

OC8 Operational Control – Odour abatement

**OC8 Operational Control – Odour abatement
(incorporating MM3)**

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1.0 Scope

A review of site operations has been carried out and the operations that could have potential to lead to uncontrolled odorous emissions were identified. This procedure covers the control methods used to prevent or where necessary minimise the malodorous emissions from the processing of animal carcasses and animal by-products operated by Edge Close Green Energy Ltd.

2.0 Definitions

N/a

2.1 Abbreviations

EMR Environmental Management Representative

3.0 Responsibilities

3.1 Managing Director

- Responsible for ensuring resources are made available to ensure that all abatement equipment and controls are maintained in an operational condition.

3.2 Facility Manager

- Responsible for following the procedure specified in the Odour Management Plan, Appendix 2.
- Responsible for ensuring that all staff working on the site are aware of this procedure and operate in line with it.

3.3 EMR

- Responsible for assessing new operations and reviewing this procedure as required

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4.0 Procedures

4.1 Attached as Appendix 2 is the Odour Management Plan (OMP) approved by the Peak District National Park in compliance with Condition 7 of Planning Permission ref: NP/DDD/0216/0084; the applicant was F Redfern & Sons Ltd.

4.2 Attached at Appendix 3 is an updated OMP for the EMS of Edge Close Green Energy Ltd.

4.3 Effluent

4.3.1 Control

- No washing of containers for the transport of loose animal by-products (not carcasses) shall take place within the Installation – this shall occur in the knackery and/or Intermediate Plant

4.3.2 Effluent – Procedure and Removal

- All drained effluent from the external washing down of equipment and the washing down of floors shall be collected in the sump via a material trap and pumped to the external storage tanks and thereafter taken off-site for authorised disposal

5.0 Records

Waste Transfer Notes

6.0 References

EMS Manual section 4.4.6

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**ANIMAL BY-PRODUCT PROCESSING AND OIL
EXTRACTION ODOUR MANAGEMENT PLAN
(Approved as part of conditional planning permission)**

OMP1 Introduction

OMP1.1 F Redfern and Sons Ltd has been granted planning permission to construct a new building and erect external plant at their premises at Flagg, Derbyshire, to house an innovative process to extract oil from the carcasses and animal by-products delivered to and produced at the adjoining knackery.

OMP1.2 The process involves:

- Introduction of animal by-products into a reception hopper
- Maceration of the animal by-products and passing of the macerated material to a buffer bin
- Heating of the macerated material
- The extraction of oil via an enclosed centrifugal process, including the removal of water which is fully contained for subsequent removal from site – the oil is temporarily stored in tanks for use as a fuel in electricity generation on site
- Drying of the remaining material, meat and bone meal
- Temporary storage of meat and bone meal in a trailer within the building before despatch for use elsewhere

OMP1.3 The process is wholly contained with the exception of the introduction of raw material and the depositing of meat and bone meal, following drying, in a trailer.

The potential sources of odour are identified as:

- Raw material at point of introduction for maceration

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- Odorous air from the heating and drying parts of the process – this air will be passed through the electricity generating set as combustion air, thus oxidising the odours
- Odorous air from depositing dried meat and bone meal in the storage trailer

OMP2 Odour Management

OMP2.1 As the process is almost wholly enclosed, and thus odours cannot be emitted, odour control is primarily managed by good working practices of expediting processing and regular and systematic cleaning as well as containment. The current operations at site involve regular and systematic cleaning including deep cleaning on a daily basis

OMP2.2 Animal by-products shall be transferred without delay from the knackery into the process

OMP2.3 Animal by-products shall be introduced directly into the reception hopper linked to the macerator and shall not be deposited on the floor of the building except where contained in leak-proof bins awaiting tipping into the reception hopper

OMP2.4 Meat and bone meal (MBM) shall only be deposited into a trailer within the building as shown on the approved planning application plans – 041-05-P405 RevA; the external doors to the MBM discharge area and stored trailer shall be kept closed at all times except when a trailer is entering or leaving the building

OMP2.5 All external doors to the building shall be kept closed at all times except when the plant is not in operation and in course of maintenance or when vehicles or personnel need to enter or leave the building

OMP2.6 Personnel shall use personnel doors in day to day operation and shall not enter or leave the building via vehicular access doors

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OMP3 Cleaning

OMP3.1 Routine cleaning shall be part of a continuous hygiene system rather than a scheduled task, commensurate with the operations of the knackery business and the delivery of feed material (animal by-products) into the process. Cleaning shall be a two stage process. Surfaces shall be soaked with a chlorine bleach solution before pressure washing with water. The washings shall be stored in a tank and emptied at regular intervals.

- a) Floors shall be thoroughly cleaned after processing
- b) Vehicles shall be kept in a clean and workmanlike condition
- c) Equipment shall be cleaned after use.

OMP4 Odour Control

OMP4.1 As part of the containment of potential malodours, odours released from the discharge of meat and bone meal into the trailer for off-site disposal or use will be contained and passed to the drier and/or electricity generating sets for use as combustion air, and thus oxidised

OMP4.2 Discharge of meat and bone meal into the waiting trailer shall only take place when the system to collect gaseous emissions from the discharging of meat and bone meal into a trailer for passing to the boilers/electricity generating sets is in operation, and the vehicular doors to the building are closed

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APPENDIX 3

ENVIRONMENTAL PERMITTING REGULATIONS 2016

ANIMAL CARCASS PROCESSING PLANT

**AT MAIN ROAD, FLAGG, NR BUXTON,
DERBYSHIRE**

**ANIMAL BY-PRODUCT PROCESSING AND OIL
EXTRACTION ODOUR MANAGEMENT PLAN**

**FOR
EDGE CLOSE GREEN ENERGY LIMITED**

OUR REF: 15/2949/ippc

Prepared By:		G J Bolton Director
Checked By:		M Redfern

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OMP1 Introduction

OMP1.1 Edge Close Green Energy Ltd propose to operate an innovative process to extract oil from the carcasses and animal by-products delivered to and produced at the adjoining knackery run by F Redfern and Sons Ltd; planning permission has been granted to construct a new building and erect external plant (storage tanks within a bund) at premises at Flagg, Derbyshire, immediately adjacent to the knackery and contiguous with the building used within the knackery to store hides.

