Plot 9

Kit and Saara's Plan for

Plot 9

An introduction to our plans for the low impact development of plot number 9 at Pont-y-gafel farm, Glandwr, Pembrokeshire with the Lammas organisation.

Contents

Appendices

Cashflows – Pig log

Cashflows – Workshop Log

Cashflows – General

Illustrative Layout 1:200

Drawing 1 – House Plans 1:100

Drawing 2 – Workshop Plans 1:100

Drawing 3 – Barn Plans 1:100

Drawing 4 – Pig and Goat Housing 1:100

1. Introduction and Background

We are a couple based on the Gower Peninsula. Kit is a carpenter making fine furniture and an artist; Saara is a registered nurse and currently a student in Swansea, finishing her studies in 2008. Saara is Finnish, but has been living in Britain for three years. We are living in a small chalet in a community on South Gower, within cycling distance to the university for Saara's studies, and partly in Kit's parents' house, where Kit has a workshop set up, and is establishing a business. Neither of these residences is permanent.

We are practical people with some experience of low impact building techniques and practice. We have both lived with large gardens and small orchards growing fruit and vegetables. Saara has worked on a farm specialising in soft fruit. Kit has kept chickens and ducks. We also have a keen interest in gathering and using the produce of nature.

We are, subject to planning approval, planning to live on plot 9 of the Lammas development. We plan to build a timber framed straw bale house with an internal cobb structure, a carpentry workshop, animal housing, and be largely self sufficient.

Our plans include a combination of growing food, keeping livestock, producing dairy and meat products, building furniture and making artworks and crafts. We will be preserving fruit and vegetables for our own consumption in the form of jams, jellies, juices, chutneys and pickles. We will be making our own beer and cider. We will be making a range of cheeses and other dairy products. We will be curing ham and bacon, making sausages and smoking meats.

Kit will continue with the carpentry, running a business using wood from the site. We expect our main sources of income to be carpentry and the meat business. Saara will make soap and candles and other craftwork.

2. Plot design

The layout of the plot has been designed using permaculture principles. The plot is divided into the house, workshop and garden area, walled garden, greenhouse and vegetable garden area, barn, pig and goat housing, orchard, rotational field system, pond, woodland and fuel production.

2.1. Visual impact and Layout

House
The house has been sited to overlook the plot and is positioned in the western corner to ensure a low visual impact. The building design provides visual impact minimalisation through the use of a sedum roof sloping down to the south. The plot is on a south-facing slope, and this is used to our advantage.

Work Building
The work building comprises of the workshop, commercial meat kitchen and dairy, with storage room for freezers. It is positioned directly to the east of the house, set back slightly to the north. Its sedum roof also slopes down to the south. The work building is positioned to be shielded by the house from the area to the west from which the plot is partially visible.

Walled garden
Our walled garden is located to the east of our main buildings. It contains our soft fruit garden, greenhouse, vegetable garden, poultry yard, and composting system. The walls will be constructed from reclaimed bricks and will be a maximum of 2 meters high.

Yard
The yard is directly to the north of the walled garden. The yard contains our main firewood store, and will be used as an exercise yard for the goats.

Barn
The barn is at the east end of the yard next to the trackway. It will be built against the wall of the walled garden. The barn will be used to store hay and feed, and agricultural equipment. It will also contain the goat milking area and additional animal housing.

Pig and Goat housing
The Pig and Goat housing is situated to the northeast of the plot next to the trackway. This is a well-drained part of the plot. This building also has a sedum roof.

Orchard
Our orchard will be on the Northern side of our plot, behind our house, sheltered from the cold northern and eastern winds by the existing bank and hedgerow between plot 9 and plot 8. This boundary will be renovated to provide a south facing wall to the north of the orchard with hedge boundary on top. It has a good south facing aspect and will be sheltered from the southwestern winds by a belt of hazel trees.

Fields
Our fields occupy the central area of our plot.

Pond
We will have a large pond to the west of our plot. The overflow of our rainwater collection system will feed into this pond. The pond will be large enough for the geese and fish and wildlife. We intend to use clay to line the pond.

Woodland
The area around the fields up to the plot boundary to the south and east will be planted with mixed woodland to provide a visual barrier and a windbreak as well as a wildlife corridor and a habitat to increase biodiversity. This woodland will include both, fast growing species and native deciduous trees. As a long term part of the project the fast growing trees will be harvested for fuel leaving established native trees as a forest Garden and long rotation coppice.

Short rotation coppice
Our willow will be planted on our half of the common we share with plot 8.

Boundaries
The Western boundary of this plot is the hedge line next to the course of the old leat. The hedge line is established with a number of mature trees. The leat is currently just an unlined ditch with a pipe running along it to supply water to the millpond. We intend to re establish this as an open watercourse. It was originally lined with slate, but this has been removed. We intend to line it with clay. Initially we will line the top of our section in stepped stages to form individual pools, whilst maintaining flow. From these we will divert water into our pond system. We hope the rest of this watercourse, which is not on our plot, will be relined and reinstated as an open watercourse. This would increase the biodiversity of the site.

3. Land based produce

3.1. Food production
This is a holistic system growing fruit, nuts, and vegetables and keeping livestock. There is a combination of gardening, raising animals and gathering. We intend to grow enough for our own needs and substantially meet the needs of our animals. In turn our animals will provide for our needs and contribute to our income.

3.1.1 House garden
There will be an herb garden near to the kitchen. We will have a small lawn. There will be a pond sited to reflect sunlight into the house. The garden will be planted with perennial plants, bushes and trees. A few examples are birch, mulberry and maple.

3.1.2. Walled garden
We will have a walled garden of 1000m^2. The northern section will be the soft fruit garden, the southern section the vegetable garden, with the greenhouse in the centre. Directly to the north of the greenhouse will be the poultry yard, tool shed, and composting facilities. There will be a pond in the northern section of the walled garden.

3.1.2. A. Soft fruits
The northern 400m^2 of the walled garden will be predominantly for soft fruit. We intend to have a wide variety of fruit and berries including blackberries, blackcurrants, blueberries, gooseberries, raspberries, red currants, sea buckthorn, and strawberries.

3.1.2. B. Greenhouse
The 100m^2 greenhouse faces directly south, built against a wall. This greenhouse will both prolong our growing season and widen our crop variety. We will have a combination of permanent planting and standard seasonal planting. The permanent planting would include fruit that would not normally grow successfully in Britain, such as, apricots, grapes, kiwi, melons, peaches etc. The “standard seasonal planting” will include aubergines, carrots, chillies, cucumbers, peppers, sweet potatoes, and tomatoes. We will experiment.

3.1.2. C. Poultry
The poultry yard will be built against the greenhouse wall to the north.

3.1.2. C. 1. Chickens
We will have 6 hens to start with and increase the numbers until we reach the appropriate level. Our chickens will provide us with meat and eggs, and used as part of a weeding and fertilising regime.

3.1.2. C. 2. Ducks
Our ducks will be a slug control and provide us with meat and eggs. We will have Indian Runners, starting with 6.

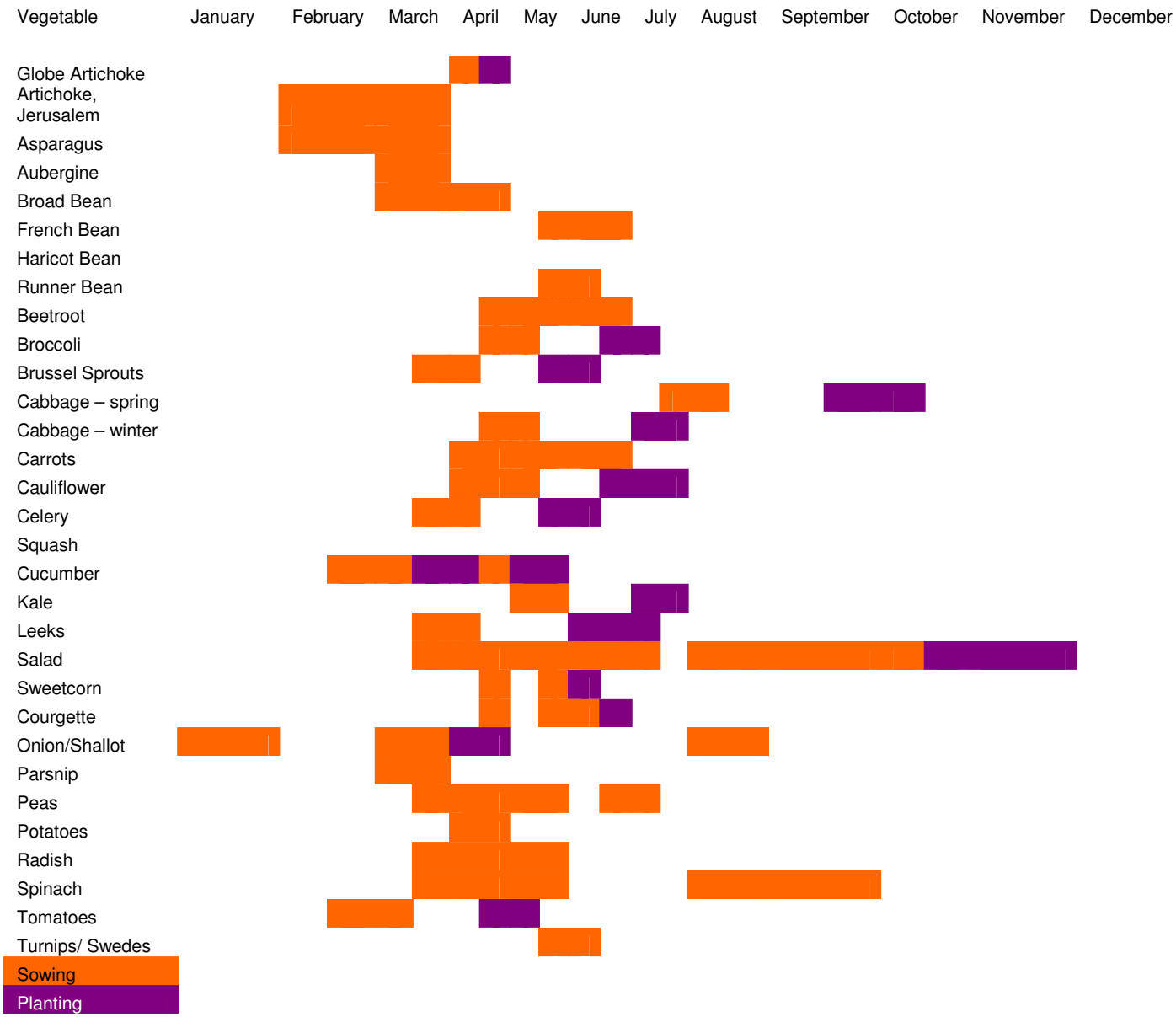
3.1.2. D. Composting
The composting system and wormery will be built to the north of the greenhouse to contribute any heat generated. They will be rat proof.

3.1.2. E. Vegetable Garden

The southern 400m^2 will be the vegetable garden, of which 200m^2 will be beds. We intend to establish 30 raised beds 5m long, 1.2m wide with a combination of 80cm and 40cm wide paths, with 60cm beds at the walls and central path of 1.4m. These will be our intensive food production strips. Using this system will allow us to concentrate our soil improvement and maximise yield. The topsoil removed form the foundations of the house and the pathways will be used to establish the beds and they will be mulched with compost, manure and straw. The pathways will be covered with cockleshells. The beds will be of a uniform width to allow the use of cages positioned over any main bed. This will provide two functions. They will allow us to use our chickens to simultaneously feed, weed, and fertilise, and also different times of the year protect our crop from pests at as appropriate.

3.1.3.Table of vegetables produced for home consumption

3.1.4. Table of vegetable planting for home consumption



3.1.5. Horticultural field

We will also grow food crops in our fields as part of the rotational system. At any time at least one of our 750m^2 fields will be used for food production in addition to our vegetable garden. This combination should provide all of our vegetable needs and substantially meet the needs of our animals.

3.1.6. Field system

We will have six 750m^2 fields managed in rotation on our plot, and a further two on our half of the common land we share with plot 8, totalling 6000m^2.

3.1.7. Mushrooms

We will have logs impregnated with oyster and shitake mushrooms. This could develop into a commercial concern. We will experiment with various other types of mushroom.

3.1.8. Orchard

We will have an orchard of 1200m^2 .The planting of the orchard is one of the first priorities due to its slow establishment. We will be planting 40 fruit trees of appropriate varieties. We will have apples, pears, plums, cherries, and quinces.

We have contacted a local smallholder with a young apple orchard in conditions very similar to those in our plot. He has planted a variety of apples and is researching those varieties that work best in that particular climate. His research has influenced and will continue to influence our choice of variety.

There will be a windbreak comprising of 30 trees. This will include crab apple, damson, elder, hazel, rowan, and Siberian pee tree.

The produce of the orchard will be for home consumption. As well as fresh and stored fruit we will be making jams, jellies, chutneys ciders and perry. Our pigs will eat the windfall and waste. Pigs will be put in the orchard when appropriate. The grazing area of the orchard is approximately 1000m^2.

3.1.9. Pigs

We will start with three pedigree rare breed Oxford Sandy and Black piglets. This breed is selected because they are traditional and rare, very hardy, suitable to be kept outdoors, and especially suitable to beginners.

We plan to buy feed in addition to vegetable fodder grown ourselves. They will also graze the fields in a rotation with the goats. Once the orchard is established the pigs will eat the windfall. Eventually our new plant woodland will be useful for foraging.

One of these pigs will be slaughtered after 30 weeks. Once raised these will produce enough piglets for our plans to sell weaners, and to keep a few porkers and baconers for our meat and the sale of pork products. We intend to make sausages, smoked bacon and dry cured ham, smoked and unsmoked.

3.1.10. Goats

We intend to keep two milking goats. We have selected British Toggenburgs due to their relatively high yield and quality. Goats are hardier than cows and would provide us with all our dairy needs.

We plan to feed the goats with a varied diet including the leaves of the coppiced trees grown for fuel. We plan to initially buy all our hay. They will also browse the fields in a rotation with the pigs.

Their milk will allow us to make cream, butter, cheese and yoghurt. In addition to our dairy needs our goats will also provide us with meat.

3.1.11. Geese

We will have geese to control grass wherever it is needed on the plot and provide us with meat and eggs. The geese will be sheltered overnight in movable housing that we can position on suitable parts of the plot.

3.2. Fuel

3.2.1. Short Rotation Coppice

Short rotation willow coppicing seems the most suitable sustainable fuel solution. We will plant 2500m^2 of willow. This should produce 2.5-3.0 dry tonne of firewood annually. For the first 5-10 years we will plant up to an additional 1500m^2 on our common land, to produce a further 1.5 –1.8 dry tonne annually, until a fuel harvest from the LRC becomes viable.

The SRC will be planted up using 20/25cm hybrid willow rods. They will be planted using hemp mulch mats to suppress weed competition. They will be planted at 0.6m spacing, in rows 1m wide, with 1.5m between twin rows.

These rows would be harvested regularly and taken to the goats to be used as fodder before converting to fuel. In addition to fuel, the harvest from this crop will also be used for pea/ bean sticks for the garden and other additional craft uses.

As our plot matures we will be able to provide fuel in increasing quantities from our woodland and hedgerows. This would allow us to reduce the area of short rotation coppice, and increase the number of fields.

3.2.2. Long Rotation Coppice

Our new plant woodland will provide us with fuel in the future. It will be a long term project aimed at providing quality timber for craftwork, fuel and fruit and nuts, as well as habitat for our pigs and goats on occasion. As such the first fuel harvest will not occur for 10 years or more. We will plant a combination of trees including, ash, alder, beech, black locust, chestnut, damson, elder, hazel, hornbeam, larch, mulberry, oak, pine, rowan, service tree, spruce, and walnut. We will be planting 4500m^2.

3.2.3. Hedge management

The management of existing hedgerows will provide the first supply of firewood from the plot. It is our intention to lay the majority of the hedgerow that forms the western boundary of our plot, leaving the mature trees. The future management of both existing and newly established hedgerows will contribute significantly to our fuel supply.

3.2.4. Additional firewood

Waste materials from the workshop will provide addition fuel. The Management of the existing woodland will contribute to the fuel supply.

3.3. Soil preparation

The soil survey indicates that this plot has an acidity between 4.6 and 5.3. The soil is perfect for blueberries, but we will need to improve it to make it more suitable for our other plans.

Course screened limestone will be rotivated into the soil at a rate of 10.5 tons per hectare in order to neutralize the soil. The cost of lime is estimated to be £40 a tonne including delivery and spreading costs.

Rockdust will also be applied to replenish trace mineral deficiencies at a rate of 5 tonnes per hectare. The cost of rockdust is estimated to be £300 a ton.

4. Services

4.1. Water and Drainage

4.1.1. Water for the household

Water will be provided by the ffynnon-deg spring. The spring water is being bottled commercially. We will have a supply for 12 hours per day. This will be stored in a 500 litre storage container.

We plan to design a future proof system allowing for the needs of an average family size. We estimate that we use between 20 and 30 litres of water a day for drinking and cooking, totalling 210 litres per week. It is estimated that a family would use about 1000 litres a week for washing, showers, baths, washing up, and using a dishwasher and washing machine. This totals 1210 litre a week.

4.1.2. Rainwater harvest

We will collect rainwater and it will be stored for irrigation. We estimate we will use up to 2500 litres of water a week for irrigation. We would create a storage facility of 6000 litres.

4.1.3. Drainage

Wastewater will be piped to a reed bed above our large pond. The wastewater will come from the shower, the washing machine and the bathroom and kitchen sinks. We will not be using any chemical products that will not be made safe by filtration through the reed bed.

