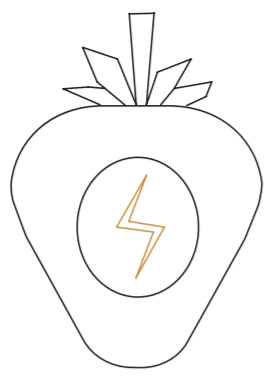


# B L O O M



## THINKS...

- ... that environmental change starts from production and manufacturing companies
- ... that design is also about other species and not just people

## CARES...

- ... about the natural environment
- ... about people
- ... about the future

## INSPIRES...

- ... a positive change in our current city dynamics
- ... people to aim for a more sustainable future
- ... recognition on the negative impact our current economic dynamics are having on the environment

## WHAT IS IT ?

BLOOM is a circular economy project that aims to reduce overall city consumption by focusing on how we source and dispose of food.

It does this by bringing food production into the city. It decomposes people's food waste on site, where electricity is generated from it and supplied to the building, but also when fully decomposed, it is used as soil/ fertiliser to grow more food on site, which is later sold back into the city.

BLOOM focuses on different strategies to create a successful circular economy and it does this through people. By focusing on the types of groups found in cities, it has created a scheme which focuses on different people's needs and creates a want and easier accessible solution for people to all play a part in a more eco-friendly future.

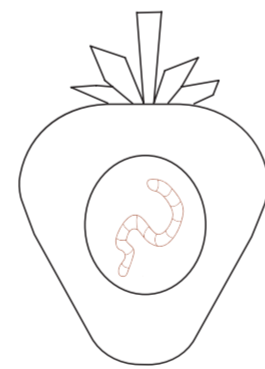
BLOOM has initially been set up in Ancoats, Manchester but has been designed to function/ occupy in any UK major city and can occupy in unused/ derelict buildings, reducing the emissions released during building.

**BLOOM is not just a building,  
it is a movement**



Indoor Hydroponic LED Bed Allotment - provides people living in flats with no garden access, space to grow food

# D E C O M



BY BLOOM

DECOM is a spin off from the project BLOOM. DECOM is a pop-up project which aims to promote BLOOM, while also encouraging people with no garden access to grow food at home and dispose their food waste into wormerys.

DECOM travels around major UK cities promoting BLOOM as a new proposal for the future. It is designed to be quickly assembled/ unassembled and can fit into a large van for easy transportation.



Internal View of DECOM

## INITIAL RESEARCH :

Based off previous research it was found that cities consume 75% of the global natural resources (WWF, 2023). The 75% consumption of natural resources is made up of multiple systems, such as transport and energy using fossil fuels, agriculture using land, wilding fishing and water waste in fashion, these are only a few examples on the types of systems that are causing a 1000 - 10,000 times higher rate of species extinction than what it should be (WWF, 2023). As a result, this is impacting vital ecological systems that sustain human life, if our consumption rate is kept at the pace it is going at the moment, then this will not only mean extreme damage to the Earth's natural climate and resources, but we also will not be able to sustain future human generations.

Research also suggested that agriculture is the cause of 80% of the global deforestation and that 1.3 billion tons of food goes to waste each year (WWF, 2023). It is evident that there is an issue in how this system works, not only this but the emissions of farming equipment and transportation of food globally is contributing to climate change.

Inspired and concerned about the risks we are facing due to our consumption methods, this project aims to create a space that will help reduce a cities consumption by focusing on how we source and dispose of food.



**1.3 billion** tons of food goes to waste each year.



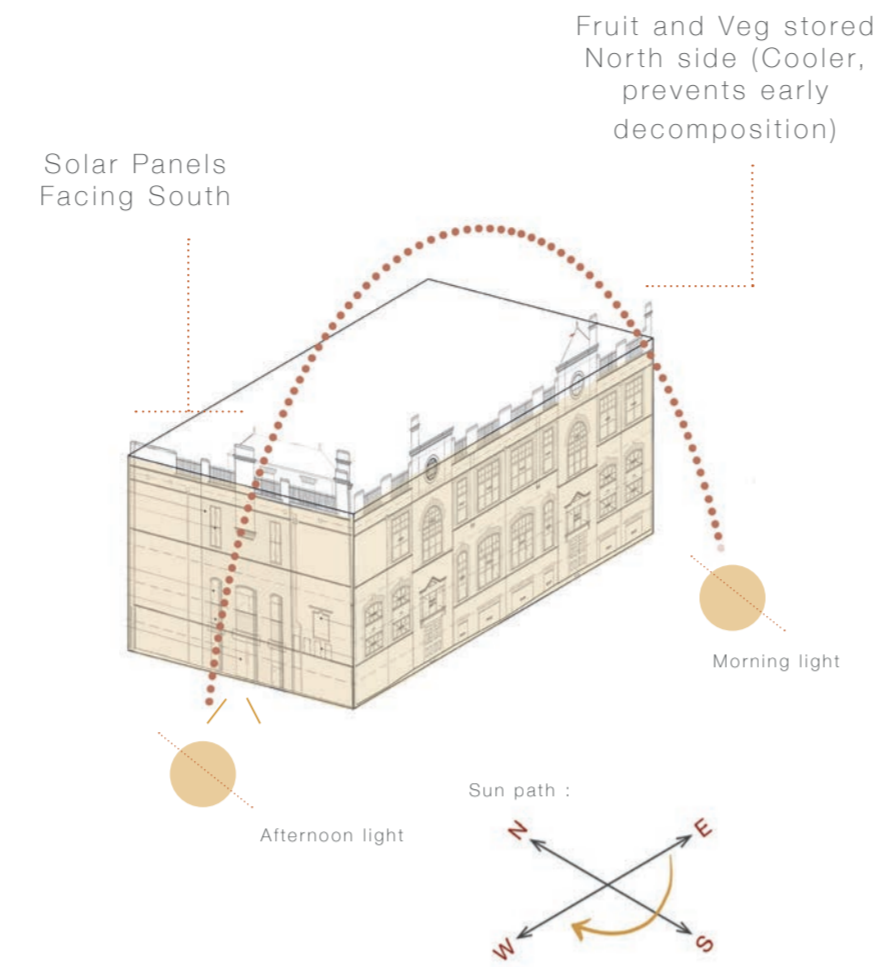
**80%** of the global deforestation is a result of agriculture.



