The Plastic Project

The Plastic Project is a micro-factory that recycles the plastic of Lewes into new products with the aim to put a stop to single use plastic altogether, a goal that Plastic Free Lewes has already pledged to achieve.

By turning a cradle-to-grave industry into a circular, cradle-to-cradle one, we can start to diminish the need for virgin plastic products and ultimately use the resources we have already got (plastic) to produce new products.
Although ideally the long term goal is to eliminate the production of plastic altogether, it seems wasteful to not use the resources we already have.

The Plastic Project is a community lead intervention with a focus on educating the people of Lewes through workshops. The simple idea is that people can bring their household waste and turn it into something functional and beautiful that they can then take home with them or use to benefit the community.

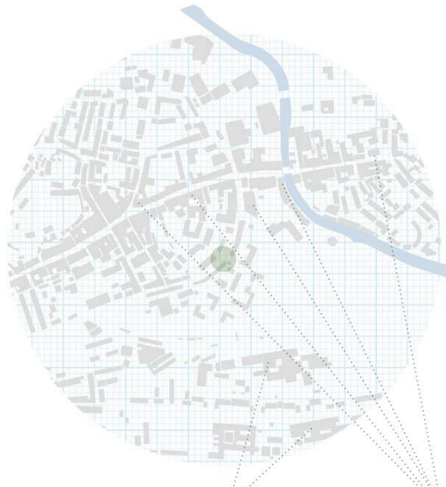
380 million tons of plastic is produced in the world every year.

Only **9%** is recycled.

It is estimated that by 2050, **12 billion tons** of plastic will be in landfill

Solution

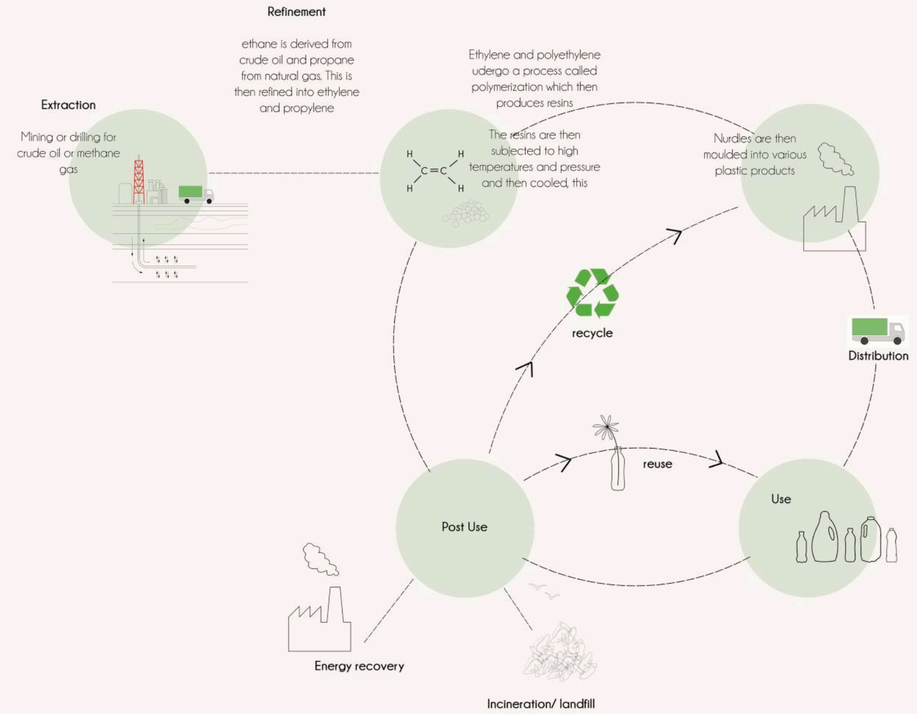
REDUCE, REUSE, RECYCLE



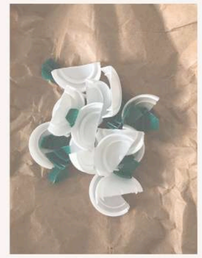
Households can bring their rubbish to the drop off point to be made into furniture or book in to the workshop to make their own furniture from their own recycled plastic.

Workshops in schools to educate children about the impact of single use plastic.