The wastewater will pass through a series of reed beds planted with bulrush, yellow flag and willow before then flowing into the pond. These plants will take up any nutrient residue in the wastewater, effectively purifying the water before returning it to the natural watercourse.

4.2. Waste

Sewage will be managed with composting toilets. Compost produced will be used on the SRC. We will use a modern automatic system, with two waterless toilets connected to the same chamber. We will also have a traditional twin chamber outside toilet.

Urine will be dealt with separately using straw bale nitrogen fixing. Nitrogens in the urine are neutralised by the carbon content of the straw whilst retaining all the minerals and nutrients for use as mulch. This mulch will be used on the SRC. The straw will be changed fortnightly.

Kitchen waste will be composted using a dual chamber wormery. The cooked food scraps and raw food scraps being composted by cultivated tiger and earth worms. The resultant compost will be used to mulch the house garden.

4.3. Electricity

We intend to be connected to the community electricity supply provided by the micro hydro and have photovoltaic cells. We intend to minimize electricity consumption through the use of ultra low energy products. We are also intending to run a fridge, freezers, washing machine (without heating element), computer and stereo etc.

However, as we will be running a commercial workshop we will have greater electricity demands than for a house alone. The latest reports suggest that there will definitely be enough electricity generated by the micro hydro for us to run our workshop on a part time basis.

The workshop power use will be agreed with other high power users on the site. There will be more hydro electrical power generated in winter and less in summer. This corresponds with the land based work demands, meaning that the workshop business will be run primarily through the winter, when there is less work on the land.

There will be a 6 m^2 photovoltaic back-up system in place.

5. Buildings

Please find attached plans and elevations of buildings.

Kit and Saara will construct all buildings with substantial help from experienced friends. We plan to bring in employed labour during certain early stages of the build, and when absolutely necessary (for example to certify the electrics).

The building design has been based on a few simple ideas, utilising readily available sustainable materials, reused/recycled components, locally sourced low impact materials, and materials from the site.

The main buildings are the house and work building. Additional buildings are the barn, animal housing, greenhouse and composting toilet.

5.1. The House
External area 144m^2

We intend to start a family in our new home, and therefore we have designed a house to accommodate a family of four that is modular, meaning that the overall building design is simple to break down into two separate construction stages. This approach will lower our immediate financial costs and provide us with a building that will meet our current needs, whilst allowing for future expansion when the increase in our family size demands it.

The key aspects of this design are to provide comfortable and practical living and working space and storage for produce and products.

The house design comprises of minimal recycled masonry and stone foundations, structural squared timber walls, laminated beams and trussed joists, with infill straw bale walling and glazing, and an internal stone wall housing the chimney to provide thermal mass. The roof will be turfed with sedum.

The house is orientated to be south facing, with the main living space having south and west aspects. This main living space is open plan, comprising of living area, dining area, and kitchen, with the kitchen being in the centre of the house. The main bedroom has south and east aspects, the spare room/study/bedroom (for children we are planning)has an eastern aspect. To the north are the sauna, shower room, entrance hall, utility room, toilet, and pantry.

5.1.1. Materials and structure

Foundations
The foundations will be a combination of minimal strip footings, and minimal pad footings, made from limecrete, recycled masonry with stone faced aspects. Any further aggregates used will be recycled.

These foundations support the pre fabricated timber walls, laminated beams and the internal stone wall.

Walls
The design uses load bearing prefabricated squared timber sectional walls to create a structure with additional elements to support laminated beams. Other sections of external wall will be infill straw clay with an external lime render and an internal earth plaster render. The straw clay walling method uses chopped straw in a clay slip as an infill in a timber frame. It provides both insulation and thermal mass. The external timber walls will be lined with straw bales internally, and either boarded over or rendered, in different parts of the building. Internal walls are part of the timber structure, except for the stone wall which houses the chimney and provides thermal mass.

Floors
The design suspends the floor from the main structural components and effectively reduces the actual land footprint to a minimum. The floor will be a framework combination of laminated beams and I beam joists, with an underside of shuttering ply, with straw infill and reclaimed floorboards. I beam joists are lightweight timber I-section beams made from recycled woodchips. We have chosen them for their high performance and environmental specification. Shuttering ply has been chosen for its rodent proof nature.

Roof
The roof will be supported by the structural timber walls, laminated beams and trussed joists. The roof will be insulated with straw/ hay infill. We will use OSB boards either side of the insulative/ structural layer. The internal ceiling will be lined with plasterboard to provide a fire retardant layer. A butyl rubber membrane will provide a waterproof layer for the turf.

Table of materials

Element	Material	Reason	Role	Source
Foundations	Recycled Masonry	Recycled	Structural	Local/ UK
	Stone	Natural	Structural	From site if possible
	Limecrete	Environment	Structural	Calc ty Mawr lime, Wales
Floor	Laminated beams	Performance	Structural	Local/ UK if possible
	I beam joists	Performance	Structural	Local/ UK if possible
	Shuttering Ply	Performance	Skin	Jewsons (made in UK)
	Straw	Natural	Insulation	Local
	Floorboards	Reclaimed	Finish	Reclaimed
	Tiles	Reclaimed	Finish	Reclaimed
Walls	Squared Timber	Performance	Structural	Local/ UK if possible
	Laminated beams	Performance	Structural	Local/ UK if possible
	Straw clay	Natural	Insulation and thermal mass	Local/ UK
	Earth render	Natural	Skin	Pont-y-gafel
	Lime render	Environment	Skin	Calc ty Mawr lime, Wales
	Cobb	Natural	Thermal mass	Pont-y-gafel
	Timber window frames	Natural	Structural	Made on site
	Double glazing	Recycled	Lighting	Recycled
Roof	Laminated beams	Performance	Structural	Local/ UK if possible
	I beam joists	Performance	Structural	Local/ UK if possible
	Plasterboard	Fire retardant	Skin	Jewsons (made in UK)
	Vapor barrier	Performance	Membrane	Jewsons (made in UK)
	Straw Bales	Natural	Insulation	Local/ UK
	Shuttering Ply	Performance	Structural	Jewsons (made in UK)
	Butyl Membrane	Performance	Membrane	LBS (made in UK)
	Turf/ Sedum	Natural	Environmental	From Site

5.1.2. Passive and active Solar

The orientation of the building is designed to take advantage of the Sun. Solar water heating will reduce fuel use considerably. We will install a 6 square meter panel of photovoltaic cells just off the ground at the base of the southern elevation of the Work building.

5.1.3. Ventilation and infiltration

We plan to install a ducted heat exchanger to both transfer heat to parts of the house where natural convection will not allow, and to capture the heat that otherwise would be lost through exfiltration. Our design minimises infiltration and unintentional exfiltration through the use of double doors and windows.

5.1.4. Heating

The building is designed to minimise fuel use through substantial insulation and buffer zones of heat distribution and loss minimalisation.

The house will be heated in addition to the cooking stove with an efficient wood burner. This will be inset in the stone wall. The burner will be connected to heating ducts, which will be channelled to other rooms.

The house is designed to allow the heat generated in the main living space to be convected around house. There will be a ducted heat exchange system at the highest point of the building. Ducting inlets are also positioned in the kitchen and shower room. The outlets are in the living room, bedrooms and toilet.

5.1.5. Cooking

An efficient wood burning range cooker will provide us most of the cooking needs and hot water with additional gas hobs running of pressurised alcohol, bio ethanol or bio diesel. This hob will be an adaptation of a proven design, which will run on any liquid flammable under pressure. The wood burning range cooker will contribute to the heating of the house through both natural convection and the ducted heat exchange system.

5.1.6. Thermal Performance

The house is designed to perform excellently. The main entrance is incorporated into a buffer zone. The pantry is also a buffer zone. These are not considered to be part of the house for heating purposes, although they are included in the thermal performance calculations as part of the house.

Element	Area m^2	U value W/m^2K	W/K
Floor	120	0.2	24
Roof	130	0.2	26
Walls Timber	77.7	0.2	15.54
Walls Bales	81.5	0.2	16.3
Doors	4.4	0.83	3.6
Windows (& doors)	75.95	1.00	75.9

The total specific heat loss = 161.4 W/K
The Volume of the house will be $626m^3$.

The heat load will be 0.26 Watts per cubic meter per degree

5.1.7. Construction

Foundations
The footings will be dug and foundations built. The soil removed digging the foundations will be used as render later in the build. The stone removed will be used as aspects of the foundations or to build walls. Topsoil will be used to establish vegetable beds.

Timber structure
The prefabricated timber section walls will be assembled to create the enclosed structure and laminated beams installed to create the additional timber structure. The I beam joists will be installed to create the floor and roof framework. Temporary flooring will be put down in sections.

Roof
OSB Boards will be attached to the underside of the roof in sections, the framework filled in with straw bales, and boarded over with OSB boards to form the top layer of the roof structure. This will be covered with a butyl rubber membrane to provide a waterproof layer. This will then be turfed.

Walls
The framework for the infill walling will be built and filled with straw clay and glazing. The straw clay sections will be rendered externally with lime.

Floors
Once the building is weatherproof the boards will be attached to the underside of the floor, the framework filled in with straw bales, and boarded over.

Internal stone wall
The stone wall will be constructed incorporating fire flue and heating ducts.

Basic structure complete
The stages of construction listed above get the basic structure built in one phase, minimising the impact of construction. Once the building is a complete weatherproof structure, heating, plumbing and wiring, kitchen and bathroom, and internal carpentry will be installed. Once the initial build is complete decorating and further refinement will be undertaken to finish the house.

5.1.8. Reversibility
The prefabricated design of the building structure would allow it to be disassembled into its components and taken of site leaving only the foundations, which could be dismantled and removed. The internal stone wall could be demolished. There would need to be some earthworks to return the site to its original gradient.

5.2. Work building
External area 144m^2

This building comprises of a workshop and studio space, a commercial meat kitchen, dairy, and a storage room for freezers and refrigerators. There is a central core that contains a wood burning boiler.

The 77m^2 workshop occupies the southern part of the building; the north of the building is the commercial kitchen of 13m^2 to the west and the dairy of 9m^2 to the east, with an entrance and freezer room of 8m^2 in between.

The workshop will provide a practical layout for a commercially viable workshop, studio space for a sculptor, storage for tools and materials.

The commercial meat kitchen is designed to meet our needs and also be available to other residents should they require the use of a registered facility.

The dairy is designed to meet our needs, but also will be available to other residents should they require the use.

The storage room will house our freezers for our meat products, and act as an entrance, connecting the kitchen and dairy to the central core.

The central core is accessible from the workshop and the storage room. This central core contains the wood burning boiler that provides hot water and heating for the building. The core is open to the workshop. There will be a ducting system that channels hot air around the workshop and to the kitchen and dairy when necessary.

5.2.1. Materials and Structure

Foundations
The foundations will be a combination of minimal strip footings, and minimal pad footings, made from limecrete, recycled masonry with stone faced aspects. Any further aggregates used will be recycled.

These foundations support the pre fabricated timber wall structure and laminated beams.

Walls
The design uses load bearing prefabricated squared timber sectional walls to create an enclosed structure, which will be the commercial meat kitchen, dairy and entrance and freezer room. The squared timber sectional walls will be lined internally with straw bales. The lower section of these bale walls will be boarded over and tiled, the upper section will be rendered.

This timber structure supports laminated beams to create the workshop area.

The workshop area external walls will be a combination of infill straw bales with an external lime render and an internal earth plaster render, and glazing.

The in fill straw bale walling method utilises a modular design whereby the components are size specific and uniform being based around straw bale dimensions. Units of straw bales stacked in a plywood sided casing and rendered will slot into the framework forming the walls, and can be replaced at a later date with glazed window units as and when required or affordable. Once removed and replaced with glazing the rendered bale units can be reused elsewhere as a building material or composted.

The windows will be two sets of double-glazing with a suitable air gap, which is a standard practice in cold environments. The frames of course will be made on site using the workshop machines, made from materials from the site if available and appropriate.

As a temporary measure polycarbonate sheeting will be used as glazing. This will provide a weatherproof workshop whilst waiting for the timber from the site that will be used to make window frames to season. These polycarbonate sheets will be used later to build the greenhouse.

Floor
The prefabricated squared timber sectional structure floor will be a framework of I beam joists, with an underside of shuttering ply, with straw infill. This will be boarded over and tiled.

The workshop area floor will be a framework of laminated beams and I beam joists, with an underside of shuttering ply, with straw infill and reclaimed floorboards.

The design suspends the floor from the main structural components and effectively reduces the actual land footprint to a minimum.

Roof
The building will have a low angle sloping roof covered with sedum. This roof will slope down towards the South.

The roof is part of the structural frame constructed using laminated wooden beams and trussed joists. The roof will be insulated with straw/ hay infill. We will use OSB boards either side of the insulative/ structural layer. A butyl rubber membrane will provide a waterproof layer for the turf.

Table of materials

Element	Material	Reason	Role	Source
Foundations	Recycled Masonry Stone Limecrete	Recycled Natural Environment	Structural Structural Structural	Local/ UK Pont-y-gafel Calc ty Mawr lime, Wales
Floor	Laminated beams I beam joists Shuttering Ply Straw Floorboards	Performance Performance Performance Natural Reclaimed	Structural Structural Skin Insulation Finish	Local/ UK if possible Local/ UK if possible Jewsons (made in UK) Local Reclaimed
Walls	Squared timber Laminated beams Straw Bales Earth render Lime render Timber window frames Double glazing	Performance Performance Natural Natural Environment Natural Recycled	Structural Structural Insulation Skin Skin Structural Lighting	Local/ UK if possible Local/ UK if possible Local/ UK Pont-y-gafel Calc ty Mawr lime, Wales Made on site Recycled
Roof	Laminated beams I beam joists Plasterboard Vapour barrier Straw Bales Shuttering Ply Butyl Membrane Turf/ Sedum	Performance Performance Fire retardant Performance Natural Performance Performance Natural	Structural Structural Skin Membrane Insulation Structural Membrane Environmental	Local/ UK if possible Local/ UK if possible Jewsons (made in UK) Jewsons (made in UK) Local/ UK Jewsons (made in UK) LBS (made in UK) From Site

5.2.2. Passive Solar
The orientation of the workshop building is designed to take advantage of the Sun.

5.2.3. Ventilation and infiltration
Our design minimises infiltration and unintentional exfiltration through the use of a buffer zone entrance and double windows. The ducted air system will provide heated air when the boiler is hot and unheated air if it is switched on when the boiler isn't hot. There will be an air filter in the workshop.

5.2.4. Heating
The workshop will be heated when necessary with an efficient wood burning boiler. This will provide hot water and heating through a ducted hot air system

The building is designed to minimise fuel use through substantial insulation and a buffer zone entrance for loss minimalisation.

5.2.5. Construction

Foundations
The foundations will be built.

The soil removed digging the foundations will be used as render later in the build. Topsoil will be used to establish vegetable beds. The stone removed will be used in the foundations or to build walls. Any further aggregates used will be recycled.

Timber structure
The prefabricated timber section walls will be assembled to create the enclosed structure and laminated beams installed to create the additional timber structure. The I beam joists will be installed to create the floor and roof framework. Temporary flooring will be put down in sections.

Roof
Laminated beams will be positioned over the workshop area. Trussed joists will be installed to form the roof frame.

OSB Boards will be attached to the underside of the roof in sections, the framework filled in with straw bales, and boarded over with OSB boards to form the top layer of the roof structure. This will be covered with a butyl rubber membrane to provide a waterproof layer. This will then be turfed.

Walls
The framework for the infill walling will be built and filled with straw bales. The bale sections will be rendered externally with lime. Polycarbonate sheeting will be used as temporary glazing. These sheets will be used later for the greenhouse.

Floor
Once the building is weatherproof the boards will be attached to the underside of the floor, the framework filled in with straw bales, and boarded over.

Basic structure complete
This method is proposed to achieve construction as quickly as possible working to a tight budget. It ensures that the building is weatherproof using simple tools and techniques so that the workshop can then be used safely to produce the more refined final construction components.

5.2.6. Reversibility
The prefabricated design of the workshop building would allow it to be disassembled into its components and taken of site leaving only the foundations, which could be dismantled and removed. There would need to be some earthworks to return the site to its original gradient.

5.3 Barn
External area 80m^2

The barn will be used to store hay and feed, agricultural equipment and mechanical tools, and for seasoning timber, and storing finished pieces of furniture. It will also contain the goat milking area and additional animal housing. This additional animal housing would be used for birthing, housing a boar, or for quarantine purposes. The upper section above the animal housing and milking area will be used initially as our temporary accommodation.

The barn will be built against the wall to the north of the walled garden.

Materials and structure

Foundations
The foundations of the animal housing and milking area will be a pad made from limecrete and recycled masonry. The barn will be built against the wall of the walled garden. The other wall will have minimal strip foundations. Any further aggregates used will be recycled.

Walls
The barn will be built against the wall of the walled garden. The lower section of the animal housing and milking area will be recycled masonry, the upper section a timber fame with infill of straw clay. The rest of the building will be a simple timber construction, comprising of a timber frame clad with timber. The frame will be from the site if appropriate timber is available. The cladding will be from the site.

Floor
The floor of the animal housing will be paved. The floor of the milking area will be made from reclaimed tiles. The rest of the barn will have a floor of compacted shale.

Roof
The roof will be a timber frame with OSB boarding covered with a butyl rubber membrane to provide a waterproof layer. This will then be turfed.

