



Weaving the city

Brownfield regeneration through urban manufacturing
at the Truman's Brewery in London

Agnieszka Trzcińska

P5 Presentation 08.11.2022

Architectural Design Crossovers

MSc Graduation Studio Heterogeneous City - London

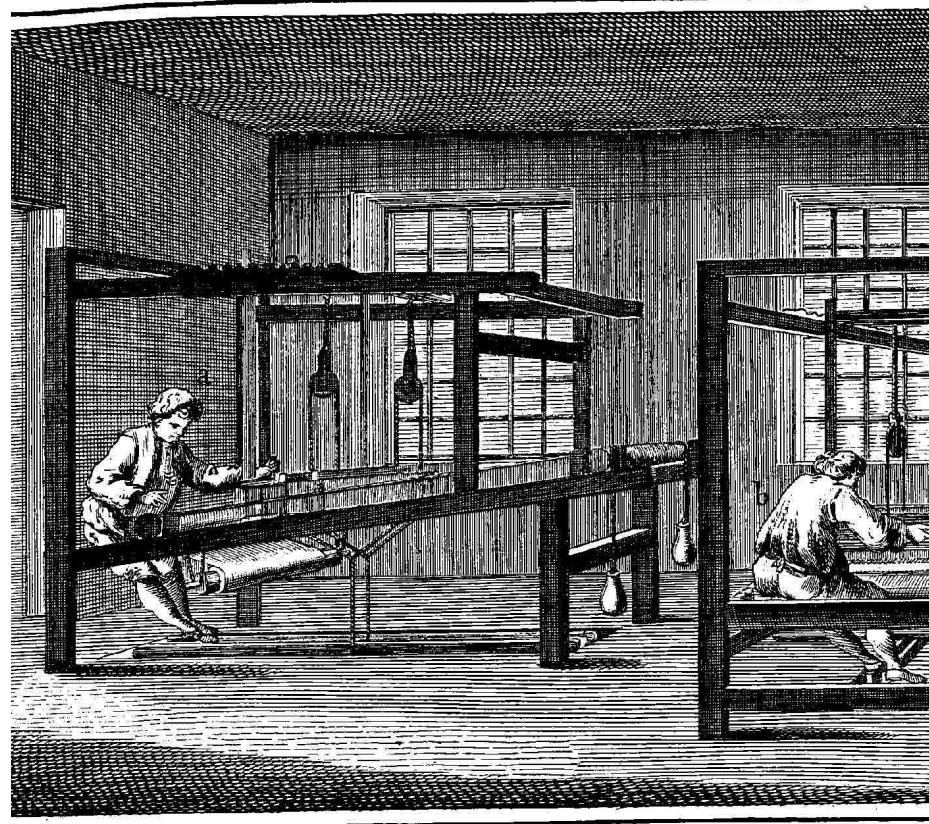
Manufacturing manages to capture one's **imagination**, like any other sector of the **industry**.
There is a certain **allure about the making** of **tangible objects** that is hard to resist.

Adrian Vickery Hill, "Cities of Making"



MATERIAL CULTURE

personal fascination



pre industrial



industrial revolution



current

TEXTILE PRODUCTION DEVELOPMENT

problem statement

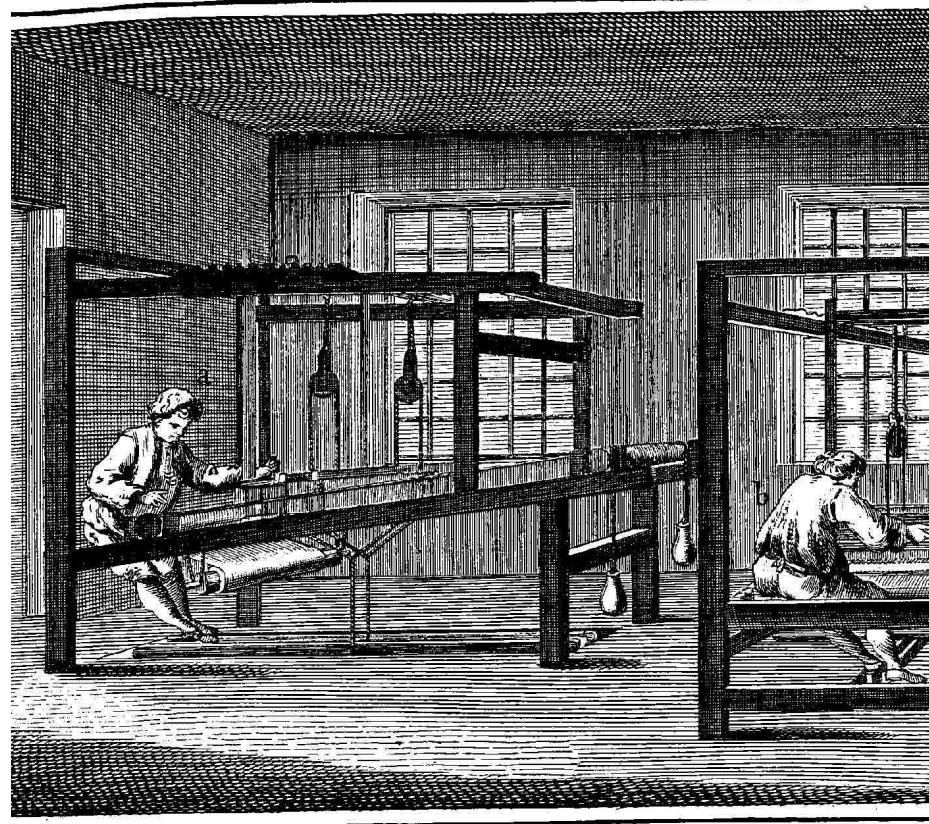


Fig. 1.

pre industrial



industrial revolution



current

?

TEXTILE PRODUCTION DEVELOPMENT

problem statement



62% of all fibres used in the fashion industry are made from a synthetic material



environmental cost of cotton processing - ca 2,000 liters of water per piece



on average 'fast fashion' garments are worn just seven times before they are thrown away



recycling of natural fibres results in lower quality of textile, while most synthetic garments can't be recycled into clothes



most of householders in Britain bin old clothing along with their household waste



300,000 tonnes of textile waste going to landfill in the UK each year

UNSUSTAINABLE FLOWS

problem statement

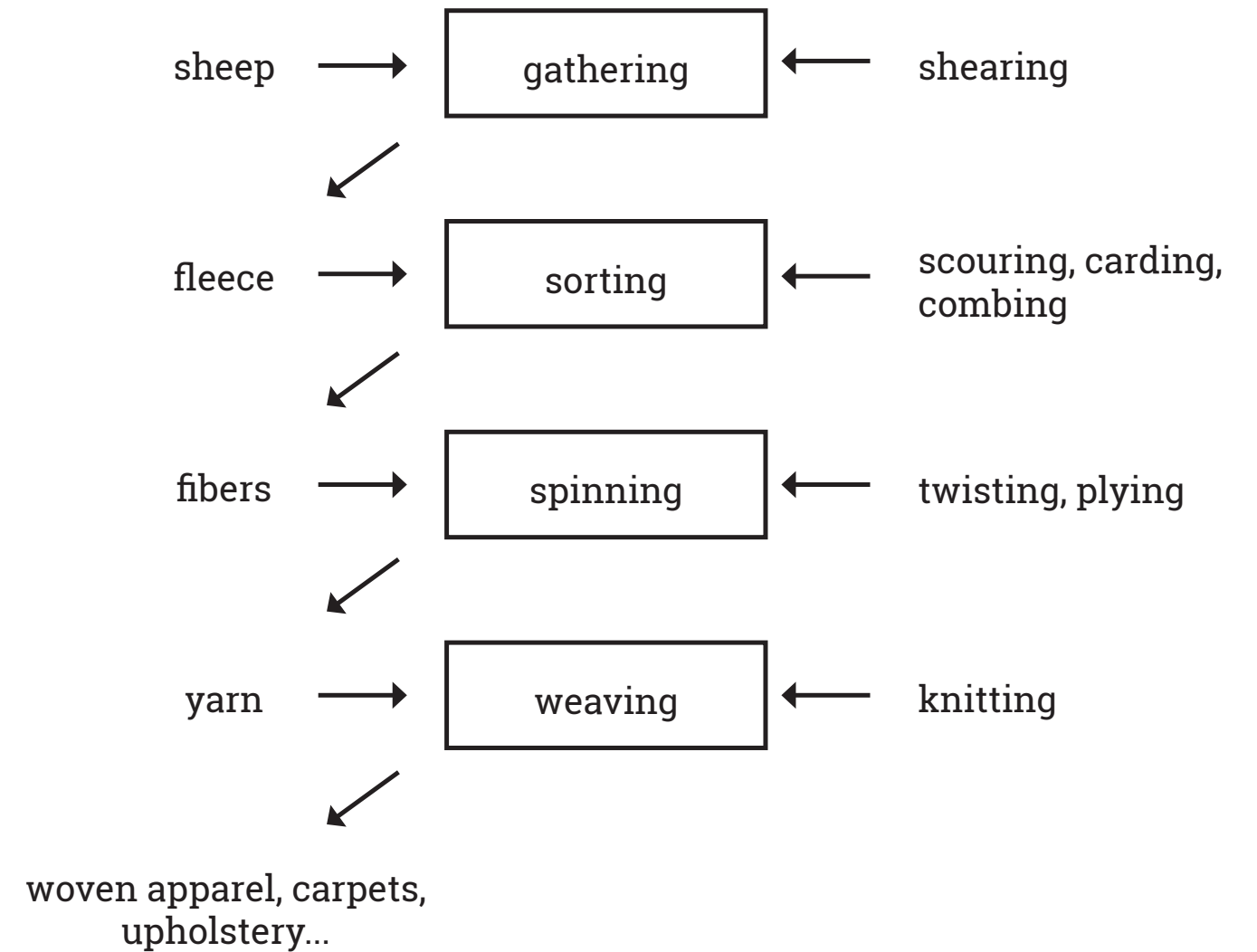


How to **weave** manufacturing into an **urban fabric**, to enhance **social and spatial connections**, improve **material flows** and contribute to a **healthy** environment?

1. What possibilities does an **urban area** give to manufacturing, in terms of resources, locations and purpose?
2. How does **urban manufacturing** influence citizens?
3. How do **flows** of the city interweave, where are **disruptions** (if any) and potential for improvement?
4. How to enhance a shift from linear to the **circular flow** of material?
5. Where does an appeal of making, **craftsmanship** and material culture come from and how can this **knowledge** be applied in a city?

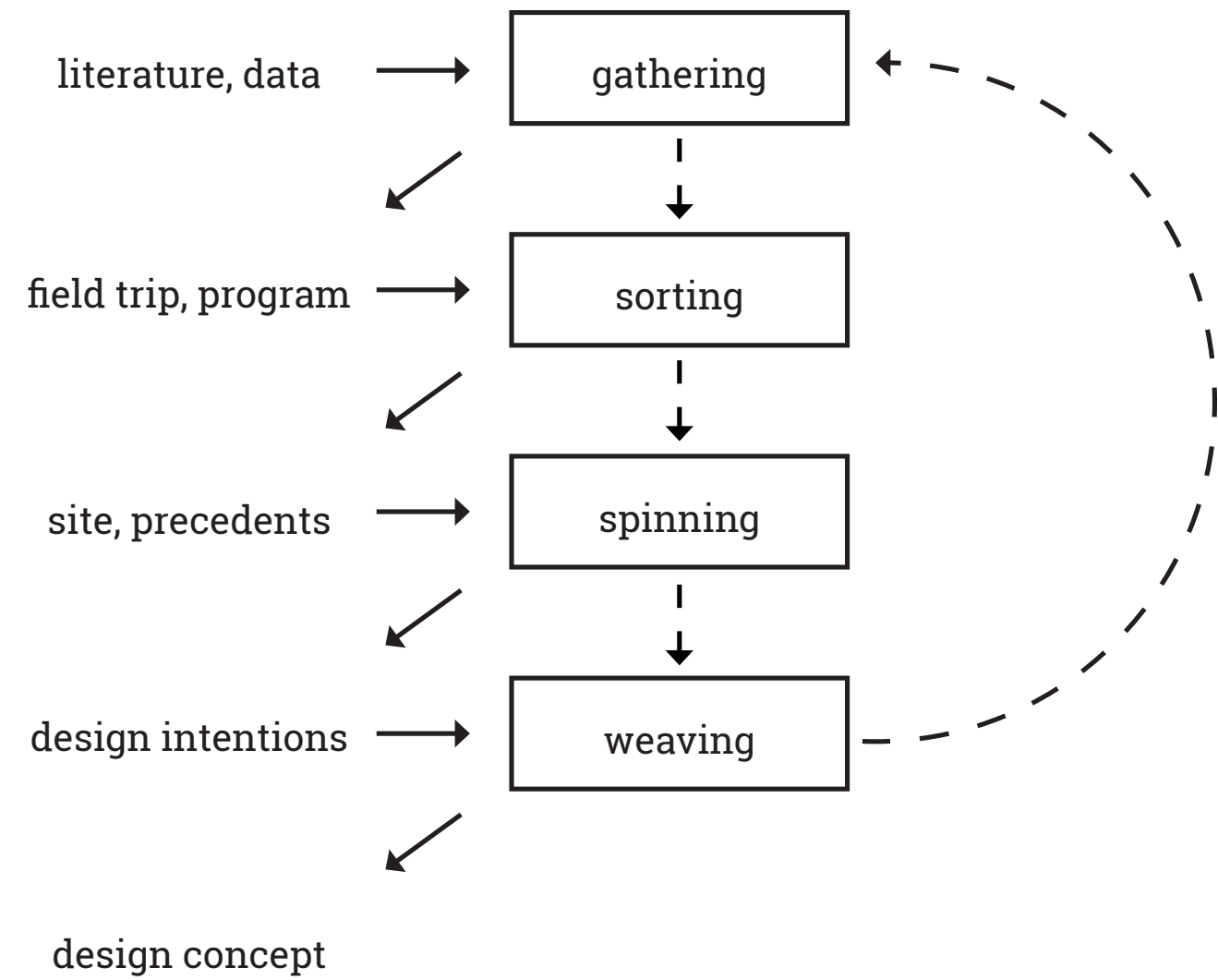
RESEARCH QUESTIONS

framework



RESEARCH METHOD

framework



RESEARCH METHOD

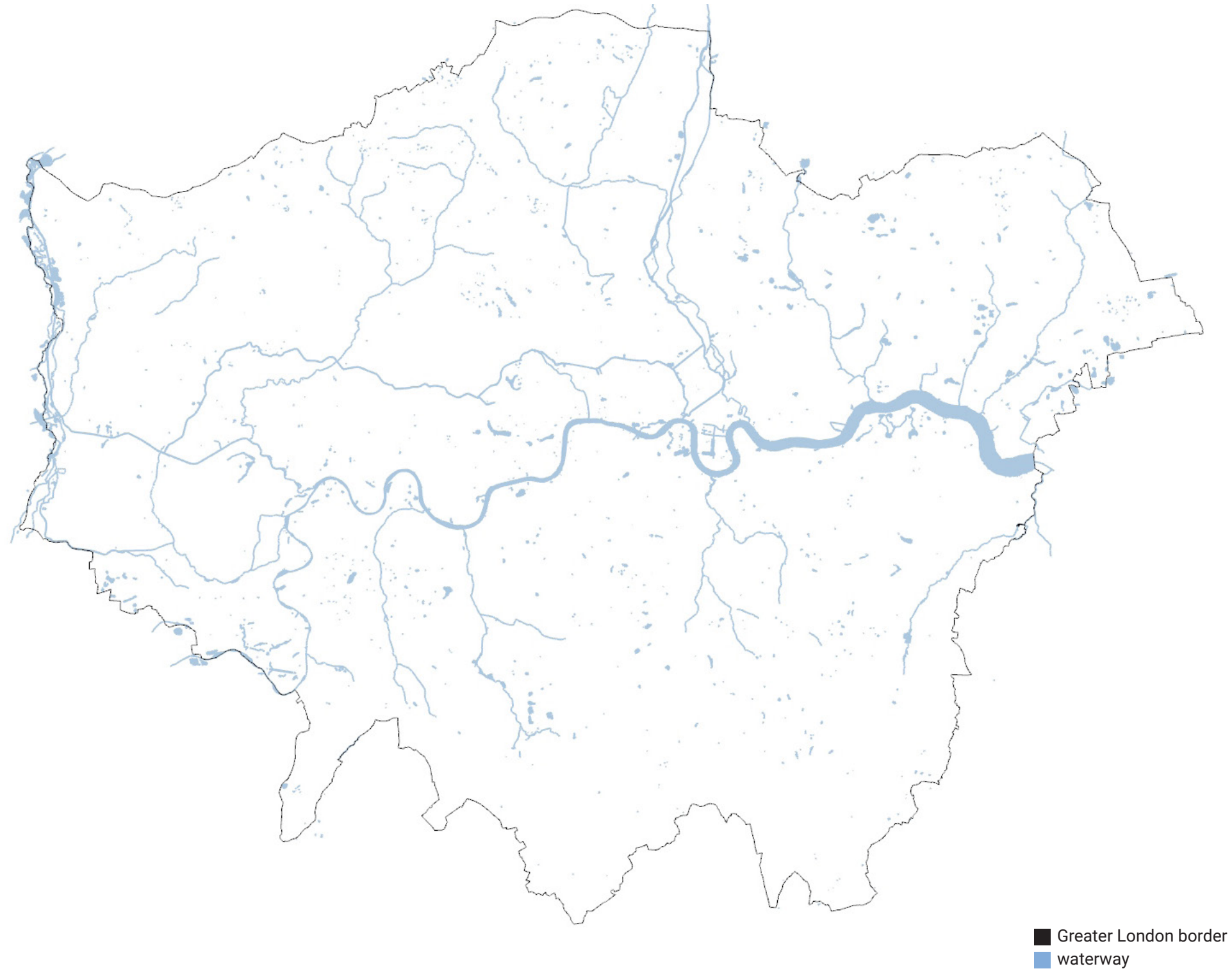
framework



■ Greater London border

LONDON

carthographic mapping



WATERWAYS

carthographic mapping

1800s - 1960s

Thames and its tributaries are critical ways of moving goods to and within the city

50x

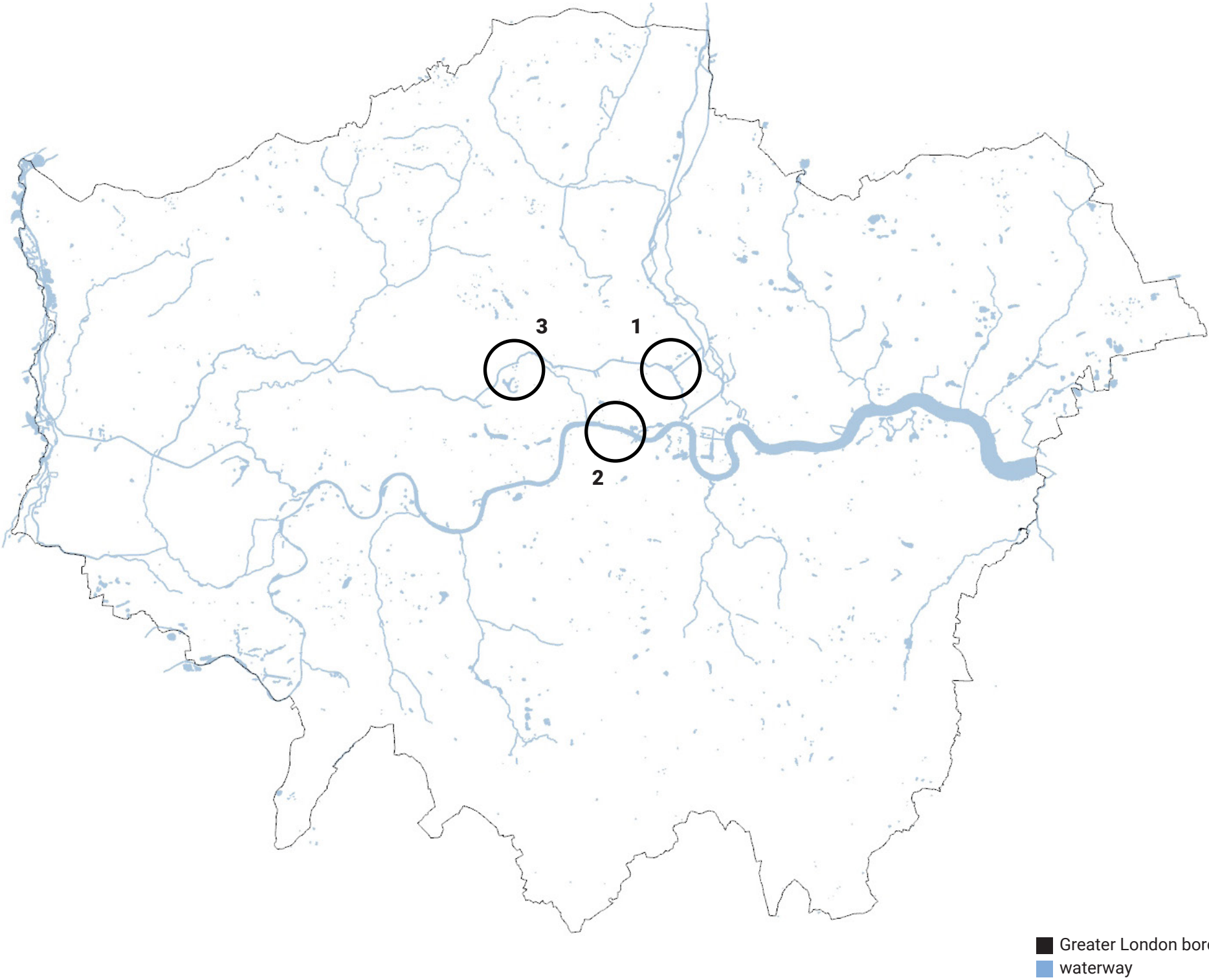
London’s canals were built largely in the first half of the 19th century to accommodate demand for moving goods by water, as horse-drawn canal boats could shift around 50 times more cargo than carts.

107 km

Commercial canal use decreased from the mid-19th century with the spread of railways and, later, road-based transport. Today, 100km of canals stretch across north London and 7 km in south.

5 minutes

Estimated time of walking to the nearest water body for half of Londoners



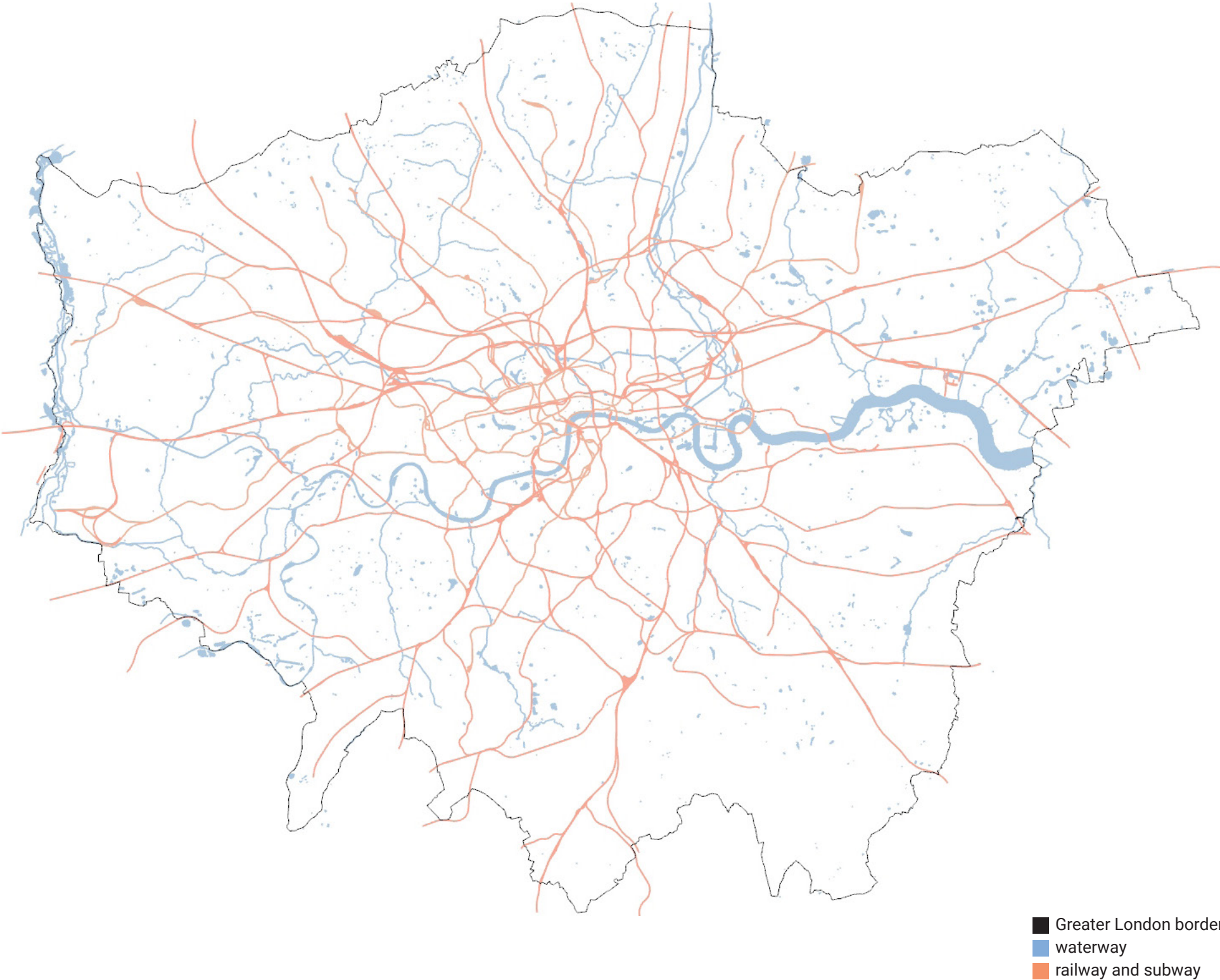
1 Regent’s canal and industrial development



2 Water trams on Thames as a passenger transportation



3 Transporting plastic waste by barges at the Camden’s market



1863

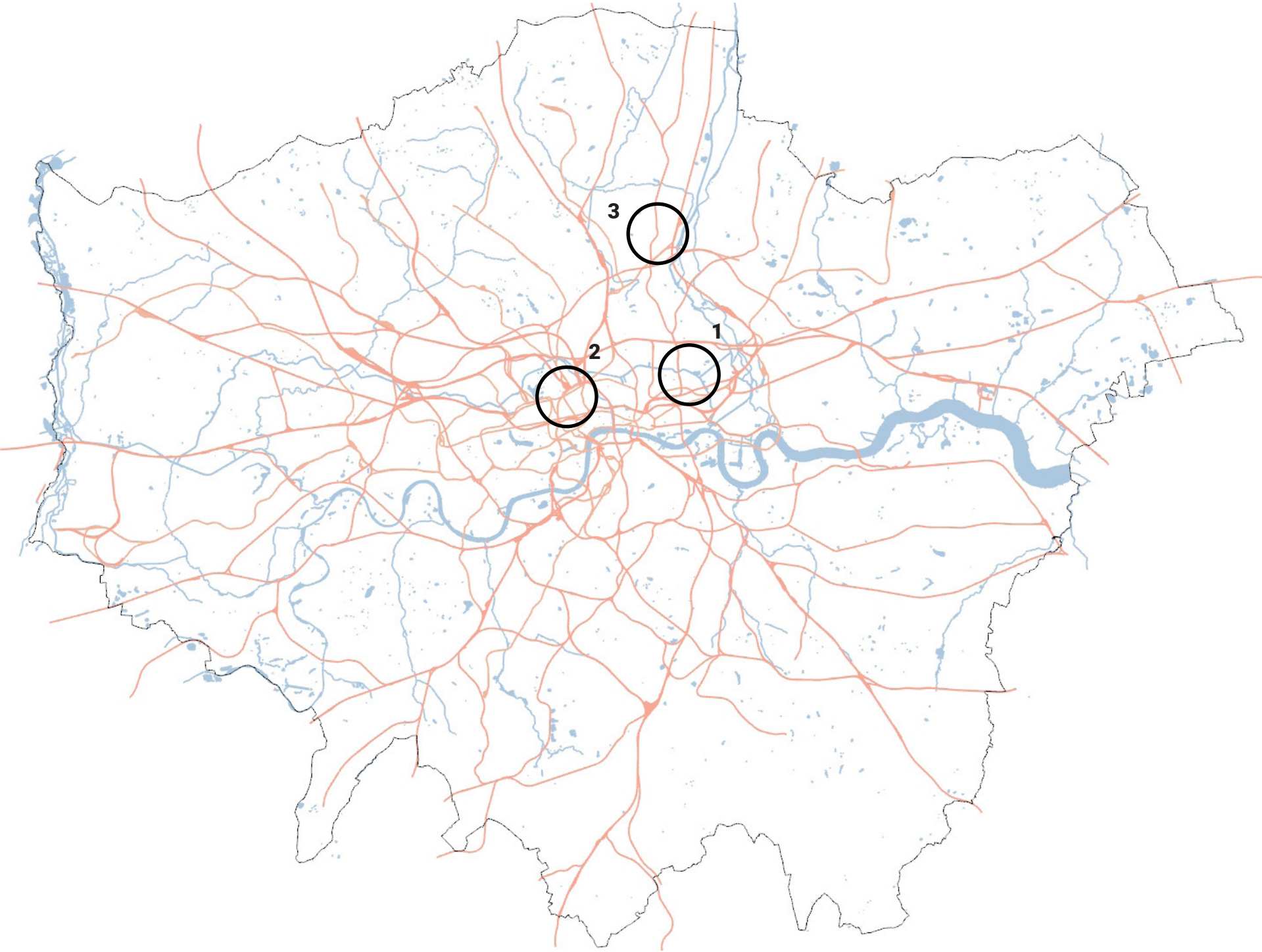
The London Underground is the oldest underground railway network in the world, it was built in 1863.

