Preliminary study for micro abattoir in Skye & Lochalsh

Study prepared for the Scottish Crofting Federation

Prepared by SAC Consulting, Portree.
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1. Executive Summary

- This report was commissioned by the Scottish Crofting Federation, to produce a design and cost for a very small abattoir that could serve producers in the Skye and Lochalsh area.

- Previous feasibility studies have shown that an abattoir model which purchases livestock and trades meat is not feasible, due to low throughput.

- Other previous reports and the limited information gathered from the investigations carried out in this study, have suggested that there is some demand for a service abattoir, i.e., an abattoir that provides a slaughter service but does not procure or sell meat.

- Questionnaire results indicate a 'micro' abattoir with a cutting and processing room, a target maximum throughput of 5 cattle, or 20 sheep or 10 pigs per day, and open for 80 days throughout the year, would meet demand.

- Since 2004, EU meat hygiene regulations governing the operations of abattoirs have been harmonised across Europe. These were introduced in the UK from 2006. All abattoirs, whether large or small or micro, have to operate to the same standards. As a result, the capital cost of building new, or refurbishing old, abattoirs has increased.

- The cost of a new build micro abattoir to cater for cattle, pigs and sheep and provide chilling and cutting is unlikely to be less than £568,000.

- Annual running costs are expected to be £59,000.

- Annual loss is expected to be £12,000 at a throughput of 100 cattle, 800 sheep and 130 pigs.

- The abattoir could operate at a modest profit if the build was fully grant aided.

- Throughput and number of days in operation have a major bearing on profitability: increasing throughput to the maximum possible reduces loss to £300 per annum, however, maximum capacity would be 4000 sheep, 200 cattle and 130 pigs; reducing throughput to 50 cattle, 400 sheep and 60 pigs increases loss to at least £15,000 if the maximum kill was achieved each day.

- Even though it is difficult to build a business case based on expectations of potential throughput, it is possible that such an abattoir in filling a gap in local infrastructure could generate new business opportunities.

- Next steps are to form a group to take the project forward; ascertain demand level; and apply for funding for the build costs. Potential sources of funding have been identified, but the respective constraints in each case are not insignificant; initial approaches to potential funders at the earliest possible stage would be advisable.

2. Introduction

The remit for this report is to undertake preliminary work to enable a full funding application for a micro abattoir to serve the Skye and Lochalsh area to be carried out. This is not a feasibility study, but rather, ascertains facilities required by current producers/retailers of meat and works out the capital and running costs for a micro abattoir. The question is not 'Could a micro abattoir work in Skye and Lochalsh?' but rather, 'What format would it take, and what would it cost?'

This report was commissioned by the Scottish Crofting Federation, with Scottish Government for funding.

The SCF's mission is to 'safeguard and promote the rights, livelihoods and culture of crofters and their communities' and therefore the SCF is keen to identify whether a very small scale abattoir would serve crofters' needs, and help crofters to maintain or expand their businesses. The SCF formed an Abattoir Working Group to take forward the establishment of an abattoir in the Skye and Lochalsh area.

Skye and Lochalsh is a primarily store livestock production area, i.e., most calves and lambs are sold at weaning or shortly thereafter, or as 'forward' stores at a year old. However, a few producers are finishing stock, and some take this a stage further by directly adding value and selling meats.

In 1992, the abattoir operated by Skye & Lochalsh District Council in Portree was closed. It was mainly used for sheep, slaughtering almost 500 sheep for home consumption. It was closed due to the cost of compliance with EEC standards. The abattoir provided a valuable service by reducing health risks to humans (compared to home kill) and by safeguarding animal welfare.

Currently, the two nearest abattoirs to Skye are at Dingwall and Lochmaddy. With small numbers of stock finished throughout the year, journeys tend to be made by individuals with a few stock, rather than by lorry. Dingwall is about 100 miles from Portree with sections of single track road, resulting in journeys of 3 ½ hours, whilst Lochmaddy involves a 1 ¾ hour ferry crossing. There is also an abattoir at Grantown on Spey which is 144 miles from Kyle. All provide a good service but there is a demand from several Skye and Lochalsh producers to have an abattoir on or near Skye to overcome issues such as transport, welfare, biosecurity, delivery and food miles.

Abattoir businesses, especially those on a small scale, struggle to be viable. Running costs are high, throughput variable and seasonal, and demand controlled by big businesses. Many abattoir businesses have closed in recent years – even those on a large scale in populated areas. Funding for capital projects is difficult to obtain and funding for on-going running costs even more so. Previous studies on the feasibility of establishing an abattoir and on the meat supply chain have not been particularly encouraging.

Demand is difficult to gauge and predict, especially with changes in agricultural policy. Demand for slaughter and for cutting services depends not just on numbers of stock that can be finished in the locality, but on potential sales of cuts/processed meat.

However, the Scottish Government is committed to ensuring that animals should be slaughtered as close to where they are reared as possible. This abattoir would provide Skye and Lochalsh livestock producers with a local option, rather than transporting stock out with the area. Producers would then have a choice in how to market stock and cutting and packaging facilities would allow further value to be added to produce. Producers would be able to engage directly with consumers and customers, helping them to shape their

businesses. Local facilities would reduce food miles, and help with government targets for a low carbon economy.

This report concentrates on provision of a very small or ‘micro’ abattoir that would serve producers in the Skye and Lochalsh area. It is envisaged principally as a service facility to slaughter livestock and possibly butcher the carcases for farmers involved in developing local artisanal retail sales businesses, as well as those wishing to have livestock killed and butchered for their own use.

Issues such as location, waste and operation are considered, outline building plans provided along with associated costs and cash flow. Finally, a plan of action towards creation of a micro abattoir is detailed.

3. Objectives

The objectives of this study are to:

Stage 1: Carry out a review of previous proposals

Stage 2: Research design requirements and specification for a small, fully compliant micro-abattoir capable of handling cattle, sheep and pigs (including all native breeds)

Stage 3: Assess the need for additional 'added value' operations, e.g. cutting room, deer larder

Stage 4: Investigate suitability of proposed sites and any planning constraints

Stage 5: Produce costings for recommended options

Stage 6: Identify waste management issues and solutions

Stage 7: Identify possible funding routes, complete funding applications and be the contact person for discussion with funders

Stage 8: Carry out an assessment of different ownership structures and operational models together with business plans and cash flow projections

Stage 9: Assess staffing and management requirements and solutions

Stage 10: Recommend a development timetable and draw up an action plan

In addition, the authors felt it was necessary to question livestock producers and interview local businesses to update figures and to garner local opinions. Up to date livestock numbers were necessary to determine throughput and therefore size and design of abattoir.

Methodology

Staff from SAC Consulting, MLC Livestock Services and SRUC worked together on this report, with valuable input from the Scottish Crofting Federation, QMS and local producers and retailers.

- A questionnaire was posted out with the SAC newsletter to 300 local producers and the results collated.
- A further questionnaire with more specific questions relating to desires was sent out to known producers.
- Telephone or face to face surveys of the 'larger' producers in the area.
- Interviews were held with the local butcher, the MD of Dingwall abattoir and the local lamb supply group organiser.
- Census figures on livestock numbers in the Skye, Lochalsh, Kintail, Duirinish, Glenelg and Glenshiel areas were provided by Scottish Government.
- Discussions were held regarding potential sites with Highland council, HIE and National Trust.

- Visit of sites with Martin Palmer MLC LS abattoir specialist.
- Review previous studies and related literature.
- Design plans for a micro abattoir created.
- Draft report discussed with the SCF abattoir working group.
- Costs obtained from utility providers, Highland council as site owners and providers of waste and water facilities, other abattoirs and QMS.
- Methods of waste disposal investigated.
- Discussion of costs with FSA, capacity of local vet practices to provide OV investigated.
- Design specification worked out.
- 5 year cash flow calculated. Sensitivity analysis carried out.
- Action Plan formulated.

4. Review of previous proposals

There have been many studies on abattoir provision in the UK and for Skye and Lochalsh. Further detail is provided in Appendix 1.

A summary of the most pertinent to this study is below:

1. "Red Meat Processing and Marketing in the Highland and Islands" carried out by PMS in 2002 reviewed the provision of slaughterhouse and processing facilities in the Highlands & Islands region.

The conclusions of the report were that increased connection with the market was required by producers; that the slaughter trade is barely profitable and that to be viable, abattoirs had to have throughput.

2. "Establishment of a local meat supply chain in Skye and Lochalsh" reporters found that the lack of abattoir facilities was only part of the story and that increased supply, processing facilities and skills were also required for the meat supply chain to work.

3. "Lamb finishing on the Western Isles" showed that:
    - Lamb finishing on the islands was technically feasible
    - Lambs could be supplied from Aug to May
    - A high value of finished lamb is required to cover costs

4. In 2003, a "Feasibility study for a Lochaber slaughterhouse" was published. The conclusions were that at the expected throughput of 4000 lambs, operating for half of the year, the slaughter house was uneconomic and unviable over the 10 years costed.

5. The "Feasibility Study for a Proposed Skye & Lochalsh Abattoir, SAC, November 1994" determined that an abattoir with capacity for 7000 lambs per annum could only be expected to breakeven at best in the short term.

6. "Scotland's Island Slaughterhouses – Crucial links in our rural infrastructure" in 2012 reported on small island facilities. Conclusions were that small facilities are not profit generating and that it is a mistake to think they can be; that cost overheads are too high for small scale plants. Therefore, such facilities should be viewed as critical parts of rural infrastructure and supported as such.

7. The report 'Plugging the Leaks' prepared for HIE Skye & Wester Ross in 2006 looked at the impact that could be made on the wealth of the local economy if customers were to buy fresh and primary produce from local businesses as opposed to national retailers. Modelling demonstrated that every one pound spent with local businesses was worth between £1.44 and £2.40 to the local economy.

Conclusion:

- From previous reports it is clear that an abattoir in the S&L area to meet business model that involves purchasing livestock and trading meat is, at best, unproven.
- It is possible that there is some demand for business model to supply a service to slaughter and add value to meat for crofters interesting in selling direct and existing butchers.

- There is a view that a new facility, even though may not be inherently profitable in itself, would have a multiplier effect on developing the local economy.

5. Operational Model

There are three models of abattoirs:
a) to purchase livestock to slaughter and trade the meat;
b) abattoirs set up to supply meat retail outlets, eg butcher shops and
c) abattoirs set up to provide a service to slaughter and perhaps add value to meat, e.g., cutting.
Some abattoirs do all 3.

Since 2004, EU meat hygiene regulations governing the operations of abattoirs have been harmonised across Europe (introduced in the UK from 2006). All abattoirs, whether large or small or micro, have to operate to the same standards. As a result, the capital cost of building new, or refurbishing old, abattoirs has increased.

This increase in the overhead capital cost that abattoirs have to bear has also been matched by increases in other key operating costs, ie energy, water and waste disposal. As a result, the unit cost for slaughtering animals has increased.

However, existing plants which offer a slaughter service may be able to do so on a marginal cost basis, and this severely undercuts the opportunities for new small plants to charge realistic fees.

Within the wider industry in Scotland as in the rest of the UK, a decline in animal numbers has led to an increased slaughter capacity and therefore, increased competition in procurement for stock. At the same time, the market for meat has concentrated into the hands of the major supermarkets that are supplied by a dedicated network of large abattoirs. As a result, the business model for a smaller abattoir to purchase and sell meat wholesale is increasingly competitive and difficult.