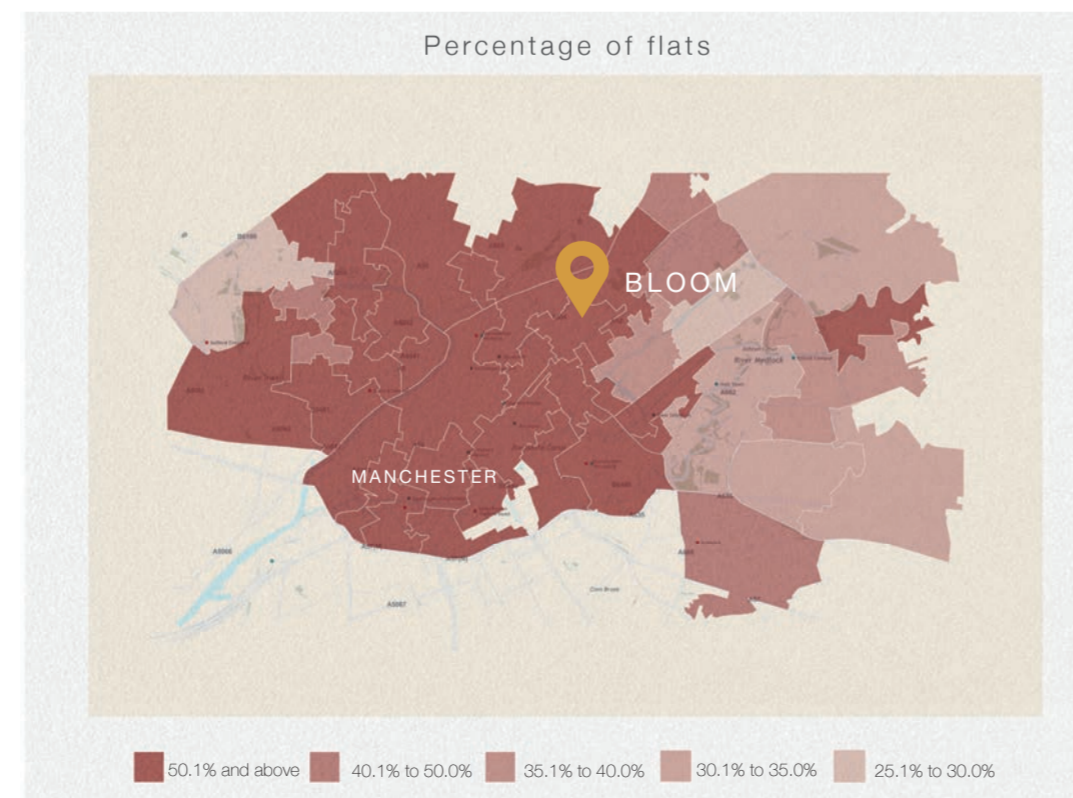
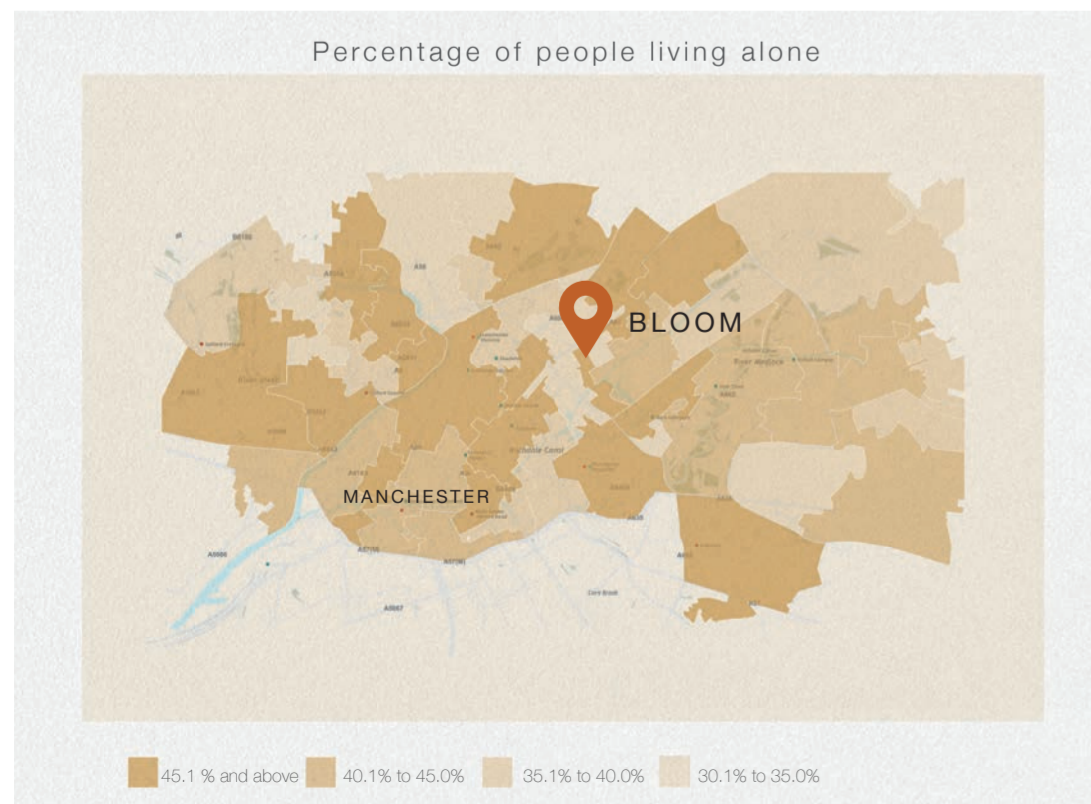
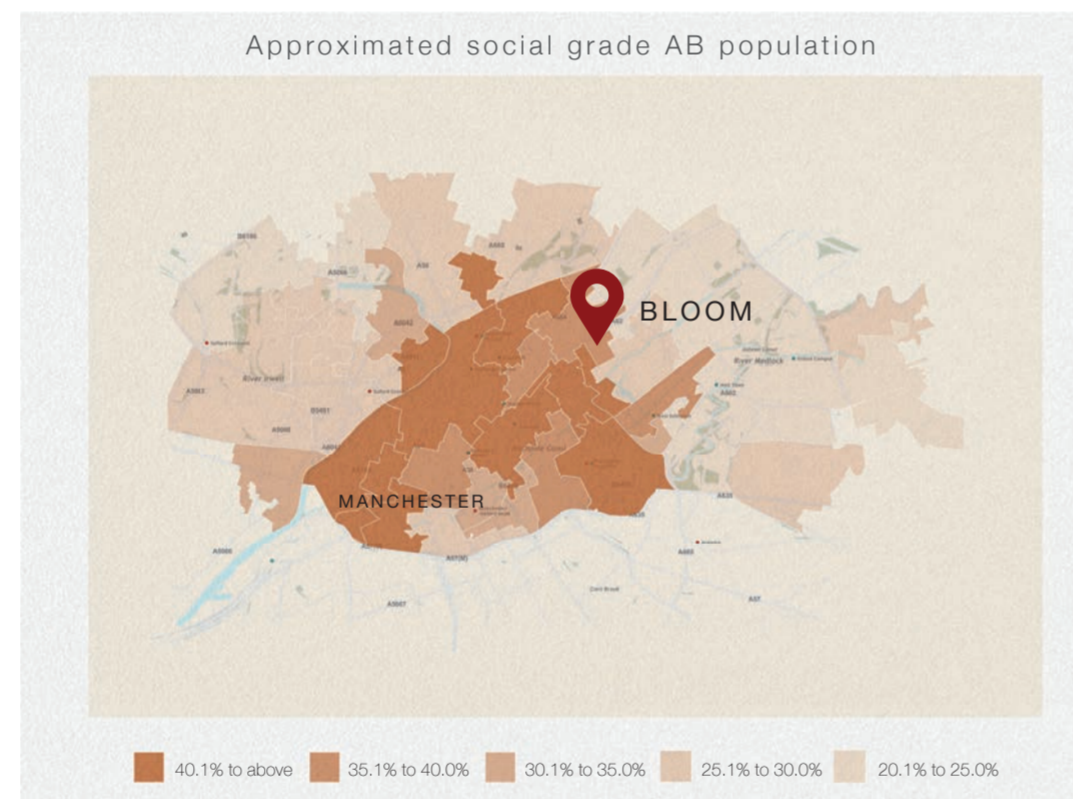
