



2025-2030

Gilfach yr Haidd Farm

Ystalyfera

SA9 2BE

Aug 2025 - (Revision B)

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1. Introduction and Summary

- 1.1.1 This Management Plan supports the application by Simon & Leigh Cometson for a One Planet Development (OPD) at Gilfach yr Haidd Farm under the TAN6 One Planet Development Policy.
- 1.1.2 This management plan has been produced with the assistance of TerraPerma, planning sustainability and agricultural consultants who provided an independent appraisal of the proposals and a landscape assessment. The SAP company ltd, who provided an energy assessment of the dwelling. Acer Ecology who carried out the PEA survey and advised on ecological issues. Local farmers provided advice about costs and incomes and experience of managing the land locally. It also builds upon the feedback received from Neath and Port Talbot Council via the pre-application process.
- 1.1.3 We are Simon and Leigh Cometson. Simon is a former Royal Marine (serving from 1979-1986) and also, until very recently, a renewable energy plumbing and heating engineer with over 20 years' experience. He was raised on livestock farms, first in Llantrisant and subsequently in Maesycwmmwr and also ran the whole farm for a number of months following the death of his father.
- 1.1.4 Leigh is a former Local Government employee (Mid Glamorgan County Council and Caerphilly County Borough Council), who was a teaching assistant in our local Primary School (Machen) and who also ran the Machen Rainbows Group. For a considerable amount of time we have wanted the opportunity to run a piece of land in an environmentally friendly and sustainable way, being able to meet our own needs without putting more strain on an already overstretched world.
- 1.1.5 As a couple we have been preparing for this for many years in the form of research, training, acquiring the necessary skills and knowledge, and, preparing ourselves financially. We believe that it is important to enjoy life, but not at the expense of others. Therefore, we believe we should do all we can to live sustainably to help safeguard the lives of future generations. We have made a concerted effort throughout our lives to live as sustainably as possible, however, we feel that we haven't been able to do enough.
- 1.1.6 Gilfach yr Haidd Farm will be our sole residence. We have sold our former family home to fund the land purchase and OPD venture and currently reside in rented accommodation. We are serious about our ethos of living off the land and providing a net carbon, minimal resource habitation for the rest of our lives. We will grow food for our own consumption, for sale to the local community and set-up land-based businesses to meet our basic financial needs.
- 1.1.7 When looking for suitable OPD land over a period of years, one of our criteria was to find land that was not too detached from a local community and not therefore located in the 'middle of nowhere'. This would provide us with an attachment to a local community, proximity to services such as healthcare and a substantial residential catchment for sales of our produce within a short journey of a few miles. This would allow multi-drop routes to deliver produce, limiting our travelling distances and combining deliveries as much as possible. This site allows us to achieve these aims.
- 1.1.8 The Welsh Government's progressive, forward thinking OPD policy is a fantastic opportunity to achieve 'real' sustainability. To satisfy all the criteria of the policy is no 'mean feat', however we enjoy hard work and a challenge and are highly motivated because we will be working towards something that we are deeply passionate about. We are determined to do what we can to preserve our planet for future generations to enjoy.
- 1.1.9 It would appear that there has been little 'take-up' of OPD projects and lifestyles within the Neath-Port Talbot County Borough area and as such, this may be seen as a 'flagship' OPD

project within the council area. The creation of OPDs bolsters local Council's and the Welsh Governments environmental targets and supports the Well-being of Future Generations Act. Since the COVID-19 pandemic, public opinion has significantly shifted towards the importance of a 'green recovery'.

- 1.1.10 The Climate Assembly UK recently found that 80% of people support an economic recovery designed to help reach net zero carbon. Also, the pandemic has highlighted the need for regions to be able to produce their own produce as we have all seen how fragile supply chains are in a crisis.
- 1.1.11 The government has demonstrated that they want more OPDs, the public are behind them and future generations need them.
- 1.1.12 We will enter into a unilateral undertaking to ensure that the proposals are tied to the land they require (the application site) on grant of planning permission. Wording of the proposed unilateral undertaking is laid out in Appendix A.

Summary of our plans

- 1.1.13 We are intending to build a low impact dwelling in compliance with the Caravan Act and the One Planet Development (OPD) policy and Guidance contained in TAN6 (July 2010).
- 1.1.14 We are also proposing to build a processing shed, polytunnel, barn cover between our containers and solar/log store. The land use plan 'proposed land management plan P125-P-601.' shows the proposed siting of the dwelling and outbuildings, described in the narrative in Section 7, and the design strategy in Section 3 details the design and construction of each. We intend to ensure that the dwelling will have a low visual impact and will sit nicely into its surroundings. We are aiming to use locally sourced building materials and as much recycled/upcycled materials as possible with the intention of attaining a carbon neutral footprint.
- 1.1.15 We intended to transform the land from its current poor-quality state, comprised of poor quality semi-improved acid grassland and defunct hedges to a rich biodiverse landscape that will have the capacity to produce an abundance of produce for ourselves living off the land and for the wider community to benefit from. We realise that what we are embarking on at this site requires an enormous amount of dedication and technical expertise in order to successfully comply with the aims and objectives of the One Planet Development Policy. However, we believe that the techniques that we will use will benefit the local area, the wider community and the population of Wales in general, as we all move towards more sustainable forms of living.
- 1.1.16 We will grow as much of our own foodstuffs as possible. With this in mind, we were already growing many types of food stuffs and vegetables in our previous property, which we sold to buy the land the subject of the current OPD application. We were generally following a no-dig method which maintains the ground and myocilin structures within the soil, a system which had proven to yield good crops for our own use. The land based business and land management is laid out in full in Section 7 and Appendix E
- 1.1.17 We have already begun managing the land to restore biodiversity. This included planting trees, replanting/thickening and managing hedgerows and managing grassland. Existing wildlife corridors will be maintained and enhanced. New corridors will be created to improve habitat connectivity and improved biodiversity, fruit, shade, habitat and nesting opportunities for indigenous wildlife.

2. Baseline Information

- 2.1.1 This section on the 'baseline' will enable us to measure improvements made to the land in all aspects of sustainability and ecology. The baseline is based on the land as purchased, prior to any OPD related activities have taken place.

2.2. Location

- 2.2.1 The site is located at Gilfach yr Haidd Farm, Ystalyfera, SA9 2BE. The site is located on an area of upland ridge within the South Wales Valleys approximately 0.7km from Ystalyfea. The location is indicated on the aerial image in Figure 1 below, shown within the blue line area.

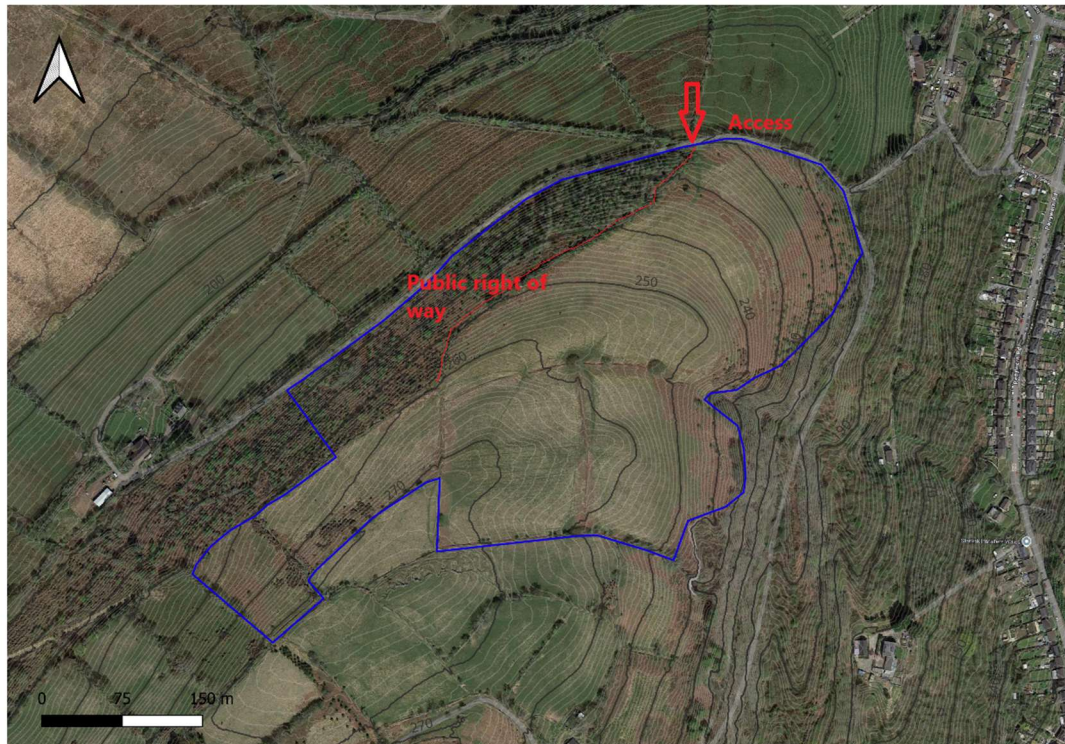


Figure 1: Gilfach yr Haidd boundary and access

- 2.2.2 The site entrance is shown by the red arrow located at grid reference OS easting 275892, northing 209158. The OPD site is accessed along the surfaced track (a public RofW) from this point. A short length of track leads from the PRefW to an area of hardstanding from which the rest of the land is accessed.
- 2.2.3 The more general location of the land is shown on the aerial photograph below showing the site in the wider context of the locality.
- 2.2.4 The land is connected to the local town of Ystalyfera 1 km away by road or footpath and from there to the surrounding settlements by foot, bus and rail. Details of the transport links to surrounding settlements are laid out in detail in the Transport Assessment and Travel Plan in Section 11.

2.3. Description

- 2.3.1 The area of the land in our ownership is 13.7 ha (34 acres), plus access tracks.

- 2.3.2 The land was historically part of a larger farm holding and was used as pasture for rearing sheep. It has since been left to lie fallow.

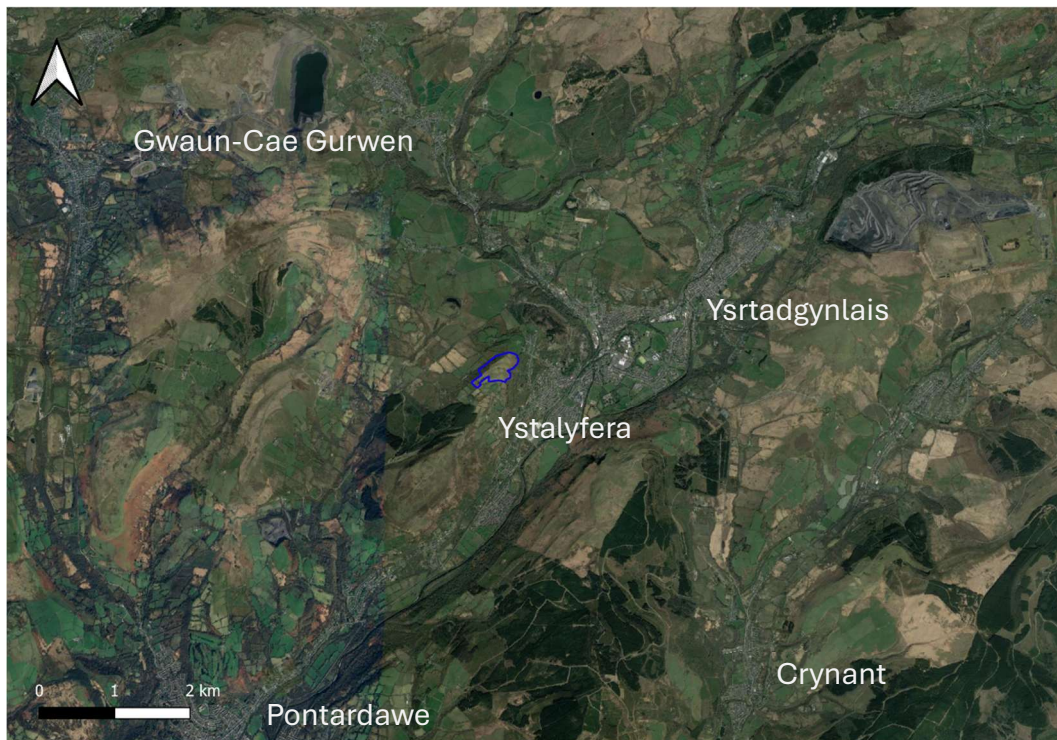


Figure 2: Gilfach yr Haidd in relation to neighbouring settlements

2.4. Physical Features

- 2.4.1 There are the following existing buildings and services within the site:
- Access track from road to the site
 - Two containers and hardstanding
 - Water spring
- 2.4.2 The topology and levels of the site as existing are shown in Figure 3 and 4. The land slopes down to the east, north and west and sits between 250-270m (AOD).
- 2.4.3 The physical features of the land are as follows:
- Mixture of soilscares including:
 - Freely draining acid loamy soils over rock
 - Slowly permeable wet very acid upland soils with a peaty surface
 - Agricultural land classification – 4
 - The farm consists of approximately:
 - 9.00 ha of semi-improved (acid grassland) pasture
 - 0.61 ha of bracken and gorse scrub
 - 1.22 ha of woodland (larch plantation)
 - 1.03 ha of woodland (Mixed broadleaf)
 - 1.82 ha of young replanted (2024) woodland
 - Tracks and hardstanding
 - 2,131 m of hedgerows/banks in very poor condition

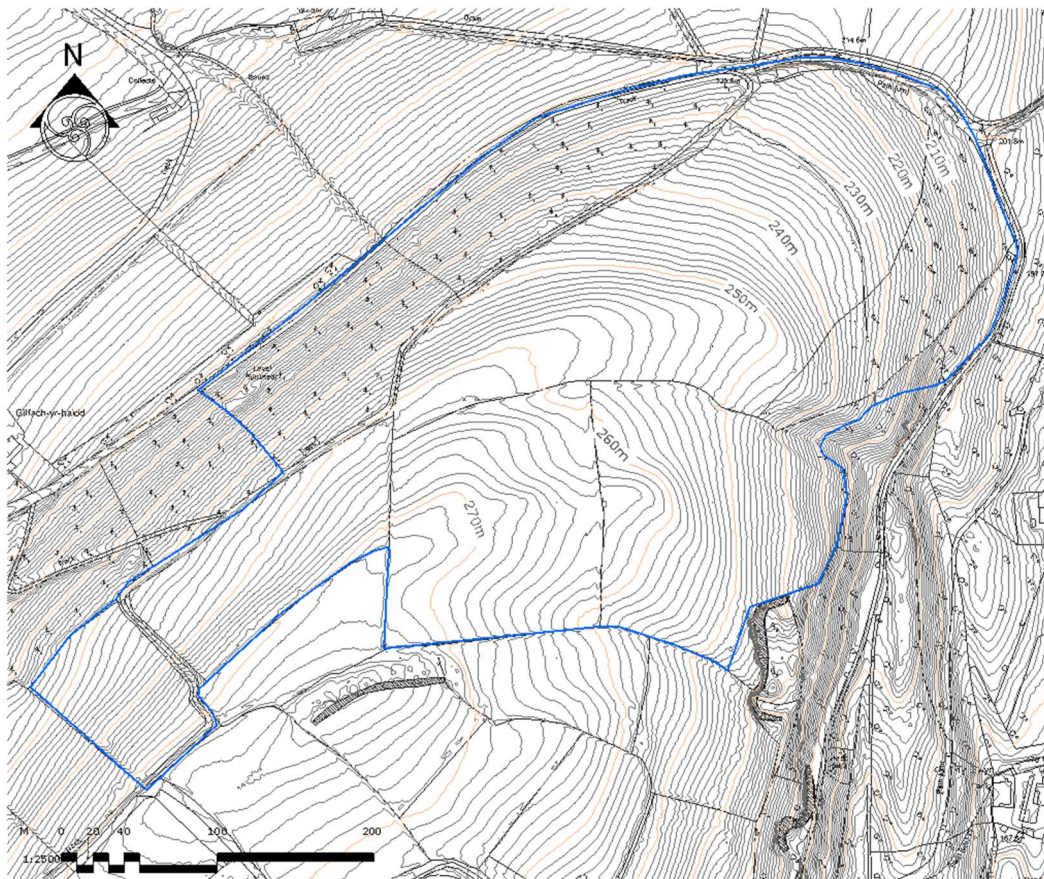


Figure 3: Topographical map of Gilfach yr Haidd Farm

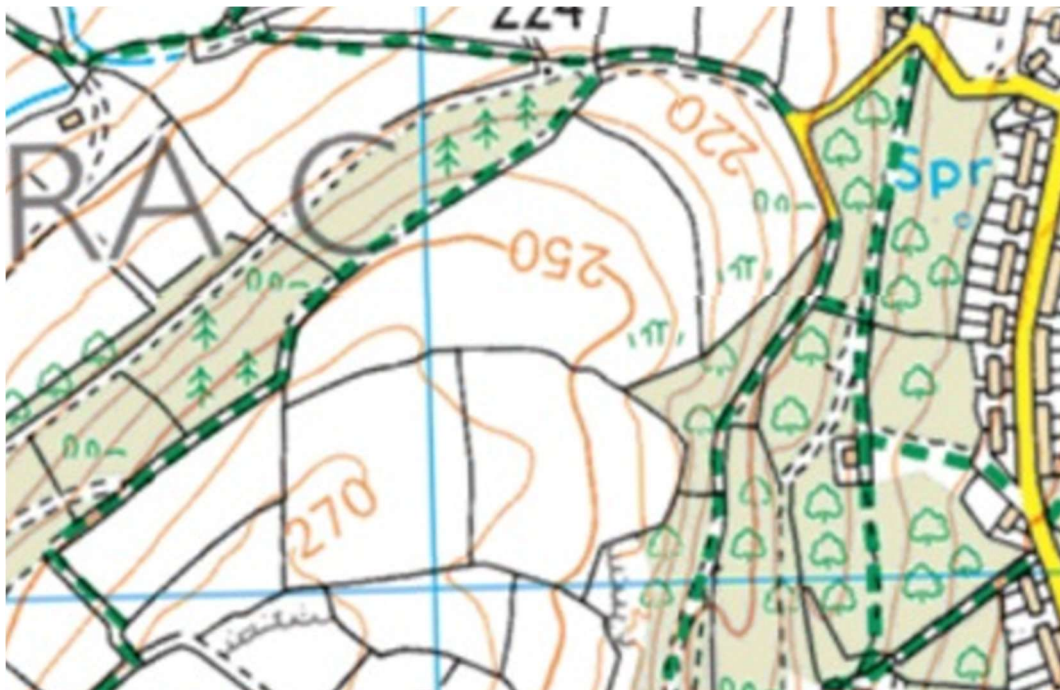


Figure 4: OS extract of Gilfach yr Haidd Farm showing footpaths and public rights of way

2.5. Baseline Ecological Information

- 2.5.1 Surveys were carried out for the Preliminary Ecological Appraisal of the land (October 2024). The PEA document (Appendix B) lays out all the existing habitats and key species to be found on the site and close to it.
- 2.5.2 The key ecological features on the land are the mix of semi-improved acid grass land (low ecological value) the sections of existing woodland (varying value). The regenerating bracken and bracken/gorse scrub. The new planted woodland and the approximately 2 km of defunct hedge lines.
- 2.5.3 Section 7.2 summarises the important features and explains how we will conserve and enhance these habitats and enhance opportunities for species.
- 2.5.4 There are no Ecological Statutory Designations recognised by Natural Resources Wales and the Wildlife Trust present on the site, nor in the immediate vicinity. The closest designated site is Gwrhyd Meadows approximately 2.1km away.
- 2.5.5 The site is within the Neath Port Talbot Watercourses SINC a locally designated wildlife site.