55%

55% of the London Underground, is not underground.

GOODS

Beside passenger transportation, the freight rail provides also movements of containerised goods, materials for construction sector, removal of city's waste and aviation fuel for Heathrow airport.



- Greater London border
- waterway
- railway and subway



1 Overground railway arches are dividing neighbourhoods



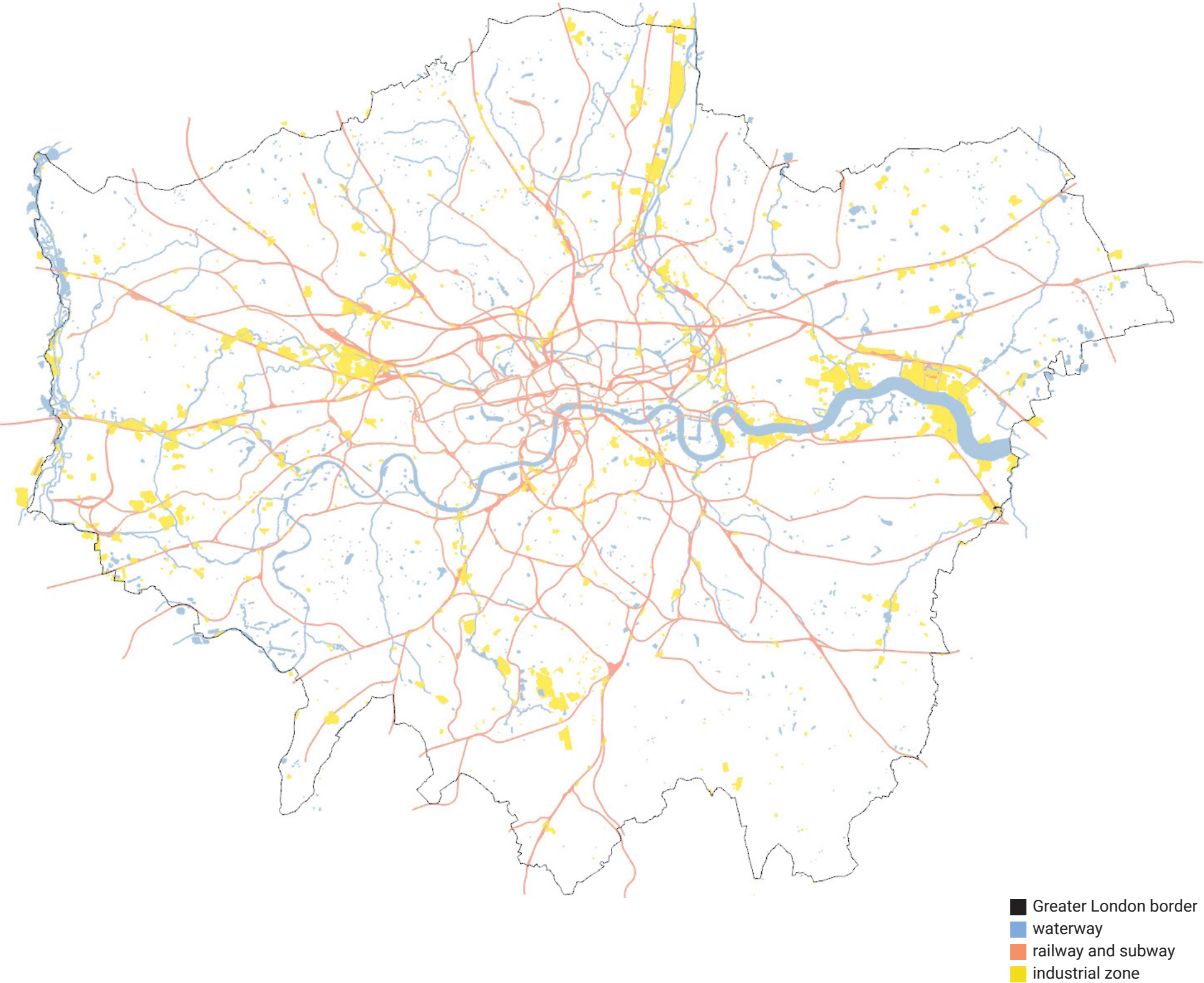
2 Underground stations as public spaces



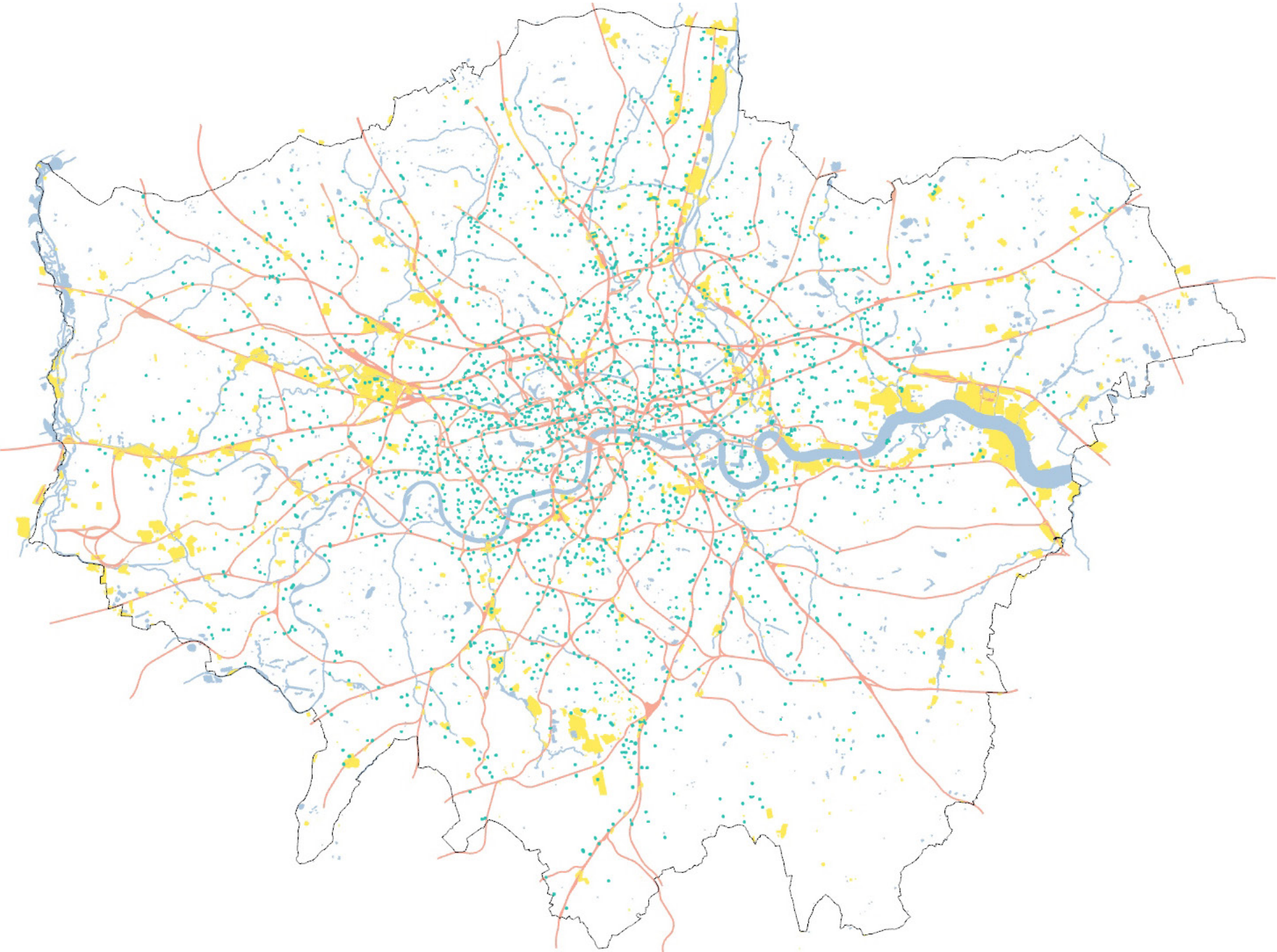
3 Continuous railway lines are conductors of additional infrastructure

RAILWAYS

carthographic mapping



INDUSTRIAL ZONES
carthographic mapping



- Greater London border
- waterway
- railway and subway
- industrial zone
- individual business related to apparel

INDIVIDUAL BUSINESSES RELATED TO APPAREL

carthographic mapping

1 in 6

In 1861 around one sixth of the country manufacturing workes were employed in the capital.

50 years

London's manufacturing base has declined significantly over the last 50 years, The shift to higher skilled, higher productivity employment.

2.2%

In London today the manufacturing sector accounts for 2.2 percent of total employment. More people are employed in manufacturing in London (114 000) than in other UK city regions.



- Greater London border
- waterway
- railway and subway
- industrial zone
- individual business related to apparel



1 Overground railway arches are dividing neighbourhoods



2 Underground stations as public spaces



3 Continuous railway lines are conductors of additional infrastructure

MANUFACTURING
carthographic mapping



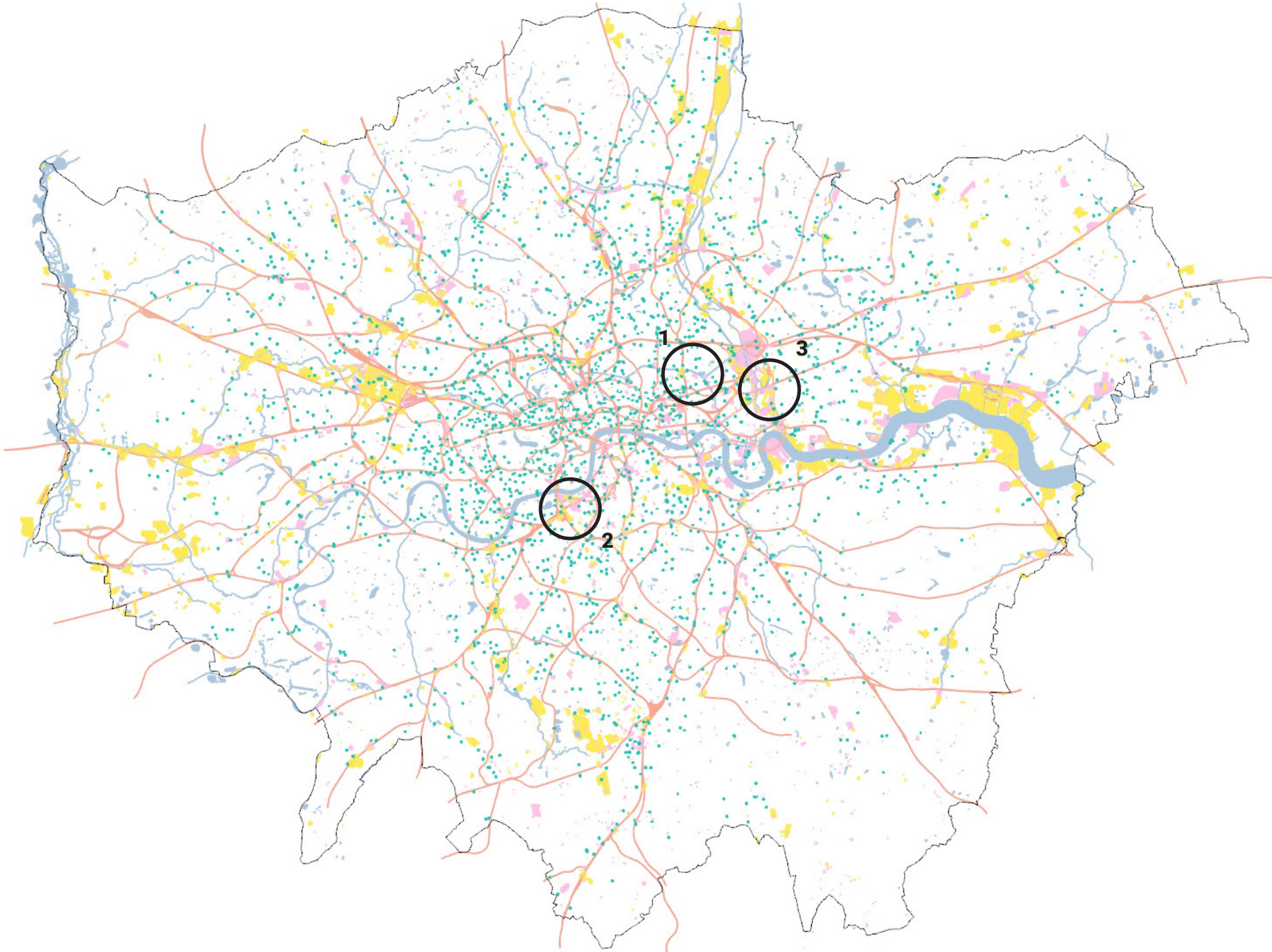
- Greater London border
- waterway
- railway and subway
- industrial zone
- individual business related to apparel
- brownfield

BROWNFIELDS

carthographic mapping

36,700

London Borough councils own approximately 36,700 brownfield sites across the capital, according to an analysis of data from the London Land Commission (LLC).



- Greater London border
- waterway
- railway and subway
- industrial zone
- individual business related to apparel
- brownfield

BROWNFIELDS
carthographic mapping



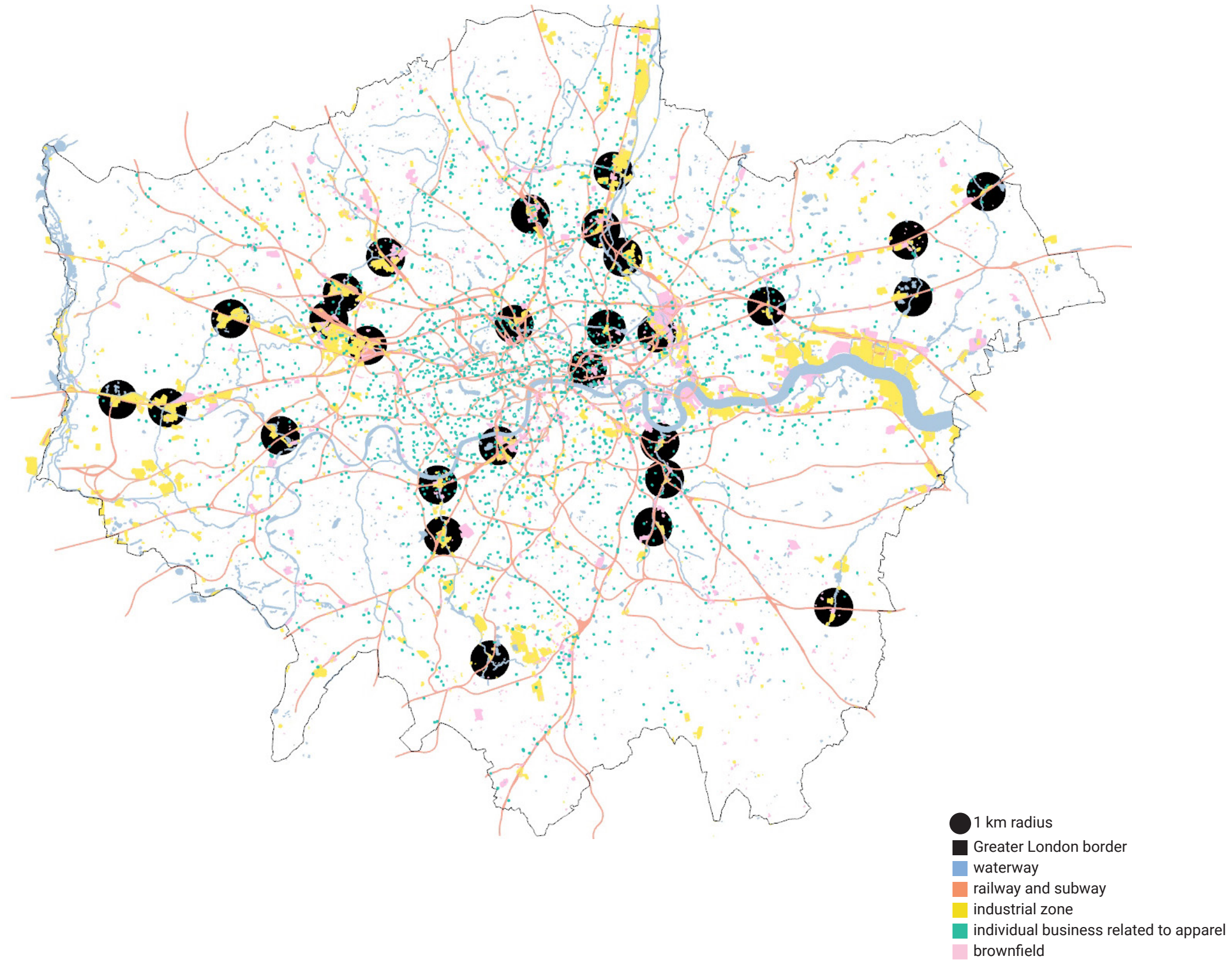
1 Space appropriation of railway arches



2 Battersea Power Station redevelopment

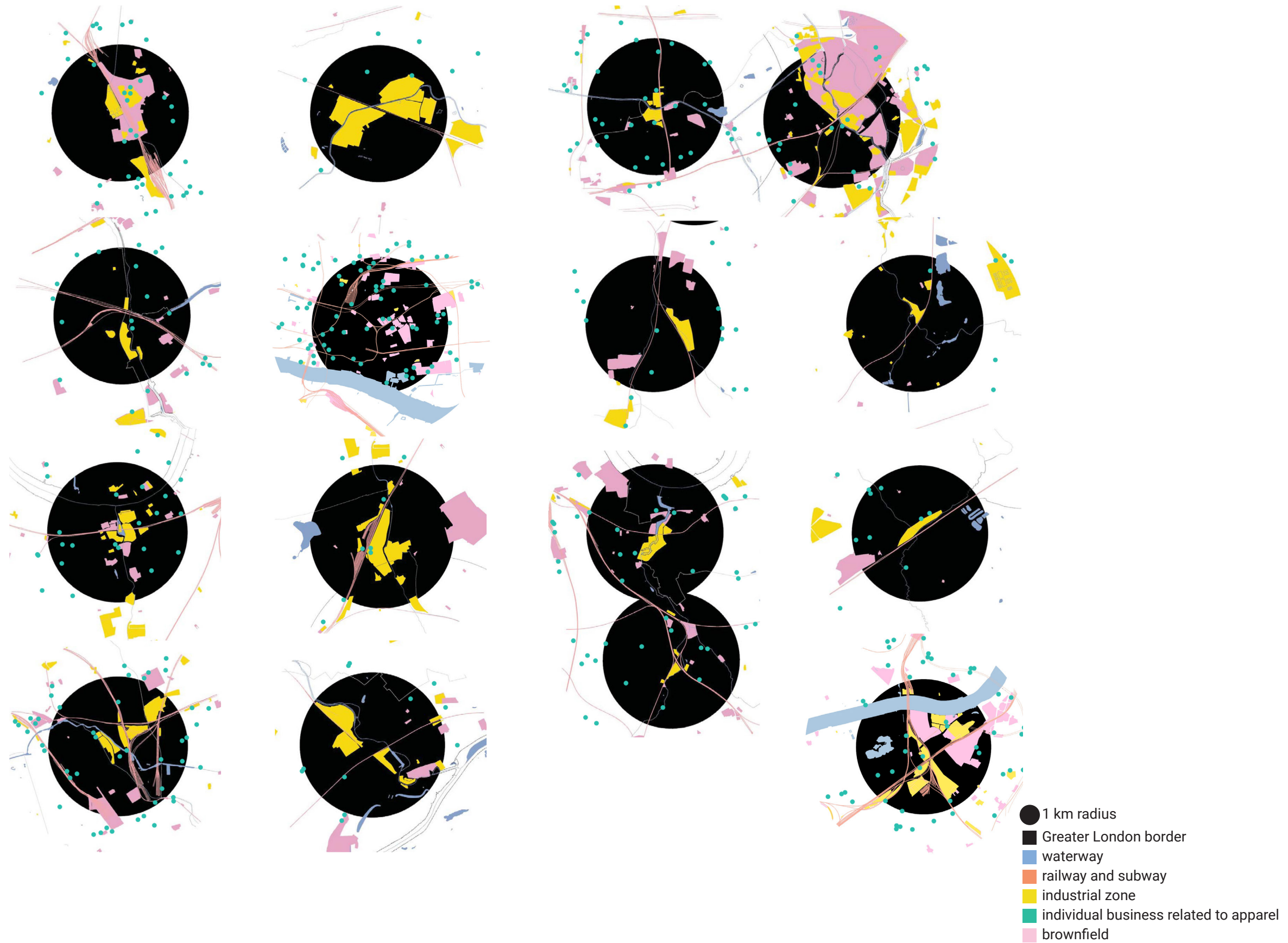


3 Obsolete infrastructure



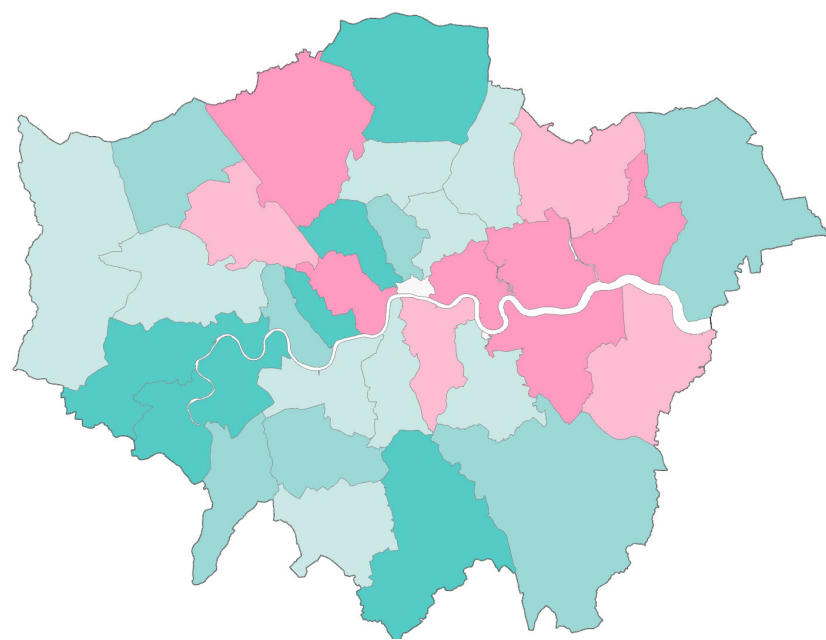
INTERSECTIONS

cartographic mapping

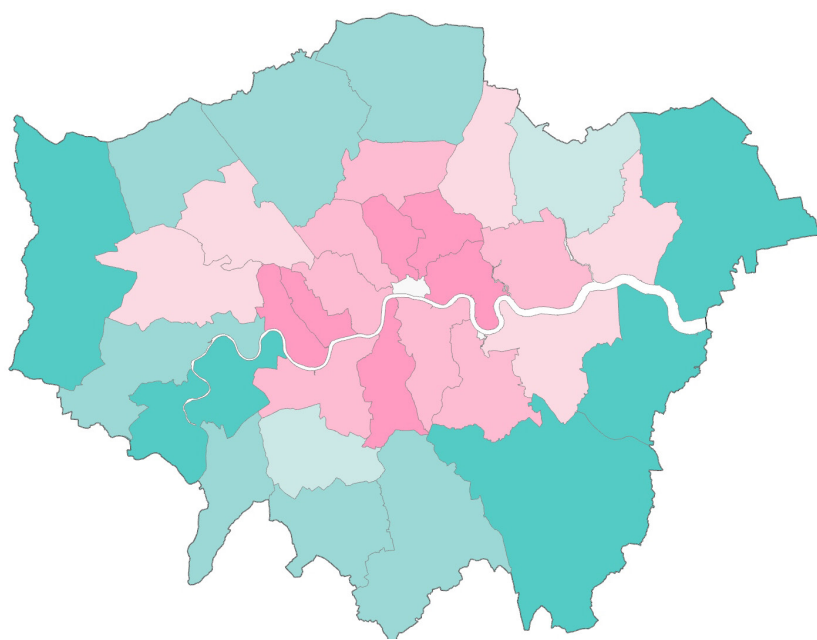


INTERSECTIONS

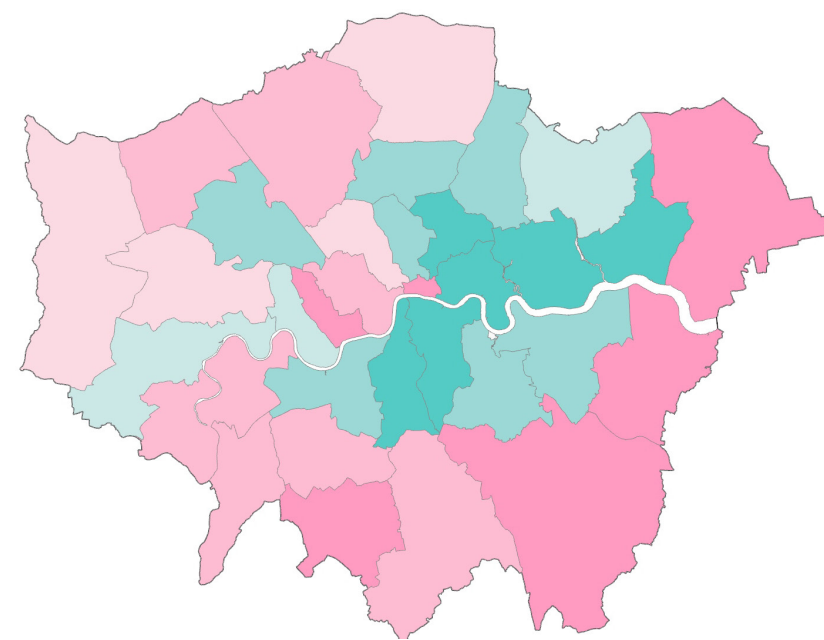
carthographic mapping



Unemployment rate (6.1)



Population density (56 people per hectare)

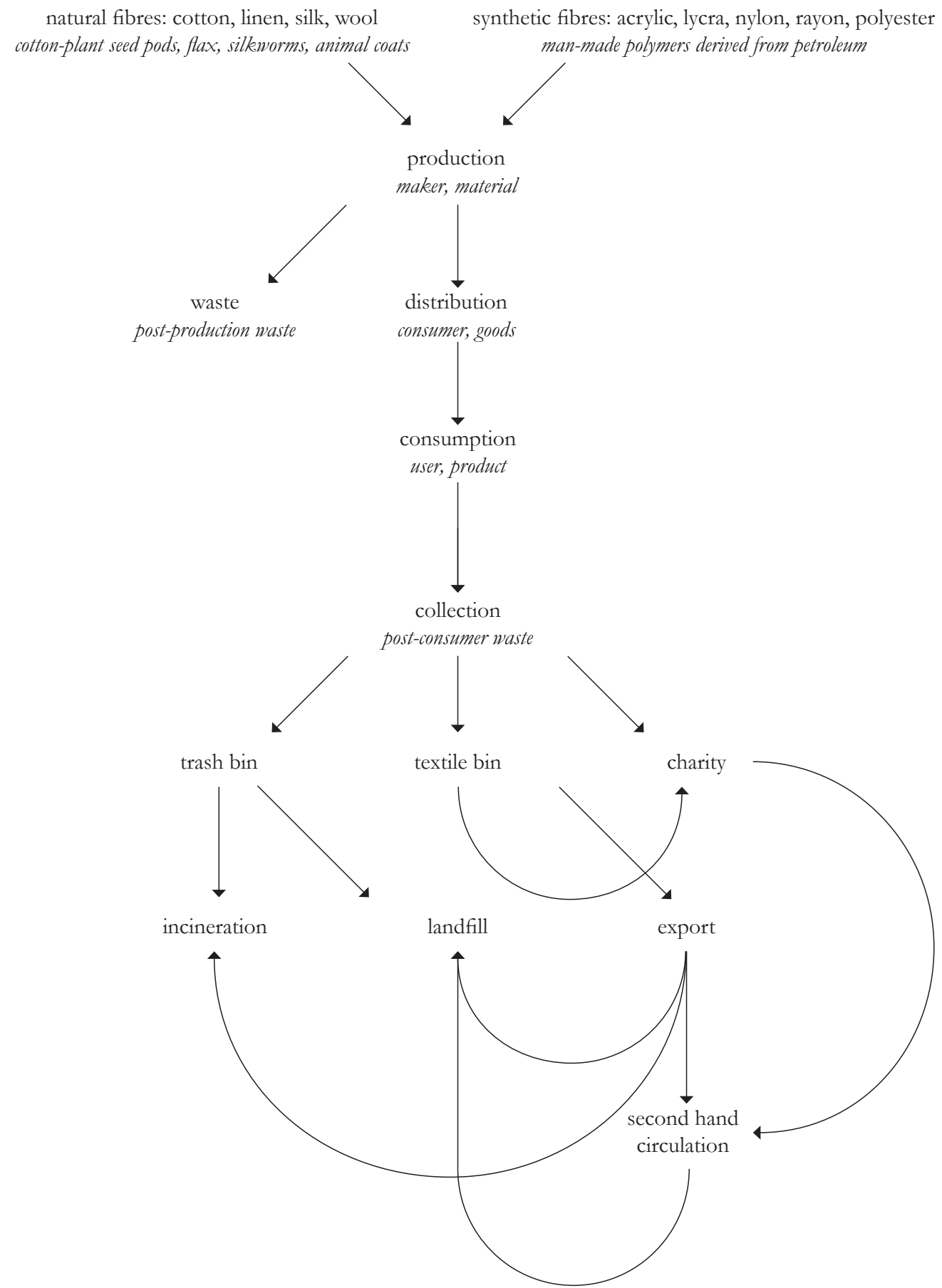


Average age (36.0)

