZUINIGERE APPARATEN)
2. KANTOREN VERBRUIKEN 70% MINDER ENERGIE
3. NIEUWBOUW WORDT ENERGIENEUTRAAL (VANWEGE EU-REGELGEVING 50.000 HUIZEN PER JAAR VANAF 2020)
4. BESTAANDE HUIZEN WORDEN ENERGIENEUTRAAL (GAS ERUIT; DE REST DUURZAAM OPWEKKEN)

A. OPSCHALEN VAN TIENDUIZENDEN WONINGEN PER JAAR IN 2018 NAAR RUIM 1 MILJOEN WONINGEN IN 2030

B. OPLEIDEN PROCESBEGELEIDERS, INSTALLATEURS EN ANDEREN DIE HUISHOUDENS GAAN ONDERSTEUNEN

Urgenda (2020)

Research Affordability

Drillrapvete aanleiding steekpartij Albert Heijn Watergraafsmeer

Een slepende vete tussen Amsterdamse drillrapgroepen was de aanleiding voor de steekpartij waarbij een medewerker van Albert Heijn zwaargewond raakte in een filiaal in de Watergraafsmeer.

Wouter Laumans en **Paul Vugts** 22 december 2020, 22:56

<https://www.parool.nl/amsterdam/drillrapvete-aanleiding-steekpartij-albert-heijn-watergraafsmeer-be-aa5857/>

REPORTAGE BIJLMERFANFARE

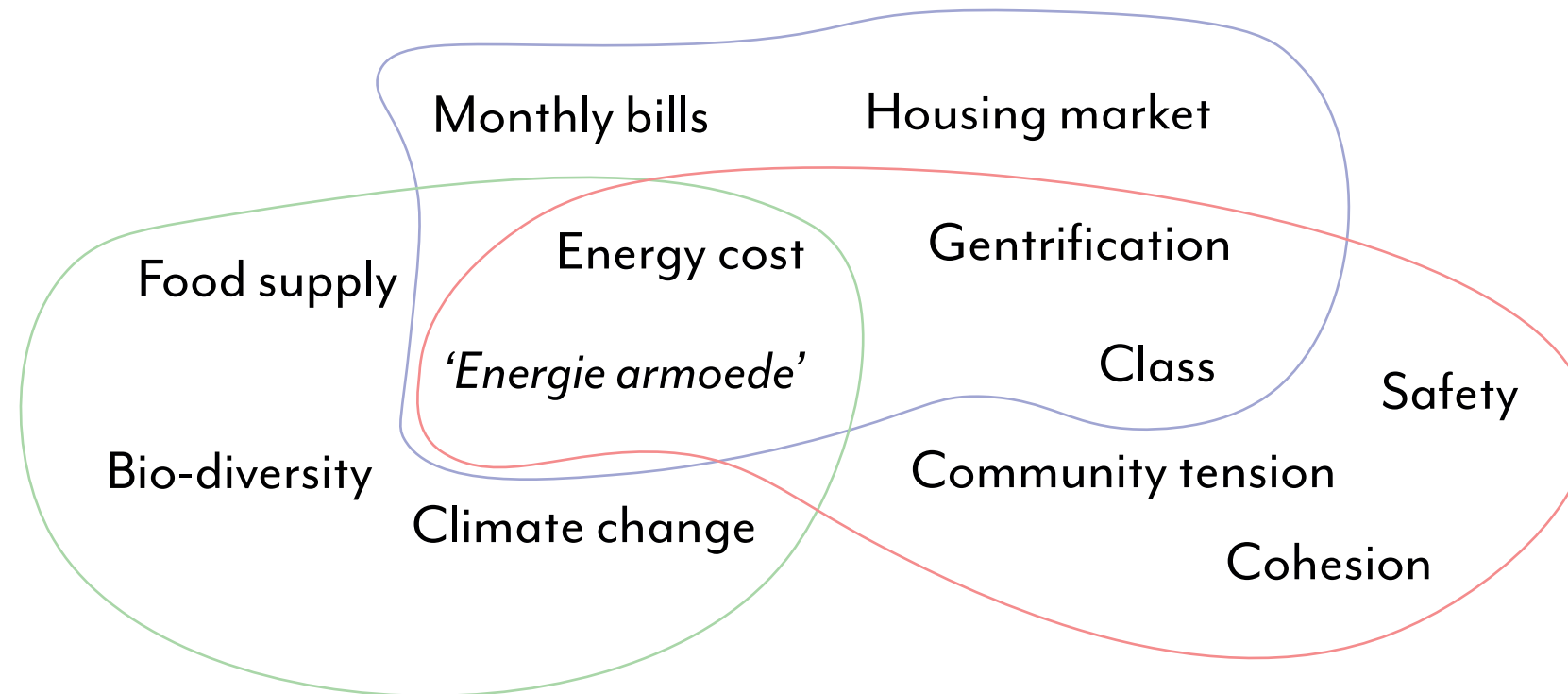
De Bijlmerfanfare laat zien dat er meer is dan drillrap, met dank aan het buurtfonds



<https://www.volkskrant.nl/nieuws-achtergrond/de-bijlmerfanfare-laait-zien-dat-er-meer-is-dan-drillrap-met-dank-aan-het-buurtfonds-b212aal3/>

Research Affordability

Affordability is the balance in cost and quality



Research Affordability

Affordability ~~is the balance in cost and quality~~

=

Economy

Ecology

Social

“Securing some given standard of housing at a price or a rent which does not impose, in the eyes some third party, an unreasonable burden on household income.” (MacLennan and Williams, 1990, p . 9)

“Households should be able to occupy housing that meets well-established norm of adequacy at a net rent which leaves them with enough income to live on without falling below some poverty standard.” (Bramley, 1990b, p . 16)

Research

Design strategy

Cultural value
anecdotal

Heritage value
self determined

Cultural & Heritage value
relate to
Attributes

Design interventions

Design

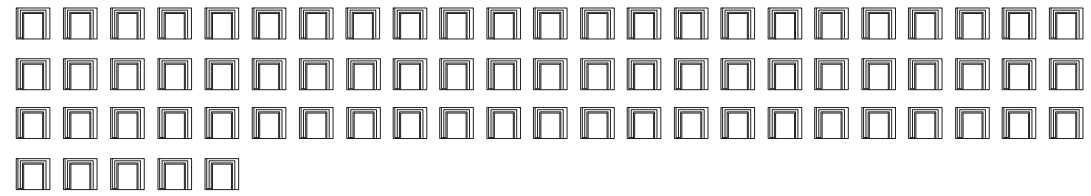
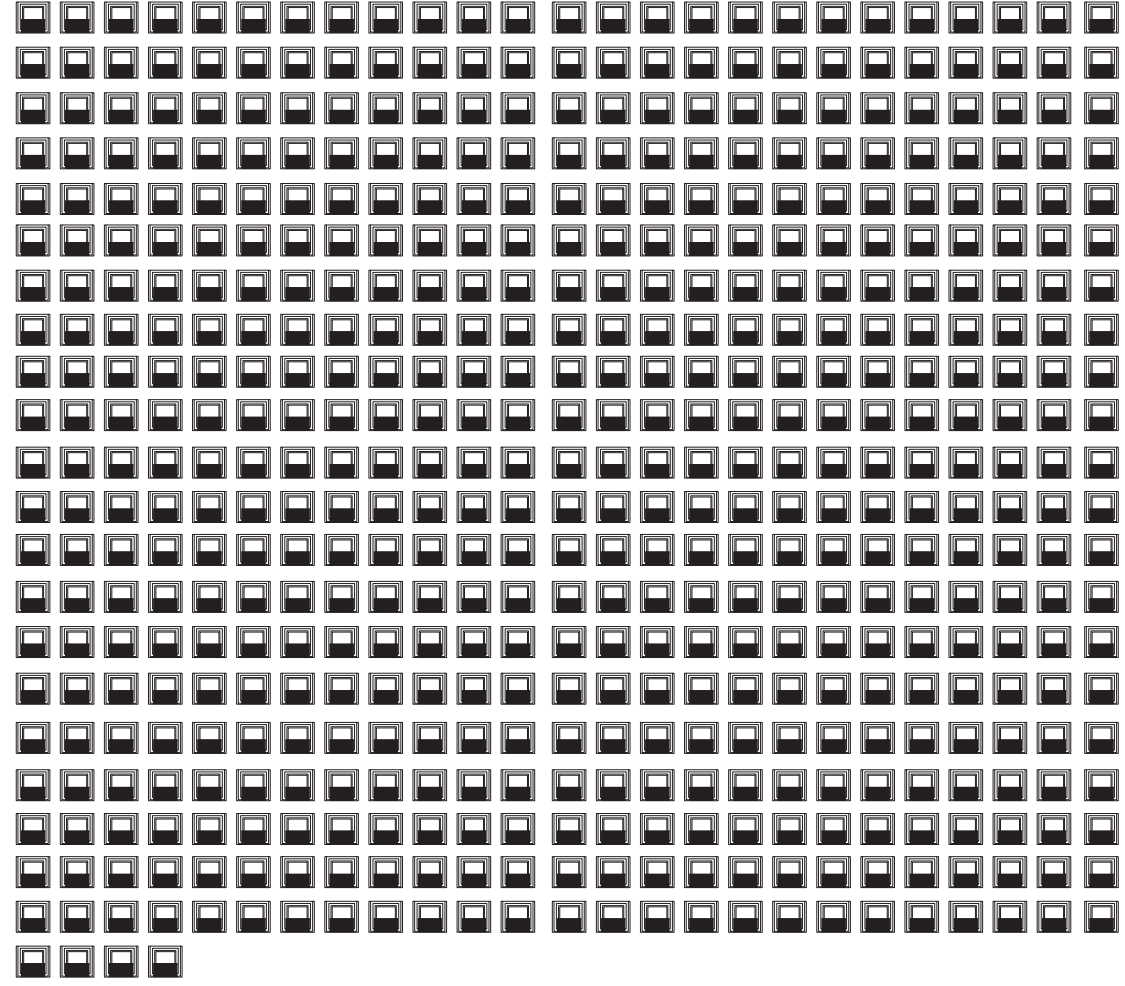
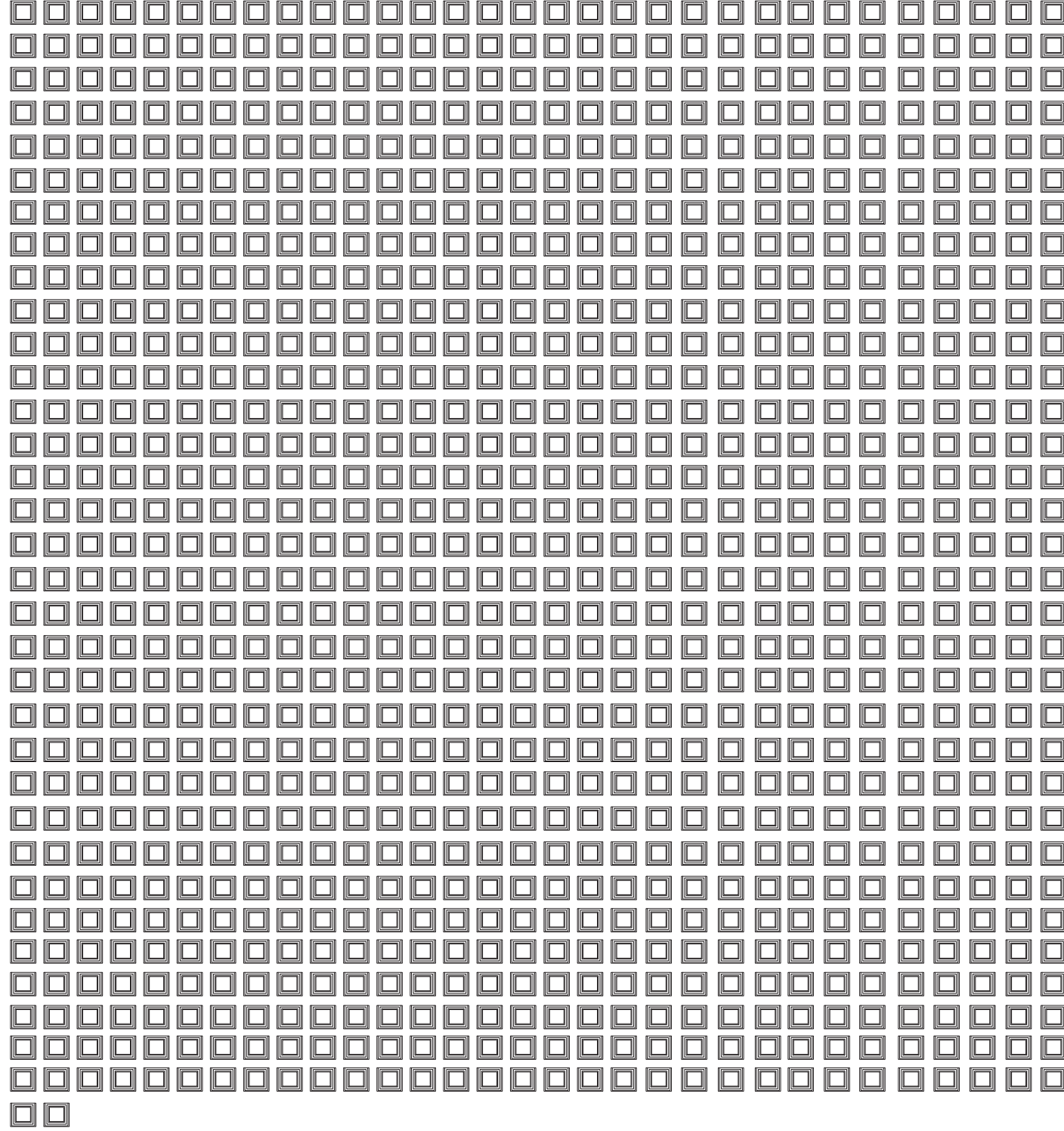
Building analysis



Balcony at Heesterveld, Beeldbank Amsterdam

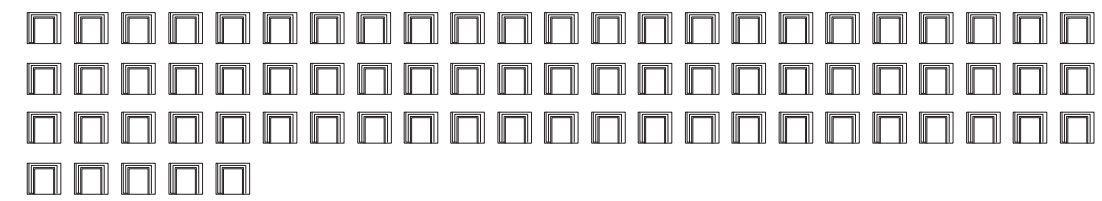
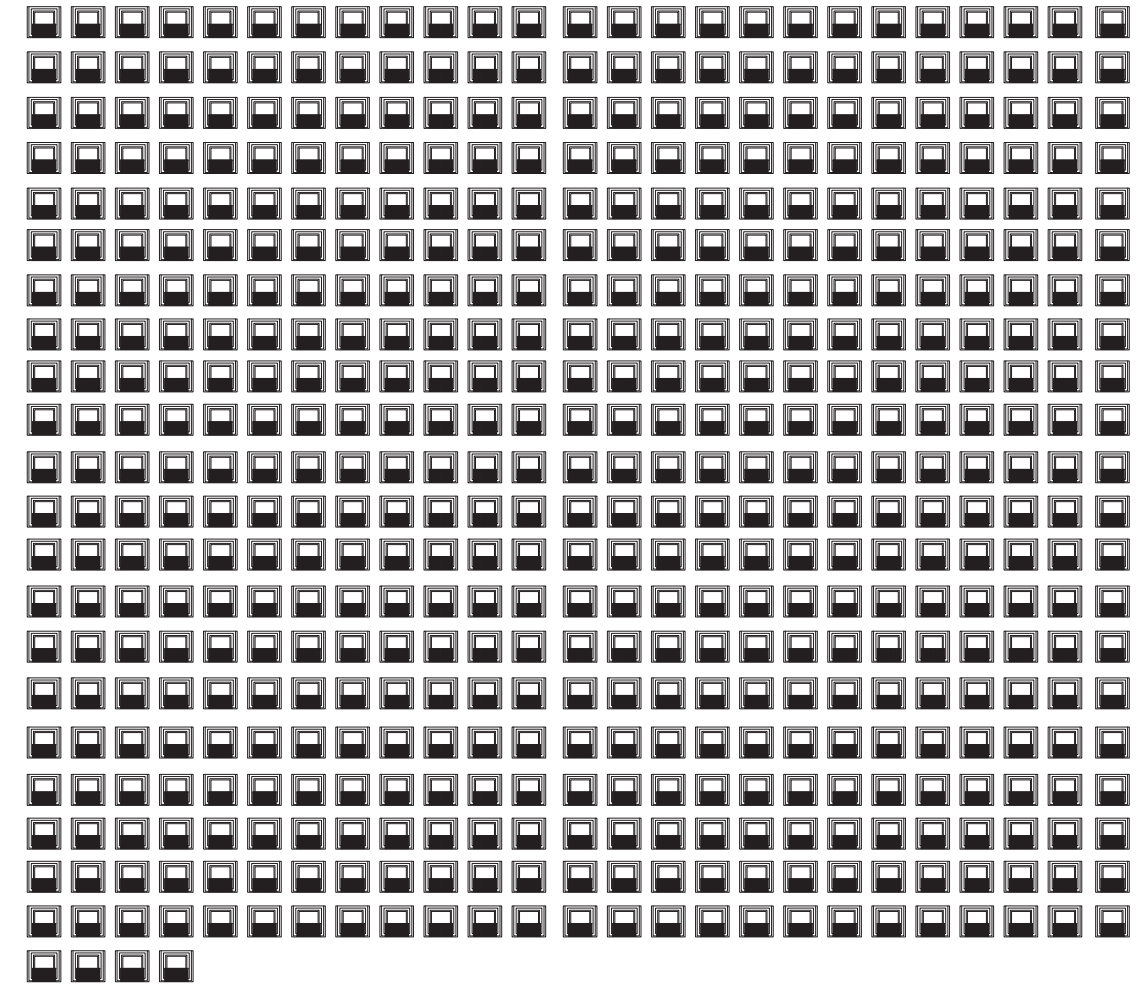
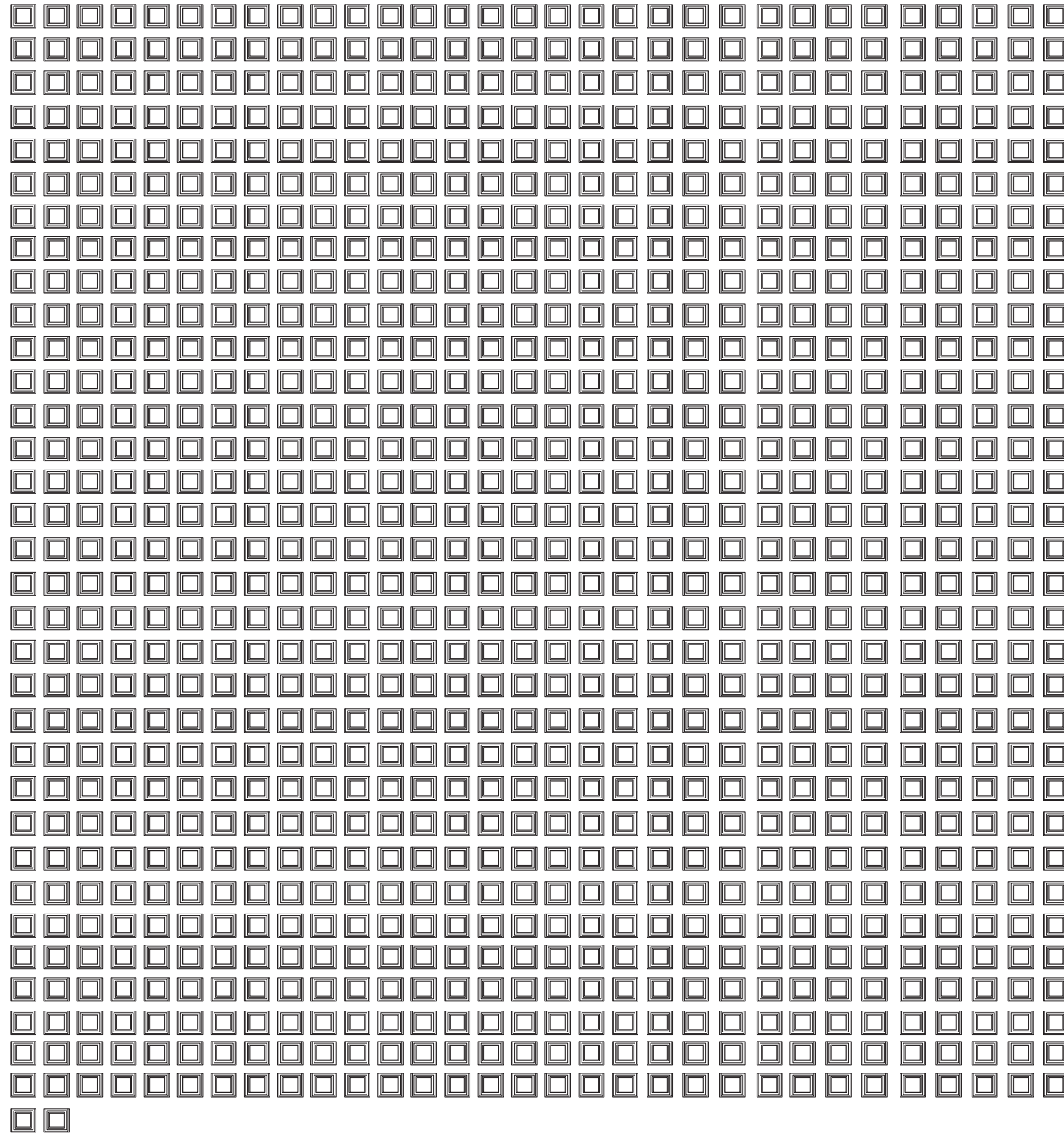
Design

Building analysis



Design

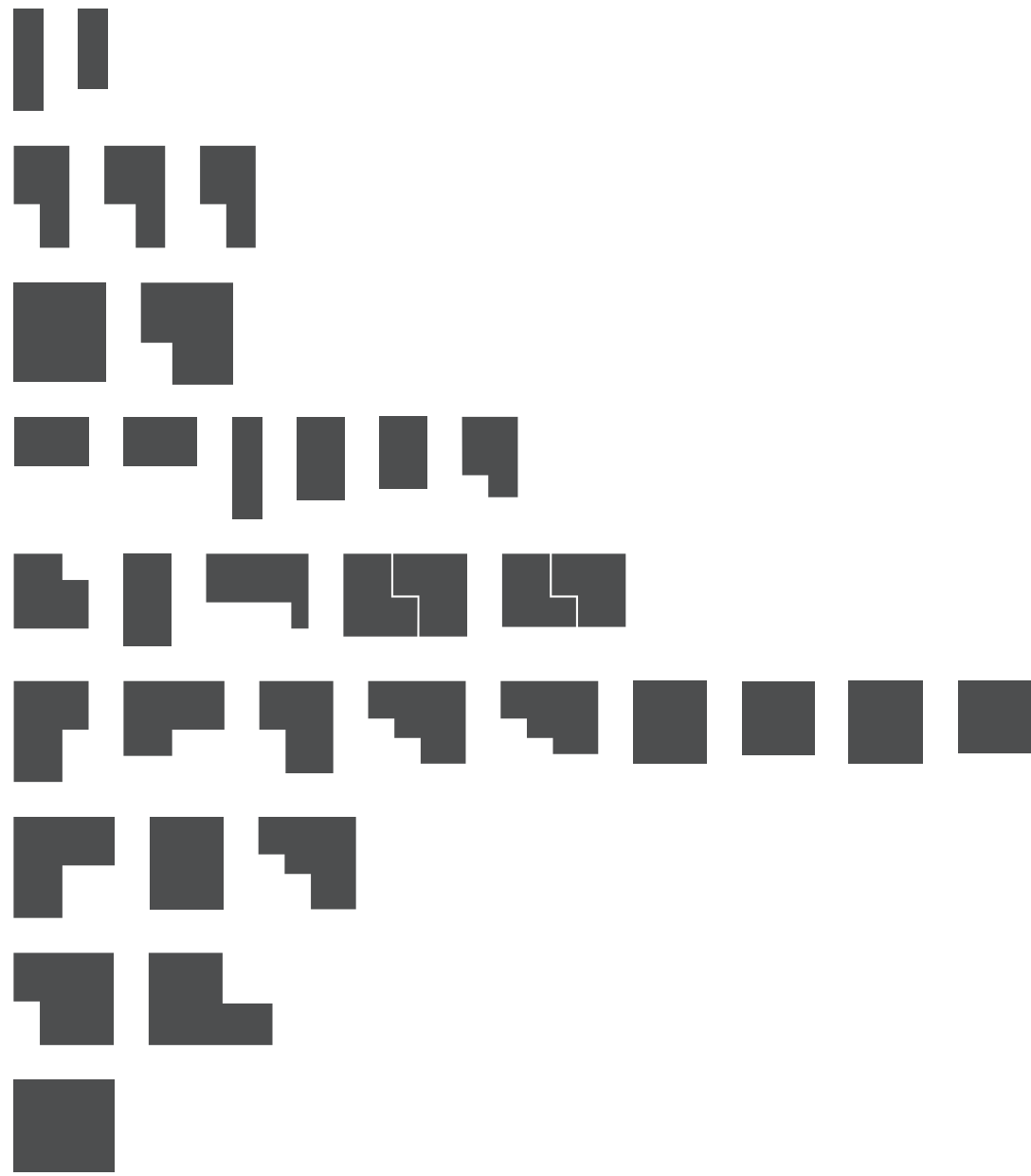
Building analysis



390t CO₂

Design

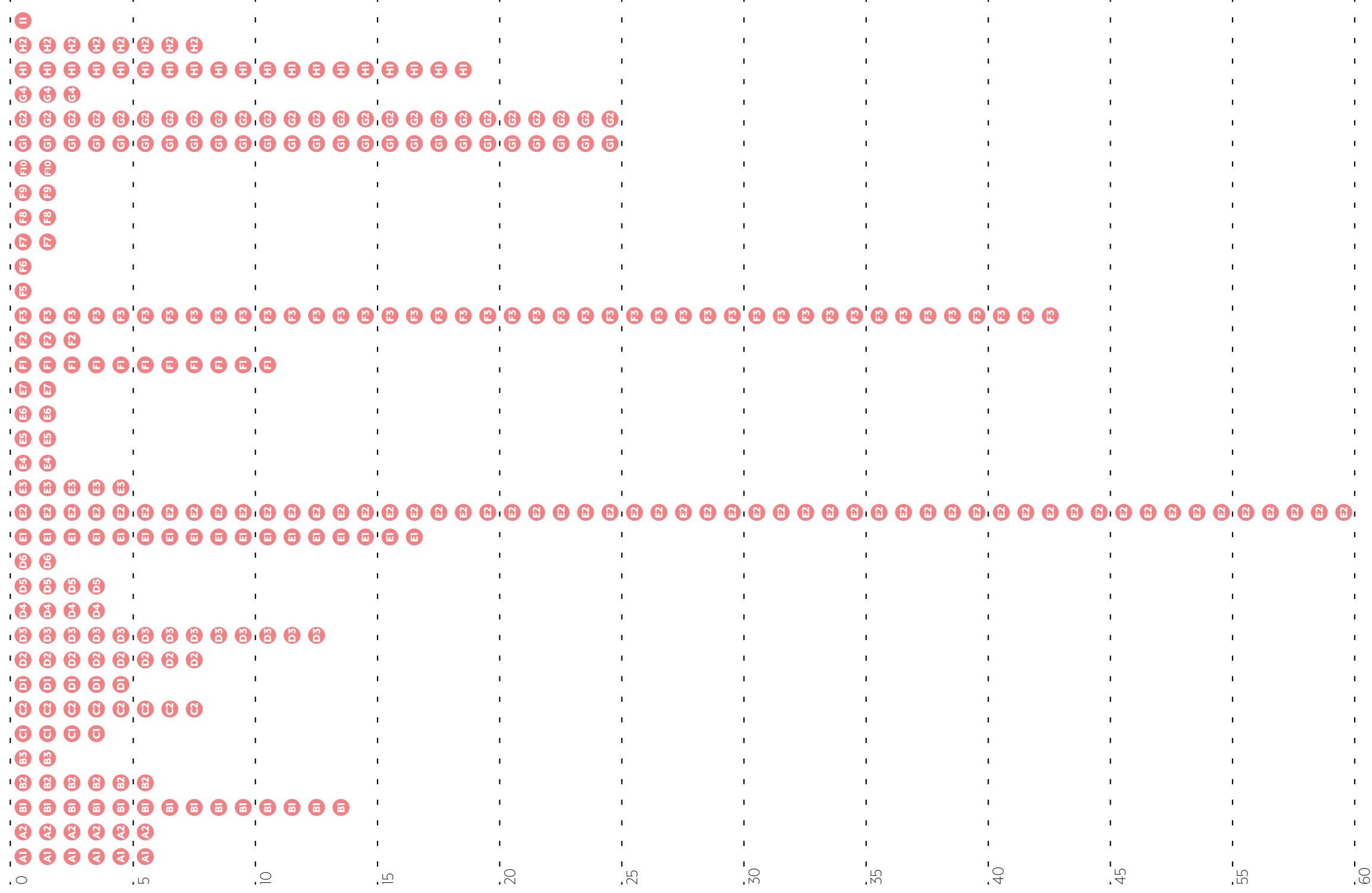
Building analysis



35 dwelling types

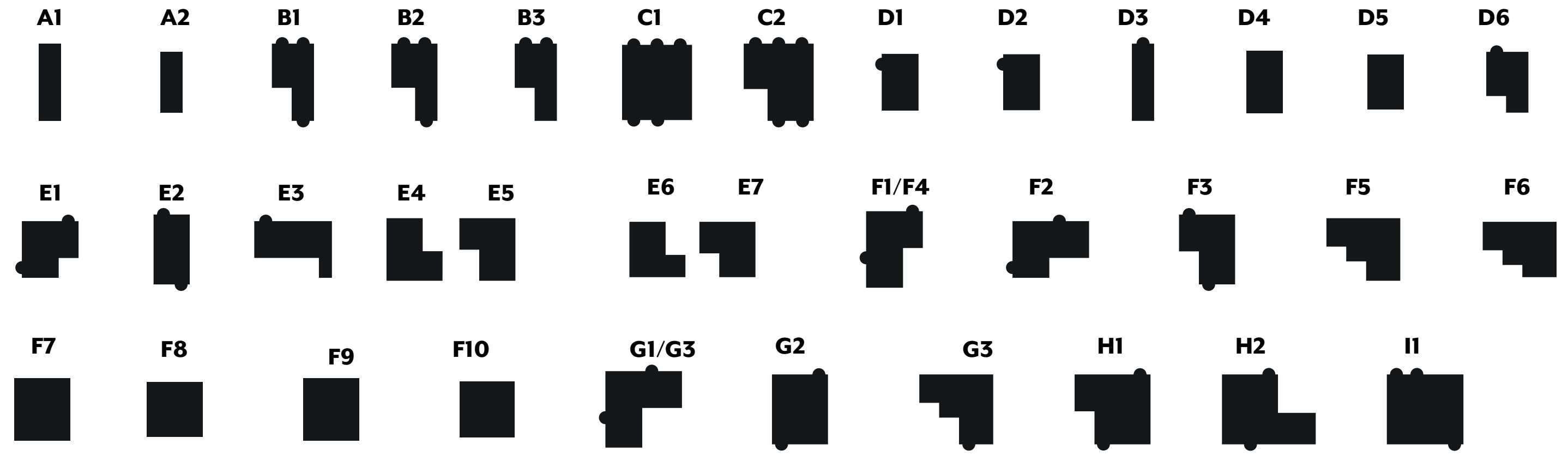
Design

Building analysis



Design

Building analysis



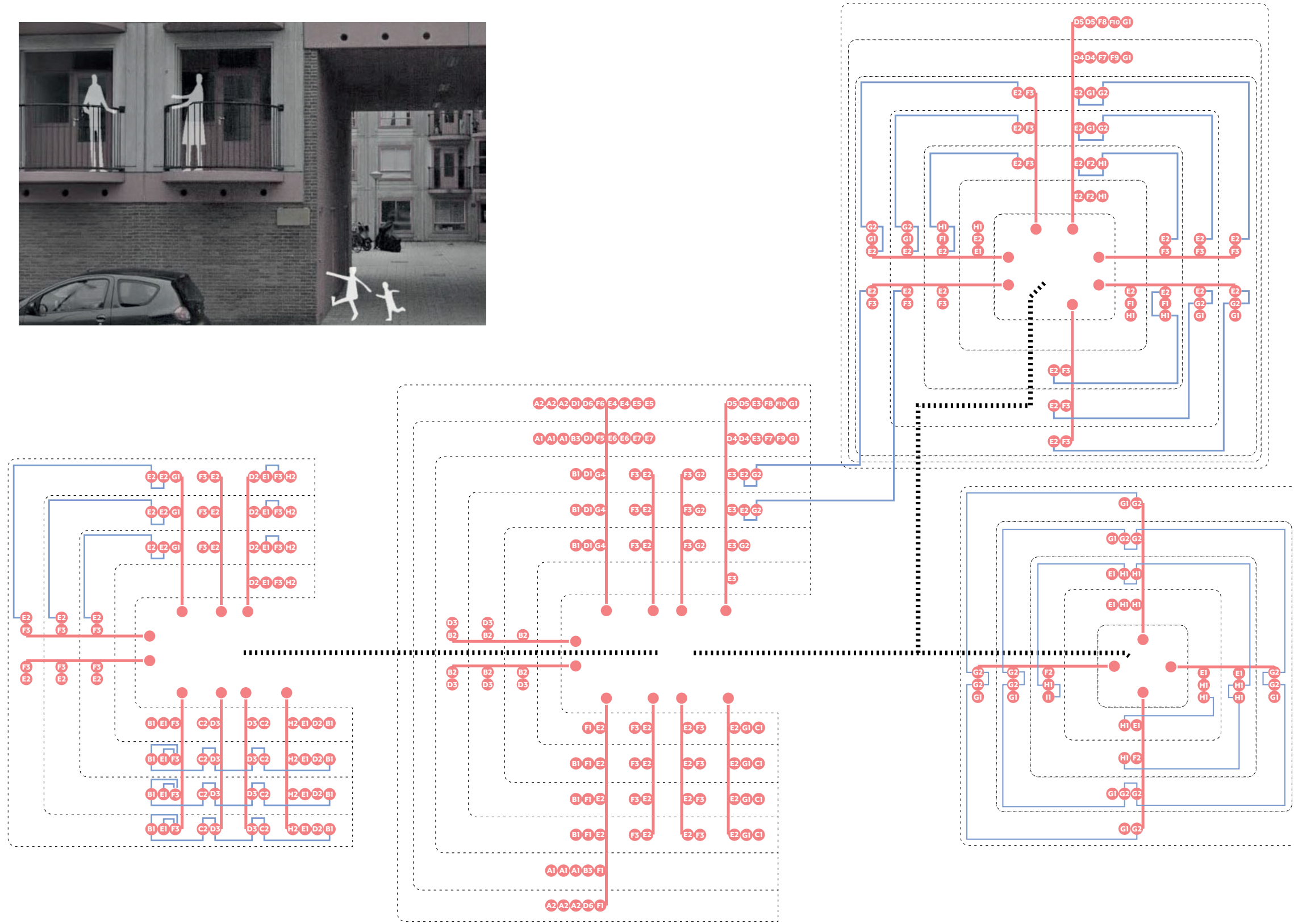
Design

Building analysis

A1 39m ² 	A2 25m ² 	B1 59m ² 	B2 63m ² 	B3 59m ² 	C1 120m ² 	C2 106m ² 	D1 47m ² 	D2 47m ² 	D3 39m ² 	D4 52m ²
D5 45m ² 	D6 51m ² 	E1 64m ² 	E2 58m ² 	E3 71m ² 	E4 65m ² 	E5 65m ² 	E6 55m ² 	E7 55m ² 	F1/F4 81m ² 	F2 81m ²
F3 75m ² 	F5 81m ² 	F6 76m ² 	F7 80m ² 	F8 70m ² 	F9 80m ² 	F10 70m ² 	G1/G3 97m ² 	G2 89m ² 	G4 87m ² 	H1 106m ²
H2 116m ² 	I1 122m ² 									

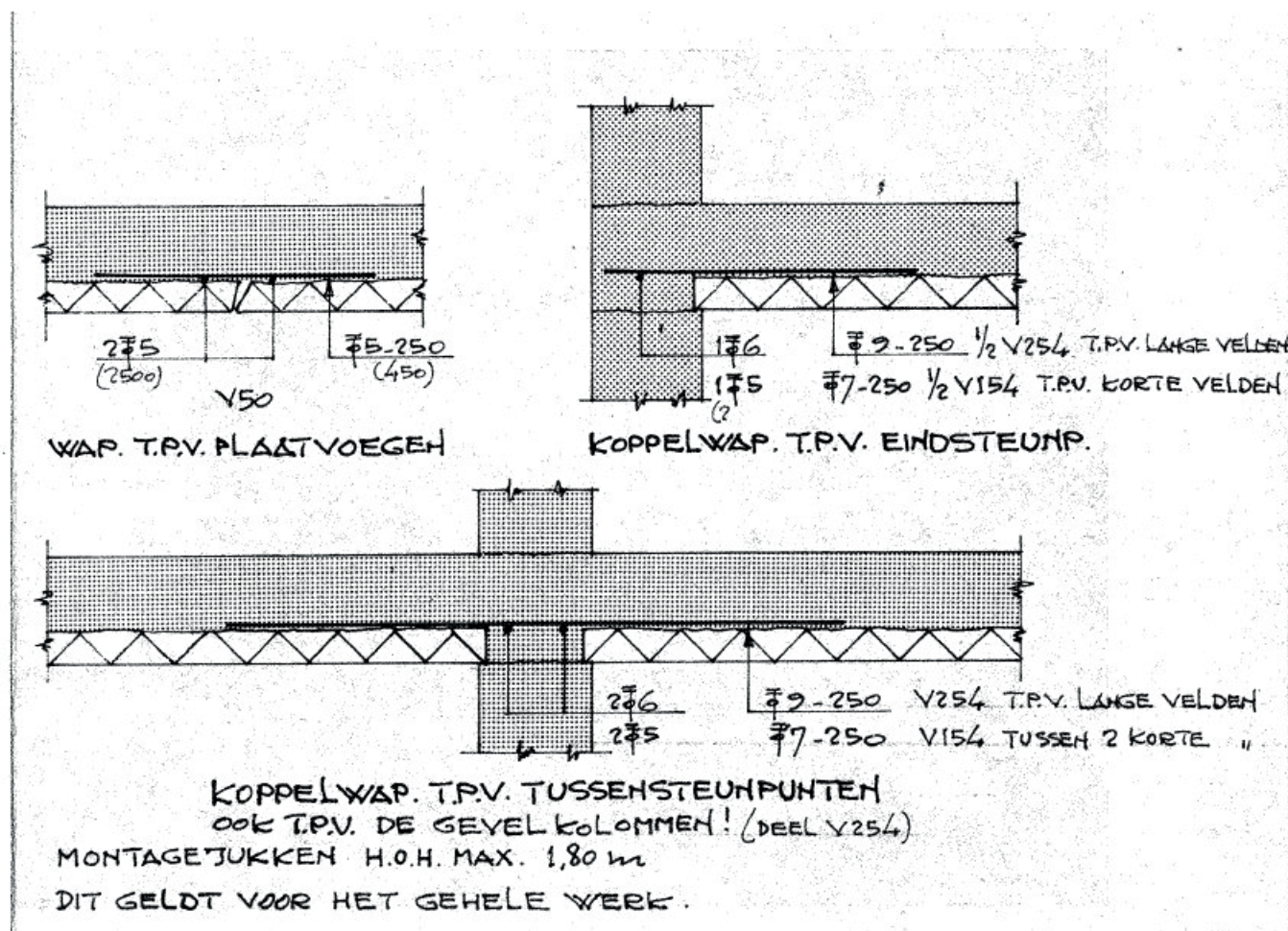
Design

Building analysis



Design

Building analysis



breedplaatvloeren onderwapening.
PLAATINDELING GEWJZ: 15-10-'81

VOOR WAPENING EN DETAILMATEN PLATEN ZIE MAP D-I/1A

DE PLAATS VAN HET MEER IN DE PLATTEGROND KOMT OVEREEN MET DE PLAATS AANGEGEVEN OP HET VLOERELEMENT.

