

Growing together

The Highbridge Community
Farm story 2010-2021



By Andrew C Ross

Dedication

To all local people who are concerned enough about our environment to have shared this Highbridge Community Farm journey together. Well done!

Acknowledgements

Thank you, Mr Russell for offering us the use of your field.

My grateful thanks to Melita S for proofreading the draft and her most helpful thoughts, comments and suggestions, several of which appear here. Thanks to Jonathan R, my dear son, who has helped with presentation. Many farm members have contributed photographs through the shared Farm Groupspaces and Facebook accounts. I am sorry I am unable to identify the authorship of many photos, but I know Lynn, Steve, Gavin, Stephen and Melita have all contributed. Thank you for bringing this account to life by capturing moments in our shared story. Thank you to Kate, my wife and best friend, who has carried an extra load as I have been working on this manuscript and for her presence, love, advice and encouragement.

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Rhubarb patch

Chapter 1 The beginnings of Highbridge Community Farm

Why Eastleigh Transition Network became interested in setting up a Community Growing project. How Mr Russell came to offer us the field and how the project began.

Causes for concern

In late 2009 the world was reeling from three major threats to stability. First was the consequences of the financial and banking collapse and the subsequent economic recession that was reducing global economic activity and causing a rise in unemployment.

Second was a feeling among Environmental groups that our world was past the days of peak oil production, that oil would become a scarce commodity, threatening energy production, transport and industrial scale food production. Here in Britain in 2012, the AgriFood industry, by burning oil, was adding around 70 million tonnes metric equivalent of CO₂ to the atmosphere each year. Farming is contributing to rising carbon dioxide levels and climate change.

Third, was the rapid rise in global food prices. In Britain food prices rose 18% in real terms between 2007 and their peak in August 2012. We import around half of the food that we consume and, as Brexit has shown subsequently, there are complications at borders when we import food. Imports could be badly hit if there was a major global crop failure caused by climate change and so as a nation, we could find ourselves struggling to feed ourselves.

Eastleigh Transition Network's engagement with climate change issues

These issues were debated by a group of about forty of us in the newly formed Eastleigh Transition Network (E.T.Net) during the autumn of 2009. The local group was started in 2008 by Liz Kent and Sarah Goode who showed a couple of environmental films at the Point, a central location in Eastleigh. This led to a series of meetings with films and discussions and appearances in local community events, such as farmer's markets, the Pumpkin festival, and the



Kate and I prepared this presentation of E.T.Net's concerns for a Community event in January 2010.

Solent Gardener's show. This generated an enthusiastic and committed membership of maybe 40 people with other supporters or attenders. Soon the leadership of E.T.Net divided the membership into a number of interest groups which could pursue their own area of interest; Energy, Transport, Recycling and Food.

We pondered how we could act to inform, challenge and change more people in our community to respond to climate change problems. The ten or so of us in the Food Group had begun to look at the issue of reducing food miles, the distance and the environmental cost of getting food from the field to our plates. We wanted to stimulate more local food production and to encourage Eastleigh people to eat more locally grown organic food.

What is ETNet and where are we going?

We are a group of local people. We meet monthly to plan how we can change now to prepare for the future.

The changes ahead for all of us include climate change, economic crisis, environmental damage and loss of biodiversity, peak oil / fossil fuel depletion (that means we're running out of oil and gas), and huge population growth. We can't carry on as we have been, even if we wanted to. For the last 50 years, our world has been based on cheap oil and now the oil is running out. But it isn't all doom and gloom!

It's good to know that we have skills already to help us cope, and we can develop new knowledge, interests, hobbies – and networks of friends – that will make us better able to withstand the coming challenges. Some of the things ETNet is involved in include:

- Growing our own food
- Greener economical living
- Plastic bag free Eastleigh
- Better public transport

Lots of towns are now part of the Transition Network. The Transition movement is where local people take the initiative in preparing for changes ahead. Come along and find out what we're up to!

For contact details see overleaf. We meet on the last Wednesday of the month (not December) ... *We hope you will join us in this exciting journey!*

From an E.T Net leaflet produced in 2010

Initially the Food Group of E.T.Net were investigating three issues:

1. compiling a list of local growers of food and retail outlets for locally grown food
2. the identification of fruit trees growing on public open spaces
3. a search for land on which a community could grow their own food because of the shortage of allotments and long waiting lists in Eastleigh.

Two of our team, Sarah and Penny had the idea of trying to obtain some land to grow food and so help out some of the people on the Allotment waiting list. They placed an article in the Eastleigh Borough News expressing our interest in acquiring a field to begin to grow more food locally.

Mr Russell offers land

Farmer Henry Russell read that article and was moved to help us. He has a real interest in helping local groups and people in whatever ways he can. He contacted Sarah and Penny and through them invited us to view the field.

On 18th February 2010, a small group of us visited Mr Russell at Highbridge Farm, just north of Eastleigh. He showed us a field approximately 4 acres in size divided down its length with a barbed wire fence. The smaller field had been sown with maize for a few years, for which the farmer received an EEC subsidy, but he never harvested the crop as there was no money in that. The larger field was a meadow which was occasionally cut for silage. We accepted Mr Russell's offer to cultivate the smaller, 1.7 acre field. At the time it was a gentleman's offer, no papers were signed, no figures of money discussed. Later we arrived at a cropping licence fee of £400 per year which included some initial help from Mr. Russell to plough the field and the provision of some fencing materials.



Tony, Penny with her dog, and I (plus others) talking to Mr Russell. 18 February 2010

Formulating an idea

After receiving the offer, the Food group went back to Penny's house to discuss what we should do. We were keen to get more people involved in growing food. Several members of our team had experience of growing on allotments and we decided on a fruit and vegetable growing project which would avoid problems and regulations we would encounter if we started with livestock. We knew that often people are offered a neglected allotment, sometimes just a patch of weeds or even scrub, which takes months to dig over. It can be very disheartening to realise that by the time you are ready to plant you have missed the

planting season. And then there are all the issues for a novice vegetable grower of what to plant. So growing fruit and veg in a council allotment is often a very steep learning curve. We wondered if some of the 400+ people on Eastleigh Borough Council's Allotment Waiting List might be interested in joining us rather than waiting up to four years for their own plot. We thought about the multitudes of people who were watching the TV programmes and hearing about the renaissance in growing your own food in a garden allotment or window box and maybe were wondering about having a go themselves. Then, there were growing numbers of people who lived in a flat and perhaps lacked a garden, but would have loved to have access to a piece of land where they could grow something. Two of us had done some work in Community development and were keen to start a project that would help to create a community feeling with many unquantifiable benefits to the membership and also to use it as an educational project for the wider community. By the end of the meeting at Penny's house we had an idea which you'll hear about in chapter 2. A question remained: would anyone be interested in joining a community project to grow food together for each other?



"Our field" after it had been ploughed.

Chapter 2 Pioneers and planners

How some members of the Food Group of Eastleigh Transition Network came up with an idea and got the growing project off the ground.

The Founding Fathers and Mothers

The founding members of Highbridge Community Farm were all Eastleigh Transition Network (E.T.Net) members which itself had evolved out of the Transition town movement. E.T. Net was started in 2008 by Liz Kent and Sarah Goode. They showed a couple of environmental films at the Point, a central location in Eastleigh which stimulated a lot of discussion afterwards. This led to a few meetings with films and discussions and appearances at local community events, such as farmer's markets, the Pumpkin festival, and the Solent Gardener's show. All this generated an enthusiastic and committed membership of maybe 40 people with other supporters or attenders. Soon the leadership of ETNet divided the membership into a number of interest groups which could pursue their own area of commitment; Energy, Transport, Recycling and Food. I was the leader of the Food Group which had 10 committed members; 4 couples and two ladies: Jim and Sue, Tony and Anne, Paul and Stephanie, Andrew and Kate, Penny and Sarah. Three of those couples and one of the ladies are still involved with the project in 2021 and that, I believe, is one of the strengths of the project for we all poured our energies into getting the Highbridge Community Farm Project going (as it was initially called). The downside was that we had less time to give to E.T.Net which continued to run publicity events for two or three years until the time when both the founders moved away and the interest groups dispersed.

Penny and Sarah placed a small article about the Food Group's desire to have land for a local community of growers to grow food in the Eastleigh Borough News. Henry Russell of Highbridge Farm read the piece and invited Penny and Sarah who invited us to meet him at the farm. The date was arranged for February 18th 2010. Several of us met Henry and he offered us two adjacent fields, with a fence dividing the two. We accepted the field which had been planted with sweetcorn, but the corn had not been harvested. Near the corner of the field was a polytunnel frame which a contact of Mr Russell had put up, but had been lying idle for a few years.

So, after viewing the field we went as a group to Penny's house to discuss what we should do! There was no model community farm to follow, so we discussed for a while our general aims. Sarah and I had some experience of organising community projects and as the two of us chatted together we thought of the 10:10 initiative which was taking place in 2010. 10:10 was an empowering climate change campaign with the aim of getting individuals, companies and institutions to reduce their carbon footprints by 10% during 2010.

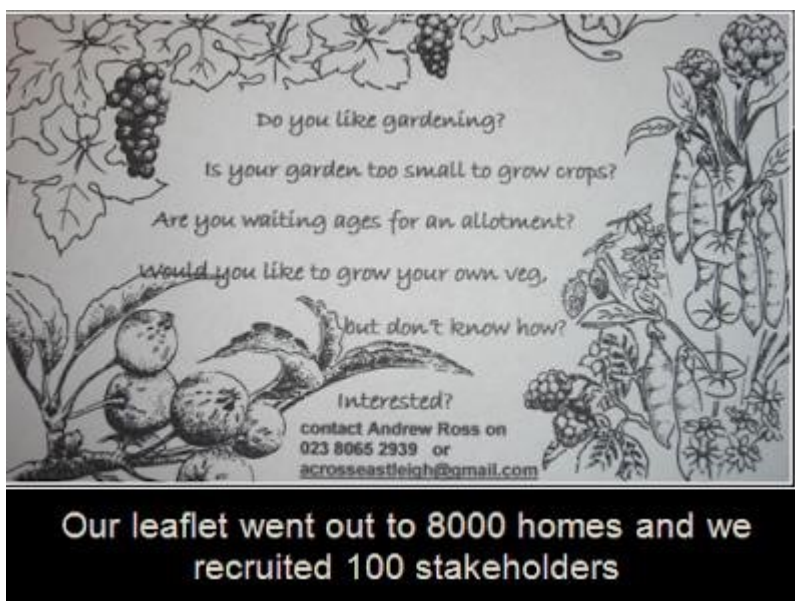
We decided to start a worker's co-operative by inviting 100 people to pay £10 for a year to become stakeholders, commit to working 10 hours over the year (a hopeless underestimate- quickly changed to 10 hours a month), in teams of 10, each team growing 1

crop. Then at harvest time all the produce would be made available to all the stakeholders to buy for approximately 1/3 of the shop price. Each team would have a team leader who would decide when and how to sow, weed, water and harvest the crop and the selling price. It seemed simple really.

The other members of the group accepted the idea, so we started planning. We had no money, no tools, no resources, but there was a significant group of committed people with real enthusiasm, knowledge and energy to get the project off the ground. A variety of skills were needed including horticultural knowledge and experience, vision, community development, research, IT skills, financial, leadership, writing, publicity and secretarial skills.

From the outset we decided that our activities must be sustainable by our own efforts, rather than seeking grants from donor organisations to allow us to purchase more expensive equipment or labour-saving devices and so we decided never to apply for a grant. We have seen other organisations who spend the first year applying for funding and doing little else. We rolled up our sleeves and got on with organising our new members and preparing the ground. Some newly formed organisations have obtained grants to allow them to purchase tractors, sheds, trees, fruit cages and other costly pieces of equipment, only for the organisation to fold a year or two later. Having money to do things easily and well has made us envious at times but throughout our time all of our income and equipment has come from membership fees, sale of produce, special member's events or gifts. This has helped us to be a resilient organisation!

Jim was treasurer of E.T. Net. He became the farm treasurer. He offered us a loan from them to help fund a leaflet. Tony and Anne had been involved in the Allotment movement for many years and had useful knowledge and contacts including a friend who designed a wonderful flier. Paul, Stephanie, Penny, Kate and myself had all had allotments for years although we couldn't all claim to "know our onions".



We felt that door to door leafleting would be the most effective way to ensure that the majority of people in the town heard of the project, although we recognised that many households will throw the leaflet in the bin with scarcely a glance. Leafleting is also expensive. So we also produced some posters and notices for advertising the project on community and church notice boards.

Recruitment, critical mass and launching

The period from February to April 2010 was frenetic for the Highbridge Community Farm organising team because we wanted to catch the beginning of the 2010 growing season.

Jim and Kate looked into insurance, health and safety issues and funding issues. We needed insurance in case anyone was accidentally injured. A Health and Safety policy was necessary in order to be a responsible organisation. We needed people to cultivate and so we concentrated on getting the flier produced and delivered. Individuals loaned the project money to supplement the finances of the E.T.Net. kitty and to raise the £200 for printing the leaflet and membership card and buying a few essential things like seed. We also began to prepare for an inaugural meeting, in a church close to the centre of our catchment area.

Kate and I manned the phone line and answered the letters and email enquiries as they arrived. The enquiries flooded in. Within six weeks, by the end of March we had nearly 200 enquiries, either by phone or email. Each one had to be dealt with individually as they had specific questions for us and we had specific questions for them. So we sent each enquirer a three-page description of our plans and a reply sheet. We wanted to ascertain the applicant's growing skill level using a scale of 1-5 for complete novice to expert growers.

It was helpful to learn something of people's past experience of growing

because, if experienced, they could make team leaders but might have been too shy or selfdeprecating to offer. We tried to discover other skills, links or contacts which could be useful to the project and whether they could introduce new aspects to the project which we had not thought of. We wanted to discern the applicants' preferences within the various groupings of the project. Were they able to undertake heavy gardening duties or just take on lighter tasks? Would they have sufficient time to fulfil their obligations? We wanted to ensure that all applicants understood the responsibilities and privileges involved

Count me in – I'll help you grow!

I enclose my annual membership fee of £10.
Cheques payable to Eastleigh Transition Network.
I agree to join a cultivation group and contribute 10 hours labour on certain days out of a number of days agreed by the group to ensure that the crop is planted, weeded and harvested at the appropriate time.
I look forward to having access to purchase a proportion of the harvest of all the crops at cost price and agree to any surplus being sold for profit.

Name

Address

Phone

email

Please select your first three **preferences** of crops to cultivate (in order of preference 1,2,3) to enable us to sort out teams.
Please also indicate your level of **experience** of growing this crop e.g. 5 = very experienced (could lead the team), 4 = quite experienced, 3 = some experience, 2 = a little experience, 1 = beginner/no experience.

	Preference	Experience		Preference	Experience
Potatoes			Courgettes		
Carrots			Beans		
Onions			Lettuce/salad crops		
Parsnips			Leeks		
Squash			Beetroot		

Please return to
Andrew Ross, 58 Magpie Lane, Eastleigh, SO50 9LU
Phone 023 8065 2939 email: acrosseastleigh@gmail.com

By end of March 2010. The first 100 replies secure membership. (We will keep a waiting list.)

Our response form

in the work. So much of a project like ours is undertaken on trust and so we explained to potential recruits that they were expected to behave in a trustworthy way. We also asked for their contact details.

From the 8000 or so leaflets that we distributed we found that 1-2% of households responded. People with large gardens seemed to be less likely to get involved, possibly because they may already have enough space for growing their own fruit and vegetables. We have since heard of attempts to form community farm groups in small villages where most people have large gardens which have been less successful as they failed to recruit enough people to give the project critical mass. In these situations, community orchard projects may be more successful. Conversely people living in flats or houses with small gardens are often keen to join in order to acquire more growing space.

Approximately 70% of the enquiries we received were from novices with little or no experience of growing their own food. So we were assured of the educational value of the project. The first 100 to return their forms with £10 were made stakeholders. 85% of stakeholders were assigned to their first preference for growing a particular crop - one of the ten crops we had decided to grow in 2010 - and another 10% to their second preference. The late applicants were fitted in where there were spaces. Subsequent enquiries were put on a waiting list.

