



# **Cymru Country Feeds**

## **Environmental Permit Variation**

### **Operating Techniques**

**November 2017**

Prepared on behalf of 2Agriculture Limited





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## 1.0 Introduction

### 1.1 Report Context

- 1.1.1 This section of the Environmental Permit application corresponds to Section 3 of Part C3 of the Environmental Permit application forms, and specifically details the operating and management procedures that will be in place at the site.
- 1.1.2 This Environmental Permit application has been prepared by WYG on behalf of the Operator, 2 Agriculture Limited.
- 1.1.3 The application is limited to those techniques relevant to the changes being sought under this variation application, namely the installation and operation of an Extrusion Plant and associated kit and the relocation of the sites Wheel and Vehicle Wash.

### 1.2 Site Setting

- 1.2.1 The Cymru Country Feeds site (the site) is situated to the west of the Llay Industrial Estate, approximately 1km north of the village of Llay, Wrexham. The site is located to the west of the industrial estate, at National Grid Reference SJ 32985, 56464. Access to the site is achieved via Miners Road that runs parallel to the southern boundary of the site.
- 1.2.2 The immediate surroundings of the site comprise an industrial setting to the west, north and south east as part of the wider industrial estate and agricultural land to the north east. Beyond the industrial estate to the south east is the village of Llay with the nearest residential property located approximately 280m south east from the site.

### 1.3 Geology

- 1.3.1 With reference to the British Geological Survey's (BGS) 'Geology of Britain Viewer', the bedrock geology of the site comprises mudstone, sandstone and conglomerate of the Salop Formation.



The bedrock was formed approximately 271 to 309 million years ago in the Permian and Carboniferous Periods.

- 1.3.2 The superficial deposits comprises diamicton of the Devensian till which were formed up to 2 million years ago in the Quaternary Period.

### **1.4 Hydrology**

- 1.4.2 With reference to Natural Resources Wales 'Flood Risk Map Viewer', the site is not situated in an area at risk of flooding.

### **1.4 Ecology**

- 1.4.3 With reference to the Multi-Agency Geographic Information for the Countryside (MAGIC) website, there are two statutory ecological designated sites within 2km of the application site. The Llay Bog is located approximately 1.2km south west from the site and is designated as a Site of Special Scientific Interest (SSSI). The Chwarel Singret is also a designated SSSI and is located 1.4km from the site.



## 2.0 Operating Procedures

### 2.1 Operating Hours

- 2.1.1 The site will operate in accordance with the planning permission which allows the site to operate from Monday to Saturday, however the site will not be open on a Sunday.
- 2.1.3 The extruder plant will operate 24 hours a day, 7 days a week inside the building.

### 2.2 Permitted Activities

- 2.2.1 With reference to the extant environmental permit, 2 Agriculture are permitted to manufacture animal feed under the following Schedule 1 activity:-
- Section 6.8 A (1) (d) (ii) – Treating and processing materials intended for the production of food products from vegetable raw materials at plant with a finished product production capacity greater than 300 tonnes per day.
- 2.2.2 In addition to the above Schedule 1 activity, 2 Agriculture is also permitted to undertake the following Directly Associated Activities:-
- Storage and handling of raw materials;
  - Product storage and despatch;
  - Steam generation in an appliance with a rated thermal input of 3.5MW; and
  - Vehicle washing.
- 2.2.3 It is considered that the addition of the Extruder Plant is a change in operating techniques to introduce a new piece of kit and is not an additional Schedule 1 Activity.

### 2.3 Proposed Additional Activities

- 2.3.1 The operator proposes to add an Extrusion Plant to the facility to prepare ingredients which will be utilised in the production of poultry feed. The Extruder Plant will 'cook' Rapeseed and Beans utilising temperature and pressure within an enclosed facility, the air from this process will then be passed through a cooler within the same piece of kit which gradually cools the air to ambient



temperature, note that there are no point sources associated with this activity. The process is a clean process in that it does not produce waste and does not produce any process effluent. The temperature applied during the cooking process will act to drive off water content of ingredients and to decrease microbial activity, which improves the quality of the material and increases its shelf life.

- 2.3.2 In order to facilitate the installation of the Extruder Plant, the operator will extend the production building over the area currently occupied by the wheel and vehicle wash. The wheel and vehicle wash will be relocated to an area of land currently outside of the permit boundary (to the east of the site). As part of this variation application, the operator proposes to extend the current site boundary to the to accommodate the relocation of the wheel and vehicle wash. A site condition report has been produced for the new area of land and this can be found in Appendix E of this permit variation application.