Table of materials

Element	Material	Reason	Role	Source
Foundations	Recycled Masonry Limecrete	Recycled Environment	Structural Structural	Local/ UK Calc ty Mawr lime, Wales
Floor	Recycled Masonry Limecrete Paved Tiled Shale	Recycled Environment Reclaimed Reclaimed Natural	Structural Structural Finish Finish Finish	Local/ UK Calc ty Mawr lime, Wales Reclaimed Reclaimed UK
Walls	Recycled Masonry Timber Straw clay Lime render Timber window frames Polycarbonate sheet	Recycled Natural Natural Environment Natural Performance	Structural Structural Insulation and thermal mass Skin Structural Lighting	UK From site Calc ty Mawr lime, Wales Made on site
Roof	Timber Shuttering Ply Butyl Membrane Turf/ Sedum	Natural Performance Performance Natural	Structural Skin Membrane Environmental	From site Jewsons (made in UK) LBS (made in UK) From Site

Construction

Foundations
The foundations will be dug and the slab for the animal housing and milking area poured.

Walls
The section of the garden wall will be built. The lower section of masonry walls will be built.

Floor
The floor for the animal housing and milking area will be laid.

Walls
The timber frame of the walls will be built. The straw clay section will be filled.

Roof
The timber frame roof will be built. OSB boards will be attached and covered with a butyl rubber membrane to provide a waterproof layer. This will then be turfed.

Walls
The timber walls will be clad with timber from the site.

Reversibility
Due to the flooring and substantially strong walls in the animal housing and milking area, this building is similar to our goat and pig housing. This section is less reversible than our other buildings. The masonry walls could be dismantled, but the limecrete slab would need to be broken up. This could then be recycled. The timber walls and roof would be simple to disassemble. There would need to be some earthworks to return the site to its original gradient.

Greenhouse
External area 80m^2

The south facing greenhouse is built against a wall. It has been designed to incorporate a rainwater harvest and storage facility. This is a series of tall slim black tanks positioned against the back wall. We are planning to store 6000 liters of water for irrigation. This tank system will be fed from the greenhouse guttering. It will act as a solar heater within the greenhouse. The water will warm up during the day and this warmth will slowly be released into the greenhouse during the night.

The total rainwater yield is calculated to be 130m^3 per year.

Materials and structure
The greenhouse will be a timber frame built against a wall with polycarbonate sheeting. The timber will be from the site. The frame will sit on minimal foundations of limecrete and recycled masonry.

Table of materials

Element	Material	Reason	Role	Source
Foundations	Recycled Masonry Limecrete	Recycled Environment	Structural Structural	Local/ UK Calc ty Mawr lime, Wales
Walls	Recycled Masonry Timber Polycarbonate sheet	Recycled Natural Performance	Structural Structural Glazing	UK From site
Roof	Timber Polycarbonate sheet	Natural Performance	Structural Glazing	From site

Construction
The wall will obviously be built first as part of the walled garden. The frame will be built in sections in the workshop. The greenhouse will be built in stages, starting as a small section, being extended when the polycarbonate sheeting that has been used as temporary glazing in the workshop becomes available.

Reversibility
The frame and sheeting will be easy to dismantle and reuse. The recycled masonry walls could be dismantled. The foundations would need to be broken up.

5.5. Pig and Goat Housing

The Pig and Goat house is designed to house our pigs and goats. It is divided into two sections. It is a simple building, constructed mainly from timber, recycled masonry, and limecrete.

The pigs will be housed in the eastern side, the goats in the western. Internally the pig side of the building is divided into stalls. The goat side of the building is also divided into stalls and a removable partition will allow kids to be kept separately from their mothers over night to save the milk for human consumption.

On the southern side of the building there will be a limecrete holding pen, divided in two. There will also be a small limecrete pen to the north of their house to allow for animal movement control.

To the south and east of the building there will be a fenced holding area of about 400m^2 for times when the pigs are not put out to graze, and especially for when the piglets are very young.

To the west of the pig and goat house is the yard, and the barn, with additional animal housing and milking area. The yard will be used to contain the goats when they are not put out to graze.

Materials and structure

Foundations

The foundations will be a pad made from limecrete and recycled masonry. Any further aggregates used will be recycled.

Walls

The bottom section of the walls will be recycled masonry with the top section made of timber from the site. The masonry will be rendered externally and internally. The timber section will be clad with timber from the site.

Floor

This will be a limecrete pad over recycled masonry with paving.

Roof

The roof will be a timber frame with OSB boarding covered with a butyl rubber membrane to provide a waterproof layer. This will then be turfed.

Table of materials

Element	Material	Reason	Role	Source
Foundations	Recycled Masonry Limecrete	Recycled Environment	Structural Structural	Local/ UK Calc ty Mawr lime, Wales
Floor	Recycled Masonry Limecrete Paved Tiled Shale	Recycled Environment Reclaimed Reclaimed Natural	Structural Structural Finish Finish Finish	Local/ UK Calc ty Mawr lime, Wales Reclaimed Reclaimed UK
Walls	Recycled Masonry Timber Lime render Timber window frames Polycarbonate sheet	Recycled Natural Environment Natural Performance	Structural Structural Skin Structural Lighting	UK From site Calc ty Mawr lime, Wales Made on site
Roof	Timber Shuttering Ply Butyl Membrane Turf/ Sedum	Natural Performance Performance Natural	Structural Skin Membrane Environmental	From site Jewsons (made in UK) LBS (made in UK) From Site

Construction

Foundations
The foundations will be dug and the slab poured.

Walls
The lower section of masonry walls will be built.

Floor
The floor will be poured and paved.

Walls
The timber section of the walls will be built.

Roof
The timber frame roof will be built. OSB boards will be attached and covered with a butyl rubber membrane to provide a waterproof layer. This will then be turfed.

Walls
The timber walls will be clad with timber from the site.

Reversibility
Due to the flooring and substantially strong walls this building is the most mainstream of our designs. As such it is less reversible than our other buildings. The timber walls and roof would be simple to disassemble, the masonry walls could be dismantled, but the concrete slab would need to be broken up. This could then be recycled. There would need to be some earthworks to return the site to its original gradient.

5.6. Poultry

5.6.A. Chicken coop

A purpose made mobile chicken coop will be used to house the chickens at night. It will be rodent and fox proof. It will essentially be a simple timber construction on wheels. Although there is a yard to the north of the greenhouse wall for the poultry, it will be beneficial to be able to move the chicken coop around the site appropriately. It will be mounted on four lightweight wheels and will be designed to be moveable by one person.

Materials

It will be made primarily from off-cuts produced during the major building works. The roof will be lined with roofing felt for a lightweight finish. It will use high grade chicken wire to ensure rodent proofing.

Table of materials

Element	Material	Reason	Role	Source
Floor	Timber	Natural	Structural	From site
Walls	Timber Polycarbonate sheet	Natural Performance	Structural Lighting	From site
Roof	Timber Felt	Natural	Structural	From site

Construction

The coop will be constructed in the workshop using whatever happens to be available and appropriate.

Reversibility

This building will leave no footprint on the earth.

5.6.B. Duck house

A purpose made mobile duck house will be used to house the ducks at night. It will be rodent and fox proof. It will be a simple timber construction on wheels that will look very similar to the chicken coop. Again, it will be beneficial to be able to move the duck house around the site appropriately. It will be mounted on four lightweight wheels and will be designed to be moveable by one person.

Materials

It will be made primarily from off-cuts produced during the major building works. The roof will be lined with roofing felt for a lightweight finish. It will use high grade chicken wire to ensure rodent proofing.

Table of materials

Element	Material	Reason	Role	Source
Floor	Timber	Natural	Structural	From site
Walls	Timber Polycarbonate sheet	Natural Performance	Structural Lighting	From site
Roof	Timber Felt	Natural	Structural	From site

Construction

The coop will be constructed in the workshop using whatever happens to be available and appropriate.

Reversibility

This building will leave no footprint on the earth.

5.6.C. Goose house

A purpose made mobile goose house will be used to house the geese at night. It will be rodent and fox proof. It will be similar to the other poultry housing, but designed for bigger birds; a simple timber construction on wheels. The geese are to control grass wherever it is needed on the plot, but we expect their house to be mostly parked by the pond.

Materials

It will be made primarily from off-cuts produced during the major building works. The roof will be lined with roofing felt for a lightweight finish. It will use high grade chicken wire to ensure rodent proofing.

Table of materials

Element	Material	Reason	Role	Source
Floor	Timber	Natural	Structural	From site
Walls	Timber Polycarbonate sheet	Natural Performance	Structural Lighting	From site
Roof	Timber Felt	Natural	Structural	From site

Construction

The coop will be constructed in the workshop using whatever happens to be available and appropriate.

Reversibility

This building will leave no footprint on the earth.

5.6.D. Compost toilet
A custom-made mobile compost toilet will be used to service the plot during the construction period and thereafter. It will be rodentproof. It will be a simple timber construction on which can be moved around the plot.

For details and specifications please visit:

http://www.thunderboxes2go.co.uk/

Reversibility
This building will leave no footprint on the earth.

6. Business plans for land based produce

We intend to establish a number of ventures on the plot. These will be run as business to both provide for our own needs, and to generate income. We will run these businesses ourselves without additional staff. All of our ventures will be financed personally.

6.1. Pig business

The pig business will provide pigs reared to slaughter weight and weaners for sale. We expect to use all the meat produced for our meat business and to sell weaners to people in the local area.

6.2. Meat business

The meat business will produce a range of products including sausages, bacon, dry cured ham, and smoked meats. Our pig business will provide the majority of meat, but we will also have goat, chicken, duck and goose, as well as beef provided by another site resident

We expect our customer base to be comprised of Internet based sales, local customers, the community hub café, and other residents.

6.3. Workshop business

The workshop business will produce one off pieces of furniture and artworks, and commissions of both. It will also plane seasoned timber from the site, and produce constructional work.

We expect to generate most sales of furniture and artwork through gallery shows and exhibitions. The Lammas website will provide a useful link.

6.4. Craft business

Once established we intend to develop a craft business that will produce soap and candles using the by-products of the meat business.

Once we have set up this business we expect to sell these products through the trading post, the Lammas market stall, the Lamas website, and as an add on to sales of our other business sales.

6.5. Machinery business

The machinery business will provide the service of hiring machinery.

We expect our customers to be mostly other residents, but this service will be available to anyone in the local area.

6.1. Pig business

6.1.1. Livestock welfare recommendations

The Code of Recommendations on the Welfare of Livestock suggests a density of no more than five pigs for half an acre of field or alternatively between 4 and 8 animals on an acre of woodland.
We have 8 750m^2 fields. At any time 4 of these fields will be used for grazing, totalling 3000m^2 (0.75 acres). In addition we have our woodland area and orchard area.

Our orchard provides about 1300m^2 (0.3 acres) of grazing, and the windfall apples will be a useful additional source of food. Our woodland covers 4500m^2 (1.11 acres) that will be usable as forage once the trees are established.

So we could assume we have enough space for up to 16 pigs. We don't intend to turn our fields into mud, and so will work with stocking densities well below this figure.

6.1.2. Our Pigs

We will start with three pedigree rare breed Oxford Sandy and Black piglets. We will raise these and slaughter one of them after 30 weeks. We will keep the other two and breed from them. They will produce enough piglets for our plans to sell weaners, porkers, and to keep a few baconers for our meat and the sale of pork products.

We expect to keep two of our first registered sows, and breed from them once a year each, at different times. We expect to get litters of eight. In our first few years of breeding we will only attempt to breed from one of our sows. The business plan and accompanying cashflow is based on only one litter of 8 per year.

6.1.3. Boar

We have contacted a local Oxford Sandy and Black keeper with a boar, who has agreed to provide his boar free of charge. We are yet to finalise arrangements, but we are planning to bring his boar to us, and it will have to stay for 20 days due to the holding restrictions, and therefore it is reasonable to plan for 40kg of pig pellet feed, which would cost about £15, plus about 40kg of additional feed. We will also have to cover the cost of transport for two journeys, but as the boar owner lives locally, this should not be very much. We would house the boar for the duration in the additional animal housing in our barn.

Should other plot holders who are keeping pigs need a boar it would be reasonable for them to bring their sow to us for the 20 day holding period, and contribute to the cost of feeding the boar, and the transport costs.

6.1.4. Pig Management

In the first year we will Slaughter whichever of our pigs we like the least after 30 weeks.

After the first year, we have 2 sows, and one litter of 8 at a time, we will have 10 pigs until we sell 4 after 8 weeks. Assuming we have a litter of 8, we intend to manage these piglets as follows:

8 weeks

We will sell 4 of our weaned pigs after 8 weeks for £80 each and we will get £320.
The remaining 4 will be reared to a selling weight.

24 weeks

After 24 weeks we will have 4 pigs weighing 75kg
Organic pork of a rare breed is worth approximately £8 per kg
If we sell 2 pigs weighing 75kg of which 50kg is meat, as pork we will get £800

30 weeks

The remaining 2 we keep for a further 6 weeks until they weigh 100kg
If we sell 2 pigs weighing 100kg of which 75kg is meat, as pork we will get £1200

Therefore we could produce about £2000 worth of pork per year, plus £320 worth of weaners, based on the rearing of 8 pigs. These prices come from various sources.

6.1.5. Pig feed

6.1.5.A. Pig feed pellets

We estimate our pigs will need about 2kg per day per sow of pig pellet feed. In addition to pig pellet feed we will also produce feed from the land, and put our pigs to graze. 2kg of vegetables is approximately equivalent to 500g of pig pellets. 3kg of grass is also approximately equivalent to 500g of pig pellets.

Therefore we will be able to reduce the quantities of pig pellets fed by increasing the supplementary feed. If we were to provide 2kg of vegetables per day per sow we could reduce the pig pellets fed to about 1.5kg per sow per day. Similarly during the summer grazing will contribute to their feed.

Once we are established we may decide to buy in the raw ingredients in bulk to mix our own pig feed, which presumably will cost less than buying pellets.

6.1.5.B. Fodder crops

We will grow a range of fodder crops including Jerusalem artichokes, carrots, turnips, and swedes. We will also feed our pigs surplus and unwanted crops grown for our own consumption.

John Nix seed prices indicate that kale, swedes and turnips will cost £51 to sew per hectare, requiring 1.85kg Kale seed, .5kg swede seed, and 1.85kg turnip seed per hectare. We expect a yield of about 30 ton per hectare.

If we plant one of our 750m^2 fields, 0.075 hectares, we expect to spend £4 on seed and harvest about 2250kg of crop. Therefore in our 2nd year of keeping pigs we would plant two of our fields, spending about £8 on seed to harvest about 4500kg of fodder crops. We will store our harvest in our barn

6.1.5.C. Feed costs

In our first year, with three pigs, we need up to 2000kg of pig pellets. This would cost approximately £660 for organic pig pellets. We also plan to feed about 2kg per day per sow of food we have produced, which will be the equivalent of 500g and therefore 2000kg will have an equivalent value of £165.

After the first year, with two pigs, we need 1500kg per year. This would cost approximately £500 per year, plus 2kg per day per sow of food we have produced with a value of £125.

One litter of 8 managed as above will eat 1500kg of feed. This would cost approximately £500. The food we grow for the litter of 8 would have a value of £125.

Therefore our pigs should eat food to the value of £1250, which actually costs us about £1008

6.1.6 Additional costs

We are budgeting for £100 a year Vet bills, we do not expect to need a vet every year, and hope not to need one at all, but we are budgeting for the possibility, and intend the money to accumulate to provide funds should we need them.

(We intend to use bulrushes from our reedbed (spring to autumn) and sawdust from the workshop (winter) as bedding, harvesting them from our reed-bed.)

6.2. Meat business

6.2.1. Meat
See pig management (6.1.4.)

Pigs after 24 weeks
After 24 weeks we will have 4 pigs weighing 75kg
If we sell organic pork of a rare breed we will get approximately £8 per kg
If we sell 2 pigs weighing 75kg as pork, of which 50kg is meat we will get £800

However, if we turn this 100kg of pork into pork and apple sausages with 80% meat, we will have 125kg of sausages with a value of £10 per Kg, £1250

Pigs after 30 weeks
The remaining 2 we keep for a further 6 weeks until they weigh 100kg
These 100kg pigs will be 75kg meat:

Approximately 25kg will be suitable for making smoked bacon.
So we will have 50kg of bacon with a value of £12 per kg of £600
It will take about 5 weeks to produce.

Approximately 25kg will be suitable for making dry cured smoked ham.
So we will have 50kg of ham with an estimated minimum value of £25 per kg of £1250
It takes 9 – 18 months to produce. (Carmarthen ham costs £35 per kilo)

The remaining 25kg will have a value of £8 per kilo
So we will have 50kg of pork with a value of £400

However, if we turn this 50kg of pork into pork and apple sausages with 80% meat, we will have 62kg of sausages with a value of £10 per Kg, £620

6.2.2. Slaughtering
We have contacted the Pembrokeshire meat company. The price of slaughtering depends on the weight of the pig. The first two pigs annually will cost £52 to slaughter. The second two, being heavier will cost £60. We will need to have the meat delivered to us in a refrigerated vehicle. This will cost £35 each time. We also have the cost of taking the pigs to the slaughterhouse.

It would be better to have the pigs slaughtered on the site; the animals would be under less stress, and the meat produced would be of a better quality. If we can find a way of getting our pigs slaughtered on site legally we will do it.

6.2.3. Added value
Rather than sell our pigs as pork we intend to make a range of meat products, including pork and apple sausages, smoked bacon and dry cured hams.

6.2.4. Facilities

We are aware of the legal requirements of slaughtering and processing meat. We will need to have registered facilities if we intend to use our premises for the purposes of a food business on five or more days whether consecutive or not in any period of five consecutive weeks. We will have a commercial kitchen appropriate for registration in our work building.

We will have commercial grade mincing and sausage filling machines. We will have refrigerators and freezers for the storage of meat.

We will build a smokehouse once we have the plot established.

6.2.5. Additional costs

We may need to buy sausage casings. We are aware that by law not all of our pig can be returned to us from the slaughterhouse. Ideally we would use all of our pig, including our own sausage casings.

