

Appendix 11



OPERATIONAL NOISE MANAGEMENT PLAN

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Version Control

Version	Date	Changes	Issued By	Approval
1	01 Sept 2022	1st issue of operational NMP	S. Hutchinson	J.Colley

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1 Introduction

Maelor Foods Ltd are implementing an operational Noise Management Plan (NMP) for Phase 2 operations at our poultry processing facility at Pickhill Lane, Wrexham, LL13 0UE.

Our environmental permit for the site (EPR/AB3591ZQ) is regulated by Natural Resources Wales (NRW) under The Environmental Permitting (England & Wales) Amendment Regulations 2018.

A NMP was prepared to support our environmental permit application and condition 3.4.1 allows us to use an approved NMP to control noise from the permitted installation.

“Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.”

Noise Management Plans (NMP) are required for installations permitted under the Environmental Permitting (England and Wales) Regulations 2018 (as amended) (EPR) if the activities undertaken at the installation have significant potential to cause noise nuisance.

We have determined that the activities at our installation have an inherent noise nuisance potential and some operations could be noisy.

This NMP is designed to ensure that all reasonable measures are taken to control noise emissions, and if an adverse impact is caused then prompt action will be taken to identify the source and apply corrective measures. It provides a schedule of actions that will be taken to help minimise noise impact and sets out site management procedures for the management of noise.

2 Objectives & content

The objectives of this NMP are to identify all significant sources of noise present at the facility and then provide information on management practices and the infrastructure in place to abate or minimise noise emissions from the facility.

The effects of emergency and abnormal circumstances on noise emissions are also considered. Monitoring procedures are described to help validate the effectiveness of measures taken to control noise emissions. The plan also outlines measures taken in the event of the detection of excessive noise during monitoring, with a view to reducing this to an acceptable level as soon as possible.

Response procedures are described in case noise related complaints are received from a neighbour of the plant, with procedures for recording all relevant information and investigating the potential cause of the noise.

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3 Guidance & review

This NMP has been produced with reference to [Noise and vibration management: environmental permits](#), Updated 31 January 2022.

Our NMP is to be reviewed on a regular basis (at least annually) or more frequently if there are any changes to the activities and/or if any specific issues in respect of noise have become apparent.

Any amendments stemming from these reviews may need to be agreed with and approved by NRW and / or the Planning Authority to meet the terms of our Planning Consents.

NRW and the Planning Authority should be consulted at an early stage to ensure that the NMP can be amended in future, with the prior written agreement of the authorities, to ensure that any necessary and beneficial changes to noise management practices can be implemented without breaching the terms of our Planning Consents and to allow compliance with the EPR permit.

Such changes may need to be made in the light of operating experience, complaint episodes or if new developments or technologies become available in future so that facilities or practices can be adapted and optimised to further reduce noise impacts.

For the management of deliveries and noise, reference should be made to Department for Transport's Guidance on [Reducing noise to make deliveries outside normal delivery hours](#)

4 Site Location and Plant Description

4.1 Site Location

The poultry processing facility is located on the site of the former Maelor Creamery, Pickhill Lane, approximately 1 km to the north-north-west of the village of Bangor-on-Dee and approximately 700m to the south-east of the residential area of Cross Lanes. Appendix 1 shows the locations of potentially sensitive noise receptors around the plant.

There are small numbers of potentially sensitive residential properties located off Pickhill Lane, to the west of the proposed main poultry processing building, and isolated residences to the north of the plant at Pickhill Old Hall and Whitegate Cottage. The proximity of sensitive receptors on Pickhill Lane is such that there are risks of off-site noise nuisance being caused and therefore high standards of noise management are required.

4.2 Plant Description & Risk Assessment

The plant undertakes the slaughter and processing of up to 2 million broiler chickens per week under Phase 2 operations. The following paragraphs describe the key activities in each area of the plant, the noise risks in each area and the key control measures which will be used to reduce noise emissions and/or disrupt the pathways for noise to potential receptors. The noise risk of each area has been assessed against experience gained to date and from knowledge of other UK poultry processing plants.

Appendix 2 shows the locations of noise sources around the site.

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4.2.1 Delivery & Lairage / Intake

Live chickens from broiler production farms arrive at the plant in modules on HGV trailers. The HGV trailers enter a lairage area, before moving to the intake area where the modules are unloaded. All doors remain closed when not in use. Birds are transferred from the intake area to the preliminary processing area.

The Lairage / Intake area has a low level of noise from the birds and a recirculated air conditioning system maintains good working conditions and a comfortable environment for the birds held in this area prior to slaughter.

The lairage is cleaned daily with the manure manually scraped into collection bins and floors washed using trigger operated spray lances.

The live bird holding area is large enough to accommodate the temporary holding of live bird delivery vehicles pending unloading if there are processing delays and deliveries of live birds are pushed back until the plant is operational again. As a further contingency, under permit Variation 2 Maelor Foods acquired the former transport depot adjacent to the installation and have scope to convert this into an additional live bird holding area for emergency use. This could allow up to seven live bird vehicles to be parked inside so the live birds can be cooled by air fans in a non-stressful manner. The live bird vehicles would be moved from here into the lairage as soon as the lairage was available to receive them.

Until this is implemented the noise potential is unsubstantiated but it is expected to be a low noise source and no worse than the lairage.

Vehicle movements are the primary noise source in this area and operations are conducted for 20 hours each day with 4 hours of non-operational time overnight. An average of 210 HGV movements into and out of the installation will be made per day under Phase 2.

Due to the increase in vehicle movements for Phase 2 our Noise Impact Assessment has identified a potential exceedance of night-time noise levels at the Pickhill Lane site entrance area. This will be mitigated by limiting night-time HGV movements to 1 per any 15-minute period (i.e. 4 per hour) between 23:00 and 07:00hrs.

A combination of traffic management and maintenance of road surfaces will minimise traffic noise. Reversing vehicles warning alarms are deactivated and the traffic flow design is such that vehicles do not have to reverse into or out of the lairage. These factors eliminate noise from reversing beepers on HGV vehicles.

This is a Medium noise risk area of the plant.

4.2.2 Stunning and bleeding

Birds are transferred from the intake area via a Linco module handling system to the preliminary processing area. Here the modules are loaded onto the intake line and the birds are gas stunned, then removed from the modules and hung-on to the “shackles” of an overhead conveyor line and transferred to a bleeding area. Here the birds are decapitated and blood is drained into the blood trough and pumped away at frequent intervals during the day to the blood storage tank in the ABP storage building.

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The empty modules are transferred to the “module wash” and then transferred to the “box return” service area where they are loaded onto empty HGV trailers for subsequent re-use in the collection of birds from farms.

The internal workplace is air conditioned on a recirculated air system while the module wash area is extracted and dispersed through the roof exhaust point.

The area is washed down and sanitised during night shifts and at weekends. The live bird handling systems area is cleaned every night and briefly in between kills.

All operations are conducted inside with doors closed so noise escape will be minimal.

This is a LOW noise risk area of the plant.

4.2.3 AeroScalder

After bleeding the birds are conveyed into the de-feather room where they are scalded by a saturated hot air system. The birds are conveyed through the scalding unit to loosen their feathers to facilitate mechanical plucking in the de-feather area.

