From structure to Ownership: An Open Building Approach
Bedrijvenpark Rodenrijs

"Transforming an unattractive business park into a liveable productive city"

A4 presentation
Advanced Housing Design: Ecologies of Inclusion
Mete Mercan

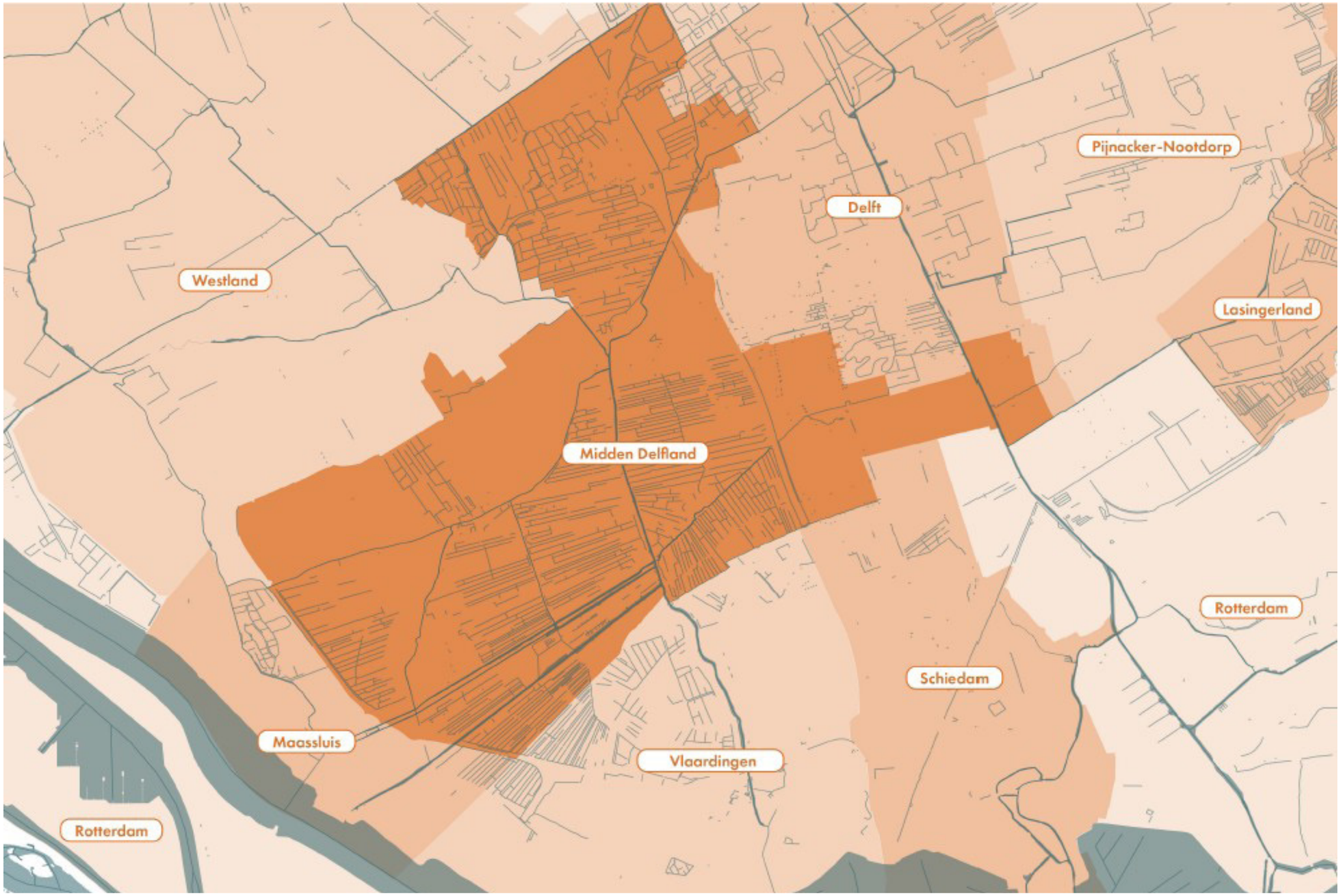
19.06.2026

Room for industry to evolve

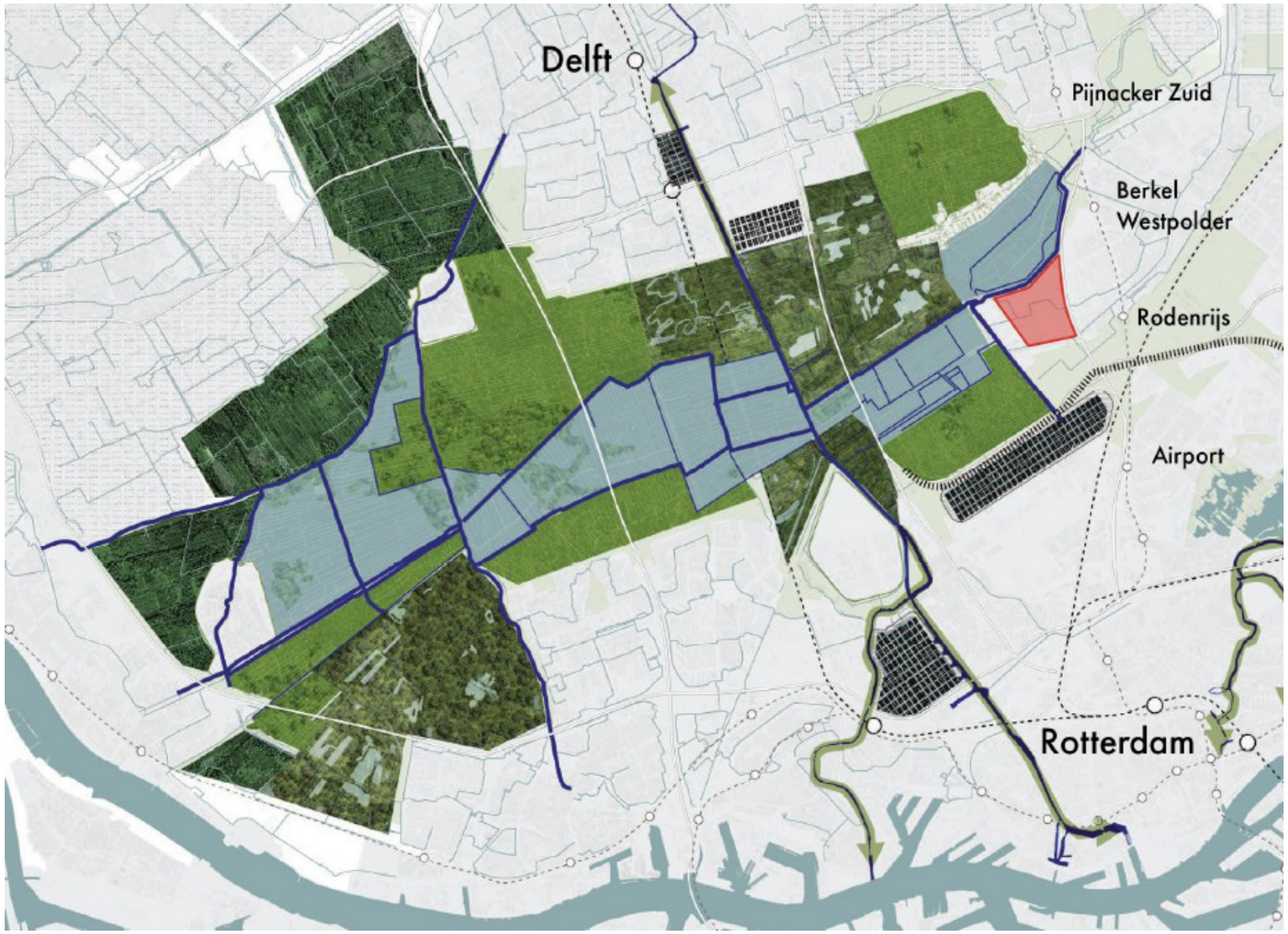
Living & working both enhanced

A door into Midden-Delfland landscape

Midden-Delfland



Zus plan

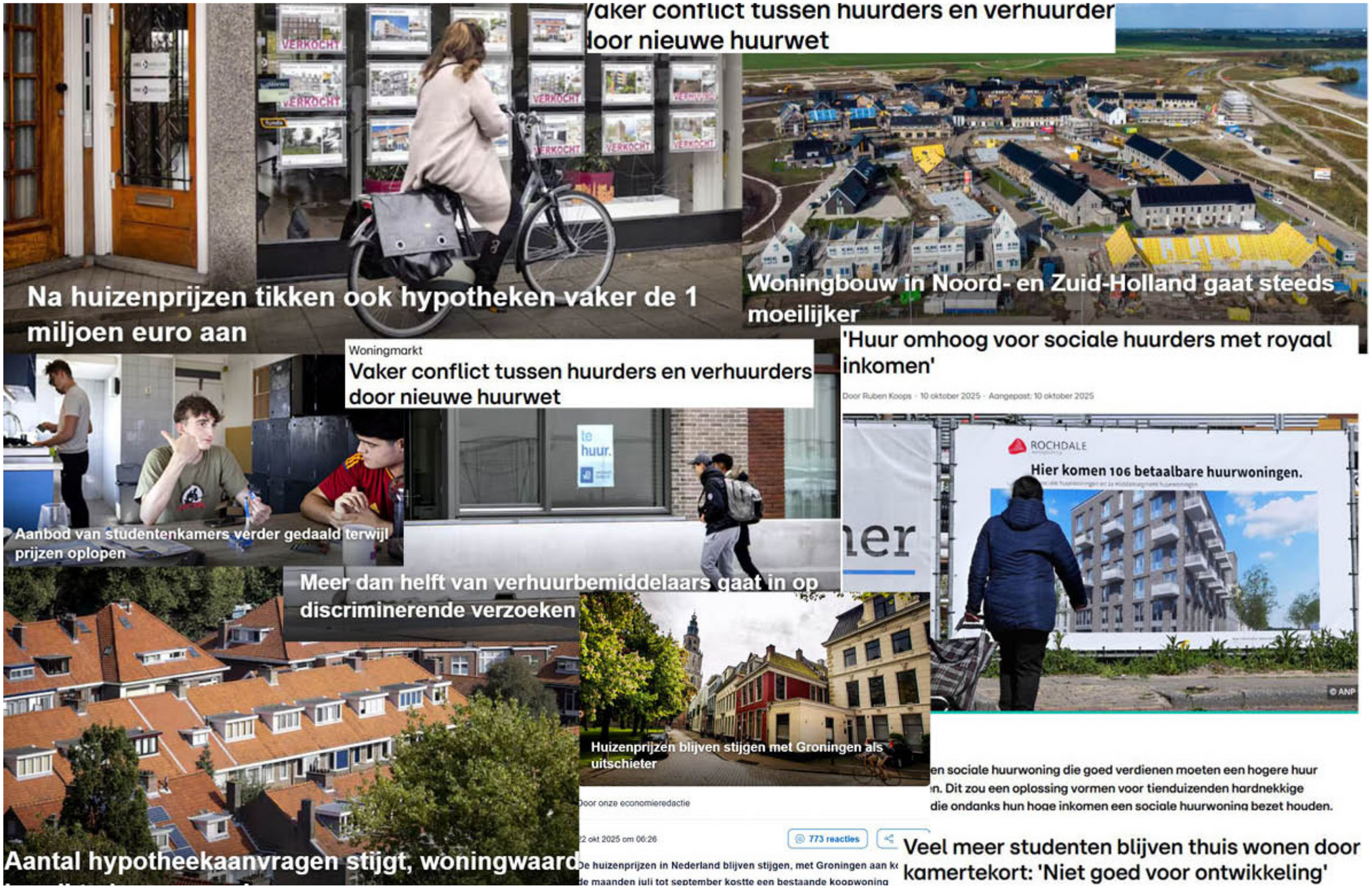


1. **Retain water:** Keep rainwater in the area for as long as possible

2. **Store water:** Create space to temporarily hold excess water during heavy rainfall

3. **Utilize water:** Use water as a asset for recreation, nature and landscape quality

Dutch housing crisis

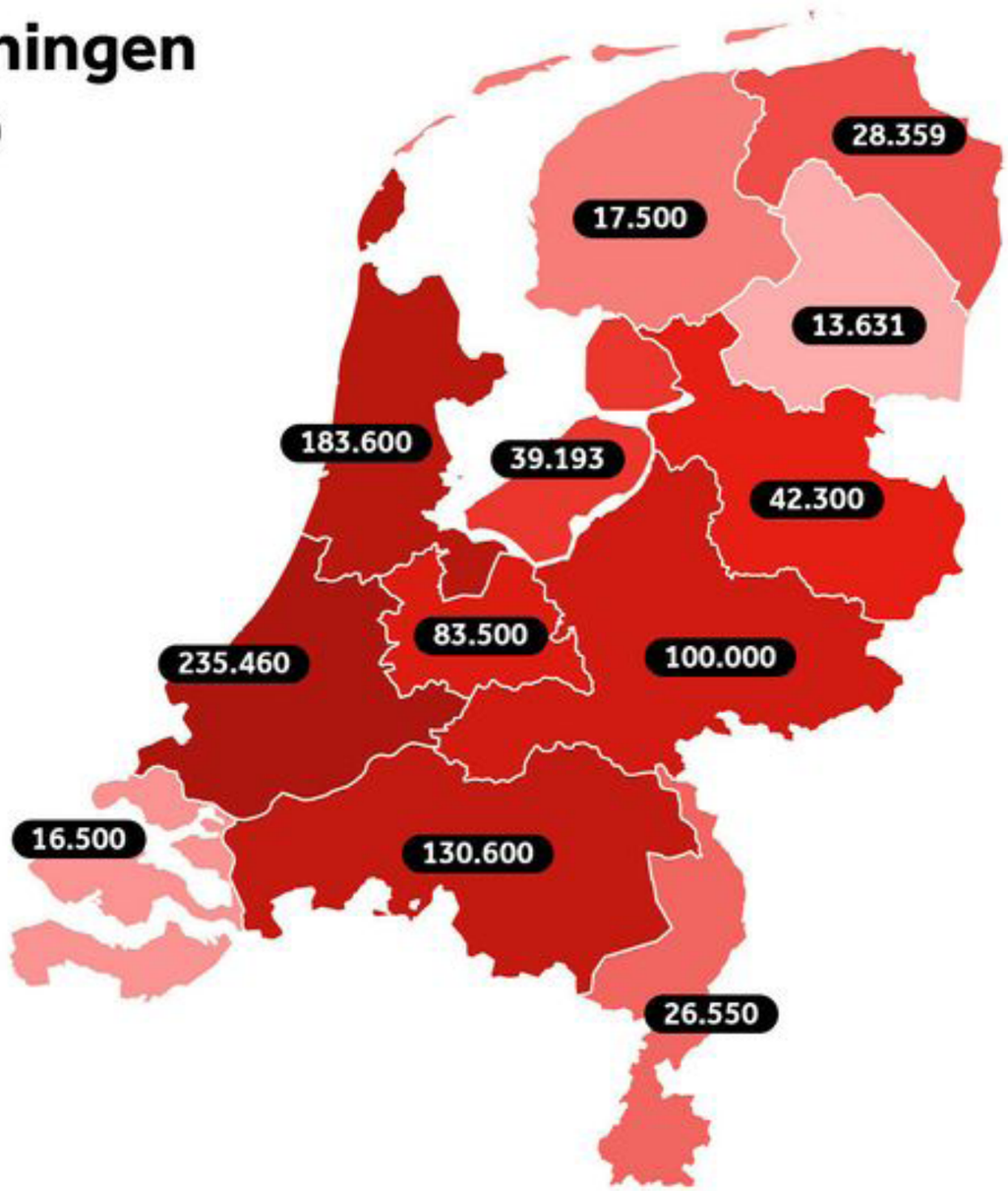


Dutch housing crisis

Aantal nieuwe woningen

per provincie t/m 2030

Drenthe	13.631
Zeeland	16.500
Friesland	17.500
Limburg	26.550
Groningen	28.359
Flevoland	39.193
Overijssel	42.300
Utrecht	83.500
Gelderland	100.000
Noord-Brabant	130.600
Noord-Holland	183.600
Zuid-Holland	235.460
totaal	**917.193**



Source: NOS Nieuws

Industrial areas

1985

2025

- Industry pushed out by cities
- urbanisation towards the polder landscape
- Monofunctional industrial areas on the outskirts of cities
- According to the 2025 United Nations World Urbanization Prospects

Report, about 55% of the world population currently lives in urban areas and 45% in rural.

