



STRATEGIC BRIEF
AND
INITIAL PROJECT BRIEF
FOR
COFARM CAMBRIDGE

VERSION 1.3

DECEMBER 2019

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CONTENTS

1. OVERVIEW
 2. BUSINESS CASE
 3. STRATEGIC BRIEF (RIBA STAGE 0)
 4. INITIAL PROJECT BRIEF (RIBA STAGE 1)
 - 4.1. PROJECT OBJECTIVES
 - 4.2. QUALITY OBJECTIVES
 - 4.3. PROJECT OUTCOMES
 - 4.4. SUSTAINABILITY ASPIRATIONS
 - 4.4.1. UN SUSTAINABLE DEVELOPMENT GOALS
 - 4.4.2. FUTURE CLIMATE PARAMETERS
 - 4.4.3. CONVENTION ON BIOLOGICAL DIVERSITY
 - 4.5. PROJECT BUDGET
 - 4.6. PROJECT LIFESPAN
 - 4.7. TECHNOLOGY
 - 4.8. FEASIBILITY STUDIES
 - 4.9. SITE INFORMATION
 5. CO-CREATION WITH AND FOR THE COMMUNITY
 - 5.1. COMMUNITY CONSULTATION RESULTS
 - 5.2. KEY INFRASTRUCTURE DESIGN PRINCIPLES
 - 5.3. KEY SOCIAL DESIGN PRINCIPLES
 6. DESIGN INSPIRATION AND LINKS
 7. DESIGN TEAM
 8. CONCLUSION
- APPENDICES – SITE INFORMATION

OVERVIEW

CoFarm (www.cofarm.co) is a Cambridge-based start-up social venture. It seeks to holistically address multiple social, environmental and economic challenges by enabling the establishment of a network of community farms across the UK, with Cambridge being the pilot location for the first CoFarm project.

‘Co-farming’ is conceived as a new - scalable - model for engaging communities in the production and consumption of local, highly nutritious food in a way designed to enhance human health and wellbeing; increase biodiversity and natural capital; promote community cohesion and contribute to the creation of a more inclusive economy.

It draws its inspiration from a great many inspiring people, projects and movements with aligned objectives. Examples include Community Supported Agriculture (CSA), Slow Food, Agroecology, Care Farming, Permaculture, City Farms, Community Gardens, Allotment Societies and organic Market Gardens.

CoFarm brings practitioners and researchers from the health, education, biodiversity, economic and social science sectors together with communities, businesses, farmers and landowners to reposition food and farming as the primary driver of public and ecosystem health in the UK.

A number of local and national stakeholders are involved in co-creating the first CoFarm in Cambridge, drawn from the various disciplines and stakeholder groups outlined above.

A 2.83 hectare/6.99 acre site has been secured, on a Farm Business Tenancy, to establish the pilot CoFarm on privately owned agricultural land in the Green Belt close the centre of Cambridge City, off Barnwell Road and adjacent to Coldhams Common. If demand for the project grows, as anticipated, a patchwork of additional sites within and surrounding Cambridge will be sought to enable more communities and residents to engage with and benefit from the model. Some of these sites may be integrated into plans for new housing developments and new communities to ensure Cambridge’s rapid growth is sustainable and ensures a high quality of life for residents.

We are delighted to have the support and guidance of RH Partnership in navigating the RIBA Plan of Work design process for this locally and nationally significant project to ensure it achieves the ambitious social, environmental and economic outcomes we seek to bring about.

1. BUSINESS CASE

The overarching business case for ‘co-farming Cambridge’ is that Cambridge will have a happier, healthier and more cohesive population - one which places fewer demands on local services; plays its part in achieving Paris Agreement targets for averting catastrophic climate change and contributes meaningfully to nearly all 17 of the UN Sustainable Development Goals at a local level.