The AeroScalder system is entirely enclosed and consists of two chambers; an air conditioning chamber where the moisturised hot air is prepared and, next to it, the scalding chamber itself through which birds are conveyed and into which the scalding air is blown. Moisturised hot air is blown forcefully onto the most critical parts of the broiler, preventing over scalding of fragile parts.

As a precautionary measure we extract air from this area of the plant at high rates directly to our chemical scrubber odour abatement system before dispersion to atmosphere through a tall stack.

There are also fresh air inlets to provide “cooling” air, which is also extracted to the chemical scrubbing abatement system.

All operations are conducted inside with doors closed so noise escape will be minimal.

This is a LOW noise risk area of the plant.

4.2.4 De-feathering

After scalding the birds are conveyed to the de-feather area where mechanical defeathering is undertaken in defeathering machines.

Feathers are rinsed from the machines with re-circulated water fed via nozzles and transported via a recirculating water flume into the ABP storage building. The flume water is drained down to the effluent treatment plant at the end of each day. The feathers are pressed to remove excess water before collection in a vehicle trailer in an ABP collection bay.

Wall and ceiling mounted fans introduce cooling air into the building. The headspace air in the de-feather area is potentially odorous so is extracted directly to a chemical scrubber odour abatement system.

All operations are conducted inside with doors closed so noise escape will be minimal.

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This is a LOW noise risk area of the plant.

4.2.5 Evisceration

The birds are mechanically eviscerated to remove the intestines and other internal organs (heart, lungs, gizzards, livers etc.). Edible offal is separated, dry chilled and packed for retail markets and transferred to the cold store awaiting distribution.

Inedible offal is transferred by vacuum lines to the animal by-products trailer in the ABP collection bay where it is collected daily for off-site processing.

Carcasses are rinsed during evisceration. Spills of meat scraps onto floors are quickly dealt with and collected into bins for transfer to ABP trailer.

An enclosed air system is in place with cooling to moderate the working environment and a small amount of input air is provided to maintain fresh air.

All operations are conducted inside with doors closed so noise escape will be minimal.

This is a LOW noise risk area of the plant.

4.2.6 Treating & processing

Under Phase 2 we will be applying flavouring rubs to some whole bird products but will not undertake cooking of whole birds. Ingredients will be mixed onsite and flavours such as, but not limited to sage and onion, garlic and herb will be injected into the whole birds. Up to 30,000 birds per week will be flavoured (approx. 50T per week) which will utilise around 6-8T of marinade per week.

At the moment there is no portioning or cutting operations undertaken.

All operations are conducted inside with doors closed so noise escape will be minimal.

This is a LOW noise risk area of the plant.

4.2.7 Chilling & packing

Following evisceration, the birds are transferred to the chiller where they pass through on a shackle carousel system, spending sufficient dwell time in the enclosure to ensure they leave at the correct temperature (<4°C). Air in the chiller enclosure is continuously recirculated via the refrigeration system to maintain the correct temperature in the enclosure.

Offal material which is fit for human consumption is transferred to chillers and cold storage areas, where it is stored before transport off-site. The cold storage buildings are kept refrigerated to prevent decay and are largely “sealed” by means of a cold-store type door.

The chiller plant room equipment / compressors are all located inside so there is no noisy external equipment. The building is constructed of insulated cladding panels which helps maintain desired temperatures within the inside in an energy efficient way and provides sound insulation. Vents are

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installed to discharge potential leaks of ammonia externally and these present a potential escape route for noise.

The chiller and associated plant were assessed in our noise impact survey in July 2020 and the remaining non-louvred ammonia vent was found to be a potential source of offsite noise nuisance. Following this study this vent has been fitted with the recommended louvre. This was the only remaining ammonia vent which was not louvred; already louvred extracts were not audible at the noise measurement position.

The noise impact assessment for Phase 2 in April 2022 identified that installing a duplicate air-cooled condenser posed a potential noise nuisance to the receptors at Pickhill Lane. A low noise water cooled condenser will therefore be installed for Phase 2. Proposed plant noise is predicted to meet targets on this basis.

This is a MEDIUM noise risk area of the plant.

4.2.8 Animal By-Products Storage and Handling

The animal by-products (ABP) comprise of inedible offal, feathers, blood, inedible material, meat scraps, dead on arrival birds and WWTP screenings. These are all held in the ABP storage building which accommodates sufficient trailers to ensure ABP are always stored inside and collected in a timely manner.

Inedible offal and other ABP are transferred by vacuum lines into trailers located inside the ABP storage building. Feathers are transferred in a water flume and separated from the flume water and pressed. The pressed feathers are loaded into bulk trailers inside the building awaiting collection for further processing off-site.

The ABP and feather trailers are collected daily to minimise degradation and odours and replaced by empty trailers. Dolavs and other small containers used for collecting ABP around the process are emptied into the ABP trailer and then washed out.

The ABP building is large enough to accommodate the collection vehicles and the trailers are sheeted up inside before being driven out.

The blood tank is emptied daily and regularly cleaned using the integrated CIP system to prevent build-up of odorous residues. Blood tanker drivers connect to the external blood offloading point and link the outlet/exhaust of their tanker vacuum pumps to a flexible hose which is directly connected to the chemical scrubber abatement system extraction ducting. This operation takes around 20 minutes once per day.

The ABP building is fully enclosed and doors are kept closed except for immediate vehicle access and egress and closed at all other times. The building headspace air undergoes at least 3 air changes per hour to the chemical scrubber(s) for odour abatement to prevent fugitive escape of internal air.

Noise breakout from the internal vacuum system is a potential source of noise and was assessed in our noise impact survey in July 2020 and found not to be a likely source of offsite noise nuisance. The vacuum systems are operational between 05.00 - 22.00hrs.

Vehicle movements and blood tanker vacuum pumps are the primary noise sources in this area. HGV's disengage reversing beepers and reverse into the building bays or use white noise reversing beepers. ABP collections are made during operational hours.

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Due to the increase in vehicle movements for Phase 2 our Noise Impact Assessment has recommended that we limit night-time HGV movements to 1 per any 15-minute period (i.e., 4 per hour) between 23:00 and 07:00hrs

This is a MEDIUM noise risk area of the plant.

4.2.9 Module Washing

Empty live bird modules are washed in the “module wash”. The building air from this area of the plant is extracted for high level dispersion above the lairage building.

All operations are conducted inside with doors closed so noise escape will be minimal.

This is a LOW noise risk area of the plant.

4.2.10 Truck Washing

Unloaded HGV trailers are moved from the intake area to the internal “truck washing” area where they are completely washed down before moving to the “box return” area for reloading with clean empty modules. The building air from this area of the plant is extracted for high level dispersion above the lairage building.

All operations are conducted inside with doors closed so noise escape will be minimal.

This is a LOW odour risk area of the plant.

4.2.11 Module Return Area

Washed and sanitised modules are returned to the “box return” area where they are loaded onto clean HGV trailers. The building air from this area of the plant is extracted for high level dispersion above the lairage building.

All operations are conducted inside with doors closed so noise escape will be minimal.

This is a LOW noise risk area of the plant.

4.2.12 Waste-Water Treatment Plant (WWTP)

Waste-water (effluent) comprises of contaminated wash water from the abattoir and specifically from the de-feather areas and the feather flume system.

The WWTP is located downhill beyond the factory buildings, well away from the Pickhill Lane residencies.