2.6. Baseline Landscape Information

- 2.6.1 Gilfach yr Haidd Farm sits in the National Landscape Character Area 37 – South Wales Valleys. It is characterised by its distinctive industrial heritage and complex landscape morphology. It also sits in Special Landscape Area EN2/1 Mynydd y Garth as identified by the Neath Port Talbot Local Development Plan.
- 2.6.2 More landscape information including baseline photographs of the site is given in the landscape assessment in Appendix C

2.7. Baseline Heritage Features

- 2.7.1 The Archwilio website ‘archwilio.org.uk’ found that there are no sites of cultural importance on the proposed OPD land or in the immediate vicinity:
- 2.7.2 The closest heritage assets in the surrounding area are:
- Wern Independent Chapel - Grade II listed building - 750m East of site
- 2.7.3 The land sits within the context of the area described below. Please see Landmap titled ‘Historic Landscape’ in Appendix D for the boundary.

‘A predominantly rural aspect area of both regular and irregular fieldscapes, with limited zones of ancient and semi-natural woodland. The aspect area is quite extensive, with some urban growth around modern industry to the far north at Gwaun cae gurwen. The aspect area is characterised by broad valleys, generally aligned north-south, that is interrupted by a block of upland (HL29). Cwm Gors is the most westerly and heavily industrialised of the valleys; following, in part, the course of the Upper Clydach River.

This extensive upland valley fieldscape with elements of irregular and regular enclosure depicted on the OS 1st edition map, defined by a mixture of hedgerows, hedgebanks and drystone walls, has remained largely intact and probably dates from the medieval/postmedieval period. The archaeological record for this area is reasonably diverse. Several groups of prehistoric ritual/funerary monuments are located just outside the boundaries of the aspect area at Bryn-chwyth, Mynydd Uchaf and Cefn Gwr.

This aspect area has been assessed as high, representing a well-preserved, extensive upland valley fieldscape of medieval/post-medieval origin with evidence of prehistoric ritual/funerary

activity, medieval/early post-medieval upland settlement and 19th-early 20th century industrial extractive activity and associated settlement.'

2.8. Baseline Transport Impacts

- 2.8.1 The site is currently visited by Simon and Leigh approximately 1-2 times a week to carry out preparation works such as planting, fencing, field renovation, seed harvesting, beekeeping, etc.
- 2.8.2 The Transport Assessment and Travel Plan in Section 11 gives details of existing local transport options and lays out how our travel patterns will change following the development. The ecological footprint assessment details our current travel impacts. Section 11 details the baseline conditions including:
- The relationship of the site to our surrounding towns and villages
 - Details of existing access to the site (vehicular and pedestrian).
 - Public rights of way through and close to the site
 - Existing public transport links
 - Our existing transport needs and use.

2.9. Context/Adjacent Land Uses

- 2.9.1 There are a number of residential farms in close proximity to the land:
- Gilfach Goch Farm located some 470 metres to the north
 - Garreg Pentwyn Farm located some 500 metres to the south-west
 - Penygraigarw Farm located some 600 metres to the south-west
- 2.9.2 Gilfach yr Haidd Farm is surrounded by agricultural land. This is either utilised for woodland, pasture/grazing or crop production.

2.10. Tenure

- 2.10.1 We purchased the land in 2023. The land in our ownership including land which is the subject of the OPD is registered under Title number WA150940.

2.11. Existing On-site Services

- 2.11.1 The land benefits from a spring which can provide water, located within the broadleaf woodland (Field 5).
- 2.11.2 There are no other services on the land, though electrical cables pass over the land.

3. Design Strategy

- 3.1.1 The land is required to provide for a single household of two people. The permaculture philosophy (which we will practice) makes the most of the interrelations between elements and activities on the land so that they support each other and maximise beneficial relationships. Outputs from one part of the system should be used as an input for another creating a cycle with no or little waste.
- 3.1.2 Land that utilises permaculture philosophies 'mimics' nature rather than working against it. As permaculture-based practises are highly biodiverse, delivering significant ecological benefit over monoculture. The land at Gilfach yr Haidd Farm is currently pasture monoculture or larch

plantation monoculture, both in relatively poor condition. Management of the woodlands, hedges and pastures will improve their quality and ecological value.

3.1.3 Due to the poor condition of the hedges much of the site is more exposed than it could be. Our strategy is to replace and thicken the hedges and plant areas of trees which will provide increased shelter over time, this has worked well for our neighbours who have grown fruit and vegetables successfully on their farm.

3.1.4 Here are some examples (not an exhaustive list) of how systems/elements on this land interrelate:

- Manure from humans and animals will be used to fertilise the land. (Human manure will only be used on non-edible plants such as willow and once it has been fully composted).
- Fertiliser will be produced from food composting and green waste.
- The willow we plant will create wind breaks, visual screening, habitats, nectar, fuel, absorb CO₂, absorb water to reduce flooding, improve soil quality and structure and provide produce to sell.
- Hedges will create wind breaks, visual screening, habitats, food, boundaries, shade for growing, absorb CO₂, absorb water and wildlife corridors.
- Management of the diseased larch woodland will improve its quality and allow for natural regeneration of replacement mixed woodland over time.
- The chickens and turkeys will provide, eggs, meat, fertiliser, pest control, income and they also scarify the land.
- The action of pigs will improve the poor quality acid grassland.
- The bees will provide a source of income from honey sales, wax and propolis and, of course, they are vital pollinators.
- The areas of re-wilding will further increase the land's biodiversity, which will result in an increase of pollinators and a natural balance that will reduce pests that damage crops by introducing natural predators. This balance can also help prevent diseases.

3.1.5 The buildings are sited where they are sheltered from the west/south-west and the local prevailing weather direction. The layout of the site has been carefully designed to gather energy in the form of water captured from the buildings at the high point of the land and to site. Water from the spring will also be raised to the high point of the land close to the house by solar pump.

3.1.6 The wider site is then managed outward from the zone closest to the house and site access with activities and production elements requiring the most attention located closest to the area we visit frequently.

3.1.7 Animals will be kept on the land, with those requiring the most attention (poultry and pigs) closest to the house and the cattle generally on the further pastures. Animals will be rotated between areas of pasture.

3.1.8 Details of this management and further land management activities is outlined in Section 7 and drawing P125-P-601 'proposed land management'

3.1.9 The programme for implementation with a detailed development timeline is given in Section 13.

Summary of the Elements of the Management

3.1.10 Buildings and land use areas across the OPD for the domestic and business enterprise include:

- Buildings/structure
 - Dwelling
 - Log store/solar mount
 - Processing shed
 - Polytunnel (1 x 49m²)
 - Containers with tented cover between
- Agricultural/land use areas
 - Reed beds (15m² + 25 m²)
 - Pond (195m²)
 - Compost area
 - Raised planting beds (up to 400 m²)
 - Fruit trees (2150 m²)
 - Soft fruit bushes (800 m²)
 - Apiary
 - Wildflower meadows (3970 m²)
 - Strip graze pig areas (6780 + 7490 = 14270 m²)
 - Willow coppice areas (1590 m²)
 - Pastures
 - Woodlands

Dwelling

- 3.1.11 The cabin design follows the principles of the energy hierarchy. It has been designed using a fabric first approach to the use of materials with high thermal performance and efficient siting to maximise solar gain. The cabin will be constructed to meet the requirements of the Caravan Act 1968. It will have a light touch upon the ground with screw pile foundations allowing for the land to return to its original condition should the development be removed.
- 3.1.12 The proposed siting of the cabin was also chosen to reduce its visual impact upon the surrounding area. It will sit in a natural depression towards the high point of the land which screens it from views. This is further expanded in Section 7 and the Landscape and Visual Assessment in Appendix C. This location within the land will mean the rainwater captured from the roof can be gravity fed to the animals and vegetable production area.
- 3.1.13 The dwelling will be accessed on foot from the hardstanding area and access track to the public right of way. When required vehicles can access the site of the building by driving up the field but we do not intend to have a vehicular access to the house site.

Polytunnel

- 3.1.14 The polytunnel will be used for horticulture to grow vegetables for sale and our own use and to prolong the growing season to contribute to our minimum food needs. Sited close by to the south west of the dwelling this site will allow it to get it will benefit from the shelter of the surrounding higher land and overtime from the planting to thicken the boundary hedge lines.
- 3.1.15 There is space for a second tunnel if it proves to be needed for the vegetable production. We will submit a prior notification application if required.

Log Store/Solar Mount

- 3.1.16 The log store building will double as a mounting for an array of solar panels. The building will be simple in form and built using local timber on a scaffolding frame. It will have a light touch on the ground with minimal foundations. Rainwater will be harvested from the roof/panel as well as storage of logs and tools. It will be located immediately west of the dwelling to cluster the buildings in one sheltered area of the land.

Processing Shed

- 3.1.17 The processing shed will be used for process and storage of horticultural produce for domestic use and commercial sales. It will be simple in form, have light-touch foundations and be built from local timber. It will be located to the north west end of the solar mount which will create a yard area between it and the dwelling

Containers with roof cover between

- 3.1.18 The containers are sited on the hardstanding close to the access from the track. This makes them easy to access in all weathers and provides a good central storage point for tools and equipment used across the land for management and farming. The cover between them creates a sheltered, contained space which can also be utilised for the animals when needed.

Compost Area

- 3.1.19 A compost heap is located close to the general horticultural area and the dwelling to allow compostable food waste to be added easily and compost to be spread easily. Compostable food waste will power our wormery.

4. Business and Improvement Plan

Land Based Activity and Minimum Needs

4.1. Subsistence`

4.1.1 Our current food needs are laid out in Table 1 below.

	Annual					
Food category	Consumed		Purchased		Produced	
	Cost / value		Value		Value	
Meat and meat products (excl. poultry)	£1,040	25.39%	£1,040	25.39%	£0	0.00%
Poultry meat and poultry products	£176	4.31%	£176	4.31%	£0	0.00%
Fish and fish products	£11	0.27%	£11	0.27%	£0	0.00%
Vegetables	£1,040	25.39%	£1,040	25.39%	£0	0.00%
Fruit	£0	0.00%	£0	0.00%	£0	0.00%
Vegetable and animal oils and fats	£150	3.66%	£150	3.66%	£0	0.00%
Dairy products- butter, cheese and milk	£286	6.98%	£286	6.98%	£0	0.00%
Grain mill products; flours of all sorts any grains, pulses and rice	£18	0.44%	£18	0.44%	£0	0.00%
Bread; rusks and biscuits; pastry goods and cakes	£77	1.88%	£77	1.88%	£0	0.00%
Cocoa; chocolate and sugar confectionery	£171	4.17%	£171	4.17%	£0	0.00%
Other food products (incl. sugar and preserves) non alcoholic drinks	£87	2.12%	£87	2.12%	£0	0.00%
Eating out and take away foods	£1,040	25.39%	£1,040	25.39%	£0	0.00%
Total	£4,096	100.0%	£4,096	100.0%	£0	0.00%

Domestic animal food purchases						
Pets - dog and cat food	£60	100.0%	£60	100.0%		0.00%
Pets - other	£0	0.00%		0.00%		0.00%
Poultry	£0	0.00%		0.00%		0.00%
Livestock	£0	0.00%		0.00%		0.00%
Total	£60	100.0%	£60	100.0%	£0	0.00%

Table 1 existing food needs

Domestic Food Production at Year 5

- 4.1.2 Section 7 Land Management, details the size and locations of the different allocations of land for domestic production, commercial production, landscape and ecological benefit.
- 4.1.3 We have information from our neighbour 200m to the southwest and research from other growers (see section 7) that reassures us that fruit and vegetables will grow locally at a similar altitude to ours. Our land based business is livestock based and we will principally grow vegetables and fruit for our own use. We will aim to preserve fruits and veg by pickling, bottling

or freezing to provide for the winter. Roots will be stored in clamps and apples will be boxed and stored. Should we produce surplus it will be offered for sale at our farm gate or to other customers.

- 4.1.4 Vegetables will be grown in outdoor minimal dig raised beds. Crop covers and a polytunnel will provide sheltered cropping space to extend the season. We have allowed 247 m² of production space but there is much more area available and we will expand the growing area if we need to. We will provide temporary shelter/windbreaks as required whilst our new hedges and hedge thickening establishes.
- 4.1.5 In addition the fruit area and orchard will expand up to 2800 m².
- 4.1.6 A 250 square meter allotment is generally considered enough to feed a family of four. This size is a traditional standard. We have based our initial sizing on this and will adjust as necessary if our yields are not sufficient.
- 4.1.7 We will be raising pigs, chickens and turkeys for commercial sales and we will provide for all our domestic meat, eggs and some fats through using the surplus from this production. We have allowed for the costs of animal feeds for domestic use in our minimum financial needs.
- 4.1.8 Bees will provide some honey for our domestic use
- 4.1.9 We consider that conservatively:
 - We will be able to provide for all of our meat, poultry and eggs and a proportion of the fats we consume.
 - We will be able to grow half the vegetables we need during a year
 - We will be able to substitute for all of the fruit we currently purchase with fruit grown on the land.
- 4.1.10 Table 2 below shows how our food consumption will change by year 5.
- 4.1.11 This shows we can meet 62% of our food needs from the land. The OPD target is to produce 30-65% of household food needs from the land and with income generated by land based activity (Paragraph 3.25 of practice guidance). We have therefore allocated the balance of costs for foods up to 65% (£90 + £181= £271) to our minimum financial needs. NB if we allocated the balance of costs for foods up to 100% to our minimum financial needs this value increases to £1,884.
- 4.1.12 The annual costs of producing our domestic fruit and vegetables is accounted for as £170 (see EFA)

	Annual					
Food category	Consumed		Purchased		Produced	
	Cost / value		Value		Value	
Meat and meat products (excl. poultry)	£1,250	31.25%	£0	0.00%	£1,250	31.25%
Poultry meat and poultry products	£250	6.25%	£0	0.00%	£250	6.25%
Fish and fish products	£11	0.28%	£11	0.28%	£0	0.00%
Vegetables	£1,500	37.50%	£540	18.75%	£750	18.75%
Fruit	£200	5.00%	£0	0.00%	£200	5.00%
Veg and animal oils and fats	£150	3.75%	£130	3.25%	£20	0.50%
Dairy products	£286	7.15%	£286	7.15%	£0	0.00%
Grain mill products; flours of all sorts any grains, pulses and rice	£18	0.45%	£18	0.45%	£0	0.00%
Bread; rusks and biscuits; pastry goods and cakes	£77	1.93%	£77	1.93%	£0	0.00%
Cocoa; chocolate and sugar confectionery	£171	4.28%	£171	4.28%	£0	0.00%
Other food products (incl. sugar and preserves) non alc drinks	£87	2.18%	£47	1.18%	£40	1.00%
Eating out and take away foods	£0	0.00%	£0	0.00%	£0	0.00%
Total	£4,000	100.00%	£2,320	37.25%	£2,510	62.75%

Year 5 calculations

Value of 30% of food needs	£1,200
Value of 65% of food needs	£2,600
Value of food produced	£2,510
Additional food costs (to 65%) to add to minimum financial needs	£90

Domestic animal food purchase						
Pets - dog and cat food	£60	9.85%	£20	3.28%	£40	6.57%
Pets - other	£0	0.00%	£0	0.00%	£0	0.00%
Poultry	£75	12.32%	£50	8.21%	£25	4.11%
Livestock	£474	77.83%	£324	53.20%	£150	24.63%
Total	£609	100.00%	£394	64.70%	£215	35.30%

Year 5 calculations for animal feed

Value of 30% of food needs	£183
Value of 65% of food needs	£396
Value of food produced	£215
Additional food costs to add to minimum financial needs	£181

Table 2 Food needs predicted at year 5

Minimum Financial Needs at Year 5

- 4.1.13 The OPD Guidance lays out the categories of expenditure to include in your minimum financial needs calculations

Minimum needs Year 5

Categories	Minimum Needs
Additional food	£90
Domestic animal feed and production costs	£181
Domestic fruit and veg production costs	£170
Domestic energy	£0
Clothing	£300
IT/communications	£288
Domestic travel	£1,276
Council tax (band A)	£1,638
Total	£3,942

