Pilgrim's Pride Ltd, Redruth Environmental Permit Application

Application Reference Number: EPR/UP3904BM/A001

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Non-Technical Summary

Pilgrim's Pride Ltd Redruth, part of the Pilgrim's Group, produces cured, smoked and sliced pork products. Finished goods are transported from site and distributed by a third-party logistics company.

The site has historically received joints of meat (pork) from sister operations in either Denmark or other UK curing facilities. The slicing plant takes joints (predominantly cured pork backs and bellies) which are blast frozen, prior to being pressed to achieve a uniform shape, then sliced on high speed lines, straight into retail pack.

The site has in recent years invested in a purpose built self-contained functional curing and smoking production facility to supply the adjacent slicing plant and is currently investing to further expand its on-site curing capabilities. The operator acknowledges that curing induces a change in the raw materials that cannot be reversed so is viewed as treatment and processing under the regulations. The most recent investment in the plant will take the maximum production capacity over the 75t per day threshold.

Whilst the enlarged curing facility provides supply raw materials to the adjacent slicing plant it can and will provide products for despatch directly to other sites and customers in line with the prevailing business model. However, the curing facility shares utilities, materials storage and effluent treatment with the slicing plant. From a business model perspective curing does not necessarily depend on the slicing facility and vice versa.

The site is served by a Dissolved Air Filtration (DAF) plant that releases treated effluent to foul sewer under a trade effluent discharge from South West Water with a daily consent limit of 240m^3.

Pilgrim's Pride considers the production of curing of meat products at the site is obligated under the Environmental Permitting (England and Wales) Regulations (EPR) 2016, as amended, in relation to the following activities:

Section 6.8 A(1) (d)(i)

treatment and processing, other than exclusively packaging, of the following raw materials, whether previously processed or unprocessed, intended for the production of food or feed (where the weight of the finished product excludes packaging)-

(i) only animal raw materials (other than milk only) with a finished product production capacity greater than 75 tonnes per day.

There are a number of directly associated activities on the site which support the obligated activity, including:

- Storage of raw materials;
- Steam raising and hot water boilers;
- Three cooling towers;
- Storage of waste prior to disposal off-site;
- Treatment of effluent prior to discharge.

The effluent treatment is considered a permittable activity under the following schedule reference:

Section 5.4 A (1) (a) (ii)
Disposal, recovery or a mix of disposal and recovery of non-hazardous waste….

(a) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day (or 100 tonnes per day if the only waste treatment is anaerobic digestion) involving one or more of the following activities and excluding activities covered by Council directive 91/271/EEC concerning urban waste water treatment -

(ii) physico-chemical treatment;

The operator is therefore now making an application for an Environmental Permit to cover its current operations.

Emissions to air from the site are from a single main steam raising boiler and hot water boilers for hygiene and domestic hot water and heating purposes. These have been assessed and found to have an insignificant impact on surrounding ecological and human receptors.

Emissions from the effluent plant are transferred to the local Wastewater Treatment Works for further treatment prior to release back into the environment. If there is a known issue with effluent being out of consent, it can be held back in the effluent reception pit or balancing tank until compliance can be achieved. Surface water run-off from the site is routed via the surface water drainage system to a local controlled water discharge (a watercourse adjacent to the A30 and Trevenson Church) which is a tributary within the Red River catchment area.

The operator has measures in place to protect drainage systems from spills of raw materials or wastes, including secondary containment of bulk tanks, level sensors for tanks, spill procedures and spill kits including drain mats, and the ability to contain spills within the effluent reception pit. All potential accident scenarios, mitigation measures and response actions are included in the Accident Management Plan within this application.

There is considered to be no significant risk of fugitive emissions to air, odour or noise and vibration from the site.

The process is operated in accordance with the site Hazard Analysis and Critical Control Point (HACCP) plan, with operating procedures and risk assessments in place for all manufacturing operations. The process is operated in such a way as to maximise yield and minimise wastage. The operator has a rolling Continuous Improvement (CI) plan in place with opportunities regularly identified and tracked.

The operator has in place a Health, Safety and Environmental Management System which will incorporate all the requirements of the forthcoming Environmental Permit.

In addition to the raw and cured meat raw materials maty be delivered in drums, IBC's and smaller containers and stored internally within the dedicated stores (chemical, engineering and food safe lubricants and oil, dry goods etc). A full raw materials inventory is provided within the application.

Energy use, water use, raw materials use and waste arisings are all measured and monitored. The operator is part of the underlying Climate Change Agreement for the food and drink sector, Agreement Identifier: FDF1/T00146 v3, Facility Identifier FDF1/F00176.

Sensitive ecological and human receptors around the site have been identified and a risk assessment carried out on the potential for the site to impact upon these receptors. Air emissions screening was carried out to assess the impact of emissions to air from the boilers. This concluded that emissions are within guideline levels and will not have a significant impact on human or ecological receptors.

The risk assessment concludes that while there is a risk of pollution of the surface water drainage system, containment and mitigation measures in place are sufficient to manage the risk within the site and to an acceptable level.

1. What operations are you applying for?

Table 1a Types of Activities

Schedule 1 listed activities						
Installation Name	**Schedule 1 References**	**Description of the activity**	**Activity daily capacity**	**Annex IIA or IIB (disposal and recovery) codes**	**Hazardous waste treatment capacity**	**Non-hazardous waste treatment capacity**
Wilson Way Food Manufacturer	6.8 Part A(1)(d)(i)	Treatment and processing of animal and vegetable raw materials (other than milk only), both in combined and separate products, with a finished product production capacity in tonnes per day greater than— (aa)75 if A is equal to 10 or more.	75 tonnes*	-	-	-
	5.4 Part A(1)a(ii)	Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per involving physico-chemical treatment.	240m3**	D9	-	240m3**

Directly associated activities (See note 4)		
Name of DAA	Description of the DAA (please identify the schedule 1 activity it serves)	
Steam/Heat Generation	6 boilers producing steam and hot water	
Refrigeration Plant	2 Ammonia refrigeration plants	
Cooling Towers	3 cooling towers	
Raw Materials Storage	Raw materials dry goods storage.	
Waste Storage	Storage of segregated waste streams in yard.	
For installations that take waste	**Total storage capacity**	N/A
	Annual throughput (tonnes each year)	N/A

***This is the sites total theoretical capacity running product on each line 24 hours/day. In reality, daily production tonnage is significantly lower.**

**** This is the total allowable discharge volume under the sites current discharge consent.**

2. Emissions to Air, Water and Land

Table 2 Emissions – See Drawing 2

POINT SOURCE EMISSIONS TO AIR				
Emission Point Ref.	**Parameter**	**Concentration**	**Unit**	**Source**
A1	NOx CO	No limit set	mg/m^3	New Hall Boiler (113KW)
A2	NOx CO	As above	mg/m^3	New Hall Boiler (113KW)
A3	NOx CO	As above	mg/m^3	Curing Hall Boiler (2370KW)
A4	NOx CO	As above	mg/m^3	Lochinvar Boiler (610KW)
A5	NOx CO	As above	mg/m^3	Old Hall Boiler (113 KW)
A6	NOx CO	As above	mg/m^3	Old Hall Boiler (113 KW)
A7	Smoke/Steam	As above		Smoker 1
A8	Smoke/Steam	As above		Smoker 2
A9	Smoke/Steam	As above		Smoker 3
A10	Smoke/Steam	As above		Smoker 4
A11	Smoke/Steam	As above		Smoker 5

POINT SOURCE EMISSIONS TO WATER (OTHER THAN SEWERS)				
W1	Clean surface water run-off	-	-	Clean surface water run-off

POINT SOURCE EMISSIONS TO SEWERS, ETP'S OR OTHER TRANSFERS OFF SITE				
S1	Settled COD	1500	mg/l	Cleaning and Hygiene; process effluent
	Total Suspended Solids	500	mg/l	
	Total Oils and Greases	150	mg/l	
	pH	6-10		

POINT SOURCE EMISSIONS TO LAND – NAN/a

N/A

3. Operating Techniques

3a Technical Standards

Table 3a Technical Standards

Description of the Schedule 1 Activity or DAA	Relevant Technical Guidance Note	Document Reference
6.8 A(1)(d)(ii) Treatment and processing of animal and vegetable raw materials with a capacity over 75 tonnes per day.	Food, Drink and Milk Industries BREF, 2018 Food and Drink Sector Guidance Note EPR 6.10	Section 3a Main Application Document
5.4 A(1)(a)(ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day by physico-chemical treatment.	Waste Treatment Industries BREF, 2018	Section 3a Main Application Document

Process Description

Site Summary

Pilgrim's Pride Ltd Redruth part of the Pilgrim's Group, produces cured, smoked and sliced pork products. Finished goods are transported from site and distributed by a third-party logistics company.

