

Mentrau Effaith Isel Lammas Cyf



Lammas Low Impact Initiatives Ltd



Tir-y-Gafel Management Plan
March 2008

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1. Executive Summary

Intro

1.1. This application aims to establish a centre for the research and promotion of low impact development in Pembrokeshire, drawing on Policy 52 of the Pembrokeshire Joint Unitary Development Plan and associated Supplementary Planning Guidance “Low impact development: making a positive contribution” (hereafter referred to as the SPG). The importance of this objective cannot be overrated. We live in a world becoming increasingly vulnerable to the effects of climate change, growing resource consumption, dwindling resource availability and unpredictable weather conditions (Hansen et al, 2007). Our society, economy and environment are threatened. The need for research into social, economic and environmental solutions to these problems has never been more immediate.

Vision:

- 1.2.** It is clear that true wealth stems from the earth and that a local economy based on the skillful, sensitive use of local, natural resources will provide the best foundation for a sustainable future.
- 1.3.** The vision proposed in this application consists of a flourishing community of land-based projects working together and playing a key role in society’s shift toward a sustainable future. We, as human beings, are dependant on the earth for our needs. We are an intrinsic part of the web of life; indeed we hold a privileged position. With good stewardship the potential for diversity and abundance is enormous. This can best be achieved by managing land to directly meet our own needs and simultaneously allowing the natural world to flourish. Human development and biotic development need not be incompatible. This requires a personal and intimate connection with our environment, and requires people living and working with the natural rhythms and cycles that form our world.
- 1.4.** An important step toward the realization of this vision lies in the creation of a successful model of low impact development. This management plan presents the structural framework

of an eco-village of 9 low impact smallholdings sited at Pont-y-Gafel farm in Glandwr, Pembrokeshire.

- 1.5. The site comprises approximately 76 acres of mixed fields and woodland and the intention is to create an integrated development, designed and run on permaculture principles. The land will be developed to improve the synergy of the different habitats across the site, simultaneously enhancing bio-diversity and leading to an increased and *sustainable* yield from the land. The site will be managed to create an accessible, educational resource and will feature a variety of self-built eco dwellings, using best practice design and technology, combined with local natural materials.
- 1.6. The settlement will create all its own electricity from renewable sources. It will supply all its water needs through rainwater harvesting and the use of a spring. Whilst the project will welcome visitors, it will manage visitors in such a manner as to minimise traffic impact. The settlement will manage and monitor all traffic use to and from the site. It will provide and promote walking, cycling and public transport links. The settlement will demonstrate annually that it provides at least 75% of residents' needs directly from the land. The project will be responsible for a diverse range of food, fuel and craft being produced from the land. The project will aspire towards a one planet ecological footprint.
- 1.7. In creating a legal structure to manage the project, Lammas has aspired to establish a system which allows the settlement to function as closely as possible to a conventional village, whilst retaining sufficient control over the development to ensure the project's long-term objectives are fulfilled. Central to our proposal is the principle that all land will be owned in common by a legal body, a Cooperative, (registered under the Industrial and Provident Society Act 1965). Membership of the Society will be open to anyone who becomes a shareholder and supports Lammas' aims. Residents of the settlement will lease plots from the Society through long-term agricultural leases. A template leasehold agreement is included in the appendices.
- 1.8. The settlement will act as a milestone in bringing low impact development into the mainstream. In addition, it will play an important role in connecting local land-based projects together to create a network of enterprises which will support a localised land-based economy.
- 1.9. Lammas is a volunteer run, not for profit social enterprise which embraces the Welsh language.

- **Overview**

1.10. The Industrial and Provident Society

On 23rd April 2007, " Lammas Low Impact Initiatives Limited" was registered under the Industrial and Provident Societies Act 1965 as a cooperative for the benefit of the community. The mission statement of the organisation is:-

The Society shall develop, research, promote, demonstrate and educate as to how low impact development can play a valuable role in the move toward a more sustainable society.

It has a Committee elected by the members (shareholders) on an annual basis.

The present Committee is:

Paul Wimbush. 22 Holtsfield, Murton, Swansea, SA3 3AQ.

With many years of eco community living and land management experience, Paul Wimbush is a committed low impact advocate and a driving force within the Lammas project. Currently working as a carpenter/eco builder, he is passionate about land based livelihoods and low impact architecture.

Larch Maxey. Rangoon, Owensfield, Cawell, Swansea, SA3 4LA.

With a Doctorate in Sustainable Communities, and currently researching sustainability at Swansea University, Dr Larch Maxey will lead the research aspect of the project. With a wealth of low impact experience, he is well placed to rigorously evaluate the project's performance.

Simon Dale. The Lays, Marros, Pendine, Carmathenshire, SA33 4PW

With many years of low-impact living and community experience, Simon Dale and family built their inspirational low-impact woodland home before coming to Lammas.

Dave Owen. Tegfan, Tan y Rhiw, St Dogmaels, Pembrokeshire, SA43 3HB

With many years of building experience, Dave Owen has already played a central role in coordinating a 9 unit self-build project in Swansea. He was a key member of the team which established Swansea Community Farm.

1.11. Residents

All of the residents have gone through a competitive allocation process in which their designs have been considered and assessed before being allocated a place in the project. Each household will lease a plot on which to build their eco dwelling in accordance with the design set out in their proposal. The leases will be agricultural leaseholds of 999 years duration. The leasehold agreements will be subject to the policies of the Society. With the agreement of Lammas, residents will be able to sell their lease on the open market and realise the added value resulting from the creation of the dwelling. Only shareholders will be eligible to become leaseholders.

1.12. Land ownership

This application concerns development on 76 acres of woodland and pasture on what is currently the south-eastern portion of the land at Pont-y-Gafel farm. The freehold of the land will be held by the Society and purchase financed by the sale of leases. The land which Lammas intends to purchase is referred to as “Tir-y-Gafel” within this document. There are no buildings on the land available for Lammas to purchase.

1.13. Monitoring

Lammas will be responsible for the delivery of the Management Plan, the success of which will be monitored and evaluated on an annual basis. It will be a condition of all leases that residents complete an annual monitoring return which identifies their contribution to the aims of the plan. The management committee will collate these returns and compile a report for the project as a whole. The project will report annually to Pembrokeshire County Council. The Annual Monitoring Report will evaluate the progress of the project through the

use of a clearly defined set of performance indicators. They will include the evaluation of the settlement's ecological footprint, its compliance with the requirements of the planning permission and progress towards the goals of the plan. They will also be used to identify ways in which management of the site can be improved.

1.14. Community buildings

Apart from the individual dwellings Lammas proposes to create a central community building. This will be a low impact structure designed to be versatile. It will serve a variety of functions such as a staffed administrative centre for Lammas, an educational facility for visitors (such as school parties), workshop and meeting space for community groups, etc. It is referred to as the “Yr Hwb” or the “Community Hub”.

Lammas also proposes to build a Minibus Garage/ Welcome Point for visitors. During the building phase this structure will act as a temporary site-office.

A campsite will be located adjacent to Yr Hwb, with campers using its shower and toilet facilities.

1.15. Transport issues

The project provides an integrated livelihood and residential scheme which will by its very nature result in a low traffic development. The site will be managed with a view to reducing travel by car to a minimum and building on the existing public transport infra-structure. Car use on site will be monitored and car ownership will be managed using a vehicle pass system. The project will run a minibus service to the local towns and will support sustainable transport solutions. During the construction phase the use of vehicles will be controlled to minimise any increase in traffic to and from the site. In part this will result naturally from the use of raw materials available on site. Off-site materials will be sourced locally to reduce the ecological footprint of the materials used.

1.16. Environmental Information

A habitat survey supported by various species surveys have been undertaken and is included in the appendices. On completion of a successful planning application Lammas aims to add further species surveys to this data. Similarly, a geology report, a water report and soils analysis report have been conducted. These have been compiled to provide baseline research data against which future surveys can be compared and analysed over time.

The history of the land has been researched and compiled in an essay included in the appendices.

A Visual Impact Assessment has also been undertaken.

Presently the woodland is unmanaged and the pasture is grazed with sheep.

- **Design, Construction and Landscape Impact**

1.17. Electricity and Heating

The site benefits from an existing leat system which channels water to a hydro-electric unit. Feasibility Reports indicate that this will provide for most, if not all, of the electrical energy requirements of the site. Lammas is currently commissioning a load test evaluation on the potential of this unit. Households may also use solar panels to supplement this. Included in the appendices is a report on the viability of the hydro turbine.

Additional heat energy will come primarily from new-plant biomass crops and will be supplemented with the by-products of hedgerow management and the management of the existing woodland which will be thinned and then coppiced in part.

1.18. Water

Drinking and household water will be supplied from the existing spring “Ffynnon-deg”. Irrigation water will be supplied through the use of rainwater harvesting. This will be backed up with a reserve water supply from the leat. Water to the camping field will be supplied by the existing borehole.

1.19. Waste

It is expected that the site will create very little domestic landfill waste as most needs will be met from the land reducing the use of packaging, etc. All organic waste will be composted and used to improve those parts of the land given over to agriculture. Human waste will be composted using compost toilets. Household water waste will be filtered through reed-beds. The modest size of the dwellings and the capture and use of rainwater will mean that drainage from the site will not exceed green field run-off rates.

1.20. Landscape issues

The development will inevitably change the character and appearance of the landscape, given the proposed presence of dwellings and the intended use of the land (in part) for crops. However, the modest size of the dwellings and their construction from low-impact natural materials straw, wood and earth, much of which will be from the site itself, will mean that any change in appearance will be a change in degree, not kind and will be very limited when viewed from a distance. At close quarters there will be significant change and the proposals in relation to access will allow people to assess for themselves the positive nature of the change. It is the intention to allow the local community to enjoy the changes brought about by the development and to highlight the positive impact on the landscape through the public access routes selected. As with traditional Welsh rural buildings, the dwellings will be sited to take advantage of the lie of the land and will be positioned to utilise passive solar heating. As such they will "fit into" the landscape.

1.21. Footpaths and tracks

There is one existing footpath route through the site. It runs eastward from the Pont-y-Gafel farmyard past the millpond and on toward Hermon. Lammas proposes to add over 1 kilometer of permissive paths to the site (approx 1140 meters) in two loops north and south of the existing footpath.

1.22. Permaculture

The development embodies the principles of Community Permaculture in which a holistic approach has been taken to the overall development rather than seeing each dwelling as a separate unit "entire of itself". Every part of the development provides a necessary service to the whole, so the scale of the development matches its needs and meets the needs of the residents.

1.23. Timescale

The SPG advises that low impact projects are expected to be able to demonstrate that 75% of its needs are being met from the land by year 3 of the development. Most residents anticipate being either wholly engaged with construction for the first 12 – 18 months. Thus there will be a time period in which residents will not be free to fully engage with the business of cultivating the land in earnest. In addition to this it must be recognised that the land is currently in a state of degradation and disrepair and it will take some time before the soil is improved to a degree where land-based livelihoods can truly flourish. This is reflected in the productivity forecasts in the 9 individual business plans. Thus Lammas proposes a staged establishment period, with a 75% target being achieved after 5 years.

1.24. Temporary Accommodation

Residents will need to use temporary accommodation on site whilst they are building their houses. In addition it may be necessary for building contractors to use temporary accommodation. Lammas would propose that a clear agreement be reached with Pembrokeshire County Council along the lines of allowing a certain number of units of temporary accommodation within agreed areas to be removed within 3 years of the start of development on the site.

1.25. Worst case scenario

In the event of the project failing through either the collapse of the IPS or the withdrawal of planning permission, the assets of the IPS will be transferred to an organization with similar aims who will prioritise in the following order:-

- The returning of the site to a condition suitable for agriculture or forestry, including the removal of all non-organic substances.
- The renumeration of the leaseholders who were resident on the land at the time of the projects collapse.
- The renumeration of the shareholders.

Whilst covering their own expenses for carrying out these tasks.

1.26. Registration of Holdings

Each of the households will need to register as separate holdings with the relevant authorities and will thus be subject to standard agricultural regulations including livestock registers, movement orders and standstill rules.

Current standstill periods are six days for sheep, goats and cattle and twenty days for pigs.

Movement of cattle will be subject to pre-movement TB testing.