## 2.4 Operating Procedures

### **Extension of Site Boundary to relocate the Wheel and Vehicle Wash**

- 2.4.1 This application seeks to amend the site boundary to include the area of land located to the east of the current site boundary as shown in site boundary Drawing Number CCF/A103882/LAY/01 to facilitate the relocation of the current wheel and vehicle wash facility. The wheel and vehicle wash is to be relocated due to the extension of the existing process building which will extend into the area of site currently occupied by the wheel and vehicle wash facility.
- 2.4.2 There will not be any changes to how the wheel and vehicle wash is operated, which will continue to be operated in accordance with the existing approved procedures, i.e. vehicles will enter the wash bay, where they will be washed out using high pressure jet hoses and detergent. The discharge rate for wash water to sewer will be 15 litres per second, with a maximum daily discharge of 5 m<sup>3</sup>, which gives approximately 5.5 hours of vehicle washing. The resultant wash water is discharged to sewer for treatment by Welsh Water as per Table 2.2.7 of the current permit.

### **Extruder Plant**



2.4.3 Extrusion cooking is a process which includes mixing, cooking, shearing and cooling. The site will operate an extruder cooker with a cooling component. The extruder plant will be utilised to 'cook' beans and rapeseed that will be utilised in the production of the poultry feed. The plant will process 6 tonnes per hour. The process will consist of:-

- Grinding Rapeseed and Beans;
- Steaming the ground material utilising steam that is generated on site;
- Placing the steamed material into the Extruder Plant where it will be heated to 120°C; and
- Moving the material from the Extruder to the Cooler to bring the temperature of the material back to ambient.

2.4.4 There are quality control systems in place to monitor compliance with the specification of the required product, the production process is outlined in greater detail below.

2.4.5 The extruder plant and associated equipment will consist of the following:-

- 3 x silos (2 at 300 tonnes and 1 at 90 tonnes) to house raw and processed materials;
- Grinder;
- Conditioner (to steam the material)
- Extruder (applies force and heat to the material); and
- Cooler (to cool the processed material to ambient temperature).

2.4.6 Raw materials (Rapeseed and Beans) are delivered by truck to site and are stored in the dedicated silos as shown on Drawing Number CCF/A103882/LAY/01. The materials are mixed and ground and are then moved to the extrusion plant where it is placed on a conveyor belt. As the material moves through the plant, it is increasingly subjected to a restricted volume which causes increased resistance to movement and essentially compresses the material, producing shearing and frictional heat.



- 2.4.7 Heat is then applied to the material which combines with the frictional heat, causing the temperature to rise to 120°C. The material is then forced through an area of the plant where the pressure and shearing forces is further increased, before being discharged via restricted openings at the end of the plant. Once the material has been 'cooked' it will undergo cooling to bring it back to ambient temperature and then stored in a dedicated silo.
- 2.4.8 The Extruder activity and associated activities will take place internally within the sites process building. It is not considered that additional abatement equipment is required to control dust emissions. The site currently operates cyclones and a wet scrubber for dust abatement as per Table 2.2.1, emission point A12 of the permit. The abatement equipment already in place is considered appropriate to contain any dust generated by this process.
- 2.4.9 Table 2.2.2 of the permit outlines the current monitoring requirements with discharge to air limits for particulates. We do not propose any changes to these limits.



## **3.0 Regulated Facility Infrastructure**

### **3.1 Raw Materials Reception Area**

- 3.1.1 As trucks are received on site, they are directed straight into the unloading area. All consignments are inspected to ensure that they correspond to the raw ingredients that were ordered. At the same time, packaging is inspected to ensure that ingredients are able to be accepted. Any ingredients that are not of suitable standard are pumped and removed from site.
- 3.1.2 Raw ingredients are then stored in either silos, the dry goods store or within the sites chiller.
- 3.1.3 The loading and unloading of trucks takes place within areas of impermeable surfacing and on sealed drainage with appropriate containment as shown on Drawing Number CCF/A103882/LAY/01.
- 3.1.4 The Reception area is designed to ensure that any spills can be immediately cleaned up. A note is then made in the sites diary.

### **3.2 Finished Product Storage Area**

- 3.2.1 All finished products are either stored within silos or are packaged and stored in an appropriate manner. All products are stored in such a way as to protect packaging and in accordance with their storage requirements. The location for storage of products is outlined on Drawing Number CCF/A103882/LAY/01.

### **3.3 Surface Water Management**

- 3.3.1 Surface water at the site is managed in such a way as to avoid the discharge of potentially polluting contaminated surface water. The current surface water management is considered sufficient to ensure that the inclusion of the extruder plant, three additional silos, cooler unit and the relocation of the vehicle and wheel wash will not result in an unacceptable discharge.
- 3.3.2 All water generated from the new part of the site will be directed to the vehicle and wheel wash facility and will be discharged to sewer.