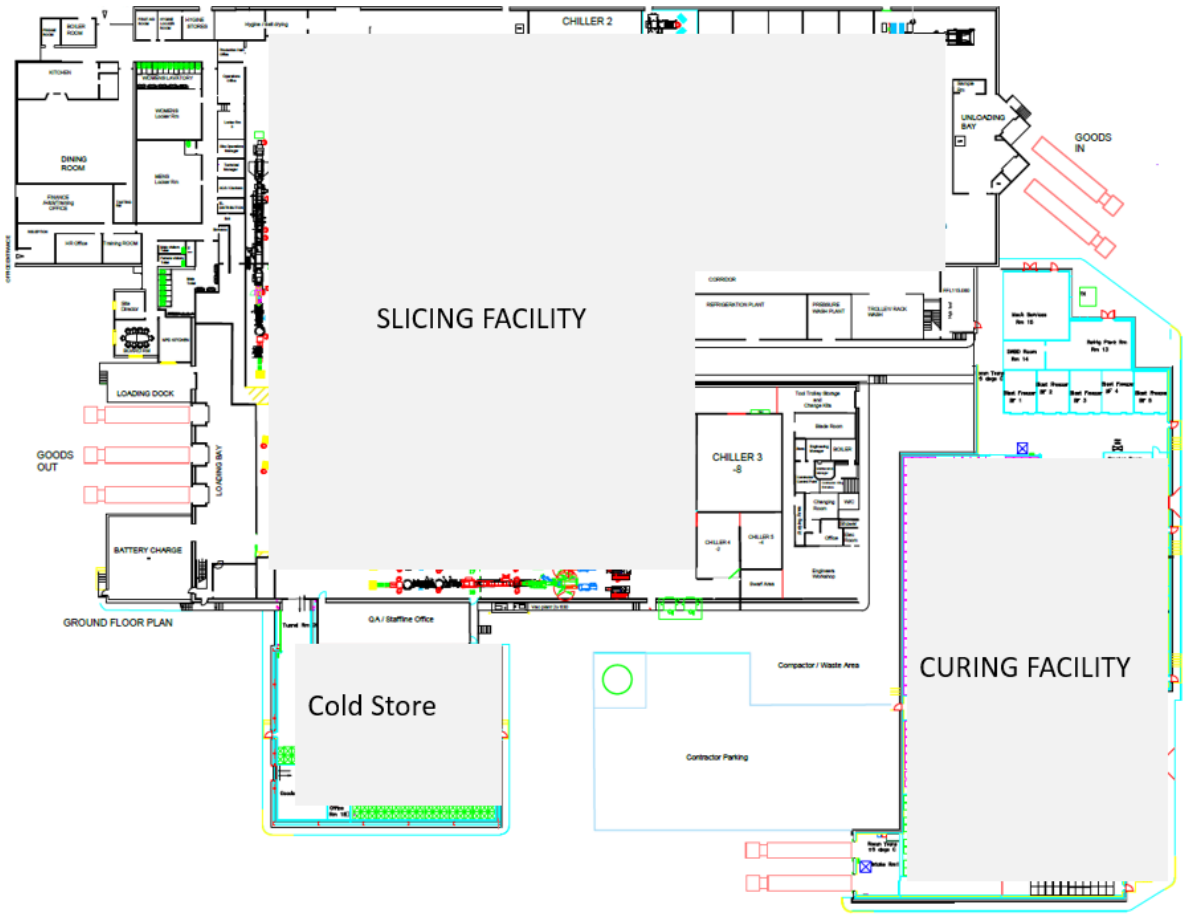
The site has historically received joints of meat (pork) from sister operations in either Denmark or other UK curing facilities. The slicing plant takes joints (predominantly cured pork backs and bellies) which are blast frozen, prior to being pressed to achieve a uniform shape, then sliced on high speed lines, straight into retail pack or bulk packed to other parties.

The site has recently invested in a purpose built self-contained functional curing and smoking production facility to supply the adjacent slicing plant and is currently investing to further expand its on-site curing capabilities. The operator acknowledges that curing induces a change in the raw materials that cannot be reversed so is viewed as treatment and processing under the regulations. The most recent investment in the plant will take the maximum production capacity over the 75t per day threshold.

Whilst the enlarged curing facility provides supply raw materials to the adjacent slicing plant it can and will provide products for despatch directly to other sites and customers in line with the prevailing business model. However, the curing facility shares utilities, materials storage and effluent treatment with the slicing plant. From a business model perspective curing does not necessarily depend on the slicing facility and vice versa.

There are 21 processing lines across the site - smoking & packing operations. Recent reconfiguration of the site layout has increased slicing capacity to around a capacity of 1200 tonnes per week. The site is increasing the capacity of its curing process (inclusive of injection, tumbling, sealing, smoking and air drying) at the site to 300 tonnes per day mainly as a result of increasing equipment capability. Once fully implemented the overall the actual production volumes including curing and slicing will be around 100 tonnes per day.

Figure 1 Site layout – Slicing & Curing



Materials Intake and Storage

The main raw materials are delivered by road, unloaded prior to being transferred to dedicated stores. Fresh pork goods are received into the Curing facility within dolavs mainly from UK sister abattoirs from within the Pilgrim's Group and EU goods comprising materials that are predominately already cured and vacuumed packed in plastic directly into the slicing facility. The site receives dry goods through dry good entrance to internal stores on both curing and slicing sides of the site.

Chemical deliveries are received directly into the chemical stores or oil stores as appropriate. Water treatment or boiler treatment chemicals are transferred to the appropriate plant room. Salt used within the curing process is delivered in 20kg sealed bags on one tonne pallets into fresh pork curing

intake and stored in dry goods until required. Other engineering consumables are received through the dry goods stores and transferred directly to the engineering stores.

The site also has bulk storage for sodium hydroxide, sulphuric acid, aluminium sulphate and polymer for use within the effluent plant. These are delivered directly to the tanks local to the effluent plant. The tank inventory in Table 4 provides further details of these tanks in addition to the bulk CO2 and nitrogen used in the process. All bulk liquid tanks are bunded, receipt is controlled, and spill kits are stored at point of receipt. Internally all drainage is connected to the site effluent system. Any chemicals stored externally are on bunded platforms.

Curing Process

Fresh pork is cured at the site in a number of ways depending on the quality of the cut and customer specification. Generally curing follows one of the following process flows (figures 2 to 8) involving either a wet process where brine is injected using one of two site injectors and then tumbled in one of four industrial tumblers under vacuum to optimise the curing effect of the brine. Tumbling time are pre-set by the requirement of the batch type. At this stage for certain products other dry or wet ingredients may be manually added such as maple syrup depending on the product specification. Alternatively, the joints may be left to soak in brine or the brine can be hand applied which requires a longer curing time before the product can be either sealed, packed, chilled and despatched or be further processed on site.

Brine is made up to specific batch specifications using water and dissolved salt plus a curing agent (nitrite) in one of four vessels and distributed to one of two injection machines, soak tank or for hand application where no injection takes place.

