

BOARDWALK Grown

The food industry currently accounts for over 25% of global greenhouse gas emissions (Ritchie and Roser, 2020) created on Earth which contribute heavily to global warming.

With global temperatures rising and climate change threatening to create irreversible damage, consumers have become more aware of the impact their diets can have on the planet and are making changes to eat more sustainably. There are now more people eating with a consideration for sustainability at the heart of their diets than ever before (Sustain, 2021), and this is only set to grow.

'Boardwalk Grown' addresses this growing consumer market through the creation of a plant-based restaurant with much of the produce grown on-site via an indoor allotment and various hydroponic systems, to further reduce the carbon footprint of the meal.

The space also encourages consumers to make other changes to lead more sustainable lifestyles, through a range of talks and workshops which will address issues such as food waste and throwaway culture. A retail space enables consumers to take the next steps in their sustainable journey, whether that's by supporting local businesses or buying gardening or cooking equipment to make a more direct change.



ENCOURAGING MORE SUSTAINABLE RELATIONSHIPS WITH FOOD



Ritchie, H. and Roser, M., 2020. Environmental impacts of food production. [online] Our World in Data. Available at: <<https://ourworldindata.org/environmental-impacts-of-food>> [Accessed 4th May 2022].
 Sustainweb.org. 2021. News study reveals pandemic has changed how people buy and eat | Sustain. [online] Available at: <<https://www.sustainweb.org/news/jun21-study-shows-eating-habits-are-more-sustainable/>> [Accessed 4th May 2022]

INDOOR ALLOTMENT AND HYDROPONICS



The hydroponic columns and railings are used to help supply the restaurant alongside the allotment. Hydroponic farms are becoming much more widespread due to their efficiency and so these features provide consumers with a small insight into what the future of food may look like.

In order to assist the plants growth, artificial lighting is used to offset the lack of direct sunlight on some of the plants.

The indoor allotment houses the majority of the plants which are grown to later be used in the plant-based restaurant. This minimises the amount of food miles the dishes have and any left over plants are given to the local community for free or sold in the retail space.

Staff tend the allotment, however it is also used by guests for workshops or simply to look around and strengthen the connection of food to plate.



HYDROPONIC FEATURES

Hydroponic systems involve removing the use of soil and instead using water enriched with nutrients. These systems can be found throughout the space including in the railings, columns, and built into the booth seating shown above. Plants grown in hydroponic systems can mature up to 25% more quickly than those grown in soil, increasing the crop yield.



