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**The Organic Advisory Service agricultural appraisal  
for:  
Lammas Low-Impact Initiatives Ltd**

**by**

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INVESTOR IN PEOPLE

## **1. Introduction**

- 1.1. This initial appraisal has been produced in relation to a planning permission re-application prepared by Lammas Low Impact Initiatives Ltd for the establishment of an Eco-Village at Pant y Gafel Farm, Glandwr, Pembrokeshire.
- 1.2. The appraisal has been prepared with particular reference to the planning guidelines set out in Section 2 and elsewhere in the application. It is intended to serve as an impartial factual appraisal of the business and horticultural potential of the proposed activities
- 1.3. The matters discussed relate to agricultural, horticultural, livestock and forestry activities. In general terms similar principles and criteria apply when considering the provision of dwellings in connection with these enterprise types.
- 1.4. This report has been prepared by Roger Hitchings, Head of Advisory Services at the Organic Research Centre, Elm Farm. The advisory service has been responsible for delivering over 8,000 free on-farm visits under the government-funded Organic Conversion Information Service (OCIS). The service also carries out a wide range of advisory and consultancy activities in England and Wales including the provision of appraisals and reports in support of planning applications. The Organic Research Centre, Elm Farm is a founding and continuing partner in Organic Centre Wales (OCW). OCW is directly funded by the Welsh Assembly Government and is also a Development Centre in its Farming Connect programme.

Roger Hitchings has been actively involved in organic horticultural advisory and consultancy work for seven years and before that he was a registered organic producer himself growing a wide range of vegetable and salad crops for a range of outlets including supermarkets, organic wholesalers and local markets. He has also been involved in land-based education and training as a qualified further education lecturer. In terms of further background he is a member of the UK Government's Advisory Committee on Organic Standards (ACOS) and he also chairs its Technical Committee. He is accredited with the Institute of Organic Training and Advice (IOTA) which is the professional body for organic consultants.

## **2 The Planning Policy Framework**

- 2.1 The detail of the planning policy applicable to this proposal is set out in detail in other documents but the context is set out in Planning Policy Wales, Technical Advisory Note 6 (TAN 6), the Joint Unitary Development Plan (JUDP) for Pembrokeshire and specifically in Supplementary Planning Guidance 52 (SPG 52).

## **3 The Holding**

- 3.1 I should note straightaway that this holding is not yet officially registered as organic although I am satisfied on reading the individual business plans for each of the plots that every effort will be made to manage it in broad compliance with current organic standards. The applicants are keen to explore the advisory support available under the Welsh OCIS scheme and the financial support available under the Organic

- 3.2 Farming Scheme for Wales but understandably wish to resolve their planning issues before proceeding.
- 3.3 The total area of land involved in this application is 30.2 hectares (76 acres). The current land use is essentially divided between woodland and permanent pasture although cereals (barley) have been grown in rotation in the past. It is therefore reasonable to describe at least part of the grass land as long term ley.
- 3.4 There is a substantial area of woodland on the site and this will be sustainably managed to provide products for sale and use.
- 3.5 The soils have been described in at least two other documents (Soil Survey and the ADAS Assessment) and can be broadly described as acid sandy loams with high organic matter levels. A site visit will be undertaken to generate a hands on assessment of the various plots and to provide recommendations on soil management.
- 3.6 The enterprise is not yet supported with infrastructure but there are very detailed plans in the proposal for a wide range of buildings.
- 3.7 In terms of equipment and machinery each of the individual enterprises has set out in detail what will be needed. Occupants will arrive with much of what they need and purchases will be made as required.
- 3.8 There are presently sheep on the site and the enterprise plans include significant numbers of small scale livestock ranging from poultry up to working horses.

#### **4 The Enterprises**

- 4.1 Taken overall the proposal covers a very diverse range of individual enterprises and there is the potential for a very complex mix of activities. These are described elsewhere in the individual plot business plans and also in the ADAS Assessment.