net nr.	total
G 634	1
V 50	95
V 254	70
staaf K12 = 12	45

lg. 4000
 BWT 19 8 0 DOSSIER 75837
 20 JAN. 1982
 643
 I, II, III, IV, A

BETONCONSTRUCTIE
 STAALCONSTRUCTIE
 PALENPLAN
 GEEN BEZWAAR

datum	omschrijving	get	gek	gez
18-11-1981	plaatindeling, voeg- en koppelnetten + wap. gestorte delen	JAP		
10-07-1981	prefab vermeld + trapsp. aangepast			
27-04-1981	vormtekening	G.M.		
18-03-1981	voorstel	FGT.		

leemtkort	hoogte	breedte	versterking	hoogte	verhoging
2	10	200	10	20	20
4	20	200	20	40	40
6	30	200	30	60	60
8	40	200	40	80	80

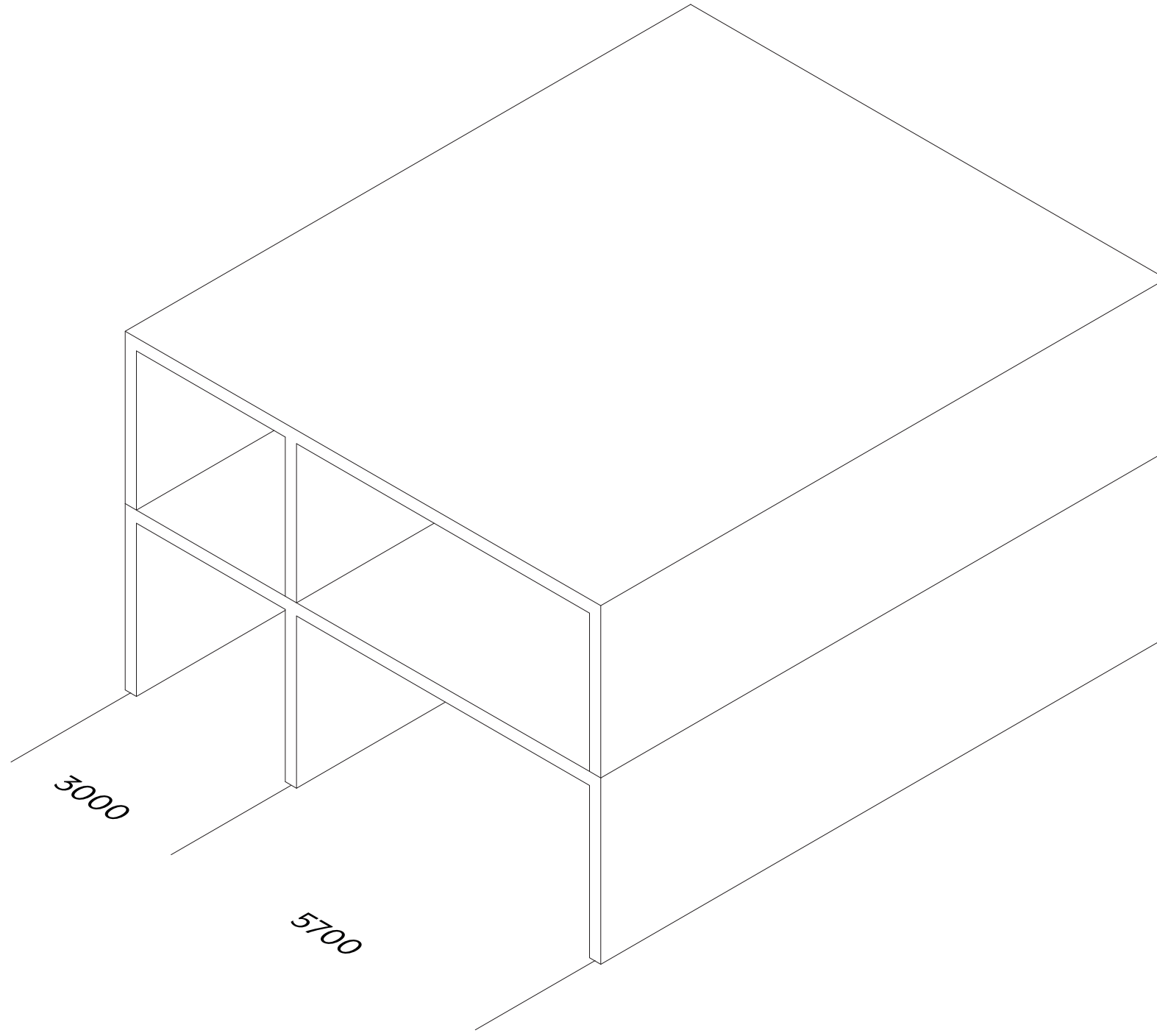
matten (ook peilmatten) in mm
 peilmatten tov peil is b.k afgewerkte begane grond = 2000 ÷ NAP

blok I

werk	Heesterveld	Amsterdam
onderdeel	plattegrond 1 ^e verdieping, deel A.	
architekten	Oyevaar van Gool de Bruijn	Amsterdam
schaal	1:50	datum 23 NOV. 1981
raadgevend ingenieursbureau Aronsohn Rotterdam		gezien
		4258 / 103
		D