Table 3 Minimum financial needs

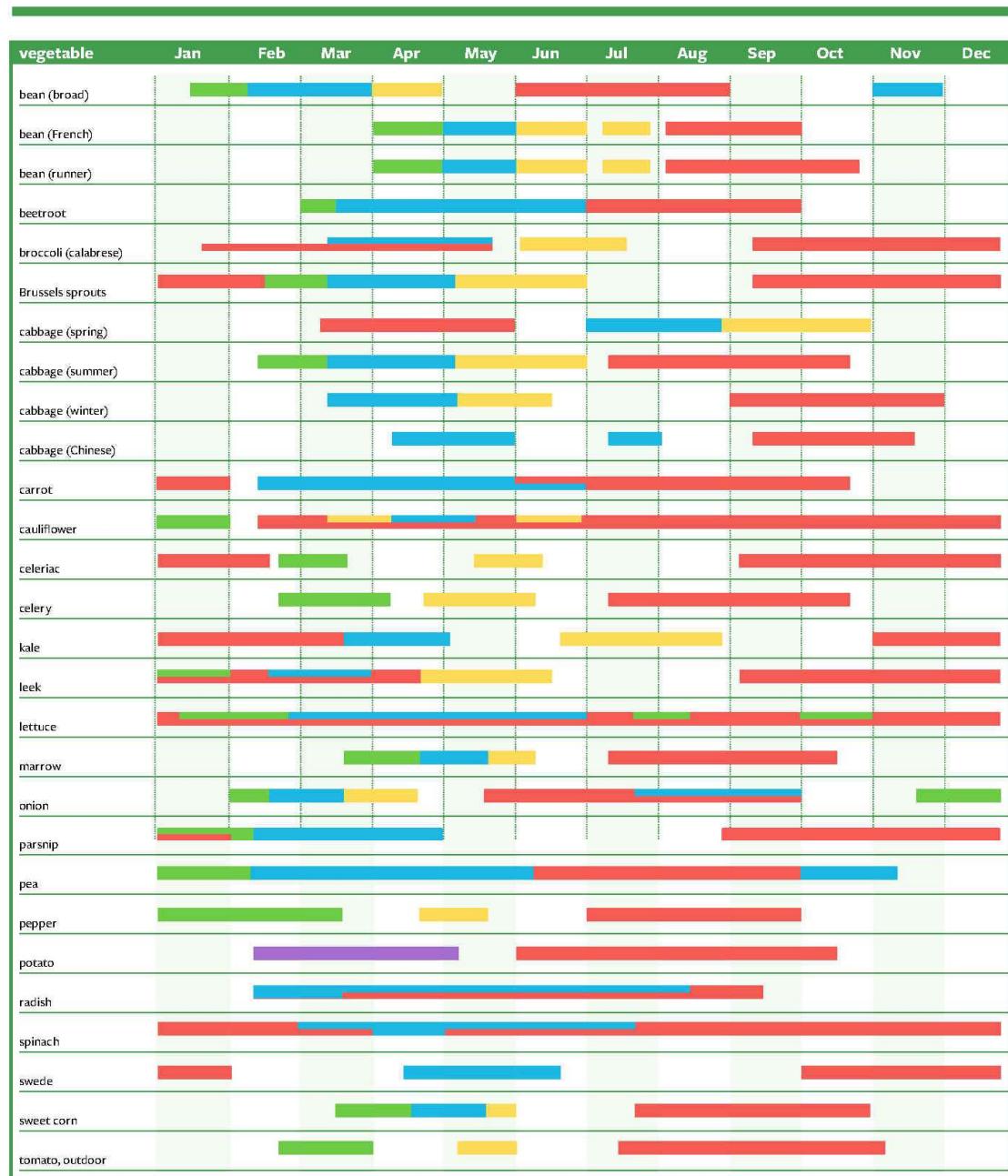
- 4.1.14 Our annual vehicle costs are calculated as follows.

Annual fuel cost	£442
Tax	£325
MOT/Service	£305
Maintenance	£600
Insurance	£340
TOTAL	£2,012
Business - 37%	£736
Domestic - 63%	£1,276

Table 4 Vehicle costs

- 4.1.15 The following table from the RHS gives an indication of the sorts of vegetable crops that can be produced and when during the year. Our growing season is somewhat shorter than this due to our altitude and exposure. The effect of this is to push the early sowings into February and the later dates for planting out seedlings back by about a month.
- 4.1.16 Details of orchard and soft fruit growing in Wales at high altitude are given in Section 7 and we have based our production planning around this.

Table 5 veg cropping planner - copyright RHS



Key
■ sowing indoors ■ sowing outdoors ■ planting tubers, sets or offsets ■ planting out seedlings ■ harvesting



4.2. Enterprise: Income

4.2.1 Our land-based Business Plan 'Giltfach OPD Business Plan June 2025' is found in Appendix E. This describes how the site will provide for our needs summarised in Table 6 below:

SUMMARY	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
INCOME					
Capital/assets introduced	10000	0	0	0	0
REVENUE					
Pork	£2,880	£5,760	£8,640	£11,520	£14,400
Beef	£0	£0	£6,750	£6,750	£10,125
Turkey	£1,090	£2,180	£3,270	£4,360	£5,450
Eggs	£336	£1,440	£2,160	£2,160	£2,160
Honey	£250	£500	£750	£1,000	£1,250
veg and fruit	£0	£0	£0	£0	£840
TOTAL	£14,556	£9,880	£21,570	£25,790	£33,385
COSTS					
Capital expenditure	£5,149	£0	£0	£0	£0
COST OF SALES					
Seeds	£20	£20	£20	£20	£20
Compost	£0	£0	£0	£0	£0
Pig costs	£2,058	£4,116	£5,488	£8,232	£10,290
Beef costs	£1,750	£1,750	£3,150	£3,488	£3,525
Turkey costs	£193	£387	£580	£773	£967
Chicken costs	£267	£916	£1,373	£1,373	£1,373
Honey costs	£45	£90	£135	£180	£225
Fruit and veg costs	£0	£0	£0	£0	£13
Vehicle costs	£740	£740	£740	£740	£740
Sub- TOTAL	£5,073	£8,018	£11,486	£14,806	£17,153
LESS EXPENSES					
Repairs and maintenance	£600	£600	£600	£600	£600
Captive bolt stunner	£365	£365	£365	£365	£365
Marketing	£30	£30	£30	£30	£30
Memberships	£412	£412	£412	£412	£412
Farm insurance	£765	£300	£330	£363	£399
Vets costs	£95	£95	£95	£95	£95
Sundries	£10	£10	£10	£10	£10
Electricity	£0	£0	£0	£0	£0
Sub- TOTAL	£2,277	£1,812	£1,842	£1,875	£1,911
TOTAL GROSS PROFIT	£7,205	£50	£8,242	£9,109	£14,322
Less depreciation at 5%	£257	£245	£232	£221	£210
TOTAL COSTS	£7,608	£10,075	£13,561	£16,902	£19,273
NET PROFIT	£6,948	-£195	£8,009	£8,888	£14,112
Cashflow	£6,948	£6,753	£14,763	£23,651	£37,763

Table 6 Enterprise profit and loss summary

4.3. Production detail

4.3.1 This section should be read alongside the business plan document and the information in Section 7. Together these sections explain what will happen where on all of the land in our management.

4.3.2 Table 7 below summarises the key elements of the production areas. It should be read in conjunction with Section 7 below and the proposed land management plan P125-P-601.

Site Features	Drawing Key	Area m2	Management Notes
Veg production area	A	200	Domestic production. 10 number 20x1m beds
Additional veg	A1	200	Additional 10 number 20x1m beds if required
Polytunnel	B	47	Domestic production.
Polytunnel 2 if required	B1	47	If required
Buildings	B2, B3, B4	265	House, PV store and processing barn.
Fruit production area	C	800	Domestic production. biodiversity enhancement
Orchard	D	2150	Domestic production. Providing biodiversity enhancement and landscape gain.
Wildflower Meadow	E (field 4c)	3968	Land disturbed by pigs. Then sown with seed.
willow coppice	F1	815	Managed for landscape benefit and as source of firewood longer term.
willow coppice	F2	774	Managed for landscape benefit and as source of firewood longer term.
Pig strip grazing	G (fields 3a and 4a)	14270	Commercial use. Pigs raised in electric fenced pens. Pigs are recommended for management of acid grasslands
Poultry tractors	H (fields 3a, 3b and 4a)	N/A	Commercial use. Following in pig grazed areas and to clear and establish minimum dig veg beds.
Turkeys	I (Field 3)	N/A	Commercial use.
Tree nursery	J Field 3b	100	To provide trees for strengthening hedgerows
Pond 1	K		Planted as per details in section 7.5 of MP
Chain of reedbeds and pond	L1, L2, L3		Planted as per details in section 7.5 of MP
Apiary	M		Sited within orchard in most sheltered area

Table 7 Key elements of the productive land management

5. Site Occupants and Labour Requirement

5.1.1 The OPD is intended to provide for the needs of one family of two adults.

5.1.2 The labour for the enterprise and the wider land management will be provided by Leigh and Simon Cometson working in partnership. Our estimate of the labour requirement is around 3,300 hours per year as shown in the Table 8 below. We are sure we can run the enterprise effectively between us.

Daily Tasks:	Time Allocation in hr		
	daily	weekly	monthly
Autumn and Winter season (Oct to March)			
Open up poultry houses, check for any issues, feed and water, check fencing	0.5		
Collecting, sorting and packing eggs and meat prep	0.5		
Moving electric fences		0.5	
Cleaning poultry housing, inspection for any pests (mites)		0.5	
Closing poultry houses, checking birds are inside and well	0.5		
Polytunnel checks, opening and closing, ventilation management	0.5		
Sowing and transplanting seedlings (care in other headings)		1	
Watering (ave)	0.1		
Weed control (average in low season)	0.15		
Pest control (average in low season)	0.1		
Cultivation (average in low season)		4	
Feeds and compost application		0.5	
Crop protection management		1	
Harvesting		2	
Processing packing horticultural produce from site (ave)		2.5	
Transporting produce to customers or markets		2	
Record keeping, horticulture and livestock			1.25
Stock check, health and veterinary work		2.5	
Check and feed pigs and general pig maintenance	0.25		
Check and feed cattle and general cattle maintenance	0.4		
Fencing work			1
subtotal:	3.00	16.50	2.25
total monthly labour requirement in hr:	163.50		

	daily	weekly	monthly
Spring and Summer (April – Sept)			
Open up poultry houses, check for any issues, feed and water, check fencing	0.5		
Collecting, sorting and packing eggs and meat prep	0.5		
Hatchery and brooder duties – averaged to daily (only nine weeks of year)	0.25		
Moving electric fences		1	

Cleaning poultry housing, inspection for any pests (mites)		0.5	
Closing poultry houses, checking birds are inside and well	0.2		
Polytunnel checks, opening and closing, ventilation management	0.5		
Sowing and transplanting seedlings		0.75	
Maintenance of irrigation system		0.75	
Watering (ave)	1		
Weed control (average in high season)	1		
Pest control (average in high season)	0.25		
Cultivation (average in high season)	2		
Feeds and compost application		0.5	
Crop protection management	0.15		
Harvesting		8	
Processing packing produce from site		2.5	
Transporting produce to customers		7	
Seed management			1
Record keeping, horticulture and livestock			1
General security checks	0.1		
Stock check, health and veterinary work		2	
Check and feed pigs and general pig maintenance	0.25		
Check and feed cattle and general cattle maintenance	0.4		
Fencing work			1
subtotal:	7.10	23.00	3.00
total monthly labour requirement in hr:	315.61		

Annual or seasonal tasks			
Maintain banks and ditches	8		
Maintain, plant, lay hedges	24		
Fruit tree and bush pruning	24		
Grassland maintenance	48		
Equipment maintenance	24		
Tunnel maintenance	16		
Composting processes - collecting materials turning etc through year	36		
Stock escapes - sporadic occurrences yearly average	5		
Pest /predator trap setting or checking - sporadic occurrences yearly average	12		
Load and transport pigs for slaughter/sale	24		
Collecting and delivering pork products for sale	48		
Poultry houses maintenance	24		
Cattle medical checks and veterinary work	3		
Load and transport cattle for slaughter/sale	12		
Preparing and delivering cattle products for sale	24		
Woodland management	100.00		
Annual Tasks sub total	432.00		
		TOTAL	3306.66

Table 8 Estimate of labour requirement

6. Sole Residence

- 6.1.1 We confirm that the dwelling proposed within this application will be our principal residence and will not be offered for holiday let of any sort.

7. Land Management and Improvement

- 7.1.1 See paragraphs 3.37-3.52 of the OPD Guidance document.
- 7.1.2 Our land management plan is laid out below. It is to be read alongside our Business Plan 'Gilfach OPD Business Plan June 2025' found in Appendix E.
- 7.1.3 The management and improvement strategy of the land has been carefully planned to take into consideration the existing biodiversity, landscape and cultural features. Land management activities are contextualised to the site and will be implemented where and when they are best suited.
- 7.1.4 Table 9 below summarises the land management across the farm. It should be read in conjunction with Section 4 above, The narrative information in section 7 and the existing land management plan P125-P-600 and the proposed land management plan P125-P-601. Together these provide all the detail of how the land will change and be managed over time.

Site Features	Drawing Key	Area ha	Management Notes
Pasture	Field 1	0.698	Poor semi improved acid grassland. Graze and provide pigs access to rest Fields 3 and 4 as required. Thicken hedgerows as possible. Target years 5-10
Pasture	Field 2	1.254	Poor semi improved acid grassland. Graze and provide pigs access to rest Fields 3 and 4 as required. Thicken hedgerows as possible. Target years 5-10
Pasture	Field 3	2.023	Poor semi improved acid grassland. Thicken hedgerows. Target year 2. Plant new hedge row to divide field into two. Pig strip grazing in north section (Field 3a) followed by chicken tractor. Pig rooting will break sward improve structure and increase diversity. OPD dwelling, vegetable production, poultry systems, composting and reedbed in south section (Field 3b)
Pasture	Field 4a	1.658	Thicken hedgerows. Target year 2. Plant new hedge row to divide field into two. Maintain new pond on boundary with field. Pig strip grazing in north section (Field 4a) followed by chicken tractor. Pig rooting will break sward improve structure and increase diversity. Sow for wildflower meadow, soft fruit and Orchard areas with Apiary (Field 4c). Mow and cut bracken above boundary with 4b.

Willow Coppice	Field 4a	0.082	SRC to be managed on a five year cycle
Pasture	Field 7	3.231	Poor semi improved acid grassland. Pig strip grazing in north section above new woodland followed by chicken tractor. Pig rooting will break sward improve structure and increase diversity. Thicken hedgerows as possible. Target years 5-10
Willow Coppice	Field 7	0.077	SRC to be managed on a five year cycle
		9.023	ha
Dense bracken	Field 4b	0.355	Left to regenerate naturally. Badgers left in peace. Hedges to provide through routes for badgers to allow foraging continuity
Bracken scrub	Field 9	0.264	Left to regenerate naturally
		0.619	ha
Broadleaf woodland	Field 5	1.034	Managed for landscape and wildlife. Contains the spring which will provide water.
Larch Plantation	Field 6	1.223	Uneconomic to extract large amounts of timber-signs of Phytophthora infection. Managed for landscape and wildlife and as source of firewood.
New broadleaf woodland planting	Field 8	1.823	Planted in 2024/25. Planting to be checked and maintained. Action taken as required to control weeds and pests.
		4.08	ha
Other features			
Access track/ hardstanding			Access track is PRoW. To be kept open and maintained
Poor hedgerows		2131 m	Fencing of 5m strip to reduce animal damage and plant up as trees become available. See detail
Hedges to be strengthened	HS	1565 m	commencing in fields 3 and 4. (802 m length) Target planting by year 2. Planting to be checked and maintained. Action taken as required to control weeds and pests.
New hedgerows proposed	NH (Field 3 and 4)	320 m	Target planting by years 4-5. Planting to be checked and maintained. Action taken as required to control weeds and pests.
Total land managed		13.722	ha

Table 9 summary of the land management across the farm

7.2. Habitat and Biodiversity

Current Ecology

- 7.2.1 The Gilfach yr Haidd Farm PEA report has identified the habitats in the site area and immediately adjacent to the site. These are as follows.
- 7.2.2 Habitats within and close to the OPD site:
- Species poor semi-improved acid grassland
 - Scattered trees
 - Defunct species-poor hedge (hazel, hawthorn, birch, backthorn, ash and oak)
 - Intact species poor hedge (south of the OPD site, species as above)
- 7.2.3 Habitats on the remaining land in our ownership:
- Conifer Plantation (diseased larch)
 - Broadleaf woodland
 - Newly planted broadleaf woodland
 - Species poor semi-improved acid grassland
 - Dense bracken
 - Bracken scrub
 - Scattered trees
 - Defunct species-poor hedge
 - Intact species poor hedge
- 7.2.4 To the north, west and east of the site within the rest of the farm land there is further semi-improved grasslands, bracken and more defunct species-poor hedge and a large area of new woodland planting.
- 7.2.5 The PEA noted that there is the potential for protected species to be present on areas outside of the OPD site within the wider farm as follows:
- Badger sets on eastern boundary of the dense bracken area
 - Isolated trees that may support bats, linked to the surrounding woodland which may also support bats.
 - Possibility of dormice within the plantation woodland to the north of our land
- 7.2.6 The PEA reported no signs of any invasive non-native species.
- 7.2.7 Predominantly the site area has been found to be of relatively low ecological value. The historic grazing practice has left the semi-improved grasslands in poor condition. Since purchasing the property, the grassland has been left to lie fallow.