1.27. Household Sufficiency

Each household will be required to account for its household needs and its land based productivity on an annual basis. Each household will be required to meet at least 75% of its household needs from land based activity. Should a household fail to meet this target then a comprehensive plan to remedy the situation must be produced. In the event of the adults within a household, through disability or old age, be unable to meet this target then the Society reserves the right to set a revised target. A revised target will need a formal application to the committee who will need to present the application to a general meeting. This target will need to be authorised by a vote at a general meeting.

1.28. Breach of Management plan

The resident's leasehold agreements will be conditionally tied to this management plan. Any breach of rules or principles contained within this management plan will be considered a breach in the respective leasehold agreement. The reasonable determination of the committee as to whether or not there has been a breach of the management plan will then be presented at the next general meeting. There a decision by members will be made to determine whether there has been a breach in the leasehold agreement.

In a worse case scenario, where a resident is found to have breached this management plan and therefore their leasehold agreement then a decision whether to withdraw their leasehold agreement will be taken by a vote of members at the subsequent general meeting.

Should a resident lose their leasehold agreement the Society will give the resident 6 months to vacate the plot. Should a former leaseholder in this situation refuse to leave, it will be the management team's obligation to pass the matter on to their solicitor who will begin an eviction and repossession process.

The Society will then resell the leasehold agreement and remunerate the former resident with 90% of the purchase price (after expenses and tax) of the leasehold agreement.

2. Management Objectives

2.1. All building and infrastructure development will have a small ecological impact.

Any structure/building will need the approval of the Society as well as the local planning authority. The Society's planning procedure will be exclusively concerned with the low-impact nature of the development and as such will need a full set of plans/drawings/specifications for approval.

The Society will ensure that all development is in accordance with the aims and policies set out within this management plan.

The project as a whole will endeavour to aspire to a one planet ecological footprint, and therefore residents will need to be willing to have their dwellings and lifestyles analysed for research. The results of this will be fed back to inform household practice.

2.2. The natural wealth and biodiversity of the land will be enhanced.

During site and building works care will be taken not to cause any environmental damage. Any areas of notable environmental value (e.g. broadleaf woodland, hedgerows, and wetland) will be acknowledged and incorporated into the site plan in such a way as to conserve and preserve their natural value. Any existing wildlife corridors will be noted and conserved.

Lammas will in effect be creating a network of small fields/forestry plots that will each be managed individually. In time, many individual ecosystems will establish themselves on the site leading to what Lammas expects to be an impressive increase in biodiversity.

2.3. The settlement will become integrated into the local community and will be an asset to the local economy.

Lammas held a meeting with neighbours of Pont-y-Gafel on April 22nd 2006 and introduced the concept of a low impact settlement.

Lammas held a second public meeting on June 10th 2006, which was facilitated by an independent researcher (Dr Jenny Pickerill of Leicester University). The proposal was described in full and a feedback process was established. An independent report of the meeting was then compiled.

Many of the report's recommendations have now been integrated into the proposal.

Lammas invited local people to a site visit and talk on September 16th 2006.

Lammas sent a letter to all local people in December 2006 inviting further feedback and discussion.

After submitting the original application (June 1st 2007) Lammas sent a letter to all Glandwr residents advising them that it was the right time to write to Pembrokeshire C.C. about the application.

We recognise the importance of open negotiations and consultations with local people in order to foster the spirit of mutual understanding and respect. We hope that the low-impact nature of the development, coupled with the many local benefits, will lead to local people appreciating the advantages of the development.

Local benefits will include:

- A boost for local businesses - Owing to the project's low impact ethos, residents will naturally shop locally and make full use of local businesses, products and trades. Visitors to the settlement will also be encouraged to shop locally.
- Rights of way – The project will create a network of footpaths for public use through the site, opening up the land for walkers.
- Affordable housing – There will be a provision of affordable housing for people with low impact aspirations.
- Local economy - The settlement will add to the local economy by offering a range of skills, crafts and produce. The Society will encourage businesses developed within the settlement to consult locally in order to complement, rather than compete with, existing small businesses in neighbouring towns and villages.
- Public transport provision – The Lammas minibus will be available for local people to

use.

- A part-time shop and café facility.

2.4. The project will offer the opportunity of affordable housing.

The project is being run by a not-for-profit organisation. The land is being purchased at an agricultural rate. Building works will be largely self-build and of a high labour/ low cost nature.

Thus we plan to provide truly affordable housing. The purchase price for plot leases is estimated at £30,000 each. Resident's estimates for building and infrastructure costs vary widely but all fall well below current market rates. Some of the residents are local people currently living in substandard rented accommodation.

The properties will be available in perpetuity. That is to say that when a resident leaves the project, they will sell their lease on the open market. The lease will contain the various conditions and regulations which will ensure the low-impact aims of the project will be maintained. Lammas fully expects that (due in part to these restrictive conditions and also due to the continuing availability of land on which low-impact developments can take place) the prices for such leases will fall well below market rates.

2.5. There will be an effective traffic reducing strategy in place.

The project has a well defined traffic management policy in place which takes into consideration all aspects of traffic generation. Essentially the project is an integrated residential and livelihood development which will by its nature allow residents to live a lifestyle less dependant on vehicle use. Most of the household needs will be met directly from the site. These include:

- Land-based employment
- Additional employment
- Social Networks (by the nature of community)
- Recreational provision (eg, playground for children, waking for adults)
- Services (Water, electricity, fuel)
- Livelihood support (skills and knowledge)

The regulatory mechanisms which will ensure that traffic will be minimised include:

- Residents will be required to share vehicles.
- A Society minibus will provide a link with local towns.
- The minibus will also be available for additional trips/ one-off opportunities.
- All deliveries to and from the site will be coordinated.
- Financial incentives will be used to encourage visitors to travel by public transport.
- All traffic will be monitored and reviewed on an annual basis.

2.6. The settlement will welcome visitors and provide an educational experience.

It is likely that the project will, due to its innovative nature, attract visitors. Most of these will be attracted to the exploration of principles of sustainability. It is important that examples of low-impact development are available for people to experience. Low-impact development offers one potential solution to the challenges of addressing climate change, limiting fossil fuel consumption, affordable housing and the farming crisis.

It is equally important to balance the project's contribution to a wider sustainability transition with the need to ensure that visitors' travel arrangements are also low-impact. Thus the Society has a policy that welcomes visitors within a clearly defined framework, designed to minimise visitor vehicle use.

The settlement will have very clearly defined open days; twice a week during winter and five times a week during summer. During these open days residents of the settlement will give guided tours of the project.

A range of information resources will be available for visitors.

Access to the settlement will be from the Llanfyrnach to Glandwr road. At the entrance to the site will be a gateway featuring a sign which will clearly display when the settlement is open and closed.

Adjacent to the car-parking area and Minibus stop will be a "Welcome Point" which will serve to inform visitors to the range of facilities available.

There will be a community hub building on the site. This will provide a meeting place for both community members and visitors. Indeed, it will be the starting point for guided walks and tours.

It will also house a part time café and a part-time shop (the trading post) from which visitors will be able to purchase produce from the locality.

The project will include a small camping area to accommodate working/ educational visitors.

2.7. The project will provide a support infrastructure for land based sustainable livelihoods to develop.

Each household will be required to provide at least 75% of its household needs from land based activity.

Each household will have access to the equivalent of approximately 8 acres on which to develop a land based livelihood. Residents will have exclusive use over some areas of this land, and will share other areas.

To create a sustainable land based lifestyle is enormously challenging. The farming community will affirm that in today's economic climate there is very little money to be made from the land. This coupled with the challenges of environmentally conscious living (for example, reducing one's travel needs) creates an adverse environment for low-impact smallholders. Only through establishing a sufficiently large group of low impact holdings can the potential of the project as a model for sustainable development be fully realised. Thus we are planning a settlement of 9 smallholdings.

With the momentum of the group helping to sustain the project in the long term, a local economy centered around land based productivity will flourish. A culture of low impact lifestyles will grow and provide support and inspiration both within the project and beyond. The support services which Lammas will offer its residents include:

- The society will provide a health and safety certified kitchen for residents to process and thus add value to their food produce.
- There will be a part-time shop (trading post) and café from which residents can sell their produce.
- Residents will be able to advertise and sell produce through the Lammas website.
- If residents produce is of a sufficiently high standard, they will be able to use the Lammas logo as a marketing tool.
- Lammas will also offer each household timber from the community woodland so that the production of value-added craft can be explored.

2.8. The project will conduct and publish research about the development.

Lammas aims to promote low-impact development as a tool for realising Wales' sustainability goals. Lammas will facilitate a research team to conduct and evaluate the project's success. The research will primarily be concerned with:

1. The settlement's ecological footprint.
2. The settlement's impact on the land in terms of habitat, biodiversity and soil quality.
3. The impact of the settlement on the local economy and community.

Research will be published through a number of media to maximize accessibility and stimulate scrutiny lay, policy, planning and academic stakeholders. A monitoring report will be produced on an annual basis. In addition to this Lammas will conduct specific research projects so that the project can be used as a model for learning and the on-going development of best practice.

2.9. The development will embrace and support the Welsh language.

Lammas recognises the importance of the Welsh language and culture in North

Pembrokeshire and sees low impact development as supporting this local language and culture, united by a common connection with the land and local rural knowledge and traditions. Lammas has a Welsh Language policy to ensure its support of the Welsh Language. Whilst several proposed residents already speak or are learning Welsh, most intend to learn once they move onto the site and Lammas aims, over time to become fully bi-lingual.

3. Welsh Language Policy

3.1. Lammas believes in equality of opportunity for all regardless of race, nationality, gender, disability, creed, sexual orientation, age or social background. As part of its commitment to equal opportunities Lammas recognises the part that the Welsh Language plays in public life in Wales. Lammas has adopted the principle that in the conduct of public business in Wales it will afford a status to the Welsh Language equal to that of the English Language. As a not for profit, volunteer run organization Lammas welcomes any support available to assist the implementation of this policy.

This policy document sets out how Lammas intends to fulfil its commitment to the Welsh Language.

3.2. Correspondence

If Lammas receives correspondence in Welsh, it will aim to reply in Welsh within the same period of time as a reply could be expected in the English Language.

3.3. Meetings

At public meetings within Wales, Lammas will aim to ensure that there is a simultaneous translator available.

3.4. Corporate identity

Printed information on letter headings, compliment slips, fax covering sheets, staff business cards and other corporate stationery for use exclusively in Wales will be in a bilingual format.

Lammas publicity leaflets for distribution in Wales will be published bilingually.

Lammas will aim to develop a bilingual website.

In respect of all printed materials to be used in Wales, Lammas will strive to ensure the Welsh and English languages receive equal prominence and status.

3.5. Signage

Lammas recognises that the Welsh Language Board's policy is to display bilingual signage. Lammas will seek to follow this best practice approach. It will also help introduce visiting members of the public to basic Welsh Language words and the concept that Welsh Language speakers are capable of dealing only through the medium of Welsh.

3.6. Training Staff

Lammas will aim to ensure that there are Welsh speaking staff available.

Lammas will encourage members of staff who do not speak Welsh to take up suitable language training and will consider financial support for such training.

3.7. Recruitment

Candidates` abilities are assessed using objective criteria to ensure that appointments are made on a fair and consistent basis in each case.

3.8. Monitoring

Every 12 months, Lammas shall monitor how well we are meeting our commitment to giving the Welsh language equal treatment through this scheme, and our monitoring will relate to the criteria set out above.

3.9. Note: *Menter Iaith Sir Benfro, an organisation dedicated to supporting the use of Welsh in the area, have offered help with translation.*

4. Visiting Guidelines

- 4.1. In order to provide a visiting resource whilst ensuring a good working structure is in place, these guidelines seek to outline what is expected both of visitors and Tir-y-Gafel residents. These guidelines are applicable to local residents and guests in the same manner as all other visitors.
- 4.2. Visitor guidelines will be clearly displayed in the community hub in both English and Welsh with braille, audio, and large print copies available on request.
- 4.3. Visitors are asked to respect that the ecovillage comprises a mix of communal areas and working agricultural units, thus there are conditions of access.