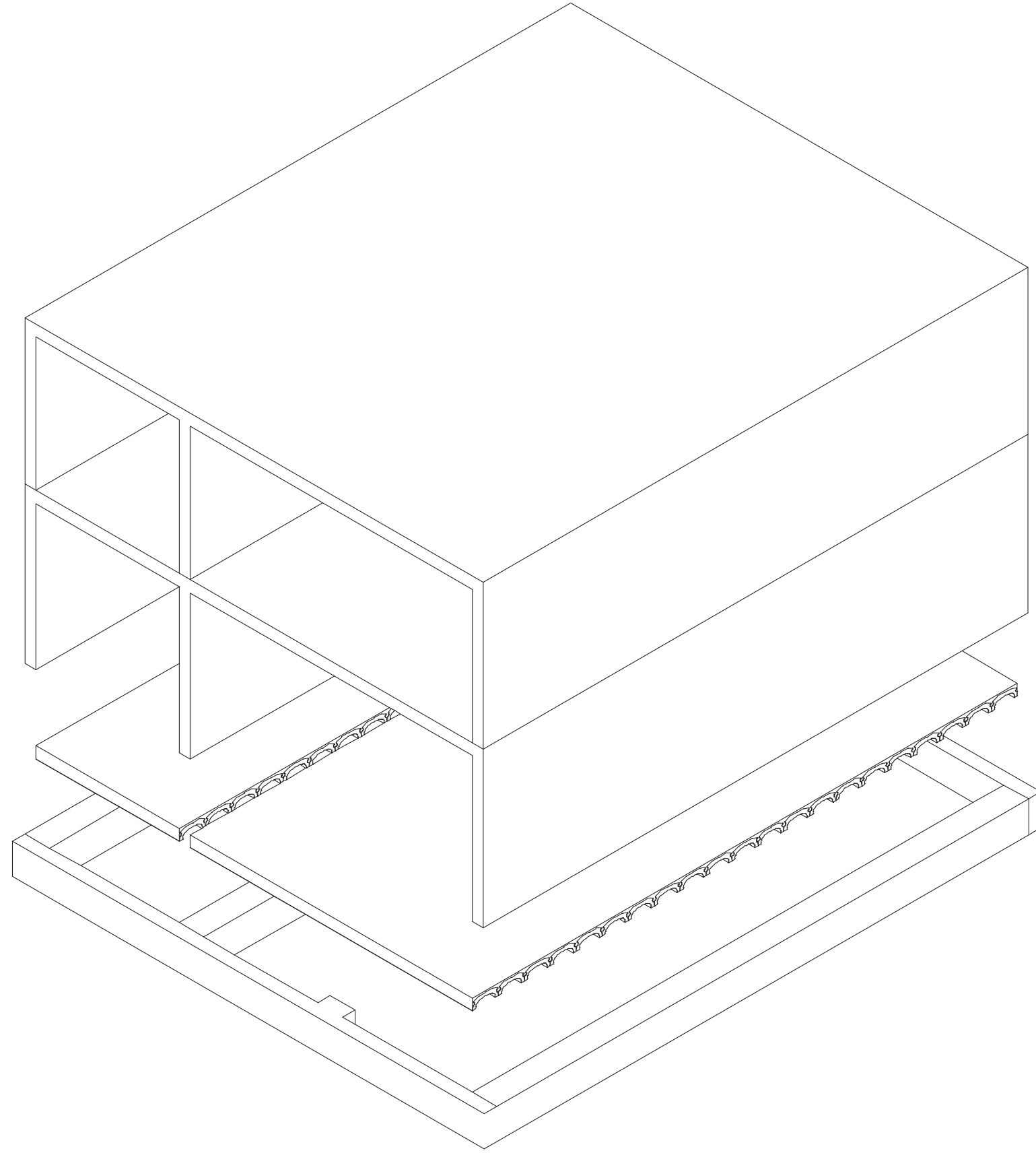
Design

Building analysis



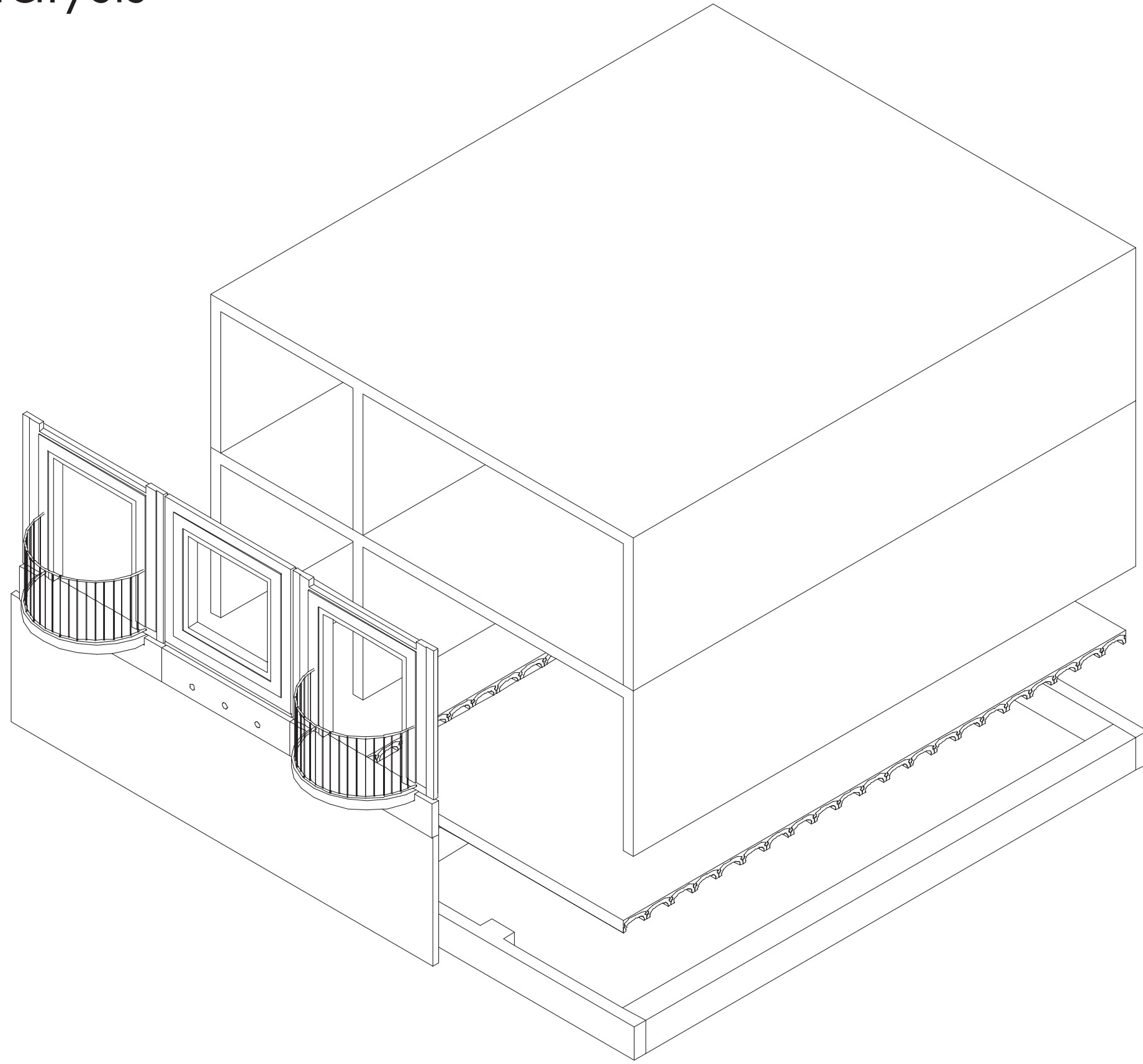
Design

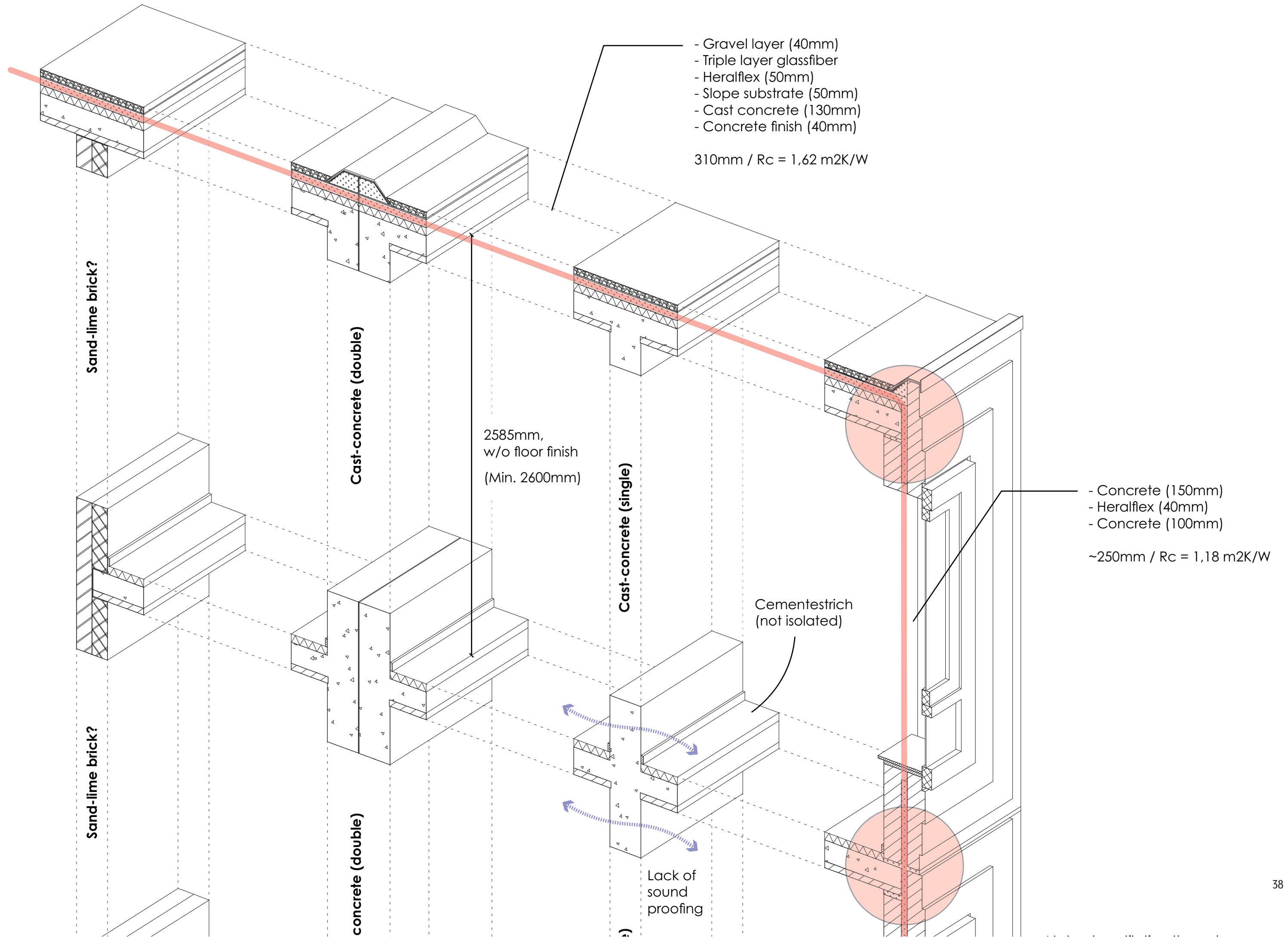
Building analysis

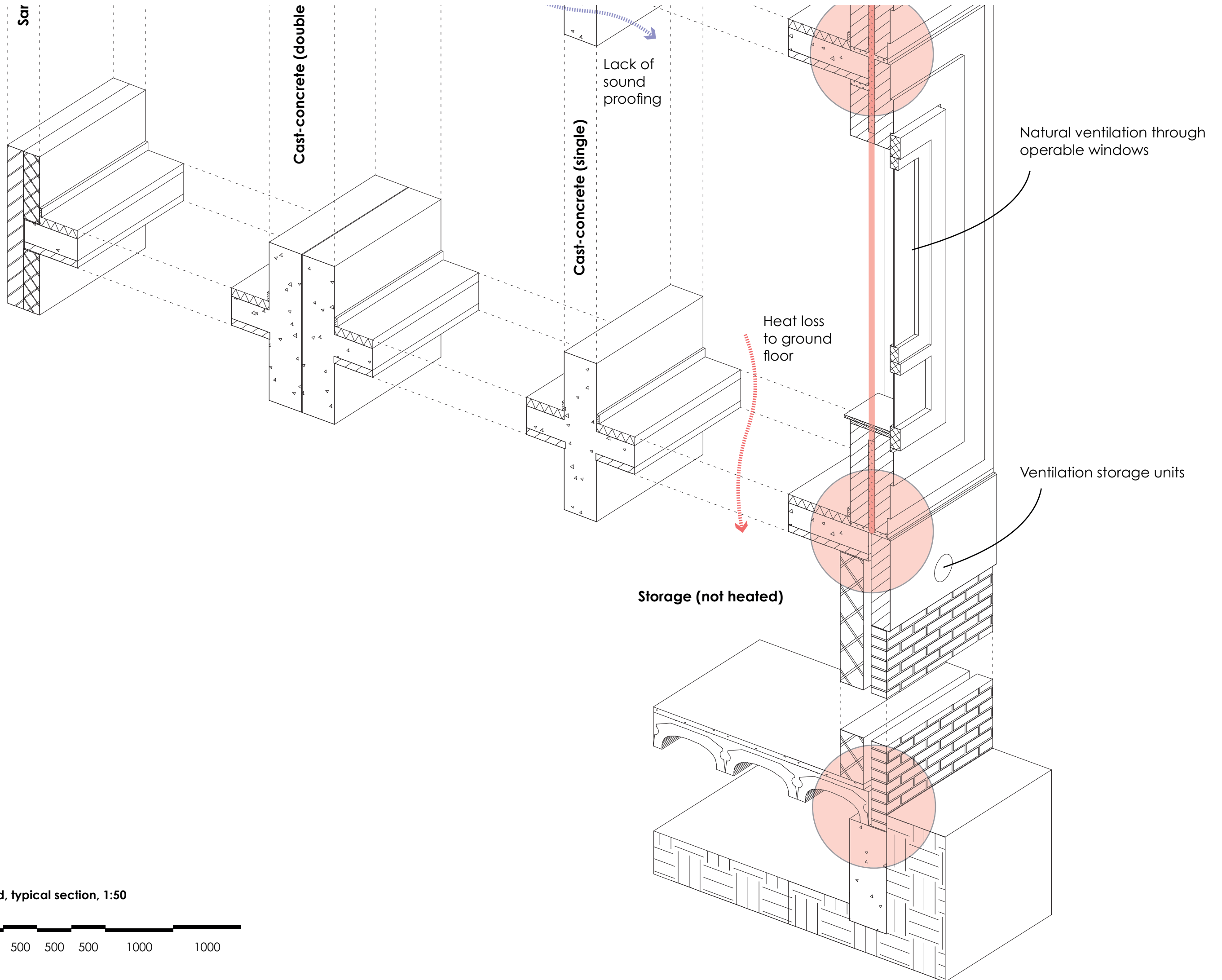


Design

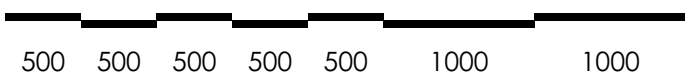
Building analysis



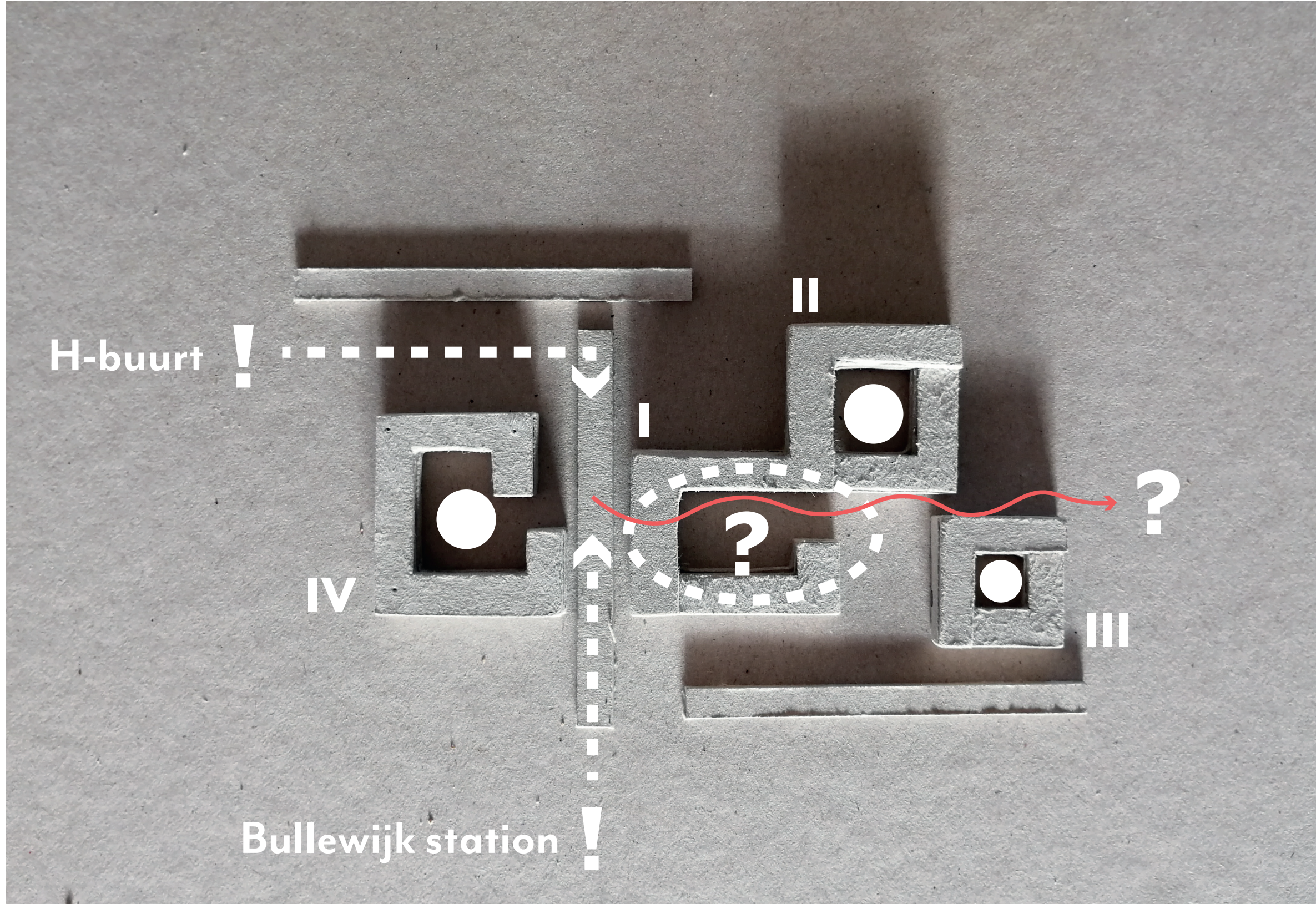




Heesterveld, typical section, 1:50

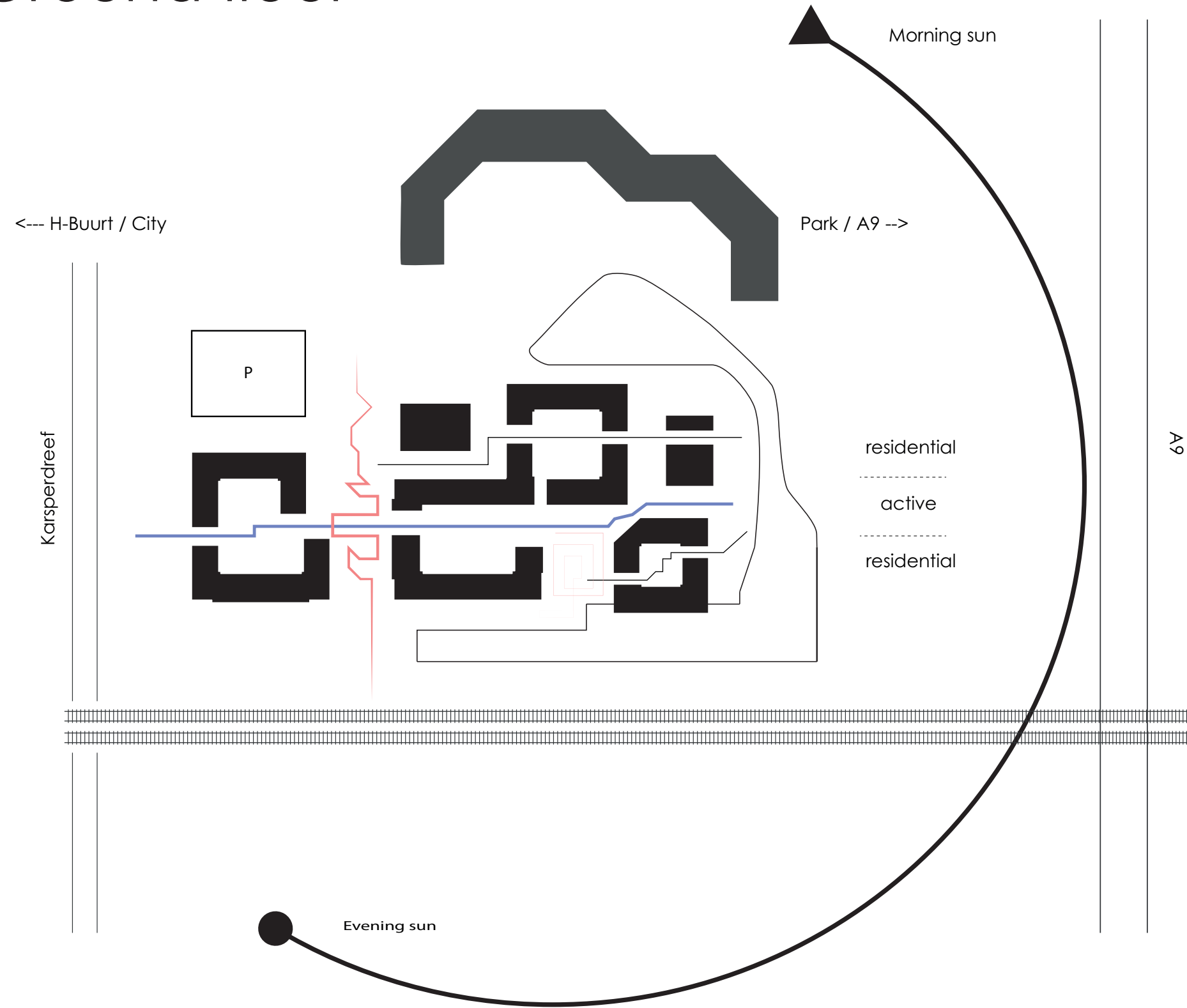


Design Principles



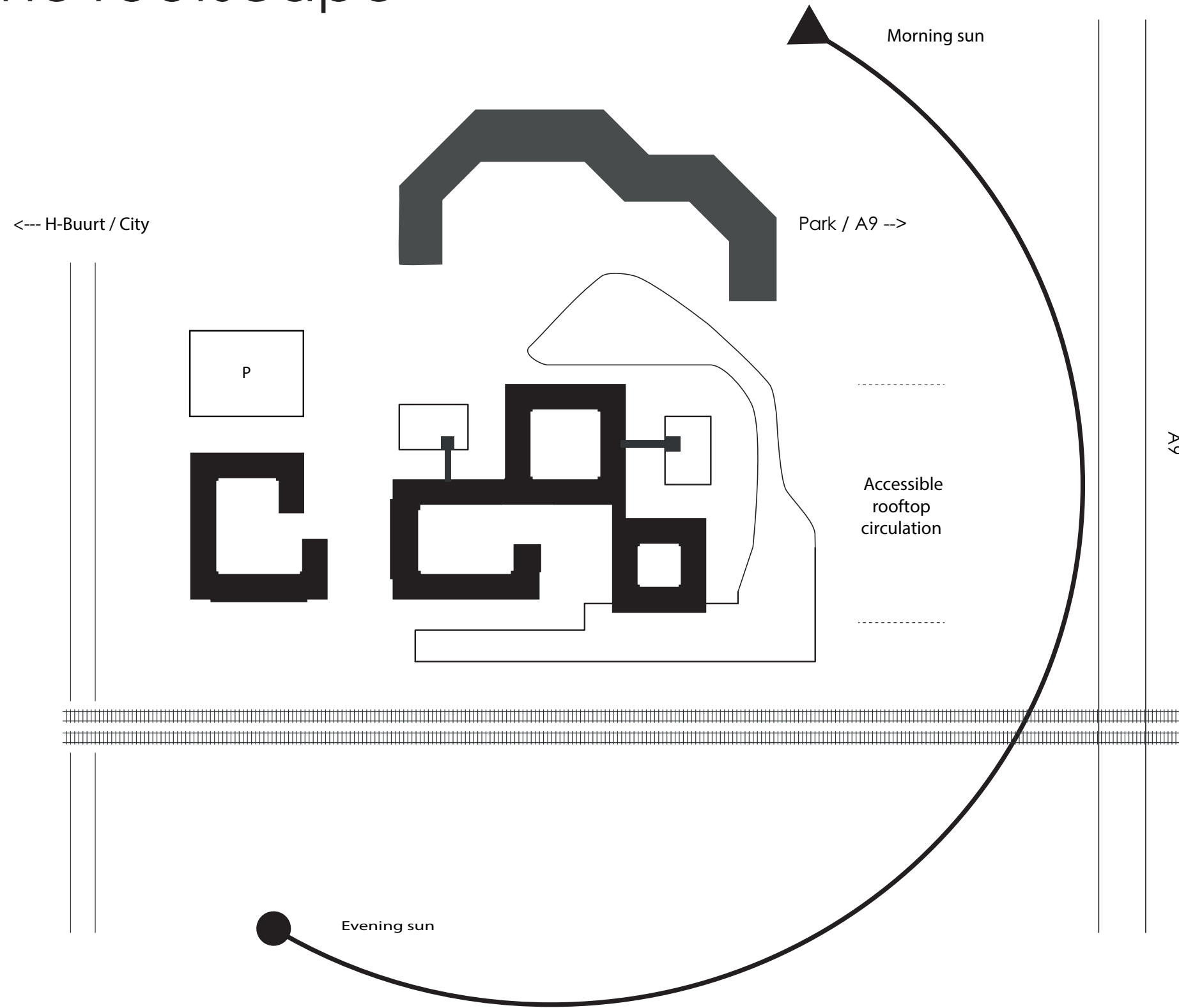
Design

Principles / Ground floor

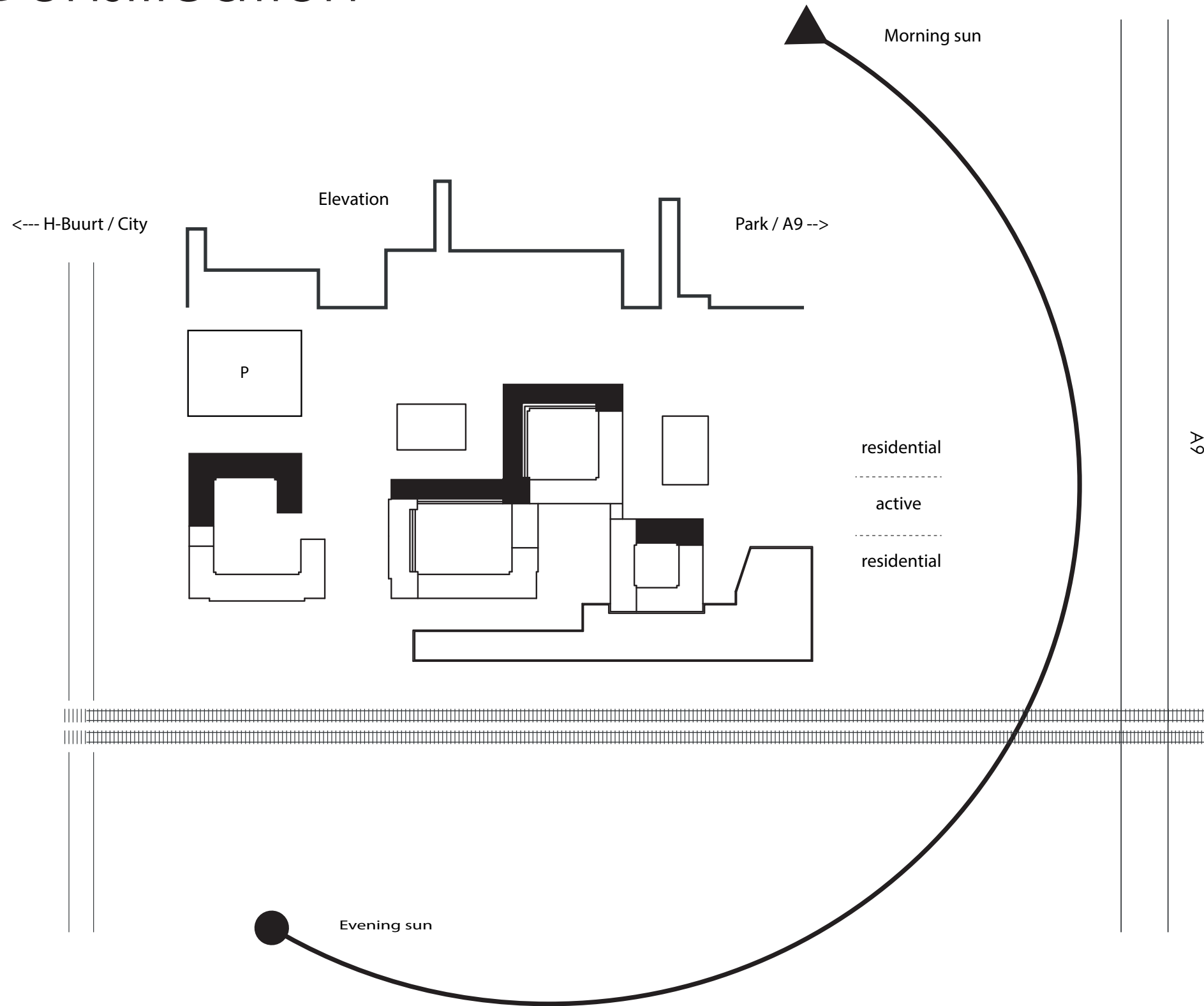


Design

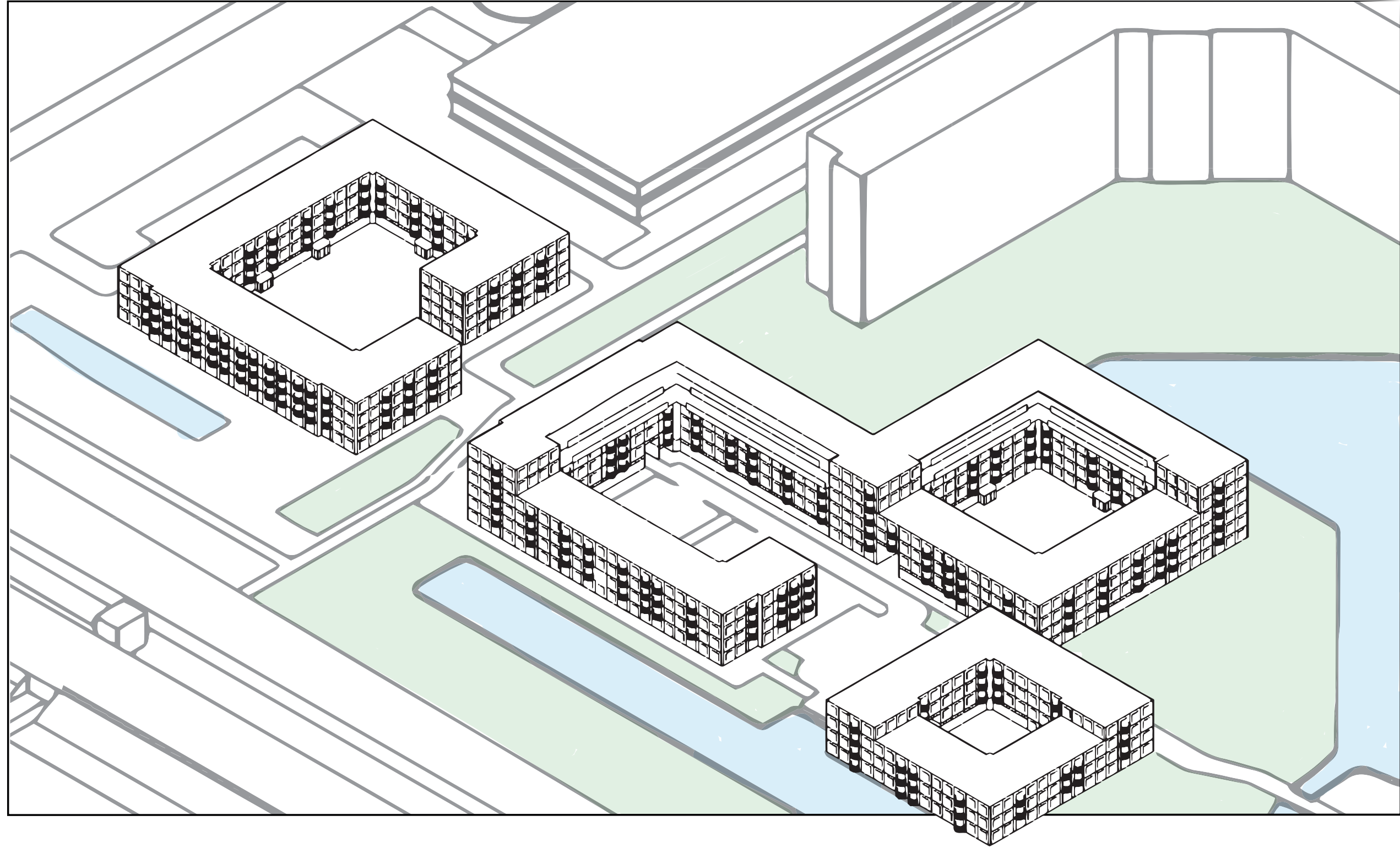
Principles / The roofscape



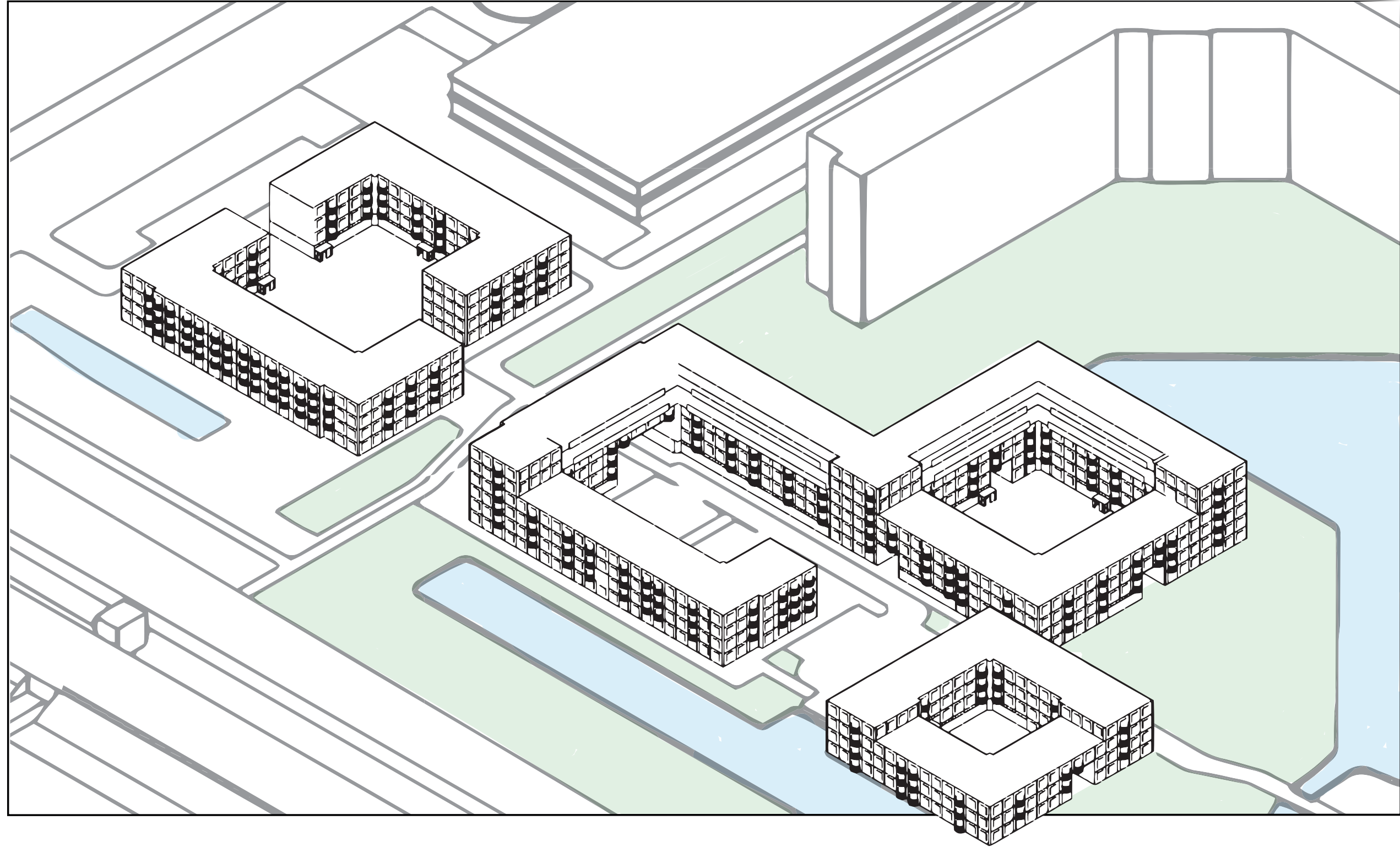
Design Principles / Densification



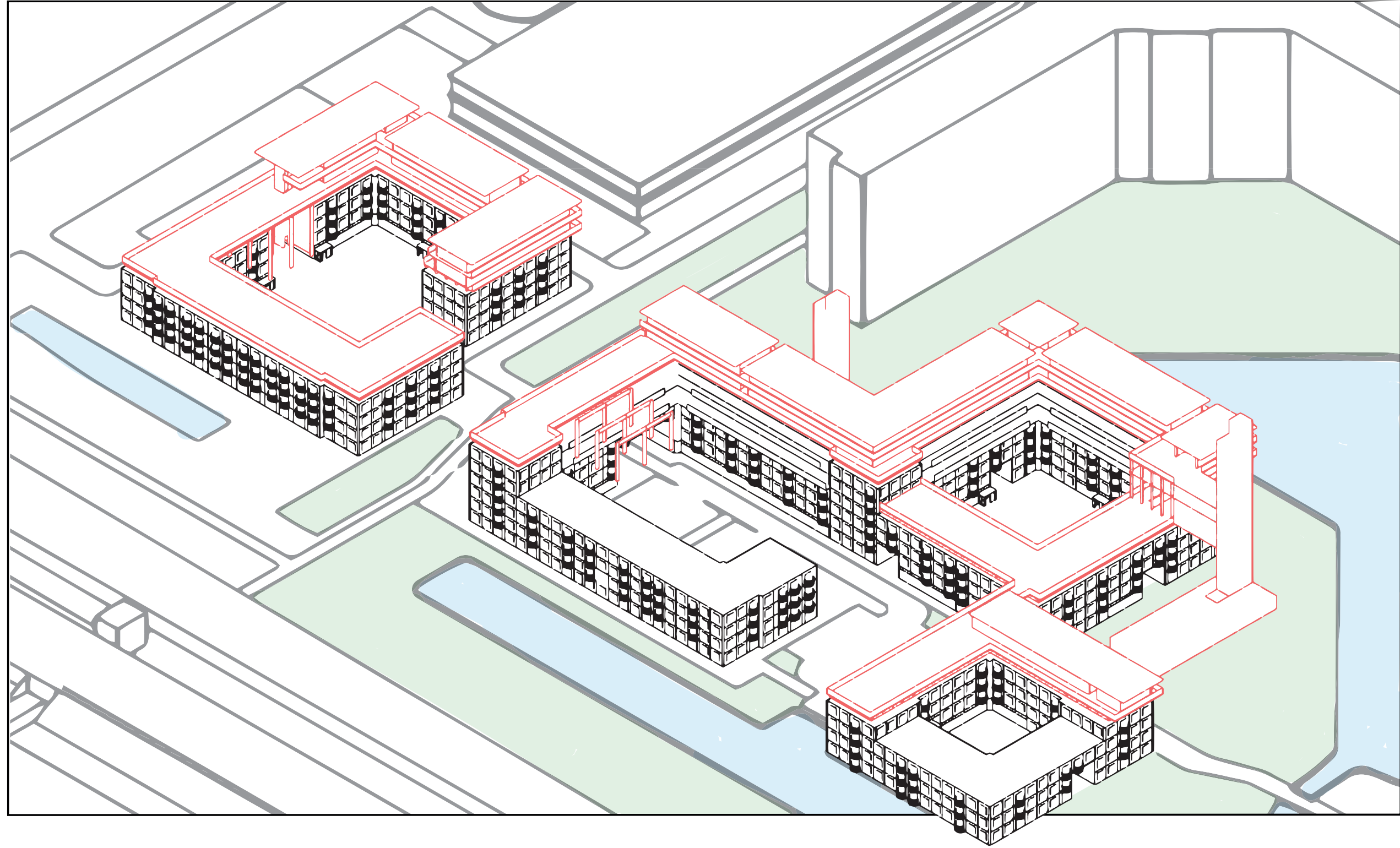
Design Principles



Design Principles



Design Principles



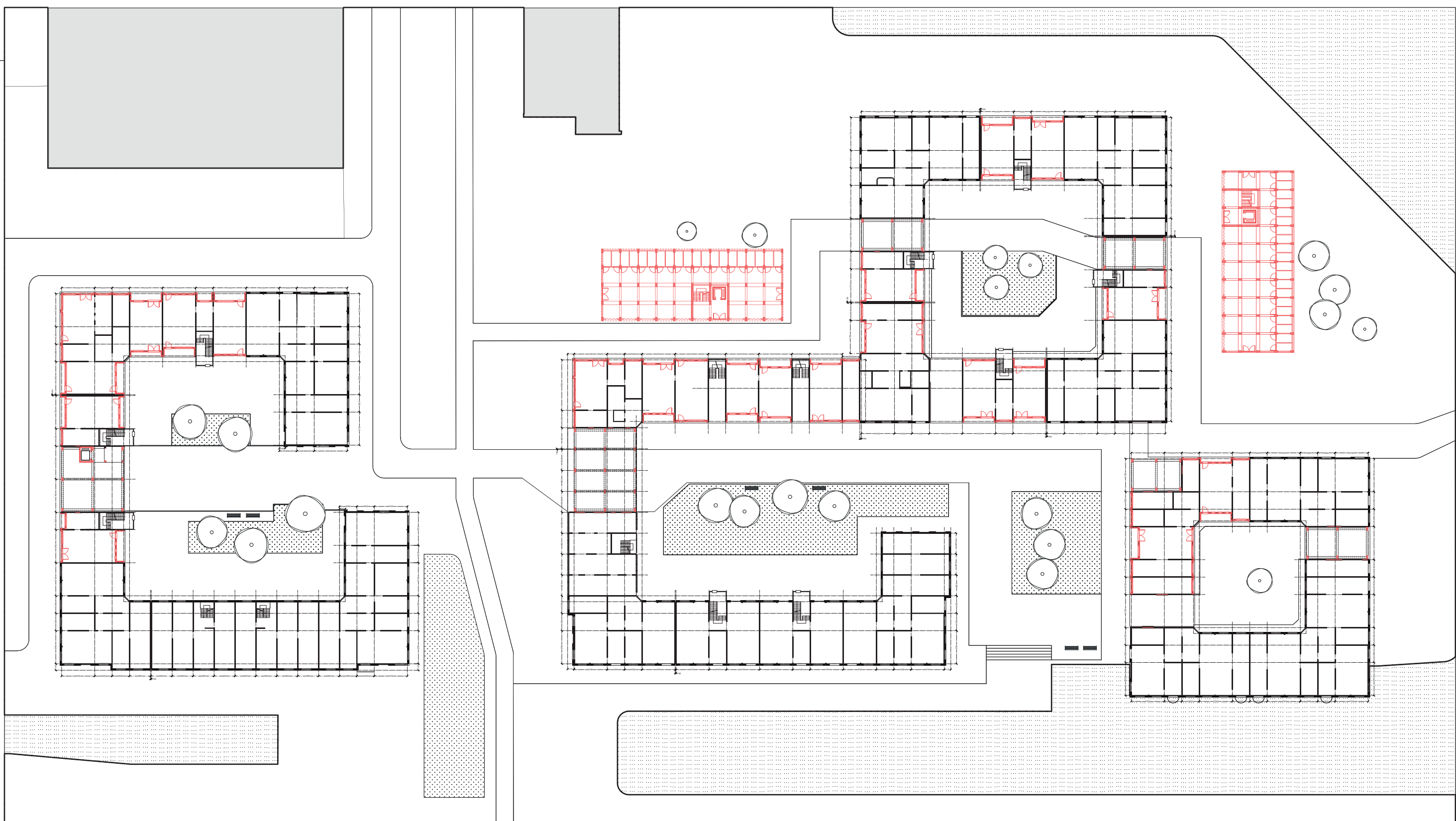
Design

Life on the ground



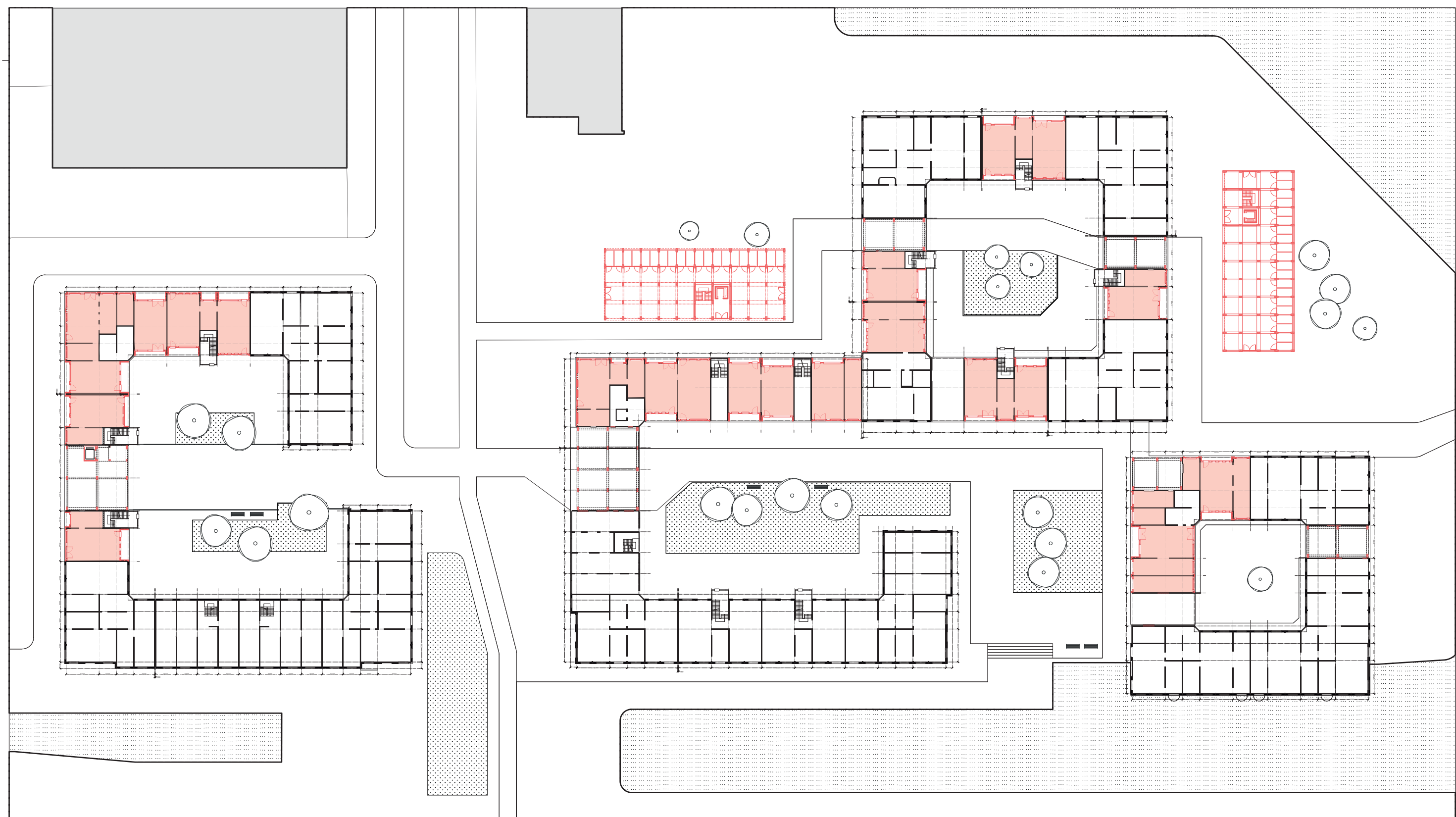
Design

Life on the ground



Design

Life on the ground



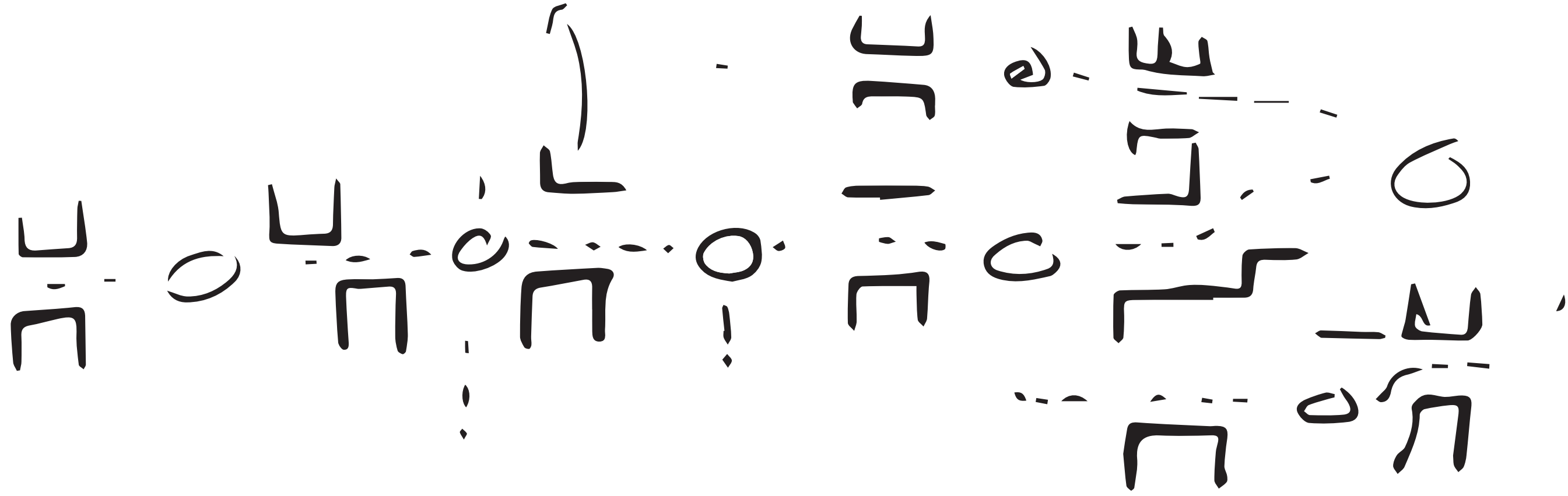
Design

Life on the ground



Design

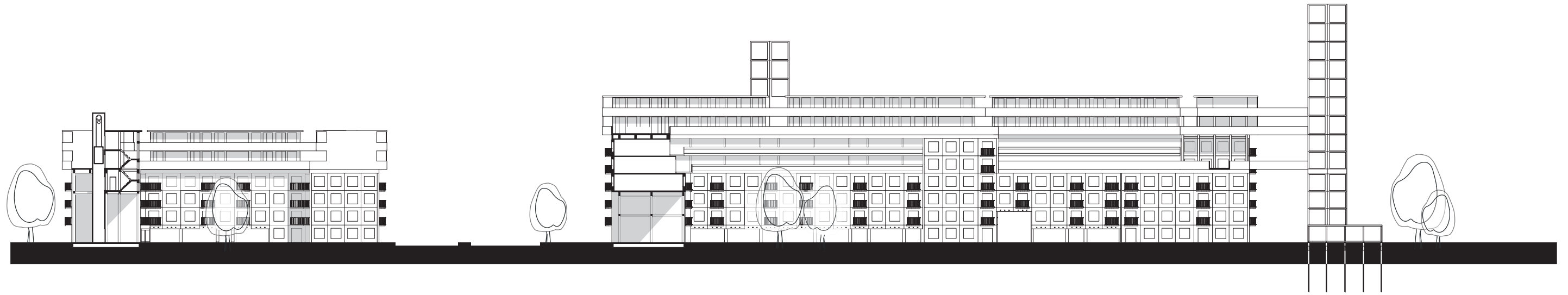
Life on the ground



A series of gates

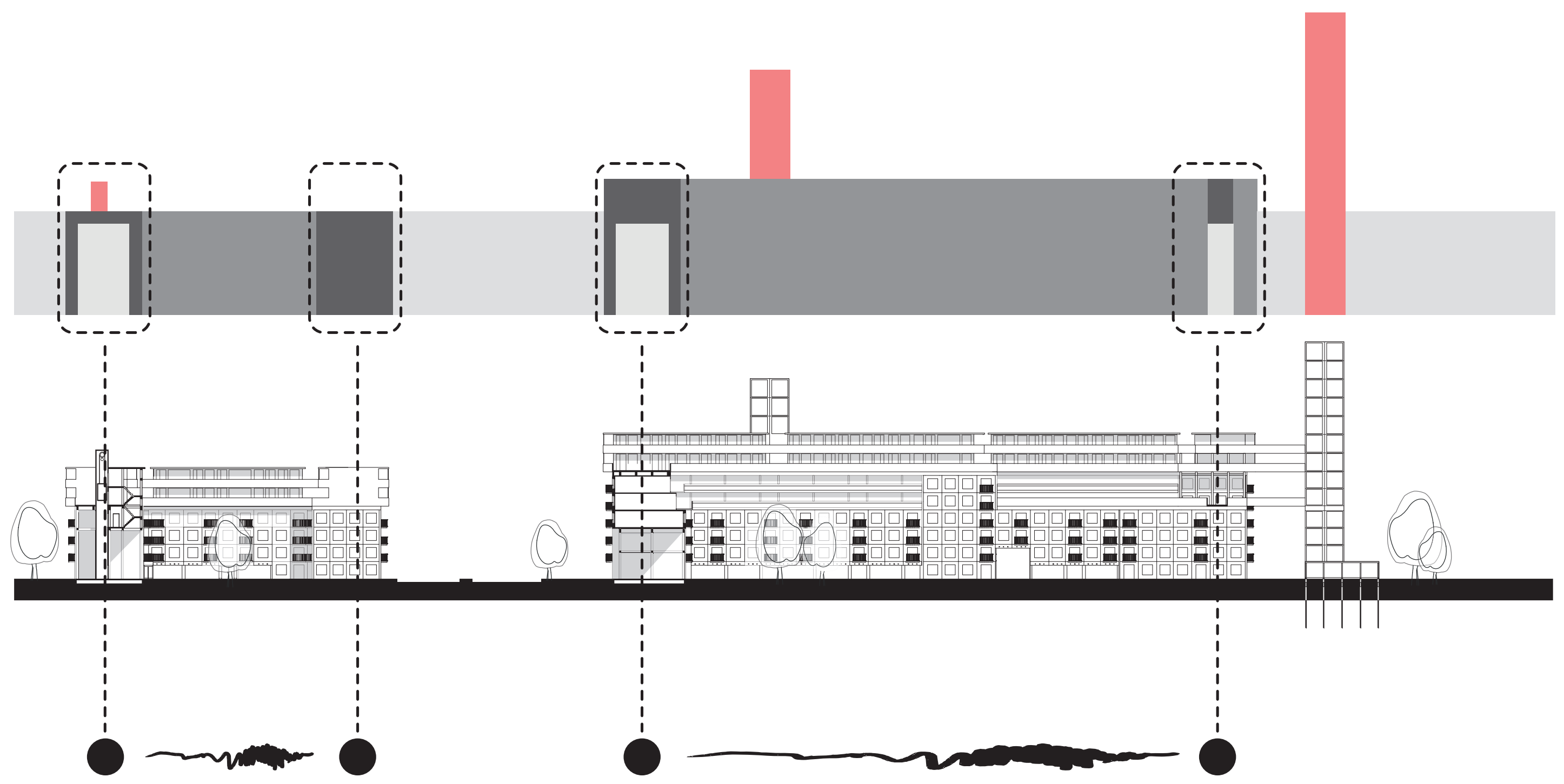
Design

Life on the ground



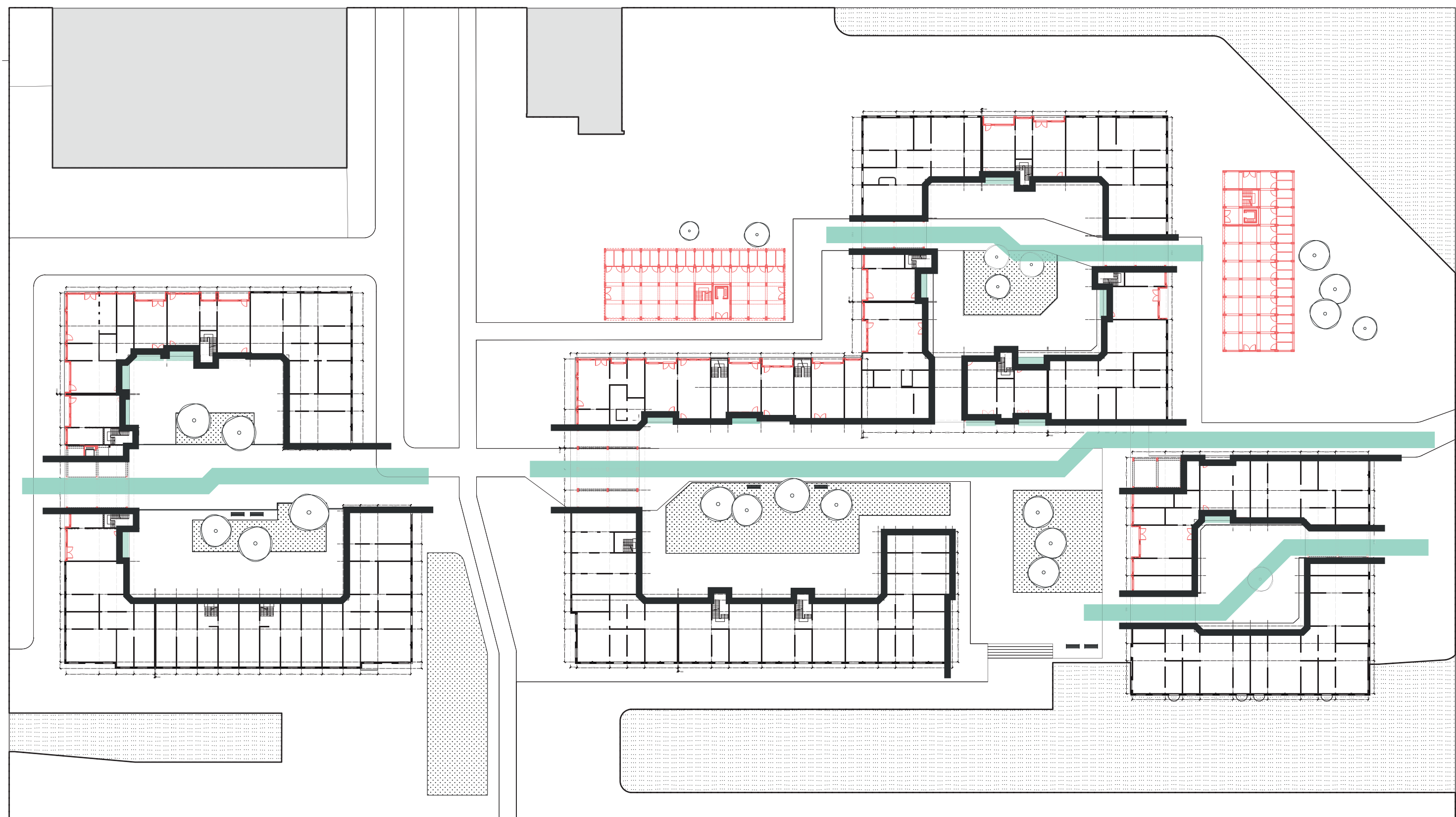
Design

Life on the ground



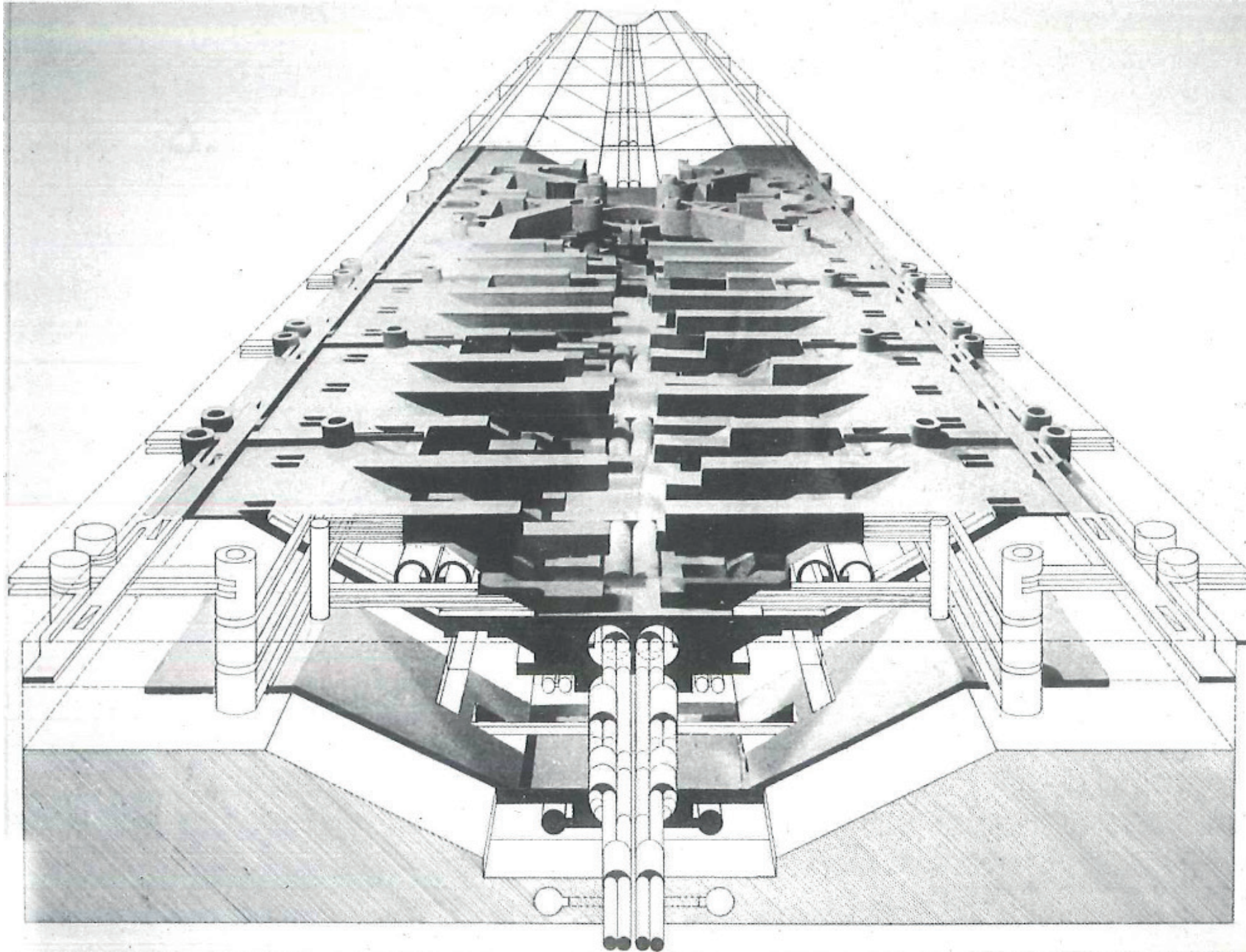
Design

Life on the ground



Design

Life on the ground



Vittorio Gregotti,
Venice housing ex saffa,
