

# PHYLLA

The cost of living in the UK rose 5% in February 2024 compared to last year according to the UK Parliament, 2024. Climate change is affecting the farmland, the quality of food and the supply and thereby the population is seeing a spike in the cost of living. Partnered with urban population rapidly growing, this is impacting the environment and society. (House of Commons, 2024)

Phylla is an initiative to tackle both the shortage of fresh produce and to help aid those that are struggling to afford to eat healthier. Phylla's philosophy is to adhere to the circular economy by minimising the impact on the community and environment by integrating sustainable practice with emphasis on community development. To focus on generating renewable energy through PV solar panel, protecting and conserving water and optimising operational and maintenance practices.



## Project Overview

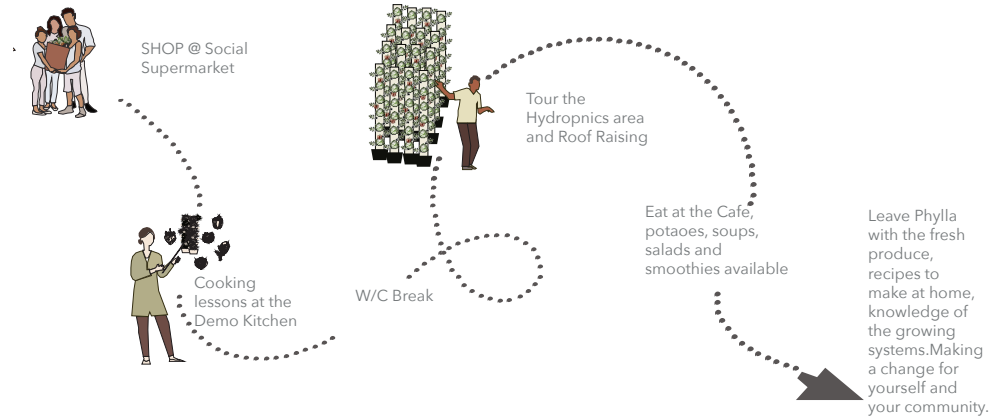
Phylla is a community-based project that hosts several activities that aim to integrate a wide range of different social and ethnic backgrounds. Phylla offers the opportunity to explore new interests, meet new people and invest in the community of Chester.

The Phylla project aims to have low impact on the environment, reduce energy consumption by using natural materials and waste management. Creating a safe and healthy environment, promoting health and well-being with an opportunity to learn and grow.

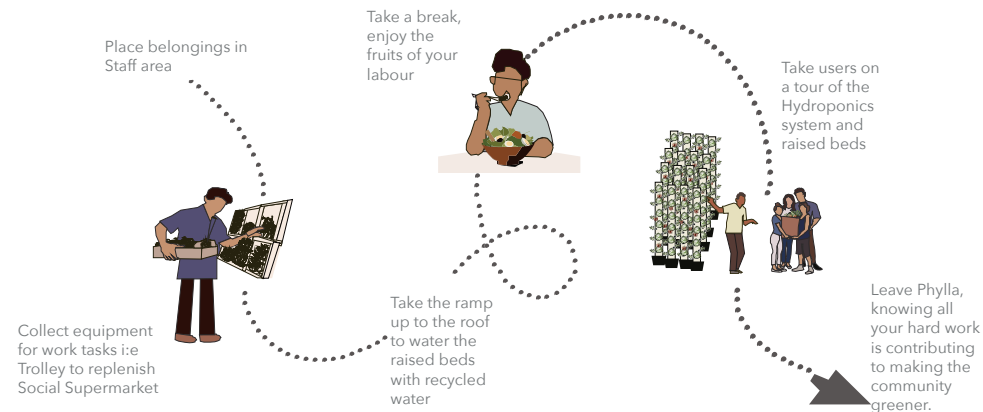
The materials used throughout will include biomaterials such as hemp, wood, cork, mycelium with an abundance of fresh produce growing or just picked.



## User Journey



## Employee Journey



## Project Objectives



### Promote Health & Wellbeing

Access to affordable fresh produce grown in house, and break away areas immersed in the growing areas. Outside spaces that are accessible.



### Enhance Education

Offer workshops on biodiversity, nutrition and teaching resources through cooking classes and sowing seedlings.



### Integrate Community

Create a space that is accessible and with the user in mind. A place that is safe and inclusive offering a variety of activities that brings the community together.



### Low Impact on the Environment

Responsible sourcing, materials that are renewable, recycled or recyclable. Conserve resources such as rain water to distribute throughout the scheme.



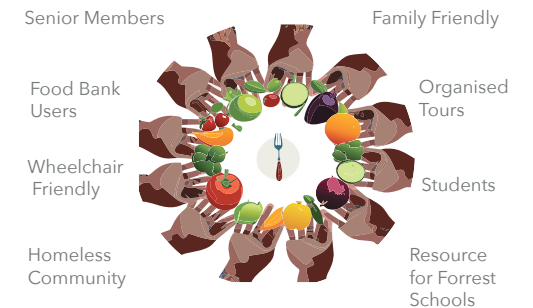
## Project Programme

The proposal for this project is to adopt non-soil cultivation methods such as regenerative agriculture and agrivoltaics. Hydroponic and aquaponics systems will be used to create a vertical urban farm to help provide nutritional food to the community that are most affected by the rising costs of living.