Of the 12 abattoirs in the H&I area, 10 of which are in the islands, two were set up on the basis of wholesale trading and have recently failed (one of which was an island plant). All of the other island abattoirs are service abattoirs, either to supply butcher shops or to provide a service to livestock farmers, either to sell from farm or for home consumption, or sometimes to do both.

From previous reports it is clear that an abattoir in the S&L area to meet business model a) is unproven.

From other previous work, and the limited information gathered from the investigations carried out in this study, it is possible that there is some demand for business model b) and c). This is an important point as size of plant, throughput, management structure and operating costs are all affected by operational model.

This study concentrates on provision of a micro abattoir providing a slaughter service.

6. Potential Throughput

Data from the following sources was used to estimate likely throughput:
previous studies;
census figures;
questionnaire results; and
discussion with the local meat supply group.

Figures from Questionnaires

Two surveys have been carried out to work out throughput, and what extra services producers would require from a local abattoir.

Scottish Crofting Federation Survey

- The survey was sent out with the local newsletter of SAC Portree to 270 farm/croft businesses. There was a 25% response rate. Of the 67 returned surveys:
- 3 respondents were not in favour of the abattoir, stating Skye and Lochalsh to be a store growing area.
- The percentage of respondents that would use the abattoir in each season was:

Autumn	75%
Winter	61%
Spring	22%
Summer	10%

- The numbers of each species that respondents would put through the abattoir was:

Sheep	334
Unhorned cattle	71
Horned Cattle	12
Pigs	81
Deer	12
Other	0

The implication of these answers is that while, if a local abattoir existed, crofters would be willing to sell stock to an abattoir that wanted to purchase stock. It is unclear how many would be interested in using an abattoir as a service facility to develop local direct sales.

SAC/MLC Survey

SAC and MLC carried out a more in depth telephone/office survey to investigate the latter point in more detail. Farm/croft businesses that were described as core users, ie those farming/crofting on a larger scale for the area (200 plus sheep, 10 plus cattle) were interviewed. From the questions useful information and thoughts were gained. These include:

- Supplying lamb rather than cattle to the local abattoir is mainly what producers would consider; though few were able provide numbers of finished stock. Keeping lambs and finishing them over the winter would be their preferred option.

- Producers would prefer to be able to sell lambs to the abattoir, or through a selling group with a premium price.

- There was a positive feeling for the abattoir from the majority of survey participants, who feel it would be good for the island, particularly the small number that wished to set up or further develop direct sales.

- Cattle were generally not considered feasible due to time it takes to finish animals, high feed price at present, and most producers intended concentrating on spring calving to provide the store market with calves.

National and Global Trends

Meat consumption is expected to increase, due to growing populations and increasing wealth in some developing countries. Projections by the Food and Agriculture organisation suggest that global demand for Sheep and Goat meat will increase by 78% by 2050.

Global supplies of beef, sheepmeat and pigmeat are constricted which is bearing down on consumption by restricting trade and pushing up prices. However, there still remains a great deal of short term volatility, eg, market conditions in the latter part of 2012. (QMS, pers comm.).

For Skye and Lochalsh producers, increased demand will mean that it may be more profitable than at present to sell meat directly, and therefore demand for an abattoir facility might rise. However, increasing demand will also push up prices for store lambs and calves lessening the difference in profit between selling store or direct selling meat.

CAP reform

Without the detail, it is difficult to predict what affect the new subsidies and grants will have on livestock numbers in the area. Much will depend on the new versions of SFP and LFASS. Historic, transitional or area–based Basic Payment Scheme (SFP replacement) payments will undoubtedly affect the market, either with store producers, finishers or both. The ANC (LFASS replacement) payment and the active farming rules will also have a major bearing on profitability in remote areas.

Skye and Lochalsh Meat Supply Group

The Skye & Lochalsh Meat Supply Group was set up to make local lamb available to Skye and Lochalsh butchers and restaurants, and as such, has experience of likely throughput of finished lamb.

The group was set up through 9 local farmers/crofters, supplying quality lamb to the local butcher and restaurants. Individuals undertook the full running of the group, liaising with the local butcher on numbers and timings, and setting a premium price for their lamb.

Transport to the abattoir in Dingwall was managed by the group, and returning lamb boxes also delivered by the group.

Timing of payment was an issue as payment was later than it would be selling through a local market.

The number of members of the group gradually reduced, with others not able to supply at the rate they felt possible at the start. Even so, the local butcher still buys lamb through the group to this day. The main supplier to the SLMSG buys in lambs from Skye to finish inside, as well as finishing home bred lambs. The group still operates as a supply group. The group estimate that with a local slaughterhouse, a throughput of at least 1000 lambs is achievable, based on past throughput.

Census figures

Census figures on livestock numbers in the Skye, Lochalsh, Kintail, Duirinish, Glenelg and Glenshiel areas were provided by Scottish Government. Full details are given in Appendix 3.

The 2012 census returns show totals of:

Cattle
3059 cows on 218 holdings **81 male beef cattle over 2 years old and 'not for breeding' from 30 holdings** **25 female beef cattle over 2 years old and 'not for breeding' from 16 holdings** **Some 49 holdings have purchased 147 store calves, though whether these are intended as breeding heifers or finished beasts is not captured.**
Sheep
66234 breeding ewes are kept across 532 holdings. **1709 sheep, over 1 year old, are kept 'not for breeding' across 532 holdings.** **50,933 lambs were produced (at time of census) from 524 holdings.**
Pigs
42 breeding sows were kept on 15 holdings. **138 fattening pigs were kept on 34 holdings.**

The census data for pigs is clear – there were 138 pigs being kept specifically for meat in 2012, and since pigs are likely to be finished within a year and assuming numbers remain around this level, there could be a potential 138 for the abattoir per annum.

For cattle, the census data collected is less enlightening when it comes to finishing cattle. 100 were being kept in 2012 which were over 2 years old and therefore potentially were being kept to finish, or could be finished. Of the store calves that were purchased, the census data does not detail where the cattle are kept, ie, they are bought by crofters/farmers with a Skye parish farm code, but may be finished on other locations, e.g., black isle.

The 1709 lambs over 1 year old are unlikely to be sold store and therefore likely to have been finished on farm. Therefore, it is possible that around this number could be available to put through a local abattoir. It could be assumed that a proportion (around 10%, from previous studies) of the ewes would be cast rather than sold as draft and therefore also

available for slaughter locally. Of the 50,000 lambs, one third would be likely kept for replacements, therefore 30,000 could be sold store or, in theory, kept to finish.

Conclusion

Future throughput of livestock is difficult to predict. Using the information above, and the data from the S&L Meat Supply Group, the SCF Abattoir Working Group estimate a throughput of 100 cattle, 800 to 1000 sheep and 130 pigs is likely.

7. Design requirements and specification

The brief asked for the design requirements and specification for a small, fully compliant micro-abattoir capable of handling cattle, sheep and pigs (including all native breeds).

Basic Principles

The design and operation of abattoirs and meat cutting plants are covered by EU Food Hygiene Regulations, specifically EU 852/2004 covers food production and 853/2004 covers food of animal origin. These regulations encompass a harmonised approach to food hygiene throughout the EU.

They were implemented in the UK in January 2006. From this time all existing plants had to be re-licensed, so that they were judged to conform with the harmonised regulations, while any new plants have had to be built to conform with them.

The licensing body is the Food Standards Agency (FSA) and a plant is licensed to a nominated Food Business Operator (FBO), who is responsible for running the plant in a hygienic manner using a HACCP (Hazard Analysis and Critical Control Point) based approach, founded on HACCP principles and good practice.

The re licensing exercise lasted a number of years and during it a more pragmatic approach was often seen to be taken by the FSA licensing officers towards the structures of existing small abattoirs especially, provided that meat hygiene was not compromised. This was because many small older plants had frequently not benefited from a steady level of investment in structures and fittings as more commonly occurs with many larger plants.

No plant will be issued a license based on its structural design as such, but rather on how the design allows its efficient and hygienic operation. The regulations themselves are not prescriptive towards how the standards that are required are met. This allows some design flexibility (e.g. standards for the construction of floors in meat plants are not specified as such, only that floors shall be constructed in a way that they can be hygienically cleaned).

In practice there are other factors that have to be taken into consideration to develop a plant that is fit for purpose (e.g. with the floors it is necessary to also have a non slip surface).

The FSA will not advise on the design of plants as such, but is prepared to comment on plans to the effect that if a plant is built in such a way it should be well placed to be operated in a hygienic manner (i.e. there are no design features that could potentially compromise the hygienic operation of the plant).

The Size of the Proposed Abattoir

The simplest definition of the size of an abattoir is by the number of livestock killed. Using the following definition of livestock units (of 1 cattle beast = 2 calves = 5 pigs = 10 sheep), abattoirs can be conveniently divided into five size ranges, which apply to both single species and multi species plants.

Very large	- over 90,000 ELU
Large	- 30,000 to 90,000 ELU
Medium	- 5000 to 30,000 ELU
Small	- 1000 to 5000 ELU
Very Small	- under 1000

Under these definitions, of those currently serving the Skye and Lochalsh area, the plant at Dingwall operated by Munro Ltd would probably fit into the Medium category, while that at Lochmaddy on Uist, would be Very Small/Small.

Previous studies undertaken in the Skye and Lochalsh area considered the development of Small/Medium sized plant. As understood, the business model envisaged for this abattoir was that it would be part of a business that would principally be involved in purchasing livestock (from the local area) and selling the meat to wholesale customers, plus some service slaughter and butchery activity for those farmers wishing to have livestock killed and butchered for their own use or for local artisanal retail sales.

In this study, the plant being considered is a much smaller facility. It is envisaged principally as a service facility to slaughter livestock and possible butcher the carcases for farmers involved in developing local artisanal retail sales businesses, as well as those wishing to have livestock killed and butchered for their own use.

Factors Inhibiting Size and Influencing Building Cost

"How small can an abattoir be built?" is a question that is often asked. People's perceptions are often coloured by memories of very basic small plants that serviced a local butchers shop. These often consisted of no more than one small slaughterhall in which livestock were stunned, and then bled and dressed while hanging from a central hook (or not so long ago dressed on the floor). Even today, on-farm facilities for the occasional animal to be slaughtered for home consumption can be just as basic.

Unfortunately from a cost point of view, but perhaps fortunately from a public hygiene perspective, even small abattoirs serving the public today have to be built with accompanying structures that enable them to comply with the EU food hygiene regulations.

This means they have to have in addition to the slaughterhall, as a minimum to begin with, a lairage with crushes (where ante mortem inspections can be carried out by the Official Veterinarian (OV) allocated by the FSA to the plant, who is responsible for overseeing animal welfare and meat hygiene at the plant).

In principal the lairage should be large enough to hold the livestock that are to be killed on that day. In existing small plants with small lairages, the OV may accept a method of operation based on timed deliveries. However, it is not certain that a new plant would be licensed if it was not considered to have an adequate lairage.

They also, in principle, need chillers of a sufficient size to accommodate one day's kill, to enable meat to be chilled to the regulation temperature before it is despatched. In small plants the OV will frequently only visit the plant once each day that the plant is slaughtering, combining the ante mortem inspection of the animals to be killed on that day, with the post mortem inspections on the previous days kill.

In practice even in small plants it is preferable from ease of operation to have two chillers, one where that days kill can be brought down to temperature and the second where the previous days kill can be held to await collection or further maturation (i.e. it is not good practice or energy efficient to put hot carcases into the same chiller as cold ones).

