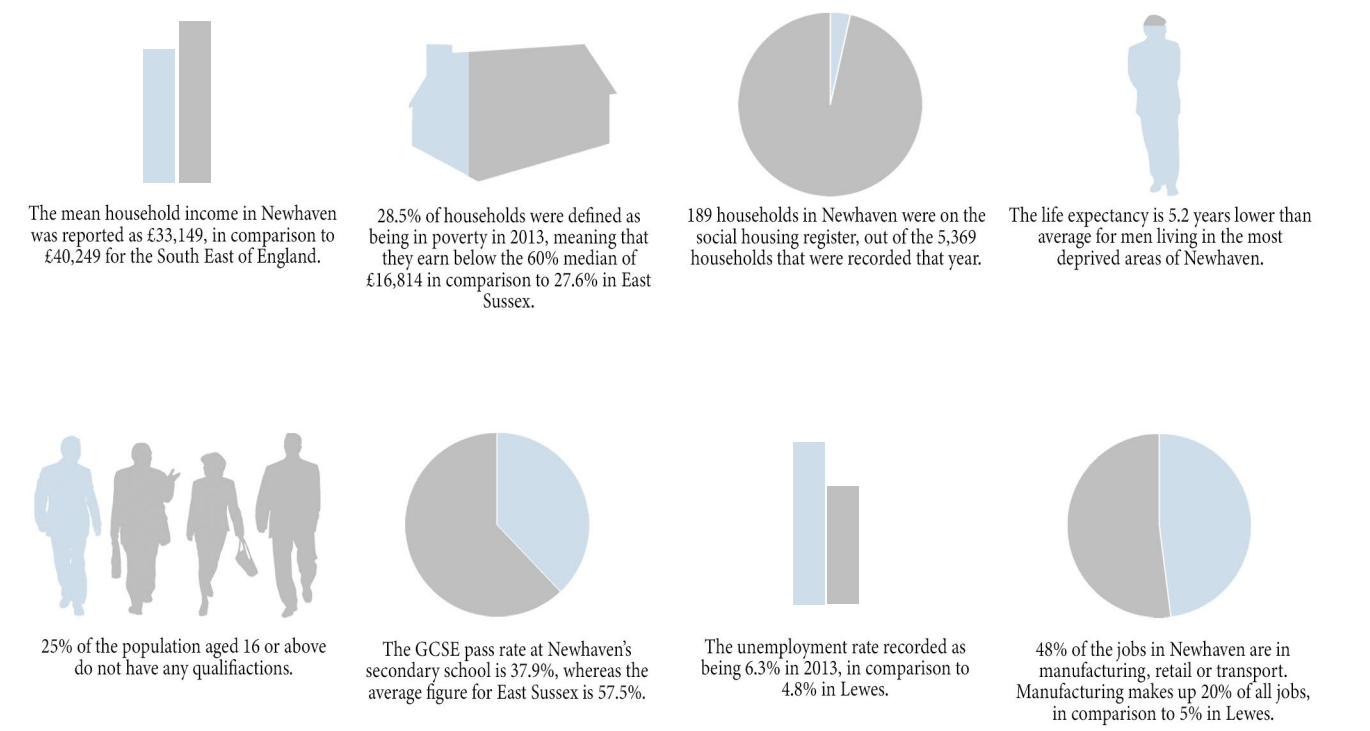
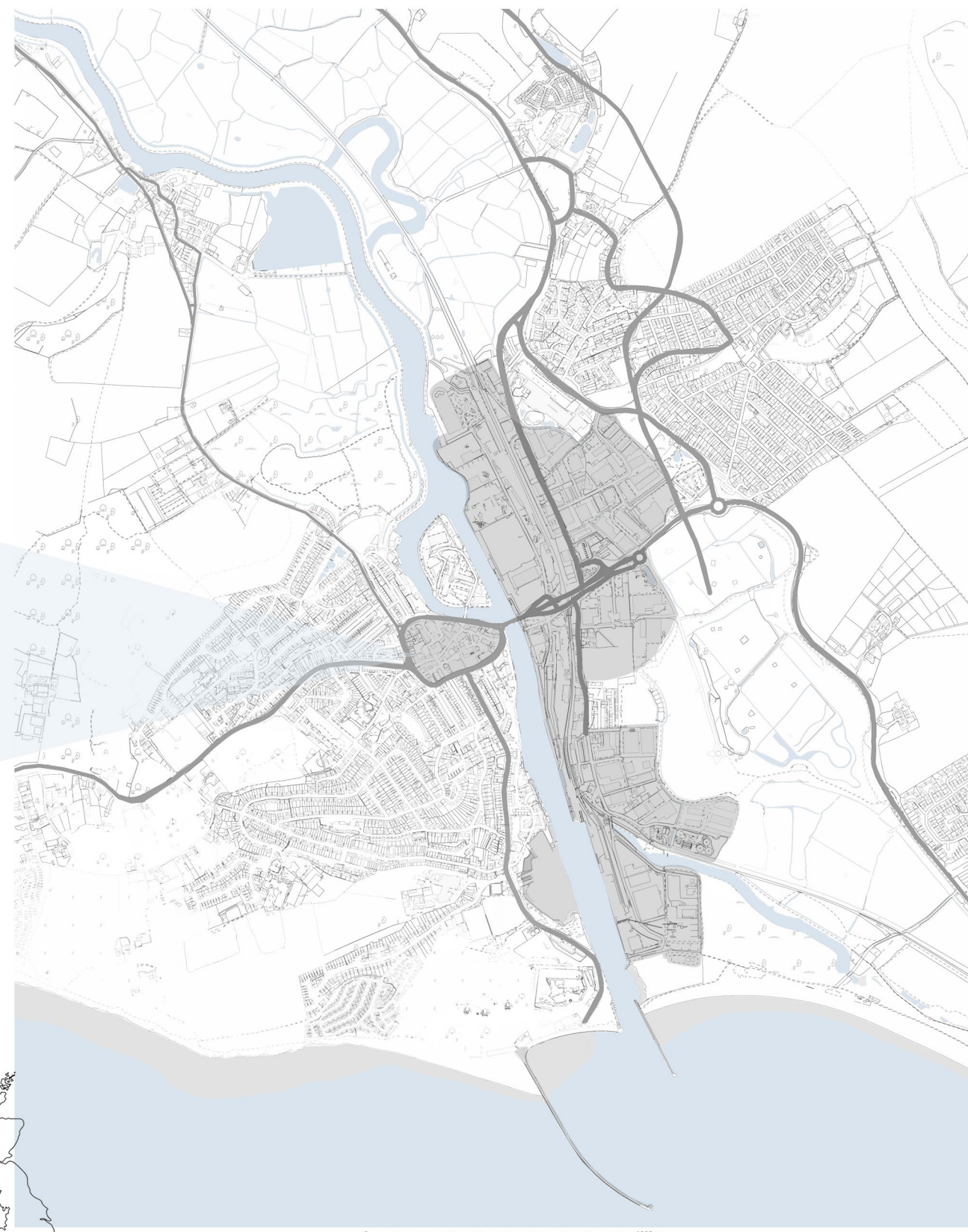
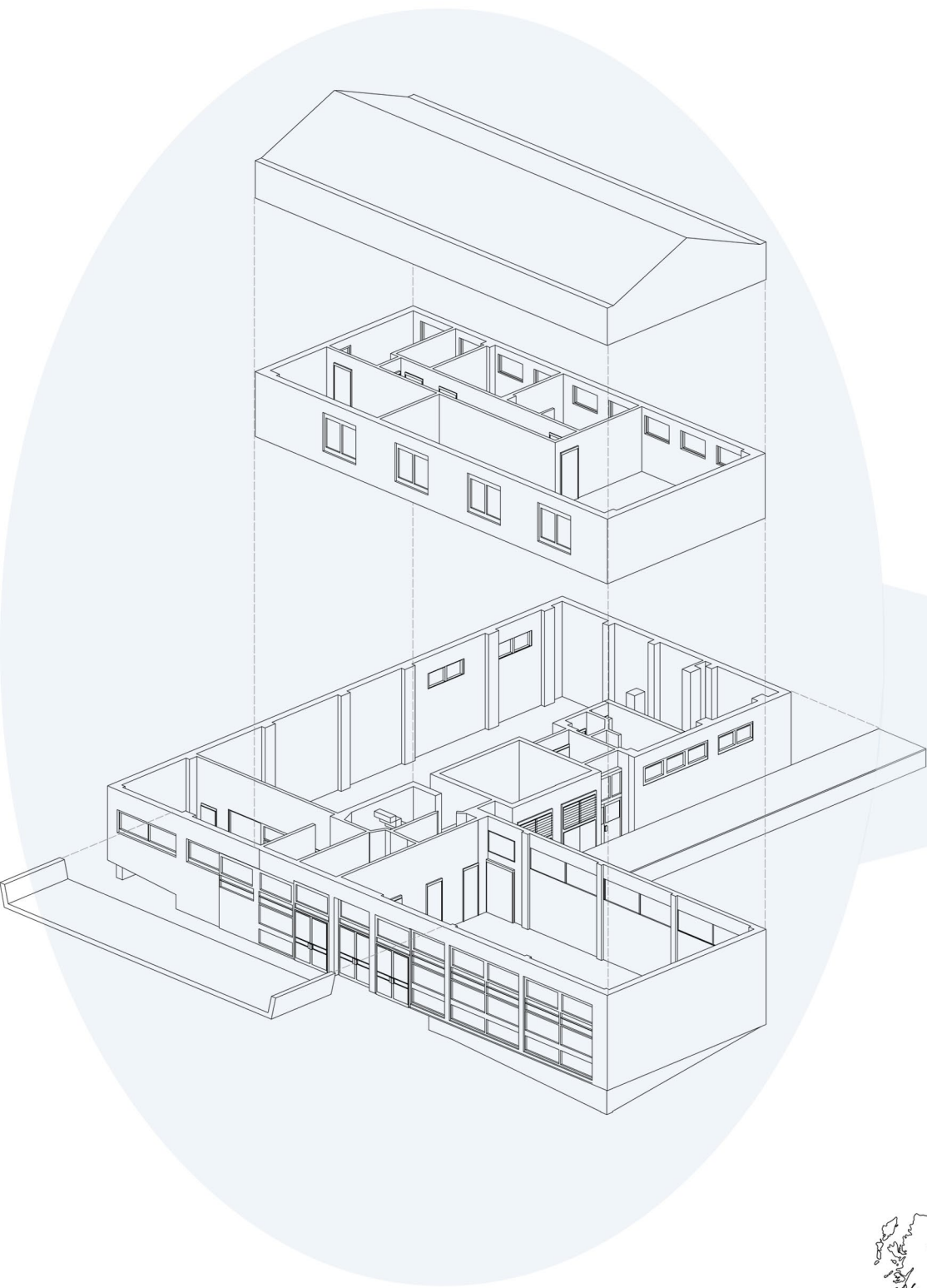


Introduction to the Site and Programme



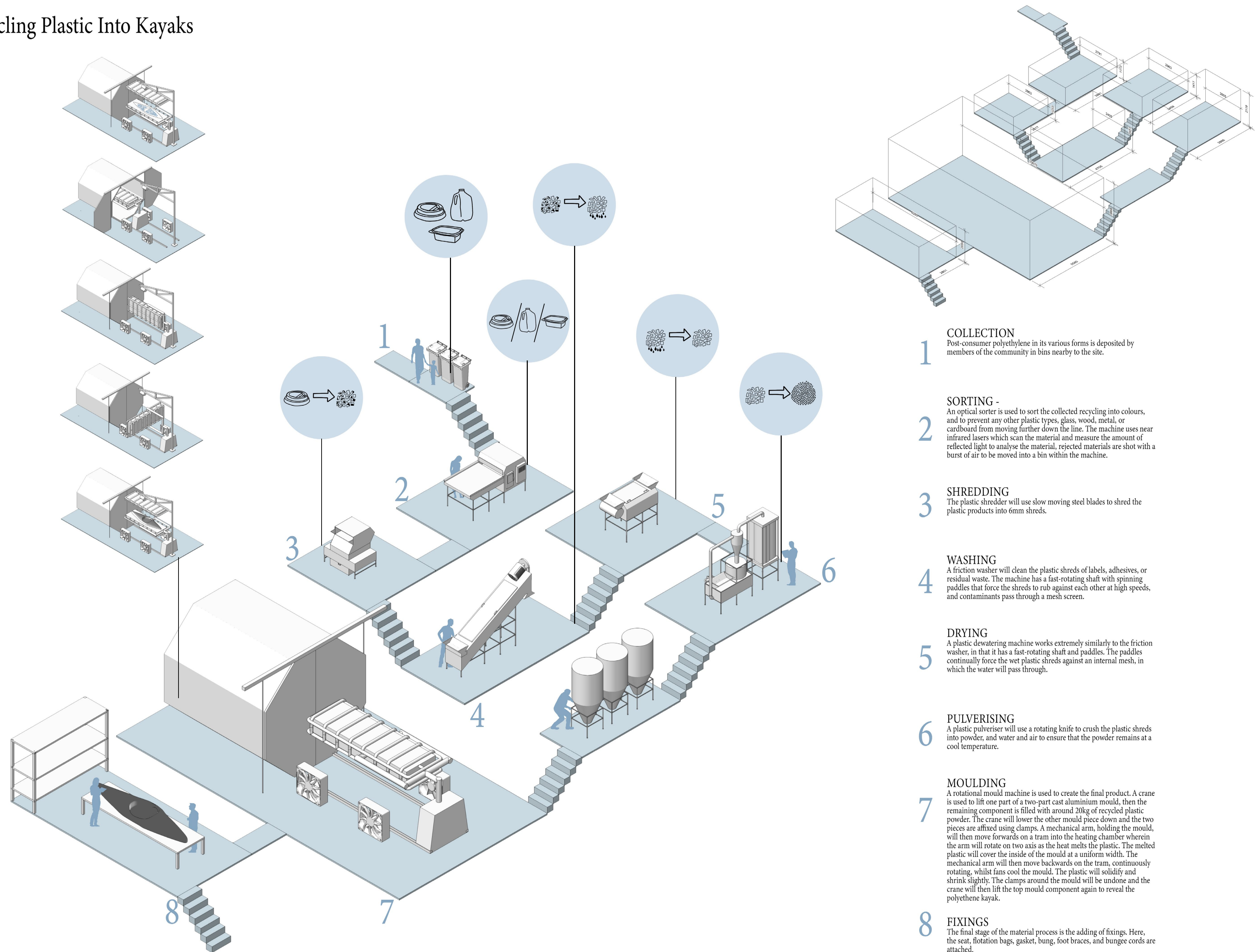
Newhaven, which is home to around twelve thousand people, is a port town located in East Sussex in the south of England and is clustered around the mouth of the River Ouse wherein regular passenger ferries to Dieppe, France run from. As such, it has a strong maritime history, which is reflected in the fishing and sailing activities that the people of Newhaven partake in. The town is surrounded by the South Downs National Park, the Castle Hill Nature Reserve and Ouse Estuary Nature Reserve. The Newhaven Cliffs are a Site of Special Scientific Interest due to the many Santonian and Campanian fossils which have been found there, and the significant flora and fauna biological interest. Once a thriving port, Newhaven has seen a decline since the end of the Second World War, as maritime and freight