After most of the response forms had been returned we had a meeting with about 15 people whose responses suggested that they were experienced in growing vegetables. Our aim was to try to discern whether they would make suitable team leaders. There we presented them with the ideas about growing the ten crops which had been selected and leading a team and asked them if they would like to be involved in leading a team, and, if so, which one. As well as offering to lead teams, one of them called Brian volunteered to mark out the field, others undertook to provide tools, and one, Les, told us he was a boyhood friend of Henry Russell the farmer. Les became our contact man with our Farmer and a great find he was too: as an ex RAF Engineer and Officer he was used to getting things done and became an invaluable contact man with Mr Russell and the man who got our Saturday morning coffee time going!

Chapter 3 Inaugural events

In which we describe our first community meeting, our first Saturday working at the farm and our experiences of growing together during the summer of 2010.

Our first Community Farm meeting

After a few weeks of leafleting, meetings, emails and phone calls we were all very excited as we gathered at St Peter's Church for our inaugural meeting on Friday 9th April 2010. Over 60 people turned up and we tried to get people sitting in their groups by having laminated pictures of the 10 vegetables strategically placed around the building.

After I had welcomed everyone, Sarah gave a five-minute potted history of E.T.Net explaining how we had evolved from the Transition movement. So, we retained its founding principles of a community-led response to the pressures of fossil fuel depletion and climate change and the need to move towards a more viable and sustainable future in which we will support local economies and businesses. We would be working together to produce food for ourselves with minimum use of fossil fuels and chemicals. We would support growing techniques that maintained the natural balance of the soil and preserved wildlife.

Then Tony spoke of the ethos of the project. His notes are printed in full:

1. This is a COMMUNITY Farm project, which means everyone will be expected to work together in sympathy with each other, in order to build a strong and self-supportive community. We could equally well be called a CO-OPERATIVE, which is an alternative way of describing how we will be working – i.e. in a very positive relationship with each other. A community effort has to have **give and take and trust** as fundamental components.
2. This is a new and unknown venture for ALL of us – including the various leaders. Hopefully we shall have lots of successes but mistakes will be made; things will go wrong and people will disagree with each other. In these adverse situations, we will all need to provide constructive support to each other.
3. There will be lots of different ideas as to how things should be done! We need to properly consider each other's ideas but it will not be possible to implement them all – far from it in fact – and that needs to be understood.
4. There will be changes along the way as we gain experience and learn from our mistakes – and this should all be part of the fun and challenge of what we are doing.
5. We are trying to start simply but will diversify and expand as we go – and this can start to happen this first season. We will be sowing again later in the year and that will give opportunities to try different crops and methods.

6. We wish to minimise bureaucracy whilst maximising flexibility and enjoyment, but still have to take a responsible attitude towards matters such as safety.

Health and Safety

7. Farms can be hazardous places and Highbridge is no exception.
8. There is an irrigation canal and also a pond immediately adjacent to our field; there is barbed wire; there is a great deal of farmyard and other machinery around and there are other businesses operating on the site. These are just a few of the hazards along with the ones we shall bring ourselves, such as forks, rakes, cutting tools, etc. Some minor injuries will be sure to occur (and so you will be well-advised to make sure your tetanus protection is up-to-date) and there will be a basic First Aid Kit on site.



The field being ploughed. On a farm the dangers are both visible and invisible.

9. However, we must guard against significant accidents and injuries through common sense and the advice of Team Leaders.
10. Most importantly, children MUST be fully supervised and controlled at all times by their parents or responsible guardians, who will be entirely responsible for their safety and well-being. It is expected that the main areas of hazard will be fenced off from our field and declared out-of-bounds but it is still essential that children are appraised of hazards and kept from harm's way.
11. Children must also learn to understand the growing process, so that they contribute positively to it and do not cause damage to crops; there will no doubt be enough other pests to deal with!
12. Dogs (or other pet animals) should not be brought to the site.

Jim was then introduced as the treasurer and he gave us a provisional budget for the year:

Income		Expenditure	
Stakeholders	£1,000	Seed	£500
		Insurance	£210
		Leaflets	£190
		Hire of church	£50
Sub-Total	£1,000	Sub-Total	£950
Sale of produce to Stakeholders	£2,000	Fencing and plot rent	£2,000
Sale of surplus produce to the public	£1,000	Hire of market stall	£200
Total	£4,000	Total	£3,150
Potential Surplus	£850		

I then talked of the future vision for the project which included what we might plant during the autumn including spinach, chard, kale, broad beans, onions, garlic. Over the autumn and winter too we hoped to see some landscaping of the site, by planting fruit trees, hazelnut etc.

I suggested that we could take on the other half of the field later and develop it slightly differently. I mentioned that there might be opportunities to plant soft fruits, rhubarb, strawberries, raspberries, blackcurrants, and gooseberries. There could be opportunities for individual members to develop a poultry unit, or perhaps even a few pigs.

Tony talked about how we were going to get tools etc and our plans for a portaloo. Then Penny chaired a “Question and Answer” session and we heard briefly from Alex Markham, Mr Russell’s nephew who was involved in a similar sort of project in Oxford which has taken 6 years to get off the ground.

We broke up into our ten teams to get to know each other and to deal with some very practical issues. Each team leader asked the members of the group to share their name and experience of growing vegetables and then to ask any questions. Discussions included

- Seed to be sown – discussion around the varieties of seed.
- Area to be sown – roughly 400-500 sq m per team. Discussions on whether people want an individual “tenth” of the crop area to be sown or whether people were prepared to work together right across the plot.

- Best time to sow (Spring was running late in 2010 due to a long period of cold winds and weather from the east). We planned to start sowing the first crop around Sat 17th April.
- What tools to bring. At that time we had a few donated tools and more donations came in.
- The need for weeding (and maybe watering) the crop and when people should come for that.
- The time of harvesting and thoughts on how the crop could be harvested and then shared out. What are the team's thoughts on pricing and paying for the food? Explanation of why we will need to charge something for the food (in order to cover expenditure). We thought of charging around 1/3 of supermarket prices!

Everyone seemed excited and enthusiastic. But would the whole thing work? What would the soil be like? What would the weather be like? Will the crops grow? Will the rabbits, pigeons, geese and deer eat everything before we can harvest it? So much was unknown.

All who had attended the inaugural meeting were given a few courgette and butternut squash seeds plus pots, if necessary, to get going in the warmth of their homes and bring on for planting out when conditions were a bit more favourable. One of our team leaders had grown some lettuce at home so these were planted out as soon as the ground had been cleared.

Before we began to cultivate the field at Highbridge Farm as a community we felt it was important to spell out our Aims and Objectives and an Ethos statement, and to ensure we had made all those coming to the farm aware, including those not at the Inaugural meeting of the Health and Safety issues.

Highbridge Community Farm Aims and Objectives

As a group

- to produce food locally for ourselves
- To provide an additional, sustainable and resilient food supply in a world where future food supplies are becoming increasingly uncertain
- To encourage the consumption of food that is nutritious and fresh

To give members knowledge and experience in vegetable and fruit growing, using organic methods as far as possible

- To help our own and the wider community understand climate change, the need for putting more carbon into the soil and less into the atmosphere and the need to transition away from fossil fuel consumption.



Photograph of the site (from Google earth) taken winter 2013/14. The plots are numbered from Plot 1 in the top right, across to plot 2 (top left) and so on down to plot 20. North is at the top of the photo. The pond is to the North of the picture and the infrastructure buildings are to the East.

Preparing the Field

On the 22 April, two days before everyone was due to come to start digging Henry Russell ploughed the field and then broke up the soil further to make a fine tilth for planting in.



The field has been ploughed and Brian is marking out the paths and plots with blue twine.

We had bought two 7 km balls of blue twine in Romsey and the following day Brian, one of the new team leaders, placed marker pegs and string in to indicate the central pathway and the twenty plots.

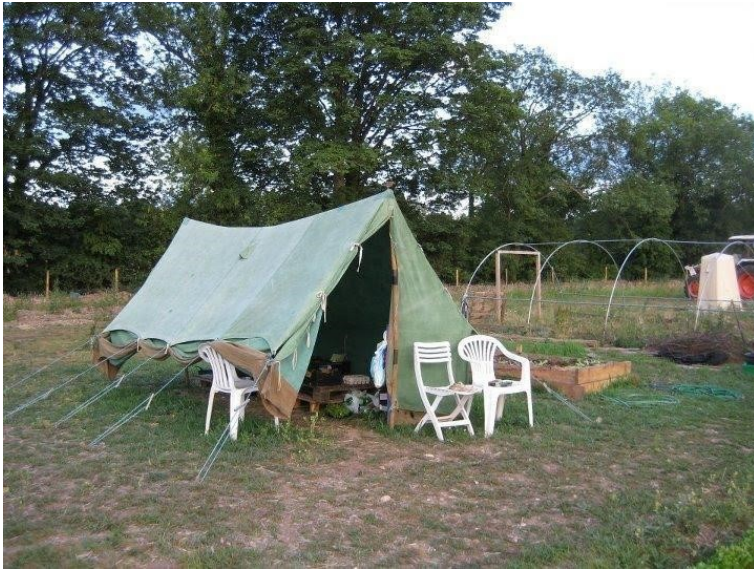
People began moving some of the larger flint stones from the plots onto the central path which became known as the Roman Road (as it was relatively straight).

Jim donated his camping tent and portaloo toilet and they became our facilities.

We were ready to go.



Jim's camping portaloo tent



The store.

Our first Saturday

Everything began on Saturday 24th April. Folks turned up from about 9 am onwards during the day, often bringing their own tools and working away at whatever their team leaders wanted them to do. For some crops the soil needed raking to break it up further, for others it was too early to plant out. Each team planted one crop from:

Beans

Parsnips

Potatoes

Courgettes

Squashes

Leeks & Onions

Beetroot

Lettuce

Carrots

Cabbages



Some of Eastleigh's early diggers

Early Experiences

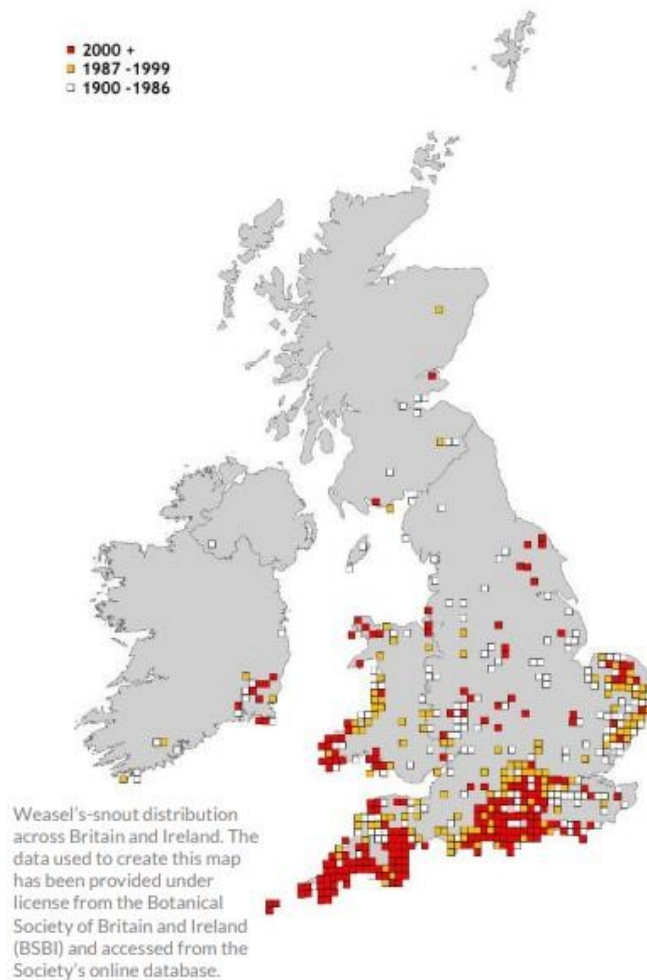
The crops grew fairly well, but the weeds grew even better. There were a lot of learning experiences for new members. One member diligently planted a row of beans for his team in some recently weeded soil. A few days later another member came along, saw a row of weeds beginning to grow and promptly hoed up the tiny bean seedlings!

I was working on plots 19 and 20 under team leader Brian. Our task was to plant parsnips in rows. We planted part of our plot, different people planting different rows. Some rows seemed to germinate better than others, and so some rows had to be sown again. Then the weeds began to grow and we lost our growing parsnips among the weeds. As we tried to do the weeding we took out some of the parsnips too. Team 19&20 only managed to plant about half of their two plots in the first year, and the remaining area quickly went back to grass and weeds. Couch grass, bindweed, nettles, mayweed, fat hen, fumitory and weasel snout were the main weeds that I remember from that year.

While most of our weeds were a real pain, it turned out that Weasel snout had been common in ploughed fields in southern Britain, but its distribution had declined massively since the 1950's with the use of herbicides and was now classified as "Vulnerable" in The Vascular Plant Red Data List for Great Britain (2005) and is also considered Vulnerable" in the Vascular Plant Red List for England (2014). It was lovely to see this pretty little plant growing in our field and we have taken steps to encourage it to grow and allow it to flower and set seed.



A lovely little weed: Weasel snout



Distribution map of Weasel snout in Southern Britain. Back from the brink data sheet
<https://naturebftb.co.uk/wp-content/uploads/2019/06/Misopates-orontium-WeaselsSnout.pdf>

By July 2010 some of the teams were beginning to harvest their crops. Most memorable was the harvest of courgettes. The team under Jo H had given a few seeds to all who would take them at the inaugural meeting, so as the seedlings grew large enough to be transplanted out, they were brought along and planted. Soon plots 9 and 10 were full of courgettes and they grew faster than folks wanted to buy them. Many were harvested and placed in our only store, a small green army tent. In a bid to sell the excess Jo boldly took these around several vegetable shops and cafes in the area, but could only off-load a few here and there. We were learning a valuable lesson: some crops grow more easily than others and you don't need such a large planted area to supply 100 stakeholders.

We had decided to share out the crops harvested between the 100 or so stakeholders and we charged approximately one third of the supermarket prices. This acknowledged the value of the labour our stakeholders had put into growing the crops, rewarded them for their efforts and also ensured that we had sufficient funds to buy new seeds, equipment and anything else we needed for the next season's growth.

In late May and June 2010 we experienced a long dry spell of weather. Our members were walking to the pond and filling watering cans with water and then completing the long trudge back to their plots- a round trip of around 400 metres for those of us on plots 19 and 20! Clearly that wasn't going to be sustainable. So Tony and I decided to go to Machine Mart and buy a petrol driven water pump. It was somewhat against the Aims and Objectives of Highbridge Community Farm as we wanted to become less reliant on Fossil fuels, but we deemed it the only quick and workable solution at that time. Tony then begged some old fire hose pipe from the Eastleigh Fire Station and we had a means (albeit requiring heavy lifting and labour) of getting water from the pond to the plots. We bought a few second hand Industrial bulk containers (IBCs) which previously had held 1 cm metre or 1000 litres of liquid such as concentrated juice, and these became our temporary water stores near the plots.

As the dry summer spell gave way to a wetter August our first harvests came in and were stored in our green army tent or sold from a bench. When people bought the food they placed their money in a tin and at the end of a Saturday morning Jim, our treasurer would empty the tin, and take it home to bank it the following week. If



A tray full of courgettes



Courgettes just two weeks later! They were growing faster than people were buying them and so piling up in the army tent.



The marquee which we were loaned at the end of Summer 2010

anyone bought vegetables at other times of the week they would leave the money in the tin for it to be regularly collected.

It was quickly noticed that the army tent wasn't really most suitable and a friend of the farm kindly lent us a yellow and white marquee towards the end of August and this served us well for the next four or five years.



The sales marquee in 2011

In 2010 Sue M, one of our new team leaders was offered some grape vines and these were initially located where the seating area is now, before being moved to nearer the Forager's hedge.