Started 1981



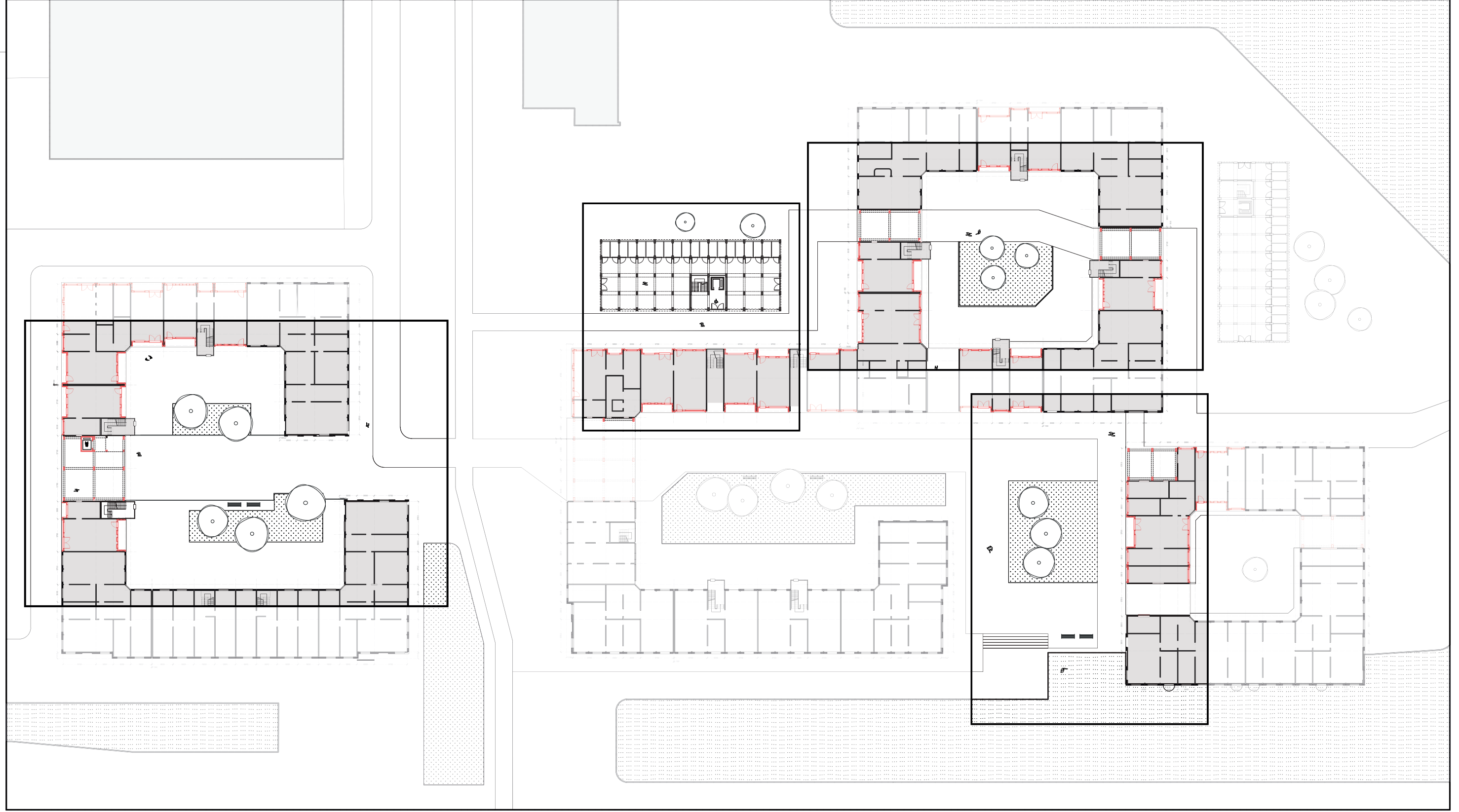
Design

Life on the ground



Design

Life on the ground



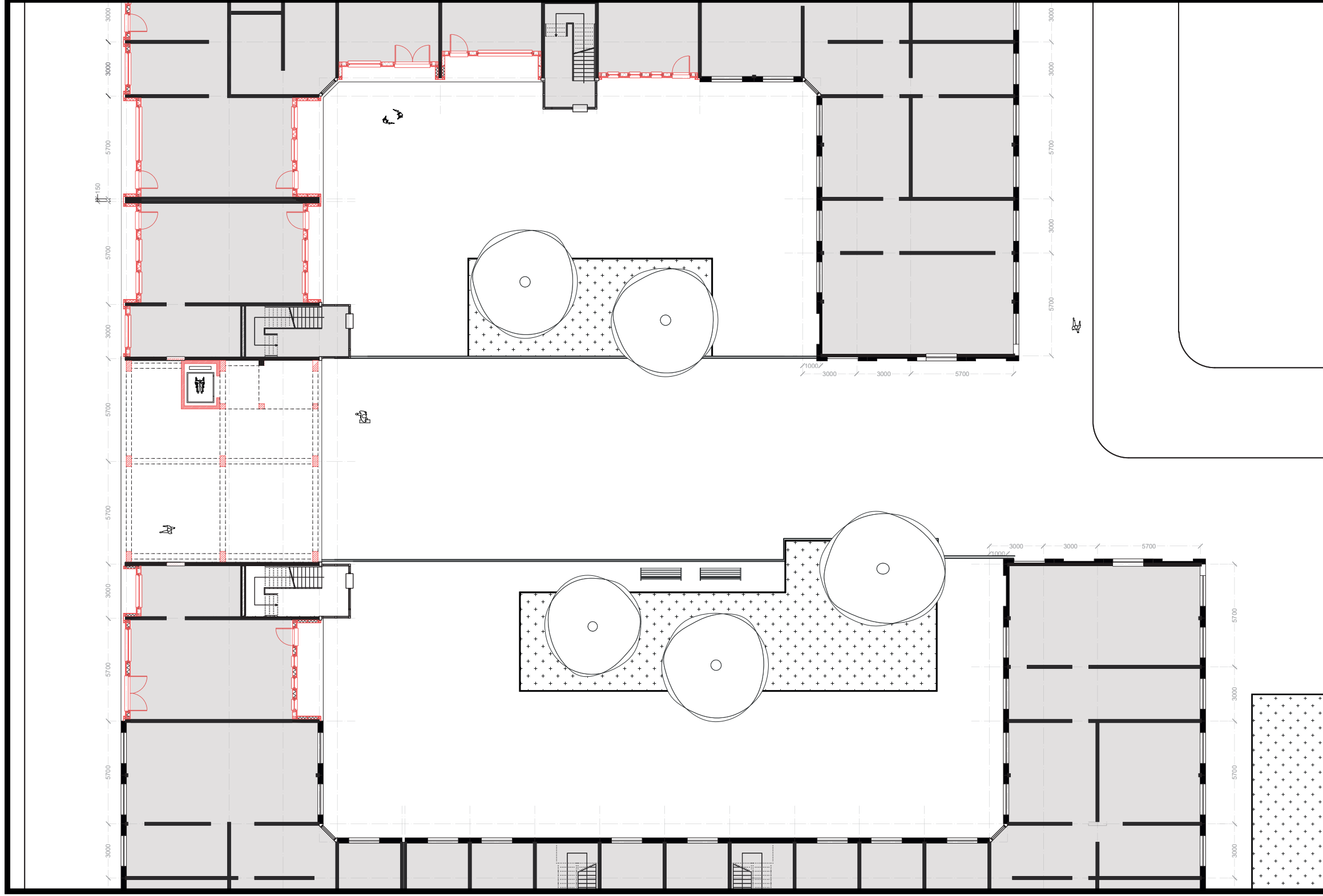
Design

Life on the ground



Design

Life on the ground



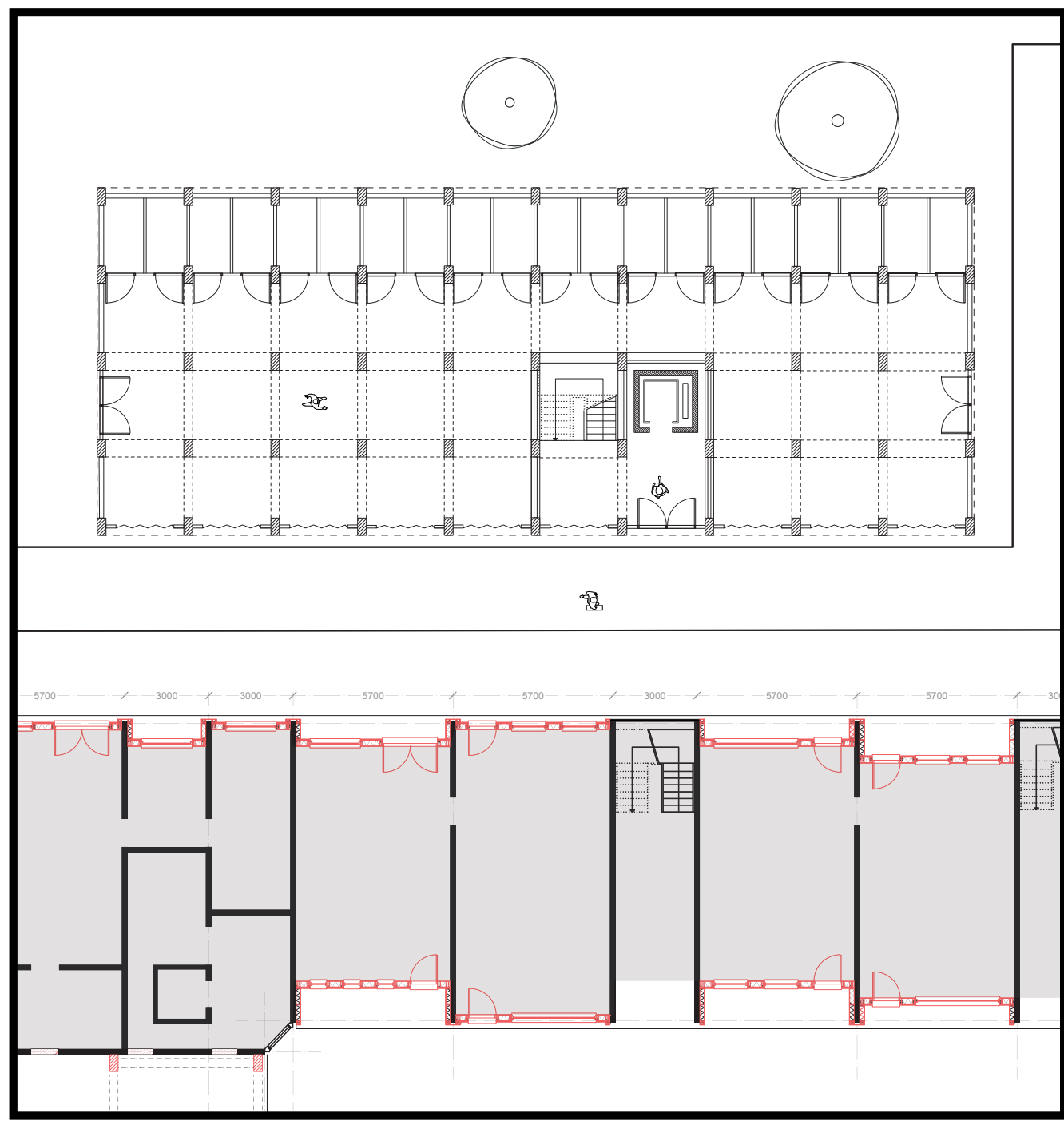
Design

Life on the ground



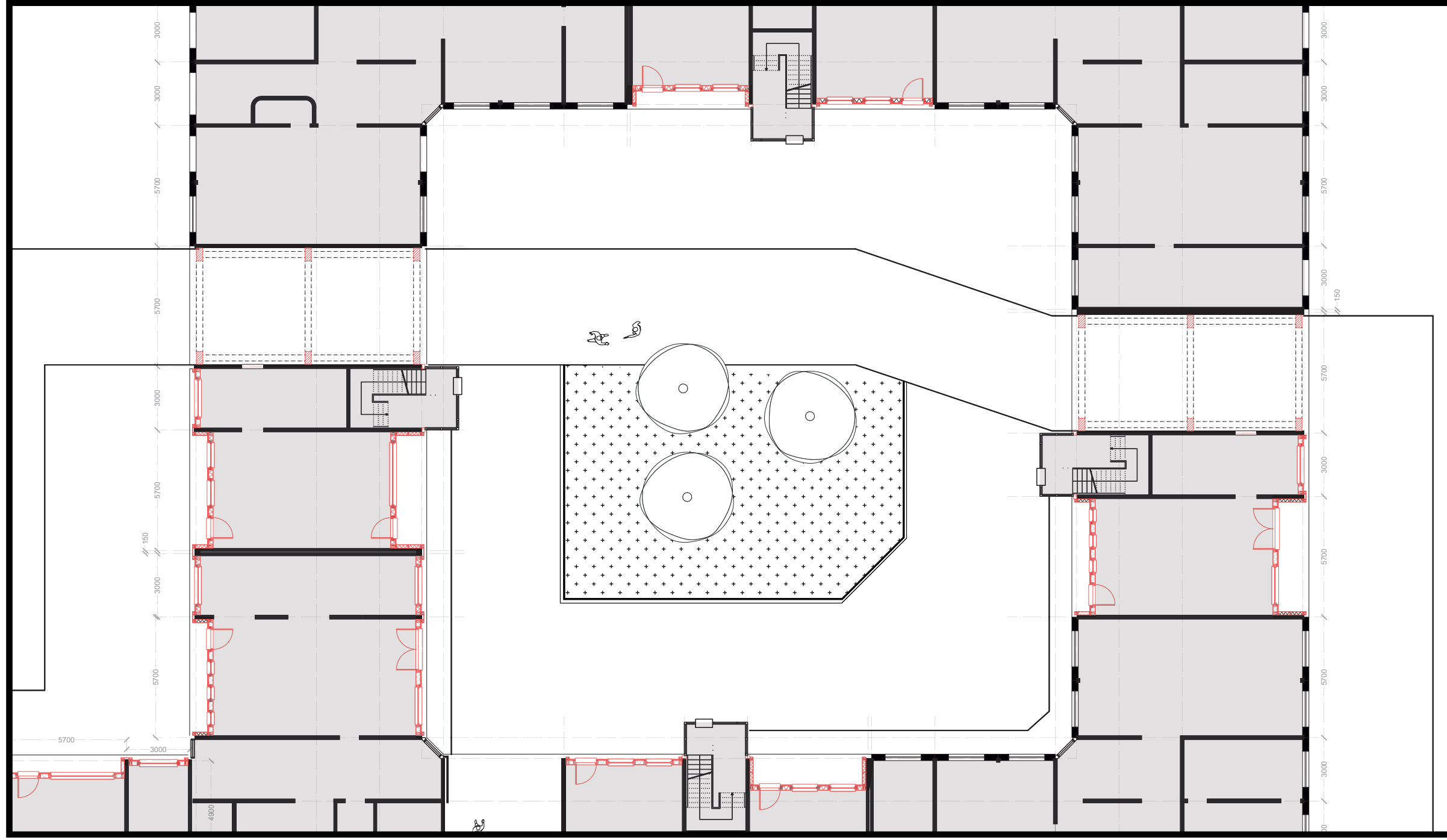
Design

Life on the ground



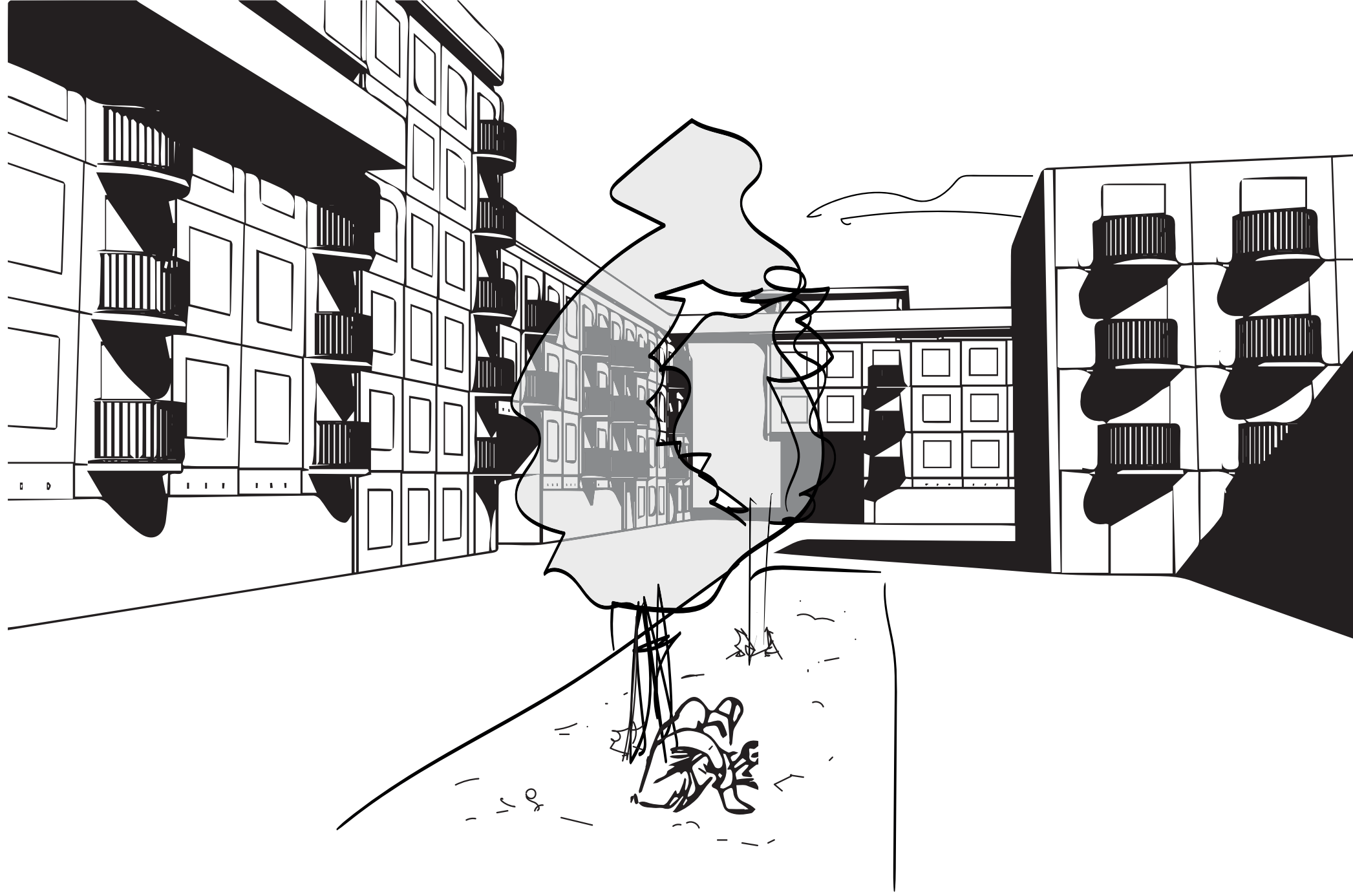
Design

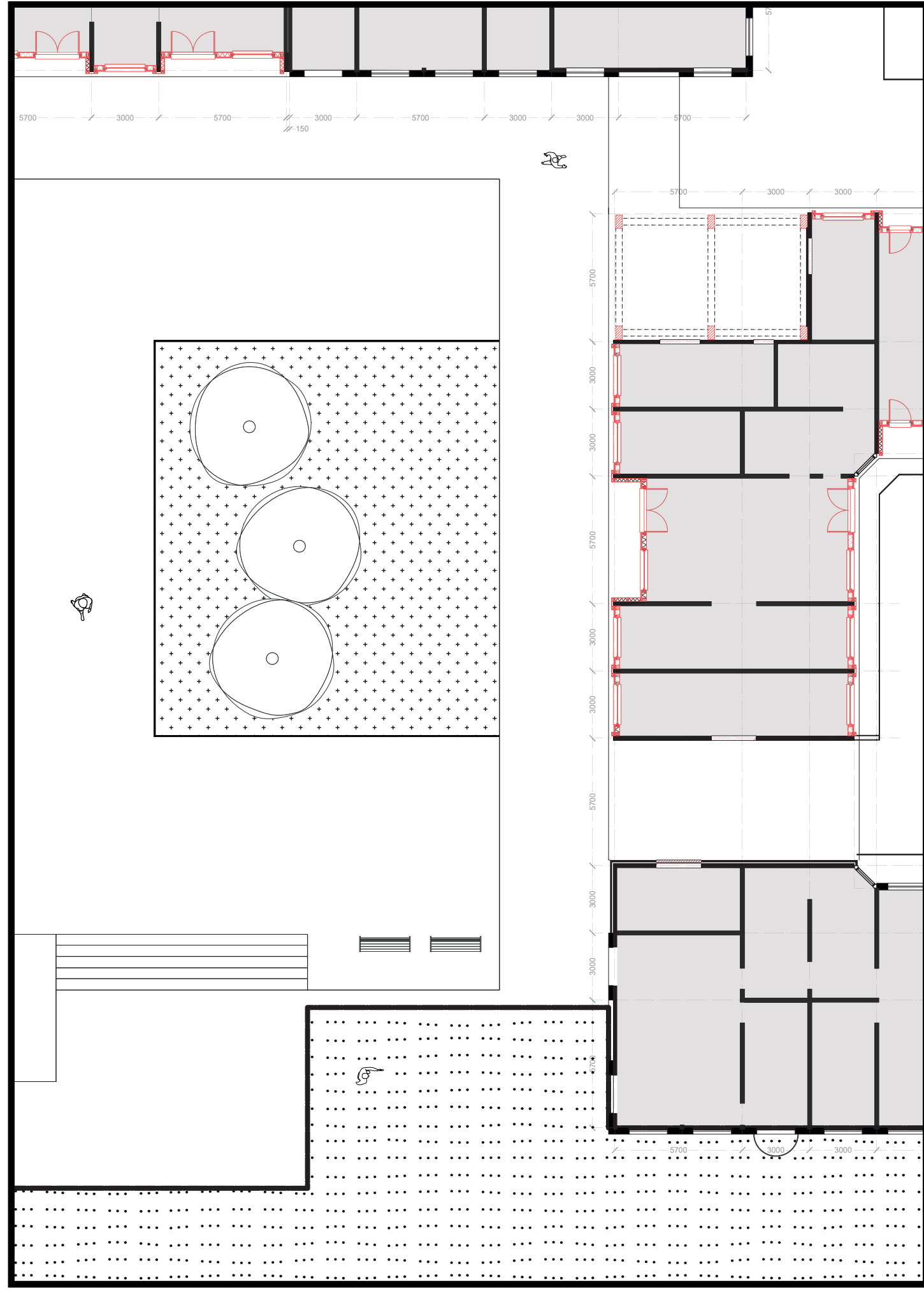
Life on the ground



Design

Life on the ground

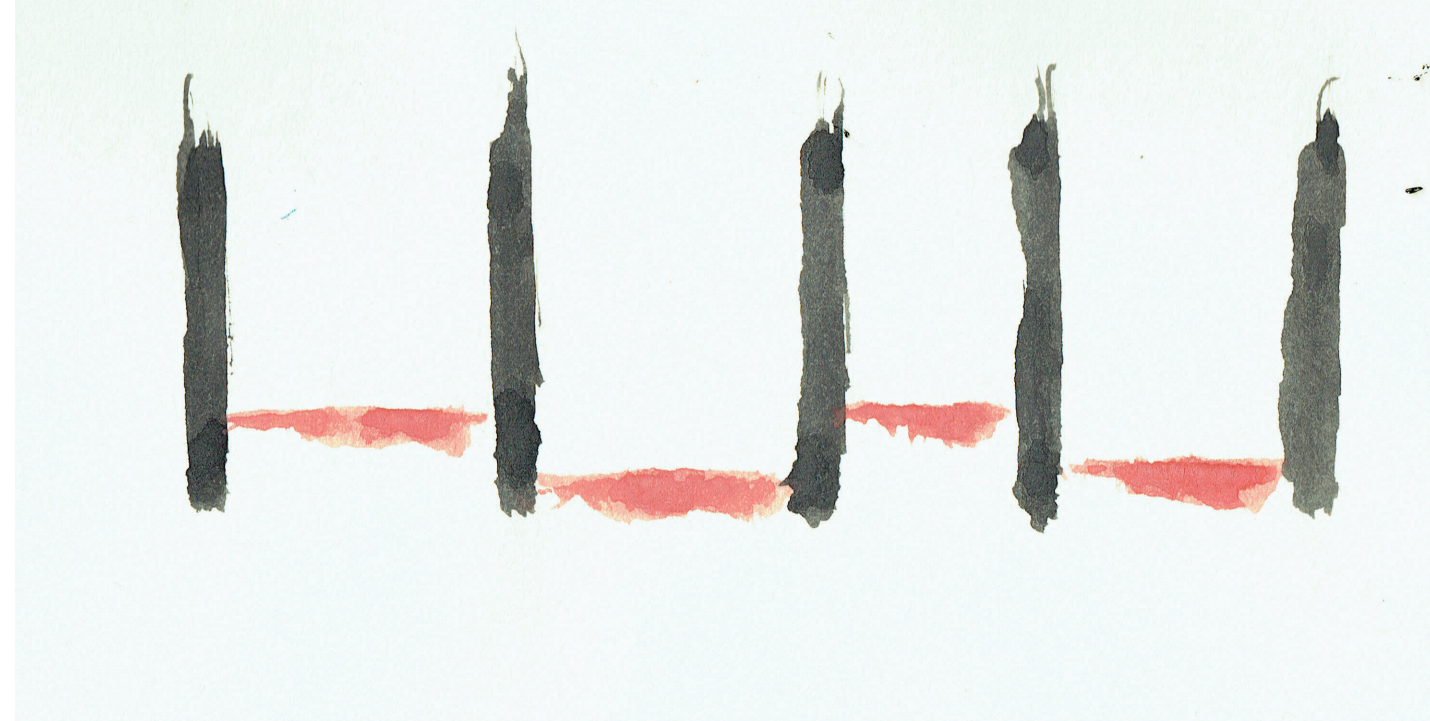




N

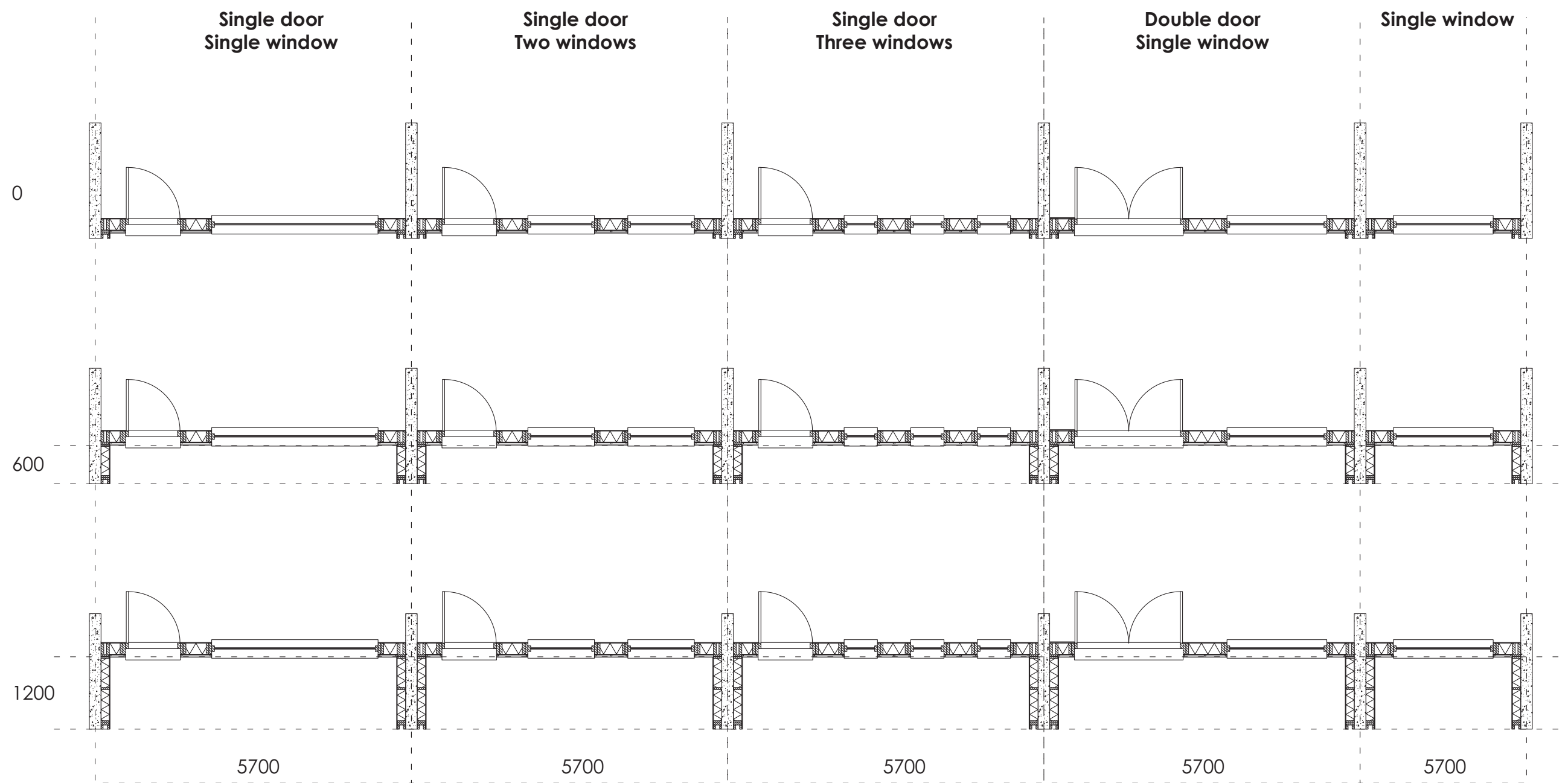
Design

Life on the ground



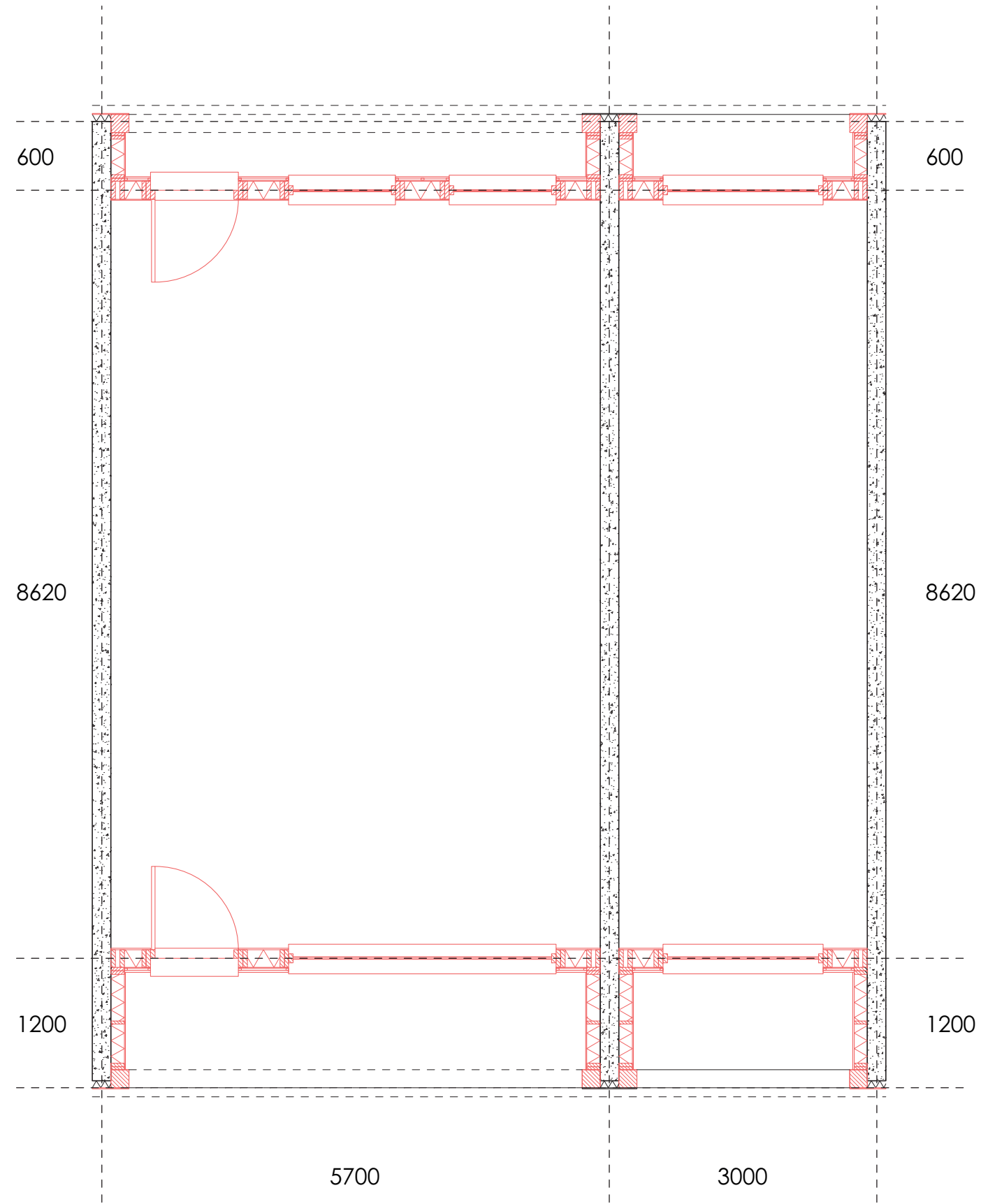
Design

Life on the ground



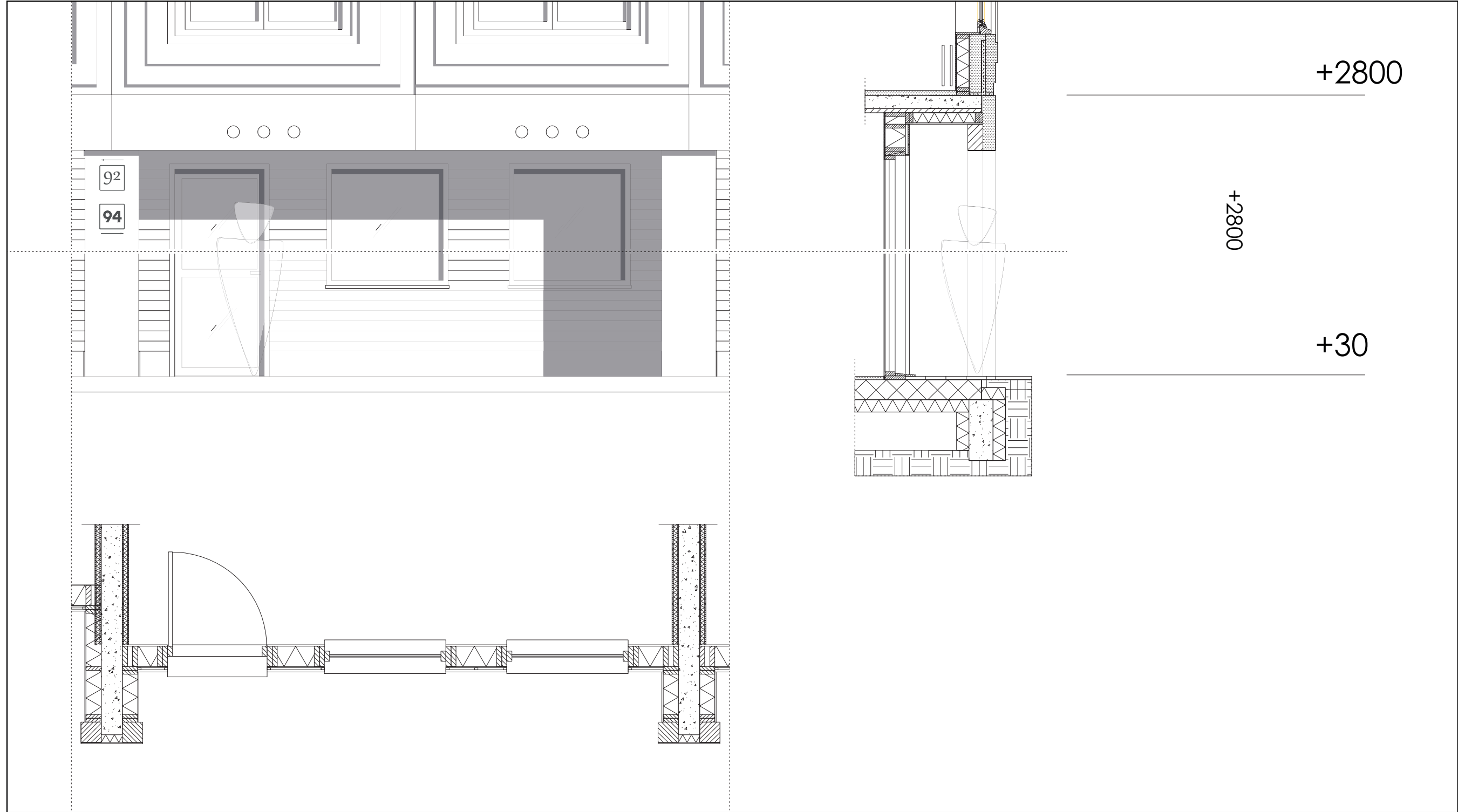
Design

Life on the ground



Design

Life on the ground

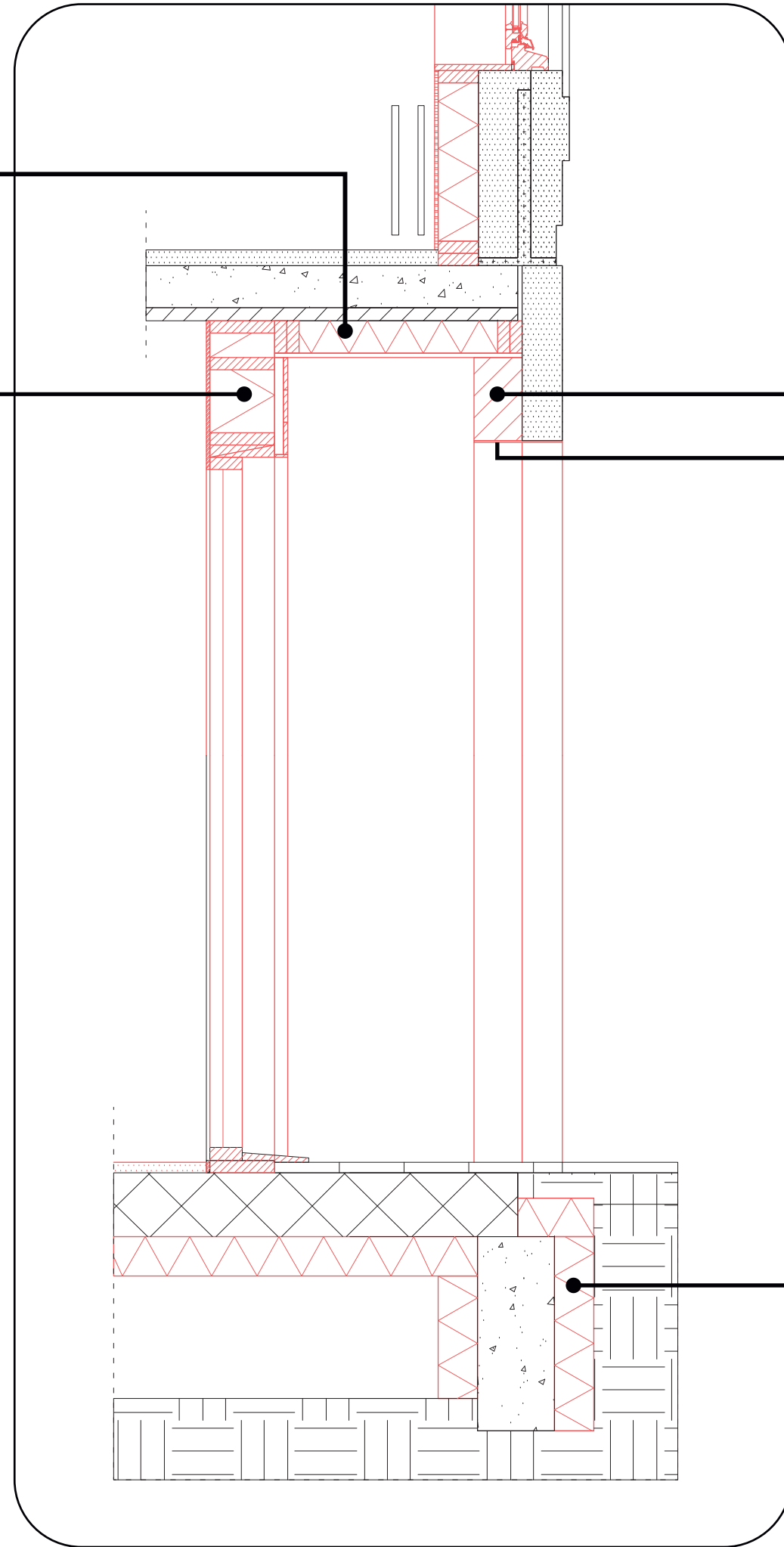




Isolation runs out into loggia as a thermal break

Timberframed new facade structure

Iso; 150mm Isovlas
 $R_c = 4 \text{ W/mK}$



200x150mm wood beam

Metal substructure for existing facade beam

Additional isolation on foundation/crawl space

120mm isovlas
 $R_c = 3$

Design

Life on the ground



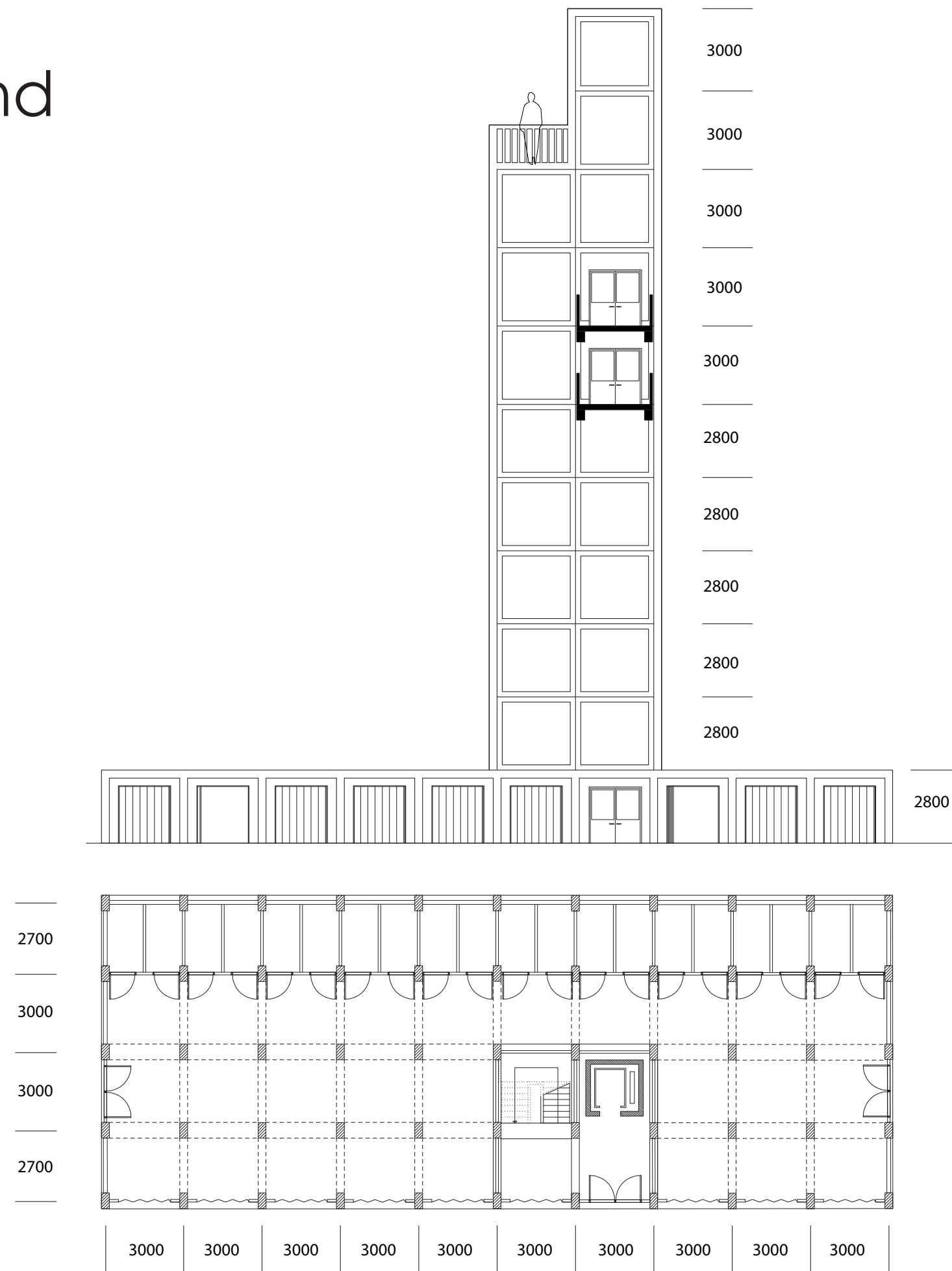
Design

Life on the ground



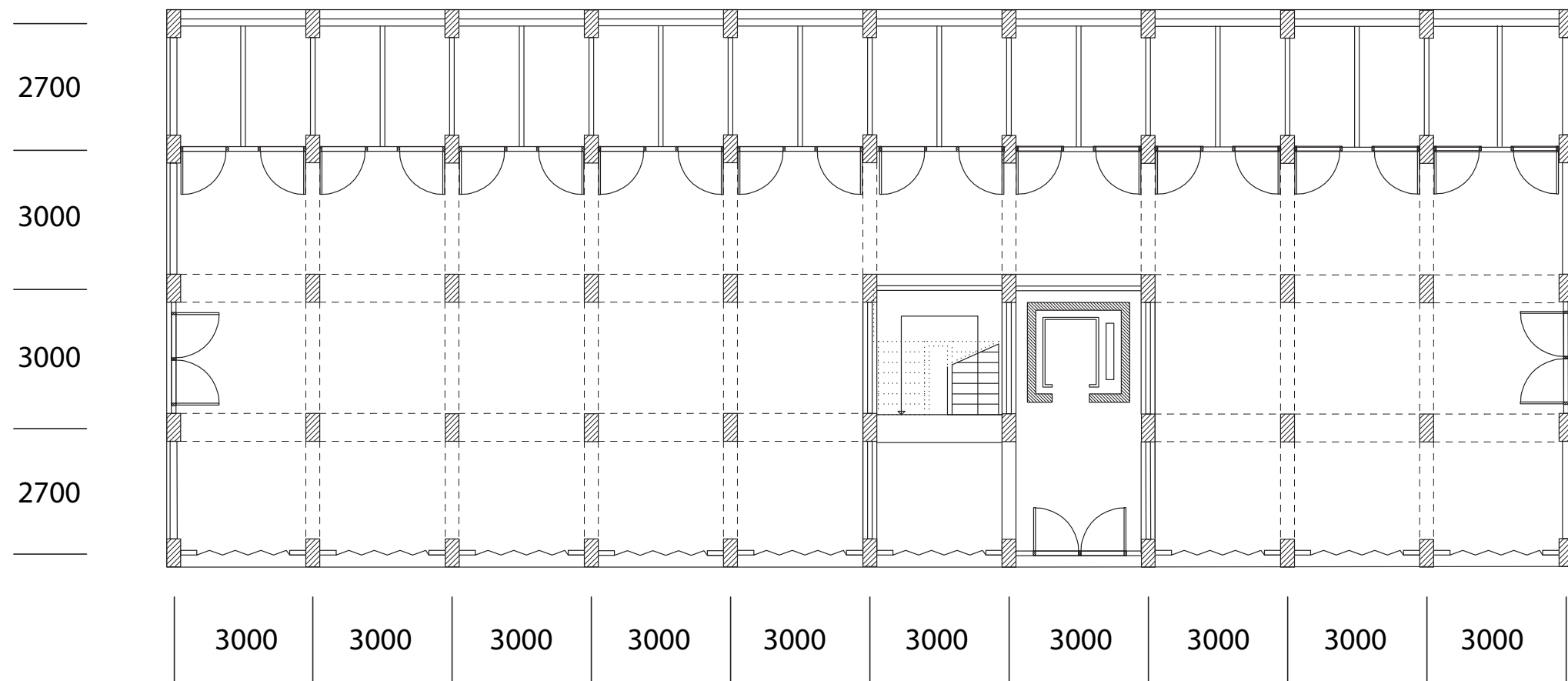
Design

Life on the ground



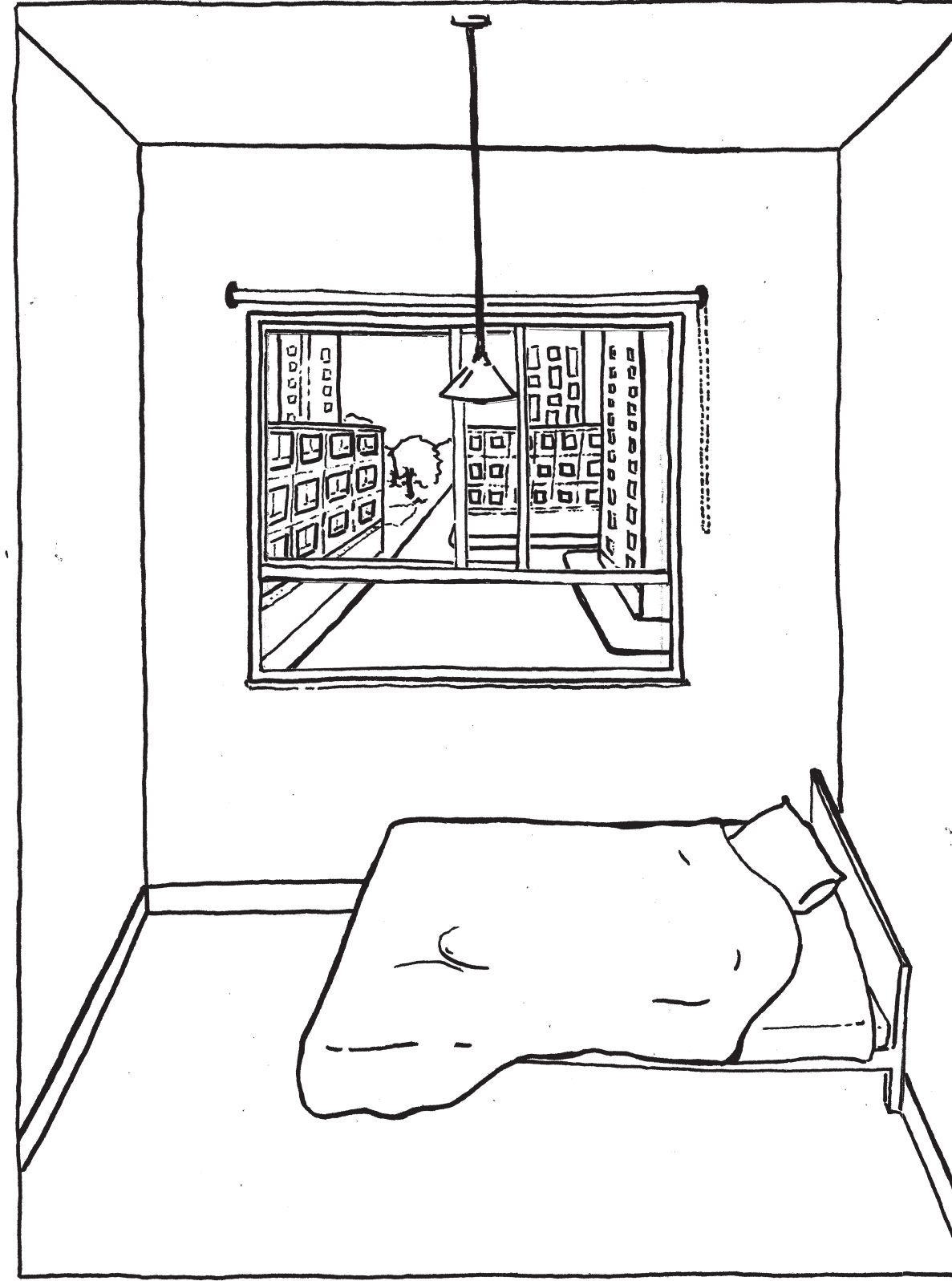
Design

Life on the ground



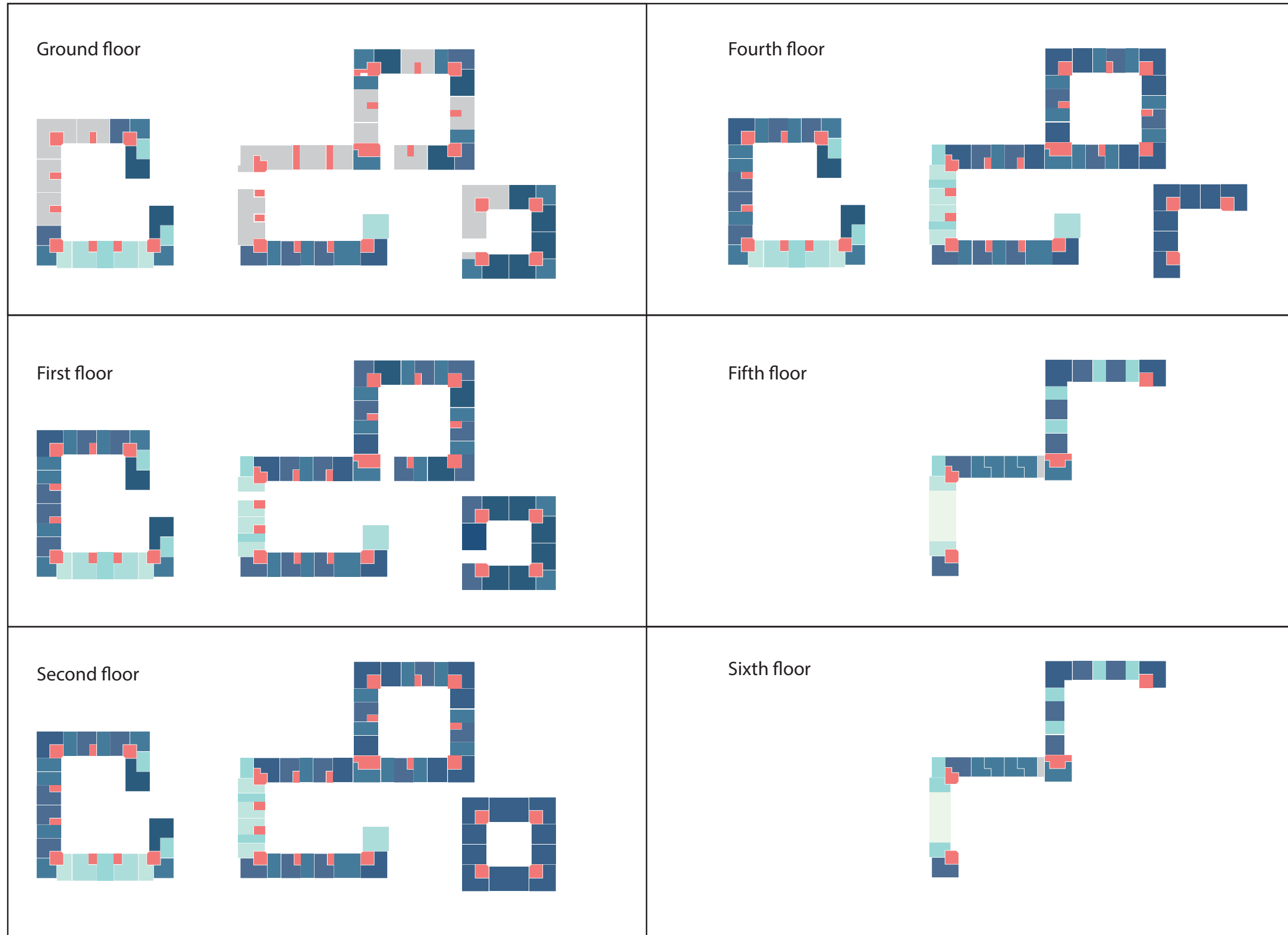
Design

Life in between