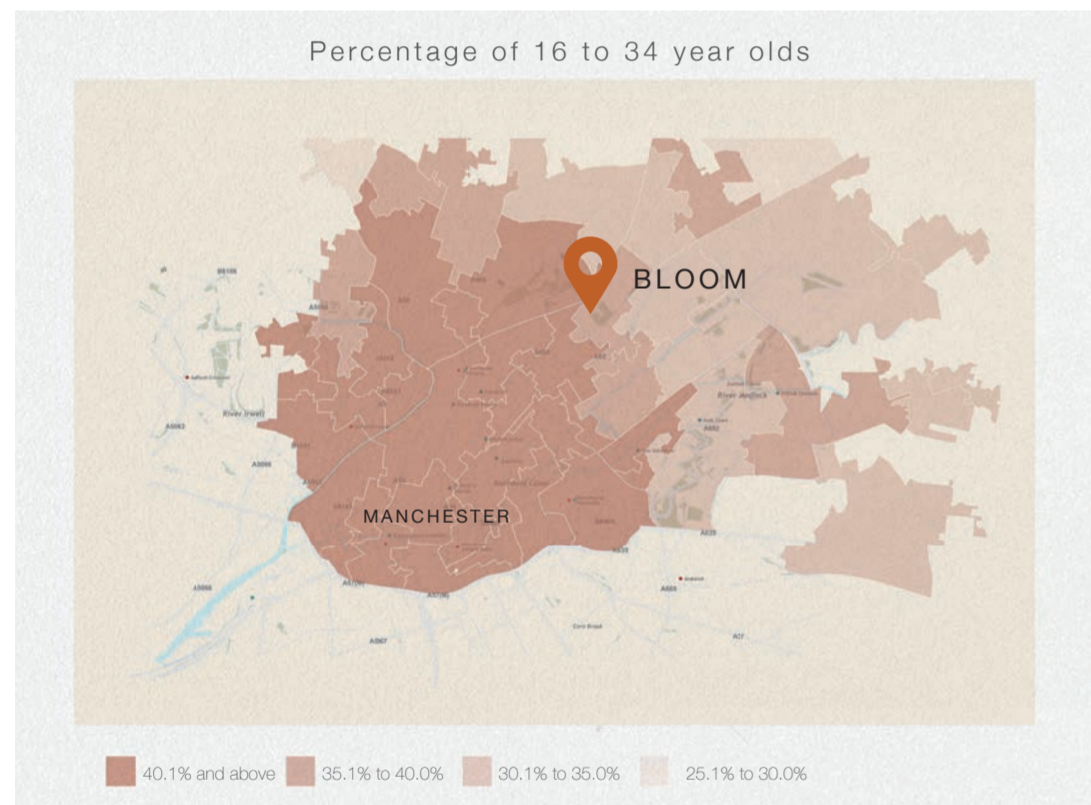
**75%** of global natural resources are consumed by cities.