By the autumn of 2010 we had a very large pile of weeds, which were covered with a tarpaulin for the winter. They broke down very well to make excellent compost for the next spring.

Question: When are weeds not a problem?

Answer: When they can be made into good compost.



Early lessons.

During our first season growing 10 crops, each team had concentrated on one crop. Some teams had a relatively easy time, others had to work much harder.

Salad crops grew quickly but required a lot of weeding and watering, and the team was unable to finish off digging and weeding the whole of their prescribed area.



Building soil fertility with manure

Those growing beans found that constructing frames for climbing beans took a lot of time and likewise they were unable to clear all their plots in the first year.

Potatoes were another easy win, for everyone loved our potatoes and we soon sold out. Looking forward to 2011, clearly a better balance of crops was needed! However, it had become abundantly clear to us that growing easy, big bulk fast growing crops like potatoes, courgettes and squashes.



The nice thing about growing squashes is that the plants quickly cover the ground and hide the weeds, so people feel that they are making progress. This gave novice horticulturalists a tremendous sense of achievement as they made their first harvest. We were also keen to add sweetcorn to the list of easy win crops.

By working together in teams, new friendships had been established, new information shared and really healthy food produced.

Sales of vegetables had been good and our finances were in pleasing shape. There was enough in the funds to buy the seeds for next year, some equipment and to pay the bills. A few stakeholder members had drifted away, but they were rapidly replaced by those on our waiting list because there was plenty to do over the winter months.

Chapter 4 First Winter

As we reached our first winter, we continued to improve our plots and branched out with our first polytunnel, a forager's hedge and the start of an orchard

Continued weeding and soil preparation

As we went into the first winter there was much to do. Only perhaps 40-50% of the available land had produced a crop as clearing the weeds took up so much time. Despite being ploughed by Mr Russell's tractor the land so quickly grew weeds that often the land needed to be weeded again before being sown and every couple of weeks after a crop had been planted. So most of the plots needed to be dug over again during the winter and more ground prepared for 2011.



Winter work on the plots

Some capable people built a soil sieve, which has been extensively used over the years to riddle the soil and remove some of the larger stones. Somehow stones keep migrating to the soil surface and always require removal before the plot can be planted. However, the earliest piles of stones were used to help construct the Roman Road - the path between the odd numbered and the even numbered plots.



Adrian, Cath and Cathy sieving soil.

But there were other exciting developments going on.

Sue M, one of our team leaders, felt that it would be very worthwhile to cover the polytunnel frame that lay in the field and use it for growing young plants from seed. She enlisted the help of her partner Steve, who is an engineer, and they obtained the appropriately sized sheet plastic and proceeded to dig the trenches to bury the polythene walls in the ground.

A pair of old Conservatory doors were donated for one end and a door frame made for the other end. Steve then dug a 1m hole in the ground and lined it with polystyrene sheeting. The farm community had collected about 300 1 pint plastic milk bottles and these were washed and then filled with water. Steve placed them in the



Sue and Steve: polytunnel pioneers

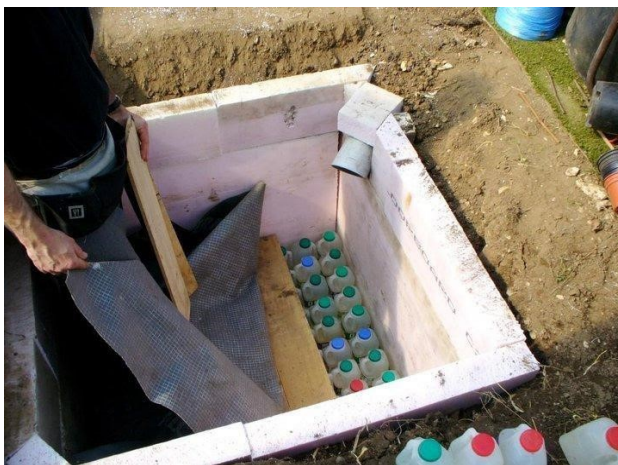
insulated hole with baffle sheets between them. Then he introduced a wide diameter pipe which ran the length of the polytunnel roof. This would pick up warm air from the top of the tunnel. A small air pump attached to a 12 v battery (and later to a solar panel) was installed which pushed the warmed air into the insulated container to warm all the water bottles. Then at night as the air temperature outside the polytunnel fell the cooler air from the polytunnel would be warmed by being pushed over the water bottles and then returned to the polytunnel to warm the air a few degrees. A brilliant idea! This polytunnel and heating system enabled the Community farm members to extend the season, particularly in the spring, by planting earlier and getting trays or pots of seedlings growing early in the season.



Sue Mi and Sue Ma sorting out the sheet plastic.



Sue and Steve setting up the polytunnel warming system



Steve filled an insulated box with 300 plastic bottles which were filled with water.



The polytunnel in 2011

The Forager's Hedge

Behind the pond, to the North of our field was a rough patch of ground which sloped southwards to the pond and which we had identified as a most suitable site for an orchard. And behind that was a wire fence and the Farmyard. Mr Russell cleared that land in late summer when he heard that we had fruitful trees to plant along the fence line.



The pond and bank in the summer of 2010

In the summer of 2010, we heard that the

Woodland Trust were giving away packs of 450 fruiting hedging trees and so I made an application for a pack. We were successful in our bid, and they duly arrived in November. We had been sent five types of whips (feathered maiden or 1 year old trees) all around 40 cm tall:

Hazel – for hazelnuts

Crab apple – to produce pollen for apple trees

Blackthorn – for sloes, often used in sloe gin

Elderberry – for making cordials champagne and wine

Dog rose – pollen for bees and for making rose hips

I had also been grafting apples onto M106 rootstocks and growing a few seedlings from pips at my allotment, so around 20 of these were mixed in with the whips. We set about planting along 100 metres or so of fence line at the back of the bank behind the pond to provide a screening hedge between our field and the Farmyard. In the next few years this hedge was cut by Mr Russell with a hydraulically powered flail mower to thicken up the hedge. The hedge now stands around 5 metres high, providing abundant amounts of elder flowers and berries, sloes, rose hips and apples which are foraged by some of our stakeholders as well as the local wildlife.



Planting the forager's hedge November 2010

The elder flowers need to be collected at the time when the pollen anthers are bright yellow against the white petals of the flowers. About 20 flowering heads can be made and made into the most wonderful elderflower cordial. This delightful summer drink has refreshed many farm members at celebratory farm events over the years.



Forager's hedge soon after planting



Part of the Forager's hedge 2020

Most years some of our members make a few bottles of rose hip syrup which apparently contains 65 mg Vitamin C per fluid ounce, four times as much as blackcurrants and 20 times as much as oranges (Richard Mabey: Food for Free). We had some with our breakfast this morning! Rose hips were collected by school children during WW2 and they were paid 2p a pound for their efforts! By 1943 the harvest averaged 450 tons. If you want a Vitamin C tonic next winter try making Highbridge Farm Rose hip syrup.



Straining the rose hips to make syrup

For those who would like something stronger then it is so easy to make Sloe Gin. Sloes are mixed with gin and sugar and shaken or stirred every two days for a month or so until it becomes sloe gin.

The Pondside Orchard

When we first viewed the field with Mr Russell in February 2010, we had taken note of the pond as a possible source of water and the south facing bank behind the pond, which looked ideal for growing fruit trees. At that time, the bank was covered with scrub, but in the autumn of 2010, Mr Russell ploughed and graded it and gave us permission to Plant it with fruit trees.



The pondside orchard was planted in Spring 2011. Notice the enriched soil around the trees.

I had purchased 50 M106 Apple rootstocks for apple grafting in 2008 and had grafted on some of the apple varieties I had growing in my garden or obtained from local sources. These young grafted trees were growing on my allotment. So once the slope had been graded, we were able to plant around 25 of these trees in two rows along the top of the bank. Other trees were added over the next few months. Polytunnel Sue had bought 4 small plum trees labelled Victoria from a supermarket – they turned out to be Pershore purple plums - and these were planted on the bank one Saturday morning during gently falling snow! Two quinces and two greengages were also donated and two peach trees followed.

The soil on the bank is really gravelly. Mr Russell had dug the pond out of the gravel as a collecting point for any toxins draining from the yard through the gravel and towards the ecologically sensitive River Itchen. He used the extracted gravel to spread on paths around the farm. But this meant for us that the soil on the pond bank was very free draining and low in organic carbon and nutrients, and possibly high in toxic materials. So, whenever we planted anything in the Pondsides orchard, we had to ensure that we added abundant quantities of compost or other water holding materials.

The Plum orchard

Around this time too, we planted a number of small Mirabelle plum trees near the small top gate. Kate and I had collected the plums from Stoneham lane in 2007 to make jam and germinated a few seeds which we grew initially on our allotment. The seedlings were brought to the farm and planted inside the entrance. They, along with a plum tree rescued by Tony and Anne from the Woodside allotment now make an attractive avenue to trees for those who enter by the small top gate. Their white blossom in late February or March is a wonderful welcome to the farm after a cold winter and a promise of better things to come.



A basket full of Mirabelle plums collected in Stoneham lane, from which our Mirabelle plum trees have grown.

Chapter 5 Diversification and Organisation

In this chapter we describe how the farm diversified in what it grew in order to take pressure off teams, and how this created the role of Expert grower. From that we look at the organisational structure of HCF, the roles of the Executive Board, Team leaders and certain Operational responsibilities.

Learning points from 2010

If 2010 showed us that our method of creating and organising a Community growing project worked, then it also gave us a number of learning points.

We learned that our soil was a fairly heavy alluvial clay with flints set above a chalk bedrock close to the river Itchen. The soil drains fairly well and is fertile, but stones up to 6 inches long keep rising to the surface and require constant removal, particularly if root crops like carrots and parsnips were being grown.

We learned in that first year there was much ground preparation to be done including destoning plots where carrots or parsnips were to be grown, digging heavy soils, followed by weeding the weeds which seemed to grow even faster than the crops. The soil needed to be weeded very regularly for the first couple of years. Taking weeds out when they are small saves a lot of time later when they have grown, so try to keep on top of weeds (difficult in the early years).



Getting ready for 2011

We realised that we needed to get on top of the grass and weeds so that we could sow our crops on time and fill the plots with our produce.

We also realised that just growing ten crops didn't fulfil everyone's food desires or use the land very efficiently. Also, we realised that if each team grew three or four crops the tasks of soil preparation, seed sowing, transplanting, weeding and harvesting would be spread out over a longer period of the year. This would make the workload more manageable.

Expert growers

Growing more crops in a season meant that our team leaders would need more expertise or someone to turn to for advice and help. So the role of expert grower was created to provide this support and advice. During the first season of 2010 four people had stood out as having a considerable knowledge and experience of vegetable growing in allotments: Paul, Penny, Tony and Brian. They became our Expert (or Experienced) growers (E.G.s) and took on five additional responsibilities:

- To decide what would be grown on each plot each year, following the principles of crop rotation. In order to avoid pests building up in any plot a 5 - or 6 - year rotation was adopted.
- To calculate the area of each plot to be allocated to each crop, work out how much seed is required to sow at the correct densities and spacings and then order the appropriate quantities of seed.
- To provide growing notes, describing when to sow, where to sow (e.g. in a polytunnel, or a seedbed or cloche or directly into the site) and whether to sow into pots or trays or directly.
- To be readily available to give instant advice, particularly on a Saturday morning when a team leader might be absent or uncertain about what to do.



Penny



Paul



Brian

- To provide advice on the use of manure, compost, liquid feeds or fertilisers for their crops.

These four expert growers have been a vital component of the project and essential to its success. They have accumulated a vast amount of cultivation knowledge, much of which has been cascaded downwards to team leaders, assistant expert growers and team members, and their planning and organising expertise and the time they put into these tasks is greatly appreciated by all. With time, one has stood down and one is semi-retired, but others have stepped up and are learning and contributing to the project in this way.

 Planting Plan for 2012 (6th update – 24 June 2012)	
19 Brian Overwintering Onions (Troy F1) plus a few Jersey shallots No manure required	20 Brian Brassicas (long season) No manure required
17 Penny /Lynn Salads (incl cucumbers, celeriac, fennel) plus surplus Wilia (2 nd early) potatoes No manure required (except for potatoes)	18 Penny /Lynn Brassicas (short season) No manure required
15 Anne Charlotte (2 nd early) and Cara (maincrop) potatoes plus some squashes in remaining space Manure	16 Anne Salads (incl lettuce, radish, rocket, spring onions) plus overflow potatoes – Anya and a few Wilia and Lady Christl No manure required (except for potatoes)
13 Les Early & Maincrop Peas Mangetout & Sugar snap peas Manure	14 Les Turnips, Swedes and Kohl Rabi
11 Brian Spring-sown Broad Beans (Green Windsor), French Beans and Runner Beans Manure after leeks come out	12 Brian Maincrop Onions (Downy Mildew resistant variety Santoro F1 grown from seed) No manure required
9 Adrian/Kate B Parsnips No manure required	10 Adrian/Kate B Beetroot, Spinach Beet, Chard, Spinach plus surplus Red Duke of York (1 st early) potatoes Could be manured but not essential
7 Paul D/Alison Garlic (early and maincrop) plus surplus King Edward (maincrop) potatoes No manure required (compost for potatoes)	8 Paul D/Alison Potatoes (main crop – Picasso and King Edward) Manure
5 Richard Courgettes and Sweet Corn Manure	6 Richard Potatoes (1 st Earlys – Vales Emerald and Lady Christl) then Leeks Manure
3 Julia R/Julia & Keith Overflow maincrop garlic, elephant garlic and Jersey shallots Digging, destoning and maybe manure	4 Julia R/Julia & Keith Potatoes (2 nd Earlys - Anya) Manure
1 Andrew Q Early & Maincrop Carrots Digging & destoning but no manure required (use matured compost from nearby heap)	2 Andrew Q Aquadulce Broad Beans (until June 2012) then squashes Manure for Broad Beans
Notes: Although not shown here, there is an intention to now sow Pak Choi (Ivory F1) on Plot 7 where the Early Purple Wight garlic has come out (Paul Dibden/Alison Ward have the seed for this.)	

Example of an early planting plan from 2012

Sowing Parsnip

This is general guidance only and variety specific or local knowledge should be used to amend as appropriate.

Parsnips

Sow Feb-May in drills 1cm deep.

Sow 3 seeds 6 inches apart (thin to strongest individual). If needed dampen drill before sowing.

Rows at 12-15" apart. Groups of 3 rows with 18-24 inch access 'path' every 3 rows

Thin to 6 inches if required (hopefully sowing will have controlled this)

For anyone working on, or handling, parsnip foliage here is some important information that you need to be aware of.

Parsnips, along with a few other plants, produce a sap that, when on the skin and in conditions of sunlight (UV light) can cause blistering, sometimes severe, along with pigmentation variations. This is a condition known as Phytophotodermatitis . When working on parsnips I would strongly advise wearing long sleeves and use gloves, also take care not get any sap on exposed skin such as the face and neck. Risks are less during winter when sunlight is less strong, and less usual to be wearing shorts and tee-shirts !

Crop notes for each crop were initially written by Adrian. Here is an example.

Farm organisation

We have always tried to be a community organisation which has held very lightly to leadership. In the early months of 2010, the Ten founding members led the organisation, with me co-ordinating the teams. Soon we established a monthly meeting of Team Leaders and Expert Growers together to take us into the Diversification phase.

After nearly three years I handed over the Coordinator's role to Richard, assisted by Adrian who helped consolidate the Development of the project. At that stage Highbridge Community Farm Project became Highbridge Community Farm (HCF).

By 2015 we had finally decided what sort of organisation we wanted to become – a Cooperative – and the leadership changed again with the creation of an Executive Board of whom more will be said later, while continuing with team leaders and expert growers making the day-to-day decisions. So, a contemporary model of our structure is shown by the following diagram. Note the co-operative nature and the lack of hierarchy within the organisation.

HCF - ORGANISATION



One of our TLs, Tudor is a Solicitor, and he very diligently and carefully wrote a constitution in 2015, which was accepted by Companies house. So, in 2016 we became a Co-operative Limited by shares under the Co-operatives and Community Benefit Societies Act of 2014 under the name of Highbridge Community Farm Limited. A Board of Directors - usually six people who stand for three years before facing re-election - was established.