### **3.4 Fuel Tanks**



- 3.4.1 An appropriately 110% capacity bunded tanks for fuel, oil and lubricants are provided on site to allow the quick and efficient fuelling and repair of the site machinery. The tanks will be maintained and inspected in accordance with the manufacturer's recommendations.

### **3.5 Security**

- 3.5.1 The facility benefits from 24 hour security in the form of cameras. The site is manned 20 hours a day for 6 days of the week. Site entrances are controlled 24 hours a day and are locked at the end of each shift. All visitors are required to sign in at the reception area.



## 4.0 Emissions Control

### 4.1 Point Control Emissions to Air

4.1.1 There will be no point source emissions to air as a result of this variation application.

### 4.2 Point Source Emissions to Surface Water

4.2.1 There will be no point source emissions to surface water as a result of this variation application.

### 4.3 Point Source Emissions to Sewer

4.3.1 2 Agriculture Limited hold a trade effluent consent to sewer, issued by Welsh Water, the permit already has a discharge point for emissions to sewer as per Table 2.2.7. this emission point will be retained, however the site layout drawing, Drawing Number CCF/A103882/LAY/01 has been updated to reflect the new location of the discharge point.

### 4.4 Point Source Emissions to Groundwater

4.4.1 There will be no point source emissions to groundwater as a result of this variation application.

### 4.5 Fugitive Emissions

4.5.1 An Environmental Risk Assessment has been undertaken in accordance with Natural Resource Wales guidance. This is provided with the application as a separate document.

#### **Odour**

4.5.2 The Site Manager will monitor odour levels and all site operatives will be vigilant and report any problems to the Site Manager. The extra production line is not expected to produce odour and the site does not currently employ any specialised odour abatement equipment. The following operational procedures are implemented to reduce and control the risk of odour from the facility:-

- All activities relating to the preparation and making of the feed will occur inside a building;



- The building is fitted with fast acting roller doors;
- The filling of outside silos is supervised at all time and any spills of raw ingredient or finished product will be subject to immediate removal;
- The material delivered within trucks is inherently non-odorous;
- The wheel and vehicle washing facility is located in a bay which will prevent the spread of odour;
- Vehicles will be washed out as soon as they are emptied; and
- The wheel and vehicle wash will be cleaned down at the end of each shift to prevent the build-up of any material.

4.5.3 The site manager is responsible for monitoring odour levels and for the implementation of any necessary preventative measures.

### Noise

4.5.4 Site Management will monitor noise levels and all site operatives will be vigilant and report any problems to the Site Manager. The additional product line and the relocation of the wheel wash is not expected to produce any additional noise. The following operational procedures will be implemented to reduce the risk of noise:-

- All production activities (including the new process line) will take place inside internally within a building;
- Doors to processing areas will be kept closed at all times;
- Speed limits are applied to all vehicles to ensure vehicle noise remains low;
- The wheel and vehicle wash will be situated within a bay which will provide noise attenuation;
- The wheel wash will only be operated during the hours of 7 am to 7 pm.

4.2.3 Site Management will be responsible for monitoring noise levels and implementing any necessary preventive measures.



## 5.0 Accident Management

5.01 All necessary measures will be taken to prevent the occurrence of accidents. The types of accidents and the potential environmental consequences associated with them have been identified in the Environmental Risk Assessment that accompanies this application.

### 5.1 Fire Control

5.1.1 Any fire on site will be treated as an emergency and will be extinguished at the earliest opportunity. If necessary the Fire Brigade will be summoned.

5.1.2 Firefighting equipment will be located throughout the site, in accordance with the Fire Regulations. All fire extinguishers shall be clearly marked and tested at appropriate intervals to confirm their integrity. Site operatives will be made aware of their location and trained in their correct use.

### 5.2 Spillage Procedure

5.2.1 The most likely source for spillages will be oil associated with plant and machinery.

5.2.2 In the event of a spillage, the following procedures will be implemented:-

- Clear the area straight away;
- Lay absorbent granules over the spill to soak up the spillage;
- Use Personal Protective Equipment (PPE) provided on site if required;
- Once the liquid has all been absorbed use a shovel to clear up the waste, put it in a plastic sack and then place it in the container for non-compliant waste for disposal at a suitably permitted facility; and
- A record of the spill incident and remedial action taken will be recorded in the Site Diary.

5.2.3 Spillage kits will be maintained on site in order to respond to any spillage incident. The spillage



kits are available at marked locations though the site.

### **5.3 Maintenance Procedures**

- 5.3.1 A planned preventative maintenance programme (PPM) will be put in place to minimise the risk to safety, health and the environment by ensuring that all appropriate items and elements within the site are serviced and inspected on a regular basis or to the manufacturers' maintenance schedules.
- 5.3.2 Details of faults, breakdowns and repairs are documented and records are maintained at the site office. Faults and breakdowns will be investigated and the service schedule revised if necessary.



