One Plant Development Management Plan

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New Life
Bywyd Newydd
Farm
est . 2021
LJAIWWA



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Section 1: *Summary*



In this management plan we have set out the details and design of our OPD and small-scale farm in Wrexham. [redacted] The land is situated on the outskirts of our hometown, in a small agricultural village named Penley.

The proposal includes a cabin, as well as ancillary buildings to support the land-based enterprises that underpin our application. All the buildings are designed with a sensitivity to the local landscape and will be low impact in their construction and maintenance.

We have drawn up our business plans with considered observation of the land for the past 5 years, along with market opportunities and other

regenerative farming projects. We have shaped our vision using a balance of horticultural and regenerative farming insights which encompasses the OPD guidelines. The businesses are also drawn from our individual skills and experiences. The entry level to regenerative farming seems to lie with poultry enterprises, using smaller paddocks at regular intervals to regenerate the soil health. Once the land is regenerated it can support larger livestock without the use of high carbon fertilisers and herbicides. This land-based business will meet the stipulated requirements and will also open opportunities for future developments as the sight matures.

Biomass will heat and fuel our home as well as the ancillary buildings. Solar will power the home and businesses. Rainwater will be the main source of water for the site for domestic use and pond water for the farm and business use. As well as meeting our energy and water needs, the site will also provide us with food in line with OPD guidelines. As the farm develops, we plan to supply this to our local community.
Most of the waste will be processed on site and recycled where necessary.

We have compiled this management plan with the assistance of Tao Wimbush. It describes how we will meet the OPD criteria, including the 5 years productivity targets. We have been conservative with some of our figures in order the make this a robust management plan but expect to be exceeding the targets set. We believe that as well as the quantifiable improvements and incomes, we will be making a beneficial contribution to our local community and offering another positive example of low impact living and farming in Wales.

The decision to buy our land and apply for an OPD is one that we have spent over a decade considering. We have visited numerous successful OPD's along with regenerative farms, while observing and assessing our land for 5 years while drawing up our own management plan. We believe this site uniquely means we can live in alignment with the OPD principles and in the most sustainable and regenerative way possible. We want to be part of the change for the better, and we believe Wrexham is our best choice to do so.

These reasons include:

- Wrexham is our hometown. This is our community, and we have contacts that help us with all aspects of the proposed businesses. We gain knowledge from other regenerative farmers and OPD enterprises to help us bring our management plan together and to Wrexham. We are also part of an online community as well as online groups locally. This gives us insight into potential markets and customers for Wrexham and attracting people to visit Wrexham.

- We believe Wrexham is a huge supporter of diversity and leaders in positive change. Over the years we have watched Wrexham blossom in empowering ways to move closer to connecting to community, as well as a conscious understanding of taking care of the planet. We have always felt at the heart of our vision it would always be within Wrexham.

- Travel wise our village is home to two very sought-after schools, only 0.5 miles from our farm. This offers a good market near to these local schools where we can sell produce during peak times along with selling from our gate. Over time our vision is to sell our produce from the farm via a small shop.

- Environmentally, as detailed by our ecological survey, the land has the potential to be greatly improved by our land management strategies such as increasing the habitat and the opportunities for local wildlife.



Our vision is one that engages our personal ethics, interests, skills and love of the natural world including the wider community and creates a site that is abundant, dynamic and an inspiring canvas for others to grow and learn. We hope that we can join others living in harmony with the land and providing an alternative example of how to live connected to nature within the modern world.

Baseline

Location, area and boundaries



The site is located on the outskirts of Penley village in Wrexham at OS grid reference SJ 42771 40395 (LL13 0LS) under a mile from the very heart of Penley.

The plot is made up of one 5.7acre field with the access, coming off the main field is the 2.5acre woodland and we are incorporating a portion of the back two fields to increase our woodland. These are the 2.1acre upper field. They have a slight decline towards the woodland which is why they will be a great addition. The main field and upper field are divided by a small stream which runs through the middle of the woodland. Our plot is laid down to pasture except for an agricultural barn, track and polytunnel which were approved

via permitted development rights along with a portable compost toilet, caravan and workshop.
The lower south edge boarders Bryn Lane. It is stock fenced along with a Blackthorn, Hazel, Wild dog rose and Hawthorn hedge. Across the road is an agricultural field which grows maize and is home to large oak trees on its boarders.



The southern tip boundary is a continued Blackthorne and Hawthorne hedge and fence and it's planted up with Willow, Hazel, Oak and Blackthorn trees.



The south-eastern boundary runs through the woodland. It is divided by fencing. The field adjacent is owned by dingle farm and is used for grass crop. The woodland in this area is made up of oak, hazel, willow, holly, Hawthorne.



The west boundary of upper field will consist of native trees with our woodland followed with a fence to separate the field and the public footpath.



The northern boundary of the site runs along the public footpath in the adjacent field owned by dingle farm. The boundary consists of mature oak trees, two ponds in both NE and NW corners, wire fencing and blackthorn, hawthorn, hazel and dog rose hedge.



The upper south boundary also of mature oak trees, hedging, consistent to all hedges on the site, a pond, with mature willow surrounding it.



Access onto site



The main access onto the site is along the eastern boundary. It offers a wide splayed entrance with off road space for larger vehicles and great visibility.



The main access to the site is followed by a track that runs across the main field, curving to the right allowing access to the agricultural barn. It also connects the lower field (now part of the OPD site) via the woodland.

The next access will be along the south-western boundary with a similar entrance to our main access, followed with a track.

There is a public footpath which runs from the east to the west on the northern tip of the site with the woodland. As the footpath continues across the width of the upper field, we will corridor the pathway when extending the woodland for easy access to the public.



Photo of public footpath, gate and bridge from Dingle farm into our woodland



Photo of public footpath, gate and bridge from woodland to upper field

Context/adjacent land uses

The northern boundary is also owned by the Dingle Farm who are a dairy farm. Their fields are laid to pasture for the cattle, free from pesticides, herbicides or harmful chemicals. Further north there is a 20-acre ash woodland. To the east our boundary is marked by the road. Our southern boundary field is also owned by Dingle Farm. The west boundary of the plot is linked to the existing land we own, and we currently use this for grazing.

0.2 miles north from our plot resides Dingle Farm and 0.3 miles southwest resides Halghton Grove.

[redacted].

Existing services

We have no mains water access within our land and no electricity.

Access

We have 2 main accesses for our site. Our first main access is to the east of the land, with an established track running to the barn and workshop. The track will be connected through the woodland into the upper field meeting the south side of our overall parcel of land. There is also an access route from the east – through the fields.

Existing buildings and structures on the site

When purchasing the land there was no building or structures in place. However, since our ownership we have been granted permitted development rights for: -

- A Dutch Barn (18m x 20m)
- Two polytunnels (8m x 20m each)
- An access track from gate to Dutch Barn

We also have built

- A Pole Barn (8m x 4m)

And we have a mobile compost toilet.

For the purposes of the planning application – we are applying for:

- Retrospective permission for the Pole Barn (referred to above)
- A Charcoal Station (4m x 4m) - attached to the Pole Barn
- A residential Cabin (19.9m x 6.6m)
- A Herb Drying Workshop (6.1m dia circular)
- A Veg Prep Workshop (6.1m dia circular)

Past land use

The main field was previously used for hay and silage.

Present land use

The upper field has only been used for grass crop and is now assigned for coppice plantation. The main field has also been used for grass crop. we have grazed turkeys on it and have begun our kitchen garden on a smaller scale along with one of the proposed polytunnels. We have also begun to plant willow within the boundary. As we build our businesses on the land, we will be introducing chickens and sheep to graze.

Existing transport generated by the site and its transport connections

The traffic to and from the site is:

- Quad bike and tractor activity tending to livestock
- Daily visits by us, either in car or by foot (weather permitted) to tend to vegetable beds, polytunnel, managing woodland, maintaining the site, surveys and planning our proposal.

The site is within walking distance from the public bus service running into Wrexham and Whitchurch. Full details found in the transport section.

Section 2: *Design & Strategy*

Illustrative Drawing (not to scale)



KEY

- OPD Application Boundary
- Meadow Grassland
- Grassland
- Wildflower Meadow
- Understorey Planting
- Woodland Understorey/ Exiting Hedgerow
- Existing Woodland
- Vegetable Beds
- Reed Filtration Basins
- Duck/ Geese Area
- Access Track
- Proposed Tree
- Fruiting Plants
- Proposed Multi-stem
- Existing Tree

Masterplan Features

1. Access Track
2. Cabin (20 x 6.6m)
3. Dutch Barn (20 x 18m)
4. Polytunnel 2no. (8 x 20m)
5. Market Garden Beds 30no. (0.75 x 10m)
6. Composting Bays (2 x 10m)
7. Filtration Drainage Basins
8. Egg Packery
9. Vegatable Wash & Packaging (6m Dia)

9a. Herb drying & Workshop space (6m Dia)

10. Workshop 3 Bay Pole Barn (6 x 10m)
11. Charcoal Station (4 x 4m)
12. Duck & Geese Area
13. Coppice Plantation
14. Orchard & Soft Fruit Rows
15. Bee Hives & Wild Flower
16. Chicken Tractors

The vision that we have for the site is based on careful design and observation. In doing so, we draw on regenerative principles along with permaculture and our own knowledge of both the land and the community around us. The framework for our design is:

- to create a site that is productive, supporting our family, local habitat and wildlife
- to design for the future, both in terms of buildings and wildlife
- minimise waste throughout the site
- fit within the natural landscape of our area
- to be integrated and within our local community
- permaculture and regenerative farming based, including holistic management principles

our site is designed to meet our family in terms of food, waste and energy. It makes use of the natural features of the land. It will support all four land-based businesses – egg production, coppice products & charcoal, vegetables and salads, agroforestry and soft fruits. The site is designed as a closed loop system, whereby the outputs of one activity become the input for another, echoing the principles of interconnection and integration. Throughout the site, we will incorporate areas for wildlife, allowing nature to regenerate. Areas of greater activity and productivity are situated close to the cabin and those zones furthest away require the least input. The areas on the site are linked by paths.

Cabin (19.9m x 6.6m)

[redacted]. It will be designed to capture passive solar heat and will be thoroughly insulated to minimise the need for energy inputs.
The structure will be made of naturally degradable materials where possible. The whole cabin is designed to fit within the local landscape, in terms of its visual aesthetic as well as the materials that it will be crafted from. [redacted] Areas that require frequent visiting such as gardens and polytunnels are all sited close by.

Ancillary buildings

Agricultural Dutch Barn (20x18m)

The barn will be located to the north of the site, in the main field. It will be used for:

- housing animals such as hens and sheep during winter
- storing animal food and bedding
- food safe kitchen and slaughter facilities
- solar array and battery bank/consumer unit room
- coppice wood workshop
- rainwater harvesting and filtration

The part of the barn that is south facing is where the solar panels will be situated. This will provide the cabin and the barns energy. It will have rainwater capture which will provide water for our kitchen, slaughter and cabin.

Polytunnels (2X 8x20m)

In order to extend the growing season, undercover cultivation areas are vital here in Wales. We will be using our pre-existing horticultural polytunnel along with a second polytunnel situated along side it. The tunnels are well sheltered from the northern winds being tucked away into the existing hedgerow. We will plant a willow shelterbelt to obscure the visual impact on the surround landscape.

In addition to being a cultivation area, the polytunnels will also house our poultry during winter, supplying shelter during avian flu season. All while fertilising the soil in the process. It will make use of rainwater harvest; this will be done by using ground level drip irrigation which does not require great pressure to work. The polytunnel has side vents which help with ventilation during the summer months.

Other inputs for the polytunnels such as compost and bio char will be made on site.

Composting Bays (2x10m)

These composting bays will be located to the back area of the market garden with easy access to distributing waste. It will be compiled of wooden pallets with a sheet roof and a water collecting area on each end.
It will be used for:

- storing and breaking down natural waste.
- Creating compost to be used on our market garden
- Harvesting and collecting rainwater

Egg Packery

Our egg packery will be sited within the front part of our storage unit. It will meet all the criteria and be inspected, once approved we can start our enterprise. It will be used for:

- collecting and cleaning eggs
- boxing and storing eggs
- storing all items related to egg production such as egg crates, spare boxes, accounts admin and stamps.

Vegetable Wash & Packing Station (6.1m dia)

This building will be located south of our market garden. It will be a 6m round wood timber structure with a timber reciprocal roof design. A rubber EPDM roof liner and turf roof. It will be partially walled, with 50% of the outer frame open. It will also include a woodfire pizza oven.
This is used for:

- washing, drying & packing our produce
- storing produce
- seed storing

Herb Drying & Workshop Space (6.1m dia)

This building will be located north of the market garden. Like the wash & packing station, the structure will be the same including size, only the whole building will be walled with a door and windows using the same materials. It will also include a log burner.
This will be used for:

- storing and drying herbs
- running workshops
- communal eating space for events and volunteers

Workshop Pole Barn (4mx8m)

This building will be located away from the road and tucked between two of our most mature oak trees on the main field and screened by hawthorn and blackthorn. The materials will be natural and recycled where possible.
It will be divided into 3 bays and used for:

- storing general machinery and tools
- gardening tools
- storing hay & lambs during lambing season
- quad bike
- charcoal station

Charcoal Station(4x4)

the charcoal station will be a-joining our pole barn workshop. So, like the pole barn workshop, it will be made from natural materials and recycled where possible. It will be used for:

- housing the charcoal kiln
- preparing and processing charcoal
- storing wood to dry
- storing charcoal

Key growing systems

Agroforest Orchard (10,100m^2)

The agroforest orchard will be found on the eastern side of the main field. It will be run in two parts separated by our main entrance track; these are located as zone A (4,144m2) and zone B (5,956m^2) this location provides maximum exposure to the sunlight throughout the site.

These zones will be primarily used for our orchard and soft fruits. Also offering pasture between each tree lane for poultry and sheep. The tree lanes run from north to south following the contour lines of the land to retain the maximum rainfall needed. This system will develop over time to include different layers from the ground up, from shrubs and vines to low and high canopy trees. Each layer will provide crops for us to harvest as well as surplus for wildlife. This multi-layer design means that cultivation space is maximised, and trees are grown within groups known as guilds benefit and work with each other. This multi layering design also applies to the businesses. The animals, transform the pasture into nutrient dense droppings for the plants and trees to absorb, therefore sequestering carbon and in which creating a closed loop nutrient cycle.

This will help enhance our desire to not just be carbon neutral but be carbon negative.

Input into the agroforest orchard will be minimal, as the idea is that it is a self-supporting habitat. However, we will be applying mulch to the bases of the trees which will be created on site.