#### **5 Management of the holding**

- 5.1 This mixed enterprise will require the highest degree of management which will need to not only address the mixed activities on each plot but also ensure that there is proper integration across all the site activities. In broad terms the applicants will carry out all of the work themselves although it is anticipated additional help will be needed at times. I have been impressed by their enthusiasm and the extraordinarily detailed planning and preparation that has been carried out to date, and I have no doubt about the seriousness of their intentions. The degree to which they can follow through on these plans and investment will of course be determined by whether planning permission is granted.
- 5.2 It is my opinion that effective management of these complex businesses can only be carried out in a situation where the applicants are resident on-site. My reasons for this opinion include the issues of security, efficient and effective use of time, the management of the protected cropping facility, and animal welfare issues amongst others.
- 5.2.1 **Security** - the position of the holding is relatively isolated and I do not think that there would be much, if any, casual pilfering of crops and livestock although there

may be a couple of minor incidents. Such isolation makes the deliberate stealing of tools and equipment a stronger possibility. The wilful attacking of animals especially horses cannot be ruled. It is impossible to estimate future potential security problems especially by someone from outside the area (I live in Carmarthenshire where there have two attacks on horses in recent months) but I believe such potential problems would be minimised where there is an on-site presence 24 hours per day.

5.2.2 **Travel** - it may be thought that this holding can be managed through the regular commuting to the site of the necessary workers. The management of this holding would require multiple commuting for reasons discussed elsewhere in this report if it were to be run from off-site. In these days of increased consciousness of carbon emissions this has to be seen as unacceptable and it would contradict the ethos of this enterprise as well as SPG 52. Excessive commuting would also seriously affect the financial viability of the business. The nature and ethos of the planned business is such if permission is granted, the avoidance of commuting would mean a significant reduction of traffic compared to the running of this business from a distance.

5.2.3 **Time management** - I know from my own experience that 'travel to work' time is unproductive and travelling inevitably costs money. I think it will be clear from a proper consideration of the proposed enterprises the applicants need to spend every available hour working on the various plots once all the enterprise strands are up and running. I also know from my own direct experience that where someone is on-site all the time then every odd twenty minutes or half hour will be spent productively because it will involve only a short walk to sow some seed, do some weeding, check the livestock, etc. This would not happen even if the residence were relatively close by.

5.2.4 The point about checking the crops and livestock is very important. It should be remembered that these enterprises will include livestock operations along with plant and salad production (and a wide range of allied activities). It is an easy matter for a farmer or a field-scale vegetable grower to work at a distance because the operations are few and far between and a weekly or daily inspection is all that is needed. Where the enterprises are complex it is a virtual certainty that one or more aspect will need attention at any given time – this is particularly important with respect to pest and disease incidence where early detection is absolutely vital. A constant presence on-site will also play a major role in minimising the damage caused by large pests such as wood pigeons, rabbits, foxes, etc. which in my experience cause greater problems than insect pests.

## **6 Protected cropping management**

6.1 Several of the business plans include some form of protected cropping and this is a very important reason why there needs to be a constant on-site presence. By its nature protected cropping seeks to maintain an ideal growing environment for the crop and this involves controlling temperature, humidity, ventilation and water supply. In a glasshouse situation many of these parameters can be controlled by automatic equipment such as auto-vents and timed irrigation with alarms that can

pass signals down telephone lines to a remote location. It is much more difficult to install such systems in the standard cropping polytunnels that the applicants intend to establish. There are significant investment costs in both the systems and the superior tunnels that would be required which rule such an approach out. Unless there is a back-up generator (more investment) such systems become useless if there is a power cut or electrical fault. Faults can lead to crop damage where an irrigation system stays on beyond its allotted time, vents stay closed in hot weather or open in the night, etc.