trade in the town decreased, alongside a reduction in public spending and private investment. The beauty of the rolling hills, marshland, cliffs, and open sea have been overshadowed by a sizeable industrial estate that has evolved over time to the east of the river. Industrial developments, unemployment, and poverty have replaced the image of the town.

The brief for this project was to design a making or fabricating space. This space should also collapse the boundary between private and public space. The fabricating process that has been proposed in this project is kayak moulding, and the process of recycling household plastics to produce the material for moulding. The aim of which is to reassert a fading narrative within Newhaven, reclaim the town from industry, and encourage sustainable practice within the town's new Enterprise Zone. Newhaven, historically, was known for its strong manufacturing industry and for its port. Following the Second World War, the port was met with a huge decline and slowly its reputation for its beautiful sandy beaches, import and export, the marina, and water sports activities was replaced solely with industry. In recent years, the port itself has been sold to a French company, who in turn closed off the 15-acre beach. The estuary has been claimed completely on one side by factory warehouses, piles upon piles of asphalt, and a heavy waste incinerator. Newhaven has lost its bright, individualistic character that it once had – now often being named a 'ghost town'. This project proposes that a step towards reclaiming Newhaven's character is to reignite a passion for water sports, or to be specific, kayaking, whilst also encouraging the people of Newhaven to claim its reputation for industry. The process of collecting and recycling plastics for kayak forming is particularly important to the project as it has the aim of fostering a sense of community ownership over the final product, rather than creating just another alienating industry within the town.