Proposed Ecology Enhancements

- Species poor semi-improved acid grassland. Will be managed by a mixture of grazing by ruminant animals and strip grazing by pigs which will break up the surface improve the structure and increase the species diversity. The areas thus turned will be enhanced with a seed mix as recommended in the PEA.
- Scattered trees. will be managed and maintained. Bat boxes will be erected in two larger trees.
- Defunct species-poor hedge will be thickened and replanted with a mixture of hazel, hawthorn, elder, dog rose, guelder rose, goat willow, rowan, birch, holly, backthorn and oak. A 2m buffer zone will be maintained adjacent to any hedgerow.

- Intact species poor hedge will be thickened and replanted with c A 2m buffer zone will be maintained adjacent to any hedgerow.
- The hazel that is retained and planted will be coppiced.
- Conifer Plantation (diseased larch) will be maintained as standing deadwood with limited extraction.
- Broadleaf woodland will be maintained with individual trees selectively coppiced as required to improve the mix of canopy cover and to facilitate planting to create a diversity of age in the trees.
- The newly planted broadleaf woodland provides compensation/mitigation to address any negative impacts of the OPD. It will be checked and maintained with action taken as required to control weeds and pests as per the PEA recommendations.
- The dense bracken area of field 4b will be maintained and left to provide habitat for the badgers. A 30m buffer zone will kept around the badger sett.
- Bracken scrub will be allowed to regenerate.
- SuDs features. The pond at the end of the chain of reedbeds will be planted with a native species -rich aquatic plug plants and a native species rich marginal seed mix and native shrubs as per the recommendations in the PEA.
- Two hibernacula will be provided for reptiles in fields 3b and 4c as per the specifications in the PEA.

7.2.8 We will enhance the habitats for birds as follows:

- The land will be traditionally farmed and woodlands will be created and well managed.
- We will increase the presence of young trees significantly.
- We will introduce more wildflowers.
- Our land management plan intends to increase the soil's health, which will result in an increase in invertebrates which could provide an invaluable source of food for birds.
- The land is currently classed as 'semi-improved grassland' and this will be transformed into a rich biodiverse landscape which will be more suitable to sustaining Barn Owls.
- We will make and install a Barn Owl nesting box in the container tent barn and bat boxes to support local populations.
- We will allow our hedgerows to grow taller and wider. According to DEFRA: 'It is estimated that every year a hedgerow is left uncut it will gain two species of breeding bird'.

7.2.9 There has been a severe decline in pollinator populations throughout Wales over recent years. According to the Welsh Government's 'The Action Plan for Pollinators in Wales' there are four main reasons for this, and we have commented below on how Gilfach yr Haidd Farm will do its part in reducing these:

- Land use intensification
 - Gilfach yr Haidd Farm will be highly biodiverse making it quite the opposite to what is classed as 'land use intensification' where as much of one species is forced to grow within a certain area. We will encourage companion planting creating plant communities which have mutual benefits to each other.
- Habitat loss and fragmentation
 - We will create new habitats that will increase the amount of wildlife corridors.' This will link habitats thus reducing 'fragmentation'. We will also create many new habitats.

- Disease
 - An increase in pollinator populations have been found to help reduce diseases and pests.
- Agro-chemicals
 - We will not use damaging agro-chemicals only organic compost and fertilisers.
- Climate change
 - We will live a sustainable life on Gilfach yr Haidd Farm and fight climate change through living to and exceeding the requirements of an OPD lifestyle.
- The highly biodiverse habitats that we will create will support an abundance of pollinating insects, re-wilded areas, the wildflower meadows, in the diverse hedgerows and amongst the willow (which flower early providing an excellent source of nectar for bees).
- The wildlife pond will be useful for supporting the lava of many species. The compost will support lava of many species as they will feed off the rotting organic matter.

7.3. Landscape Character

- 7.3.1 Gilfach yr Haidd Farm is located within the National Landscape Character Area 37- South Wales Valleys and in the local Special Landscape Area SLA1 (EN2/1) Mynydd y Garth.
- 7.3.2 A full landscape and visual assessment can be found in Appendix C along with an assessment of key viewpoints and the photographic baseline of the site. It outlines in detail the key characteristics of the surrounding national and local landscape characters and the impact of the proposed development on the local landscape character. The visual impact is assessed using a Zone of Theoretical Visibility (ZTV) model, cross referencing the viewshed with areas where visual receptors might be present (i.e. residential roads, footpaths, etc).
- 7.3.3 The proposed development has been sited in a ‘bowl’ within the landscape. This will limit the impact the development will have on the local landscape character and its visual impact. The dwelling has been designed to be ‘compact’ and has been kept to a single story to further mitigate landscape impact. The other ancillary/agricultural buildings have been sited as close to the dwelling as possible to cluster the development in one area of the site. The containers and associated hardstanding have been sited on the lower reaches of the western slope next to the treeline and existing access track with an area of fast growing willow planted to the north of them to provide screening from the PRow track which passes through the farm.
- 7.3.4 The proposed development will include landscaping proposals to have a positive effect on the immediate landscape. The ongoing management of areas of pasture to enhance their ecological value whilst providing an income stream will maintain and enhance the landscape character of the site in line with key characteristics of the local area. New hedge lines in fields 3 and 4 will create a mosaic of small fields typical of the area. Restoration of existing hedgerows and tree planting, as outlined in Section 7.2 the landscaping plan drawing P125-P-601. New hedge planting, strengthening and thickening of existing hedge lines and planting of areas of willow coppice will screen the proposed development.

7.4. Heritage Assets and Cultural Heritage

- 7.4.1 There are no heritage/cultural assets located on the site except the field boundaries. However, if any were discovered, they would be conserved and enhanced through appropriate management.
- 7.4.2 The proposals will maintain the historic field pattern and the culture of small scale farms.

7.5. Land Management Strategy

- 7.5.1 See drawing P125-P-601 which locates and cross references the elements detailed below.

Buildings and Access

- 7.5.2 The site is accessed from the Prof W which passes through our land. Vehicular access under normal day to day movements will be restricted to the area of hardstanding that has already been installed 80m north of the dwelling. A storage area has been established here in two containers which hold the materials and equipment for managing the land.
- 7.5.3 The dwelling will normally be accessed on foot from the entrance area. Vehicles can access the dwelling area across the field through the existing field gateway as indicated on the plans. We anticipate this access will only be required during construction and on limited occasions during the year. If required we will install a reinforced grass system to provide access. This arrangement reduces the visual impact of the access to the dwelling.
- 7.5.4 The dwelling and the ancillary buildings are located in a sheltered natural depression (see landscape impact section 7.3) which is also towards the centre of our land affording easy access to the production areas. The replanted and thickened hedgerows and the new hedgerows will increase the shelter and screening to this area over time.
- 7.5.5 The dwelling will be a low height, single storey building, built from locally sourced timber with a mono-pitched roof, which will very subtly blend into the landscape. The timber cladding will silver over time which will blend it into the surroundings.

Agricultural Activity

- 7.5.6 The development of buildings and fruit vegetable production will only impact upon agriculturally semi improved poor quality acid grassland and will aid in providing biodiversity for wildlife. Horticultural production will practice environmentally sensitive practices.
- No synthetic fertilisers or pesticides will be used
 - 'No-dig' methods of cultivation will generally be used to keep soil health and structure intact within the relatively small areas of vegetable bed proposed. Coupled with mulching and application of organic compost will help increase the organic matter content of the soil.
 - Liming will be localised to the beds to modify the ph.
 - Intercropping and companion planting will be used to boost biodiversity and encourage beneficial predatory animals/insects

Grasslands (Fields 1,2,3,4, and 7)

- 7.5.7 Will be managed by a mixture of grazing by ruminant animals and strip grazing by pigs.
- **Strip Graze Pig Area: (Fields 3a and 4a)** will be allocated for strip grazing of the pigs which will break up the surface improve the structure and increase the species diversity. The areas thus turned will be enhanced with a seed mix¹ as recommended in the PEA. (NB the seed mix shown is the one recommended following receipt of PEA v4.)

¹ <https://britishwildflowermeadowseeds.co.uk/products/welsh-meadow-seed-mix?variant=32619212701833>

- **Other grasslands and pasture: (Fields 1, 2 and 7)** will be maintained by managed livestock grazing. Rotation of livestock in the pastures will ensure grassland will not be depleted but will also allow for fertilisation from animal excrement. Bracken will be mowed as required in pasture areas and allowed to grow on areas allocated for regeneration.
- **Chicken Tractor: (Fields 3a and 4a)** Chickens will be kept in a purpose built chicken tractor. A chicken tractor is a movable chicken coop that can help to fertilize and till up the soil. The idea of using a chicken tractor is to put the chickens inside of it so they can eat all of the bad bugs in the area of the garden while also fertilizing it and tilling up the soil all at once! This is an all-encompassing form of gardening/land care and compliant with bird flu requirements when necessary. It will be moved from place to place as required so that the chickens can access the veg beds and follow the livestock around the pastures.



Figure 3 Example of a home-made chicken ‘tractor’ (Credit ‘Homestead Survival Site’)

- 7.5.8 **The wildflower meadow: (E in Field 4c)** will increase biodiversity and provide insects with food in the form of leaves, nectar and pollen and sources of winter food for birds and other small animals in the form of seeds. It will also help further improve soil health. Wildflower seeds will also be collected and sown in other areas of the farm. The meadow will provide wider benefits as insects fed by the flowers are eaten by birds, bats, amphibians, reptiles and small mammals.

Raised Vegetable Planting Beds (A and A1)

- 7.5.9 200 m² of minimal dig vegetable beds. The beds will be sited east of the dwelling on a slight south facing slope benefiting from a sheltering dip in the land which does not form a frost pocket. This area will be used for intensive organic horticulture. Using regenerative and biointensive horticultural practices.
- 7.5.10 There is space for a further 200 m² of beds if the production needs to increase.
- 7.5.11 A composting system will be established to process the plant wastes, bracken harvested from field margins and animal bedding from the pig arcs and the poultry. The resulting composts

will be concentrated on the minimum dig vegetable beds as mulch to improve the soil quality, raise fertility and improve water retention.

- 7.5.12 Currently the soil quality is poor due to the monoculture of improved grassland.
- 7.5.13 The horticultural area will create a diverse range of healthy habitats and improve soil quality through mulching and the application of organic compost and fertiliser. The plants will help hold the soil together, which reduces erosion and helps conserve the soil. The decomposed plants add nutrients to the soil.
- 7.5.14 Mulching will take place to improve soil quality, it serves to reduce the likelihood of weeds, fights soil erosion, holds in moisture and improves soil structure by providing the necessary nutrients.
- 7.5.15 We will grow plants that have nitrogen fixing properties like clover, peas, beans and lupins. Nitrogen-fixing plants are those whose roots are colonized by certain bacteria that extract nitrogen from the air and convert or “fix” it into a form required for their growth. When the bacteria are done with this nitrogen, it becomes available to the plants, themselves.

Orchard Fruit Trees (D)

- 7.5.16 These will provide fruit for consumption for us living on the land, to provide a small income from local sales of surplus and to provide forage and food for the local wildlife population.
- 7.5.17 We are relatively high but we are aware of other fruit businesses such as Welsh Mountain Cider (340m AOD) <https://www.welshmountaincider.com/> who are significantly higher than us.

Soft Fruit Bushes (C)

- 7.5.18 These will provide fruit for consumption for us living on the land, to provide a small income from local sales of surplus and to provide forage and food for the local wildlife population.
- 7.5.19 In the UK, growing berries at very high altitudes (above 275m) can be challenging but not impossible, we are lower than this. Welsh Fruit Stocks is a business that grows and sells fruit plants <https://www.welshfruitstocks.co.uk/> at 300m altitude in Wales. We will create a sheltered, south-facing site and try to shelter our bushes from late spring frosts.
- 7.5.20 We think that Blueberries, blackberries, gooseberries, currents and rhubarb will grow here and strawberries will grow in the shelter of the polytunnel.

Apiary (M)

- 7.5.21 The apiary for our bees and hives for honey production is located within the orchard and below the fruit bush area in a section of the land which is sheltered and warmer than more exposed areas. It will provide a crop of honey for sale in good bee years, ecosystem services for the fruit through pollination and provide educational opportunities. It is a carefully planned and managed area that provides a safe and conducive environment for bees to thrive. We have experience of other local bee keepers, including the thriving apiary at the DOVE workshop allotments, Banwen. This is 8 miles north east of us at 243m altitude.
- 7.5.22 This area has been subject of testing by ourselves for suitability by keeping our own hives and bees in this and other areas to ascertain the suitability of the location. We have found that this is most conducive and suitable area for our own hives.
- 7.5.23 Bees are vital pollinators; we will start initially with two hives each consisting of approximately 10,000 bees each. We will be aiming for at least 5 hives by Year 5.

Tree nursery (J)

- 7.5.24 100 m² is allocated in field 3b for a tree nursery to raise the saplings to be used to replant the hedgerows. In this location it can be readily observed, has good access to water from the storage tanks and pond and our daily movements are likely to help deter pests enabling many trees to be propagated to thicken and replant the depleted hedges on the site.

Willow Coppice Areas (F1, F2,)

- 7.5.25 These areas will be a haven for wildlife and highly biodiverse and provide a source of short rotation coppice firewood with other materials for basketry and other craft uses. The willow grove will also be a beneficial habitat to bees and help improve water drainage and retention on the sloped fields. The coppice in field 4 has been located where it will be in the natural overland flow channel from the field so it will intercept any runoff rainwater nutrient enriched from the livestock. The coppice at the entrance of field 7 will screen our hardstanding area.

Wider Site - Woodland and Trees (Fields 5, 6 and 8)

- 7.5.26 1.8ha of woodland has been planted on the northern part of the site in Field 8. The planted woodland is a mix of the following broadleaved trees:

- Downy and silver birch
- Small leaved lime
- Hazel
- Grey, goat and white willow
- Wild and bird cherry
- Field maple
- Common crab apple
- Holy
- Blackthorn
- Hawthorn
- Oak

- 7.5.27 Woodland management of the existing trees in fields 5 and 6 has already begun.

- 7.5.28 We will also install three bat and two barn owl nesting boxes within the woodlands.

Wider Site - Hedgerows (HS -1565m))

- 7.5.29 The existing hedgerows are important semi-natural habitats and will be conserved and enhanced by following good practice guidelines for hedgerow management, which will include leaving them uncut as much as possible, laying in sections every 5-7 years and thickening infilling/improving with local native species where required. We will aim to maintain the hedges at a minimum height of 1.5m above the ground. Some standard trees will be allowed to develop to provide continuous canopy cover around the site boundary to develop a more complex habitat in the long term; approximately 1 per 40m length of hedge.

- 7.5.30 There is currently a mature Ash and some five mature Oaks in the hedgerows, these will be retained and protected. Drawing P125-P-601 identifies 1565 m of hedgerow on banks which is weak. Hedgerows will be reinstated and planted with a mixture of hazel, hawthorn, elder, dog rose, guelder rose, goat willow, rowan, honeysuckle, birch, holly, blackthorn and oak. We will plant native species from cuttings and trees grown from seed harvested from our woodlands. We will establish a tree nursery area to raise the young saplings in before planting out. The hazel on the south-eastern aspect of field 3b, adjacent to the proposed grey water system, shall be bought back into coppice rotation to increase the suitability of the habitat for dormice.

- 7.5.31 New hedgerow planting (**NH 320m in fields 3 and 4**) will use the same species mix as above.
- 7.5.32 New hedge row trees will be planted in staggered double row configuration, ensuring a minimum density of 6-7 plants per meter, with no single species exceeding 70% of the mix. A 2m buffer zone will be maintained adjacent to any hedgerow.
- 7.5.33 Stock can damage hedgerows by browsing and trampling. New re-growth after hedge-laying is particularly vulnerable. We will be growing our hedgerows wider than the norm to increase diversity and habitat. This will allow the shrubby growth to develop on the bank while creating an area of tall grasses at its base. This is an important habitat for small mammals and insects, and one that is often lacking in tightly grazed fields.
- 7.5.34 These reinstated hedgerows will act as important wildlife corridors improving the connectivity of the areas of woodland surrounding us. They will also improve the micro climates within the fields, particularly fields 3 and 4.

Pond 1 (K)

- 7.5.35 The pond on the boundary of field 4 and field 7 will be planted with a native species -rich aquatic plug plants² planted at 5 plants per square metre along pond edge. and a native species rich marginal seed mix³ at a rate of 4g per square metre and native shrubs: dogwoods (Cornus sanguine and Cornus alba), Downy birch (Betula pubescens), Grey Willow (Salix cinerea) and Goat Willow (Salix caprea). This pond will provide drinking water for livestock. The pond will be useful for supporting the lava of many species.

Reed Beds and Pond (L1, L2, L3)

- 7.5.36 The two reed beds and pond will be used in a chain to process waste greywater in a low-impact and natural process. Wetland plants, including common reed (Phragmites australis) and great reed mace (Typha latifolia - Bulrush) will be used to clean grey water effluent in a 'stepped' system filtering through each reed bed and discharging clean water into the pond. It has the potential to be low-cost and require zero operational energy.
- 7.5.37 The pond at the end of the chain of reedbeds will be planted with a native species -rich aquatic plug plants, mix as per pond 1, planted at 5 plants per square metre along pond edge or river bank. and a native species rich marginal seed mix, mix as per pond 1, at a rate of 4g per square metre and native shrubs as per the recommendations in the PEA. The pond will provide back up irrigation water for the vegetable crops and the tree nursery. It will be useful for supporting the lava of many species.
- 7.5.38 In order to prevent the gradual encroachment of scrub into the SuDs, an active management regime will be adopted with thinning and removal of scrub every three years. In order to avoid the risk of adversely affecting nesting bird species, this management will take place during November to February inclusive.

8. Our Low Impact

- 8.1.1 This section lays out how our proposals will reduce our impacts from all aspects of living on the site.