Critically, we believe that co-farming could play a significant role in enabling Cambridge residents to continue to enjoy a high quality of life as the city grows. As the project (and land available to expand it) grows, so too will Cambridge's ability to credibly present itself as an international beacon of good practise in sustainable urban and peri-urban design and development. This will, in turn, enable Cambridge to continue to secure significant inward investment and attract organisations and individuals who will contribute to a sustainable evolution of the much admired 'Cambridge Phenomenon'.

2. STRATEGIC BRIEF (RIBA STAGE 0)

The community farm off Barnwell Road is a pilot site through which we aim to prove that thoughtful, co-creative and outcome-led design can deliver the social, environmental and economic outcomes we describe in section 4.3 of the Initial Project Brief.

Research and initial stakeholder consultation suggests that 7-acres of good agricultural land – where managed by skilled growers - would be capable of producing sufficient fresh fruit, vegetables and herbs to supply up to 800 households throughout the growing season, which we plan to extend with the aid of greenhouses and/or polytunnels.

Given that this first site is a demonstration site, we propose to initially cultivate approximately 2 acres of the site according to biologically intensive, organic market gardening principles. Our aim is to provide a reliable supply of high quality fruit and vegetable produce for approximately 200 households who are willing to be active participants in research that will enable us to track health, wellbeing and community cohesion indicators over time.

To eliminate the need for chemical fertilisers, herbicides, pesticides and nitrogen inputs, we also plan to keep some livestock on the site and manage the farm according to the principles of [agroecology](#). (Opens a link to the UN Food & Agriculture Association Agroecology Hub.) Therefore, approximately 1 acre will be required for chickens and grazing animals.

This leaves approximately 4 acres with which to optimise social and environmental outcomes and create an aesthetically beautiful, inspiring, inclusive and health-enhancing space which encourages prosocial behaviours, community interaction and cohesion; promotes biodiversity and builds natural capital.

3. INITIAL PROJECT BRIEF (RIBA STAGE 1)

3.1. Project Objectives

- To create a safe and welcoming space where people are supported to develop and maintain good physical and mental health and wellbeing, whilst immersed in nature and connected to each other.

- To create an aesthetically pleasing and fully accessible community space where local residents, school groups, community-based organisations and employees of local businesses can safely learn about - by participating in - sustainable food production.
- To create a productive and financially viable market garden and community farm on the Barnwell Road site with sufficient infrastructure to extend the growing season using greenhouses and polytunnels
- To provide a secure and safe environment for keeping limited livestock to provide eggs, honey, organic manures and sustainable grazing according to the highest animal welfare standards.

3.2. Quality Objectives

- As a pilot project with aspirations to scale-up, Cambridge's first community farm needs to demonstrate good practise in all aspects of its operations.
- In terms of built infrastructure, any initial infrastructure should be low impact and temporary, using locally sourced, natural materials and enhancing the site's natural features, rather than detracting from them.
- Much of the infrastructure should be capable of being created and implemented by a voluntary workforce with mixed skills (the community), under the supervision of those with appropriate technical expertise, as required.
- As tenants on a privately owned site for agricultural use in the Green Belt, we need to demonstrate to planners that any infrastructure is relevant to community-based agricultural use and it should also be capable of relocation with minimal loss of investment, should our tenancy come to an earlier than envisaged termination.
- The aesthetics of the site are very important. The site should be beautiful, tranquil and feel natural in order to help promote and maintain good physical and mental health.

3.3. Project Outcomes

We seek to bring about the following outcomes by creating the community farm off Barnwell Road:

- Increased community cohesion, community safety and prosocial behaviours in the neighbourhoods closest to the community farm. (Abbey, Romsey and Cherry Hinton.)
- Enhanced mental and physical health and wellbeing of individuals who participate in co-farming activities and source their food from the farm.
- Increased biodiversity and natural capital on the farm site and neighbouring areas.
- A more inclusive local economy in which value is retained in - rather than extracted from - the community

3.4. Sustainability Aspirations

One of the major motivations behind establishing CoFarm is the recognition that our local and global food systems are the primary driver of biodiversity loss and climate change. We seek to create a local model of what an efficient and sustainable food system might look like if (and when) replicated at scale.

