

# GROWING TOGETHER

A productive framework

Design Report

Appendix\_Team & CV's





# GROWING TOGETHER

## A productive Framework

submit this second stage submission for the 'Re-imagining the Garden City' competition in Letchworth. The aim is to combine the urban agriculture approach

The team has also drawn on expertise from specialists in the field of agroforestry and organic farming, seeking to create a hybrid between an agricultural landscape and a housing development by integrating food growing into the design of the neighbourhood.

The sustainability expert once said that everything can be done more sustainably in cities except food production. This is not a statement with which Ebenezer Howard would have agreed. His Social City was designed to

incorporate within its structure everything that society needed including farms, market gardens, and allotments. What if we could do the same at the neighbourhood scale? What if we could learn from the inspiration of groups like Incredible Edible in Todmorden to weave food growing into the very fabric of the neighbourhood? We believe that if given the right framework it's possible to inspire people to live within their environmental means and create a healthy and socially sustainable community.

Our entry turns the usual process of development on its head. Rather than fitting greenery around the development we are using the dual meaning of the word 'plot' to create a framework of plots for food growing that can then become plots for development. We are taking the core Garden City Principles of healthy communities, food growing, generous green spaces and a strong vision into a modern day context, and doing so in a way that is both innovative and deliverable.





## Plotlands

We are intrigued by the word 'plot'- it can refer to an allotment or to a site to build a house. The dual meaning of the word goes back to the very origins of villages and towns as structure of agricultural plots were incorporated into the structure of the settlement.

A good example is the North Laine in Brighton where the word 'Laine' refers to the medieval shared fields that once surrounded the town. The streets of the North Laine are built on the 'leeways' or paths that ran between these field and the houses, shops, pubs and workshops of the area were built on plots that had originally been used to grow food.

There was a movement in England in the 1930s called 'Plotlands' where people from cities took over plots of land in the countryside to grow food, but also to spend time during their holidays and at weekends. A few of these places still exist, but the movement was largely wiped-out by the planning system.

However it still exists in Denmark where the notion on an allotment is different to that in the UK. Families in these places treat their allotment as a weekend retreat, a place to relax and for the kids to play as much as a place to grow food. While they are not allowed to live full time on their allotment many of their 'sheds' become quite comfortable and as self-built structures, reflect their personality through a combination of what they grow and where they live. This is the inspiration for our plan.

We have also been inspired by the principles of agroforestry - the practice of growing trees and crops and/or livestock on the same land area for greater productivity, biodiversity and landscape value.

As set out in the competition brief the aspiration is for approx. 2000 trees to be planted as part of this development and we are proposing to use these trees as the overarching element of the masterplan - setting out the pattern of the new development.

Our aim is to fully utilize the potential of the trees in terms of being a community generator and truly integrate them into both the housing, the community and growing components of the new development, including agroforestry. Using the trees as the defining character will also give the opportunity for the masterplan structure to be established on the ground at an early stage in the process.



Terrier Map of Brighton, 1792



A typical "plotlands" house, 1930's



Creating Structure with Orchard Planting

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### Plot-based masterplanning

Our masterplan seeks to replicate the process of setting out plots that can be developed for both food and housing. The idea is to create a plot structure across the whole site using tree planting and then allow the neighbourhood to grow onto this frame. The structure of this masterplan is based on a series of neighbourhoods, or Hamlets, laid out along an avenue with densities rising towards the avenue and decreasing towards the edge of the site.

The district centre will be developed in the northern part of the site with a primary school, communal facilities, food hall, square and transport hub.

Each Hamlet will have a different character, both in terms of its materials and design but also the form and species of planting. Each Hamlet is made up of three fields and these are divided up into plots that will initially be used for food production. The paths between the fields will be lined with fruit trees and will at some point become streets.

The intention to plant the trees as the first step of development aims to establish a framework element setting-out the premise of the new development, also acting as a community engagement by bringing people of all ages together in the planting process.

We have created a grid based on multiples of 6m. The standard plot dimension will be 12m wide by 24m deep. Fields will be two to four plots deep and three fields will form a Hamlet. Each Hamlet will include the full range of growing space.