Working Visitors

- 4.4. Working visitors will be permitted to stay on-site for a pre-arranged period, conducive with how long their services will be welcome.
- 4.5. The Society will limit the number of working visitors to a level which appropriately meets the amount of work available, and the amount of visitor accommodation available.
- 4.6. Working visitors will be coordinated by the office administrator. They will be coordinated in such a way so that all households have fair access to the pool of volunteer labour, whilst tailoring working visitor's tasks to their abilities. The office administrator will ensure that all working visitors undertaking work on the site will be made aware of the appropriate health and safety regulations.
- 4.7. Working visitors, whilst assigned to a household, will share their meals with the household benefiting from their work. In return they will be expected to apply themselves for at least 5 hours in a working day. Working visitors who are involved in community projects will have a similar, mutually beneficial, clear arrangement with the Society

Campsite

4.8. There will be a seasonal campsite available on site for visitors (or guests) wishing to stay in the settlement. It will accommodate a maximum of 12 tents and will be open for 9 months of the year from April 1st through until January 1st. It will be supplied with water by means of a standpipe (connected to the existing borehole). Campers will have use of the compost toilet and washroom facilities within the community hub. The Campsite will be coordinated by the office administrator and maintained by the site manager. The Society will levy a charge for camping of £5 a night per tent for visitors.

Horses

4.9. Visitors who arrive by horse will be welcome. Provision for grazing will be provided free of charge. This will need to be coordinated by the site manager who will allocate either the village green (in preference) or one of the common/ shared areas for the horses to graze and rest.

General

4.10. Littering, graffiti, de-facing of notices and signposts are not permitted; any visitor found doing so will be asked to leave the site.

4.11. Public access compost toilets are available which should be used rather than hedgerows and wild areas.

4.12. Visitors are not permitted to pick fruit or vegetables without permission.

4.13. Visitors are asked to treat all animals with respect at all times.

4.14. Visitors wishing to bring dogs with them must keep them on a lead. Dogs remain the responsibility of their owner at all times.

4.15. Children are most welcome but remain the responsibility of their parent/ carer at all times.

4.16. Visitors with individual needs are most welcome but in order to ensure Lammas can best meet these needs they are asked to pre-notify the Society with specifics.

Behaviour

- 4.17.** Lammas welcomes all visitors regardless of age, ethnicity, gender, religion, physical & mental health, sexuality, in turn Lammas asks visitors to respect the same in residents and other visitors alike.
- 4.18.** Any visitor found displaying aggressive or intimidating behaviour to residents or other visitors will in the first instance be made aware of their inappropriate behaviour, if such behaviour continues they may be asked to leave.
- 4.19.** In the case of a resident displaying aggressive or intimidating behaviour, visitors are asked to notify another resident who will bring the matter to the Society under a grievance procedure.

Specific areas

- 4.20.** Communal grazing areas are open access provided gates are kept closed and animals treated with respect.
- 4.21.** Common Woodland areas are open access for walking and cycling, however the picking of wild flowers and logging are not permitted.
- 4.22.** Individual plots are not open access areas; they are private residential areas that should be respected as such.
- 4.23.** Visitors with specific areas of interest should pre-arrange their visit with the Society in order to avoid disappointment and so the Society can arrange a sensible visiting time with an appropriate resident.

Guests

- 4.24.** Residents are responsible for the behaviour of their guests.
- 4.25.** If a guest displays behaviour incompatible with the visitor guidelines, the Society will bring this to the attention of the appropriate household, who has the responsibility for curbing any such inappropriate behaviour.
- 4.26.** If inappropriate behaviour continues the guest will be asked to leave and the resident household will be held accountable, this may result in guests not being permitted future visiting.

Visiting Days and Tours

- 4.27.** Visiting days will be organised well in advance (at least a month) with residents notified through posting at the community hub.
- 4.28.** One or two residents will be responsible on such days for providing guided tours. They will work with the office administrator in encouraging visitors to adopt sustainable travel arrangements (and issuing vehicle parking permits where appropriate).
- 4.29.** All tours must be risk-assessed in advance.
- 4.30.** Any residents who wish to be directly involved with the visiting days (for instance by offering a workshop) are asked to coordinate with the office administrator to provide a coordinated and structured approach.
- 4.31.** The resident(s) responsible for coordinating tours on any visiting day are required to notify the other residents of the details of the proposed tour by posting a notice at least 24 hours in advance in the community hub noticeboard.
- 4.32.** The financial arrangements of visiting days have been created to offer financial benefit to both the Society (through vehicle parking permits) and residents who are directly involved (who will receive tour monies).

Workshops

- 4.33.** If residents wish to offer workshops to participants they are required to notify the office administrator of this well in advance in order to co-ordinate the range of available activities, accommodation and travel arrangements.
- 4.34.** Workshop facilitators are responsible for ensuring health and safety procedures are in place and that they are clearly explained to participants.
- 4.35.** Residents wishing to use the hall and camping facilities for workshops will need to pre book the facilities with the office administrator and will need to pay the Society the relevant charges for the use of the facilities.

Educational visits and working parties

- 4.36.** Residents will be asked to outline if and how they would like to participate in these in order to co-ordinate with others and provide a range of available workshops/ trainings.

4.37.The office administrator will coordinate all educational/ working visits.

4.38.When educational visits and working parties are arranged residents will be notified well in advance by notice in the community hub.

4.39.If a resident wishes to organise an educational or working group they are duty bound to submit a proposal to the office administrator outlining number of proposed visitors, any costs, travel arrangements, what activities the group will undertake and whether they consider this will be carried out with other residents. The Society reserves the right to limit the number of such visits in order to meet the demands of the traffic policy, however fair consideration will be given to each proposal.

5. Common Areas Policy

5.1. Entranceway

The Entranceway has been designed to provide a safe area for vehicles to turn into the site and leave the site. It is not a parking area. There will be a clear bilingual sign here indicating the presence of the project and visiting days when the project welcomes visitors. There will be a cattle grid here to ensure that stray animals do not venture onto the site and also ensure that resident's animals do not stray off from the site.

5.2. Common areas

Responsibility for any animals within these areas will be down to the owners of the animals. Responsibility for keeping the areas in good condition will be down to the residents using the areas. These areas will also be overseen by the site manager and the Society.

5.3. Trackways

The trackway from the road to the community hub (approx. 500m) will be a high grade aggregate track capable of supporting heavy goods vehicles for deliveries. The trackways from the community hub to the individual plots (approx. 500m) will be a lighter grade aggregate track capable of supporting light goods vehicles and tractors.

The trackway through the woodland area will be maintained as a rough track for occasional use in woodland extraction. The trackway below the woodland area will not be owned by Lammas. Lammas will have access rights for woodland work.

The Society will maintain the trackway network across the site. The tracks will be aggregate based using stone quarried from the site.

5.4. Community Hub

The Community Hub is a mixed-use building with some public areas and some private areas. Public areas include the covered area and the compost toilets. Some areas of the Hub are open on a part-time basis for visitors; the trading post, the hall and the cafe. The kitchen is only open to residents/ café staff. The office is open to employees of Lammas and Committee members only.

5.5. Community Hub Garden

The Community Hub Garden is an area for residents, guests and visitors to use. It will be managed by the Site Manager.

5.6. Community Hub Short Rotation Coppice

This area, to the east of the Community Hub and running alongside the existing hedgerow line, will be managed by the site manager to provide fuel for the Community Hub Kakeoven. It will be a short rotation willow hybrid coppice worked on a 3-year rotation.

5.7. Community Hub Woodland plantation

This is a small triangular piece of land to the northeast of the Community Hub, bordered by trackways and footpaths. This small plantation of native mixed trees is an area of open access. It has been incorporated to provide an ecological, recreational and a long-term timber resource.

5.8. Children's Play Area

This area is hedged and fenced on 3 sides to provide a secure area for children to play in. It will be open to residents, guests and visitors. The design process for this area will be a participatory one involving local people.

5.9. Seasonal Campsite

The maintenance of this area will be managed by the Site Manager. The management of the users of this area will be the Office administrator's responsibility. The area will be empty and left fallow throughout the months of January, February and March. It will accommodate up to 12 tents.

5.10.Village Green

This area is a community resource for recreational activities. It will be a secure field in its own right and will be reserved primarily for grazing by visitor's horses.

5.11.Minibus Shelter and Temporary Office

This structure will be designed in the long term to house the minibus and provide a cycle shelter for any visitors arriving by bike. It will also act as a welcome point providing information and orientation for visitors.

During the construction phase this structure will act as a temporary site office to coordinate the development.

5.12.Footpaths and Permissive Paths

There is one existing footpath through the site running from the Pont-y-Gafel farm, past the millpond and proposed community hub, and passing out of the site on the North Eastern border. There are two permissive footpaths proposed running in two loops North and South of the public footpath. These will be maintained by residents (where the paths traverse their plots) and the Society.

The permissive footpaths will be closed during the construction phase (estimated to be the first 3 years).

It is also expected that there will be a network of informal footpaths for use by residents only.

5.13.Car Park

This will be an aggregate based clearing off of the main trackway. It will be for the use of all visiting vehicles. All vehicles parked here will be required to display a vehicle parking permit. Vehicles not displaying a vehicle parking permit risk being clamped by the site manager. A removal fee will then be charged. Vehicles parked at this car park will be done so at their owner's risk. Bilingual notices to this effect will be clearly displayed in the car park. Vehicle parking permits will be available from the welcome point adjacent to the car-park. This facility will be overseen by the site manager. The office administrator will act as a back-up.

5.14. Millpond

The Millpond is a valuable ecological resource as well as having considerable amenity value. It will primarily be managed in this light. Toward this end the Society aims to increase the diversity of native aquatic and riparian zone plant species. It will be managed and overseen by the site manager.

The millpond will be offered as a resource to any residents willing to take on the management of it for their own enterprise given that any enterprise is harmonious with existing wildlife and general organic principles of aquaculture and that any enterprise does not interfere with the enjoyment of the pond by all other users.

5.15. Leat

The leat is currently in need of some maintenance. A maintenance program will need to be designed, implemented and reviewed by the site manager.

6. Services Policy

- 6.1.** The society will provide a service infrastructure network across the site which will be buried underground with various inspection and maintenance points. This will serve each plot.
- 6.2.** The extension of this service network from the service point on each plot to the points of use will be the leaseholder's responsibility and will be at the leaseholder's expense.
- 6.3.** The Society will nominate a service point on each plot which is most convenient from the perspective of an efficient distribution network.

6.4. Household Water

The Society will provide drinking/ washing water to each plot. The water will be sourced at the Ffynnon-deg spring on the site.

6.5. Best Practice

- Water will be considered as a precious resource and should be used with care.

6.6. Guidelines:

- Each household will have a drinking/ washing water storage facility of at least 25 gallons (113 litres) per adult and at most 50 gallons (227 litres) per adult within their house.

6.7. Rules:

- The supply to the water storage facility within each plot will be via a 50mm air gap to the tank to avoid negative pressure feedback
- Each plot should maintain in good working order at least one isolation tap/ valve. Details of the whereabouts of this facility must be communicated to the Society office, which will keep a record of this information.
- The domestic household water supply will only be used for domestic drinking/ washing water

6.8. Rainwater harvesting

6.9. Best Practice

- Each household will make provision for the supply of all its water needs (other than household drinking/ washing water) through the harvesting and storage of rainwater.

6.10. Guidelines

- Annual rainfall on the site is 1600mm.
- Provision should be made for dry spells of 4 weeks when calculating water storage requirements.
- The Society will make provision for the supply of a "back-up irrigation network". This will only be used in exceptional circumstances.
- Ponds should be considered as a storage option for water to be used for irrigation purposes.

6.11. Rules

- All households will practice rainwater harvesting.

6.12. Grey Water

The Society defines grey water as household waste water, not including urine or faeces

6.13. Best Practice

- Grey water should be managed as a valuable, nutritionally-rich water resource.

6.14. Guidelines

- Grey water needs to be filtered through a series of reed-beds before being returned to natural watercourses.
- Within households, care should be taken to avoid bleach, softening and whitening agents, "biological" detergents and substances containing boron.
- During the spring, summer and autumn a high proportion of the grey water entering the reed beds will be taken up by a combination of plant transpiration and evaporation.

6.15. Rules

- Each household is required to install and maintain a grey water reed-bed filtration system of at least 10 square meters, and all household grey water must pass through this system.
- Grey water reed-bed systems must be designed to be inaccessible to livestock and children.
- Grey water reed-beds must be completely independent of existing or natural watercourses and must be sited at least 5m from these.
- Grey water reed-beds must be lined with clay or a waterproof membrane from the pipe outlet until the end of the filtration system, where the water will be only be allowed to return to ground/ natural watercourse having passed through an inspection chamber.
- The reed-bed and inspection-chamber must be designed to a standard considered acceptable to the Environment Agency.
- Residents will be required from time to time to collect and submit water samples from the reed-bed inspection-chambers to the Site Manager and/ or Environment Agency for testing.