## SUN DIAGRAM :

Concept considerations linked to sun path



## URBAN PEOPLE OF MANCHESTER :



## CONCEPT VISUAL :



Staff food waste collection

Food waste drop off points



### THE COMMUNAL ALLOTMENT

The communal allotment is aimed towards the people living on the outskirts of Manchester: families and elderly. A volunteering based allotment, where the food grown here is sold in the market on the ground floor. It has wheelchair accessible plant beds, social mobile seating and an area focused towards educating children on climate change. Solar panels facing the south to generate electricity.

Communal Allotment



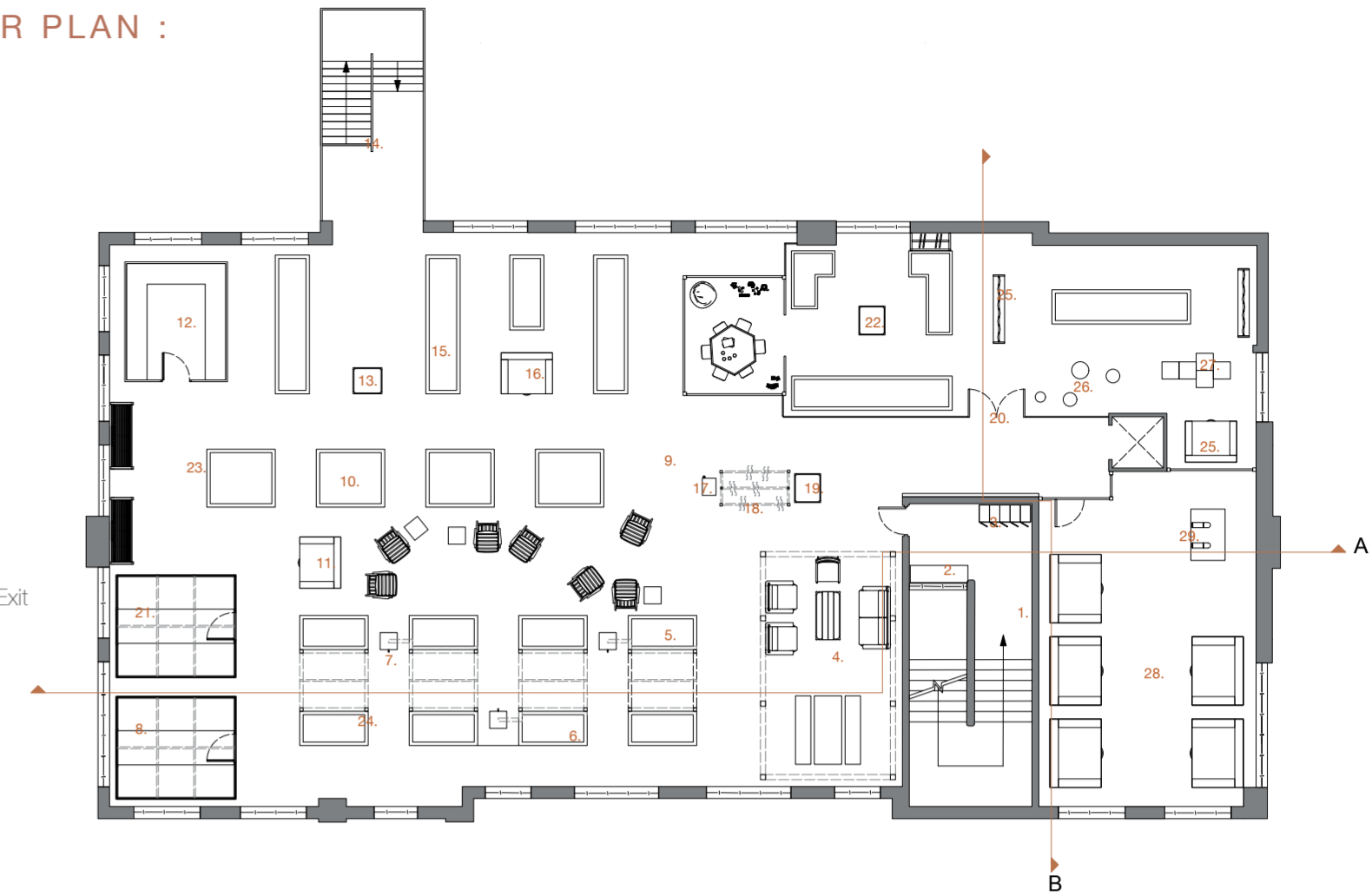
### THE MARKET

Food grown at the roof terrace is sold in the market. All food, including wonky food is sold here, this is to aim to reduce the bad stigma of 'wonky' foods and therefore reduce waste. The market also provides the locals with another shop, as there is only one in the local area.