Raw effluent drains to an enclosed/housed raw effluent pump sump. From the sump the raw effluent is pumped through an enclosed rotary drum screen on top of the balance tank to screen out larger solids from the effluent before treatment. The primary screenings fall into a skip which is enclosed on three sides with strip curtains on the fourth to minimise odours. The screenings are transferred into a trailer in the ABPs storage building. The screen and associated elements are cleaned daily.

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The balance (and diversion tank on the occasions when it is used) are agitated by venturi mixers to mix and aerate the contents and to maintain aerobic conditions and prevent them from going septic and becoming odorous. The Phase 2 balance and diversion tank are enclosed tanks and the other balance tank is fitted with a cover, which helps contain noise from the venturi mixers. An air extraction unit pulls tank headspace air into the scrubber serving the WWTP area to reduce odour emissions.

From the balance tank, effluent is transferred to a Dissolved Air Flotation (DAF) system to flocculate and separate/remove suspended solids, fats, oils and greases, from where the separated solids are pumped to a covered sludge storage tank. The DAF plant is housed inside a new building installed to accommodate a new sludge dewatering plant so noise will be contained inside.

The separated liquid from the DAF plant is transferred to an activated sludge system tank for aerobic (activated sludge) treatment before final settlement and discharge to river.

Our activated sludge plant consists of anoxic treatment followed by an aeration tank where the conditioned mixed liquor is injected with air via fine bubble air diffusion manifolds. A final settling clarifier tank removes the remaining suspended solids from the effluent backed up by rotary disc ultrafilters to guarantee the final effluent quality.

The primary noise sources at the WWTP area are pumps and blowers. The aeration tank is served by two partial noise enclosures, one housing 2 x Aerzen D52S blowers and the other housing a Landia DK-6940 blower. These were assessed in our noise impact survey in July 2020 and found not to be a likely source of offsite noise nuisance.

This is a MEDIUM noise risk area of the plant.

4.2.13 WWTP Sludge treatment, storage and handling

The combined DAF and waste or surplus activated sludge are dewatered before transfer off-site for land spreading or injection by contractors or other waste recovery method. The dewatering plant is located inside a building at the WWTP so noise is contained inside and HGV's will enter the building to collect sludge cake.

As a contingency, the Phase 1 sludge storage tank is retained for back up use and is covered. A mixer is in place to keep the sludge mixed if operational. The off gas from the tank headspace is vented into the WWTP area scrubber. Displaced air from the road tanker during sludge transfers is fed into the chemical scrubber. Sludge tanker drivers collecting non dewatered sludge connect to the external sludge offloading point and connect the outlet/exhaust of their tank or tanker vacuum pumps to a flexible hose which is directly connected to the for treatment before release to atmosphere. This operation takes around 20 minutes and is likely to be an infrequent event.

This is a LOW noise risk area of the plant.

4.2.14 Chemical Scrubber Odour Control & Mitigation Systems

The Phase 1 chemical scrubbers were assessed in our noise impact survey in July 2020 and found not to be a likely source of offsite noise nuisance but as a contingency the process area scrubbers are only operational at design duty between 05:00 – 21:00hrs, with a timer set to reduce fan speed between 21:00 – 06:00hrs. For the Phase 2 noise impact assessment the additional scrubbers were found to not have a significant offsite noise potential. The WWTP area scrubber is required to operate continuously.

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This is a Medium noise risk area of the plant.

4.2.15 Air Handling Systems in Process Areas

The process buildings are served by a recirculated air conditioning system and there are no emissions externally. All these operations are conducted inside with doors closed so noise escape will be minimal.

This is a LOW noise risk area of the plant.

4.2.16 Utilities

Hot water for the activities is provided by 3 modular boilers comprising 9 modules in total. Two further boilers serve the aeroscalders.

All the boilers are located in the utilities building which is fully enclosed and ventilation points are fitted with louvres. The boilers operate during processing and cleaning and ramp down overnight to meet the base load only.

Water softening plant serving the boilers runs continuously and is located outside the utilities building and was not identified as a significant noise source during the 2020 noise impact survey.

Air Separation Unit (ASU) for nitrogen gas generation for use in our packaging applications. This minimises liquid or bottled nitrogen delivery and noise associated with deliveries.

This is a LOW noise risk area of the plant.

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5 Source Identification & Review

5.1 Physical characteristics

The key plant and equipment (or operations) with the potential to give rise to noise is listed in Table 1 below:

Table 1 - Noise sources

Operation	Description
Site vehicle movements	HGVs bringing in live birds, ABP & waste collections, forklift trucks
Chiller	Condensers / fans
Boilers	Modular and aeroscalders boilers for hot water supply
General plant & equipment	Fans, pumps, vacuum pumps, compressors, blowers, air extraction systems, abatement plant, stacks for emissions to air
General	Cleaning of plant, modules & vehicles, waste collections

Noise sources from our activities will have different and distinctive characteristics and the duration and frequency of noise will vary. These features are listed in Table 2 below:

Table 2 - Noise type by source

Type of noise	Potential source	Frequency/ duration*
Clatter or rattle	HGV, fork truck movements Equipment and belts Module offloading Module wash	Frequent & intermittent Periodic
Buzzing or beeping	Reversing vehicles warning alarms and other audible warning alarms	Frequent & intermittent
Whine or hum	Fans, compressors, condensers	Periodic or continuous
Roaring / rushing	Reving of HGV engines, steam relief vents, high pressure air lines, air brakes	Occasional, brief
Screech	Fan belts Vehicle brakes	Periodic or continuous Occasional, brief
Clangs, bangs, grinds and thumps	Maintenance workshop, vehicles, movement of containers by fork truck, unloading of materials	Frequent & intermittent
Tonal elements	Fans, blowers, condensers, vacuum pumps, stack gas efflux noise	Continuous & intermittent

* Overnight periods, limited vehicle movements, production lines and air extraction equipment switched off / ramped down

5.2 Key Noise Control Measures

The following advisory measures are recommended to reduce noise impacts:

General Management

- It is important to reduce noise impact that an open dialogue is kept with nearby residents and any concerns they have in relation to noise are dealt with and followed up.
- Employees should be made aware and instructed to minimise noise break-out from all warehouse, factory and utility areas and keep doors closed.
- Management of the loading bays should introduce procedures to reduce the possibility of shutter doors and plant room doors being left open, drivers slamming doors, leaving engines idling, having radios on loud and causing unnecessary noise.
- Reduce the time spent for HGV's waiting at entrance gates by opening prior to HGV arrival or immediately upon arrival to minimise the impact of noise generated by engine idling.
- Ensure items of plant are regularly maintained so that noise is not unduly generated.

Plant & Utilities Management

1. The chiller plant has acoustic louvres fitted on all external ventilation points and the condensers are specified to meet the sound pressure levels recommended by our noise consultants.
2. The fans on the process area chemical scrubbers are operated on a timer to ramp down overnight.
3. Vacuum tankers collecting blood and sludge are scheduled between operational hours.
4. The blowers at the WWTP are housed in acoustic enclosures.
5. The utilities building housing the boilers is fitted with louvered doors and is fully enclosed.
6. WWTP building houses DAF and sludge dewatering plant.