Industrial areas

A system replicable across many areas

Industrial areas

Guidelines
principle & ambitions

Masterplan

- Using exteriorless architecture
- Gateway into Midden-Delfland
- Affordable housing
- Maximising land use densifying
- Closing the loop
- Visible watersystem, visible industry creating awareness

Create a replicable system that could work in many different industrial areas

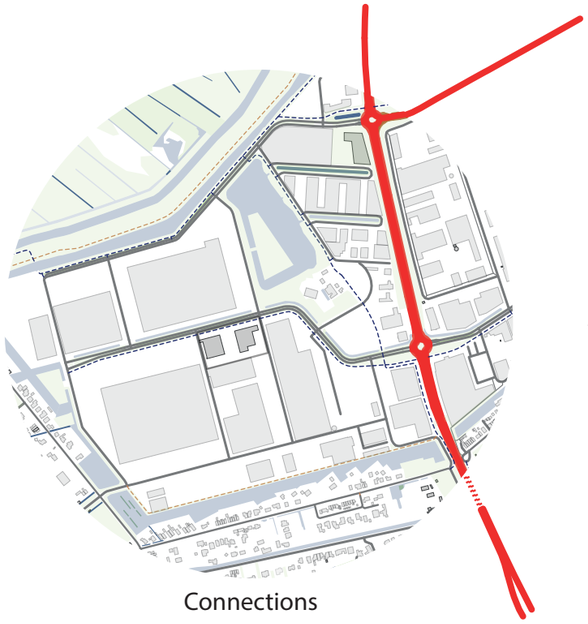
Research question

How can mono-functional industrial areas at the urban–polder edge be transformed into sustainable mixed-use environments, and how can this approach serve as a model for similar locations in the Netherlands?

Masterplan

Massing

Plot choice

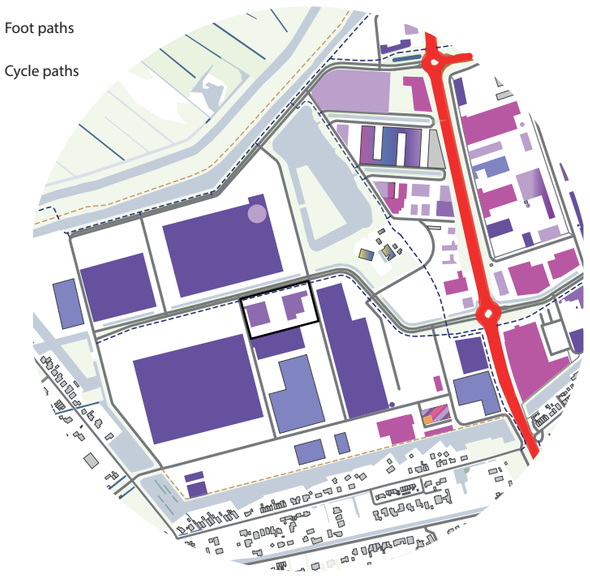


Connections

- Primary Road
- Secondary Roads
- Foot paths
- Cycle paths

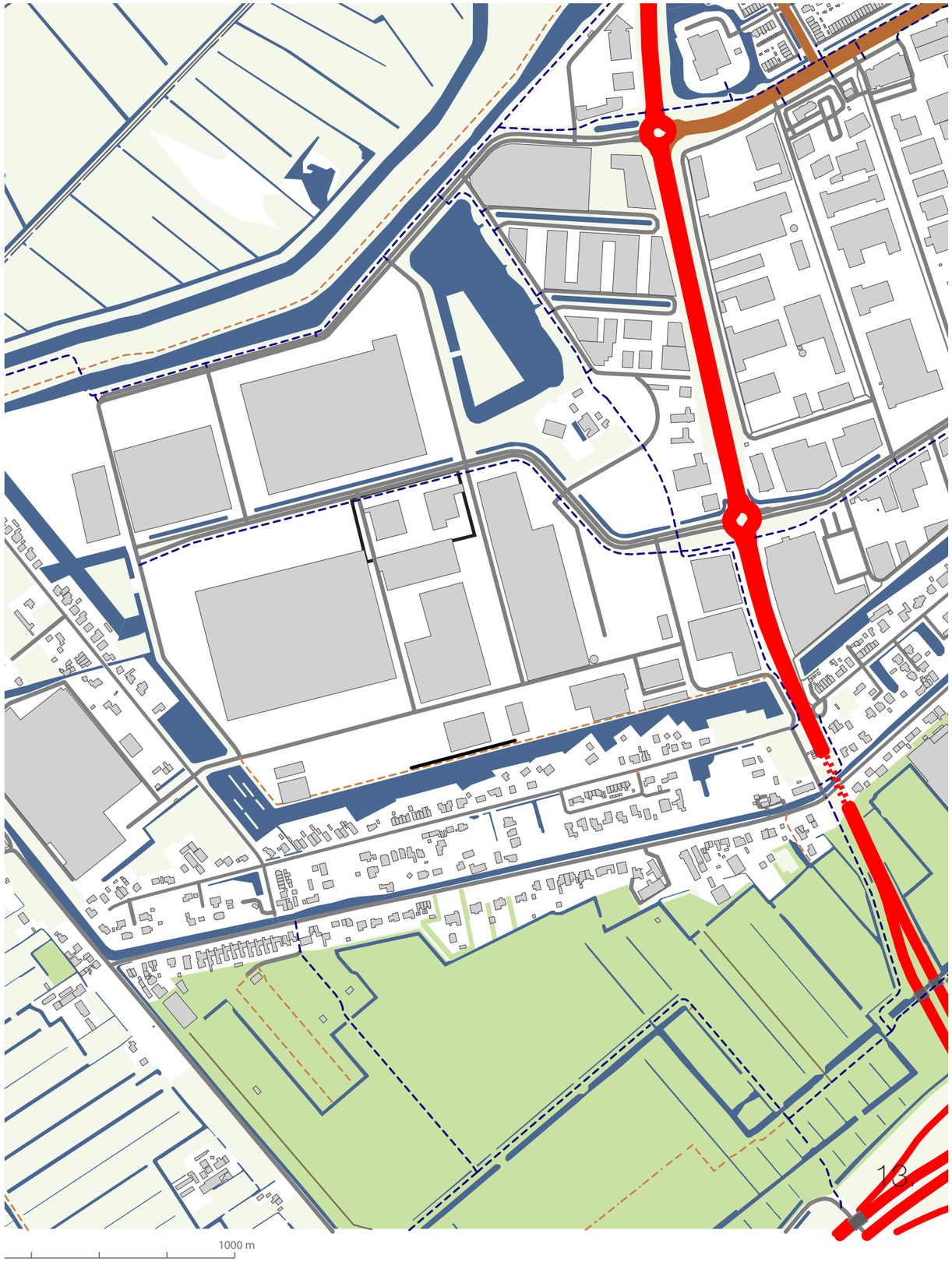
Figure Ground

- Building



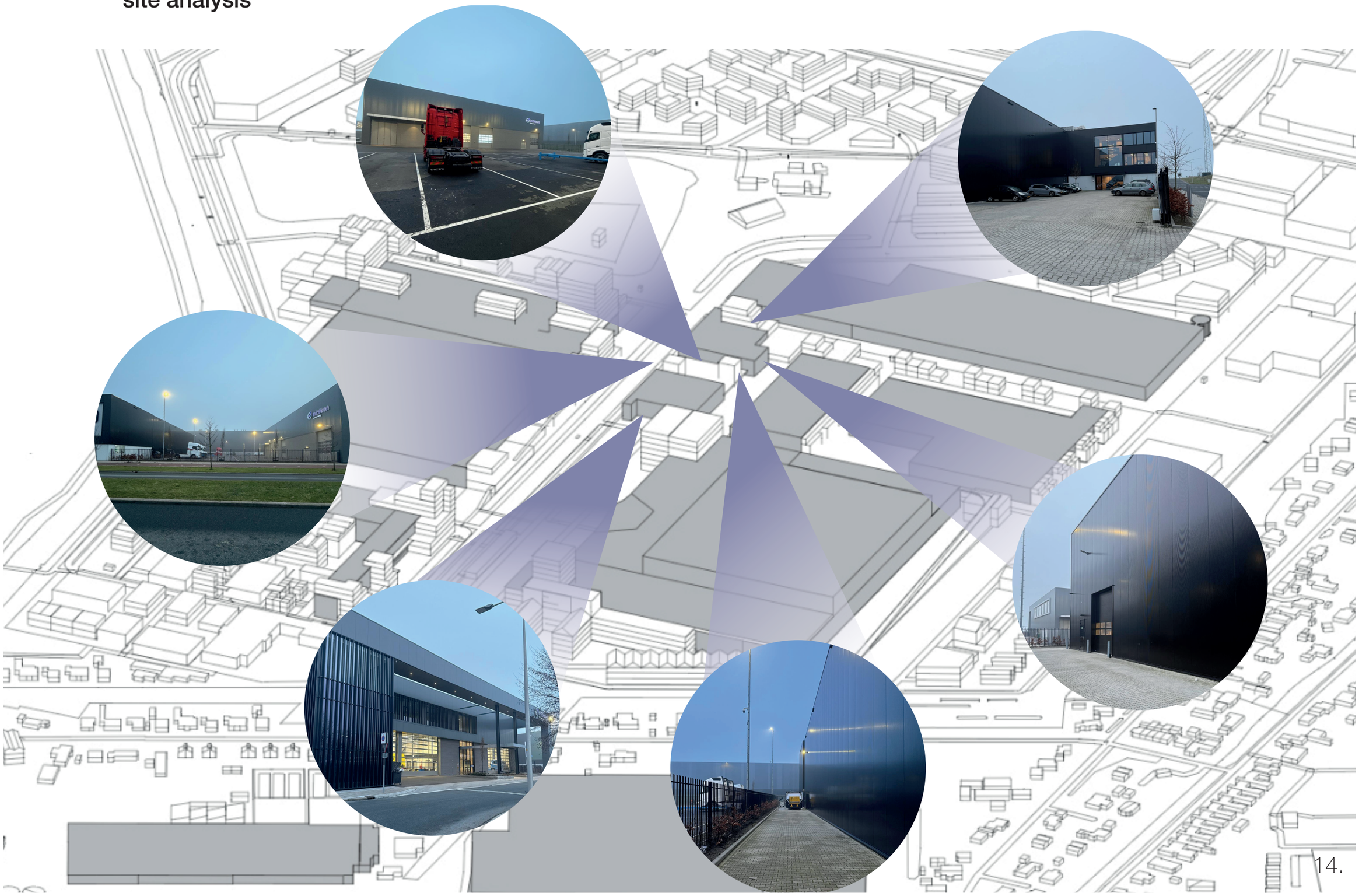
Building Uses

- Logistics / Delivery Warehouse
- Residential
- Wholesale businesses
- Car related business
- Other / unknown



Plot choice

site analysis



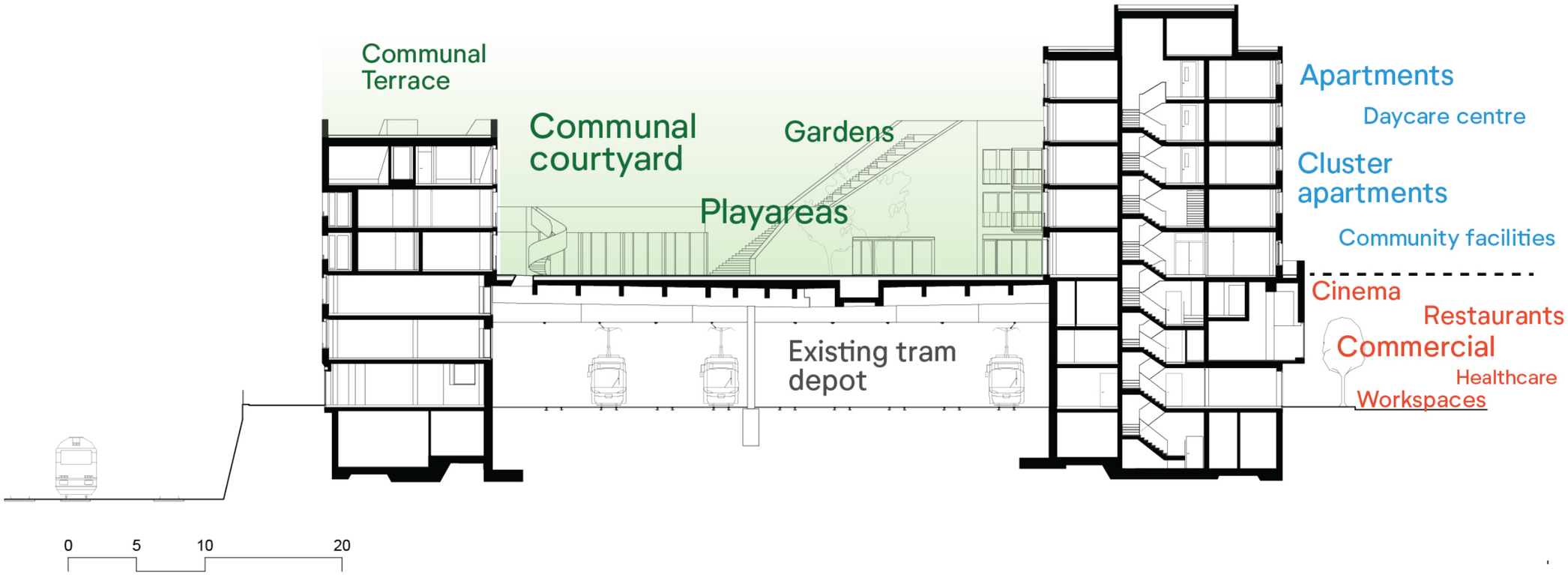
References

Kalkbreite, Zurich

Source: Eminotor

References

Kalkbreite, Zurich



Source: Althousingblog

Why this architecture conflicts with the traditional housing model?