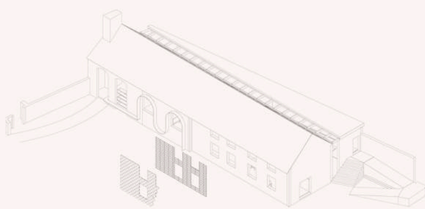
Plastic waste can be collected from local businesses such as The Trading Post

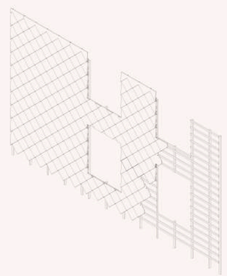


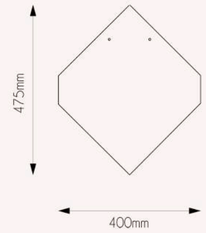
The Process



Experiment: Homemade Recycled Plastic

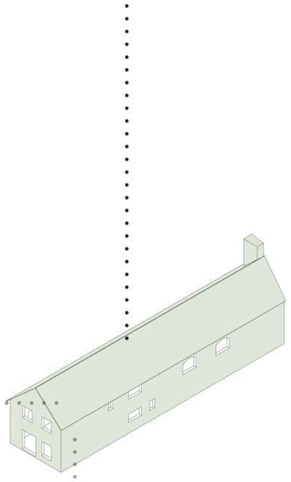


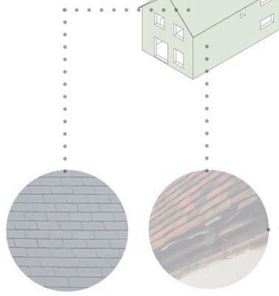




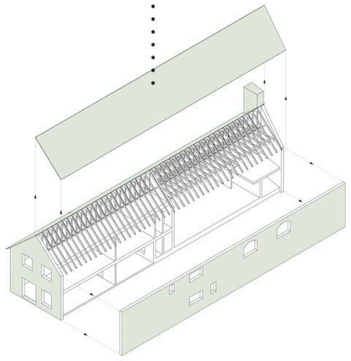
Recycled Plastic Tiles

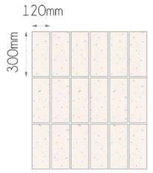
Much of the existing building remains in order to reduce embodied carbon.





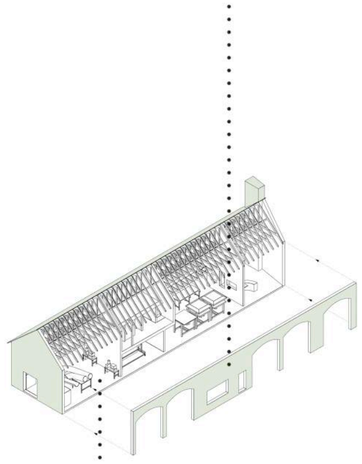
The existing roof tiles are removed and replaced with translucent recycled plastic tiles to allow natural light into the spaces below, especially into the work spaces below to allow for the comfort of workers.





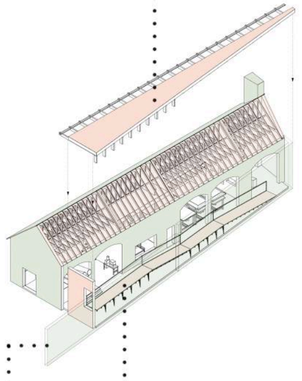
The existing roof tiles and vertical tiles will be recycled into a new floor tile that will run through the entire ground floor, using the company *Stone Cycling*.

Arches are cut out of the rear wall to allow the public and private zones to be integrated, the arches frame the various stages of the plastic recycling process.



Part of the first floor is removed to allow more light into the area. It also means that the collection point tube system can be accessed from a greater height.

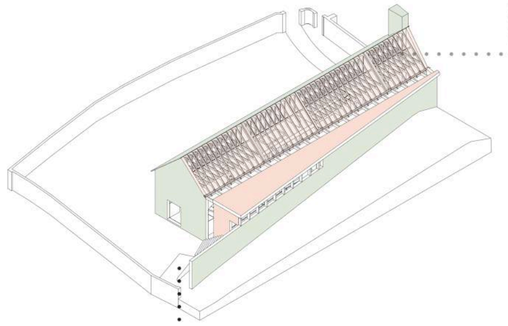
An aluminium sandwhich panel and roof lights are added to the extension.