Kitchen & Domestic Garden (11,00m^2 – 30X 0.75x10m beds)

The cultivation areas will be to the east and south of the cabin area which is essential as this will be the most frequently visited area. The garden will be sheltered from winds by buildings to the east and woodland to the west. The gardens will be well positioned, as they have a south facing aspect.

The garden beds will follow the contours of the land, capturing and storing water in the soil. The garden beds will be made up of compost primarily produced on site. The compost bays will be located within the garden area. We will be following the no dig approach to all our beds on site.

Extended Woodland/Coppice Plantation (14,568m^2)

The upper field will consist of a heavy plantation of native trees extending out our established woodland. Within our woodland we have mature oak trees, hawthorn, hazel, holly, crab apple, field maple, elder and ash. The woodland is also home to plants such as woodland anemones, bluebells, lesser celandine, primrose and cow slips.

Our focus with the 3.6 acre of extended plantation is to increase our coppice production. We will be planting primarily willow and hazel to do this. We will still be aiming to create optimum diversity for the wildlife so we will also include slow growing nut trees such as walnut and horse chestnut. The new plantation will be planted and coppiced through a short 3-year rotation.

Wildflower Meadow (220m^2)

the wildflower meadow area will be located south of the site, along with the bees. This wildflower area will transform the existing overgrown, brash while introducing a high increase of biodiversity for wildlife and plants. It requires low fertility and so requires minimal inputs. This will provide food for the bees that we will be keeping on the site as well as other species that will come to inhabit the site. It will be an area purposely left just for the wildlife alone.

Reedbed System (20m^2)

The reedbed system constructed is in the perfect area of the site. It will be intentionally built gravity fed from the cabin, allowing the grey water to be filtered in a primary and secondary reed bed before returning into the ground after being filtered. We will encourage plants that thrive in damp areas around the reedbed system. These in turn, will be harvested as mulch as well of course as enhancing the biodiversity of the site. The area is easily accessible from the cabin for maintenance and for harvesting.

Hedgerows

The site is surrounded by hedgerow as a boundary. The western boundary will also be hedgerow with blackthorn, hawthorn, holly, dog rose and native trees like ash and oak. We will replant hedges where we can improve the hedging that already exists. We will apply old methods such as hedge laying to increase density and therefore biodiversity. We plan to not waste anything where possible so the waste product from the hedge laying will be used in the bio char production, this will then be fed back into the soil through our orchard and kitchen garden.

OBJECTIVES

We aim to meet most of our food needs from the land, rearing and growing in a sustainable and regenerative way. Our land-based enterprises will support our other basic needs whilst overall activity on the site to enhance its environmental capital.

SUBSISTENCE

Fresh fruit and vegetables are a staple in our family's diet. Supplying food for such a large family can be hard. Fortunately, we have over 10 years of experience in growing our own food as well as rearing chickens and ducks for eggs and the occasional meat, as well as turkeys. For produce we can't grow ourselves we would aim to purchase locally and organically. [redacted] This is something we are looking at dramatically reducing once our enterprises grow and we can introduce a larger variety of produce to grow ourselves.

Section Three: *Land Based Activity*

Current and projected annual food consumption. (Based on annual 2024 figures)					
Food category	*Percentage of current food spend*	*Value - £ Current food spends*	*Percentage produced by us in 5 years*	*Value - £ Produced by ourselves*	*Value -£ Food spend year 5*
Meat	11%	[redacted]	13%	[redacted]	£0
Poultry/ eggs	16%	[redacted]	16%	[redacted]	£0
Fish	3%	[redacted]	0%	£0	[redacted]
Fruit/veg	36%	[redacted]	20%	[redacted]	[redacted]
Oils/fats	1%	[redacted]	0%	£0	[redacted]
Dairy	2%	[redacted]	0%	£0	[redacted]
Cupboard/ grains	9%	[redacted]	0%	£0	[redacted]
Breads	4%	[redacted]	0%	£0	[redacted]
chocolate	2%	[redacted]	0%	£0	[redacted]
other	9%	[redacted]7	0%	£0	[redacted]
Non alc drinks	1%	[redacted]	0%	£0	[redacted]
Alcoholic drinks	0%	[redacted]	0%	£0	£0
Eating out	6%	[redacted]	0%	£0	[redacted]
Total	100%	[redacted]	50%	[redacted]	[redacted]

[redacted]

[redacted]

Our sheep will be rotated across the whole 9acre site within fenced paddocks. They will be moved weekly to ensure they have optimum feed while fertilising the land. Each paddock will have a 6-week rest to recover and establish new growth. We will be starting with 7 ewes, and they will be in lamb this coming autumn, ready for lambs next spring. We have a lambing area prepared and we have arranged for some of our grass from our other field to be bailed for hay for them over the winter. The sheep offer very little feed costs, as they will be grazing on our grass, the only cost will be the hay bales for winter and the sheering. Our intention for the sheep is to boost our home consumption of meat. Our figures are based on 1.3 lambs per ewe, allowing for one lamb lost per year. We will raise our own replacement stock. We will home slaughter. Our aim is to become completely self-sufficient in meat.

Below is a breakdown graph of the home-grown consumption figures for meat and poultry for the year. Along with a graph to show financial costs in rearing sheep.

Annual home-grown consumption for meat & meat products	
Meats	Quantity per year
Lamb	8 lambs
Chicken	60 table birds
Eggs	624 eggs 1 dozen per week

[redacted]

Sheep/lamb management per annum	Value - £
Annual Fencing cost	
Ram hire (per year cost)	
Feed cost	
Sheering cost	
Vet/medication cost	
Unforeseen costs	
Total	

[redacted]

Our current food consumption figures do not take any preserving into account. We will be growing enough fruit and vegetables to take us through the winter through preserves, freezing and storing.

Growing our own fruit and vegetables will not only fulfil the 30% target as stipulated by the One Planet Development requirements but in the longer term, takes us closer to meeting the total 65% food production target which is to come from the land and the land-based enterprises. We have spent many years growing our own fruits and vegetables in our previous home, so we have a lot of experience with the process and feel confident we will meet the targets set for food production.

How we will grow

Whilst we wish to grow as much as possible from the site, we use some principles from permaculture as well as focusing our methods from regenerative agriculture. Both of these hold an important role on the overall health of the plot. Well-being of the land as well as the people involved in its cultivation are equally important.
As previously mentioned, we have years of experience in growing our own food, and this year we have started to grow vegetables including strawberries, salad leaves, tomatoes and carrots on the site, to name a few.

[redacted]

As well as following the principles of regenerative farming, we aim to follow the unique aspects of key line design throughout our land and its patterned use for soil development and water conservation, combined with water harvesting, storage and irrigation. The use of the water in this way, slows down flood damage. As our soil has high clay content causing water to percolate slowly, this technique is an exciting method moving forward to reduce flooding. As this is common in our area.

This technique applies well with growing vegetables via a no dig method. We have already begun to make our no dig beds. We add organic matter into the soil along with mulches, local manure from our neighbouring dairy farmer, our own compost and when applicable. Other great fertilisers we will use will be specific plants, such as nettles and comfrey, our own biochar, woodchip and wood ash and our chickens.

We aim to include our community within our site and work alongside local growers, sharing ideas and techniques as well as workdays and inviting volunteers to work and experience our land.

Additional crops: *Mushrooms*

Mushrooms will be grown on site. It is possible to grow mushrooms from inoculated logs or from blocks made from sawdust or even coffee grounds which will be collected from local coffee shops/café's that are aligned with our methods. Both materials are available locally with high quality and quantity. Varieties that can be grown include shitake and oyster, along with more popular chestnut and white mushrooms.

Additional crops: W*ild foods*

In addition to the foods we grow, we also forage- herbs, plants, fruits and nuts all grow in abundance all around our site and surrounding all our land. [redacted]. Nettles and chickweed provide a mineral rich springtime leaf, perfect for salads. Along with Blackberries, elderberries, sloes and cobnuts in autumn. We are always aware of nature when foraging, never taking more than we need and always making sure we leave enough for the wildlife. As we come to spend more time on the land will continue to deepen our knowledge and help establish what supports us and the wildlife with food.

Additional production: *Bees*

Bees play an important role in the site's biodiversity and in the future, we plan to keep them for their crucial works as pollinators for the fruit and garden crops. With addition to the primary role of the bees within our land and beyond, we will harvest their honey. This will be for our own consumption. Consuming as local honey as possible has so many health benefits and can even help with allergies and hay fever. [redacted].

At a time when bee populations are at an international decline and threatened by conventional agricultural practices, we are very keen to provide shelter, food and space for the local population to thrive. We will be planting many plants that bees love to feed on. Along with their location site on the land being on the perimeters of the orchard providing them with an

abundance of food. We know a couple beekeepers and will be learning from their experience to build a healthy colony and contribute to supporting the population of bees in our area.

Additional production: *Meat – sheep & chicken*

Raising animals has been a long dream for us both. We as a family consume meat, so it has always been in our vision to raise sheep & chickens for meat on a small scale. This is something that we will build on over time. Keeping our herds small and allowing it to slowly grow by lambing during lambing season for meat. We aim to raise our annual consumption of chickens within an 8-week time frame during the summer months and freezing the meat to use for the rest of the year. This smaller timescale allows only 8weeks worth of feed to purchase and more freedom throughout the year on our other businesses. A similar approach will be taken with the lambs. Rearing animals for meat will not only help our family as a food source but will also help benefit our land. We will have our own manure and wool to help with the market garden. Keeping chickens and sheep will keep our grass short and maintain overgrown brambles which will free us more time to focus on our businesses all while fertilising the land.

Additional Productions: *Ducks & Geese*

We have noticed the wild ducks that visit our ponds situated on our site and want to house several varied species of ducks within the pond to the right of our main entrance. Ducks are a brilliant pest control for gardens and growing food. The area will be fenced off and secured to keep our ducks safe at night and the ducks will be free range at times in the day. We will sell their eggs along with our chicken eggs at the gate. Any surplus will be used for our meat consumption and can also be sold point of lay. The same is applied for the geese.

Labour requirements

Growing food year-round means that the garden needs continuous attention. Even during the winter months when the outside garden is less productive. Parts of the polytunnels will continue to produce food throughout the year which means constant work for us both. We will be sowing seeds, planting weeding, harvesting, processing, composting, mulching and pruning-as benefits the season and garden.

Cost of food production

The initial cost for setting up can be a lot, we aim to keep the costs involved in food production as low as possible without losing the high quality we wish to achieve. This can be done by making our own compost, using our own woodchip, allowing our chickens to amplify the fertility of the soil and using local manure.

We aim to save our seeds where possible and seed share too. We have friends and family who also grow food for themselves, and we all want to take part in seed swapping, this will help ensure that our costs are low, we can grow our knowledge and discover foods we may not have chosen before, and this can be an experience we can share with our community.



5 years from now

By looking at the figures, we have supplied relating to our current food consumption and projected production we have shown how we will meet the OPD targets. As the soil builds in fertility, plants and trees mature and our experience and knowledge of our land expands, we expect that yields will increase and by doing so will result in us easily exceeding our 30% target.

How we will meet our OPD food production criteria	
Essential Criteria	*How we will meet them*
The minimum food needs of all households are met from the produce grown and reared on site or purchased using income derived from other products grown and reared on site.	We have shown how we will be meeting a minimum of 30% of our food needs from our land. This will be by producing vegetables, fruits, eggs and meat.

How we will monitor our food production		
Target	*Indicator*	*Our monitoring*
That the minimum food needs (at least 65%) of all occupants are met from produce grown and reared on site or purchased using income derived from other products grown and reared on site.	Annual reporting of food production consumed by household. Annual reporting of spend on other food.	We will be keeping annual records of food produced and purchased which we have proven experience of.

Section 3: *Land Based Business – Introduction*



Land based business overview

The vision that we have for our land is one that not only supports wildlife and nature, but one that also supports us as a family. [redacted] This can be achieved by bringing a diversity of enterprises together that promote habitat within land management.

In shaping our business and design ideas we have spent over 10 years researching, volunteering and viewing fellow OPD plots which include Lammas, as well as off grid small holdings and regenerative farms. We have met with experts in these fields such as Richard Perkins and Tao Wimbush and sought advice from long standing growers, as well as our neighbouring

farmer friends. We have spent 5 years trialling ideas on our land, in order to come up with what works and what is needed in our area that meets the needs of the community and fits the policy along with our own experience, passion and skill.

[redacted]

[redacted]

[redacted]

We will develop the following enterprises on the site:

- Egg production
- Willow/Hazel coppice & Charcoal/ biochar
- Agroforest Orchard & soft fruits
- Vegetables & salads – market garden

We have already begun trials on the market garden & willow/hazel coppice to help us home the business plans and get a sense of the demands of the market as well as production and processing. A more in-depth description of each income streams follows:



The minimum table above shows targets that we will need to reach by year 5. In line with point 3.25 of the practice guidance, food costs are calculated at 65% of our annual food spend minus the value of the food produced by ourselves.

Section 3: Land Based Business – Egg Production



When considering a business approach on the land we thought the most important needs are to regenerate the land, and then know if we leave, it is left in a better condition than how we found it. Improving soil, wildlife and biodiversity.

When entering the farming community when found that laying hens were a great opening enterprise for a farm. Eggs give good cashflow and hens are a good source of nutrients to the pasture as they move between tree lanes, regenerating the pasture. As the pasture and soil health improves, so does biodiversity. For us, hens are a vital starting point for our farm.

Our egg packery will be a converted shipping container following the guidelines and approval stipulated by Wrexham council.