■ lower than average
■ higher than average

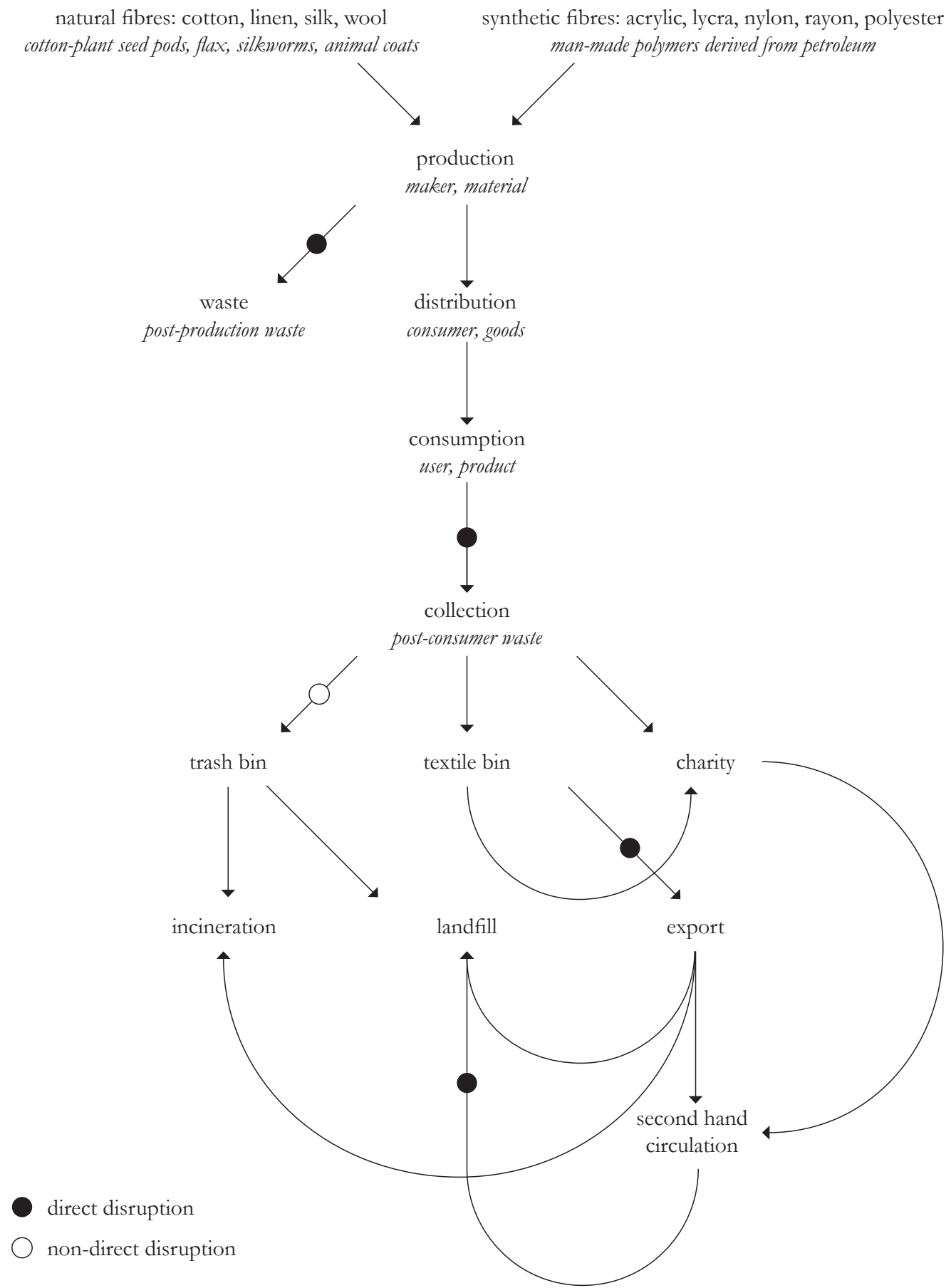
SOCIAL LAYER

thematic mapping



TEXTILE FLOW LAYER

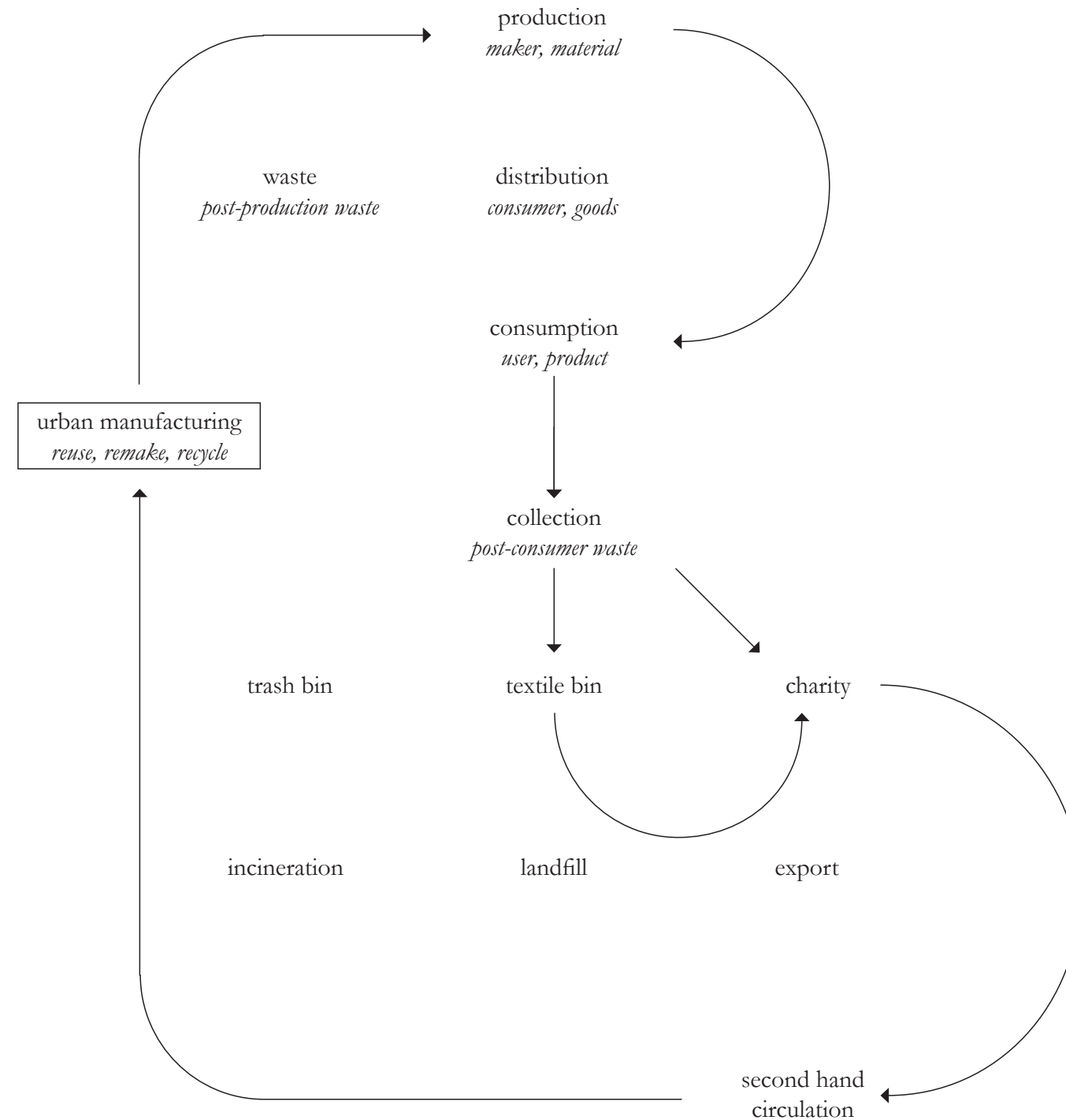
thematic mapping



TEXTILE FLOW LAYER
thematic mapping

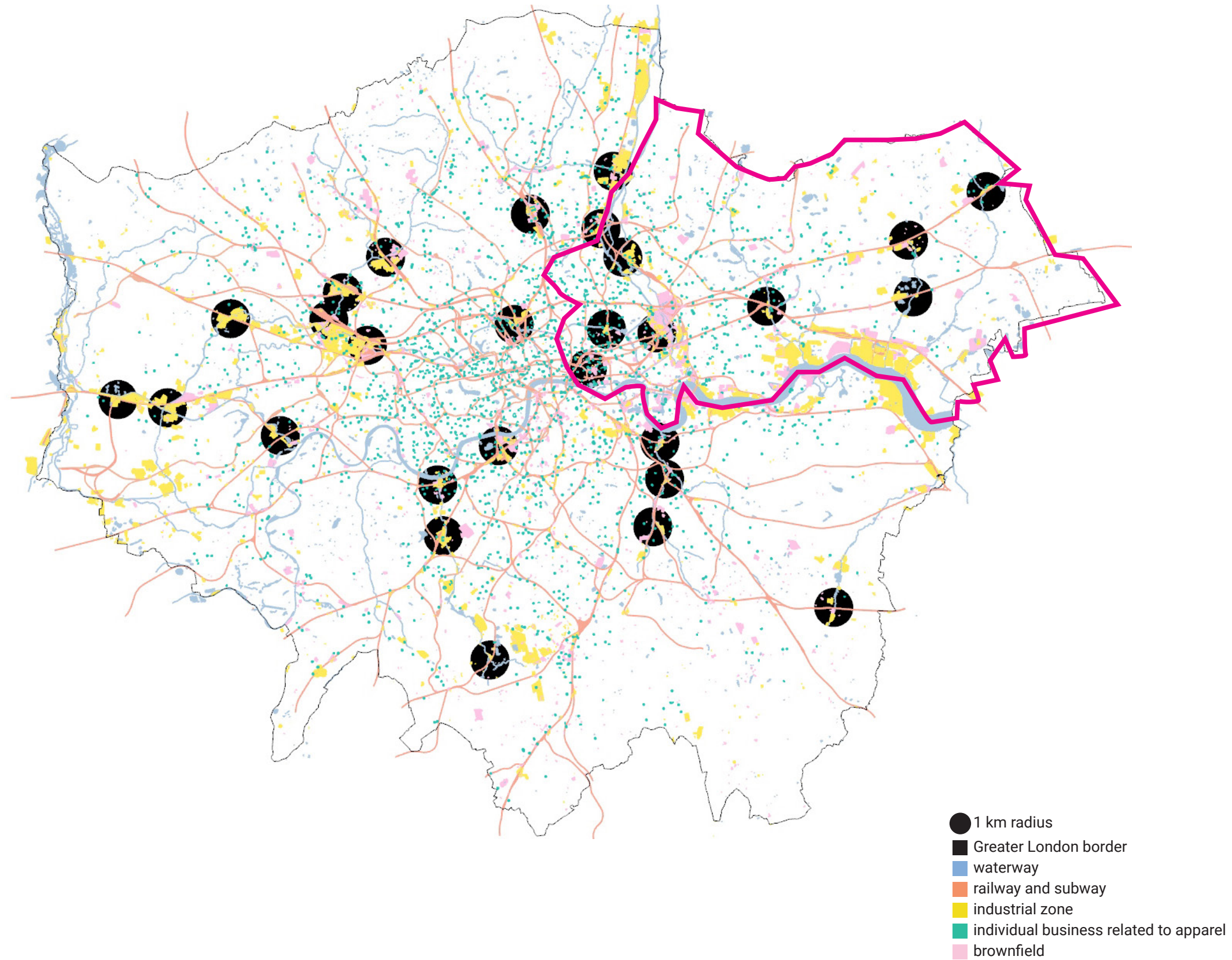
natural fibres: cotton, linen, silk, wool
cotton-plant seed pods, flax, silkworms, animal coats

synthetic fibres: acrylic, lycra, nylon, rayon, polyester
man-made polymers derived from petroleum



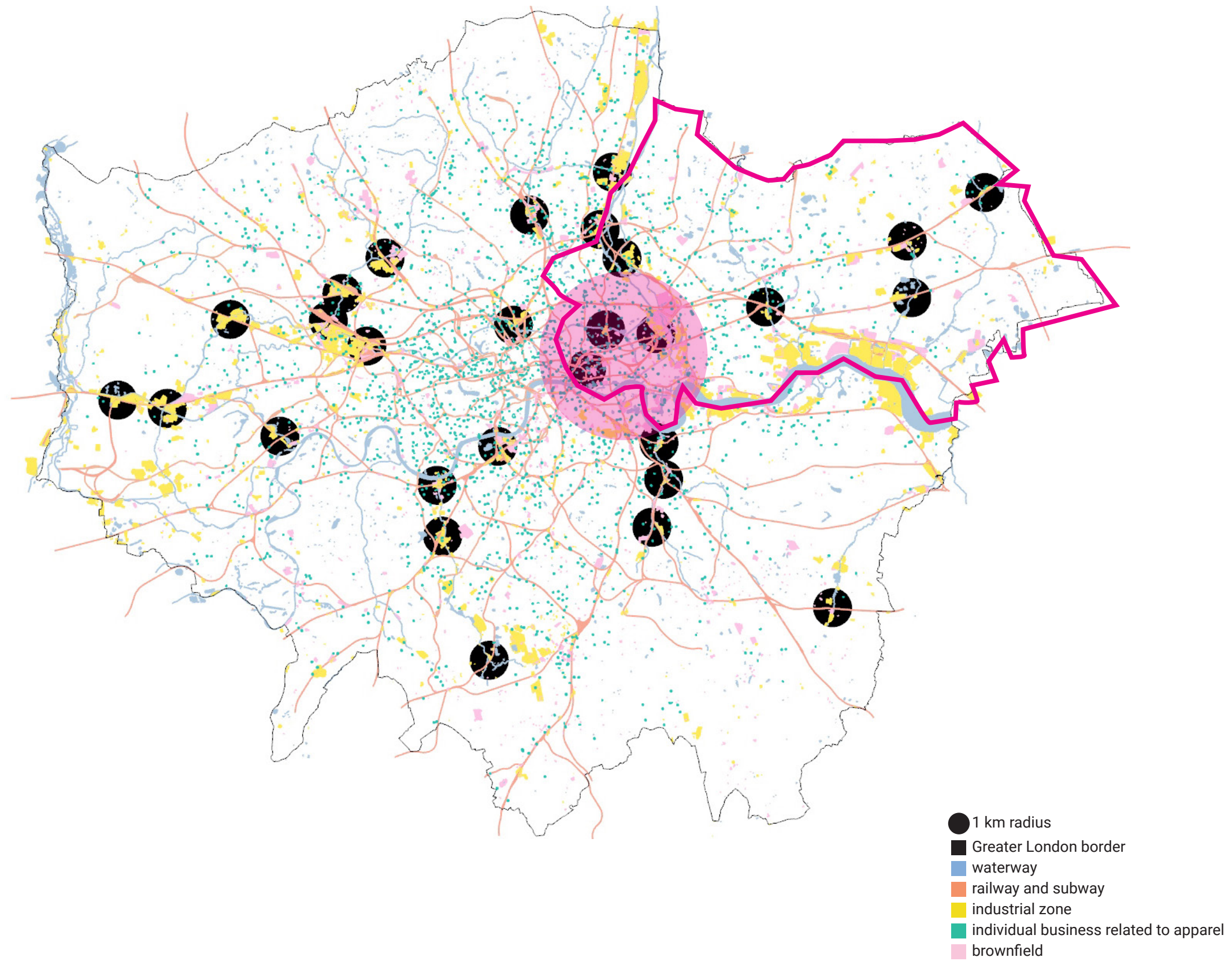
TEXTILE FLOW LAYER

thematic mapping



EAST LONDON WITH FASHION PAST

thematic mapping

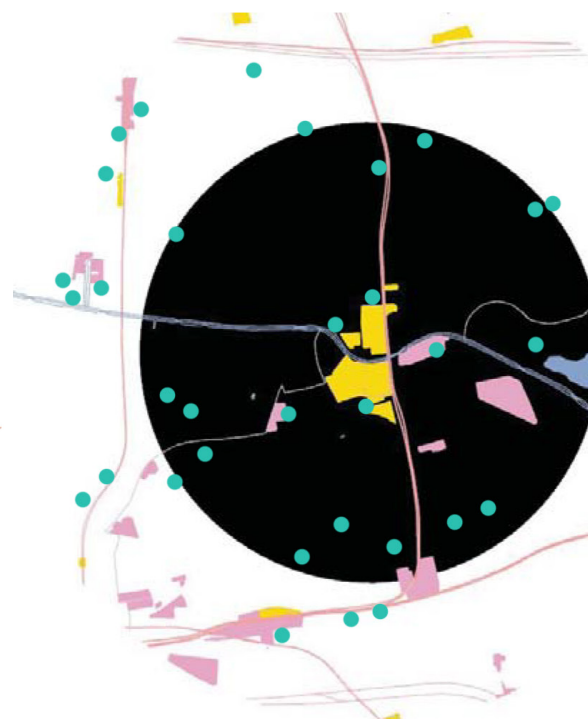


INNER LONDON DISTRICTS

thematic mapping



Spitalfields, Tower Hamlets



Maker Mile, Hackney

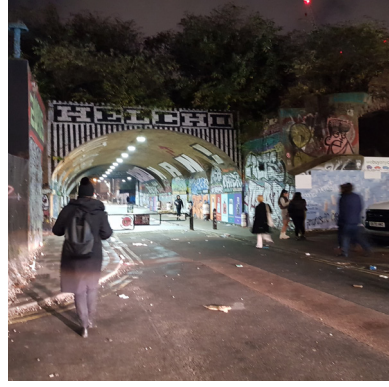
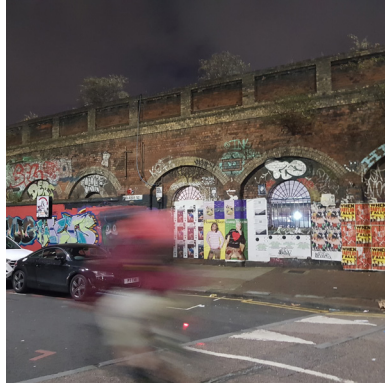
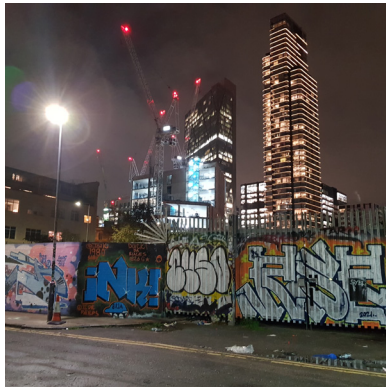


Lea Valley, Tower Hamlets

- 1 km radius
- Greater London border
- waterway
- railway and subway
- industrial zone
- individual business related to apparel
- brownfield

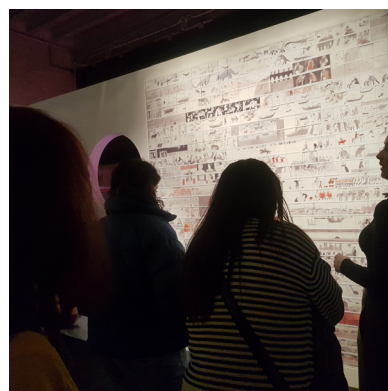
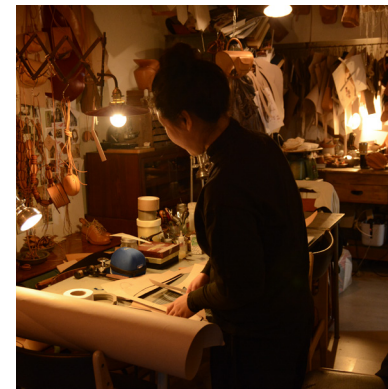
CONSTRUCTING SITE

thematic mapping



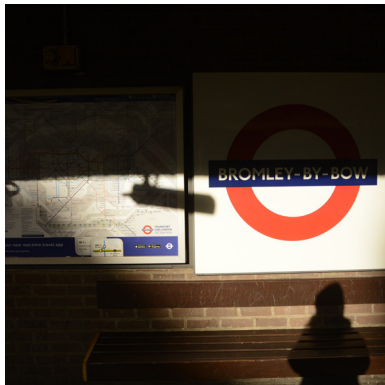
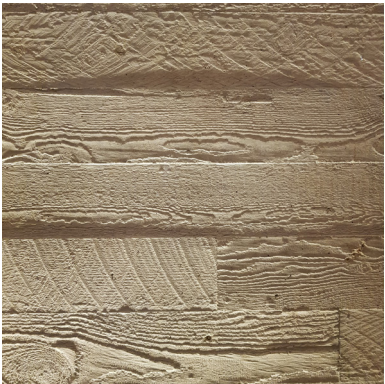
SPACE

field research



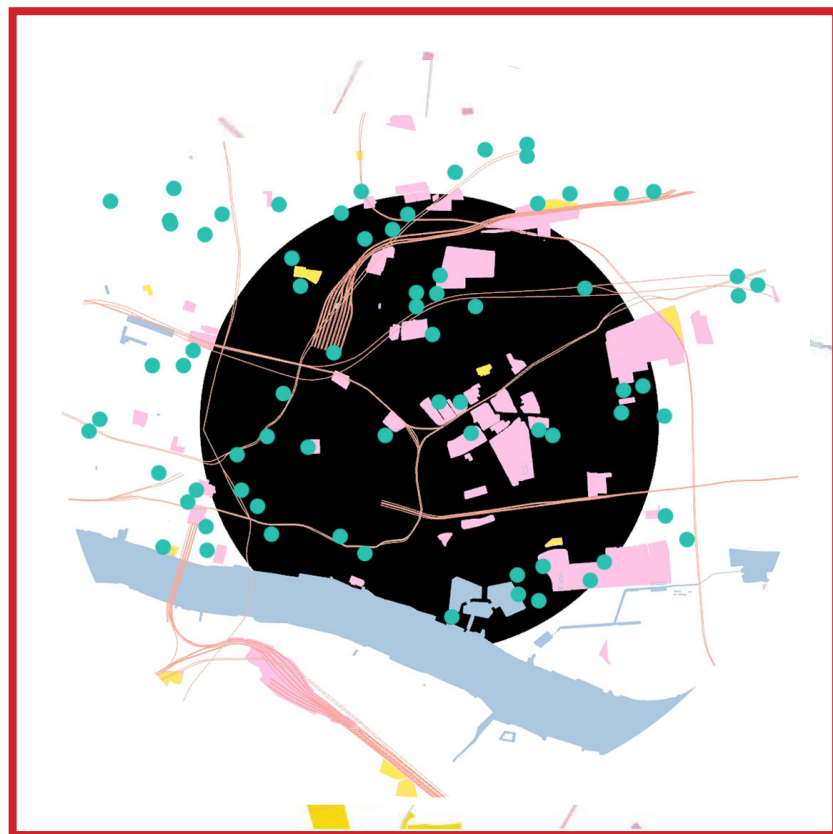
PEOPLE

field research

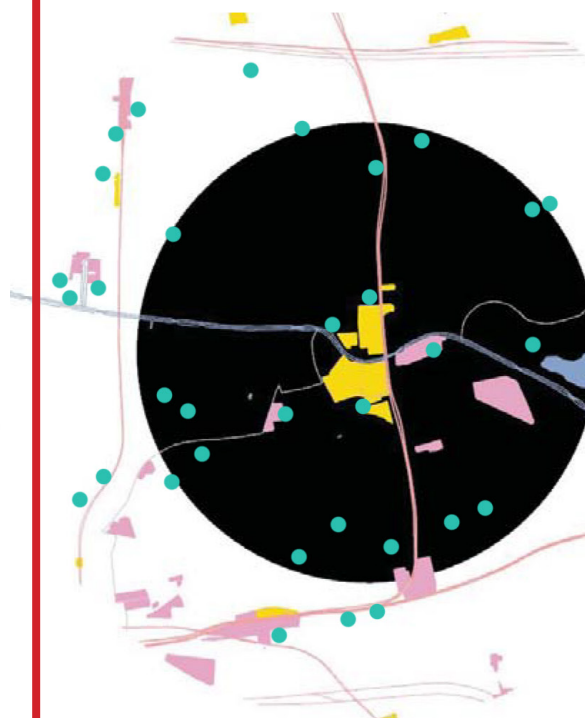


MATERIALS

field research



Spitalfields, Tower Hamlets



Maker Mile, Hackney



Lea Valley, Tower Hamlets

- 1 km radius
- Greater London border
- waterway
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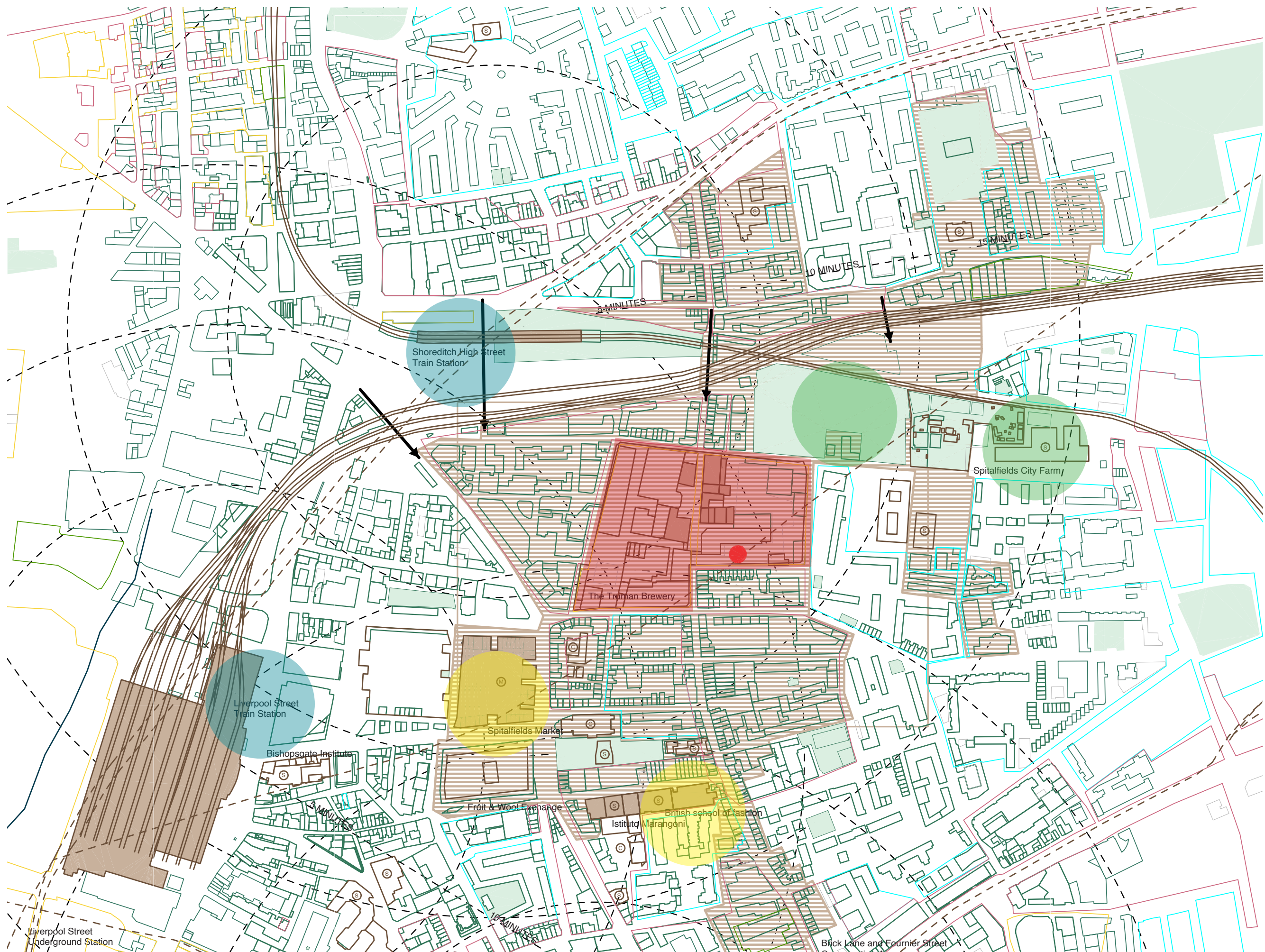
CONSTRUCTING SITE