Our Constitution specifies that when a single person or a couple or a family join Highbridge Community Farm they become a stakeholder who is committed to doing a minimum of 10 hours work a month. If a couple or family joins as a stakeholder then there are more than one over 16-year-old person in the stakeholder group. One of them becomes the primary stakeholder and the remaining over sixteen-year-olds become secondary stakeholders. At joining all stakeholders over 16 buy a £1 share in the Company which remains valid throughout their membership. This is for insurance purposes and has the real value of protecting the leaders and members from any lawsuits against farm members.



Andrew



Tudor

The Board of Directors meets several times a year, organises Annual and General Meetings, ensures that our finances are in proper order and submitted on time to Companies House, ensures that Health and Safety Policies are enforced, Insurance is organised and makes the final decisions on any important farm matters. On the Board of Directors are the Company Secretary and the Treasurer, but we do not have a Managing Director or Chief Executive and so we try to be a very equal community.

Company Secretary



Kate and Lynn sieving soil

Lynn S joined the project after it had been going a few months and has done an incredible amount to keep minutes of meetings, records of meetings, deal with contact enquiries, give potential new members a tour of the site, induction and place them in a team. She writes many of the policies and documents and regularly produces items of interest for the weekly updates to members as well as hosting our Facebook pages. She is the oil that keeps the whole of HCF running smoothly. She is also a director. The Company Address is at her home. There are doubtless many other jobs that she does about which we are totally unaware.

Treasurer

From 2010 to 2020 Jim has been an excellent treasurer, keeping wonderful accounts, paying bills promptly and never losing a penny. Jim made weekly records of income and his graph of the first ten years is very impressive. He has recently handed over to Steve. Both are Directors of HCF.

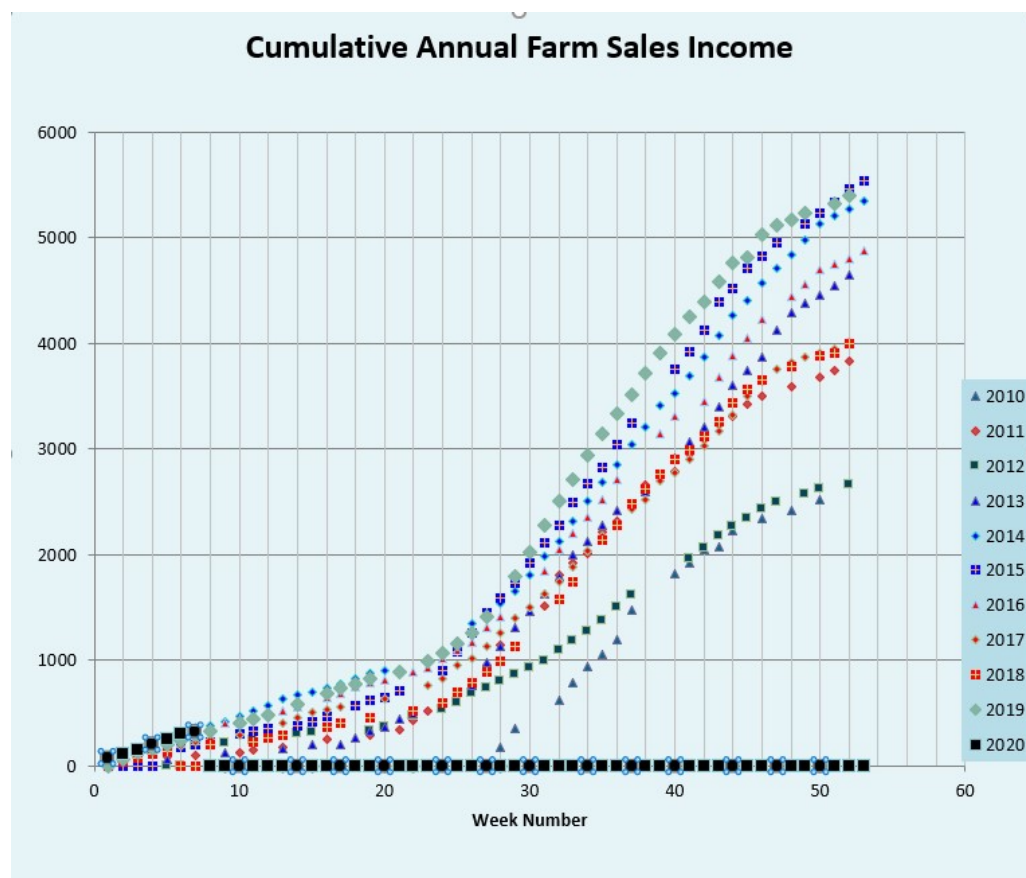
As well as being a meticulous recorder of figures and information, Jim has a real passion for the environment. He reads books and articles on the subject and attends open lectures at the Environmental Sciences department of Southampton University and those run by the Hampshire and Isle of Wight Trust.

Steve who has taken over as Treasurer is an Environmental Sciences graduate and an excellent photographer. Some of the best photos in this ebook are his.

As well as the core roles shown in the diagram above there are operational responsibilities that members volunteer for and these additional responsibilities make a big difference to the smooth running and atmosphere of our community. Some of these responsibilities are explained in the remainder of this chapter.



Jim - caught in the middle of a lifting task



One of Jim's spreadsheet- weekly and yearly Farm income from sales.

Team leaders

TLs have continued to manage their two plots and their teams throughout the duration of the project and are responsible for day-to-day operations.

There are three requirements for all effective team leaders and each leader must have each skill

- Skill in communicating with and managing a group.
- Sufficient time to devote to lead the team by example, think about the issues and research issues when necessary, induct new members and train members in the necessary skills.
- Sufficient horticultural knowledge and skills in growing the crops and dealing with some of the basic issues that arise and the humility to ask for help when it is beyond their experience.

Team leaders have been encouraged to have regular dialogue with all members. For most team leaders this involves a weekly email, WhatsApp, Facebook message or phone conversation over what needs to be done. Some teams

maintain a plastic box on site with a notebook in it and leaders and members write there what needs to be done and what has been done. Inevitably members who turn up at peak times such as a Saturday morning or an agreed weekday time will establish the strongest bonds within the team.



Toby

Team leaders have tended to stay on their own plots and with their own teams, although team members may move to a different plot if inclined. Team leaders and members feel that they have put effort into improving the soil and developed relationships with their team and so few feel inclined to move to other plots. Team leaders meet together monthly for review and planning meetings and the sharing of information and ideas has helped them to upskill. Many met more often informally at the farm with each other and shared knowledge, information and advice. At Team leader's meetings each TL gives a brief report about what has been going on and any personnel matters and may raise questions or be questioned. Most teams have deputies or experienced people who will stand in for their leader at a team meeting.

We have found that it is really helpful when the teams are put together that there are a mixture of ages and skill/knowledge levels. Older retired people can come down during the week when younger folk may be tied up with families and work. They are very useful for



Andrew Q

making bits of equipment or putting up sheds or doing some of the routine tasks in the polytunnels, like watering. Younger people should have the strength for sustained periods of digging or weeding. Children have always been welcomed, as what they learn in their formative years will influence them for life.

Specialists

As the complexity of the Farm grew, so did the number of people who stepped up to take on a specific responsibility, but, like organs in the body, their contributions are vital to the functioning of the whole community

Polytunnel

Sue M quickly gravitated to working in the polytunnel, looking after the teams seedlings, making sure they were watered and fed, but also growing many salad vegetables- tomatoes, peppers, cucumbers, lettuce, winter greens like mizuma, mibuna and land cress. She would often turn up at 7 am to water the plants before starting her work from home. Normally there would be three or four older and infirm or stakeholders who were recovering from an injury or operation who would assist her. There is plenty to do now that we have three polytunnels. Recently Lynn J has taken over the leadership of this team.

Tea hut leader

An important moment in the Farm week is at 11 am on a Saturday morning when the whistle goes and we all head for the tea hut for a cup of tea or coffee and a biscuit. At the same time the Sales area opens and people can buy their fruit and veg. Then follows a few notices from the team leader, perhaps a demonstration of a gardening technique or a reminder. Les initiated the Tea time ritual and took on responsibility

for sourcing the urns, the gas to heat the water, tea, coffee, biscuits, sugar, mugs, washing up liquid, tea towels etc, etc. When he moved away from the area his brother Mike took over. Mike also is an RAF trained Engineer and has done a lot of great work fixing solar panels and batteries to appliances such as water pumps, lights, and fridges to raise our standards of operation over the years.

Compost area leader

Mike L also has responsibilities for the Compost Facilities which will be described in a later chapter.

A-team leader

This group is named after the TV programme. At various times we have added more sheds and stores. Often the sheds have been donated or needed modification.



Sue, Les and Kate

Brian T has moved from being full time TL and Expert grower to part time E.G. and part time A team leader. He has sorted the foundation for many sheds, built the shed then fitted it out. He also calculates what we need and keeps records of where everything is stored. Brian has been assisted by Will M who is increasingly co-ordinating this work.

Water Fairy

If the title is a joke, the job isn't. Will has a huge bushy beard to confirm it! Will ensures that the water pump at the pond is primed and working and often spends his time moving heavy Fire Station hose from one IBC to another for filling or one plot to another for watering. We are currently (March 2021) designing and building an irrigation system that should largely replace the heavy lifting. This process is being led by Roger, but more of that elsewhere.

Communications team

Every week for eleven years someone has written an Update for Farm members. In recent years Melita, Izy and Lynn have taken on the responsibility for this side of the community. Team leaders let Sarah know what fruit and vegetables will be available and their prices Sarah then contacts the editor for the week's Update with the information. The editor also includes reminders, bits of news, articles and matters of general interest. All this is ready for sending out around Wednesday teatime. There is another part of the communications team that looks after the website, all our past files, photographs, minutes and articles, two Facebook sites, an inward one for members and an outward facing one for people interested in the farm and past members. Lou, Alex and Melita are involved here.

First Aid Officer

Maggie checks the First Aid boxes and often gives a little plug on a health issue at the 11 am coffee times.

Health and Safety Officer

Various people have taken on the responsibility to produce Risk assessments of activities and ensure we respond rightly to any threats.

Machines and Maintenance

Alan D and Alan I are both technical guys. Alan D is a retired shipbuilder and welder and repairs our broken gardening tools as well as leading on Gooseberries, while Alan H maintains machines and does a lot of mowing and strimming around the site, particularly in the orchards.



Alan D looking after the gooseberries

Social Committee

We also have groups of specialists who organise social

events, participate in our Education and Involvement Section, give site tours, illustrated talks, and go out to schools or host visiting groups. If our stakeholders have skills that they are prepared to use to help the farm, we will happily make use of them.



Alan H working on the machines

Chapter 6 Community

In this chapter we try to paint a verbal and visual picture of what it means to be a Community farm.

Highbridge - a rural spot between Eastleigh, Chandlers Ford, Bishopstoke and Winchester.

Community – a group of people who become friends and regularly meet together

Farm – a place where food is grown.

At the centre of our name Highbridge Community Farm is the word Community. It is a place where friends meet together. In this respect our community farm is so much more effective than having 20 allotment holders on 20 plots, who all come and go when they like and most don't speak to each other, and probably half the plots are under-cultivated or poorly managed.



At Highbridge Community Farm people work together in teams. Often, they meet up on Saturday mornings and work together for the morning. A few who are free may arrange to meet up at the farm at another time during the week, perhaps to come down for a couple of hours on a sunny summer's evening.

At the time of writing, we are in the middle of the Covid 19 epidemic and many of us are not able to travel or visit family, friends or places as we would wish. Yet we can meet in a socially distanced way at the farm for exercise, growing of food and procurement of our food. Currently, those who are younger and perhaps employed or at school tend to go at weekends, those who are retired tend to go during the weekdays, in order to reduce the

number of people on site at any one time. For many at this moment this is the greatest opportunity of the week to talk face to face to other humans.

Saturday mornings

In normal times there are often 80 members on the site on a typical Saturday morning. They work in groups, but there is a lot of movement around and mixing. Approaching 11 am teams bring their produce to the sales area but no-one is allowed to buy until the whistle has been blown. At 11 a.m. when the whistle goes people put down their tools and

wander over to the area to find out what is on offer on the price boards or head straight for the tea hut. It can be a bit of a scrum! Soon people have sorted themselves out and by about 11.15 have headed to the Community area where they sit at tables, enjoy a bit of chat and then the announcements, before heading back to their plots around 11.30.

Occasionally at tea time someone will bring along something unusual that has been grown and people are encouraged to sample it. This is an excellent opportunity to introduce a new crop to members. For example, when Celeriac was first introduced few people knew what to do with it, so various people introduced



Tea time 2011



Tea time 2019. Spot the differences.

ways of cooking and processing it.

it. Three of our favourites are: grated in a salad, made into celeriac gratin and mixed with cheese in celeriac bread.

Stakeholders have brought along kale crisps, padron peppers and varieties of apples and pears for taste testing. Many have tasted medlars for the first time at the farm although we don't grow them. Sometimes home-processed products are brought along for sharing; medlar jam, strawberry jam, green tomato chutney, glutney. Maybe jars of the produce can be bought afterwards including Penny's chutneys and Paul's honey.



Padron peppers

Occasionally our tea times may take a different form. We have had coffee mornings with cakes to raise money for Practical Action, a charity working in the Third world to help Farmers, the RSPB, Cancer Research, Macmillan nurses, a local hospice and probably others.

New member's lunches

Approximately three times a year we have a lunch and training session for new members. This is in addition to the tour of the site when a person or family is interested in joining and the Induction that a team leader will give to new team members. A typical session will last around 2-2.5 hours and begin with a short talk on the Aims and ethos of the Community. Then a different person will take them a tour of the area from the herb garden to the children's play hut, particularly focussing on three areas: how we start off our plants in the polytunnels; how we bring our produce to market; how we end many a plant's life in the compost area. We also encourage the use of the herb garden and the cleaning of tools after use. If new members have not been over to the New Fruit area, we may pay a visit in that direction.



Locally grown vegetarian kebabs

Then we have a “bring and share pot lunch.” After lunch someone has to take the graveyard slot of reinforcing some of the Health and Safety messages. It is amazing how many new people will leave a rake or fork lying on the ground with its tines pointing up, so we reinforce messages that new members should have already been given by their team leader. Finally, we end up with a questions and answers session. These are generally excellent times when a few experienced stakeholders get the opportunity to chat to newcomers, possibly discovering talents that can be made use of in such a community and beginning a friendship that may continue for years.

Celebratory Events

Once or twice a year we have a barbeque or bring and share lunch, sometimes linked in with team games, quizzes, training sessions, scarecrow competitions.

The farm now possesses a couple of silly prizes for the winning team - a Portuguese pottery cockerel for the top team and a gold sprayed polystyrene cup for which the teams compete with varying amounts of ferocity, cheating and good humour!



Celebratory events. Clockwise; Tug of war; Richard cooking; Brian K and Jenny; Julia, Charlotte and Adrian cooking

Children's activities

Children are welcome at HCF. As Melita said, "Personally, I get great pleasure from working alongside the children of other members or hearing them play with each other and discussing the wildlife of HCF. There aren't many situations nowadays where people of different generations can mix together."



Children are always included in special events with various races and competitions. A couple of occasions we have had inter team scarecrow competitions. They are very involved in events such as the worm survey and one of our older children has even made a teaching video of the event. More recently we have been organising events such as apple pressing, pond dipping and Wildlife Safaris specifically for some of our children and placing a greater emphasis on helping them to learn about the natural history of the area. We also have been involving them more in small groups at a time in some of the farm growing activities such as picking and weighing rhubarb, picking raspberries, strawberries and apples and wrapping the apple keepers in paper. They have their own play house, toys, child sized gardening tools and sit on tractors.