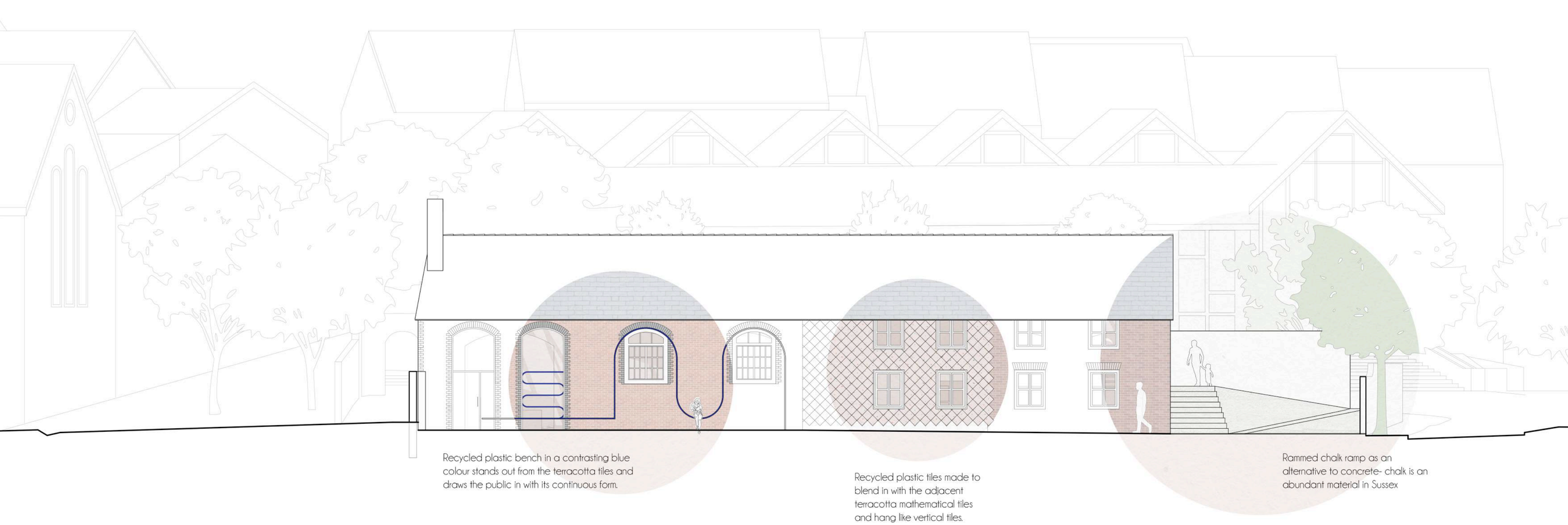
A viewing ramp is installed to allow the public to see the process of recycling plastic, this leads down into the shop.

The existing retaining wall remains.

Translucent recycled plastic tiles will clad the roof at the back, allowing light into the workshop spaces and shop below.



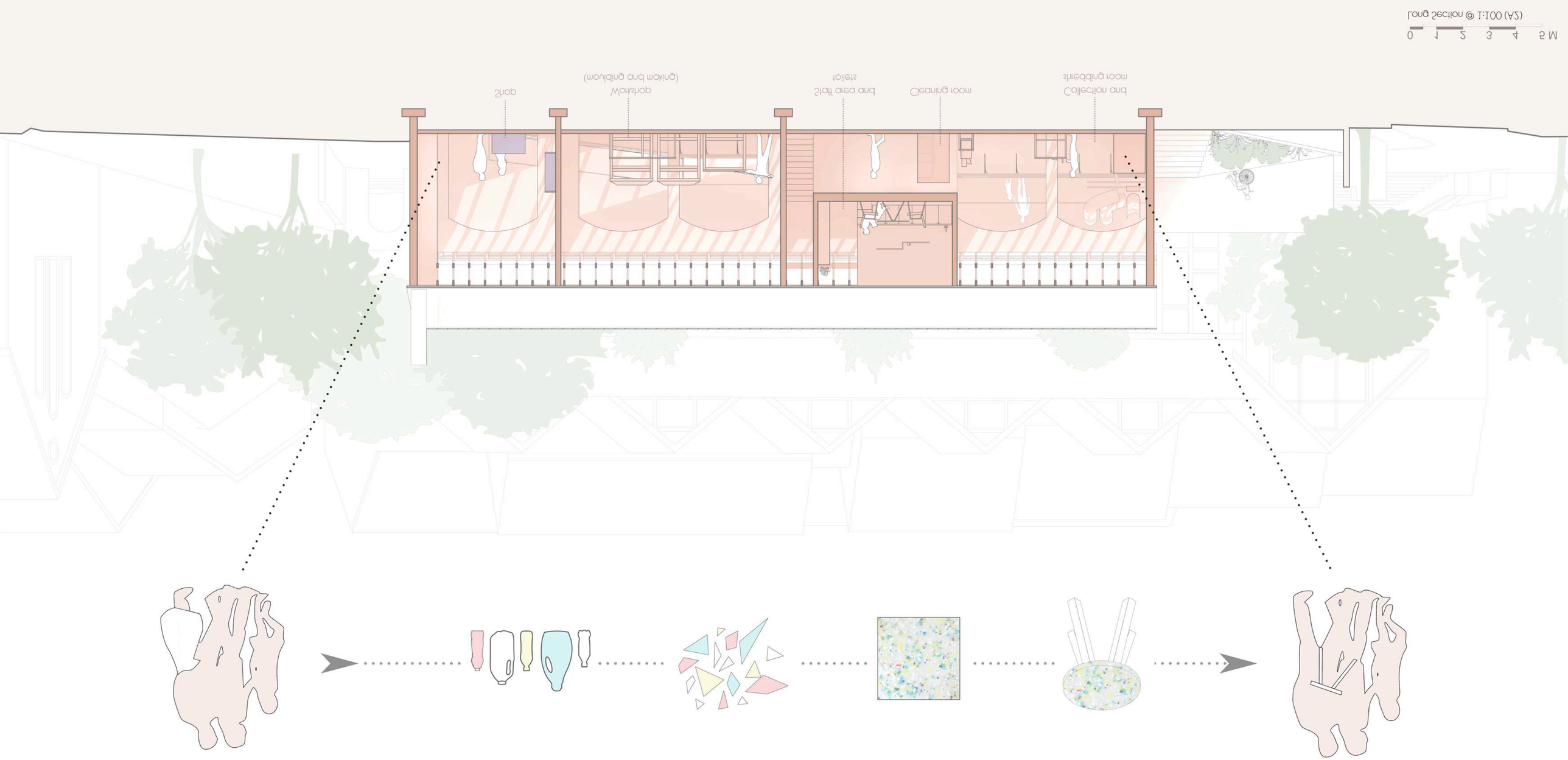
An exterior ramp and stair system is installed to allow access to the internal collection point. Accessibility is a key focus of the proposal.