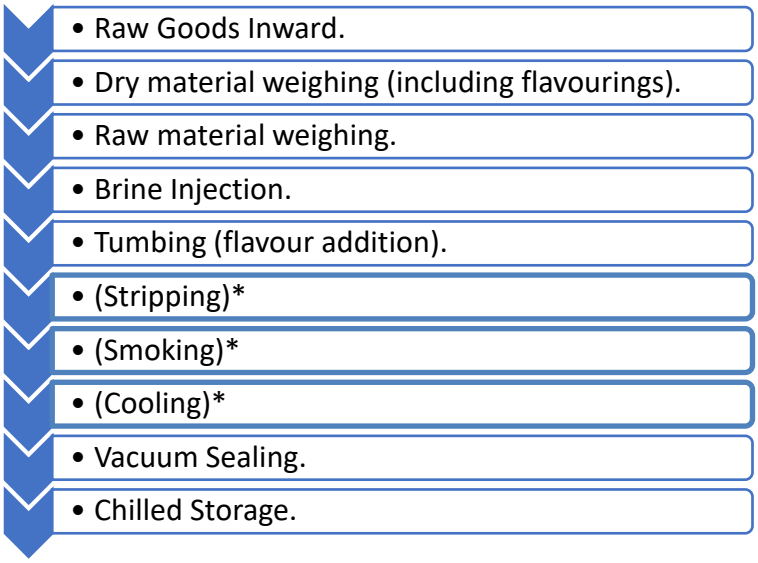
For smoked products the raw meat will follow the same process of curing but additionally enter a smoking chamber for up to 2 hours. The site has 5 2.5 tonne friction smokers that in combination with steam generated by the main steam boiler both smoke and heat set the product if required. The smokers operate on pre-set cycles which involve the periodic purging of the smokers to atmosphere (A7 to A11) depending on the depth of smoking required.

Cured and smoked products are then blast chilled in one of 5 rapid chillers served by the curing facility ammonia plant before passing into chilled storage. The product is then either packaged and despatched to customers or can be held before being further processed through the slicing facility.

- **Injection Cure Smoked & Unsmoked Bacon Processing**

The process flow for injection curing can be seen in Figure 2 overleaf

Figure 2 Injection Cure Smoked & Unsmoked Bacon Processing

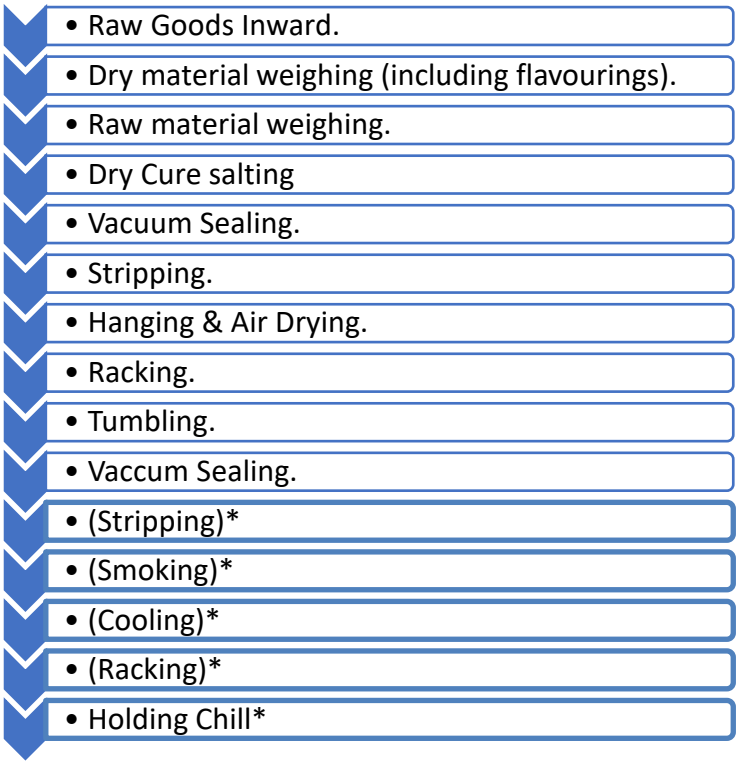


Note: * Smoked product process flow only

- **Dry Cure Bacon Processing**

Dry curing involves no injection stage with the curing agent being hand rubbed (no water addition). The product is then vacuum sealed and left for specific maturation period Vac sealed and left to maturation period. This process flow can be seen in Figure 3 below:

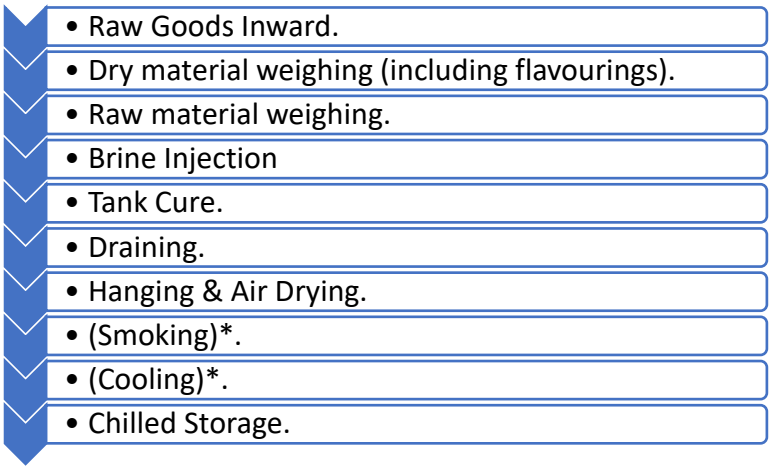
Figure 3 Dry Bacon Processing



Note: * Smoked product process flow only

Tank cured products post injection are placed within a 'live' brine tank which is only periodically refreshed to maintain a specific micro-flora to give the particular characteristic of the product. The cured product is then racked and air dried. The process flow for tank cured bacon can be seen in Figure 4 below:

Figure 4 Tank Cured Bacon Processing

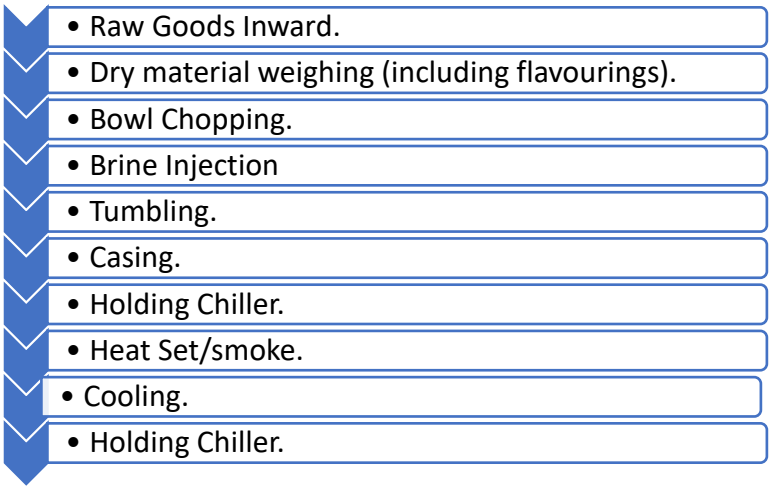


Note: * Smoked product process flow only

- **Reformed Processes**

To optimise the yield from reformed materials a bowl chopper is used (industrial food blender) to obtain a uniform consistency before forming into a shape filling machine into casing to minimise further losses when processed. The process flow for reformed product processing can be seen in Figure 5 below:

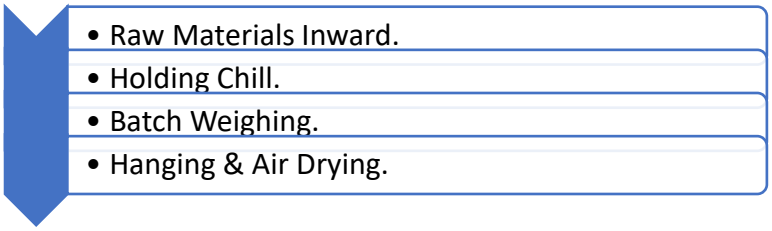
Figure 5 Reformed Product Processing



- **Ayrshire Unsmoked Bacon Process**

The process for Ayrshire unsmoked bacon product is very similar to that described above and can be seen in Figure 6 below:

Figure 6 Ayrshire Unsmoked Bacon Product Processing



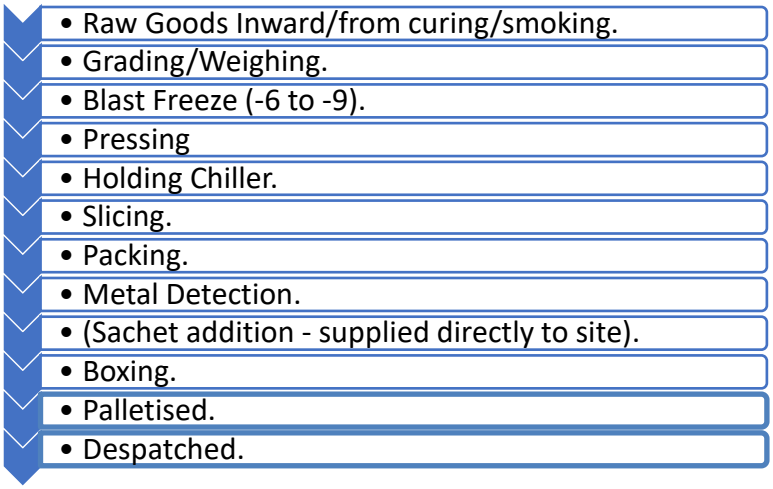
Slicing

- **Prime Sliced Bacon Rashers & Gammon Steaks Processes**

Cured products received from sister operations or products cured on site are received within the slicing department. The generalised process flow involves the blast freezing and pressing within the pressing department for large volume production or inline. Pressing turns back or belly cuts into a uniform shape so minimising product losses as the items are processed further in one of 19 slicing lines.

The process flow for slicing of bacon rashers and gammon steak product processing can be seen in Figure 7 below:

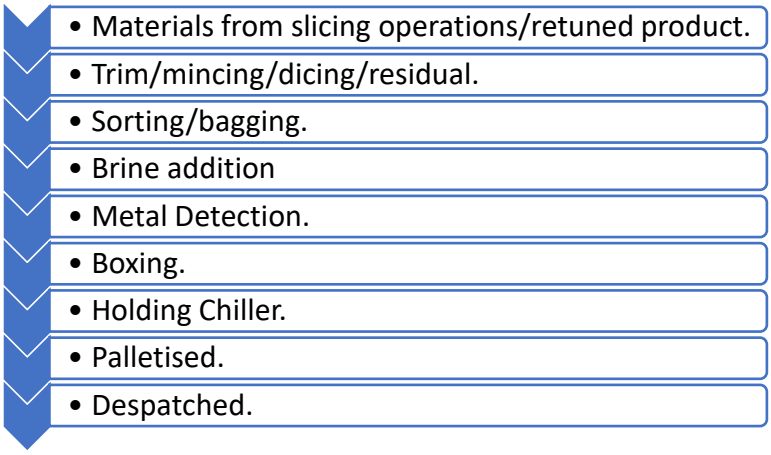
Figure 7 Sliced bacon and gammon steak product processing



Materials recovered from the above process including trimmings can be processed further by either mincing or dicing to ensure minimal food wastage in the production of residual products.

The process flow covering trimmings, mincing, dicing and residual product processing can be seen in Figure 8 overleaf.

Figure 8 Trim, minced, diced and residual product processing



Process heat

Process heat is supplied by a single natural gas steam boiler that mainly serves the curing department and a Lockinvar hot water boiler that provides all hot water requirements via a 90m^3 hot water tank for hygiene and wash down (including tray wash) and four smaller hot water heaters that provide hot water for handwashing and heating of non productive areas/offices on demand.

Process Cooling

The site has two separate ammonia refrigeration plants serving the curing and sling facilities. Both plants are two stage system comprising a glycol secondary cooling loop. All blast freezers are direct fed ammonia loops to freeze or maintain product below freezing. Secondary cooling via the glycol loop provides for air tempering in production halls. Both plants cool circulating water through the Multivacs packaging units and plant 1 cools oil for presses and packaging lines in the slicing facility.

Plant 1 contains 3t ammonia whilst plant 2 has a 1.5t charge.

There are three evaporative cooling towers on site. Units 1 and 2 cool hot gas from the refrigerant plant 1 and Unit 3 serves plant 2 fridge plant.

There are 10 blast freezers within the main slicing facility plus an addition unit that serve the shingle lines with 5 further blast freezers in curing

There are three chillers across the facility including Chiller 3 (holding chill for slicing), Chiller 4 (cryocell blast freezers serving slicing lines 17/18/19 (shingle product production)) and Chiller 5 serving NPD samples storage.

Effluent Plant Operation

Wastewater from the factory gravitates to a large volume concrete reception pit from where it is pumped (controlled by level switches in the sump via duty and standby pumps) over a screen, which removes all particles larger than 1mm diameter. These screenings drop into a sealed dolav located within the bund and is removal by the site waste provider.

Screened water drops into a concrete resin lined 90,000m3 aerated pit. The volume of the pit is maintained above 20% to ensure continuous agitation to keep solids in suspension at all times. There is a high level audible and visual alarm (external to the effluent plant) that is activated if the pit reaches 90% capacity. Level switches in the pit automatically activate either the duty and standby pump to convey effluent to the flocculator where the pH is measured continuously to determine the dosing levels of aluminium sulphate, caustic soda or sulphuric acid and polymer.

Aluminium sulphate is stored externally in a 4,500 litre plastic tank adjacent to the bulk 3,000 litre 32%v sodium hydroxide plastic tank that are located within a common concrete bund. Polymer concentrate is stored internally within the effluent plant building and is diluted prior to use within the make up tank.

From here effluent is conveyed to the 5,000 litre capacity Dissolved Air Flotation (DAF) plant. The chemicals added in the flocculator before entering the DAF create “flocs” (coagulated and flocculated fats and proteins present in the wastewater and caused by chemical reaction with them). These float to the top of the DAF and are skimmed off and pumped to a 9,000 litre rigid plastic conical sludge storage tank for off-site disposal. The sludge level is monitored by a level probe that is alarmed at 50% which activates a visual beacon inside the effluent plant. The sludge tank is not agitated and the sludge is allowed to settle and dewatered by daily cracking off liquid effluent that is recirculated back to the reception pit for further treatment.

Effluent is gravity discharged to sewer via the final in-line calibrated flow meter. pH is manually tested at the flocculator and final outfall to inform the effluent plant operator of plant performance. The final outfall is sampled every two weeks with samples sent off site for accredited laboratory testing for compliance purposes.

The effluent plant is subject to daily and weekly routine PPM including the checking of plant function and/or adverse operation, clean down and weekly emptying and jetting of the reception pit and annual desludging. In addition, a third-party specialist is retained to carry out 6 monthly inspection and plant overhaul including compressor, filter, blades, dosing lines and pumps in addition to identifying opportunities to optimise the treatment process.

Hygiene/Cleaning operations

Where possible production is planned to minimise washdowns. Hygiene is predominantly carried out in situ. Drains are fitted with catch pots and each production tank drains to waste via a collection basket to remove solids. Detailed work instructions are in place to maximise efficiency and minimise waste. The site operates a clean as you go policy in addition to daily cleaning undertaken by the site hygiene team that operate over night (10pm to 6am) supervised by the night shift manager. The control philosophy is to rinse, foam, rinse and apply sanitiser to all equipment and surfaces. Due to the nature of the process there are no CIP systems in place.