Special events

We have enjoyed so many special events together. My list includes

- Wassailing,
- Bat walks at dusk
- Fungus Forays
- Sunset suppers
- Mulled wine at Christmas
- Barn dances
- Craft fairs
- Wax wrap making,
- wreath making
- Seed swaps
- HCF Open days
- Sunflower growing competitions



Eileen and her wreath

- Growing a trug of potatoes
- Trip to Hampton Court Flower show
- Trip to Lavender fields
- Apple pressing
- Nature walks



Apple pressing

And then there are trips to advertise ourselves at events like the Solent Gardeners fair and the Pumpkin festival. Some members organise their own private parties or team lunches and there are the monthly team leader's meetings, which are generally held at the Dog and Crook Pub and the AGM at St Peter's Church which are always great fun.

Highbridge Community Farm genuinely feels like a community working, playing and eating together.



A Barn dance at Colden Common Village Hall

Chapter 7 Infrastructure

In this chapter we describe how we identified three major issues in the early months which have challenged us over the years; water availability, nutrient loss and recycling and the need for storage and how we have worked over the years to tackle these issues.

Within the first three months of starting the project we identified three infrastructure issues that needed dealing with urgently. A dry spell in May and June showed us that we needed a better watering system than carrying watering cans from the pond to the plots. The growth of the weed pile over the summer and the loss of associated nutrients in the vegetables and soil on the roots forced us to quickly think about recycling nutrients. The need for dry places to store tools and our harvest forced us to think quickly about our resources.

Water

We have all been noticing that our climate is changing. Heat waves, droughts, storms, floods, the beast from the East, stronger winds, wet winters and dry summers all tend to be more frequent. In our short history at HCF there has scarcely been a year when there hasn't been a major environmental stress on our soil and crop growing.

In Spring and early summer 2010 our immediate response to the dry period was to purchase a petrol driven water pump. Tony managed to persuade the Hampshire Fire



IBCs near plot 1

Service to give us several rolls of redundant 2 inch hose pipe and this has been heavily used. We also purchased and have been given Industrial bulk water containers (IBCs) which hold 1 cu m (1000 litres) of water and many of these are found adjacent to the Roman Road. An IBC can be filled from the water pump via the fire hose in a few minutes and contains enough water to fill about 100 watering cans. When open the taps on the IBCs release a 2 inch bore of water which can fill a 10 litre watering can in about 3 seconds.

Les and his brother Mike installed a fixed pipeline from the pump housing under the road track and onto the site and then installed a ¾ inch pipe along the Roman Road, with 5 standpipes along the track. This pipeline can be used to fill IBCs slowly or supply water for watering the crops via a ½ inch hose pipe, but again only when the pump is on.

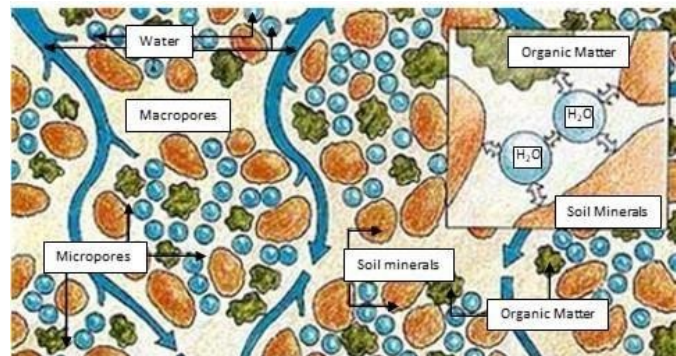


Apple Avenue, Fence and the IBCs that supply the Fruit area irrigation system

The vegetable plots were watered using the pump and hose pipes or pipeline for the first 11 years of our existence. However, there are a number of disadvantages. Moving the hose pipes is heavy work particularly when they are full of water. The system is inefficient, because the pump often has to be turned off while the pipe is being moved. The hose pipes are worn out and sometimes leak and we have been unable to obtain more donations from the fire service.

When the Fruit team built the New Fruit cage in 2015/16 a drip feed system running from an IBC was installed because the majority of fruit bushes are in the same place for around 10 years and so there is no need to move the pipes around. This provoked thought among the vegetable teams about improving the irrigation and in 2020 I investigated our water requirements.

We have a silty loam soil at Highbridge and a lot of flint stones. If the soil had no organic matter in it the soil would hold about 15% soil water when the soil is at field capacity (i.e. full of water). This equates to around 45 litres per square metre in the top 30cm of soil. The top 30 cm is the place where the majority of vegetable roots are found. Organic matter, the dead remains of plants and animals - contains a lot of carbon and acts like a



Simple diagram to show how rain or irrigation water infiltrates through soil and is held between the soil minerals and organic matter. Compost basics. UCCE Composting Education programme. University of California Agriculture and Natural resources Dept. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ucanr.edu/sites/default/files/2023-07/379966.pdf

sponge. Every kilo of dry organic matter added to the soil holds about 4 litres of water. We have increased the soil organic matter from about 4% in 2010 to around 13% in 2020. This gives our soil a calculated additional water holding capacity of about 41 litres per square metre in the top 30 cm. When Highbridge soil is full of water ("at field capacity"), which generally happens at the end of a wet winter, it holds about 86 litres in the top 30 cm of each square metre of soil.

During the summer water evaporates from the soil surface and the plant leaves. Precipitation exceeds evaporation in the winter but evaporation exceeds precipitation in summer. In our part of Hampshire during an "average summer" evaporation has exceeded precipitation by around 90 mm by the end of August as the table below shows.

So, during an "average summer" it is likely that we will need to add around 90 litres of water per square metre of crop surface. Our plots are generally around 200 square metres in area. So each plot will need in an average season approximately 16-20 cu metres (16-20 full IBCs). Some crops like potatoes and sweetcorn will need more water, while onions and leeks may need less. Thus, the total requirement over an "average summer" for 20 plots would be 320 - 400 cu m irrigation water.

Professional growers tell us that plants get stressed if their soil loses more than 30% of the available water. So soils should be maintained at 70% of field capacity to ensure good growth of crops throughout the season (i.e. have 70% of 85 litres in the top 30 cm of each square metre of soil).

But what would happen if there was a complete drought for a couple of months of the season along with normal amounts of evaporation? How much water would be lost if there was a drought throughout June and July and how much water would we need to add to keep the plants growing? These are my best guesstimates:

Month	Average monthly evapotranspiration rates from an agricultural area in eastern England (mm water lost from surface which is the equivalent of litres of water lost per square metre)	Average monthly rainfall for Winchester mm	Average monthly shortfall over summer season (rainfall - evapotranspiration)	Cumulative soil moisture deficit over summer season mm
April	57.0	54	3	3
May	83.7	72	11.7	14.7
June	93.0	76	17	31.7
July	96.1	60	36.1	67.8
August	89.9	67	22.9	90.7
September	45.0	64	-19	71.7
Total summer	464.7	393	71.7	

The table shows that if there was a complete drought for the two months of June and July the evapo-transpiration (shown by the two figures in red) would create a shortfall of nearly 190 litres of water- two times as much water as there is in the top 30 cm. To keep the soil at field capacity we would need to add the equivalent of 1 IBC for every 5 square metres of surface or roughly 40 cu m per 200 square metre plot – a lot of water.

Using this data, a group of our engineers under the leadership of Roger, a retired architect is devising and implementing a plan to use solar energy to power a small pump to lift filtered water out of the pond and take it to IBCs adjacent to each plot. This task is scheduled for completion in 2021 with individual plot irrigation to be installed for 2022.

Compost and manure

From the start of our project, we have tried to grow organic crops. We have avoided using inorganic fertilisers, pesticides and herbicides on any of our crops in order to obtain the highest possible nutrient density within our crops. It is currently being reported that you need to eat 14 supermarket tomatoes to get the same quantity of nutrients as you would obtain in one tomato 50 years ago – such has been the loss of nutrients from many soils. But not at HCF! Of course, we are aware that by removing crops from the soil and the soil which clings to crops and weeds is actually removing nutrients from our soil, so we have made every endeavour to put more nutrients back than we take out.



Mike, who supervises composting with a spadeful of compost

Right from the start all weeds were collected and composted and then put back on the soil. But we found that sometimes not all the weeds had died- there were still living roots of couch grass and convolvulus in the compost which re-grew again.

Then Mike and a team built 11 compost boxes. We systematically put our weeds in them and then merged two compost bins together into a new bin after a few months to allow for better composting. Still a few weeds and weed seeds persisted in the compost.

Then Mike further developed our composting system by removing the flowering parts and the roots of 5 pernicious weeds; nettles, couch grass, convolvulus, docks and thistles and drowning these bits in a sack in a large bin full of water. He waited a few months until they had rotted down completely. The liquid can then be collected and stored in an IBC as a concentrated liquid feed while the dead plant remains can be further composted in the compost bins.



Picture on the left shows the label identifying pernicious weeds. The picture on the right shows how, once bins are full, they are covered to maintain moisture inside for composting.



The pernicious weeds are placed in these barrels to rot down under water

We also collect a lot of well-rotted manure from local stables and put this on certain crops such as potatoes and brassicas. So far, we have had no problems with toxic substances in the manure affecting our plants.

For a number of years, we purchased “Pro-grow” which is Hampshire County Council’s name for the Green garden waste which has been hot composted. However, we found that this had a high pH and was tending to raise the soil pH to around 7.5 which was making elements such as phosphorus and boron unavailable to certain crops and causing plants to develop mineral deficiencies and show poor growth. So, we stopped purchasing pro-grow and have let the pH fall to between 6.5 and 7.0.

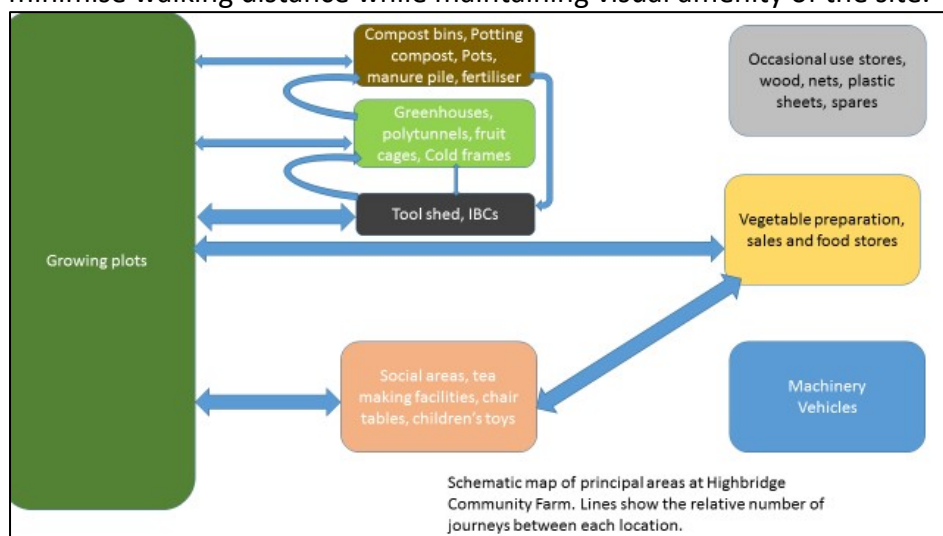
For a few years from approximately 2013 to 2018 we increased the amount of black sheet plastic placed over the plots during the winter months, partly to stop the heavy winter rains washing nutrients particularly nitrates and phosphates down through the silty-gravelly soil and into the river Itchen, and partly to stop the weeds growing through the winter and the plot needing more soil preparation in the spring. It really did reduce the number of weeds, particularly perennial weeds on the plots and had the added benefit of preventing the sun photo-oxidising the organic carbon or humus in the soil into carbon dioxide and then escaping to the atmosphere where it contributes to global warming. However, this sheet plastic was made from petroleum products and was therefore unsustainable. As a community, led by one of our directors Martin, we decided to move away from using plastic as much as possible and adopt a number of major, more positively environmentally friendly activities which will be described in another chapter.



Sheets of plastic were used to cover plots to suppress winter weed growth and reduce leeching

Storage places and other constructions

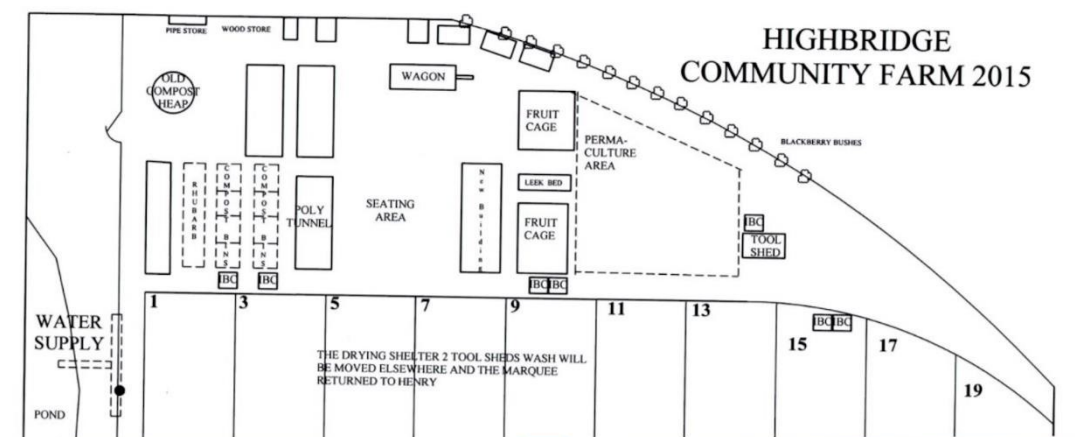
Over the years the number of sheds and storage places has grown. Most have been donated by members or friends. We have tried to locate our sheds and facilities in such a way as to minimise walking distance while maintaining visual amenity of the site.



We have three tool sheds, plus several stores, a workshop, and covered areas, a small shipping container which has been covered in thick insulation sheets and is used as a cool store, our tea hut which is a converted army mobile telecommunications hub, and a large green meeting shed. This latter shed was one of very few that we purchased and cost just short of £4000. We learned that if we did not provide a concrete base for a shed, then rats would nest underneath, so some of the early sheds had to be replaced on solid foundations. There is also a large covered area for sales and a nearby smaller area for the containers and sales notice board. The children also have a play hut.



One shed and some of the tools from inside it. Water troughs are placed close by to enable members to wash tools and then dry them before returning them.



Sketch showing location of infrastructure in 2015

Since this diagram was drawn the Fruit cage near plot 9 has become a Hardening off area, where seedlings raised in the polytunnels can be given a bit of protection from cold nights from the chicken wire walls and roof. With the addition of a tarpaulin to the roof the cage can double up as a drying area for Alliums.

The permaculture area became the Old Fruit Cage in 2015 where summer and autumn fruiting raspberries are grown.

For a number of years, the women used a portaloo in a dedicated shed, and the men an urinal. In 2018 we invested in a composting toilet which mixes sawdust with human waste. The waste is allowed to compost for two years and then placed on apple trees.

Sales Area

This covered area has changed considerably over the decade and now functions like a permanent market stall with price board, scales, bags and an honesty tin for cash payments. One of the consequences of Covid 19 has been the move to BACS payments for food purchases.



The Sales area in operation

Year by year our A-team, first under the leadership of Les, then Brian, now Will have made a vital contribution to our infrastructure. They are well equipped with tools and expertise and spend many hours building and maintaining facilities that we need to support the growing, storage and presentation of our crops.



The sales area can get quite congested.



Part of the team of men who put up the new shed: Andrew, Les, Brian, Mike, Toby, Paul, Alan D.

Fences

From time to time, we have had problems with rabbits and deer getting onto the field, so first a chicken wire fence approximately 90 cm high was installed all-round the site, and the gates made rabbit proof. Local deer displaced by housing developments near Bishopstoke



The style over the low fence which was subsequently replaced by a higher fence and the Tull gate

woods jumped over our fence and found a new source of food. So, a raised fence of chicken wire to approximately 2 metres high was constructed by a team led by Bryn and that has been effective in deer-proofing the site. Jay, the farm gamekeeper, tells me deer could still jump this fence, but we don't appear to have been troubled by this in the last year or so.

Herb garden

We now have an attractive herb garden adjacent to the main gates and which produces over 20 useful herbs during the year. The herb garden was created by Keith and Julie in 2018.