The Market

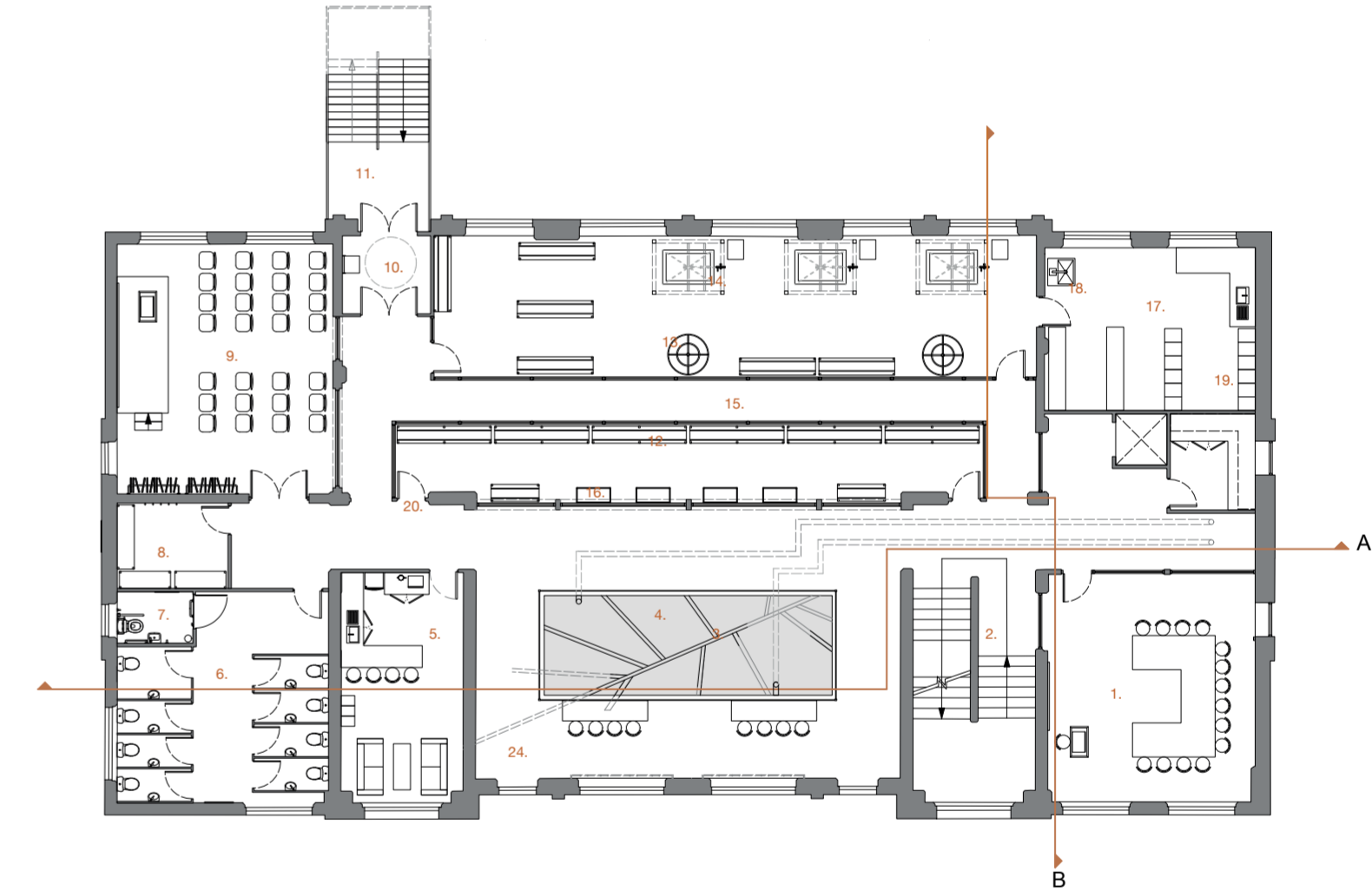
### ROOF TERRACE FLOOR PLAN :

1. Lockers
2. Shoe Changing
3. Entrance/ Exit
4. Sheltered Seating
5. Wheelchair Accessible Beds
6. High Rise Beds
7. Rain Water Collection
8. Greenhouse (Saplings)
9. Communal Mobile Seating
10. Low Rise Beds
11. Compost Storage
12. Garden Shed Storage
13. Wormery
14. Fire Escape Stairs
15. Low Rise Beds
16. Compost Storage
17. Rain Water Filtration Drinking System
18. Wind Chimes
19. Wormery
20. Children's Educational Area Entrance/ Exit
21. Enclosed Children's Play Area
22. Wormery
23. Wind Chimes
24. Compost Storage
25. Outdoor Instrument
26. Play Stumps
27. Hop Scotch
28. Compost Storage
29. Pneumatic Tube System