To complete the plant, despatch areas are required to allow hygienic loading/unloading; staff changing and hygiene areas that begin the good hygiene practice and control entry/exit into and from the plant, as well as hide rooms and gut rooms to handle the animal by products that are the residual output to carcase meat from the slaughter process.

Design Specifications

While in the first instance an abattoir is for the slaughter of livestock, in practice such facilities are also often required to undertake other related activities. These will affect their design, the cost of building and the cost of operation.

Defining the activities to be undertaken at any plant is the first stage in the design process.

Once a potential site has been found the key questions that will define the design specifications for the plant are:

- What services are available to the site?
- Species to be slaughtered?
- Number of animals to be slaughtered?
- Rate of slaughter per species – Number per week ? Number per day? Number per hour?
- Number of staff will be available/envisaged to operate the plant?
- Proportion of carcases that will be dispatched, as soon as the required internal temperature is reached?
- Number of carcases that may be despatched hot?
- Is there a need for any carcase storage for purposes of maturation etc?
- How will by-products be managed?
- Will the plant want to trade in skins and other by products?
- Are any meat cutting facilities required? (Note – plain storage rooms are not the be used as work rooms and work rooms are not to be used for storage)
- If it is decided to cut and butcher carcases are any packing facilities required e.g. vac pac, overwrap, boxing, etc?
- Is any further processing envisaged e.g. mincing, fresh sausage manufacture?

Specifications for the Proposed Abattoir

The brief asked for a design for a micro abattoir that would kill cattle, sheep or pigs. If this is designed to meet current regulations, ie, has necessary facilities to hold animals for ante-mortem inspections and carcasses and related offal and by-products for post mortem inspection, then a facility that could do one cow, could do 5 in a day with the same number of staff required to do one.

Similarly a facility designed to do one sheep could do up to twenty, and to do one pig could do up to ten.

For instance, if this plant was operated for 3 days a week, it could do 5 cattle on Monday, 20 sheep on Tuesday and 10 pigs on Wednesday. Alternatively, if there was a peak of sheep, it could do twenty sheep a day for 5 days a week so it would do a total of 100 sheep.

Based on the throughput figures, such a capability would meet most of the requirements.

A design has been prepared for a micro abattoir that would have the capability of a maximum daily kill of:

5 cattle or 20 sheep or 10 pigs
or a combination of the above

This is the smallest abattoir that can be built and meet regulations.

Two chillers are provided of sufficient size to handle one days maximum throughput plus further holding and maturation as discussed above.

The design to accommodate this is set out in the drawing for a Proposed Small/Micro Abattoir.

This is set in a building of overall dimensions 12 metres by 24 metres, that has in it all the features that it is believed that the licensing authorities would wish to see.
The lairage is as small as is feasible, with it is envisaged a degree of timed delivery being required if the plant was to be operated to its planned maximum.

The layout of the chillers within the building allows additional space that could be used for further cutting and processing

A typical method of construction for such a plant would be for a steel framework to be set into a concrete slab. The outer shell or the outside walls , apart from the lairage area could be of solid material up to 1 metre in height (e.g. brick), clad thereafter (e.g in profiled/corrugated steel sheets). The walls in the lairage would be solid up to 2.5 metres in height. The roof would be constructed of similar profiled/corrugated steel sheets.

Internally an insulated box would be formed within this outer shell by using prefabricated insulated panels with washable surfaces, set onto coving, up to which a non slip floor surface would be laid onto the concrete scree. This would be divided up by further insulated panels into the room areas as indicated on the plan. Inside this the internal rail work and related would be carried on steel ‘goal posts’ anchored into the concrete floor (i.e. no equipment or railwork would be suspended from the steel framework as such).

The height of the building is almost predetermined by the species that it is designed to kill. For cattle a minimum internal height of 4.7 metres is required to accommodate a bleed rail that cattle are hoisted up to by a shackled leg from the landing area that they will drop onto

after stunning. To accommodate this, an eaves height of normally about 6 metres is required.

This in turn sets the size for the rest of the building in which, although such height is not necessarily also required in the chillers and cutting room, if kept to, the additional space allows better ventilation and helps prevents problems arising from condensation. In a small abattoir it also gives space for refrigeration equipment and other plant to be located in the roof void above the chill rooms.

8. The need for additional 'added value' operations

Two questionnaires and phone interview sessions were carried out. The results from the first postal questionnaire indicated that many producers are interested in having additional facilities for maturing, cutting and packaging.

In response to the question of 'What facilities should be offered apart from slaughtering?' the following responses were given:

Service:	No (out of 67 responders)
Flexible period for hanging carcasses	57
Butchery service	55
Vacuum packing	47
Deer larder	12
Labelling	37

As before, it is not clear whether crofters wished these facilities so they could add value to direct sales, or whether they would like to see these facilities for others to sell meat on their behalf.

From the second questionnaire, few respondents wanted facilities for adding value.

Maturation

To add value, the ability to have a carcase hanging area is important (and important to the first survey respondents) as it allows the chilling regime that delivers the required to level of maturation in the carcases, which is the main area for adding value (apart from high quality butchery). The flexibility will be determined by throughput, but if there is a butchery/carcase chill then this will allow for some flexibility, and the determination of when to cut is often best judged by the butcher, so there is some added value to be gained by having a butchery facility on site.

Butchery

It may be possible that if this is a low throughput facility, that the cutting/killing/butchery may be delivered by a small team (or even one person). The skill in judgment over carcase use, cutting and added value is likely to be at this stage. The main issues for many crofters will be in using the lower value cuts for mince, burgers, sausages etc. to ensure full carcase use. Links with local butchers (and bakers) will be essential for deriving greater added value rather than selling primals, although the latter may be an option to hotels/restaurants if throughput is an issue.

9. Suitability of proposed sites and planning constraints

Five locations were investigated for suitability for siting a micro abattoir.

1. Balmacara near Kyle of Lochalsh – owned by the National Trust for Scotland.
2. Kyleakin – A quarry.
3. Broadford – Within the industrial estate.
4. Drynoch – Disused dump, council owned.
5. Portree – Within an industrial estate.

Full descriptions and pros and cons of each site are provided in Appendix 2, with scores allocated to each for criteria such as size, slope, planning status, water, electricity, effluent, road accessibility and transport hubs, and renewable energy possibility.

The sites at Portree and Broadford scored the highest points, as the areas are zoned for industrial use, have good road access and could probably be secured for nominal cost.

The Portree site has the advantage of proximity to effluent treatment.

10. Waste management issues and solutions

In addition to producing meat, an abattoir will produce 4 main streams of 'waste products'. These are

1. animal by-products and offals (some of which may not be true waste but could have value)
2. effluent consisting of waste water mixed with blood, fat, urine and faeces
3. other wastes such as plastics and cardboard
4. lairage material and stomach and gut contents

Dealing with the first requires either the services of specialist companies to remove the waste e.g., renderers, or collection agents of renderers, or requires the plant to deal with the waste on site, e.g., through the use of incineration or other methods such as Anaerobic Digestion (AD), or recovering materials for sale, e.g. skins or offals for human consumption or pet food.

Dealing with the second requires either utilising existing public sewerage services or setting up on site facilities that can include water treatment.
Dealing with the 3rd requires either specialist services or incineration.
Dealing with the 4th requires farmland on which material can be composted and spread (note difficult if the land manager is in particular quality assurance schemes), or disposed of by other methods such as AD.

The consultants believe that a major issue in the development of an abattoir on the island would be in dealing with these waste management issues. These could increase both the capital and running costs for the micro abattoir.

11. Build cost

Estimated Building Cost

The actual cost of any meat plant can vary widely depending on the individual circumstances that a design has to accommodate and the nature of the materials used (e.g. to meet local planning needs for outside wall claddings; the use of stainless steel over galvanised etc).

Proposed Small/Micro Abattoir Build cost:

For a building of 24 x 12 metres (288 sq metres), the estimated build cost using all new materials of an average specification to meet regulatory requirements is £561,600

This excludes the cost of the land, any special equipment needed to handle local environmental problems (e.g. water/effluent treatment; incinerator to dispose of animal by products), professional fees, connection to services etc.

In practice there are ways in which this cost could be reduced (e.g. using local labour; using recycled equipment/local materials).

A plan of the building layout is in appendix 7.

Alternative Design

For comparative purposes an alternative design for a slightly larger plant (of a similar size it is believed to that that was envisaged in an earlier study) that gives some greater flexibility, has also been prepared.

This is set out in the drawing for a Proposed Small Abattoir in Appendix 7.

This plant is also designed to be a multi species plant with slightly higher maximum throughputs. The plant size has to be increased to cope with this additional throughput and in particular would require additional lairage space from the outset, plus a plant room to accommodate control equipment.

Estimated building cost:

Based on the cost of £2,000 a square metre, using all new materials and a footprint of 370 sq metres, the build cost is estimated at 370 x £2,000 = £740,000

This excludes the cost of the land, any special equipment needed to handle local environmental problems (e.g. water/effluent treatment; incinerator to dispose of animal by products), professional fees, connection to services etc.

12. Operating Costs of Small Abattoirs

Studies have shown that operating costs can vary significantly by size of abattoir, but also between abattoirs of a similar size, as other factors (quality of management, efficiency of operation) all play a part.

In addition the activities within a plant will greatly affect its operating costs i.e. to what extent are the resources employed in the plant being used principally to:

a) slaughter (defined as killing an animal, disposing of the animal by products and waste, chilling to the required core temperature, and splitting cutting into quarters for beef, sides for sheep and pigs),

or

b) to slaughter and also to mature/cut all or a proportion of the carcases to primal cuts, which for beef are usually fully deboned, and then usually vac packed and chilled,

or

c) to slaughter, mature/cut and also to further breakdown all or a proportion of the primal cuts to retail cuts and packed, and also to further process meat and edible by products e.g. mincing, fresh sausage manufacture, tripe/feet dressing etc.

The allocation of the costs in an abattoir between variable and overhead (appropriate to whatever level of activity is being undertaken), can vary depending on the convention applied. In strict terms many of the costs in a plant are variable on throughput (e.g. such as where staff work on piece rate terms or in the water/energy use), although traditional convention may consider them as overheads. An approach MLCSL/AHDB use is to consider the major costs as 'operating costs'.

The following sections have where possible put operating costs in terms of throughput (headage), to allow a quick assessment of likely costs for small/medium facilities.

Where an abattoir is killing more than one species, costs can be allocated based on livestock units, although this is not as straightforward as it sounds.

For a better allocation of costs in an abattoir the livestock unit can be based on the operations (time/resources), involved in slaughtering and dressing and animal. This can vary, but a livestock unit based on 1 cattle beast to 5 sheep to 3 pigs is a useful ratio (note - compared to cattle and sheep, pigs use a great deal more energy i.e. in heating water for the scald tank and singeing the carcase).

Major Operating Costs

a. Labour

Even the smallest abattoirs typically have at least two operatives – divided into those working in 'clean' areas (dealing with dressing the carcase); and those working in 'dirty' areas (dealing with the lairage, stunning, bleeding, guts, hides etc.), plus those working in the office/administration.

As a working average in a small plant two men on a five hour morning shift (i.e. 7 to 12.30 including breaks) should be able to kill and dress 5 cattle, or 20 sheep, or 10 pigs.

Labour can be paid either on 'piece' rates (reflecting throughput), or hourly/weekly (reflecting time). Clearly the incentive structure for labour will differ depending on how they are paid. Larger abattoirs with a more regular kill may prefer to pay weekly or even have some staff on salary.