field research



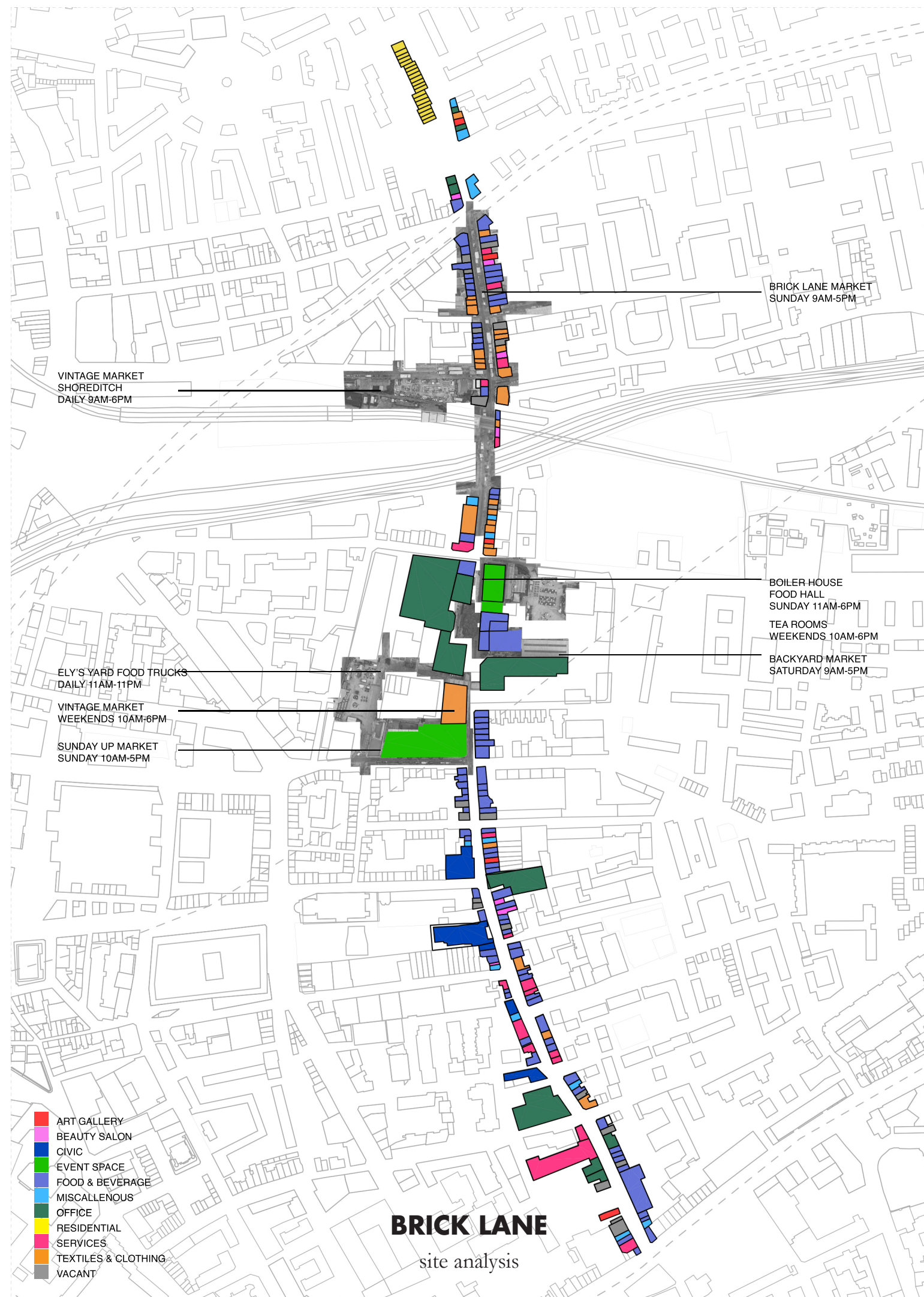
THE TRUMAN'S BREWERY

site analysis



SPITALFIELDS

site analysis





BRICK LANE COMMUNITY

site analysis

Peter Zumthor
Werkraum

Herzog & de Meuron
Dominus Winery

Eduardo Tresoldi,
Gharfa Pavilion

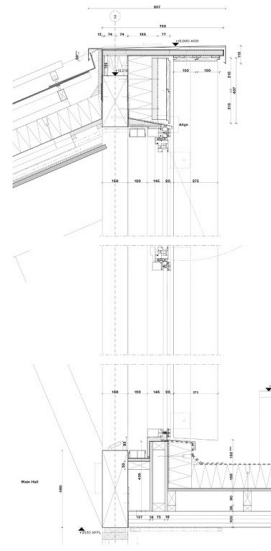
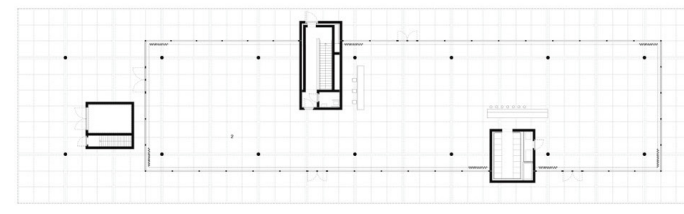
Architecture 00,
The Foundry

Mae Architects
Arts and Community
Centre

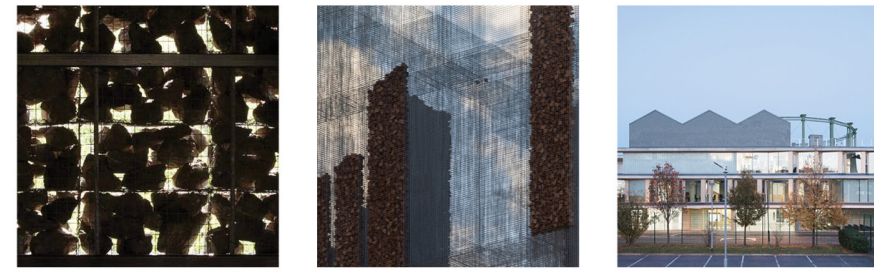
connectedness



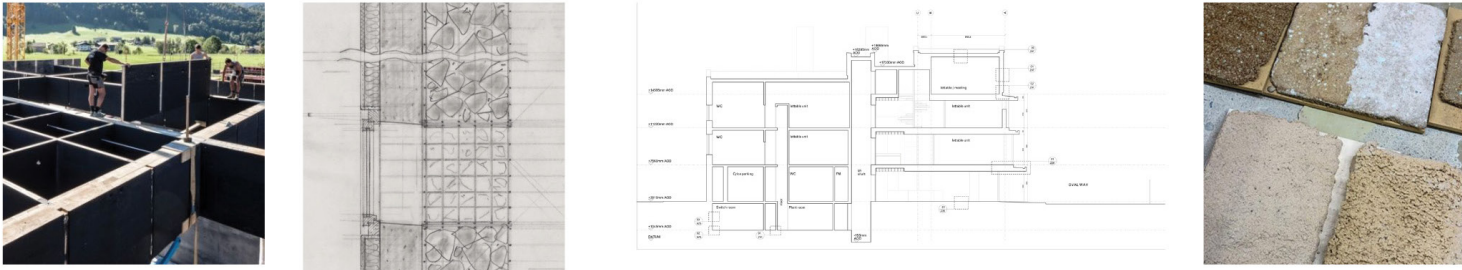
flexibility



permeability



sustainability



tactility



transparency



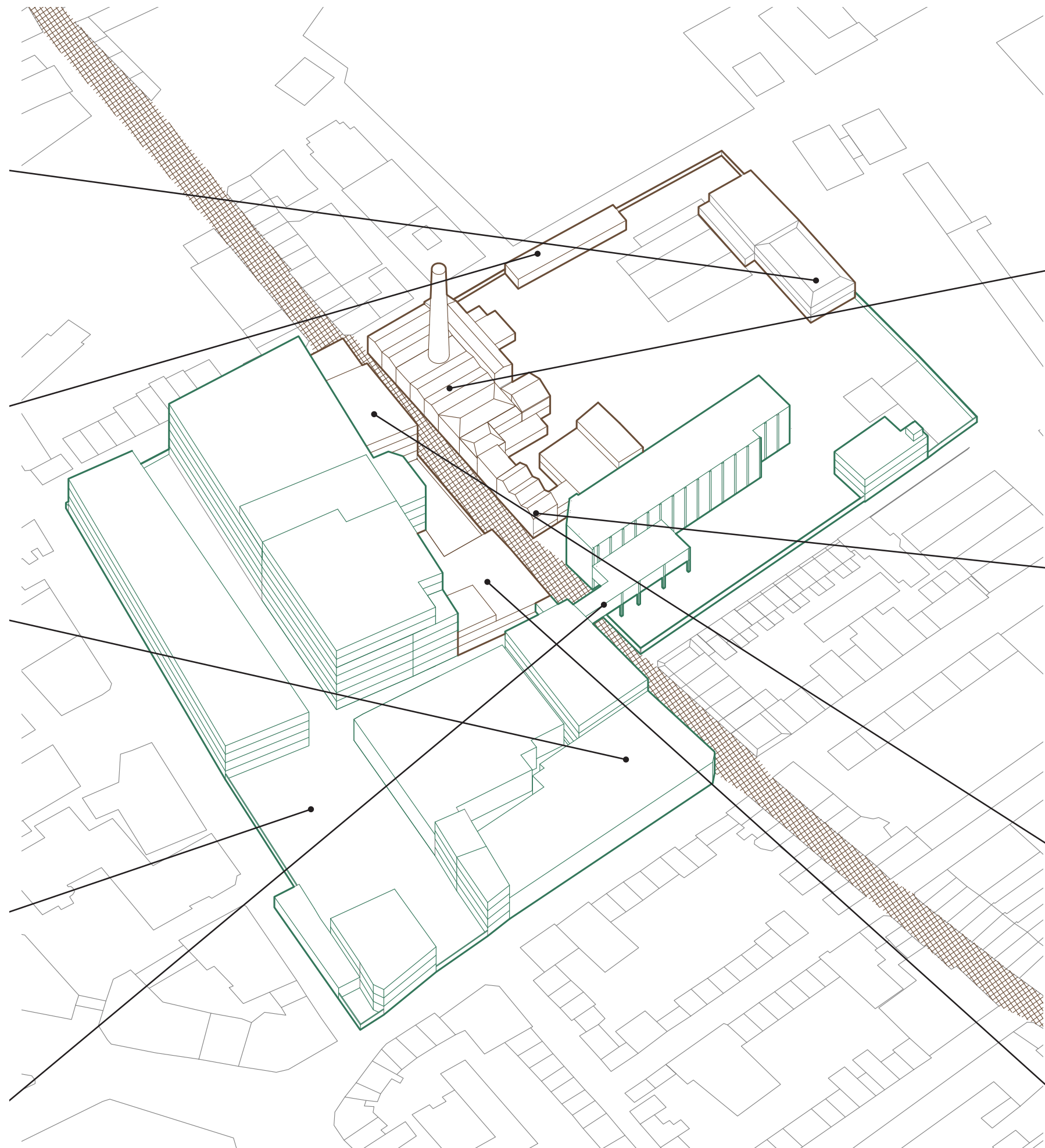
MATERIALITY IN REFERENCES

site analysis



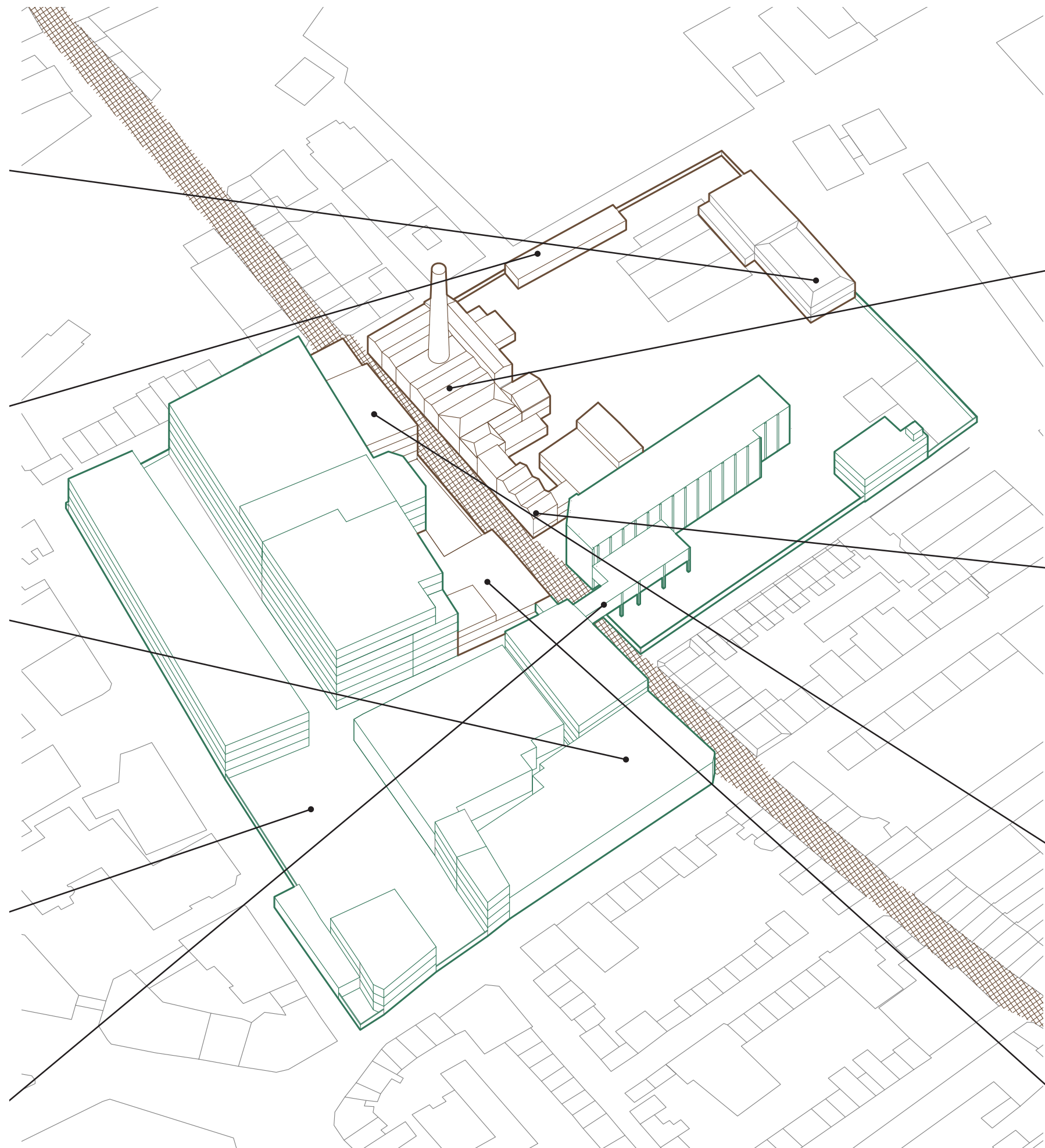
MATERIALITY ON SITE

site analysis



MATERIALITY ON SITE

site analysis



Former Stables (Boiler House)
& Engineer's House



Vat House

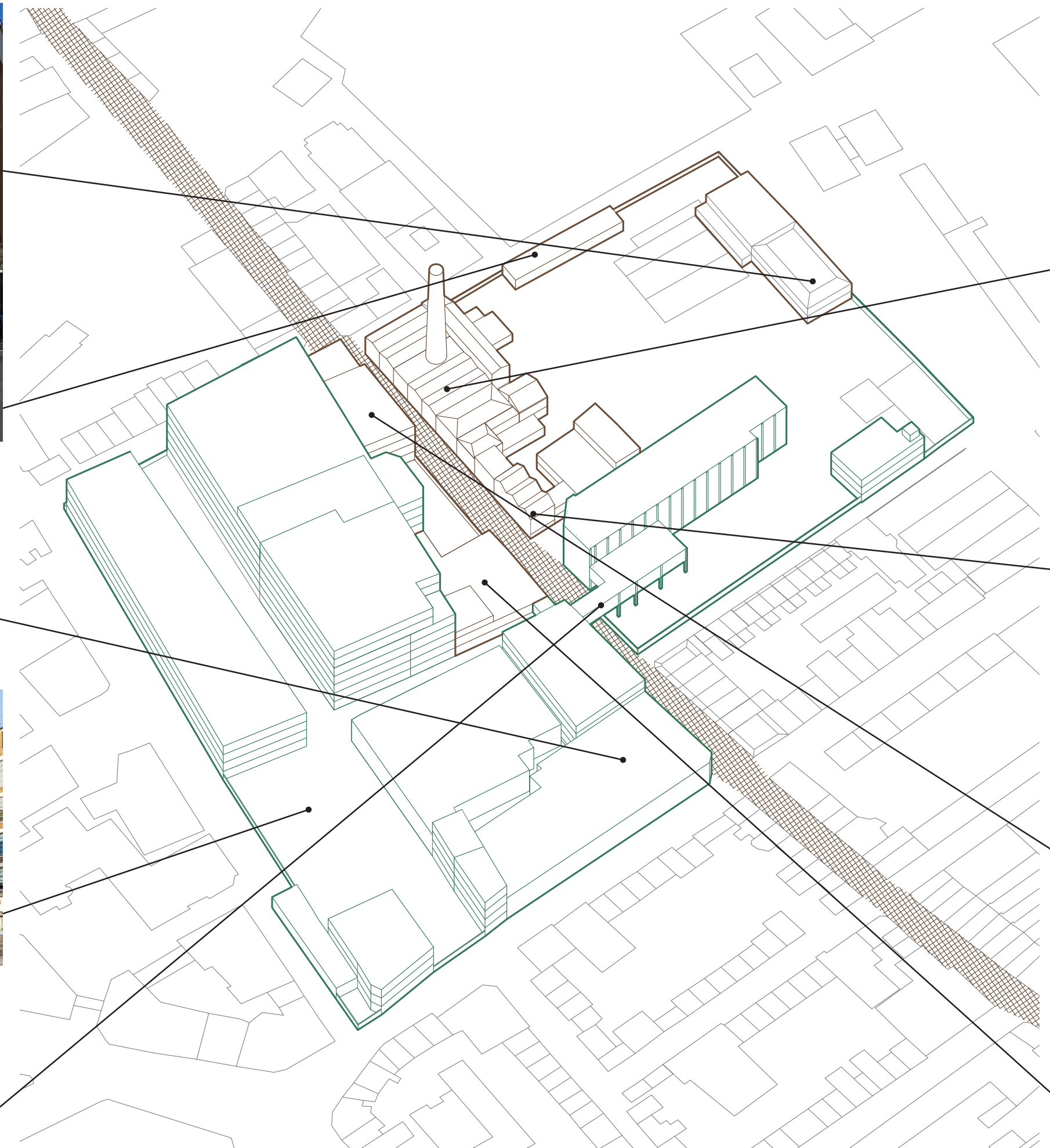


Brewmaster's House



MATERIALITY 17th-19th CENTURY LAYERS

site analysis



Former Stables (Boiler House)
& Engineer's House



Vat House



Brewmaster's House



MATERIALITY 20TH CENTURY LAYERS

site analysis



USERS
site analysis

Users

Weekdays

Weekends

Residents

walk
shopping
visit neighbours
visit church/mosque

Business people

office workers
employees

Creatives

artists
craftsmen
freelancers

Students

university students
school pupils
extra curriculum activities

Commercial visitors

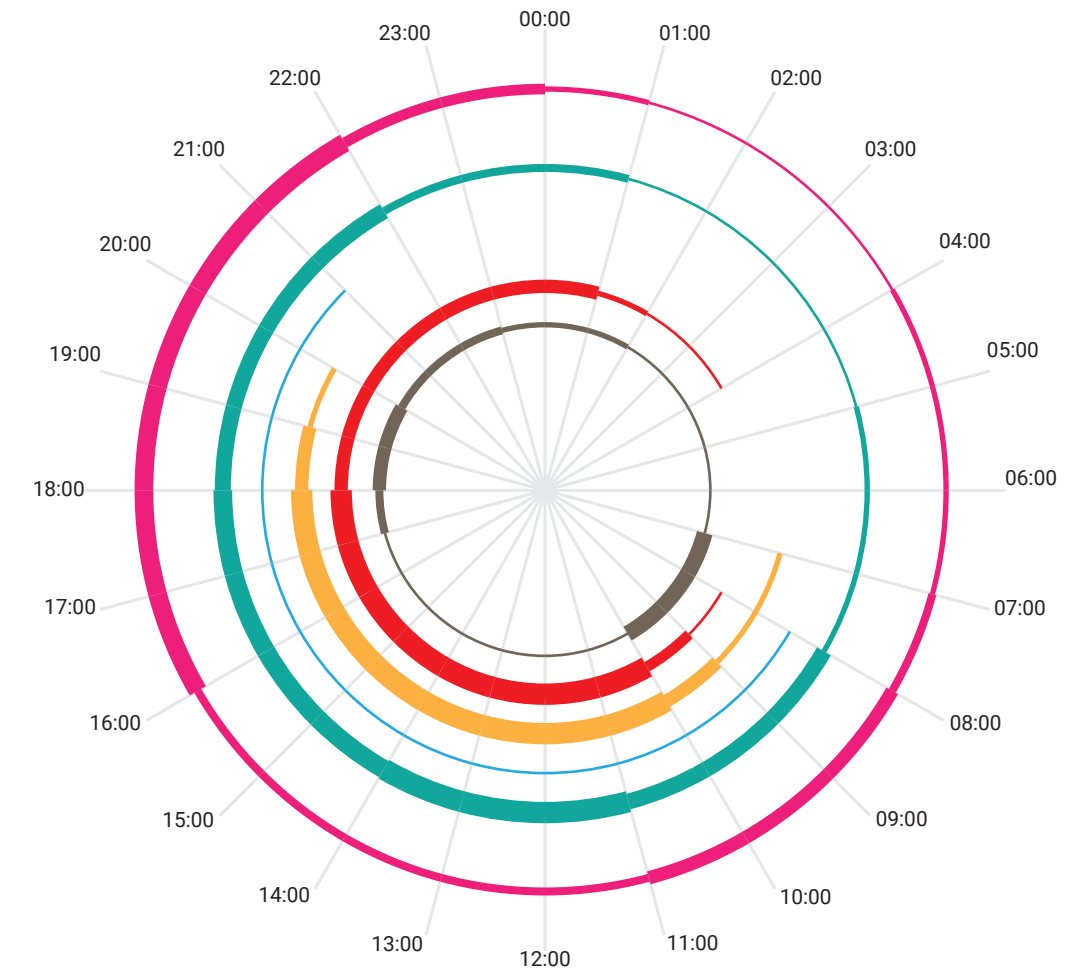
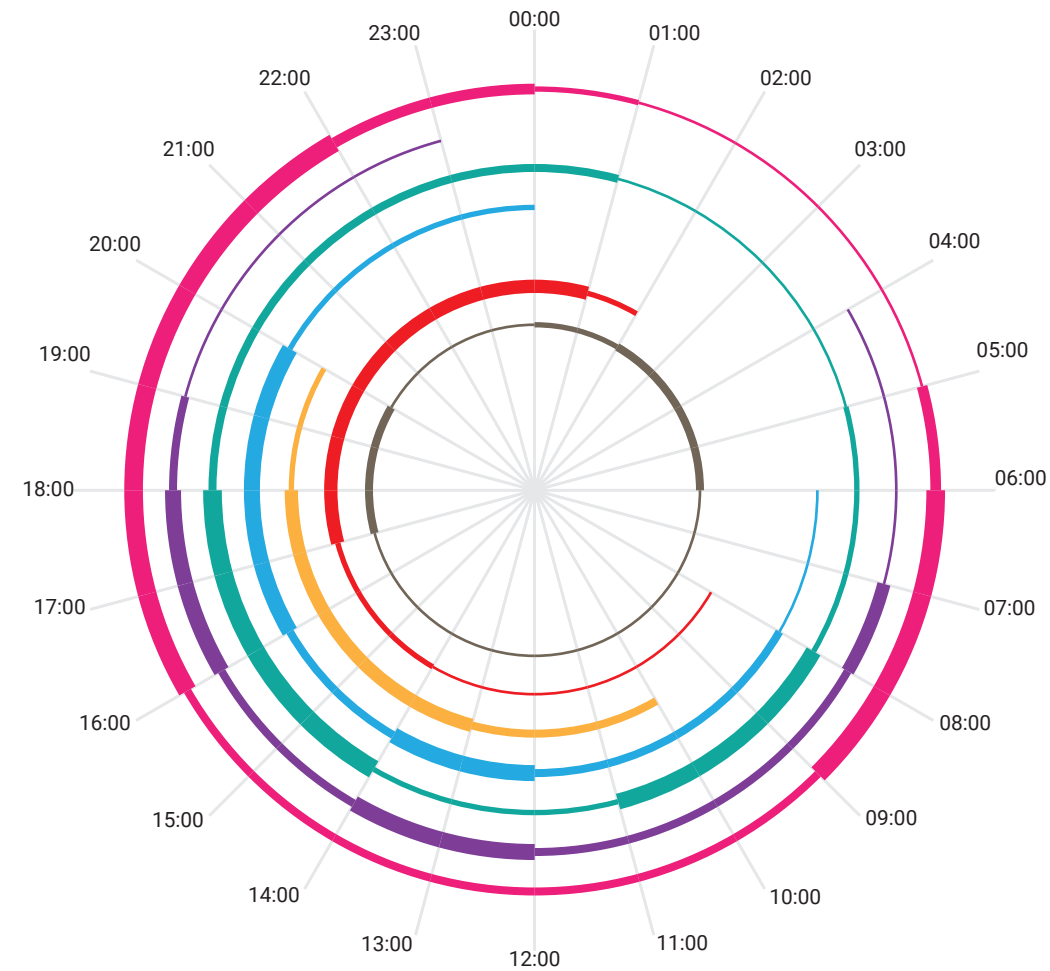
shopping
outdoor markets