HGV & Vehicle Movements

- HGV movements are minimised overnight.
- Traffic routes designed to minimise reversing of vehicles.
- Low volume broadband white noise reversing alarms should be used or reversing alarms are to be deactivated on site and a banksman used.
- The site speed limit is 5mph to avoid excessive bumping and jolting.
- The hardstanding and vehicle movement routes are maintained in good condition, inspected regularly and repaired as required to minimise potholes and other defects.
- Loading bay shutter doors gates should be closed once HGV have manoeuvred into the loading bay and engine switched off.
- When departing, HGV engines should be switched on before opening loading bay shutter doors.
- HGV engines should not be left to idle.
- For the management of deliveries and noise, refer to the Dept. of Transport's - Quiet Deliveries Good Practice Guidance – Key Principles and Processes for Community and Resident Groups, Feb 2015. <https://www.gov.uk/government/publications/quiet-deliveries-demonstration-scheme>

Fork Lift Trucks

- Surfaces on which FLT's operate are free from bumps and steps so that shocks to the fork suspension do not cause impulsive noises.
- Where practicable (i.e. between trailers and delivery points) clearly mark work-site routes for the FLT's so that rough or uneven surfaces are avoided.

Table 3 summarises the potential sources of noise at the installation and the factors which may influence noise levels and the potential for variations in noise.

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Table 3 - Potential Noise Sources

Area / Source of Noise	Control measures	Factors that may influence emissions
1. Lairage / Intake	<p>Control of HGV movements within approved operating hours.</p> <p>Availability of processing line / space in lairage to move live bird vehicles inside.</p> <p>Good condition of hardstanding and adherence of drivers to speed limits and reversing procedures.</p> <p>One way system for HGV vehicles reduces vehicle reversing warning beepers noise</p> <p>Closure of doors at all times except immediate access / egress.</p> <p>Maintenance of air conditioning systems to prevent abnormal noise from wear and tear of fans / vibration etc.</p> <p>Sound insulation of buildings</p> <p>Holes and openings closed off</p> <p>Enclosed operations within buildings</p>	<p>Out of hours vehicle movements, unauthorised use of horns, revving of engines, squeaking brakes, speeding, potholes & bumps, unaffixed loads.</p> <p>Poor maintenance, doors left open, damaged building fabric</p>
2. Hang-on and bleeding, scalding & de-feather & Evisceration	<p>Closure of doors at all times except immediate access / egress.</p> <p>Maintenance of aeroscalders, air conditioning systems to prevent abnormal noise from wear and tear of fans / vibration etc.</p> <p>Sound insulation of buildings</p> <p>Holes and openings closed off</p> <p>Enclosed operations within buildings</p>	<p>Poor maintenance, doors left open, damaged building fabric</p>
3. Treating, processing and packing – flavouring of whole birds	<p>Closure of doors at all times except immediate access / egress.</p>	<p>Poor maintenance, doors left open, damaged building fabric</p>
4. Chilling & Packing	<p>Continuous operation, invertors on condenser fans to minimise operation, located in plant room, insulated building fabric</p> <p>Attenuation of ammonia vents</p> <p>Low noise specification for condensers (1 water cooled, 1 air cooled)</p> <p>Maintenance of refrigeration plant to prevent abnormal noise from wear and tear / vibration etc.</p> <p>Closure of doors at all times except immediate access / egress.</p>	<p>Poor maintenance, doors left open, damaged building fabric.</p> <p>Refrigerated trailers left running overnight on yard or diesel units used.</p>

Area / Source of Noise	Control measures	Factors that may influence emissions
	Refrigerated trailer loading done in covered docks and electric units.	
5. ABP handling and storage	<p>Control of ABP HGV movements within approved operating hours.</p> <p>Availability of processing line / space in lairage to move live bird vehicles inside.</p> <p>Good condition of hardstanding and adherence of drivers to speed limits and reversing procedures.</p> <p>Closure of doors at all times except immediate access / egress.</p> <p>Maintenance of air extraction systems to prevent abnormal noise from wear and tear of fans / vibration etc.</p> <p>Adherence to procedures for collection of ABP and for emptying blood tank</p> <p>Maintenance of vacuum pumps to minimise potential for noise breakout.</p>	<p>Out of hours vehicle movements, unauthorised use of horns, revving of engines, squeaking brakes, speeding, potholes & bumps, unaffixed loads</p> <p>Poor maintenance of vacuum pumps and extraction equipment, doors left open, damaged building fabric</p> <p>Doors left open</p>
6. Module washing, truck wash & module return area	<p>Closure of doors at all times except immediate access / egress.</p> <p>Maintenance of equipment and air extraction systems to prevent abnormal noise from wear and tear of moving parts, fans / vibration etc.</p> <p>Sound insulation of buildings</p> <p>Holes and openings closed off</p> <p>Enclosed operations within buildings</p>	Poor maintenance, doors left open, damaged building fabric
7. WWTP	<p>Maintenance of blowers and pumps to prevent abnormal noise from wear and tear / vibration etc.</p> <p>Effectiveness of noise enclosures around blowers.</p>	Poor maintenance of pumps and blowers
8. WWTP sludge storage & handling	<p>Enclosure of primary and divert tanks, DAF and dewatering plant inside building.</p> <p>Minimal sludge tanker movements & within approved operating hours, adherence to procedures for collection of sludge</p> <p>Maintenance of pumps to prevent noise form wear and tear / vibration</p>	<p>Poor maintenance, doors left open, damaged building fabric</p> <p>Out of hours vehicle movements, unauthorised use of horns, revving of engines, squeaking brakes, speeding, potholes & bumps, unaffixed loads</p> <p>Poor maintenance of pumps</p>

Area / Source of Noise	Control measures	Factors that may influence emissions
9. Main extraction and air treatment system	Timer operation of process area scrubbers to ramp down fans overnight Maintenance of scrubbers and extraction systems to prevent abnormal noise from wear and tear / vibration etc.	Poor maintenance, ID fan belt noise, vibration in stacks, doors left open, damaged building fabric, extraction units / process area scrubbers left on full power overnight
11. Utilities	Closure of doors on utilities building at all times except immediate access / egress. Maintenance of equipment to prevent abnormal noise from wear and tear of moving parts, fans / vibration etc. Timers on boilers to shut down / ramp down overnight	Poor maintenance, ID fan belt noise, vibration in stack, doors left open, damaged building fabric

6 Noise Risk Assessment

Our original Planning Consent required that the rating level of any noise generated due to this installation shall not exceed the pre-existing background level by more than 5dB(A) at any time. Our initial noise impact assessment supported our planning application for Phase 1.

During Phase 1 we undertook a noise survey in July 2020 to investigate noise complaints from a residence in Pickhill Lane. This noise survey proved that under Phase 1, the installation increases the background levels at the closest residential receptors by less than 5dB(A). The survey did make one recommendation, which has been completed, to add attenuation to the one remaining ammonia vent on the chiller plant without attenuation.

We have undertaken a further noise impact assessment for Phase 2.

The key report findings are:

- The previous noise survey undertaken in July 2020 determined background noise levels at the nearest residential receptors (LA90 (15min)).
- The predicted level of plant noise exceeds the limiting noise level target at the Pickhill Lane receptor for the daytime and night-time periods.
- The limiting noise level targets for delivery noise will not be exceeded at the Pickhill Lane receptor in the night-time period if deliveries are restricted to 1 per any 15-minute period (i.e. 4 per hour) between 23:00 and 07:00hrs.
- Daytime - The recommended night-time limit approximately equates to 16 HGV movements during the 4-hour night-time period of the 20-hour working day.
- On this basis, the number of daytime (16-hour) movements to meet the required average 220 movements is 194. This equates to 12 movements per hour.