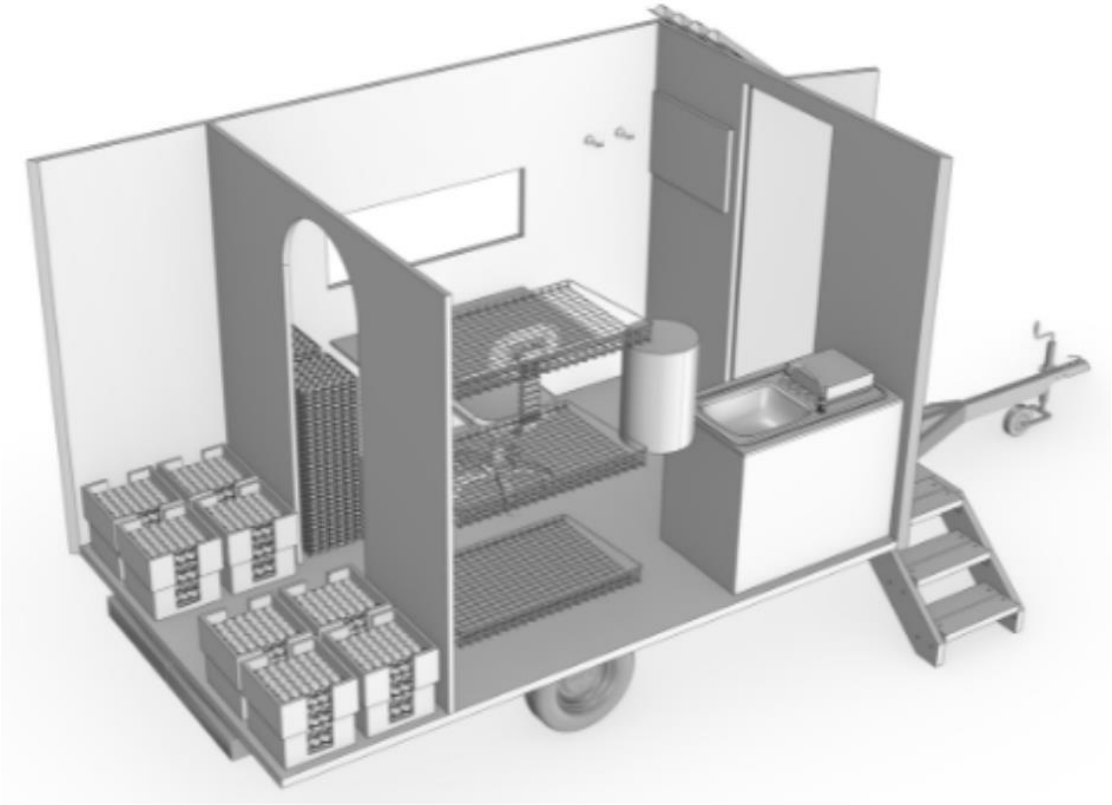


Image of egg packery from Ridgedale Farm Builds book by Richard Perkins.

Inside the egg packery we will have equipment to inspect for damaged eggs, along with grading them on their condition while stamping the ones that require stamping. Once done we will keep the appropriate documentation to track the egg grades and dates.

The chickens will live on the land being free to graze pasture under a controlled grazing schedule. They will be housed in an egg mobile which is rotated throughout the pasture every few days.

We will then build a mobile chicken house comprising of a trailer chassis with 4 walls and a roof with automated nesting boxes and opening hatch to minimise maintenance. We will purchase egg collector trays that are great for saving waste and utilise space along with adding additional safety when transporting.

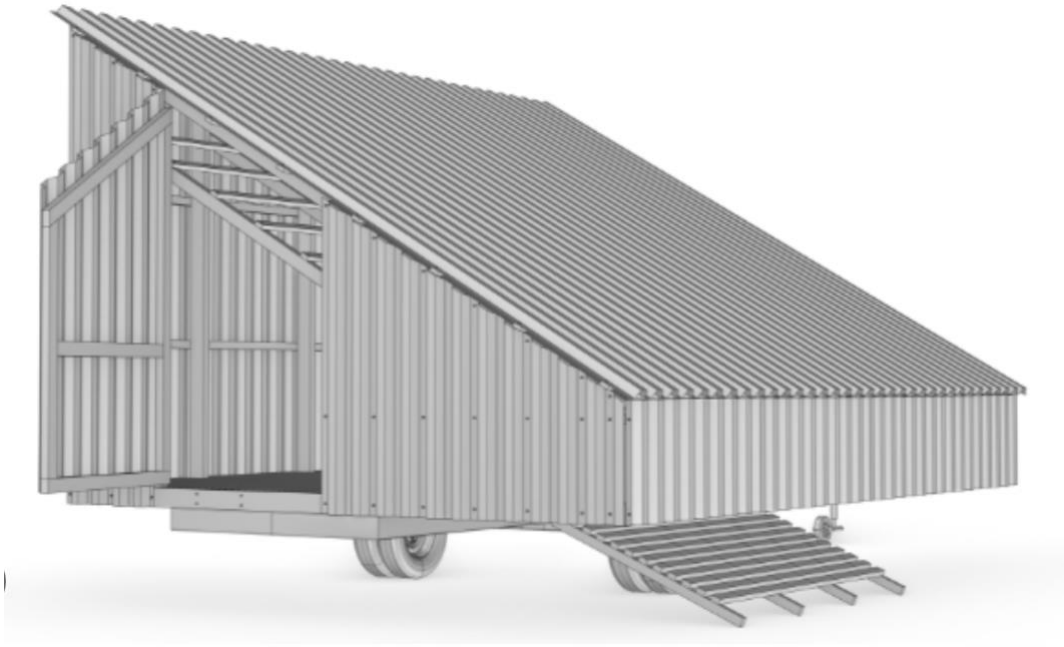


Image of egg mobile from Ridgedale Farm builds by Richard Perkins.

Discussing this enterprise with local members of the community we know we have interest in selling our eggs from our local shop, from our gate and from our local butchers. [redacted]

We will keep 100-layer hens, either Isa browns or Lohmann browns who are known for their high lay rates and aim to generate a 60% lay rate working up to a 75% lay rate by year 5. As chickens lay rates start to decline each year, we will sell our flock and purchase new point of lay hens every 3 years giving us optimum production and much more consistent lay rates throughout our business.

We will give adequate feed ration by using the best data on layers available from leading European expert such as Richard Perkins, [redacted]

This gives us the confidence for a high profit turnover, even with a start lay rate of 60% and we will be able to meet our financial targets

We will purchase chicken feed on a bulk order to reduce the cost, and the feed will be stored in rodent proof containers. They will be kept in our workshop pole barn until our Dutch barn is built where it will have permanent storage.



Marketing

We will sell the eggs from the gate and in future our small shop on site, our local shop and from local butchers. A local coffee shop/restaurant is very interested in using our eggs within their company.
We have already reached out to Lot11 in Wrexham who are very keen to purchase our eggs for their café each week





Section 3: Land Based Business – Willow/Hazel Coppice & Charcoal/Biochar



In observing the land over the last 5 years [redacted] has seen some obvious history within the site, derelict hazel stools in need of coppicing. Along with signs this was a tradition performed within our woodland years ago, as some hazel and willow show as well-established coppiced trees. In doing the woodland management, the hazel should be brought back into rotation and coppice which was vital work in our heritage, as this was a way, we used to harvest our materials to build tools and for fencing etc. The positives of a well coppiced woodland are plentiful as it increases biodiversity within the landscape, as well as highly economic without the need to import materials, this creates a carbon negative resource.
This is something we as a family as passionate about and want to share this through workshops and our coppice products.

By running open days and courses on the dying tradition of woodland management, we will show people how easily products can be produced, and the abundance of materials produced by the managed tradition.
After noticing a rise in people wanting to be more resourceful and connecting more to nature, we feel this will become a popular and positive course to empower people to go back to nature, foraging has become more popular over the last few years, and this is a wonderful resource to go with that.
Along with courses and workshops on this, we also think this is a wonderful way to include our community, help locals see what is achievable on our doorstep with our hands is not only positive for the planet, but also a great way to help with people's mental health, especially since Covid.



As we have a large abundance of Willow and Hazel within our woodland this creates low start up and running cost.

We expect this course to increase over the 5 years with a higher expected income and without the need of a paid teacher/instructor.





With the waste from our coppice workshops & courses we feel what's waste for one business, can be the main source for another which is why we knew our charcoal/biochar business was important.



Image of Dartmoor Dragon™ charcoal kiln

We plan to store and dry out the waste from the coppice workshops over winter and burn spring to sell over peak summertime.

We aim to run 1 burn a day 5 days a week through May & June which would produce 18kg per burn which equals 90kg a week. We will divide the weekly amount into 3kg bags resulting in 30 bags for the week, and 240 bags for the 2 months.

Our charcoal will be sold at £6 each from our farm gate along with local farm shops, fisheries and camp sites. We have had keen interest from Acorn Commonwood campsite, and we will be investing money in advertising and deliveries for other local campsites and creating a marketing campaign to promote our charcoal.

By year 5 we will increase our burns through February and March as the demand grows.

Making and selling locally sourced charcoal means a reduction in charcoal importations, which in turn helps the environment.





Section 3: *Land based business – Agroforest Orchard & Soft Fruits*



As previously mentioned, our Agroforest orchard will be situated in the eastern side of the main field, running to contour on either side of the track. We will plant the orchard early for us to gain maximum yield as soon as possible. Usually, we will see some good results at around year 5 and onwards. Our soft fruits will become established much sooner which will be harvested and used within our vegetables sales or sold individually/mixed soft fruit punnets. This can be done from the gate or at local markets.

We will plant around 70 fruit trees from different varieties and species, 6 metres apart to allow space for growth and in-between we will plant soft fruits, these will be a guild plantation where the under crop of soft fruits will benefit from the partial shelter of the tree lanes and the nutrient sharing that

guild planting offers. The spacing allows for the soft fruits to gain optimum sunlight, even when the trees are fully established. The tree lanes which consist of a 15m spacing run throughout the pasture, which will be grazed by our livestock. The types of trees we are aiming to plant will be varieties of apples, pears, plums, cherries, damsons and various nuts. Our soft fruits will consist of varieties of raspberries, blackberries, blueberries, strawberries, tayberries, blackcurrants, loganberries and redcurrants.

We will purchase top grade organic trees from a local, well established tree nursery, Tom the Apple man.

This enterprise will be a slow start, without seeing any produce until year 5, and not reaching maximum yield for up to year 10. However, once the trees are established, we aim to sell bags of 6 apples as part of our veg box scheme, along with from our gate and to local markets and shops. We predict this to be not only profitable and versatile, using our fruit trees to produce cordials, chutneys and jams for our own consumption, it will also add to our biodiversity and increase habitats for the wildlife.

We will add additional options for fruit boxes alongside our veg boxes, as well as selling mixed seasonal soft fruit punnets from our gate and local markets. We plan to sell mixed fruit punnets for [redacted]

Marketing

We are keen to have additional outlets to make us resilient. If we have surplus fruits, we can sell them dried to local markets, potential wholesale businesses, through our website and via REKO rings –

"An independent marketplace between local people and local food producers, which subverts the supermarkets and unsustainable supply chains we too often come to rely on. By using a social media group to match up local producers, customers can benefit from access to a broad range of higher quality, local food products- meat, vegetables, eggs, preserves and milk; and

producers can charge fair prices without middlemen cuts or hidden supermarket fees."

This is something we wish to apply to all our enterprises throughout the site when are where possible.







Section 3: Land Based Business – Veg & Salads/Market Garden



In addition to growing our own vegetables for our own consumption from our kitchen garden, we plan to expand this into a market garden organically over time.

Our approach to our kitchen/market garden is to combine the best planning strategies and tools with the best soil care strategies.

"A No Dig approach requires initial work to create the beds but saves time and effort by assisting natural processes to work for you building deep rich soil. No dig aims to disturb the soil as little as possible, keeping a diversity of living plants in the ground as often as possible including roots after crops are harvested."

We are deeply inspired from the likes of Charles Dowding, a renowned no dig garden specialist and Richard Perkins, a global regenerative agriculture

expert and successful farmer, who we have been fortunate enough to have support our vision.

In order to know of the yields possible using no dig and other low impact techniques, it is useful to look at the work done by Charles Dowding. His experiments over 6 years show yield of between 8-10kg/m2. A 20m2 square bed would produce between 160kg-200kg. current government recommendations call for 7 portions of fruit and veg a day (700g) which totals 255.5kg a year. If we estimate quarter of this to be fruit, then we would need to produce 191kg a year of vegetables.

[redacted]



[redacted]

Our location means easy access and minimal effort in terms of sales and transport. We aim to deliver our produce to our local butcher, Penley store and from our gate. In the future as the market garden expands and becomes well established, we will organise specific days to the community to pick their own veg boxes. This helps people connect deeper to their own food while creating a personalised seasonal box for each sale.

Within our polytunnels we aim to grow specific veg to sell in bulk, such as standard and special varieties of tomatoes and cucumbers. We expect an average yield of 40kg per m^2 on cucumbers and 10kg per m^2 on tomatoes. The average price for selling these produce varies depending on the varieties, so we intend to grow speciality varieties with a higher price bracket such as beef tomatoes which can be sold for on average [redacted] and baby cucumbers that can be valued at up to [redacted]. we feel these prices will be something we will achieve once we are well established, so starting with a slightly lower than average cost feels achievable. Along with the speciality varieties we will be growing standards, this will be for our own consumption as well as catering to demand. We aim to sell this produce within our local shops as well as café's. Surplus can also be added seasonally to our veg boxes on smaller scale.

Veg box produce will be seasonal, during June-August when harvest is at its peak and when we have surplus. We will sell 5 boxes weekly during that time resulting in 60 boxes per year. We expect this to grow and will increase our produce according to the demand to ensure success. The veg boxes will be delivered in recycled cardboard boxes and bulk veg will be in premade large crates by [redacted] using unwanted extra wood when possible.



Image of first row of no dig beds laid early spring at Bywyd Newydd



Image of planted no dig beds early summer



Image of produce late summer

Marketing

We have received a lot of positive feedback from our local shops & butcher. They understand the demand for fresh local produce in our area. So we feel confident in selling our produce within our community.





As our market garden grows, we plan to invest our profits in machinery to maximise time efficiency, such as a Jang™ garden seeder and Paper pot transplanters. These are tools used and recommended by Richard Perkins. These will in turn save not only the time to handle the other enterprises on site but also money.

Section 3: *Land Based Businesses – Summary*



The table above shows the projected incomes for the separate business strands and how they contribute to reaching our minimum income needs , the diversity of our business model means that there is a contingency within the figures, and we are very confident that we can meet the targets by year 5.

Occupants

. We are interested in using his skills with the community also by taking more work on within the village. This will also help our ecological footprint. This work will be offsite and part-time work as our site business' grow and Luke can eventually pass his gardening business on to someone else as our site businesses are our priority.

January – February

Preparing beds. Over winter mulching, sowing early seeds, bed and garden maintenance. Planting and pruning certain fruit trees, continual polytunnel production harvest. Bedding down and feeding animals. Coppice harvesting, woodland management and firewood preparing/splitting. Seed bed planning and purchasing. Polytunnel livestock management, Egg production management.

Estimated 6 hours a day, 367 hours

March – April

Sowing seeds, transplanting and plant maintenance, continued bed preparation, continual polytunnel production and harvest. Animal maintenance, paddock preparation, irrigation management. Lambing pen preparations/lambing. Charcoal kiln management/courses. Egg production management.

Estimated 7 hours a day, 451 hours

May – September

Busiest time of the year- sowing, transplanting, harvesting, mulching, compost management, processing and preserving. Continual polytunnel production harvest. Broiler chicken production and processing, Egg production management. Running courses/workshops. Orchard management and harvesting, soft fruit harvesting. Attending stalls and fayres. Livestock rotation/grassland management.

Estimated 8 hours a day, 1,952 hours

October – December

Harvesting, mulching beds over winter, sowing over winter crops, processing and preserving. Continual polytunnel harvest, Orchard harvest/pruning, market garden bed clearing and covering. Egg production management, Polytunnel clearing for livestock over winter. Livestock rotation/ grassland management.