Building above active infrastructure requires:

- heavy structures
- complex construction
- shared supports and access

The binary housing model: Rent or Buy

Rent:

- No equity accumulation
- Housing as a finished product
- Hard private boundaries
- Mono-houshould unites

Buy:

- Debt and interest
- High entry threshold
- Hard private boundaries
- Mono-houshould unites

Research question

How can phased housing make homeownership more affordable and flexible for first-time buyers while combining housing with logistics on the same site?

Subquestions:
What technical and spatial design approaches are essential for integrating housing with an active logistics infrastructure within a coherent design?

How does phased housing function as a tool that allows economic and spatial development to take place in parallel over time?

In what ways does phased housing help to lower financial barriers and increase flexibility for firsttime buyers in the housing market?

PHASED HOUSING

From a financial model to a spatial model

What if I apply the principle of **“building step by step”** to architecture?

SO WHAT DOES IT MEAN?

NOT

more ownership every month or year

FROM TRADITIONAL MODEL

VS

BUT

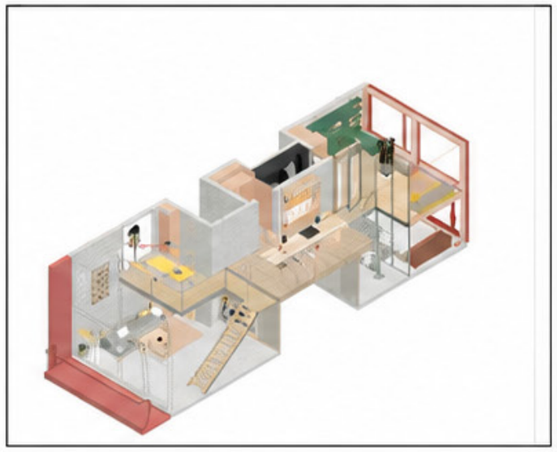
More space and completion at each stage

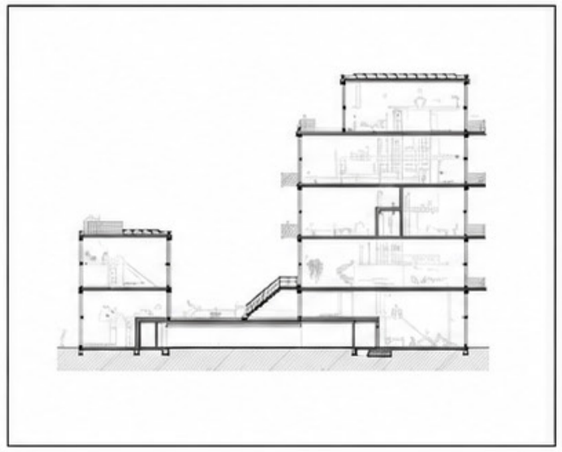
PHASED HOUSING - ARCHITECTURAL MODEL

Superloft · Amsterdam

Casco model	Starting from 200,000 (85m2) · Excluding: interieur, parking · Including installations
Flexibility	Expandable up to 130 m2 · Possible to add an extra floor
Self-build	Phased construction over time · Savings: Tens of thousands of euros

> **John Habraken** introduced the principle of support and infill: a fixed structural system with a flexible interior that allows users to shape and adapt their own living environment over time.



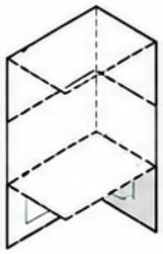


STEP 1 · VALUE IN USE

YOU TAKE OUT A LOAN OF

€300,000

You are buying a property as a shell (structure only)



- Total potential value: **€600,000**
- You will only be using one floor
- You take out a loan of **€300,000**
- You only complete that specific floor

STEP 2 · GROWTH > REFINANCE

AFTER COUPLE OF YEARS – NEW VALUE

€400,000

The property is worth more and the loan has been partially paid

- You need more space
- You **refinance** – the existing loan is replaced
- The additional funds are used to complete the second floor or the rest of the house

TRADITIONAL MODEL

A large upfront payment

- Large upfront payment
- Heavily in debt
- Lack of flexibility

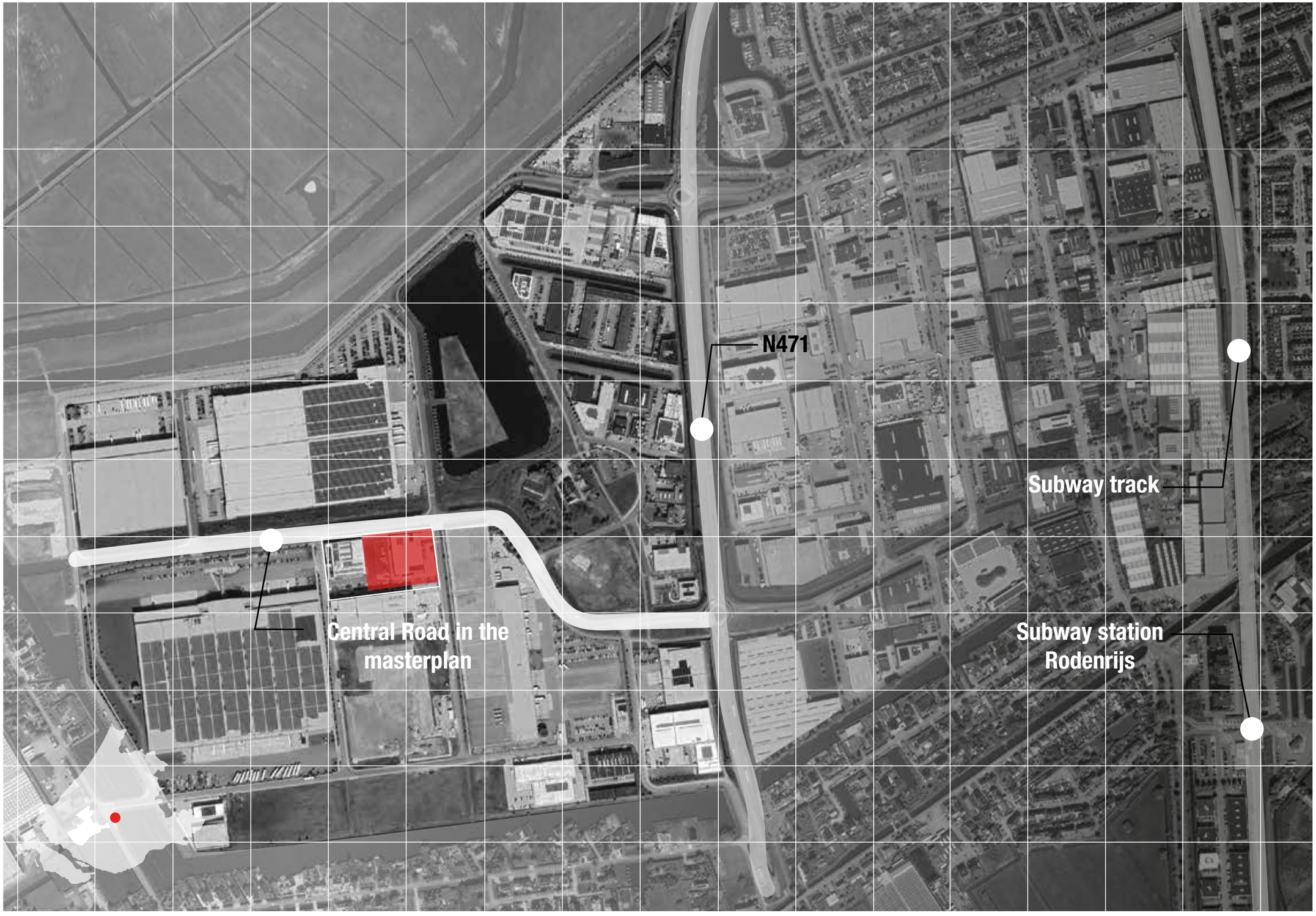
VS

PHASED HOUSING

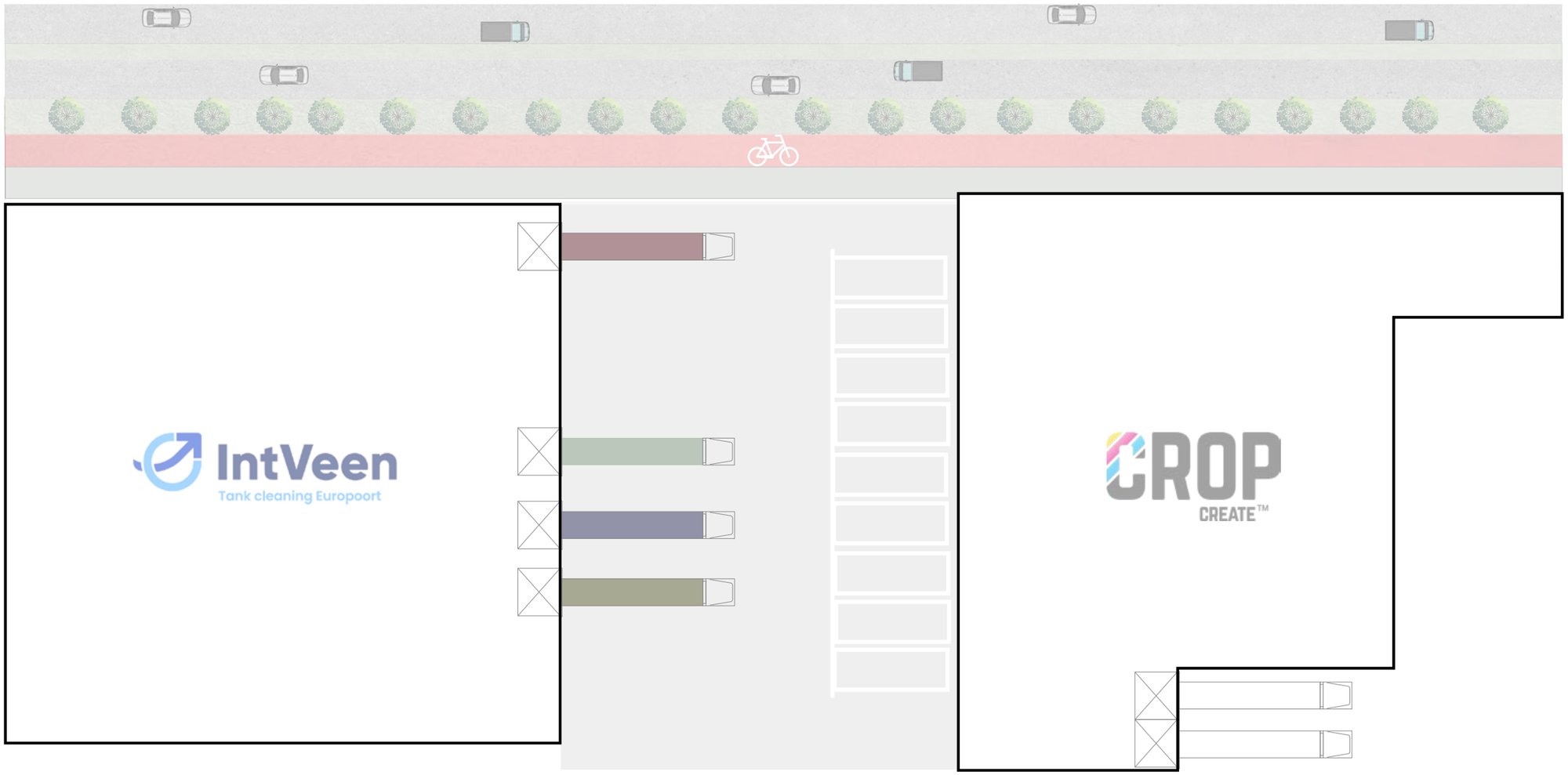
Use and space increase gradually

- Use grows
- Spatial accumulation
- More space with each phase

> **The use and completion of the home occur in phases. The home grows with the user both spatially and financially.**


N471
Subway track
Central Road in the masterplan
Subway station Rodenrijs

Insights



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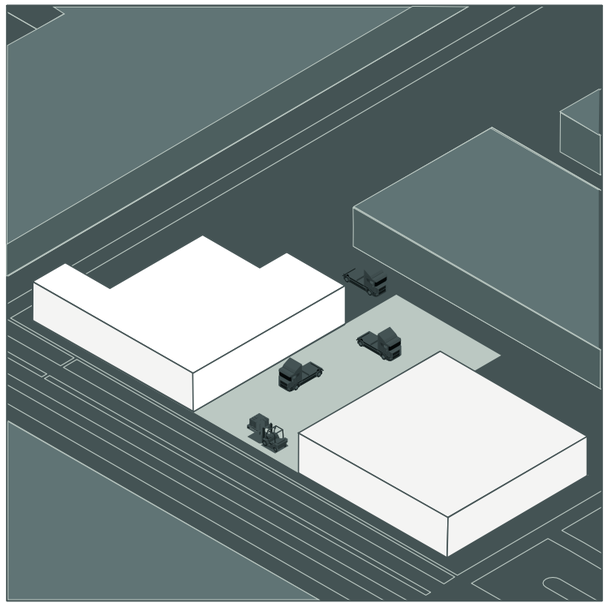
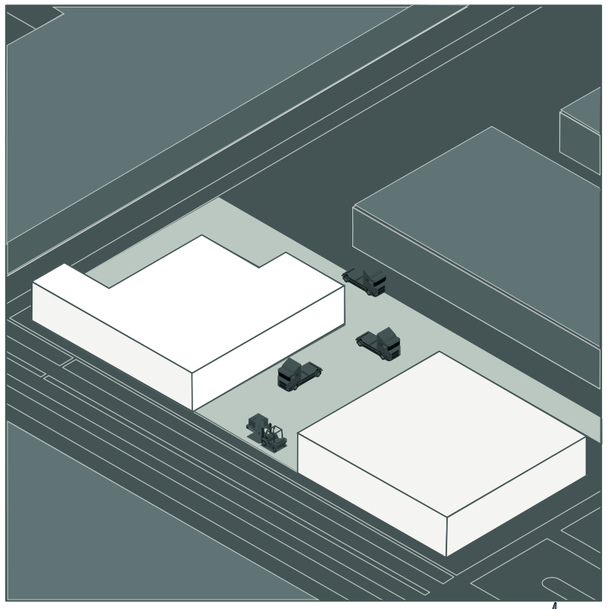
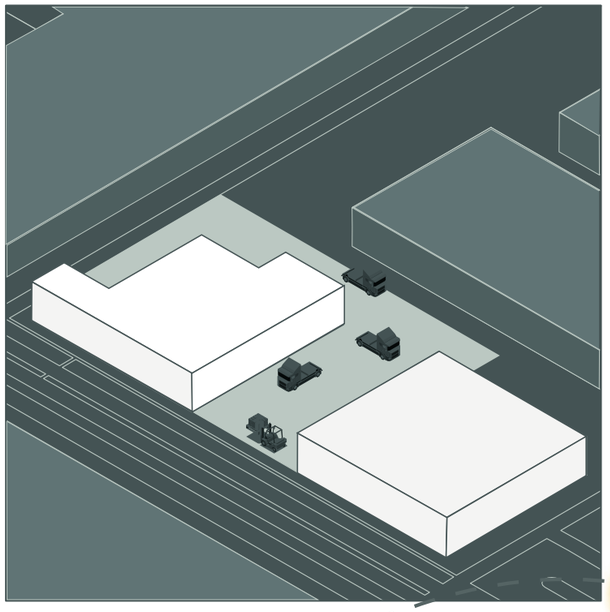