6.16.Human waste

6.17.Best Practice

- Compost toilets are the ultimate ecological sewage solution. Generally no water is used and the return of plant nutrients and humus to the soil is maximised.

6.18.Guidelines

- Compost toilets should be designed to be rodent proof, using a masonry base.
- Compost toilets should be designed to make full use of urine as a valuable source of nitrogen and minerals by separating it from solid waste.
- Compost Toilets should be inspected and maintained weekly.

6.19.Rules

- Compost toilets are to be exclusively used throughout the project.
- The chambers of all Compost toilets are to be waterproof.

6.20. Recycling and refuse

6.21. Best Practice

- Each household will reduce, reuse and repair in order to lessen that which needs recycling or disposing of.
- Each household will ensure its own putrescible waste is composted on site and recycle paper, metal, glass and plastic.

6.22. Guidelines

- The Society will work with Pembs. C.C. and coordinate the collection of recycling and refuse from the project.

6.23. Rules

- Each household will be responsible for the cleaning and safe storage of recycling until it is collected from the site.
- The collection point for recycling will be at the entrance to the site. Residents will only be permitted to leave recycling for collection during the hours specified by the Society.

6.24. Electricity

The Society plans to install an independent electricity grid which will be connected to the hydro turbine, and centered at the community hub. It plans to supply electricity to the community hub and households. This supply may drop during the summer months, or may be temporarily unavailable during occasional maintenance works.

6.25. Best Practice

- Residents will install a back-up renewable electricity system to compliment the hydro-turbine system.
- Residents will use electricity carefully.

6.26. Guidelines

- Care will need to be taken in the siting, maintenance and correct use of battery banks.

- Any wind turbines will need planning approval and should be selected for low noise generation.
- All generation, storage and use of power should be efficient and safe.
- A community awareness of the nature of the electrical supply should be cultivated by all residents.

6.27.Rules

- Households will be independent of the national grid.
- Any household running workshops requiring large electrical loads will be expected (unless there is good reason) to share such facilities with other residents.

6.28.Communications

The Society will not provide a communications network to the plots. This is due to recent technological leaps in broadband technology which has made available cheap and reliable mobile communication networks.

7. Conflict Resolution Commitment

7.1. Best Practice

Residents choose:

- To make a commitment to improve and aspire to develop clear communication skills both with each other, including children.
- To view any conflict as an opportunity to learn and grow both individually and as a community.
- To aspire to resolve challenges as promptly, peacefully and clearly as possible.
- To encourage the Celebration of human diversity, thus enabling individuality to flourish.
- To attend training days run by external facilitators to deepen and expand our communication, empathy and conflict resolution skills base as a community for the benefit of the whole.
- To take personal responsibility for feelings, responses and reactions in any given situation (i.e. adopt a “No Blame approach”. For example: “I feel.....” (emotion) rather than “You make me feel.....”).
- Recognition that a statement such as “I feel manipulated by you” is a judgement of another, and is not a feeling but a perception. More accurately it would be “I’m feeling overwhelmed and pressured right now!” A feeling is true when there is no underlying blame of another for your feeling.

Guidelines

- 7.2.** It is not compulsory to attend training days, however to ensure the smooth growth and evolution of our community, it is encouraged that people make the choice to attend. This would ensure a common language when dealing with conflict.
- 7.3.** Communication skills are defined as the ability to empathize with our own feelings and the feelings of others and attempt to identify the needs of others as well as our own, and to assertively request that those needs are met resulting in a win – win situation.

- 7.4.** What is considered to be an essential component of conflict resolution is a willingness and ability to identify, name and own the feelings that are aroused internally and to communicate those feelings without suppression, denial, or blame. This process alone involves a commitment to being aware of our selves, being honest with ourselves and cultivating a degree of self reflection and self management.
- 7.5.** When these feelings on both sides are actively listened to, empathized with, (including an element of role reversal) and the underlying need that is not being met is identified, then the possibility for resolution comes into sight. If one person has an issue, and the other party feels clear, there is still a willingness of both parties to aim to resolve what is coming up. For one party to state "this is not my problem....you are on your own" is not acceptable. The underlying intention is always "How can I make life more enjoyable for you?" whilst owning our own feelings and adopting a self reflective stance...in other words "what is my part in this?"
- 7.6.** This process can occur between parties of any number of people. If conflict arises between two people, then this policy exists to provide a framework for resolution between them. The level of discretion or openness is the choice of the people involved and needs respect and support. If there is slanderous talk about a third party in their absence, then this is a good indicator that clear communication needs to happen.

Rules

- 7.7.** If a major conflict arises between two residents, or groups of residents, and they are unwilling or unable to resolve it, the situation is unacceptable. A conflict resolution meeting shall be called by any resident in order to work toward resolution. It is required that all those involved attend. More than one meeting may be necessary. If no satisfactory progress is made, an outside facilitator, acceptable to the members in conflict, will be invited and a further attempt made. This process will continue, at the expense of the conflicting parties, until a resolution is found.

8. Land Management Policy

Principles.

- 8.1.** The individual plots, the shared areas and the common land, facilities and resources shall at all times be used, managed and controlled so as to uphold principles of Care for the Earth and Care for the People.
- 8.2.** The flora and fauna are to be observed and enjoyed at all times and used in such manner as will preserve the environment with full recognition of the environmental sensitivity of the area.
- 8.3.** Individual plots must be kept in a manner which is in harmony with the natural beauty of the site.

8.4. Aims

- The land will be designed and worked using permacultural principles.
- To foster biodiversity and conserve sensitive habitats and landscape features.
- To work with natural systems and cycles throughout all levels from the soil to plants and animals.
- To maintain the long term fertility and biological activity of soils.
- To treat livestock ethically, meeting their physiological and behavioural needs.

8.5. General site management

The estate will be divided into 3 zones:

- Common areas. Responsibility for these areas will be covered by the Society
- Shared areas. Responsibility for these areas will be covered by a defined group of residents. These in turn will be overseen by the Society.
- Individual holdings. Responsibility for these areas will be covered by the leaseholders of the individual holdings. These in turn will be overseen by the Society.

Boundaries

Responsibility for the maintenance of boundaries will either be held by the Society, a group of leaseholders or individual leaseholders. Where individual leaseholders are responsible for boundaries, this will be detailed in the individual leasehold agreements.

8.6. Best Practice:

- All hedgerows will be managed sensitively in order to foster a healthy diverse stockproof boundary with standards
- The site will be interlaced with a network of hedgerows which shall act as wildlife corridors
- Fence posts will be from locally sourced hardwood

8.7. Guidelines:

- It is recommended that all hedge trimming takes place in winter, preferably January and February.
- Hedgerows will be laid on a 5-10 year rotation
- All appropriate boundaries will be stock proof
- Earth and stone banks will be repaired and kept in good order
- Species poor hedgerows will be fenced and planted so as to develop a species rich hedgerow
- New hedgerows will be banked and planted with local native species
- Ditches should be cleared in stages.

8.8. Rules:

- No mature trees (living or dead) will be cut from hedgerow lines without both the Societies approval at a Society meeting and CCW approval (Close inspection of mature trees identified for felling or tree works should be carried out a maximum of one month prior to the works)

- No existing hedgerow lines, ditches or banks may be removed. The exception to this rule is that an entrance in an existing hedgerow line may be made where there is an appreciable need.
- Residents must not trim hedgerows between 1 March and 31 August.

Crops

8.9. Best Practice:

- Plot management should work to develop a healthy and productive holding that encourages a balanced and varied farm ecosystem which coexists with natural ecosystems.
- Residents should apply high standards of conservation management throughout their holding to conserve and enhance landscape features, habitats and wild plant and animal species.
- Residents should create wildlife corridors to link habitats, for example making continuous semi-natural habitats containing hedgerows, field margins and verges.
- Residents should manage the soil with the aim of developing and protecting an optimum soil structure, biological activity and fertility.
- The concentrations of heavy metals and other metallic elements within the soil should be monitored and managed to maintain a correct and healthy balance.
- Weeds should be controlled using a combination of rotation, green manures, good composting practices, good seed choice and soil management.
- The best way to control disease or pests is through the careful design and management of the land to achieve health, diversity and vitality in the soil, plants and livestock.
- By using a balanced crop rotation the soil fertility and health will be increased. In addition to this a good rotation will break the lifecycles of pests and limit the spread of diseases.

8.10. Guidelines:

- Residents should keep an uncultivated strip of perennial grass or wildflowers around the edges of any cultivated fields

- Residents should maintain a protective cover of vegetation, such as green manure or mulch, to protect surface living organisms and soil structure from exposure to dry conditions, heavy rain or strong winds.
- Residents should install beetle banks around their plots to encourage balanced insect populations.
- Cultivation should cause minimal disruption of the soil profile by shallow ploughing or preferably no-till systems
- Manure and plant wastes should be returned to the soil in order to maintain or increase soil fertility and microbial activity.
- To avoid the potential contamination of watercourses residents should not apply more than the equivalent of 200kg of nitrogen per hectare per year.
- Mineral fertilizers, (with the exception of fresh blood, guano, urea, slaked lime and quicklime) may be used.
- Pests and diseases should be controlled by encouraging natural predators within and around crops (through techniques like companion planting, mixed cropping and uncultivated field margins), good choice of seed and planting times, and good land hygiene practices to limit the spread of any pests or diseases.
- Pesticides and fungicides not considered permissible under soil association organic standards should not be used.
- A balance of cropping and grass/ clover leys in crop rotation will benefit the soil.
- When planting Alliums, brassicas and potatoes a gap of at least 3 seasons should be left before planting the same crops in the same piece of land.

8.11. Rules:

- Residents must meet the terms of all legal and statutory requirements regarding the wider environment at all times.
- Residents must not clear vegetation by burning.
- Residents must not burn straw, cereal waste or stubble
- Residents must not apply manure or slurry in unfavorable conditions when pollution is likely to occur.
- Residents must not spread manure within 10m of ditches or watercourses or within 30m of boreholes or springs.

- Residents must not use any agrochemical or hormone herbicide without the prior consent of the committee.

Woodland

This policy should be considered together with the woodland management plan

8.12. Best Practice:

- Mature trees and woodland are major contributors to the beauty and amenity value of the landscape.
- Individual trees and woodland play a vital part in conserving landscape and species diversity.

8.13. Guidelines:

- New plant woodland should be planted using native species, preferably sourced from local stock.
- New plant woodland should be protected from livestock
- Existing broadleaf woodland should be managed exclusively for its high ecological and wildlife value
- Existing coniferous and plantation woodland should be thinned and replanted with native species.

8.14. Rules:

- Existing coniferous and plantation woodland must not be clear felled.
- No mature trees (living or dead) are to be cut from areas of existing broadleaf woodland without the prior permission of both the Society and approval from CCW.

Livestock

Responsibility of animals will be down to the individual leaseholders.

8.15. Best Practice:

- All livestock should be managed with special care for their welfare and health. Livestock's behavioural needs should be accounted for.
- Animals should be chosen for suitability to the local climate and landscape conditions.
- The use of high quality feed, regular exercise and access to pasture will encourage disease resistance.
- Traditional, local or rare livestock breeds should be selected in preference to other breeds.
- Stocking density should be carefully monitored to maintain a healthy stocking density and avoid overgrazing.

8.16. Guidelines:

- The nutritional needs of livestock must be provided for.
- Animals should have access to water at all times.
- Herd animals should not be kept alone.
- Animals should be free to behave naturally.
- Provision should be made to isolate any sick or injured animal at short notice.
- Veterinary medicines or antibiotics should not be used as a preventative treatment. Vaccines should only be used when there is a known disease risk which you cannot control by other means.
- Grazing should be rotated to avoid the build up of parasites.
- Animals should be provided with sufficient shelter from the sun, rain, wind and extreme temperatures, appropriate to their age and breed.
- Housed livestock should be provided with bedding.
- All livestock should be kept within a clearly defined area from which they are unable to escape.
- Each of the households will need to register as separate holdings with the relevant authorities and will thus be subject to standard agricultural regulations including livestock registers, movement orders and standstill rules.
Current standstill periods are six days for sheep, goats and cattle and twenty days for pigs.
Movement of cattle will be subject to pre-movement TB testing.