In small abattoirs where typically slaughter may take place on only two or three days per week (and typically for only part of the day), piece rates may not be sufficiently attractive.

Staff are increasingly more useful to a plant if they can be multi-skilled, particularly in small plants where staff who can be involved in slaughter for part of the week/day, can also then be involved in carcase activity (i.e. cutting/butchery) in other parts of the same week/day.

Rates for slaughter/cutting operatives vary depending on availability and skills of staff, but a rate of £10-£12/hour may be considered average – assuming that the operatives work an 8 hour day and 5 day week. It is expected that the rate would increase if operatives worked fewer hours per week.

N.B. Employers National Insurance must be added.

The availability of suitably qualified and skilled staff to work within an abattoir is often a significant problem, especially where unemployment rates are low (demand for labour is high).

b. FSA Inspection Charges

All abattoirs are controlled and inspected by an 'Official Veterinary Surgeon' appointed by the Food Standards Agency (FSA) aided by 'veterinary assistants' (who in the recent past where part of the 'Meat Hygiene Service' but now work for the FSA). Their primary duty is to ensure that the plant operates to the required hygiene standards, with regard to food safety, efficacy and animal welfare.

The fees for the Official Veterinary Surgeon inspections are charged by the FSA. All plants are charged on a full time cost basis that is then discounted according to historic charges.

In practice when operational, the plant will have to negotiate with the ' FSA Service Delivery Manager' - identify throughput and operational hours, and then, following a run in period using estimated charges, a new deal will be struck. Rates will not be below the EU minimum. For small plants in remote areas it is regarded as a much subsidised service and allowances are made.

European Regulations now make compulsory for the introduction of HACCP (Hazard Analysis Critical Control Point) into all red and white meat plants within the UK from June 2003. Associated with this introduction will be the need to micro-biologically test swabs taken from carcasses. There will be costs associated with the implementation and operation of HACCP and testing of swabs.

c. Waste Disposal Charges (other than sewage effluent)

Historically abattoirs earned money from the 'fifth quarter' (edible offals, animal by products, including blood, hides/skins etc.). However, in the 1990s and especially since BSE in 1996 this situation changed – many by-products were treated as waste, which abattoirs have had to pay to be removed by specialist firms.

The situation has gradually changed in recent years to 2013, with in many instances abattoirs being able to recover value from some items. However, the situation facing individual plants varies nationally and some abattoirs are still consigning a large amount of such 'fifth quarter' product to 'waste disposal' routes.

Charges for waste disposal vary by region/distance from rendering plant and volumes taken; there is therefore no 'correct value' i.e. abattoirs must negotiate prices with renderers and other collectors.

Charges made by renderers for Category 1 material (i.e. skips containing SRM, plus other animal by products which become Category 1 if mixed with SRM) can still be as high as £80 to £90 a tonne for abattoirs in more remote places but on existing pick routes. For abattoirs not on existing pick up routes rates have to be negotiated (and with only one renderer in Scotland – Dundas at Dumfries, such rates could be very high).

Alternatively companies that principally offer collection services for fallen livestock will sometimes act as collection agents for renderers for waste material from abattoirs, and these may offer a better value waste disposal route for abattoirs in more remote areas.

The following average weights can be used as an approximate measure of the waste material (residual to the skeletal meat as a result of slaughtering) that may have to be disposed of from each species:

Kg	**Liveweight**	**Skeletal meat weight**	**Total residual material**	***Made up of***			
				Typical edible offal *	**Hide/skin**	**Stomach/ intestinal contents**	**SRM and other waste for Cat 1 disposal *****
Cattle	600.0	318.0	282.0	*13.0*	*43.0*	*74.0 ***	*152.0*
Sheep	42.0	20.0	22.0	*1.2*	*4.5*	*5.0*	*11.3*
Pigs	101.0	76.0 ****	25.0	*2.0*	-	-	*23.0*

Note: Although for cattle liveweight may vary by species and age (more so perhaps than with sheep and pigs finished to normal weights), this variation is largely made up of the weight skeletal meat (the average carcase weight), while the weight of the residual product will remain more stable. For sheep the weight of residual material for a well finished lamb will be similar to that for all but the largest ewes. For calves, light

lambs and suckling pigs, residual material weights should be reduced in proportion to the carcase weight. Sow weights will also be proportionally higher.
* Cattle and sheep – kidney, heart, liver, tongue
Pigs -
** Stomach only – intestines usually disposed of full as SRM
*** Assumes no collection of best fat for sale
**** includes head , feet, KKCF, kidney

d. Other Operating Costs - Overheads

The definition of overheads varies. By strict definition, overheads (fixed costs) are not affected by throughput. The following are typically defined as fixed or overhead costs in abattoir accounts although they are often dependent upon throughput.

Water *
Energy *
Sewage effluent
Repair and Maintenance
Insurance
Laundry
Telephone
Sundries

Note * water usage and energy requirements for processing pigs will be proportionally higher than that needed for cattle and sheep.

No individual costs are available for these figures on a headage basis and individual circumstances can cause some of these costs to vary considerably (e.g. if no easy connection to public sewage is available this may necessitate the provision of water treatment facilities).

As a guidance estimate, the total cost of the above services for a small/medium abattoir will be in the region of £15 to £20 per livestock unit (where 1 LU = 1 cattle beast, 3 pigs or 5 sheep).

Rates

The calculation of rates on abattoirs is often carried out by specialist valuers, typically taking into account location and floor area of different parts of the facility, but largely depends on local circumstances and the local authority.

Other 'office' costs

Accountancy – *charge for auditing*
Administration -the operation of a small plant could require the employment of up to one extra person for all or part of the week (depending on throughput), purely to cope with the administrative requirements in handling animals, even if the plant is only involved in contract killing stock and not with any trading.

e. QMS Levy

Set amounts for cattle, sheep and pigs –
Levy rates for the year 1 April 2013 - 31 March 2014

Species	Total Levy per head	Total paid by producer per head	Total paid by slaughterer per head
Cattle	£5.50	£4.20	£1.30
Pigs	£1.26	£1.02	£0.24
Sheep	£0.80	£0.60	£0.20

f. Capital Repayments

Debt repayments will vary depending on amount borrowed and interest rate.

Depreciation

In its simplest terms, depreciation is the amount of money needed to replace worn out equipment at the end of its working life. As such this amount of money must be collected over the course of the life of the equipment; in this sense it can therefore be seen as a cost. Several types of formula are used to calculate depreciation; variables include value of equipment when purchased; value when sold/scrapped and life expectancy of equipment. MLCSL/AHDB usually work on a 20 year lifespan for basic slaughter plant structures, equipment lifespan can vary (e.g. computers 2 to 3 years), but an average of 10 years is acceptable.

Other

The above costings assume that the livestock are delivered to the plant at no cost. If the plant is actively procuring them then there is another layer of procurement costs to take into account that are normally treated as an addition to the cost of the livestock (in a similar way that hide and offal returns are treated as a negative cost).

Conclusion

The above figures indicate the main categories of cost incurred by abattoirs in the typical slaughter process.

Additional costs would be incurred if, for instance, meat was hung for longer in maturation chillers (requiring more chiller space – capital cost; and greater energy costs – operating costs), or if the abattoir also operated a co-located cutting facility.

If the plant is selling the meat from the livestock it procures then there are other sales and distribution costs to be taken into account.

Because of the variables, MLCSL/AHDB do not calculate an indicative overall average unit cost of slaughter (which covers all operating costs); too many variables are involved, particularly relating to the amount, cost and efficiency of labour; and overhead costs; the extent to which admin./accountancy costs are related to other parts of a business, and debt repayment levels. The basics outlines here can be used to build up a costing model dependent on the individual circumstances.

It may be concluded that as for abattoirs of all sizes, the fundamental way of reducing unit costs of slaughter is to spread fixed costs over greater volumes; hence small abattoirs are at an inherent disadvantage in terms of low throughputs. The main way of mitigating this is to operate the facility as a 'cost centre' rather than 'profit centre' i.e. once the costs have been established, derive a cost of slaughter figure that is to be recovered from the stock processed.

Any recovery that can be made on 'fifth quarter' products, typically on skins and edible offals, can be used to offset the operating costs.

13. Cashflow

Assuming a 50% grant towards capital costs and at an annual throughput of 800 sheep, 100 cattle and 130 pigs, the abattoir makes a cash loss of between around £12,000 per annum.

The largest annual expenses are repayment of bank loan for the remaining 50% of capital cost, followed by wages and waste disposal.

This figure is based on the abattoir being open for 73 days (i.e., working at full capacity when open), paying staff on a daily rate (rather than salary) and sales of skins.

Assumptions are listed in Appendix 4. Cash flow for the above scenario is provided in Appendix 5.

What if?

1. 100% grant towards capital cost

If funding could be obtained for the entire capital cost of the project, then at the above throughput, a surplus of around £3,000 would be made each year.

2. Increasing slaughter charge

Increasing charges by 10% brings in around £3000 additional income, reducing loss to around £7,500 per annum.

3. Increasing Throughput

If the abattoir is run at maximum capacity, in operation every weekday and with salaried staff, the abattoir runs at a small loss of around £300 per annum. At maximum capacity, throughput would be 4000 sheep, 200 cattle and 130 pigs.

4. Other concessions

Zero rates would save £3,500 per annum.
The cost of waste disposal would be dramatically reduced if there were a derogation allowing waste to be sent to landfill or if an incinerator is built in Portree.

5. Low throughput

If 50 cattle, 400 sheep and 40 pigs are slaughtered, the annual loss is around £15,000 per annum.

Conclusion

The simplest scenario to allow the abattoir to operate at a slight profit is for 100% funding of the capital cost. Repayment of a loan is the second largest cost after wages, and a burden that does not change with throughput.

Increasing slaughter charges by 10% doesn't make the abattoir profitable and may have a detrimental effect if customers go elsewhere. Some running costs might be reduced through negotiations, e.g. with the Highland Council but it is unlikely that the cost of waste disposal will reduce or alternatives found, certainly in the short term.

Maintaining throughput is important – at half the predicted rate, losses increase by at least a third. In practice, losses are likely to be much higher unless the facility is closed for 9 months of the year and throughput is at an optimum when open.

14. Staffing and management

The plant could be operated by no more than three staff, working on a part time basis. One staff member would be a working manager, two of the staff would be slaughtermen and one staff member would carry out administration.

In practice, at the smallest level of resources, it is envisaged that the maximum kill would be achieved over three days operation (e.g. with cattle being killed on day one, sheep on day two and pigs on day three).

With the correct skills two staff should be able to handle the above kills in a morning with clean down in the afternoon. Sorting and any cutting of carcases before despatch could be carried out in between days and on the fourth/fifth days.

Administration duties would include taking bookings, invoicing and banking, paying bills and wages, liasing with the OV and authorities, arranging sampling, arranging waste and hide collection, postage etc.

Veterinary Inspections

The three veterinary businesses on the Isle of Skye all expressed willing to do the necessary inspections ante and post mortem, with two of the vets having done OV inspections in the past. Both would require to update their red meat OV certificates, and attend annual CPD courses. It might be possible to have ante-mortem inspections one day and combine ante and post on the second morning to reduce cost.

15. Possible funding routes

Funding streams that could provide contributions towards a capital cost of circa £600,000 were investigated.

