

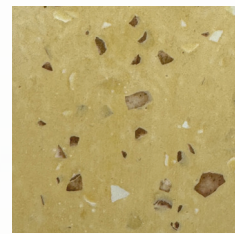
EATING ON EGGSHELLS

Eggshell waste crafted as functional home ware and speculated as a biomaterial, shaping a closed loop kitchen culture at *The Seasoned Table* located in the city centre of Glasgow.

FROM MEAL TO MATERIAL: MATERIAL EXPERIMENTATION



EXPERIMENT ONE



MATERIAL TEXTURE
SAMPLE 01:
- EGGSHELL
- YELLOW OXIDE
COLOURING

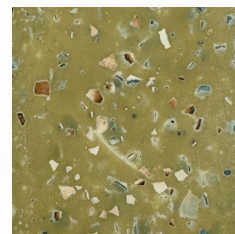
Eggshells are commonly found in households, as a 'waste' product from eggs, a household staple ingredient. In this experiment, finely crushed eggshells are cast with crystacast plaster to test form and strength. Sanding enhances the shell's texture, while yellow oxide pigment highlights its natural tone in the finished cutlery design.



USAGE IN SPACE



EXPERIMENT TWO



MATERIAL TEXTURE
SAMPLE 02:
- EGGSHELL
- RED CABBAGE
COLOURING

The second experiment builds on the first by exploring natural colouring through sensory appeal. Once structural integrity is achieved, the focus shifts to scent and visuals using red cabbage dye. Eggshells are soaked overnight before casting, resulting in colour shifts from blue to purple to green, adding depth and variation to the final cutlery.



USAGE IN SPACE



The Seasoned Table aims to build connections and combat chronic loneliness on older adults through food, fostering community engagement through a supported culinary hub and community kitchen. Centred on the universal language of food, it brings people together across cultures. Through accessible, inclusive culinary experiences, the hub also raises awareness of food waste and climate issues, while promoting well-being and supporting the local economy.

CHALLENGES OF A CULINARY HUB

The culinary hub combines a cafe, restaurant, and indoor vertical farm on the ground floor, with kitchens above supporting frequent cooking. While operating on a smaller scale, it is expected to generate food waste, such as vegetable scraps and eggshells, mirroring the UK's wider food waste problem.

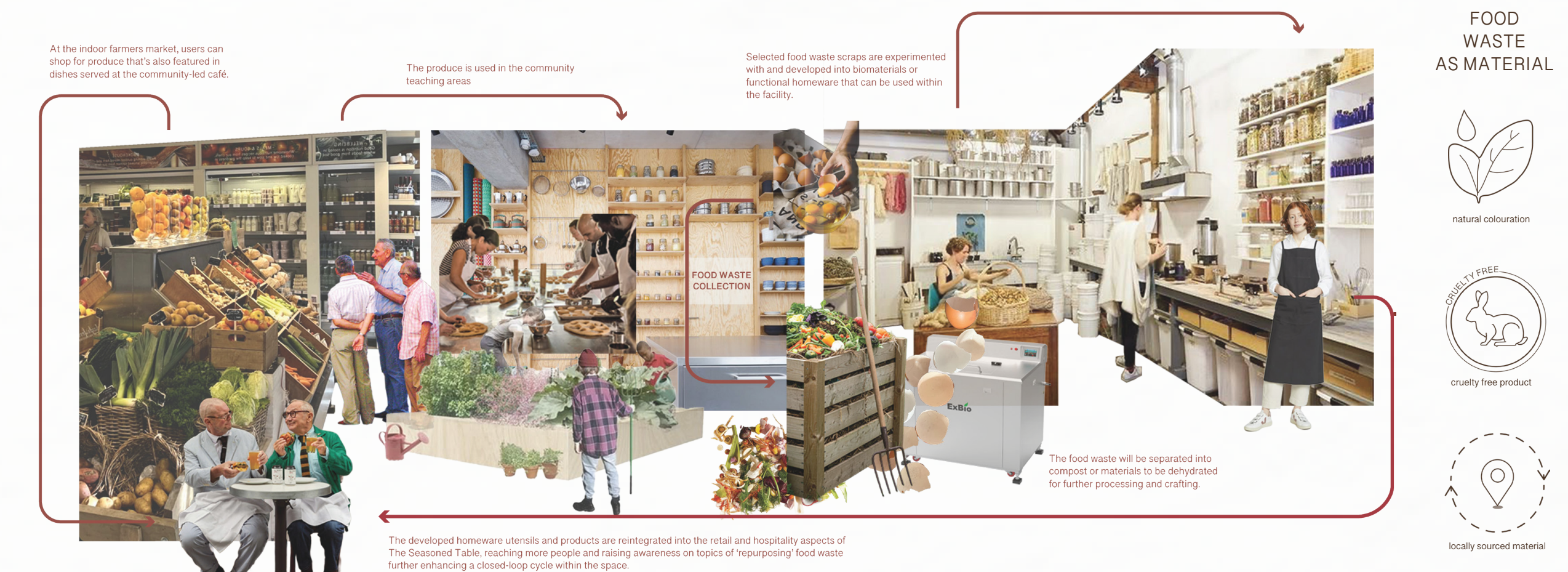
According to Business Waste, the UK discards around 9.5 million tonnes of food each year despite 8.4 million people living in food poverty. This crisis not only highlights social inequality but also fuels climate change, linking directly to the recurring 'Heat or Eat' dilemma faced by households nationwide.