OMP1.2 The prescribed process involves:

- Introduction of animal by-products into a reception hopper
- Maceration of the animal by-products and passing of the macerated material to a buffer bin
- Heating of the macerated material
- The extraction of oil via an enclosed centrifugal process, including the removal of waste water which is fully contained for subsequent removal from site – the oil is temporarily stored in tanks for use as a fuel in electricity generation on site
- Drying of the remaining material, meat and bone meal
- Temporary storage of meat and bone meal in a trailer within the building before despatch for use off-site

OMP1.3 The process is wholly contained with the exception of the introduction of raw material and the depositing of meat and bone meal, following drying, in a trailer.

The potential sources of odour are identified as:

- Raw material at point of introduction for maceration
- Air vented from the buffer tank – passed to the electricity generating set with other air and used in combustion

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- Odorous air from the heating and drying parts of the process – this air will be passed through the electricity generating set as combustion air, thus oxidising the odours
- Odorous air from depositing dried meat and bone meal in the storage trailer – used as combustion air
- Air from the storage tanks – vented via charcoal filters

OMP2 Odour Management

OMP2.1 As the process is almost wholly enclosed, and thus odours cannot be emitted, odour control is primarily managed by good working practices of expediting processing and regular and systematic cleaning as well as containment. The operations at the knackery site adjoining involve regular and systematic cleaning including deep cleaning on a daily basis

OMP2.2 Animal carcasses and by-products shall be transferred without delay from the knackery into the process; by-products shall only be accepted into the Installation plant within leak proof containers (dolavs). No carcasses or animal by-products shall be stored within the Installation site.

OMP2.3 Animal by-products shall be introduced directly into the reception hopper linked to the macerator and shall not be deposited on the floor of the building except where contained in leak-proof bins awaiting tipping into the reception hopper. The lid to the reception hopper shall be kept closed at all times except when raw material is introduced.

OMP2.4 Meat and bone meal (MBM) shall only be deposited into a trailer within the building as shown on the approved planning application plan – 041-05-P405 RevA, and as illustrated on Environmental Permit application plan ECGE SM2; the external doors to the MBM discharge area and stored trailer shall be kept closed at all times accept when a trailer is entering or leaving the building

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OMP2.5 All external doors to the building shall be kept closed at all times except when the plant is not in operation, in course of maintenance or when vehicles or personnel need to enter or leave the building

OMP2.6 Personnel shall use personnel doors in day to day operation and shall not enter or leave the building via vehicular access doors

OMP3 Cleaning

OMP3.1 Routine cleaning shall be part of a continuous hygiene system rather than a scheduled task, commensurate with the operations of the knackery business and the delivery of feed material (animal by-products) into the process. Approximately 1m³ of mains water per day will be required for wash down. Cleaning shall be a two stage process. Surfaces shall be soaked with a chlorine bleach solution before pressure washing with water. The washings shall be stored in a tank and emptied at regular intervals.

- a) Floors shall be thoroughly cleaned after processing
- b) Vehicles shall be kept in a clean and workmanlike condition

OMP3.2 Cleaning of the plant is automated. At the end of each operational period (daily) the system is purged by continuous re-cycling of processed water, extracting any residual solids, until the process/cleaning water is “clean” when mains water is introduced for final cleaning and purging; this final purge water is collected in the waste water streams and storage tanks for off-site authorised disposal. Approximately 1m³ of mains water is used per day in this cleaning process.

OMP3.3 In warmer weather or when odours are noted on site, the cleaning schedule shall be reviewed and increased as required.

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OMP3.4 In the event of offensive odours being noted by the Operator, the reception hopper and associated feed line, together with all potential outlets of odour shall be investigated and washed down with disinfectant as required.

OMP3.5 All instances where offensive odours are noted by the Operator, or a complaint is received from a local resident or from the Local Authority, together with all remedial actions taken, shall be recorded in a site log book. The log book shall be retained on site for a minimum of two years.

OMP3.6 The Odour Management Plan shall be kept under review in the light of the experience of the operation of the Installation.

OMP4 Odour Control

OMP4.1 As part of the containment of potential malodours, odours released from the discharge of meat and bone meal into the trailer will be contained, drawn off and mixed with other air and passed to the electricity generating set for use as combustion air, and thus oxidised.

OMP4.2 Discharge of meat and bone meal into the waiting trailer shall only take place when the system to collect gaseous emissions from the discharging of meat and bone meal into a trailer for passing to the electricity generating set is in operation, and the vehicular doors to the building are closed.

OMP4.3 Odorous air from the drying of meat and bone meal shall be contained, drawn off and mixed with other air and passed to the electricity generating set for use as combustion air, and thus oxidised.

OMP4.4 Vented air from the buffer tank shall be contained and passed with other collected air to the generating set for combustion

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OMP4.5 Air vented from the waste water storage tanks (x3) shall be passed through charcoal filters and shall not be released directly to atmosphere. The filters shall be regularly maintained in accordance with the manufacturers' recommendations. The used medium shall be collected and disposed of as a waste.

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