² https://britishpondplants.co.uk/products/aquatic-native-plants-marginals?srsId=AfmBOoqu6EGJIAIXH7_RzZUILEbFQWfWfH6Pw6Vk-QleTz1cv_v5r0t0

³ https://britishwildflowermeadowseeds.co.uk/products/welsh-meadow-seed-mix?srsId=AfmBOopgtMxT7j8AhwXAfE66ipv351_-TfoH2tunzcJBN6q2Pyvo1Gpu

8.2. Energy and Water

8.2.1 See paragraphs 3.62-3.63 of the OPD Guidance document.

Energy

8.2.2 The low carbon building energy report 'Giltach-MP-Appendix-F-Zero-Carbon-Energy Report' has been prepared by the SAP company to address the requirements of the OPD Guidance.

8.2.3 The results of the report are summarised below:

- The primary energy demand of the building will be 39.1 kWh/m²/annum
- That our net carbon emissions will be -0.02 T CO₂e per year.
- We comply with the zero carbon in use requirement of the Guidance.

Heating and Hot Water

8.2.4 We have carefully considered the need for energy and will reduce the demand as much as possible. A high efficiency 12 kW woodburner will be used to meet the space heating demand during months where heating is required. During these months the woodburner will double as a stove and will meet our cooking and hot water needs. During the summer months where space heating is not required, an induction hob will be used to meet cooking needs and any extra energy generated from PV panels will be dumped into the hot water immersion heater.

8.2.5 Wood fuel will come from firewood grown on site there are large amounts of hedgerow and woodland management for the short-med term and in the longer term short rotation coppice. The calculations in the SAP report show that heating and hot water will require 6,712 kWh per year, including hot water that will be provided by the surplus from the solar PV. The balance of the energy can be provided from the land from the 0.1590 of willow coppice and from our other woodland and hedge management until the willow coppice is established.

8.2.6 6.712 MWh/46MWh/annum/ha⁴ yield from SRC Willow = 0.146ha SRC willow required.

8.2.7 The total electrical energy demand for all the activities of the site is estimated in Tables 10 and 11 as follows

Domestic Electrical Energy

8.2.8 The demand is reduced during the winter as we will be using the woodstove for heating and cooking.

8.2.9 Ebike Transport requirements are included. We will not have an EV car.

Peak daily household electrical energy demand

	Power	Summer demand		Winter demand	
Item:	W	Hours	kWh	Hours	kWh
Washing machine A+++	-	-	0.45	-	0.45
Fridge /freezer	120		0.57		0.57
Kettle					
LED lighting based on 6x10w	60	4	0.24	10	0.6
Induction Hob 1.2 kW	1200	0.5	0.6	-	-

⁴ Forestresearch.gov.uk indicate that SRC willow yields 46 MWh per ha per year (46,000kWh)

Air Fryer 1.2 kW	1200	0.5	0.6		
Microwave	800	0.2	0.16	0.2	0.16
Laptop	100	6	0.6	10	1
Phone/device charging x2	0.2	1	0.0002	1	0.0002
Headtorch charging	5	0.2	0.001	1	0.005
Vacuum cleaner	820	0.05	0.041	0.05	0.041
Potable water pump	12	0.3	0.0036	0.3	0.0036
UV lamp	100	0.5	0.05	0.5	0.05
UFH recirculation pump	5	0	0	24	0.12
Electric Bike (400w) twice per week	0.05	2.29	0.000114	2.29	0.000114
Immersion heater	300	2	0.6	0	0
Total:			3.92		3.00

Table 10 Domestic electricity demand

Business Electrical Energy

Peak daily enterprise energy demand

	Power	Summer demand		Winter demand	
Item:	W	Hours	kWh	Hours	kWh
LED lighting based on 6x10w	60	2	0.12	5	0.3
Tool charging	240	2	0.48	2	0.48
Electric fencing battery	415	4	1.66	4	1.66

Total			2.26		2.44
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Table 11 Enterprise electricity demand

8.2.10 Note that fencing batteries will not be required to be charged daily, They store enough charge for at least three weeks⁵ if the fencing is attended to daily and we will keep two charged and charge them up on windy or sunny days where there is surplus and whilst we are not using other items. We are also using solar panels to support the electric fences and extend the battery life.

Meeting the Electrical Energy Need

8.2.11 The maximum

- Total normal peak electrical demand (Summer) is $3.92 + 0.6 = 4.52$ kWh per day
- Total normal peak electrical demand (Winter) is $3.00 + 0.78 = 3.78$ kWh per day

8.2.12 The site is not connected to the electricity grid. Due to the nature of the site, an electrical grid connection would be a vastly expensive undertaking and instead all energy needs will be met off-grid and on site.

8.2.13 Renewable energy for the buildings on the site will come from the following systems:

⁵ <https://www.farmcareuk.com/blog/blog-162.html>

- 6kWp solar array
- 9.84kWh (4 x 205 Ah flooded lead acid) battery system
- a Leading Edge LE 600 domestic wind turbine
- SRC woodfuels from the land.

8.2.14 Appendix G shows a breakdown of estimated average daily solar generation, wind generation and battery performance throughout the year, taking into account when the sun doesn't shine and when the wind blows.

8.2.15 The batteries will provide 9.84kWh – sufficient to run for two days with no generation at all. The chances of this occurring are reasonably low as demonstrated by the figures in Appendix G. If we experience extreme situations where we can see that we will lack generation capacity we can reduce our use of items to compensate. If it is shown over time we need additional batteries we will install more.

Water

8.2.16 The buildings have been designed to minimise water use with low flow and water efficient fittings

8.2.17 The domestic water demand has been estimated in the SAP assessment report. Input was not adjusted to reflect the use of a compost toilet. The report found that the water consumption would be around 49.6 litres per person per day. 100.2 litre/day for both of us. As we are not going to have flush toilet this figure is a worst case.

8.2.18 The water demand of the enterprise and wider site is estimated as:

8.2.19 Outdoor irrigation:

- 200 m2 of beds x 4.5mm/day⁶ = 0.9 m3 per day without rain

8.2.20 Polyunnel:

- 47 m2 of beds x 4.5mm/day = 0.21 m3 per day - required irrespective of rainfall

8.2.21 Livestock requirement per day⁷:

- 6 cattle at 0.13 m3 per cow = 0.78 m3
- 30 pigs at 0.01 m3 per pig = 0.3
- 50 turkeys at 0.0003 m3 per bird = 0.015
- 45 chickens at 0.0002 m3 per bird = 0.009
- Total livestock per day = 01.104 m3 (1104 litres) per day

8.2.22 Total water need for irrigation and livestock = 2.214 m3, 2214 litres per day

8.2.23 The site has not got a mains water connection, but there is a reliable spring.

8.2.24 Water will be collected from:

- The roof of the house (75 m2),
- The PV solar store (26 m2)
- The processing barn (25 m2)
- and the polyunnel (47m2)
- Total collection area = 173 m2

⁶ <https://www.waterirrigation.co.uk/how-to-calculate-drip-line-length-and-run-time>

⁷ https://assets.publishing.service.gov.uk/media/5a7f18fa40f0b62305b850da/LIT_10146.pdf

8.2.25 Domestic water will be filtered and storage will be provided by:

- A 10,000L rainwater capture tank

8.2.26 The runoff coefficient which allows for the proportion of rainfall which evaporates, leaks or overflows before it reaches the tank. The value for a pitched roof in the UK is 0.7.

8.2.27 The average filter efficiency is between 0.8 to 0.9. We will use 0.8 to err on the side of caution.

8.2.28 Roof area in m² x run off coefficient x filter efficiency x rainfall in mm = annual yield in litres.

8.2.29 The typical rainfall in our area is shown in Table 12 below (source⁸).

8.2.30 Based on this and allowing for losses from runoff coefficient and filter losses we will be able to capture $0.8 \times 0.7 \times 173 \times 0.0491 = 4756$ litres (4.75 m³) in the lowest rainfall month. There is an average of 8.2 days of rain in our driest month April. Our rainwater would provide domestic water for $4.756 / 0.1002 = 47$ days consumption, longer than we are likely to need in the event of low rainfall, backed up by the spring.

Based on weather reports collected during 2012–2021.

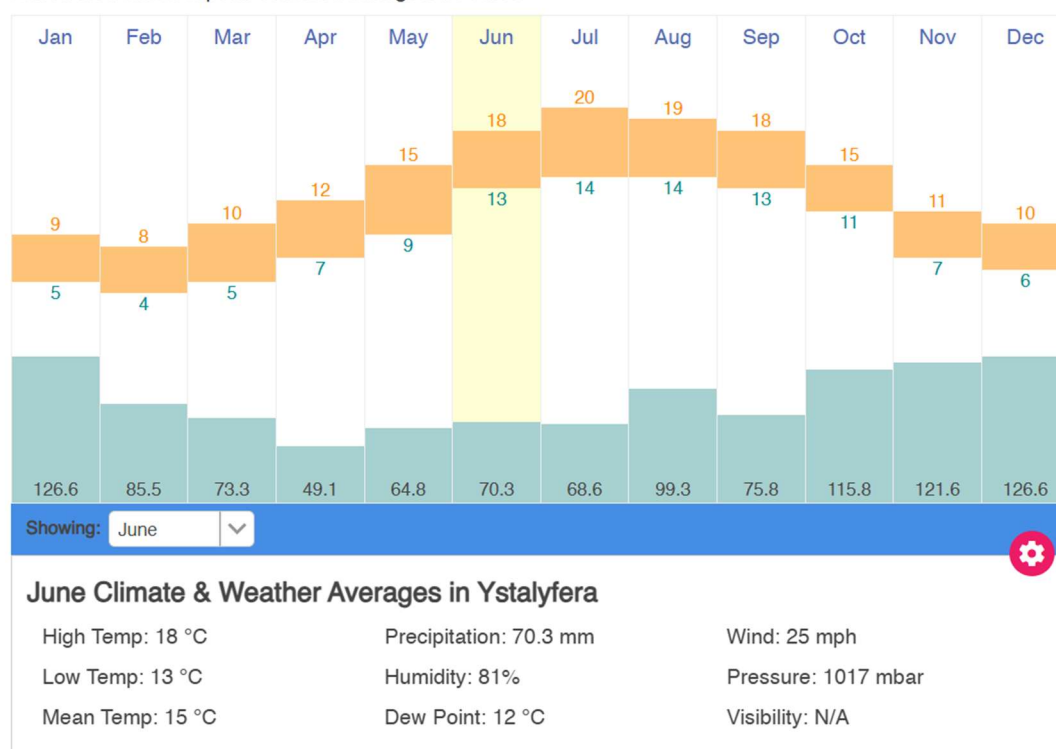


Table 12 annual precipitation

8.2.31 Water for the livestock and irrigation needs of the farm is provided by:

- A 10,000L rainwater capture tank
- 5 x 1000 litre IBC storage = 5000L.
- Two ponds
 - Pond 1 = 41.4 m³
 - Pond 2 = 30 m³

⁸ <https://www.timeanddate.com/weather/@2633337/climate>

- 8.2.32 When full we will provide storage for $85,000 / 2214 = 38$ days without rain.
- 8.2.33 The tanks when full can provide for 8 days without rain before we will need to fill them from the spring.
- 8.2.34 These features will reduce the water demand to a minimum.
- 8.2.35 Any shortfall in water required will be met from the existing spring. Water will be pumped from the spring to the storage utilising a ram pump.
- 8.2.36 We recognise that surface water drainage in Wales requires a parallel application to the local 'Sustainable Drainage Approval Body'. This will be initiated when we have secured planning.
- 8.2.37 Any excess water not used on the site will be stored in the wildlife pond at the end of the grey water treatment chain. Any exceedance from this will run over the permanent grass to the south east in the same pathway as the existing overland the runoff.
- 8.2.38 Surplus rainwater will be directed to the wildlife pond once the tanks are filled.

8.3. Waste

- 8.3.1 See paragraphs 3.68-3.78 of the OPD Guidance document.
- 8.3.2 All wastes will be dealt with in accordance with Environment Agency regulations and guidelines.

Grey Water

- 8.3.3 'Grey water' refers to all wastewater not derived from toilets, i.e., output from sinks, showers, baths and washing machines. The site will produce no 'black water' from toilets (i.e. effluent) because a dry composting system is used rather than water flush toilets. Grease/sediment traps will be installed in both the kitchen and packing barn and allow much of the solids to settle out before reaching the reed beds.
- 8.3.4 Grey water from the dwelling will then pass through a series of terraced reed bed filtration systems to remove any harmful substances. The clean water discharged from these beds will be captured by an attenuation pond which will also receive the overflow from the rainwater harvesting system.

- 8.3.5 The reed beds will be sized the recommendation of the good building guide⁹ The first stage reed bed will be a vertical flow gravel reed bed, as shown in figure 6 the minimum size recommended is 15m².

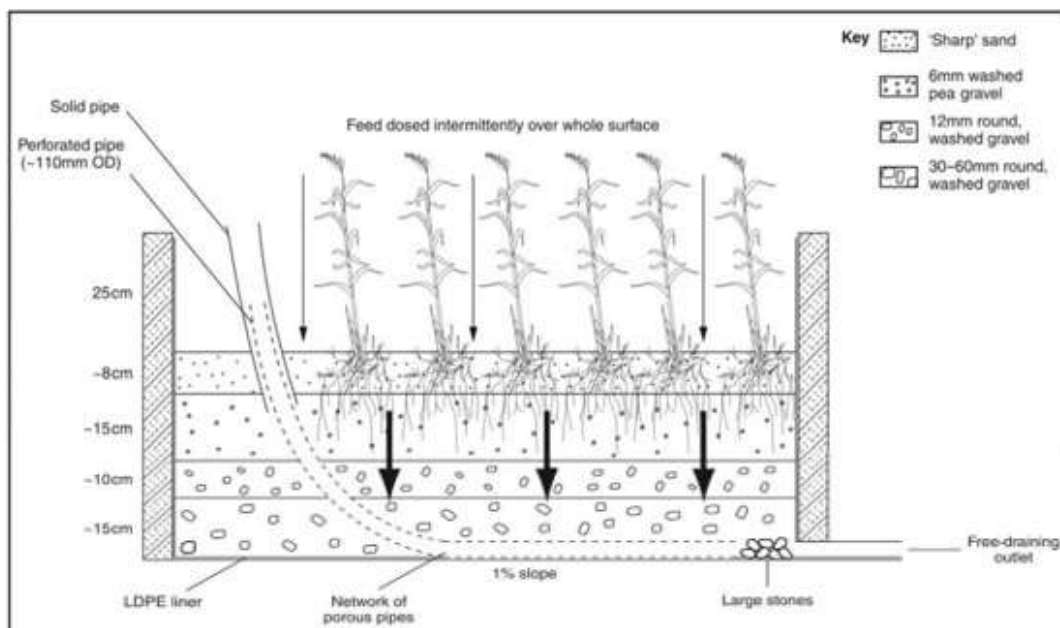


Figure 4 vertical flow reedbed

- 8.3.6 The minimum HF reed bed size recommended for a 1-3 bedroom house is 25m². This sizing is based on a horizontal flow gravel reed bed system, which is suitable for treating domestic sewage to secondary treatment standards. The design is shown in Figure 7 below.

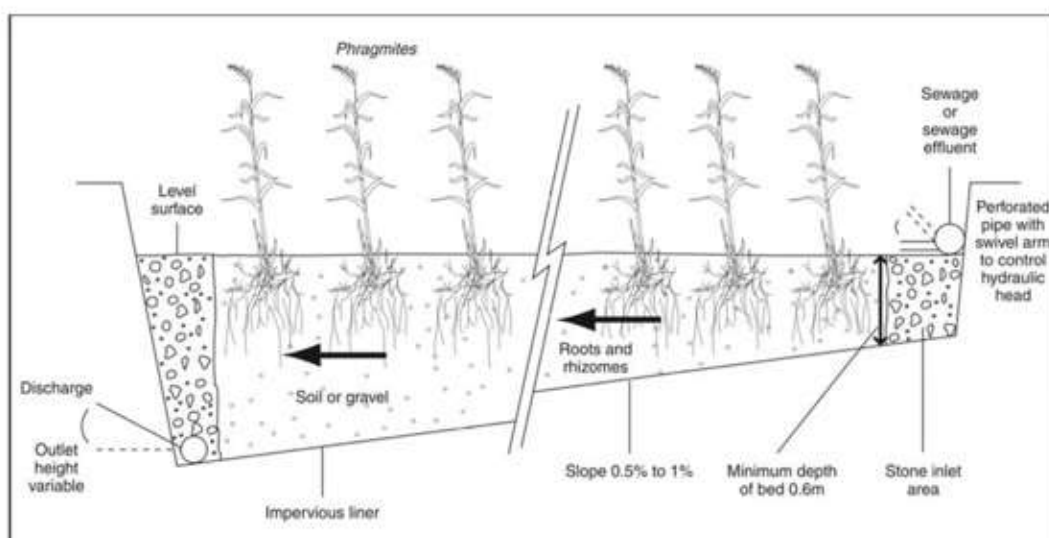


Figure 5 Horizontal flow reedbed

- 8.3.7 All waste water systems will comply with the [General binding rules](#): small sewage discharge to the ground.

⁹ Good Building Guide 42 Part 2 Reed beds: design, construction and maintenance

Toilet and Solid Waste

- 8.3.8 Urine and faeces will be separated at source. Faeces will have sawdust added and be composted aerobically within a sealed container in situ, avoiding unpleasant odours and methane production. Composting duration will be at least one year to ensure breakdown of all pathogens. The resulting hygienic and highly fertile 'humanure' will be spread around the base of top-fruit (i.e., fruit-trees, not vegetables) and non-food crops.
- 8.3.9 We will build the toilet ourselves, however, we will purchase a urine separator which will allow aerobic decomposition which prevents unpleasant odours and methane production. The contents will be stored in suitable sealed containers.
- 8.3.10 Urine will be diluted 12:1 to be used as fertiliser on productive trees/shrubs, with excess discharged to the reed bed system with the grey water.

Inorganic Waste

- 8.3.11 Production of inorganic waste will be reduced as much as possible, and where produced we will aim to re-use items before considering recycling or landfill off site. Materials will include plastic and metal packaging, chemicals, electronic components, broken tools, etc.

