Agenda Item 4: Slaughterhouse Waste Disposal

Chief Pleas Extraordinary Meeting 17th May 2016

This proposal is being brought to Chief Pleas at short notice because the method used until recently to dispose of slaughterhouse waste is no longer available. An informal agreement between a land-owner and the slaughterhouse operator has ended and an alternative is needed.

After the brief Paper in tonight's Agenda was written, a meeting was called between Agriculture, Public Health, Douzaine and Finance and Resources Committees to discuss what should be done.

The amount of waste material produced from the processes at the slaughterhouse had been looked into, I won't go into too much detail about the by-products - some of us may have just had our dinner – but after an average mixed process of lamb, pig and cattle, around half a tonne or 500 kg of material has to be disposed of. Also occasionally, whole animals have to be disposed of at end of life, including the large ones, horses and cattle.

The possible alternatives available for disposal were set out for consideration:

Past methods can no longer be used, for legal and environmental reasons. Even without legislation prohibiting tipping either on land or at sea, it would be wrong to consider these for the present or future, so this was quickly ruled out.

Burying of some waste isn't currently illegal here, but very careful consideration of possible pollution of any nearby water source. This would be far from ideal but could be a short term solution while implementing a longer term solution.

For information and comparison with elsewhere, in the UK it is permitted to bury pet animal remains including horses, but not remains of animals produced for food consumption. There are exceptional circumstances where that is permitted including in remote UK locations, The Isles of Scilly and Lundy Island are mentioned.

Shipping of animal waste to Guernsey was also discussed. Discussion with Guernsey States and Sark Shipping revealed that several dedicated Chilled Containers would be needed and very careful handling is necessary during transfer between containers to avoid contamination of other cargo. Further to that, costs were obtained from the Guernsey Abattoir for incineration. These proved very high, for instance disposing of a whole cattle carcass would cost £300 currently. Added to shipping cost, it was felt this was prohibitive and unaffordable for Sark farmers.

This left Incineration and after discussion, the consensus of the meeting was that Incineration was the best solution, and should be looked at further.

Discussion about a Mobile Incinerator ended with the conclusion that finding suitable locations to operate one would be difficult, the size of mobile models probably wasn't big enough and there was no real benefit in using the Incinerator around the Island

rather than putting the waste in suitable (leak and smell proof) containers and taking to the Incinerator.

Therefore, the decision was to look at a permanent site for a fixed incinerator of sufficient size to burn both batches of slaughter waste (up to about 500kg) and less regularly, disposal of whole cattle and horses.

The two options identified were the Les Laches sewage treatment site or the Harbour Quarry site. Both have advantages and disadvantages. Both would operate best if housed in some kind of shelter for operator comfort and safety and also for protection of the equipment. An on-site electricity and diesel supply is needed and ideally a water supply for cleaning. Any Development Control permissions required would be sought for the Installation.

Members of the Committees have done research and contacted Suppliers to find out what is available, what options are offered and importantly Prices and running costs, particularly Diesel fuel consumption. Conseiller Dunks has collated this information to allow comparison and I'd like to thank him for that work.

Four Companies that have suitable products and experience have been looked at so far.

We have not been able to select the best option from a particular supplier yet, but it is considered that the burning chamber should be large enough to take a whole carcass, the burning rate should be fast enough to incinerate a normal load in 10 hours and the fuel efficiency should be as good as possible.

The Incinerator should also be as manpower-efficient as possible, loading should not require manual lifting of heavy containers and once loaded, the burning process should be automatic. Once the door is shut and the burning started, then it should run automatically until complete and then shut down. Once cooled down ash removal would be done, leaving 3% of the original weight.

Modern design with a secondary combustion chamber should give very clean burning. If a large enough model is chosen for whole animal disposal then there is the potential to use it for burning other waste, as a back-up or in addition to the current Island Incinerator.