Cultural visitors

concerts
museums
restaurant guests
night life
tourists

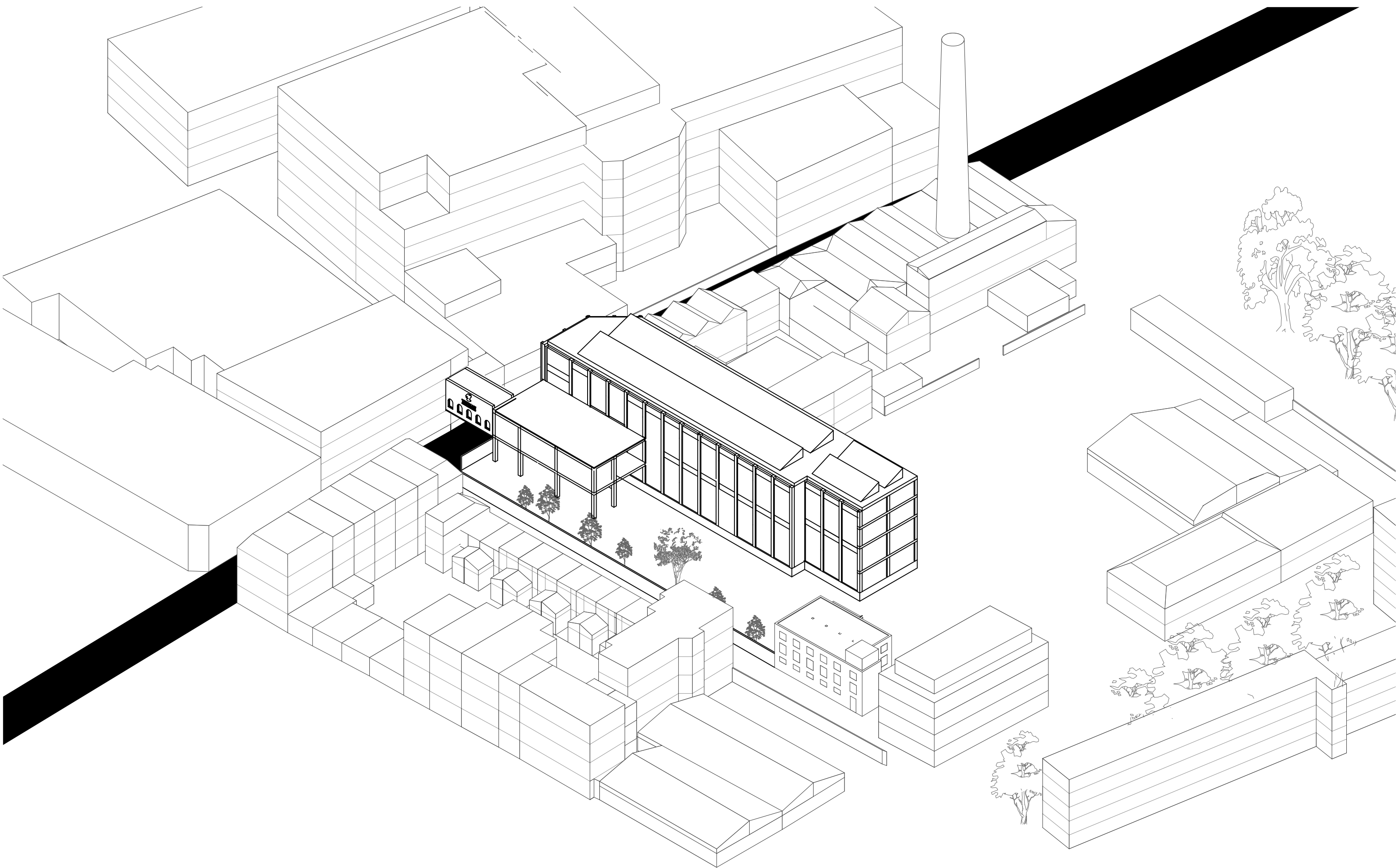
Logistics

deliveries
setting up
cleaning
security



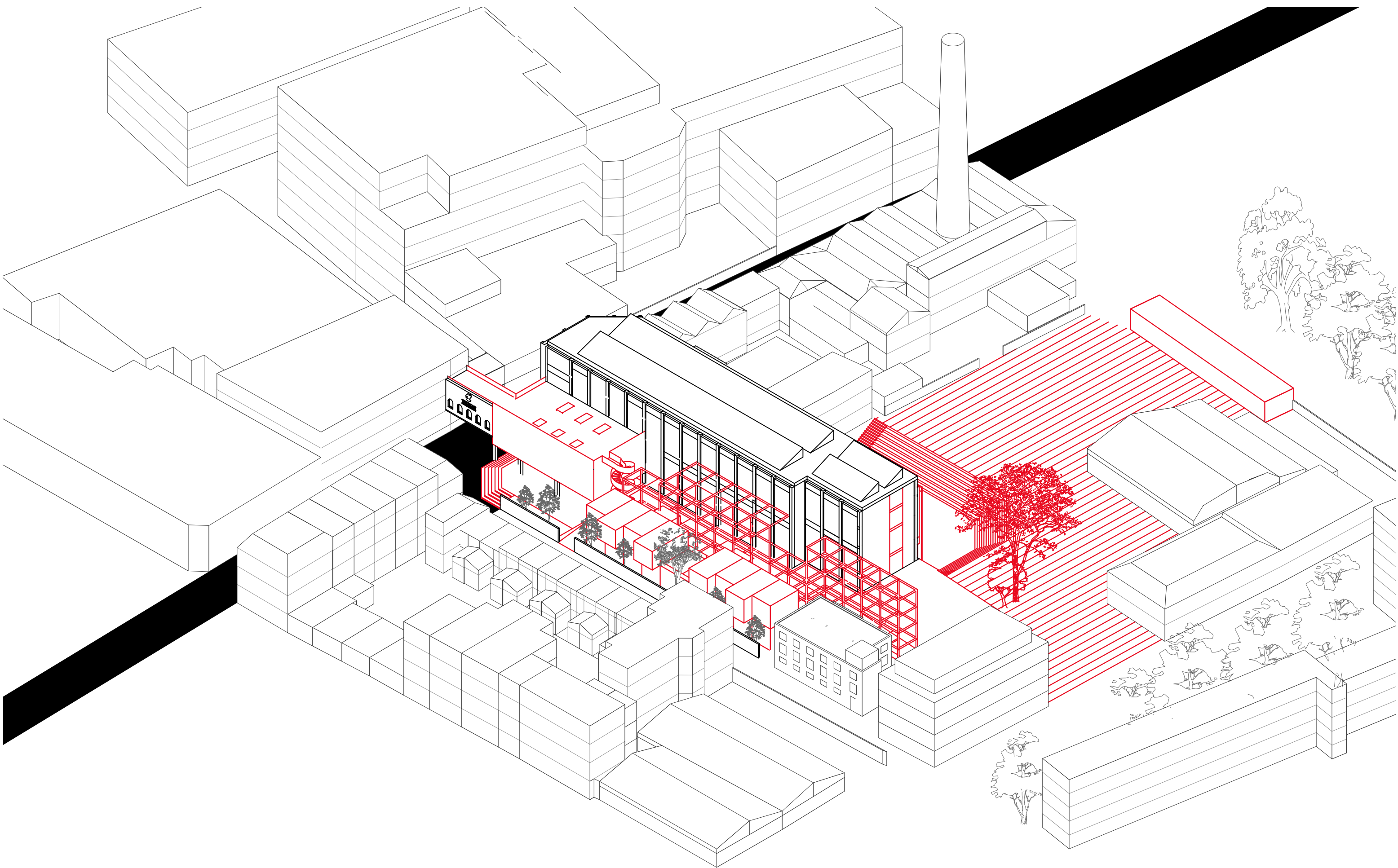
USERS IN TIME

site analysis

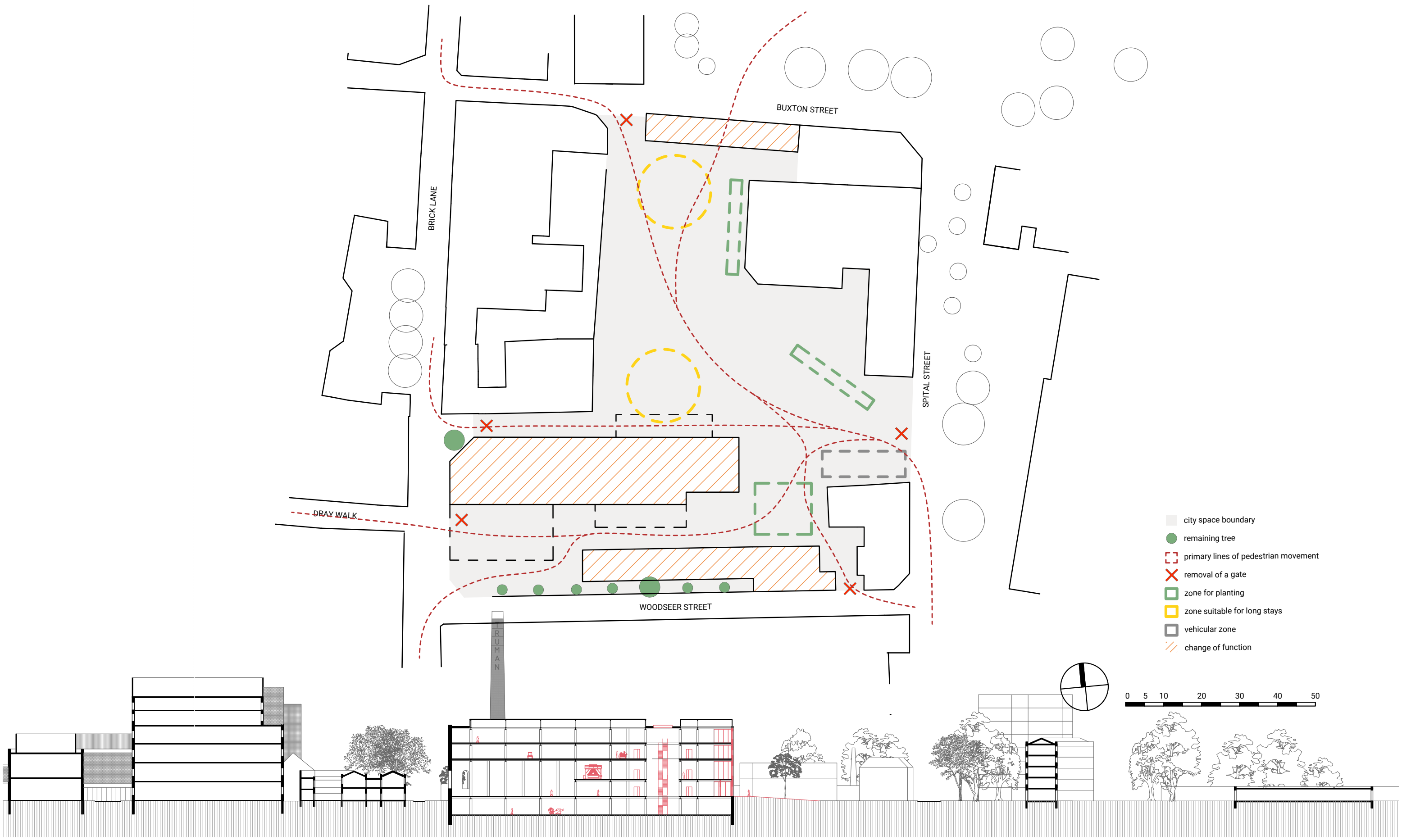


EXISTING SITUATION

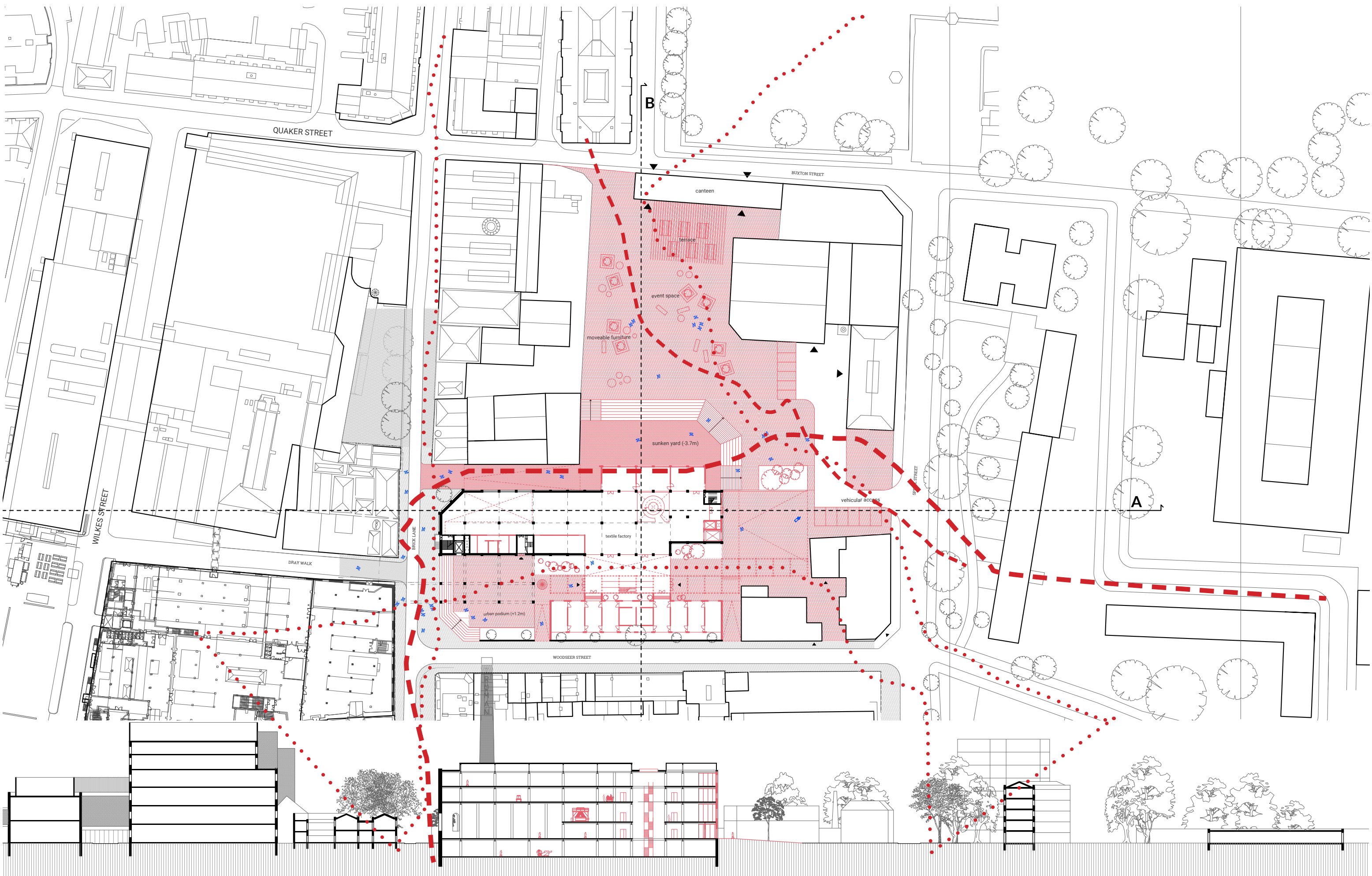
brownfield redevelopment



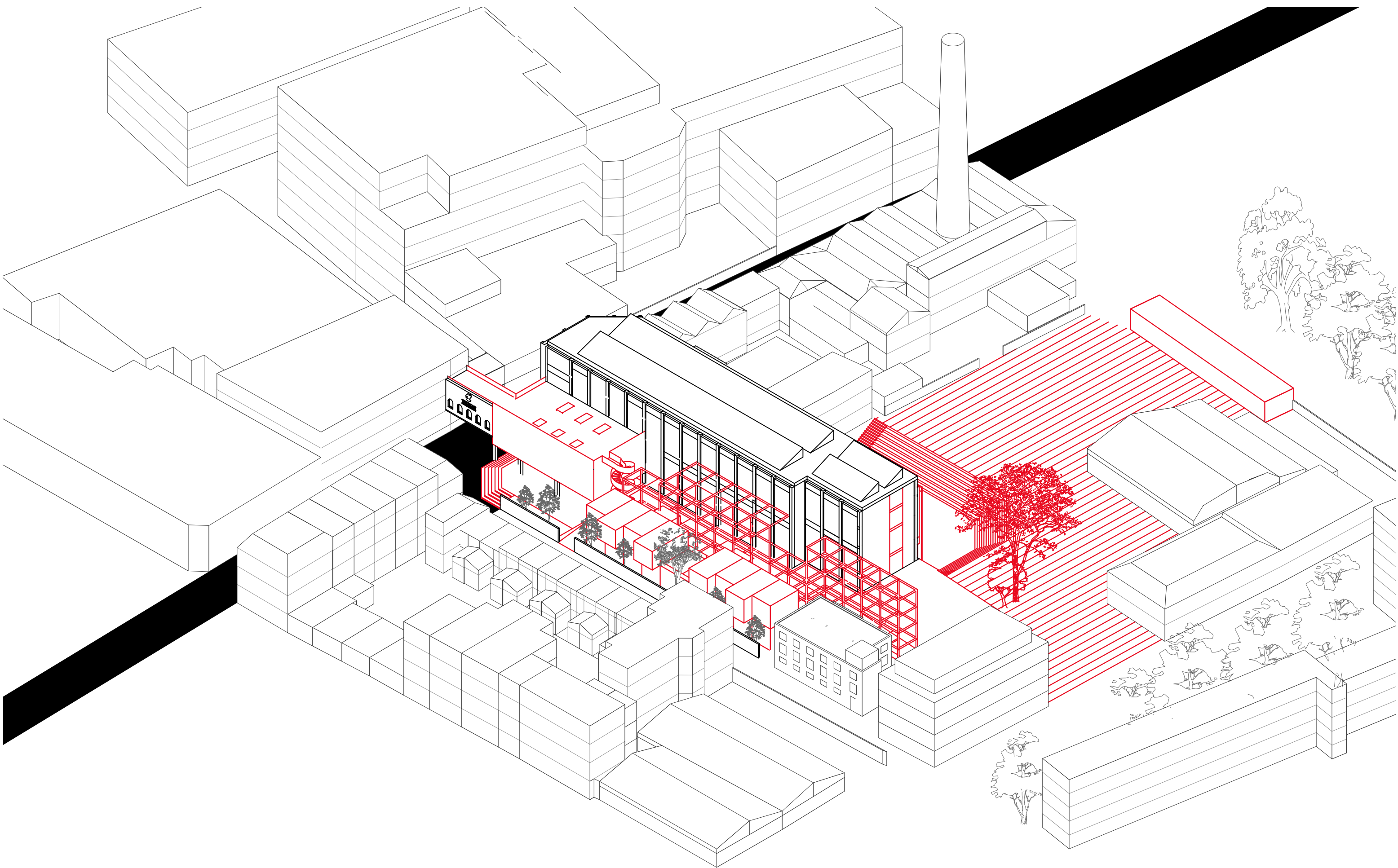
DESIGN PROPOSAL
brownfield redevelopment



SITEPLAN

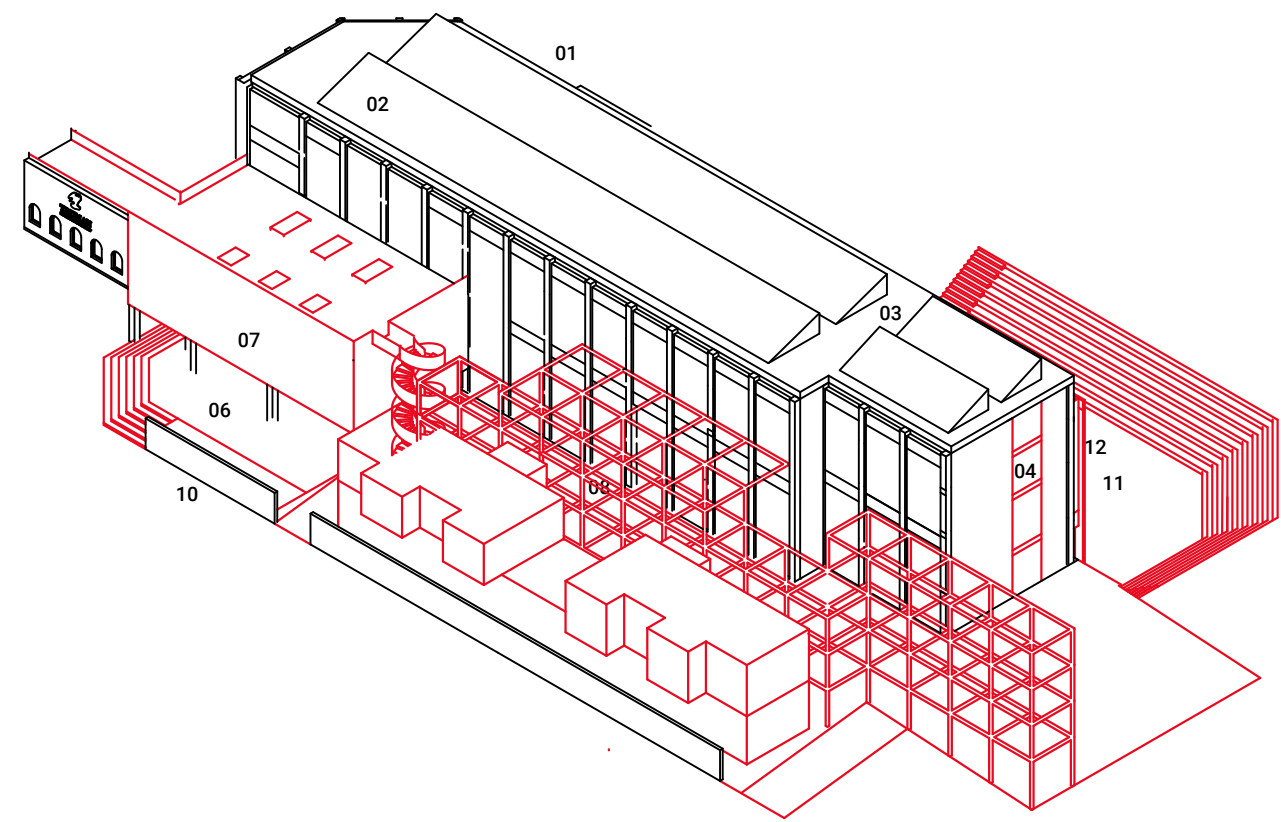


SITEPLAN



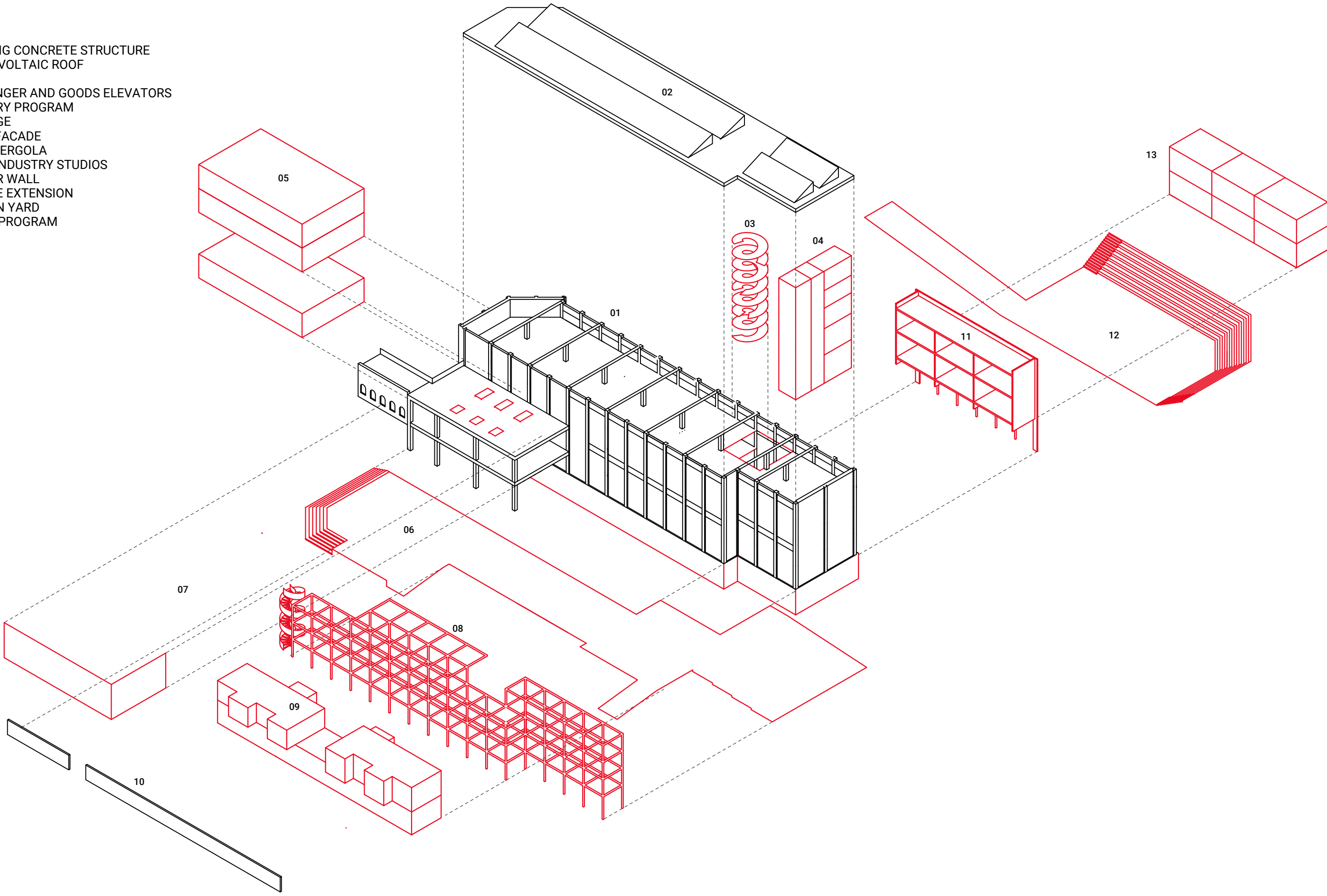
DESIGN PROPOSAL

- 01 EXISTING CONCRETE STRUCTURE
- 02 PHOTOVOLTAIC ROOF
- 03 RAMP
- 04 PASSENGER AND GOODS ELEVATORS
- 05 FACTORY PROGRAM
- 06 PASSAGE
- 07 BRICK FACADE
- 08 OPEN PERGOLA
- 09 LIGHT INDUSTRY STUDIOS
- 10 BORDER WALL
- 11 FACADE EXTENSION
- 12 SUNKEN YARD
- 13 CRAFT PROGRAM



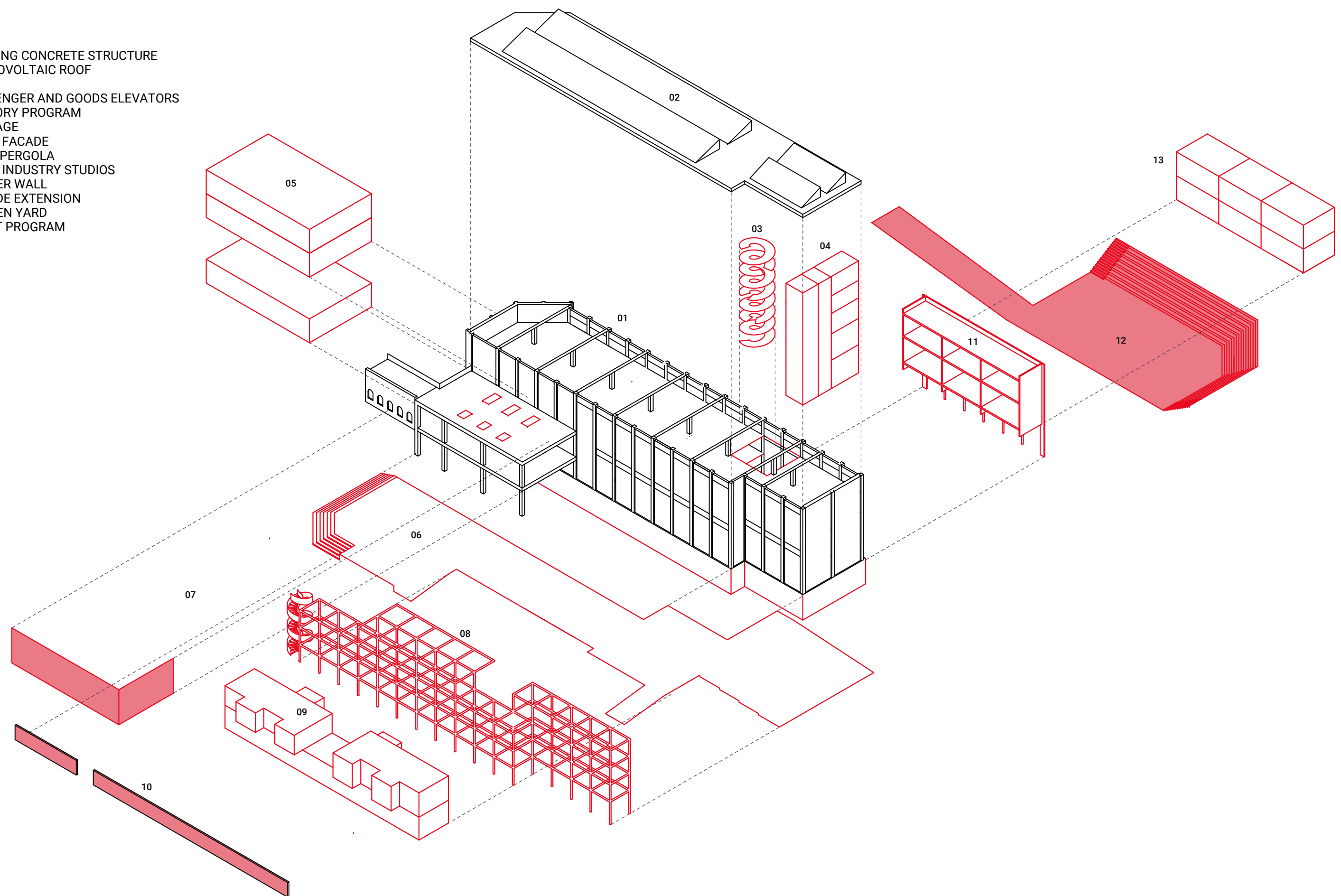
FRAGMENTS

- 01 EXISTING CONCRETE STRUCTURE
- 02 PHOTOVOLTAIC ROOF
- 03 RAMP
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FRAGMENTS