The space will be occupied by a social supermarket, demonstration kitchen, and a soup kitchen for the homeless community. There will be education spaces where the users can gain knowledge in agricultural practices, nutrition, health and well-being. The project design principles will focus on sustainability and using renewable energy, minimal waste: Including Integration of Photovoltaic (PV) system in windows (onyx solar pv glass harvested rain water and heat gains).

The user journey includes a social supermarket and demonstration kitchens where produce is sourced from hydroponics, aquaponics vertical growing systems on site. The educational hubs provide valuable information promoting health and well-being from nutrition to life skills.

## Phylla is Inclusive...

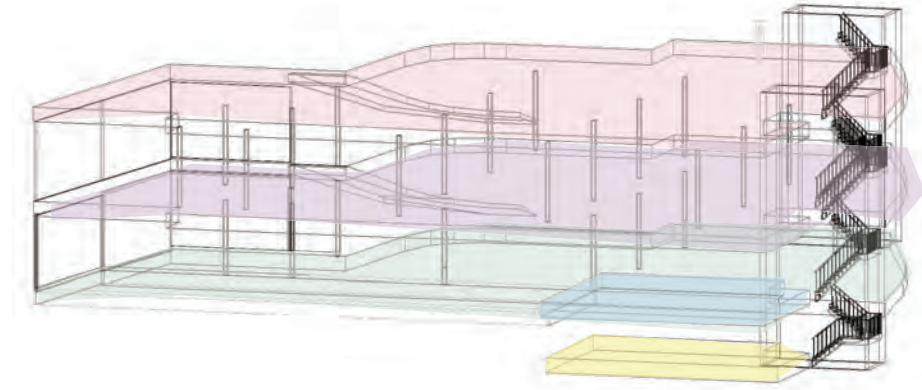
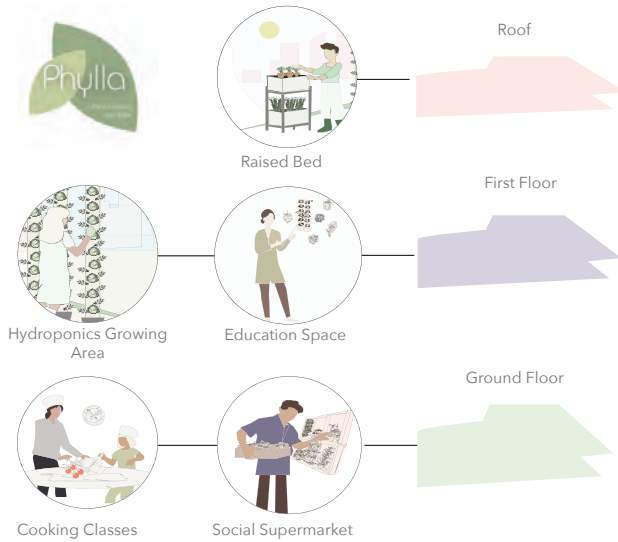


## Spatial Zoning

The social supermarket, demonstration kitchens for guest chefs and cooking classes will be located on the ground floor, offering inclusive seating.

The first floor will be the main vertical growing area, learning hubs with be placed on this floor as an immersive experience. The roof will offer alternative growing methods such as raised beds.

The upper ground floor (highlighted in blue) will be a balcony which will be a flexible space. The lower ground floor (highlighted in yellow) will be a soup kitchen open out of hours to provide for the homeless community.



## Proposed Section

Key:

1. Social Supermarket
2. Demonstration Kitchen
3. Service Lift
4. Hydroponics Growing Area
5. Education Hub
6. Toilet
7. Lifts
8. Atrium Railings
9. Solar Roof
10. Light Well
11. Outdoor Kitchen
12. Raised Bed
13. Rain Water Harvest

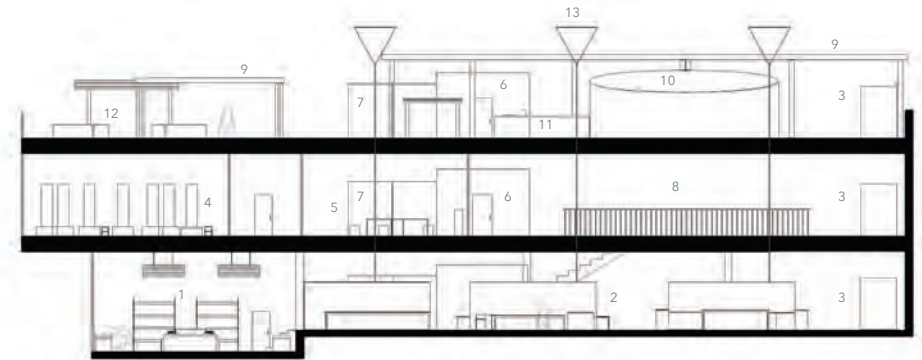
Ground Floor Section



First Floor Section



Roof Section



## Existing Building Exterior

The space is situated on Lower Bridge Street, adjacent to Duke Street, interweaving agriculture and education into residential and commercial life. Concrete is the main material used for the structure and facade of the building.