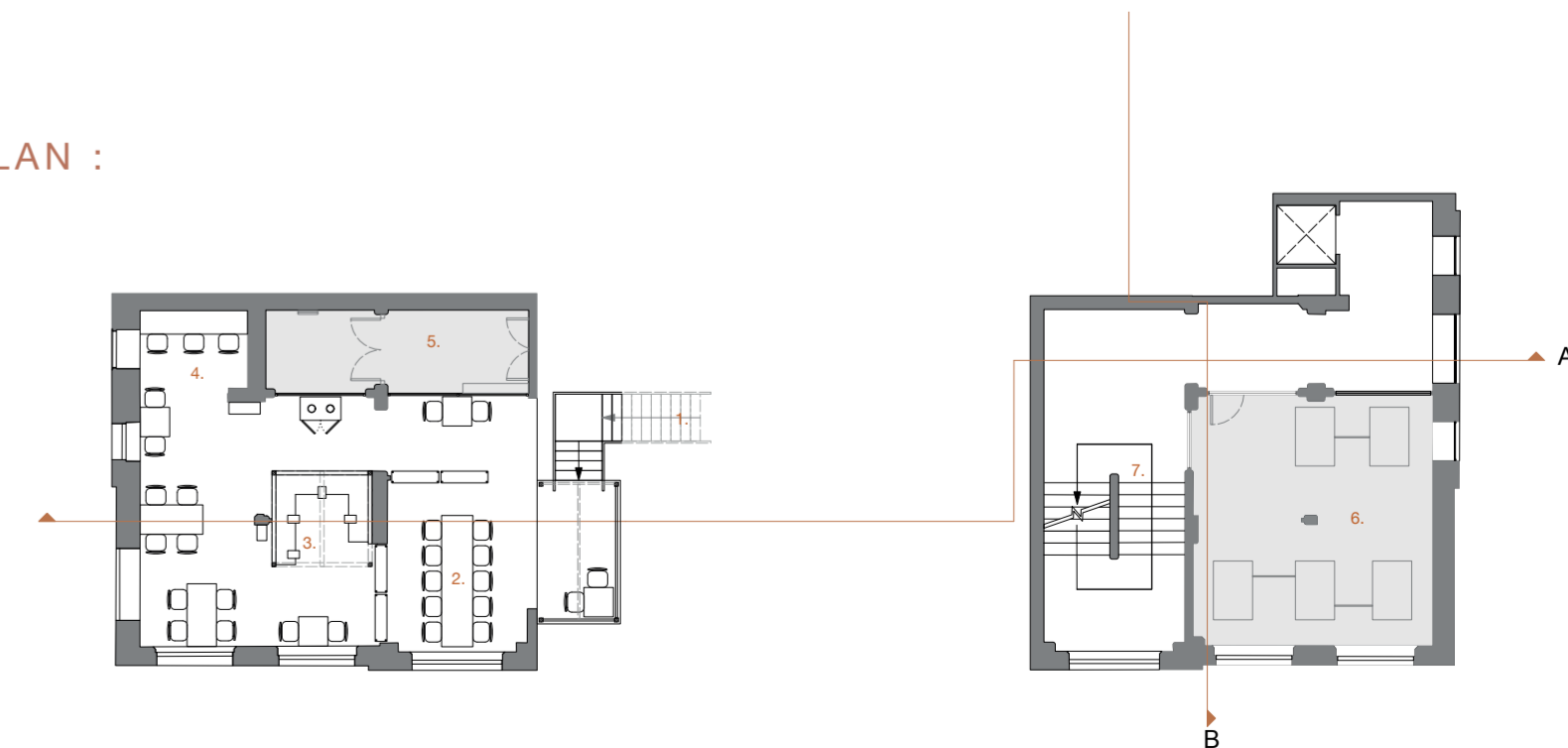
### FIRST FLOOR PLAN :

1. Entrance/ Exit
2. Workshop
3. 3D Curated Structure
4. Void
5. Staff Room
6. Unisex Toilets
7. Disabled Toilet
8. Cleaning Cupboard Storage
9. Lecture Theatre
10. Fire Escape Lobby
11. Fire Escape Stairs
12. LED Hydroponic Static Beds
13. LED Hydroponic Turning Beds
14. LED Hydroponic Pulley Beds
15. LED Bed Public Walk through
16. Wormery
17. LED Bed Storage Room
18. Water Filling Station
19. Lockers
20. Fob Access Door



### MEZZANINE FLOOR PLAN :

1. Entrance/ Exit
2. Communal Seating
3. Comfortable Social Seating
4. Private Seating
5. Void
6. Void over looking generating room
7. Entrance/ Exit