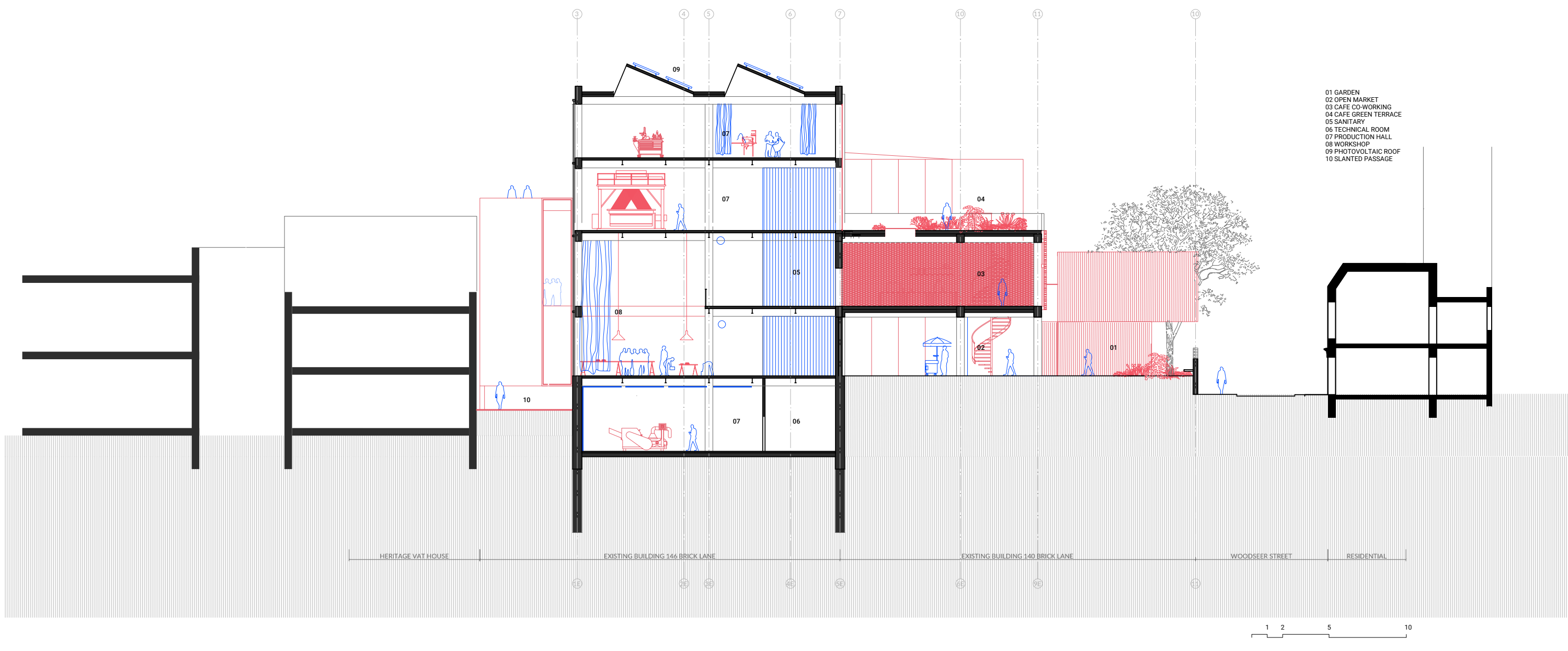
- 01 EXISTING CONCRETE STRUCTURE
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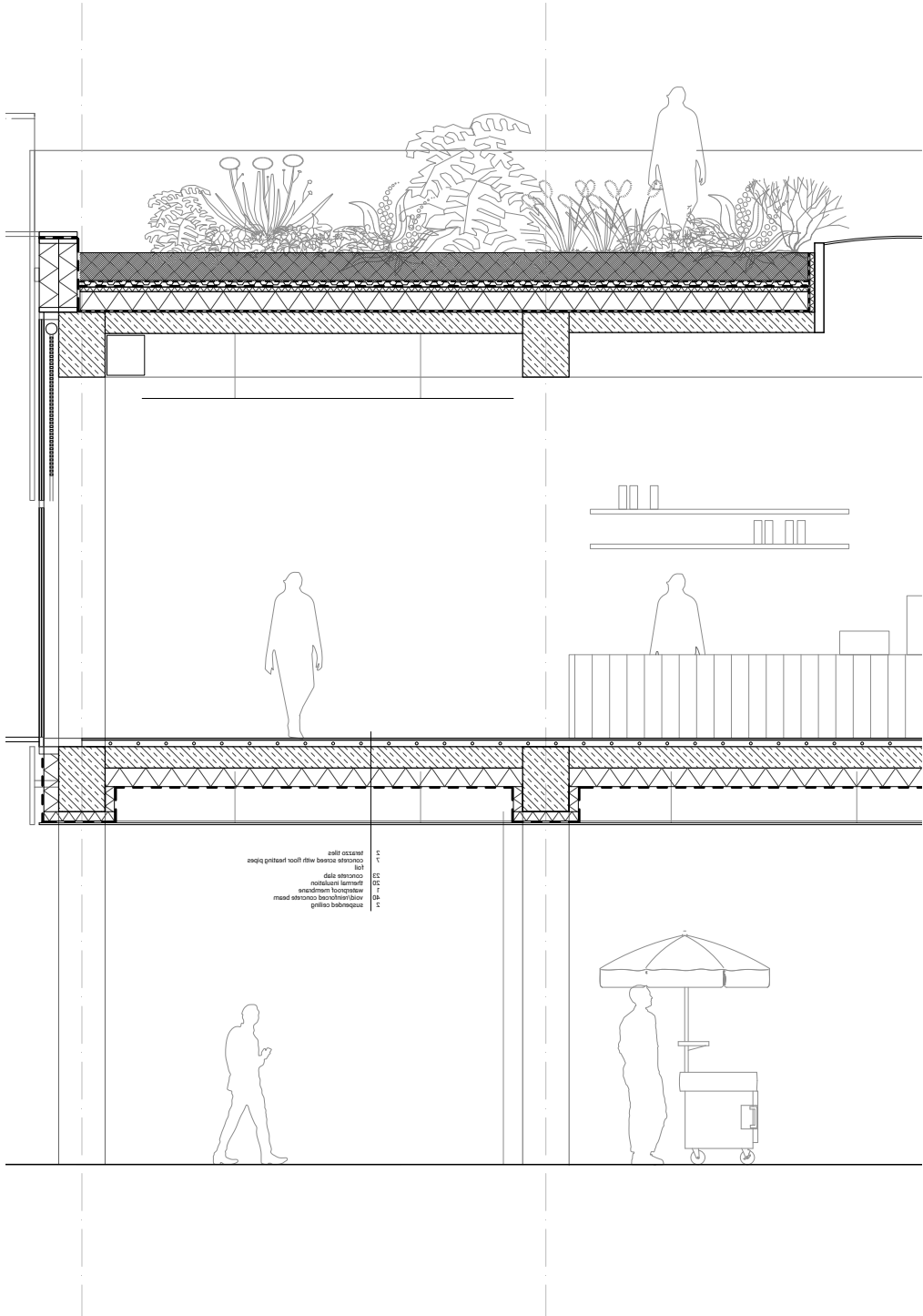
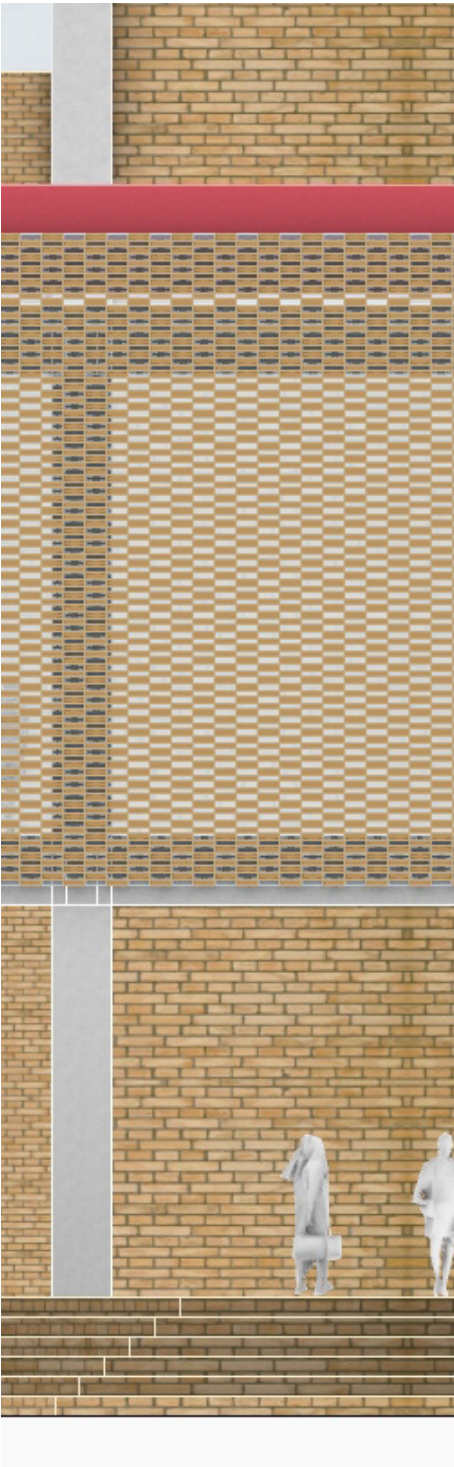
BRICK FRAGMENTS



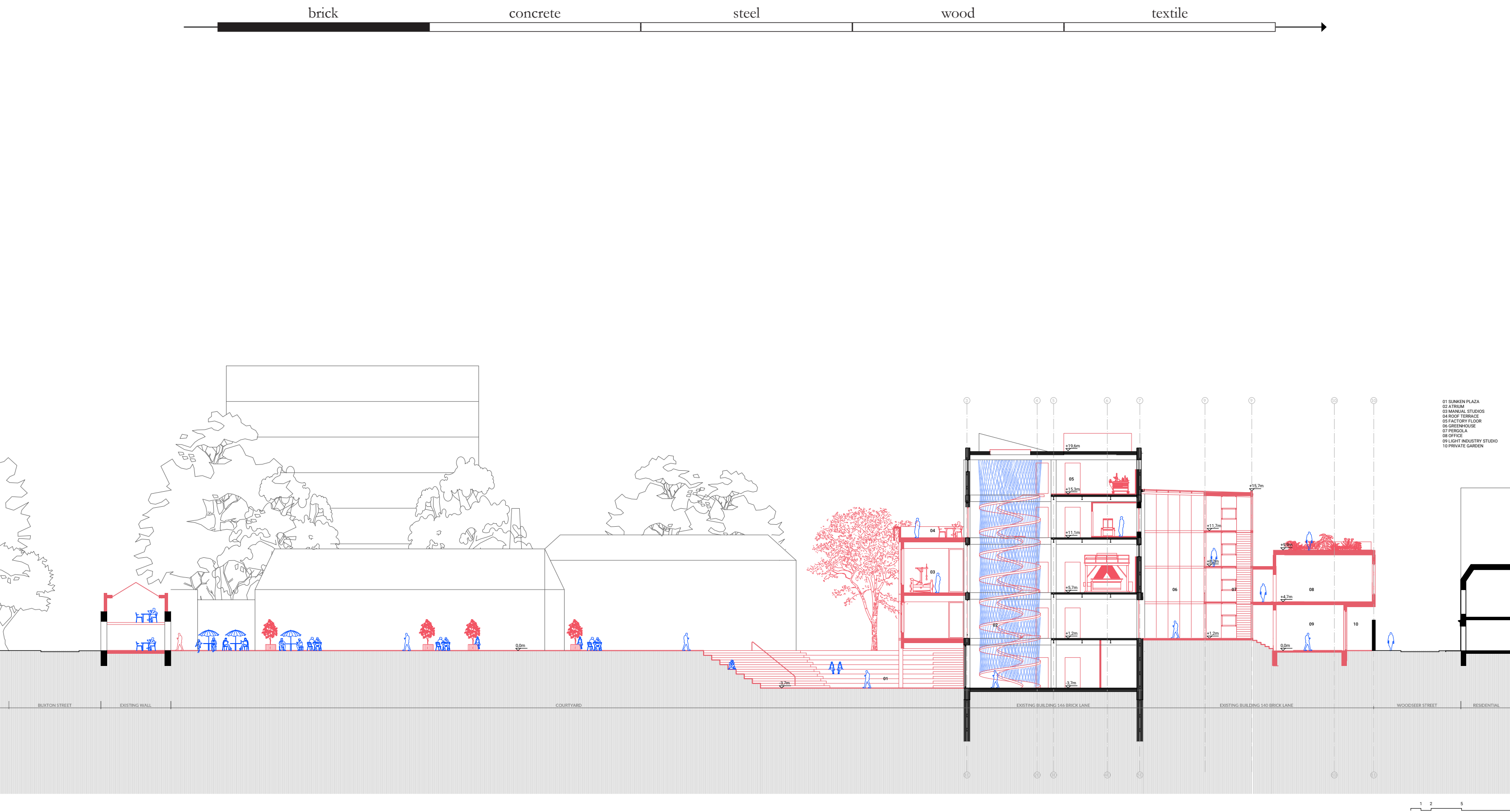
BRICK LANE ENTRANCE



CROSS-SECTION BRICK LANE ENTRANCES



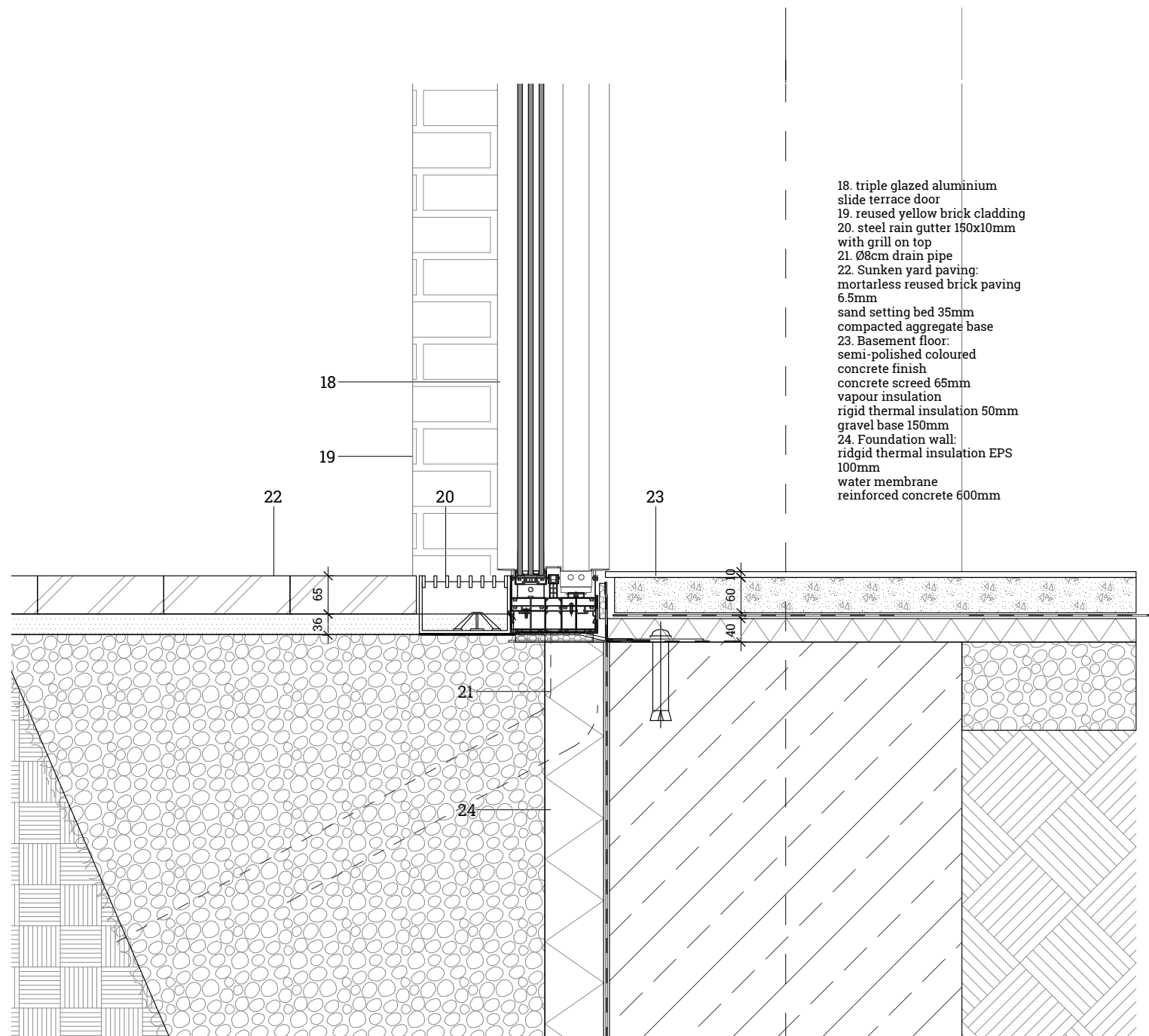
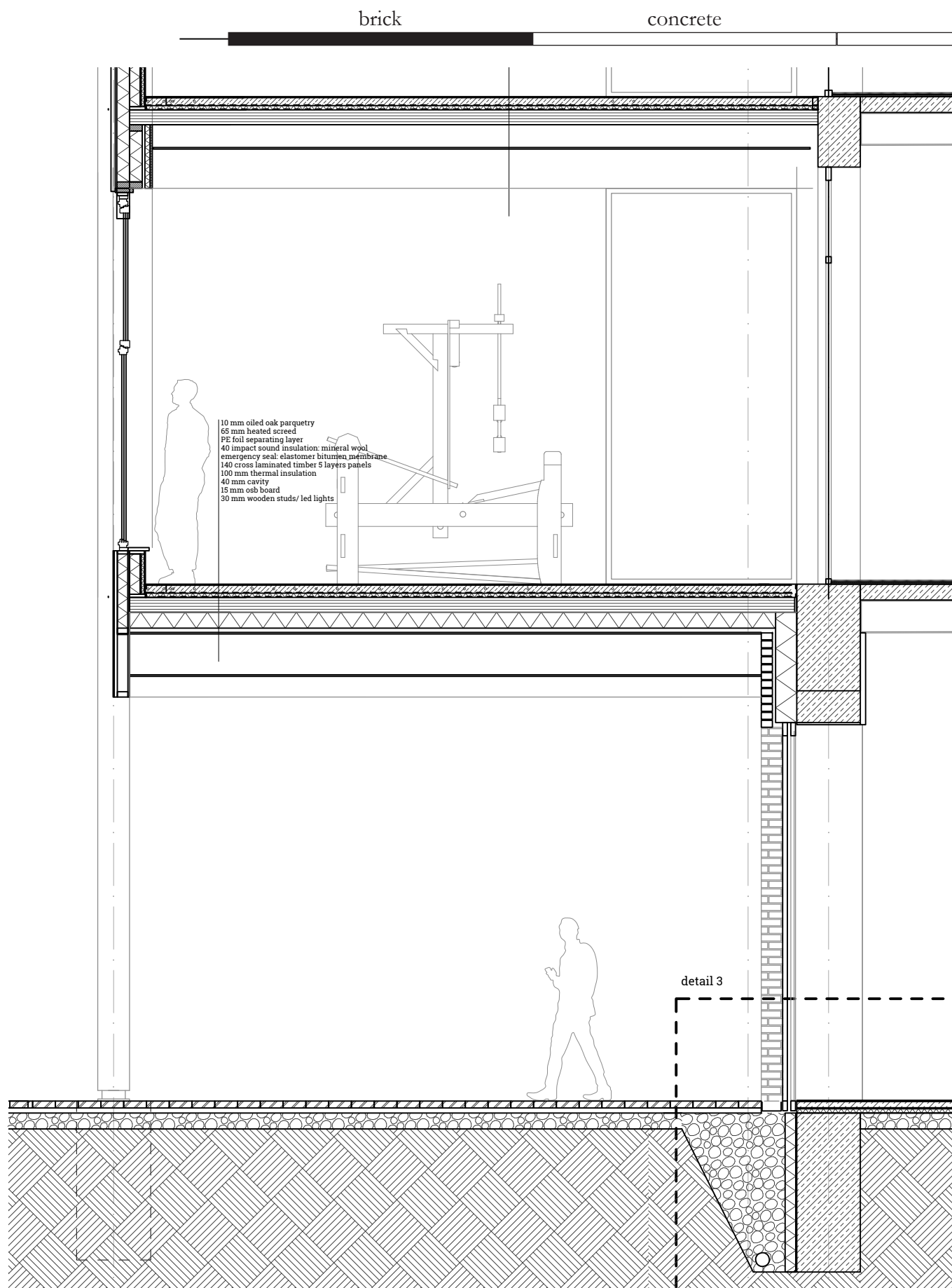
BRICK SCREEN FACADE OF COWORKING CAFE



COURTYARD CROSS-SECTION



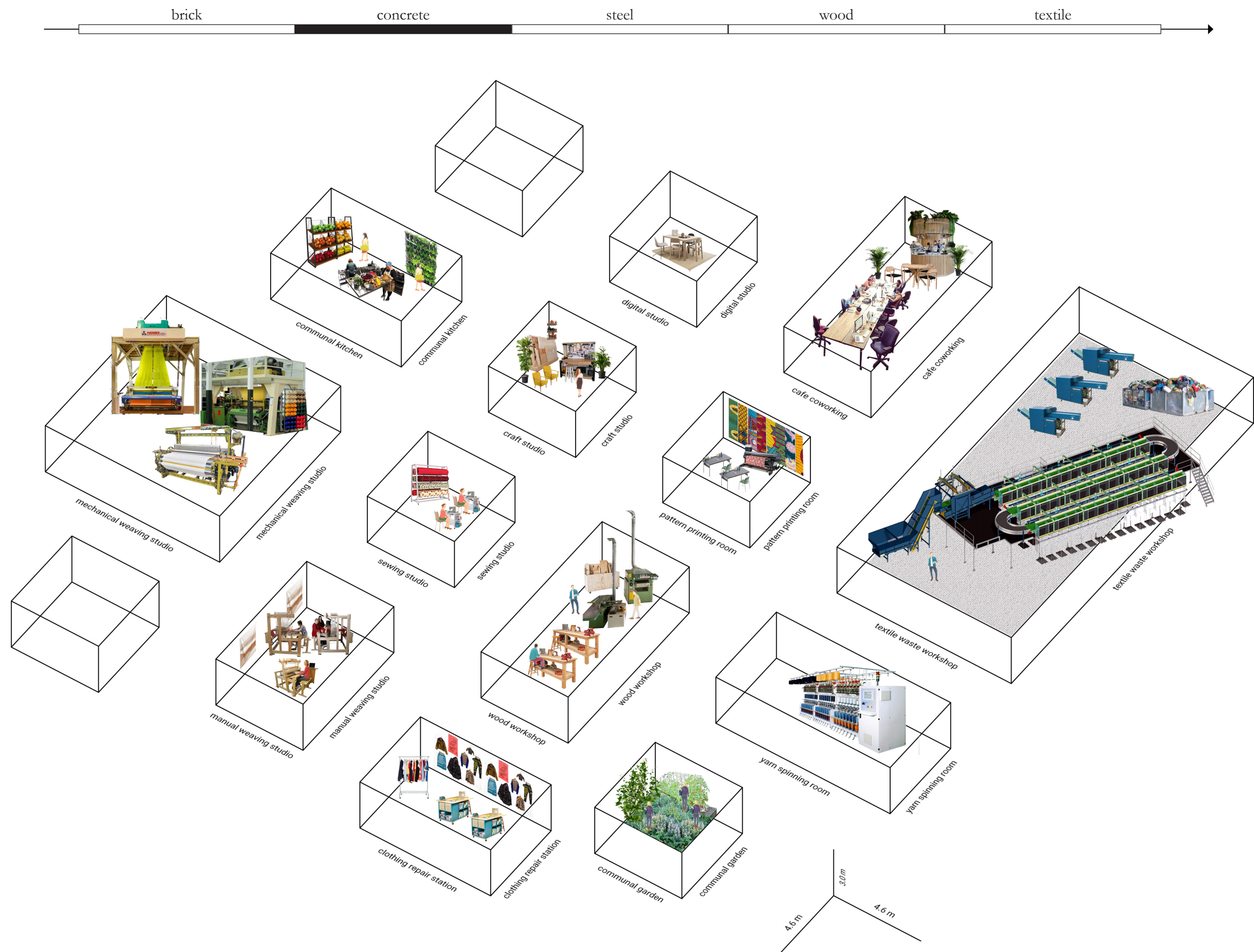
COURTYARD ENTRANCE



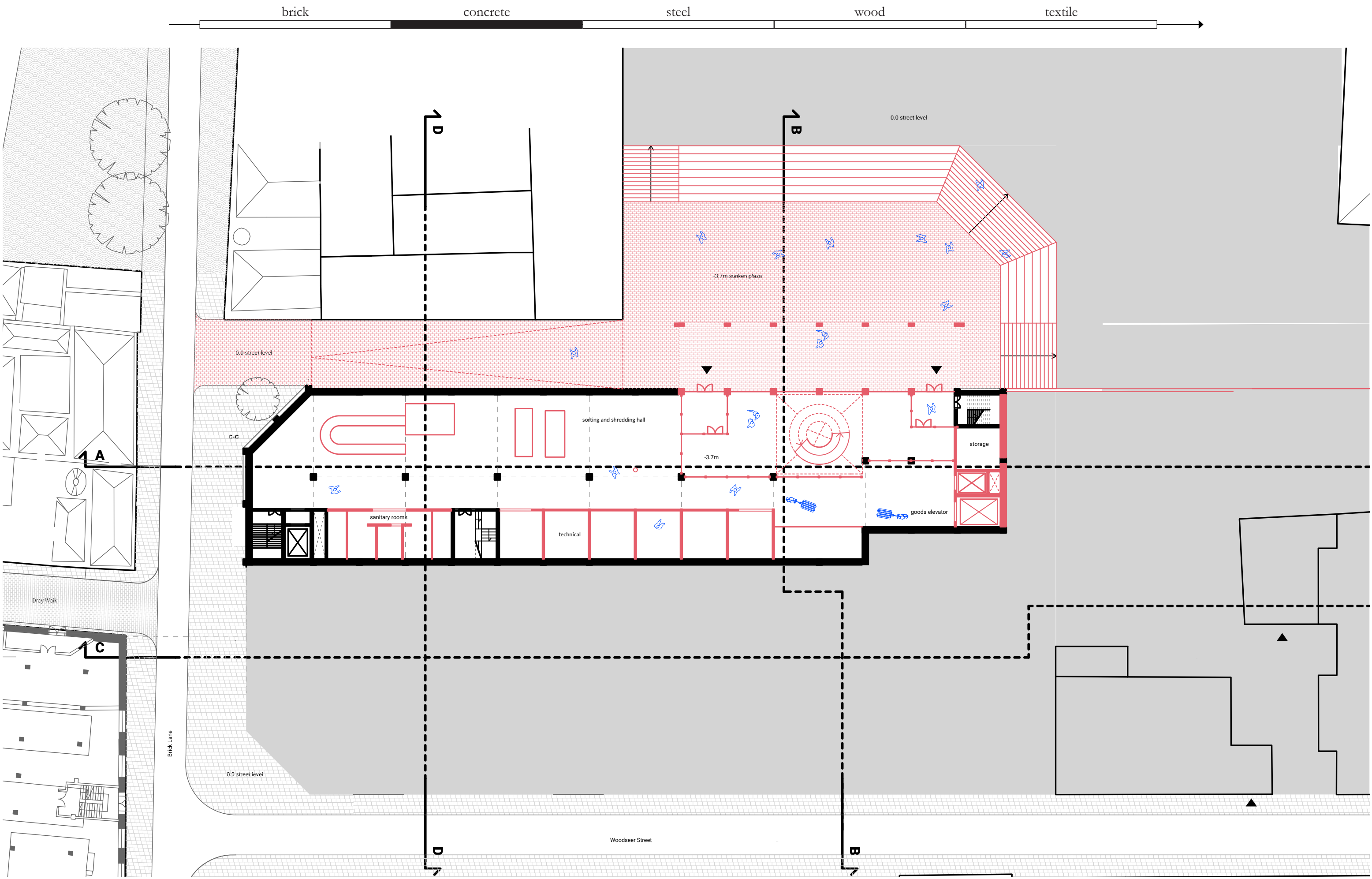
COURTYARD ENTRANCE DETAIL

-
- This exploded axonometric diagram illustrates the assembly of a building structure, with components numbered 01 through 13. The components are as follows:
- 01**: The main structural frame, including walls, columns, and floor slabs.
 - 02**: A long, narrow roof or ceiling panel.
 - 03**: A vertical, spiral-shaped element, possibly a staircase or a decorative feature.
 - 04**: A vertical, rectangular panel or wall section.
 - 05**: A large, rectangular block, likely a foundation or a large storage unit.
 - 06**: A series of parallel, curved lines, possibly representing a ramp or a series of steps.
 - 08**: A grid-like structure, possibly a floor slab or a wall section.
 - 09**: A series of rectangular blocks, possibly representing a foundation or a large storage unit.
 - 11**: A long, narrow, rectangular panel or wall section.
 - 12**: A series of parallel, curved lines, possibly representing a ramp or a series of steps.
 - 13**: A series of rectangular blocks, possibly representing a foundation or a large storage unit.
- The diagram uses dashed lines to show the spatial relationships and assembly sequence of the components. The components are rendered in a light red color with black outlines.