Julie in the herb garden

Pigs

In late 2010 Terry, one of our members decided to keep some pigs and with Mr Russell's permission housed decided to keep some pigs them in some

enclosures on the adjacent field. For several years they became an added attraction to the farm, particularly for younger visitors. For one winter they were housed on plot 4 in the hope that they would provide some extra nutrition to the soil, but it was a particularly wet winter and they poached the soil so heavily that it took some time to recover. The experiment was not repeated. We would really like to keep chickens on site to use as chicken tractors turning over the soil surface, but chickens need daily attention and attract rats, so we have not gone down that path.



The presence of some pigs near the New Fruit area was a great attraction

Chapter 8 Vegetables Galore

In this chapter we describe how we have increased the varieties and quantity of vegetables harvested. This has been achieved through the careful planning and organisation of our expert growers and team leaders, as well as through crop rotation, diversification of crops, extending the season and closing the hungry gap.



Over the years we have managed to grow some wonderfully large, tasty and nutritious food. It is not due to luck as might sometimes happen on an allotment but requires several different but overlapping areas of understanding, research, planning and management which we will attempt to tease out in this chapter.

Highbridge Community Farm children really enjoy getting involved in the growing process

Planning

The organisation of our planting plan requires three geniuses: our expert growers, Penny, Paul and Brian to work it all out a year in advance for 20 plots of different sizes and three polytunnels. The planning is immense! It is a far cry from the 10 crops planted in 2010. The table shows the planting plan that they have devised for 2021-22.



2021-2022 PLANTING PLAN

Key: LAST SEASONS PLOT METRES PER PLOT MANURE COMPOST

19 Martin Alliums: Spring sown red and white onions. Summer leeks	4 192	20 Martin Root brassicas: Swede, turnip, Kohl rabi, Pack choi, plus Cavolo Nero	10 217
17 Penny Roots: Carrots followed by giant winter spinach	2 223	18 Penny Main crop potatoes: Valor, Kingsman (to follow on from Spring greens)	-- 232
15 Jim and Debbie Legumes: Autumn and Spring sown broad beans and peas	11 287	16 Jim and Debbie Early potatoes: International Kidney, Red Duke of York, Acoustic, followed by leeks	5 272
13 Tudor and Theresa Main crop potatoes: Cara and Maxine (following on from parsnips)	-- 274	14 Tudor and Theresa Winter brassicas: Tall cabbages interplanted with summer cabbage	3 215
11 Robin and Pat Brassicas: Short winter cabbages	6 282	12 Robin and Pat Legumes: Climbing and French beans, Peas	9 211
9 Toby Roots: Parsnips and beetroots	13 241	10 Toby Squash	17 198
7 Paul Salads	-- 238	8 Paul Alliums: Autumn sown shallots, Elephant garlic, red onions	14 205
5 Jon and Carol Celeriac and Fennel	16 220	6 Jon and Carol Sweetcorn	12 201
3 Kate Courgettes, Swiss Chard, Spinach and overflow squash	20 168	4 Kate Main Crop potatoes: Cara, Maxine	-- 182
1 Andrew Q Brassicas: Summer brassicas followed by Spring greens	18 181	2 Andrew Q Alliums: Main crop white onions	15 225

Polytunnels: Lin

Polytunnel 1 Fallow for winter then spring seed sowing then peppers

Polytunnel 2 Winter salads, spinach, rocket, radish, cherry and salad tomatoes

Polytunnel 3 Salads including mizuma, coriander, lettuce, tomatoes

This year it looks as if we will have

- 4 plots of potatoes
- 4 plots of leeks and onions
- 2 plots of legumes
- 5 plots of brassicas
- 3 plots of root vegetables

- 2 plots of courgettes and squashes
- 1 plot of sweetcorn
- 1 plot of salads growing at the height of summer.

Crop rotation

During the World War II there was a Dig for Victory campaign which practiced a 3 year rotation

1. Root and potatoes then lime
2. Brassicas and beans then mulch
3. Everything else, then manure

Knowledge has increased since the war and so our Expert growers work out a 5 or even a 6 year rotation of

1. Potatoes then green manure
2. Leeks and legumes – broad beans, runner beans, French dwarf and climbing beans fava beans and borlotti beans plus peas. Then some manure.
3. Brassicas such as cabbage, Brussels sprouts, broccoli,
4. cauliflower, kale, pak choi, swede and turnip
5. Sweetcorn, pumpkin, squashes, courgettes and marrows
6. Other root crops e.g. carrots, parsnips, turnips, celeriac, fennel plus the Chenopodiaceae - beetroots, chard and spinach

Then also there are the salad crops, lettuce, tomatoes and outdoor cucumbers to squeeze in.



Quick growing salad crops can be planted grown before crops such as squashes and courgettes are planted out in late May or after pearly potatoes have been removed in summer



Diversification of crops grown

In total we plant over 30 types of vegetables, ignoring different varieties.

Our expert growers always try to remember that we need to grow on a scale so that there is enough of one crop plant to ensure that all 100 or so stakeholders can have part of the crop. We tried growing Asparagus for a few years, but they need permanent beds (like rhubarb) and it was realised that we would have had to devote a lot of space to grow enough for all of stakeholders. So asparagus was abandoned.



A few pumpkins for the children

In selecting the varieties grown our Expert growers (E.G.s) chose varieties that grow well in our conditions. For example, many varieties of potatoes have been tried. Some of the varieties we tried were given to us by companies undertaking potato trials, and although we liked the varieties, they are no longer available. Sometimes one variety of potato will do well one year and then be affected by blight or wireworm or slugs the next. Farm members give their feedback on how tasty the potatoes are and how well they keep and boil or fry. So there are a great number of factors which influences which potatoes and what quantities of the varieties the E.G.s will select.

We have tried growing garlic, but the garlic bulbs that were purchased from the Isle of Wight were expensive, and garlic was prone to rust and didn't grow well, so we tended not to grow this crop. It is cheap and easily available in the shops. On the other hand, elephant garlic bulbs are expensive to buy, and nearly impossible to find in the supermarkets. They grow well, so we have tended to cultivate them.

With certain crops our E.G.s select varieties that are tried and tested by Allotment growers, such as Beetroot Boltardy and Leek Musselburgh, but will also introduce new varieties, such as a yellow beetroot or an early season leek to encourage interest and new experiences or lengthen the season.



Healthy brassicas

Initially we grew just garden peas but now we also grow sugar snap and mangetout. Sugar snaps have a rounder shape than mangetout, a crunchy texture and a very sweet flavour. Mangetouts are flat with very small peas inside and have a mild flavour.



The broad bean Aquadulce is planted either in the autumn or the spring to extend the harvesting period

There are some plants, particularly brassicas, that take a long time to come to maturity. Sprouts and purple sprouting broccoli are sown in March and then planted out in April, but are harvested in winter or spring and are not dug up until the next February, March, April or even May. Others such as quick growing cabbages are sown in the spring and can be harvested by about June or July. Quick growing crops need a second crop or follow up crop in order to keep the soil covered with plants and make the best use of the ground.

As you can see from the 2021-2022 planting scheme, when a crop such as purple sprouting broccoli or sprouts has been in the ground over the winter and is dug out in April or May the ground is then generally planted with something like main crop potatoes. This goes into the ground fairly late in May and grows quickly. If a crop such as early potatoes or summer brassicas are planted early and then harvested by July or August,

then spring greens or leeks can follow it afterwards, ensuring that something is growing in the soil almost all year round.

After every year each crop is evaluated, some are dropped because of germination problems, infections or infestations or poor harvests and so new varieties have to be researched and purchased.

Extending the season with different varieties

Runner beans or climbing beans are one of the tastes of summer. One of the ways we are extending the growing season and the eating season for beans is by growing Fava beans and Borlotti beans. We will eat broad beans in May and June, runner beans and French climbing beans in July through to September or October. Fava beans and Borlotti beans are grown to be dried at the end of the season in October and eaten through the winter right into the Hungry gap the following March to May.

Fava beans look like small broad beans and are a source of protein that can be harvested and stored year-round. They became one of the main ingredients of the British diet in a simple bean stew, known as pottage during the Middle Ages. We also sow the broad bean Aquadulce in the autumn (around Trafalgar day -the 21st October) and again in the spring to ensure that the harvest is spread out over a few weeks.

Most gardeners know about extending the potato season. Our early potatoes are International Kidney, Red Duke of York and Acoustic, which are planted in March or April while our maincrop potatoes, Valour, Kingsman, Cara and Maxine may not go in until late May.

As well as extending the season with different varieties we sow crops such as beetroot and carrot serially over a longer period.

Other crops such as parsnips are notoriously difficult to germinate – the temperature and moisture of the soil is vitally important. So frequently multiple sowings of parsnips occur.

Sweetcorn is generally sown in two or three batches in plastic pots in the polytunnel. When the sweetcorn is around 15 cm tall, holes are dug in the correct position in rows on the plots and the pots placed in the holes down to the correct depth. The pots are watered, any excess water drains directly into the soil. Then the pots are removed and the



Pumpkins hardening off in a polytunnel

sweetcorn planted by being pressed down into the pre-prepared hole. They are immediately mulched to reduce transpiration from the soil surface. This ensures that most plants grow strongly away. If any fail to survive transplanting they can be replaced with a later batch grown in the polytunnel or by direct sowing. As the month of May progresses towards June the temperature of the soil warms up, so later sowings can be made directly into the soil of the plot. The seed is sown into about one 5 inch pots worth of well-watered compost to ensure it gets off to a fast start.

The staggering of planting times for a crop can also be used to extend the season of harvesting as well and we have learned how to avoid the sort of glut we had with courgettes in 2010.

There are so many different varieties of cabbages and lettuces that planting can be extended to ensure production and harvesting almost continuously throughout the year.

Covering the hungry gap

In the early years of HCF very little food was available in the period February, March and April. We did not make good use of the ground over the winter. Now more beans, leeks and winter brassicas are grown so most of the plots are producing for twelve months of the year.

With the greater availability of winter salads produced in the polytunnels, plus sprouts, cabbage, winter) and dried beans the hungry gap has been substantially closed and the availability of food for purchase in these months encourages more people to come down and do some work.



Sweetcorn is such a rewarding crop to grow. It produces a large plant biomass in a few months. The stalks plus the stems of carrots, kale, cavolo nero, and squashes provide residues that can be used as a mulch and this will ultimately sequester carbon into the soil. "Digger Dave" in the foreground



Stages in growing a lovely crop of onions

Chapter 9 Improving the Soil

Good soil is an incredibly valuable asset. Here we read how our crop quality has been improved through better plot management and careful attention to feeding the soil (not fertilising the plants). Soil carbon levels have been raised by using manure and compost but also by minimum digging, mulching and using green manures. Finally, we summarise some of the health benefits of growing in rich organic soils.

Improving the plot management

We have already written of the problems experienced in 2010 and the next few years with weeds on the plots. Weeds are but a minor issue now, and that is due to several different strategies being brought to bear on these unwanted plants.

- We learned that if you tackled the weeds early it was less work than allowing them to grow and then having to dig them out! So, hoe weeds while they are small.
- The control of our plots in the early years with sheet plastic gave us a method of keeping them down over winter or when crops were not being grown. When the plastic was removed in the spring the plot just needed a brief bit of selective weed digging and hoeing.
- The regular mowing of the grass paths prevented weeds flowering and going to seed nearby and so stopped more seed being dispersed again over the plot.
- The cutting of vertical edges around the plot reduced invasion of spreading plants which have long runners such as couch grass, nettles and convolvulus.
- We realised that if you use paths of cardboard covered with woodchip across the plot you could get around the plot without compacting the soil and ensure that weeds didn't grow on the paths or uncultivated areas.



Creating paths across a plot

- The use of semipermanent paths which are constantly topped up with wood chip prevents manure being spread in areas where plants will not be growing. And manure often contains weed seeds!



A plot ready for spring planting

Improving the soil

Since our beginning as a community farm in 2010 our aim has been to grow good organic food. In recent years there has been a growing general awareness of the value of soil and the need to manage it carefully. Nutrient poor soils produce nutrient poor plants which are far less healthy and less beneficial to those who eat them.

The 2015 Paris Climate Agreement stated that farmers worldwide should aim to raise their soil organic carbon levels by 0.4% per year in order to sequester more carbon in soil, build up soil and help combat rising atmospheric carbon levels and climate change.

Our first soil samples were taken and analysed on 18 February 2010 and the soil has been checked regularly since. Tests show us that the organic matter level has risen from around 4% to 13%. To achieve this we have added manure, compost, pro-grow and other organic supplements in the belief that this will improve the health, fertility and productivity of our soil and hence the nutrient density of the vegetables we produce.

We now understand that each kilogram of organic matter added to the soil has the capacity to hold approximately 4 kg of water, so a rise in organic carbon is increasing the soil's ability to hold more water and keep plants growing for longer during periods of warm sunshine without rain or watering.

A rich organic soil means there will be more nutrients present in the soil and available for the plant roots to take up. By raising our soil organic carbon levels we are trying to create a soil that holds more nutrients and more water and so is better able to support whatever crop is planted in it and (ideally) cope with whatever combination of weather events that is thrown at it.

Minimising digging

We have also learned recently that a relatively undisturbed soil will reduce the rate at which the soil carbon in organic matter is oxidised back to carbon dioxide which is then released to the atmosphere. Anything that minimises soil disturbance contributes to soil

health. This replicates natural systems such as woodlands where organic matter falls on to the surface and is left in situ to break down. A visit to Charles Dowding's "No dig" garden by a small group of Farm stakeholders convinced us that wherever possible a "no dig" approach would benefit the soil.

Digging aerates the soil, which allows more bacteria to feed on the organic matter present and convert it to carbon dioxide which escapes to the atmosphere. So, the soil organic matter, water and nutrient holding capacity of the soil is reduced.

"No dig" with the addition of organic matter to the surface allows the worms to mix the soil naturally. As the plant roots grow, they release sugars into the soil which are taken up by the filaments of mycorrhizal fungi which grow through the soil. These filaments effectively increase the soil root area 10-100-fold and bring water and nutrients to the roots in return for the sugars. This mutually beneficial relationship has been found to increase plant growth rates by about 30%. Unfortunately these filaments are broken by digging and mycorrhizal fungi decline in dug soils.. This association between mycorrhizal fungi and plants works for about 90% of plants, but sadly not for brassicas. So the mycorrhizal fungi struggle to survive when the soil is dug or just brassicas are growing in a soil; hence the need for intercropping brassicas with a different family of plants and "no dig."

Teams 1&2 and 3&4 have pioneered the use of minimal dig. They have planted potatoes in soil simply by using a spade to slit the soil at the appropriate place and placing a potato chitted end up in the slit approximately 15-20 cm below the surface.

Monitoring the soil through analysis and worm counts

Worms are really useful biological indicators of how healthy a soil is, and studying them is something that children and adults alike enjoy. Each spring for the last few years we have encouraged teams to take a 20x20x20 cm sod of topsoil and place it in a tray, then count the number of adult worms (worms with a saddle) in that sample.