The Food Processing, Marketing and Co-operation (FPMC) Grant Scheme funded this report. The FPMC scheme is part of the Scottish Rural Development Programme and is not open to new applications. The scheme provides assistance to develop food processing facilities to ensure more value is retained by both farmers and growers, supporting a successful and prosperous food processing industry. Support is available towards tangible costs of projects such as the erection of new buildings, the refurbishment of old buildings, the purchase of new (and second-hand where permissible) equipment, waste treatment minimisation and disposal, computer hardware and software and directly related professional/technical costs such as architects', engineers' and consultants' fees. Variable rates of funding are awarded.

Big Lottery Fund: Investing in Communities: Growing Community Assets
This fund is designed to support communities to take more control and influence over their own future through ownership of assets. Funding can be made available to projects that delivery the folowing 4 outcomes:

- Communities work together to own and develop local assets
- Communities are sustainable and improve their economic, environmental and social future through the ownership and development of local assets
- Communities develop skills and knowledge through the ownership and development of local assets
- Communities overcome disadvantage and inequality through the ownership and development of local assets.

Funds are available between £10,000 and £1,000,000.

The **Esmée Fairbairn Foundation** has a long standing interest in food and in its impact on people, communities and the wider environment. The Food Strand supports work that demonstrates the important role food plays in wellbeing and that connects people to the food that they eat. As part of this primary aim the Strand seeks to bring about more sustainable food production and consumption policies and practices.

The Strand is open to both large-scale strategic interventions and innovative local work. Its budget is £5million over three years, from January 2013 although it may be extended for a further two years pending a review during 2015.

Esmée Fairbairn will support work that:
• delivers high quality, innovative local food projects, particularly those that can become financially sustainable and are replicable.
• establishes closer links between NGOs, community groups, producers, retailers and industry in order to create more coherent food sector.
• improves people's understanding of the place that food plays in our lives and shows the role that access to good quality food can have on wellbeing.
• leads to the prioritisation of sustainable food production and consumption in local and national policy, practice and decision-making.
• increases demand for better quality food from sustainable sources, for example, through changes to public procurement.

Esmée Fairbairn will prioritise applications that have the following:
• Clear and practical delivery plans
• Methods for measuring impact
• The capacity to make a lasting impact on policy or practice
• the credibility and commitment to make alliances with other food related organisations
Esmée Fairbairn particularly welcome projects that also demonstrate innovation.

The European commission's **INTERREG IVB North West Europe Programme** funded projects which contributed to cohesive and sustainable development within North-West Europe. The 2007 to 2013 fund has closed, but the 2014 to 2020 fund will be announced later this year. This fund might be a good opportunity to learn from other countries with rural abattoirs or develop an abattoir in consultation with others.

16. Assessment of different ownership structures

The choices for ownership are numerous. The main issues are legal form of the abattoir business, whether to be charitable and whether to be a social enterprise. A summary is provided below; full details and a table summarising pros and cons is provided in Appendix 6.

Legal Status
The legal format of the business is important, as there are different rights and responsibilities with each type. The main types are Sole Trader, Partnership, Limited Company, Limited Liability Partnership (LLP) or Community Interest Company (CIC).

Social Enterprise
The term “Social Enterprise” describes the purpose of a business, not its legal form. It is defined as “a business with primarily social objectives whose surpluses are principally reinvested for that purpose in the business or in the community, rather than being driven by the need to maximise profit for shareholders and owners".

Community Interest Companies (CICs)
Community interest companies (CIC) are a type of limited company designed specifically for those wishing to operate for the benefit of the community rather than for the benefit of the owners of the company. This means that a CIC cannot be formed or used solely for the personal gain of a particular person, or group of people.

Industrial and provident society
An Industrial and Provident Society is a legal structure that can be either a Co-operative or a Society for the Benefit of the Community.
Co-operatives are run for the mutual benefit of their members, with any surplus usually being ploughed back into the organisation to provide better services and facilities.
Societies for the Benefit of the Community provide services for people other than their members.

Charitable Status
If the abattoir benefited the public and obtained charitable status, it would be able to register with Her Majesty’s Revenue & Customs (HMRC) for Gift Aid and other tax relief, and may qualify for rates relief from local authorities.

Conclusion
A social enterprise would be best placed for winning many of the available grants, and would allow reinvestment of any profit back into the running of the facility or into the local community. A co-operative structure would give local users a say in the running of the abattoir, which might encourage continuing support if users have a stake. A co-operative approach would also mean that individuals could benefit from purchasing power by buying in bulk, or selling power by joint marketing.
The Scottish Agricultural Organisation Society (SAOS) provides information, advice and specialist development support to farmers and food chain companies, that decide to work co-operatively or in joint venture to achieve their aims and objectives. SAOS receives a core grant from the Scottish Government to support the development of co-operation amongst farmers in Scotland.

SAOS can provide model rules and field support for the formation of a trading co-operative. It can also advise on forming a Society for the Benefit of the Community under Co-ops UK model rules.

17. Development timetable

In order to progress the provision of an abattoir for Skye and Lochalsh, the following actions are recommended:

Summer 2013	Set up a steering group to take the project forward (e.g. the current SCF abattoir working group, plus any other interested individuals).
	Steering group visit to other small scale abattoirs, e.g. Islay - funding application made to facilitate study tour.
	Ask SAOS for help with setting up a legal form for the abattoir.
	Set up webpage (hosted by SCF?) to maintain profile with producers and present plans (and allay fears) to local community.
	As a Delivery and collection service may be required for a local abattoir, apply for funding to develop a better delivery, collection and distribution service from the Dingwall/Lochmaddy/Grantown abattoirs in the interim.
Winter 2013/14	Start the planning process by completing an online pre-application. Applications could be put in for two different sites simultaneously.
	Arrange training courses in technical skills such as feeding for finishing, use of EBVs, assessment and grading plus training in marketing skills for producers interested in developing direct sales.
	Carry out a robust study of consumer attitudes, predicted market, outlets and producer commitment including how much producers are prepared to pay. This will be necessary to back up any grant application.
	Apply for funding to several sources.
Spring 2014	Liase with AHDB regarding building plans and send out to tender.

Appendix 1 Review of previous proposals

There have been many studies on abattoir provision in the UK and for Skye and Lochalsh.

A summary of the most pertinent to this study is below:

8. "Red Meat Processing and Marketing in the Highland and Islands" carried out by PMS in 2002 reviewed the provision of slaughterhouse and processing facilities in the Highlands & Islands region. The reporters identified a lack of facilities in the Lochaber/Skye area. At that time, the reporters identified that finding supplies of finished lamb was possible, but that the volume (around 4000 lambs) required to meet local demand was relatively low. Noted were the difficulties that the local meat selling initiatives had encountered, such as freight and killing costs, lack of commitment from customers and producers, lack of scale and seasonality.

   The conclusions of the report were that increased connection with the market was required, ie, better marketing knowledge so that producers knew what to produce, for whom; co-operation was required, both in production and processing; that subsidy on headage meant producers were less market driven; that the slaughter trade is barely profitable and fraught with issues such as waste disposal, so that to be viable, abattoirs had to have throughput.

9. "Establishment of a local meat supply chain in Skye and Lochalsh" was prepared for the S&L Meat Supply Group in 2005. The reporters found that the lack of abattoir facilities was only part of the story and that increased supply, processing facilities and skills were also required for the meat supply chain to work. Recommendations from this report led onto further work, and a marketing group was established (Skye & Lochalsh Meat Supply Group).

10. "Lamb finishing on the Western Isles": The conclusion of this study was that finishing of lambs (rather than selling store) to a suitable standard for butcher and supermarket sales outlets, was feasible. High standards of stockmanship, careful control of costs and exacting selection of stock were required. The price differential between store and finished also determined whether it was cost effective for the producer.

    Although the study was carried out in 2000, the points raised are relevant. Many respondents to the questionnaire on developing a Skye & Lochalsh abattoir made the point that this is a store animal production area. However, it is entirely feasible for some finishing of lambs to take place.

    - Lamb finishing feasible technically
    - Supply feasible Aug to May
    - High value of finished lamb is required to cover costs

11. In 2003, a "Feasibility study for a Lochaber slaughterhouse" was published. This feasibility study was commissioned by Highland Council, Lochaber Enterprise and Lochaber Agricultural Group to assess the feasibility of constructing and operating a viable slaughterhouse in the Lochaber area. The facility would be to handle lambs and ewes only. The proposed slaughterhouse had a capacity of over 4,000 lambs

per annum but would likely operate on a seasonal basis for 25 weeks (End July – Dec) and kill only on one day per week.

It was estimated to build a licensed slaughterhouse on the Lochaber 'Rural Complex' site would cost approximately £450,000. That was the cheapest option for the size of plant required to handle the expected volume of lamb and cast ewes in late summer through to the end of December, utilising the benefits of a shared site with many facilities already established. A comparable facility in a green field site would have cost an estimated £555,000. To make the facility dual purpose for cattle would have cost an additional £65,000, and an extra £24,000 for pigs.

The 10-year cashflow for the proposed slaughterhouse showed a closing deficit bank balance of -£390, 132. The conclusions were that at the expected throughput of lambs, operating for half of the year, the slaughter house was uneconomic and unviable over the 10 years costed.

12. The "Feasibility Study for a Proposed Skye & Lochalsh Abattoir, SAC, November 1994" was commissioned by the Skye & Lochalsh Abattoir Services Group (comprising the then SCU and the NFUS) believing that the best option for re-establishing a local abattoir was to build a new facility for sheep at the Auction Mart's premises on the outskirts of Portree. The facility would meet both local consumption and tourist demand, supplying Skye branded lamb to shops and hotels on the West Coast.

    A survey of 34 producers established general support with 90% of respondents prepared to increase the production of finished livestock if there was an abattoir located on Skye. A survey of meat outlets indicated that both local supermarkets and some local butchers were supportive in principle. Local and tourist lamb consumption in Skye & Lochalsh was then estimated at 2,300 carcases per year. The estimated cost for an EEC compliant low throughput abattoir with a 7,000 lamb capacity was £125,000. With grant aid for build costs, the abattoir could only be expected to breakeven at best in the short term.

13. "Scotland's Island Slaughterhouses – Crucial links in our rural infrastructure" in 2012 reported on small island facilities, concentrating on Mull and Islay. To break even, the Islay abattoir required circa £20,000 per annum additional income. The study looked at opportunities to reduce costs, such as removing some of the regulatory burdens.
    Conclusions were that small facilities are not profit generating and that it is a mistake to think they can be; that cost overheads are too high for small scale plants. Therefore, such facilities should be viewed as critical parts of rural infrastructure and supported as such.

    Recommendations included further investigation into derogations for waste disposal; a risk-based approach to regulations; an 'Island Abattoir Fund' for unexpected costs/cover; and a meeting of all those involved in island abattoirs to explore issues and best practice.

14. The report 'Plugging the Leaks' prepared for HIE Skye & Wester Ross in 2006 looked at the impact that could be made on the wealth of the local economy if customers were to buy fresh and primary produce such as meat, vegetables, fish, eggs, bread and fruit from local businesses as opposed to national retailers.

A questionnaire about shopping habits for fresh and primary food produce completed by 125 residents to Skye and Lochalsh showed that there was both a lack of awareness and a lack of opportunity to purchase from local businesses.

Modelling demonstrated that every one pound spent with local businesses was worth between £1.44 and £2.40 to the local economy. Should, for example, every one of the 12,536 residents in Skye and Lochalsh, spend £2.50 per week on primary and fresh produce purchased from local businesses instead of from national retailers (i.e. £1.63m a year), this would result in an additional £1.35m circulating in the local economy each year.

In 2006, questionnaire results showed 68% of respondents purchased meat form the co-op, 34% from the butcher, and the remainder from markets and local producers.