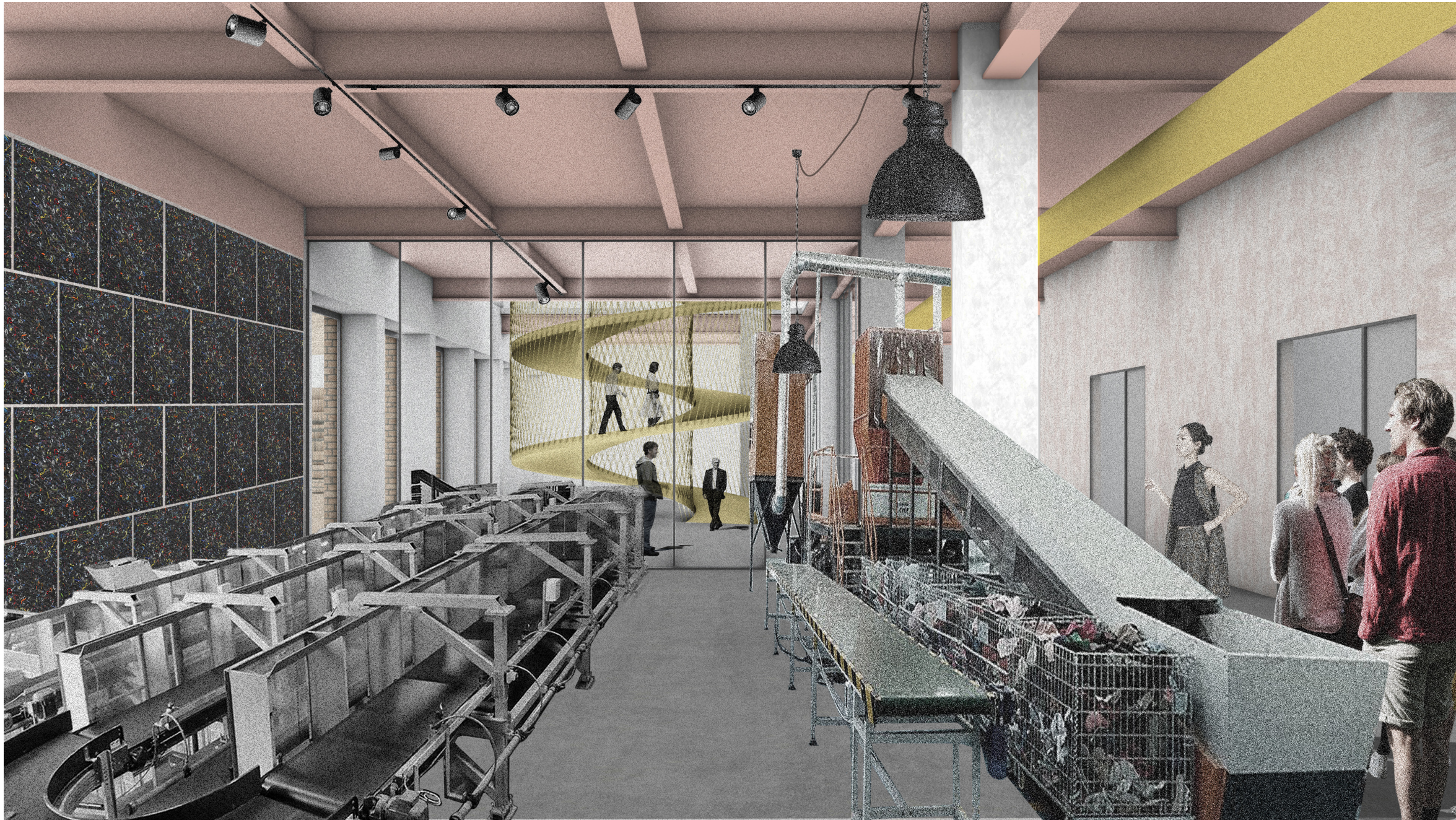
CONCRETE FRAGMENTS



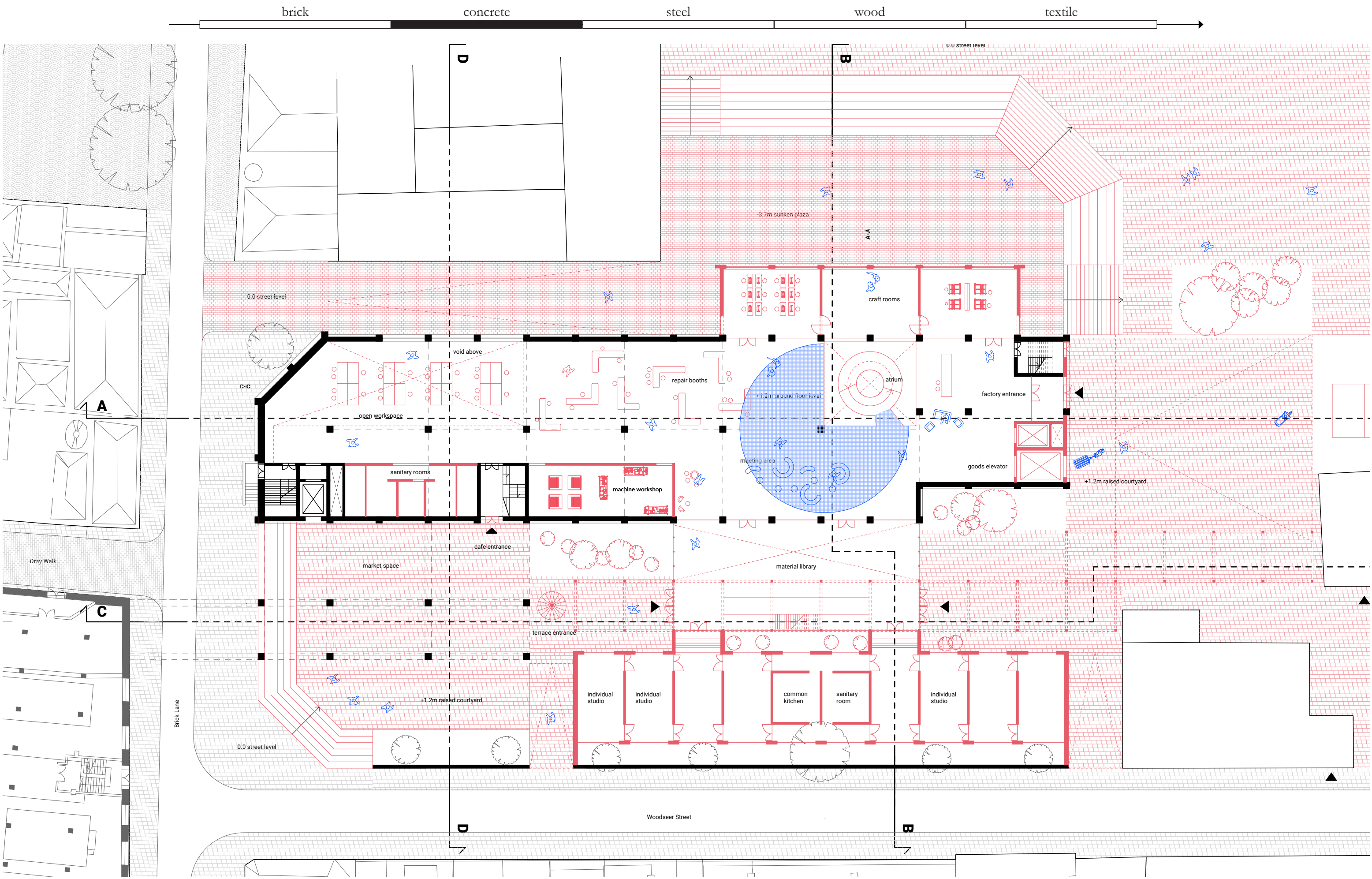
PROGRAM DIVISION



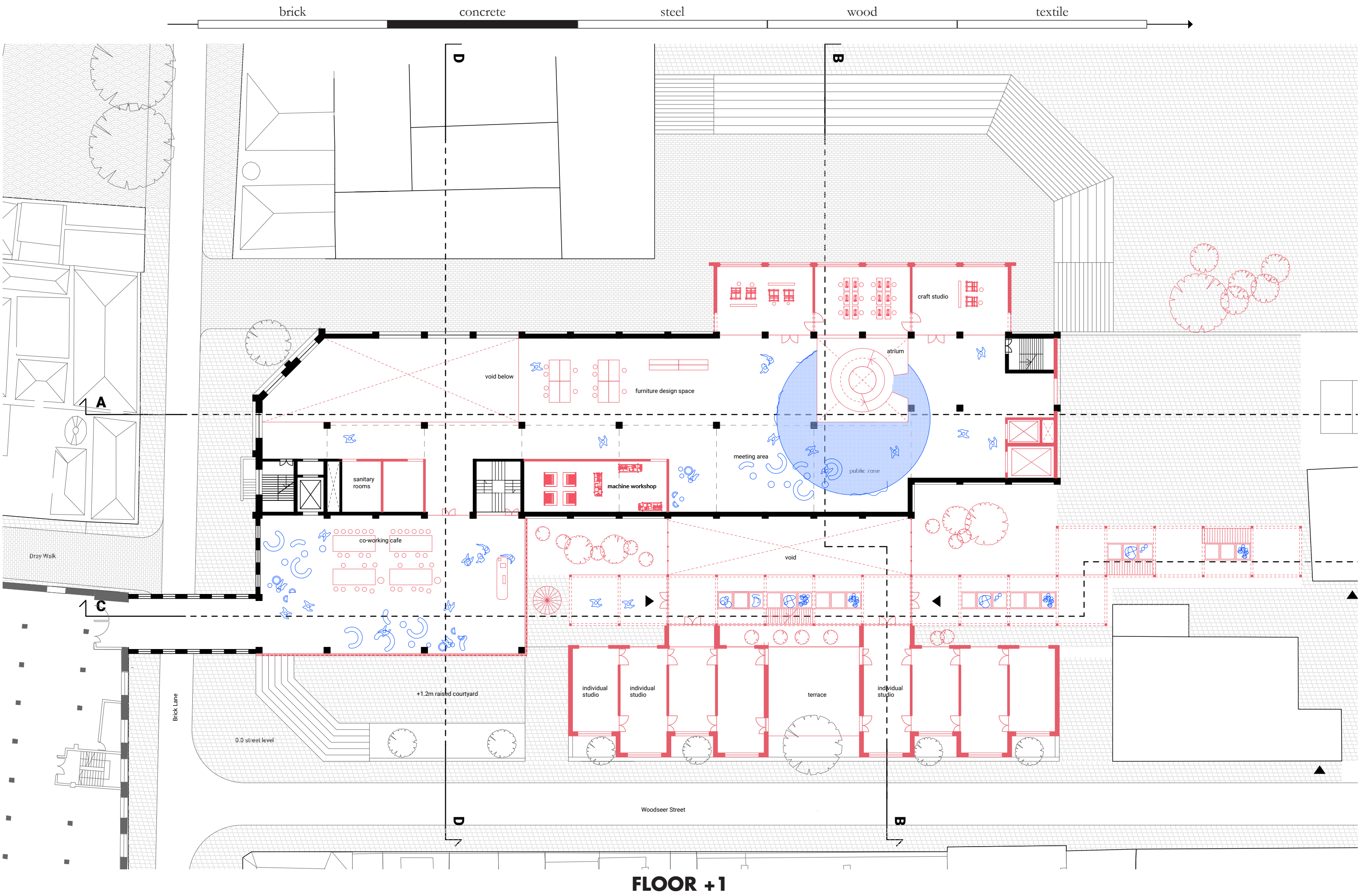
LEVEL -1



LEVEL -1 FACTORY HALL



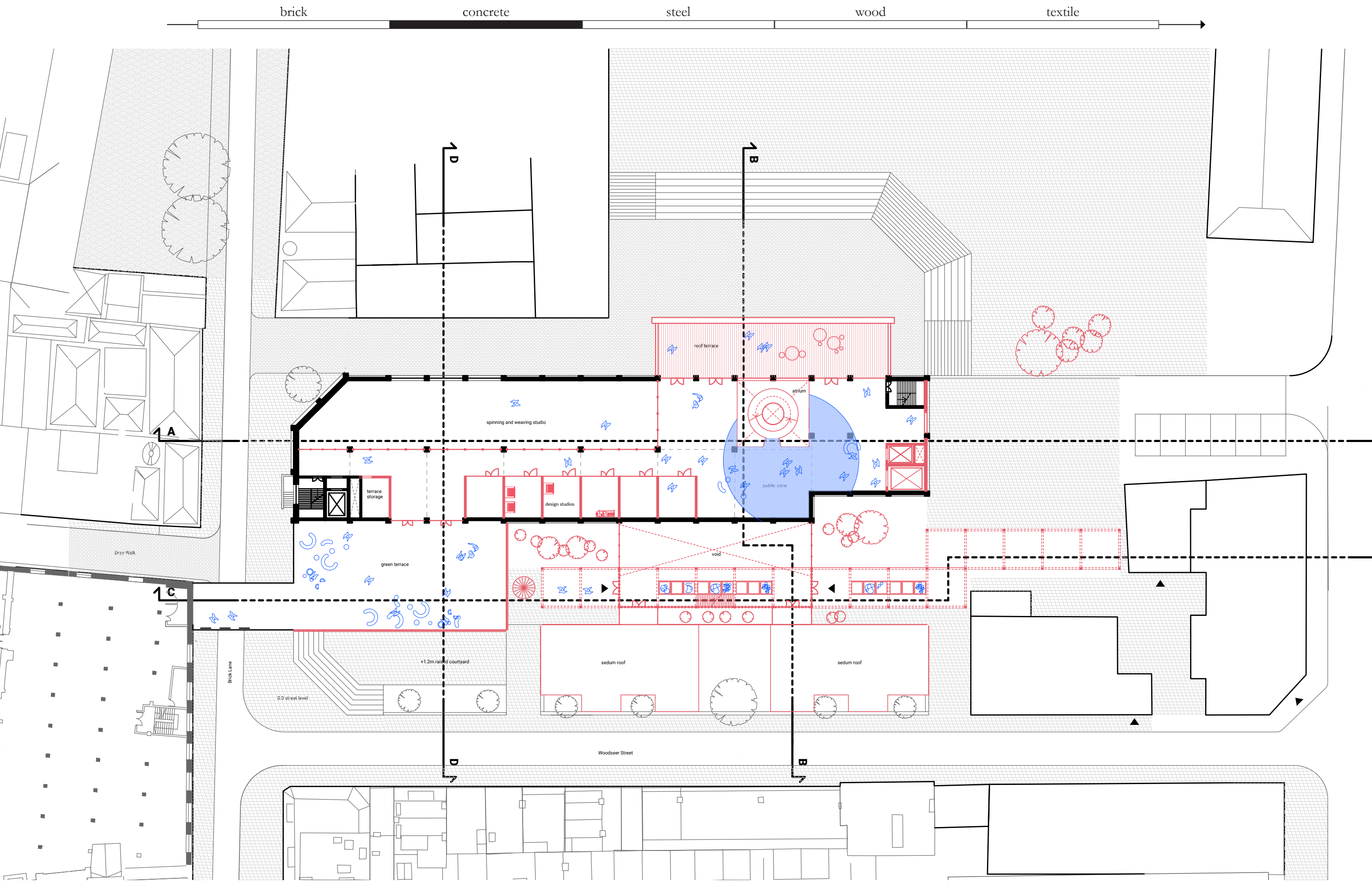
GROUND FLOOR



FLOOR +1

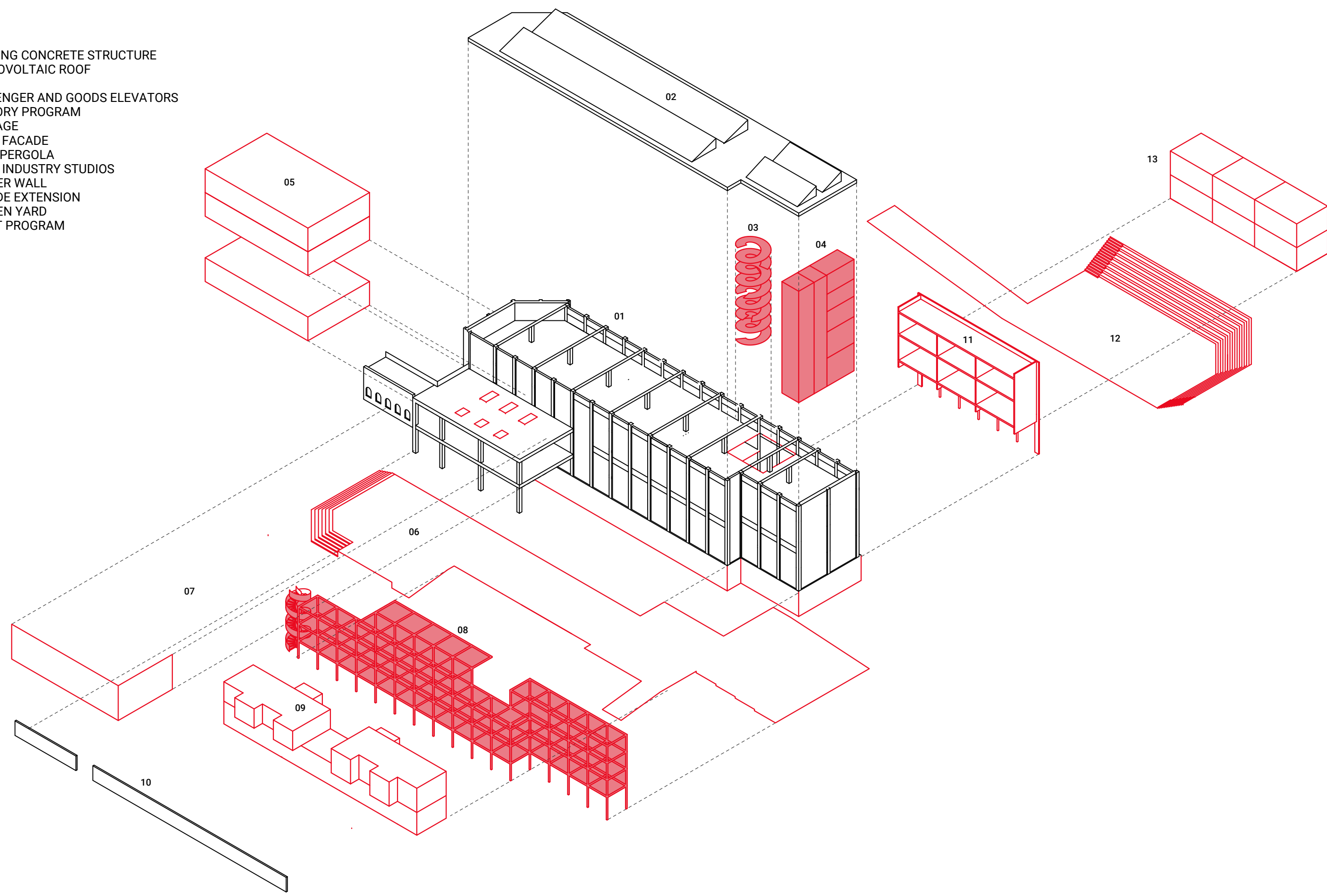


FLOOR +1 VIEW TO WORKSHOP BELOW

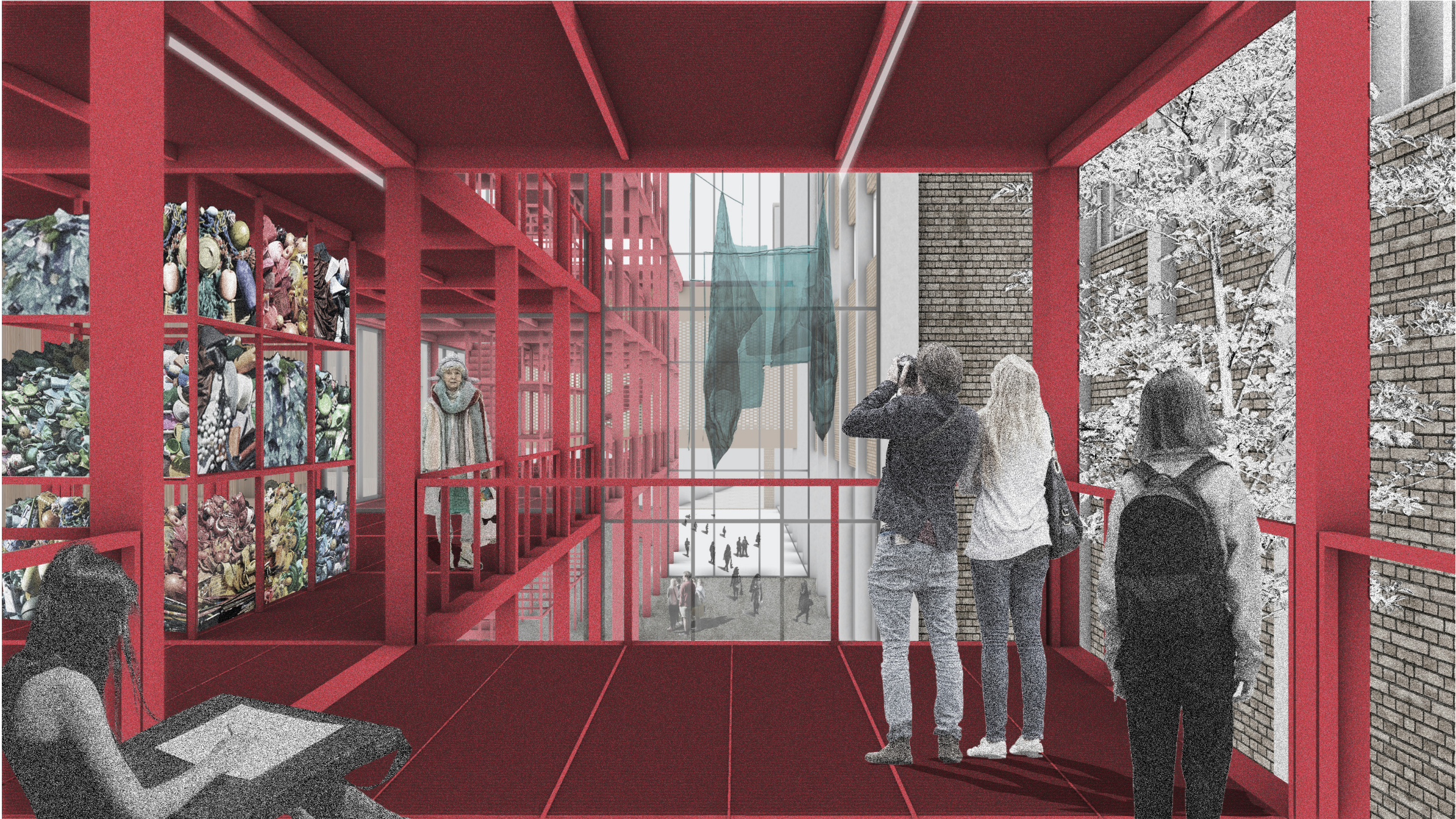


FLOOR +2

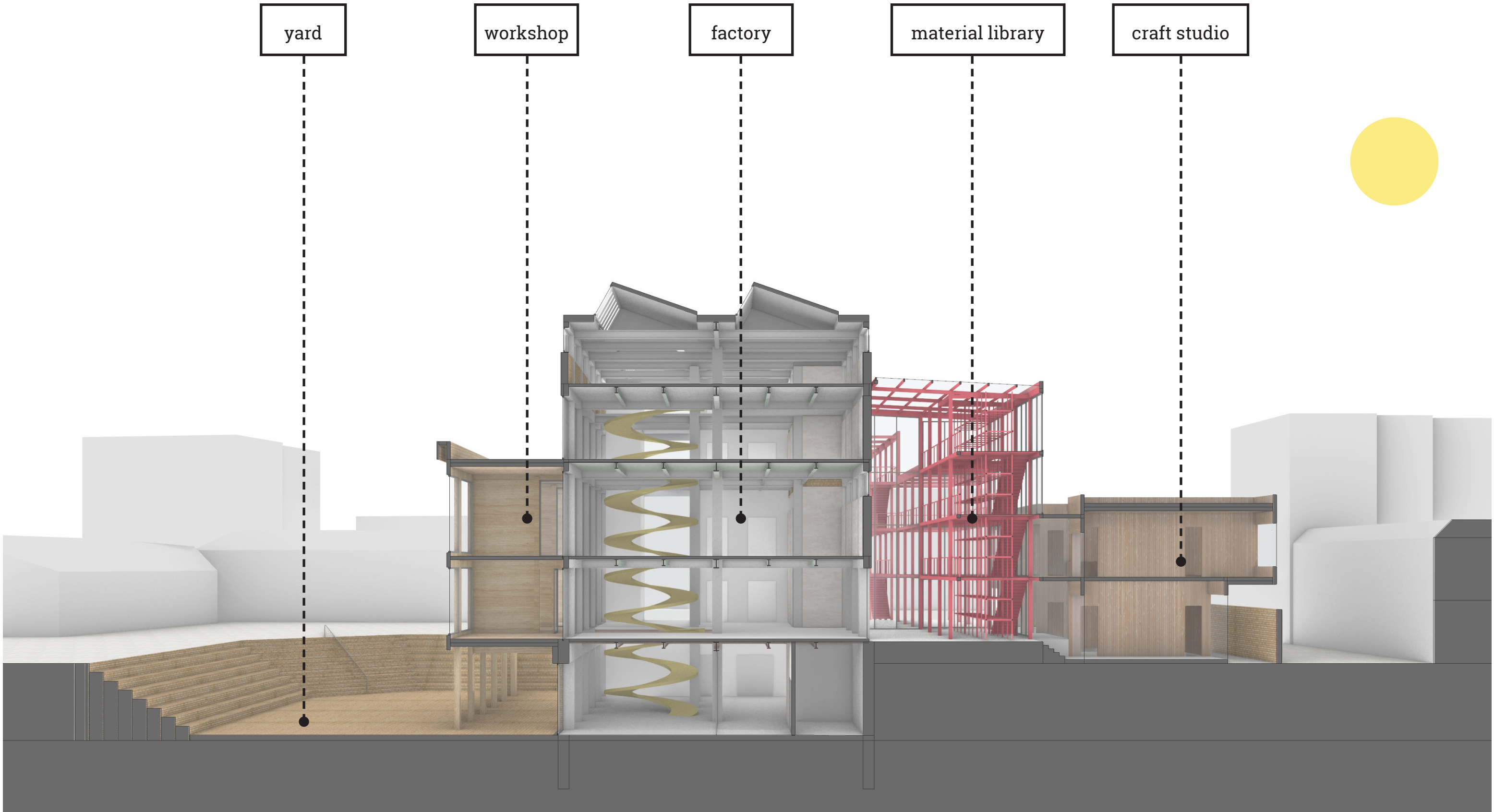
- 01 EXISTING CONCRETE STRUCTURE
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- 03 RAMP
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- 06 PASSAGE
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- 10 BORDER WALL
- 11 FACADE EXTENSION
- 12 SUNKEN YARD
- 13 CRAFT PROGRAM



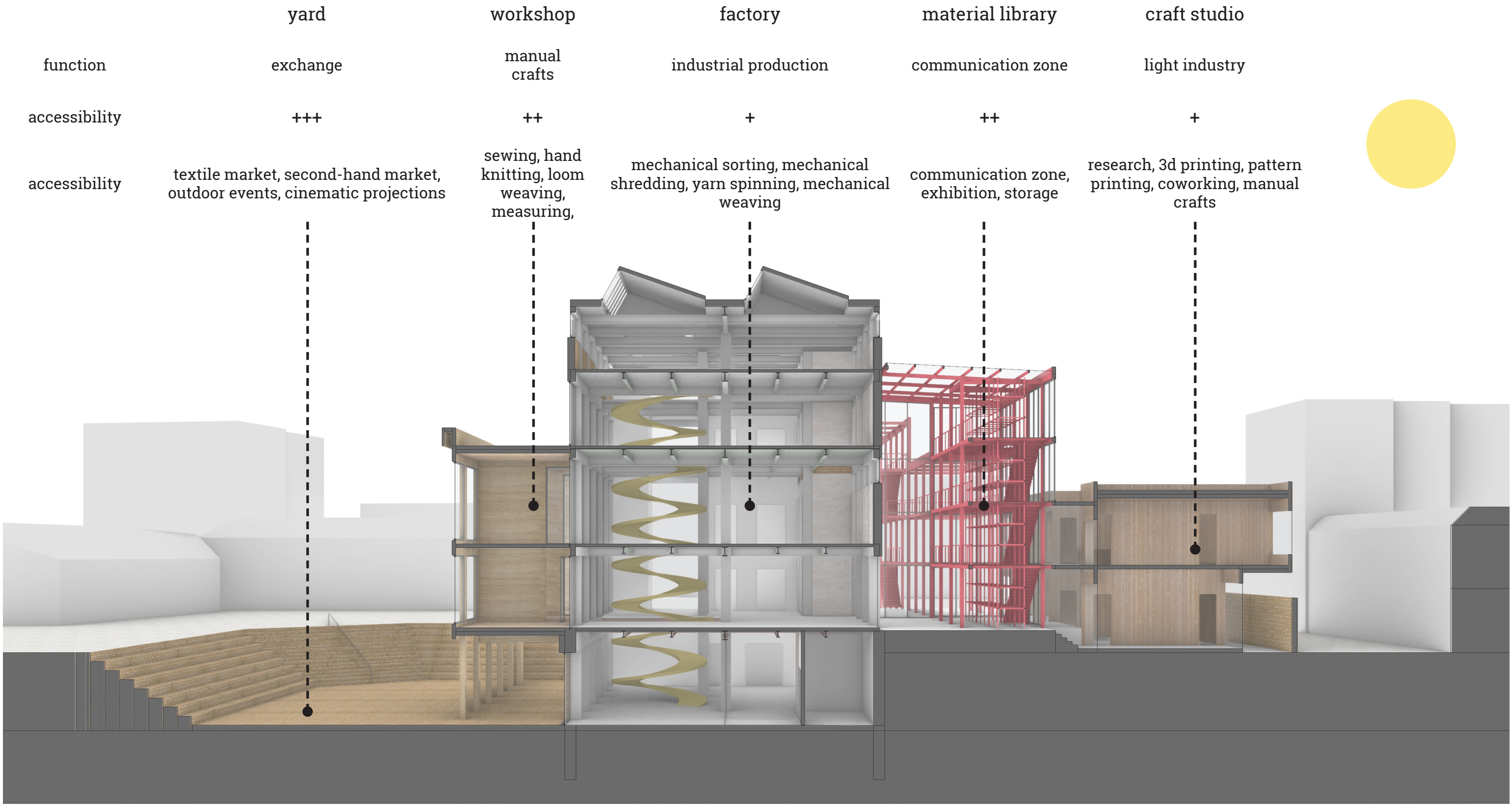
STEEL FRAGMENTS



OUTDOOR CONNECTOR LEVEL +1



FUNCTIONAL DIVISION



FUNCTIONAL DIVISION

A sporadic human presence

industrial production
16 - 21°C
source of noise and vibration

B light physical effort

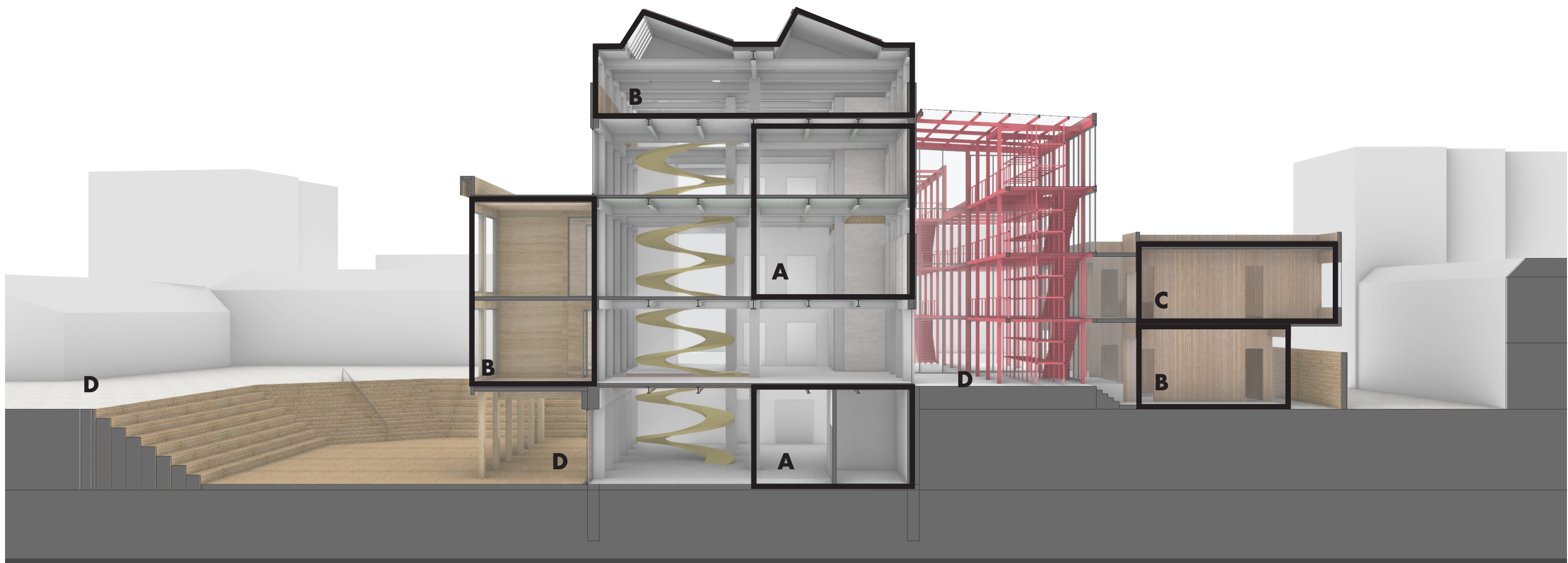
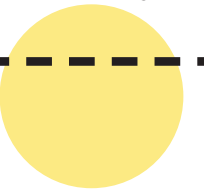
manual crafts
18 - 21°C
source of noise and body heat