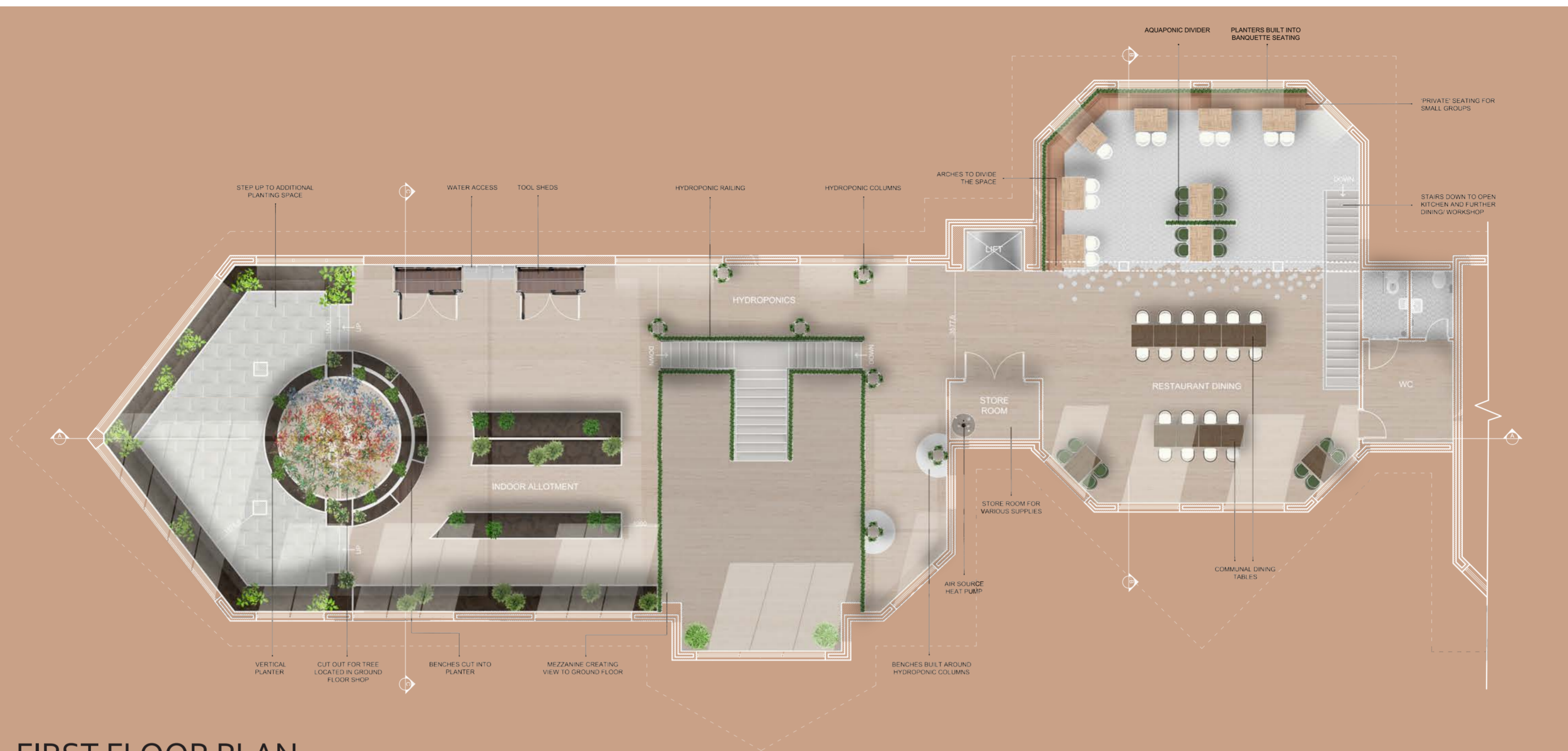
AQUAPONIC FEATURES

The divider located in the centre of the restaurant utilises an aquaponic system to grow herbs which can later be used in the kitchen. This works in a similar way to the hydroponic systems where plants are grown in water rather than soil. Here, however, aquatic organisms (in this case fish) provide the nutrients that the plants need, creating a natural eco-system with the fish eating and producing waste which creates fertiliser for the plants.