Estimated 7 hours a day, 1,288 hours

We estimate the time for running this holding including land-based income, subsistence farming and general land management will require 4,062 hours of labour annually. This surpasses 2 adults working full time hours coming in at over 75hrs per week.

How we meet OPD criteria for land-based activity	
Essential criteria	How we will comply
The minimum food needs of all households are met from produce grown and/ or reared on the site or purchased using income derived from other products grown and reared on the site.	We have detailed how we will produce food to meet our needs- expecting that we will exceed the 30% target easily. The table above (*land-based activity – total income overview*) shows the detail of the land-based businesses that will meet any additional food needs.
The basic domestic needs of all households are met from income derived from produce grown and reared on the site, including processing and adding value and other income streams derived from the productive and regenerative capacity of the site, such as from training and education courses, or consultancy directly linked to land based activities on the site. These latter activities should be clearly subsidiary to the primary activity of growing and rearing produce.	The above table (land-based activity – total income overview) gives us a breakdown of business figures that make up the income from the site. These projections exceed the minimum needs requirements through a combination of primary and secondary income. The overall income of the secondary does not exceed the primary.
The number of occupants is directly related to the ability of the site to support minimum food and income needs and the number of people needed to run the site effectively.	The subsistence chapter of this section clearly shows how we expect to be growing our own food to feed us whilst the details of the land-based businesses show how we will be earning a living directly from the land and to products.
Contributory criteria	How we will comply
The land-based enterprise provides food and other products to local markets, reducing local footprints.	The main market for our products and services will be local, either through direct sales or through local markets. This means the local people will be

	reducing their footprint by having more choice of local produce.
Facilities for processing produce are made available to other local producers.	The facilities will be available to other local producers, and we can see this as an opportunity for creative collaboration and shared learning.
Training/courses/consultancy are offered as components of the land-based enterprises to share best practice of One Planet Development.	Green wood workshops will be offered along with others as our businesses grow such as, biochar courses, nature craft workshops and no dig veg workshops to name a few which will share OPD practices as well as enrich people's connection with the natural world and the potential to live a low impact life.

How we will monitor our land-based activity		
Target – essential criteria	indicator	Our monitoring
The minimum food needs (at least 65%) of all occupants are met from produce grown and reared on site or purchased using income derived from other produce grown and reared on the site.	Annual reporting of food production consumed by household. Annual reporting of spend on other food.	The annual reporting of food production will detail the food produced on site as well as additional food spend.
That the minimum income needs of all occupants are met from the income derived from the land use activities on the site.	Annual household income and costs reporting.	The annuals monitoring form will show how the land-based income from the site will meet the minimum income needs of all occupants.

That income derived from other land-based enterprises such as training and education courses or consultancy remain subsidiary to the primary activity of growing and rearing produce.	Annual reporting on the total value of produce grown and reared on the site compared with income derived from other land-based enterprises.	The annual reporting form will clearly show primary and secondary income streams.
That the number of occupants is directly related to the ability of the site to support their minimum food and income needs and the number of people needed to run the site effectively.	Annual reporting on number of occupants by household and their roles on site.	Annual reporting form will detail the number of occupants on site and their roles.
Target – contributory criteria	indicator	Our monitoring
That the land-based enterprise provides food and other products to local markets, reducing other local footprints.	Annual reporting of sale volumes and market areas by each on site enterprise.	The annual reporting form will detail where and how much produce is sold locally.
The facilities for processing produce are made available to other local producers.	Annual reporting on the use of processing facilities by others.	The annual reporting form will note any sharing of facilities with local producers and neighbours.

Section 3: *Land Management*

Our objectives

Our vision is to create an abundant high production system that sustains us and surrounding wildlife along with helping our community. Our management will enhance the existing sites biodiversity, improve the soil health as well as reintroduce traditional techniques and landscape features. In this way, we hope to meet our production needs in sympathetic and symbiotic relationship with the natural surroundings and wildlife.

Baseline condition and management recommendations

The existing site conditions for biodiversity, cultural and landscape are detailed in the baseline section.

Max Ellson from Marches Ecology completed an extensive ecological survey for the site. We have used Max's knowledge and expert opinions and recommendations to help shape our management plan to maximise working with the land and what it already offers while helping the wildlife & biodiversity thrive. (The full report can be found in the index)

These include:

- Woodland management including expansion/ coppice establishment encouraging regeneration via small scale rotation
- Establishing native fruit orchard using local varieties within North Wales
- Appropriate management & establishing native hedgerows including local & species rich hedges to create smaller field units for livestock to be planted at the appropriate time of the year.
- Restoration of ponds & creating new ponds including water storage ponds for feeding livestock & produce can also help increase the range

of wildlife within the area. Including hibernacula construction for amphibians
- Creation of a wildflower meadows to provide enhancements for pollinators such as honeybees
- Retention and appropriate managements of grasslands and field margins
- Provisions of bird and bat boxes to be mounted upon trees within the whole site including Barn Owl boxes

In drawing up our land management strategy we have drawn on the following:

- Recommendations from the ecological survey
- Consultation & course with Regenerative agriculture expert Richard Perkins, including advice and support.
- Advice and recommendations from neighbouring farmer's and locals who have known our land for many years
- Assistance, advice and recommendations from One Planet Development consultant Tao Wimbush
- Our own observation of the land and the seasons since February 2021

We have spent much time observing the site and the surrounding landscape, wildlife, soil, weather patterns. We have brought an intimate relationship with the land together with not only permaculture design, but also regenerative agriculture techniques of season observation and design. Sensitively integrating human and wildlife needs within the landscape. We have based our land management strategy on complementary threads of conservation and creation. By fostering symbiotic relationships between wildlife and food production, we will be working to secure that there are food and shelter for all for many years to come.

This section is divided into land management strategies for the biodiversity, cultural features and landscape.

Biodiversity

Soil improvement

The health of the land begins with that of the soil and so this is one of the main focuses in our land management and production on the site. Whilst we tend to our land, we are contributing positively to environmental health globally and our ability to adapt to the challenges of climate change in the future.

We are lucky to have one of our neighbouring farms (who we purchased the land from) manage this site for the last 50 years without the use of harmful chemicals, herbicides or pesticides, along with our neighbouring dairy farm who are also chemical free.

In working to boost soil health, we will be improving drainage on the site, decreasing soil erosion, increasing carbon capture and benefit microorganisms alongside fertility. This is a clear example of the positive synergy between production and land management, benefitting the surrounding environment of the site.

We will be addressing soil health in the following ways:

- Minimal disturbance of the soil through no dig type techniques allows the soil depth and health to grow through the addition of organic matter from the site.
- Applying keyline techniques throughout the site to cleverly distribute excess water to areas where it is better needed.
- The use of trees and deep rooting plants to help break up the compacted lower soil releasing nutrients as well as decreasing soil compaction.
- Trees will also help improve drainage and surface flooding on the land where needed.
- Mulches from green manures and woodchip will help to protect the soil during the winter months and increase organic matter.

- Animal manures from the chickens, ducks and farm livestock will also boost the fertility of the lands soil.
- Biochar will be produced from the sites biomass to increase fertility. The willow and hazel grown on the land are perfect materials for biochar production which can be done efficiently on a small scale.
- Cover cropping of beds with green manures and allowing for the development of ground cover in the forest garden and wild zones will improve soil health through protection and replacement of nutrients.
- Perennial plants help stabilise soil structure as well as providing minerals from their deep reaching roots.

Fertility management

To ensure our poultry manure will not impact our local watercourses we will use a *keyline* plough technique which means we follow the contours of the land and plant tree lanes accordingly which act as nutrient absorbing corridors stopping poultry manure impacting our local watercourses

Creation of compost system

At the heart of the site design is a system that can return nutrients, beneficial microorganisms and organic matter to the soil without the reliance on external inputs.

The use of green manures will be a key part of this- they will be incorporated into the crop rotations to replenish the soil, grown around the site for chop and drop mulching as well as also being grown for inclusion in compost mixes and compost teas.

Dynamic accumulators whose deep roots bring minerals and nutrients up into the soil are an important part of soil health and composting. Comfrey is an incredibly rich source of potassium for example and the use of its leaves in compost systems release its nutrients back into the soil.

Woodchip will be used from the willow and hazel from the woodland along with any tree maintenance needed in the woodland. These are important components of mulches and composts.

The woodland will provide us with the material for leaf mould. This can be used for potting compost.

Conservation of hedgerows

The hedgerows have been flail cut every year by the previous owner along the road. We will replace this practice with a more traditional hedge laying and coppicing. We will do this from December to February to allow berries to be harvested (by us and the wildlife) and to avoid damaging birds' nests.

We will plant native trees and shrubs where needed alongside the existing trees and hedgerows to improve habitat and give shelter and visual screening for the site.
We will include bird boxes within the site for additional nesting. And all mature trees on the site are to be incorporated into the sites design.

Extending the woodland

Whilst we have approximately 4 acres of woodland, we wish to extend this further up the bank of the upper field.

Woodland shelter belt strips & dividers

As previously mentioned, water sits on the surface during the winter months, so by planting and replanting native species such as willow, hazel and alder that thrive in wetlands alongside new hedgerows in certain areas and throughout the field to create extended sheltered zones.

We will introduce shelter belt strips along the hedgerows to give more habitat to wildlife whilst also define the zoned areas. Some woodland areas

will then be left to grow undisturbed, providing the best opportunity for wildlife to establish itself, creating new habitats.

We will plant trees that are inoculated with mycorrhizal fungi. This network of mycelium that will be established further enhances soil and woodland health as well as being a human and animal food source.

Creation of traditional orchard

We will be planting apple, pear and cherry trees along with other fruit trees within the lower field. Ahead of any planting we will be consulting tree experts and quality producers local to the area producing native trees species that are best suited to our climate, soil and wildlife.

Creation of ponds

As we already have 3 ponds on the site and a stream, we have observed the benefits of supporting the wildlife that surrounds them, creating homes and food sources amongst many more. Ponds create microclimates by raising temperatures and light levels through reflection. They slow run off from the site and provide a resource for wildlife and humans alike. We will be creating additional ponds within the site. One will be situated within the kitchen garden, used as a water storage for the plants. A number of small ponds will be situated near the cabin as a reed bed cleaning system for the grey water run-off.

Creation of vegetable, herb and flower gardens

These will be vital areas for bees as well as combining the needs of people and other wildlife. Not only a food source for people, the herbs, plants and flowers can be processing for medical uses for our family along with skin care. The plants can also be dried and sold in bulk.

Creation of meadow

Creating habitat for bees, insects and wildlife is vital. We will be introducing meadow areas throughout the site for this purpose, allowing the areas to return to their natural state.

Conservation of bees and pollinating insects

Bee keeping is key to diversity of the site and surrounding areas. This is why we will be having several hives on our land. Their importance however exceeds beyond our local boundaries as they along with other insects are responsible for pollinating much of the world's food crops. The protection of our bees is fundamental to the wellbeing of ecosystems which depend on their pollination. Bees and other pollinators are under serious threat from insecticides, disease and die offs.

We believe we have a responsibility to help bring back the bees into our habitats. We will include nectar rich plants for as much of the year as possible. Growing native herbs and flowers will encourage bees on to the site. Bees are said to see the colour purple well and thus are attracted to flowers such as lavender and catmint. From bugle to crab apples in the springtime, to summers teasels and thymes and finally to the last flowering ivy in the early winter. The site will be designed to attract and feed bees, bumble bees, butterflies and other insects. As we come to know our local insect communities, we can adapt our wildlife management to their needs as well- learning about preferred plants, watering spots and shelters.

Landscape

The relationship between the site and its surroundings are most appreciable in terms of how it visually sits within the landscape. The location of buildings and structures is the first consideration, and we are taking advantage of natural landscapes to help create recesses and screening. Native trees which are fast growing will form additional screening where needed to reduce the visual impact from public vantage points. This combines habitat creation with landscape design. The introduction of fruit trees, traditional hedgerow management and meadow zones will also enhance the landscape.

Agricultural Barn

The barn was approved for erection in 2022 through permitted development rights. It is a traditional Dutch style barn we purchased second hand to uphold sustainability. The walls will be wood clad to help compliment the landscape and fit a natural aesthetic.

Polytunnels

Along with the barn, we also had the polytunnel approved via permitted development right. The polytunnels sit towards the boundary near the agricultural barn. This position gives maximum sun, and the location is tucked in near the boundary hedge and bond. we aim to elevate the roadside hedgerow to help screen the polytunnels. The commercial sized polytunnel will provide us with a large yield of vine fruits to sell.

Horticultural tool and equipment storage

This is located to the away from the public road, tucked away under the mature oak trees and hawthorn hedgerow dividing the back park of the field. The storage barn it all, to allow our tractor inside to apply maintenance when needed as well as upper storage for all equipment.

Additional buildings including wood store, potting shed, compost toilet will all be sensitively placed within the landscape, taking advantage of natural recesses, planting shelterbelt and using local materials.

Access track

Our track was also approved with our agricultural barn. Our gate is set back from the road, creating a large loading space to not affect road traffic. Our track has been established using recycled stone, something we feel is important in sustainability and reusing functional products. The track meets the agricultural barn past the cabin. We plan to add specific trees along the track to apply cloud pruning. [redacted]

The cabin

Our cabin will be situated away from any road, behind tree lanes once established will screen our cabin, along with the high hedge boundary obscuring our cabin from view, so the visual impact will be minimal. The materials will be local to the site where possible helping to maintain a landscape fit and natural to the aesthetic.

How we will meet OPD criteria for land management	
Essential criteria	*How we will meet criteria*
All existing semi natural and other important habitats on the site are conserved and enhanced through appropriate traditional management.	By correctly maintaining ponds, hedges and woodland corridors with ecological management principals. And also planting additional hedges creating new field margins.
All cultural heritage features (e.g. archaeology) on the site are conserved and enhanced through appropriate management.	There are no identified cultural heritage features on the site.
The landscape of the site is enhanced by the additional management of characteristic or once characteristic local landscape features that, amongst other things, may be used to screen and filter views to build elements of the proposals and to provide shelter and screening to horticultural areas.	Hedges and trees will be planted for screening and habitat. Woodland will be extended with native species and allowing increased space for natural regrowth.
Buildings and other structures and access tracks are located where they can be recessed into the landscape and do not stand out in views from public vantage points.	All future builds will have hedge screening and careful placement to encourage minimal visibility. This includes the proposed cabin
Contributory criteria	How we will meet criteria
Existing semi natural habitats are extended, or once characteristic habitats are recreated, ideally creating wildlife corridors across the site, linking to other habitats beyond the site.	We will introduce tree lanes, which will link existing ponds with new ones, creating a more biodiverse network of habitat zones.
Populations of once characteristic farmland birds of the local area are increased through appropriate habitat creation.	A diversity of habitats will be created on a previously grazed field allowing for greater bird numbers.
Populations of pollinating insects are increased	Beehives as well as increasing the nectar rich plants on the site throughout the season will help increase the numbers of pollinating insects.