Appendix 2 Suitability of proposed sites and planning constraints

Assessment of Potential Sites for the New Abattoir					
	Site 1.	**Site 2**	**Site 3**	**Site 4/Not Appropriate**	**Site 5/Not appropriate**
Short Name for Site	**Balmacara**	**Broadford**	**Portree**	**Kyleakin**	**Drynoch**
1. Location	Balmacara, Kyle	Broadford Industrial	Portree Refuse Centre	Kyleakin Quarry	North Drynoch
Owner of site	National trust	Highlands and Islands Enterprise	Local authority	Local authority	Local authority
Size of site	0.15ha	0.20ha	0.20ha	0.20ha	0.20ha
Location vis a vis Skye and Lochalsh area	Mainland Lochalsh	First centre on island after Skye bridge , on existing industrial estate	Near centre of Skye, on existing area allocated for waste disposal/recycling	Disused quarry close to Skye Bridge, Kyleakin	Disused tip near Drynoch, west side of Skye. Situated of the A863
Distance from A 87	Sited just off this road	Sited just off this road	Sited just off this road	Sited just off this road	6.5 miles from A87
Existing Groundworks/and land type	Flat – brown field site	Flat – brown field site	Flat – brown field site	Flat – brown field site	Flat – brown field site
Does the site have a natural slope Could one be constructed	No	No	No	No	Yes

Short Name for Site	**Balmacara**	**Broadford**	**Portree**	**Kyleakin**	**Drynoch**

Existing planning designation	No Planning Designation	Industrial	Industrial	Industrial	Industrial
Proximity to other buildings/habitation please indicate whether industrial/domestic	Nearby old estate gate house – thought to be soon up for private sale. New carpentry business being constructed behind the site	On existing industrial estate – no nearby businesses that would affect the abattoir. Residential developments probably too far away to be an issue	On existing waste collection/disposal/recycling area – no nearby buildings – residence or business other than connected with the existing waste collection/disposal/ recycling activity	Near existing working quarry - no nearby businesses that would affect the abattoir. Residential developments probably too far away to be an issue	No nearby businesses that would affect the abattoir. Residential developments probably too far away to be an issue
Level of screening on site	None currently	None currently	Gorse/heather covered mound hides site form A 87	None currently	None currently
Security potential of existing site	Could be developed	Good	Very Good	Could be developed	Good
Relationship of site to landscape/environmental features significant to the project	The location of the site in an area of ONB could be an issue for some if an abattoir was to be built here	The location of the site on an existing industrial estate should give rise to less possible objections	The location of the site on an area already being used for waste collection/disposal/recycling should give rise to less possible objections	The location of the site on an old quarry, and off the road, should give rise to less possible objections	The location of the site on an old disposable site, and off the road, should give rise to less possible objections
Likely level of objection to change of use/planning from - 1 strong potential for objections to 10 unlikely to be strong objections	*5*	*7*	*9*	*9*	*8*

Site 1 Balmacara

Site 2 Broadford

Site 3 Portree

Short Name for Site	**Balmacara**	**Broadford**	**Portree**	**Kyleakin**	**Drynoch**
2. Existing services					
Water	Could be connected from nearby source	Could be connected from nearby source	Could be connected from nearby source	Potentially available from some distance away	Potentially available from some distance away
3 Phase electricity	Potentially available from some distance away	Should be available from connections ton the industrial estate	Should be available from connections to the waste collection/disposal/recycling area	Potentially available from some distance away	Potentially available from some distance away
Gas	No	No	No	No	No
Vehicular access	Good	Good	Good	Poor	Poor
Likely level of cost involved in connecting to existing services- from 1 high cost to 10 low cost	*4*	*7*	*7*	*3*	*4*

Short Name for Site	**Balmacara**	**Broadford**	**Portree**	**Kyleakin**	**Drynoch**
3. Processing of Waste & Effluent					
Does the site currently connect to public dirty water systems	No	Should be connections on the industrial estate	Should be connections to the nearby sewage waste processing area	No	No
Would an additional dirty water treatment plant be necessary on this site	Possibly	Possibly	Possibly	Possibly	Possibly
Would a dirty water treatment plant be capable of being constructed on this site	Site is very small	Yes	Yes	Yes	Yes
Does this site have the capacity for a reed bed system	No	No	Possibly	Possibly	Possibly
Increased lairage for stock	No	No	Possibly at the nearby livestock market	No	No
Likely level of objections on environmental grounds from 1 high level of objection to 10 low level of objection	*4*	*7*	*8*	*7*	*5*

Short Name for Site	**Balmacara**	**Broadford**	**Portree**	**Kyleakin**	**Drynoch**
4. **Does the site have the potential for future growth and development of:**					
Further processing capacity	Limited	Yes	yes	Yes	Limited
A retail unit	Site more suitable for cutting plant/retail outlet	Possibly	No	Possibly	Possibly
A distribution hub	Site suitable for cutting plant/chillers – or livestock collection centre	Possibly	Possibly	Possibly	Possibly
A renewable energy project e.g. wind turbine or methane digester	Limited site – PV possibilities for roof	Possibly PV on roof and WT	Possibly PV on roof , WT and AD	Possibly PV on roof , WT and AD	Limited site – PV possibilities for roof
SAC/MLCSL Consulting assessment of the suitability based on the known facts about the site – on a scale of 1 to 10 (with 1 unsuitable to 10 very suitable)	**4**	**7**	**8**	**4**	**4**

Appendix 3 Land use and livestock statistics

Land use and livestock statistics for Skye and Lochalsh parishes 453, 458-464 and 763-765

Source :June 2012 Agricultural Census

	Total	
	Holdings	**Area/No**
Total barley	0	0.00
Total oats	*	*
Turnips and swedes for stockfeeding	7	0.54
Other crops	*	*
Total crops	214	62.22
Total fallow land	100	228.12
Total crops and fallow land	241	290.34
Grass under 5 years	348	323.60
Grass 5 years and older	1,339	12,656.78
Total crops and grass	1,497	13,270.72
Rough grazings	1,229	122,451.57
Woodland	273	10,846.19
Other land (roads, yards, buildings)	627	9,574.28
Total land	2,289	156,142.76
Total beef cows	281	3,059
Total bulls	114	140
Other male cattle 2 years old and over	30	81
Other male cattle under 2 years old	46	99
Male cattle under 1 yr	239	1,294
Other female cattle 2 years old and over: not for breeding	16	25
Other female cattle under 2 years old: not for breeding	12	39
Female cattle under 1 yr	239	1,277
Other cattle	249	1,218
Total cattle	352	7,232
Store cattle sold under 1yr	167	1,583
Store cattle sold over 1yr	67	266
Store cattle bought under 1yr	24	63
Store cattle bought over 1yr	25	84
Ewes for breeding	532	66,234
Rams for service	392	2,057
Other sheep 1 year old and over; for breeding	443	15,068
Other sheep 1 year old and over: not for breeding	198	1,709
Lambs	524	50,933
Total sheep	613	136,001
Total breeding sows	16	42
Total pigs for fattening	34	138
Other sows , gilts and boars	6	12
Total pigs	43	192
Deer	0	0

* To prevent disclosure of information about individual holdings, entries relating to less than five holdings, or those where two or less account for 85% or more of the information, have been replaced with an asterisk. Additionally, some of the data in the tables may not, by itself, be disclosive, but the information has also been withheld to prevent disclosure by deduction.

Statistics prepared by Scottish Government RESAS Statistics(Agriculture)

Appendix 4 Cash flow Assumptions

A five-year cashflow was prepared for the proposed micro abattoir.

The assumptions used in the cashflow are as follows:

a) Throughput of 100 cattle, 800 sheep and 130 pigs.
b) Throughput remains constant for the 5 years.
c) The plant is open for 73 days and works at maximum capacity when open.
d) Slaughter charges are £120 for cattle, £18 for sheep and £41 for pigs.

Seasonal Throughput

Annual number	Type		Charge	Total £	April - Jun	July - Sep	Oct -Dec	Jan - March
100.00	Cattle	@	£120	£12,000	25%	25%	25%	25%
800.00	Sheep	@	£18	£14,320		50%	40%	10%
130.00	Pigs	@	£41	£5,314	25%	20%	30%	25%

e) Dressed carcasses are provided.
f) Skins are stored and sold at £30 for cattle and £5 for sheep. Petfood sales are not included.
g) Labour: a manager/slaughterman is paid for days worked at £18/hr; a slaughterman is paid for days worked at £12/hr and admin paid for hours worked at £10/hour.
h) Waste is collected by an Aberdeen based fallen stock company at a cost of £130 per tonne.
i) Meat inspection charges: it is difficult to predict the exact charge and the FSA cannot give a definitive cost. For budgetary purposes the following figures, which are based on the EU minimum, have been used.
   Cattle - £4.30
   Pigs - £0.86
   Sheep - £0.22
   These rates include the cost of the OV (ante and post mortem inspection) plus the related meat inspection service at the plant and travel time.
j) HACCAP etc tests at £2/animal.
k) QMS levies as detailed in report.
l) Maintenance and repairs at £750 per annum.
m) Electricity at £14/day.
n) Laundry and cleaning chemicals at £4/day.
o) Office expenses at £3/day plus phone line.
p) Insurance estimate at £1100 to insure the building, stock, staff and third party liability.
q) Rates pro-rata from similar businesses at £3,500 per annum.
r) Accounting charge of £700 per year.
s) Miscellaneous £1,000 per year.
t) Bank interest on overdraft at 5% above base
u) Bank loan: 50% of the capital cost is covered by grant with the remaining £285,000 borrowed on a bank loan for 20 years charged at 3%

Appendix 5 Cashflow

PROJECTED CASHFLOW YEAR 1			YEAR	2015/16	
Year 1	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**TOTAL**
Enter Months per Qtr	April - Jun	July - Sep	Oct -Dec	an - March	
INCOME	**£**	**£**	**£**	**£**	**£**
Non-food @ standard VAT	750	2750	2350	1150	7000
Slaughter fees @ zero VAT	6000	11400	11400	7200	36000
Trading Income @ exempt VAT					
Other income					
Loan Capital/Personal capital	285300				285300
Grant Receipts	285300				285300
VAT on Outputs	131	481	411	201	1225
VAT Refunds					
TOTAL INCOME (a)	577481	14631	14161	8551	614825
EXPENDITURE VATable items	**£**	**£**	**£**	**£**	**£**
Capital Expenditure - buildings	561600				561600
Planning, connections	9000				9000
Light/Heat/Power	170	324	324	204	1022
Repairs/Renewals				750	750
Waste Disposal	1053	2001	2001	1264	6318
Laundry	49	92	92	58	292
Telephone/Stationery	169	321	321	203	1013
Advertising/Marketing	200				200
Vet & Meat Inspections	377	717	717	453	2263
Misc. (boxes, postage etc.)	137	261	261	165	824
VAT on inputs					
VAT payment		131	481	411	1024
Non VATable items					
Salaries/Wages/PAYE	3825	7268	7268	4590	22951
Insurances	1206				1206
Rent/Rates/Water	3500				3500
Loan Repayments (capital)	3566	3566	3566	3566	14265
Loan Repayments (interest)	107	107	107	107	428
Bank & Leasing charges	30	40	40	35	145
Capital items (no VAT or refund)					
TOTAL EXPENDITURE (b)	584990	14827	15177	11806	626800
CASH FLOW FOR PERIOD (a-b)	-7508	-196	-1016	-3255	-11975
OPENING BANK BALANCE +/-		-7560	-7861	-8992	
Bank interest	52	105	115	146	418
CLOSING BANK BALANCE +/-	-7560	-7861	-8992	-12393	