- 6.2 It is relatively straightforward to maintain an optimum environment in reasonably constant weather conditions but the real problems arise when there is a sudden change. Temperature rises of 15-20° C are not uncommon where overcast skies clear to give full sun – this is a situation where prompt action is essential to prevent damage to the crops. Sudden strong winds can cause damage to plants where the end doors are fully open for ventilation purposes and in extreme conditions can cause damage to the tunnels themselves. Problems occurring in the day are likely to be dealt with promptly when people are working there. It is the problems that can (and do) occur in the night that can give the greatest concern.
- 6.3 The proposed purposes of the various tunnels differ to some extent but as an illustration I will discuss the production of leafy salads, the production of young salad plants for setting out in the soil on a regular basis along with transplants for the vegetable plots. Small seedlings growing in trays and small pots are extremely sensitive to changes because they are generally less robust and because they are grown in a relatively small amount of compost. If the trays and pots dry out unexpectedly then the young plants die – this can happen in a matter of hours. More plants can be produced but the marketing plans will have been disrupted. Plants can survive such problems in their early stages of growth but will not grow to their full potential and in the case of leafy crops they can ‘bolt’ prematurely thus reducing the amount of leaf that can be taken. Rocket and other oriental brassicas (mizuna, mibuna, mustard, Pak Choi, etc.) are examples of crops that can bolt under stress while lettuce seeds refuse to germinate in conditions that are too hot. At the opposite end of the temperature spectrum damage can be caused by night time frosts if they are unpredicted or precautions not taken.
- 6.4 This aspect of the enterprises will be crucial to the generation of regular cash flow in most of the proposals and it is therefore vital that the closest of control is maintained. Monitoring and adjustments need to be frequently carried out – this should involve several checks during every day and at least one every night. It is not enough that plants survive – they must be given the best environment all the time and this would be impossible if the applicants were required to live off-site.

## **7 Livestock Management**

- 7.1 A high level of animal welfare is the norm for all UK production systems but it is subject to particular emphasis in organic systems. All livestock producers must not only comply with the guidelines set out by the Farm Animal Welfare Council (FAWC) and if the applicants opt for organic certification they will need to comply with any particular provisions within the standards of their organic Certifying Body (CB).

7.2 **Legislative requirements** – there are a number of requirements that apply to livestock operations in general and to equestrian operations in particular. Government has made concerted efforts in recent years to increase the welfare standards that apply to all livestock including horses.

7.2.1 The equine industry has its own code of practice, the Equine Industry Welfare Guidelines Compendium for Horses, Ponies and Donkeys, produced in 2002 and revised in 2005. This is not a statutory code but it does refer to relevant legislation throughout. It places responsibility for the welfare of livestock firmly on the ‘keeper’ – this is ‘the person responsible for or in charge of animals whether on a permanent or temporary basis’.

7.2.2 It is an offence under the Agriculture (Miscellaneous Provisions) Act 1968 to cause unnecessary pain or unnecessary distress to any livestock. The basic requirements for the welfare of livestock are a husbandry system appropriate to the health and, so far as practicable, the behavioural needs of the animals and a high standard of stockmanship. Stockmanship is a key factor, because no matter how otherwise acceptable a system may be in principle, without competent, diligent stockmanship, the welfare of the animals cannot be catered for.

7.2.3 The current Welfare Codes are considered within a framework that was developed by the Farm Animal Welfare Council and known as ‘**The Five Freedoms**’ which are:

1. **Freedom from thirst and hunger** – by ready access to fresh water and a diet to maintain full health and vigour;
2. **Freedom from discomfort** – by providing an appropriate environment including shelter and a comfortable resting place;
3. **Freedom from pain, injury or disease** – by prevention or rapid diagnosis and treatment;
4. **Freedom to express normal behaviour** – by providing sufficient space, proper facilities and company of the animals’ own kind;
5. **Freedom from fear and distress** – by ensuring conditions and treatment which avoid mental suffering.