3.4.1. UN Sustainable Development Goals

The Global Goals are baked into CoFarm's DNA and founding governing documents and there are few Global Goals which CoFarm's holistic model won't contribute to delivering, if implemented successfully. The 11 Goals we're striving to drive the greatest progress against are:



Goal 1 - No poverty

Goal 2 - No hunger

Goal 3 - Good health and wellbeing

Goal 6 - Clean water and sanitation

Goal 8 - Decent work and economic growth

Goal 10 - Reduced inequality

Goal 11 - Sustainable cities and communities

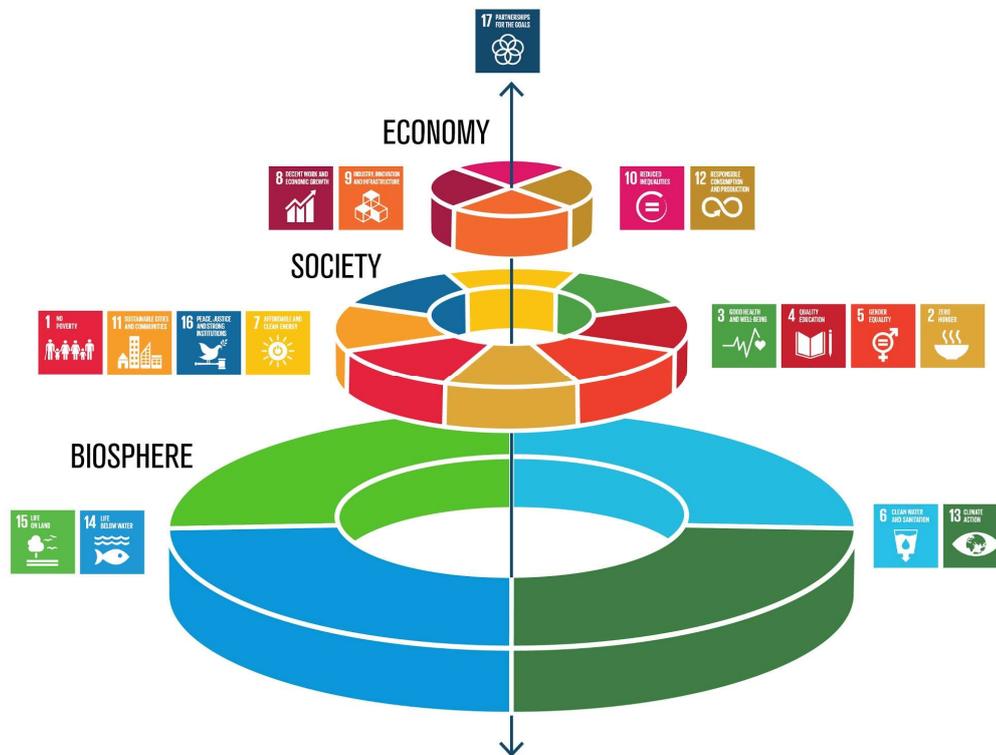
Goal 12 - Responsible consumption and production

Goal 13 - Climate action

Goal 14 - Life below water

Goal 15 - Life on land

The [Stockholm Resilience Centre](#) has produced this useful diagram that shows how food connects all of the Goals and provides a good visual explanation about why we're creating CoFarm.



Graphics by Nerker Lokrentzi/Asome

3.4.2. Future climate parameters

CoFarm's model seeks to make a positive contribution to limiting global warming and limiting the most harmful impacts of climate change in five main ways:

- Rethinking energy use across the food system, which currently contributes between 30% and 50% of global emissions. All of our activities from production to distribution will seek to minimise carbon emissions by creating hyper local production and distribution systems that predominantly require human energy (to the extent that it is beneficial to enhancing health and community outcomes) and renewable energy inputs.
- Farming according to the regenerative principles of agroecology, therefore increasing the amount of carbon sequestered in the soil.
- Eliminating the need for chemical inputs that have high energy requirements to mine, manufacture and distribute.
- Reducing the amount of produce that is imported from regions (e.g. East Africa, South Africa) where communities are already being hit hard by climate change and where food sovereignty needs to be dramatically increased.