6.2.6. Sales

In addition to the trading post there will be a "Lammas" stall set up in a local market offering various goods from the site. We expect to take our turn in manning it if it is set up in this way. One sensible option for specialist producers is Internet based sales. There will be a Lammas website. We expect that this outlet will enable a substantial amount of our sales.

The Rare Breed Survival Trust Meat Marketing Scheme will be useful for selling traditional products. We also intend to experiment with smoked goat, geese and duck, goat's sausages etc.

6.2.7. Income

We could produce about £3700 worth of products per year based on the rearing of 8 pigs. However, we are planning to provide ourselves with all our own needs, and sell the rest to cover our costs and generate an income. We are working to the assumption that we will actually sell about £3000 worth of products per year, to generate an income of about £2000. These prices are based on actual prices for organic rare breed products.

The meat business will not generate this income in its 1st year. The 2nd year will produce the first litter, and the start of meat products production. The sausages and bacon will be available for sale on the 2nd year, but the dry cured smoked ham starting to be produced at the end of the 2nd year will not be available for sale until the 4th year. Also we will not start the meat business until the 2nd plot year.

Business forecast:

Plot year	Business year	Costs	Produce	Sales	Home use	Income
2	1	£1186	£610	£380	£230	-£806
3	2	£1058	£1570	£1230	£340	£172
4	3	£1058	£3095	£2630	£465	£1572
5	4	£1058	£3720	£3130	£590	£2072
6	5	£1058	£3720	£3130	£590	£2072

6.3. Future Plans

The above business plan and cashflow forecasts are based on the rearing of one litter of 8. After a few years of experience we will breed from both of our sows at different times of the year. This should double our meat output. The costs of feed for the additional litter would add about £500, plus about £4 for seed the additional slaughtering fees, transport, possible vets bills and boar costs would add £337. The total additional costs would add up to £837 minus the 4 additional weaners sold after 8 weeks for £320, represents total additional costs of £517

The additional £3720 of meat produced would all be destined for sale, as we do not imagine we would increase the amount we provide ourselves with for our own needs.

Therefore should we rear two litters of 8 a year our figures would be significantly higher. It would increase our workload, and also the demand for the additional food we grow for the pigs. It would also increase the demand on the fields. Statistically we have enough land to cover this possible increase in livestock numbers, but we will make the decision once we have the experience to do so. The main issues will be how well the fields cope with the management plan based on rearing of one litter of 8, and also whether we can dedicate an additional field to the growing of fodder crops in our field rotation.

Future possible forecast:

Plot year	Business year	Costs	Produce	Sales	Home use	Income
7	6	£1571	£7440	£6850	£590	£5279

6.3. Workshop business
Kit is planning to run a commercially viable furniture making business on a part time basis, and continue to practice as an artist.

He is currently establishing this business; one of the main limiting factors is workshop space. He has a small workshop set up at the moment, has produced a number of commissions and is starting to generate more work.

Timber from site
He is planning to convert and store timber from the site and work with it, using the trees allocated each year from the woodland.

The woodland management plan allocates .71m^3 of hardwood per plot per year, as part of the ongoing management process.

The .71m^3 once sawn can be regarded approximately as three boards 3m long, 90cm wide by 6cm thick, and two boards 3m long by 90cm wide by 3.5cm thick.

Once planed this can be regarded as 3 boards 3m long, minimum 80cm wide, by 5cm thick and two boards 3m long, minimum 80cm wide, by 2.5cm thick

The timber that would make these 5 theoretical boards will be used to produce furniture and artwork.

The three 5cm thick boards could make, for example, two simple substantial desks with tops 1.5m x 80cm, or one more complicated desk of the same dimensions, and a pretty hefty coffee table

The two 2.5cm thick boards could make 20 panels approximately 40cm x 60cm. This is the average size of the panel that I currently use to make inlayed artworks. It is highly unlikely that I would want to make 20 of these panels in a year; it would be better to think of using one of these boards to make 10 panels and use the other board in furniture production.

In reality, the work produced will be designed around the timber available, but for the sake of the business plan for this application it is to be assumed that I will have enough timber allocated under the woodland management plan every year to produce two large pieces of furniture, lets stick with the example of desks, one small piece of furniture, lets say a coffee table, and 10 panel based artworks.

Not every resident has plans to use their allocation of timber from the site, so it would be possible for me to trade/barter/buy additional timber harvested from the site.

Allowing One inch per year to season it is reasonable to assume there will be usable timber from the site within three years to be used for projects to contribute to land based income.

Until this site produced timber is ready he will continue to use sustainably managed welsh hardwoods from other locations. In addition to Welsh hardwoods he uses reclaimed hardwoods of various origins. This practice will continue to be used to its full advantage in his artworks.

Land based projects
The workshop will be used to make furniture and artworks using timber from the site. Kit will continue to use small amounts of interesting reclaimed hardwoods in addition timber from the site.

The plan is to have between 2 and 6 furniture projects a year. We believe this sort of individual project based work is particularly suitable as it can be planned around the seasonal management of the plot. It would be reasonable to produce 2 to 6 pieces of furniture a year using the allocated to our plot timber from the site.

An example of an oak table I have made (currently for sale at £800)

An example of an oak bed I have made (sold for £1500).

As well as the furniture side of the business he will continue to produce unique artworks and commissioned pieces. Based on current works it would be reasonable to produce between 10 and 15 pieces of artwork of a reasonable size a year using the allocated to our plot timber from the site.

An example of an ash panel inlayed with reclaimed beech, iroco, mahogany, oak, teak and walnut I have made (Works of this nature are currently selling in the region of £400 – this piece sold for £395)

Facilities

As well as providing space for bench work and hand tools, the workshop will contain machinery including the following: a table saw, planner thicknesser, bandsaw, mortising machine, drum sander machines, disk and belt sanding machines, router table, spindle molder, wood working lathe, milling machine, metal working lathe, welding equipment, and a potters wheel.

The workshop building design provides enough space for a practical layout of these machines, with enough space for bench work and construction.

Costs
The timber is free, but it will need to be milled before seasoning. The saw mill will cost £200 a day to hire, we should be able to plank all our timber in o days, therefore we expect to pay £200 per year.

The electricity is free, effectively being paid for by our service charge. The plot will provide fuel for heating, in addition to burning workshop waste. Workshop consumerables, miscellaneous hardware and fixtures, tool maintenance, and a general category called "other" have been accounted for.

I already own all the machines, apart from the spindle molder and lathes. I may choose to upgrade some of my machines, but I would be able to produce the work stated with what I have.

Workshop land based Income
Based on the timber allocated to our plot from the site it is reasonable to produce 2 to 6 pieces of furniture a year. This furniture would make approximately £4000

Based on the timber allocated to our plot from the site it is reasonable to produce 10 reasonable sized artworks a year, in addition to the furniture. These artworks would make approximately £3000

Therefore using the timber allocated to our plot from the site I can make about £7000 a year

We will assume that the workshop generated income will not be £7000 in the first year of running the business. Also the workshops 1st year of business will not be in the 1st year of plot ownership, because I will be busy doing other stuff. The time lag will be usefull, as it means that at least some of the timber felled and milled in the first year will be sufficiently seasoned by the end of the second year, when I start to run the business.

We will assume that the workshop generated income will be:

Plot year	Business year	Costs	Sales	Income
2	1	400	2400	**£2000**
3	2	750	3750	**£3000**
4	3	750	4750	**£4000**
5	4	900	7900	**£7000**
6	5	1100	8100	**£7000**

These estimates are based on the use of the timber allocated annually to our plot. We expect to be able to trade/barter/buy additional timber harvested from the site, and use it for further projects once the plot is established and I have enough time. This extra work produced would be counted as income derived from the land.

Additional workshop use
As well as the possibility of extra work produced using timber harvested from the site, it is probable that work will be made using timber from other sources. This would not be counted as income derived from the site.

We are keen to set up the workshop to be able to be used by a number of people. We intend to have this workshop available by invitation to anyone living on the site or in the local area. There will also be the option of the use of the workshop, along with supervision and support for educational purposes.

The timber harvested from the site will either be used in the round, or milled before seasoning and then planed before use. I am not the only plot holder with a planer thicknesser, but should I upgrade my machine to a larger one, it would seem appropriate to use it for the planning of other people's timber.

Along with the carpentry tools and machinery I have a potters wheel. I do not currently own a kiln, as I have access to a few, and it is common practice to share the use of a kiln. We are currently looking into the option of an electrical kiln, as there will be sufficient power generated by the micro hydro during the winter to cover the number of firings we imagine we may wish to have. The other option would be to use a wood fired kiln.

There will also be basic engineering facilities in the workshop, a lathe and milling machine, and welding equipment. The design and development of sustainable tools and equipment, along with maintenance will be possible. We are looking into the manufacturing of "rocket stoves", continuous flow wormeries and bio methane digesters.

Eventually I would like to make the workshop available to a recent graduate or other talented individual, who is also interested in sustainable self sufficient living. We imagine that this guest would be provided with accommodation and food and the use of the workshop with support and tuition, in return for contributing to the overall running of the plot, and providing me with assistance in the workshop. This idea is only possible once the plot is established and capable of providing enough food and fuel for an additional adult. As such, the additional produce that this idea would demand is not included in our calculations, and should be regarded as a speculative suggestion. It would be a very good way of getting someone to work for us without having to pay them! Should this idea come to fruition, it would be essential that the guest would comply with the low impact policy specifications. We would not consider offering this possibility to anyone who didn't share these ideals.

6.4. Craft business

Once we have established the plot we will develop plans to start a craft business making soap and candles. This is not a current business plan ready to implement. We have made our own soap already; it is a simple process involving a reaction between oil or fat and lye. We have not made our own candles yet, but have spoken to people who have, and it sounds simple enough to consider practical.

We intend to be making a number of household products to provide for our own needs. It will be more efficient to produce larger amounts using the materials we have. Whilst we do not envisage this enterprise to provide us with a substantial income, it would be foolish to not take advantage of the surplus of a product we will be making anyway.

Soap

We intend to make soap to provide for our own needs. The fats of our animals and goat's cream will be used as raw materials. We have made our own soap using commercial lye, but we will try the traditional way of making lye, using wood ash.

To make the amount of soap we estimate we need in a year we need less than 1kg of fat. Therefore one pig will give us more than enough fat for soap every year. In addition we will use goat's cream for finer soap. We will have the raw materials to make far more than enough soap for our own needs, so we will make a larger amount, appropriate to the materials we have and sell the excess.

In "Lush" a 100g bar of soap costs from £2 to £3. If we aim to sell our soap for a similar price, depending on speciality, and sell 200 bars of soap a year, it would result in an income of about £500

Candles

Candles can be made out of different kinds of animal fats. Again, we will aim to make the candles we use ourselves, but we will have much more raw materials than we need for ourselves alone. This means that we will have homemade candles to sell.

Special candles cost from £1 to as high as £15. Our candles will be organic and environmentally friendly in the sense of pollutants and poisonous gases released when burning. Depending in the size of a candle we will ask from £3-£6. Selling 200 candles a year would give us an income of about £900

Craft sales

Once we have developed this business idea we expect to sell these goods at the trading post and the "Lammas" stall and through the Lammas website. We could also sell these products as an add-on to our meat sales, as they will be directly related.

We could make about £1400 a year from these products; however, as this is not a developed business plan it would not be appropriate to include this possible income in our 5 year plot plan

6.5. Machinery business
We plan to have a 2 wheel tractor and a range of implements. We will have a compact quad tractor if we need one (or Saara lets me buy one). These will be available to hire. We will start this business by only buying what we need for our plot. If it seems appropriate and good business practice we will expand our range of machinery.

As this is not a developed business plan it would not be appropriate to include this possible income in our 5 year plot plan.

6.6. Plot costs: Animal costs (except pigs)

6.7.A. Poultry feed
4 geese will need approximately 1 sack of feed every 2 months
6 chickens will need approximately 1 sack of feed every 2 months
6 ducks will need approximately 1 sack of feed every 2 months
At £15 per sack this works out to be £45 every 2 months, £270 per year
Total £270

6.7.B. Goat feed
2 goats will need approximately 1 sack of feed every 2 months
This works out to be £90 per year.
The goats will also need approximately 100 bales of hay per year.
This will cost £100 per year.
Total £190

6.7.C. Vet bills
Hopefully we won't need to worry about vet bills, but we need to budget for the possibility. We have contacted a local vet, and are budgeting for £100 per year.

6.7.D. Total cost of animals
We estimate the total cost of our animals per year to be **£600**

6.8. Plot costs (Not animals)

6.8.A. Seed cost
Seed costs for our vegetable gardens are estimated at £200 a year. We will save much of our own seed.

6.9. Total Plot costs
Estimated at **£800** a year.

7. Household needs

7.1. Fuel

We estimate that we will need 3 tonnes of wood for heating each year.
We estimate that we will need 2 tonnes of wood for cooking each year.

This totals at 5 tonnes of fuel per year. At £90 per tonne this is £450

7.2. Water and waste

We estimate that we will be using about:
210 litres drinking water a week
1000 litres washing water a week
2500 litres irrigation water a week

Total annual water consumption = 190000 litres

Basing charges upon 0.26 pence per litre plus £30 standing charge (*Dwr Cymru*): £524.00

7.3. Food

We estimate that we currently spend about a £70 a week on food between us. Our annual costs would be £3640.

Food Category	**% Current Spend**	**Value**
Bread/ rice/ pasta/ cereals	9	£300
Buns/ cakes/ biscuits	2	£60
Meat	12	£440
Fish	4	£150
Eggs	3	£100
Dairy	14	£500
Fruit	17	£600
Cooking oil	1	£40
Dried fruit/ nuts	3	£100
Vegetables	28	£1000
Sugar/ sugar products	1	£40
Chocolate	1	£40
Tea/coffee	2	£70
Fruit/ veg juices	5	£200
		£3640

7.4. Clothing
Kits spending on clothing is sporadic, but averages out to be about £300 per year. Saara's is similar. Therefore we assume our total annual clothing needs to be £600. This is higher than the Lammas guidance of £235 per person.

7.5. Electricity
Our electrical approximations are based on current bills for a large house running reasonably low energy lighting and appliances, with a couple of refrigerators and freezers and a small workshop. We intend to have a smaller house, with very low energy lighting and appliances, but more freezers and refrigerators, and a much larger workshop that is big enough to really work in.

We estimate the house to use approximately 2000 kWh annually. At 15p per kWh for renewably sourced electricity this would be £300

We estimate the workshop building will use approximately 2500 kWh annually. At 15p per kWh for renewably sourced electricity this would be £375

This totals 4500 KWh annually, which would cost £675

7.6. Household Maintenance
We estimate material costs to average out to about £200 a year, and 40 hours labour, £400, totalling £600

7.7. Other Household costs
We assume council Tax to be £500
Ground rent £1000
Telephone £360
Vehicle £1000
Travel £500
Mortgage £3480

7.8. Plot maintenance
The fencing will need to be maintained. Any timber will be provided from the site. We will need to buy fencing wire and ironmongery. We estimate material costs to average out to about £100 a year, and 40 hours labour, £400, totalling £500

7.10. Table of annual household and plot needs

Item	Value
Household heating & cooking fuel	£450
Water	£524
Food	£3640
Clothing	£600
Electricity	£300
Household maintenance	£600
Council tax	£500
Ground rent	£1000
Telephone	£360
Vehicle	£1000
Travel	£500
Plot maintenance	£500
Mortgage	£3480
Total	**£13454.00**

8. Produce

8.1. Fuel produced

All our firewood will be produced on site within three years. 5 tonnes at £90 per tonne would be the equivalent of £450

Although it will take five years for our short rotation coppice to produce this level of harvest we will produce the first supply of firewood from the plot through the management of existing hedgerows.

8.2. Water and waste

All of our water will be from the site. The site will deal with our waste. This would be equivalent to £524.

8.3. Food

We are aiming to produce approximately 78% of what we eat. 78% of our basic needs cost is £2796

Proportion of food produced from plot:

Food Category	% Current Spend	Value	Produced From plot	% Produced From plot	Value Produced
Bread/ rice/ pasta/ cereals	9	£300			
Buns/ cakes/ biscuits	2	£60			
Meat	12	£440	Yes	12	£440
Fish	4	£150			
Eggs	3	£100	Yes	3	£100
Dairy	14	£500	Yes	14	£500
Fruit	17	£600	Yes	15	£530
Cooking oil	1	£40			
Dried fruit/ nuts	3	£100	Yes	2	£66
Vegetables	28	£1000	Yes	28	£1000
Sugar/ sugar products	1	£40			
Chocolate	1	£40			
Tea/coffee	1	£70			
Fruit/ veg juices	5	£200	Yes	4	£160
		3640		**78**	**2796**

To provide this we will be paying running costs of £800

8.4. Electricity produced
The electricity we will use for our basic needs will be produced on site by the micro hydro and solar panels. 4500 kWh annually at 15p per kWh for renewably sourced electricity would be equivalent to £675

8.5. Household and plot maintenance
The equivalent of £800

8.6. Pigs and Meat business
We expect to earn £2000 by year 5

8.7. Workshop business
We expect to earn £7000 by year 5

8.8. Tables of annual plot production

Item	**Year 2**
Household Heating & Cooking Fuel	£150
Water	£524
Food	£499
Electricity	£675
Household and plot maintenance	£800
Pigs and meat business	-£806
Land based Workshop business	£2000
Total	**£3842.00**

Item	**Year 3**
Household Heating & Cooking Fuel	£250
Water	£524
Food	£1798
Electricity	£675
Household and plot maintenance	£800
Pigs and meat business	£172
Smallholdings costs	-£800
Land based Workshop business	£3000
Total	**£6419.00**

Item	**Year 4**
Household Heating & Cooking Fuel	£350
Water	£524
Food	£2297
Electricity	£675
Household and plot maintenance	£800
Pigs and meat business	£1572
Smallholdings costs	-£800
Land based Workshop business	£4000
Total	**£9418.00**

Item	**Year 5**
Household Heating & Cooking Fuel	£450
Water	£524
Food	£2796
Electricity	£675
Household and plot maintenance	£800
Pigs and meat business	£2072
Smallholdings costs	-£800
Land based Workshop business	£7000
Total	**£13517.00**

9. Percentage calculations

Year 2
We have expenses of £13454
We have Income of £3842
We can therefore make about **29%** of our basic household needs.