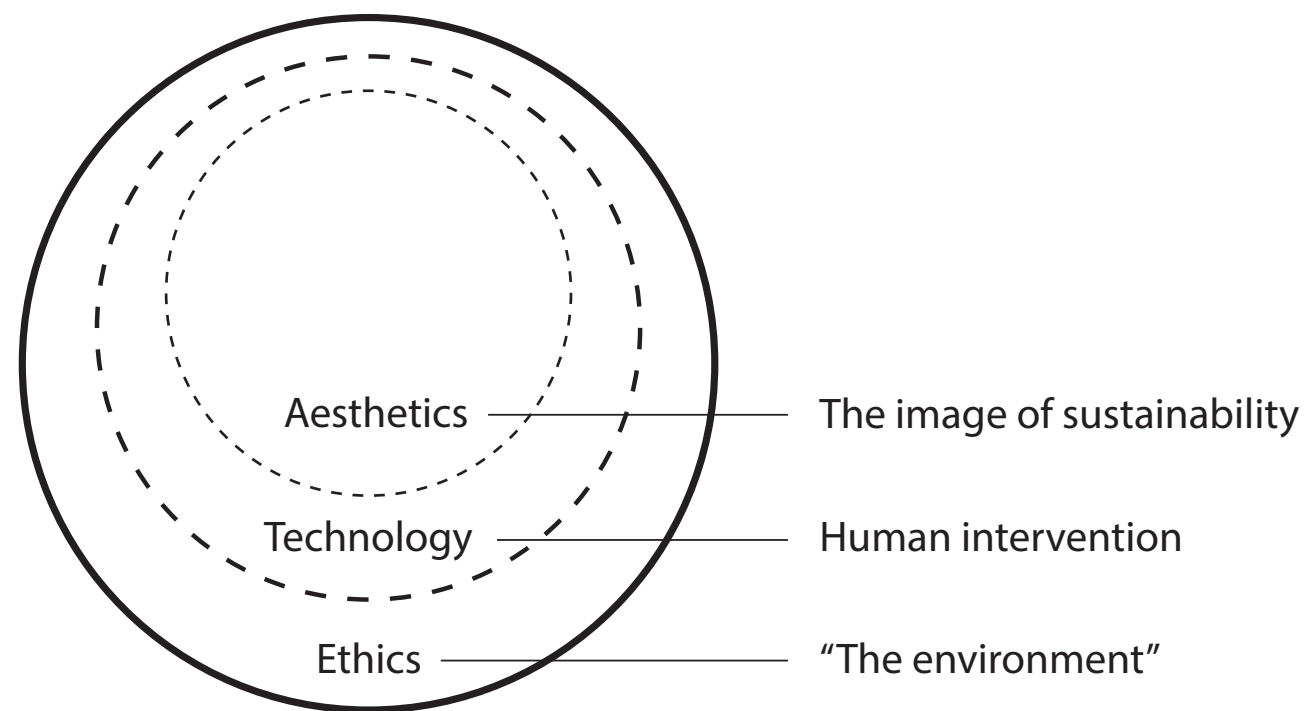
Design

Life in between



Design

Life in between



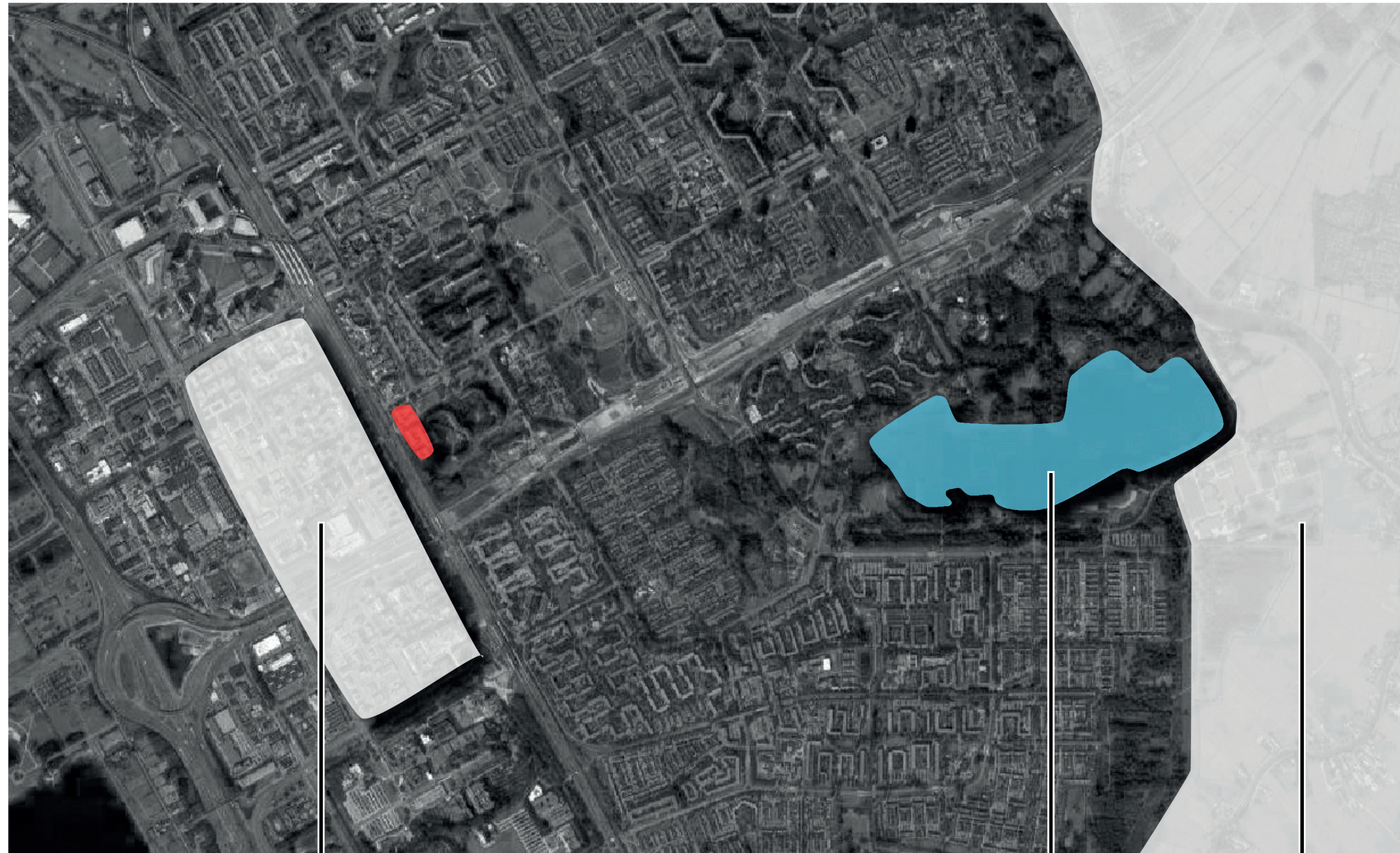
How can sustainable design mitigate psychological effects of urban life?

How can the material value of Heesterveld be taken advantage off in a redesign?

How can architecture be designed to keep grounded in its environment, profiting from natural processes?

Design

Life in between



Waste heat from nearby data centres / industry
4 PJ / 314.246 households

Cooling potential from Gaasperplas

Solar and wind in from rural land
1,36 PJ / 106.843 households

Design

Life in between

Local energy source potential

Electricity

Solar on 60% of roofs
0,72 PJ / 57.350 households

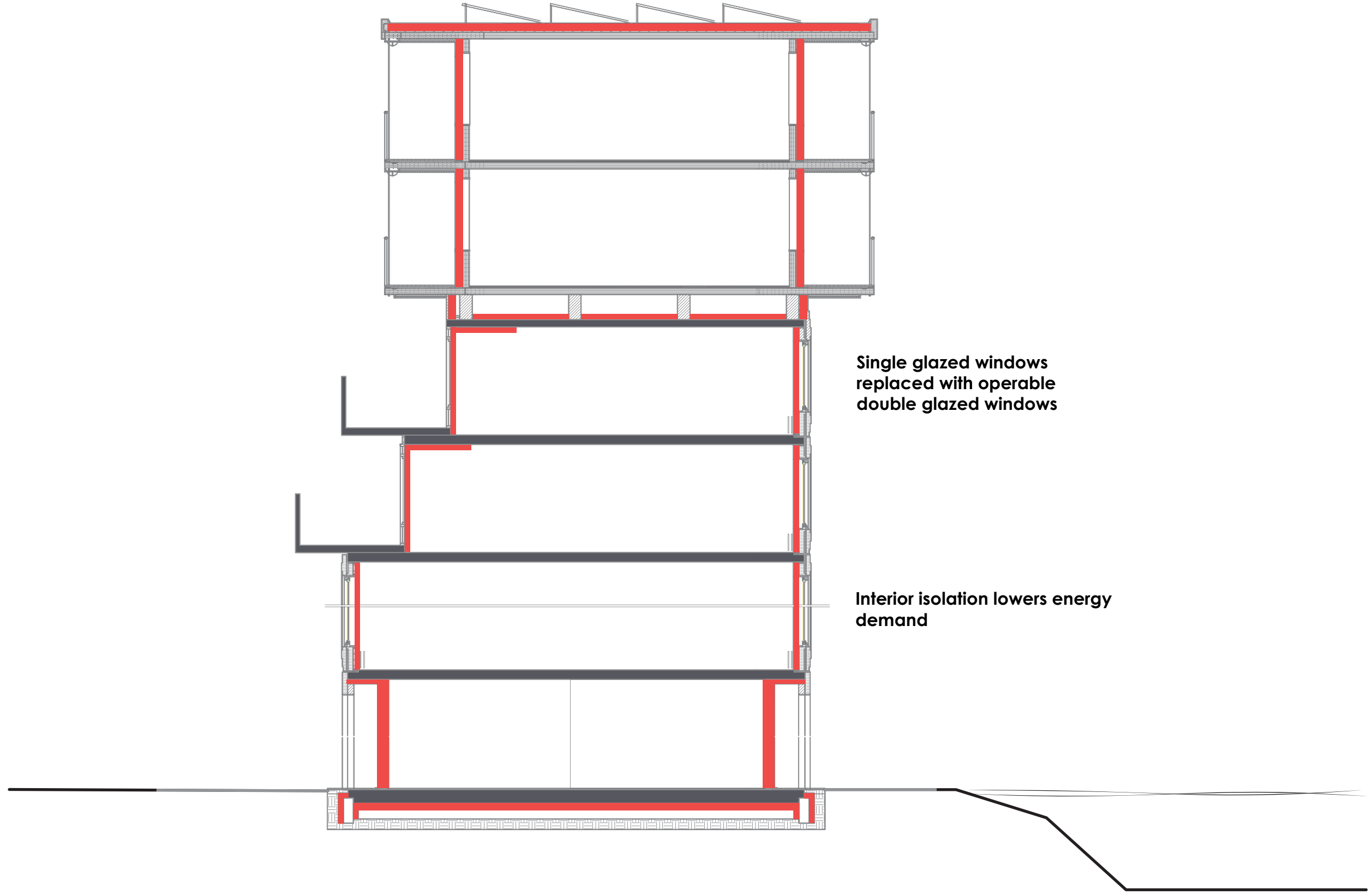
Heat

Biogas
Hydrogen
Surface water
Solar boilers
Geothermal
Heat-Cold storage



Design

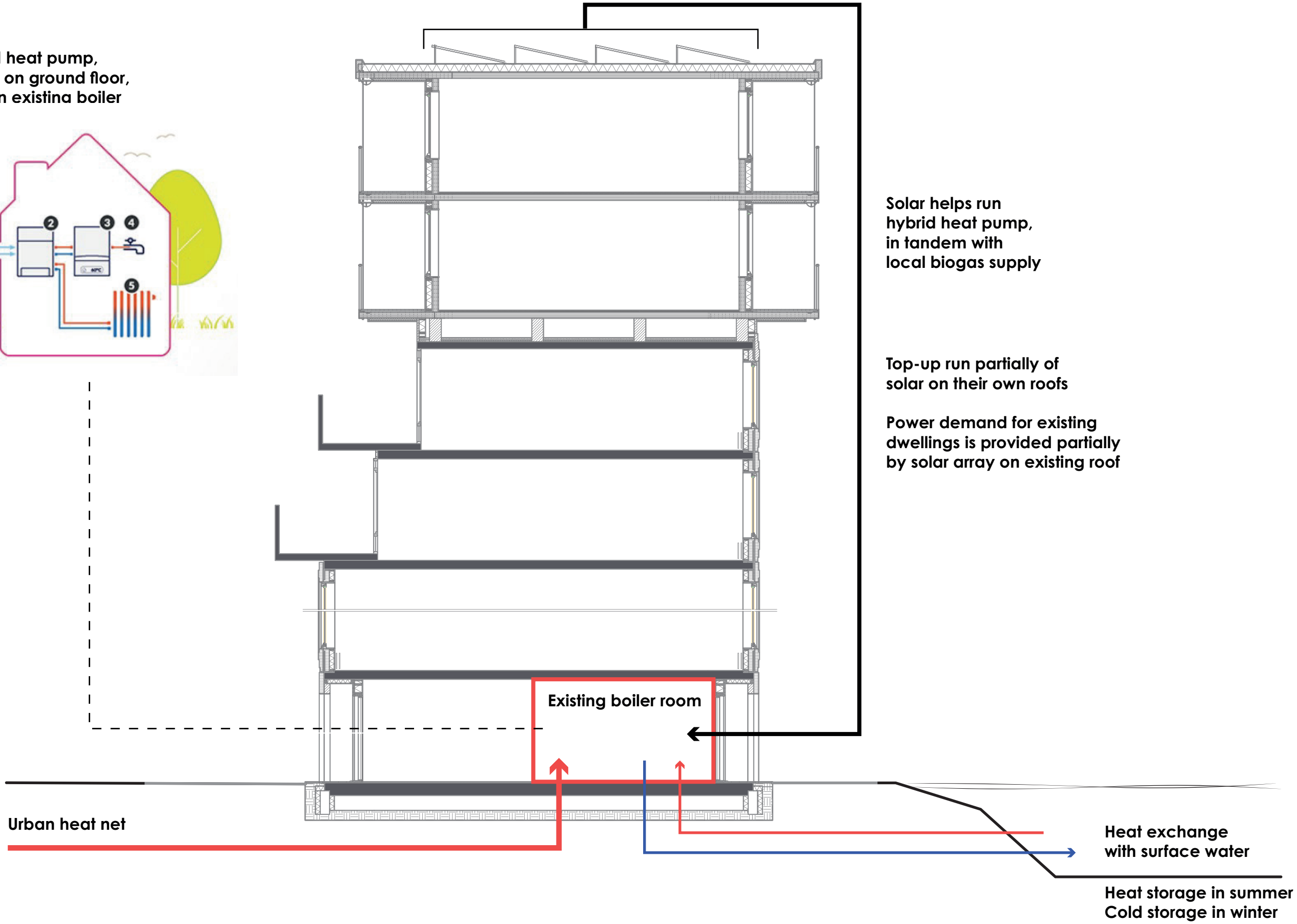
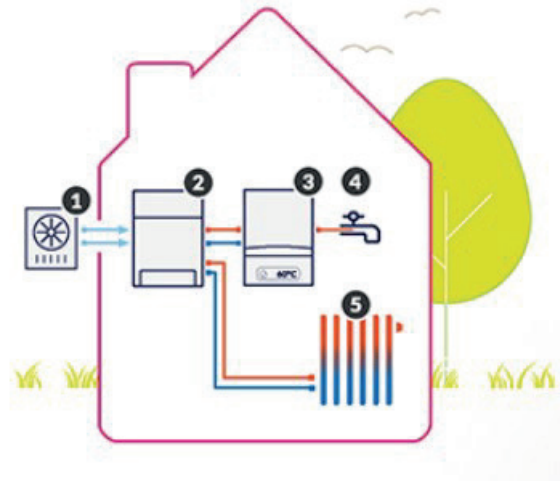
Life in between



Design

Life in between

Hybrid heat pump, intake on ground floor, runs on existing boiler



Solar helps run hybrid heat pump, in tandem with local biogas supply

Top-up run partially of solar on their own roofs

Power demand for existing dwellings is provided partially by solar array on existing roof

Heat exchange with surface water

Heat storage in summer
Cold storage in winter

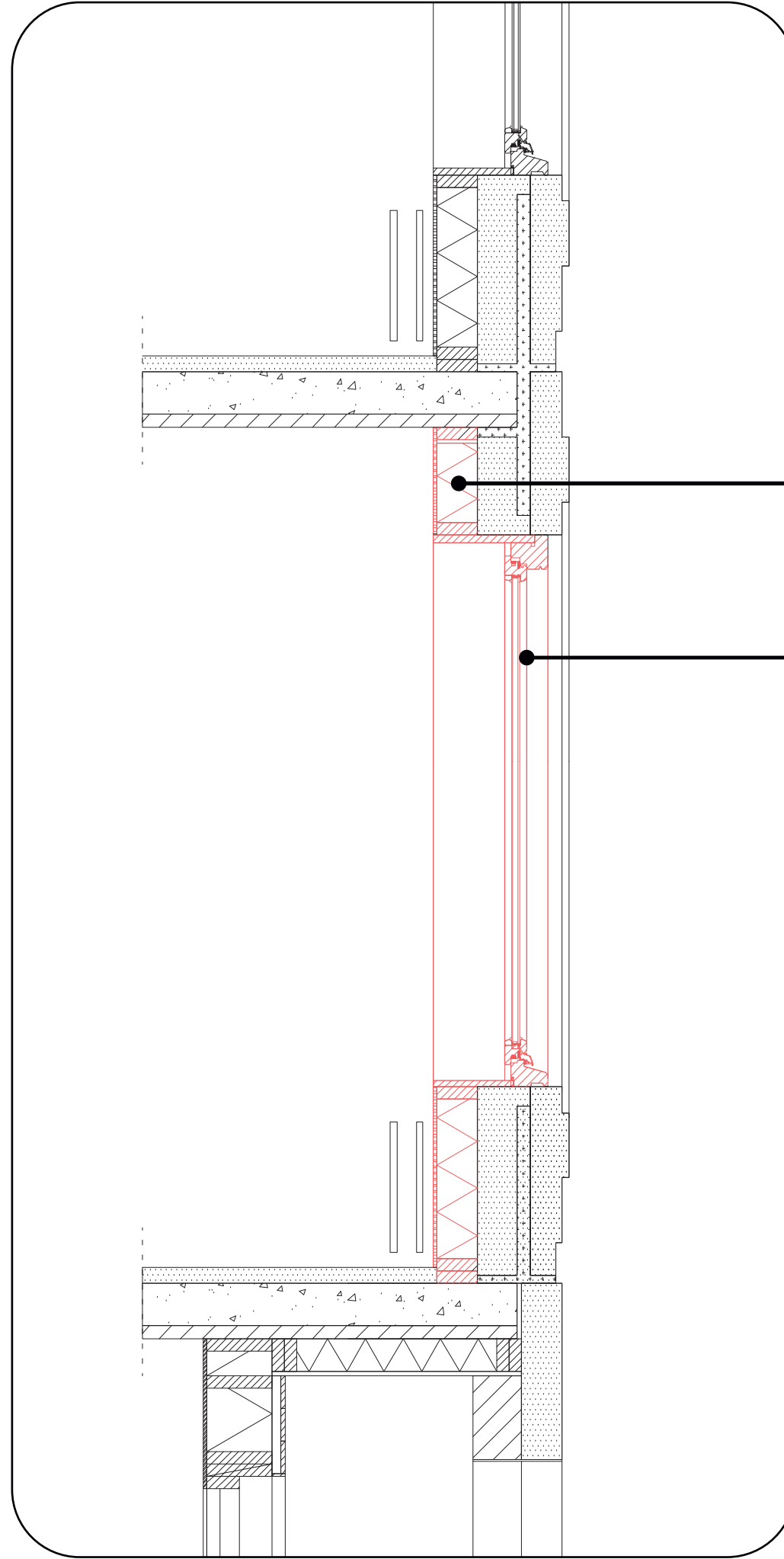
Design

Life in between

Where is the heritage value?