- Reducing food waste, by growing directly for an engaged local market where demand and supply are closely matched and surplus resources can be processed on site

Any infrastructure we create to enable this low climate impact system should also have as little embodied carbon as possible and be powered by renewable energy sources wherever feasible. Our aim is to demonstrate a closed loop, carbon positive system is possible.

3.4.3. Convention on Biological Diversity

In 2020, world leaders will gather in Beijing to adopt new targets in a legally binding framework (the Convention on Biological Diversity) for slowing the rate of biodiversity loss, which is currently at least 1,000 times the background extinction rate. Transforming food production and distribution will therefore be a large part of meeting the new CBD targets, which need to be ambitious.

Our Cambridge pilot site should demonstrate that local farm systems with high biodiversity and crop diversity can also produce high yields.

3.5. Project Budget

We have budgeted, for fundraising purposes, approximately £120,000 for all infrastructure related capital expenditure on the site. This is on the basis of having to pay full market rates for materials and services such as fencing and earthworks, which we are confident we can access either free of charge, at trade rates or 'at cost' in recognition of our (forthcoming) charitable status. Our intention, therefore, is to keep well within this budget.

The design resulting from this site design phase will play an important part in helping to secure the resources to implement it from a range of sources.

3.6. Project Lifespan

Our Farm Business Tenancy with the landowner automatically renews each time it expires, so we have some security of tenure on the site. We intend that the farm becomes a much loved community facility that delivers community benefit over the long term and certainly up until 2030 at a minimum.

In terms of the lifespan for implementation of the farm design and associated infrastructure, we anticipate a phased approach as the required funds and/or partners become available. In terms of growing, **we need to be fully operational by February 2020**, in order to be growing throughout the growing season in 2020. Minimum infrastructure required in Phase One to enable this includes:

- secure fencing of the whole site to minimise predation of crops by wildlife, deter theft and vandalism and ensure the safety of vulnerable service users (e.g. young children, adults with learning disabilities and older people with dementia)
- social space and shelter from the elements for staff and volunteers
- accessible toilet facilities
- hand washing, produce washing and potable water stations
- rainwater harvesting infrastructure (ponds, reservoirs and associated rainwater collection equipment installed to any built infrastructure)
- highly secure tool and equipment storage

Subsequent phases could focus on implementation of more aspirational and planning consent/funding dependent aspects of the infrastructure. Some examples include:

- a field to plate cafe
- a teaching/demonstration kitchen
- a secure office space
- a refrigeration room for harvested produce prior to distribution

Pending RH Partners and Design Team capacity for working up draft designs, we'll aim to have initial design concepts drafted by 5th December - UN World Soil Day.

3.7. Technology

In keeping with our low-impact, low emissions, low running cost and high sustainability aspirations - and coupled with the lack of basic services to the site (e.g. there is no direct water supply and no mains electricity) - we aim, if feasible, to operate a closed-loop and off-grid system on the farm.

Technologies required to achieve this might include:

- solar and/or wind powered electricity generation
- geothermal or ground source energy capture and pumping
- energy storage systems
- rainwater harvesting infrastructure
- waterless/composting toilets
- off-grid refrigeration system (for post-harvest waste prevention)
- reed-bed grey water filtration system
- low-emission, high efficiency wood burning stoves
- renewable powered CCTV and automated biodiversity monitoring systems

We are interested in using technologies that could be replicated in other off-grid locations in developed and less developed regions.

A core component of CoFarm's business model is the close monitoring of all of our inputs, outputs, outcomes and - ultimately - our impact, across all aspects of our operations. We are developing a digital platform to help enable this.

3.8. Feasibility Studies

We have not conducted a feasibility study for the Cambridge pilot farm as it is intended that the pilot itself will determine how feasible it is to scale the model nationally and internationally. We know from our community consultation process that there is sufficient support for the Cambridge pilot to make it viable in terms of participation.