Year 3
We have expenses of £13454
We have Income of £6419
We can therefore make about **48%** of our basic household needs.

Year 4
We have expenses of £13454
We have Income of £9418
We can therefore make about **70%** of our basic household needs.

Year 5
We have expenses of £13454
We have Income of £13517
We can therefore make about **100%** of our basic household needs.

10. Daily Routines

Our morning routine will be similar throughout the year, taking into account changes in milking patterns, and the stages of food production. Most of the year we will first check the fire in the range cooker and put a kettle on. We will let out the geese, feed them, collect their eggs, and head back to the house to check the kettle. We will let our chickens and ducks out, feed them, and collect the eggs. We will feed the pigs and let them out into their pen. We will milk the goats and let them out in to their pen. Next we check the greenhouse, before having breakfast.

After breakfast we have to take the livestock to whichever of the grazing rotation fields is in use, and get on with the rest of the day. Kit will have carpentry projects that will be managed around the seasonal work. Saara will be making cheese and dairy products throughout the year. Obviously some of our work is seasonally specific.

Spring is the start of the bulk of our food production, so our days will be based around the land. On some spring mornings Kit will be ploughing the field strips with our rotivator. A typical spring day will be spent planting crops, replanting what we have grown in pots, and weeding. Obviously when our animals are going to be born we will prioritize their care, and fit in the rest of the work around them. We will have early crops to harvest at the end of spring.

We will spend most of our summer days outside taking care of our plants weeding and watering, planting new seedlings or sowing new seeds. We need to harvest some crops and process them for later use. For example preserving tomatoes in the form of pastes or chutneys will start during the summer months. Our soft fruit will ripen by the end of the summer, which will keep us busy picking and preserving them or making juices.

In autumn we will be found busy picking apples and pears or pressing them for juice and making ciders, harvesting nuts and other crops. Our fuel needs to be cut and dried before burning, and the end of autumn might be the time for this job.

Winter is the time for us to get the rest of the work done, so our days are more varied. A typical winter's day would continue with Kit fixing fences and maintaining the property or machinery, whilst Saara is making jam from frozen fruit we have not had time to deal with earlier in the year. Later that day we would be together cutting firewood if the weather is suitable.

Winter is also the time for us to deal with our meat production. If one of our pigs has just been slaughtered we will both be found in our commercial kitchen preparing meat for our bacon, ham, or mincing it for filling sausages.

Another typical winter's day Kit will be working on a carpentry project, working full time until evening having breaks like anyone else with a job. Saara will be spending her time dealing with the curing process of the hams and bacon, and working on her own craft work, making soap or candles.

Clearly we need to eat during the day and check our animals and polytunnel regularly. At some time we need to go to get our post and read it. There are many small tasks that will be carried out during breaks from other work.

Evenings will also share similar routines throughout the year. The livestock will need taking back to their housing pens and feeding and putting away for the night. The polytunnel will be checked and the plants watered. We need to make and eat dinner.

At some time through the week we need to take seasoned firewood from the barn to stack it in the house. We need to complete our paperwork, both personal and business related.

10.1. Table of activity throughout the year

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Workshop												
Animals												
Animal Produce												
Dairy												
Horticulture												
Preserving												
Fuel												
Plot management												
Key												
Minimal attention												
Moderate attention												
Significant attention												
Substantial attention												

10.2. Daily timetables

10.2.A. Daily timetable of a typical day in spring:

Kit:
07:00 Rise. Let out and feed geese. Let out and feed ducks and chickens. Feed pigs
08:00 Breakfast
08:45 Take pigs and goats to grazing
09:00 Spreading compost across raised beds
11:00 Mulching fruit trees
13:00 Lunch
14:00 Workshop
17:00 Put away geese, ducks and chickens
17:30 Take pigs and goats to pen
17:45 Feed pigs, put away
18:15 Cook dinner
19:15 Dinner

Saara:
07:00 Rise, milk the goats, let out into pen
08:00 Breakfast
09:00 Sowing seeds in greenhouse
12:00 Watering greenhouse
13:00 Lunch
14:00 Weeding
17:45 Bring in, feed and milk goats
19:15 Dinner

10.2.B. Daily timetable of a typical day in summer:

Kit:
07:00 Rise, Let out and feed geese. Let out and feed, ducks and chickens. Feed pigs
08:00 Breakfast
08:30 Take pigs and goats to grazing
09:00 Planting out seedlings
11:00 Watering Polytunnel
13:00 Lunch
14:00 Weeding vegetable beds
19:00 Take pigs and goats to pen
19:30 Dinner
20:00 Feed pigs, put away
20:15 Put away geese, ducks and chickens

Saara:
07:00 Rise, milk the goats, let out into pen
08:00 Breakfast
09:00 Harvesting tomatoes
10:30 Preserving tomatoes
13:00 Lunch
14:00 Weeding vegetable beds
17:00 Chutney making
18:30 Cook dinner
19:30 Dinner
20:00 Bring in, feed and milk goats

10.2.C. Daily timetable of a typical day in autumn:

Kit:
07:00 rise, Let out and feed geese. Let out and feed, ducks and chickens. Feed pigs
08:00 Breakfast
08:30 Take pigs and goats to grazing
09:00 Picking apples
11:00 Harvesting vegetables
13:00 Lunch
14:00 Spreading compost across garden beds
15:00 Harvesting fuel
17:00 Put away geese, ducks and chickens
17:30 Take pigs and goats to pen
17:45 Feed pigs, put away
18:15 Cook dinner
19:15 Dinner

Saara:
07:00 rise, milk the goats, let out into pen
08:00 Breakfast
09:00 Picking apples
11:00 Picking soft fruit
13:00 Lunch
14:00 Jam making and juice steaming
18:00 Bring in, feed and milk goats
19:15 Dinner

10.2.D. Daily timetable of a typical day in winter:

Kit:
08:00 Rise, Let out and feed geese. Let out and feed, ducks and chickens. Feed pigs
09:00 Breakfast
09:30 Take pigs and goats to grazing
10:00 Workshop
13:00 Lunch
14:00 Workshop
16:00 Put away geese, ducks and chickens
16:15 Take pigs and goats to pen
16:30 Feed pigs, put away
17:00 Workshop
18:30 Dinner
19:00 Workshop

Saara:
08:00 Rise, milk the goats, let out into pen
09:00 Breakfast
09:30 Cheesemaking
13:00 Lunch
14:00 Craftwork
16:30 Bring in, feed and milk goats
17:00 Cook dinner
18:30 Dinner

11. Functional need

The success of our plans depends on our living on site. The scale of and diversity of our plans should ensure success providing that we are on site full time to correctly manage them. Transporting our milk, vegetables, fruit and fuel somewhere else to process and consume would be inefficient and in itself use lots of fuel. Having to travel back and forth to a different location would render much of this plan so inefficient as to not be worthwhile.

Our animals will obviously need our presence 24 hours a day during the period they are birthing; it might happen at any time. We need be there to take care of our animals, but also to make sure they are where they are meant to be; It would be bad enough if our goats managed to escape from their grazing to our vegetable plot, but disastrous if they got onto one of our neighbour's commercial crops and destroyed a seasons income supply. We need to be there to herd the animals to their grazing rotation and back to their housing every day. We need to milk the goats first thing in the morning and last thing in the evening. The poultry needs to be let out in the morning and put away in the evening.

In hot weather the plants in our greenhouse might need watering and the ventilation adjusted several times a day.

The small scale of our production for our own needs is viable with the time we have between other daily jobs, but would not be if we had to travel. For instance, making certain types of cheese using the combination of an evening's milking and the follow morning's, involves keeping milk overnight and mixing it with the morning milk, and then starting to make cheese as soon as possible. The actual process itself involves a lot of waiting between stages. Making such a small amount of cheese is not viable unless this time is spent doing something else. This is without considering that whist we find it perfectly reasonable to organise our lives around milking our goats before breakfast, we would not wish to do so if that involved even more than a five minute walk.

Many of the craft based items we will produce will either be worked on around the seasonal land based work, or in between daily land based tasks. Soap making or candle making in such small numbers is again only really viable by using by-products of other activities at a time between other more essential tasks.

Kit's workshop based livelihood lends itself well to seasonally intensive land based work, namely in that commissions will not be worked on during busy periods, but also in that many of the smaller land based jobs that do not involve full time attention can be managed during breaks form workshop activities.

Finally, many of these activities are only truly realistic with the help and support of others around us living similar lives. This could be from the simplest ideas of buying grains in bulk, sharing a rotivator, to knowing that neighbours will be there to help

12. Positive contribution

Habitat
Our design significantly increases the range of habitat on the plot through the planting of woodland and establishment of ponds. This should significantly increase biodiversity.

Workshop
We are keen to set up the workshop to be able to be used by a number of people. We intend to have this workshop available by invitation to anyone living on the site or in the local area. There will also be the option of the use of the workshop, along with supervision and support for educational purposes.

There will also be basic engineering facilities in the workshop, a lathe and milling machine, and welding equipment. The design and development of sustainable tools and equipment, along with maintenance will be possible. We are looking into the manufacturing of “rocket stoves”, continuous flow wormeries and bio methane digesters.

Landrover
Our Landrover can be kitted out as a basic ambulance, and as we are not planning to use a vehicle often it could be left ready for use as a site emergency vehicle. We would kit out a trailer with water tank and pump as a fire engine to be pulled by the Land Rover.

Fruit press
We will have a fruit press. We will not be using it all the time for our fruit. We would make this available for others to use.

13. Transport
We plan to keep the Landrover we have, to transport materials and completed carpentry work. This vehicle will not be used often. We would have access to a smaller car for use through a share scheme.

14. Additional sources of income
We both expect to be engaged on the plot on a full-time basis. We also expect to be able to take on occasional part-time work if necessary. Kit plans to make additional furniture and artwork pieces occasionally to earn additional money. Timber for such products will be sourced locally. Money generated using materials not from the site it would be considered additional income. Saara is a registered nurse, but has no plans to work as a nurse in the future. Should we need to earn additional money she could work locally as a nurse. Kit will apply for the part time position of Lammas site manager.

15. Proposed schedule of work

The following is an outline of the main stages of plot set up and building works. Included are the introduction of animals and the first planting of vegetables and soft fruit in the walled garden. Subsequent plantings are not included as they are an integral part of the normal running of the plot.

Marking out

Tent & temporary toilet
Fence plot boundaries
Mark plot layout

Groundworks

Levelling areas for buildings, walled garden, trackways
Remove topsoil - store
Remove midsoil - store
Dig foundations for walled garden, first and second buildings, and pond
Remove sub soil - store
Lay basic trackway
Soil preparation
Dig for SRC
Dig for woodland planting
Dig for orchard planting
Separate topsoil, midsoil, stone - store

First building

Build foundations for walled garden, barn, pig and goat housing and toilet
Start build north wall of garden barn section
Build Barn - Temporary accommodation / workshop / storage
Build composting toilet
Build Raised beds fill with topsoil, mulch, cover and ignore
Fence orchard
Fence fields

Second building

Build pig and goat housing
Complete Walled garden
Build first section greenhouse
Fence Poultry yard

First planting (at the appropriate time of year)

Plant some veg in raised beds
Plant some soft fruits

Introduce animals

Get poultry, pigs and goats

First tree planting (at the appropriate time of year)
Plant first bit of SRC
Plant nut trees and fruit trees
Plant some trees in new woodland

Third building
Dig foundations of workshop and house
Build foundations of workshop and house
Build workshop

Second tree planting (at the appropriate time of year)
Plant more SRC
Plant more woodland

Fourth building
Build house

16. Implementation timescales
The time estimated to undertake the scheduled work is stated in the table below. Certain stages of the work should be carried out at a particular time of year. Without knowing the start date it is impossible to detail the exact timescales. The following table is based on a start date of January 2009. Should we be able to start earlier we would undertake stages that were appropriate to the time of year.

Month		**Work**
1		Marking out
2 – 3		Groundworks
4 –9	April year 1	First & Second building
4 - 9		First planting
9 – 10	September year 1	First tree planting
17 – 20	April year 2	Third building
21 – 22	September year 2	Second tree planting
29 - 33	May year 3	Fourth building

17. Estimated set up costs

Item	Cost
Lease	£30,000
Groundworks	£4,000
House	£40,000
Work building	£25,000
Barn	£10,000
Pig and goat house	£4,000
Greenhouse	£3,000
Fencing/ hedging	£2,000
Tree planting	£2,000
Total	**£120,000**

Our funding will come from private sources. At present we expect to have £100,000 capital available for the project. We will need to borrow an additional £45,000. We have set aside £25,000 as living costs during the set-up period. The £45,000 will be taken out as a mortgage.

Pig log year 1	Info	Month 1	Month 2	Month3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Totals	**Costs**	actual	Value	**Plot Calc**
Sows	3 @ 10 week £80	-£240													**-£ 240.00**		-£ 240.00	-£ 240.00
Litter 1																		
Litter 2																		
Number of offspring	(average litter)																	
Sow food	average estimate																	
Pig feed (kg)	See explanation	182kg	182kg	182kg	182kg	182kg	182kg	182kg	182kg	125kg	125kg	125kg	125kg	1956kg				
Aditional food (kg)	See explanation	182kg	182kg	182kg	182kg	182kg	182kg	182kg	182kg	125kg	125kg	125kg	125kg	1956kg				
Pig feed (£)		-£ 61.15	-£ 61.15	-£ 61.15	-£ 61.15	-£ 61.15	-£ 61.15	-£ 61.15	-£ 61.15	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00		**-£ 657.20**		-£ 657.20	-£ 657.20
Aditional food (£)		-£ 4.00													**-£ 4.00**		-£ 164.30	
Offspring food																		
Pig feed (kg)																		
Aditional food (kg)																		
Pig feed (£)																		
Aditional food (£)																		
Vet bills											-£ 100.00				**-£ 100.00**			
Transport		-£ 20.00							-£ 45.00		-£ 10.00				**-£ 75.00**		-£ 75.00	-£ 75.00
Boar fee	D Phillips										-£ 25.00				**-£ 25.00**			
Slaughtering	Pembs Meat Co								-£ 30.00						**-£ 30.00**		-£ 30.00	-£ 30.00
Registry fees	B.P.A.	-£ 45.00													**-£ 45.00**		-£ 45.00	-£ 45.00
	Oxford Sandy Soc	-£ 10.00													**-£ 10.00**		-£ 10.00	-£ 10.00
Weaners sold	£80 each as pigletts																	
Meat Produced																		
Pork	£8/kg																	
For Sausages	£10/kg									25kg								
ForBacon	£12/kg									25kg								
ForHam	£25/kg									25kg								
MEAT BUSINESS																		
Meat																		
Pork	£8/kg																	
For Sausages	£10/kg									25kg				25kg				
ForBacon	£12/kg									25kg				25kg				
ForHam	£25/kg									25kg				25kg				
Products																		
Pork	£8/kg																	
Sausages	£10/kg									31kg				31kg				
Bacon	£12/kg										25kg			25kg				
Ham	£25/kg																	
Home use																		
Pork	£8/kg																	
Sausages	£10/kg									11kg				11kg			£ 110.00	£ 110.00
Bacon	£12/kg										10kg			10kg			£ 120.00	£ 120.00
Ham	£25/kg																	
For sale																		
Pork	£8/kg																	
Sausages	£10/kg									20kg								
Bacon	£12/kg										15kg							
Ham	£25/kg																	
Meat sales																		
Pork	£8/kg																	
Sausages	£10/kg									5kg	5kg	5kg	5kg	20kg				
Bacon	£12/kg										5kg	10kg		15kg				
Ham	£25/kg																	
Income																		
Pork	£8/kg																	
Sausages	£10/kg									£ 50.00	£ 50.00	£ 50.00	£ 50.00		**£ 200.00**		£ 200.00	£ 200.00
Bacon	£12/kg										£ 60.00	£ 120.00			**£ 180.00**		£ 180.00	£ 180.00
Ham	£25/kg																	
Total		**-£ 380.15**	**-£ 61.15**	**-£ 61.15**	**-£ 61.15**	**-£ 61.15**	**-£ 61.15**	**-£ 61.15**	**-£ 136.15**	**£ 8.00**	**-£ 67.00**	**£ 128.00**	**£ 8.00**		**-£ 806.20**		-£ 611.50	-£ 447.20

