

Appendix 11

Energy Efficiency Review

Energy usage at Carkin Moor Farm is as follows:

Energy source	Use
Electricity	Lighting, ventilation, computer control systems, feed augers, water pumps.
Bottled gas	N/A
Diesel	Vehicles, back-up generators, pressure washing
Other?	

Basic energy requirements

The site has been designed with a strong focus on resource saving and efficiency.

- Control sensors are checked in accordance with manufacturer's instructions and kept clean
- Ventilation rates are computer controlled to minimise, as far as the indoor requirements allow, heat losses from the sheds
- There is draught control and fans are fitted with back draft shutters to reduce heat loss
- The sheds are maintained in good condition
- The sheds are fully insulated to reduce condensation, heat loss and solar gain
- The flooring is maintained and cracks are repaired

Electricity

- The ventilation fans in all sheds have been selected so that they are the appropriate power and size for the age and number of animals housed
- The computer systems control the ventilation for maximum efficiency
- The fans are low energy and are regularly maintained and cleared of debris
- Low energy light bulbs are used in the office and stores
- LED lights are used in the sheds

Fuel oil

- There is a diesel generator available in case of mains electricity failure.
- Vehicles and tractors are serviced by a contractor at recommended service intervals
- All staff and contractors employed on site are trained in the efficient use of equipment, including driving techniques. Training needs are reviewed annually, and as new equipment or techniques are introduced
- Energy usage is recorded. In accordance with the permit, energy efficiency and usage will be reviewed every four years. Opportunities to improve energy efficiency will be implemented if suitable.
- We use well maintained machinery and equipment, on a rotating replacement policy looking for the most energy efficient models.

Further potential improvement measures include:

- Installing more energy efficient equipment and controllers, as appropriate.