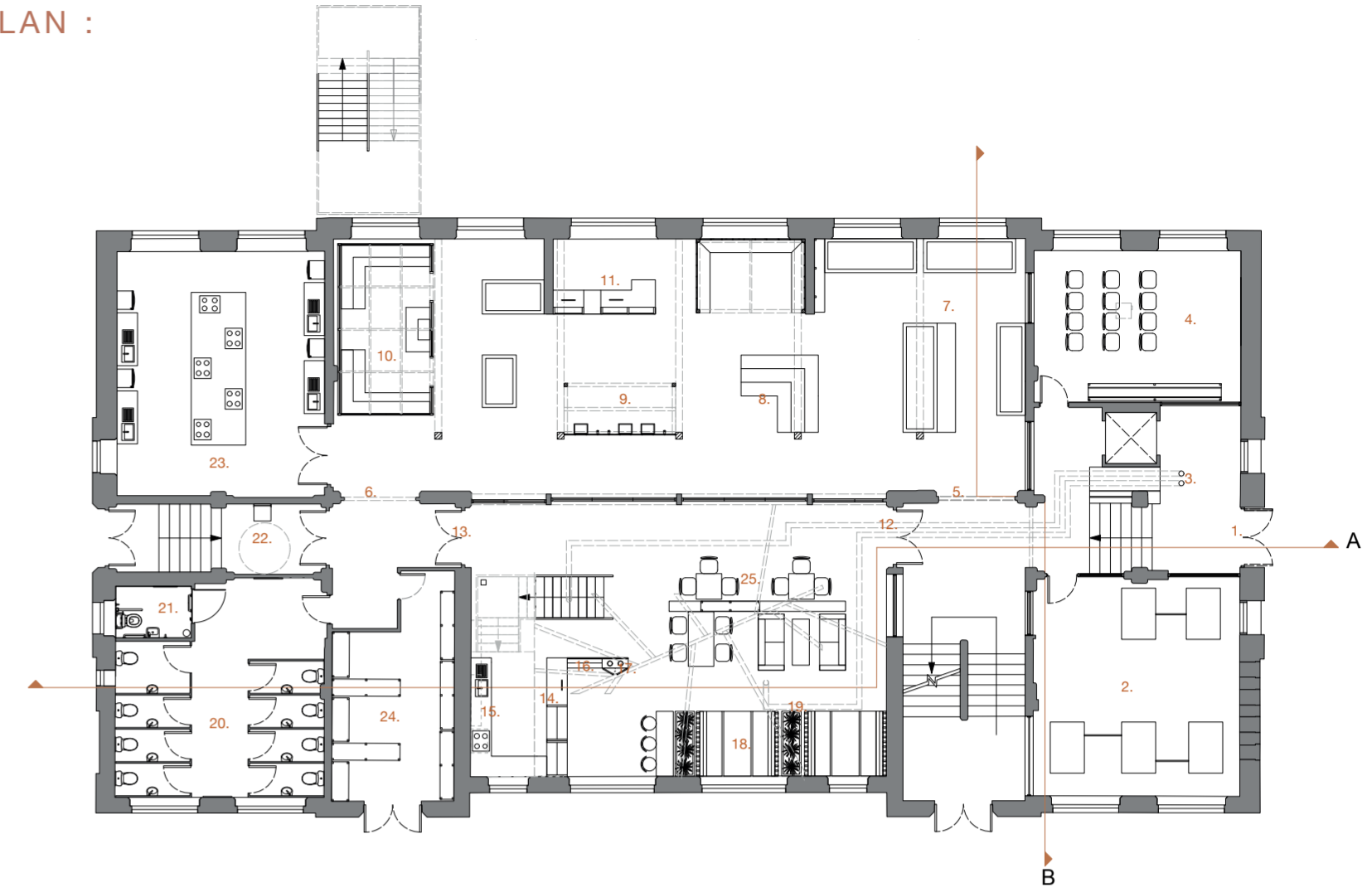
**THE PNEUMATIC TUBES**

Pneumatic tubes are used to transport food waste from basement to roof terrace in capsules. Thermophilic stage of decomposition is stored in basement to reduce smell, biogas from this stage is used to generate electricity to power LED beds. When the food waste reaches its mature phase, it is used as fertiliser to grow more food on the roof terrace.