Pig log year 2	Info	Month 1	Month 2	Month3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Totals	**Costs**	actual	Value	**Plot Calc**
Sows																		
Litter 1				1- 4	5 - 8	9 - 12	13 -16	17 - 20	21 - 24	25 - 28	29 - 32							
Litter 2																		
Number of offspring				8	8	4	4	4	4	2	2	0						
Sow food	average																	
Pig feed (kg)	2kg per day	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	1500kg				
Aditional food (kg)	2kg per day	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	1500kg				
Pig feed (£)		-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00		**-£ 504.00**		-£ 504.00	-£ 504.00
Aditional food (£)															**-£ 4.00**		-£ 126.00	
Offspring food																		
Pig feed (kg)	See explanation			110kg	220kg	220kg	240kg	240kg	240kg	125kg	90kg			1485kg				
Aditional food (kg)	See explanation			110kg	220kg	220kg	240kg	240kg	240kg	125kg	90kg			1485kg				
Pig feed (£)				-£ 36.96	-£ 73.92	-£ 73.92	-£ 80.64	-£ 80.64	-£ 80.64	-£ 42.00	-£ 30.24				**-£ 498.96**		-£ 498.96	-£ 498.96
Aditional food (£)															**-£ 4.00**		£ 125.00	
Vet bills				-£ 100.00											**-£ 100.00**			
Transport									-£ 45.00		-£ 55.00				**-£ 100.00**		-£ 100.00	-£ 100.00
Boar fee											-£ 25.00				**-£ 25.00**			
Slaughtering									-£ 52.00		-£ 60.00				**-£ 112.00**		-£ 112.00	-£ 112.00
Registry fees	B.P.A.	-£ 20.00																
	Oxford Sandy Soc	-£ 10.00													**-£ 20.00**		-£ 20.00	-£ 20.00
															-£ 10.00		-£ 10.00	-£ 20.00
Weaners sold	£80 each as pigletts					£ 320.00									**£ 320.00**		£ 320.00	£ 320.00
Meat Produced																		
Pork	£8/kg																	
For Sausages	£10/kg								100kg		50kg			150kg				
ForBacon	£12/kg										50kg			50kg				
ForHam	£25/kg										50kg			50kg				
MEAT BUSINESS																		
Meat																		
Pork	£8/kg																	
For Sausages	£10/kg								100kg		50kg			150kg				
ForBacon	£12/kg										50kg			50kg				
ForHam	£25/kg										50kg			50kg				
Products																		
Pork	£8/kg																	
Sausages	£10/kg								125kg		62kg			187kg				
Bacon	£12/kg											50kg		50kg				
Ham	£25/kg																	
Home use																		
Pork	£8/kg																	
Sausages	£10/kg								22kg					22kg			£ 220.00	£ 220.00
Bacon	£12/kg											10kg		10kg			£ 120.00	£ 120.00
Ham	£25/kg																	
For sale																		
Pork	£8/kg																	
Sausages	£10/kg								103kg		62kg			165kg				
Bacon	£12/kg											40kg		40kg				
Ham	£25/kg																	
Meat sales																		
Pork	£8/kg																	
Sausages	£10/kg								15kg	15kg	15kg	15kg	15kg	75kg				
Bacon	£12/kg											10kg	30kg	40kg				
Ham	£25/kg																	
Income																		
Pork	£8/kg																	
Sausages	£10/kg								£ 150.00	£ 150.00	£ 150.00	£ 150.00	£ 150.00		**£ 750.00**		£ 750.00	£ 750.00
Bacon	£12/kg											£ 120.00	£ 360.00		**£ 480.00**		£ 480.00	£ 480.00
Ham	£25/kg																	
Total		-£ 72.00	-£ 42.00	-£ 178.96	-£ 115.92	£ 204.08	-£ 122.64	-£ 122.64	-£ 69.64	£ 66.00	-£ 62.24	£ 228.00	£ 468.00		**£ 172.04**		£ 644.04	£ 635.04

Pig log year 3	Info	Month 1	Month 2	Month3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Totals	**Costs**	actual	Value	**Plot Calc**
Sows																		
Litter 1				1- 4	5 - 8	9 - 12	13 -16	17 - 20	21 - 24	25 - 28	29 - 32							
Litter 2																		
Number of offspring				8	8	4	4	4	4	2	2		0					
Sow food	average																	
Pig feed (kg)	2kg per day	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	1500kg				
Aditional food (kg)	2kg per day	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	1500kg				
Pig feed (£)		-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00		**-£ 504.00**		-£ 504.00	-£ 504.00
Aditional food (£)		-£ 4.00													**-£ 4.00**		-£ 126.00	
Offspring food																		
Pig feed (kg)	See explanation			110kg	220kg	220kg	240kg	240kg	240kg	125kg	90kg			1485kg				
Aditional food (kg)	See explanation			110kg	220kg	220kg	240kg	240kg	240kg	125kg	90kg			1485kg				
Pig feed (£)				-£ 36.96	-£ 73.92	-£ 73.92	-£ 80.64	-£ 80.64	-£ 80.64	-£ 42.00	-£ 30.24				**-£ 498.96**		-£ 498.96	-£ 498.96
Aditional food (£)		-£ 4.00													**-£ 4.00**		-£ 125.00	
Vet bills				-£ 100.00											**-£ 100.00**			
Transport									-£ 45.00		-£ 55.00				**-£ 100.00**		-£ 100.00	-£ 100.00
Boar fee											-£ 25.00				**-£ 25.00**			
Slaughtering									-£ 52.00		-£ 60.00				**-£ 112.00**		-£ 112.00	-£ 112.00
Registry fees	B.P.A.	-£ 20.00													**-£ 20.00**		-£ 20.00	-£ 20.00
	Oxford Sandy Soc	-£ 10.00													**-£ 10.00**		-£ 10.00	-£ 10.00
Weaners sold	£80 each as pigletts					£ 320.00									**£ 320.00**		£ 320.00	£ 320.00
Meat Produced																		
Pork	£8/kg																	
For Sausages	£10/kg								100kg		50kg			150kg				
ForBacon	£12/kg										50kg			50kg				
ForHam	£25/kg										50kg			50kg				
MEAT BUSINESS																		
Meat																		
Pork	£8/kg																	
For Sausages	£10/kg								100kg		50kg			150kg				
ForBacon	£12/kg										50kg			50kg				
ForHam	£25/kg										50kg			50kg				
Products																		
Pork	£8/kg																	
Sausages	£10/kg								125kg		62kg			187kg				
Bacon	£12/kg											50kg		50kg				
Ham	£25/kg		25kg											25kg				
Home use																		
Pork	£8/kg																	
Sausages	£10/kg								22kg					22kg			£ 220.00	£ 220.00
Bacon	£12/kg											10kg		10kg			£ 120.00	£ 120.00
Ham	£25/kg		5kg											5kg			£ 125.00	£ 125.00
For sale																		
Pork	£8/kg																	
Sausages	£10/kg								103kg		62kg							
Bacon	£12/kg											40kg						
Ham	£25/kg		20kg															
Meat sales																		
Pork	£8/kg																	
Sausages	£10/kg	15kg	15kg	15kg	15kg	15kg	15kg		15kg	15kg	15kg	15kg	15kg	165kg				
Bacon	£12/kg											10kg	30kg	40kg				
Ham	£25/kg		5kg	5kg	5kg	5kg								40kg				
Income																		
Pork	£8/kg																	
Sausages	£10/kg	£ 150.00	£ 150.00	£ 150.00	£ 150.00	£ 150.00	£ 150.00		£ 150.00	£ 150.00	£ 150.00	£ 150.00	£ 150.00		**£ 1,650.00**		£ 1,650.00	£ 1,650.00
Bacon	£12/kg											£ 120.00	£ 360.00		**£ 480.00**		£ 480.00	£ 480.00
Ham	£25/kg		£125	£125	£125	£125									**£ 500.00**		£ 500.00	£ 500.00
Total		£ 70.00	£ 233.00	£ 96.04	£ 159.08	£ 479.08	£ 27.36	-£ 122.64	-£ 69.64	£ 66.00	-£ 62.24	£ 228.00	£ 468.00		**£ 1,572.04**		£ 1,919.04	£ 2,170.04

Pig log year 4	Info	Month 1	Month 2	Month3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Totals	**Costs**	actual	Value	**Plot Calc**
Sows																		
Litter 1				1- 4	5 - 8	9 - 12	13 -16	17 - 20	21 - 24	25 - 28	29 - 32							
Litter 2																		
Number of offspring				8	8	4	4	4	4	2	2	0						
Sow food	average																	
Pig feed (kg)	2kg per day	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	1500kg				
Aditional food (kg)	2kg per day	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	1500kg				
Pig feed (£)		-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00		**-£ 504.00**		-£ 504.00	-£ 504.00
Aditional food (£)		-£ 4.00													**-£ 4.00**		-£ 126.00	
Offspring food																		
Pig feed (kg)	See explanation			110kg	220kg	220kg	240kg	240kg	240kg	125kg	90kg			1485kg				
Aditional food (kg)	See explanation			110kg	220kg	220kg	240kg	240kg	240kg	125kg	90kg			1485kg				
Pig feed (£)				-£ 36.96	-£ 73.92	-£ 73.92	-£ 80.64	-£ 80.64	-£ 80.64	-£ 42.00	-£ 30.24				**-£ 498.96**		-£ 498.96	-£ 498.96
Aditional food (£)		-£ 4.00													**-£ 4.00**		-£ 125.00	
Vet bills				-£ 100.00											**-£ 100.00**			
Transport									-£ 45.00		-£ 55.00				**-£ 100.00**		-£ 100.00	-£ 100.00
Boar fee											-£ 25.00				**-£ 25.00**			
Slaughtering									-£ 52.00		-£ 60.00				**-£ 112.00**		-£ 112.00	-£ 112.00
Registry fees	B.P.A.	-£ 20.00													**-£ 20.00**		-£ 20.00	-£ 20.00
	Oxford Sandy Soc	-£ 10.00													**-£ 10.00**		-£ 10.00	-£ 10.00
Weaners sold	£80 each as pigletts					£ 320.00									**£ 320.00**		£ 320.00	£ 320.00
Meat Produced																		
Pork	£8/kg																	
For Sausages	£10/kg								100kg		50kg			150kg				
ForBacon	£12/kg										50kg			50kg				
ForHam	£25/kg										50kg			50kg				
MEAT BUSINESS																		
Meat																		
Pork	£8/kg																	
For Sausages	£10/kg								100kg		50kg			150kg				
ForBacon	£12/kg										50kg							
ForHam	£25/kg										50kg							
Products																		
Pork	£8/kg																	
Sausages	£10/kg								125kg		62kg							
Bacon	£12/kg											50kg						
Ham	£25/kg			50kg														
Home use																		
Pork	£8/kg																	
Sausages	£10/kg								22kg					22kg			£ 220.00	£ 220.00
Bacon	£12/kg											10kg		10kg			£ 120.00	£ 120.00
Ham	£25/kg			10kg										10kg			£ 250.00	£ 250.00
For sale																		
Pork	£8/kg																	
Sausages	£10/kg								103kg		63kg			187kg				
Bacon	£12/kg											40kg		40kg				
Ham	£25/kg			40kg										40kg				
Meat sales																		
Pork	£8/kg																	
Sausages	£10/kg	15kg	15kg	15kg	15kg	15kg	15kg		15kg	15kg	15kg	15kg	15kg	165kg				
Bacon	£12/kg											10kg	30kg	40kg				
Ham	£25/kg			10kg	10kg	10kg	10kg							40kg				
Income																		
Pork	£8/kg																	
Sausages	£10/kg	£ 150.00	£ 150.00	£ 150.00	£ 150.00	£ 150.00	£ 150.00		£ 150.00	£ 150.00	£ 150.00	£ 150.00	£ 150.00		**£ 1,650.00**		£ 1,650.00	£ 1,650.00
Bacon	£12/kg											£ 120.00	£ 360.00		**£ 480.00**		£ 480.00	£ 480.00
Ham	£25/kg			£250	£250	£250	£250								**£ 1,000.00**		£ 1,000.00	£ 1,000.00
Total		£ 70.00	£ 108.00	£ 221.04	£ 284.08	£ 604.08	£ 277.36	-£ 122.64	-£ 69.64	£ 66.00	-£ 62.24	£ 228.00	£ 468.00		**£ 2,072.04**		£ 2,544.04	£ 2,795.04

Pig log year 5	Info	Month 1	Month 2	Month3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total kg	**Costs**	actual	Value	**Plot Calc**	If ending year 1	If ending year 2	If ending year 3
Sows																					
Litter 1				1- 4	5 - 8	9 - 12	13 -16	17 - 20	21 - 24	25 - 28	29 - 32										
Litter 2																					
Number of offspring				8	8	4	4	4	4	2	2	0									
Sow food	average																				
Pig feed (kg)	2kg per day	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	1500kg							
Aditional food (kg)	2kg per day	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	125kg	1500kg							
Pig feed (£)		-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00	-£ 42.00		**-£ 504.00**		-£ 504.00	-£ 504.00			
Aditional food (£)		-£ 4.00													**-£ 4.00**		-£ 126.00				
Offspring food																					
Pig feed (kg)	See explanation			110kg	220kg	220kg	240kg	240kg	240kg	125kg	90kg			1485kg							
Aditional food (kg)	See explanation			110kg	220kg	220kg	240kg	240kg	240kg	125kg	90kg			1485kg							
Pig feed (£)				-£ 36.96	-£ 73.92	-£ 73.92	-£ 80.64	-£ 80.64	-£ 80.64	-£ 42.00	-£ 30.24				**-£ 498.96**		-£ 498.96	-£ 498.96			
Aditional food (£)		-£ 4.00													**-£ 4.00**		-£ 125.00				
Vet bills				-£ 100.00											**-£ 100.00**						
Transport									-£ 45.00		-£ 55.00				**-£ 100.00**		-£ 100.00	-£ 100.00			
Boar fee											-£ 25.00				**-£ 25.00**						
Slaughtering									-£ 52.00		-£ 60.00				**-£ 112.00**		-£ 112.00	-£ 112.00			
Registry fees	B.P.A.	-£ 20.00													**-£ 20.00**		-£ 20.00	-£ 20.00			
	Oxford Sandy Soc	-£ 10.00													**-£ 10.00**		-£ 10.00	-£ 10.00			
Weaners sold	£80 each as pigletts					£ 320.00									**£ 320.00**		£ 320.00	£ 320.00			
Meat Produced																					
Pork	£8/kg																				
For Sausages	£10/kg								100kg		50kg			150kg					50kg		
ForBacon	£12/kg										50kg			50kg					50kg		
ForHam	£25/kg										50kg			50kg					50kg		
MEAT BUSINESS																					
Meat																					
Pork	£8/kg																				
For Sausages	£10/kg								100kg		50kg			150kg							
ForBacon	£12/kg										50kg										
ForHam	£25/kg										50kg								50kg	50kg	50kg
Products																					
Pork	£8/kg																				
Sausages	£10/kg								125kg		62kg			187kg							
Bacon	£12/kg																				
Ham	£25/kg			50kg								50kg									
Home use																					
Pork	£8/kg																				
Sausages	£10/kg								22kg					22kg			£ 220.00	£ 220.00			
Bacon	£12/kg											10kg		10kg			£ 120.00	£ 120.00			
Ham	£25/kg			10kg										10kg			£ 250.00	£ 250.00			
For sale																					
Pork	£8/kg																				
Sausages	£10/kg								103kg		62kg										
Bacon	£12/kg											40kg									
Ham	£25/kg			40kg																	
Meat sales																					
Pork	£8/kg																				
Sausages	£10/kg	15kg	15kg	15kg	15kg	15kg	15kg		15kg	15kg	15kg	15kg	15kg	165kg					140kg		
Bacon	£12/kg											10kg	30kg	40kg					50kg		
Ham	£25/kg			10kg	10kg	10kg	10kg							40kg					50kg	50kg	50kg
Income																					
Pork	£8/kg																				
Sausages	£10/kg	£ 150.00	£ 150.00	£ 150.00	£ 150.00	£ 150.00	£ 150.00		£ 150.00	£ 150.00	£ 150.00	£ 150.00	£ 150.00		**£ 1,650.00**		£ 1,650.00	£ 1,650.00	£ 1,400.00		
Bacon	£12/kg											£ 120.00	£ 360.00		**£ 480.00**		£ 480.00	£ 480.00	£ 600.00		
Ham	£25/kg			£250	£250	£250	£250								**£ 1,000.00**		£ 1,000.00	£ 1,000.00	£ 1,250.00	£ 1,250.00	£ 1,250.00
Total		£ 70.00	£ 108.00	£ 221.04	£ 284.08	£ 604.08	£ 277.36	-£ 122.64	-£ 69.64	£ 66.00	-£ 62.24	£ 228.00	£ 468.00		**£ 2,072.04**		£ 2,544.04	£ 2,795.04	**£ 3,250.00**	**£ 1,250.00**	**£ 1,250.00**

Workshop work Log	January		Febuary		March		A	M	J	J	A	S	October		November		December		Total	Costs
Year 1	1-2	3-4	1-2	3-4	1-2	=SUM(V27:V39)							1-2	3-4	1-2	3-4	1-2	3-4		
Expenses																				
Tools																				
Tools Maintainance																			-£ 50.00	-£ 50.00
Consumerables																			-£ 100.00	-£ 100.00
Materials																				
Timber																				
Bought																				
From site																				
Reclaimed																				
Hardwear																			-£ 100.00	-£ 100.00
Other																				
Power																			Nill	Nill
Advertising																			-£ 100.00	-£ 100.00
Office																			-£ 50.00	-£ 50.00
Work made																				
Furniture																				
Large															£ 1,000.00				£ 1,000.00	
Small																				
Artworks																				
													£ 350.00	£ 350.00		£ 350.00	£ 350.00		£ 1,400.00	
Other																				
Construction																				
Planing																				
Total Value													£ 350.00	£ 350.00	£ 1,000.00	£ 350.00	£ 350.00		£ 2,400.00	
Sales																				
Furniture																	£ 1,000.00		£ 1,000.00	£ 1,000.00
Artwork																	£ 1,400.00		£ 1,400.00	£ 1,400.00
Other																				
Total																				£ 2,000.00