7.2.4 The Welfare of Farmed Animals (Wales) Regulations 2007 require that all animals shall be inspected by the owner or keeper at least once a day to check that they are in a state of well being. The health and welfare of animals depends on them being regularly inspected. Badly managed and unhealthy animals will not thrive, and it is essential that the stock-keeper should watch for signs of distress, disease or aggression towards an animal by others in the group. To do this, it is important that stock-keepers have enough time to:

- inspect the stock;
- check equipment;
- take action to deal with any problem.

Keepers should be able to anticipate problems or recognise them in their earliest stages and, in many cases, should be able to identify the cause and put matters right immediately. As with all livestock holdings, in addition to complying with the Welfare Codes, there are other instances when emergencies can occur which demand an immediate response and so all stock-keepers should be aware of the importance of regular inspections and be familiar with the normal behaviour patterns. It is also important that the overall security of the business and premises are maintained so that if intruders are on the site, their presence is detected and appropriate action taken.

- 7.3 At the present time there are a significant number of enterprise strands that will involve livestock. The complexities of the livestock operations and associated businesses are set to increase over time as numbers are increased.
- 7.4 Specific welfare issues are to some extent unpredictable such as illness, parasite infestation (internal and external), delivery difficulties, stock especially young stock getting trapped or otherwise caught up in physical situations, escapes from the holding, entry of other stock and the risk of disease transfer, predation and the consequent risk of injured animals, etc., etc. If the holding becomes registered as organic (after an appropriate conversion period), the organic standards require livestock to be housed for a maximum of one third of their life and only where prevailing conditions require it i.e. in the depths of winter. This means that permanent housing of farm animals would not be an option.
- 7.5 Any such problems that arise during the normal working day can of course be dealt with because there should be people on site but, as was noted for the management of protected cropping, it is the problems that arise 'out of hours' that give rise to the greatest concern. Welfare problems of all types do not respect the working day and in some cases such as predation are likely to be worse at night.
- 7.6 The question of animal welfare is vitally important regardless of the number of animals under care as the references to codes and legislation should make clear.

## **8 Woodland Management**

- 8.1 A wide range of activities is carried out under this heading, many of which do not in themselves require a constant on-site presence. Nonetheless the woodland management activities require a significant labour input given the wide range of planned outputs and the considered approach to management.

## **9 Functional Need**

- 9.1 I consider the functional need requirements of the appropriate legislation to be satisfied on several counts. These are specifically the production of salad crops and plants in the proposed polythene tunnels, and the standard and specific welfare requirements of the livestock.
- 9.2 In order to fulfil the projected requirements of output and income generation, the proposed polythene tunnel operation must be run in a manner that guarantees both quantity and quality of the produce intended for sale. Healthy plants produce

healthy and attractive leaves but the process requires constant attention as I have outlined above. It is also crucially important that healthy young plants are raised on a more or less continuous basis in order to sustain the sequential cropping that will be vital to the success of this strand of the business.

- 9.3 Much is made of stockmanship in the animal welfare codes and legislation. As has been noted the keeper of the animals has the primary responsibility for the welfare of all animals and I believe a strong case for a constant presence on-site can be made for healthy animals.
- 9.4 Other issues such as general security are considered relevant under PPS7 but are not in themselves a demonstration of functional need but taken with the above reinforces the overall passing of the test.
- 9.5 The issue of effective time management is not normally considered but as noted earlier in this appraisal the physical management of this multi-faceted business will depend on an on-site presence.
- 9.6 In terms of actual time input it is often useful to describe this in terms of standard man days (SMD), a measure that was once a common feature of the Agricultural Census. The calculation of SMDs is no longer a statutory requirement but it still features in issues relating to planning. Assessments of what is meant by a standard man day can vary but in this case it represents an 8 hour working day and 275 SMD per year is equivalent to a full time worker (2200 hours). Some definitions use 280 SMD and 2400 hours respectively. It is interesting to note that the equivalent for an office worker is closer to 1900 hours (237.5 SMD).
- 9.7 It should be noted that while standard figures exist for a wide range of agricultural activities there are no established figures for these particular activities. The following represents a small number of examples as to review every strand of every business proposal would be very time-consuming. Further detail and analysis can be provided if required.
- 9.7.1 Equine enterprise – figures from the 2007 Nix Farm Management Pocketbook for brood mares have been used to give a sense of what might be required. This gives an annual labour input of 605 hours (approx. 75.4 SMD) per horse.
- 9.7.2 Protected cropping – horticultural SMD data tend to apply to single crop enterprises either in the field (carrots, potatoes, etc.) or typically in glasshouse production (long season tomatoes, cucumbers, etc.). There is frankly no point whatsoever in taking figures derived from large scale glasshouse production and applying them to mixed cropping in small polythene tunnels. There is nothing in the published literature that covers the production of mixed crops in polythene tunnels although there is plenty that covers the large scale production of strawberries under Spanish tunnels.