As development comes forward it will take place at four densities:

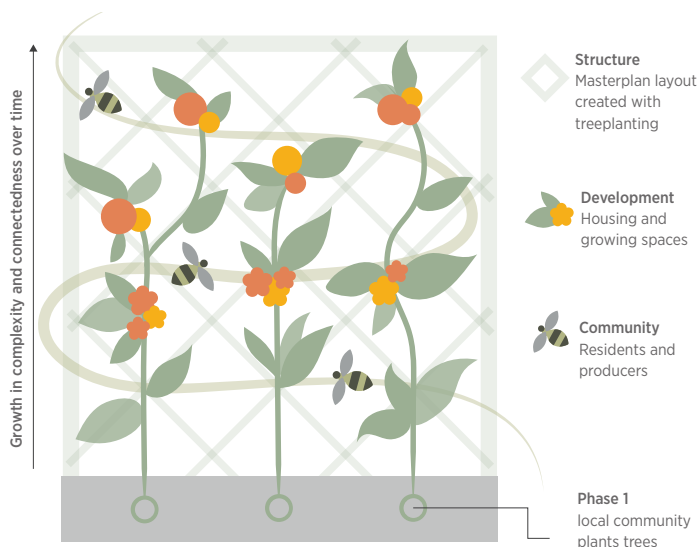
- **Detached:** (25 units/ha) with a single family home on a 12x24m plot. As in the original Bournville layout each plot would be provided with a vegetable bed and a fruit tree.
- **Semi-Detached:** (35 units/ha) A two-storey single family home on a 12x24m plot with the back garden facing the Hamlet Common.
- **Terraced:** (50 units/ha) along the Avenue the plots will be subdivided to create 6x24m plots that can be developed for terraced housing to achieve the form of a village street at greater densities.
- **Apartments:** (100 units/ha) Elsewhere plots will be combined to create building sites for small apartment schemes. These will be 3 and 4 storeys and may contain commercial uses on the ground floor.

These plots would be subject to a simple plot passport on a single sheet of paper. This will set out what can be built on the plot and what it can be used for. It will include the position and height of the home, parking arrangements and future use.

The idea of the 'open source' neighbourhood will allow these rules to be as permissive as possible allowing people, for example to create a studio for home working, or even to open a shop or cafe. The idea being to allow the neighbourhood to grow organically.

### A Hierarchy of Growing Spaces

Within this structure of plots and lots created by tree planting, we are proposing a radically different approach to green space. If you look at an aerial photograph of a traditional housing development there is plenty green space. Some of this is in back gardens, but much of it is made up of unproductive verges and landscape areas that serve little more than a decorative function. What if we were to turn this into productive land? What if we were to design a neighbourhood with a net



increase in biodiversity compared to the farmland that it is now?

Within the structure formed by tree planting the masterplan is therefore organised into a series of neighbourhoods, each of which incorporates the hierarchy of productive growing spaces described below:

- **Private** – Each house has its own growing spaces in its garden, roof areas and balconies.
- **Communal** – Each Hamlet has a central growing space which, depending on the wishes of local people can be allotments, a market garden or common land.
- **Common** – Each of these neighbourhood spaces links to larger growing areas including market gardens and common land for agriculture linked to the surrounding farmland.
- **Public** – Meanwhile the streets of the neighbourhood are lined with fruit trees so the neighbourhood itself is the orchard.

## Agroforestry & Biodiversity

After decades under intensive farming, the level of nutrients in UK soils is in sharp decline with direct impact on biodiversity and food quality. Agroforestry, as a complex system combining trees, crops and livestock, can contribute to achieve economic and ecological value – whilst restoring soil health.

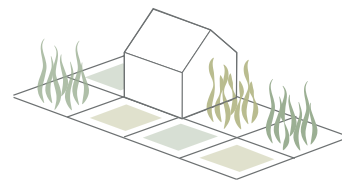
By incorporating trees in agriculture, we can increase the amount of carbon sequestration in the soil, triggering a food chain that starts with the decomposition of organic matter and results in an overall biodiversity increase, from which we ultimately benefit.

A combination of trees and rotating crops through the Hamlets will provide a variety of products along the year with allocation in the local market and at the same time replenish soil nutrients – culminating in an overall balanced and regenerative system, ultimately sustainable.

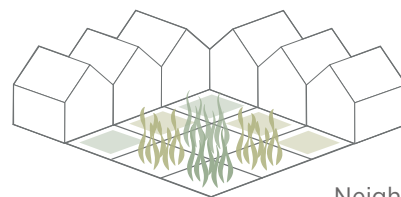
Our vision is to design a neighbourhood transforming the monotonous farmland in a more complex landscape which integrates housing, woodland, hedgerows and agro-forestry, resulting in an expressive biodiversity net gain.