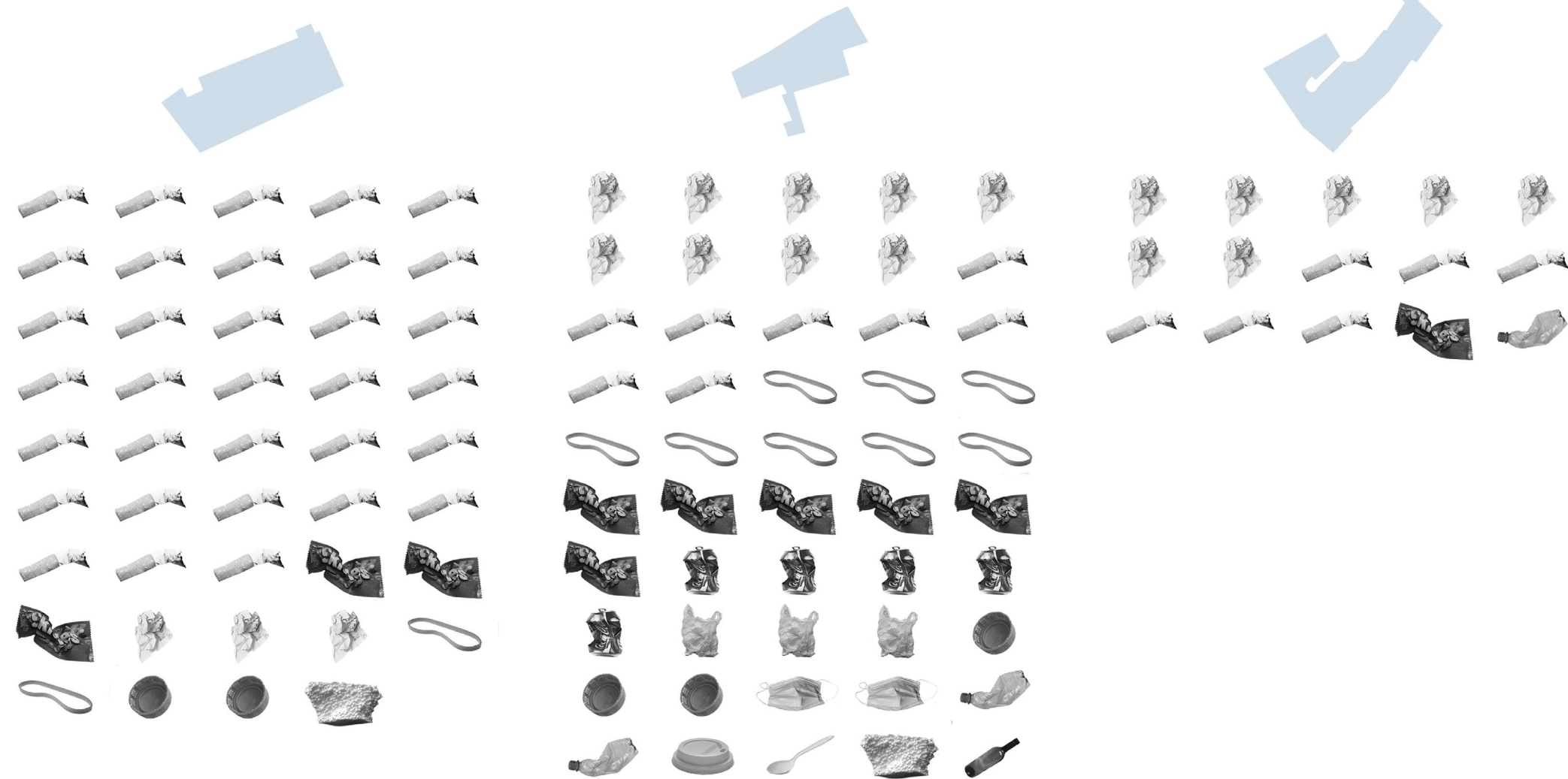
Past Present Potential Future

The Process of Recycling Plastic Into Kayaks



- 1 COLLECTION**
 Post-consumer polyethylene in its various forms is deposited by members of the community in bins nearby to the site.
- 2 SORTING -**
 An optical sorter is used to sort the collected recycling into colours, and to prevent any other plastic types, glass, wood, metal, or cardboard from moving further down the line. The machine uses near infrared lasers which scan the material and measure the amount of reflected light to analyse the material, rejected materials are shot with a burst of air to be moved into a bin within the machine.
- 3 SHREDDING**
 The plastic shredder will use slow moving steel blades to shred the plastic products into 6mm shreds.
- 4 WASHING**
 A friction washer will clean the plastic shreds of labels, adhesives, or residual waste. The machine has a fast-rotating shaft with spinning paddles that force the shreds to rub against each other at high speeds, and contaminants pass through a mesh screen.
- 5 DRYING**
 A plastic dewatering machine works extremely similarly to the friction washer, in that it has a fast-rotating shaft and paddles. The paddles continually force the wet plastic shreds against an internal mesh, in which the water will pass through.
- 6 PULVERISING**
 A plastic pulveriser will use a rotating knife to crush the plastic shreds into powder, and water and air to ensure that the powder remains at a cool temperature.
- 7 MOULDING**
 A rotational mould machine is used to create the final product. A crane is used to lift one part of a two-part cast aluminium mould, then the remaining component is filled with around 20kg of recycled plastic powder. The crane will lower the other mould piece down and the two pieces are affixed using clamps. A mechanical arm, holding the mould, will then move forwards on a tram into the heating chamber wherein the arm will rotate on two axis as the heat melts the plastic. The melted plastic will cover the inside of the mould at a uniform width. The mechanical arm will then move backwards on the tram, continuously rotating, whilst fans cool the mould. The plastic will solidify and shrink slightly. The clamps around the mould will be undone and the crane will then lift the top mould component again to reveal the polyethene kayak.
- 8 FIXINGS**
 The final stage of the material process is the adding of fixings. Here, the seat, flotation bags, gasket, bung, foot braces, and bungee cords are attached.