Further information on current regulations and guidelines, including some very helpful booklets on various livestock guidelines are available from :

Caroline King

The Animal Health Divisional Office

Ty Merlin,

Hoel Glasdwr,

Parc Pensarn,

Carmarthen,

01267 245400

8.17. Rules:

- All livestock must comply with national and/ or EU regulations.
- Any livestock must not go longer than an eight hour period without access to water or food,
- Residents must not house any livestock for any longer than 6 months in any year.
- Animals should only be tethered for no longer than 6 hours in any one day.
- Livestock must be checked every day.

Footpaths

8.18. Best Practice:

- All footpaths will be easily accessible routes through the site.
- To walk on the footpaths will be a pleasant experience.

8.19. Guidelines:

- All footpaths will be clearly labeled as such.
- It will be the responsibility of the leaseholders to maintain any permissive paths which pass through their respective plots.
- The Society reserves the right to close a permissive path temporarily either for works concerning the footpath or in the interests of safety for the public.

- Residents are able to, with the full consent of the site manager, close a permissive footpath temporarily either for works concerning the footpath or in the interests of safety for the public.
- All footpaths and permissive paths will be registered as such with Pembrokeshire County Council with a Section 31 statement under the Highways Act 1980. The Society will renew this legislation every 10 years.

8.20. Rules:

- The public footpath will be kept clear of obstructions at all times.
- The permissive paths will be clearly labeled as such and will specify any conditions of use, for example; that all dogs be kept on leads at all times.

8.21. Hunting

- Hunting in common areas is not permitted. The committee is empowered to make an exception to this in a situation where it is deemed absolutely necessary for pest control. Any such activities undertaken on residents' individual plots must be in accordance with all current laws and regulations.

8.22. Red Kites.

- Should red kites be nesting in the vicinity then the society will establish a seasonal exclusion zone extending 100m around the nesting site. There shall be no building development (other than routine building maintenance) or major landscape works (i.e. works involving earth moving machines) within the exclusion zone. The exclusion zone will operate from mid March until mid July.

(This guidance follows consultation and advice from Tony Cross (Consultant Ornithologist) of The Welsh Kite trust, Samaria, Nantmel, Llandrindod Wells, Powys.)

8.23. Chemicals

A resident shall obtain permission of the Society for the use of an undesirable chemical as provided in the list of such chemicals provided by the Society from time to time.

8.24. Dogs and Cats

Residents are wholly responsible for the behavior of their dogs. All dogs are to be on a lead when they are on land not covered by the owner's individual leasehold agreement. The exception to this is when a dog owner has the permission of the plot leaseholder to allow their dog to roam free. In such circumstances it is the responsibility of the dog owner to ensure that their dog does not wander beyond the boundaries of the plot concerned.

Any dog that harms or attacks livestock or people will not be allowed to reside or visit the site.

Whilst there are no restrictions in place on cat ownership, residents are reminded of the damaging effect of cats on wildlife. Cats damage local populations of small birds and mammals and significantly decrease biodiversity. Therefore the Society requests that cat ownership be considered very carefully by residents.

8.25. Rubbish

No resident shall deposit or throw upon the common property any rubbish, dirt, dust or other material likely to interfere with the peaceful enjoyment of the site by a resident of another plot or of any person lawfully using common property.

8.26. Storage of flammable liquids.

A resident shall obtain the consent in writing of the committee to use or store upon his or her plot or upon the common property any flammable chemical, liquid or gas or other flammable material, other than chemicals, liquids, gases or other material used or intended to be used for domestic purposes.

9. Lammas Building Policy

- 9.1. There should be a clear functional need justifying each building's existence and size.
- 9.2. All buildings should blend into the landscape in which they sit. Toward this end all buildings will encourage plant growth on and around them.
- 9.3. All buildings should be situated and designed to minimise any visual impact from nearby farms, properties and roads.
- 9.4. All buildings will be made from predominantly local, natural and/or recycled materials.
- 9.5. All decisions as to materials should be considered and should take into account the outcome required as against the ecological cost of achieving it.
- 9.6. In many cases this consideration will point to the use of local natural materials but equally appropriate outcomes at an acceptable cost may be achieved through the use of recycled materials.
- 9.7. Rarely will the use of non local non recycled materials be justified.
- 9.8. All dwellings will minimise their use of high embodied energy materials such as concrete. Use of these materials will be restricted to those areas where no other practical solution can be found (subject to building regulations).
- 9.9. All buildings will harvest and store rainwater for washing and irrigation.
- 9.10. External artificial finishes (for example, stainless steel fluepipe) should be kept to an absolute minimum.
- 9.11. Pvc should only be used where no other substitute is available.
- 9.12. A building should be finished in natural colours which blend with the natural surroundings.
- 9.13. There should be no external lighting on and around buildings.

Dwellings:

- 9.14. All dwellings will be designed to incorporate passive solar heating using elements of thermal mass, thereby minimising external heating requirements.

- 9.15.** All dwellings will obtain their heating from renewable sources.
- 9.16.** All dwellings will be super-insulated to a level well in excess of building regulation requirements.
- 9.17.** All dwellings will minimise infiltration and will have a well considered approach to ventilation.
- 9.18.** All domestic hot water will be heated from renewable sources, with a strong presumption in favour of using solar water heating. Where this is not used this must be justified.
- 9.19.** All dwellings will be designed so that the internal rooms will not need any supplementary lighting under normal daylight conditions.

10. **Monitoring Arrangements**

The society will produce an Annual Monitoring report. A copy of this report will be sent to Pembrokeshire County Council. The report will give a general description of the projects activities over the preceding 12 months. It will then chart the project's progress against a well-defined set of performance indicators. It will conclude with a resolution for future targets and propose changes to management practices.

10.1. **Performance Indicators**

1. Annual

- Ecological Footprint Assessment (SEI)
- 75% Productivity target
- Traffic volume and density
- Management objectives evaluation
- Welsh language integration

2. Long term (4 year)

These performance indicators will be evaluated every 4 years due to the long term nature of their improvement program

- Soil health
- Biodiversity
- Number of new trees planted (accumulative)
- length of new hedgerow planted (accumulative)
- Number of new ponds installed (accumulative)

3. Variable

- Grey Water systems

10.2. Ecological Footprint Assessment

It is the intention of the project to progress toward a one planet ecological footprint. Ecological footprint evaluation is an established resource accounting tool for sustainable consumption. It measures the total environmental burden we place on the planet. It is based on the area of land needed to provide raw materials and crops, and to absorb pollution and waste created by a given population, wherever that land might be. The footprint is measured in a standardized area footprint, the “global hectare” and is usually expressed as global hectares per person – or per capita (gha/ cap). It is estimated that the Earth has an estimated capacity of 1.8 gha/cap. An average Welsh person has an ecological footprint of 5.3 gha/cap. The Findhorn ecovillage in Scotland has achieved a footprint of 2.7 gha/cap. We are aspiring toward a footprint of 1.8 gha/cap. This is no light task and we expect to move toward this target over time. We will evaluate our footprint annually and will use the results of this analysis to inform us about the areas of resource use we need to improve upon. We have consulted with the Stockholm Environment Institute concerning this annual evaluation process. Each household will be required to fill out a comprehensive “Lifestyle Questionnaire” annually toward this end. A copy of this questionnaire is included in the appendices.

10.3. 75% Productivity Target

The project will ensure that at least 75% of its households needs are met from land based productivity. To calculate this, the Society will be reliant on the calculations from individual households. Each household will be required as a condition of their lease, to produce details of its own performance in this area as outlined in the SPG.

The project will collect and collate all the total household needs and all the land based produce from the project to arrive at a percentage productivity figure for the project as a whole.

After 3 years (taken from the commencement of building works on the site) Lammas estimates that the project will meet 41 % of its needs directly from the land.

After 4 years (taken from the commencement of building works on the site) Lammas estimates that the project will meet at 68 % of its needs directly from the land.

After 5 years the project will meet at least 75% of its needs directly from the land.

10.4. Traffic Volume and Density

Please refer to Traffic Plan

- In order to monitor the impact Lammas is having on local traffic density the Society acknowledges the need to undertake traffic density surveys throughout the project and reassess targets on an ongoing basis.
- The office administrator will be asked to make a weekly estimate of the vehicle journeys made to and from the site. The office administrator will already have accounts for the vehicle passes/ parking permits issued, minibus journeys and a record of deliveries to and from the site.
- Lammas recognises that it may be necessary from time to time to conduct actual vehicle journey counts. In order to do this Lammas will require its residents to keep accounts of vehicle journeys (for their households and their guests) in order to provide a fuller picture.
- Similarly Lammas may require from time to time that any staff working from the site keep a record of their vehicle journeys made.

10.5. Management Objectives Evaluation

The project will produce an annual report outlining the success of the project's 9 management objectives as described in section 3 of this plan.

10.6. Welsh Language

The project's performance regarding the Welsh language will be evaluated in accordance with the Welsh language policy under the headings:

- Correspondence
- Meetings
- Corporate identity
- Signage
- Training Staff
- Recruitment

10.7. Soil Health

This will be measured and reassessed on a four yearly basis. Parameters for analysis will include:-

- soil organic carbon content,
- texture (incl. particle size and colour),
- main nutrients (potassium, phosphate, nitrate),
- bulk density (dried samples),
- root depths.
- pH analysis

Tests will be carried out across the site. Many samples will be taken from each field/plot to give a good indication of average soil health both within each plot and also across the site as a whole.

10.8. Biodiversity

This will be reassessed on a four yearly basis with a full habitat survey and complimentary species surveys where appropriate.

10.9. Number of new trees planted (accumulative)

This will be assessed on a four-yearly basis. Lammas is aiming to plant over 1000 trees.

10.10. length of new hedgerow planted (accumulative)

This will be assessed on a four-yearly basis. Lammas is planning on planting at least 2000 meters of new hedgerow.

10.11. Number of new ponds installed (accumulative)

This will be assessed on a four-yearly basis. Lammas is aiming to establish at least 9 wildlife ponds across the site.

10.12. Grey Water Reed-bed Systems

A periodic assessment of the water quality issuing from the grey-water reed-bed systems will be undertaken by the Site Manager under a monitoring schedule to be agreed with the Environment Agency. This will involve analysing water samples taken from the grey-water inspection chambers across the site under a series of categories (including pH, Suspended solids, Dissolved solids, COD (Chemical Oxygen Demand)) to be agreed with the Environment Agency.

11. **Addressing Policy 52 and the SPG:**

Meeting the Low-Impact Criteria

This application has been created from the outset in order to fulfill the requirements of JUDP Policy 52 and its associated SPG “Low impact development: making a positive contribution”. Indeed, as a grassroots organization representing over five hundred people, Lammas was an official consultee for the SPG, and remains a committed supporter of both P.52 and the SPG as exemplary planning policies. Lammas has drawn upon and implemented the Policy and Guidance throughout the development process and as SPG paragraph 3 notes, “Dealing with proposals under Policy 52 needs to be seen as a process”.

The SPG emphasises the importance of applicants being clear on their aims and objectives before submitting and as this document shows. The aims and objectives of this application, as set out in this Management Plan, have been refined over 2 ½ years through an on-going process of consultation with Lammas members, supporters, residents local to the Tir-y-Gafel site and planning officers. The SPG sets out a mechanism for a pre-application meeting with Pembrokeshire County Council, for example and full use has been made of this, including meetings with the Planning Department and Highways. This Management Plan has been set out following the guidance in paragraph 10 of the SPG, with “a suite of documents” including a landscape assessment, travel plan and detailed individual livelihood plans.

Para 5 of the SPG encourages early discussion with groups that have already received planning permission for similar schemes and recommends Chapter 7, the planning office of The Land is Ours, as a useful resource in this regards. Responding to this guidance Lammas has worked closely with Chapter 7 from the beginning, drawing upon its expertise and getting in-put into all aspects of the current scheme from its aims and objectives to the details of its implementation. In addition, Lammas continues to work closely with other groups throughout Wales and England and

engaged the services of members of several groups in appointing an independent assessment panel to select applicants for the nine small holdings in the application.

Finally, as para.8 of the SPG notes “There are eight specific criteria that need addressing to comply with Policy 52”. The remainder of this section, therefore, addresses each of these criteria in turn:

Criterion 1

The proposal will make a positive environmental, social and/or economic contribution with public benefit.

Relevant documents in this application include the Management Plan, Business plan, Permaculture Report, Traffic Management Plan, Terrace design, Site Plans, Community Hub Design, Individual Plot Management Plans and various Appendices, including the Habitat Survey, Soil Survey, Geology Survey, Species Survey and Social and Economic Status Report.