Reduction at source

- 8.3.12 Meeting the food production requirements of the policy will naturally cause a great reduction in imported packaging. The majority of food not produced on site will be bought from local retailers.

Reuse

- 8.3.13 Where possible, every effort will be made to reuse products to extend their lifespan. Products with bio-based packaging can be diverted into compost/mulch and reused on site.

Recycling

- 8.3.14 Any waste that remains will be collected by the local municipal facilities for recycling or landfill.

Green Waste

- 8.3.15 Garden waste will be composted on-site with animal bedding and bracken to add fertility to annual vegetable beds. Twigs from coppicing will be chipped and either composted or used to mulch paths and around trees/bushes to suppress weed growth. Mulch production is an essential part of reducing weeding work, adding nutrients and water retention.
- 8.3.16 Ash from the stove will be added to the compost as this is an excellent source of lime and potassium. The dwelling and sheds will be clad using wooden panels, when these start to decay making them unsuitable they will be removed, replaced, dried and then burnt for fuel.

Brown Waste

- 8.3.17 Organic waste that cannot be classed as green can all be made use of on site. Paper and cardboard arriving onsite will be composted (sequestering carbon).

Domestic Food Waste / Composting

- 8.3.18 Vegetable off-cuts and chicken bedding are valuable for creating compost. This, plus cooked or processed food will be composted in vermin-proof composting containers and wormery¹⁰ which will convert scraps into nutrient-rich plant food that will be added to the annual vegetable beds annually. The use of no-dig techniques and continuous herbaceous cover (to

¹⁰ <https://www.growveg.co.uk/guides/worm-composting-how-to-make-a-wormery/>

include green manures over winter) without the use of inorganic fertilisers will reduce the risk of soil over-enrichment or nutrient (e.g., nitrate/phosphate) runoff.

Land Based Business Wastes

- 8.3.19 The animal bedding will be composted and utilised on the land.
- 8.3.20 We will dispose of any animal carcass wastes from poultry slaughter or deceased animals in accordance with the Animal By-Products (Enforcement) (Wales) Regulations 2014.

9. Zero Carbon Buildings

9.1.1 See paragraphs 3.79-3.109 of the OPD Guidance document.

9.2. New Buildings Proposed

9.2.1 We propose to live in an attractive, very low energy, well insulated cabin.

9.2.2 The details of the design are shown on drawings numbers:

- TPG-P125--P-400 dwelling elevations
- TPG-P125--P-401 Dwelling plans and section proposed
- TPG-P125--P-402 Construction make up details

9.2.3 Whilst the buildings are being constructed, we will live in a temporary caravan sited on the hardstanding which will be removed from the site once the dwelling is complete.

9.2.4 We confirm that all habitable buildings will comply fully with the building regulations as the regulations apply to them.

Ancillary Buildings

9.2.5 We will also build the following new buildings:

- A 13m x 2m unheated wood store and storage shed for tools and equipment for managing the land which will also support our PV array.– see drawing number Drg SLS -01_Fm_Solar_Log_store
- A packing and processing shed 5m x 5m. This unheated barn will be used for packaging and processing produce. – see drawing number Drg PS - 01_Processing_Shed.
- A polytunnel 8.6 x 5.5 m x 2.6m high. – see drawing number P125-P-402
- A cover will be placed between the two containers in the hardstanding area to act as a barn shelter.

9.2.6 The wood store and storage shed will be constructed of a timber clad scaffolding frame, fixed to ground anchors. This is a lightweight and effective, removable solution.

9.2.7 The packaging and processing shed will be a more substantial timber frame construction with a mono-pitch roof. Constructed on screw piles. Fitted out internally to comply with FSA regulations.

9.2.8 The polytunnel will be a conventional lightweight tubular steel structure with plastic sheeting. This is an efficient and low energy construction for a sheltered cropping space.

9.2.9 The cover between the containers is a steel structure with green metal roof sheeting. This is an efficient and low energy removable construction for a shelter. The containers are lockable storage for equipment and animal feeds .

9.2.10 All the ancillary buildings are efficient designs incorporating materials with minimum embodied energy to perform their function whilst providing functional spaces.

Zero carbon in construction

- 9.2.11 The cabin will meet the definition of a caravan and can be re-sited if the project fails. The structure will be mounted above the ground using ground screw foundations which are removable and minimise the materials in construction.
- 9.2.12 The vast majority of the dwelling construction will be carried out by hand by us with minimal reliance on machinery and equipment. We will have support from friends, family and members of the local community who have experience in construction. This will reduce the carbon impacts of construction.
- 9.2.13 Simon has amassed a wealth of experience in the building trade as a plumber/heating engineer and his brother is a building contractor with over 40 years' experience. As well as family and friends we have electricians, carpenters and many other trades who are very keen to be involved with this project.
- 9.2.14 We have specified natural materials with low embodied energy as follows:
- Locally sourced timber cladding
 - FSC certified treated softwood timbers (internal and external walls)
 - FSC certified timber I beams
 - FEC certified OSB boarding
 - Warmcell blown cellulose insulation (made from recycled paper)
 - Wood fibre insulation board
 - Metal roof sheets (reclaimed if possible)
 - Double glazed windows and doors (reclaimed if possible)
- 9.2.15 It is recognised that a building that is literally zero carbon in construction is not possible to achieve. We have considered and reduced the energy embodied within the materials proposed to be used for our building as laid out in the Code for Sustainable Homes materials assessment report in Appendix H
- 9.2.16 As stated in the OPD Guidance the dwelling must comply with category three of the code for sustainable homes. There are five elements from this guidance that are applicable to OPDs:
- Roof
 - Internal walls
 - External walls
 - Floors
 - Windows
- 9.2.17 At least four of these must have a rating of at least A. Below we have demonstrated how all of these elements exceed rating A.

Roof

- 9.2.18 The roof will be constructed in a mono-pitch, warm deck format. To achieve U value of 0.13 The construction will be:
- Steel profile sheet (reclaimed if possible)
 - Treated timber battens (vertical/horizontal)
 - Waterproof breathable vapour membrane (Tyvek or similar)
 - 11mm OSB3

- 300 x 63 timber I-Joists @ 400 c/c
- With 300 mm full fill warmcell cellulose insulation (or equivalent)
- 11mm OSB3

9.2.19 The report shows this rated A +

Internal Walls

9.2.20 The internal walls will be 'framed partitions. The construction will be:

- 12mm OSB3
- 97mm treated timber stud (reclaimed if possible)
- Insulation (rockwool)
- 12mm OSB3

9.2.21 The report shows this rated A +

9.2.22 We will improve this rating by utilising reclaimed wood where possible

External Walls

- Softwood timber cladding (We will use reclaimed locally grown untreated Larch as cladding if this is available,
- Treated timber battens (horizontal)
- 40mm woodfibre board
- 150mm timber studs
- With 150 mm full fill warmcell cellulose insulation (or equivalent) to achieve U value of 0.18
- 11mm OSB3
- breathable vapour membrane
- Treated timber battens (horizontal)
- OSB plus paint

9.2.23 The report shows this rated A +

9.2.24 We will improve this rating by utilising reclaimed wood where possible

Floors

9.2.25 Suspended timber floor to achieve U value of 0.13. The construction will be:

- 18mm OSB3 flooring
- 300 x 63 timber I-Joists @ 400 c/c
- With 300 mm full fill warmcell cellulose insulation (or equivalent)
- 11mm OSB3

9.2.26 The report shows this rated A +

Windows

9.2.27 The windows we intend to use are rated as A+, however we may deviate from this if we are able to source good quality reclaimed or 'mis-fits' double-glazed windows which would lower the embodied energy and cost.

Footings

9.2.28 We will not require concrete, aggregate or a sand blinding. The building will be supported on screw piles.

Sourcing of materials

- 9.2.29 We will source materials from as close to the site as possible. Where possible we will seek to utilise reclaimed and surplus materials, including window units and doors and roofing that have been miss-sized for other buildings. If possible we will extract and mill larch from our own woodland for use as cladding.

Zero Carbon in Use

- 9.2.30 The low carbon building energy report 'Gilfach-MP-Appendix-F-Zero-Carbon-Energy Report' has been prepared by the SAP company to address the requirements of the OPD Guidance.
- 9.2.31 The results of the report are summarised below:
- The primary energy demand of the building will be 39.1 kWh/m2/annum
 - That our **net carbon emissions will be -0.02 T CO2e per year.**
 - We comply with the zero carbon in use requirement of the Guidance.
 - All energy used will be from renewable sources from the site.

9.3. Removal/Exit Strategy of Buildings

- 9.3.1 Should it be necessitated, the proposed buildings are capable of being removed and the site will be restored to its previous and improved condition.
- 9.3.2 The packing shed and polytunnel could be retained for their agricultural use, with the agreement of the LPA .
- 9.3.3 The dwelling building and the storage building with PV can be dismantled in order to remove from the land and the materials reclaimed as follows:
- 9.3.4 Reuse of all reusable materials:
- Fixtures and fittings can be removed from site and reused, including windows and doors, burners, white goods and sanitary goods.
 - Good quality structural timber can be reused in other buildings
 - Other timber such as floorboards, cladding etc can be reused for the same purpose
 - Steel roofing can be reused
 - PV system and batteries can be removed
 - The blown insulation can be removed into dumpy bags and removed from site
- 9.3.5 Disposal on site via composting:
- Composting of untreated wood following removal of the small quantity of nonbiodegradable materials (glass windows and metal items)
- 9.3.6 Disposal off site:
- Small quantities of materials that are not suited for on-site disposal or re-use, such as membranes will be removed from the site to specialist recycling facilities or otherwise disposed of via municipal waste handing resources.

- 9.3.7 The full exit strategy proposal can be found in Section 13.

10. Community Impact Assessment

- 10.1.1 As part of our efforts to integrate ourselves in the Ystalyfera community we have joined various local facebook groups (Ystalyfera, Ystradgynlais and Pontardawe) with the intention of finding out what is happening around the locality and thus being able to join in with local events.
- 10.1.2 We have approached Ystalyfera Community Council through phone calls and emails and informed them of our plans and given a presentation to them in July 2025. We welcome visits to the land from interested local people who wish to know more about our proposals. We will be growing some Christmas trees for use around the village in future.
- 10.1.3 We regularly visit local pubs where we have met a wide variety of patrons and during conversations we have laid out our OPD plans which have been met with enthusiasm.
- 10.1.4 During various work we have carried out close to the main metalled road leading to our land from the main housing areas we have had the opportunity to discuss our plans with various dog walkers, ramblers and families out for a stroll and have received very positive feedback from all parties.
- 10.1.5 We visited an establishment called DOVE Workshops and Allotments in Banwen, which is 9 miles from our land. We have established contact with individuals who are available to assist with bee swarm collection, provide advice on growing various fruits and vegetables, and offer any additional help they can. We have, in return, offered any help we are able to give (Simon has a wide variety of skills especially plumbing/renewable energy systems).
- 10.1.6 We have enquired about local Welsh classes but have been unable to find anything so intend to learn Welsh using duo-lingo and practising with our daughter who has recently taken her first Welsh exams.
- 10.1.7 We will arrange a meeting with locals (if they wish) to introduce ourselves and discuss our plans once the application is submitted.
- 10.1.8 We will be happy to provide detailed information on how we will benefit Ystalyfera, socially, economically and environmentally within our monitoring and how we will do our utmost to mitigate any negative impacts.
- 10.1.9 We are determined to continue to embed ourselves into the community by developing positive and purposeful relationships.
- 10.1.10 An assessment of our positive impacts and mitigation of any negative impacts across a number of areas is laid out below.

Economic impact

- 10.1.11 We will produce a range of products, all of which have a low ecological footprint. We will provide ethical low carbon food and products to the local community.
- 10.1.12 Our initial investigations have shown a local appetite for our offering. By focusing on stimulating local markets we will contribute in a small but meaningful way to the reduction of the ecological footprint of the wider community. By buying from local suppliers and using local shops we will contribute to the local economy.

Positive community impact:

- Increased choice of local produce for consumers
- Customers will be reducing their own carbon footprints as products will have low food-miles
- Customers will have more personal and direct relationships with their producers

Mitigation of negative community impact:

- We will be in competition with other local producers/retailers, however our product range is limited our volumes low and this impact should be very small.
Mitigation:
- We will seek to co-operate with other local producers and add value to other local retailers by offering our products to them.
- We will shop locally and use local businesses to provide services, materials, equipment and groceries.

Social and cultural impact, community integration, access and events

- 10.1.13 We are currently immersing ourselves into the local community with regular visits to the local shops and pubs, discussing our plans with the local community and generally making friends locally. We are trying to learn Welsh.
- 10.1.14 We will be contributing to the Local Neath Port Talbot Council by being new Council Tax payers, although we will not be putting too much of a burden on them as the only services we will require will be the use of waste bin collection and recycling bags.
- 10.1.15 We will be utilising the Ystalyfera Community Library, Community Hall, Heol Ynysdarren, so hopefully more numbers attending the facility will help prevent possible future closure.
- 10.1.16 We regularly visit the YDT charity shop not only to add to money made for the charity but also to chat to the ladies who run it who are a font of knowledge about the local area.
- 10.1.17 Once the site is up and running, we will run free events/open days on site to encourage the local community to engage with nature and better understand our low impact living practices.
- 10.1.18 We will ensure the PRow which passes through our site is kept open and welcome respectful local community members to access the land to see the project.

Positive community impact:

- Community cohesion by providing opportunities for local people to get together
- Educational resource for children and others to learn about low impact living, permaculture, building with natural materials and organic food growing
- Education around the benefits of, and maintenance of, local provenance
- Supporting local knowledge and skills around food growing and preserving
- Example of a low energy building
- Contribution to council tax

Mitigation of negative community impact:

- The site is within walking distance of the town and a bus stop, so the public will be encouraged to walk/cycle to events where possible. Parking will be advertised as only being available for those who are disabled, in order to reduce car use whilst ensuring accessibility.
- There will be some increase in traffic movements due to us being on site over what there would be if it was not being used. However these will be less than if we were managing it from outside the site. Our own transport impacts are low as demonstrated in section 11 and so impact on the local transport network will be very small.

Environmental Impact. Ecosystem services / Green Infrastructure function

- 10.1.19 The careful design of site ecosystem means that a number of further ecosystem services (see Section 7 for details) and habitats will be provided, see below for a summary of benefits.

10.1.20 The development will introduce new built features into the landscape but we hope the positive management of the land in our ownership will more than compensate for that delivering a net benefit.

Positive community impact:

- Pollination for nearby food crops
- Carbon sequestration
- Revitalise traditional land management practices in the area (coppicing, hedge laying)
- Genetic resource for local progeny
- Increasing wildlife and biodiversity for appreciation
- Building soil

Mitigation of negative community impact:

- The planting and management of our boundaries, woodlands and careful stewardship of our land, and the access we will allow to it will deliver net positive landscape and environmental benefits.
- Small increases in wastes leaving the site to the municipal waste stream will be reduced to a minimum by our waste hierarchy.

11. Transport Assessment and Travel Plan

11.1. Baseline travel information

11.1.1 The site is currently visited by us approximately 1-2 times a week. These visits are to undertake land management activities such as tree planting and hedge restoration.

Access

11.1.2 The access to the site is via an existing metalled highway from the adjoining highway network at Allt y Grug Road.

11.1.3 Gilfach yr Haidd Farm is accessed from an existing farm track off this unclassified road. (see figure 1 for location) Photos of the access can be found in Appendix C. We propose to continue using this as the main access to the site, no changes will need to be made.

11.1.4 The access track is a PRoW (ref 18/137.lgk/1), but public users will not be impacted by the use of the track as an access point to the site. The PRoW has been improved by surfacing which was carried out after consultation with the footpaths officer of Neath Port Talbot Council, Jon Griffiths and has provided significant local public access benefits which were welcomed by Mr. Griffiths.

Proximity to Surrounding Settlements and Amenities

11.1.5 Gilfach yr Haidd Farm is located on the outskirts of Ystalyfera. The close proximity to the settlement and available amenities allows active travel to and from the site and for easy integration into the local community.