SECTION AA

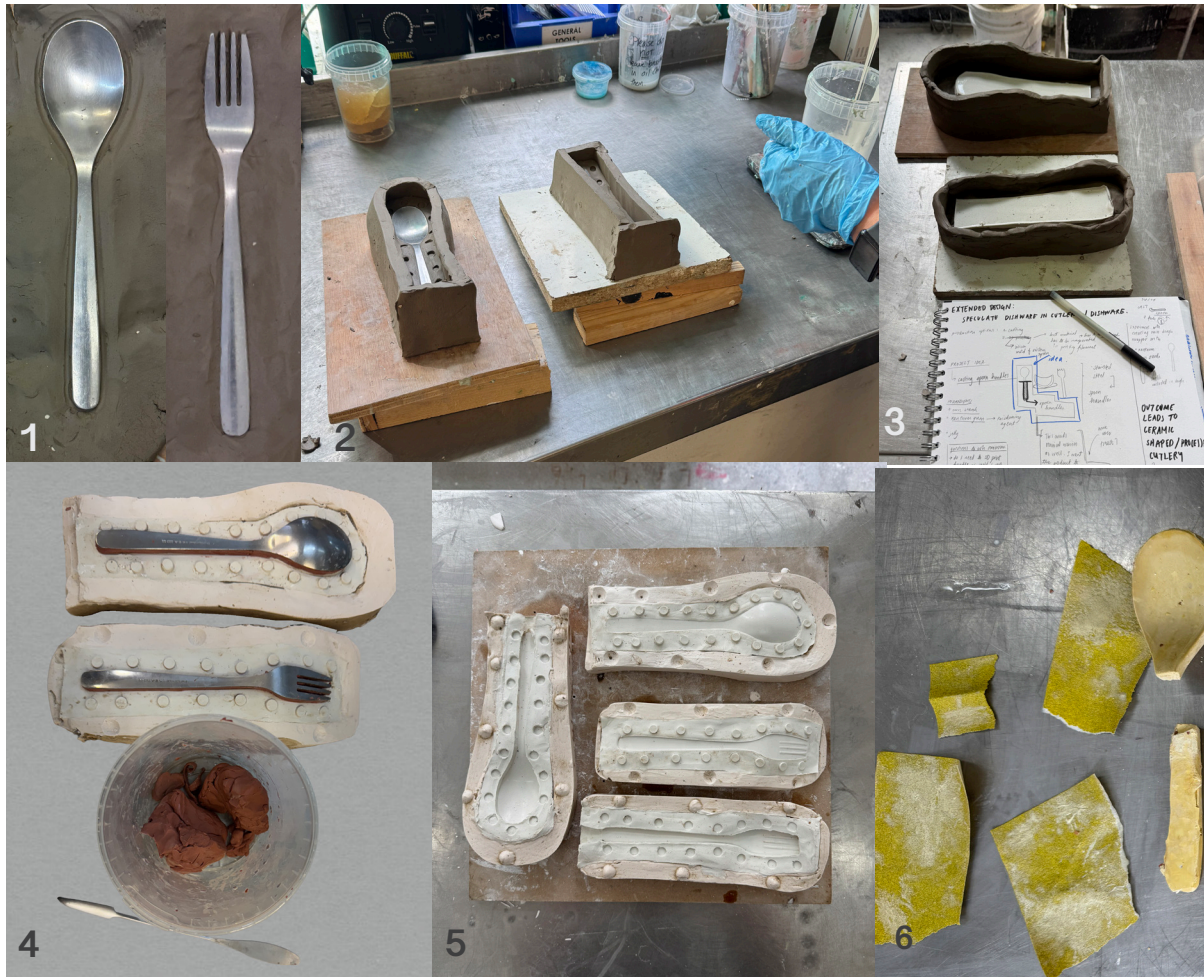


OPPORTUNITIES OF FOOD WASTE



Food waste continues the narrative of the culinary hub by shifting focus from disposal to possibility, in other words, *meal to material*. It opens up interdisciplinary practice in the education of cutlery-making, where craft and sustainability intersect. Through collaborative making, the project fosters deeper community engagement and shifts the material language from semi-industrial production to a more hands-on, crafted approach amongst all users in the city centre facility; reinforcing the facility's vision of a closed-loop system.

Since the food is first consumed before becoming 'waste', the materials used are low-cost and already embedded in everyday life. This accessibility supports a maintained sustainable production while promoting creative reuse. The resulting products, such as biodegradable cutlery highlights the potential of food waste not only as a material but as a medium for environmental awareness and design innovation; giving value to what was once discarded.