Soil organic matter is increased	Soil health will improve through the practises outlined above which are focused on incorporating organic matter into the soil through mulches, composting and planned grazing.

How we will monitor land management		
Target - essential criteria	*Indicator*	*Our monitoring*
That all existing semi natural habitats are in favourable condition.	Spread of characteristic species of that habitat against an established baseline Decline in non-characteristic/commercial agricultural species within each habitat	New woodland plantations, ponds, orchard lanes and meadows will all be noted in the annual reporting form, including size and species sighted.
That all identified cultural heritage features are maintained in good condition.	No cultivation or soil erosion over buried archaeological sites and historic earthworks. Tree and shrub removed over buried archaeological sites and historic/cultural features stabilised, and shrub/trees removed.	In the event of any culturally significant heritage features being discovered, we will follow the advice outlined opposite.
That there is an increase in the number and/or area if the length of traditional characteristic landscape features and all are under appropriate traditional management.	Increase the number/area/length of landscape feature such as hedgerows, woodland, meadows and ponds.	We will be increasing the hedges and woodland within the site by planting more hedges and trees where needed. The creation of other areas will also be noted in the annual reporting form, detailing area size.
Target – contributory criteria	Indicator	Our monitoring
That (named) semi natural habitat(s) are extended/created.	Area of new habitat. Spread of characteristic species of that habitat.	New orchards, meadows and ponds will be noted in the annual reporting form, including area, size and species sighted.

That there is an increase in the population of farmland birds on the site.	Number of breeding farmland birds on the site against an established baseline.	There is no established baseline for breeding farmland birds on the site. We will note all species seen on site as part of the annual monitoring form.
That there is an increase in the population of honeybees.	Number of actives hives on site.	The annual monitoring will include the number of active bees found in the hive.

Section 4: *Energy*

Our energy need for all activities on the site will be met from renewable sources, solar photovoltaic panels and biomass.
To decrease the demand, we will minimise our energy requirements in the following ways.

Cabin design, heating and cooking

- Cabin design will maximise the capacity to use the sunlight from the southern aspect but also consider sunrise and sunset. This will not only increase heat energy but also reduce the need for electric lighting and increase general comfort.
- A large percentage of the heating requirements for the cabin will be achieved using passive solar design.
- High levels on insulation will further reduce the need for additional heating.
- All glazing will be very low U values.
- Heat sources where possible (e.g. cooking stove) will be placed in a central location to ensure maximum heat distribution throughout the cabin and minimise heat loss through the external walls.
- Cooking will be done on highly efficient solid fuel range in the winter, (which burns with on average 78-82% efficiency), and on surplus solar power in the summer.
- Heat generated as a by-product from the range will heat other rooms and domestic hot water.
- We would ensure all wood is seasoned well and ensure moisture levels are at a minimum, therefore maximising the calorific value of fuel.
- Mealtimes and hot water demand to be coordinated so by cooking we have hot water for washing up and bathing/showering.
- On sunny days we will have surplus power from the PV panels which will be stored in a battery and to heat our hot water tank. This will be well insulated and keep the water hot for when is needed.

Electricity – minimising demand

The site has no grid connection and therefore will rely completely on an off grid solar PV array to produce all the required electricity for the site. Monitoring and careful balancing of the energy use will be crucial.

We will reduce our energy demands in the following way:

- Being aware of our energy requirements and ensuring to keep them to a minimum.
- Planning and managing any peaks in our usage to avoid blackouts.
- Reducing lighting demands by ensuring the cabin design lets in lots of light particularly during the winter. The southern aspect will enable as much light as possible to enter the rooms, also the layout design considers where the sunlight will most be needed.
- Lighting will be LED with a low wattage, and with a minimum number required per room.
- Ensuring lights are not left on unnecessarily will also save considerable energy.
- Any appliances that are use will be of the highest efficiency rating and nothing will be needlessly left on standby.

Electricity – Demand

Our average electricity consumption is estimated at 10.7kwh/day for both summer and winter. We will be aiming to reduce this over the first 5 years. However, our estimated annual consumption is still lower than an average 5-person household. Note that the following table does not include surplus electrical power diverted to cooking and hot water in the summer.

Estimated Average electricity usage on site		Per year kwh	Per day kwh
Domestic			
Laptop & mobile phones	1 laptop & 2 phones	258	0.7
fridge freezers	2 x Constant (A+++)	620.5	1.7
Washing machine	6 washes a week	312	1.5
Lighting	LED – Est 24W	30.0	0.15
Kitchen appliances	Blenders, dehumidifier, toaster	219	0.6
Audio speakers	Portable speaker	3.6	0.01
Water treatment	Filters, UV continuous load 5W pumps	255.5	0.7
Fire alarms	constant	25.5	0.07
TVs & consoles	Est. 270W 2x 3hrs/day	295.6	1.6
Business			
Dutch Barn	Lighting, fire alarm, heat lamps (on occasion)	292	0.8
storage	Lighting, fire alarm, chest freezer (A++)	219	0.6
Egg packery	Lighting, fire alarm, small heater (winter months)	292	0.8
Pole Barn	Lighting, fire alarm, small heater, Battery charged tools (winter months)	292	0.8
Broadband	Daytime only	63	0.1
		[redacted]	[redacted]

Electricity generation – solar photovoltaic array

Our electricity demand is an estimated maximum 11kwh per day therefor it is important that we build a system that provides this amount in the winter months to ensure we have no energy blackouts.

We will be installing a 20kw photovoltaic array giving us a minimum of 13 – 23 kwh in winter which clearly produces enough energy for our needs and allows for potential expansion, particularly for our land-based enterprises. We will be storing the electricity in a bank of batteries specified to give us back up power.

As we will be needing solar power immediately, the solar panels will be floor mounted, then onto the roof of the agricultural barn once erected.

Biomass – Demand

We have calculated that we will need 3 tonnes of biomass per year for domestic hot water, space heating and cooking.

Biomass will be burnt in a range with hotplates and oven for cooking, a back boiler to heat the water and space heaters (radiators and underfloor heating) A wood burner will be used as an alternative space heater.

Biomass source

The extended woodland situated in the upper fields will provide a great source for biomass. Along with an additional 1.5-acre strip of willow along the eastern boundary of the main field. Any woodland management and tree thinning can be included in our biomass source. We can implement a short 3-year rotation coppice on the willow or hazel.

Using conservative estimates SRC coppice produces 3T per acre per year according to John Nix Farm Management Pocketbook. So, planting 3.6 acres of coppice woodland will yield an average of 10.8 tonnes per annum. This will be divided by:

- 4 tonnes domestic use
- 6.8 tonnes charcoal/biochar use

If we combine this with biomass taken from the established woodland, hedge trimmings and other land management activities, we are confident we will have enough biomass for our energy needs.

Non- Renewables – Petrol & Diesel

Minimising demand

Although we will require small amounts of non-renewable fuel such as unleaded petrol for the chainsaw and other equipment, we will aim to reduce our demand as [redacted] has invested in battery powered machinery. We will also be reducing our need for a lawn mower as the livestock will maintain the grass.

We estimate to be using 200L diesel and 100L petrol per year with the intention of reducing this where possible.

Non renewables – demand

During the winter months we will need to maintain the woodland by using the chainsaw. The chainsaw will be only used where essential and other the use of other tools can be used in the woodland management.

How we meet OPD criteria on energy	
Essential criteria - energy	*How we will comply*
The energy need for the site will be minimised through suitable design and use of technology, including that which enables re-use.	The energy section details how energy needs on the site will be minimised.
All the energy needs of all activities shall be met from sources of renewable energy on site, except for small amounts of non-renewable fuel for uses for which they are best suited and justifiable.	By year 5, biomass will heat the domestic building and provide cooking fuel. Solar power will meet the electricity needs of the site for domestic and business purposes. Needs for non-renewable fuel are outlined in accordance with the policy.
Contributory criteria – energy	*How we will comply*
Human and animal labour should replace the use of non-renewable energy wherever possible and practical.	Human labour will be the main source of energy used to maintain the site. Holistic management and regenerative agriculture designs will minimise labour working alongside animal labour, for example, chickens to fertilise the soil and sheep to manage the grasslands.

How we will monitor our energy		
Target – essential criteria	*Indicator*	*Our monitoring*
That all the energy needs shall be met from sources of renewable energy on site.	Annual reporting on the use of renewable energies generated on site (as percentage of energy needs) Annual reporting on the use of all non-renewable fuels, recorded in terms of (what for) and amount (quality) Annual reporting on quality of electricity exported to the grid and imported from the grid.	Our annual reporting form will contain details of energy consumed, renewable and if used, non-renewable. It will record the way in which this was produced, quantities and whether it was for domestic or business purposes. Biomass production and use will be included in our annual reporting. We currently do not have any plans to sell back to the grid, but if we do in the future, this will also be included in the annual monitoring form.

Section 4 - *Water*

Water – Minimising Demand

We will reduce our water consumption in the following ways:

- Any appliances that use water will be the most efficient available and their use will be relative to our energy supply.
- Cabin and barns will have integrated rainwater harvesting systems providing water for irrigation, domestic and land-based activities. Our existing polytunnel rainwater harvesting system provides all the water for irrigation.
- Ponds and pools will also provide valuable sources of water and will be designed to maximise natural habitat and wildlife.
- We will be monitoring our onsite water status, which will be a high daily priority. This awareness and relationship to our water supply will be a significant factor in reducing out demand.
- We will use our existing compost toilet which require no water, and the tap water is available using the rainwater harvesting system. This represents a significant reduction in water used compared to the average household.

Water source – rainwater

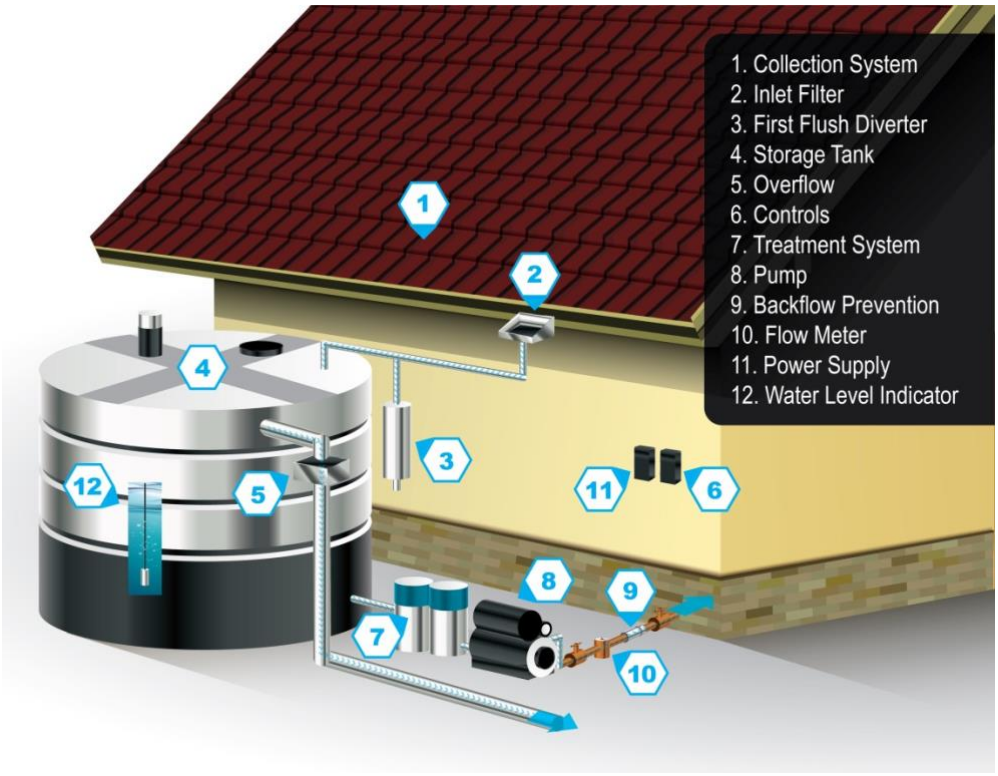
There is no spring on the land. We have explored drilling a borehole, as well as connecting to the mains water supply, both options are possible should the need arise. However, we are confident that we will be able to meet our water needs from rainwater harvesting systems.

We intend to use a UV filter powered by the solar PV to purify our rainwater for domestic and any produce processing requirements. We will use un-purified rainwater for irrigation crops, washing clothes and general cleaning.

We will require a 10,000L tank for domestic purposes which will be placed partially underground near the barn with purifying filters, and a pond will be

created for the tanks overflow. We will be using a gravity fed process for harvesting the rainwater from the barn and cabin roofs. And a solar pump used to direct the water where needed within the house. The Irrigation and crop watering will be made up of recycled IBC tanks around the site and natural systems such as ponds.
The natural systems will include a submersible solar pump so we can use the water overflow pond rainwater on crops and livestock.

Other land-based activities will use purified rainwater if needed and where possible.



Rainwater supply/demand overview		
Supply (figures include 20% losses)		
	Annual average	Driest month average
Rainfall	1200mm	50mm
Total harvesting capacity	Litres	Litres
Roof area	Annual harvest	Driest month harvest
Dutch Barn (360sqm)	345,600	14,400
Polytunnels (320sqm)	307,200	12,800
Cabin (136sqm)	130,560	5,440
Pole Barn and Charcoal Station (48sqm)	46,080	1,920
Herb Drying and Veg Prep Workshops (83sqm) - note losses at 40% (turf roofs)	59,760	2,490
Total	889,200	37,050
Demand	Litres/years	Litres/month
Potable		
Household domestic	81,320	6,760
Food safe kitchen	12,160	1,216
Total potable	93,480	7,976
Non potable		
Polytunnels irrigation (summer)	56,064	4,672
General watering crops outdoors	3,625	seasonal
Livestock	30,600	2,550
Total site development	183,769	15,198

How we meet OPD criteria on water	
Essential criteria	*How we will comply*
The water needs of the site will be minimised through suitable design and use of technology, including that which enables re-use.	Design will minimise the water needs of the site as well as enabling water to be reused where possible.
Rainwater harvesting from buildings and structures must be a maximum.	Most roofs will harvest rainwater including the polytunnels. Green roofs will mitigate surface run off.
All the water needs of all activities should be met from water available on site, unless there is more environmentally sustainable alternative. Abstraction from water bodies (including ground water sources) must be at levels that do not cause environmental harm. Harm would result from the lowering of surface and ground water levels.	Rainwater harvesting will be the main source of water for the site, including UV filtration for domestic consumption. Mains water will be used for sprinkler systems in order to comply with building regulations regarding pressure and as an emergency back-up for the cabin. As outlined, borehole abstraction will be a future investment.
Contributory criteria - water	How we will comply
Any water pumping should be renewably powered.	All pumping systems will be run using solar PV panels and batteries. Pumping will also be kept to a minimum; we will use gravity feeds where possible.
Any ponds/lakes created should maximise habitat creation and should not destroy important existing habitats.	Ponds are an important part of the design and will be created to encourage habitat creation and with sensitivity of existing habitats.