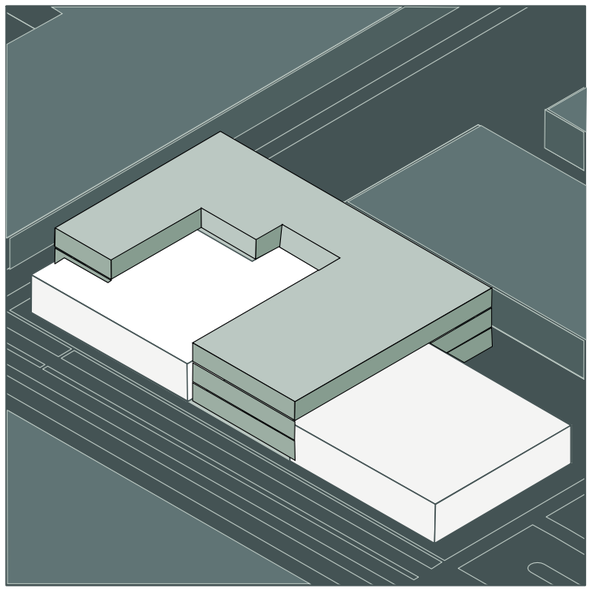
01 Space available

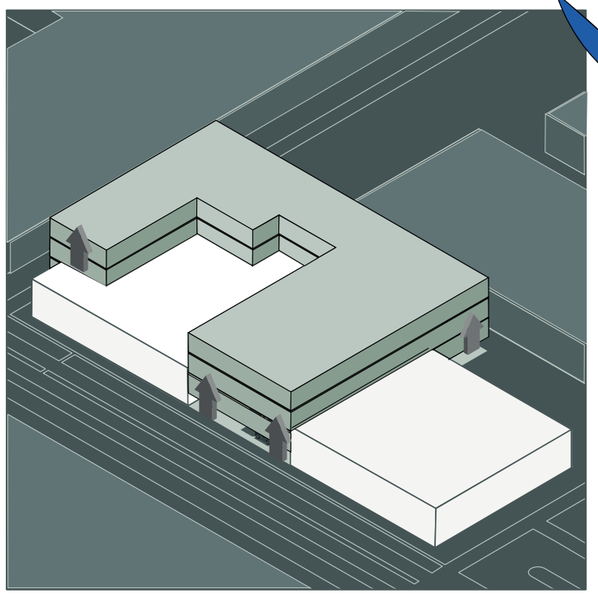


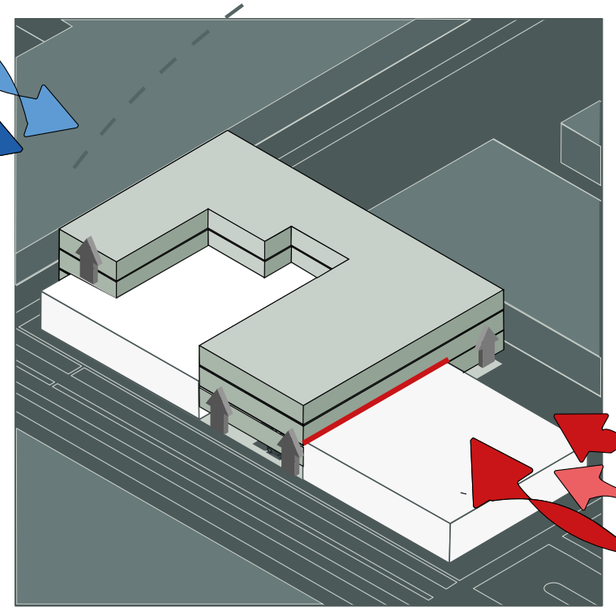
02 Site dominance

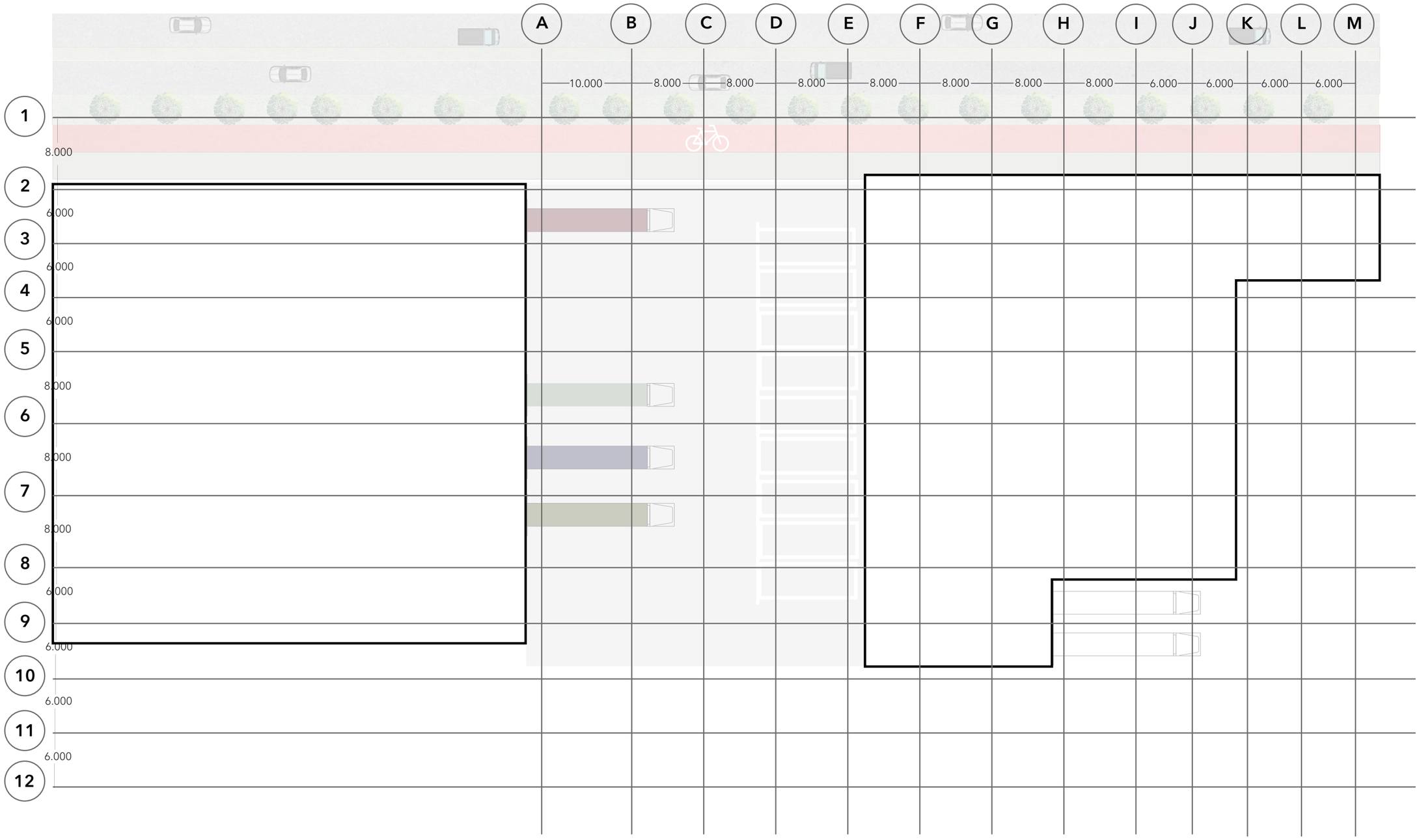


03 Balanced integration





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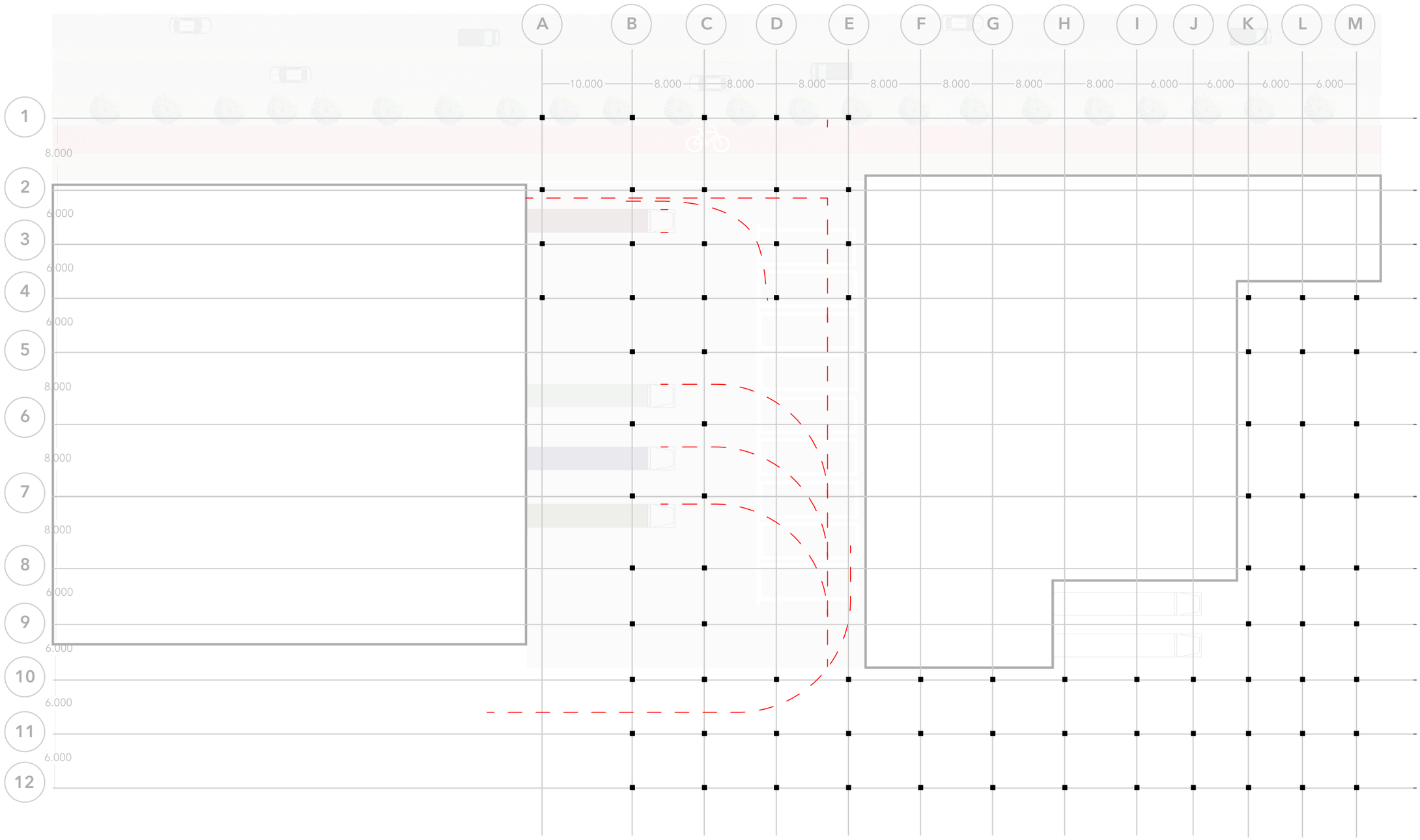
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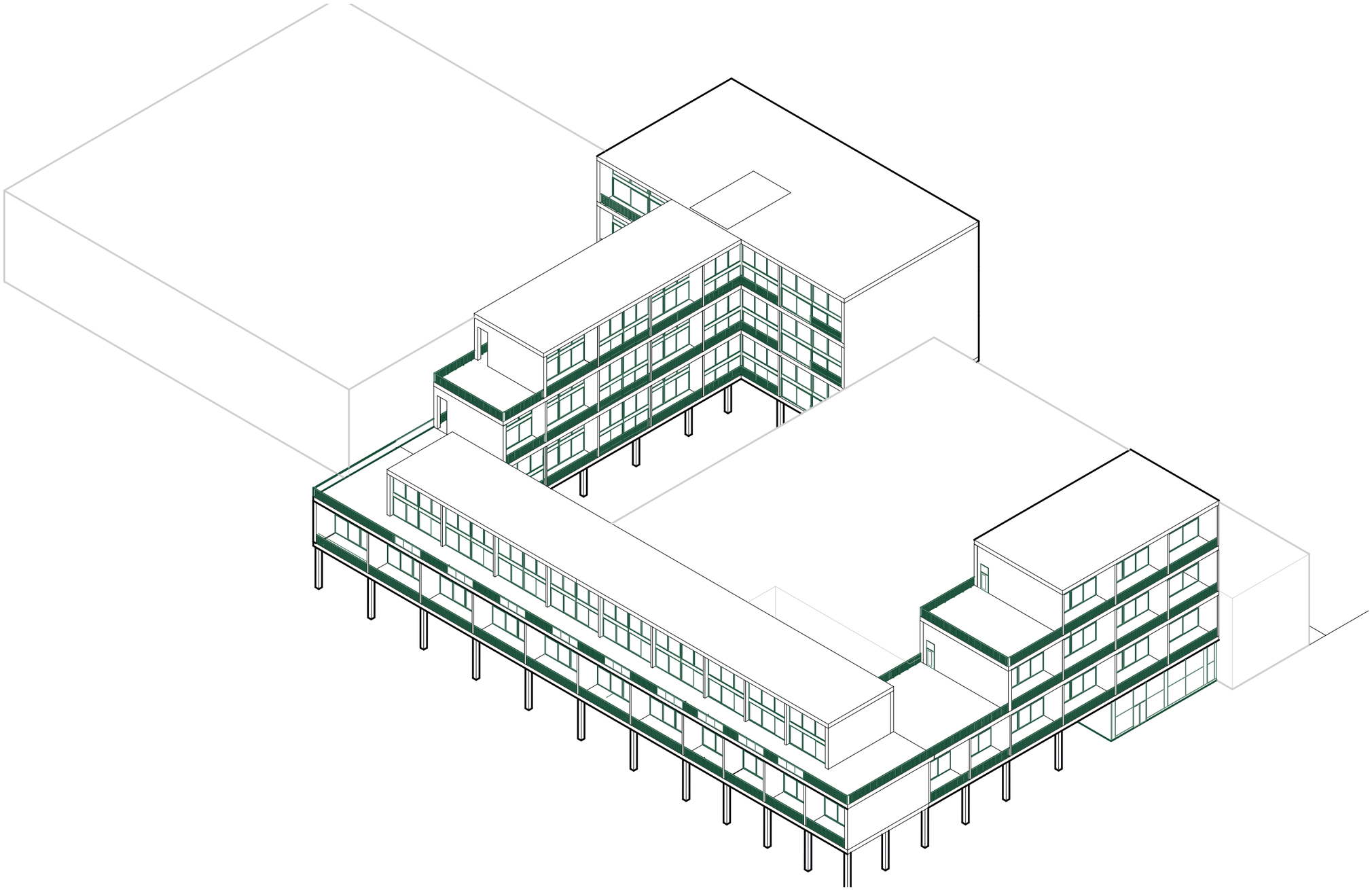