Environmental Contribution:

In terms of environmental benefit the SPG on Low Impact Development refers to other Supplementary Planning Guidance issued by the Authority on Biodiversity and Development in Pembrokeshire. The biodiversity SPG suggests that new benefits associated with development can include:

New water features

New tree planting (native species)

New hedge banks and hedges

Planting native climbing plants, trees, shrubs and wildlife species in landscaping schemes.

This proposal will provide all of the above benefits, with provision to plant 1000 native trees, 2000 meters of native hedgerow and establishing 9 ponds. There is also a comprehensive woodland plan to improve the biodiversity of existing wooded areas.

Lammas has compiled a habitat survey of the site and has complimented this with individual species surveys for key species, namely bat, otter, badger and dormouse. Furthermore, geology, soil and water surveys and have been carried out. Collectively these surveys and associated reports provide detailed knowledge of the base line data for the site in terms of biodiversity, ecology and environmental quality. Drawing upon this base line data Lammas will undertake longitudinal research to monitor, evaluate and respond to the changing nature of these environmental qualities. There are few examples of a development undertaking such detailed base-line data and undertaking in such a thorough program of environmental quality enhancement. The comparable research which does exist, however, suggests that there will be significant increases in habitat and biodiversity, so the project demonstrates clear and quantifiable environmental positive benefit. The on-going longitudinal research will allow these predicted benefits to be measured and assessed and for a responsive management policy to ensure they are maximized.

The Social and Economic Contribution:

Examples of social and economic contributions with public benefit cited in the SPG include:

- *The provision of skills training*
- *Provision of local facilities;*
- *The provision of services to the community including making natural and locally produced food available;*
- *Positive health recreational development through public access e.g. opening new footpaths or educational visits through the practical demonstration of more sustainable technology;*

- *Provision of local employment*

This proposal provides for all of the benefits listed above and in the SPG. There will be training and work experience opportunities in sustainable building design, construction and maintenance, sustainable food production, permaculture and traditional crafts. The Community hub building “Yr Hwb”, and associated recreational facilities, including a children’s play area, will be available for use by residents of the surrounding area. The 9 business plans developed for each of the 9 small holdings form a central component of this application. These business plans will bring a range of services to the community, including making natural and locally made food and craft produce available and a kitchen food waste collection service.

The food waste collection service targets kitchen waste as this constitutes up to 30% of Household waste, yet is often the most problematic to recycle (Waste Awareness Wales, see <http://www.wasteawarenesswales.org.uk/factsheets.html>). The civic amenity site operated in Hermon, for example, includes the disposal of garden waste but not kitchen waste. Furthermore, research shows that a collection service not only increases recycling rates, it also reduces journeys and thus supports the project’s commitment to minimising traffic as set out in the Traffic Management Plan.

A local minibus service will also be created by the project and promoted amongst residents in the surrounding area to compliment the existing provision. During consultation with local residents it became clear that there is a high level of concern over the low level of public transport currently available in Glandwr and so this service has been introduced into the plans in response to this finding.

The project is committed to openness and accountability, as is demonstrated by its on-going series of public consultative events culminating in placing this planning application on its website for full public scrutiny. To further support its aim of actively integrating with the local community and make its resources available wherever possible the project will open up 2 permissive footpaths on the site, totalling 1.14kilometers. The utility of these will be maximised by their linking to the existing public footpath network link on the site.

The project will create the following local employment opportunities: a business manager, an office administrator, a minibus driver and site manager. In addition, Lammas will provide a part time shop and café, both of which will provide employment and amenity value locally.

The project will make a positive environmental, social and/or economic contribution with public benefit and thus this criteria will be met, as was established in the first round of this application (Lawrence, 2007).

Criterion 2

All activities and structures on site have low impact in terms of the environment and use of resources.

Relevant documents in this application include the Management Plan, Business plan, Permaculture Report, Traffic Management Plan, Terrace Design, Site Plans, Community Hub Design, Individual Plot Management Plans and the following Appendices: Water Report, Eco-footprint assessment letter (from SEI) and Hydro Report.

The SPG, p.11 defines 'low impact' under six bullet points outlined below with an accompanying commentary outlining how this proposal relates to this definition.

1. *“Development will be expected to provide their own water, sanitation and energy on site and not rely on use of mains sources.”*

Water

The site will be independent of the mains water network and entirely self-sufficient in water.

The households will all harvest all of their agricultural/ irrigation water needs from their rooftops. This water will then be stored in large containers or ponds (depending on its final destination).

Provision will be made for the storage of 4 weeks worth of irrigation/ washing water. Should the stored harvested rainwater ever be insufficient to meet the demand for irrigation/ livestock-, then Lammas will redirect water from the leat to replenish supplies. There would be a temporary interruption in electricity supply in such an eventuality.

Domestic water will be sourced from the existing Ffynnon-deg spring. The bottling plant at Pont-y-Gafel bottles water at an average rate of 26 litres/minute*. Lammas will have water rights from Ffynnon-deg between 8pm and 8am every night. Thus even in late summer the spring would supply 14,400 litres through the night. This is more than ample to supply residents' domestic water needs as the average adult in the UK, according to DEFRA 2004-5 figures (<http://www.sustainable-development.gov.uk/regional/summaries/16.htm>), uses 150 litres of domestic water each day. Through the use of highly efficient design and technology and a culture of sustainable consumption, residents' needs will be considerably less than this. 27% of UK domestic water is currently used for flushing toilets, for example, which will largely be eradicated within this scheme through the use of composting toilets.

*For most of the year the rate is approx 30 litres/minute. At the annual low-point in late summer, however, this can drop to 20 litres a minute. Source – Jes King, Ffynnon Deg bottling plant, Pont-y-Gafel.

Sanitation

The site will provide all of its own sanitation by means of composting toilets for human waste and reed-beds for kitchen/ washing water waste. These will all use tried and tested technologies (see, for example, CAT, 2007; Environment Agency et al, 2006; Davison et al, 2005; Bayley et al, 2003;

<http://www.elementalsolutions.co.uk/projects.htm>) and will be designed and built to the satisfaction of the relevant authorities and will not impact on the water table or existing water courses. Wirral Council has recently installed two composting toilets on Hilbre Island, a Local Nature Reserve within a Site of Special Scientific Interest, a Special Protection Area, a Wetland of International Importance, a candidate Special Area of Conservation and a Regionally Important Geological and Geomorphological Site. Compost toilets were chosen mainly because of their low environmental impact. (see <http://www.natsol.co.uk/>).

Energy

The site will be completely independent of mains electricity. Current UK Government and WAG best practice in mitigating climate change and implementing sustainable development establishes an energy hierarchy with energy efficiency and reducing demand first and then this reduced demand being met by renewable sources (for example, see <http://www.defra.gov.uk/Environment/energy/index.htm>). This approach is increasingly being adopted by PCC as it implements its own commitment to climate change and sustainability.

Pembrokeshire JUDP Policy 7 Quality of Design, for example, requires that:

'Design in new development or conversion and reuse of buildings and spaces will be required to be responsive to context, sustainable in consumed energy and future use, and provide a safe and stimulating environment.'

Policy 52 (and the associated SPG) and Policy 7 as well as the wider framework of climate change and sustainability commitments will be addressed by this proposal first and foremost through the use of highly efficient design and technology to

minimize the demand for energy. This reduced demand will then be met entirely from renewable energy. An independent micro electricity grid will be created to provide electricity, powered by a hydro turbine, as outlined in the Hydro report.

- 2 “Buildings are to be constructed from materials that are recycled, reusable, and have low embodied energy or are from sustainable sources.”

The buildings proposed by Lammas are primarily structured from locally sourced wood and use local natural materials both as infill (cob, straw, hay) and as finishes (turf, timber). Stone will be sourced from Pont-y-Gafel farm from an existing small quarry. Of the materials that are bought in, residents will use recycled materials where possible.

- 3 “Traffic generation targets must be well below what would be expected from a similar development operated in a conventional way.”

At a meeting held between Lammas and Highways & Construction Division: Highways Development Control held on 9/10/07, it was established that the average rural household generates 10 vehicle journeys per day. Residents at Lammas are expected to generate a maximum of 4 vehicle journeys per day. Even when taking into account visitors, working staff and all other categories of traffic generation on the site, the project expects to, on average, generate less than the average vehicle journey generation for a conventional 5 rural household development. This application includes a detailed Traffic Management Plan which sets out exactly how the schemes low traffic targets will be achieved.

- 4 “The development satisfies criterion 4 in terms of landscape impact.”

This point is discussed below under under criterion 4.

- 5 “The project must be reversible, insofar as new buildings can be easily dismantled and the land easily restored in the event of the collapse of the project.”

The concept of low impact development was introduced to the UK public and planning system alike during the mid-1990s and has continued to evolve in both theory and practice since that period. Simon Fairlie’s book “Low Impact Development, Planning and People in a Sustainable Countryside” was foundational in many respects, introducing 9 criteria to define low impact development. Even within this initial document “Temporary” as a criteria was described as “only beneficial in certain cases” and has since been largely removed from the criteria for low impact development.

Fairlie (1996) cites Hockerton Housing Project as an example of low impact development and indeed it has been hailed internationally since then for pioneering best practice in this field. Hockerton Housing Project is based upon an earth sheltered, 5 unit terrace involving substantial earthworks and reinforced concrete foundations and as such is not “temporary”. As the idea and practice of low impact development has been further refined a growing consensus has emerged that “temporary” should not be part of the required criteria.

Simon Fairlie, for example, was a member of The Rural Planning Group which produced a more extensive list of fifteen criteria to define low impact development in 1999 (The Rural Planning Group, 1999). This document is drawn upon directly within the SPG, e.g. footnote 12, p.13. Criterion (9) from that document has clearly formed the basis for the SPG wording quoted above (point 5) and the subsequent commentary provides important guidance on how reversibility should be approached when assessing low impact developments:

“(9) The project is reversible, insofar as new buildings can be easily dismantled and the land easily restored to its former condition.

Reversibility in the event of collapse of a project or upon its completion does not feature highly as an indicator of sustainability in international agreements or in Government guidance. However an obligation to restore land after use is a common feature in minerals applications; and a temporary three year trial period for residential developments associated with new agricultural or forestry enterprises is required by PPG7.

In practice, this criterion principally guarantees that there will be no extensive earthworks, foundations, areas of concrete, roads or other heavy infrastructure associated with a proposal which might be viewed as experimental or prove to be short-term. However there may well be elements of a project which, although they are relatively permanent, are judged to be of long-term benefit or very minimal impact to the environment or landscape - the excavation of a pond or the construction of an earth-sheltered building, for example. In such cases non-adherence to this criterion should not be taken as an indication of unsustainability.” The Rural Planning Group, 1999, p 12.

As The Rural Planning Group (1999) and other low impact practitioners and theorists have demonstrated, there may be a conflict between maximizing a building’s sustainability performance and its reversibility. When such a conflict occurs it is entirely reasonable to maximize sustainable and low impact performance.

One example of this can be found when considering the concept of

thermal mass. Thermal Mass is one technique that green buildings use to store heat when it is readily available (for example solar heat during a winter's day when the sun is shining) so that it can be released when it is needed (for example on a winter's evening). Thermal mass is one of the best examples of best practice sustainable design, reducing the need for external heating and thus reducing a buildings impact. It is, however, as its name suggests, massive by its nature. To support such weight requires foundations which satisfy building regulations.

Other examples where best practice sustainability and minimizing impacts may conflict with reversibility include turf roofs, masonry stoves and accumulator tanks (used to store hot water). Each of these examples are currently used within low impact schemes with planning permission in England and Wales.

This application strikes a balance between creating dwellings that will perform to the highest environmental standards and structures that can be easily dismantled with the land being restored to its former condition. The application is exemplary in this respect in that its total impact will be amongst the lowest of any development in the UK. For example, thermal mass in the buildings will be achieved through the use of rammed earth and clom, a technique traditional to Pembrokeshire, rather than through the use of concrete, for example. Such an approach not only has a far lower embodied energy impact, it also renders the scheme more reversible.

- 6 “The development must be of a scale no greater than is necessary to meet the needs of the development.”

The whole Lammas project is one which addresses the challenge of appropriate scale. A recent report commissioned by the Welsh Assembly Government (WWF & SEI, 2005) concluded that the average

person in Wales has an Ecological Footprint of 5.3 gha/cap. The earth has an estimated capacity of 1.8 gha/cap. Thus, if everyone on the earth lived as we do here in Wales we would need 3 planets to support us.