3.9. Site Information

The site is 6.88 acres of privately owned agricultural green belt land off Barnwell Road, in Abbey ward, Cambridge City. See Appendix 1 for a site map. The land is adjacent to Coldhams Common - an important and well-used recreational green space in the City.

Abbey ward has among the highest food poverty and lowest life expectancy rates in Cambridge, which ranks as the most unequal city in the UK for the second year running in the last [Cities Outlook report produced by the Centre for Cities](#).

One boundary of the site (which runs parallel to Barnwell Road) has a formal public footpath running along its length, which is a permissive path to Coldhams Common. For several years the site has not been farmed and during this time dog walkers have created an additional access point at the opposite, Northern end of the site by sawing through a section of wooden cattle fence, trampling and removing wire fencing – thereby creating informal access and a circular walk around the perimeter of the field.

Under the terms of our Farm Business Tenancy we are required to reinstate any fencing that has been destroyed or damaged.

Sensitively managing community access; safety and security on the site are key issues we need to address as we transform the site into a thriving community farm.

Water is also a significant issue, as the site is not directly served by a water supply. Coldhams Brook runs parallel to the public footpath and Barnwell Road but this is an important site for biodiversity which frequently runs dry in the summer and so we will not draw water for irrigation from it. There is a potable water supply on the neighbouring Coldhams Common, which is managed by Cambridge City Council. We are informed by Cambridge Water that a pipe from this supply could very simply be extended to the farm for a potable water supply, with the permission of Cambridge City Council.

It would be possible, with thoughtful design, to holistically address access issues as well as habitat creation and rainwater fed irrigation by creating ponds, wetlands and reservoirs that serve all of these purposes as well as being aesthetically pleasing.

4. CO-CREATION WITH AND FOR THE COMMUNITY

One of the [fundamental elements of agroecology, as defined by the Food and Agriculture Organisation of the United Nations \(FAO\)](#) is, “Co-creation and sharing of knowledge”.

In keeping with this fundamental principle of agroecology, this community farm will be co-created and continually shaped by the community. We started this process by initiating a community consultation process in the Spring of 2019 to determine what the community wanted from the farm and what we need to provide in order for community needs to be met.

4.1. Community consultation results

The results of the consultation are attached as Appendix Two or can be viewed online at www.cofarm.co/survey. The full report contains a vast amount of valuable data that we gathered as part of the consultation, and we recommend reading this in full. To assist the design process, we've teased some key design principles out of the report, which we've split into two groups - infrastructure and social.

4.2. Key infrastructure design principles and features

Access & security

- Limited motor vehicular access via Barnwell Road entrance and on-site parking restricted only to:
 - farm vehicles
 - food trucks/mobile catering vans (for special events, by appointment only. May also be used for community cafe catering in Phase One.)
 - registered disabled visitors (with a caregiver or driver, where applicable)
 - group visitor transportation by appointment only (e.g a school minibus or small coach from a local business or community group)
- Secure bicycle parking facilities for visitors and suitable bicycle and pedestrian access from Barnwell Road and from Coldhams Common to encourage sustainable transport.
- Separate secure cargo bicycle fleet parking for distribution of produce, close to farm produce storage/wash station.
- All access points to the farm must be capable of being very secure at times when the farm is not open to the public. (i.e. over night and at other times when the site is not staffed)

- CoFarm will develop a lone working policy for staff and volunteers. Core spaces where public access can be controlled to ensure the physical security of staff and volunteers are required.
- The whole site must be accessible for those with restricted mobility, sensory impairment and other disabilities. To include:
 - wheelchair access throughout the site with appropriate surfaces and all furniture designed to accommodate wheelchairs or other mobility aids
 - wide enough gaps in polytunnels and greenhouses for wheelchairs
 - a significant proportion of growing beds raised high enough to enable tending by wheelchair users
 - wheelchair washing station at disabled parking bays
 - easy to navigate spaces for those with sensory impairments

Aesthetics & style

- Retain a wild and natural feel throughout the site, enhancing and creating natural features that support the development and maintenance of good mental and physical health and wellbeing
- Holistically combine requirements such as crop irrigation, security and access with reservoir and wetland creation, where possible. (For example, a biodiverse pond will have a nicer aesthetic than razor wire topped fencing but may be just as effective at ensuring site security and controlling access.)
- Styling should be rustic and natural but comfortable and safe for all users.
- Extensive use of wildflowers and cutting flowers throughout the site for aesthetics and to benefit wild pollinating insects.