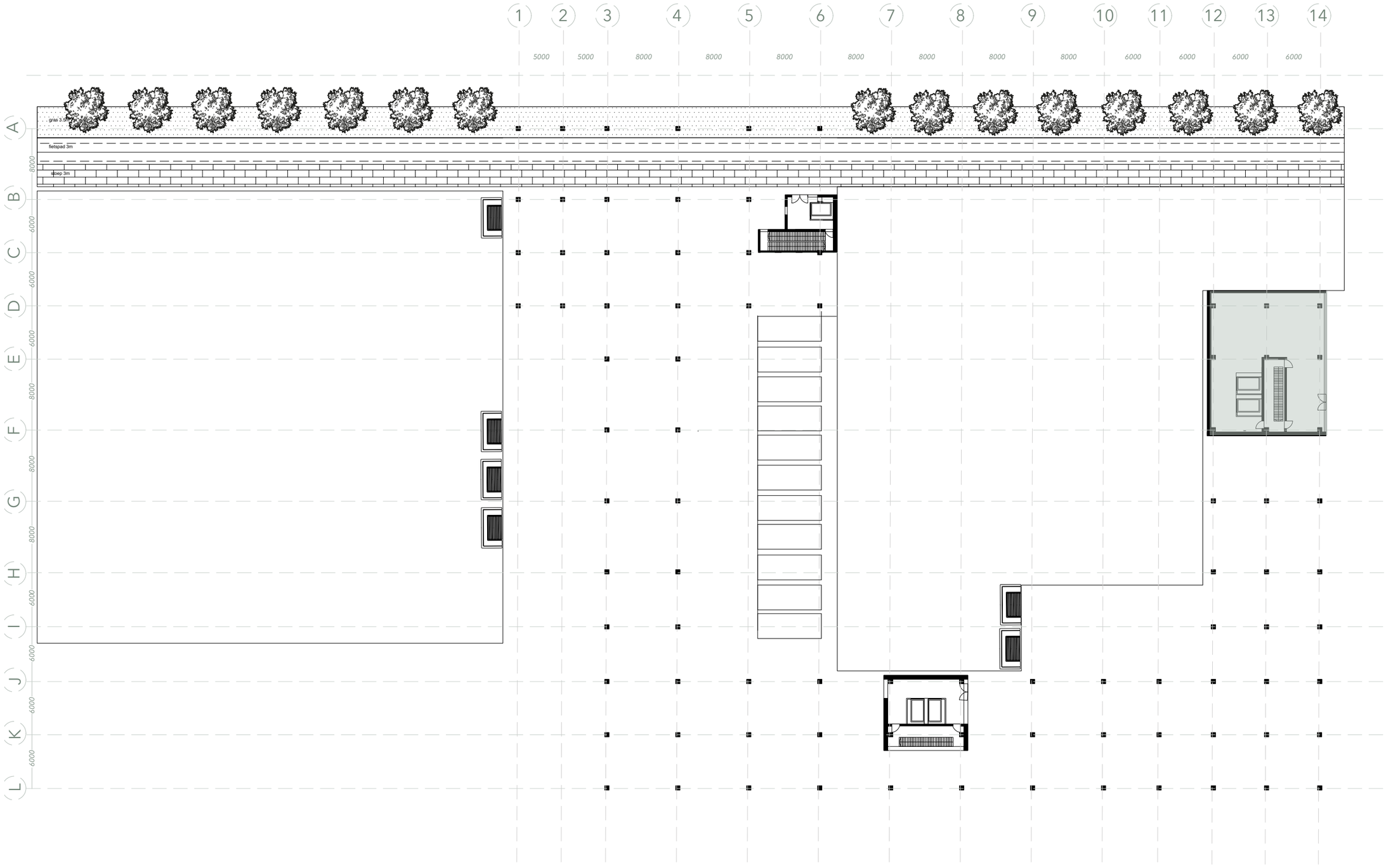
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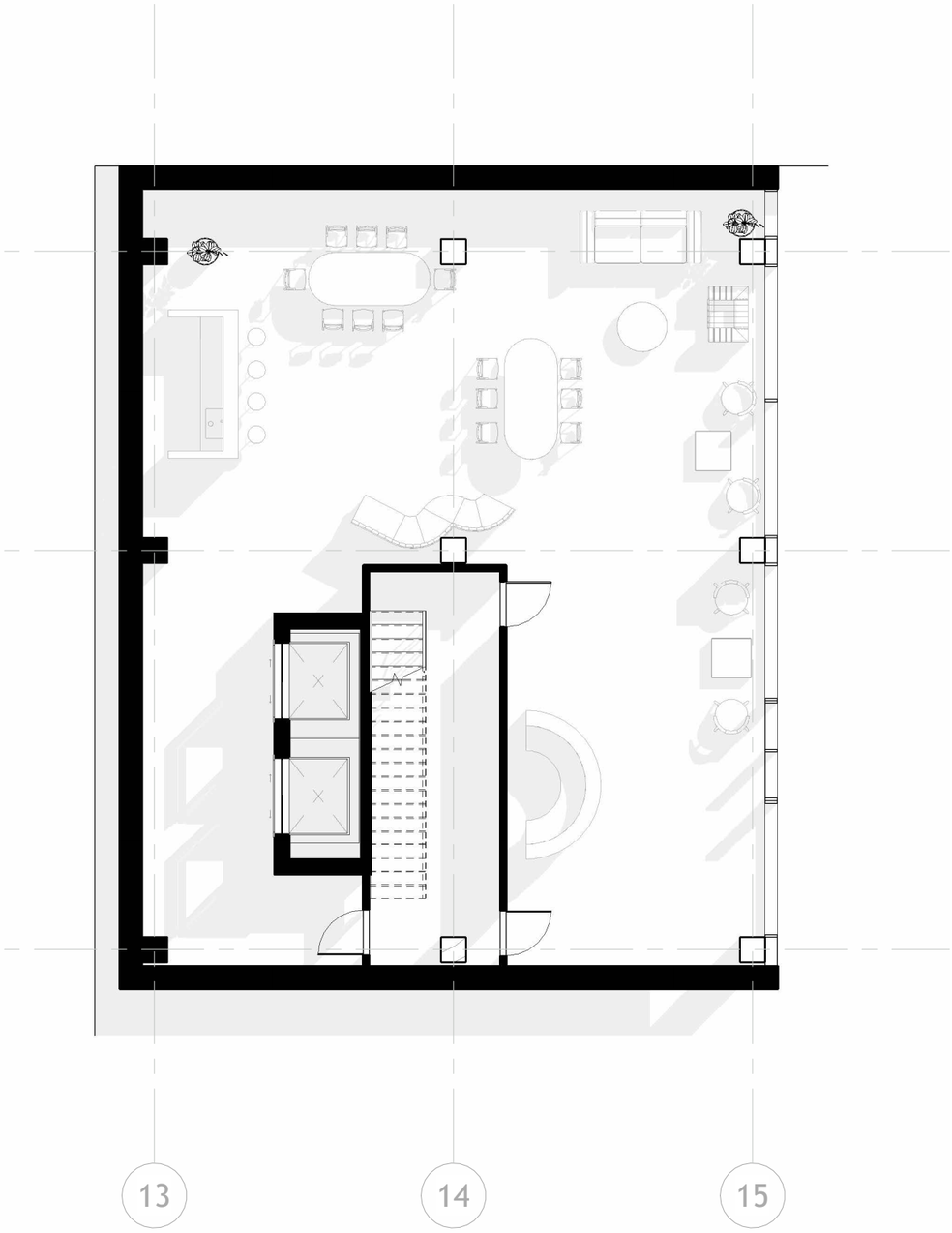
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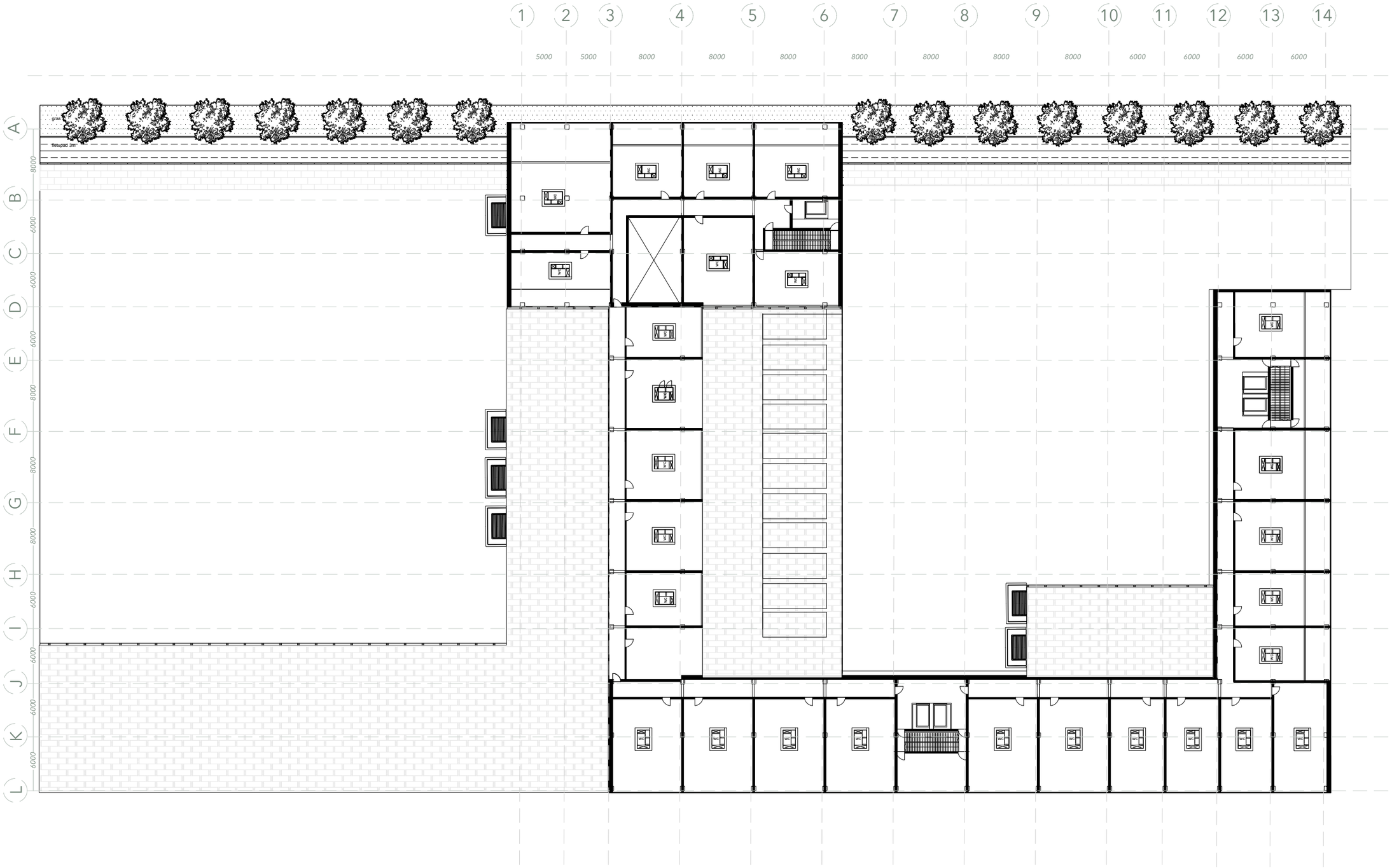
It's great to have a central lobby where residents en employees can meet and interact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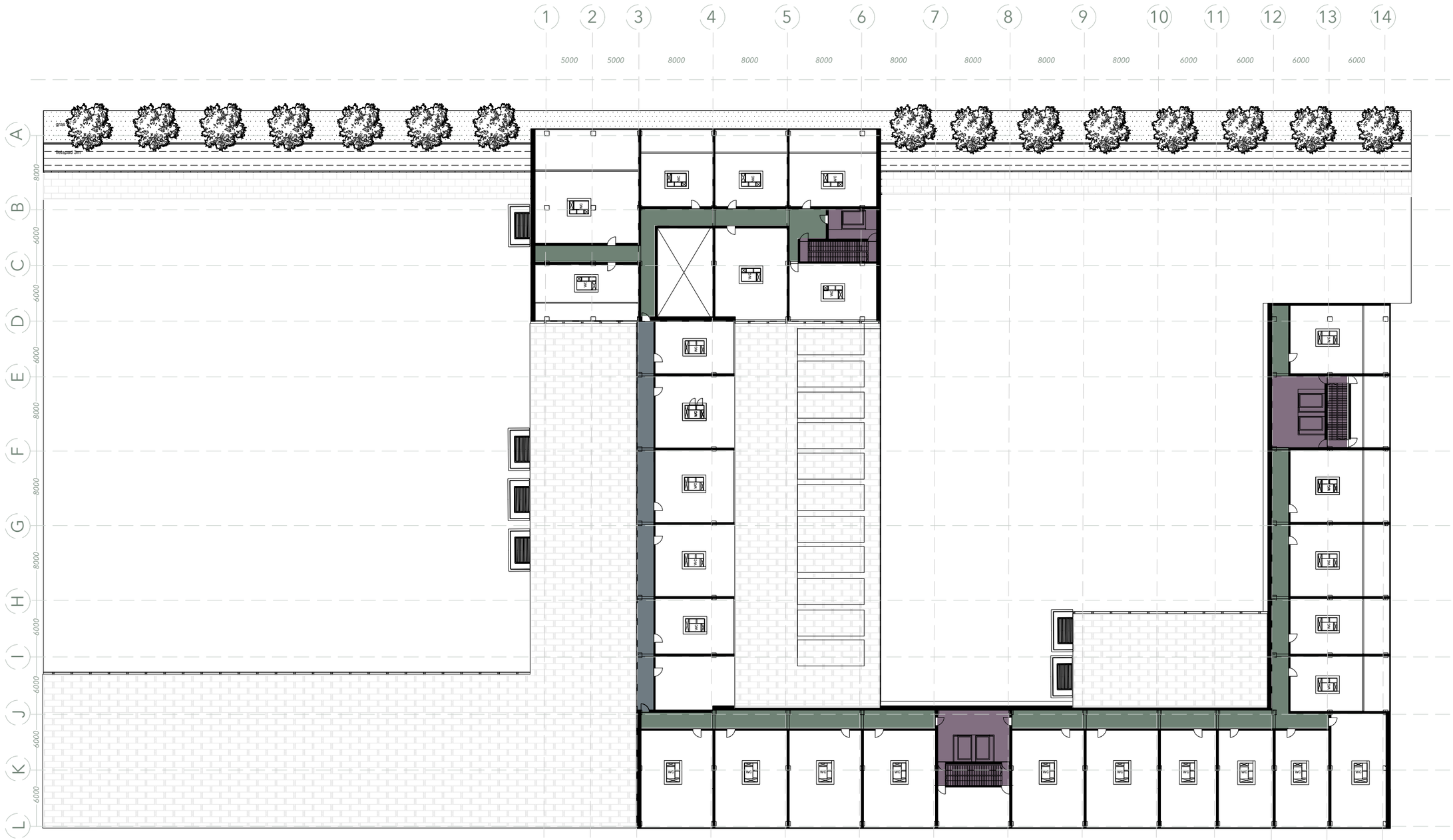
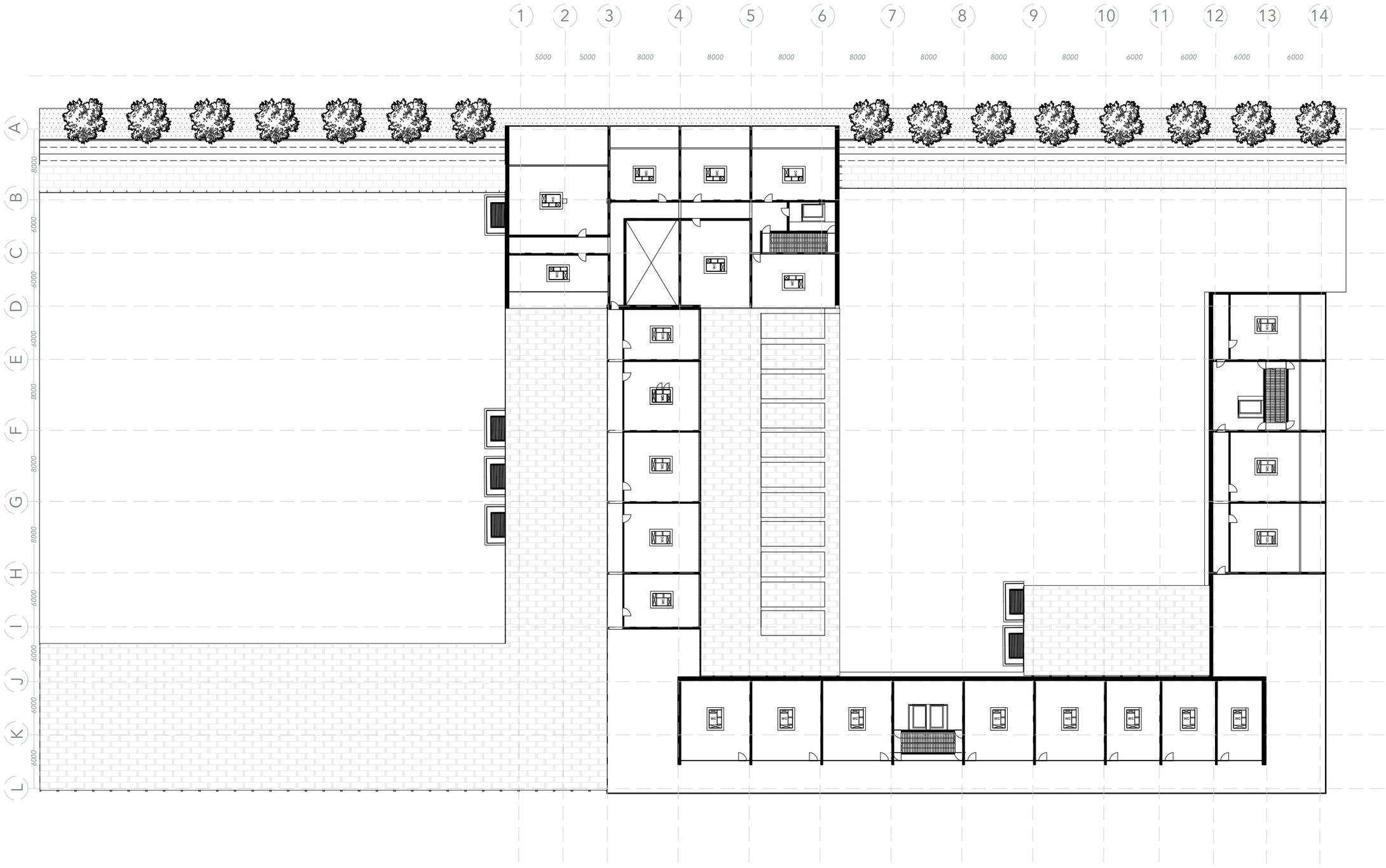