150mm isovlas
 $R_c = 4 \text{ W/mK}$

New, operable, double
glazed window

In line with existing
isolation line

Design

Life in between



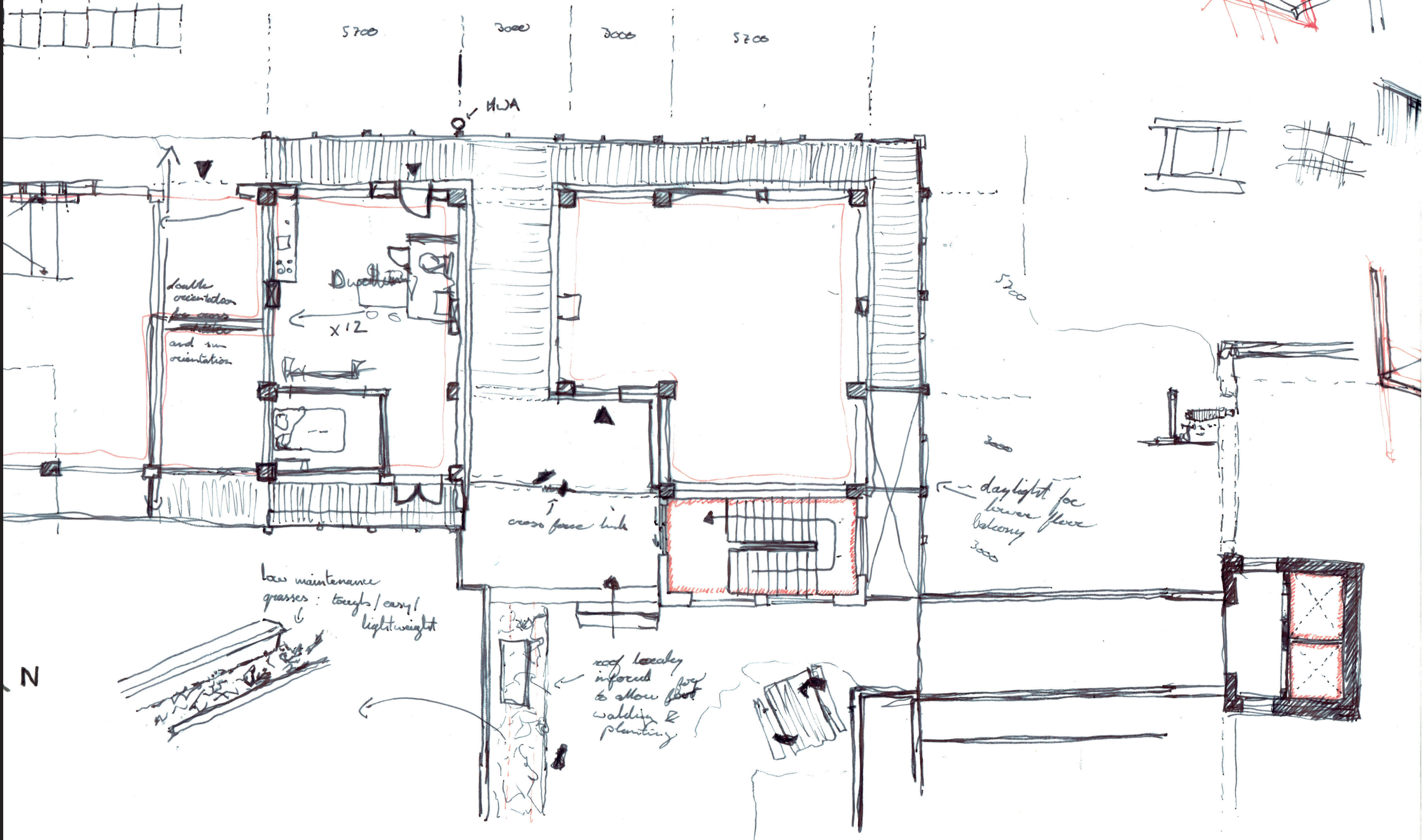
Design

Life in between



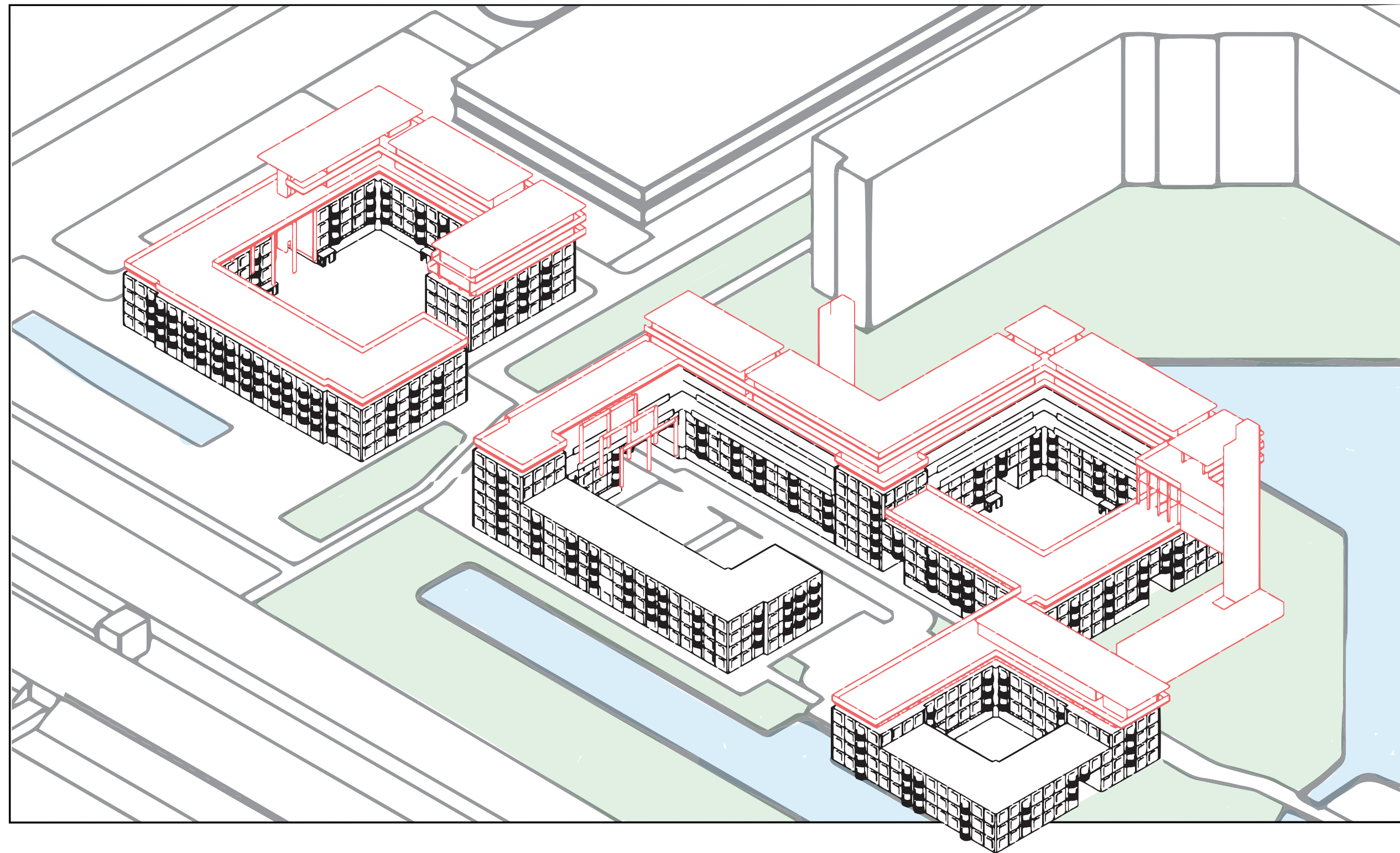
Design

Life on top



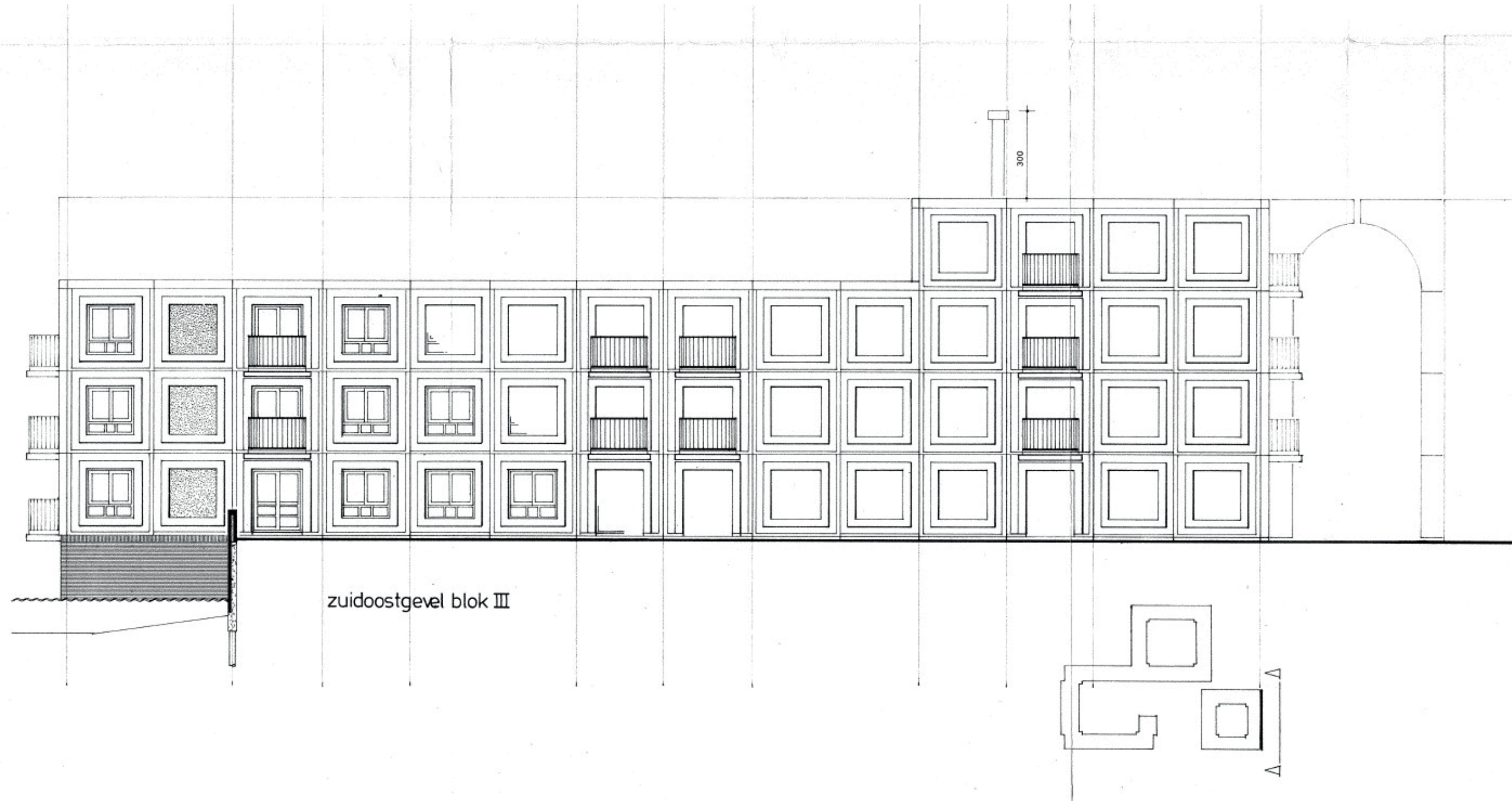
Design

Life on top



Design

Life on top



Design

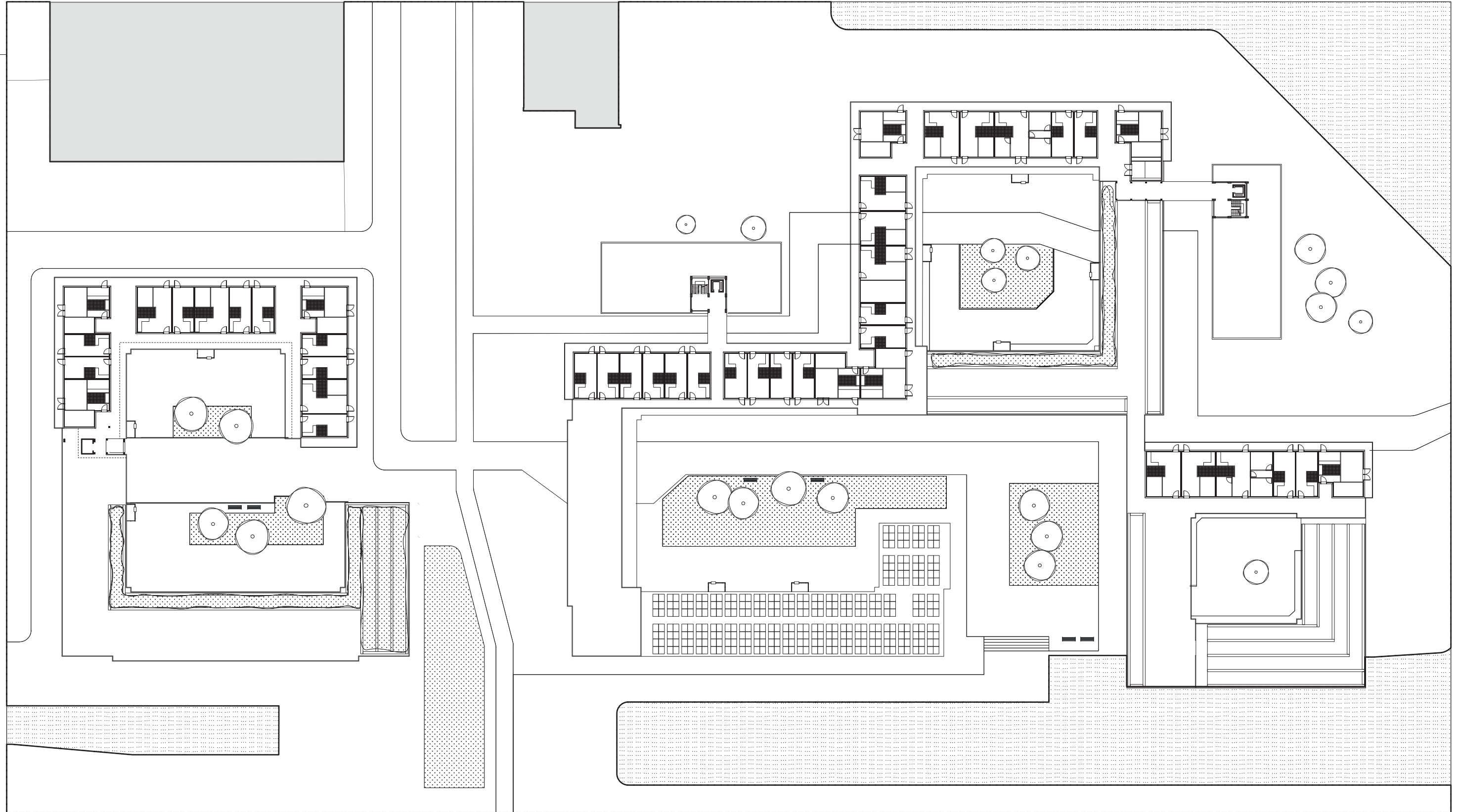
Life on top



Public housing in Russia,
Built under Chroesjtjov

Design

Life on top

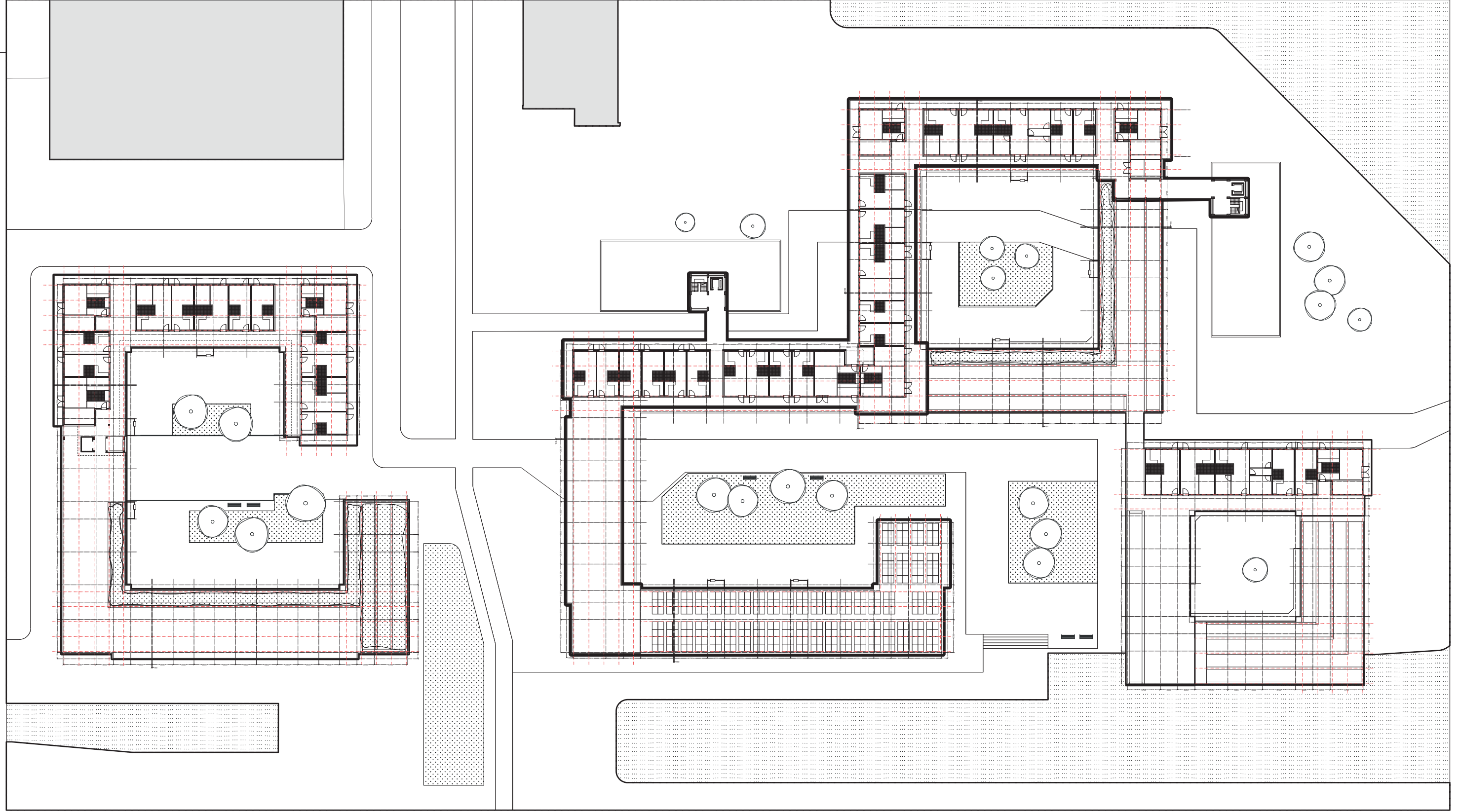


82 dwellings spread over two floors



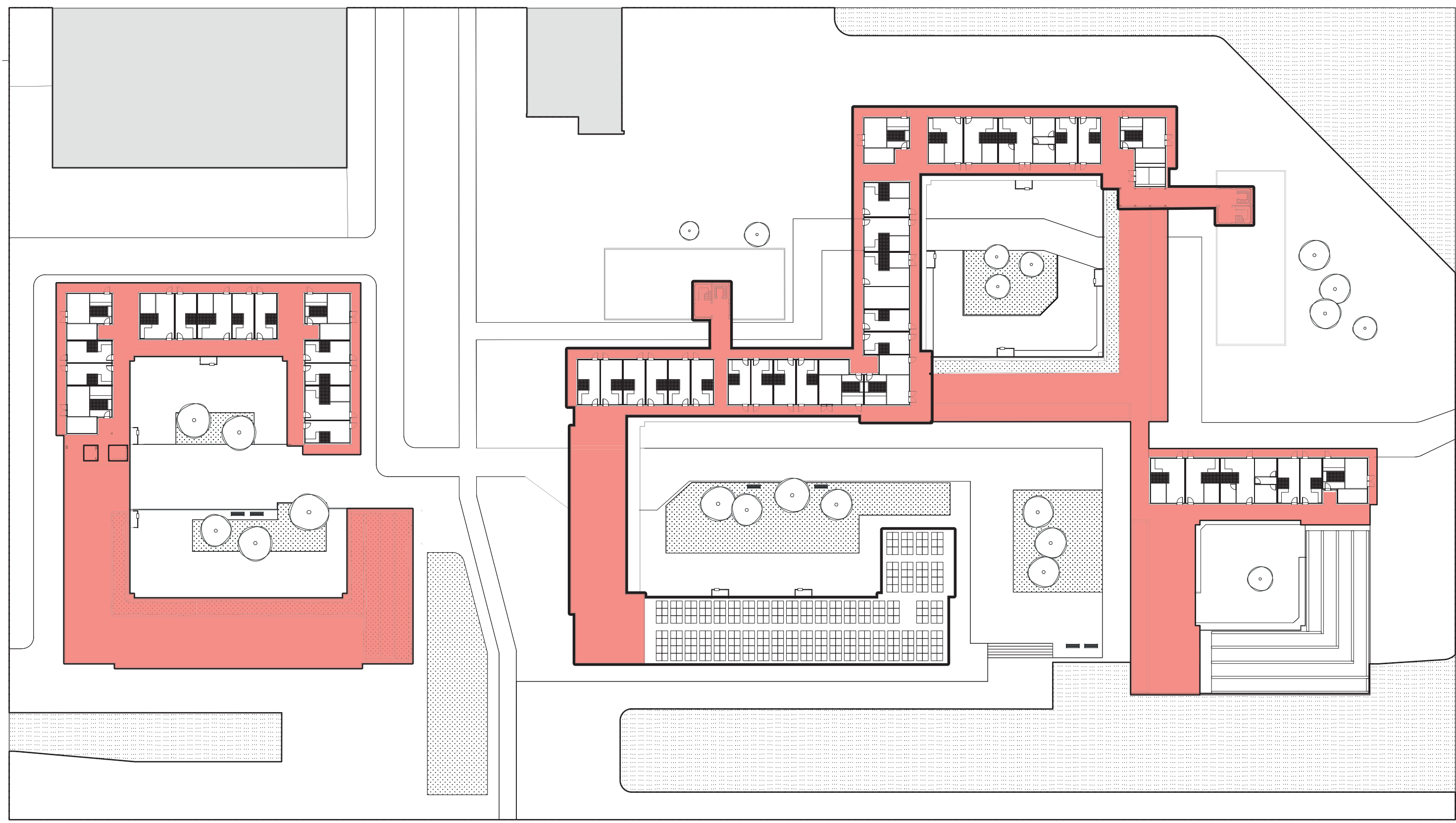
Design

Life on top



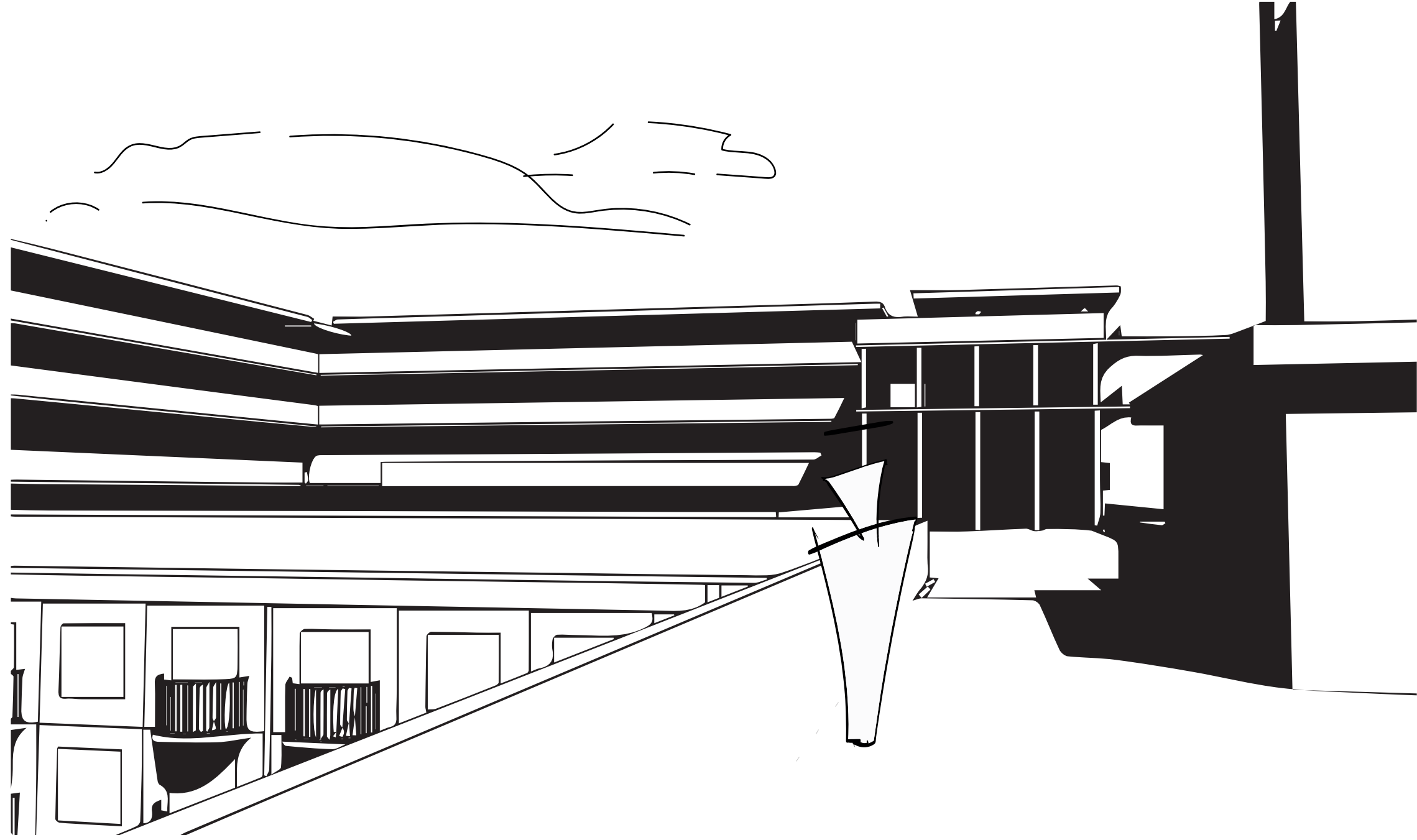
Design

Life on top



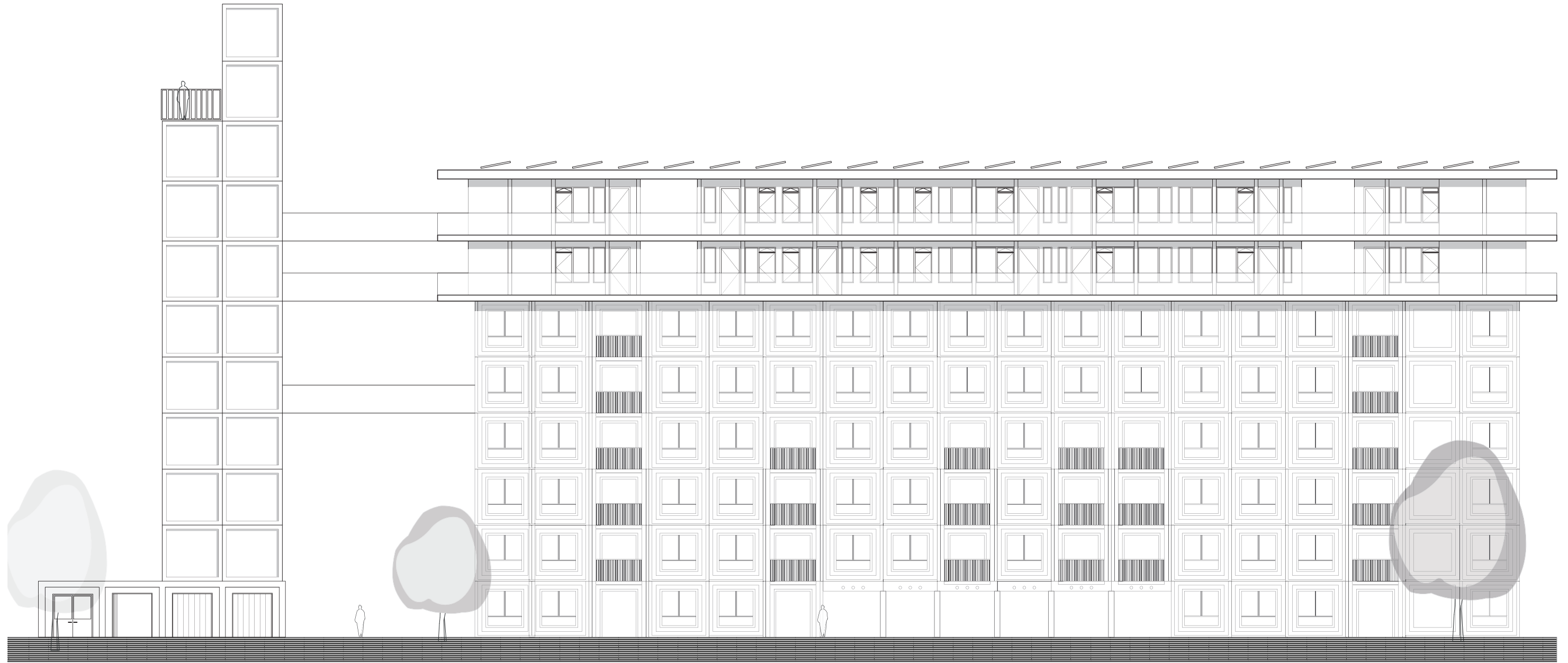
Design

Life on top



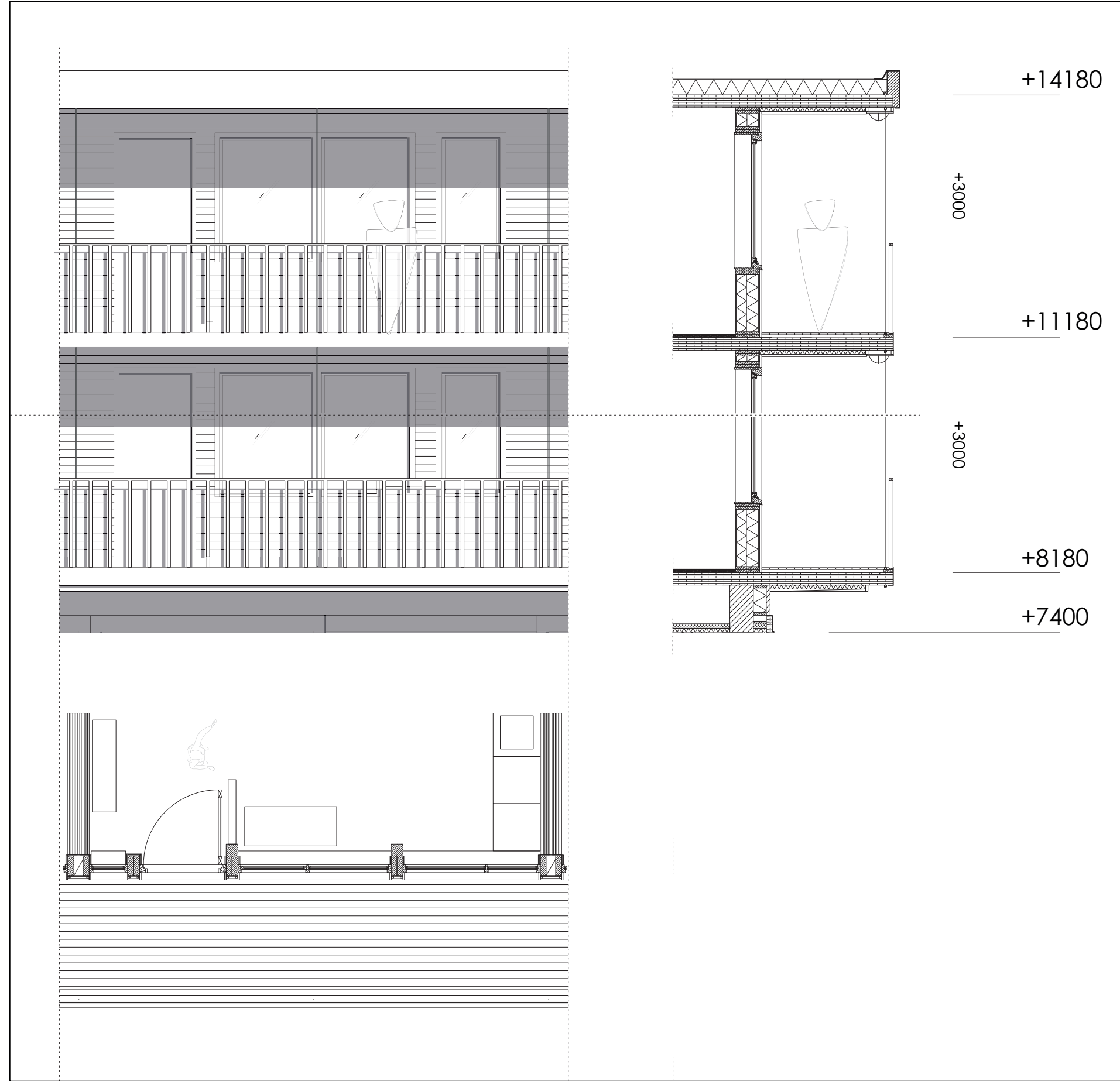
Design

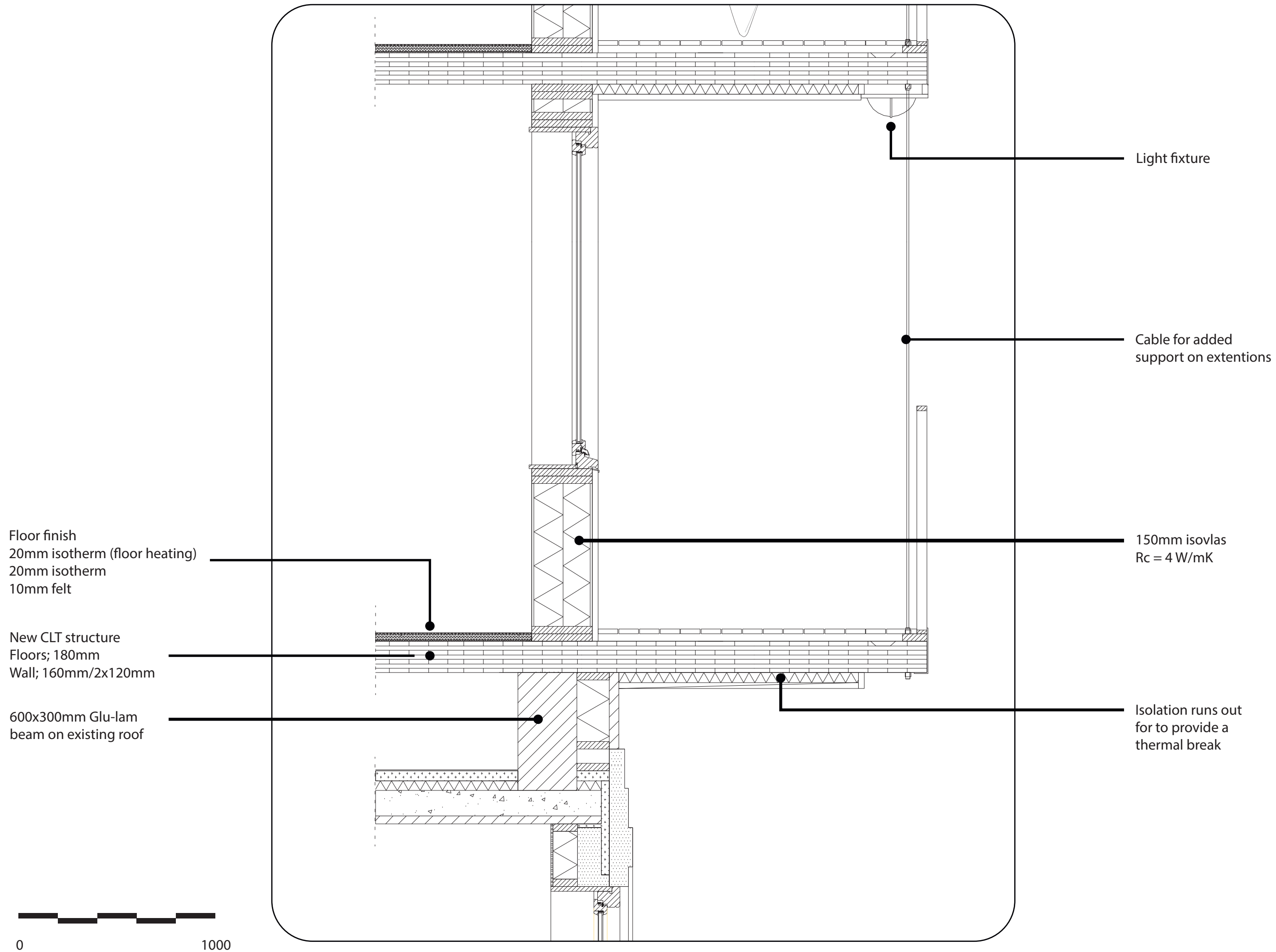
Life on top



Design

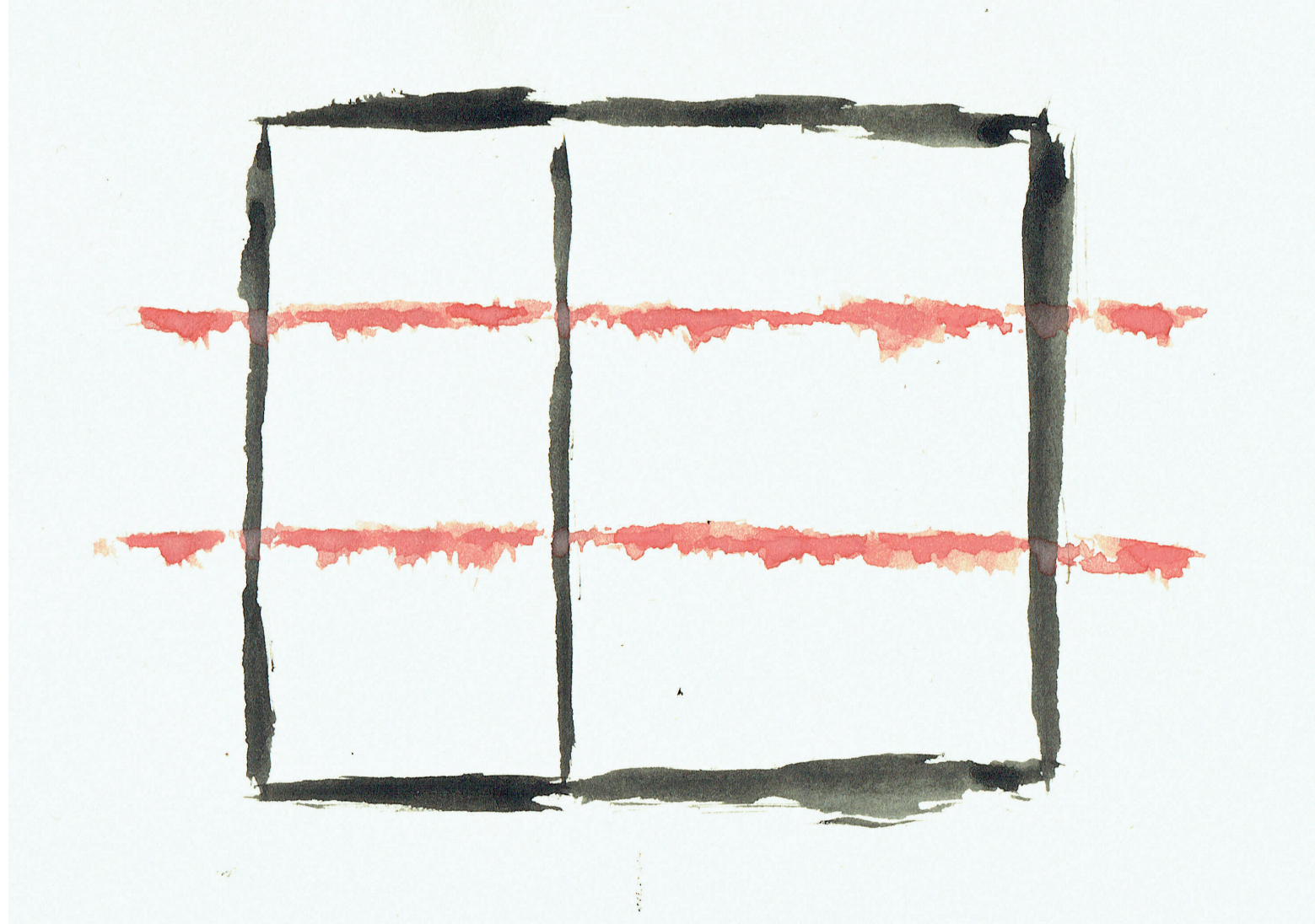
Life on top

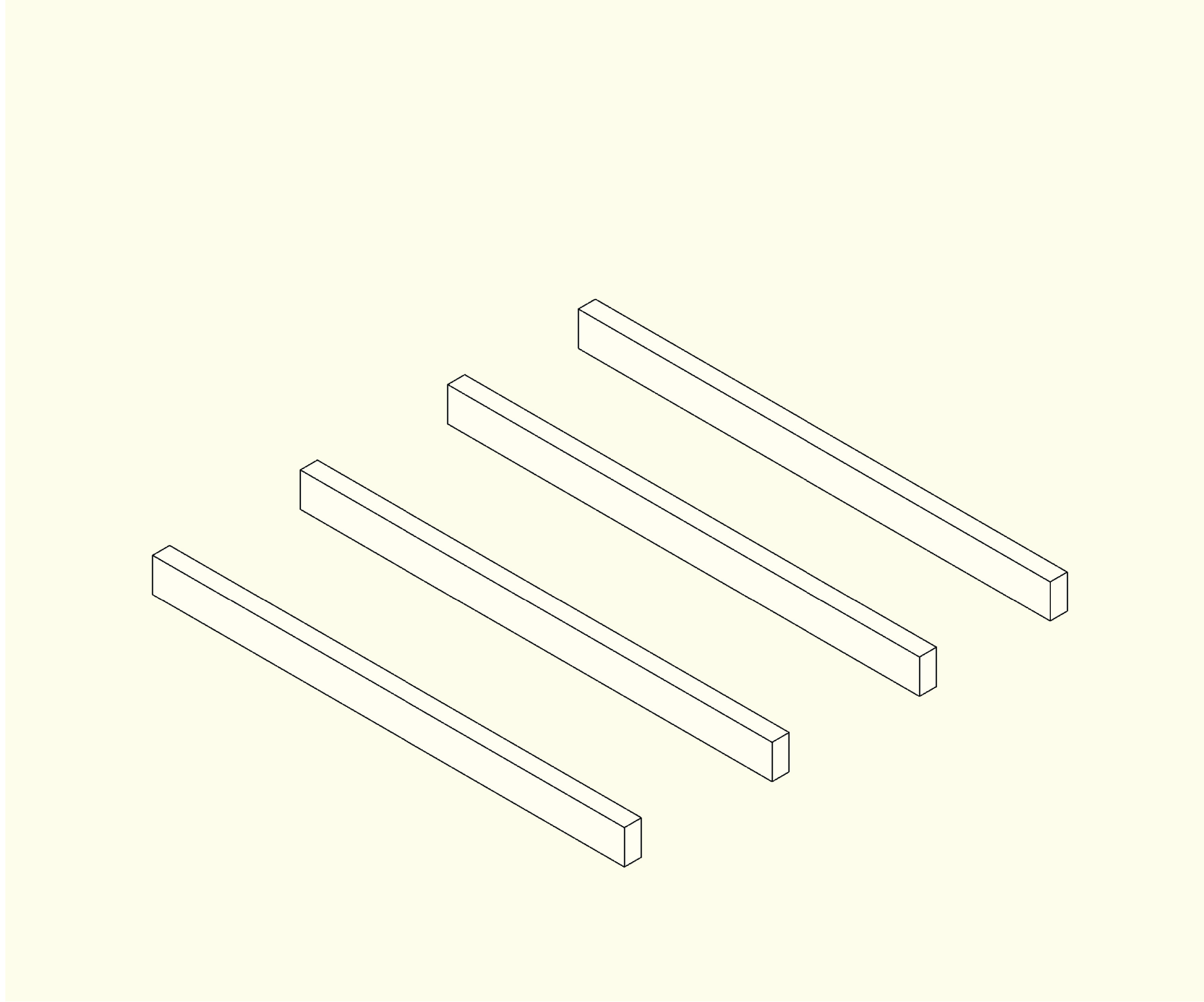