11.1.6 Distances to travel from site to local settlements and amenities:

- Settlements:
- 1.4km to Ystalyfera town centre
- 9.2km to Pontardawe town centre

- Public transport:
- 0.8km to nearest bus stop
- 16.7km to nearest train station (Morrison)

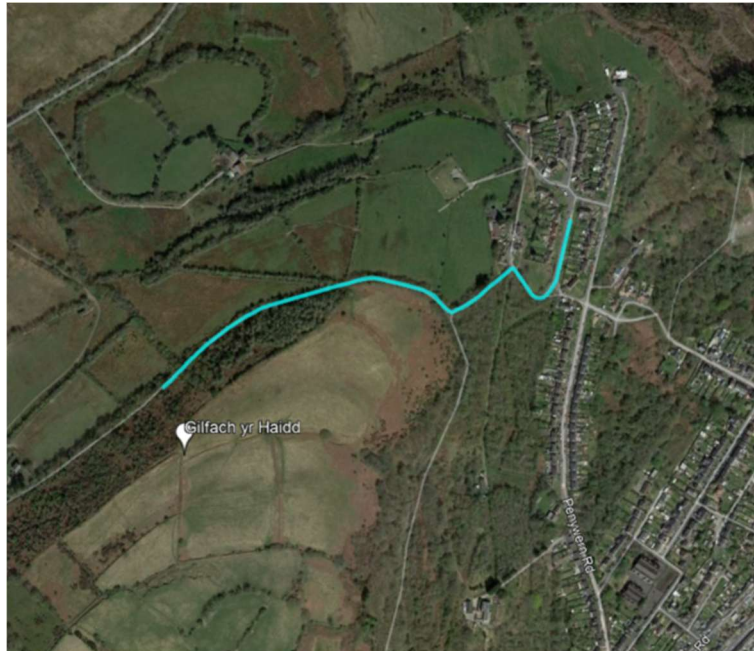


Figure 6: Gilfach yr Haidd Farm to nearest bus stop

- Food and drink:
- 2.3km to Tesco supermarket
- 2.6km to Asda supermarket
- 1.4km to local pub

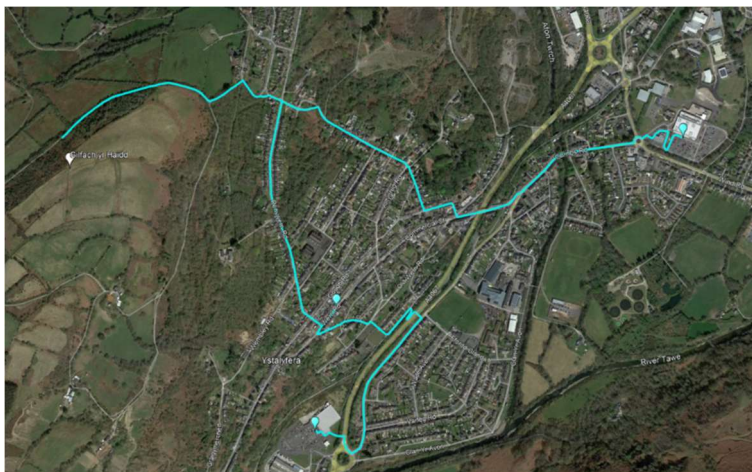


Figure 7: Gilfach yr Haidd Farm to local food & drink amenities

- Amenities:
- 1.4km to local GP
- 3.4km to local community hospital
- 17.5km to Morrison hospital

- 8.2km to Pontardawe police station
- 3.2km to local primary school
- 2.1km to local secondary school

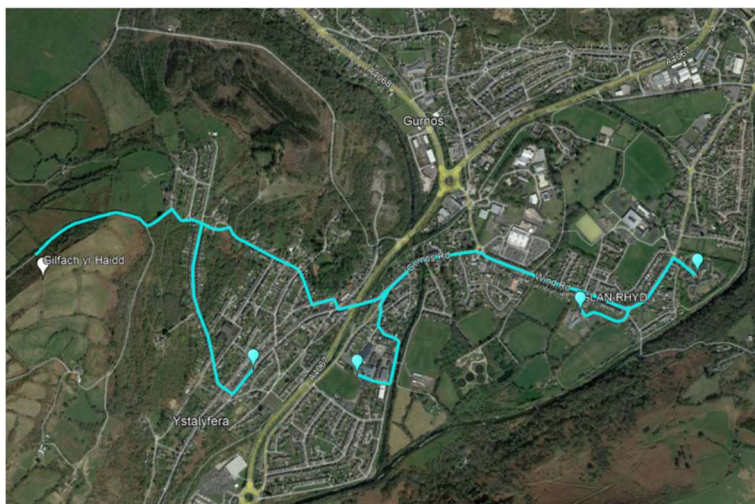


Figure 8: Gilfach yr Haidd Farm to local schools / GP / community hospital

11.2. Our Current Travel Pattern

11.2.1 By living on site our domestic and business travel patterns will be greatly reduced and will be comprised of active travel where possible. Table 13 below shows Year 0 (current travel patterns).

11.2.2 We currently travel 10,928 miles (17,583 km) per year. This includes travelling to the land to set up the project, plant trees and manage the land.

Description	Estimated trips (1 return Journey = 2 trips) Per Year	Miles per trip	Total Distance (miles) (Return Journeys)	Strategy/Transport Mode
Collection of groceries/shopping	100	3.5	350	diesel van
Deliveries of produce produced on site	0	0	0	Not yet on-site
Social journeys to family & friends (local)	92	1.5	138	diesel van - worst case
Social journeys to family & friends (non-local)	24	45	1080	diesel van

Journeys to and from work	208	45	9360	diesel van
Total	424		10928	Miles
			17583	kilometers

Table 13 Current Travel Baseline - NOT Living on the Land

11.3. Year 5 Travel Impacts

11.3.1 Table 14 below shows how our travel patterns will be reduced by Year 5 (when our OPD site is fully established). We will reduce our annual domestic mileage to 1580 miles (2542 km) per year, 1271 km/per person/per annum. This is due to the fact that a substantial part of our domestic and business needs will be met from land-based activities on the site and will therefore have less of a need to travel elsewhere.

11.3.2 Even considering our domestic and land based business mileage combined we will reduce our car/van travel by 75% to 2715 miles (4370 km) per year, 2185 km/per person/per annum.

11.3.3 Reductions will come from:

- No longer commuting to work
- No longer commuting to the land
- Substituting local ebike journeys for car journeys
- Walking and /or taking the bus for other local journeys
- Living closer to local friends
- Combining business and domestic journeys where possible.
- Switching from a diesel to a more efficient lower emission petrol vehicle

Description	Estimated trips (1 return Journey = 2 trips) Per Year	Miles per trip	Total Distance (miles) (Return Journeys)	Strategy/Transport Mode
Collection of groceries/shopping	24	1.65	39.6	Asda 1.7m, or Tesco 1.6m All done locally on ebikes or combined with other journeys
Deliveries of eggs/honey etc	104	2.5	260	ebikes
Pigs to slaughter	10	23	230	
Deliveries of pig produce	10	33	330	small petrol van
produced on site				
Cattle to slaughter	6	23	138	
Deliveries of beef produce	6	33	198	Hired farm trailer
produced on site				

Collection of farm supplies	24	10	240	small petrol van combined with other journeys if possible
sales of Turkeys - collected by courier				
Collection of produce produced on site	0		0	All produce delivered locally (as above)
Social journeys to family & friends (local)	24	4	96	Ebikes/walking/bus
Social journeys to family & friends (non-local)	24	40	960	small petrol van
Other longer journeys in year	12	50	600	small petrol van
Journeys to and from work	0		0	Both retired
Domestic van total	48.00		1579.80	Miles
Business van total	56.00		1136.00	Miles
			2715.80	
Domestic ebike total	36.00		115.80	Miles
Business ebike total	104.00		260.00	Miles
	244.00	Domestic van total	2542	kilometers

Table 14 Year 5 Travel Estimate

Footpaths

- 11.3.4 There is a good network of footpaths and Public Rights of Way (PRoW) in the area, including 18/137 that runs along the access track to our land and which we have improved with the knowledge and agreement with the footpaths officer of Neath Port Talbot Council, Jon Griffiths. This has provided significant local public access benefits which were welcomed by Mr. Griffiths.

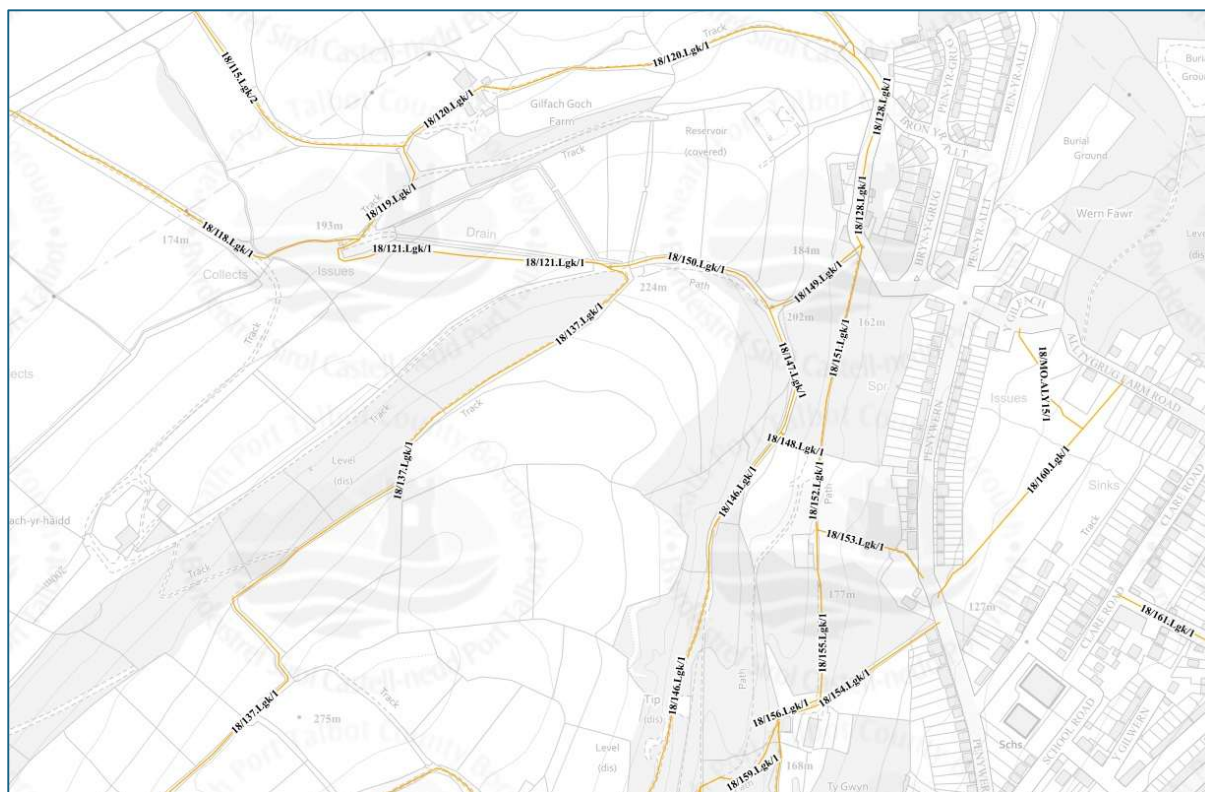


Figure 9 Extract from the Neath Port Talbot CBC interactive Public Rights of Way network map. (Copyright Ordnance Survey and Neath Port Talbot CBC)

- 11.3.5 There is a good level of pedestrian connectivity between the site, local amenities and local bus facilities and an excellent level of highway connectivity for cycling provision.
- 11.3.6 Indicated on the map below, which is an extract from the Neath Port Talbot County Borough Council interactive Public Rights of Way network map, are the local PRoW's in proximity to the OPD land. Copyright credit is given to NPTCBC for the base map from which the map extract below was created.
- 11.3.7 Local amenities within an 'acceptable' or 'maximum' walking distance of the site include both primary and comprehensive schools, shops, employment, recreation and entertainment facilities.
- 11.3.8 The Chartered Institution of Highways and Transportation (CIHT) Guidelines 'Providing for Journeys on Foot' (2000) sets out desirable, acceptable and maximum walking distances for different trip purposes.
- 11.3.9 The desirable walking distance for commuting/school journeys is 500 metres, the acceptable walking distance is 1km, and the preferred maximum is 2km. Manual for Streets defines a 'walkable neighbourhood' as 800m.

Active Travel

- 11.3.10 We will practice active travel by substituting ebikes and walking for local trips where possible.

- 11.3.11 It is understood that Neath Port Talbot CBC as local highway authority is required to provide 'Active Travel' networks within their county area.
- 11.3.12 'Active travel means walking and cycling for everyday journeys. This includes journeys to school, to work, to the shops or to access services. Active travel does not include walking and cycling for recreational or social reasons.'
- 11.3.13 In this respect, the council has published its 'Active Travel' Network Maps.
- 11.3.14 It will be noted that at this current time, there are limited 'Active Travel' opportunities in proximity to the site as shown on Maps 8 and 13 of the attached extract document. The council do however indicate that 'future routes' are planned within the locality to ensure the extension and continuation of their Active Travel network.
- 11.3.15 This shows a future proposed route for walking, cycling and disabled access as being located along Penywn Road and Pen-Yr-Allt in close proximity to our OPD site.

11.4. Public Transport

- 11.4.1 We will encourage visitors to the land to utilise public transport whenever possible.

Local buses

- 11.4.2 First Cymru operate service X6 from Swansea Bus Station to Ystradgynlais and the figure below shows the local bus stops in Ystalyfera and Ystradgynlais on the service from Swansea Bus Station. A similar route operates in reverse.

Ystalyfera, nr Farteg	08:45	10:45	12:45	14:45	16:45							
Pantteg, before Clees Lane	07:48	09:43	11:43	13:43	15:43	17:43	18:43	19:59	20:59			
Ystalyfera Varteg Road Post Office (o/s Post Box)	08:46	10:46	12:46	14:46	16:46							
Ystalyfera Cynhyng Road (after 4)	07:49	09:44	11:44	13:44	15:44	17:44	18:44	20:00	21:00			
Ystalyfera Heol Cynhyng (nr 20)	07:49	09:44	11:44	13:44	15:44	17:44	18:44	20:00	21:00			
Ystalyfera, before Pantteg Legion	07:50	09:45	11:45	13:45	15:45	17:45	18:45	20:01	21:01			
Ystalyfera, before New Swan Inn	07:55	09:50	11:50	13:50	15:50	17:50	18:50	20:06	21:06			
Glanrhyd, o/s Capital Shops	07:56	09:51	11:51	13:51	15:51	17:51	18:51	20:07	21:07			
Glanrhyd Wind Road (opp 14)	07:57	09:52	11:52	13:52	15:52	17:52	18:52	20:08	21:08			
Glanrhyd, nr Post Office	07:58	09:53	11:53	13:53	15:53	17:53	18:53	20:09	21:09			
Glanrhyd Hospital (opp)	07:59	09:54	11:54	13:54	15:54	17:54	18:54	20:10	21:10			
Glanrhyd, nr Claphon Crossing	08:00	09:55	11:55	13:55	15:55	17:55	18:55	20:11	21:11			
Ystradgynlais, nr Gough Arms	08:01	09:56	11:56	13:56	15:56	17:56	18:56	20:12	21:12			
Ystradgynlais Bus Station Stand 5 (at)	08:03	09:58	11:58	13:58	15:58	17:58	18:58	20:14	21:14			

Figure 8 Bus timetable in Ystradgynlais and Ystalyfera

- 11.4.3 South Wales Transport operate service 121 and that 'Adventure Travel' operates a bus from Ynysygerwn Avenue Turn to Travellers` Rest, Ystalyfera every 2 hours, and the journey takes 15 min.
- 11.4.4 The closest bus stop to the OPD site is 'Allt-y-Grug Estate' bus stop located on Bryn-y-Grug some 350 metres to the north-east operated under Service 121. The specific local timetable for that service in relation to the bus stop is shown below.

Trains

- 11.4.5 The nearest mainline railway station is approximately 11km away at Neath and provides mainline access to the public train network to Swansea for all West Wales connections and to Cardiff and beyond for all other Wales and UK connections.
- 11.4.6 The more provincial railway station of Skewen Railway Station is also some 11.7km

121  YSTRADGYNLAIS - PENYWERN Circular via Glanrhyd or Gurnos, Farteg & Hodgson's Rd 											
MONDAY, WEDNESDAY & FRIDAY											
							SCH	HOL	SCH	HOL	
Ystradgynlais Bus Interchange	-	0910	1010	1110	1240	1340	1440	1440	-	1600	1650
Gurnos, Gorof Road	-		1016		1246		1446	1446	-		1656
Glanrhyd Hospital	-	0914		1114		1344			-	1604	
Tesco Ystradgynlais	-	0917	1020	1117	1250	1347	1450	1450	-	1607	1700
Ystalyfera, Swan Inn	-	0919	1022	1119	1252	1349	1452	1452	-	1609	1702
Ystalyfera, Farteg	-	0921	1024	1121	1254	1351	1454	1454	-	1611	1704
Asda Ystalyfera	-	0924	1027	1124	1257	1354	1457	1457	-	1614	1707
Godre'r-graig, Hodgson's Road	-	0928	1031	1128	1301	1358	1501	1501	-	1618	1711
Godre'r-graig, Graig Newydd Lights	0837	0929	1032	1129	1302	1359	-	1502	1619	1619	1712
Panteg	0839	0931	1034	1131	1304	1401	-	1504	1621	1621	1714
Ystalyfera, Allt-y-Grug Estate	0846	0938	1041	1138	1311	1408	-	1511	1628	1628	1721
Ystalyfera, Swan Inn	0850	0942	1045	1142	1315	1412	-	1515	1632	1632	1725
Tesco Ystradgynlais	0852	0944	1047	1144	1317	1414	-	1517	1634	1634	1727
Glanrhyd Hospital	0855		1050		1320		-	1520	1637	1637	1730
Gurnos, Gorof Road		0946		1146		1416	-				
Ystradgynlais Bus Interchange	0859	0953	1054	1153	1324	1423	-	1524	1641	1641	1734

SCH = School days only

HOL = School holidays only

OPERATED BY

SOUTH WALES

TRANSPORT

Figure 9 Bus Service 121 timetable

away.

- 11.4.7 Neath Railway Station is served by Great Western Railways and Transport For Wales (TFW) and provides connections to:
- Swansea Train Station
 - Bridgend Train Station
 - Cardiff Central;
 - London Paddington; and,
 - Manchester Piccadilly; as well as,
 - Regional stations throughout South Wales.

11.4.8 There are secure bicycle stands available at the station, with car parking available adjacent to the station and within the town centre municipal car parks. A taxi rank is also situated adjacent to the station.

11.4.9 Connections can be made to other local services at Cardiff (Valley Lines) as well as to the national network at Newport (Gloucester, Shrewsbury, Manchester and North Wales) and Bristol (Portsmouth, Plymouth and Cornwall).

Cycle paths

11.4.10 Whilst there is no formal cycle route within the immediate vicinity of the site, there are a number of local/regional cycle routes within a reasonable cycling distance.

11.4.11 National Cycling Network (NCN) Route 43 is located within 700m of the site to the south-east.

11.4.12 NCN Route 43 links into NCN Route 4 to the south-west.

11.4.13 NCN 4 is a long-distance route between London and Fishguard via Reading, Bath, Bristol, Newport, Swansea, Carmarthen, Tenby, Haverfordwest and St. Davids. It is approximately 432 miles in length, provides access with numerous railway stations and is fully opened and signed. NCN 4 can be accessed via 'White Lightning Way' (this route is not part of the National Cycle Network), which is located some 0.6km to the south.