CORRIDOR

COMMUNAL OUTDOOR SPACE

STAIRWELL

GALLERY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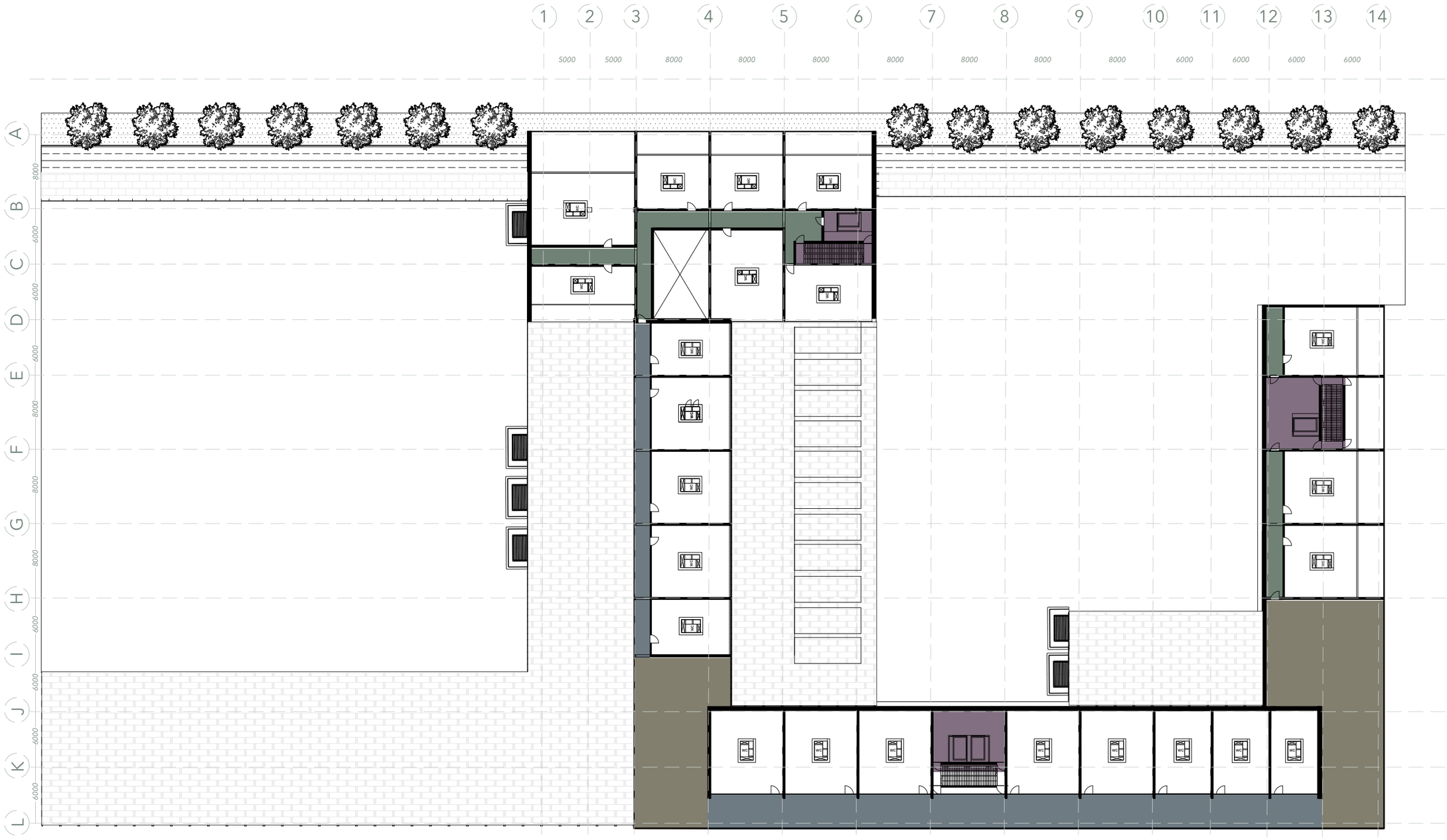