Recycled plastic bench in a contrasting blue colour stands out from the terracotta tiles and draws the public in with its continuous form.

Recycled plastic tiles made to blend in with the adjacent terracotta mathematical tiles and hang like vertical tiles.

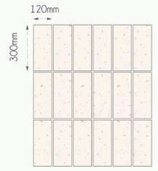
Rammed chalk ramp as an alternative to concrete- chalk is an abundant material in Sussex



Long section @ 1:100 (A3)

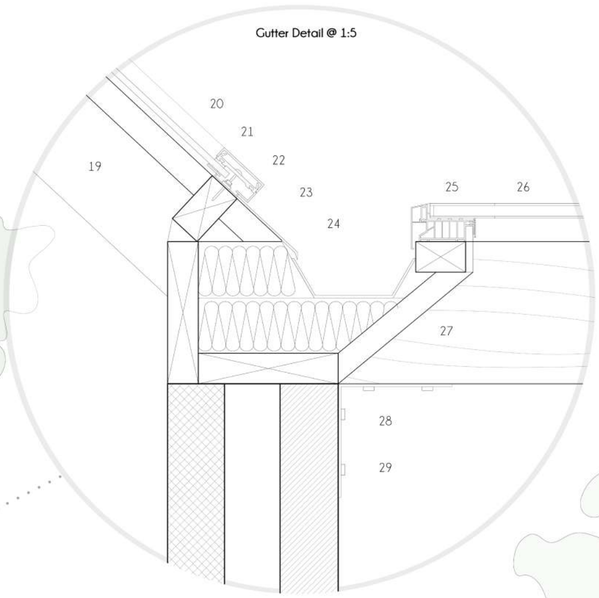

HDPE
LDPE
PP

Recycled floor tiles

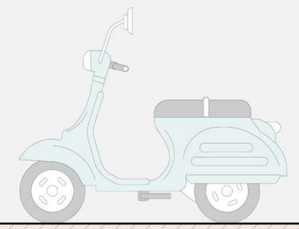


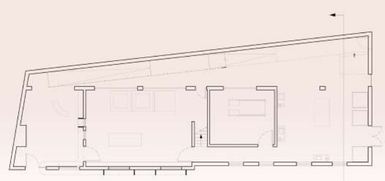
Translucent recycled plastic roof tile

Gutter Detail @ 1:5



1 existing clay roof tiles
2 timber battens
3 timber beam
4 gutter system
5 existing sash window
6 blockwork cavity wall
7 concrete foundations 150mm
8 insulation 80mm
9 screed 30mm
10 recycled tiles 30mm
11 existing retaing wall
12 timber beam
13 aluminium sandwich panel
14 gutter system
15 steel arch lintel
16 recycled plastic tiles
17 timber counter beams
18 aluminium frame
19 timber beam
20 recycled plastic tile
21 aluminium frame
22 timber counter beam
23 flange
24 gutter system
25 aluminium frame
26 double glazed glass pane
27 plywood
28 timber beam
29 steel bracket





0 1 2 3 4 5 M

Perspective Section @1:20 (A2)