11.4.14 National Route 47 of the National Cycle Network is a mainly inland route starting at Newport and finishing at Fishguard passing through Neath and Carmarthen and is located to the west.

11.4.15 The site is well connected to the adjoining highway network with immediate access to roads for cycling to all parts of the area and the cycle routes noted above.

11.4.16 The National cycle routes within the vicinity of the site are shown below.

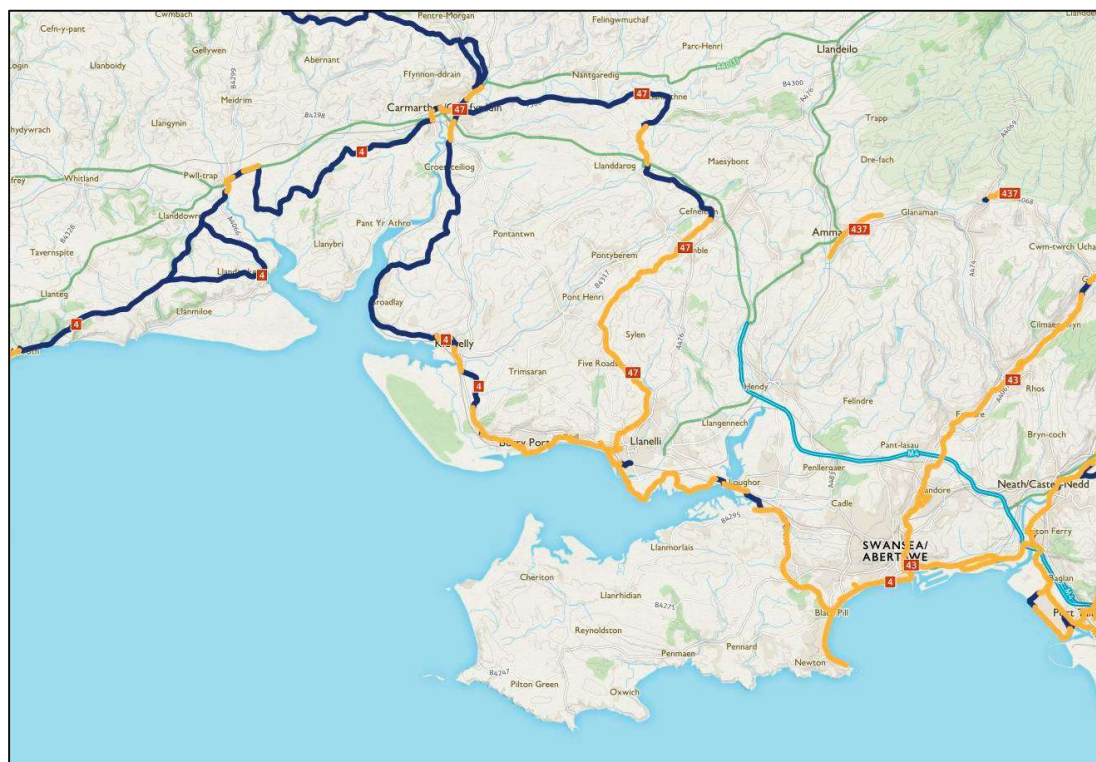


Figure 10 Sustrans Cycle Routes in the locality

11.5. Travel Plan

- 11.5.1 A travel plan is a long-term management strategy for a development, site or organisation that seeks to deliver sustainable transport objectives. The travel plan seeks to mitigate the effect of traffic movements resulting from the proposed development by presenting a package of measures that reflect the need to reduce travel-related emissions whilst acknowledging the transport impact of the proposed development.
- 11.5.2 Travel plans can assist in mitigating the effects of traffic movements resulting from a proposed development at a time when people moving home or moving to a new area, are more open to behavioural change. This will then allow an action plan to implement those measures and monitor their success.
- 11.5.3 Physical activity has been shown to contribute to mental and physical wellbeing. The promotion of active travel (walking and cycling) as part of a travel plan enables people to enjoy these health benefits as part of their daily routine.
- 11.5.4 The main reasons for implementing a Travel Plan are:
- To provide a framework for the actions and incentives that will make the adoption of the Plan possible;
 - To contribute to Social Responsibility, the applicants accepts that they should do everything they can to protect the environment and encourage their residential homeowners/tenants to do the same;
 - To understand and reduce the carbon footprint arising from travel to and from the site; and,
 - To improve facilities available on-site, which encourage and enable more sustainable travel.
- 11.5.5 The primary focus of this travel plan is the travel undertaken by residents of the development, but also includes measures to encourage sustainable travel by visitors to the development.
- 11.5.6 The overall objectives of the Travel Plan are as follows:
- Health & Social Benefits – A reduction in car travel will benefit health through reduced air pollution and harmful emissions, road traffic accident prevention and through the promotion of healthier activities such as walking and cycling. In addition, a percentage of households have no regular access to private vehicles and therefore the use of public transport, cycling and walking can play a significant role in improving accessibility and reducing social exclusion.
 - Climate Change – The burning of fossil fuels is altering the climate, with carbon dioxide emissions being the most common contributor. Climate change represents one of our biggest environmental challenges with transport accounting for approximately 22% of man-made greenhouse gas emissions. The implementation of Travel Plans can reduce the adverse impact on climate change.
- 11.5.7 Section 11 of this Management Plan is considered to represent a combined Transport Assessment and Travel Plan for the purposes of the OPD submission.

11.6. Monitoring

11.6.1 There will be detailed recording of all trips to and from the site in terms of purposes, distances, modes, and any transport sharing. The record of all trips will be included in the annual OPD monitoring report.

11.6.2 The contributory criteria for OPD are that:

- The use of low and zero carbon modes of transport should be maximised.
- On site vehicle numbers should be controlled and vehicle pools used for One Planet
- Developments of more than one household.
- Connections between the site and local suppliers and customers for goods and services requiring travel, should be maximised opposed to those at a greater distance.
- Visitor travel should be the subject of proactive management to reduce transport

12. Ecological Footprint Analysis

12.1.1 We have used a checked and updated version of the Ecological Footprinting Tool provided to us by TPG to assess our current ecological footprint We have also considered how implementing our OPD project will enable us to reduce our impacts.

12.1.2 The results are shown in full in Appendix I as follows:

- Our current EFA living off site is 3.57 gha.
- Our estimated ecological footprint at first habitation of our OPD is 2.27gha.
- Our estimated ecological footprint at year five of our OPD is 1.96 gha.

12.1.3 We will reduce our impacts due to the following actions:

- Having a low energy home
- Producing all our energy needs from the site
- Growing a significant proportion of our food on the land
- Reducing our consumption of non-essential goods and services
- Reducing our annual domestic travel from 10928 miles per year to 1580 miles per year
- Substituting local ebike journeys for car journeys
- Switching from diesel to petrol van.

12.1.4 We will regularly record the information needed to calculate our future ecological footprint from first occupation of the site and provide this information within our monitoring reports.

12.1.5 We recognise that our business activities will also incur impacts beyond the scope of those captured by the domestic EFA. We have considered how we can reduce these by actions such as the careful choice of feeds for the animals, organising our travel so we combine journeys using reclaimed and recycled materials which minimise the need for new materials and infrastructure to run the business. Guests and visitors to the site will be encouraged to reduce their travel impacts as much as possible.

12.1.6 We hope our products will have a lower footprint due to our production systems.

13. Phasing, Monitoring & Exit Strategy

13.1. Phasing & Implementation

13.1.1 We aim that the OPD will be fully established by year 5 and that all of the essential criteria for OPD will be achieved by this time.

13.1.2 The programme for the implementation of our proposals is laid out below:

Following OPD permission granted									
Site Features	Drawing Key	Area m2/ha	Management Notes	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Hedges to be strengthened	HS	1565 m	commencing in fields 3 and 4. (802 m length) Target planting by year 2. Planting to be checked and maintained. Action taken as required to control weeds and pests.		Field 3 - all boundaries	Field 4 - all boundaries		Field 2 - all boundaries	Fields 1 and 7- all boundaries
New hedgerows proposed	NH (Field 3 and 4)	320 m	Target planting by years 4-5. Planting to be checked and maintained. Action taken as required to control weeds and pests.		Field 3	Field 4			
New woodland	Field 8	1.8ha	Planting already being checked and maintained. Action taken as required to control weeds and pests.	4,300 trees planted	ongoing management	ongoing management	ongoing management	ongoing management	ongoing management
Veg production area	A	200	Domestic production. 10 number 20x1m beds		5 beds prepared	5 beds prepared			

Additional veg production area if required	A1	200	10 number 20x1m beds if required					if required	
Polytunnel	B	47	Domestic production.	Polytunnel erected					
Additional polytunnel if required	B1	47	If required					if required	
Container tent	Hardstanding				Erect container tent				
Spring				Renovated					
Buildings	B2, B3, B4	265	House, compost toilet, PV store and processing shed. We currently have a compost toilet in use by the containers and 1 will be installed in the house. Obviously depends on planning permission.		Processing shed, dwelling and PV store erected				
Fruit production area	C	800	Domestic production. We currently have 20 blackcurrant/redcurrant bushes but will be collecting a large number of bushes for planting in the Autumn (such as various currant bushes,	Planting of bushes Autumn 25	ongoing management	ongoing management	ongoing management	ongoing management	ongoing management

			gooseberries, blueberries, rhubarb)						
Orchard	D	2150	Domestic production. Local varieties – see table, providing biodiversity enhancement and landscape gain	first 3 rows of trees planted (21)					
Wildflower Meadow	E (field 4c)	3968	Using PEA recommended seed mix					Pigs to cultivate area, planting hereafter	
willow coppice	F1	815	Managed for landscape benefit and as source of firewood longer term.					Planting	
willow coppice	F2	774	Managed for landscape benefit and as source of firewood longer term.	Planted					
Pig strip grazing	G (fields 3a and 4a)	14270	Commercial use. Pigs raised in electric fenced pens. Pigs are recommended for management of acid grasslands. By years 4/5 it is intended to have our own farrowing sows		1st batch 6 pigs reared	2nd batch 12 pigs reared	3rd batch 18 pigs reared	4th batch 24 pigs reared	5th batch 30 pigs reared

Beef cattle	Field 1, 2 and 7		Cattle rotated	4 cattle	4 cattle	4 cattle	4 cattle	5 cattle	5 cattle
Poultry tractors	H (fields 3a, 3b and 4a)	N/A	Commercial use. Following in pig grazed areas and to clear and establish minimum dig veg beds.	Starting later in the year	15 chickens	30 chickens	30 chickens	45 chickens	45 chickens
Turkeys	I (Field 3)	N/A	Commercial use.		1st batch of 10	2nd batch of 20	3rd batch of 30	4th batch of 40	5th batch of 50
Tree nursery	J Field 3b	100	To provide trees for strengthening hedgerows	Seeds collected , cuttings in Autumn	on-going	on-going	on-going	on-going	on-going
Pond 1	K		Planted as per details in section 7.5 of MP	Starting this year	on-going				
Chain of reedbeds and pond	L1, L2, L3		Planted as per details in section 7.5 of MP		pond dug reedbeds installed				
Apiary	M		Sited within orchard in most sheltered area	2 hives	2 hives	3 hives	4 hives	4 hives	5 hives

Table 15 Phasing and implementation

13.2. Monitoring

- 13.2.1 Appendix J is the monitoring template we propose to use. It details the information we will record which will be in addition to all the information that is necessary to complete the ecological footprint spreadsheet.
- 13.2.2 We will submit annual monitoring reports according to the OPD Practice Guidance. An EFA will be submitted to cover Years 3 and 5, along with a management plan in Year 5 reviewed for the following five years.

13.3. Exit Strategy

- 13.3.1 See paragraph 5.11 to 5.17 of the OPD Guidance document.
- 13.3.2 The OPD Guidance document defines project failure as *‘a failure to achieve one or more of the essential characteristics of One Planet Development in the open countryside over a period of two years (after year 5) without instituting clear and effective measures to address the identified problems.’*
- 13.3.3 It is our intention that the OPD development will succeed and demonstrate that it has attained the criteria laid out within the policy and guidance such that it will continue to be an active OPD
- 13.3.4 The Guidance suggests communication over emerging problems and critical failures. The Guidance suggests that if the LPA consider that we are not delivering against essential criteria as laid out in the Management Plan a yellow/red card approach can be utilised where they highlight any concern to us and we address it. If we fail to address it in a reasonable period of time a ‘red card’ could be issued. We accept that a critical failure would be defined as if we get two consecutive red cards for any essential criteria that have been flagged to us and we have not addressed fully within the two years. In that instance we would either need to ensure everything was addressed satisfactorily or start to implement the exit strategy.
- 13.3.5 The following exit strategy sets out measures which will be undertaken in the event that the One Planet Development fails, and if the reasons for its failure cannot be overcome. It lays out how the development and associated built land use changes would be treated with a priority for re-use. Such that the use of the site is restored to its previous agricultural use and improved condition (or another use agreed with the Local Planning Authority).
- 13.3.6 The buildings which will be on the land are identified in figure 11 below.

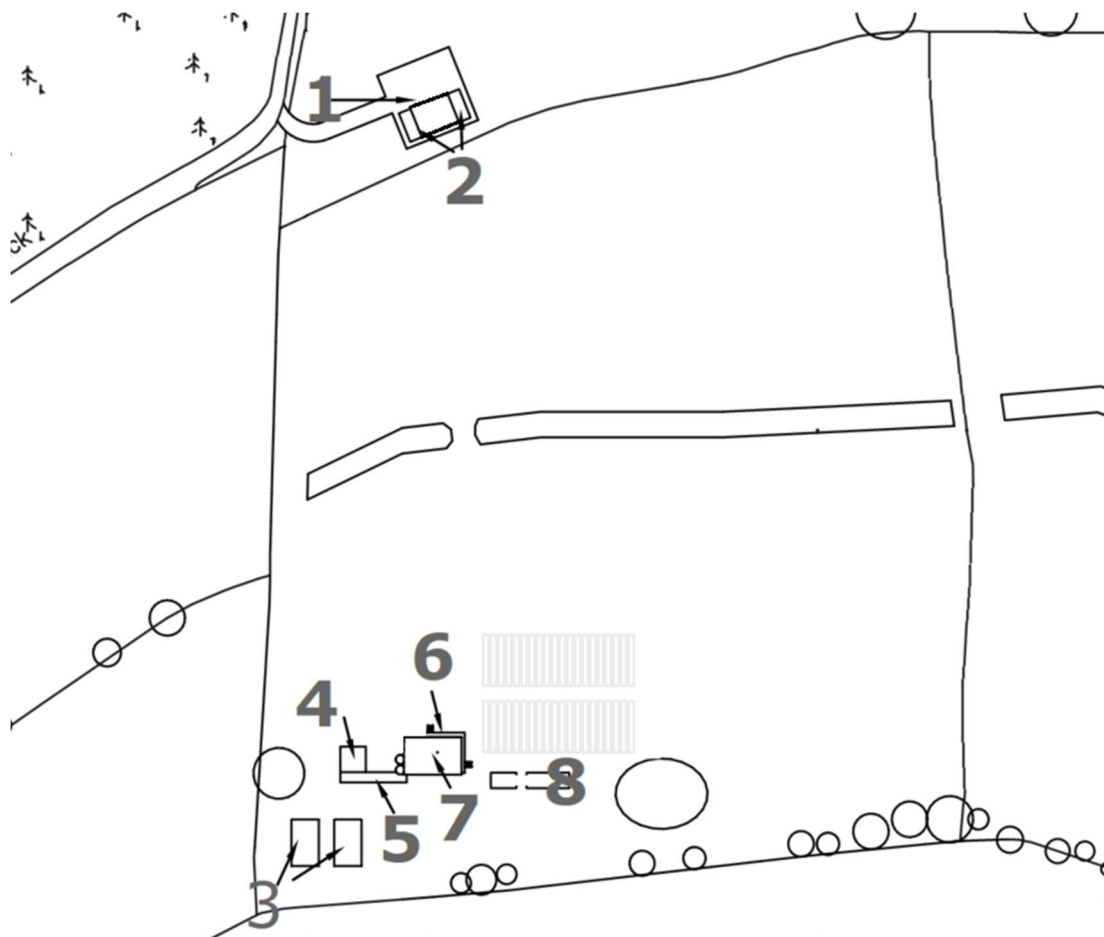


Figure 101 Buildings/items covered by exit strategy

13.3.7 The details of the strategy for each building/item are laid out in Table 16 below.

Ref	Item/Building	Use during OPD	Retained or Removed	Use post OPDS	Actions Required	Post OPD Condition	By When
1	Access tracks and hardstanding	Agricultural - access	Retained	Agricultural	None	As is	N/A
2	Existing containers and roof	Agricultural - machinery, tools, produce store	Retained	Agricultural	None	As is	N/A
3	Polytunnel	OPD - domestic vegetable production	Retained	Agricultural - sheltered cropping	None	As is	N/A
4	Packing shed	OPD - storage and processing produce	Retained	Agricultural - storage/animal shelter	None	As is	N/A

5	Solar PV Shed/Store	firewood and equipment store and support for PV system	Removed	N/A	dismantle and remove	As 7 below	within twelve months
6	Decking	Access to OPD dwelling	Removed	N/A	dismantle and remove	As 7 below	within twelve months
7	OPD Dwelling House	OPD-dwelling	Removed	N/A	Building to be advertised for sale and dismantled. Screw piles will be removed. The component parts, fixtures and fittings will be removed from the site.	The ground under the building will be reinstated as acid grassland to match the surrounding sward. This should be easily achieved as the building is raised above the ground and the topsoil still exists beneath it	within twelve months
8	Reedbed system	Grey water treatment	Retained	Habitat	Reedbeds and ponds to be retained for wildlife habitat	N/A	N/A

Table 16 Exit strategy summary