Community infrastructure

- Sheltered and outdoor areas for keeping warm, gathering, socialising, relaxing, eating & dining, learning & sharing, fire pits, playing.
- Sheds - both functional and social.
- Play spaces/areas for families with very young children with access to other parts of the site restricted
- Sensory and herb garden
- A 'CoFarmacy' garden for growing and education about medicinal plants
- Rustic cafe and indoor and outdoor communal food preparation/preservation/demonstration/teaching areas (e.g. cob bread and pizza ovens, BBQ areas)
- Waterless/composting toilets (and some thought given to how to manage access for farm volunteers/visitors and not attract every user group of neighbouring public spaces)
- Woodworking area/s for:
 - group green woodworking workshops and

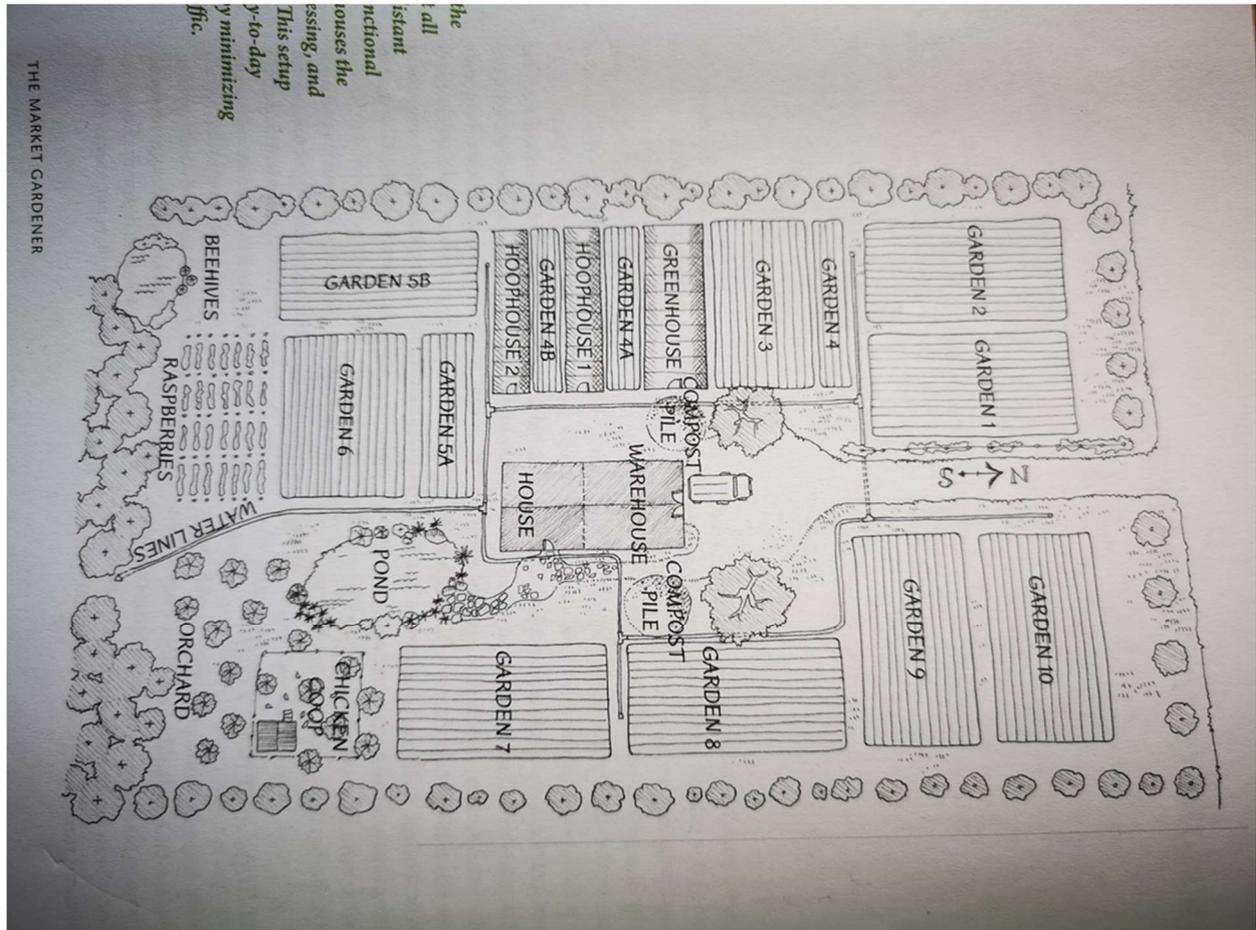
- receiving and processing City Council felled wood and coppiced wood into farm infrastructure/firewood/woodchips craft items etc.
- seasoning and storing firewood and timber for community distribution and use on the farm. Meandering low walls could also be created from these resources.
- biochar kiln
- solar powered wood chipper
- 'Shop' area for CoFarm subscribers to collect their produce and, subject to any change of use planning implications, for people to buy direct from the 'farm gate'. A converted shipping container may suffice and enable powerful storytelling about global food commodity trading. (See [Insane Trade](#).)
- Hard standing/matted area to enable pop-up events/food festivals/community celebrations/mobile catering trucks
- Sculpture and public art used throughout the site to enhance wellbeing and instil a sense of wonder. To include a place to accommodate a large interactive sundial for visitors to explore and play with the concept of time and time well spent.