## Proposed Building Exterior

The proposal for the exterior is to install photovoltaic solar panels on the roof and stair well exterior to improve power resiliency with on site renewable energy. The roof will harvest rain water to use throughout the building and recycle and adhere to the circular economy.

# Demonstration Kitchens

## Design Detail and Material

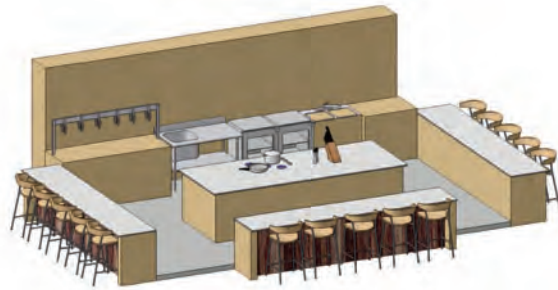
The demonstration kitchens are inclusive, designed for users to be able to participate effectively and feel comfortable and confident to be themselves.

The kitchen offers a flexible working space for guest chefs and cooking lessons, using facilities and building resources that are grown on site. The use of biomaterials such as oak, mycelium and cork go beyond aesthetic they signify a deeper commitment to the planet.

Rainwater is harvested, filtered and distributed throughout the build. The kitchen source has a charcoal filtering system making it safe to use. The grey water is then used for purposes such as, toilet flushing and watering plants. The circular water economy is valuable in making a change towards climate change,



Kitchen 1

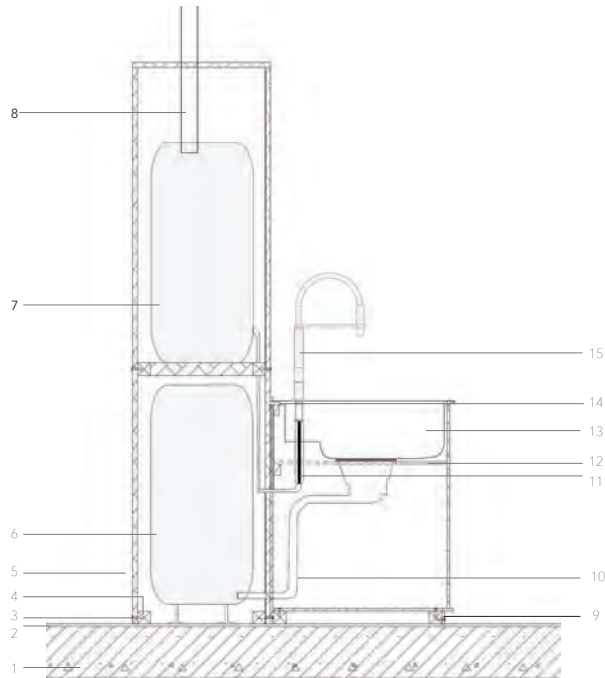


Kitchen 2



**Key:**

- 1 Existing Concrete slab
- 2 Printed Cork Flooring
- 3 Stainless Steel Screw
- 4 Wood Bracket
- 5 Oak Cupboard
- 6 Grey Water Tank
- 7 Charcoal Filtered Water Tank
- 8 Harvested Rain Water Access Pipe
- 9 Oak Kickboard
- 10 Waste Water Pipe
- 11 Charcoal Filter
- 12 Oak Shelf
- 13 Stainless Steel Basin
- 14 Stainless Steel Bracket
- 15 Brushed Stainless Steel Tap



Detail A



**Key:**

- 1 Printed Cork Granorte NATURTrend "1244017" <https://www.bricoflor.co.uk/flooring/cork>
- 2 Custom Tototomoxle Veneer
- 3 Oak with Hemp oil finish <https://cheshiretimberproducts.co.uk>
- 4 Galvanized Navy Blue Mild Steel Frame Scaffolding. <https://ccbscaffolding.com>
- 5 Mycelium Lampshade <https://www.musflumelighting.uk>
- 6 Custom Willow Seat <https://willowavon.co.uk>
- 7 Stainless Steel Tap <https://www.notjusttaps.co.uk>
- 8 Olive Stripe Cushion Pad <https://www.alicepalmer.co.uk>



**View of Social Supermarket** - offers fresh produce grown on site at an affordable cost. Simply select, weigh and pay. A dignified shopping experience for those who have struggled financially and want to eat healthy, nutritious, food.



**View of Hydroponics Growing Area** - An abundance of fresh vegetables and leafy greens produced using a vertical system. This method of growing is soilless and uses harvested water and energy from solar panels that are on-site.



**View of Foyer with Terrarium** - The terrarium is an enclosed ecosystem that showcases the geosphere, biosphere, hydrosphere, and atmosphere. Placed in the foyer to provide an educational opportunity.



**View of Educational Hub** - a space that can offer an interesting way of learning about food, environment and build a community and culture.