PROJECTED CASHFLOW YEAR 2			YEAR	2016/17	
Year 2	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**TOTAL**
Enter Months per Qtr	April - Jun	July - Sep	Oct -Dec	an - March	
INCOME	**£**	**£**	**£**	**£**	**£**
Trading Income @ standard VAT	765	2805	2397	1173	7140
Trading Income @ zero VAT	6120	11628	11628	7344	36720
Trading Income @ exempt VAT					
Other income					
Loan Capital/Personal capital					
Grant Receipts					
VAT on Outputs	134	491	419	205	1250
VAT Refunds					
TOTAL INCOME (a)	7019	14924	14444	8722	45110
EXPENDITURE VATable items	**£**	**£**	**£**	**£**	**£**
Capital Expenditure - buildings					
Planning, connections					
Light/Heat/Power	174	330	330	208	1042
Repairs/Renewals				765	765
Waste Disposal	1074	2041	2041	1289	6444
Laundry	50	94	94	60	298
Telephone/Stationery	172	327	327	207	1033
Advertising/Marketing	204				204
Vet & Meat Inspections	385	731	731	462	2308
Misc. (boxes, postage etc.)	140	266	266	168	840
VAT on inputs					
VAT payment		134	491	419	1044
Non VATable items					
Salaries/Wages/PAYE	3902	7413	7413	4682	23410
Insurances	1230				1230
Rent/Rates/Water	3570				3570
Loan Repayments (capital)	3566	3566	3566	3566	14265
Loan Repayments (interest)	107	107	107	107	428
Bank & Leasing charges	31	41	41	36	148
Capital items (buildings non VAT)					
TOTAL EXPENDITURE (b)	14604	15050	15407	11969	57030
CASH FLOW FOR PERIOD (a-b)	-7585	-126	-963	-3246	-11920
OPENING BANK BALANCE +/-	-12393	-20194	-20599	-21852	
Bank interest	216	279	290	323	1108
CLOSING BANK BALANCE +/-	-20194	-20599	-21852	-25421	

PROJECTED CASHFLOW YEAR 3			YEAR	2017/18	
Year 3	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**TOTAL**
Enter Months per Qtr	April - Jun	July - Sep	Oct -Dec	an - March	
INCOME	**£**	**£**	**£**	**£**	**£**
Trading Income @ standard VAT	780	2861	2445	1196	7283
Trading Income @ zero VAT	6242	11861	11861	7491	37454
Trading Income @ exempt VAT					
Other income					
Loan Capital/Personal capital					
Grant Receipts					
VAT on Outputs	137	501	428	209	1274
VAT Refunds					
TOTAL INCOME (a)	7159	15222	14733	8897	46012
EXPENDITURE VATable items	**£**	**£**	**£**	**£**	**£**
Capital Expenditure - buildings					
Planning, connections					
Light/Heat/Power	177	337	337	213	1063
Repairs/Renewals				780	780
Waste Disposal	1095	2081	2081	1315	6573
Laundry	51	96	96	61	304
Telephone/Stationery	176	334	334	211	1053
Advertising/Marketing	208				208
Vet & Meat Inspections	392	746	746	471	2354
Misc. (boxes, postage etc.)	143	271	271	171	857
VAT on inputs					
VAT payment	205	137	501	428	1270
Non VATable items					
Salaries/Wages/PAYE	3980	7562	7562	4776	23878
Insurances	1255				1255
Rent/Rates/Water	3641				3641
Loan Repayments (capital)	3566	3566	3566	3566	14265
Loan Repayments (interest)	107	107	107	107	428
Bank & Leasing charges	31	42	42	36	151
Capital items (buildings non VAT)					
TOTAL EXPENDITURE (b)	15028	15278	15642	12134	58082
CASH FLOW FOR PERIOD (a-b)	-7869	-55	-909	-3238	-12070
OPENING BANK BALANCE +/-	-25421	-33693	-34212	-35597	
Bank interest	404	464	477	512	1856
CLOSING BANK BALANCE +/-	-33693	-34212	-35597	-39347	

PROJECTED CASHFLOW YEAR 4		YEAR	2018/19		
Year 3	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**TOTAL**
Enter Months per Qtr	April - Jun	July - Sep	Oct -Dec	Jan - March	
INCOME	**£**	**£**	**£**	**£**	**£**
Trading Income @ standard VAT	796	2918	2494	1220	7428
Trading Income @ zero VAT	6367	12098	12098	7641	38203
Trading Income @ exempt VAT					
Other income					
Loan Capital/Personal capital					
Grant Receipts					
VAT on Outputs	139	511	436	214	1300
VAT Refunds					
TOTAL INCOME (a)	7302	15527	15028	9075	46932
EXPENDITURE VATable items	**£**	**£**	**£**	**£**	**£**
Capital Expenditure - buildings					
Planning, connections					
Light/Heat/Power	181	343	343	217	1085
Repairs/Renewals				796	796
Waste Disposal	1117	2123	2123	1341	6704
Laundry	52	98	98	62	310
Telephone/Stationery	179	340	340	215	1074
Advertising/Marketing	212				212
Vet & Meat Inspections	400	760	760	480	2401
Misc. (boxes, postage etc.)	146	277	277	175	874
VAT on inputs					
VAT payment	209	139	511	436	1296
Non VATable items					
Salaries/Wages/PAYE	4059	7713	7713	4871	24356
Insurances	1280				1280
Rent/Rates/Water	3714				3714
Loan Repayments (capital)	3566	3566	3566	3566	14265
Loan Repayments (interest)	107	107	107	107	428
Bank & Leasing charges	32	42	42	37	154
Capital items (buildings non VAT)					
TOTAL EXPENDITURE (b)	15255	15510	15881	12304	58950
CASH FLOW FOR PERIOD (a-b)	-7952	17	-853	-3229	-12018
OPENING BANK BALANCE +/-	-39347	-47895	-48537	-50063	
Bank interest	596	658	673	711	2638
CLOSING BANK BALANCE +/-	-47895	-48537	-50063	-54003	

PROJECTED CASHFLOW YEAR 5		YEAR	2019/20		
Year 3	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**TOTAL**
Enter Months per Qtr	April - Jun	July - Sep	Oct -Dec	Jan - March	
INCOME	**£**	**£**	**£**	**£**	**£**
Trading Income @ star	812	2977	2544	1245	7577
Trading Income @ zero	6495	12340	12340	7794	38968
Trading Income @ exempt VAT					
Other income					
Loan Capital/Personal capital					
Grant Receipts					
VAT on Outputs	142	521	445	218	1326
VAT Refunds					
TOTAL INCOME (a)	7448	15837	15329	9256	47871
EXPENDITURE VATabl	**£**	**£**	**£**	**£**	**£**
Capital Expenditure - buildings					
Planning, connections					
Light/Heat/Power	184	350	350	221	1106
Repairs/Renewals				812	812
Waste Disposal	1140	2165	2165	1368	6838
Laundry	53	100	100	63	316
Telephone/Stationery	183	347	347	219	1096
Advertising/Marketing	216				216
Vet & Meat Inspections	408	776	776	490	2449
Misc. (boxes, postage	149	282	282	178	892
VAT on inputs					
VAT payment	214	142	521	445	1322
Non VATable items					
Salaries/Wages/PAYE	4141	7867	7867	4969	24843
Insurances	1305				1305
Rent/Rates/Water	3789				3789
Loan Repayments (cap	3566	3566	3566	3566	14265
Loan Repayments (inte	107	107	107	107	428
Bank & Leasing charge	32	43	43	38	157
Capital items (buildings non VAT)					
TOTAL EXPENDITURE (	15487	15747	16125	12476	59835
CASH FLOW FOR PERI	-8038	91	-797	-3220	-11964
OPENING BANK BALA	-54003	-62838	-63611	-65288	
Bank interest	798	863	880	920	3461
CLOSING BANK BALAN	-62838	-63611	-65288	-69428	

Appendix 6 Ownership structures

Charitable Status

A charity in Scotland is an organisation which is entered on the Scottish Charity Register. An organisation can only become a charity if it meets the 'charity test', meaning that it must show it has only charitable purposes and benefits the public. The Office of the Scottish Charity Regulator (OSCR) decides whether to grant an organisation charitable status and to enter it on the Register.

Charities may register with Her Majesty's Revenue & Customs (HMRC) for Gift Aid and other tax relief, and may qualify for rates relief from local authorities.

Charities must keep accounts and submit them to OSCR.

Social Enterprise

The term "Social Enterprise" describes the purpose of a business, not its legal form.

It is defined (by Government) as "a business with primarily social objectives whose surpluses are principally reinvested for that purpose in the business or in the community, rather than being driven by the need to maximise profit for shareholders and owners".

At the simplest level, a social enterprise can be a sole trader who has decided to donate the majority of the profit he or she makes to a good cause. Social enterprises may however take a variety of legal forms and the process for establishing one will depend on which legal form is chosen. Commonly used legal forms include Limited company, Community Interest Company (CIC), and Industrial and Provident Society. However some social enterprises may also take on an unincorporated legal form such as an unincorporated association or a trust (or a combination of the two).

Community Interest Companies (CICs)

Community interest companies (CIC) are a type of limited company designed specifically for those wishing to operate for the benefit of the community rather than for the benefit of the owners of the company. This means that a CIC cannot be formed or used solely for the personal gain of a particular person, or group of people.

CICs can be limited by shares, or by guarantee, have a statutory "asset lock" to prevent the assets and profits being distributed, except as permitted by legislation. This ensures the assets and profits are retained within the CIC for community purposes, or transferred to another asset-locked organisation, such as another CIC or charity. CIC structure provides a clear signal to investors that the enterprise operates for the benefit of the community, and that this social purpose is protected by proportionate regulation.

The process for setting up a CIC is relatively simple. It is essentially the same as that for a limited company except those wishing to register a CIC must also submit a second form comprising a community interest statement, providing evidence that the CIC will meet the

community interest test defined in law. This statement is passed by Companies House, which manages the Registration process, to the CIC Regulator prior to registration for review and decision. The CIC Regulator also provides a series of model articles of association for prospective CICs to adopt "off the shelf" to ensure that the process is as straightforward as possible.

Limited companies

The most common incorporated form for business is the private company - limited either "by shares", or alternatively "by guarantee". The limited company is subject to stricter regulatory requirements than unincorporated forms: greater accountability and transparency to shareholders and to the public is the price to pay for the benefit of limited liability. The limited company form offers flexibility for various types of business, including social enterprises.

Co-operatives

Co-operatives are businesses owned and run by and for their members, whether they are customers, employees or residents. As well as giving members an equal say and share of the profits, co-operatives act together to build a better world through co-operation.

Co‑operatives are trading enterprises, providing goods and services and generating profits, but these profits are not taken by outside shareholders as with many investor owned business - they are under the control of the members, who decide democratically how the profits should be used. Co-operatives use their profits for investing in the business, in social purposes, in the education of members, in the sustainable development of the community or the environment, or for the welfare of the wider community.

Community co-operatives:

Enterprises that are owned and controlled by people belonging to a particular community. This may be a geographical community or a community of interest. Normally they will carry out activities that are of benefit to the whole community.

Co-operative consortia:

Co-operatives formed by a number of independent businesses, organisations or individuals, and owned and controlled by them. The members enhance their trade or reduce costs by working together on key activities such as leasing premises, buying equipment or marketing the members' products and services.