The report makes a recommendation for noise mitigation measures to be implemented to ensure that the target requirements will be met at all the residential receptors:

- Condenser plant is substituted for a 'quieter' model. Units achieving a sound pressure level of 66dBA at 1m would be sufficient.

This measure has been addressed by specifying a low noise water cooled condenser.

6.1 Potential impact of releases

We have also undertaken a qualitative assessment of the potential noise impact from the sources described above.

6.1.1 Qualitative assessment of risks of potential impacts

The likelihood and frequency of exposure to any noise arising from the facility is determined by the magnitude of release, duration, time of day and the distance and direction of receptors in relation to the facility.

A qualitative risk assessment methodology has been used where a judgement of risk of an impact is assigned based on the 'Source-Pathway-Receptor' Model.

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A subjective risk score has been calculated for each identified odour or noise source based on a potential Impact score "I" (scored from 1 to 5), which is a subjective measure of intensity/emission rates, multiplied by a Likelihood "L" score (also from 1 to 5). T

The overall risk score assumes that specified suitable control measures are in place, however, the bracketed scores with asterisks provide an assessment of the potential risk if controls are not effective or not effectively used/monitored.

The risk assessment has been based on the following risk matrix scoring system that is used widely in this and other sectors.

Risk Matrix		Likelihood				
		1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost certain
Impact Severity	1 Negligible	1	2	3	4	5
	2 Minor	2	4	6	8	10
	3 Moderate	3	6	9	12	15
	4 Major	4	8	12	16	20
	5 Catastrophic	5	10	15	20	25

For grading risk, the scores obtained from the risk matrix are assigned grades, as follows;

1-4	1 – 4	Low risk	Broadly acceptable level of Risk
5-9	5 – 9	Low - Medium risk	ALARP Risk is tolerable if risk reduction is impractical disproportionate to cost
10-14	10 – 14	Medium - High risk	ALARP Risk is tolerable if is disproportionate to cost
15-19	15 – 19	High risk	Unacceptable risk, cannot be justified except in extreme circumstances
20-25	20 - 25	Extreme risk	Risk cannot be justified

ALARP – as low as reasonably practicable

The risk assessment is presented in Table 4 below:

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Table 4 - Noise Risk Assessment & Key Noise Controls to Minimise Risk

Inventory		What can harm/ be harmed?			Managing the risk		Assessing the risk	
Source	Process (Location)	Hazard	Receptor	Potential Impact 'I'	Risk Management	Likelihood of exposure 'L'	Magnitude of Risk 'I' x 'L'	Overall Risk
1. Lairage / Intake	North-east section of factory	Noise from HGVs and from lairage / intake buildings	Closest houses (some owned by Maelor) on Pickhill Lane approx. 140 m West of lairage	2 - Minor	Control of HGV movements within approved operating hours. Availability of processing line / space in lairage to move live bird vehicles inside. Good condition of hardstanding and adherence of drivers to speed limits and reversing procedures. One way system for HGV vehicles reduces vehicle reversing warning beepers noise Closure of doors at all times except immediate access / egress. Maintenance of air conditioning systems to prevent abnormal noise from wear and tear of fans / vibration etc. Sound insulation of buildings Holes and openings closed off Enclosed operations within buildings	3 - Possible	6 – Low-Medium	Low - Medium if well managed. Night time disturbance likely if controls fail
				(4 – Major*)		(4 – Likely*)	16 - High	
2. Hang-on and bleeding, scalding & de-feather & Evisceration	Central section of factory	Noise from internal process operations	Closest houses on Pickhill Lane (some owned by Maelor) approx. 140 m West of primary bird reception area	1 - Negligible	Closure of doors at all times except immediate access / egress. Maintenance of aeroscalder, air conditioning systems to prevent abnormal noise from wear and tear of fans / vibration etc. Sound insulation of buildings Holes and openings closed off Fully enclosed operations within buildings	1 - Rare	2 - Low	Low

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Inventory		What can harm/ be harmed?			Managing the risk		Assessing the risk	
Source	Process (Location)	Hazard	Receptor	Potential Impact 'I'	Risk Management	Likelihood of exposure 'L'	Magnitude of Risk 'I' x 'L'	Overall Risk
3. Treating, processing and packing – flavouring of whole birds	South of the main building opposite side close to Pickhill Lane	Noise from internal process operations	Closest houses on Pickhill Lane (some owned by Maelor) approx. 115 m West of primary processing area.	1 - Negligible	Fully enclosed operations within buildings Closure of doors at all times except immediate access / egress.	1 - Rare	2 - Low	Low
4. Chilling & Packing	North-west corner close to Pickhill Lane	Noise from condensers / breakout from vents	Closest houses on Pickhill Lane (some owned by Maelor) approx. 100m West of chiller plant	2 - Minor	Continuous operation, invertors on condenser fans to minimise operation, located in plant room, insulated building fabric.. Attenuation of ammonia vents Low noise specification for condensers Maintenance of refrigeration plant to prevent abnormal noise from wear and tear / vibration etc. Closure of doors at all times except immediate access / egress. Refrigerated trailer loading done in covered docks and electric units.	3 - Possible	6 – Low-Medium	Low - Medium if well managed. Night time disturbance likely if controls fail
				4 - Major*)		(4 – Likely*)	16 - High	
5. ABP handling and storage	Northern section of factory	Noise from HGVs, tanker vacuum pumps and from inside	Closest houses on Pickhill Lane (some owned by Maelor) approx. 140 m to West of	2 - Minor	Control of ABP HGV movements within approved operating hours. Availability of processing line / space in lairage to move live bird vehicles inside.	3 - Possible	6 – Low - Medium	Low - Medium if well managed. Night time disturbance likely if controls fail

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Inventory		What can harm/ be harmed?			Managing the risk		Assessing the risk	
Source	Process (Location)	Hazard	Receptor	Potential Impact 'I'	Risk Management	Likelihood of exposure 'L'	Magnitude of Risk 'I' x 'L'	Overall Risk
		storage buildings	ABP storage building.	(4 - Major*)	Good condition of hardstanding and adherence of drivers to speed limits and reversing procedures. Closure of doors at all times except immediate access / egress. Maintenance of air extraction systems to prevent abnormal noise from wear and tear of fans / vibration etc. Adherence to procedures for collection of ABP and for emptying blood tank Maintenance of vacuum pumps to minimise potential for noise breakout.	(4 - Likely*)	16 - High	
6. Module washing, truck wash & module return area	Southern section of factory	Noise from inside building	Closest houses on Pickhill Lane approx. 140 m to West of bird reception area	2 - Minor	Closure of doors at all times except immediate access / egress. Maintenance of equipment and air extraction systems to prevent abnormal noise from wear and tear of moving parts, fans / vibration etc. Sound insulation of buildings Holes and openings closed off Enclosed operations within buildings	2 – Unlikely	4 - Low	Low
7. WWTP	Eastern edge of site activities	Noise from WWTP equipment	Closest houses on Pickhill Lane (some owned by Maelor) approx. 290 m West of effluent plant. Pickhill Old Hall is	2 - Minor	Maintenance of blowers and pumps to prevent abnormal noise from wear and tear / vibration etc. Effectiveness of noise enclosures around blowers. Primary and divert tanks enclosed. DAF and sludge dewatering plant inside building.	2 – Unlikely	4 - Low	Low if well managed. Night time disturbance possible if controls fail