The latest scientific evidence clearly demonstrates that we are living in an unsustainable social and economic system (Hansen et al, 2007). The challenge of trying to create a sustainable society is, therefore, enormous and will require radical change. Research over the last ten years demonstrates that highly sustainable businesses which internalise external costs currently operate at a disadvantage vis-a-vis those operating within the mainstream, unsustainable economy (Maxey, 2006; Smith, 2005; Douthwaite, 1996). Such businesses, therefore, often require additional support if they are to operate successfully and grow the niches they occupy (Smith et al, 2005). A similar process has been recognised within sustainable living and sustainable communities, whereby a critical mass of people living a working in a sustainable way is needed to ensure long term viability (Seyfang and Smith, 2006). This application, therefore, has been designed at the minimum scale necessary to achieve this critical mass and allow the project to succeed over the longer term. The scale of the application has been carefully revised to ensure that it is as small as possible whilst still achieving the following key elements of success and long term viability:

- Momentum. A group of people working on a project together can build a momentum in which the whole is greater than the sum of the parts. This has been demonstrated by economist Richard Douthwaite, for example (1996).
- Range of skills. One advantage of a community of people working together is that they are able to share complimentary skills. Many of the skills that will be practised in the project will either be near-forgotten traditional skills or recently developed

green technologies. The residents of the project will be required to make a significant lifestyle change and in so doing will be required to practise and learn unfamiliar skills. Each of the residents will bring relevant skills of their own to the project. Amongst the residents there is a good range of horticultural, farming, traditional craft, green technology, permaculture, forestry, building and livestock skills. No single resident or household, however, has all of these skills. Thus skill sharing will play an important part in the project and again is a feature of successful low impact projects (Baker Associates; Fairlie, 1996; Douthewaite, 1996).

- Social resources. One of the greatest factors leading to the failure of smallholdings and small farms is the social challenge of isolation (Maxey, 2006). In the case of low-impact development this challenge will be exaggerated because those people living under the new low-impact policy will be required to live under an additional set of legal restrictions. It is thus important to create a supportive social fabric for the pioneers of such developments.
- Internal economy. Each of the households in Lammas will naturally specialise in their own range of land-based produce. An internal economy will build up between these households which will enable residents to source more of their needs directly from the site (Douthewaite, 1996; Seyfang and Smith, 2006).
- Diversity. One of the scheme's aims is to provide a demonstration and research project which explores the different approaches to low impact development that are possible under Policy 52. Diversity is a key feature of sustainable systems (Smith, 2005) and in this case having a sufficient range of

people in the project will help ensure its on-going diversity and viability. For example, this will help the project overcome the longer term tendency experienced by some similar projects to see an ageing of the population (Douthewaite, 1996). As the project will be actively managing the land in order to produce 75% of its needs from the site, it is important that a mixture of households and age ranges remain over the longer term.

- Shared Resources/ Working together. Living in a low impact way will be greatly facilitated by the opportunities for residents to work cooperatively together. There will be many examples of this, to provide one illustration:

Several households will generate income from the timber harvested during the management of the communal woodland. By working together across several households this economic activity becomes viable where otherwise it would not have been. The Larch will be harvested and, if required, roughsawn on location using a mobile Sawmill. It will then be seasoned on site before being distributed amongst residents. Some of the timber will go to Kit Owen's workshop on Plot 9, where it will be planed and formed to order. From there it will go to Plots 5, 6, 7 and 9 for further processing before being sold on as value-added produce. The sale of this produce will again be viable due to the scale of the project as it is thus able to support a trading post and website which will open up marketing and sales opportunities that would not be present if the project were on a smaller scale.

A key factor determining the scale of this application is the aim that it fit within the wider communities of Glandwr and rural North Pembrokeshire. Based on extensive research and practice into the ideal scale for such a

development, the initial proposal Lammas took to the local community for consultation was a scheme of forty smallholdings. Throughout the process of developing this application, however, Lammas has been committed to working with and listen to all stakeholders, including local residents. Accordingly, the views expressed through several local consultation events have led to a significant reduction in the scheme's scale from 40 to 9 smallholdings. There are 76 houses currently registered within Glandwr (based upon those households registered with the Post Office). This application would see a proportionally small increase to 85 households. Furthermore, the current population is ageing and there is a shift towards Glandwr becoming a dormitory settlement with the recent closing of the school and Post Office. The current application would thus bring a mixture of households, including those with younger people, into the area and contribute to the viability of Glandwr as a sustainable community.

Criterion 3

Opportunities to re-use buildings which are available in the proposals area of operation have been investigated and shown to be impracticable.

Relevant documents in this application include the Site Locations Plans, Business Plan, Legal option and Letters from the landowner (see Appendices).

The site is in a rural location and there are very few buildings nearby.

The only nearby buildings potentially available are those associated with the Pont-y-Gafel farm. These include agricultural sheds and outbuildings.

Of the 3 large modern agricultural barns, one is currently used as a bottling plant, and the other two are leased out.

There is a scattering of small traditional sheds and outbuildings around the Pont-y-Gafel farm complex. These are all currently used by Pont-y-Gafel farm as storage and workshop space.

There is a range of agricultural outbuildings (Grade 2 listed) which were recently given planning permission for conversion to 4 residential units. Discussions have taken place between Sue Burke of Pont-y-Gafel farm and Lammas about the prospect of purchasing these outbuildings for use by the project. Mrs Burke has repeatedly made it clear to us that she would like to develop these buildings as accommodation for her children and that they are therefore not for sale. She has also stated that if she were to sell the outbuildings she would sell them to friends of the family at market rates.

The only other nearby structure currently not in use is a derelict barn a short distance North of the site. Lammas has also enquired about purchasing the derelict barn (Clawdd-du) and again Mrs Burke has clearly stated that the barn is not for sale.

Should a nearby existing structure (such as, for example, an agricultural barn with planning permission for conversion to residential units, or a neighbouring/ nearby house) become available it would be necessary for Lammas to make constitutional changes before the organisation (principally set up to develop and research low impact development) would be in a position to buy and develop such property. It would be entirely inappropriate for property with existing residential rights to be developed under the low impact policy for a number of reasons. The primary reason that low-impact development does not marry well with the conventional property market comes down to the low-impact requirement for a land based livelihood. The only possible exception to this would be one in which a developer had a huge amount of existing capital available to pour into the project. In all other cases the mortgage repayments on such a property would necessitate an income far higher than would readily be available from a land-based enterprise.

This can be illustrated with an example using an outbuilding (with planning permission for conversion to residential) from Pont-y-Gafel and figures from the

Lammas Plot Management Plans:

We have been advised that a barn like the end-outbuilding in the Pont-y-Gafel courtyard with planning permission for conversion to residential would sell for between £125,000 and £170,000. Dave Owen (Builder) puts a ballpark figure of £95,000 - £145,000 for renovation/ rebuild to building regulations standards (depending on the level of skill and assistance provided by the owner). Adding £30,000 lease purchase for a plot of land gives a total capital requirement of an estimated £255,000 - £315,000.

The average capital investment available per Lammas household is £75,000. Under this scenario, the “average” Lammas household would need a mortgage of between £180,000 - £240,000. This would mean annual repayments of between £14,580 and £19,440.

The average income of the Lammas households ((before overheads such as lease rental, council tax, transport, additional food costs etc). after 5 years is £7,208 per annum.

This example illustrates the incompatibility of a low impact lifestyle supporting a conventional mortgage figure and holds true even when applied to the most affluent Lammas households:

Plot 4 has one of the highest capital sums to invest in the project and has the highest projected income at year 5, £13,150pa (before overheads such as lease rental, council tax, transport, additional food costs, clothing etc).

Plot 4 has an estimated £105,000 in capital to invest and so, in this illustrative example, would need to raise between £150,000 - £210,000 on a mortgage. Annual repayments on this would be between £12,160pa to £17,000 pa.

So in such a scenario even those Lammas residents with the highest of capital to invest and highest projected income would not be able to meet their household mortgage repayments, and perhaps more significantly, would fall well below the 75%

requirement for meeting their household needs from land-based income.

Criterion 4

The development is well integrated into the landscape and does not have adverse visual effects.

Relevant documents in this application include the Management Plan, Landscape and Visual Assessment (Appendix 9), Individual Plot Management Plans, Terrace design, Community Hub design and Permaculture Report.

Visual Impact has been a consideration for the project since its inception. The land was selected in the knowledge that it is largely not overlooked. The site layout and the layout of the individual plots were designed with intent to minimise any visual impact. Where visual impact might be a consideration, mitigation measures were put in place.

A detailed landscape impact assessment has been submitted with the application including reference to LANDMAP, a landscape assessment tool used by Pembrokeshire County Council. LANDMAP defines the value of the landscape and recommends management requirements to preserve and enhance it. Preservation of hedges and field boundaries and woodland management are identified as management requirements in the proposal location and these have been proposed by Lammas with additional planting for screening. Turf roofs are proposed for most buildings and plot layouts have taken account of the need to minimise visual impact. Much of the site is located on land which is higher than the public roads in the area and above the village of Glandwr. Public views of the site from close by are therefore limited, with the exception of views from the public footpath through the site. There would be distant views from the A478 road south of Crymych, but over a distance of about 2 kilometres.

The project will effectively blend into the landscape and thus this criteria will be met, as was established in the first round of this application (Lawrence, 2007).

Criterion 5

The proposal requires a countryside location and is tied directly to the land on which it is located, and involves agriculture, forestry or horticulture.

Relevant documents in this application include the Management Plan, Business Plan, Permaculture Report and the 9 Individual Plot Management Plans.

The project is based on horticulture, agriculture, animal husbandry, coppicing, woodland management, renewable electricity generation, craftwork and value-adding to natural resources derived from the site. The project also involves education, training, research and dissemination. These are all activities which are centred around the use of resources grown, reared or occurring naturally on the site.

The project therefore satisfies this criterion, as was established in the first round of this application (Lawrence, 2007, pp.9-10).

Criterion 6

The proposal will provide sufficient livelihood for and substantially meet the needs of residents on the site.

The ways in which this criterion is satisfied by this application are specifically addressed in this Management Plan, the Woodland Management Plan, Business Plan, Permaculture Report and 9 Individual Plot Management Plans. Included within each Plot Management Plan is a business plan and 5 year cash-flow forecast along with a 1:200 plot plan detailing the areas set aside for crops. Please also refer to the Marketing Survey and the Economic Survey in the Appendices.

The project will require, as a condition of the leasehold agreements, that residents meet 75% of their household needs from the land. Thus if residents are not able to meet this target they will be required to sell their leaseholds and leave. Through this legal arrangement this criteria will be guaranteed.

The majority of this 75% will be met from residents meeting their needs directly. All of the resident's water, electricity, sewage and household-fuel needs will be met directly from the site. In addition to this all of the households are planning to grow a substantial proportion of their own food. The remainder (which is a relatively small proportion) of the 75% requirement will be met through land-based income generation.

To demonstrate that the Lammas residents are able to completely fulfill this 75% target, each household has supplied a well considered business plan. All of the business plans include market research, 5-year cashflow forecasts, set up costs and marketing plans. All of the business plans comprise of at least two land-based initiatives, and most of them rely on more than three independent enterprises. As the old proverb goes, no one household is putting all their eggs into any one basket. This principle of diversity of activities is also central to permaculture.

Whilst all the individual business plans have been thoroughly researched and planned, unforeseen circumstances may lead to one of the planned enterprises not taking off. In this eventuality Lammas is confident in the flexibility and adaptability of the residents to meet the challenge. It must be remembered that all the residents are willing to commit their lives to this innovative project and as such will be integrating sustainable principals into their lives. The people who have chosen to be involved with the project are all adaptable, innovative individuals.

It is interesting to compare the estimated land-based produce figure for the Lammas project in year five with an estimation of the current land-based produce figure. Currently the woodland is unmanaged and the pasture is down to spring lambing. If one estimates there are 195 ewes on the 60 acres of pasture with a gross margin of

£12 per ewe (source – *John Nix Farm Management Pocketbook, based on a low-average yield for lowland spring lambing*) then it is possible to arrive at an estimate of £2340 annual land-based income for the site under its current use. When considered against this Management Plan and the Individual Plot Management Plans, this demonstrates the scale of the increase in productivity from the land that the project will generate.