Dolav and tray/rack washing is carried out during day shift through an automated process that doses and re-uses wash water. The automated cycle is supplemented where necessary by trigger controlled hand lancing

Hygiene chemical stock and ordering from the dedicated chemicals supplier is undertaken by the shift manager. taken and ordering night shift manager

All team members are trained in chemical awareness- cleaning is done by risk assessment of frequency and determined by in depth analysis and swab testing. Effectiveness of cleaning is carried out in line with food hygiene and customer requirements.

Recycling bins are readily available on all lines. Where possible spillages are cleaned in place rather than flushed to drain. Spill kits have been strategically placed around site by risk assessment. Cleaning chemicals are kept in a locked dedicated store controlled accordingly.

3b General Requirements

Table 3b General Requirements

Are fugitive emissions an important issue?	No
Is odour an important issue?	No
Is noise and vibration an important issue?	No

Fugitive Emissions to Sewer, Surface Water and Groundwater

Raw material, hygiene and engineering chemicals (including glycol) are delivered directly to store and transferred to the internal storage area of chemical stores. Bulk tanker delivers of caustic, diesel, aluminium sulphate, IBC's of acids and bulk gases are offloaded or transferred directly to the external storage areas. The yard and roadways is all hardstanding. There are sealed joints to all concrete slabs. All drainage pipes are clay or stainless steel where above ground, with chemically resistant collars and stainless steel manhole covers, bedded in concrete. Other underground structures include the effluent pit which are lined concrete.

Surface water and foul drainage is separate and there are surface water drains in the yard areas where chemicals and waste are stored. The final outfall of surface water is to a local controlled water (a watercourse adjacent to the A30 and Trevenson Church) which is a tributary within the Red River catchment area is shown on the drawings. There is no additional means of shutting off the outfall to the stream in the event of a major spillage in the yard. In the event of a spill, spill kit materials would be deployed with the aim of preventing the spill reaching the surface water drainage system.

In the event of contamination of effluent meaning it is out of specification for discharge to foul sewer, effluent can be held back in the reception pit or balance tank until it can be effectively treated and brought within consent limits, or if this is not possible effluent would be tankered off-site.

Measures provided in the yard to prevent leaks and spills include bunding to bulk sludge, caustic soda and IBCs of sulphuric acid associated with the effluent plant and bunding of all engineering oils and liquid wastes. In addition, the site has a self bunded oil storage regulations compliant diesel fuel tank for refuelling of on site MHE equipment and the sprinkler pumps.

The bulk tanks within the effluent plant are sited on hard standing and within bunds, the delivery connection points are within the bunds. The tanks have a high-level alarm.

Procedures for receipt of acids, alkalis and fuels oil in addition to the tankering off of effluent sludge are in place as part of the site's Health, Safety and Environmental Management System. Spill kits and drain covers are in place in the yard for use in the event of a leak or spill; operatives are trained in the use of spill kits.

Effluent screenings are also stored within a covered dolav within the footprint of the effluent plant bunds within the yard. All IBC's of waste materials are regularly removed from site. Boiler and water treatment chemicals are also stored in the 'tunnel' adjacent to engineering on mobile drip trays. Other effluent chemicals including flocculant are stored within the DAF plant building on mobile bunds. All IBC's are stored with lids, caps and valves secured and in place.

IBC's and smaller containers of hygiene chemicals and engineering oils are stored in a self-bunded chemical store adjacent to the effluent tank and the dedicated hygiene chemical stores.

The effluent plant balance tank and sludge tank are sited within an external bunded area of hard standing adjacent to the effluent plant.

Waste is stored in designated, labelled areas of the yard in compactors, skips and IBC's.

Regular Health and Safety walks and GMP audits take place which include external yard areas, these would include visual inspection of storage facilities and bunds.

Table 4 Vessel Inventory

Tank Ref:	Type	Capacity	Material of construction of tank and Condition	Location (internal/external)	Potential Emissions (venting/leaks/ spills)	Emission Control Technique Primary, secondary & tertiary including PPM
1	Effluent Reception Pit	Not known	Concrete	External (below ground)	Leaks due to breach of integrity	Visual Inspection (internal and 3rd party)
2	Aeration Pit Tank	90,000 m^3	Resin coated concrete	External (below ground)	Leaks due to breach of integrity	Visual Inspection (internal and 3rd party)
3	Aluminium Sulphate	4,500l	Rigid plastic	External	Leaks due to breach of integrity	Self bunded tank with concrete bund Visual Inspection
4	Sodium hypochlorite (32%)	3,000l	Rigid plastic	External	Leaks due to breach of integrity	Self bunded tank with concrete bund Visual Inspection
5	Sludge Tank	9,000	Rigid plastic	External	Leaks due to breach of integrity	Concrete bund Visual Inspection
6	Diesel Fuel Tank	2500l	Rigid plastic	External	Leaks due to breach of integrity	Self bunded Visual Inspection
7	Sprinkler Tank 1	Not known	Steel	External		Visual Inspection
8	Sprinkler Tank 2	Not known	Steel	External	Leaks due to breach of integrity	Visual Inspection

Fugitive Emissions to Air

There are no external sources of dust.

There is the potential for fugitive emissions to air from ammonia charged refrigeration plant leaks. All refrigeration plant is subject to ongoing planned preventative maintenance and checks in accordance with manufacturers recommendations, under a service contract. This minimises any possibility of fugitive leaks of refrigerant gas.

Odour

The site has 5 2.5 tonne friction smokers that in combination with steam generated by the main steam boiler both smoke and heat set the product if required. The smokers operate on pre-set cycles which involve the periodic purging of the smokers to atmosphere (at height to gain maximum dispersal effect- A7 to A11) depending on the depth of smoking required.

The processing operations are all located internally within enclosed buildings. Processing buildings also operate air handling systems which vent from the building which have the potential to release internal general factory odours however, due to the nature of the processing (frozen/chilled products and no cooking operations) these are not judged to be routinely odorous.

The site has identified as part of its environmental management system that there are potential sources of fugitive release of odour:

- Raw materials receipt and unloading
- Effluent Plant
- Effluent Sludge Tank Emptying
- Waste Storage
- Site Drains
- Building entrances and exits

The emphasis in the management of odour from the site is on prevention, and as such preventative maintenance, management, monitoring and inspection of all potential sources of odour are the main control measures, alongside efficient operation of the processing plant. Odour has been specifically assessed as part of the BAT appraisal which details the measures taken to prevent odour from the installation. The changes to site processes will not introduce any new sources of odour and existing control measures are deemed adequate to control odour at the site. No odour complaints have ever been received by the site.

A summary of odour risk is presented below:

Odour Management

Source	Receptor	Likelihood	Control measures	Actions for outside boundary control	Responsible Person
Effluent Plant	Immediate Neighbour.	High	Daily operator and engineers checks. Automated controls	Contain the source of odour: -Cease recirculation of divert or sludge	Engineering Manager

			Planned PPM	- checks to ensure integrity of tanks and pipework. Any fails result in immediate clean up activities	
Sludge Tankers	Immediate Neighbour.	High	Emptying sludge tank -Activity planned with contractor and timed to avoid nuisance	Cessation of tanker loading activities and investigate.	Engineering Manager
Smokers	Local community	High	Dispersion of purged smokers at height. Operational control, preventative maintenance, management, monitoring and inspection of equipment	No historical issues or complaints Emergency services would control according to emergency plan.	Production/Engineering Manager
Ammonia	Local community	Low	Alarm system and automatic shutdown.	No history. Highly unlikely even in catastrophic event – refer to modelling. Emergency services would control according to emergency plan.	Engineering Manager
Drain Clearance	Immediate neighbour	Low	Regular contracted drain jetting Annual interceptor clearance	Stop jetting and investigate potential source. No historical issues	EHS/Engineering Manager
General/ABP waste	Immediate neighbour	Low	Cleaning and pressure washing of compactor /ABP area. Washings run to ETP. Regular waste transfer from site.	No historical issues or complaints Clean down area	EHS/Production Manager

Noise

There is limited potential for noise on the site. The main sources of noise are vehicle movements on and off site for deliveries and product distribution; movement of forklifts around the site; potential for noise during offloading and loading of raw materials and products; operation of compressors and process machinery. Compressors are within an enclosed building, as is all other process equipment. Delivery vehicle engines are switched off during loading and offloading for safety reasons and to minimise noise. The site has never received any complaints of noise nuisance related to the routine operation of the process. See Table 11 for closest sensitive receptors to the site.