A robust green infrastructure, articulating the existing hedgerows and spots of woodland with street trees, parkways, wild buffer and sustainable farming will increase the connectivity of the landscape, with great benefits for new species to thrive.

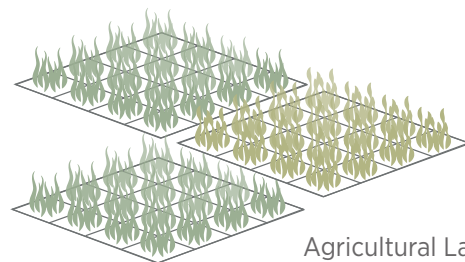
The selection of a wide variety of edible fruit and pollinator friendly trees and shrubs will attract a range of different insects, bird and mammal species.



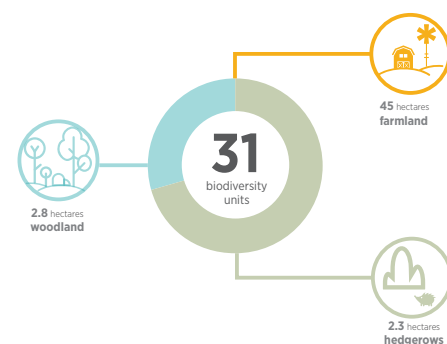
Private Gardens



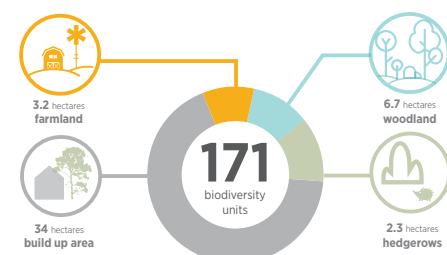
Neighbourhood Growing Spaces



Agricultural Land and Producers



Current Condition



Proposed Condition  
(140 units of biodiversity net gain)



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### Growing a Community

As we have learnt from case studies like “Incredible Edible Todmorden”, such a radical approach to community food growing can bring huge benefits in terms of health, biodiversity and community cohesion. However, success relies on careful coordination and stewardship by passionate and competent individuals.

We are proposing that a “Community Champion” be appointed, to coordinate local farmers, producers, neighbourhood growing groups, educators, volunteers and motivated individuals in their participation within this new system.

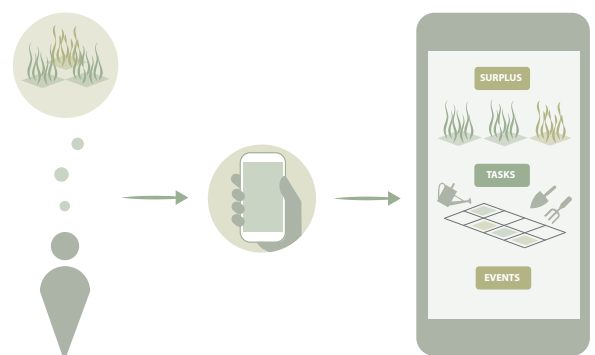
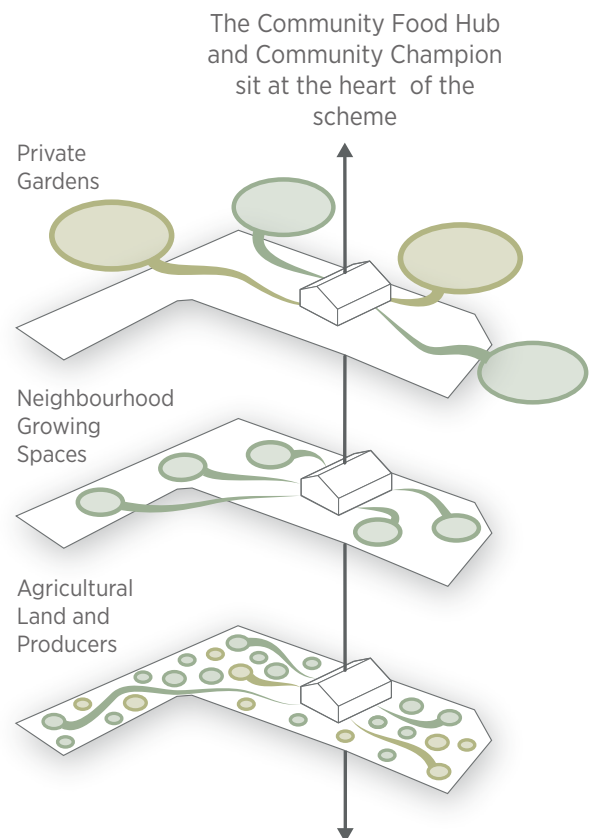
To get the full social benefits it is also important to have a single, central space where members of this growing community can come together to share surplus crops, knowledge and resources. It could also function as a social space, a place to learn from one another, host events and prepare food together. We are proposing a Community Food Hub at the heart of the scheme, functioning as the centre for every food growing space in the hierarchy shown opposite.