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Inventory		What can harm/ be harmed?			Managing the risk		Assessing the risk	
Source	Process (Location)	Hazard	Receptor	Potential Impact 'I'	Risk Management	Likelihood of exposure 'L'	Magnitude of Risk 'I' x 'L'	Overall Risk
			around 270m North of WWTP plant	(3 – Moderate*)		(3 – Possible*)	(9 – Low-Medium*)	
8. WWTP sludge storage & handling	Eastern edge of site activities	Noise from HGVs and tanker vac pump	Closest houses on Pickhill Lane (some owned by Maelor) approx. 290 m West of effluent plant. Pickhill Old Hall is around 270m North of WWTP plant	2 – Minor	Standby use only under Phase 2 with new sludge dewatering plant. Control of sludge tanker movements within approved operating hours. Adherence to procedures for collection of sludge Maintenance of pumps to prevent noise from wear and tear / vibration	2 – Unlikely	4 – Low	Occasional use as back up. Low if well managed. Short duration night time disturbance possible if controls fail
				(3 – Moderate*)		(3 – Possible*)	(9 – Low - medium*)	
9. Main extraction and air treatment system	To east of main factory building	Noise from scrubber fan / efflux noise from stack	Closest houses on Pickhill Lane (some owned by Maelor) approx. 190 m West of scrubbers and their stacks and Pickhill Old Hall is	2 – Minor	Timer operation of scrubbers to ramp down fans overnight Maintenance of scrubbers and extraction systems to prevent abnormal noise from wear and tear / vibration etc.	2 – Unlikely	4 – Low	Low if well managed. Night time disturbance possible if controls fail
				3 – Moderate		(3 – Possible*)	(9 – Low - medium*)	

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Inventory		What can harm/ be harmed?			Managing the risk		Assessing the risk	
Source	Process (Location)	Hazard	Receptor	Potential Impact 'I'	Risk Management	Likelihood of exposure 'L'	Magnitude of Risk 'I' x 'L'	Overall Risk
			approximately 300m away					
10. Utilities	Eastern edge of site activities	Noise from inside building / stacks	Closest houses on Pickhill Lane (some owned by Maelor) approx. 190 m West of scrubbers and their stacks and Pickhill Old Hall is approximately 300m away	2 – Minor	Closure of doors on utilities building at all times except immediate access / egress. Maintenance of equipment to prevent abnormal noise from wear and tear of moving parts, fans / vibration etc. Timers on boilers to shut down / ramp down overnight	2 – Unlikely	4 – Low	Low if well managed. Night time disturbance possible if controls fail
				3 – Moderate		(3 – Possible*)	(9 – Low - medium*)	
(*)risk of abnormal events, e.g., failure of noise control systems and / or non-adherence to procedures								

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7 Management of noise

This NMP is a working document, intended to be used as a reference document for operational staff on a daily basis. It provides a schedule of actions that must be taken to minimise noise impact and details site management procedures for the management of noise.

The NMP is available on-site to all relevant site personnel and any visiting officers from Wrexham County Council or NRW.

Our environmental management system (EMS) addresses noise and we will use and review the NMP to ensure we minimise noise from the installation. The management systems include:

- Staff roles and responsibilities
- Training of staff
- Operating procedures
- Auditing and inspections
- Preventative and breakdown maintenance
- Housekeeping standards
- Incidents and emergency response
- Complaint handling and investigation
- Community liaison

The remainder of this document is structured according to aspects of the operation and management of the site.

All measures, contained in this NMP are to be implemented in the daily operation of the site. Additional measures that may be adopted in response to incidents or one-off events, detailed in the contingency procedures section.

8 Roles & Responsibilities

8.1 Site Management

The overall implementation of this NMP is the responsibility of the General Manager, supported as required by other Maelor Foods staff with specific roles relating to odour control. The roles and responsibilities of staff are documented under the EMS.

The General Manager can delegate certain tasks as required, although ultimate responsibility will remain with him / her.

A nominated deputy can be appointed for all times when the General Manager is not on site. In such circumstances, it will be the nominated deputy's responsibility to ensure that the requirements of the NMP are adhered to.

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8.2 Staff Training

Staff training is a key aspect of ensuring that odour is controlled through effective management during daily operations. All key site operatives involved in “noise” related areas of the plants and particularly maintenance personnel must be trained on induction with “tool-box talks” to deal with noise management issues in the areas in which they will work. They must also be made aware of the existence of this NMP and its requirements through environmental training tailored to staff responsibility levels.

Training needs are reviewed for all staff on an annual basis and refresher training scheduled at set intervals. General noise management forms part of the site induction process to all new members of staff or contractors working in potentially noisy areas of the plant.

Where investigation of an incident identifies a gap in training or a need for refresher training this will be carried out as soon as possible.

8.3 Operating Procedures

All departments have a set of operating procedures that cover specific and generic tasks. These procedures identify areas where noise could be released and specify the measures that must be taken to ensure that noise is minimised. The procedures cover the measures to be taken if abnormal events occur such as plant failures and spell out the reporting and recording criteria if abnormal events occur.

Plant whose failure could cause a noise event is covered by operational procedures.

8.4 Maintenance

Any plant item whose failure could cause a noise event is covered on the preventative maintenance (PM) system which schedules a series of maintenance tasks at set frequencies. The PM system includes regular checks and maintenance of doors, extraction systems, building fabric, odour abatement plant, WWTP and process plant to minimise failure events and keep noise control optimised. The tasks and their frequency are based on plant manufacturer’s guidance or site experience of operating the plant.

We hold stocks of essential spare parts, so plant can be repaired as soon as possible, and we have same day call out contracts for the main elements of the plant if specialist help is required.

Breakdown maintenance is prioritised if there is potential for or an increase in noise. We will undertake a bespoke environmental risk assessment if we need to undertake maintenance tasks that could create an elevated noise risk and will identify precautions and additional measures that we must take to control noise during the work. This could include work on building doors or roof if they need to be opened for prolonged periods. Wherever possible, we will schedule such work for non-production days to minimise the potential for noise events to disturb site neighbours. We may also issue neighbourhood bulletins to advise neighbours in advance of such work.

There is a clear structure of responsibility which allows operational staff to call in specialist contractors to deal with emergencies and unplanned events which may lead to a noise impact, such as damages to extraction ducts etc.

Such events, and appropriate remedial measures are normally the responsibility of the Site Manager, but lines of responsibility and delegation will be clarified in case the manager is off site when an unplanned

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event occurs. A list of approved contractors who can be called out to deal with incidents is maintained by the Engineering Manager and all staff with delegated responsibility are aware of this list.

8.5 Sub-Contractors

Any sub-contractors working at the site must adhere to the requirements of the NMP. Failure to comply with noise control measures will result in a formal warning to the operative and his or her employer. Failure to comply with the warning will result in the operative being banned from the site.

8.6 Measures for Reducing Noise Levels On-site – Auditing and Inspections

Maelor Foods will address all reasonable opportunities to reduce noise levels from the site. Measures for reducing the risk have been detailed throughout the document. Audits and inspections are carried out across departments covering housekeeping and adherence to procedures where they address odour. Departmental Managers will also undertake their own checks, inspections and audits as part of the shift handover process.