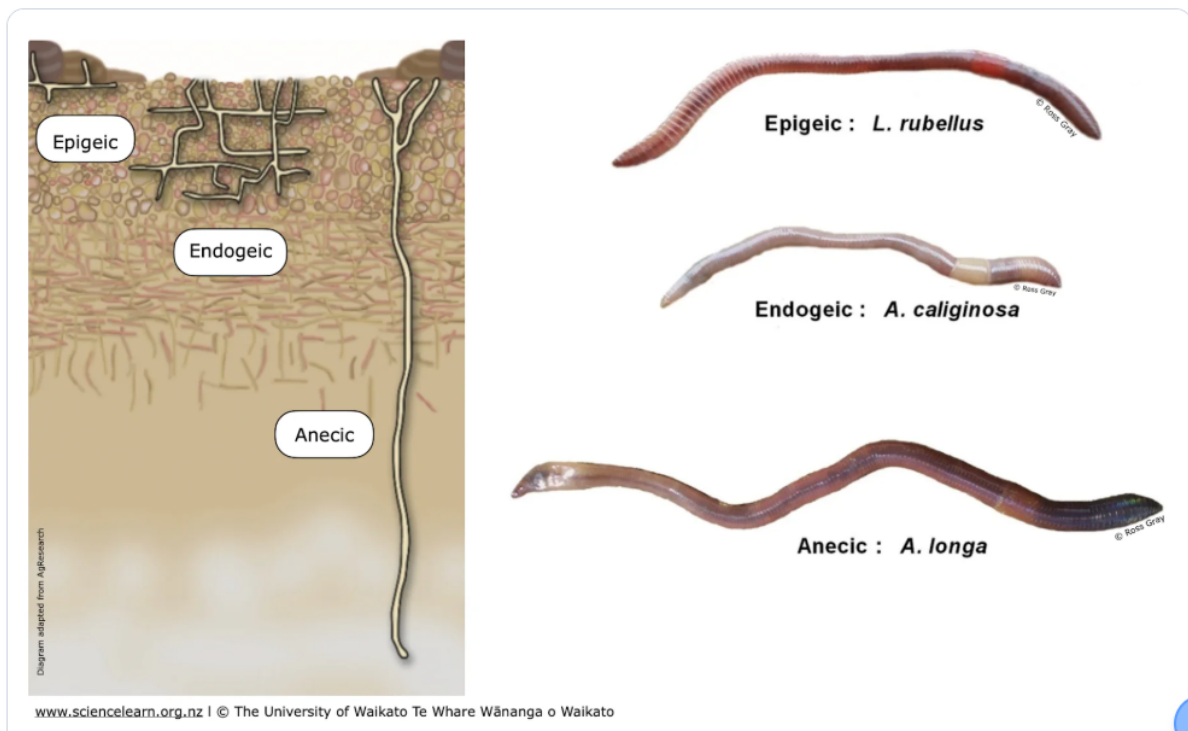
There are three groups of worms in our soil, each of which has a different role and value for the soil

1. Epigeic worms live near the surface of fields with abundant leaf litter and feed on the leaf litter breaking it down to plant fertiliser. They can't survive if there are no plant remains on the soil surface.



Team 1 & 2 doing an earthworm survey

2. Endogeic topsoil worms make horizontal burrows through the soil to move around and to feed. They mix soil and mobilise nutrients for plant uptake and so help to raise crop productivity.
3. Anecic earthworms make permanent vertical burrows in soil which are excellent for getting air into the soil and acting as drainage holes during heavy rain. They feed on leaves on the soil surface that they drag into their burrows. If the soil is frequently dug their burrows are destroyed and they die out.



The three main types of soil earthworms. "Science Learning Hub – Pokapū Akoranga Pūtaiao, The University of Waikato Te Whare Wānanga o Waikato, www.sciencelearn.org.nz

So, by counting the numbers of each type of worm in their sample we can see how the soil in each plot is doing. The hope is that there will be around 30 adult worms per sample with representatives of each group. A fall in earthworm biodiversity through the loss of epigeic or anecic worms indicates that some farming practices need to change.

Mulches

Mulching of plots with plant biomass is becoming increasingly popular during the hot dry summer periods when a lot of water can be evaporated from bare soil surfaces. Broad Beans are increasingly grown through the recycled sweetcorn stalks from the previous year, but other products such as pondweed, straw (for strawberries) and woodchip have

been used. In autumn and winter we have appreciated being able to use plant biomass such as pondweed, and sweetcorn stalks to suppress weed growth and photooxidation of soil carbon back to carbon dioxide.



Two mulching approaches tried on plots 3&4: Left: Using pondweed as a mulch and a fertiliser. Right: using old sweetcorn stalks to protect the soil from the effect of sunlight evaporating water from the surface as young broad beans are growing.

Green manures

Team 3&4 have been undertaking trials with growing a number of green manures over winter, rather than leaving the ground bare or covered with sheet plastic. A green cover crop for winter use should germinate in the late summer or early autumn after a crop has been removed, then grow as much as possible during the autumn, covering the ground to suppress other weeds from growing, and then provide biomass for later composting. The leaves reduce soil erosion from water run-off and wind. The roots of the green manure plants bind the soil together, feed the mycorrhiza, and draw up nutrients which otherwise might be leached deeper into the soil by the rains. Ideally too, a green manure should be cheap to buy. Then finally, the plants should be killed off by the frosts of winter.

The team trialled 4 cover crops: Phacelia (*Phacelia tanacetifolia*); Daikon Radish; The Poached egg plant (*Limnanthes douglassii*) and Miner's lettuce or Claytonia (*Montia perfoliata*) all planted in mid-September. Phacelia grew the best during the autumn and resisted mild winter frosts. In their trial in the second year the team just grew Phacelia and cut down the stems in March and left them to breakdown on the surface while the roots slowly died below ground, but continued to feed the mycorrhiza until the spring crop (potatoes) were sown directly into the surface in the month of May. This "no dig" approach in the spring avoids disrupting earthworm activities and mycorrhizal associations with plant roots and the team believe it will lead to the healthiest possible soil.



Plot 3 trials of Daikon radish (left) and Phacelia (right) as winter cover crops

Reflection

This chapter has largely focussed on the corporate thought and effort that goes into growing healthy crops. It is a combination of all farm members; expert growers, team leaders and stakeholders alike, plus those who bring the manure to the farm, make compost or help in pumping the water to the plots. It is one of the great strengths of a community farm to have the benefits of many minds addressing the same problems of improving crops, soil organic matter and water holding capacity.

The health benefits of our growing methods

There is one more massive benefit from the way we involve our community in growing their own organic food: better health. Currently we are hearing that most of our food contains much lower levels of vitamins and minerals compared with a few decades ago and this is often attributed to selective breeding for other qualities such as size and sweetness. It is also due to the declining fertility of many soils because of the use of inorganic fertilisers, herbicides and intensive cultivation. Sadly, many of the fields growing crops in Hampshire have a soil organic content of around 1%.

It is said that you need to eat about 14 supermarket tomatoes to get as many mineral and vitamin nutrients as one tomato grown in the 1950's. Yet the alternatives to not eating supermarket tomatoes for many people are even worse – eating a diet of junk foods, processed foods and sugary and fatty foods. Foods low in nutrient density are decreasing the varieties of healthy bacteria that live in the gut and this seems to be correlated with

massive increases in autoimmune diseases such as Diabetes, Asthma, Rheumatoid arthritis, Multiple Sclerosis, IBS and Coeliac disease within the British population.

Highbridge Farm's fruit and vegetables are grown in an organic, pesticide-free way in carbon rich soils that hold abundant mineral nutrients. So HCF fresh foods are nutrient dense and far more like those eaten by our parents and grandparents decades ago. By eating plenty of these foods we believe we are helping our guts to maintain a wide variety of the healthy gut bacteria. This is called a healthy gut microbiome and we hope that the general health of our members will be better than average as well.

Our vegetables may not always be a perfect shape, but they taste great!



Chapter 10 Abundant Fruit

This chapter traces the planting of the Pondside orchard, then the rapid expansion of our stocks with the gift of 160 apple trees and the creation of the Old Bridge Orchard and the Long Orchard. The chapter then explains how the quality of fruit has been raised through pest control and the use of organic fertilisers. Then the growth of the Soft Fruit area is described.

Early developments

Soon after the community farm began, two members brought rhubarb from their allotments and a rhubarb patch was formed (in what is now the Herb garden area).

Rhubarb is much appreciated in late March, April and May - the months of the “hungry gap” when not many other fresh fruits and vegetables are available.

As described in chapter 4 we planted the Forager’s hedge in the autumn of 2010 and the beginnings of the Pondside orchard in the Spring of 2011 after Mr Russell had graded the hillside

The Pondside Orchard

The bank behind the pond was very gravelly with little soil in it. Any topsoil which had developed was destroyed by the bulldozer while it was grading the site. When we planted the area with small trees composed of apples grafted onto M106 rootstocks from my allotment we added plenty of organic matter, but this tended to be leached out fairly rapidly. It is known that fruit trees grown in a meadow lose around 30-40% of the nutrients available to the trees to the competing meadow grasses. Our trees planted on this gravel bank soon had to compete with coarse grasses and weeds such as nettles, burdock and teasels and probably a lost more nutrients through leeching to the gravel below. So, we have always been keen to add additional organic matter to the Pondside orchard including cauliflower and sprout stalks which take 2-3 years to break down.



Planting of the pondside orchard just after grading the slope.



Notice the gravelly nature of the soil around the pond and the amended soil around the tree.

The Old Fruit Cage

There was a patch of ground near the tea hut which originally had been designated a permaculture area but then became a soft fruit area, growing raspberries and gooseberries. After a year or two we decided to cover the fruit and protect it from birds and so we made our first fruit cage.



Gooseberries (foreground) and raspberries behind in what became known as the Old Fruit cage. The black mypex cover is to suppress weed growth.

The Old Bridge Orchard

In the process of purchasing various fruit trees prior to 2010 I had developed a friendship with Mr Philip House of Family Trees of Shedfield near Wickham. He had taught me grafting techniques. He rented a 4 acre field where he grew fruit trees for direct sale to the public. About two years earlier I had bought 50 M106 apple rootstocks from Mr House and grafted them to scions- shoots of apple varieties that I wished to propagate and grow on at my allotment. But when they were planted on the pondside bank they looked pitifully small and would clearly take several years to become productive, particularly in such a gravelly hillside.

In autumn 2011 I made a visit to Family trees and Mr House mentioned to me that he was going to grub up an area where there were the less attractive trees that hadn't sold and replace them with young whips that he would graft himself. When I asked how he would take them out he said he would hire a man with a digger to do it. I offered to bring my friends from the farm along and dig them up for him. So, in October 2011 we dug up around 70 trees from Shedfield and replanted them in a long line running N-S outside the Vegetable field fence and then in four rows at right angles to the Southern end near the Old Victorian Bridge across the stream. We call this Orchard the Apple Avenue and Old Bridge Orchard.



Pershore plums in the pondside orchard

The Long Orchard

Then, in February and March 2012 we dug up another 90 from Family Trees and brought these along to plant in two rows of trees in what we call the Long Orchard. In all the chaos of about a dozen people digging out so many trees some were misidentified or mis-labelled and on arrival at Highbridge they were all planted in a completely random manner. Nevertheless, within two years of starting a community farm we had nearly 200 maturing apple trees of 60 different varieties.



Spin harvesting huge Peasgood nonsuch apples in 2016

Maintaining stock and adding more fruit trees

For the next couple of years all our trees were looked after by two or three of us who liked working with trees, but there was a lot to do in staking, pruning, manuring and fertilising them and it was quite evident that we needed to form a Fruit team as soon as we had enough members to go above our 100 stakeholders, especially if we were to develop soft fruit cultivation as well. A team began to come together in 2015/16.

Around that time, we were also given 20 fruit trees by Eastleigh Borough Council and these were planted by the carpark near the Farm entrance and along the lane near our fields. These are mainly pears, plums and cherries, but several have been damaged by other activities in the car park area.



Children enjoying picking windfalls in Apple Avenue

Raising Fruit quality

Over the years the quantity and quality of the apple harvests has risen. We have worked on improving the soil around the trees with the addition of various organic amendments, notably wood ash which is high in potassium, which encourages flowering and fruiting, and also contains phosphorus and a variety of micronutrients such as manganese, iron, zinc and calcium. We have also used eggshells which add small amounts of calcium, potassium, sodium, phosphorus and magnesium. Any rise in pH is compensated by the addition of spent coffee granules.



Beautiful Apple blossom

We grease the tree trunks each autumn and this has been effective in reducing problems with winter moths. The virtually wingless, female winter moths hatch in November, then crawl up fruit

trees to mate with male moths. The eggs

Beautiful apple blossom that are laid hatch into caterpillars in spring, which eat the leaves and flower buds of the affected tree. This treatment has successfully reduced the problem, leaving only the issue of codling moths unresolved. We avoid using pesticides which allows the natural predators of the codling moth such as some wasps and birds to feed on the larvae as they crawl up the tree.

Pre-season codling moth protection can be partially achieved by picking up all fallen fruits from the ground which removes some of the larvae and prevents them from reaching adulthood and starting the codling moth life cycle all over again.



Andrew on the pruning and picking ladder

For a couple of years, the apple leaves were attacked by an alder beetle, but it seems to have died back naturally. Some years the birds peck quantities of fruit and these damaged fruits are then visited by wasps which makes harvesting tricky.



Apples for sale one Saturday

Harvesting records 2019																	
Saved as Excel File in HCF/ Fruit Group/ HCF Orchard Records																	
Variety	Quantity of apples (in trays) and Weeks harvested													Location of trees			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	OBO	LO	PO
Early Victoria c															27		
Discovery d															17,12	14,77,79,80,81, 85,88	
Devonshire Quarrenden d															65		30
George Cave d																	
Irish Peach d															22,23		
Beauty of Bath																39	
Laxton's epicure d																18	
George Neal c																63	
Gravenstein d																50,51	
Exeter Cross															60, 4	34	
Rev W Wilkes c																	3
Yellow Ingestre															70,52,36		
Bardsey Island															61		
Laxton's fortune d															20,8		
James Grieve d																52,84	
Charles Ross c																4	
Ellison's orange d															55		
Merton Knave d															35	30	
St Edmunds Pippin d															67		
Peasgood nonsuch c																5,36,54	
Arthur Turner c															33,47		
Monarch c															1,21,38		
Egremont Russet															16		
Blue permain																	
Pitmaston pineapple d																	
Bountiful c																	1,2,13,16,
Lord Lambourne d															18,48	20	
Sunset d																7,8,13,22,2	10,32,34
Margill																	
Kidd's Orange Red																	
Golden Noble d																9,35,55,86	
Spartan d																45	

Part of the Apple harvest spreadsheet. The pale brown boxes highlight the varieties we would expect to harvest in the first three weeks of August and the first three columns are for recording the number of trays harvested in those three weeks, and so on down the list and through the season

Apple Avenue is now a magnificent sight, particularly in April when the trees are in blossom or in September when most of the trees are laden with fruit.

Each year as the team has become more skilled, we seem to harvest greater quantities of better sized apples and better-quality apples. Typically, we harvest around 180-200 trays of

40 + varieties for sale. We have tried apple pressing on site, but it requires a lot of human effort to produce relatively small quantities of apple juice, so in 2020 we sent off about 200 kg of apples to a pressing and bottling company and they returned us 72 wonderful tasting bottles of Highbridge Apple juice. There are many different favourite apples at the farm including Laxton's Epicure, Devonshire Quarrenden, Bardsey Island, Lord Lambourne, Pitmaston Pineapple, Spartan, Melrose, Orleans Reinette and Christmas Pearmain among the dessert apples and Early Victoria, Bountiful, Peasgood nonsuch, Edward V11 and Golden Noble among the cookers.



Highbridge Farm Apple juice



Orleans reinette apples

Soft Fruit

By 2015 the area adjacent to the Vegetable field was filling up with different individual or group projects. At the North end was a Nepalese/Gurka community who were growing their own vegetables, then an area which Penny had used for growing pumpkins for her business, then a dog exercise area, then a small Permaculture area, then our 4 rows of apple trees, then another dig exercising area. So, we took on Penny's plot which had been used for growing Pumpkins. It was an area a little over 30 m x 30 m. We wanted a New Fruit Cage to grow soft fruits on the land and move across some of the bushes from the Old Fruit cage.

In the Old Fruit cage we had experienced many problems with couch grass growing in from the side to compete with the soft fruits and spread among their roots. We wanted to start our New Fruit Cage with as little plant competition as possible. So, in October 2015 the area was sprayed with the herbicide Glyphosate and when the weeds had mostly died any remaining ones were dug out and the area covered with black plastic sheets or a woven black plastic called mypex to suppress any new weed growth. A year later in October 2016 the plastic was briefly removed and any remaining weeds dug up. Then the area where the Fruit cage was to be built was heavily manured with well-rotted cow manure and spread with about 15 tonnes of dry hay which



Anna and Caroline spreading the hay over the ground prior to covering with sheet plastic again

would rot down to improve the fertility and water holding capacity of the soil. Then we added some blood, fish and bone slow-release fertiliser and some eggshells to supply calcium. Afterwards we recovered the site with mypex sheeting to suppress weeds and allow the organic materials to break down.