C static

digital design
summer 20-24°C, winter 19-22°C
silent environment

D active

half climate
source of noise, vibration, body heat



CLIMATE ZONES

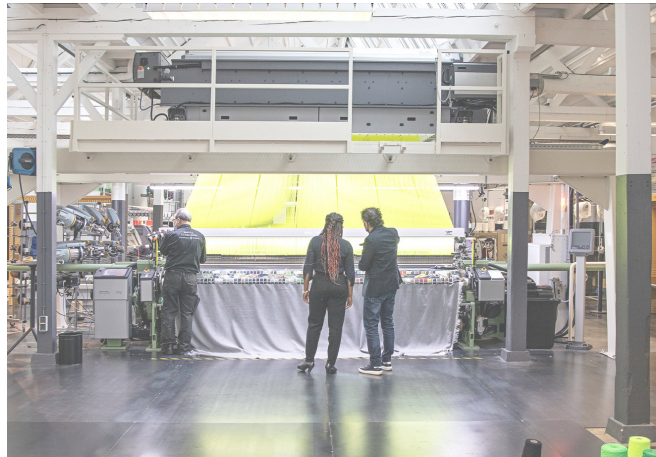
A

sporadic human presence

industrial production

16 - 21°C

source of noise and vibration



B

light physical effort

manual crafts

18 - 21°C

source of noise and body heat



C

static

digital design

summer 20-24°C, winter 19-22°C

silent environment

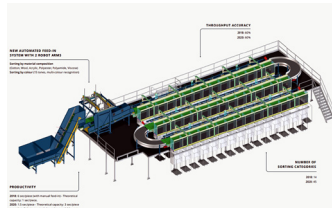


D

active

half climate

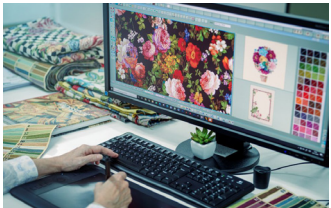
souce of noise, vibration, body heat



textile sorter



sewing



digital design



cloth shredder



hand weaving



coworking



yarn spinning machine



repairing



research



power loom

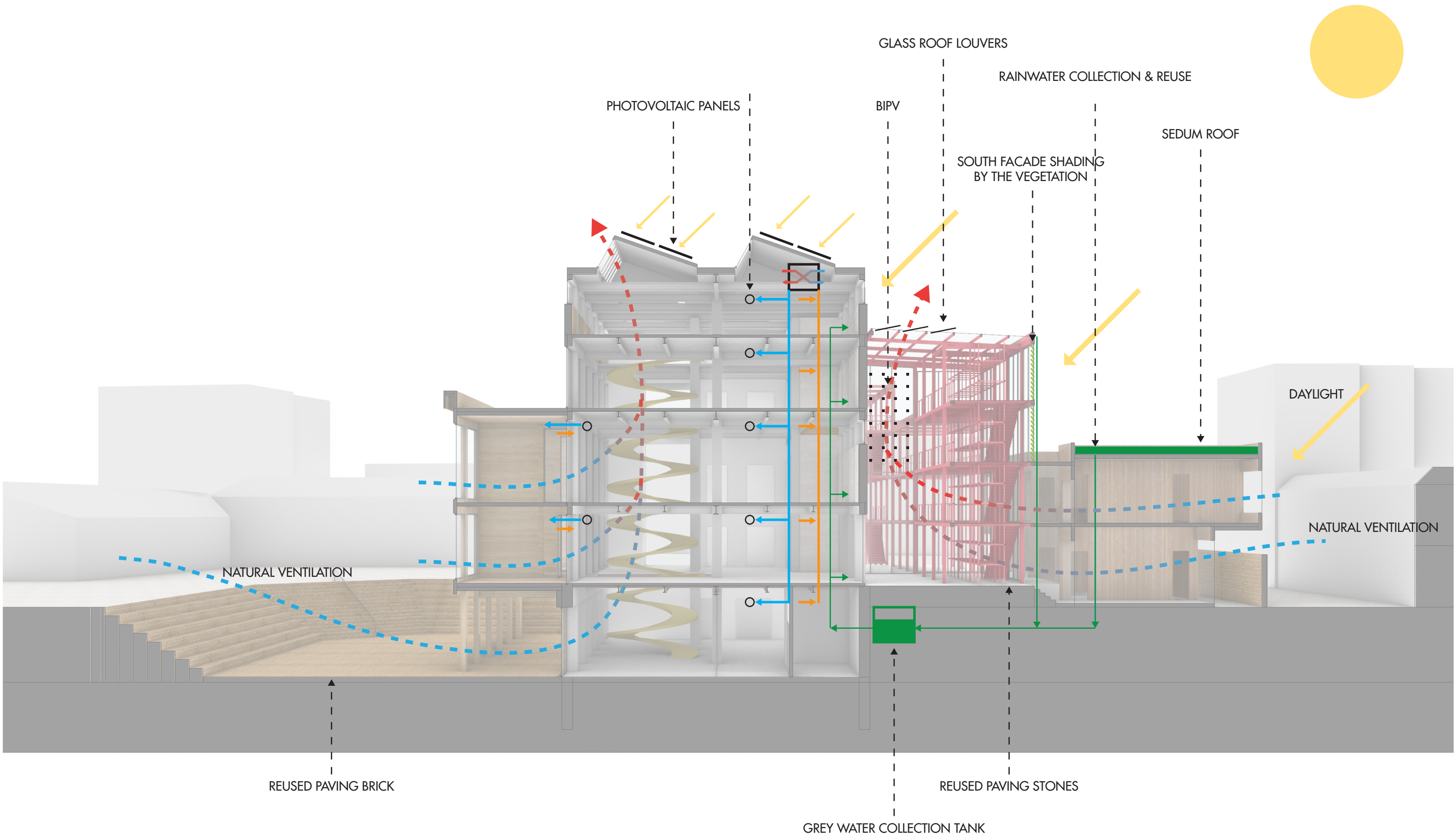


drawing

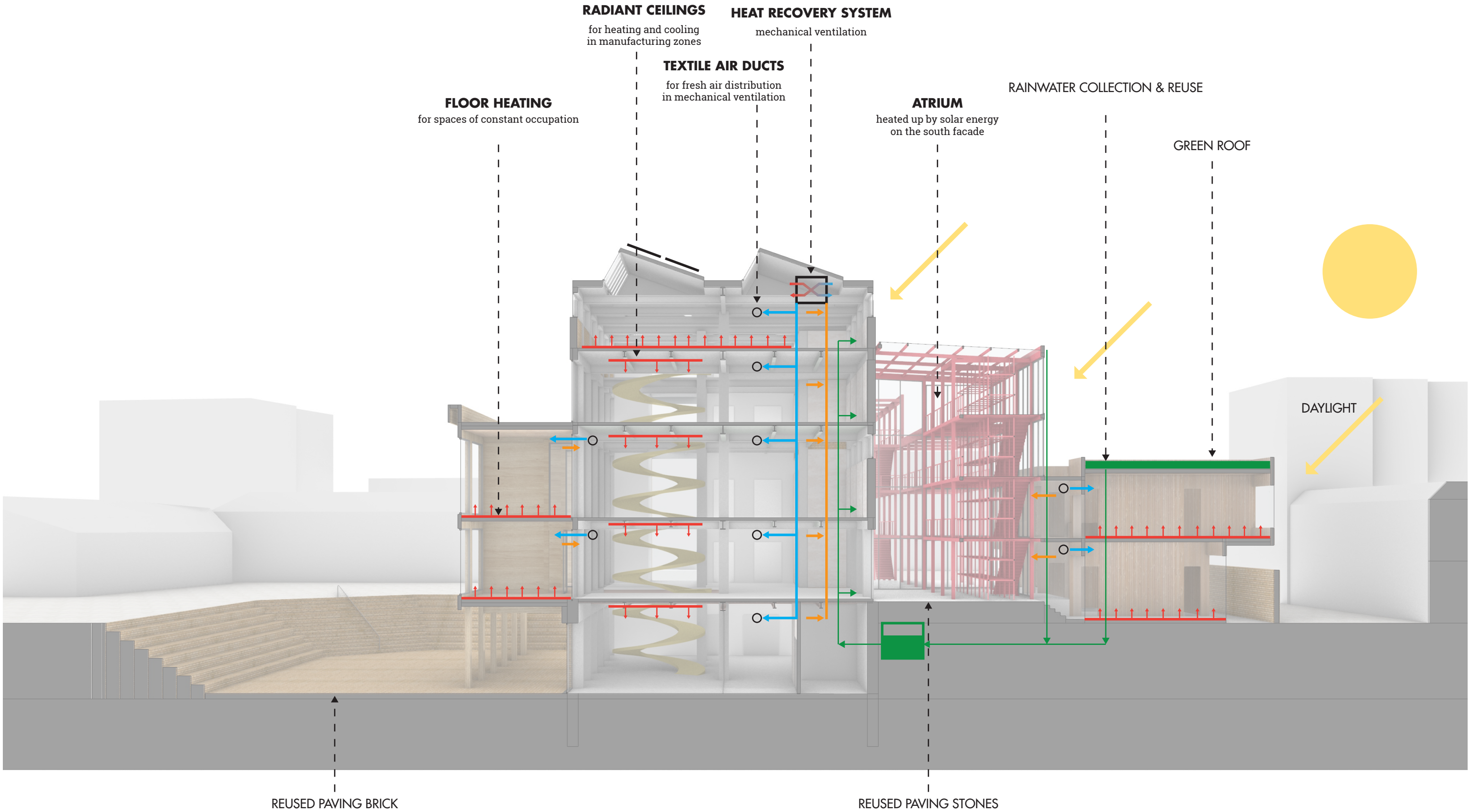


pattern printing

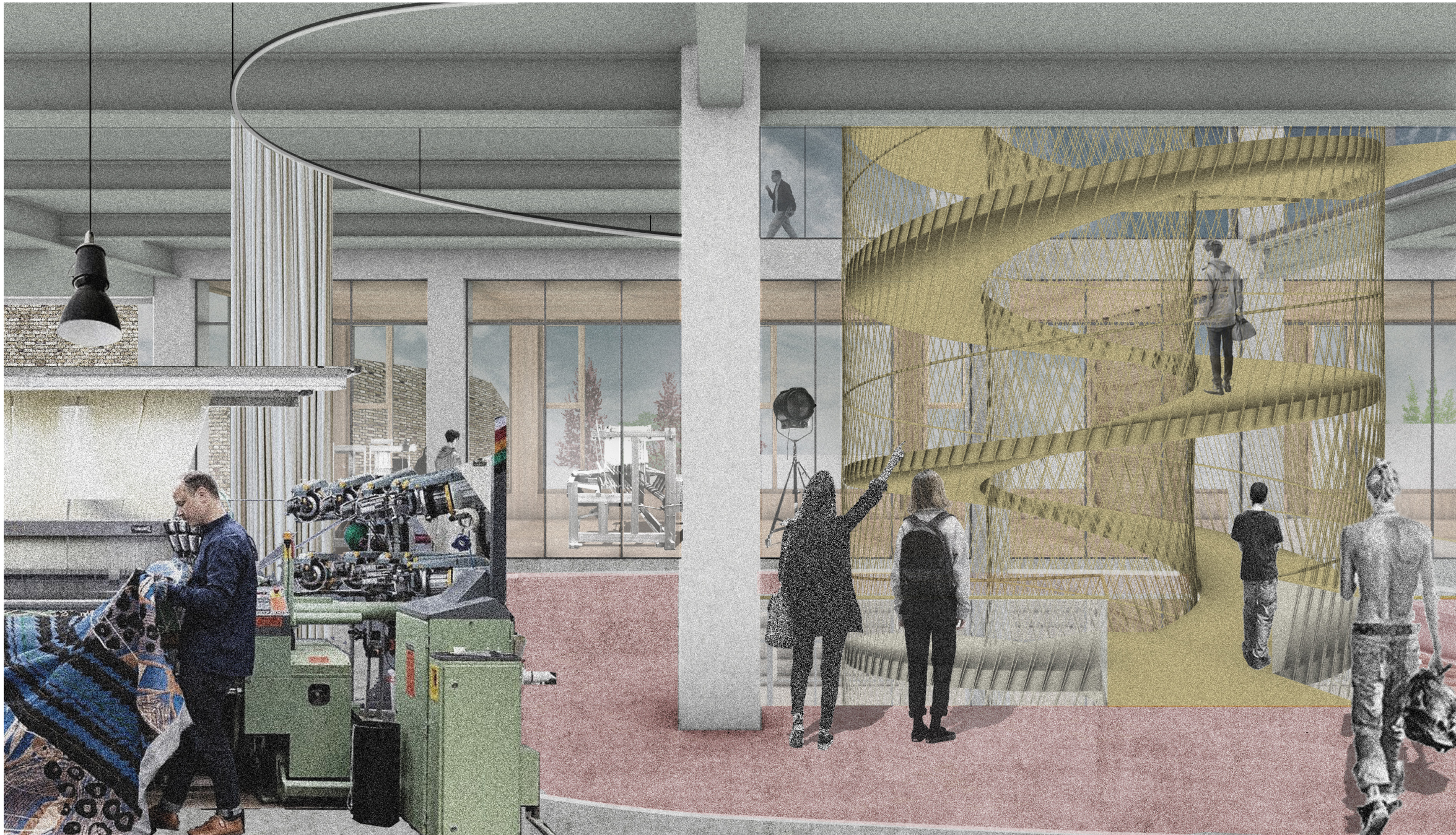
CLIMATE ZONES



CLIMATE SUMMER



CLIMATE WINTER



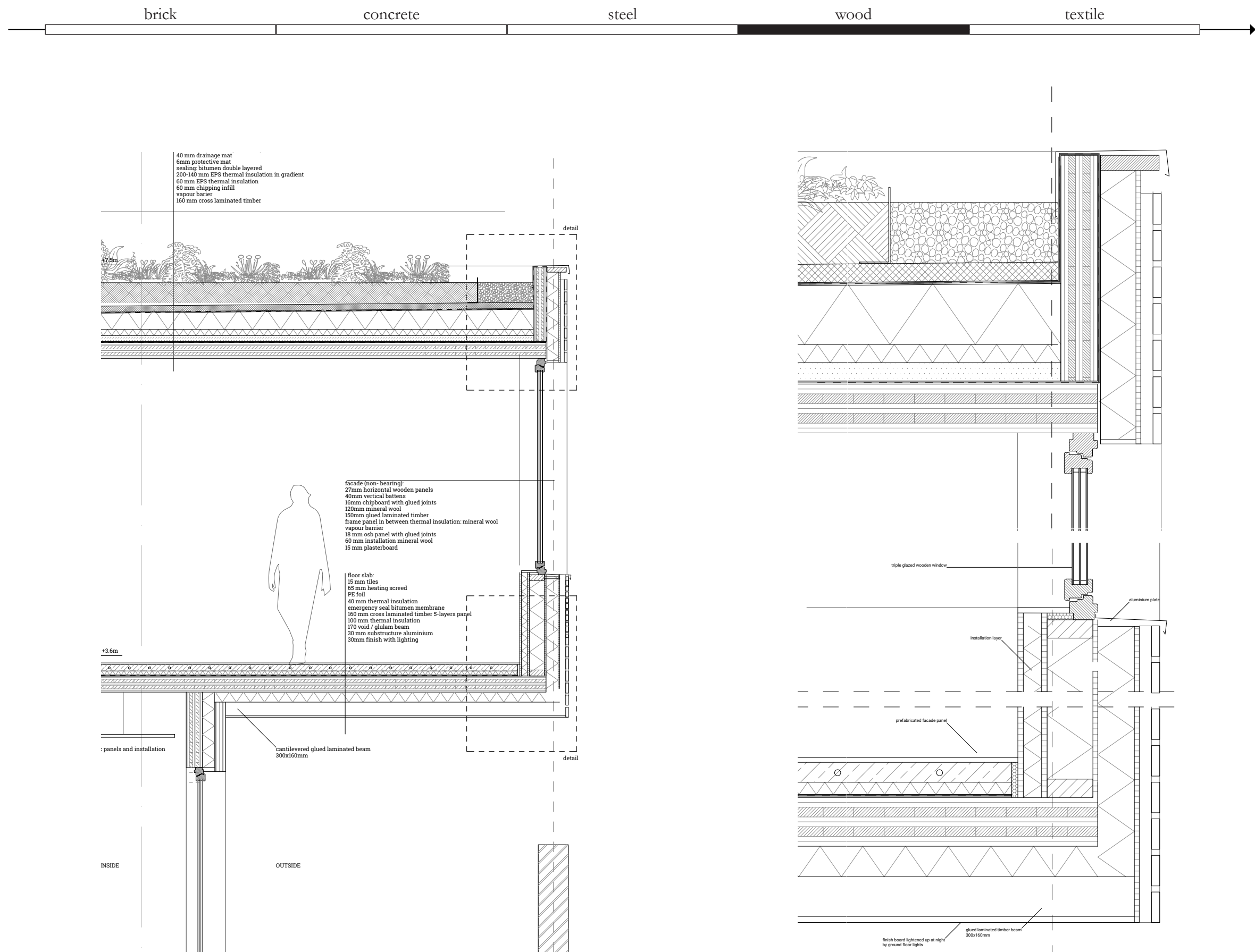
FACTORY LEVEL +1

-
- This exploded axonometric diagram illustrates the assembly of a modular furniture system. The components are numbered 01 through 13:
- 01:** The main rectangular frame structure, shown in black lines, consisting of a central table area and surrounding shelving units.
 - 02:** A long, narrow rectangular panel, likely a backrest or divider, shown in black lines.
 - 03:** A red spiral spring component, positioned between the main frame and the backrest panel.
 - 04:** A red rectangular panel, likely a backrest or divider, positioned to the right of the main frame.
 - 05:** A red rectangular block, likely a cushion or filler, positioned to the left of the main frame.
 - 06:** A red L-shaped component, likely a corner connector or support, positioned at the bottom left of the main frame.
 - 08:** A red grid-like structure, likely a base or support, positioned at the bottom left of the main frame.
 - 09:** A red rectangular block, likely a cushion or filler, positioned at the bottom left of the main frame.
 - 11:** A red rectangular panel, likely a backrest or divider, positioned to the right of the main frame.
 - 12:** A red L-shaped component, likely a corner connector or support, positioned at the bottom right of the main frame.
 - 13:** A red rectangular block, likely a cushion or filler, positioned at the bottom right of the main frame.
- Dashed lines indicate the alignment and assembly path for each component. The components are shown in red, except for the main frame (01) which is in black.

WOOD FRAGMENTS



SOUTH ELEVATION



CRAFTSMAN STUDIOS DETAILS



CRAFT STUDIOS COURTYARD VIEW DAY



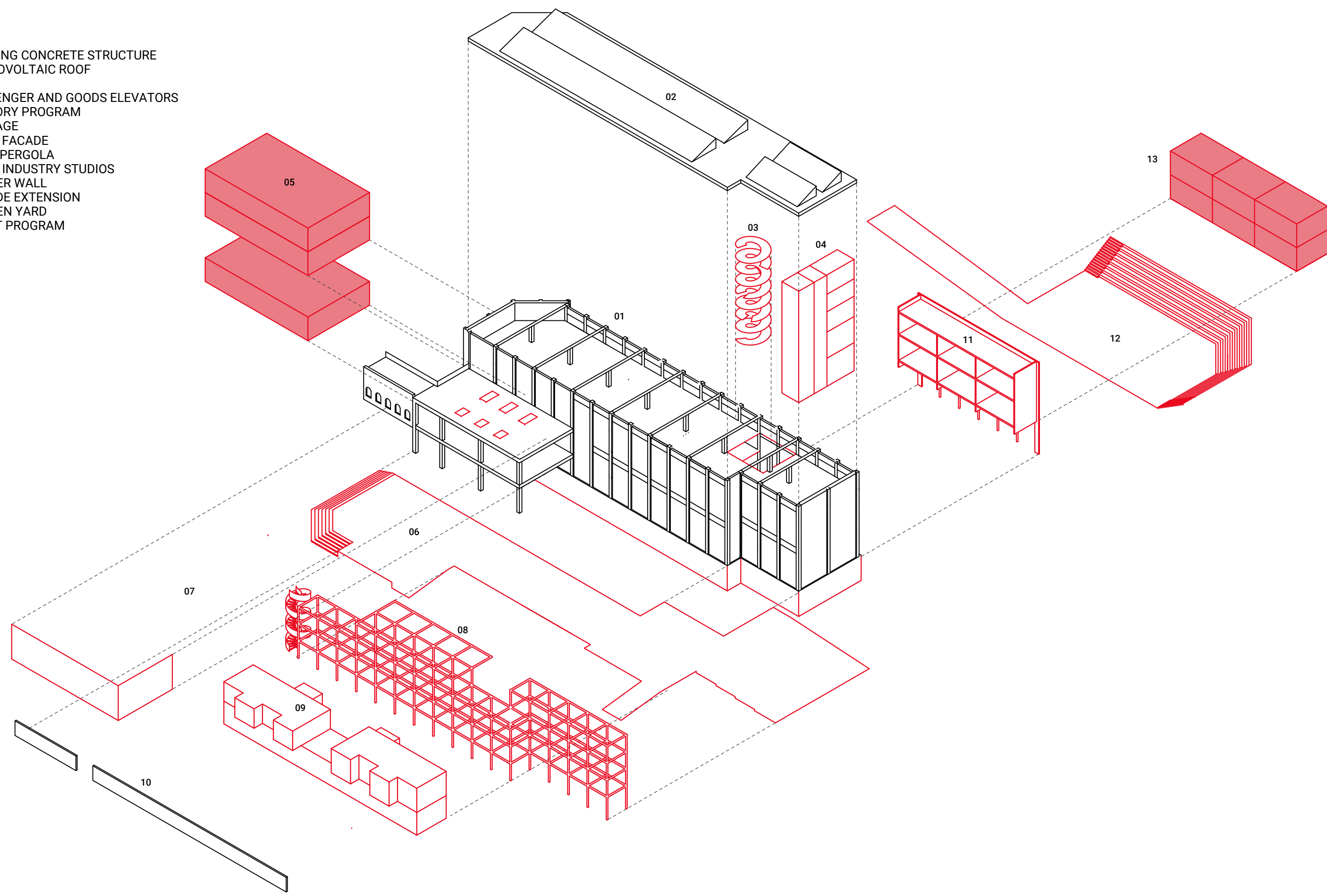
CRAFT STUDIOS COURTYARD VIEW NIGHT



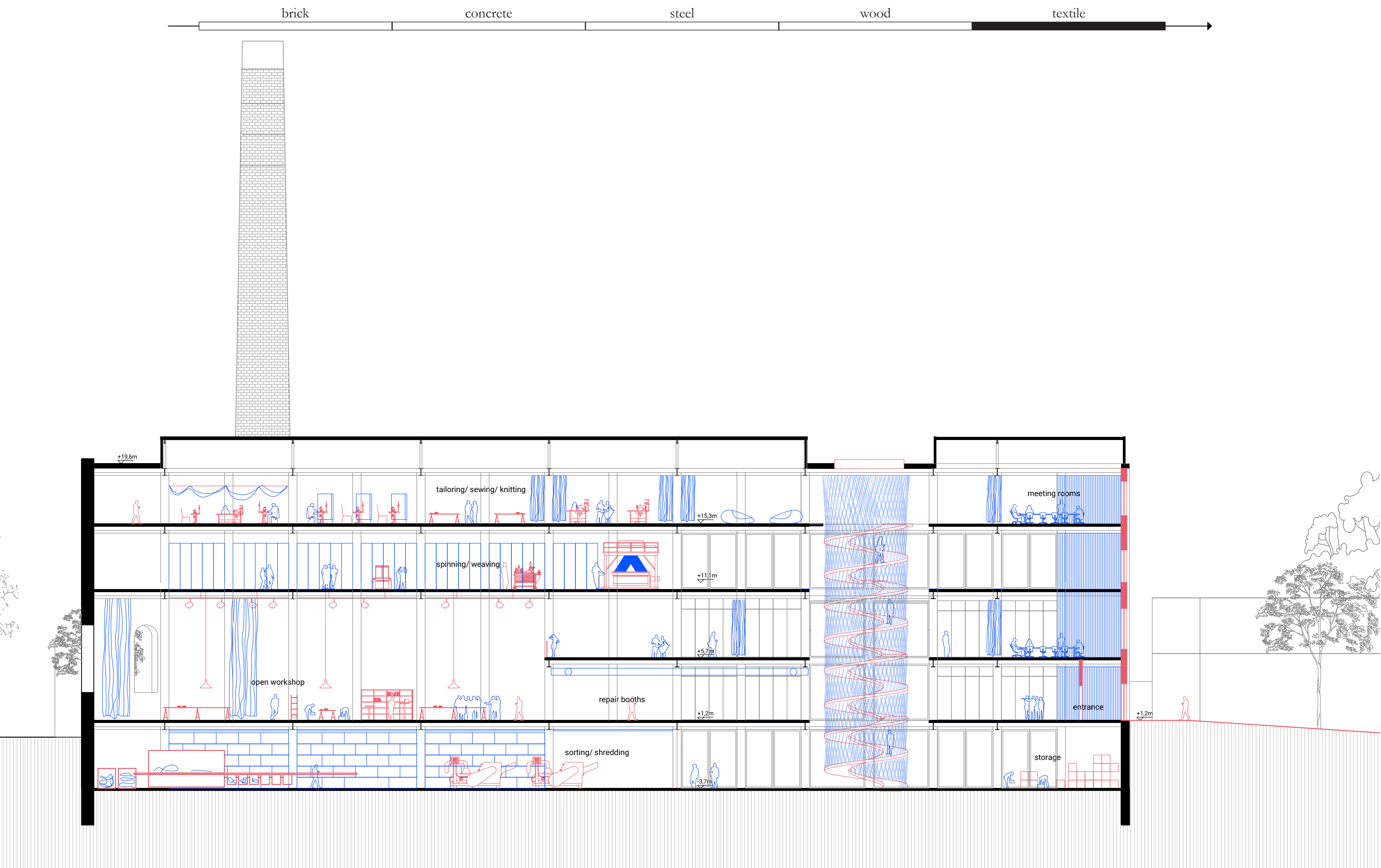


NORTH FACADE

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TEXTILE FRAGMENTS



LONGITUDINAL SECTION



THANK YOU