The specific noise management and noise related checks and tasks are listed in **Error! Reference source not found.** below. This list must be reviewed as experience of the plant is collected and if incident investigations identify any areas for improvement:

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Table 1 - Routine Noise Management & Monitoring Tasks / Checks

No.	Tasks	Who?	Targets/Action Levels	Record form
1	Inspect the site for excessive noise levels at least daily during the hours of production (including during the night) and record the findings to determine trends. Frequency to be increased in event of complaints	Environmental Manager/ Hygiene Manager and Security	Checks to include: 1. Not >1 live bird delivery waiting to get into the lairage 2. Doors closed on lairage & ABP storage building when not in use for vehicle movements 3. Doors closed on other process buildings 4. Chiller plant building – no abnormal parameters or noise 5. WWTP area - No abnormal parameters or noise 6. Chemical scrubber area – no abnormal parameters or noise 7. Utilities building – no abnormal parameters or noise 8. External hard standings / vehicle pathways are free of any bumps, holes, obstructions 9. Site speed limit being observed by drivers 10. Reversing beepers disengaged on vehicles 11. External fork trucks use white noise beepers	Combined Noise / Sniff survey record form EMS9.3.1.1.4 - Appendix 33
2	Site perimeter noise assessments at different times of day. To be conducted alongside odour SNIFF assessments	Environmental Manager/ Hygiene Manager and Security	Detectable/recognisable noise. Back track if elevated or abnormal noise is detected and carry out site checks as set out at 1 above.	Combined Noise / Sniff survey record form EMS9.3.1.1.4 - Appendix 33

3

9 Abnormal Events and Emergency Operation

We have contingency measures to deal with the foreseeable abnormal events that could influence noise levels from the installation. Table 2 describes several abnormal events or emergencies which may take place at the site and lead to elevated noise levels and lists the response measures.

Table 2 - Abnormal Events and Emergency Operation

Scenario / Event	Location on Site	Likely effect on emissions inventory	Response Measures
Failure of noise control measures, e.g. doors not closing or building fabric / attenuation damage, excessive wear on plant	Site	The control measures proposed are all simple and low tech so the risk of failure is low. If failures do occur, then the potential effect would be an increased risk of off-site effects	All maintenance staff to be trained in identifying problems with control equipment or systems and applying simple fixes. For mechanical plant, such as fans and scrubber dosing and liquor circulation pumps, a supply of essential spares will be kept on site. Refrigeration & WWTP plant engineers available on call
Unavailability of site staff	Site	Incidents occurring outside of site hours may be exacerbated by lack of staff available to attend.	Emergency contact details to be agreed such that someone is available on call to address issues which may arise.

Our Emergency Response Plan covers the generic aspects of how to respond and who to notify. We also have more specific procedures such as a spillage procedure to cover types of incidents. Other events are covered in our standard operating procedures such as how to address effluent treatment plant faults.

We treat door faults, extraction or abatement plant failures and any other incidents that cause or could lead to a noise increase as an environmental incident. Such incidents are handled in accordance with our Incidents & Non-conformances Procedure and we will ensure they are fully investigated and recorded once resolved, with preventative and corrective actions.

We will report incidents to NRW in accordance with our Environmental Licence Reporting Procedure of and Schedule 5 of our environmental permit. These notifications comprise of an initial report to notify NRW of a potentially significant incident as soon as possible followed by a report covering the incident investigations and conclusions.

10 Record keeping

Throughout the whole of the NMP, accurate and thorough record keeping are essential to ensure noise is controlled and will allow us to review and analyse performance. We keep records of maintenance of plant, production, waste management, monitoring, audits and inspections, communication, incidents, complaints and training.

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Our Production Managers are responsible for keeping records of vehicle arrivals, departures, load details, materials processed and records of any incidents or issues that occur. They also maintain a shift log of processing stages which detail any abnormal events or faults requiring maintenance.

11 Noise Complaints Procedure

The measures outlined in this NMP are aimed at preventing excessive noise occurring to the extent where complaints may be made by neighbours of the site. Nevertheless, it is recognised that having an established complaints procedure is a necessary part of the NMP and we have a generic Environmental Complaint Procedure which we use for this purpose.

The primary purpose of this complaint procedure is to ascertain whether any complaints are linked to the site and associated operations and, if so, to identify the cause(s) and what action may be taken to remedy any on-going complaint episode and to prevent or minimise the probability of a recurrence. All complaints and investigations into them are recorded on an Environmental Complaint Investigation

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Record Form as shown in

Daily Environmental Check Sheet



General Information

Inspection Date	Inspection Time	Weather Conditions	Temperature	Wind Direction	Wind Strength

Odour Survey

Location	Time	Nature of Odour	Odour Severity	Extent/ Persistence	Noise Level (dB)
1					
2					
3					
4					
5					
6					

Scoring Guide			
	Nature	Severity	Persistence
0	No Odour	No Odour	No Odour
1	Lairage/ Chicken	Very Weak	Localised, not off site
2	Defeather/ Aero scald	Weak	Offsite for brief period
3	Offal	Distinct	Persistent but localised
4	Effluent	Obvious	Persistent over narrow range
5	Sludge	Strong	Persistent over wider range
6	Blood Tanks	Very Strong	
7	Other (Describe)	Extremely Offensive	



ETP Alarm Y/N		Cyclone Alarm Y/N		Cyclone Redox:		Cyclone pH	
Main Scrubber Alarm (Y/N)				Scrubber Redox		Scrubber pH	

General Site Management

Odour Management

Question	Yes/ No	Question	Yes/ No
Are vehicles observing speed limits?		Is there more than 1 vehicle waiting	
Are FLT's driving safely and loads secure?		Are all offal/ lairage doors closed?	
Are external yard areas clean and free of spills?		Is lairage area clean	
Are spill kits sealed and contents full/ unused?		Are all other process doors closed?	
Are correct containers being used/ labelled?		Is offal bay clean and in good condition?	
Are noise controls working around the site?		Is blood tank area clean?	
Are all chemicals banded/ stored correctly?		Is ETP area clean?	
Are bunds in good condition/ no leaks?		Are all carbon filters working?	
Is site drainage colour coded?		Are all Dolavs covered?	
Are handstanding areas in good condition?		Is sludge tank back venting (where applicable)?	
Cleaning activities in correct area?		Other Comments/ Actions:	
W2 and W3 free of visible oil/ grease?			
Borehole secure and free from obstruction?			
Completed By			
Signature			

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Issued By: Suzanne Gray	Approved By: James Colley	

Appendix 4.

12 Noise Monitoring

There is no routine noise monitoring undertaken on or around the site. Should noise complaints be verified we use our noise consultant to undertake noise monitoring to identify the extent of any nuisance and to investigate any on site sources and advise on any noise mitigation measures.

13 Community Liaison

It is important to reduce noise impact that an open dialogue is kept with nearby residents and any concerns they have in relation to noise are dealt with and followed up.

We appreciate how important it is that our neighbours who could potentially be affected by noise from the plant are made aware that we take noise control very seriously and take all reasonable measures to reduce our environmental impact on the local community. Our neighbours will be kept informed of new developments and if requested, we will issue contact details for them to notify the company or to complain in the event of unacceptable noise being experienced.