As part of a previous commission for a client in Wales delivered under the Welsh Assembly Government's Farming Connect service I had to unpick the activities of a 1.5 acre walled garden including 3 polytunnels in order to derive the weekly labour input. On the basis of those figures and a consideration of the differences between the types of cropping I estimate that the proposed polytunnels will

require a minimum of 12 hours per week over the course of a year. This would include ground preparation, fertility management, structure maintenance, crop care, weeding, watering, environmental monitoring, propagation, harvesting and cleaning. It is possible to produce leafy salad crops on an all year round basis and once harvested and bagged they can achieve prices of around £12-15/Kg when retailed directly. This figure results in an annual labour requirement of 624 hours or 78 SMD.

The production of such crops in protected cropping structures is well established and has the potential to generate income streams that will be significant in the context of these enterprises. It is possible to achieve a turnover of £20 per square metre in cold polytunnels and I have seen leafy salad operations achieving well in excess of this.

## **10 Financial review**

- 10.1 I am not able to include a detailed evaluation of potential income from the various components of the businesses at this time although once again this can be provided. The applicants have provided extremely detailed figures which have broadly stood up to analysis with minor adjustments required. I suspect that there could be further adjustments but in my professional opinion they are broadly consistent with figures I have seen elsewhere.
- 10.2 The key area of difference appears to be based around yield estimates and once again it is not relevant to take yields from large-scale enterprises and apply them to these very intensive and mixed small-scale businesses. It is notable that the productivity of subsistence farms in Africa and elsewhere can be higher than the most efficient large scale arable farms.
- 10.3 Yields on the small scale can often be higher on a per hectare basis than the equivalent field scale crops and figures can be supplied to support this. The crops will more often than not be direct sold and therefore bring a greater percentage of the selling price back into the business. The final point is that a greater proportion of the crop is sold with the balance generating value-added income through being processed into jams, chutneys, and other products. Once again in broad terms the figures proposed by the various plot holders are reasonable and appropriate.
- 10.4 It is worth noting, however, that the enterprises that are proposed as fulfilling the functional need requirements are in many cases those that will provide a substantial element of overall income. In broad terms they are therefore essential to the financial viability of the businesses.
- 10.5 In my considered view these enterprises have the potential to achieve a degree of viability at the present time that is sustainable in terms of the requirements of the individuals concerned. The potential for increase of cash flow and profitability is real and justifiable. The turnover figures are relatively low but judgements on the required levels should be based on the needs of the individuals concerned not on a hypothetical average family. It is once again inappropriate to judge the needs of a low impact community against the yardstick of society as a whole.

## 11 Conclusions

- 11.1 This is an enterprise proposal that has the potential for viability both in terms of its parts and as a whole.
- 11.2 The commitment to all aspects of the business by the applicants is clear and undeniable in my opinion.
- 11.3 Such business developments are consistent with both central and local Government policies relating to sustainability, rural employment, biodiversity and local food production. They can only have positive benefits for the locality and its environment.
- 11.4 It is my opinion that the functional need requirements have been satisfied on several counts as outlined above and that a round the clock on-site presence is essential to the success and sustainability of the business.

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