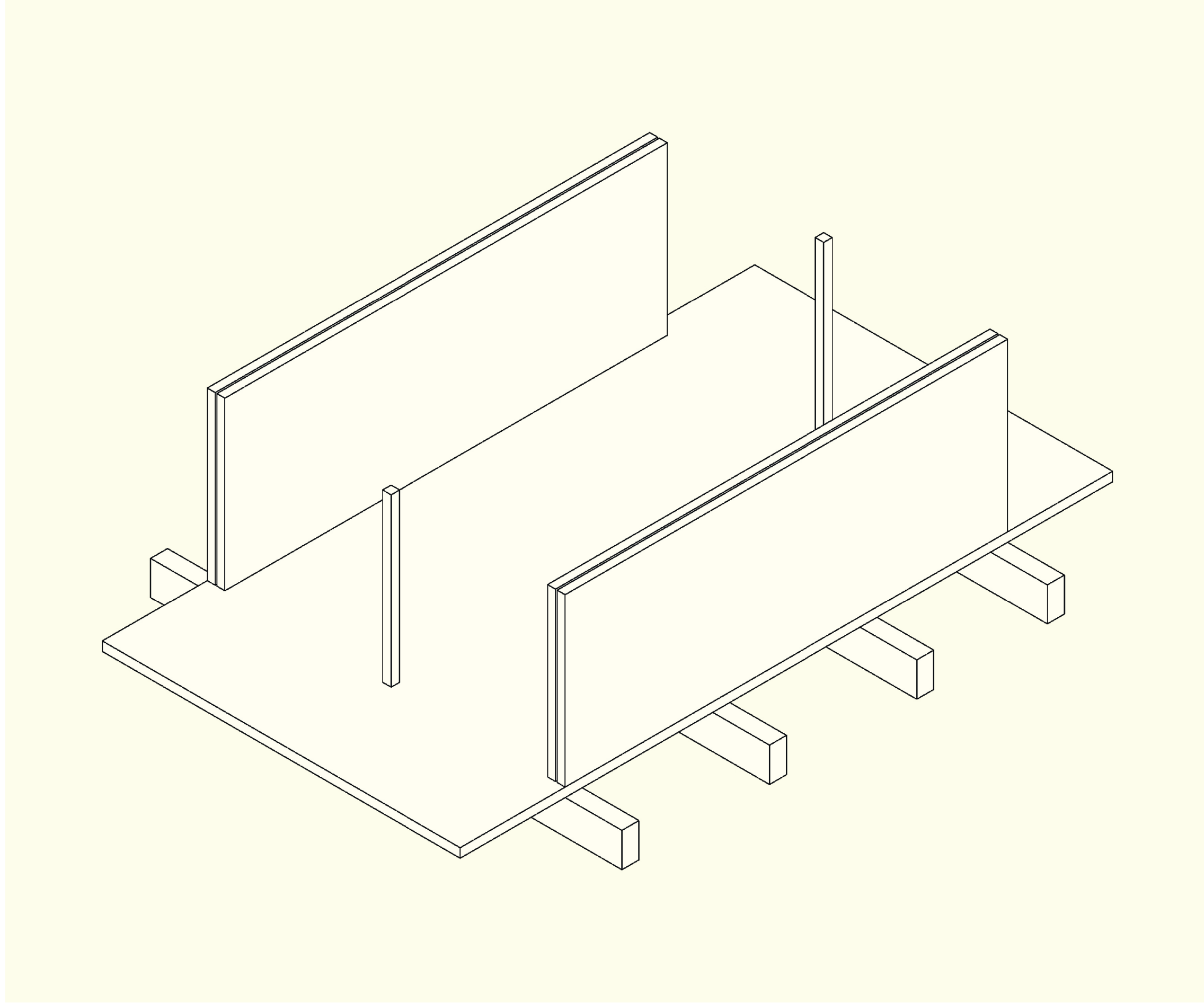


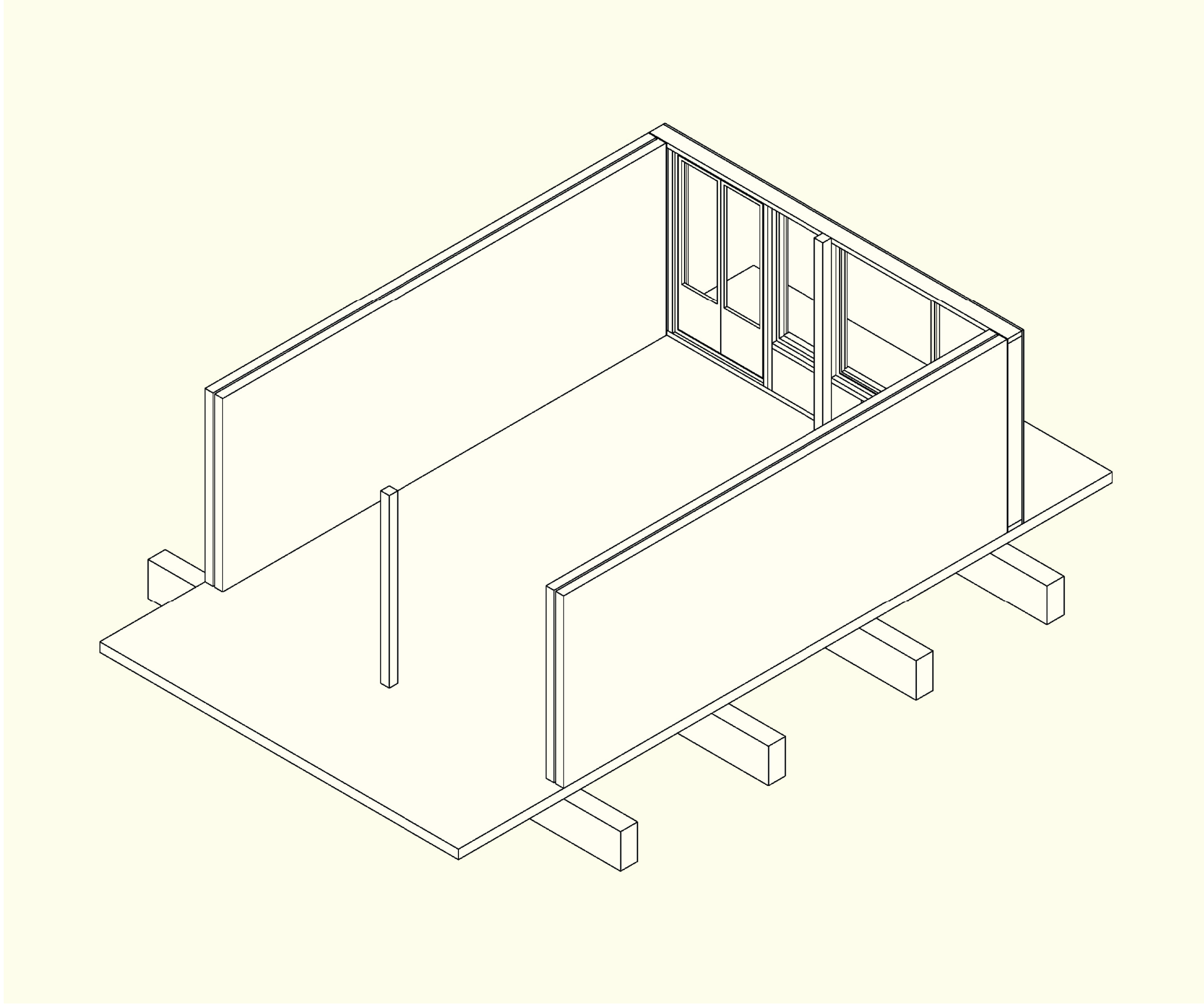
Design

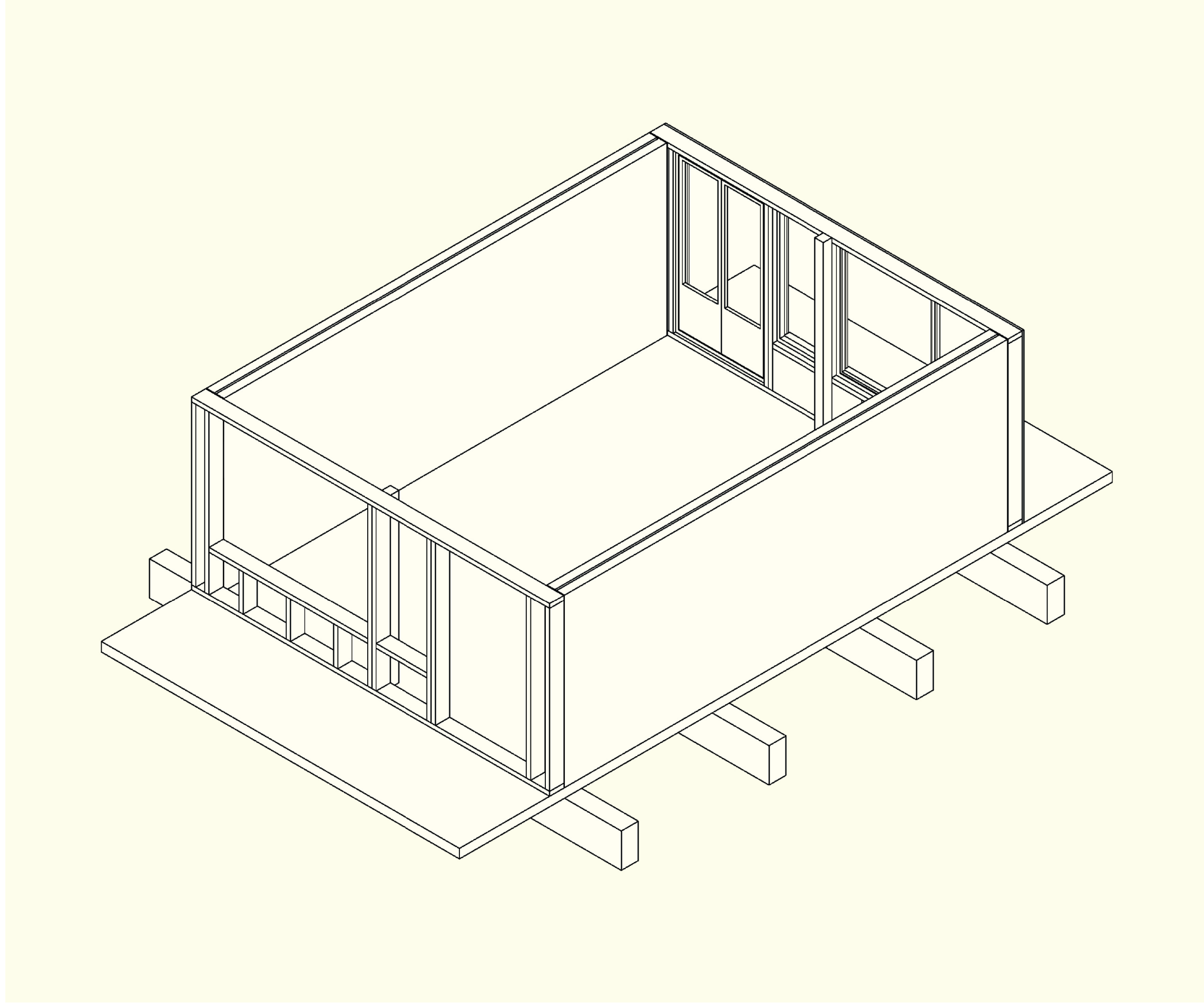
Life on top

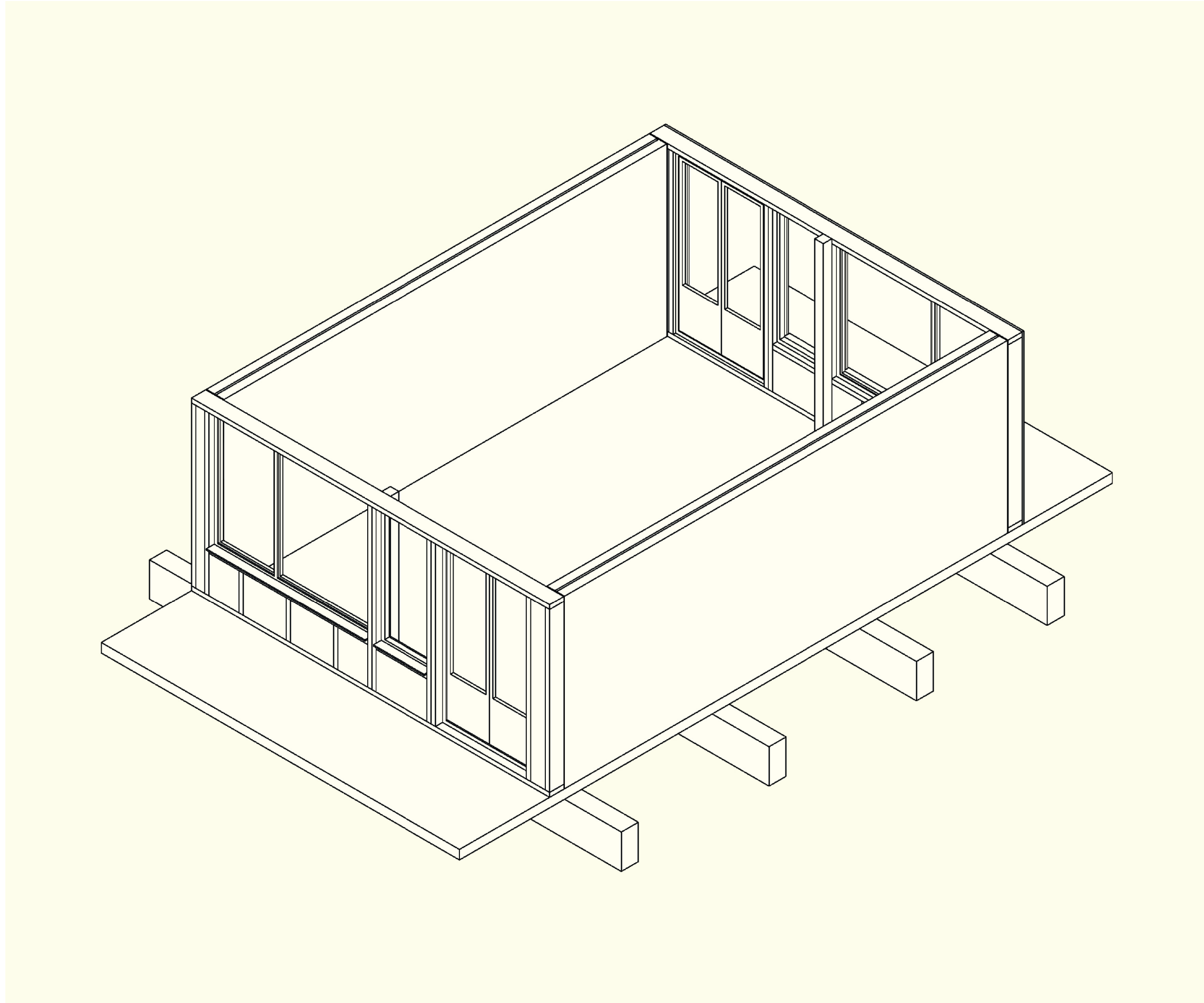


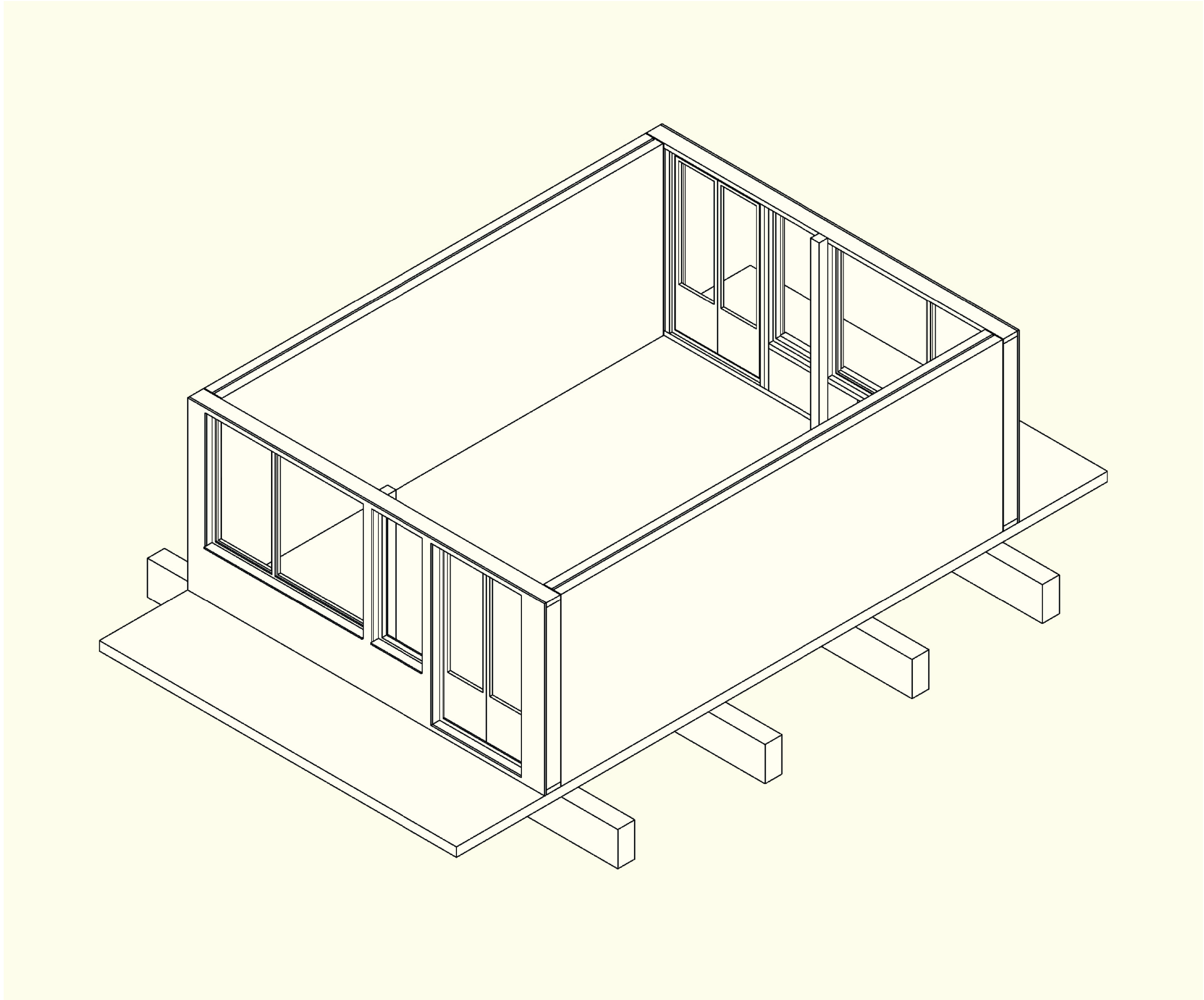






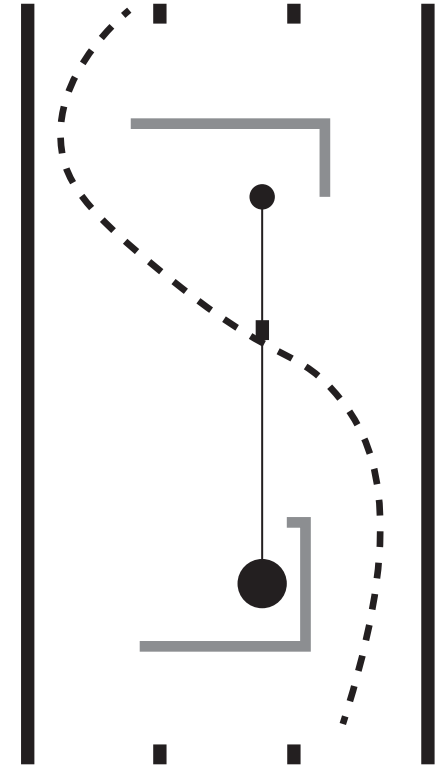
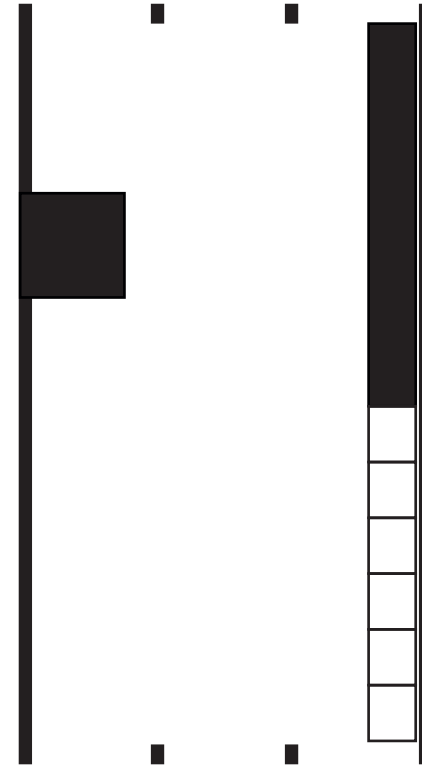
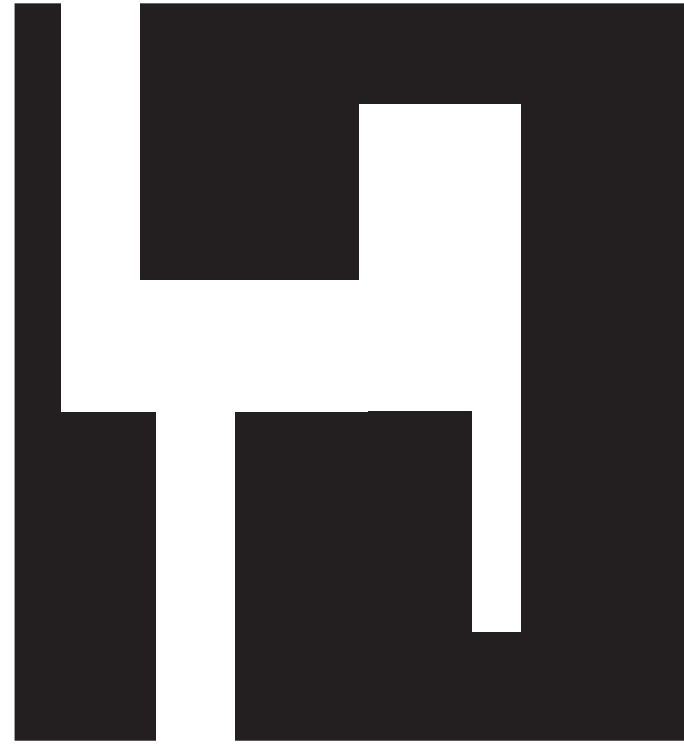
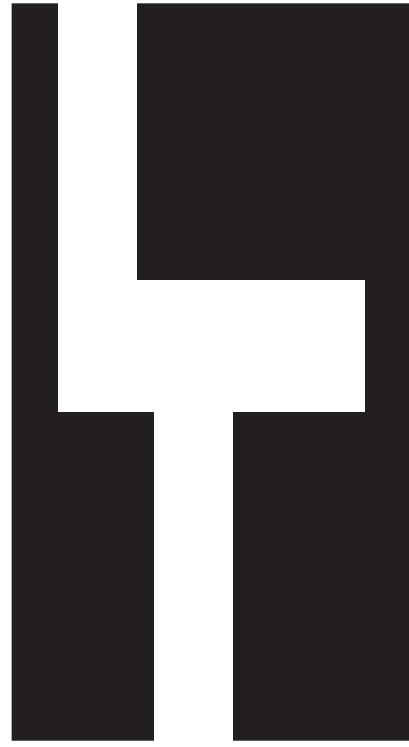






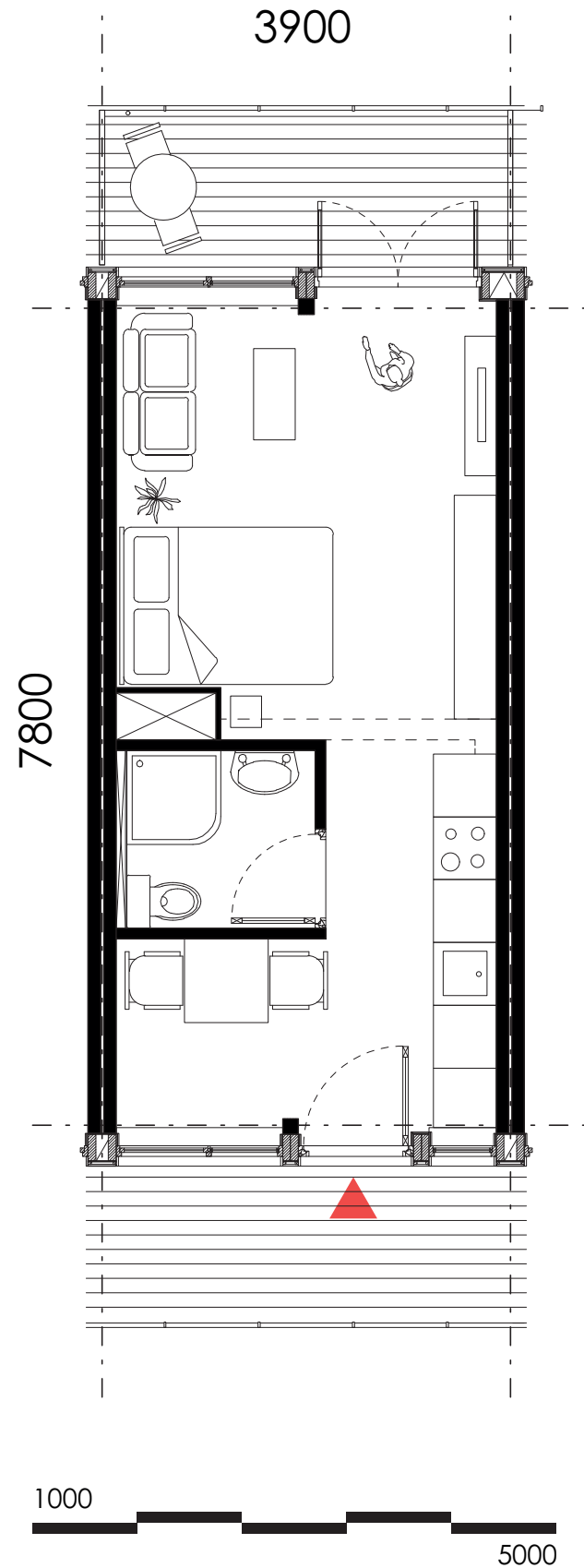
Design

Life on top

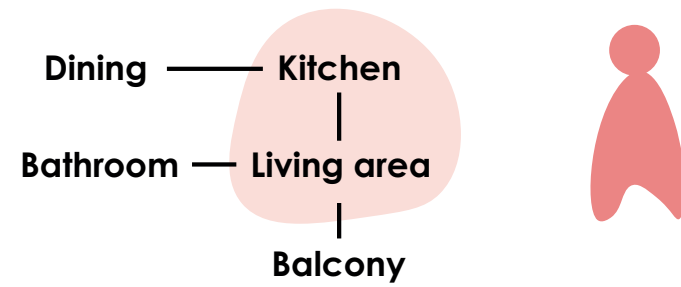


Design

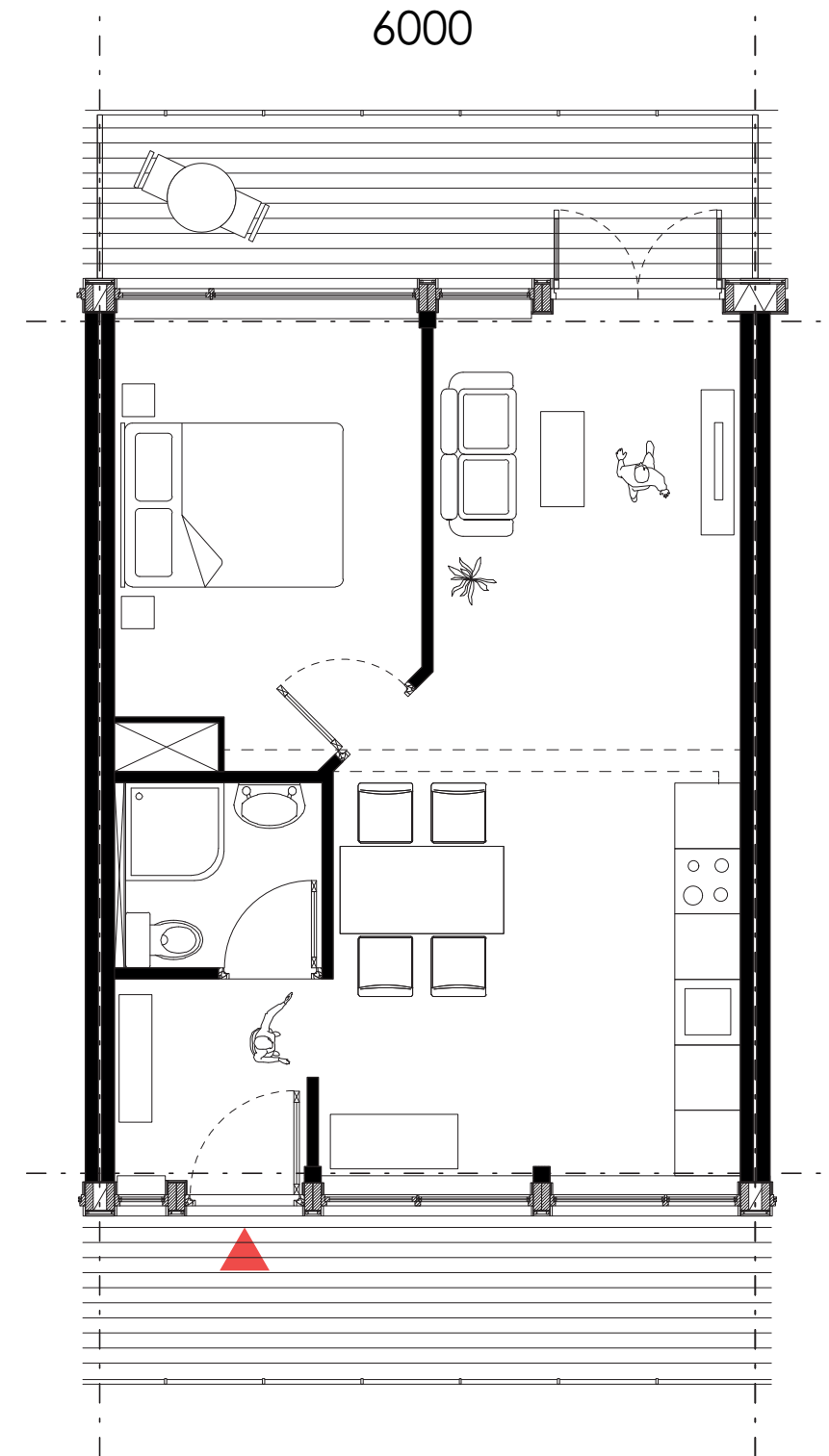
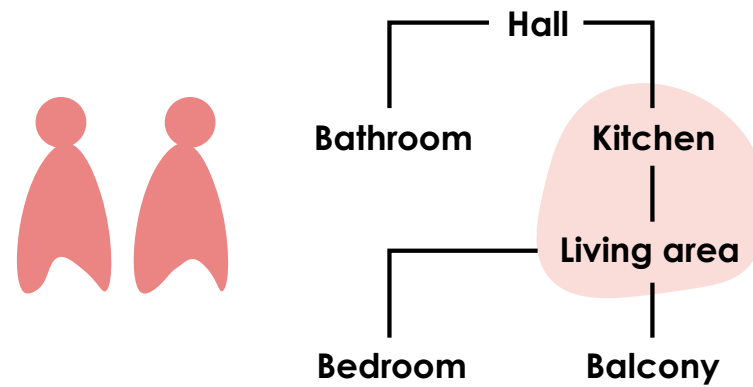
Life on top



Type A - 28.8m² / 6.4m² balcony

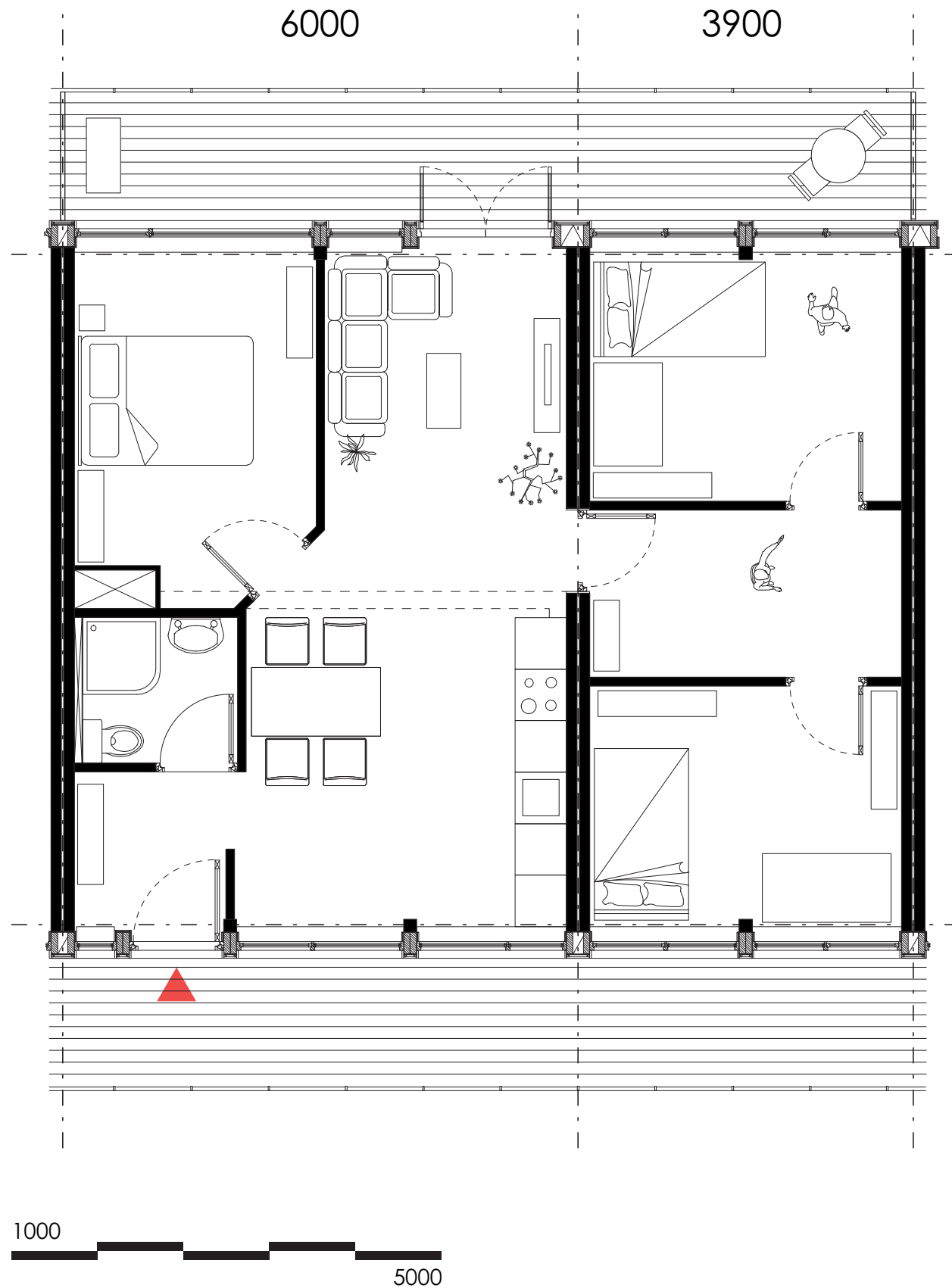


Type B - 45.6m² / 10m² balcony

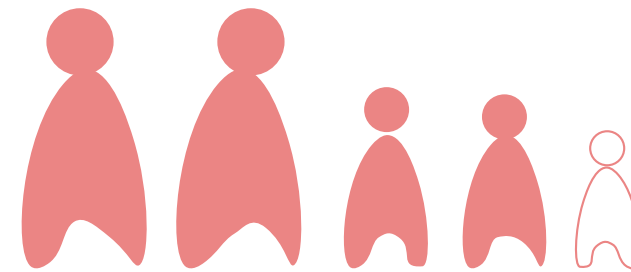
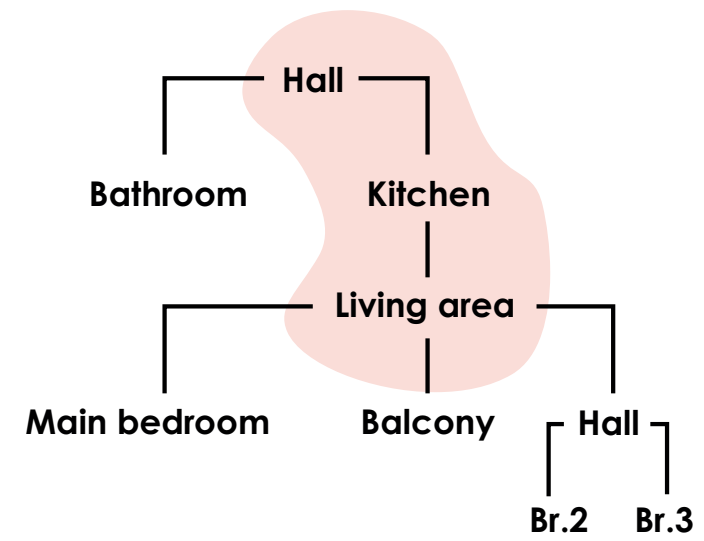


Design

Life on top

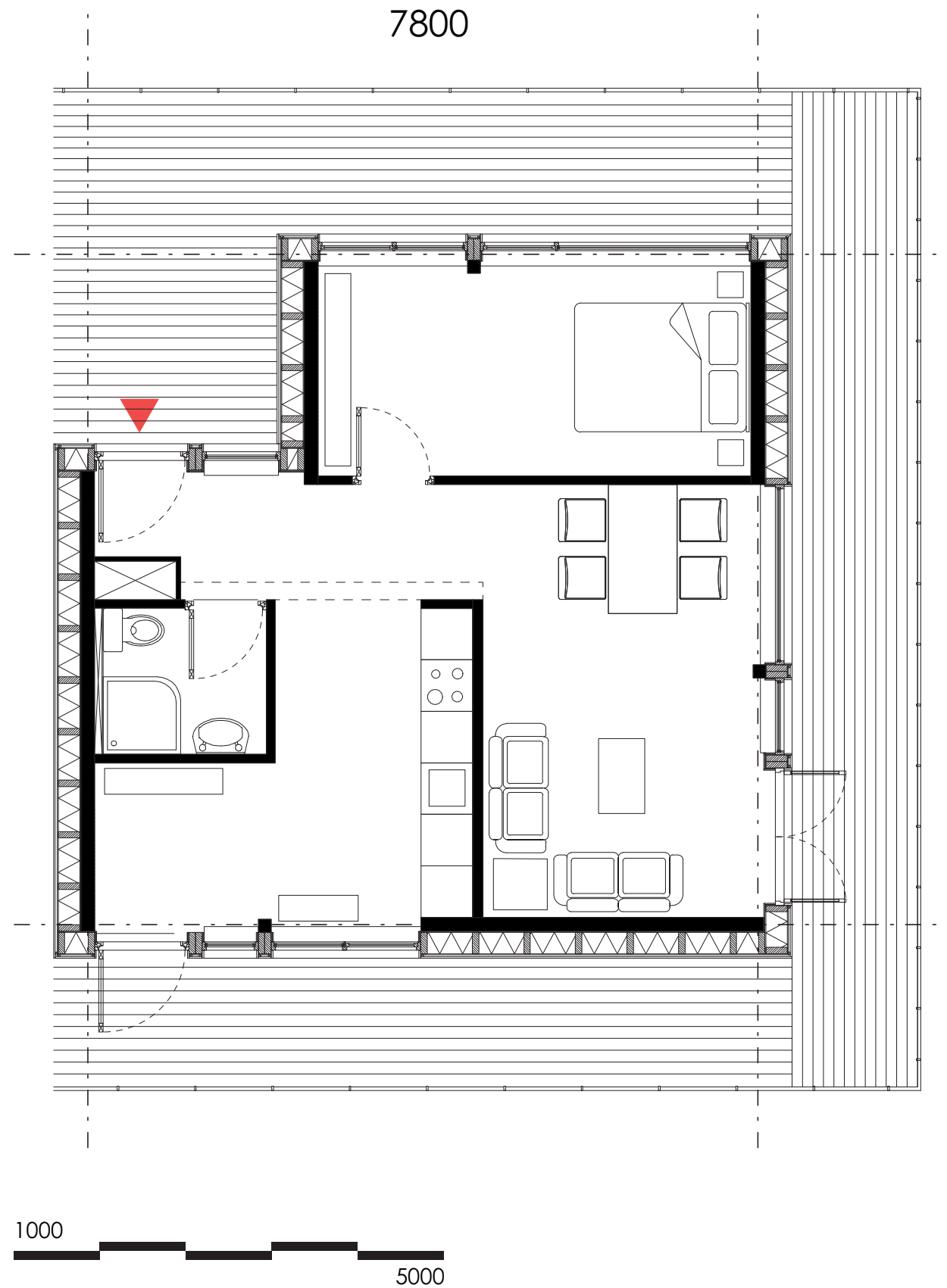


Type C - 76,6m² / 16m² balcony

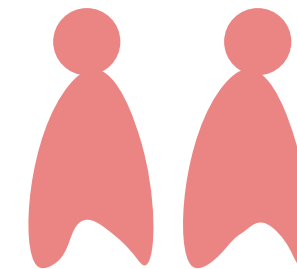
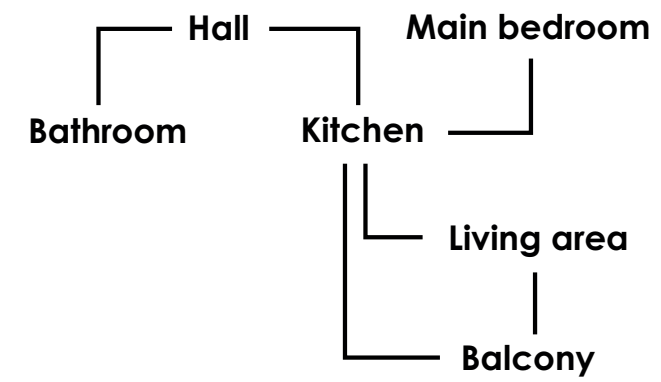