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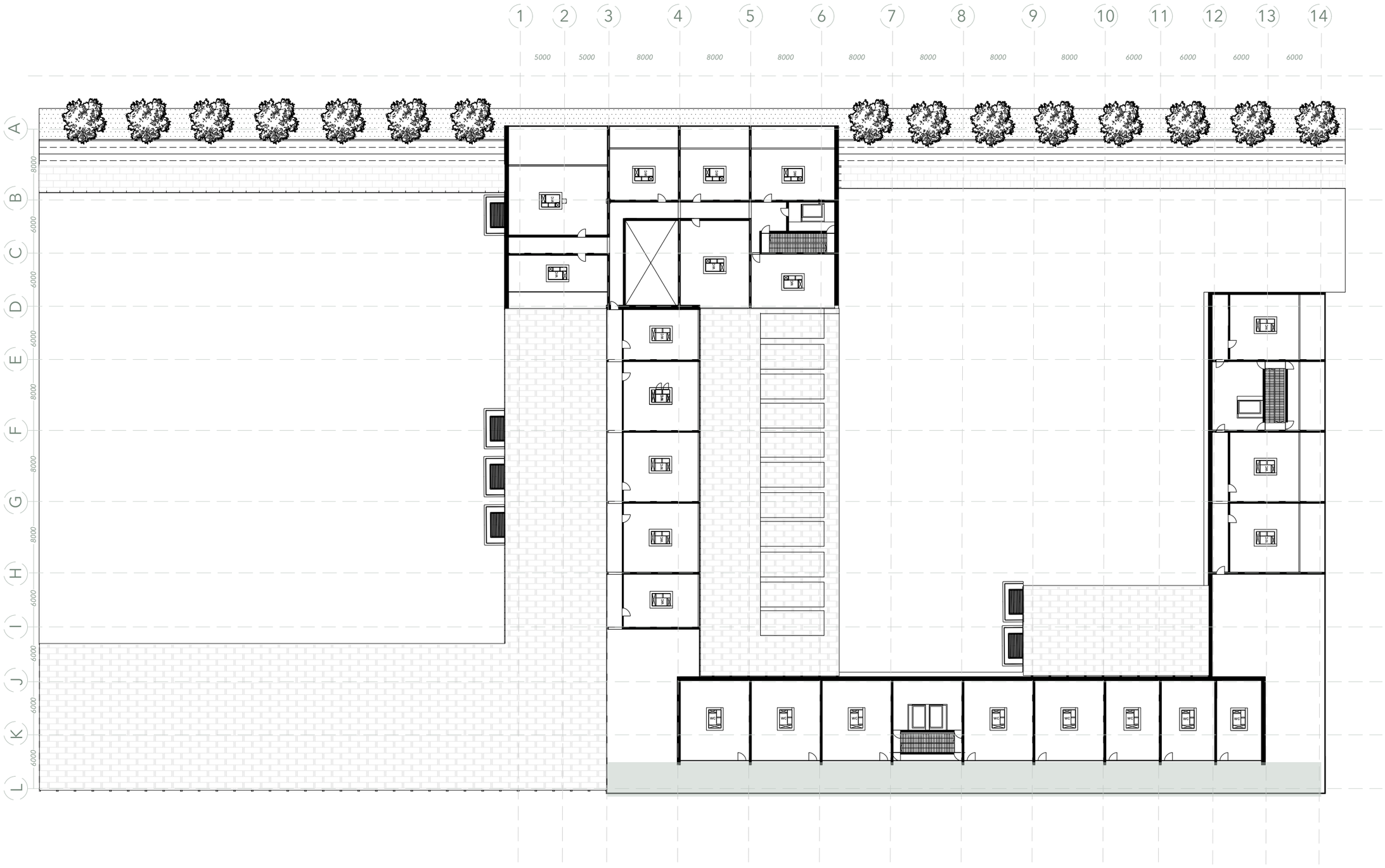
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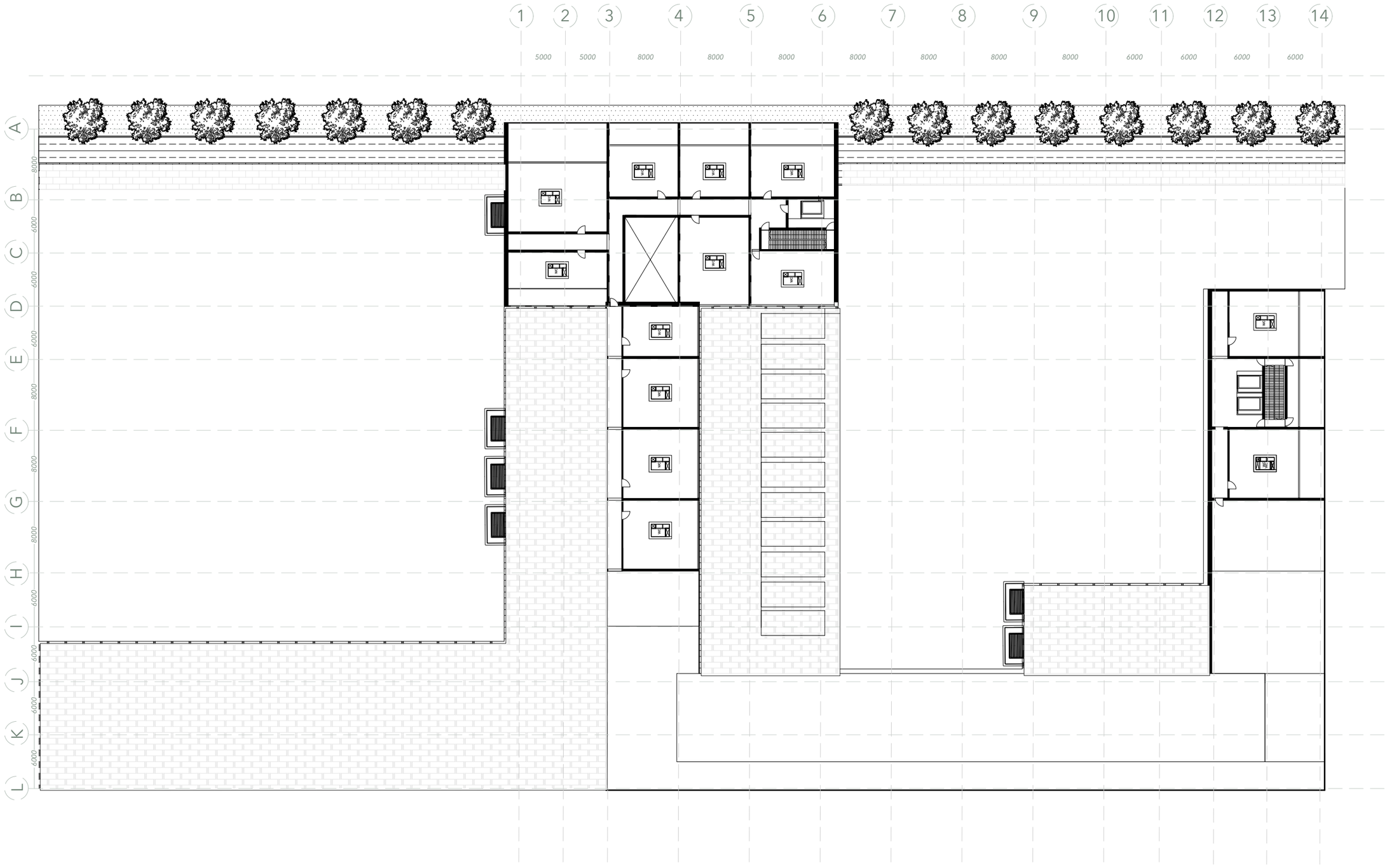
I really love that the gallery is so specious and that our children can still enjoying playing outside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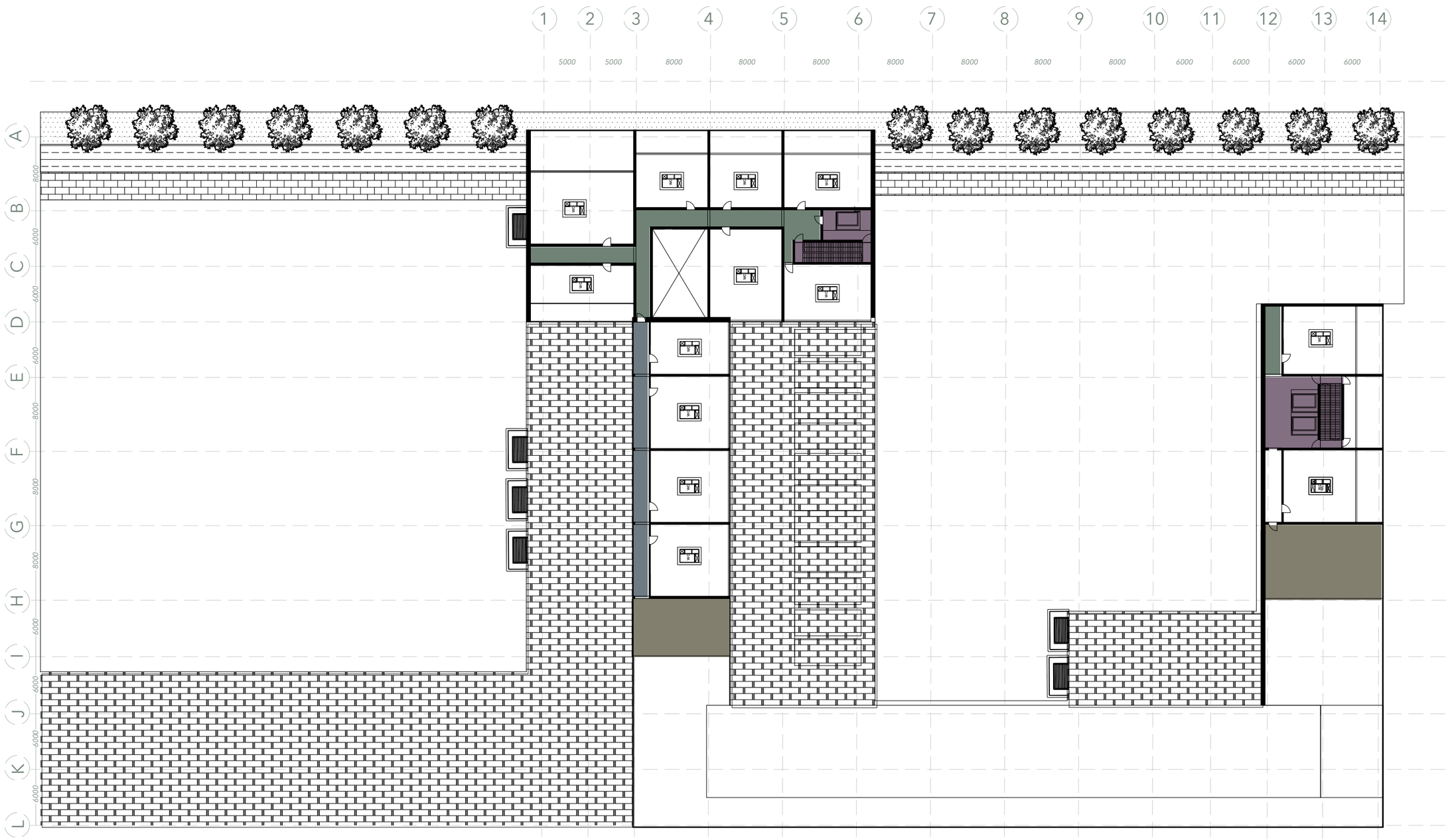

CORRIDOR

COMMUNAL OUTDOOR SPACE

STAIRWELL

GALLERY

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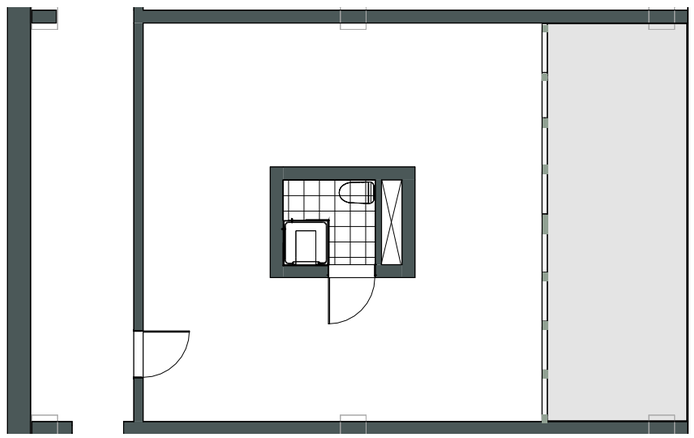
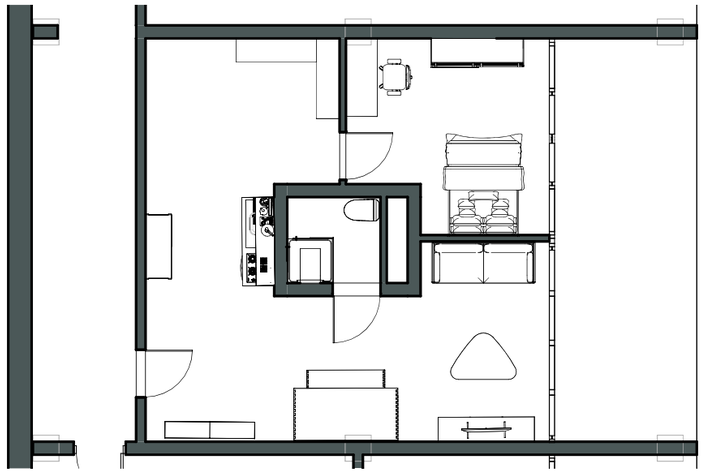
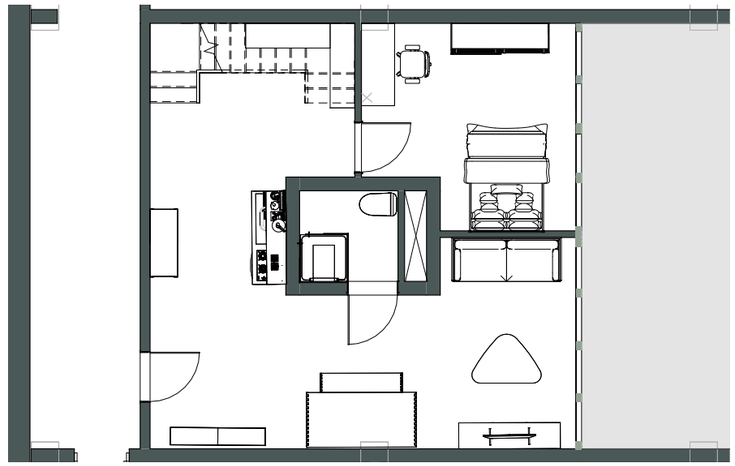