Pests

The operator has an ongoing pest control contract in place with a third-party provider.

3c Types and Amounts of Raw Materials

Table 5 shows the predicted new annual throughput for the main raw material, bacon. Annual throughput of ancillary materials including packaging, bulk gases and cleaning/effluent chemicals are shown in the table, where known.

Table 5 Raw Materials Inventory

Schedule 1 Activity	Description of raw materials and Composition	Max Amount (kgs or time supply)	Annual Throughput (kgs each year)	Description of Use including main hazards
Food Production				
6.8 Part A(1)(d)(i)	Bacon	1500 Tonnes	44000 tonnes	Raw Material – Bacon Feedstock
	Curing Salts, preservatives, flavourings etc		Variable	Ingredients
	Plastic Film/cardboard, labels etc		Variable	Packaging
	Nitrogen	5.5 Tonnes		Food Preservation
	Carbon Dioxide	2.5 tonnes		Food Preservation
	Hydraulic Oils		5000 litres	Engineering consumables
Hygiene Chemicals				
	Chlorfoam Plus Foaming Detergent		14600kg	Cleaning of plant/equipment removing soil containing fats & grease. Alkaline
	Caustic detergent (turbo Ultra, Caustak 30		14800kg	Cleaning of plant/equipment removing soil containing fats & grease. Alkaline
	Trayclean Detergent		4150 kg	Alkaline detergent for use in food manufacturing.
	Disinfecting Spray Wipes		1850 kg	Cleaning of plant/equipment removing soil containing fats & grease. Alkaline
5.4 Part A(1)a(ii)	Caustic 32%		2700kg	DAF unit pH adjustment; corrosive
	Sulphuric Acid 50%		12,000 ltrs	DAF unit pH adjustment; corrosive
	Ferric Chloride		10000 kg	DAF Coagulant agent
	Aluminium Sulphate		10000 kg	DAF unit flocculation agent

3d Management Systems

In line with Pilgrim's Pride standards the site operates an Environment management system which incorporates the following:

- Documented Environmental Policy setting out the businesses vision and values in relation to environmental management;
- A documented Aspects Register identifying all activities on site with an assessment of environmental impact;
- A Climate Change Risk Assessment (included at Appendix G);
- Documented structure and responsibilities for environmental management within the system manual and individual procedures;
- Identification of all applicable environmental legal requirements and the compliance status of the business. The site is subject to audit as part of the Pilgrim's Group;
- Documented operating procedures for environmental operations that may have an adverse impact on the environment;
- A planned preventative maintenance regime and routine inspections of key plant and equipment (Holistech);
- Routine documented monitoring of key parameters including effluent discharge, energy and water use, waste arisings and raw materials use;
- Training programmes to ensure all staff and contractors are suitably inducted and trained in relevant environmental procedures;
- Procedures for the investigation of any potential complaints;
- Contingency plans to be used in the event of breakdowns of key plant and equipment or unplanned events such as extreme weather;
- An accident plan is present on site which includes any emergency procedures for environmental matters e.g. spillage;
- Regular review of Environmental performance by the management team against set improvement targets;
- Procedures are in place for all key operations including receipt and processing of raw materials;
- Audits of compliance against relevant procedures and all legal requirements are carried out periodically;
- Non-conformances are documented and appropriate corrective and preventive actions are taken;
- Records are kept to demonstrate compliance with applicable legislation, as well as other relevant records including training, monitoring and maintenance.
- Documented procedures for change management including assessment of potential environmental impacts of any planned changes to the site.

Accident Management Plan

Table 6 Accident Management Plan

Incident/Abnormal Circumstance	Likelihood	Consequence	Prevention Measures	Mitigation Measures
Equipment breakdowns	Medium	Dependent on equipment: DAF breakdown/pump breakdown; valve/plc malfunction - Release of out of specification effluent; Boiler/refrigeration plant malfunction – inability to operate process; Process plc malfunction – inability to operate process	Planned Preventative Maintenance of all equipment; Service contracts for boilers, refrigeration plant, compressors, effluent plant;	Some production could be diverted to sister site if required; Effluent plant has balance tank capacity in which effluent can be held back if required; effluent will be tankered off-site if required; Service contracts/ agreed response times in place for boiler, compressors, effluent plant, and refrigeration plant;
Spillage during Tanker Loading/Offloading	Low	Spillage of acid/caustic, oil or sludge from tanker/hose with potential to enter surface water course.	Site vehicle management e.g. speed limits, designated routes; Operators trained in delivery procedures; connection points within bunds;	Spill kits; Spill procedures; Bunding; If catastrophic spill overtops bund or spillage occurs from tanker outside of loading area, whole site containment plan deployed.
Bulk vessel overfilling	Low	Spillage of acetic acid or oil from vessel with potential to enter surface water course.	Tank level checking prior to off-loading; Tank high level alarms; Bunding	Bunding; Spill kits; Spill procedures;
Spill from IBC or drum	Medium	Spillage of chemicals (acid/caustic or other treatment/hygiene chemicals), or other liquid/food waste with potential to enter surface water course.	Mobile bunds; all containers stored with lids and valves closed; Some containers stored in bulk storage container with integral bund; all storage away from traffic routes;	Bunding; Spill kits; Spill procedures;
Fire	Medium	Emission of smoke/dust to air	Site fire risk assessment; Fire detection systems. Planned Preventative Maintenance of all equipment; Site permit to work system (hot works)	Fire response plan; Crisis Manual; battle boxes

Incident/Abnormal Circumstance	Likelihood	Consequence	Prevention Measures	Mitigation Measures
Contaminated Firewater	Low	Release of contaminated water to sewer/surface water/ground	Site fire risk assessment; Planned Preventative Maintenance of all equipment; Site permit to work system (hot works)	All internal drains directed to effluent; Firewater could be pumped to effluent reception pit for containment prior to testing/release to sewer;
Release of out of specification effluent	Low	Potential impact at WWTW Breach of effluent consent	pH adjustment plant; DAF plant; Balance tank	Effluent recirculation if out of consent for pH; Effluent can be held back in the balance tank if there is a known problem with consent levels;
Blocked Drains	Low	Odour nuisance	Planned Preventative Maintenance of drainage system;	Contractor call-out
Flooding	Low – parts of the perimeter of the yard are within a flood zone, but there are no records to show the site has ever flooded.	Mobilisation of pollutants on site with potential to migrate to drainage system/controlled water/ground.	Dedicated storage areas; Bunding;	Crisis Manual; Isolation of utilities; Lock off all vessel valves
Vandalism	Low	Spills/litter/damage to property/nuisance	24 hour site security; CCTV; full perimeter fencing	Crisis Manual; Spill procedures
Bad weather	Low/Medium	Suppliers unable to deliver; Workforce unable to get to work;	Risk Register and Crisis Manual for response to loss of suppliers e.g. fuel supply or difficulties with workforce getting to work.	See site Risk Register and Crisis Manual for response to loss of suppliers or difficulties with workforce getting to work.

4. Monitoring

4a Describe the measures you use for monitoring emissions

There is currently no requirement for emissions monitoring from the process. The operator does not propose any further monitoring.

4b Point source emissions to air only

As above.

5. Environmental Impact Assessment

5a Have your proposals been the subject of an EIA under Council Directive 85/337/EEC?