Industrial and provident society

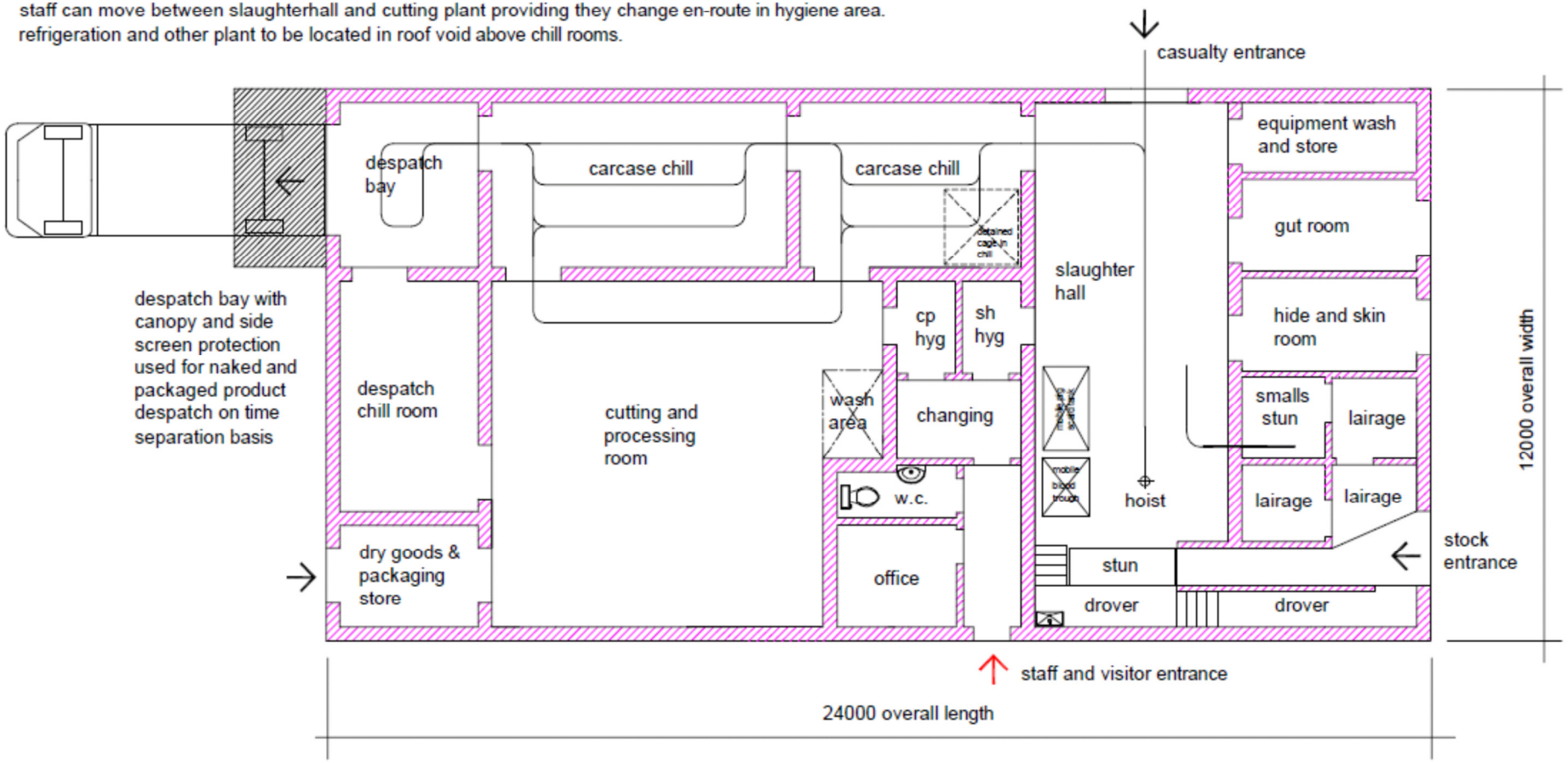
An Industrial and Provident Society is a legal structure that can be either a Co-operative or a Society for the Benefit of the Community. Both are registered under the Industrial and Provident Societies Act 1965. Co-operatives are run for the mutual benefit of their members, with any surplus usually being ploughed back into the

organisation to provide better services and facilities. Societies for the Benefit of the Community provide services for people other than their members. It is anticipated that some changes in the above two legal structures will take effect in April 2013 but these will not substantially affect their overall purpose.

Legal structure	Summary: most typical features	Ownership, governance and constitution	Is it a legal person distinct from those who own and/or run it?	Can its activities benefit those who own and/or run it?	Assets "locked in" for community benefit?	Can it be a charity and get charitable status tax benefits?
Unincorporated association	Informal; no general regulation of this structure; need to make own rules.	Nobody owns: governed according to own rules.	No: can create problems for contracts, holding property and liability of members.	Depends on own rules.	Would need bespoke drafting to achieve this.	Yes if it meets the criteria for being a charity.
Trust	A way of holding assets so as to separate legal ownership from economic interest.	Assets owned by trustees and managed in interests of beneficiaries on the terms of the trust.	No: trustees personally liable.	Trustees/ directors no, unless trust, court or Charity Commission permit.	Yes (if trust established for community benefit).	Yes if it meets the criteria for being a charity.
Limited company (other than Community Interest Company)	Most frequently adopted corporate legal structure; can be adapted to suit most purposes.	Directors manage business on behalf of members. Considerable flexibility over internal rules.	Yes; members' liability limited to amount unpaid on shares or by guarantee.	Yes (but no dividends etc to members if it is a company limited by guarantee).	Would need bespoke drafting in articles (which could be amended by members).	Yes if it meets the criteria for being a charity.
Community interest company (CIC)	New "off-the-peg" limited company structure for social enterprise with secure "asset lock" and focus on community benefit.	As for other limited companies, but subject to additional regulation to ensure community benefits.	Yes; members' liability limited to amount unpaid on shares or by guarantee.	Yes, but must benefit wider community as well. Can pay limited dividends to private investors.	Yes, through standard provisions which all CICs must include in their constitutions.	No, but can become a charity if it ceases to be a CIC.
Industrial & Provident Society (IPS) (Co-operative)	For bona fide co-operatives that serve members' interests by trading with them or otherwise supplying them with goods or services.	Committee / officers manage on behalf of members. One member, one vote (regardless of e.g. sizes of respective shareholdings).	Yes; members liability limited to amount unpaid on shares.	Yes, but should do so mostly by members trading with society, using its facilities etc, not as a result of e.g. shareholdings.	Would need bespoke drafting in articles (which could be amended by members).	No – would have to be constituted as community benefit type of IPS.
Industrial & Provident Society (IPS) (Community Benefit Society (BenComm))	Benefit community other than just own members and have special reason not to be companies.	Like Co-op type, but new legislation provides option of more secure form of asset lock.	Yes; members liability limited to amount unpaid on shares.	Must primarily benefit non-members; asset lock applies.	Yes (asset lock only survives dissolution if new statutory form of asset lock adopted).	Yes if it meets the criteria for being a charity.
Charitable Incorporated Organisation (CIO)	First ready-made corporate structure specifically designed for charities.	Similar to company but with different terminology (e.g. for "directors" read "charity trustees").	Yes; members either have no liability or limited liability.	Members: no. Charity trustees: only if constitution, court or Charity Commission permit.	Yes.	Cannot be anything but a charity, and must meet the criteria for being a charity.

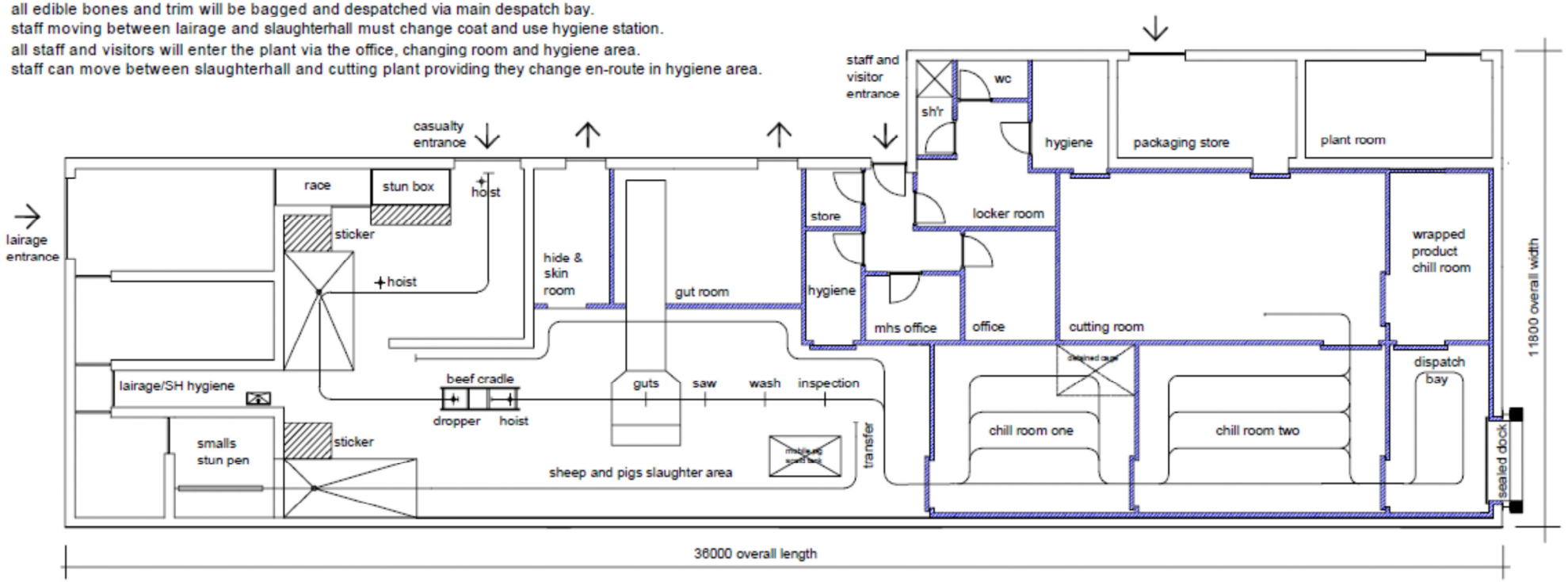
Appendix 7 Abattoir Designs

notes
weekly throughput - 5 cattle, 20 sheep and 10 pigs.
condemned product will be locked in sealed bins and removed via the gut room.
all edible bones and trim will be bagged and despatched via main despatch bay.
staff moving between lairage and slaughterhall must change coat and use hygiene station in drovers area.
all staff and visitors will enter the plant via the office, changing room and hygiene area.
staff can move between slaughterhall and cutting plant providing they change en-route in hygiene area.
refrigeration and other plant to be located in roof void above chill rooms.



Proposed Small / Micro Abattoir 15th March 2013 Scale:NTS Drawn by JG

notes
weekly throughput - 10 cattle, 40 sheep and 20 pigs.
condemned product will be locked in sealed bins and removed via the gut room.
all edible bones and trim will be bagged and despatched via main despatch bay.
staff moving between lairage and slaughterhall must change coat and use hygiene station.
all staff and visitors will enter the plant via the office, changing room and hygiene area.
staff can move between slaughterhall and cutting plant providing they change en-route in hygiene area.



Proposed Small Abattoir

drawn: jg date: 06.03.13 scale: 1:100 or as printed

1m 0 1m 2m 3m 4m 5m 6m