Workshop work Log	**January**		**Febuary**		**March**		A	M	J	J	A	S	**October**		**November**		**December**		**Total**		**Costs**	
Year 2	1-2	3-4	1-2	3-4	1-2	3-4							1-2	3-4	1-2	3-4	1-2	3-4				
Expenses																						
Tools																						
Tools Maintainance																			**-£**	**50.00**	**-£**	**50.00**
Consumerables																			**-£**	**200.00**	**-£**	**200.00**
Materials																						
Timber																						
Bought																						
From site																						
Reclaimed																						
Hardwear																			**-£**	**100.00**	**-£**	**100.00**
Other																			**-£**	**250.00**	**-£**	**250.00**
Power																			**Nill**		**Nill**	
Advertising																			**-£**	**100.00**	**-£**	**100.00**
Office																			**-£**	**50.00**	**-£**	**50.00**
Work made																						
Furniture																						
Large																£ 1,000.00	£	1,000.00	**£**	**2,000.00**		
Small																						
Artworks																						
													£ 350.00	£ 350.00	£ 350.00	£ 350.00	£ 350.00	£ 350.00	**£**	**1,750.00**		
Other																						
Construction																						
Planing																						
Total Value													£ 350.00	£ 350.00	£ 1,350.00	£ 1,350.00	£ 350.00		**£**	**3,750.00**		
Sales																						
Furniture																	£ 2,000.00		**£**	**2,000.00**	**£**	**2,000.00**
Artwork																	£ 1,750.00		**£**	**1,750.00**	**£**	**1,750.00**
Other																						
Total																					**£**	**3,000.00**

Workshop work Log	January		Febuary		March		A	M	J	J	A	S	October		November		December		Total		Costs	
Year 3	1-2	3-4	1-2	3-4	1-2	3-4							1-2	3-4	1-2	3-4	1-2	3-4				
Expenses																						
Tools																						
Tools Maintainance																			**-£**	**50.00**	**-£**	**50.00**
Consumerables																			**-£**	**100.00**	**-£**	**200.00**
Materials																						
Timber																						
Bought																						
From site																						
Reclaimed																						
Hardwear																			**-£**	**100.00**	**-£**	**100.00**
Other																			**-£**	**250.00**	**-£**	**250.00**
Power																			**Nill**		**Nill**	
Advertising																			**-£**	**100.00**	**-£**	**100.00**
Office																			**-£**	**50.00**	**-£**	**50.00**
Work made																						
Furniture																						
Large																£ 1,400.00	£	1,400.00	**£**	**2,800.00**		
Small																						
Artworks																						
													£ 350.00	£ 500.00	£ 350.00	£ 400.00	£ 350.00		**£**	**1,950.00**		
Other																						
Construction																						
Planing																						
Total Value													£ 350.00	£ 500.00	£ 1,750.00	£ 1,800.00	£ 350.00		**£**	**4,100.00**		
Sales																						
Furniture																	£ 2,800.00		**£**	**2,800.00**	**£**	**2,800.00**
Artwork																	£ 1,950.00		**£**	**1,950.00**	**£**	**1,950.00**
Other																						
Total																					**£**	**4,000.00**

Workshop work Log	January		Febuary		March		A	M	J	J	A	S	October		November		December		Total		Costs	
Year 4	1-2	3-4	1-2	3-4	1-2	3-4							1-2	3-4	1-2	3-4	1-2	3-4				
Expenses																						
Tools																						
Tools Maintainance																			**-£**	**50.00**	**-£**	**50.00**
Consumerables																			**-£**	**200.00**	**-£**	**200.00**
Materials																						
Timber																						
Bought																						
From site																						
Reclaimed																						
Hardwear																			**-£**	**100.00**	**-£**	**100.00**
Other																			**-£**	**300.00**	**-£**	**300.00**
Power																			**Nill**		**Nill**	
Advertising																			**-£**	**200.00**	**-£**	**200.00**
Office																			**-£**	**50.00**	**-£**	**50.00**
Work made																						
Furniture																						
Large																£ 1,800.00	£ 1,800.00		**£**	**3,600.00**		
Small																		£ 800.00	**£**	**800.00**		
Artworks																						
													£ 500.00	£600.00	£ 600.00	£ 600.00	£ 600.00	£ 600.00	**£**	**3,500.00**		
Other																						
Construction																						
Planing																						
Total Value													£ 400.00	£600.00	£ 600.00	£2,400.00	£ 2,400.00	£1,400.00	**£**	**7,900.00**		
Sales																						
Furniture																		£4,400.00	**£**	**4,400.00**	**£**	**4,400.00**
Artwork																		£3,500.00	**£**	**3,500.00**	**£**	**3,500.00**
Other																						
Total																					**£**	**7,000.00**

Workshop work Log	January		Febuary		March		A	M	J	J	A	S	October		November		December		Total		Costs	
Year 5	1-2	3-4	1-2	3-4	1-2	3-4							1-2	3-4	1-2	3-4	1-2	3-4				
Expenses																						
Tools																						
Tools Maintainance																			**-£**	**50.00**	**-£**	**50.00**
Consumerables																			**-£**	**200.00**	**-£**	**200.00**
Materials																						
Timber																						
Bought																						
From site																						
Reclaimed																						
Hardwear																			**-£**	**100.00**	**-£**	**100.00**
Other																			**-£**	**500.00**	**-£**	**500.00**
Power																			**Nill**		**Nill**	
Advertising																			**-£**	**200.00**	**-£**	**200.00**
Office																			**-£**	**50.00**	**-£**	**50.00**
Work made																						
Furniture																						
Large																£ 1,800.00	£ 1,800.00		**£**	**3,600.00**		
Small																		£ 1,000.00	**£**	**1,000.00**		
Artworks																						
													£ 500.00	£ 600.00	£ 600.00	£ 600.00	£ 600.00	£ 600.00	**£**	**3,500.00**		
Other																						
Construction																						
Planing																						
Total Value													£ 400.00	£ 600.00	£ 600.00	£ 2,400.00	£ 2,400.00	£ 1,600.00	**£**	**8,100.00**		
Sales																						
Furniture																		£ 4,600.00	**£**	**4,600.00**	**£**	**4,600.00**
Artwork																		£ 3,500.00	**£**	**3,500.00**	**£**	**3,500.00**
Other																						
Total																					**£**	**7,000.00**

Plot 9
Year 2

	January	February	March	April	May	June	July	August	September	October	November	December	Income	Outgoings
Busineses														
Workshop Year 1													£2,000.00	
Meat business Year 1	-380.15	-61.15	-61.15	-61.15	-61.15	-61.15	-61.15	-136.15	8	-67	128	8	-£806.20	
Plot management														
Hay														
Straw														
Animal Feed														
Seed														
Vets bill														

Plot 9
Year 3

	January	February	March	April	May	June	July	August	September	October	November	December	Income	Outgoings
Busineses														
Workshop Year 2													£3,000.00	
Meat business Year 2	-£72.00	-£42.00	-£178.96	-£115.92	£204.08	-£122.64	-£122.64	-£69.64	£66.00	-£62.24	£228.00	£468.00	£172.04	
Plot management														
Hay								-100						£100
Straw							-40							£40
Animal Feed	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30		£360
Seed		-150						-50						£200
Vets bill												-100		£100

Plot 9
Year 4

	January	February	March	April	May	June	July	August	September	October	November	December	Income	Ougoings
Busineses														
Workshop Year 3													£4,000.00	
Meat business Year 3	£70.00	£233.00	£96.04	£159.08	£479.08	£27.36	-£122.64	-£69.64	£66.00	-£62.24	£228.00	£468.00	£1,572.04	
Plot management														
Hay							-100							£100
Straw						-40								£40
Animal Feed	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30		£360
Seed		-150						-50						£200
Vets bill												-100		£100

Plot 9
Year 5

	January	February	March	April	May	June	July	August	September	October	November	December	Income	Outgoings
Busineses														
Workshop Year 4													£7,000.00	
Meat Business Year 4	£70.00	£108.00	£221.04	£284.08	£604.08	£277.36	-£122.64	-£69.64	£66.00	-£62.24	£228.00	£468.00	£2,072.04	
Plot management														
Hay							-100							£100
Straw						-40								£40
Animal Feed	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30		£360
Seed		-150						-50						£200
Vets bill												-100		£100

Plot 9
Year 6

	January	February	March	April	May	June	July	August	September	October	November	December	Income	Outgoings
Busineses														
Workshop Year 5													£7,000.00	
Meat business Year 5	£70.00	£108.00	£221.04	£284.08	£604.08	£277.36	-£122.64	-£69.64	£66.00	-£62.24	£228.00	£468.00	£2,072.04	
Plot management														
Hay							-100							£100
Straw						-40								£40
Animal Feed	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30		£360
Seed		-150						-50						£200
Vets bill												-100		£100