No

6. Resource Efficiency and Climate Change

6a Describe the basic measures for improving how energy efficient your activities are?

- Start-up and shut-down procedures are in place for all lines and hibernation settings are in place.
- All steam pipes are insulated.
- A leak survey or compressed air systems has been completed and leaks addressed.
- Condensate from boilers returned to boiler hotwell.
- Refrigeration equipment is maintained by external contractor and optimised via regular maintenance.

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6b Provide a breakdown of any changes to the energy your activities use and create

Table 7 below shows energy use for the period Jan 2019 to end of December 2019.

Table 7 Energy Use

Period	Electricity (kWh)	Natural Gas (kWh)	Propane/ LPG (litres)	Total Energy (kWh)	Total Emissions (kgCO2e)
1	975,009	249,099	N/A	1,224,108	295,009
2	857,925	213,324	N/A	1,071,249	258,505
3	917,093	213,046	N/A	1,130,139	273,577
4	904,426	205,075	N/A	1,109,501	268,874
5	936,949	229,977	N/A	1,166,926	281,765
6	870,278	195,504	N/A	1,065,782	258,386
7	923,464	172,603	N/A	1,096,067	267,770
8	987,487	196,182	N/A	1,183,669	288,470
9	1,035,213	225,786	N/A	1,260,999	306,111
10	1,114,270	322,493	N/A	1,436,763	344,098

11	1,090,959	322,560	N/A	1,413,519	338,152
12	1,083,390	340,892	N/A	1,424,282	339,587

Table 8 Summary of Site Boilers

Boiler Type	Location	Emission Point	Net Therma Input (kW) (estimated based on 80% efficiency)
Hot Water	New Hall Boiler (113KW)	A1	136
Hot Water	New Hall Boiler (113KW)	A2	136
Steam	Curing Hall Boiler (2370KW)	A3	2844
Hot Water	Lochinvar Boiler (610KW)	A4	732
Hot Water	Old Hall Boiler (113 KW)	A5	136
Hot Water	Old Hall Boiler (113 KW)	A6	136

6c Have you entered into, or will you enter into, a climate change levy agreement?

Yes, the operator is part of the underlying climate change agreement for the Food and Drink sector, Agreement Identifier: FDF1/T00146 v3, Facility Identifier FDF1/F00176 (Appendix G).

6d Tell us about, and justify your reasons for, the raw and other materials, other substances and water you will use

Water

Water is metered across the site and the use of hoses is closely monitored. Table 9 below shows water use and effluent volume for the period Jan 19 to end of Dec 19.

Table 9 Water Management

Period (e.g. month)	Water Use (m3)	Effluent Volume (m3)
1	2,818	1,152
2	2,530	1,094
3	2,623	1,107
4	2,804	1,251
5	3,202	1,443
6	2,976	1,364
7	3,111	1,348
8	3,810	1,797
9	4,350	2,187
10	5,111	2,771

11	4,644	2,500
12	4,491	2,660

The production team review the production plan every week and challenge batch sizes/changes. The operator is constantly looking for ways to minimise these and thereby save water.

Raw Materials

Raw materials are selected on the basis of the batch process requirements, operator can minimise waste by ordering correct pack sizes etc. and scheduling production to ensure all raw materials are used up.

The operator uses an industry standard supplier management tool to understand impacts in their supply chain.

6e Describe how you avoid producing waste in line with Council Directive 2008/98/EC on waste

Products can sometimes be reworked however those that can't (including floor waste) due to food safety requirements have to be disposed of in accordance with the Animal Biproducts Regulations.

The operator runs a CI Programme.

Table 10 below shows waste volumes and disposal routes for the period Jan to end of Dec 2019.

Table 10 Waste Streams and Disposal Routes

Waste Type	Source of Waste	State (e.g. solid/liquid)	Class (Haz or Non-Haz)	Storage Location	Disposal Route e.g. recycled, recovered, composted, landfilled etc	Annual Volume (tonnes or litres)
CAT 3 Waste	Food Waste	Solid	Non-Haz	Yard	Anaerobic Digestion	228t
General Waste	General Factory/Office waste	Solid	Non-Haz	Yard	Energy Recovery	1087t
Sludge Effluent	From Effluent Plant	Solid	Non-Haz	Bulk Tank, Yard	Anaerobic Digestion	193t
Cardboard	Cardboard	Solid	Non-Haz	Yard	Recycled	82t
Wood Skip	Wood Skip	Solid	Non-Haz	Yard	Recycled	3t
Metal Skip	Metal Skip	Solid	Non-Haz	Yard	Recycled	3t
Waste Oil	Waste Oil	Liquid	Non-Haz	Bulk Tanks, Yard	Recycled	2t
Hazardous Waste	Hazardous Waste	Solid	Haz	Yard	Hazardous Waste	<1t
Light Tubes	Light Tubes	Solid	Haz	Yard	Hazardous Waste	<1t

7. Installations that include a combustion plant (excluding waste incinerators)

Is the aggregated net thermal input of your combustion plant more than 20 MW?

No

8. Environmental Risk Assessment

The following section addresses the potential impact of the proposed changes on the surrounding area.

Sensitive Receptors

The following sensitive receptors have been identified as being potentially affected by operations at the site. Statutory and non-statutory ecological receptors have been identified within a 10km radius, using magic.gov.uk. Human receptors immediately surrounding the site which may be sensitive to nuisance from odour, dust, or noise from the site have also been identified. These are also shown in Drawings 5a, b and c.

Table 11

Name of Receptor (designation/distance/direction)	**Nature of Receptor**	**Emission which may impact on the receptor and their relevant pathways**
Ecological Receptors		
Bristol Channel Approaches/Dynesfeydd Mor Hafren (pSAC) 6km north	European significant populations of harbour porpoise	Air Emissions Surface Water
Godrevy Head to St Agnes (SAC) 4km north	Dry heathland habitat of European significance	Air Emissions
West Cornwall Bryophytes (SSSI) 1.6 km SE and SW (nearest points)	Nationally important assemblages of brophytes, liverworts and mosses	Air Emissions
Red River Valley (Local Nature Rerserve) 1.8km NW	Locally important wildlife site	Air Emissions
Roskear Local Wildlife Site 2km W	Locally import scrub, heath and grassland habitats	Air Emissions
Carn Brea Local Wildlife Site 1km S	Locally important heathland	Air Emissions
Penteventon Moor Local Wildlife Site	Locally import scrub, heathland	Air Emissions
Human Receptors within 1km		
Residential areas off Agar Road, adjacent to northern boundary of site	Residential areas	Odour, Noise, Air Emissions
Commercial properties to southern, eastern and western boundaries	Commercial Properties	Odour, Noise, Air Emissions

Impact of Emissions to Air

The principal emissions to atmosphere from the installation are identified in Table 2. This section presents the approach to the assessment of the impact of the emissions on the local receiving environment.

H1 Assessment

Data from the emission monitoring exercise was used to conduct the H1 assessment. Due to the height and position of the stacks in close proximity to the adjacent building an effective height of 0m was entered into the tool. For all combustion units representative data

The steam boilers operate both at the same time, for 5 or 6 days a week, depending on production schedules, and automatically modulate between the boilers. A blanket operational percentage of 100% was applied to both boilers on H1.

The information was inputted in the H1 tool which produced the following results:

Table 12 H1 Assessment Results

Substance	Long Term EAL (ug/m3)	Short Term EAL (ug/m3)	Long Term PC (ug/m3)	% PC of EAL	>1% EAL?	Short Term PC (ug/m3)	% PC of EAL	>10% EAL?
NOx	40	200	27.9	69.6	Yes	733	367	YES

Emissions of NOx are significant both the long and short term. The data was then compared to background emissions concentration data from Cornwall Council (downloaded from http://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html) for grid square 167500, 41500. Background data is available for NOx – 8.01 µg/m3 (predicted 2020 background pollutant concentration).