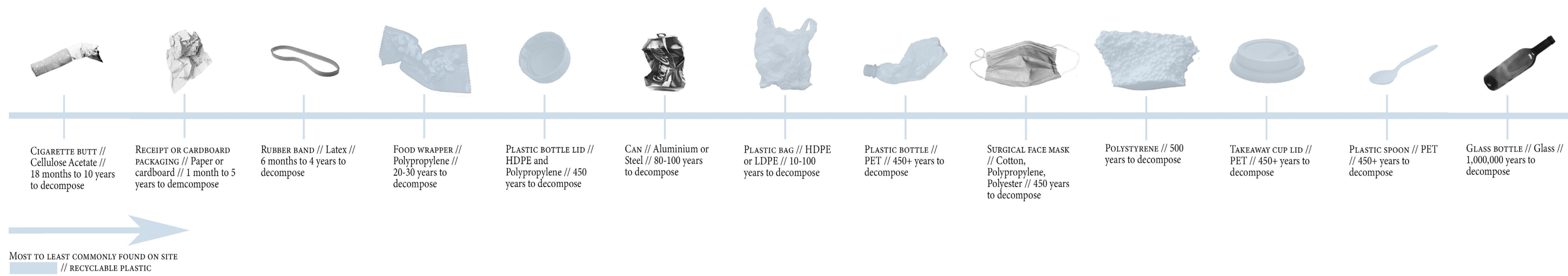
Survey of Recyclable Plastic in Newhaven High Street



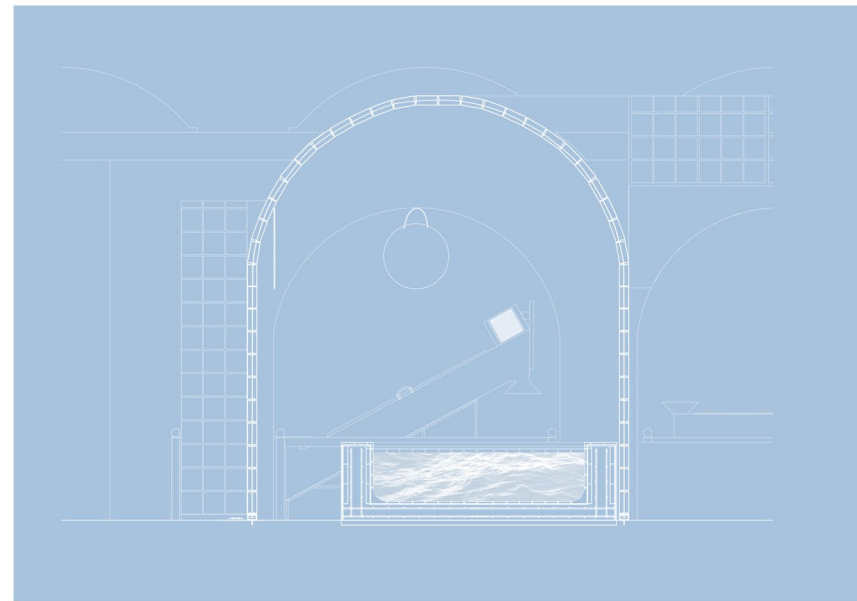
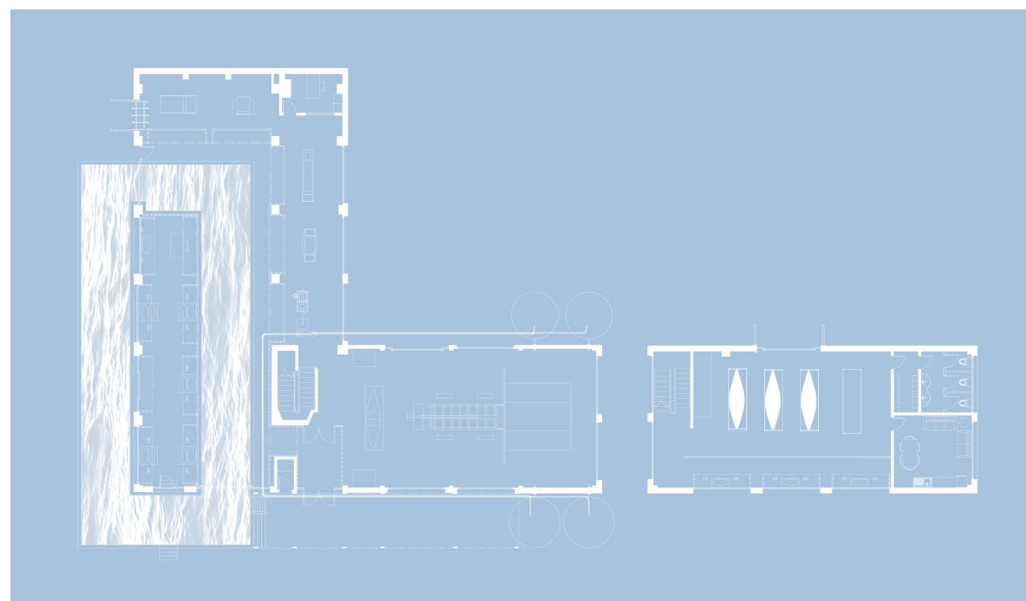
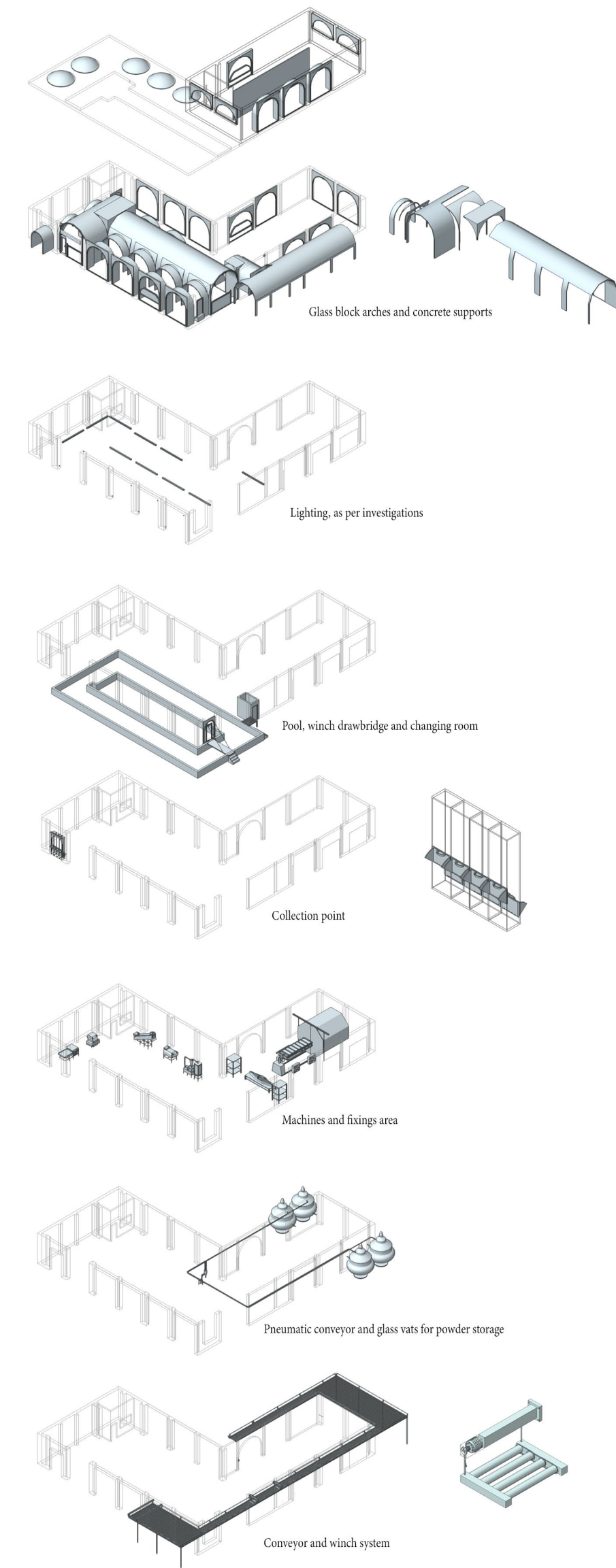
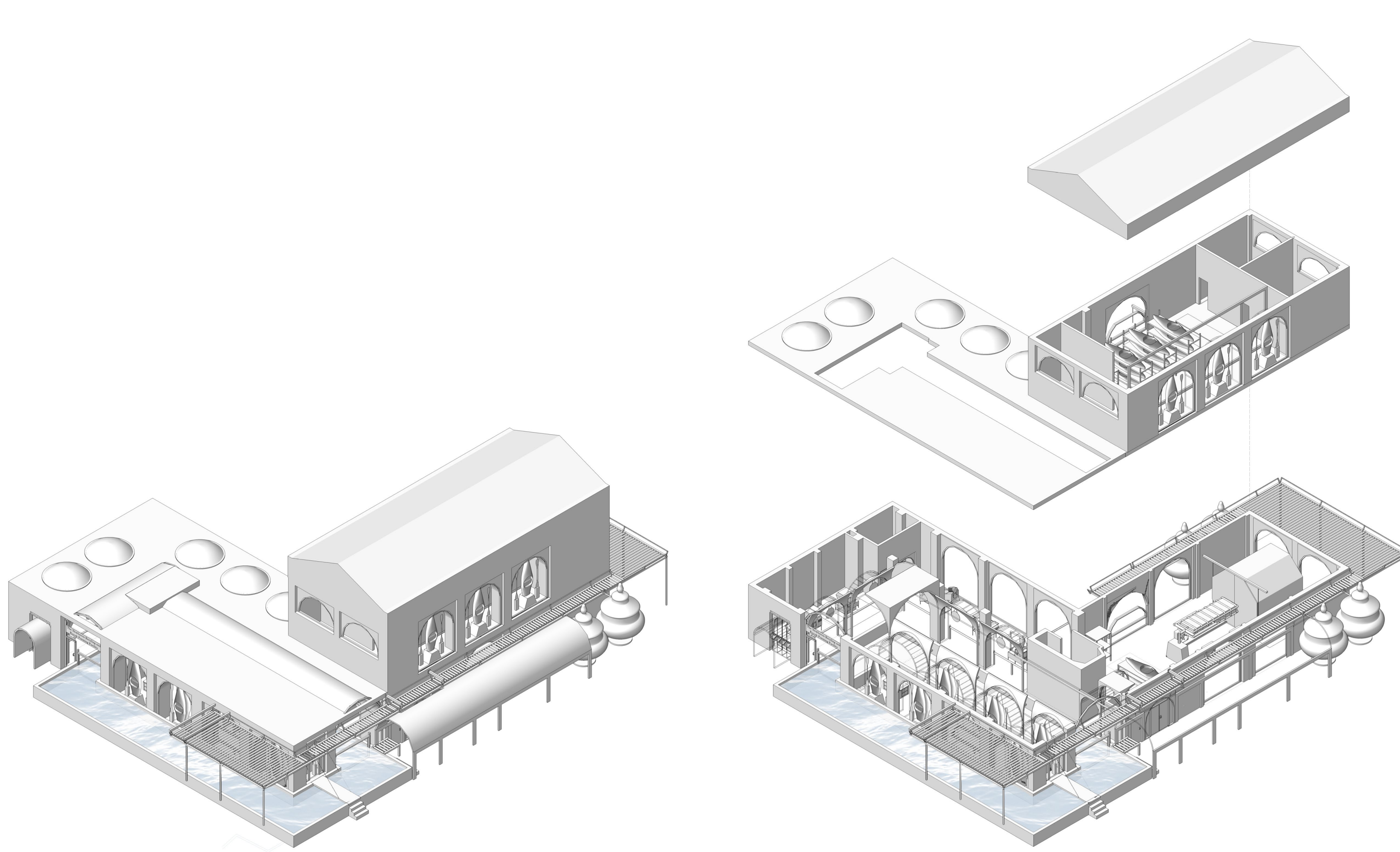
Zone A has within it two benches, outdoor seating for a café, and a ramp which is one of the main entrances into the town centre. The brunt of the litter was focused around the bench outside the post office so it can be assumed that this is an area in which people congregate.

Zone B is located at the end of a quiet cul de sac which provides street access and parking to the dwellings above the shops and the new developments, as well as to the post office. There is also a short alleyway which leads onto the highstreet, and is used for residential bin storage. It potentially isn't swept as regularly as the highstreet, and much of the litter found in this area may be spillage from the alleyway's bins.