MAKERS GUIDE: EATING ON EGGSHELLS

Eggshells were chosen as the primary material in this experimentation of their domestic qualities, almost expected to be present in every household. The eggshells were crushed into different states [fine and coarse]. They were incorporated in crystacast plaster and jesmonite colouring [yellow oxide] in speculation on the shape's form and integrity.

Since the initial cutlery is thin and intricate, a silicon mould is made and cased in plaster casing [2 & 4] to enable multiple reiterations and embody the means of reiteration, with intentions to create functional home-ware. The casted shape is then sanded and refined to showcase the eggshell texture.

The process is reiterated multiple times since the mixture hardens and snaps while shaping, particularly where the eggshells are placed.

MAKERS GUIDE: COLOURING EGGSHELLS

Colouring options for vegetable scraps are explored to develop further the speculated eggshell cutlery. Red cabbages are chosen as the natural colour food dye of their interest in colour transformations; the cabbages are purple from the start, but once boiled and extracted, the colour shifts to a dark blue dye [1 & 3].

The eggshells are dipped overnight and oven-dried for 15 minutes at 150 degrees celsius; showcasing the most significant colour transformation of the dye and the eggshell. There is colour gradation from purple to blue, indicating the time dipped and the reaction of the two mediums [4]. To produce a material sample, the product [4] is finely crushed into crystacast plaster and shaped into silicon mould [5] - to test the properties of the developed material.

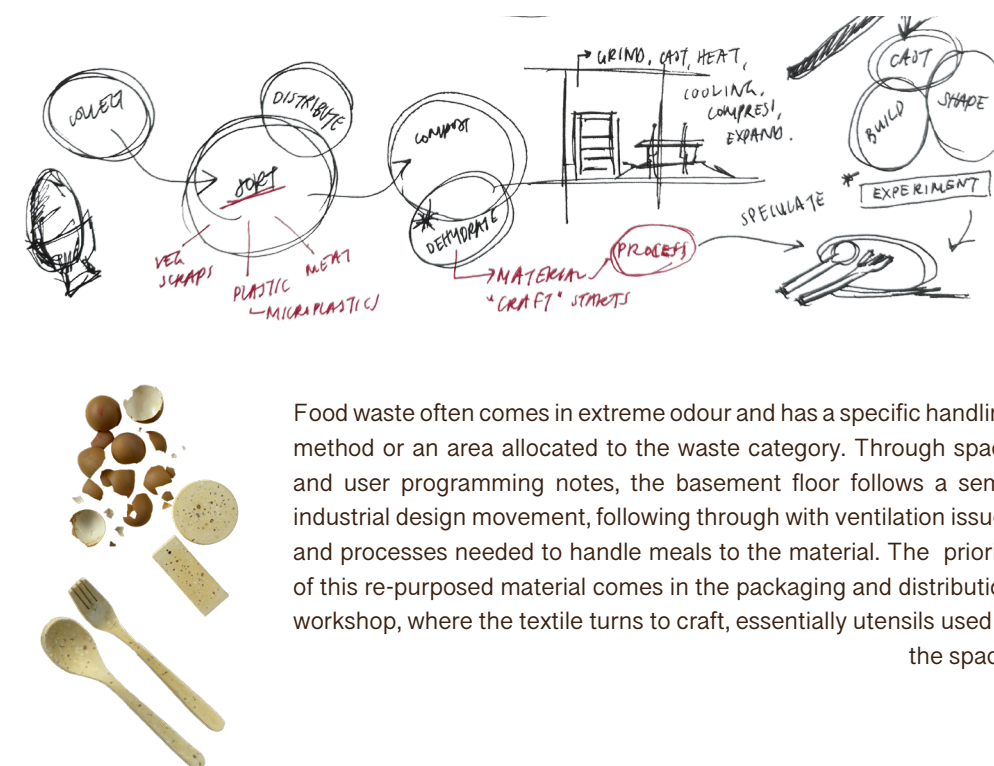
The colouring processes depends on how long the food scrap is boiled; the longer the scrap boils, the more pigment is extracted. This goes the same for material dipping.



KEY

- | | | | |
|-------------------------|---------------------------|---------------------------------------|--|
| 1 entrance lobby | 3 waste sorting area | 5 waste dehydration | 7 material casting and redistribution workshop |
| 2 waste collection area | 4 food waste sorting area | 6 material process and sample storage | 8 material / product storage |

BASEMENT FLOOR PLAN NOT TO SCALE N O



Food waste often comes in extreme odour and has a specific handling method or an area allocated to the waste category. Through space and user programming notes, the basement floor follows a semi-industrial design movement, following through with ventilation issues and processes needed to handle meals to the material. The priority of this re-purposed material comes in the packaging and distribution workshop, where the textile turns to craft, essentially utensils used in the space.



COMMUNITY KITCHEN INTERIOR VIEW



MATERIAL LIBRARY



MATERIAL DISTRIBUTION WORKSHOP