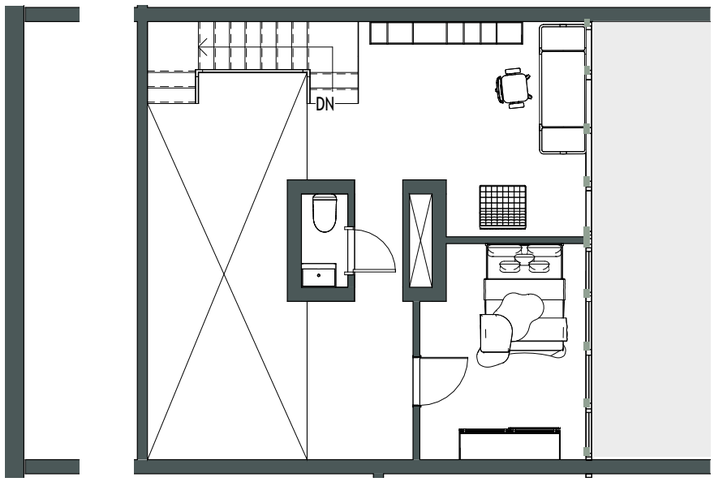
Casco

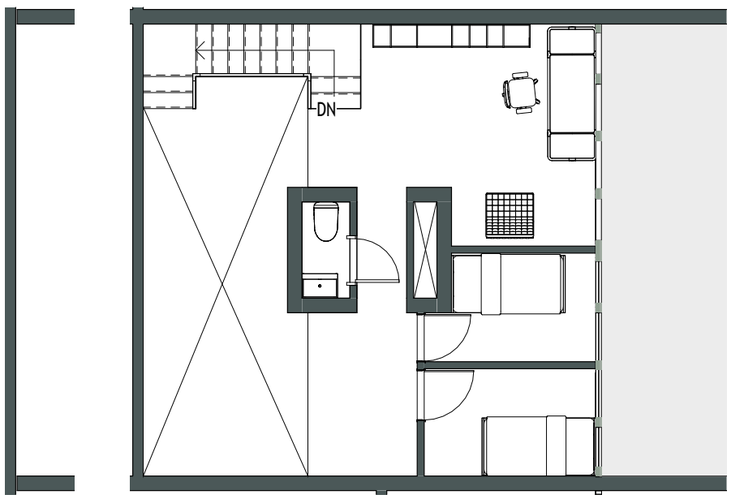


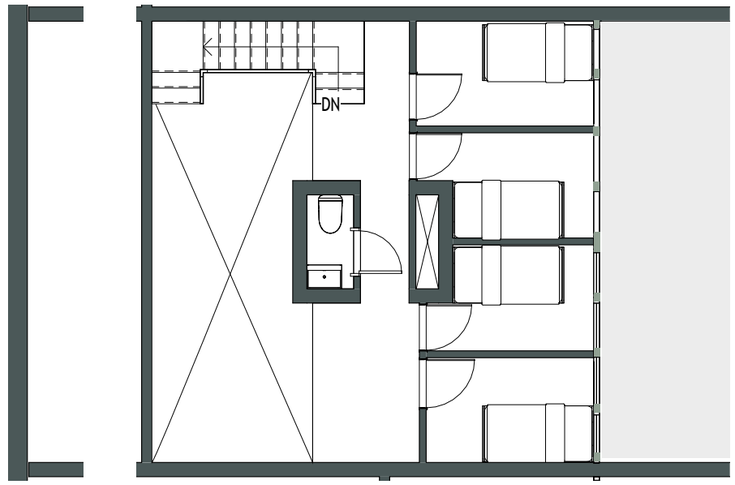
Studio

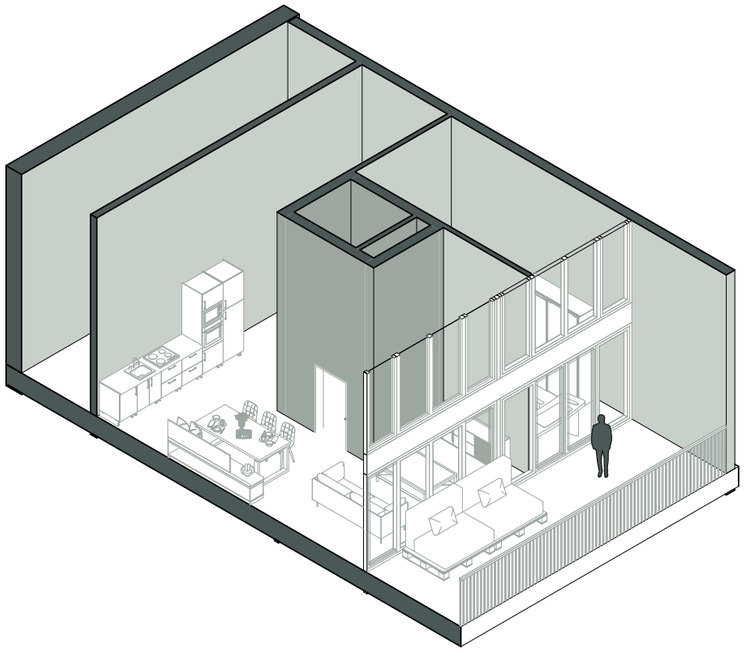


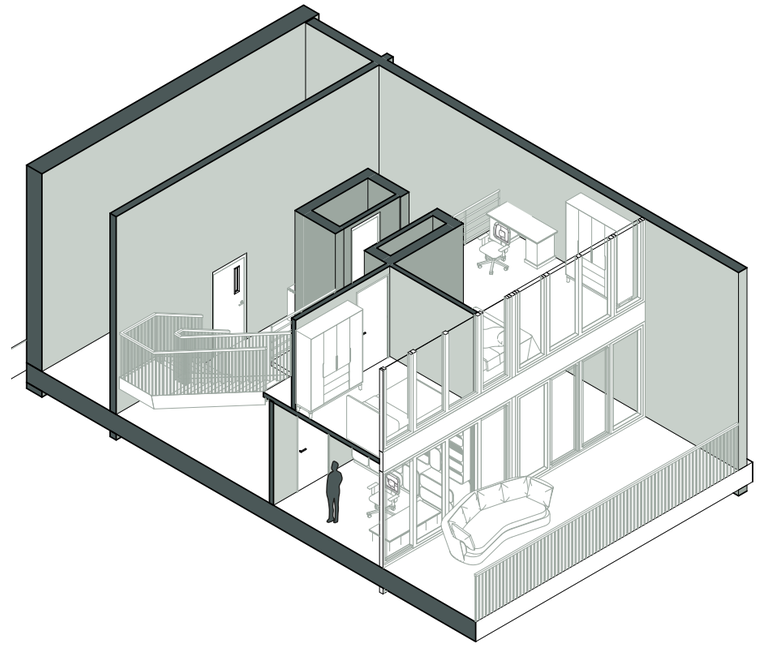
Insert a mezzanine floor

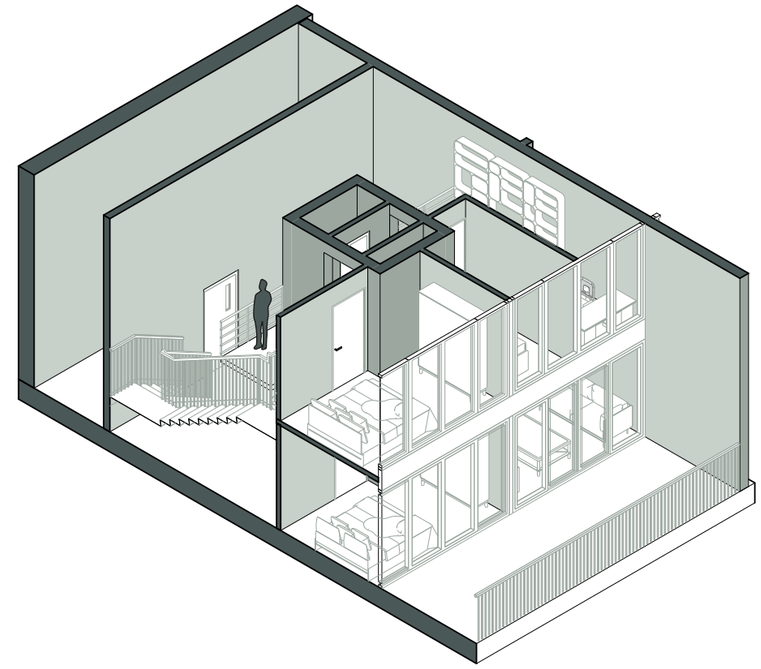








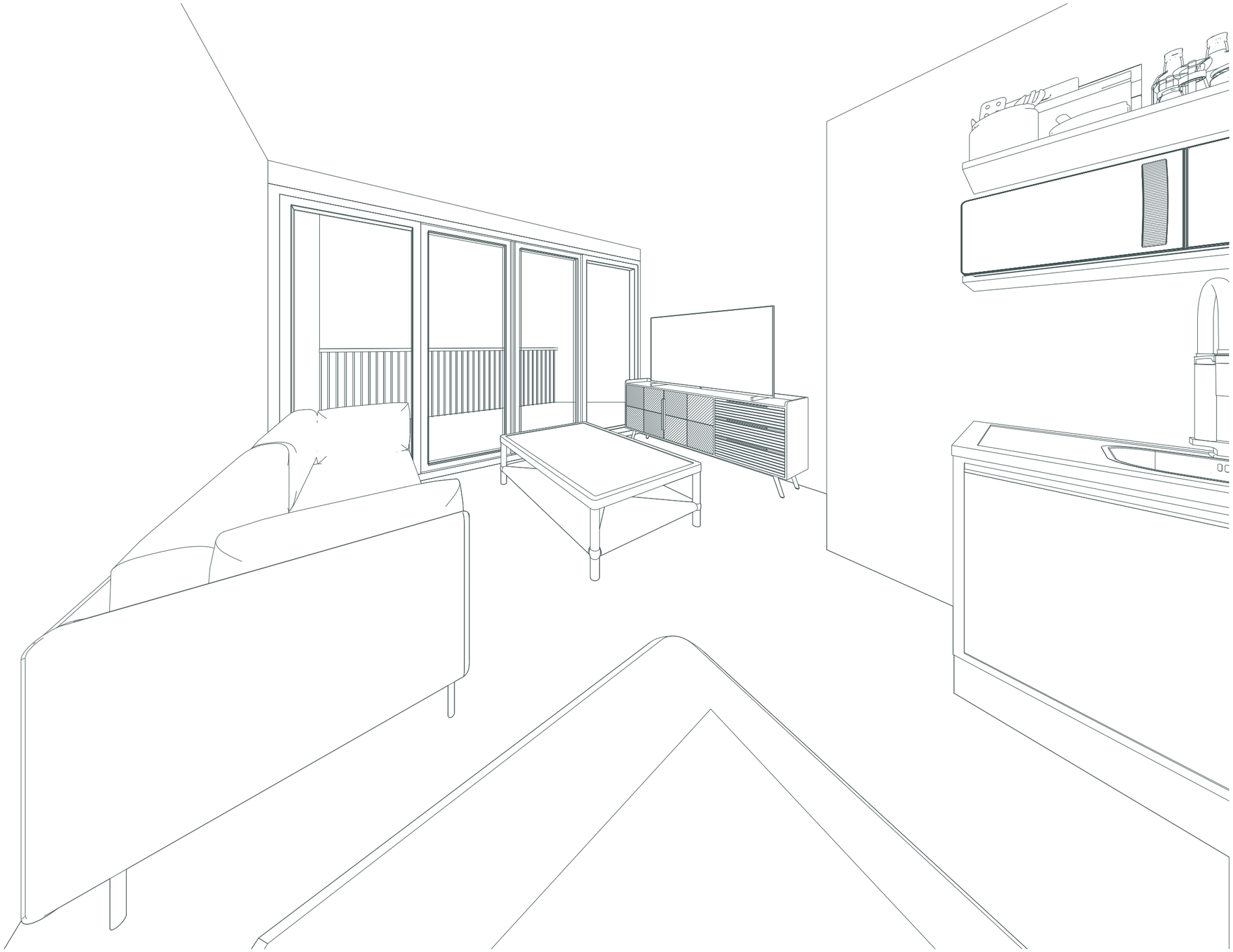




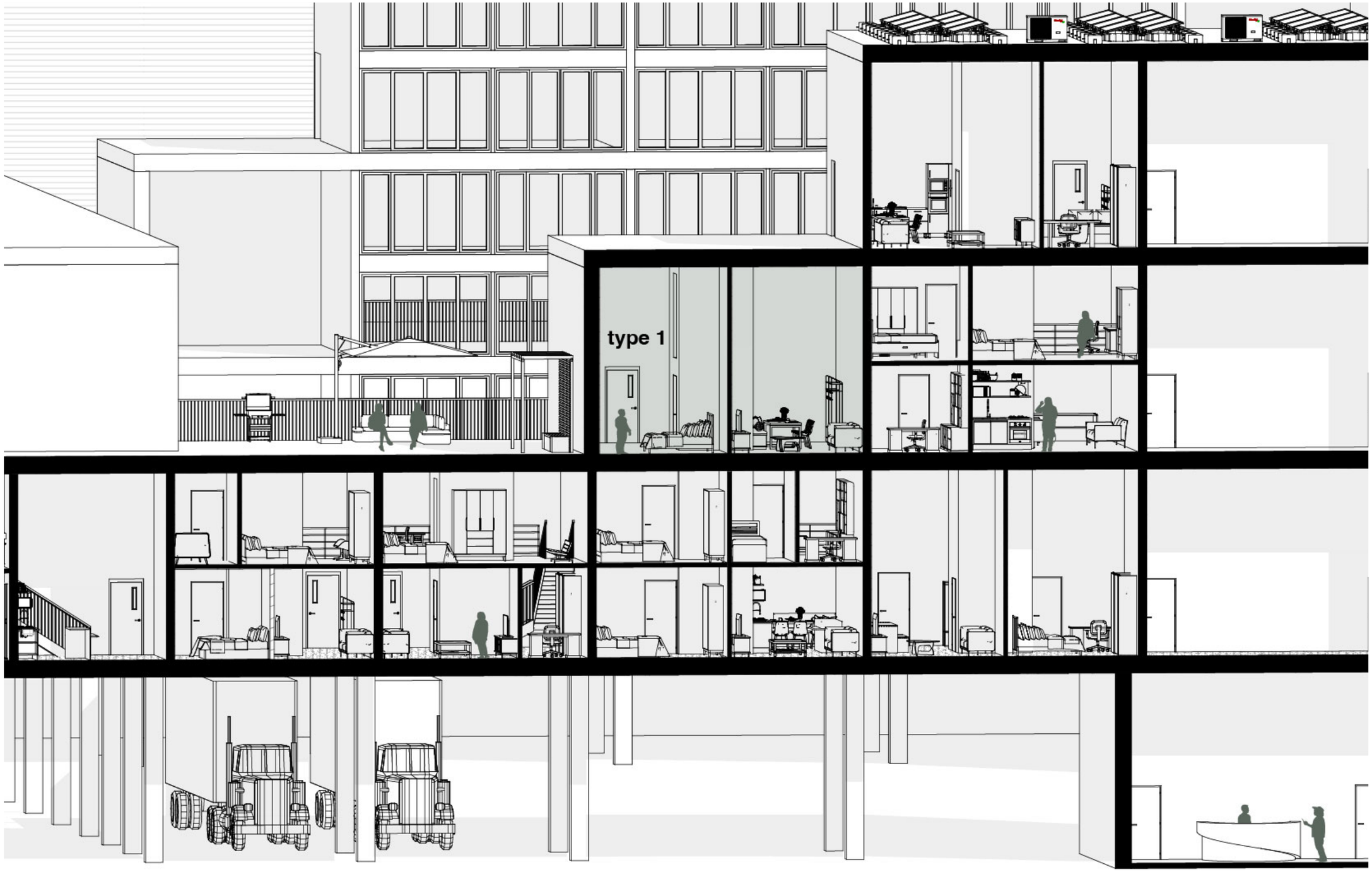
Phase 1: A compact dwelling with a generous clear height of 5.4 metres.

Phase 2: The addition of an intermediate floor, significantly increasing the usable living area.

Phase 3: Further expansion of rooms and functions as the occupants' housing needs evolve.

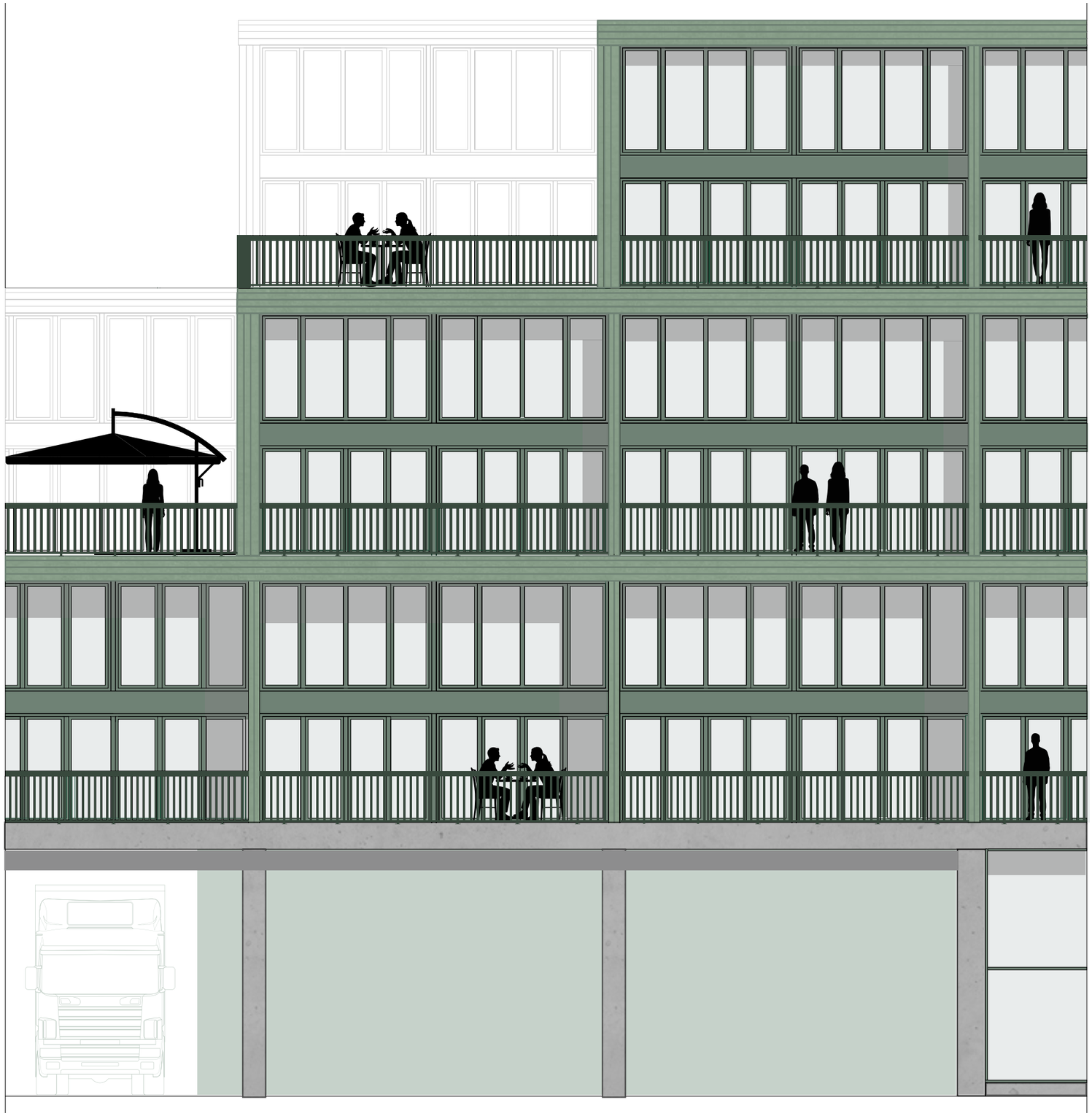


type 1


type 1

+23350
+17401
+11453
+5500

The green façade evokes the landscape of Midden-Delfland, whilst also bringing colour and character to the otherwise monotonous, industrial streetscape of the surrounding area.



Room for industry to evolve

Living & working both enhanced

A door into Midden-Delfland landscape