House

Work building

Yard

Barn

Pig and goat housing

Soft fruit garden

Greenhouse

Vegetable garden

160

160

155

Plot 9 Illustrative Layout

1:200

10M

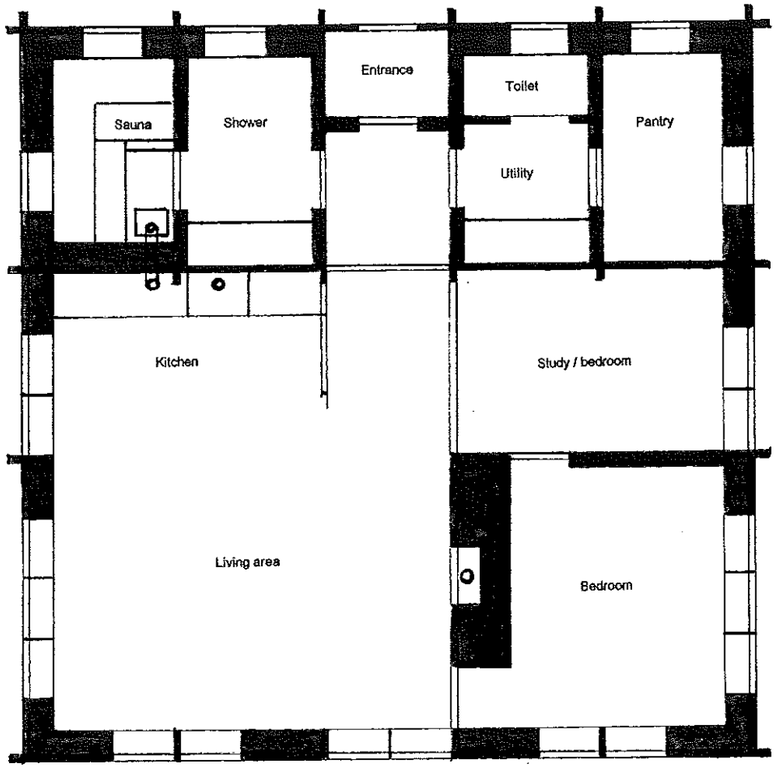
WATER

REED

WOODLAND

ORCHARD

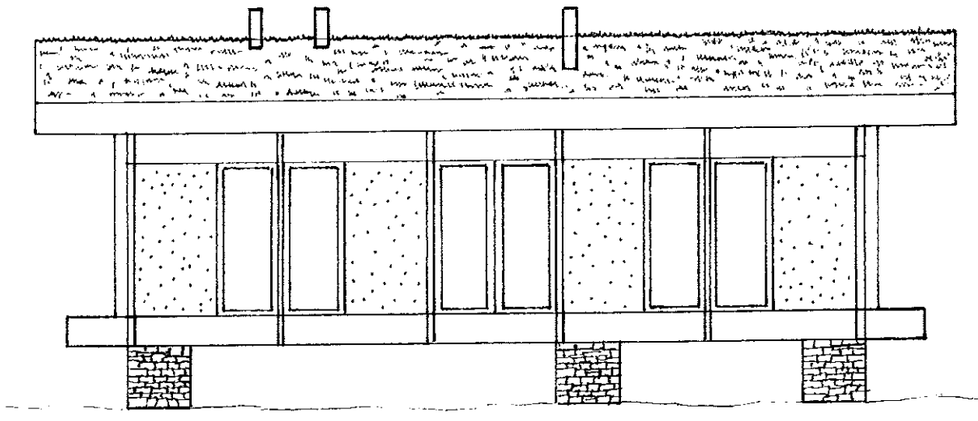
HEDGE



N

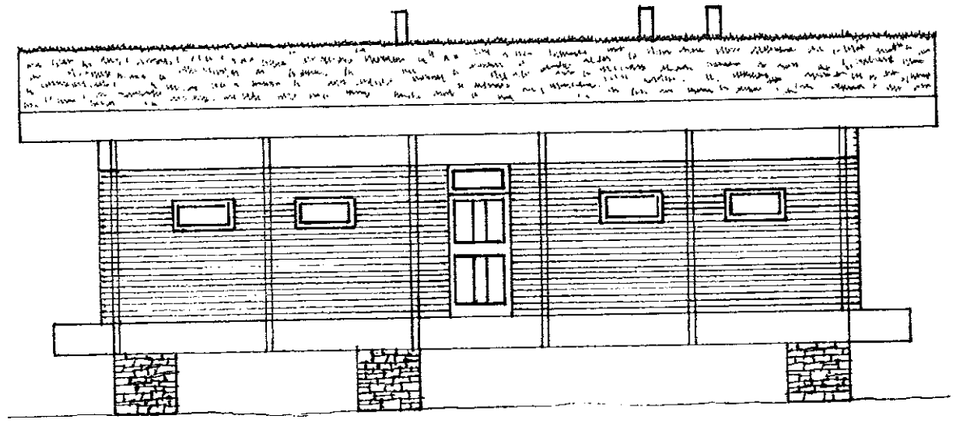
Plan

Plot 9, Drawing 1

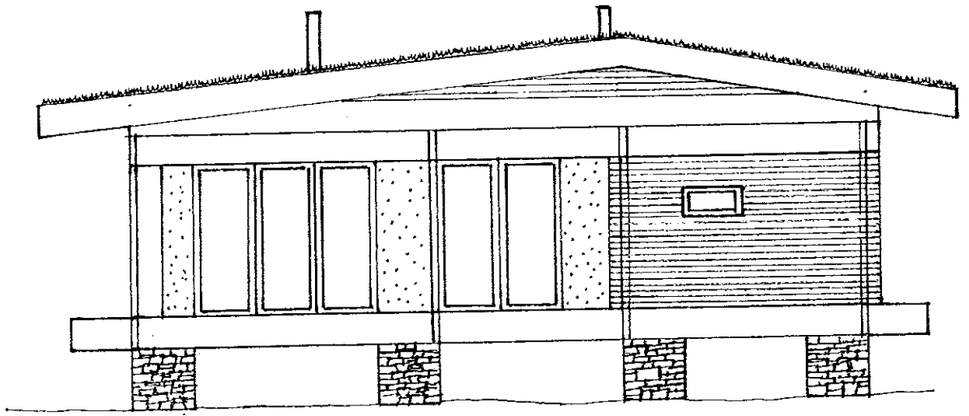


South elevation

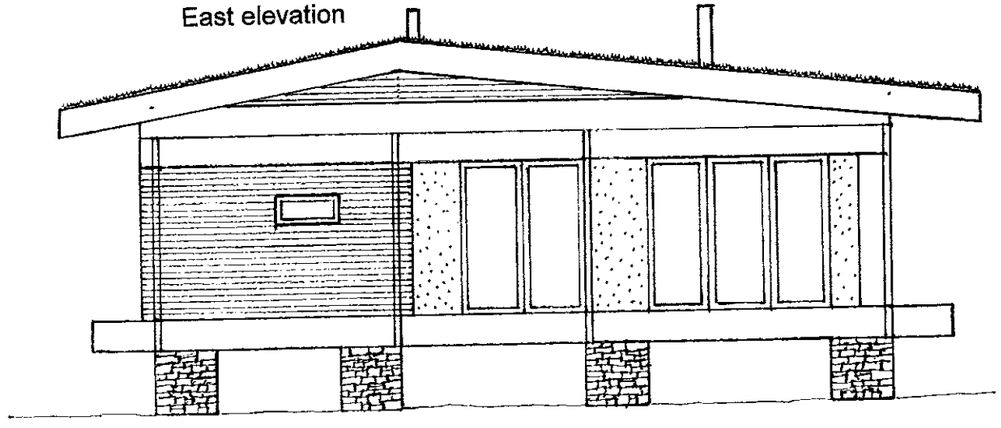
House 1:100



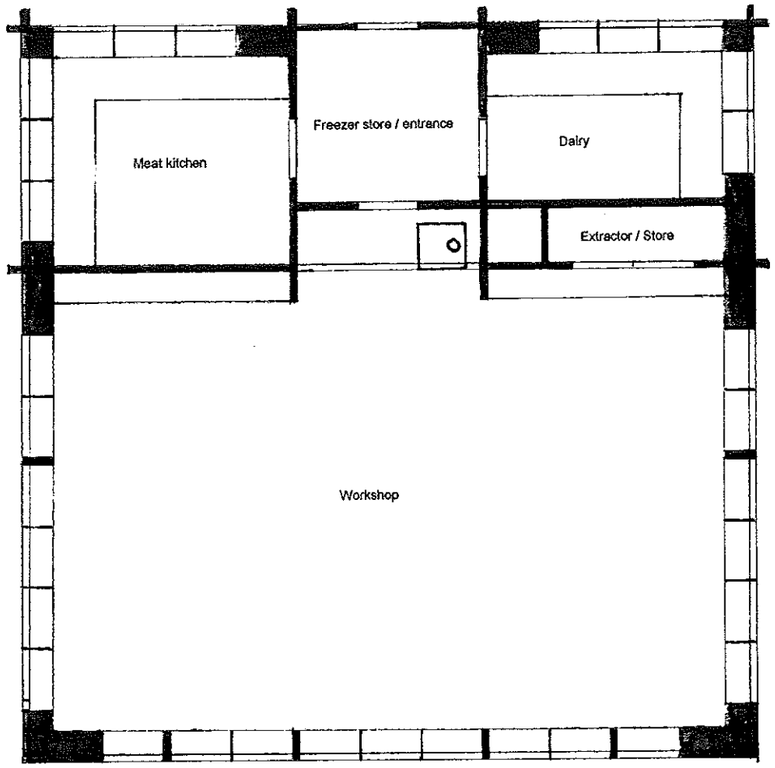
North elevation



East elevation

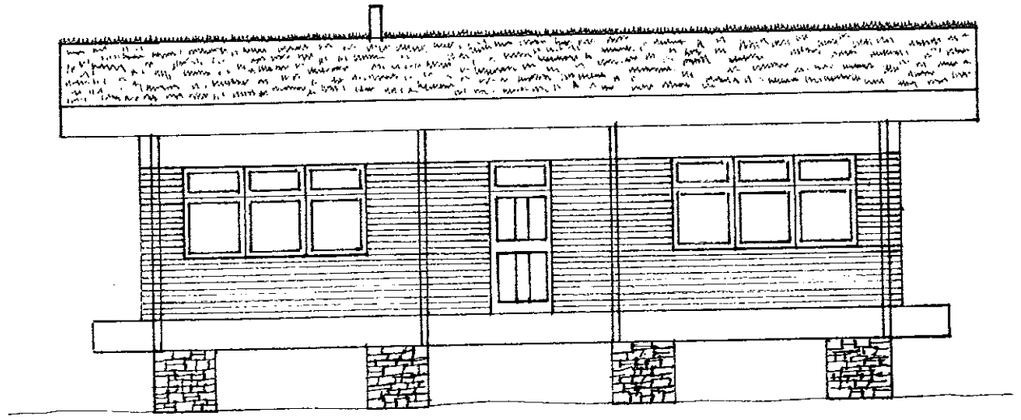


West elevation

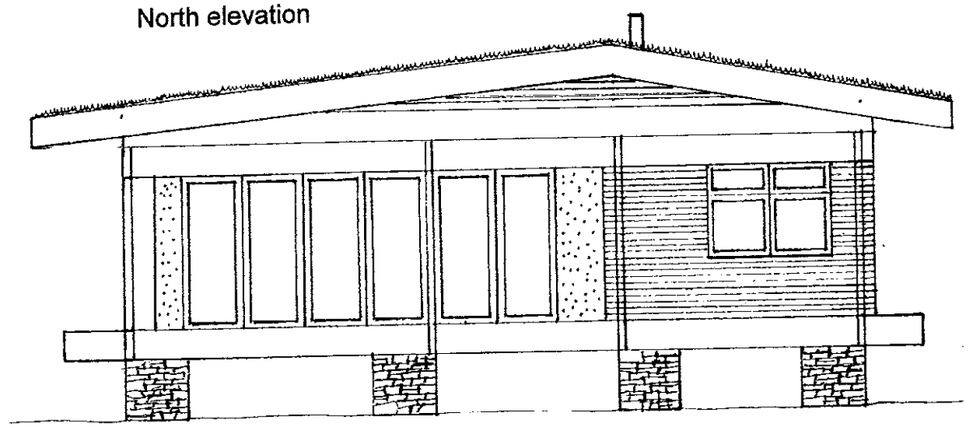


Plan

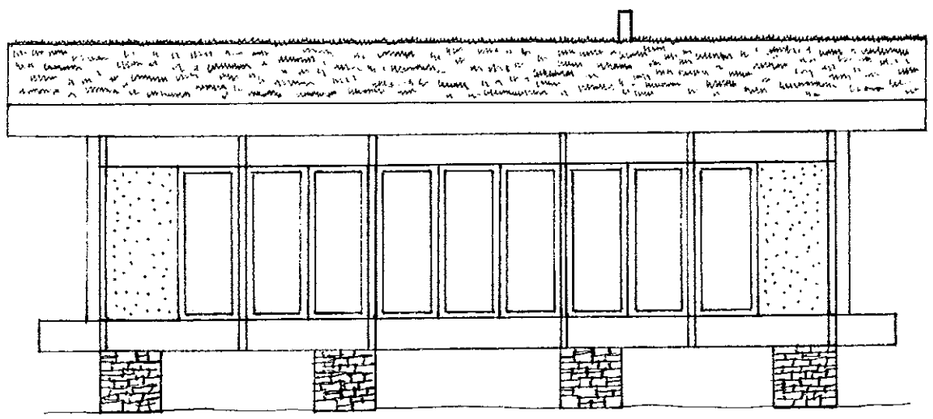
Plot 9, Drawing 2



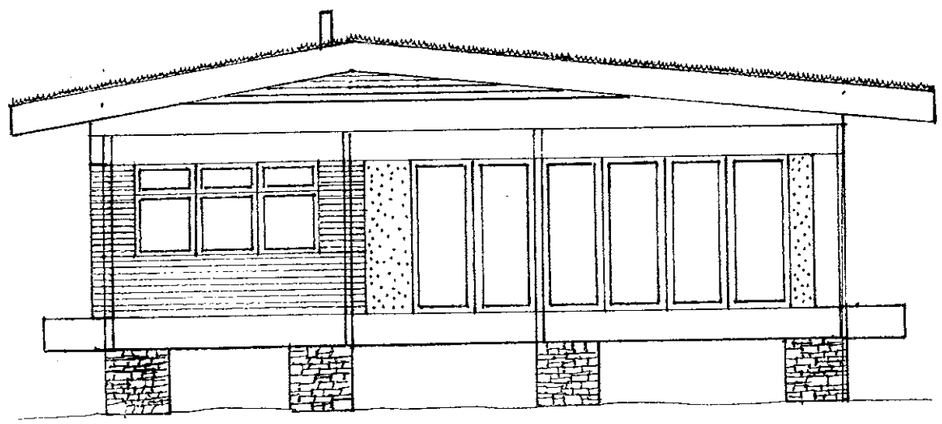
North elevation



East elevation



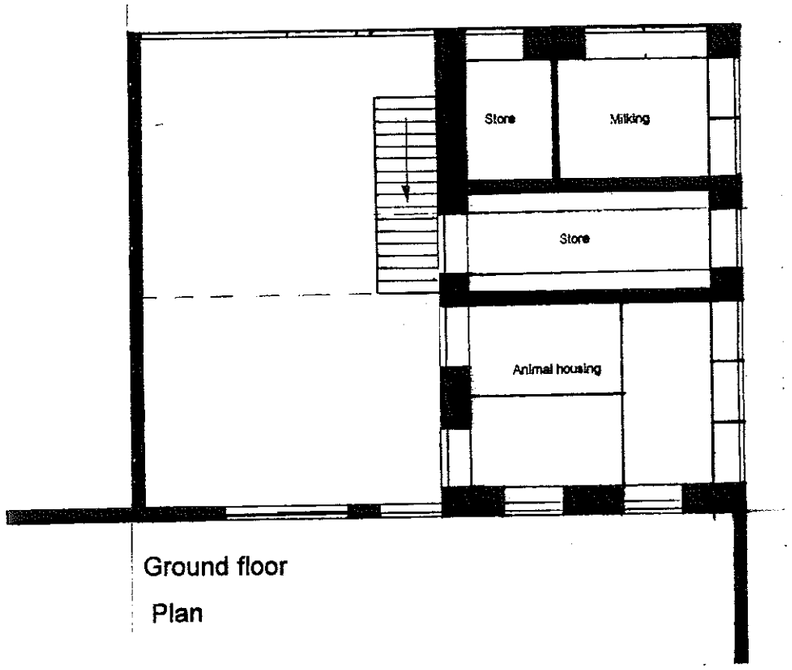
South elevation



West elevation

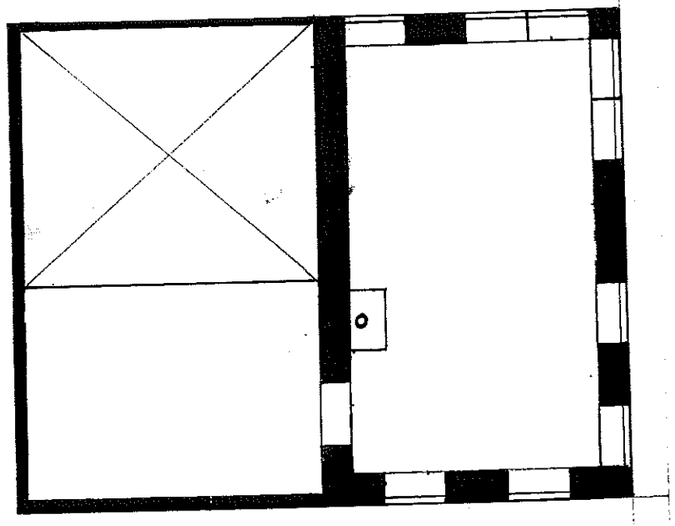
Work building 1:100

Plot 9, Drawing 3

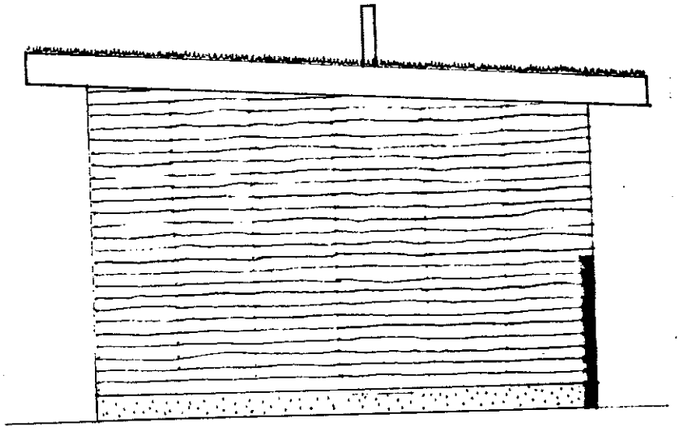


Ground floor

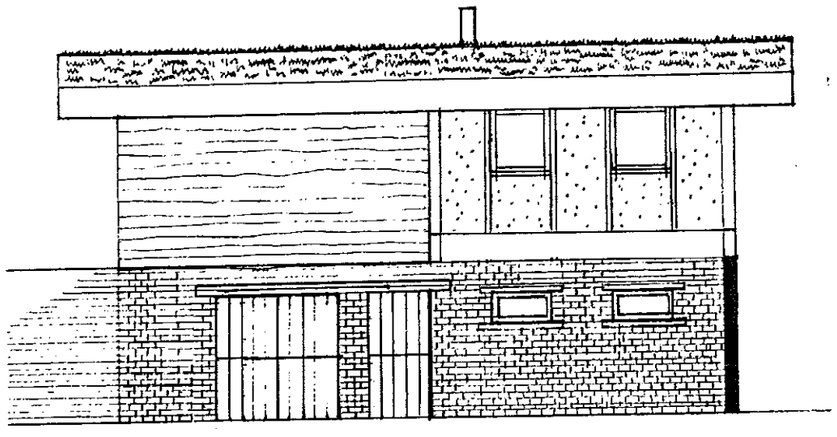
Plan



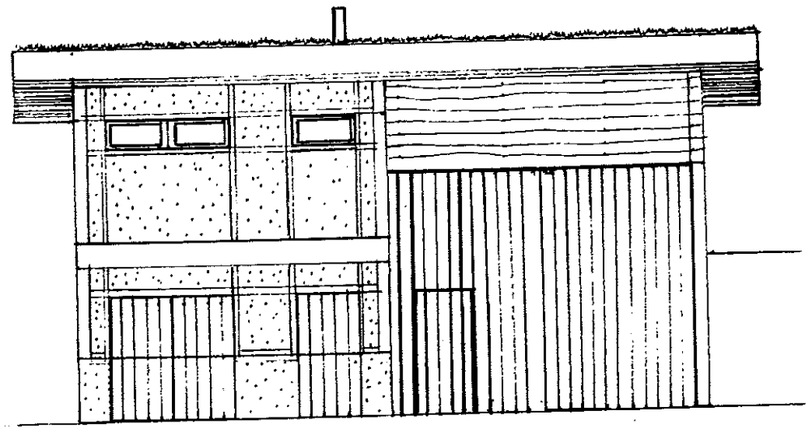
Upper floor



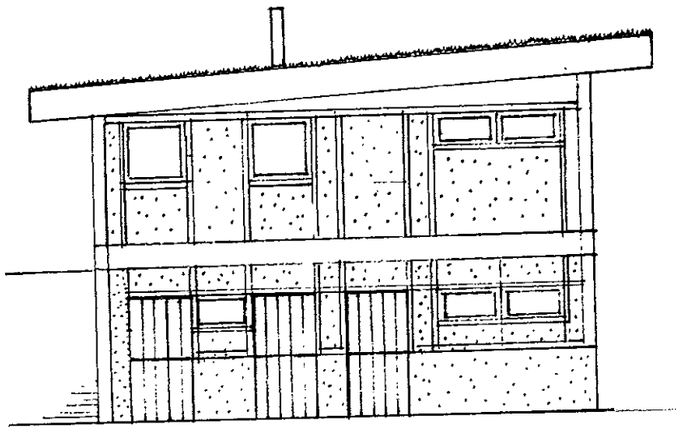
West elevation



South elevation



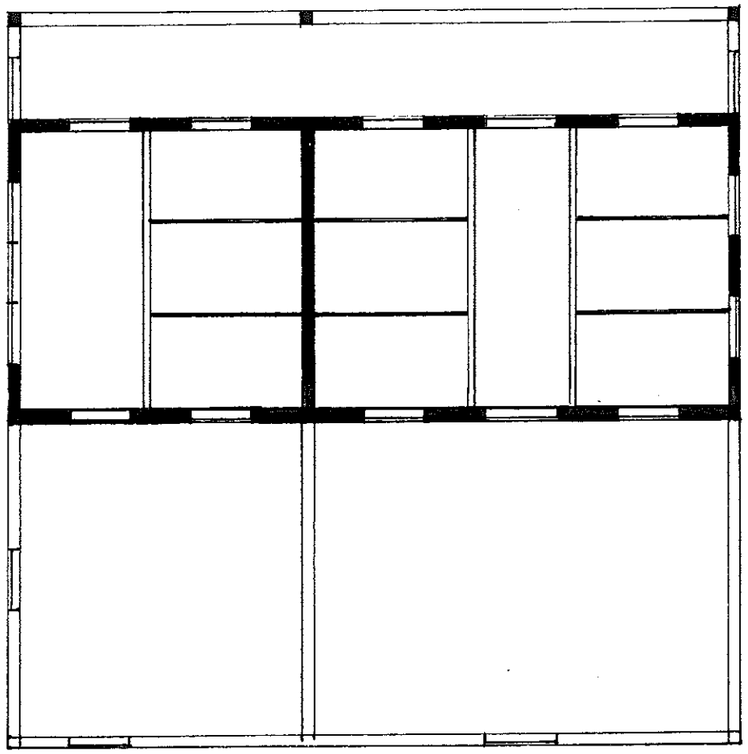
North elevation



East elevation

Barn 1:100

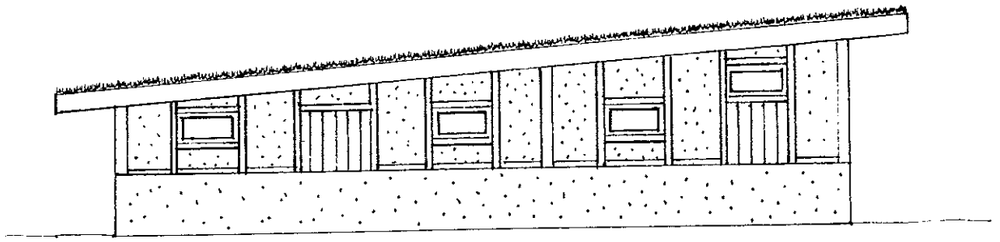
Plot 9 Drawing 4



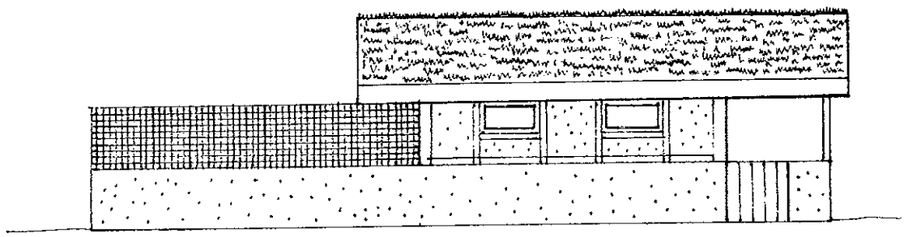
N

Plan

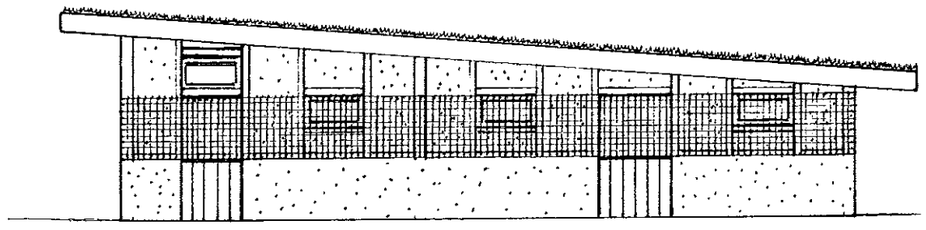
Pig and goat housing 1:100



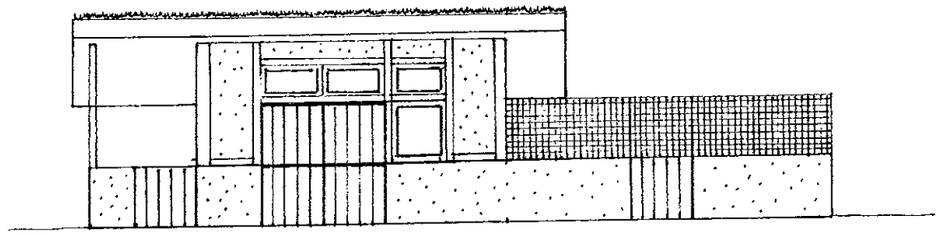
North elevation



East elevation



South elevation



West elevation