As a guide, most Incinerators looked at by us burn at a quoted rate of 50kg per hour, using in the order of 10 litres diesel/hr to achieve this. That would burn a 500kg load in 10 hours.
Sizes of the burning chamber are between 1.2 m^3 and 4.2m^3 and the final decision depends on considering all the information available.
That involves cost, delivery availability, servicing options, site requirements and further discussion with the supplier to satisfy ourselves that they will provide a suitable, reliable product with adequate product training and after-sales service.

There will also be cost involved in Site preparation, which may involve laying down a concrete slab of suitable size and thickness, constructing a basic shelter structure for it to be housed under, and purchasing suitable containers to store and transport the

materials, sealed against leakages and smells. Tipping equipment is also available to make loading the Incinerator cleaner and less physically demanding.

There follows a table showing information on the models considered currently with some indication of cost, but these are not finalised and could be open to negotiation.

Currently, we are not in a position to decide which is best suited, but in order to allow making that decision, it is felt that up to £40,000 should be requested as a Capital Expenditure Request, so that further requests are not needed following this. That would include the site construction needed, the other equipment for the operations and delivery to Sark.

Further information will be reported once a decision is made for a particular purchase and will be reported to Chief Pleas Midsummer Meeting, all subject to the proposition being approved this evening.

The Proposition:

That the expenditure of up to £40,000 be approved by Chief Pleas for the purchase of a suitable Incinerator, associated equipment and incidental costs, for the purpose of disposing of slaughterhouse waste, other animal remains and general waste.

Conseiller Paul Williams

Chairman, Agriculture and Environment Committee and Public Health Committee

Model	Dimensions	Burn chamber	Load Capacity	Burn rate	Fuel rate	Top/front load	Lining	Power supply	Ash volume	Single/dual use	Site requirement	Operators	Training	Repair/ maintenance	Cost (+transport)	Delivery time
Addfield TB	3.7m x 2.2m x 3.5m **5000kg**	**2.3m³**	Up to 1300kg (900kg abattoir)	50kg /hr	8-10 ltr/hr	Top	180mm	220-240V 13-16 amp	3%	Animal, general	150mm concrete pad	1	£900 + travel		£21,995 + Delivery	5-7 weeks + delivery
Addfield TB-AB	3.8m x 3.6m x3.5m **6800kg**	**4.18m³**	2000kg	50kg /hr	12-14 ltr/hr	Top	180mm	230v	1-3%	Animal, general	5m x 4m concrete pad	1	Training included		£26,000 + Delivery	10 weeks
Inciner8 I8-200	3.0m x 1.3m x 4.4m **5500kg**	2.0m x 1.0m **1.92m³**	Up to 1100kg$	100kg /hr	20-38 ltr/hr	Top	120mm	230v	100mg /m³	Animal, general, medical	200mm concrete pad	1 min			£34,000 + Delivery	1-2 weeks
Inciner8 I8-250	3.6m x 1.3m x 4.4m **6000kg**	2.5m x 1.1m **2.4m³**	Up to 1400kg$	300kg /hr	30-40 ltr/hr	Top	120mm	230v	100mg /m³	Animal, general, medical	6.0m x 4.5m concrete pad	1 min			£42,000 + Delivery	1-2 weeks
Matthews TS-50	*2.2m x 1.6m x 1.6m* **4000kg**	**1.2m³**	1000kg	50kg /hr	8 ltr/ 100kg	Front or Top	150mm	220-240V 13 amp	3%	Animal, medical, general	Container £4000 fitted	1			£18,000 + Delivery	4 weeks + delivery
Volkan 1000	3.1m x 3.2m x 3.5m **3500kg**	0.9m x 2.2m x 1.1m **1.81m³**	Up to 1000kg	50kg /hr	7-11 ltr/hr	Top		230v		Animal, food, abattoir	Concrete hardstand	1	£2K		£15,519 + Delivery	6 weeks
Volkan 1500	8.4m x 2.2m x 2.1m **4500kg**	**3.26m³**	Up to 1500kg	50kg /hr*	7-11 ltr/hr	Top		230v		Animal, food, abattoir	5m x 10m concrete pad	1	£2.5K		£21,000 + Delivery	6 weeks

*$ = computed figure * = higher rates are quoted by the manufacturer dependent upon materials being incinerated*