Food growing & processing built infrastructure

- Polytunnel/greenhouse x 2 for extending growing season and growing seedlings for transplanting
- Polytunnel/greenhouse for growing herbs and spices
- Polytunnel/greenhouse for tomatoes/cucumbers/fruits etc.
- Fresh produce washing and packing station with potable water supply
- Vermin proof, refrigerated storage area/warehouse for post-harvest/pre-distribution food storage (24 hour turn around)
- Extra high raised beds, accessible for wheelchair users
- Central composting and vermicomposting area/s (with large vehicle/tractor access)
- Secure housing for free range laying chickens and grazing livestock (TBC) with highest possible animal welfare standards

5. DESIGN INSPIRATION AND LINKS

The picture below shows a [JM Fortier's organic market garden](#) layout which supplies 150 households with a weekly fruit and veg box and surplus to sell at local markets in Canada.



Layout of J.M Fortier's 1.5 acre bio-intensive commercial market garden in Ontario. 'The Market Gardener', J.M Fortier, New Society Publishers 2016

Fortier's layout optimises efficiency and maximises yield, without the need for chemical fertilisers and herbicides.

This layout is designed for a small, physically fit, team of skilled growers to run it as a commercial market garden, rather than involving an engaged and diverse community of volunteers to be involved in the growing. Therefore the design and system might not be optimal for creating the outcomes we seek to create. But we can draw inspiration from some aspects of the design.

6. DESIGN TEAM

The following people have all expressed an appetite for providing input into the design process for the community farm:

- Tom Foggin (Lead) - Architect at RH Partnership and Chair of RIBA Eastern Region
- Andrew Drummond (Lead) - Architect at RH Partnership
- David Ward – Director, RH Partnership
- Peter Wrapson (Co-Lead) - Horticulturist and former Head Gardener for Jamie Oliver restaurants and family
- Dominic Walsh (Co-Lead) - Horticulturist and Ecologist
- Gavin Shelton (Co-Lead) - Founder, CoFarm Group
- Dr Laura James – Founding Trustee, CoFarm Foundation; Director, CoFarm Estate
- Richard Brooks – Founding Trustee, CoFarm Foundation; Director, CoFarm Cambridge
- Ben Cowell – Founding Trustee, CoFarm Foundation; former National Trust East of England Director
- Helen Holmes (Co-Lead) – Crop Scientist and Community Supported Agriculturalist
- Alex Collis – Trustee, Abbey People; Lead Councillor for Sustainable Food and Anti-Poverty, Cambridge City Council
- Rachel Steward - Environmental Manager, University of Cambridge; Director, Wild Play & Education
- Dr Steve Boreham – Geologist, Ecologist and Palaeontologist, University of Cambridge Department of Geography
- Sarah Hamilton, Designated Nurse Safeguarding Children, Cambridgeshire and Peterborough Clinical Commissioning Group
- Anusha Iyer - local resident, User Experience Designer and foodie
- Rina Dunning - Community Engagement Team Leader, Cambridge City Council
- Richard Todd - Local Resident and retired Head Gardener at National Trust's Anglesey Abbey
- Emma Reynolds - Community & Education Manager, Groundwork East
- Emily Lomax – Youth Development Manager, RSPB
- Iain Webb – Community Wildlife Officer, Wildlife Trust BCN
- Aiysha Malik – Independent Branding and Graphic Design Consultant
- Meg Clarke - Local Resident, Permaculture Diploma Candidate and Baker
- Rev. Karin Voth Harman - Vicar of St Andrews Church, (land owner)
- MJ Black - Local Resident, Horticulturist and Site Accessibility Adviser
- Beth Ball - Service Manager - Horizon Resource Centre, Cambridgeshire County Council
- Emily Jacob - local resident and Landscape Architect
- Guy Belcher - Cambridge City Council Biodiversity Officer
- Katie Thornburrow - Executive Councillor for Planning Policy and Open Spaces, Cambridge City Council
- Georgie Bray - Farm Manager, RSPB Hope Farm
- Ellen Winchester - Abbey Resident; visitor experience at National Trust Anglesey Abbey
- Douglas Stanton – Chartered Surveyor, Sector Three Property
- Matt Deacon – Wicken Fen Vision Project Officer, National Trust

RH Partnership will lead on the design process, supported by Peter Wrapson, Dominic Walsh and Helen Holmes on horticultural aspects as Co-Leads with Gavin Shelton for CoFarm.

For agility's sake, we will schedule a number of in-person/online meetings to produce the design, at which attendance will be optional, and determine a suitable system of sharing design drafts and feedback between the design team online. Final drafts will be shared with the wider community for feedback through at least one public viewing prior to implementation.

7. CONCLUSION

The community consultation process revealed a huge amount of support for Cambridge's first community farm.

With climate change and biodiversity loss now front and centre of people's minds, communities divided by seemingly intractable political issues and families with lower incomes wondering how they will absorb the predicted increases in food costs that result from them, the appetite and the need for this project will continue to grow.

We look forward to co-creating an optimistic community-based space that holistically and positively addresses these issues and increases social, natural, health and financial capital at the local level.

APPENDIX ONE - THE SITE



CoFarm Cambridge, in Abbey ward, from above. The 6.88 acre field, which can be accessed from Barnwell Road, is surrounded by a well-established hedgerow, which separates it from Coldhams Common.

The red circle indicates the farm gate vehicle access point and also where a public footpath starts that runs parallel to Barnwell Road and joins Coldhams Common at the top left corner of this image.

A railway line runs along one boundary of the site.

To view the site on Google Maps, [click here](#).

For a [What3Words](#) location for the farm gate (ringed in red on the image above) on Barnwell Road use [///work.drum.skip](http://work.drum.skip)

APPENDIX TWO – MARKET GARDENING ZONE

The dotted area highlighted in lilac below is the part of the site with the most favourable growing conditions. This is where the more bio-intensive market gardening aspects of the design should be situated, though food can and should be grown throughout the site.