Void Space showing pneumatic transportation tube system

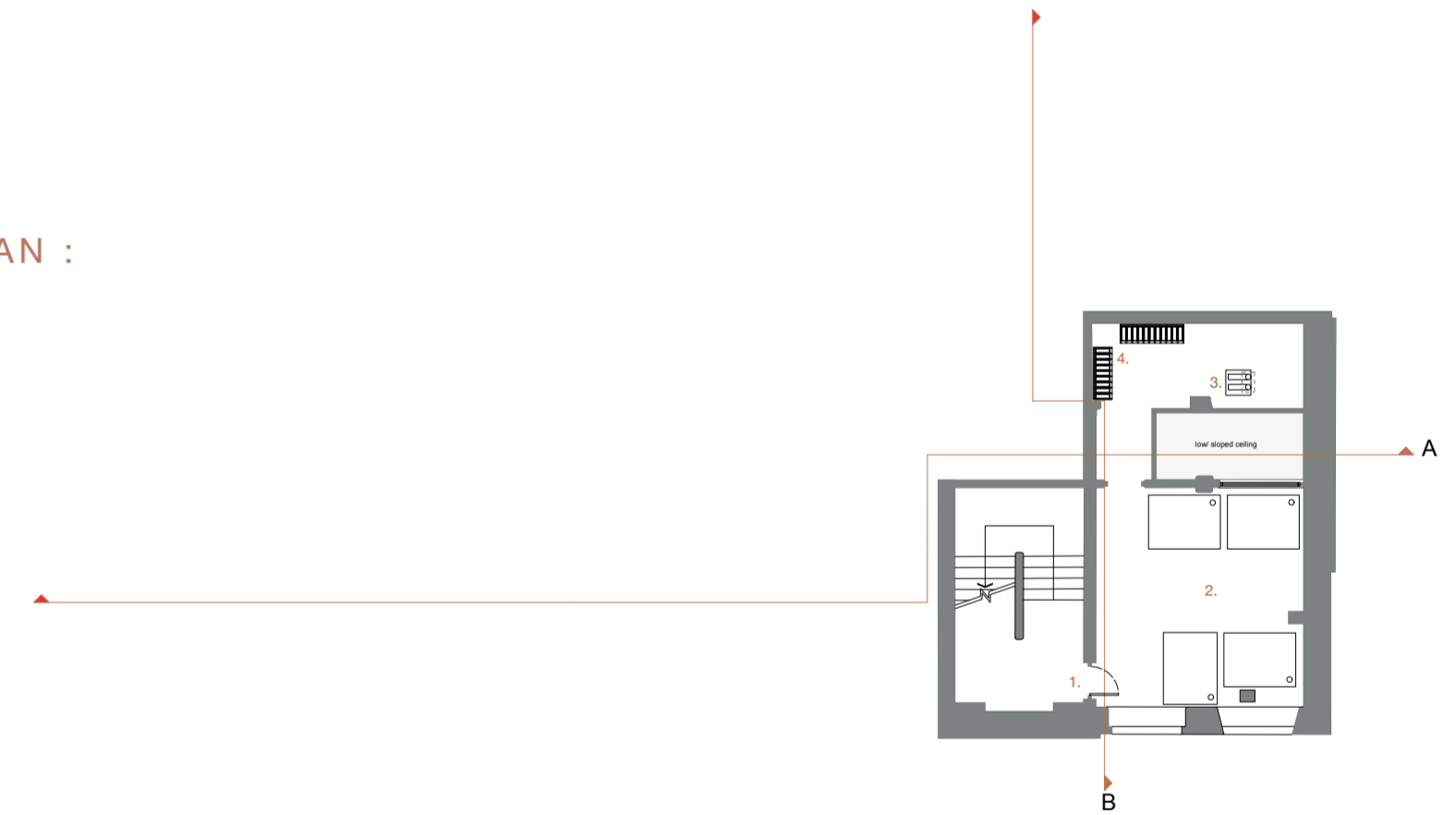
**GROUND FLOOR PLAN :**

1. Entrance/ Exit
2. Electricity Generating Room
3. Pneumatic Tube System
4. Project Information Cinema
5. Market Entrance/ Exit
6. Market Entrance/ Exit
7. Fruit & Vegetable Stall
8. Companio Bakery Stall
9. Garden Equipment Stall
10. Flowers Stall
11. Checkout
12. Workers Cafe Entrance/ Exit
13. Workers Cafe Entrance/ Exit
14. Cafe Counter
15. Cafe Kitchen
16. Cutlery and Condiments Counter
17. Bin
18. Enclosed Seating
19. Plant Beds
20. Unisex Toilets
21. Disabled Toilet
22. Fire Escape Lobby
23. Cookery School
24. Market Storage
25. Open Seating



**BASEMENT FLOOR PLAN :**

1. Entrance/ Exit
2. Food Waste Storage
3. Pneumatic Tube System
4. Pneumatic Tube Storage



**THE WORKERS CAFE**

BLOOM is not only a project focusing on a sustainable future, but it also focuses on the NOW, and the people living in the city NOW. Through research the majority of people living in the city centre are young professionals living in flats with no garden access, BLOOM provides them with the workers cafe that gives a social working spot to meet like-minded individuals.

Workers Cafe

**MADE FOR URBAN PEOPLE :**



**THE RENTERS**

Are young professionals living in flats in Manchester City Centre. They have no garden access: coming to BLOOM allows a reconnection to nature and a temporary escape from busy working lifestyles. The Renters are fascinated by the modern hydroponic LED allotment beds and are invited to rent a space which encapsulates a futuristic twist on traditional allotment renting.



**THE VOLUNTEERS**

Are the people living on the outskirts on Manchester City Centre. They mostly live on their own and want to find connections with people of similar interests. Volunteers at BLOOM are passionate about the environment and see the impact the city is having on it. Volunteering on the communal allotments gives these people the opportunity to be a part of a circular economy system, fighting to change the future of city dynamics.



**THE CONSUMERS**

Are passersby or local residents that are trying to find a cheaper alternative to access groceries than the local Co-op. They take pride in Ancoats Conservation Area's history, and enjoy coming to BLOOM where they can eat, shop and take part in lectures/ workshops, in a modern renovation of a historical building.



**THE CONTRIBUTORS**

Are people living in Manchester City Centre or local restaurants who contribute their food waste to the scheme. They have the option to drop the food waste off at the BLOOM centre or at a local drop of bin for easier commuting.



**THE WORKERS**

Are staff who work at BLOOM. They have a passion for the environment and a strong belief in trying to make a change in our city's current consumption dynamics, for a future that can sustain human life without impacting on the environment. The Workers also collect food waste from drop off bins by bicycle.

**FOOD WASTE MATERIALS :**



Potato Skins



Avocado Skins



Beetroot Juice

BLOOM aims to find as many possible uses of food waste. With the aim to reduce overall city consumption, it focuses at reducing this through the circulation of food. Therefore, a food's uses does not end after consumption: fruit peels, coffee grounds, vegetable skins etc, can be useful and not just disposed of. BLOOM experimented with drying food waste and mixing it with jesomite to discover new types of materials. Jesomite is a mineral based resin, so can be broken down with water, unlike typical plastic resins that cannot be broken down and are bad for the environment.

**BLOOM : A CIRCULAR ECONOMY PROJECT**

Food waste journey and urban people contribution diagram