The results show that the emissions are still significant and emissions modelling is required. It should be noted that all the existing emission points would have been part of the background concentrations and as such the H1 assessment does not provide an accurate picture of the contribution of the site to local air quality.

On the basis of the above results, emissions modelling was commissioned (see Appendix I).

Dispersion modelling of NOx emissions was undertaken using ADMS-5. Impacts at sensitive receptors were quantified and the results compared with the relevant Environmental Quality Standards (EQS) and significance criteria. Predicted pollutant concentrations were below the relevant EQSs at all locations for all meteorological data sets modelled. Resultant impacts were classified as not significant for both human sensitive receptors. Impacts were also modelled at relevant ecological sites. The results indicated that emissions from the plant

Point Source Emissions to Sewer, Surface Water and Groundwater

Sections 3b Fugitive Emissions and 3d Accident Management Plan have described the sites approach to managing the risk posed by storage of potential pollutants on the site. This is summarised in the risk assessment below in Table 14.

Odour

The processing operations are all located internally within enclosed buildings and as such there is routinely a negligible risk of odour from these operations. All raw materials are unloaded directly into internal bays.

There is the potential for releases to air from the smoking operation to odorous. Processing buildings also operate air handling systems which vent from the building which have the potential to release internal general factory odours however, due to the nature of the processing (frozen/chilled products and no cooking operations) these are not judged to be routinely odorous.

As part of its environmental management system the site has identified that there are potential sources of fugitive release of odour:

- Raw materials receipt and unloading
- Effluent Plant
- Effluent Sludge Tank Emptying
- Waste CAT3 Storage (not exceeding 3 days on site = covered 1100l wheelie bins).
- Site Drains – jetted at least annually.
- Building entrances and exits

The emphasis in the management of odour from the site is on prevention, and as such preventative maintenance, management, monitoring and inspection of all potential sources of odour are the main control measures. No odour complaints have ever been received and the existing measures are therefore deemed to be effective.

Noise

There is limited potential for noise on the site. The main sources of noise are vehicle movements on and off site for deliveries and product distribution; movement of forklifts around the site; potential for noise during offloading and loading of raw materials and products; operation of compressors and process machinery. Compressors are within an enclosed building, as is all other process equipment – noise suppression is in place on compressors and grinding room. Delivery vehicle engines are switched off during loading and offloading for safety reasons and to minimise noise. The site has never received any complaints of noise nuisance. No additional measures are considered necessary at this time.

Table 14 Environmental Risk Assessment

Hazard	Receptor	Pathway	Risk Management Technique	Probability of Exposure	Consequence (Severity)	Overall Residual Risk
Emissions to air – boilers emission points A1-A4	See Table 11	Air dispersion	Boiler burner balancing and annual testing	High	Low	Low - See H1 assessment and Air Dispersion Model.
Emissions of trade effluent to sewer from discharge point S1	Redruth Waste Water Treatment Works	Sewerage drainage system	Compliance with trade effluent discharge consent via use of pH adjustment and DAF plant.	High - Emissions during hours of operation	Low – compliant with consent	Low – site operates within existing consent levels.
Odour – processing activity	See Table 11 – Human Receptors	Air dispersion	No further management required	Medium	Low	Low – controls in place will be adequate to minimise potential for odour nuisance complaints.
Odour – waste storage	See Table 11 – Human Receptors	Air dispersion	Covered/enclosed containers; regular uplifts	Medium	Low	Low – controls in place will be adequate to minimise potential for odour nuisance complaints.
Odour – sludge removal	See Table 11 – Human Receptors	Air dispersion	Enclosed drainage system	Medium	Low	Low – no complaints received.
Noise – processing activity	See Table 11 – Human Receptors	Airborne	PPM for all equipment; Housing for noisy equipment; Engines switched off during loading/unloading; Enclosed loading bay	Medium - Emissions during hours of operation; restrictions on vehicle movements at unsociable hours.	Low	Low – no complaints received.

Pests	See Table 11 – Human Receptors	Airborne; overground	Pest Control Programme	Medium	Low	Low – no complaints received.
Fugitive Emissions to Air – dust, litter etc.	See Table 11	Air dispersion	Yard inspections	Low – no dusty wastes	Low	Low – no complaints received.
Fugitive emissions to air – processing e.g. refrigerants	See Table 11	Air dispersion	Contracted maintenance programme.	Low - Potential for emissions during maintenance or in the event of a breakdown	Low – No impact	Low – records show no significant refrigerant losses.
Fugitive Emissions to surface water, sewer and groundwater – accidental minor leaks and spills – bulk oil tanks	Controlled water; Waste Water Treatment Works	Drainage system; overground;	Tank integrity checks; High level alarms; Delivery procedures; Spill procedures and training; Whole site containment.	Low – no records of reported non-conformances	Medium – minor impacts with no pollution occurring	Medium – minor leaks and spills routinely cleared up with no impact.
Fugitive Emissions to surface water, sewer and groundwater – accidental minor leaks and spills – effluent tanks	Controlled water; Waste Water Treatment Works	Drainage system; overground;	Tank integrity checks; High level alarms; Spill procedures and training;	Low – no records of this occurring	Medium – minor impacts with no pollution occurring	Medium
Fugitive Emissions to surface water, sewer and groundwater – accidental minor leaks and spills – sludge tank and emptying	Controlled water ; Waste Water Treatment Works	Drainage system; overground;	Tank integrity checks; High level alarms; Delivery point in a bunded area; Spill procedures and training;	Low – sludge tank emptied approximately weekly but no incidents reported	Low – minor impacts with no pollution occurring	Low
Fugitive Emissions to surface water, sewer and groundwater – accidental minor leaks and spills – effluent treatment chemicals	Controlled water ; Waste Water Treatment Works	Drainage system; overground;	IBC Storage on bunds, infrastructure inspections, tank integrity checks; High level alarms; Delivery procedures;	Low – regular deliveries but no incidents reported	Low – minor impacts with no pollution occurring	Low – minor leaks and spills routinely cleared up with no impact.

			Spill procedures and training; Whole site containment.			
Fugitive Emissions to surface water, sewer and groundwater – accidental minor leaks and spills – hygiene Chemicals	Controlled water ; Waste Water Treatment Works	Drainage system; overground;	IBC Storage on bunds, infrastructure inspections, tank integrity checks; High level alarms; Delivery procedures; Spill procedures and training.	Low – regular deliveries but no incidents reported	Low – minor impacts with no pollution occurring	Low – minor leaks and spills routinely cleared up with no impact.
Fugitive Emissions to surface water, sewer and groundwater – accidental minor leaks and spills – Waste storage	Controlled water ; Waste Water Treatment Works	Drainage system; overground;	IBC Storage on bunds, infrastructure inspections, tank integrity checks; High level alarms; Delivery procedures; Spill procedures and training.	Low – regular uplifts but no incidents reported	Low – minor impacts with no pollution occurring	Low – minor leaks and spills routinely cleared up with no impact.
Fugitive Emissions to surface water, sewer and groundwater – catastrophic failure – bulk oil stores	Controlled water ; Waste Water Treatment Works	Drainage system; overground;	IBC Storage on bunds, infrastructure inspections, tank integrity checks; High level alarms; Delivery procedures; Spill procedures and training	Low	High – whole site containment system requires improvement to provide sufficient containment capacity.	Medium - Risk considered very unlikely.

Appendices

Appendix A – Site Plans

i) Drawing 1 Installation Location and Boundary

ii) Drawing 2 Site Layout and Emission Points

iii) Drawing 3a Drainage Plan – Sewer and 3b Drainage Plan – Surface Water

Appendix B – Air Quality Assessment

Appendix C – BAT Summary Food & Drink BREF

Appendix D – BAT Summary Waste BREF

Appendix E – Site Condition Report

Appendix F – Habitats Screening

Appendix G – Climate Change Agreement

Appendix H – Discharge Consent

Appendix I – Climate Change Risk Assessment