How we will monitor water use		
Target – essential criteria	*indicator*	*Our monitoring*
That all water needs are met from the water available on site (unless there is a more sustainable alternative)	Annual reporting on use of water sources (amount used from each source) including that harvested on site and the abstracted from water bodies (surface and ground water) Annual reporting on ground and surface water levels (reported on monthly basis)	Annual reporting will detail water consumption and source – including the amount of rainwater harvested. Ground and surface water levels will be monitored monthly

Section 5: *Waste*

Working with the principles of regenerative agriculture, a system designed to reduce waste and energy by reintegrating it. A good example of this on our site is our coppice production waste being used as a core material for our biochar/charcoal production. Here, and output in one are becomes a valuable input for another. This underlines our approach to waste assimilation on site.

The types of waste on site can be divided into further categories.

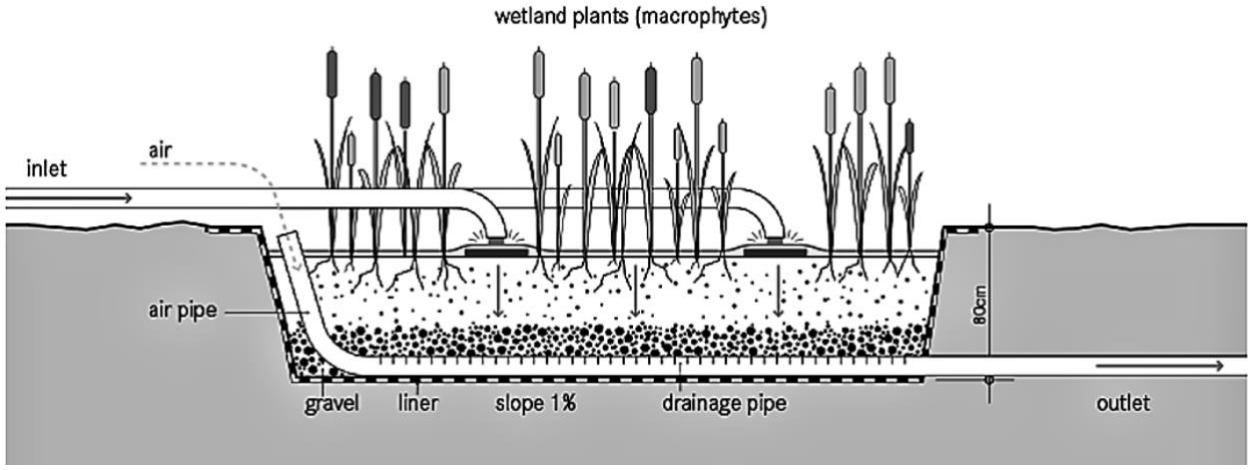
Domestic food waste

Food waste is a crucial component of composting and of increasing the soils fertility and productivity. So, we will be composting all food waste that we can. Food that cannot be composted, such as cooked food will be disposed of via our local recycle centre in Wrexham industrial estate.

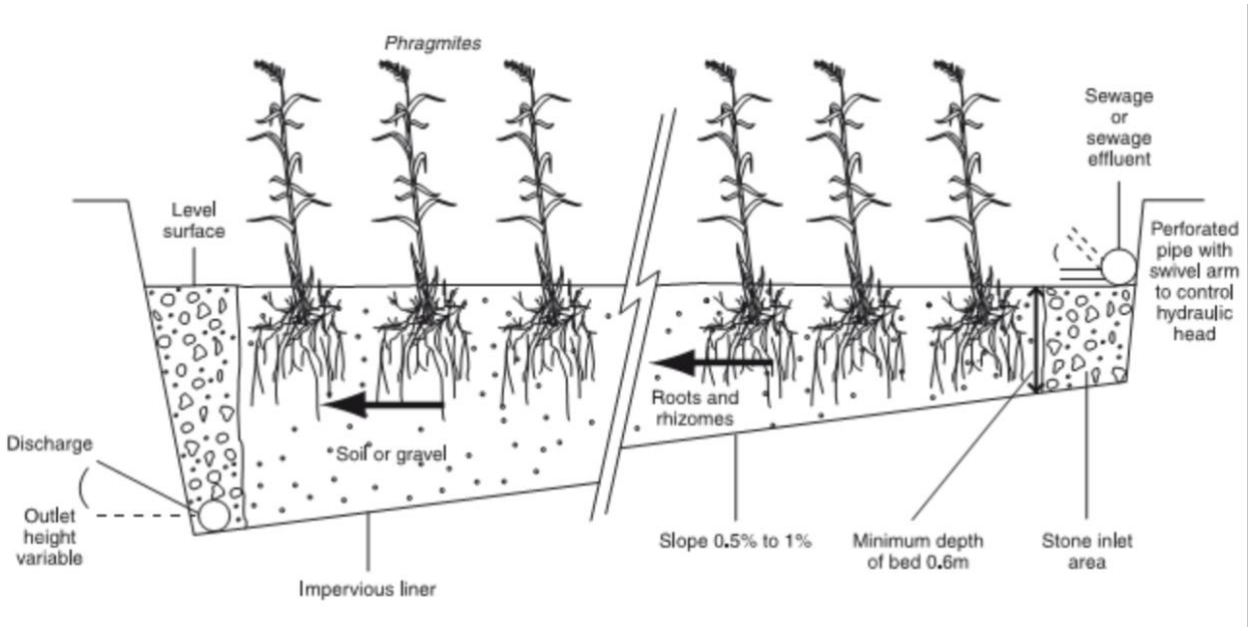
Grey water

The site will produce no black water as compost toilets will be used. However, there will be grey water from the kitchen, bathroom and laundry. These will be treated as a wetland system such as vertical flow reed bed or vertical, followed by horizontal reed bed. Ecological cleaning products will be used and made by us using plants grown where possible, this will minimally affect the reed beds and thus the surrounding environment.

The principle of vertical & horizontal flow reed bed designs is illustrated in the diagrams below.



Vertical flow reed bed



horizontal flow reed bed

The constructed wetland system will be situated relatively close to the cabin. The vertical flow reed bed will be fed intermittently by a pipe from a settlement tank which is used to capture suspended solids, fats and oils. From there the water will be bed into the horizontal flow reed bed and then into a series of soakaway ditches that snake through the planted willow near the woodland providing useful nutrients to the trees. As well as willow, which will create biomass for fuel, the reed bed will be surrounded with comfrey used as a nutrient rich mulch and feed for the garden.

Human waste

The composting toilets separate the urine from the faeces. The urine filtered into a reed bed system with the grey water for adequate dilution. The faeces are collected in the compost toilet container where it breaks down aerobically, without any foul smell or production methane. Once full, the container is sealed and stored until it is sufficiently broken down, the result is hygienic and very fertile compost which will be used only under hedgerows avoid any risk on contamination.

Livestock bedding/manure

Manure and bedding from the poultry will provide important nutrients and fertility for the soil when composted. We also have our neighbouring dairy farm who supply us with manure when we need it. Bedding and winter feed for the sheep will come from hay taken from other areas of our land and bailed.

Inorganic waste

This includes packaging (plastic/metal) paper, chemicals, electronics and broken tools.

The familiar adage of reduce, reuse and recycle is our refrain.

Reduce; the one planet way of living and growing food means that there is a natural reduction in the quantity of inorganic waste. We will also be buying

additional food in bulk where possible to minimise the amount of packaging we will be using.

Reuse: we will be reusing packaging where possible, jars will be used to store our preserves, cardboard will be added to the kitchen garden and used as mulch for example.

Recycle; we do not expect there to be much that we are unable to repurpose ourselves. In such case, we will visit our local recycle centre to when needed.

Business specific waste

- *Egg production*
  Any damaged or spoiled eggs can be added to the compost. We do not envision much being wasted. Packaging will be reused if possible and if not, recycled.

- *Coppice & biochar*
  The coppice and biochar side of the business will not generate any additional waste- we will recycle any packaging not needed.

- *Orchard & soft fruits*
  Any spoilage of fruits can be left for wildlife to feed on. We do not imagine much waste as we plan to make preserves and incorporate them into other products from surplus. All packaging will be recycled.

- *Veg and salads*
  The same applies to this business as the orchard.

How we will meet our OPD criteria on waste	
Essential criteria	*How we will comply*
All biodegradable waste produced on site is assimilated on site in environmentally sustainable ways.	We will be composting all biodegradable materials as detailed above.
The only exception to this is the occasional offsite disposal of small non-biodegradable amounts of waste which cannot be assimilated on site which arise from things being used on site wearing out or breaking irreparably.	We aim to keep this to an absolute minimum by considering this when making purchases, avoiding products that are highly packaged, non-biodegradable and/if with a short life span. We will take any non-biodegradable waste to our local recycle centre in Wrexham industrial estate.
All waste handling and assimilation on site must comply with environment agency guidelines.	We will comply fully with environment agency guidelines when dealing with waste on site.
Contributory criteria	*How we will comply*
The re-use of organic waste on site should increase overall site fertility and productivity so long as this is not at the expense of important semi-natural habitats dependant on how soil fertility.	Composting materials from the site is a key part of food production and improving soil fertility of the site. Certain parts of the site will not need high soil fertility such as wildflower meadow areas.

How we will monitor our waste management		
Target essential criteria	*Indicator*	*Our monitoring*
That the biodegradable waste produced on site will be assimilated on site in environmentally sustainable ways.		The annual reporting form will detail the biodegradable waste produced and how we have assimilated it onsite.
The only exception to this is occasional off-site disposal of small amounts of non-biodegradable waste items which cannot be assimilated on site that arise from things used on site wearing out or breaking irreparably	Annual reporting on all waste production by types of waste and sources – domestic and other (specified) Annual reporting on quantity of onsite waste assimilation and off-site waste disposal.	The annual reporting form will detail waste produced onsite as detailed above. This includes domestic and other specified business sources. The form will also show how this has been assimilated and whether this was on or off site in the case of small non-biodegradable materials.
Target – contributory criteria	Indicator	Our monitoring
That all waste handling and assimilation on site must comply with environment agency guidelines.	Annual statement of compliance with environment agency guidelines.	The annual reporting form will also contain a statement of compliance with the environment agency guidelines.
The re-use of organic waste onsite should increase overall site fertility and productivity, so as long as it is not at the expense of important semi natural habitats dependant on low soil fertility.	Addressed in annual reporting of onsite waste assimilation, mentioned above.	The annual reporting form will detail our onsite waste assimilation.

Section 6: *Zero Carbon Buildings*

The primary requirements of One Planet Development are as follows:

- To provide a functional space which, in addition to housing residents, can also be used as a working area, as a water collection system, as a growing area, as a drying space and as a source of electricity
- To be embedded into the landscape
- To be made of local, natural materials
- To be 'zero carbon' in construction and use.

The proposed buildings do not require building regulations either being agricultural in nature or being classed as a caravan. The main cabin will be a timber framed cabin, which falls under the definition of a caravan. Therefore, not require building regulations in accordance with 3.82 of the practice guidance.

The buildings have been designed to meet these requirements in the following ways:

Main Cabin

- Carefully located to ensure low visual impact, with a comprehensive planting scheme that will further embed the cabin into the landscape.
- Situated in an area that maximises passive heating and solar energy
- Constructed from natural materials that have low embodied energy and come from sustainable sources and are recyclable. Main materials include:
    - Structure built from locally sourced, sustainably managed timber
    - Insulation will be raw sheep's wool from own and local sheep, sealed into the cavities to avoid moths. 150mm of insulation will create a highly insulated building, minimising energy inputs to the building.

    - OSB boards, made from woodchip will provide sheeting either side of the timber framework.
    - Metal sheet roofing will enable rainwater harvest.
- All energy requirements will come directly from the site (solar PV and biomass)
- Waste will be mostly assimilated onsite – reed beds for grey water, composting toilets (separation)

Dutch Barn

- Storage of materials, biomass, large tools, machinery, animal feed, and animal housing.
- Will house our solar PV array, providing all our electrical energy needs for both domestic and business activities
- Constructed from a recycled metal frame, with metal roofing sheets enabling rainwater collection

Pole Barn and Charcoal Station

- Primarily used for small tool storage and as a workshop space.
- Located behind a hedge to minimise visual impact
- Made entirely from reclaimed materials

Veg Prep Workshop and Herb Drying Workshop,

- These two structures are designed to blend into the landscape, with turf roofs.
- The structures have been sited close to their source materials – and designed to enable processing and preparation of primary produce either for storage or for market.
- The structures are built from, and clad with, locally sourced, sustainably grown timber.

How we meet OPD criteria on zero carbon buildings	
Essential criteria	*How we will comply*
Domestic and ancillary buildings will be carbon zero in construction and use as explained in the guidance and using the up-to-date Welsh definition of zero carbon.	Buildings will all be constructed to minimise their carbon footprint.
Proposals will identify which structures will require building regulations approval and that this is approval is obtained either before or during construction.	This is noted in the above building regulations paragraph.
All structures identified for removal in the exit strategy are capable of removal with low environmental impact.	The cabin is capable of removal with a low environmental impact.
Contributory criteria	*How we will comply*
The construction of buildings should make as much use of recycles materials as possible so long as this does not affect their ability to satisfy the essential criteria.	Where possible every effort has been made to use recycled local materials.
Existing buildings are reused where this would have an overall lower environmental impact then new buildings, or where they are in of particular value in the landscape or heritage terms, but providing that they are not unsightly or have negative impact on the surrounding landscape.	There are no old building available for re-use on the site.

How we will monitor our zero carbon buildings		
Target – essential criteria	*Indicator*	*Our monitoring*
That domestic and ancillary buildings are zero carbon in construction and use.	Achievement of zero carbon assessment for all buildings requiring building regulations approval in construction as described in this guidance.	No buildings require building regulations approval
That structures requiring building regulations approval obtain this approval.	All structures requiring building regulations approval are identified in the proposals. This approval is obtained either before or during construction.	n/a
That all structures identified for removal in the exit strategy are capable of removal with low environmental impact.	Specification of how each structure identified for removal in the exit strategy is capable of removal with low environmental impact.	The cabin is capable of being removed with low environmental impact
That the construction of the structures should make as much use of recycled materials as possible so long as this does not affect their ability to satisfy the essential criteria.	Detailed summary of use of recycled materials in construction of structures.	We use recycled materials wherever possible.