The Supplementary Planning Guidance generally requires that 75% of basic household needs be met from the land within three years of project commencement. However, it allows for derogation from this:

“For those parts of the project that cannot be achieved within three years, because of the nature of the activity, a timescale as close to the three year target must be identified with reasons why a shorter time-scale is not appropriate. The applicant must clearly advise as to how and when the achievement of 75% will happen.” (SPG, p.12).

Following extensive research and the development and refinement of individual Plot Management Plans, the Woodland Management Plan, Business Plan and Permaculture Report, it is clear that on this site three years is an insufficient period to allow the project to provide 75% of its needs from the site for several reasons. Firstly, permaculture is a design approach which informs this application to a considerable extent (see, for example, para 8.4 within the Land Management Policy above). Within the practice and theory of permaculture there is a wealth of knowledge and experience of developing highly sustainable land based livelihoods. Indeed, permaculture is specifically mentioned in the SPG as an appropriate design approach (p.7). Furthermore, a UK Planning Inspector recently endorsed permaculture as a highly innovative and sustainable approach to land management and granted planning permission in an area without a dedicated low impact development policy specifically because the project was based on permaculture principles (Land Matters, S Hams DC, Devon ,APP/K1128/C07/2039820). Permaculture is a design intensive approach which works closely with natural patterns and processes. A central part of any permacultural project, therefore, is observation and an on-going process of reflection,

adaptation and response to the conditions and processes occurring on the land. It is universally accepted within permaculture that there should be a period of observing the land closely before any significant changes are made to it. Twelve months is the minimum period of observation generally recommended as this allows the observation of a full cycle of seasonal change. In adopting the principles of permaculture this application carefully balances this recommendation with the requirements of the SPG. Rather than implement the ideal permacultural approach of living on the land and observing it closely before making any significant changes, therefore, it is proposed that residents will carry out this period of observation whilst carrying out the initial stages of their Plot Management Plans.

As trees take the longest time to establish and will provide wind and visual breaks, soil-slope stability and various resources from which household needs can be derived, each plot will begin with a phase of tree planting and mulching. Having done this, the majority of residents' focus for the first 12 – 18 months will be the construction of their homes. This construction period allows an ideal opportunity to observe the land whilst substantially taking their Plot Management Plans forward. Thereafter residents will be in a better position to devote themselves fully to developing their land-based activities and will have the detailed base-line data regarding the processes operating on their particular plot.

Secondly, key feature of permaculture is its extensive use of perennials, often layering these up from the subsurface root layer, through ground cover and shrubs to trees to create symbiotic relationships between the plants and animals on site. Establishing perennials, particularly trees and shrubs takes time and again suggests that three years is too short a period to allow these plants to come in to a sufficient level of productivity to allow residents to meet 75% of their needs from the land. This is particularly true given the permacultural aims of the project and hence the need not merely to establish perennial plants, but to do so within integrated permaculture designs. Through these designs perennial plants are integrated into harmonious and symbiotic relationships with the soil, other plants and the fauna found on or introduced into the plot as part of the Plot Management Plan.

Once more a balance has been struck in this application, so that residents will employ a combination of plant types and means of supporting themselves from the plot allowing the 75% target to be reached as close to three years as possible, as recommended in the SPG (see quotation above). The thought and effort that has gone into striking this balance can be illustrated by two examples. Firstly, residents will substitute incomes based upon tree-derived produce with annual crops to increase their ability to provide for household needs from the land in the intervening period whilst the trees become established. Secondly, residents will use a combination of root stocks for their top fruit so that more dwarfing varieties which produce yields more quickly, despite lower yields in the longer term, will provide some income whilst they are waiting for the slower developing varieties to yield.

A third factor pointing towards the need for more than three years to reach the 75% target is the extensive body of research which demonstrates that land based businesses take time to establish (UWE, 2002). Indeed, the difficulty in getting such businesses past their most challenging start up period is illustrated by the fact that most small scale farm businesses go bust within the first three years (Maxey, 2006). Given this, it is imperative that the Lammas residents are allowed time to invest in their long term yields and do not sacrifice longer-term viability in order to meet the three year recommendation. Only one Business plan out of the nine estimates that it will reach the 75% needs-met target before 5 years (Plot 8 forecasts meeting 75% by year 4) and that particular forecast comes from a household already established in the area and mainly proposing enterprises which supply an existing closed market.

Fourthly, the depressed nature of the rural economy means that it is currently very difficult to derive income from the land, with farm closures and suicides at an all time high. In this context Government policy is to encourage farm diversification and 'added value' through on-farm processing (Maye et al, 2007). In line with this advice and the hard realities of the present economy, many of the business plans incorporate an element of 'adding value' to land based produce. This will benefit the wider economy and community, creating wealth and providing goods and services

locally. However, establishing the infrastructure to make this added value possible will place a further temporal and financial burden upon residents. The scale of the project means that these burdens can be shared and mitigated to some extent, again, allowing the project to meet 75% of its needs as close to the three year target as possible. For example, “Yr Hwb” (the community hub building) will include a fully certified kitchen which all residents will be able to use as part of ‘adding value’ to their produce.

Finally, the conditions on the site, its elevation and the quality and nature of the soil, provide further evidence of the need to extend the period within which the project will reach the 75% target. As the Geology and Soil Report indicate, there will need to be an extensive program of neutralisation and soil improvement to allow the productive potential of the site to be realized.

In light of all of the above, this application proposes that a five year establishment target is appropriate in this case. Whilst permacultural design principles alone would suggest a longer period, of perhaps ten years, this five year timescale has been carefully worked through with advice from qualified permaculture designers, an independent agricultural consultant with experience working with ADAS and established smallholders. Thus, as required by the SPG, the target is set as close to three years as possible and there is a clear timetable for when and how the 75% will be achieved over the first 5 years of the project, as is illustrated by the table below summarizing individual Plot Management Plan forecasts for “household needs met from land-based enterprise”:

Establishment percentages

| Plot | Household needs (£) | Land based produce (£) | | | | | |
|--------------------|---------------------|------------------------|--------|--------|--------|--------|---------|
| | | Year 3 | | Year 4 | | Year 5 | |
| | | % | £ | % | £ | % | £ |
| 1 | 9,916 | 41 | 4,035 | 71 | 7,045 | 83 | 8,219 |
| 2 | 12,975 | 50 | 6,527 | 71 | 9,275 | 134 | 17,372 |
| 3 | 8,538 | 39 | 3,356 | 63 | 5,360 | 100 | 8,461 |
| 4 | 11,147 | 34 | 3,373 | 73 | 8,156 | 160 | 17,602 |
| 5 | 9,817 | 54 | 5,292 | 74 | 7,242 | 89 | 8,704 |
| 6 | 14,535 | 29 | 4,221 | 56 | 8,138 | 88 | 12,775 |
| 7 | 11,322 | 33 | 3,708 | 62 | 7,005 | 77 | 8,663 |
| 8 | 14,247 | 43 | 6,104 | 75 | 10,668 | 89 | 12,683 |
| 9 | 13,454 | 48 | 6,419 | 70 | 9,418 | 100 | 13,517 |
| Total (Average) | 105,951 | (41) | 43,035 | (68) | 72,307 | (102) | 107,996 |

Criterion 7

The number of adults should be directly related to the functional requirements of the enterprise.

This criterion is addressed by the Individual Plot Management Plans as within each of

these there is a description of the functional roles of all the adults on site. In addition, the Permaculture Report deals specifically with this issue.

There are 9 households proposed for the site. Each of the 9 Plot Management Plans clearly identifies the number of adults involved in each household and their roles on the various smallholdings.

Smallholdings have long been documented as being more productive in terms of yield per square meter than larger farms.* Permaculture provides even greater potential for this productivity to flourish. The principal method of a low impact permaculture smallholding is one of abundance through diversity. Each of the smallholdings will consist of an interconnected mosaic of habitats which will serve to meet the needs of the households. The reason that a permaculture smallholding is significantly more productive than a conventional farm is a combination of care to the detail and a philosophy of observing and emulating natural processes. The higher productivity per acre for smallholdings in the first instance and permaculture based smallholdings in the second is derived in part from a higher labour input per acre compared with large scale farms. The emphasis of the smallholding, and this application is no exception, is in producing diversity rather than profit. Indeed, this is recognised in the SPG (p.12), which acknowledges that low impact holdings may be based upon subsistence rather than making a large profit or contributing significantly to the Government's policy of promoting economic growth.

The higher ration of labour and time devoted to each unit of land and the efficient use of overlapping niches and symbiotic floral and faunal relationships is the key to understanding why an 8 acre low-impact smallholding thrives where an 80 acre mono-crop farm struggles and why all the adult residents included in this proposal are indeed required for its successful functioning and for it to meet its productivity targets.

As human beings we need a diversity of produce to survive; we need shelter, electricity, air, water, fuel, fruit, vegetables, grain, animal produce, social interaction, celebration and community to thrive. Each smallholding will source most of these

needs directly from the land, rather than generating money to purchase goods and services to provide for these needs. This approach requires the embodiment of a lifestyle, and it is the lifestyle which Lammas residents will be committing to.

Sustainable lifestyle choices mean that:-

- Residents will be cultivating a high degree of intimacy with their plots in order to benefit fully from their potential whilst at the same time increasing the biodiversity, soil depth and the wildlife value of the land.
- Most of the labour will be achieved using hand tools or small machines.
- Livestock will be kept in small natural groupings rather than huge flocks.
- Livestock and crops will be managed using organic principles (the Land Management Policy has been closely designed to meet on *Soil Association* organic standards) and this requires a higher degree of attention to detail and natural cycles.
- Harvesting, observation, reflection and plot modification will take place on a day-by-day, on-going basis.
- The households will need to process their raw foods (rather than pre-washed or processed foods from a supermarket) to a greater degree than the average household.
- Sales of produce will largely take place on a small local level rather than to large distributors, and thus will require further attention.
- Water flows, groundwater levels and filtration systems will need overseeing.
- Fuel will need harvesting and storage and active heating system maintenance.
- Low-Impact buildings require significantly more maintenance than their conventional counterparts (this can be illustrated by the difference between wooden window frames and upvc frames, earth plaster and cement based plaster each of which has far lower impact, but far higher maintenance implications).
- Most importantly of all will be the observational and management work as to how the various crops, habitats, livestock, wildlife and soils interrelate with each other. A sustainable land-based livelihood requires a great dedication

and returns enormous satisfaction. A satisfaction that needs to be communicated and shared.

Lammas is proposing to create a complex and inter-related network of smallholdings. The overall management and functioning of the site will also require careful observation and management. A high degree of interdependence will naturally develop between the plots. The beginnings of this can already be seen within the individual Plot Management Plans. Some of this interaction will be formalised (for example allocating the timber from the communal woodland) but the majority of it will be informal (for example helping a neighbour herd his pigs into the trailer). In addition, a wealth of trading relationships will inevitably develop. Again some of these connections will take place on a formal basis (for example, through the café or the trading post). There will also be a large degree of interaction which will take place on an informal basis (for example, sharing meals). These formal and informal connections and interactions will play a very important part in the success of the project.

By sharing skills, resources and information Lammas will be able to create a vibrant, healthy community momentum. This group momentum is important because what Lammas is proposing to do is, in the context of an economy based on cheap fossil fuels, is actually very challenging. The viability of the project is dependant upon both an intimate relationship with the land and a vibrant, healthy interacting community of people.

In this scheme, therefore, the people and the web of cooperative encounters are all inextricably linked. The labour requirements and the need for community cooperation are considerably higher than would be with a conventional household. Clearly there is a functional requirement for the adults to be there.

**The 1980 World Census on Agriculture carried out by the Food and Agricultural Organisations of the UN found that small farms outyielded larger ones. Typically, farms of between 0.5 and 6 hectares in extent were around four times as productive as farms over 15 hectares. In some cases they were twelve times as productive*

Criterion 8

In the event of the development involving members of more than one family the proposal will be managed and controlled by a trust, co-operative or other mechanism in which the occupiers have an interest.

. Covered by this Management plan, the Society Registration document and the Society Rules.

The project will be managed and directed by a co-operative, Lammas Low Impact Initiatives Ltd (registered as an Industrial and Provident Society, register number 30222R). Lammas Low Impact Initiatives Ltd (referred to in this document as *Lammas* or *the Society*) will retain the freehold ownership of the site. The leaseholds themselves will be drafted in such a manner so that the Society retains control of the development. All leaseholders will be members of this co-operative.

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