Design

Life on top



Type D - 53m² / 27,4m² balcony



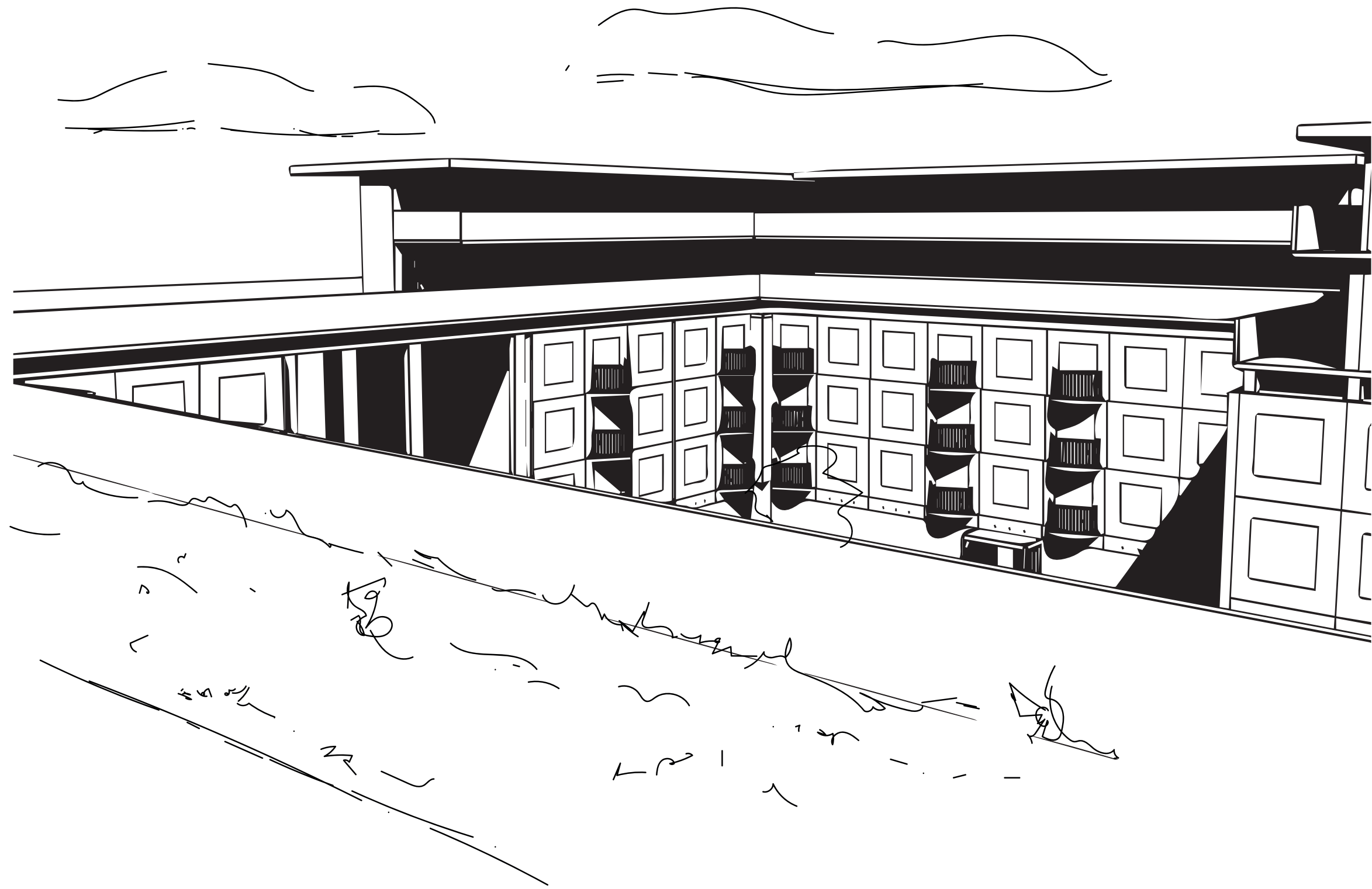
Design

Life on top



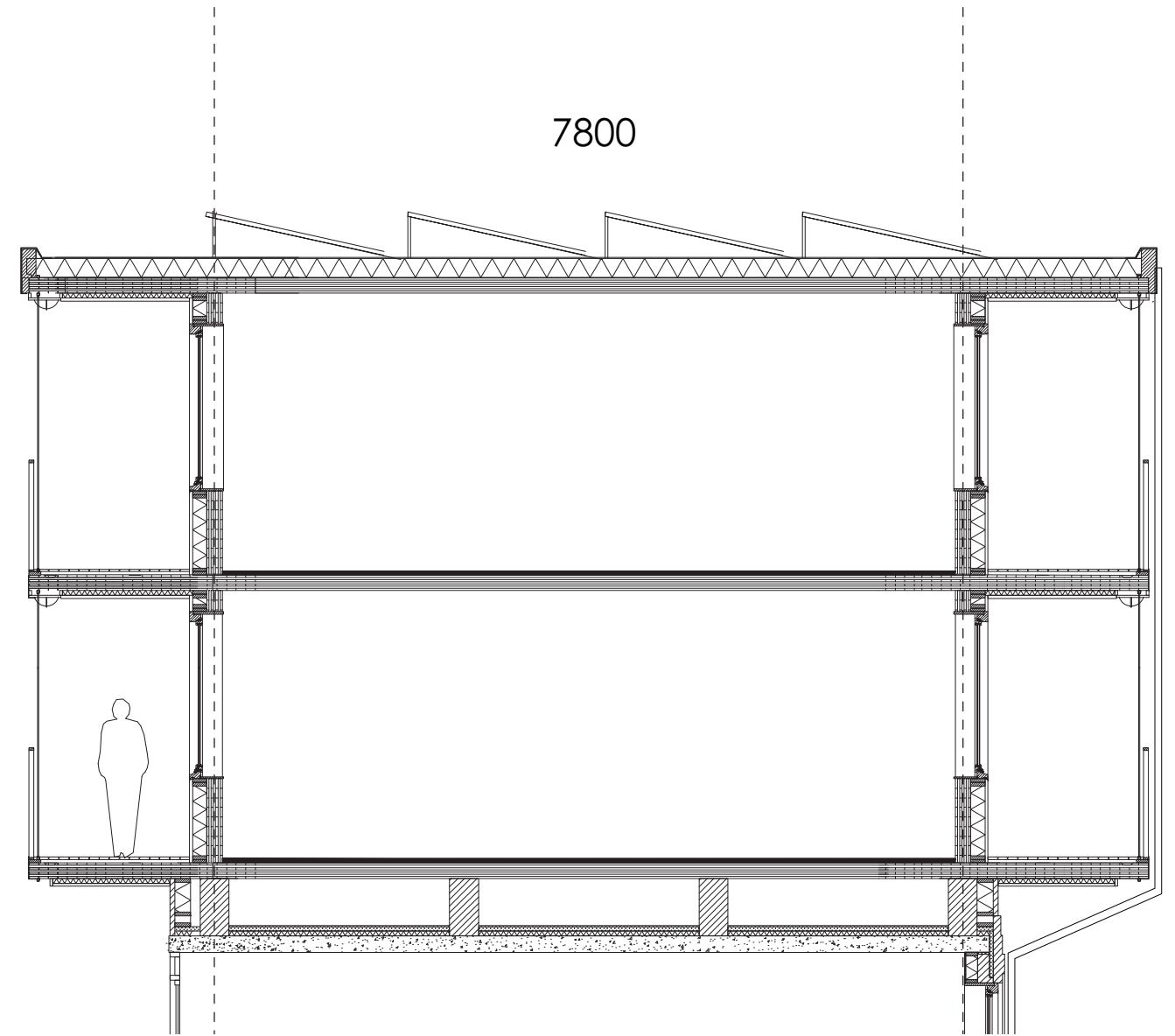
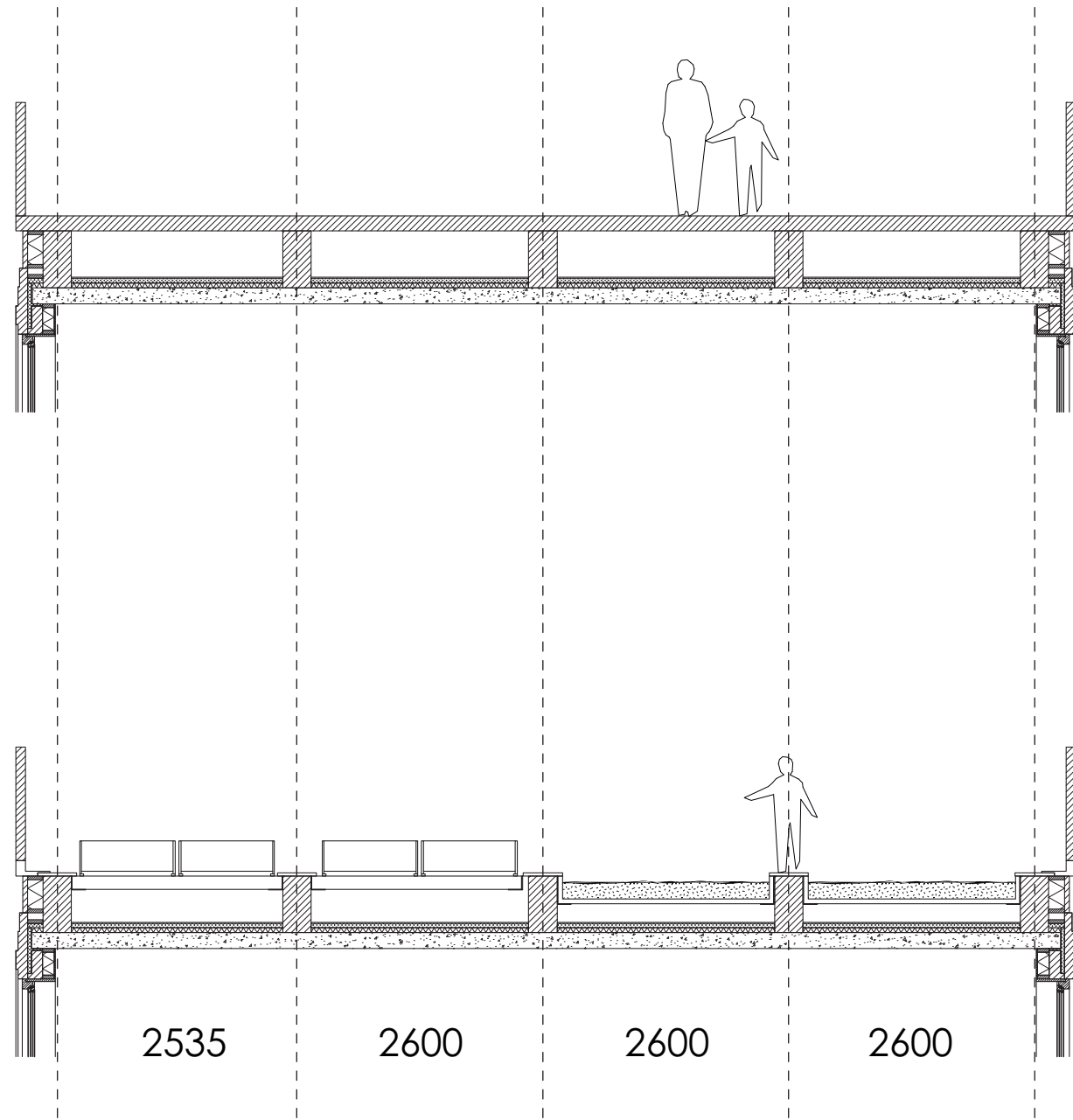
Design

Life on top



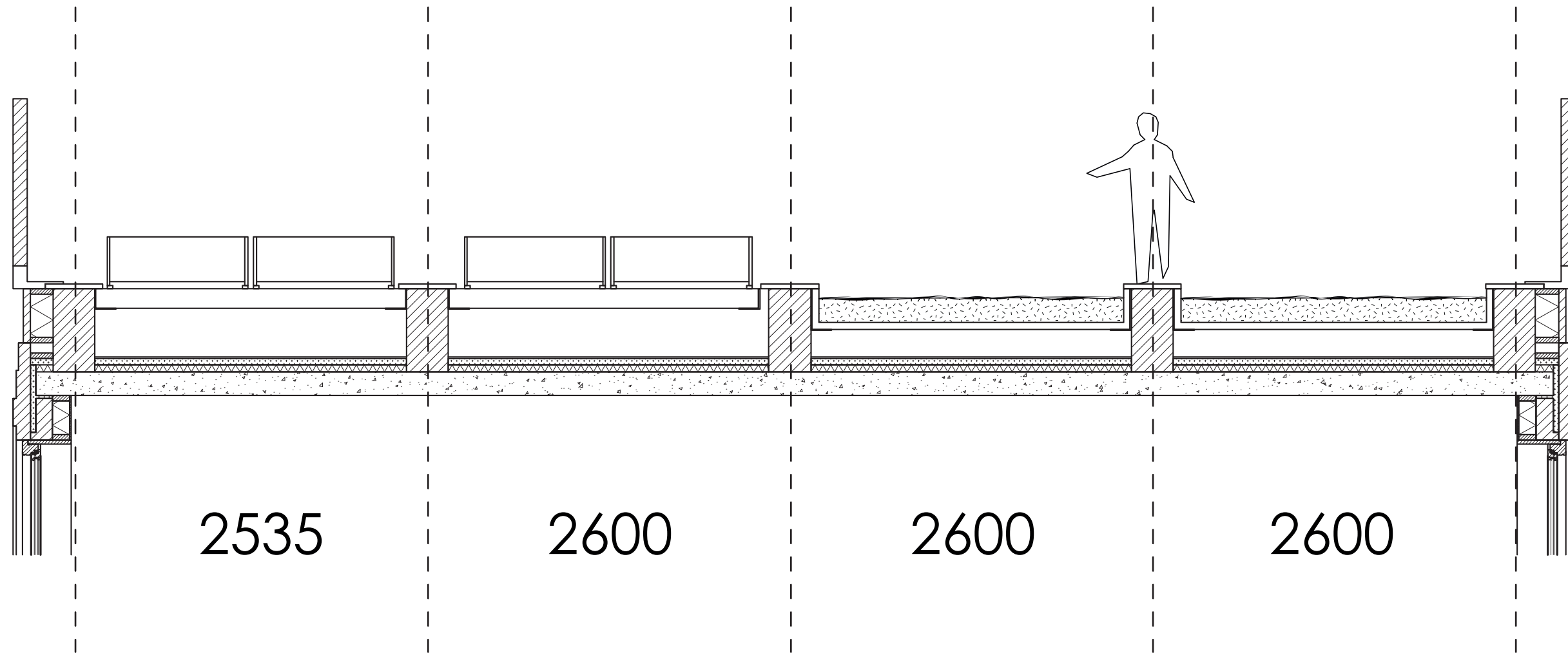
Design

Life on top



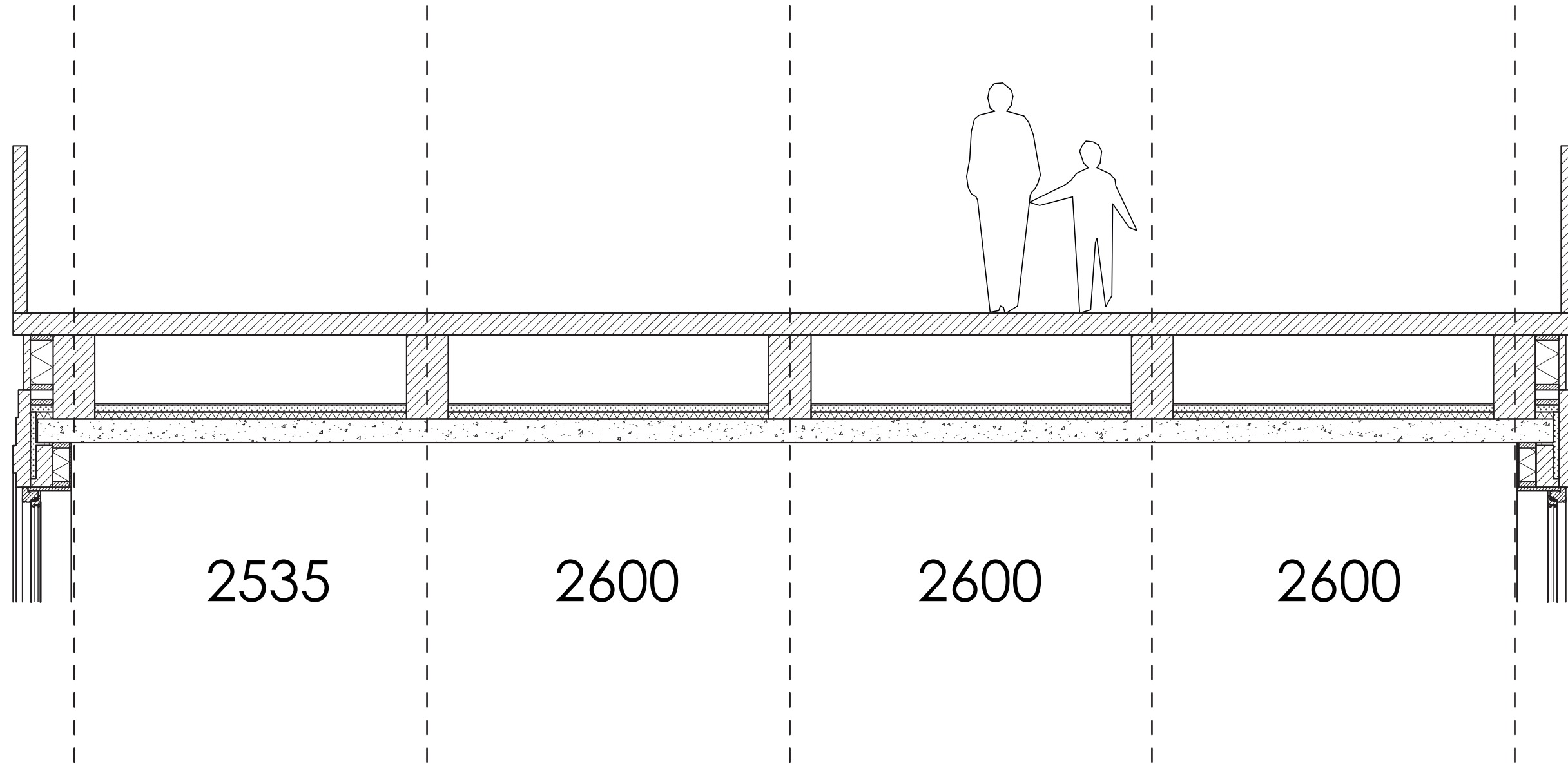
Design

Life on top



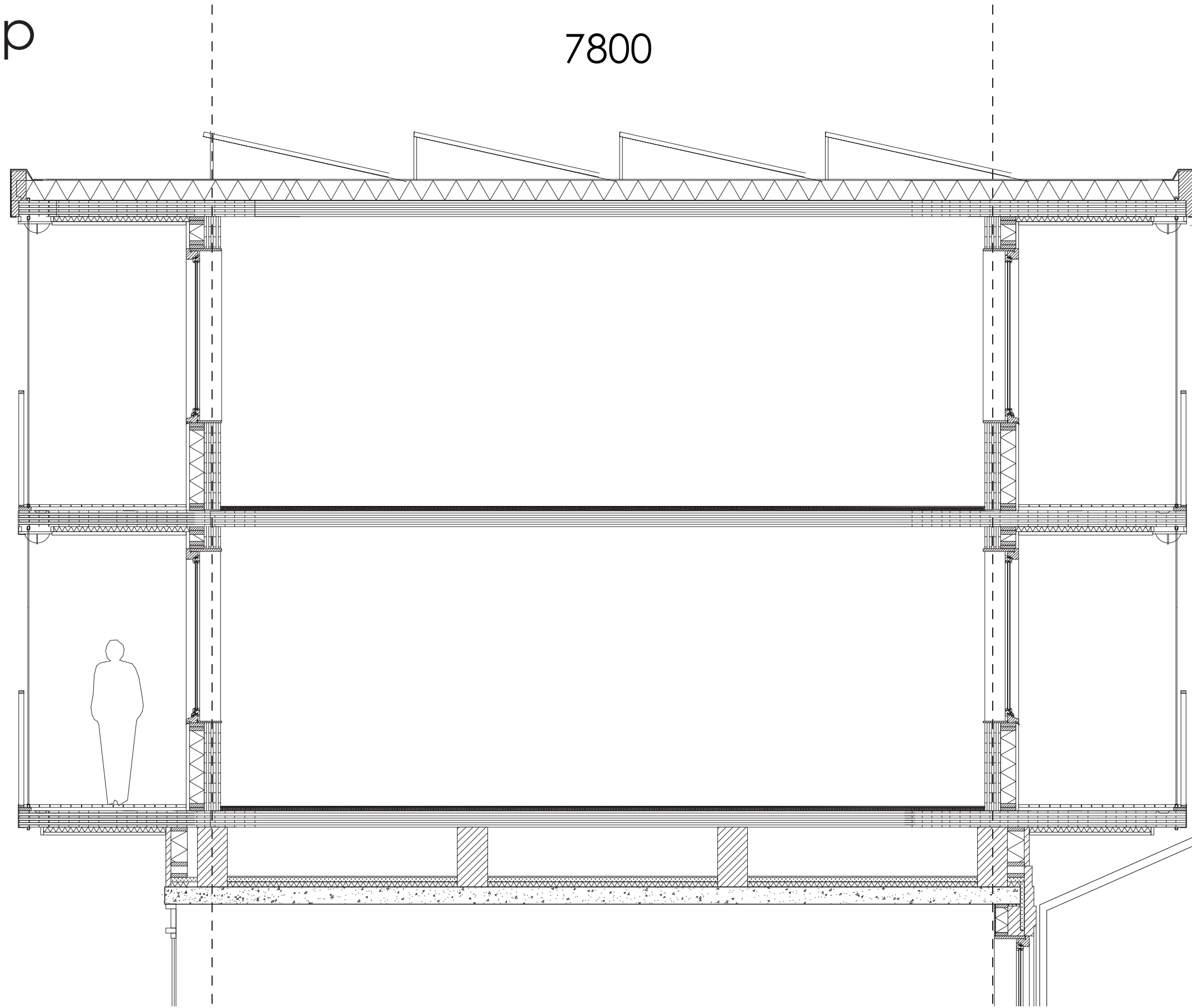
Design

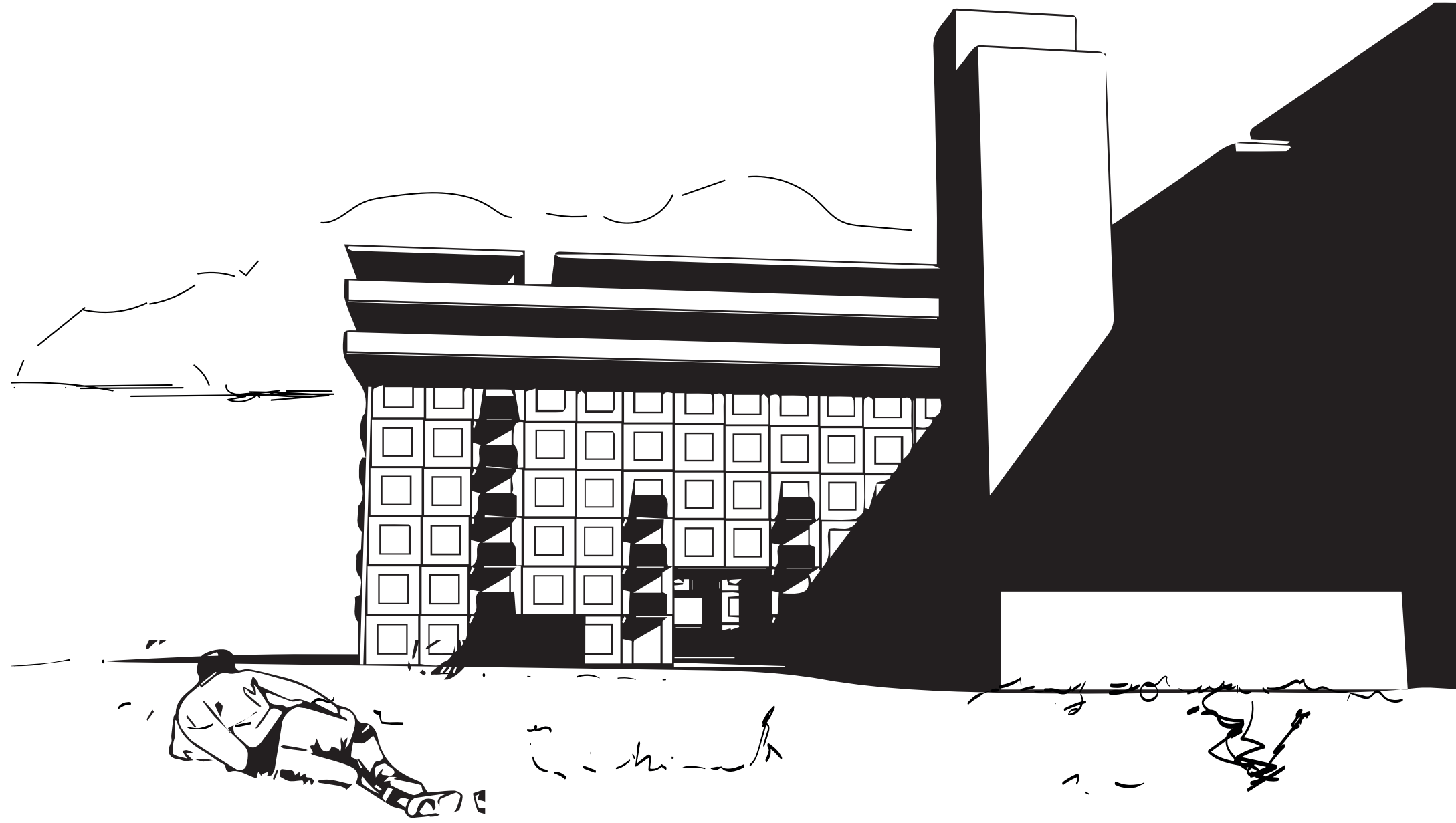
Life on top



Design

Life on top





Reflection

Affordability is the balance in cost and quality.

=

Economy

Ecology

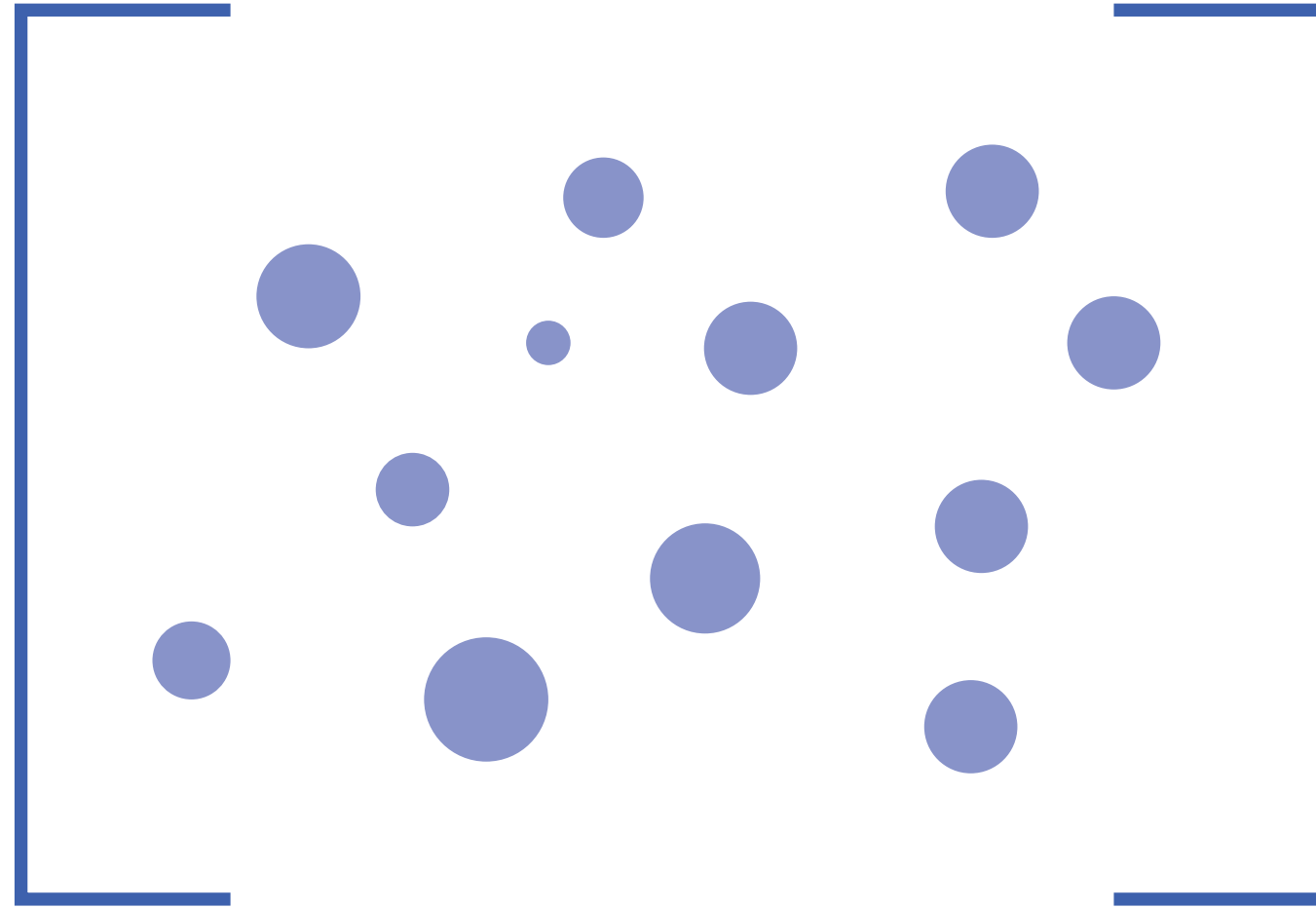
Social

“Securing some given standard of housing at a price or a rent which does not impose, in the eyes some third party, an unreasonable burden on household income.” (MacLennan and Williams, 1990, p. 9)

“Households should be able to occupy housing that meets well-established norm of adequacy at a net rent which leaves them with enough income to live on without falling below some poverty standard.” (Bramley, 1990b, p. 16)

Reflection

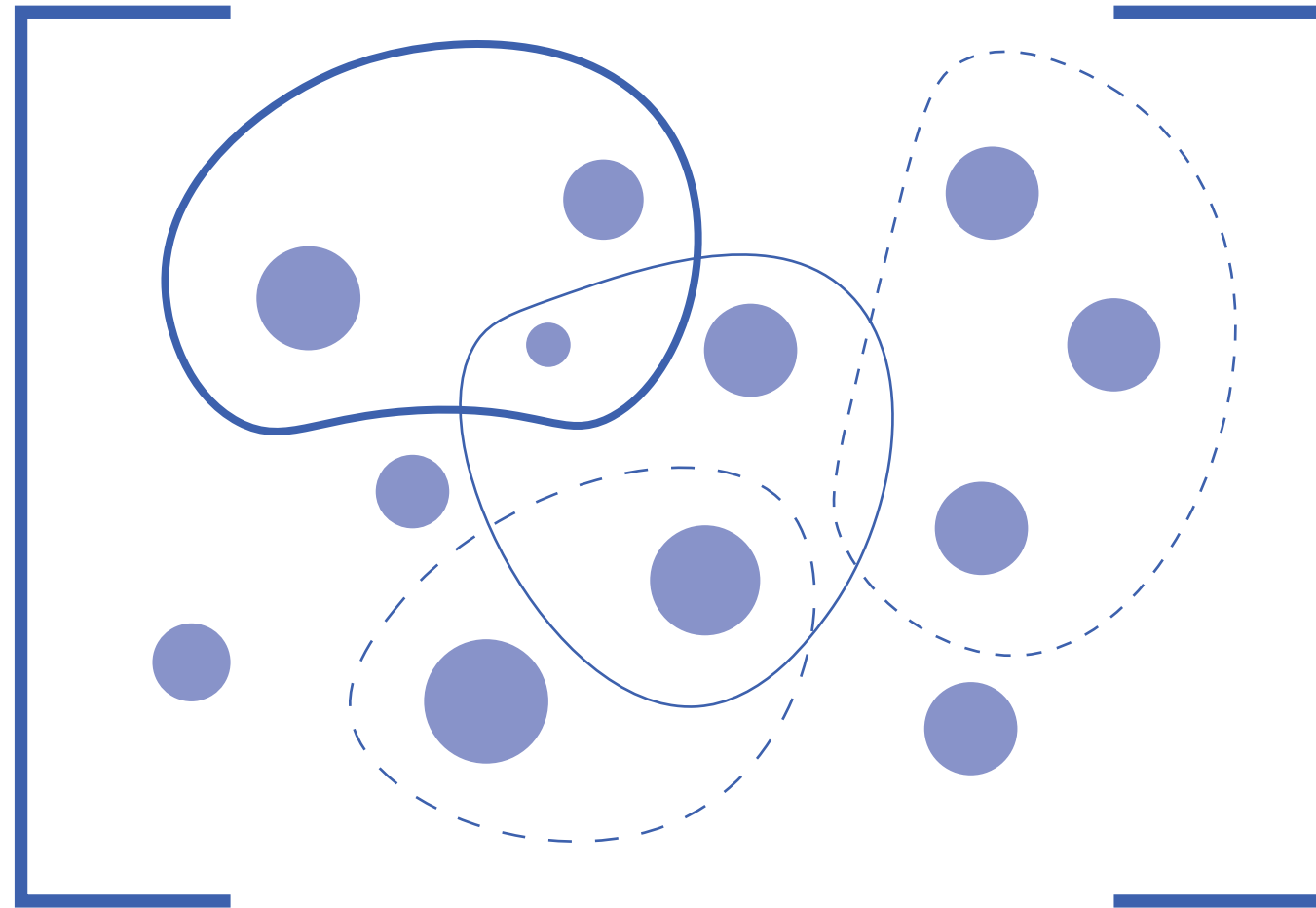
Identify



cultural value

Reflection

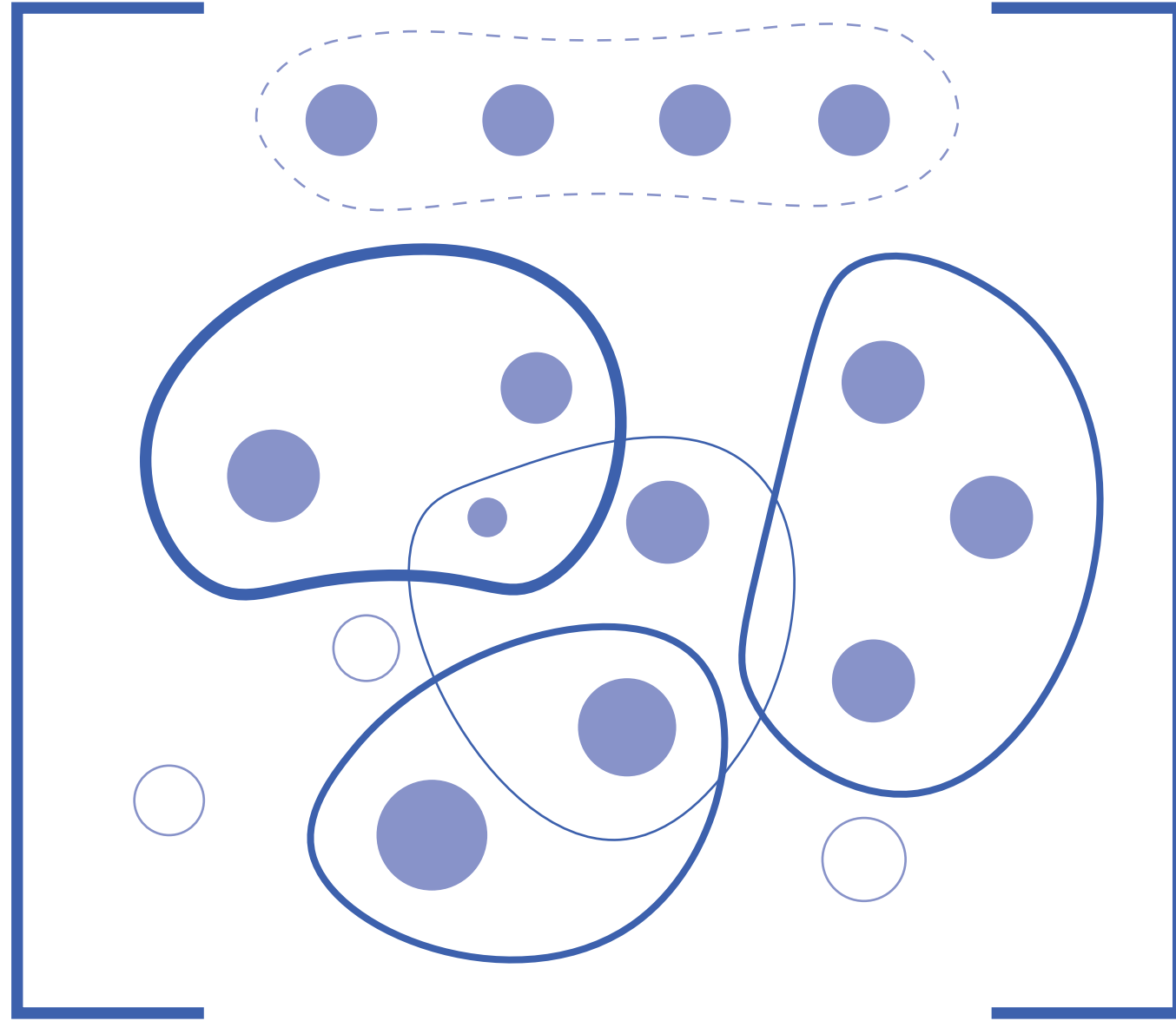
Identify



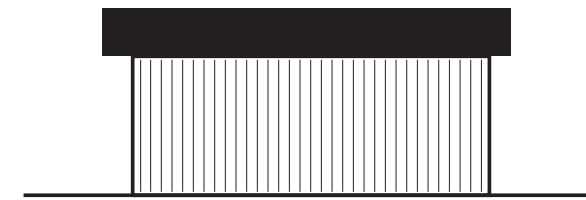
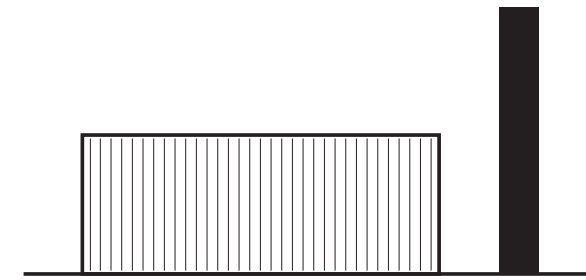
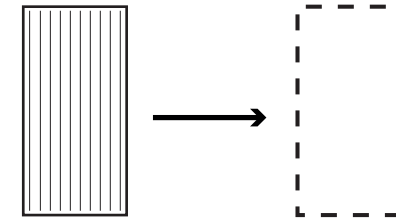
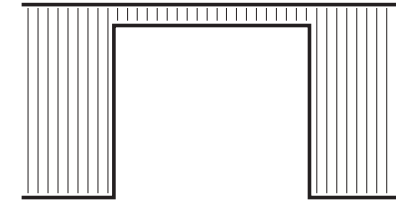
heritage value

Reflection

act

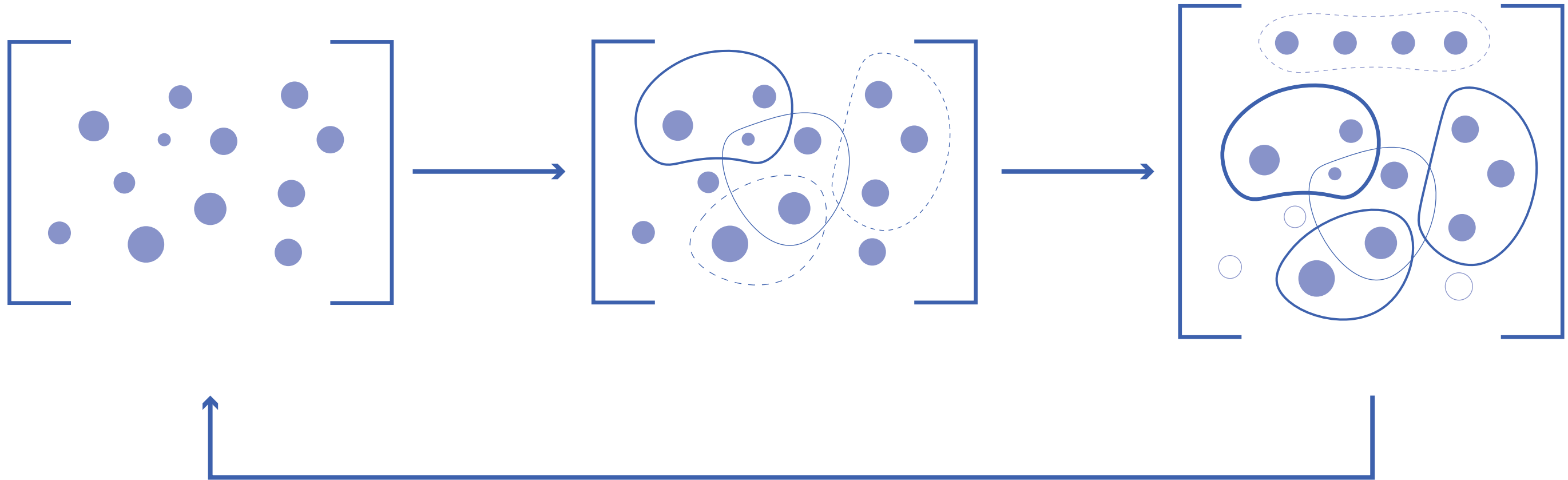


consolidation & expansion



Reflection

Iterate



reflection