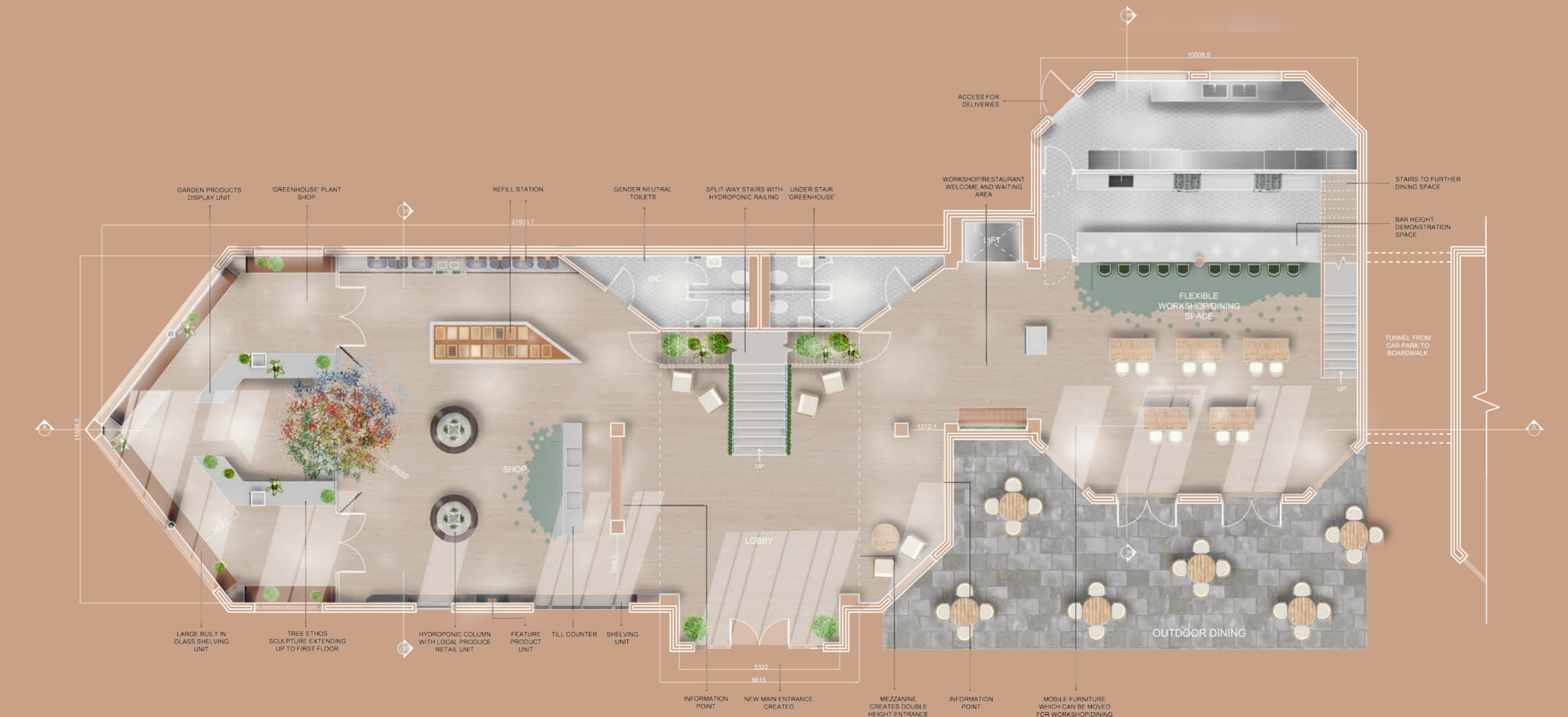
TERRARIUM FEATURES

Plants grown inside the hanging closed terrariums installed throughout the space are grown in soil, providing the plants with the nutrients they need to grow. Both the plants and the soil in the terrarium release moisture and water vapour, which condenses on the walls of the terrarium and falls back towards the soil where it can be reused. This enclosed system allows the plants to thrive and be harvested throughout the year.



FIRST FLOOR PLAN

NOT TO SCALE



GROUND FLOOR PLAN

NOT TO SCALE

THE LAYOUT OF THE SPACE ALLOWSGUESTS TO GAIN INSIGHT INTO THE CHANGES THE CAN MAKE AND THEN EMPOWERS THEM TO MAKE THESE CHANGES.



ETHOS SCULPTURE

A large tree sculpture can be seen in the centre of the store spanning up to the first floor. This ethos sculpture has been made from rubbish found and collected from the local canals and can be added to and grow as future litter picks are conducted.



LOCAL GOODS

Part of the store is dedicated to selling local goods, in this case all products are made in Derbyshire. Not only does this reduce the carbon footprint, but it also enables consumers to support their local businesses and help boost their local economy.



REFILL STATION

The refill station allows consumers to purchase non-perishable goods without the single-use plastic. Various 'food cupboard staples' are sold as well as containers making it easy for guests to start making their food shops zero-waste.



GROW YOUR OWN

The back portion of the store is dedicated to products which consumers can use to grow their own produce at home, including seeds, saplings and gardening equipment. The majority of middle-class families have the capability to grow their own produce, but very few actually do. By providing the classes and the tools to make this change easier consumers can reduce their carbon footprint.

The drawing below shows how the plants are integrated into the till using a modular pot system and artificial lighting.