The New Fruit Cage

Over the winter of 2016-17 the team began to build the Fruit cage using 2.4 m x 73 mm round posts for the basic structure inserted into the ground every 2.5 m apart. Battens attached the posts together along their tops and provided a place to attach the netting to and wires ran across the cage to support the netting. The cage is L shaped; the main part is 30m x 12m with a side area of 15 x 10m-which gives us a total area of 510 sq m.

Approximately 30% of the area is devoted to growing gooseberries, 30% to growing blackcurrants and redcurrants, 30% to growing big berries- jostaberries, tayberries and loganberries and 10% to growing strawberries. Each area has a different person who takes responsibility for that crop.



Two photographs (taken from the shed roof) showing the New Fruit cage. On the left is the gooseberry area with the currants behind. On the right is the big berry area containing jostaberries, tayberries and loganberries

Meanwhile the A-team had constructed a base for a shed. Tudor had offered us a 10ft x 8 ft shed and it was beautifully re-built and then kitted out by the A Team. The shed had an oakwood floor and was insulated between the outer tongue and groove boards and the inner plywood because we planned to store apples in the shed from the autumn and gradually release them over the winter and early spring as they ripened and reached their climacteric. If we have a cool Autumn and Winter we can extend the natural harvesting season of July to early November to an eating season which runs through to March and the time when we start picking the new season rhubarb.



In the early Spring of 2017, I put in a drip irrigation system, using water from an IBC which was filtered and then run through a branching network of pipes and taps to irrigate the cage.

Outside and inside views of the shed donated by Tudor

Rhubarb was moved across from the old site in 2016 and 2017 and by the summer of 2017 the New Fruit area began to produce great quantities of lovely rhubarb, which is particularly welcome in late March, April and May when not many other fruits or vegetables were available. In 2019 we harvested 660 lbs rhubarb from our patch. The New Fruit cage was working well and magnificent harvests were beginning to come in by summer 2017.



One Saturday's harvest of gooseberries and raspberries

The team had been working incredibly hard for about two years, preparing the soil for the fruit cage, then planting the bushes and building the cage throughout one cold winter. We were beginning to see the benefits of hard work; soft fruit which was appreciated by all of the Farm members.



Picking all these raspberries takes a long time

It was time to celebrate success and we enjoyed a couple of good social events at Anna's house and one in the Fruit cage during the first cropping season.



The Fruit team enjoying a relaxing lunch together in the Fruit cage

Disaster struck in July 2019!

During a very violent thunderstorm a direct lightning strike to the shed (possibly the solar panel on top and the connecting battery) completely destroyed the shed, two nearby IBCs, the nearby area of the fruit cage and some gooseberry bushes and rhubarb. Falling bits of burning debris fell on other parts of the cage and melted holes in the netting.



A lightning strike and subsequent fire destroyed the Fruit shed.

The Fire left most of the Fruit team and the A-team who had built the shed feeling pretty discouraged. We were in the middle of the busiest time of the year picking soft fruit while at the same time we needed to spend time clearing up the mess and searching for precious objects such as pruning knives and scale weights which we hoped to find in the debris.

Many other Farm members were very helpful and encouraging. One offered substantial financial help, another repaired the wooden handles on some of the pruning knives that were recovered. The local Eastleigh Lions offered us a new shed which we gratefully accepted and Brian, Will, Alan and others set about building a second shed on the foundation in less than three years. We had learned some lessons from the design of our first shed and so these modifications and improvements were implemented in the construction and fitting out of the new Lion's Den.

We did not put a solar panel on our shed and have a battery within the shed. The solar panel was placed several metres away on an aluminium IBC frame and the battery housed nearby. A lightning rod was attached to the nearby IBCs and an armoured cable leading to good earthing materials was installed nearby by Paal, a qualified electrician and farm stakeholder.

The new shed, the Lion's den, was opened in March 2020 and contains space to store 180 trays of apples or pears.



The Lion's Den. Opened March 2020

Changes and modifications continue to take place in the New Fruit area as new areas of strawberries are planted, new members join the group and others move on. The Fruit Team is unusual among the farm teams in that each member is encouraged to take responsibility for a specific fruit crop. This is because there are a lot of different pieces of specific knowledge and skill required for the crops and in order to ensure better continuity of management from one year to the next. So, we have leads on raspberries, rhubarb, currants, gooseberries, strawberries, the big berries (jostaberries, tayberries and loganberries) and the Orchards. Within the orchards individual stakeholders take responsibility for the three main orchards: Pondside, Old Bridge and Apple Avenue and the Long orchard. The Fruit Group continues to provide excellent food throughout the year for the farm stakeholders. This includes crops such as blackcurrants, jostaberries, tayberries and loganberries and many varieties of apples, plums and pears that are unobtainable elsewhere locally.

Chapter 11 May it be....

In our final chapter we reflect on our Mission statement, Aims, Ethos and Values and to what extent they have been fulfilled by the farm.

How do we begin to reflect on the achievement of the hundreds of people who have and still make up Highbridge Community Farm? This booklet is only a snapshot. Certainly, we have not embarked on a one-person mission to save the world as Greta Thunberg has done. Nevertheless, we are a community of hundreds who have set out on a journey together to do what we can to grow and eat vegetables and fruit in a sustainable manner. Will it be enough? I rather doubt it. Only time will tell. There are so many other areas in our lives and the life of this world that desperately need to be addressed.

Mission

To work together to cultivate and share sustainably produced vegetables and fruit for our mutual benefit and enjoyment.

Aims

For our mutual benefit:

- To produce food locally for ourselves
- To provide an additional, sustainable and resilient food supply in a world where future food supplies are becoming increasingly uncertain
- To encourage the consumption of food that is nutritious and fresh
- To give members knowledge and experience in vegetable and fruit growing, using organic methods as far as possible

And in doing so - far community benefit:

- To act as a model for other enterprises wishing to follow our example
- To help our own and the wider community understand climate change, the need for carbon capture and the need to reduce our dependence on fossil fuels.

Ethos

We have evolved from the Transition Movement and retain their founding principles - a community-led response to the pressures of fossil fuel depletion and climate change, supporting local economies and moving towards a more viable and sustainable future. Now a mutual benefit co-operative society in our own right, we work together to produce food for ourselves with minimum use of fossil fuels and chemicals. We support growing

techniques that maintain the natural balance of the soil, preserve wildlife and their habitats, and encourage biodiversity.

Values

All cooperatives are based on the values of self-help, self-responsibility, democracy, equality, fairness and solidarity. In addition, Highbridge Community Farm members believe in the ethical values of:

- Teamwork
- Mutual respect
- Education
- Environmental responsibility

Evaluating our mission

We certainly have achieved our mission to produce vegetables and fruit for our mutual benefit. It has been an incredible, almost miraculous process of working together with enjoyment. Admittedly it's not so much fun doing it when it is cold and wet, but there are still the benefits of fresh air and exercise.

Evaluating our aims

We might be criticised at times for not providing healthy food for a wider market or even for local food banks, but in a limited space and with limited time at our disposal we are scarcely able to produce more than our stakeholders can consume. So, we consider that the benefits to our members of friendship, relaxation, exercise, new learning and nutritious food justify our limited activities.

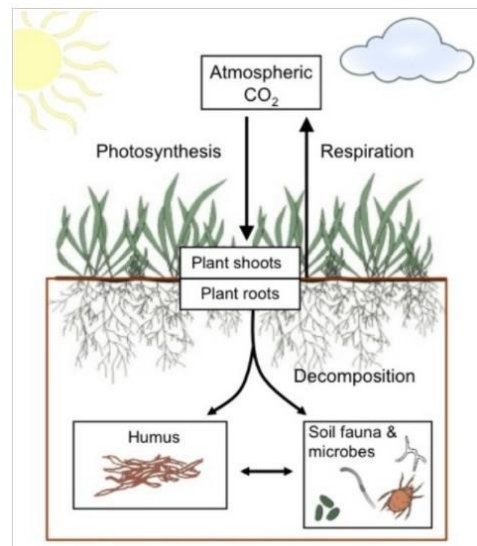
Like farmers the world over we are struggling with the effects of weather uncertainties created by climate change. As I write (April 2021) we have not had rain for five weeks, and the weather has been unseasonably cold with some harsh night frosts. Some of our crops are suffering: the pears, plums and peaches are all in flower and a frost is likely to greatly diminish this year's harvest. Rhubarb should be growing inches a day at present and be really juicy, but it is stunted, dry and tough. We need better irrigation. Fortunately, we have the pond and the River Itchen nearby, but if everyone in the Itchen catchment area draws more water from it then the wildlife dependent on the river will suffer.

We have given hundreds of people from Eastleigh, plus others from Winchester, Southampton and even further away valuable experiences in vegetable growing. Children and young people from local primary schools right up to Sparsholt Agricultural College have visited and seen farming in practice. We've been out and talked to Horticultural Societies, and local groups and shown round a number of groups who are interested in using our community as a model for setting up something similar within their community.

In our Saturday morning tea briefings, on the weekly updates, in our published articles on our website and HCF Facebook sites we are constantly addressing the impacts of climate

change, the need for carbon capture and the need to move away from our dependence on fossil fuels to alternative, non-environmentally damaging sources of fuel.

Every year we add many tons of manure, compost and other organic materials to our soil but we also remove tons of fruit and vegetables. Soil carbon sequestration means maximizing atmospheric carbon dioxide removal into the soil and minimizing soil carbon losses by the soil. We know that microorganisms digest up to 90% of the organic carbon that enters a soil in organic residues and through their respiration return the carbon back into the atmosphere as carbon dioxide. But by moving to minimum dig we are moving away from conditions that support bacteria which respire the carbon into carbon dioxide. We are moving towards conditions that support mycorrhizal fungi which have slower respiration rates and produce less carbon dioxide and are characterized by higher carbon sequestration efficiencies. By increasing our soil organic carbon from 4% to around 13% we have probably sequestered around 200 tonnes of Carbon in the vegetable plots alone. Carbon is also absorbed in the wood of the trees and the grassland below builds organic matter in the soil. It is their perennial nature which makes orchards so important in carbon terms. Orchards are important carbon sinks that also provide food for humans. Some of this carbon may still be in the soil at Highbridge in 500-1000 years' time. Our contributions are long lasting!



Simple diagram of air/plant/soil carbon movement ©2012 Nature Education All rights reserved.

Evaluation our ethos

We support growing techniques that maintain the natural balance of the soil, preserve wildlife and their habitats, and encourage biodiversity. During our time at the farm we have learned a lot about soils in general and our soil in particular.

We have moved away from covering the soil with black plastic, as helpful as it was, to more environmentally healthy and sustainable activities. Most of the teams now focus on minimum digging and the avoidance of the use of rotavators. We encourage mulching of the soil surface with crop residues throughout the year, the use of woodchip to create paths across the plots (another method of sequestering carbon), the use of green manures, winter cover crops and generally growing more crops in winter rather than leaving the soil bare. We also obtain more regular soil analysis and make worm counts. As the soil organic matter rises so too does the nutrient content and its health. So too, we hope to see an increase in the numbers of earthworms. So too, apparently, do the numbers of moles increase! We also have a HCF Plastics group who are trying to find alternatives to plastic and ways of reducing and eventually eliminating plastic from the farm. They also provide regular tips to help us all to live more sustainably. Or as they say "reduce, reuse, and recycle."

As we have worked out in the countryside at Highbridge farm we have seen so much wildlife. We are very fortunate in having many nature lovers and several members who are ecologists or environmental scientists: Dave – entomologist; Andrew Q - ecologist and reptile expert; Matt and Claire - ecologists and bat experts; Bryn and Lynn - Natural Historians; Andrew R - Plant Ecologist; Andy W and Steve G - Environmental Scientists. These folks tend to keep us informed about what is going on in the living world around us.



<https://highbridgecommunityfarm.org/a-round-up-of-eco-tips/>



Grass snake and buzzards are just two of many sightings of wildlife.

Buzzards, red kites, ravens, swans and geese flying overhead are fairly common sights, but there have also been more elusive visitors, such as kingfishers, woodcock as well as the local residents including robins, long tailed tits, great tits.

A couple of grass snakes have been caught in netting- a warning to us to be ever vigilant of our impact on the environment.

The pond and a couple of small garden ponds in the Fruit area support populations of frogs and newts and the pond has some fascinating life in it including the very rare Southern Damselfly and the long water scorpion. Sometimes the otters visit the pond and feast on an easy meal of goldfish.

We occasionally come across rats, but are more likely to find small field voles who have enjoyed living under the plastic sheeting. Our bat experts have taken us on a couple of evening bat searches for Daubenton's and Pipistrelle bats and we are in the process of developing more regular wildlife safaris and activities for children.



Insect house

In order to maintain or increase insect populations we are now planting beds of wild flowers and they, plus all the flowering fruit trees, are a great source of nectar for bees. Mike has introduced us to mason bees and created several breeding sites for these stingless bees which Steve has photographed so well.



Mason bee nesting site

Of course, wildlife can only survive if their habitats are suitable so we do all we can to encourage biodiversity in the area that we manage. The creation of the Foraging hedge and the recent establishment of another wildlife hedge in the Fruit area ensures that there are now more wildlife corridors across this area of the farm. The longer grass of the hedgerows and orchards allows the growth of local plant populations which support the wildlife and we hope will contribute to a more stable ecosystem which is more resistant to environmental change.

Melita wrote just after the Covid Pandemic “I think that the pandemic year of 2020 tested the resilience of our community, yet in the middle of legal restrictions and worries about contagion, we still managed to continue to grow our crops and to support and sustain each other safely. As the supermarket shelves were stripped bare and supplies looked uncertain, we could look to the farm with some confidence that we could produce food and, if necessary, learn to produce more. There was also something really grounding about the farm at that time. The world was no longer as we knew it, many people were far from loved ones and there was so much to worry about - but when I came to the farm, I was reminded that all this was just a part of something much bigger. However crazy things were in our lives, Nature simply got on with doing its thing - just as it has forever.... and the mindful moments that I got to spend at the farm, simply focussed on the soil, the water, and the plants made a huge difference to my ability to cope. We are very lucky to have this community farm.”

Evaluating our values

Our personal and corporate values are very important in driving us day by day. Our unwillingness to apply for grants has helped us to be self-sustaining and resilient. We don't actually have a leader or chairperson- we are very democratic and equal. We have had an amazingly happy and conflict free eleven years. Of course, there have been moments of annoyance and disagreement, but most have been resolved respectfully and in good faith. Community and teamwork are at the heart of our organisation.

We enjoy each other's company, yet there is sufficient space at the farm to work quietly away on one's own. A lady once explained to me that she had been experiencing mental health issues, but coming to the farm and working away in peace and quietness with only

the company of the birds had saved her from a full mental breakdown. Our existence is important for the larger community.

We believe that by being part of HCF we are encouraging each other to take responsibility in our own lives for the environment around us, particularly in response to climate change, soil degradation and the decline of nutrients and vitamins in shop bought food. Highbridge Farm is a learning environment for us all, from the youngest to the oldest. And long may it last. With apologies to the Poet Stewart Henderson who wrote the original "May it be..."

May it be

May it be a place of learning
But not a bit like school
Where all can dig and count the worms
And think that soil is cool

May it be a place of growing
Of people, fruit and veg,
God's garden to watch the flowers bloom
And see the blue tits fledge.

May it be a place of freedom
Where the kids explore and roam
And older folks can plant and dig
Not troubled by their phone.

May our farm fields peel with laughter
As folks give thanks for rain
Our toddlers splash in puddles
And mums relax again

May it rage at man's destruction
For we must change our ways
Our wasteful lives and climate change
Will shorten all our days.

May our soil produce good harvests
Especially of our seeds,
Where we reap fruits of our labours
Not just pernicious weeds.

May it be a place of peacefulness
For those who've lost their voice,
Help us to care for all around
And help them to rejoice.

May it be....may it be....may it be....may it
be....