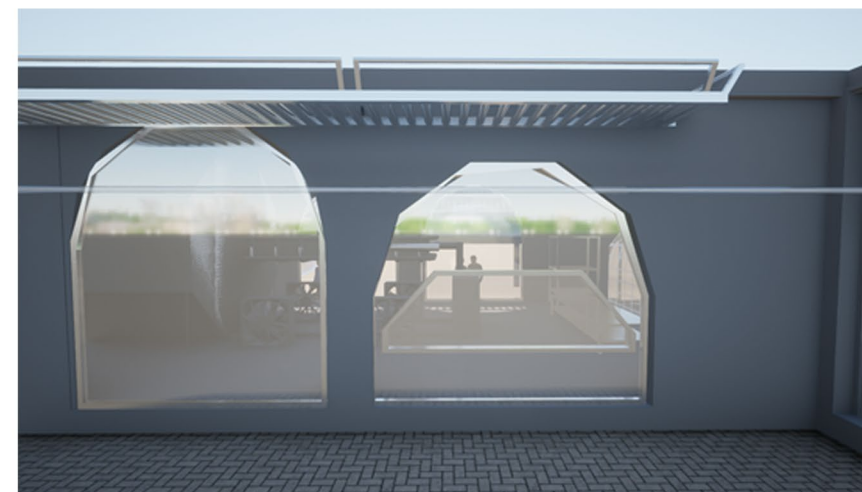
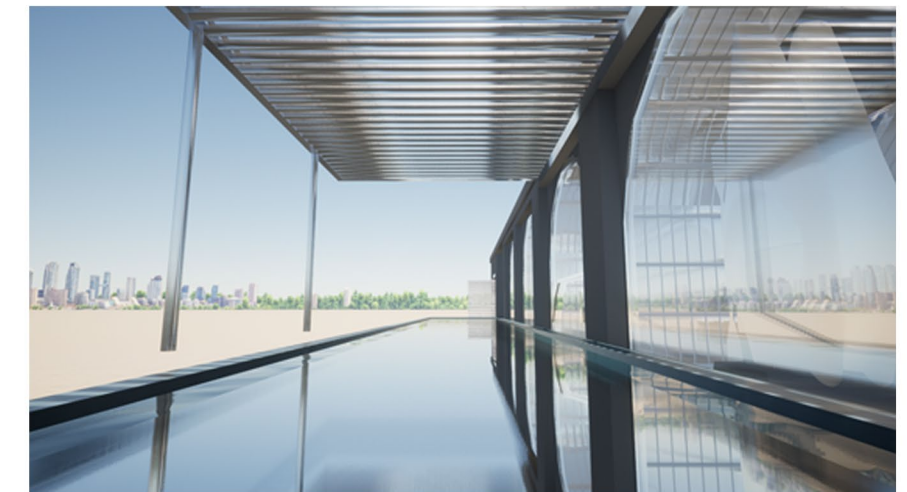
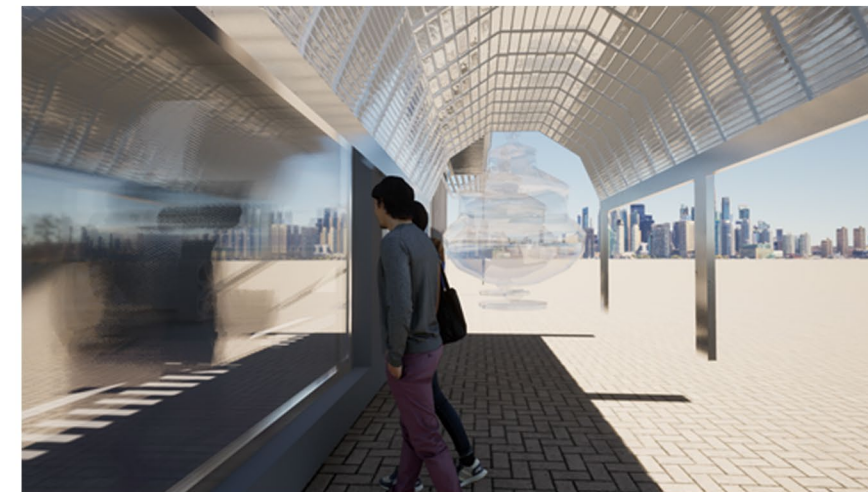
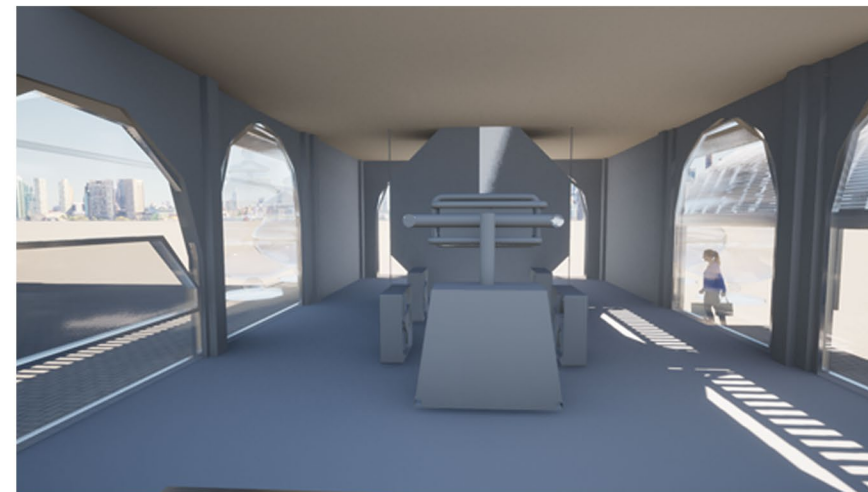
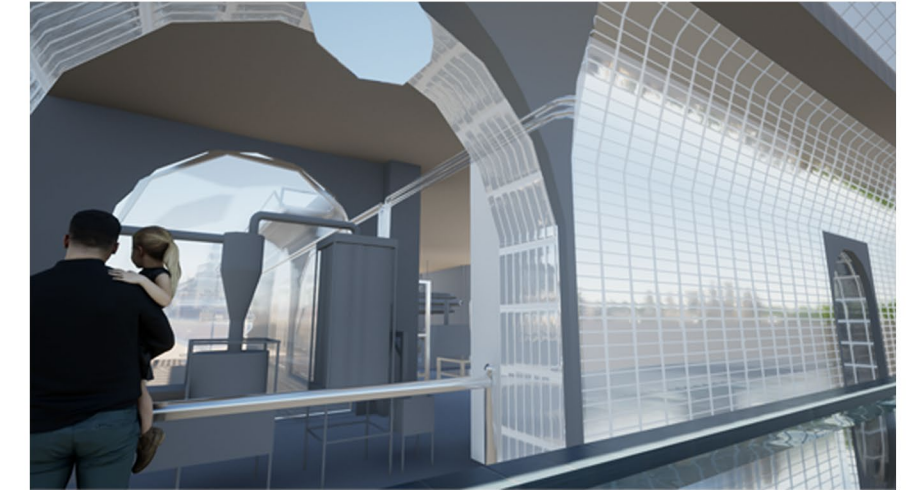
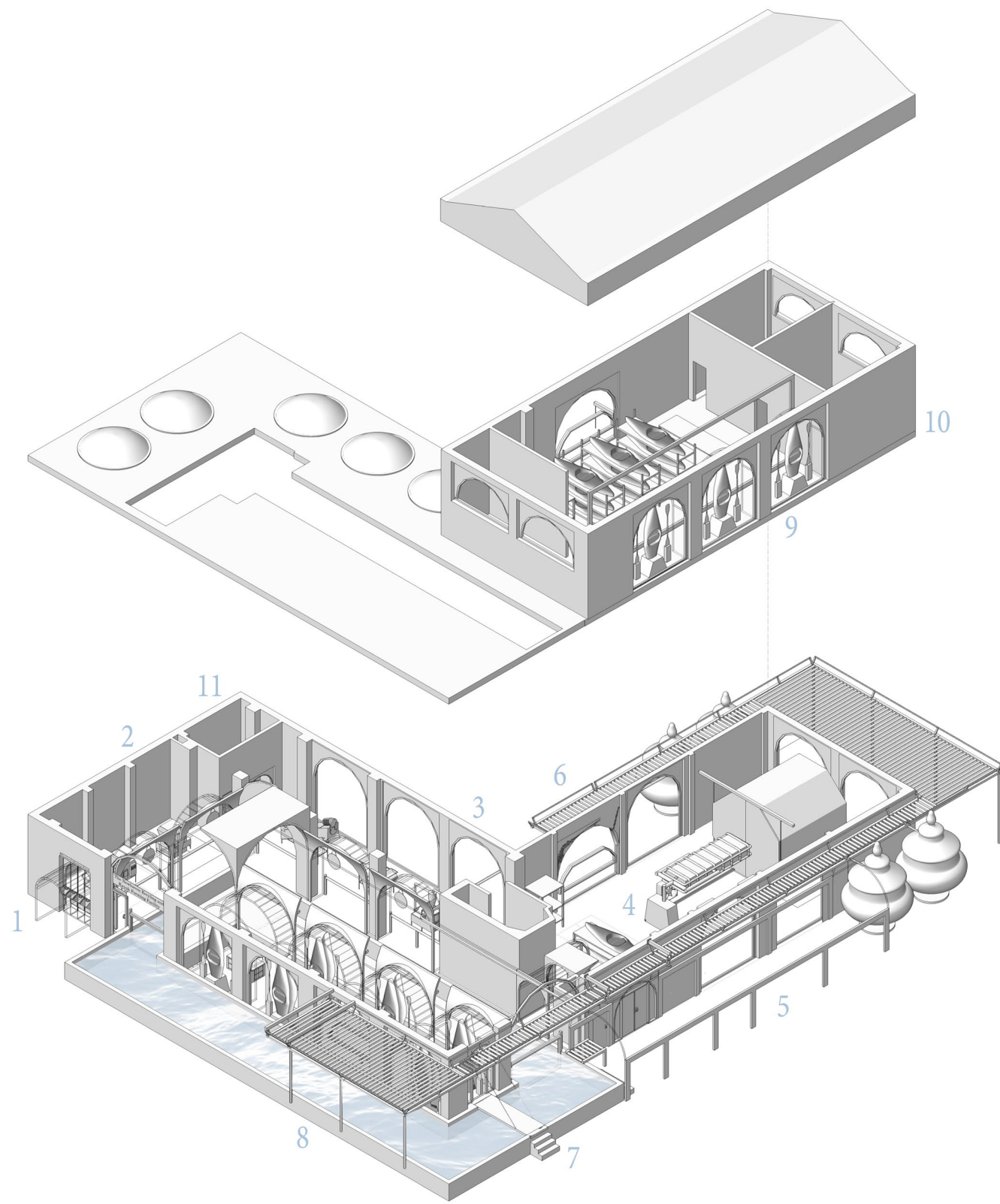
The litter surveyed in Zone C provides an insight to the highstreet as a whole. Within this zone, there is the highstreet's largest convenience store, a health and beauty retailer, and a busy café with outdoor seating. It would appear to have a relative footfall, as such it is evident that the main areas of the highstreet are regularly cleaned.



Axometric Representations of the Facility



Atmospheric Representations of the Facility



1. Household Waste Collection Point
2. Recycling Facility
3. Pneumatic Conveyor
4. Rotational Mould
5. Outdoor Viewing Space
6. Conveyor
7. Kayak Experience Pool
8. Kayak Retail Space
9. Kayak Storage and Packing Area
10. Staff Area
11. Office Space