That existing buildings are reused where this would have an overall lower environmental impact that new buildings, or where they are of particular value or heritage terms, but providing that they are not unsightly or have a negative impact due to location.	Explanatory statement on the re-use of any existing buildings.	n/a

Section 7: *Community Impact Assessment*

At the heart of our proposal is a desire to contribute positively to the community. As might be expected of an OPD proposal, the benefits of bringing families back to the land go way beyond financial. There are important opportunities for education, within this as a way of sharing resources, experiences and knowledge for future generations. As both of us being raised in Wrexham, we deeply value our roots and seeing such a loss with community hubs and businesses, we can see this is something Wrexham is trying to change and we recognise the economic contribution that we can offer, as well as social enrichment. We feel the passionate drive Wrexham must build a better, more connected and environmental future. Being Welsh we believe it's important to keep our language alive which was a priority to give our site a Welsh name. While also knowing we live on the border, we adding the English translation making our signage bilingual helps it feel inclusive of all our locals.



Contributing to local economy

Our personal choices around food and shopping already favour local businesses and our support will continue not only in our domestic purchases but also those linked to the businesses.

Positive community impacts

- Wrexham has lost many businesses from its high street in recent years. By keeping money within the local economy, we are choosing to support the families and communities around us and not retail chains.

- Being part of local business community has benefits for all involved through shared recommendations, possible trade and advertising.
- We will take part in seasonal markets that encourage people to shop locally. We believe that we offer something new that will draw more interest, helping to ensure the survival of community markets in the area.

Mitigated negative impacts.

- Travel into Wrexham and local villages. We will encourage lift sharing and shop sharing tasks to reduce our carbon footprint.
- The choice to shop locally, seasonally and organically where possible over cheaper supermarkets or online often at a financial premium which is reflected in the elevated food values shown in our ecological footprint calculator. We believe that choosing local has a more beneficial impact that can at times be shown by the monetary values associated to the ecological footprint calculator.

Community facing businesses

The businesses that we are creating have been shaped from personal knowledge of the communities that they are based in and serve. At the heart of each business vision is community. An opportunity to encourage an ever-deepening relationship and curiosity about the natural world and the way we can work with it harmoniously.

All our businesses will incorporate our community in some way, from open days picking your own veg or apple picking to workshops to help connect people deeper to the land, with knowledge and skill.

Positive community impacts

- Empowering the community in their confidence, health and knowledge.
- Building connections with fellow like-minded visitors at the site whether it be at a workshop, an open day or a specific event.
- Having local drop off points means that local people are once more able to reduce their carbon footprint through their support of any of our businesses.
- Customers will also have the chance to taste truly local flavours, seasonally produced while exploring tastes from the surrounding countryside from herbs, to preserved fruit to fresh salads.
- We want to encourage local people to get involved – offering pick your own to creating your own baskets. This will in term help reduce community waste.
- Accessibility is important to us, so our workshops will be offered on a sliding scale to make sure that those who want to take part can. We want to be an inclusive as we can.

Mitigated negative impacts

- Open days will mean an increase in traffic and visitors to the site and possible disruption to the neighbouring farms. We will run any event with great sensitivity to our locals, inviting and informing them in advance. We will also be respectful of sound levels. Incentives will be offered for people travelling by zero/low carbon or travel sharing.

Participation in local groups

We already support local groups such as Agri-cation and Incredible Edible. We aim to collaborate and foster new groups with similar principles around regenerative farming and permaculture where needed so that our site and our community can access these resources.

Positive community impacts

- Community is made when people come together and in scattered population, participating in groups bring closeness, connection and opportunities.
- We offer our learning from experience gained elsewhere and want to bring that back to our community.
- Offering a venue and resource is a way of opening the site to community groups and to inspiring groups in the future.

Mitigated negative impacts

- Again, travel is a consideration and once more we would seek to minimise traffic by encouraging lift sharing, cycling, walking and public transport.

Sharing resources – processing facilities

One of the joys of creating a business is seeking collaboration and creative partners, sharing skills and learning. The facilities on the site will be made available to local people to rent when not in use and with supervision when necessary.

Positive community aspects

- Through offering these facilities to local people, they can benefit from the investment in equipment to develop their own products professionally. This may encourage more local people to being their own local businesses.
- Collaboration excited us and engaging with other local producers means creating a more diverse local offering, strengthening and inspiring customers with innovative products.

Mitigated community impacts

- Mitigating follows as previously. With groups it will be easier to encourage life sharing.

Sharing resources and learning - education

With how much sharing resources has helped us learn and achieve the knowledge we have today we are aware of the opportunities to share and promote low impact living and building can be. Whether through onsite volunteering, open days, bespoke courses/workshops or online offerings, this is an educational project in which we are learning alongside our wider community.

Positive community impact

- Helping to reimagine the potential of small-scale land-based enterprises is part of ensuring that people can find ways to adapt to changing political/financial climates as well as climate change itself.
- Through learning more skills, we become more resilient as a community as this in turn means less resource use. We want to be part of this important process.
- We will run courses as a way of involving people in the building of our infrastructure, offering them the chance to learn about using natural building techniques just as we have done ourselves in previous volunteering stints. We hope this will encourage more people to adopt low impact living.
- Gain more knowledge on the media side of learning. This will be done without any carbon footprint from travel. Such as videos, blogs, zoom workshops, guest hosts on talks. It is widely accessible and environmentally smart.

Mitigated negative impacts

- Any increase in travel will be mitigated as above.

Sharing resources and learning – accessibility

As we have outlined in this section, accessibility is a key part of our proposal in its many forms. An additional way in which we will seek to make the site accessible is by encouraging people to visit, learn and experience low impact living in this area. We will do this through seasonal open days, as outlined previously. Volunteer opportunities on the site extend the offering.

Every One Plant Development is pioneering in its way and giving other people the chance to learn from the experiences behind ours is a contribution of broadening the appeal in low impact living and showing how it can be done in different areas.

Positive community impact

- By being open to the public as described above, we will offer our learning and experience to others that are keen to find out more. We hope to inspire people as we have been inspired in the past. It follows the principle of *paying it forward.* Offering something for free with no expectation of direct financial return. We hope to offer our site to inspire others with the principles of low impact living.
- Open days will focus on local and seasonal elements, connecting people to the land around them, to traditional Welsh practices as well as introducing regenerative agriculture principles.
- We have already touched on how the site will be resourceful to local groups. There is also the opportunity for this to extend to wider groups-from children to those interested in self-building, gardening, plant medicine, woodworking and all the other areas covered by the site.

Mitigated negative impacts

- Once more, travel is the main negative impact from opening the site to the public. We will be encouraging use of public transport and offering lift sharing where possible.



Positive impacts

- Selling produce locally reduces the community's ecological footprint and the need to drive longer distances to get produce which is highly packaged and often imported.
- Through selling seasonal produce, we will be raising awareness of food production, encouraging people to eat with the seasons and appreciate what is locally available through offering a range of produce and experimenting with new varieties of fruit and veg.
- Offering produce which is as fresh as possible, without chemical inputs means healthy and nutritious food for the local community. It also gives a chance for local people to form a relationship with the people producing their food, increasing a sense of connection to the land and locality. For visitors it's a chance to sample fresh produce from this area.
- Sharing the vision of other local businesses to promote and support a network of local producers.
- Supporting local markets as well as the possibility to develop seasonal fayres which would offer an outlet for other local producers as well.

Mitigated negative impacts

- Having a local outlet saves people from travelling greater distances to shop. We will be expanding the range of produce available to them locally.

Conservation

The site is designed with biodiversity at its core, increasing habitat and integrating the needs of local wildlife. The benefits extend far beyond our sites boundaries as well as increasing local populations of birds, animals and pollinators.

Positive community impact

- By managing our site with the explicit intention of cresting habitat and biodiversity, we are offering a positive example of human and wildlife needs being met alongside each other. Our access policy means that this is something that other people in our community can collaborate with.
- As part of the site design, we have incorporated extended woodland, along with wild areas throughout the site meaning that we are increasing the range of wildlife. This supports a larger local population of birds and animals.
- By raising bees on site and growing plants specifically for pollinator populations and all the other wildlife that are dependent on them. we aim to be part of a local network that encourages people to conserve bees.
- Through using traditional hedgerow management techniques, we hope to share skills learnt and inspire other people to do the same.
- Developing soil health is once again an exemplary practice that we hope to share with others to help promote wider spread benefit.

[redacted]

Positive community impact

- [redacted]

How we will meet OPD criteria: community impact assessment	
Essential criteria	*How we will meet criteria*
There is a thorough assessment of all impacts of the proposals on neighbouring communities. One Planet Development in the open countryside would not impact negatively on neighbouring communities.	We believe that we have made a comprehensive study of the impacts of our proposal on neighbouring communities and take into full consideration any negative impacts.
Any negative impacts are mitigated.	All negative impacts will. Be mitigated as described above.
Contributory criteria	*How we will meet criteria*
OPD children attend local schools and residents support local groups, clubs and events.	We already support local events and community groups and as described hope to offer our site as resource for the community.
There are open days, permissive footpaths and other access, as well as the hosting of local events on-site.	Seasonal open days are a key part of community engagement. Permissive footpath allows easy access to the site through the back fields and neighbouring field.
Residents shop locally and use other local businesses.	We already support local shops and businesses and will continue to do so.
Residents sell food and other produce locally.	Our eggs, fruit and veg will all be grown on site for local sale. In addition, preserved food such as jams and eventually meat will be offered.

How we will monitor our community impact.		
Target – essential criteria	*indicator*	*Our monitoring*
That community impacts are thoroughly assessed and there are measures in place to mitigate any negative impacts.	Annual monitoring of community impacts. Implementation of mitigation measures to address any negative impacts.	Annual monitoring will enable us to address any negative impacts that may arise. Our close relationships with our local community will help us with this and implementation of any mitigation.
All the positive community impacts are fostered and recorded.	All positive community impacts are fostered and recorded.	Annual monitoring will also record all positive impacts. Our approach is to foster community relationships and positive impacts that result from our OPD site.

Section 8: *Transport Assessment and Travel Plan*

Objectives

We aim to adopt a low carbon transport options where possible to minimise car journeys to and from the site for both resident and visitors.

Baseline

The site is situated half a mile down Bryn Lane (Halghton Lane) from the A539 which runs directly though Penley village. There are several houses within Bryn Lane including farms in both directions of the site.

The site currently generates very little traffic. We visit the site daily to tend to the growing plot either by foot or car if it's bad weather and occasionally via the tractor if appropriate work is undergone. As we currently live close to the site in a rented property so we are able to make well informed assessment of travel, both present and future.

Survey of existing transport options:

- *public transport*

The site is half a mile from the A539 with regular bus transport routes going into Wrexham and Whitchurch up to 5 times a day during the week and Saturday via the bus route 146 Wrexham – Whitchurch.

For long distance travel, there are buses from Wrexham centre that can connect easily throughout all of Wrexham, Denbighshire, Flintshire and England these buses can also mean easy transport to trains, extending your travel making Wrexham Centre a great resource for long distance travel.

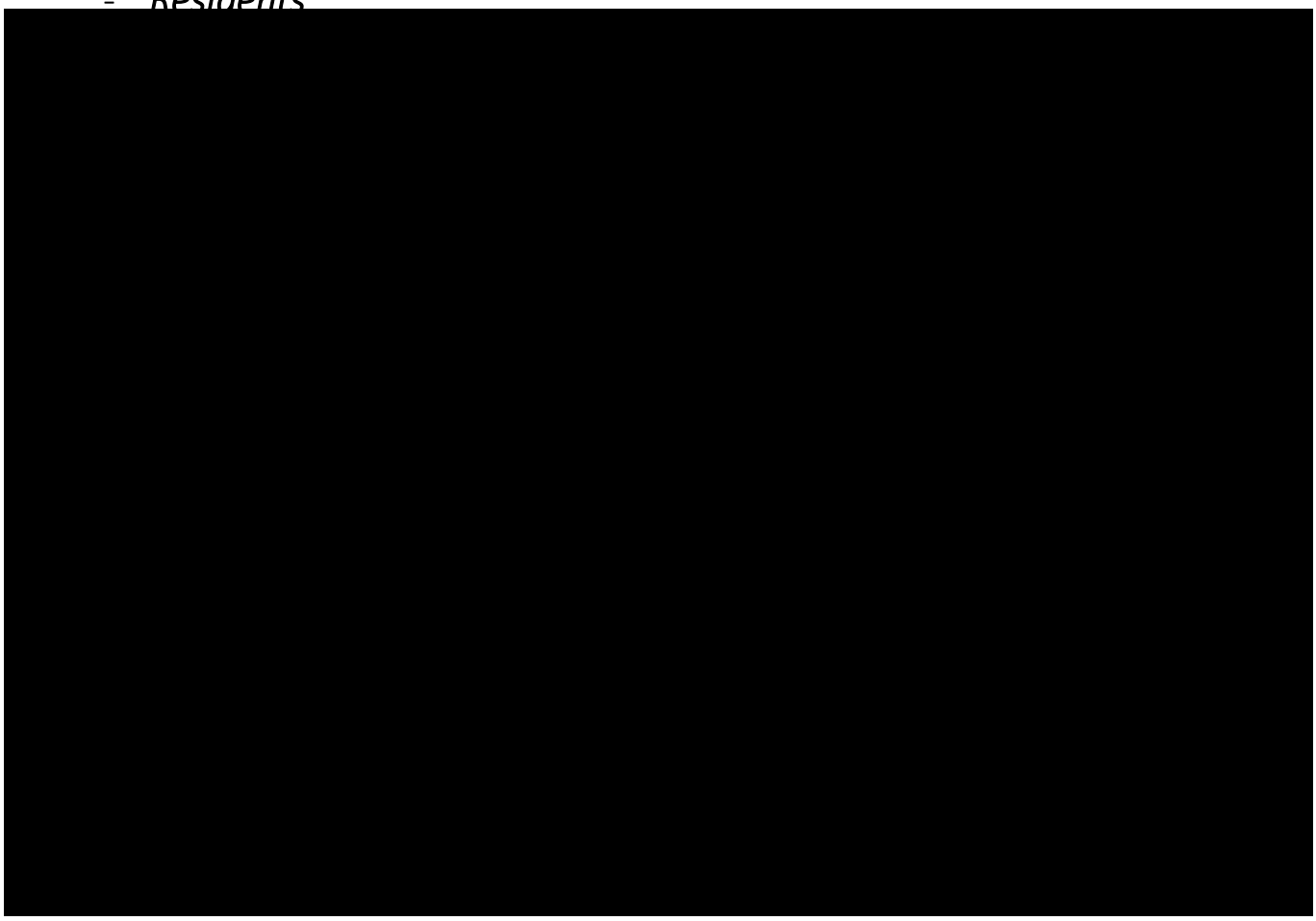
- *Existing footpaths*

There is a public footpath that runs across our upper field. This footpath Is part of the popular Mile Away footpath route that runs through Penley. This

footpath has stable access to the field (images referenced on page 13&14) and is maintained by us.