The Food Hub could be supported by an app - letting residents know what surplus crops are available, coordinating tasks on the communal growing spaces, and promoting learning events and socials.

This app could likewise be used for other community based activities such as the compost collection and waste management. The app would also be used as a management tool for a carsharing scheme with electric vehicles (cars & bikes). In each Hamlet as well as in the Transport Hub charging points and parking will be provided for these vehicles.

### Growing the next Generation

The food production would involve all parts of the community from school children to people in the care home, so growing becomes the medium that unites the community. Each hamlet contains a mix of typologies & tenures creating a mix of people of all ages, health and income. An expression of a circular living arrangement, where residents can stay and be the co-creator of the good social life in the district for the whole.



## **Social, Economic and Environmental Sustainability**

Such a neighbourhood could provide for much of its own fresh food needs. People could grow for themselves, grow communally with their neighbours and grow for sale in local markets. This would be organised at the neighbourhood scale including the following:

- A Community Champion to coordinate the management of the collective agriculture.
- A green box scheme in which people receive vegetables in return for a number of hours work a month or fee.
- A local green grocer's shop.
- Tool banks to provide gardening tools and specialist equipment.
- A market where produce can be bartered and sold both locally and to people in the surrounding area.
- A community composting scheme.
- A micro brewery to make beer and cider from local produce.
- A shared kitchen where people can cook together at community events.

This would start to develop a circular economy in the neighbourhood where food waste is recycled and turned into productive output. This would involve all parts of the community from school children to care home elderly, so growing becomes the medium that unites the community. It would also be self-supporting financially with the income from the production and processing of food being used to pay for the neighbourhood farmer and the organisation of the system providing social, environmental and economic benefits.

Placing the food production at the door step will have an immense impact reducing carbon emissions and converting intensive farming into organic agroforestry will create opportunities for wildlife that have long been forgotten. Doing this while preserving soil and water value also through the implementation of Sustainable Drainage Systems (SuDS), will benefit the generations to come and guarantee the health and well-being of people at present.

Our SuDS proposal begins with the site itself - its topography, soils and slope - but feeds in and complements the existing green infrastructure of woodland, hedgerows and trenches, which not only provides shelter for biodiversity but works already as a sustainable drainage framework.

Being the Avenue the main source of pollution, it is fundamental that we start to deal with water right there - intercepting it with bioretention systems or 'raingardens'. The water is then taken

to retention ponds located in the wild buffer around the site through pervious pavements, swales and hedgerow trenches, crossing the different Hamlets and providing additional levels of treatment.

The benefits of SuDS rely not only in the control of runoff and water quality but also in the benefits for biodiversity and, ultimately, for the creation of better places for people.

The landscape is hereby a vibrant and potential environmental troubleshooter solving climate challenges, whilst creating recreational variety and hotspots for social activities.

Ditching the extensive deserts of grass lawns for a more naturalistic approach that integrates species of the native flora with introduced ones, and a sustainable water management will make the landscape a resilient and low maintenance asset, that will save resources in the future.

A low maintenance, and regenerative landscape is the ultimate sustainable environment.

## **The Master-Developer**

This plot based approach is not predicated on self-build. The proposals suggest that it is appropriate for all forms of housing development so that some plots would be developed by individuals, via custom build or baugrupen arrangements. Others would involve small scale developers and housing associations and yet more could involve the a volume house builder. This would include 40% of the plots that would be delivered as social housing. All plots would be required to work within the plot structure and follow the plot passport rules.

This implies that the development will be coordinated by a master builder. This could be the Letchworth Trust, the local council or a private master developer. The master developer would be responsible for laying-out the initial grid, for putting in services and roads, building the school, planting the trees and managing the agricultural use. The cost of this would be recouped from plot sales.

The freehold would be retained and passed on to a community trust who would become responsible for the long term management of the area and the control of future development. This is nothing particularly radical, it is the way that much of Letchworth was developed before the second world war and is the way that most large-scale development takes place elsewhere in Europe.