## 6.0 Site Management

- 6.0.1 Cymru Country Feeds is operated by 2Agriculture Limited.
- 6.0.2 The operator, 2Agriculture Limited, has a certified Management System in place which is compliant with the requirements of ISO14001.
- 6.0.3 All site operatives are adequately trained in health, safety and environmental issues. Staff are only be permitted to undertake activities that they have been trained for. They are aware of the procedures they must follow in the event of an accident or incident and will be able to access any relevant documentation that they may require. All training, experience and qualifications of staff will be noted and these records will be maintained and kept up to date.



## 7.0 Management of Documentation

### 7.1 Record Keeping

- 7.1.1 2 Agriculture has an EMS in place which includes procedures for the management of documentation.
- 7.1.2 A record will be kept that provides details on all incoming loads to the site as well as finished product that is removed from the site. Records will also record what waste products are generated as part of the process, including details on waste types, quantities and the date of removal. This will be provided to the Natural Resources Wales in accordance with current permit requirements.
- 7.1.3 A site diary will be kept in the site office, and this will be updated daily. The diary will be used to record any accidents, spillages, vandalism, complaints etc. This will provide an ongoing record throughout the period of operation at the site, and this will enable any investigate or corrective action that may be required.
- 7.1.4 The Environmental Permit and other documents containing information regarding the operation of the site will be kept in a convenient location, allowing access for any person that may be working at or visiting the site.

### 7.2 Maintenance of Records

- 7.2.1 The site diary will be maintained and updated to include the following:-
- Weather conditions;
  - Details of all visitors, including their status and times of arrival and departure;
  - Details of maintenance, modification, repair, replacement, delivery and return, and breakdown of any plant and machinery;
  - Damage to vehicles, fences, gates, etc. and incidents of trespass; and
  - Details of any complaints



## 8.0 Incidents and Non-Conformance

8.0.1 2Agriculture Limited have a Management System which includes procedures for investigating and recording any incidents and non-conformances at the site.

8.0.2 The following types of incidents will require investigation:-

- Malfunction, breakdown or failure of plant and equipment;
- Deviation from site procedures and operating techniques;
- Near misses; and
- Complaints from external parties.

8.0.3 All staff will be trained to detect and report any such occurrences. Procedures will be taken to allow the operations to resume and preventative measures may be put in place to ensure that the incident does not reoccur.



## 9.0 Management System

9.0.1 The facility will be operated in accordance with a written Management System.

9.0.2 The system has documented procedures for:-

- Operations and Maintenance;
- Competence and Training;
- Accidents/Incidents/Non-Conformance/Breakdowns/Enforced Shutdowns;
- Organisation; and
- Managing Documentation and Records.

9.0.3 A report summarising the management system is provided within the application.

9.0.4 All staff will be appropriately trained in health, safety and environmental issues, including the correct procedures to follow in the event of an accident or an emergency. All training, experience and qualifications gained by the site staff will be noted and kept up to date within the site records.

9.0.5 Procedures will be in place to cover all aspects of operations that may have an adverse impact upon the environment.

9.0.6 The procedures are reviewed and may be amended under the following scenarios:-

- Periodic review identifies and improved method of operation. The revised procedure will have a reduced or unchanged risk of impact upon safety, health and environment;
- A need to amend procedures is identified following a near miss investigation;
- A need to amend procedures is identified following an incident investigation; and
- Legislative requirements change resulting in a need to alter procedures.

### 9.1 Site Records

#### Place of Keeping

9.1.3 A record of all waste deposited at the site will be maintained. A site diary will be kept in the site office and updated daily. This diary will be used to record any incidents on site involving



accidents, spillages, vandalism, complaints, etc. This will provide an ongoing record and allow for investigative and corrective action in line with the requirements of a Management System.

- 9.1.4 A copy of the site's Environmental Permit will be displayed in a convenient location in the site office allowing access for all persons working on or visiting the site.

### Maintenance of Records

- 9.1.5 The site Diary will be maintained and updated to include the following:-

- The name of the Certificate of Technical Competence holder in attendance;
- Details of all visitors, including status and times of arrival and departure;
- Details of maintenance, modification, repair, replacement, delivery and return, and breakdown of any plant and machinery; and
- Damage to vehicles, fences, gates, etc and incidents of trespass.

- 9.1.6 A separate Visitors Book is maintained and visitors must record their time of arrival and departure from site.



## Drawings

CCF/A103882/LAY/01 – Site Layout and Installation Boundary

CCF/A103882/REC/01 – Receptor Plan



## Appendices



## **Appendix A – ISO 14001 Certificate**