Description of travel elements within proposal

- *Residents*





- *Enterprises*

Selling to local retailers, wholesalers, markets and clients means there is minimal traffic and travel involved. Being well embedded in the local economy greatly helps to reduce impact. Where there is a need to travel, we will combine travel where possible, making multipurpose journeys rather than single purpose trips.

We aim to deliver all eggs locally one day a week, to reduce traffic to the site, also making multipurpose journeys rather than single trips.
We will also have our farm shop accessible for people walking via the Maelor Way. [redacted]

- *Visitors*

All visitors to the site – local open day to visitors, volunteers and course participants- will be encouraged to travel by public or low carbon transport. As outlined that there are bus routes that pass through the village. Encouragement will take shape of clear information about the travel options within advertisements, arranging events to fit local bus timetable Open days will be aimed at local neighbours primarily, given seasonal opportunities to visit. Offering organised events like this means it is easier to car share if driving is required and reduce more regular visits. Course participants and volunteers may come from further afield and therefore we will offer to collect from bus and train stations – or indeed from local villages that offer connecting bus services. All of these are factored into travel assessment that follows.

Transport assessment

Because we live in a rural area that sadly has only a small independent shop of which only sells very minimal fresh produce and limited products, it is inevitable that there will be a need for some travel. We have drawn up the following plan of estimated trips based on information gathered about current journeys as well as considering future development of the site. This transport assessment covers all transport modes – car, bike, bus etc.

Transport assessment – resident, enterprises & visitors			
Residents: Transport assessment & travel plan			
Description	*Estimated trips*	*Distance travelled*	*strategy*
Delivery or collection of additional foods and other goods (personal needs not related to business)	1 weekly trip to Wrexham for food errands which will be combined with one of our weekly home education events.	Short (approx. 9.5 miles)	We are part of a local bulk wholefoods buying group and order quarterly to reduce the number of deliveries. We will continue to lift-share/share-shop where possible to reduce traffic. When a trip is needed, we will use 1 vehicle and eventually electric transportation. Other activities such as swimming lessons and business where possible. For trips into Wrexham, we also have good public transport links.
	4 annual bulk deliveries of food	Long distance	
[redacted]	[redacted]	[redacted]	[redacted] When a trip is needed, we will only use one vehicle or public transport where feasible.
[redacted]	[redacted]	[redacted]	[redacted]

Enterprises: Transport assessment and plan			
Business – Egg production	2 weekly trips through Wrexham delivering all allocated eggs. 3 annual trips to festive markets (Wrexham, Ellesmere, Whitchurch)	Short (9 -23 miles each way)	Transporting our eggs is a big consideration. Minimising the delivery to a designated day of the week and incorporating all deliveries withing that day reduces traffic. For local people we will provide them at the gate. Trips to markets will be shared with sloes and coppice products.
Business- Orchard, fruits, Veg & salads	2 weekly drop offs during season	Short (max 13 miles each way)	deliveries of fresh produce will be made using 1 vehicle and combined with other journeys into town made by neighbouring family to reduce the number of journeys made. Any preserved products made will be combined in the travel to festive markets.
Willow/hazel coppice	1 weekly drop off during season & 3 annual markets	Short (max 20 miles each way)	We will be selling coppice products via local markets to minimise customer travel and impact to the site. Any deliveries will be combined with other enterprises.
Charcoal & biochar	1 weekly drop off during season & 3 annual markets	Short (max 20 miles each way)	We will be selling biochar at our gate along with weekly deliveries and annual markets. The deliveries will be combined with our coppice and other enterprises.
Business (deliveries/visits site)	1 weekly delivery/visit	Medium (depending on order)	When possible, bulk ordering will minimise the number of deliveries and if possible, will

			be made through post rather than courier services.
Travel related to off-site work	1 weekly trip	Short (20 miles)	[redacted]
	1 monthly trip	Medium (max 40 miles each way)	[redacted]

Visitors transport assessment and plan			
[redacted]			
Volunteers	Estimated 40 trips per annum	Short to long (depending on volunteers)	Volunteers will be encouraged to use public transport and lift share where possible as we can offer to collect them bus and train stations. Having long term volunteers will help keep traffic down.

Onsite courses (up to 5 per year)	Estimated 26 trips per annum	Short – medium (depending on participants)	Any courses we would offer incentives for those travelling by public or car sharing. Along with offering facilities for those needing to recharge any electric vehicle on site.
Open days	Up to 40 trips per year	Short – medium but aimed at local people	Seasonal open days means that small numbers of people coming to the site. We will incentivise people to lift share, walk or come. By public transport where possible.

We envisage that during the initial years of set up (years 1-5) additional trips will be made – due to delivery of building materials and establishment and promotion of businesses.

Travel strategy and plan

Our travel and plan strategy can be summarised as follows:

- Continued lift sharing and shop sharing to reduce communal carbon footprint
- Walking, cycling for short distances
- Using electric car will reduce our travel carbon footprint
- Using public transport where possible
- Offering visitor incentives for lower carbon travel
- Offering charging opportunities for electrical vehicles when there is sufficient energy
- Buying in bulk
- Combing business trips where possible, including domestic

Reducing the carbon footprint produced by travel is vital and we have taken steps in recent years to address this. [redacted] The use of lift sharing with neighbouring families sharing errands/shopping runs – all have contributed to bringing both our household and family communal carbon footprint down. We will continue to seek new ways to reduce our travel impact. Having land-based enterprises means that we do not commute for work with them which is an otherwise significant contribution to trip.

Some traffic to the site will be generated by visitors. Our strategy for reducing this is set out as offering incentives for shared/public transport or cycling. We will offer secure parking and we hope to show by example that it is possible to live rurally without generating a large carbon footprint from fossil fuel use.

We will allocate permanent parking spaces on designated open days by using hard standing set aside for deliveries with a 5mph limit and parking will be as close to the access point as possible to reduce movement across the site.

[redacted]

Electric vehicle

As no more diesel or petrol fuelled cars will be sold after 2040, moving government transport policy towards electric vehicles means this mode of transport becoming more common. We are hoping that by showing the use of an electric car is possible in this area. We will also be encouraging others to change to more carbon friendly means of transport. To share the benefits, we will also be car sharing with our family. This means sharing the cost of maintenance /services as well as sharing the charging of the vehicle. The car will be charged by our off-grid system in the summer and in the winter when there is less available energy, by families who also have solar panels that feed into the grid. Using an electric car in this way has many benefits from the carbon footprint of our close community and the reduction in emissions beyond the site.

How we meet OPD criteria on travel	
Essential criteria	*How we will meet the criteria*
The management plan must be accompanied by a transport assessment and travel plan (which may be combined)	The management plan incorporates the transport and travel plan.
Overall, the development should achieve a significant reduction in transport impacts from all activities on site (residents, enterprises and visitors) in comparison to what would be the 'norm' for such activities.	The figures given the transport assessment and travel plan show that the journeys mase by the site will be 40% of the average in Wales. As noted, visitors will be incentivised to travel by low/zero carbon means to reduce impact.
There should be detailed monitoring on all trips to and from the site in terms of purposes, distances, modes and any transport sharing.	A logbook will be used to record journeys to and from site, including deliveries. This will help keep an accurate record for future monitoring.
Contributory criteria	*How we will meet the criteria*
The use of low and zero carbon modes of transport should be maximised.	Where possible, we will walk or cycle. In the future will use an electric vehicle for other journeys.
On site vehicle numbers should be controlled and vehicle pools used for One Planet Developments of more than one household.	We will eventually have one electric vehicle for the site and indicated we will be car-sharing with neighbouring families.
Connections between the site and local suppliers and customers for goods and services requiring travel, should be maximised opposed to those at a greater distance.	Following our approach of a supporting local businesses, this reduces travel impact from distance covered. In terms of our own sales, we will be looking to supply local customers.

	Purchase of food off site will be minimised by increased production.
Visitor travel should be the subject of proactive management to reduce transport impacts.	Our closest family members live within walking distance which is a significant reduction in travel impact. We will be offering incentives for visitors/volunteers to travel by public transport, walk, cycle and car share when possible.

How we will monitor transport and travel		
Target – essential criteria	*Indicator*	*Our monitoring*
That there is a significant reduction in transport from all activities on site in comparison with the 'typical' levels for the number of occupants and activities on site.	Annual monitoring of all trips to and from the site by purpose, distance, mode and any transport sharing. Annual assessment of the transport impact of the site against the Transport Assessment Strategy and Travel Plan.	The annual monitoring will cover all the required details stipulated to gain a full picture of the transport and travel. This will allow us to compare with the typical national levels. We will be reviewing the annual assessment against the Transport Assessment Strategy and Travel Plan.
Target – contributory criteria	*Indicator*	*Our monitoring*
That there is maximisation of use of low and zero carbon modes of travel.	Annual monitoring of use of low and zero carbon modes of transport. (part of annual monitoring of all trips)	The annual monitoring plan will include details on low and zero carbon modes of transport.
That there is a reduction in on site vehicles using vehicle pools.	Annual monitoring of vehicle numbers and use of vehicle pools.	Details of customers and suppliers will be noted in the annual monitoring form.
That there is proactive management of visitor travel.	Annual monitoring of visitor travel.	Details of visitor trave; will also be noted in the annual reporting form.

Section 9: Ecological Footprint Analysis

Our EFA has been calculated at 1.95gha/cap on first habitation, dropping to 1.20gha/cap at year 5

Whilst this figure may appear low, we have been reassured that it is because we are such a large household (and our ecological footprint is divided by the number of people in our household).



We are confident therefore, that we will be living a one planet footprint within 5 years. This would be a huge milestone in our journey to achieving a sustainable lifestyle.

The reasons for this reduction are:

- Minimal car travel
- 50% of basic food needs grown from the land
- Our energy being generated on site by solar
- Our water being harvested onsite from stored rainwater

Other footprints

The ecological footprint calculator is a very comprehensive in its scope, but the guidance notes call for an assessment of other impacts arising from the site, linked to business and domestic activities.

- Positive impacts: food production for local markets/consumers
  The site will be growing an abundance of fruit and vegetables along with eggs for local sale. Supplying local people with food significantly reduces food miles and therefore the ecological footprint of the local community.
- Positive impacts: inspiring one planet living
  The site hope to serve as an inspiration to others who are interested in living sustainably and reducing their ecological footprint. By sharing lessons learnt by others, we hope to spread the ideas and the practical tools to start other people on the path to one planet living.
- Positive impacts: improvement of the landscape
  We aim to improve the sites biodiversity and aesthetic along with the surrounding areas by increasing hedgerows and various habitats.

- Negative impacts:
  The site will attract visitors and volunteers as outlined in the transport assessment. Measures to mitigate this area are also included in the travel plan, focusing on encouraging people to car share and take low carbon transport where possible.
- Negative impacts: business related transport impacts
  We will be combing transport where possible, sharing vehicles so we aren't making unnecessary trips. This will also be combined with domestic journeys.
  Negative impacts: small amounts of fossil fuels in our site management will be used for combustion engine tools.

  We hope that the site will contribute in the long term to a reduction in not only our own ecological footprint, but those in the surrounding community. We hope that as more people are inspired to follow one planet living, there will be greater potential for collaborations and

further reductions in the community's gha by year 5, with a continued downward trajectory in the following years.

Section 10: Phasing, monitoring and exit strategy

Prior to submitting application, we have already begun trial plots for crops. The timeline for the site development is detailed below.

Site development timeline			
Year	Paperwork	Building work	Business and site development
Pre habitation Year 1 2026	Application submitted	- Site groundwork for all new buildings, grey water system & drainage. - Begin structure for installing solar panels. - Finish egg packery.	- Landscaping including ponds, banks for visual screening. - Planting shelter belts. - Increase woodland Hedging trees. - Continue market garden development. - Begin wild zones. - Start extra no dig beds.
Pre habitation Year 2 2027		Spring/summer/autumn: - Begin groundworks for cabin. - Finish installing solar panels. - Build chicken tractor.	- Plant orchard & soft fruits - Establish grey water/reed system. - Plant no dig kitchen garden. - Install bees

Year 1 2028 *once approval granted*	Annual monitoring report	- Start cabin build. - Build wood store.	- Chickens and ducks on site. - Begin egg production. - Harvest & sell produce.
Year 2 2029	Annual monitoring report	- Complete cabin. - Complete barn build. - Build root cellar.	- Continue development of garden and woodland. - Continue harvesting & selling needed produce.
Year 3 2030	Annual monitoring report	- Site maintenances and final finishings. - Set up biochar/charcoal production.	- Continue harvesting produce and eggs. - Maintain woodland and hedgerows. - Continue maintaining orchard. - Harvest & sell soft fruits. - Being harvesting willow & hazel.
Year 4 2031	Annual monitoring report	- Continue site maintenance. - Build lean to on barn and make workshop.	- Continue egg production. - Begin harvesting & selling apples. - Harvest & sell remain produce.

			- Sell biochar/charcoal. - Start woodworking workshops.
Year 5 2032	Annual monitoring report Resubmission of management plan alongside EFA report (to be done every 5 years)		- Continue with all established enterprises. - Meeting all OPD targets.

Monitoring

As set out above, there will be an annual monitoring report produced following the monitoring criteria set out in each section of the management plan (food production, minimum needs and land-based businesses, land management, energy, water, waste, zero carbon buildings, community impacts, transport) it will report on any emerging problems and make recommendations to resolve them. it will also provide clear evidence that the residential use continues to be clearly linked to the management of the land. A revised management plan will be submitted in year 5 and 5 years thereafter.

Exit strategy

If we fail to meet the requirements of the One Planet Development practice guidance (point 5.11) a “failure of the site as a whole” would be a failure to achieve one or more of the essential characteristics of One Planet Development practice guidance (October 2012) over a period of 2 years without initiating, clear and effective measures to address the identified issues brought forward to us.

If a “failure of the site as a whole” occurs we would reside offsite, elsewhere and adopt the following strategy:

- Removal of the cabin from the site, with the removal of permission to live on site.
- Masonry piers from the cabin site will be dismantled and removed
- Service connections to/ from the cabin site will be dismantled and terminated.

Conclusion

We submit this application with widespread local support for our proposal including neighbours, local farmers, local shops, business leaders and the community. We hope we can provide an abundance of food, connection and inspiration for our community on how to live gently and thrive living alongside the wildlife on this one planet we all share.