Our neighbours are encouraged to report any nuisance noise at the time they are experienced so that timely investigations can be carried out.

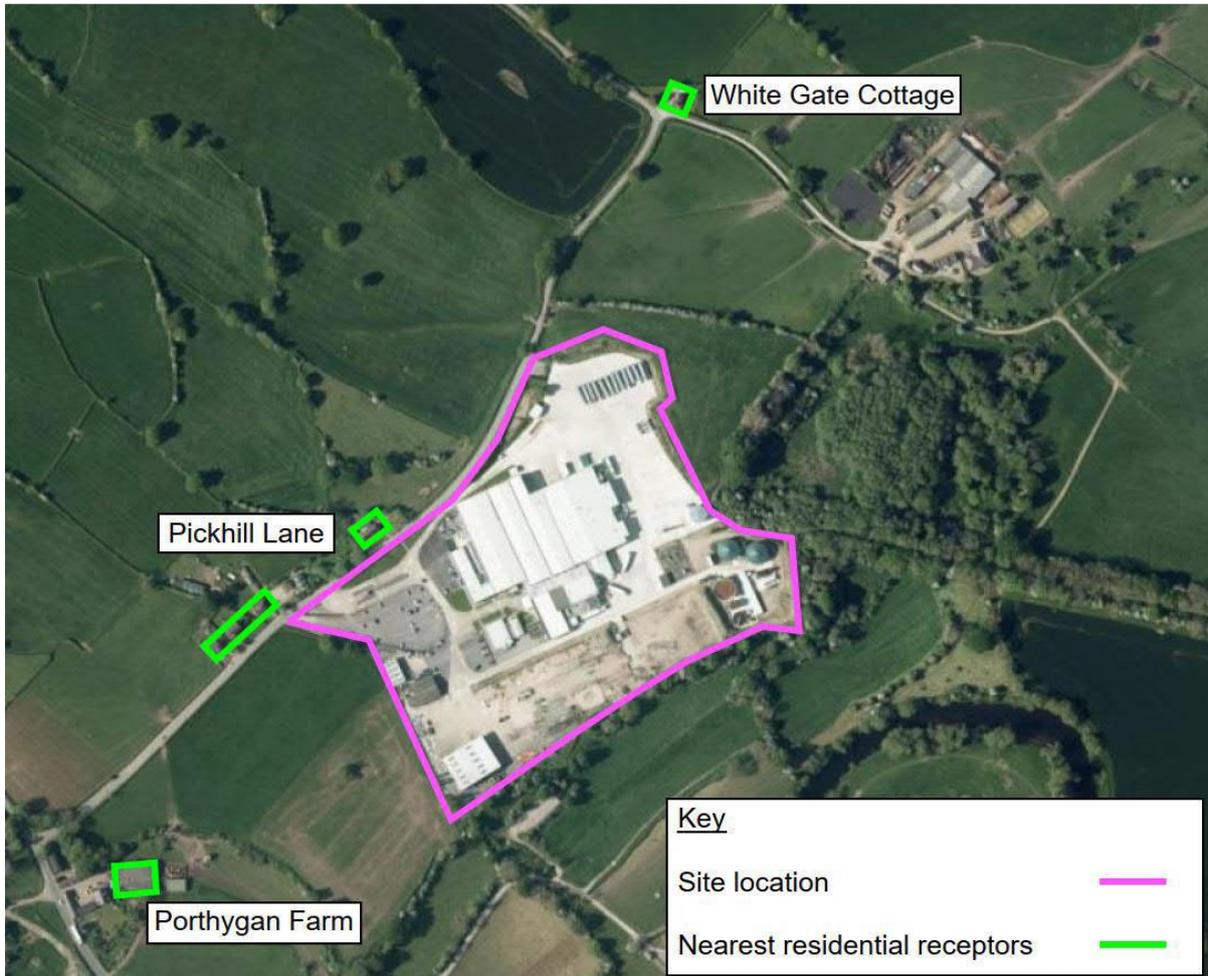
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14 Appendices

Appendix 1 – Potential Noise Receptors

Figure 1 shows the site location and nearest residential receptors (NSRs).

Figure 1: Site location and nearest residential receptors



Appendix 2 - Site Noise Source Locations

- **Ammonia Duct:** Extract ventilation duct from the internally situated ammonia plant which is switched off between 21.00 – 22.00hrs.
- **Vacuum System:** Noise breakout from the internal vacuum system operational 05.00 - 22.00hrs.
- **Chemical Air Scrubber:** Operational at design duty 05.00 – 21.00hrs with a timer set to reduce fan speed 21.00 – 06.00hrs.
- **Water Softening Plant:** Continuously in operation.
- **Aeration Tank:** Two partial enclosures, one with 2 x Aerzen D52S blowers and the other with 1 x Landia DK-6940 blower.

Figure 2: Maelor Foods site and plant noise sources



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Appendix 3 – Daily Environmental Check Sheet

Daily Environmental Check Sheet



General Information

Inspection Date	Inspection Time	Weather Conditions	Temperature	Wind Direction	Wind Strength

Odour Survey

Location	Time	Nature of Odour	Odour Severity	Extent/ Persistence	Noise Level (dB)
1					
2					
3					
4					
5					
6					

Scoring Guide			
	Nature	Severity	Persistence
0	No Odour	No Odour	No Odour
1	Lairage/ Chicken	Very Weak	Localised, not off site
2	Defeather/ Aero scald	Weak	Offsite for brief period
3	Offal	Distinct	Persistent but localised
4	Effluent	Obvious	Persistent over narrow range
5	Sludge	Strong	Persistent over wider range
6	Blood Tanks	Very Strong	
7	Other (Describe)	Extremely Offensive	



ETP Alarm Y/N		Cyclone Alarm Y/N		Cyclone Redox:		Cyclone pH	
Main Scrubber Alarm (Y/N)				Scrubber Redox		Scrubber pH	

General Site Management

Odour Management

Question	Yes/ No	Question	Yes/ No
Are vehicles observing speed limits?		Is there more than 1 vehicle waiting	
Are FLT's driving safely and loads secure?		Are all offal/ lairage doors closed?	
Are external yard areas clean and free of spills?		Is lairage area clean	
Are spill kits sealed and contents full/ unused?		Are all other process doors closed?	
Are correct containers being used/ labelled?		Is offal bay clean and in good condition?	
Are noise controls working around the site?		Is blood tank area clean?	
Are all chemicals banded/ stored correctly?		Is ETP area clean?	
Are bunds in good condition/ no leaks?		Are all carbon filters working?	
Is site drainage colour coded?		Are all Dolavs covered?	
Are handstanding areas in good condition?		Is sludge tank back venting (where applicable)?	
Cleaning activities in correct area?		Other Comments/ Actions:	
W2 and W3 free of visible oil/ grease?			
Borehole secure and free from obstruction?			
Completed By			
Signature			

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Issued By: S Hutchinson	Authorised By: J. Colley	Page 36 of 38

Appendix 4 - Environmental Complaint Record Forms

Date of Complaint	Time of Complaint	Date Noticed	Time Noticed																								
Name and Address of Complainant																											
Description of Odour (what does it smell like?)																											
Odour Severity	1 Very Weak Faintly perceptible when odour present	2 Weak Odour character easily recognizable	3 Distinct Odour character is recognizable																								
	4 Obvious Odour character is easily recognizable	5 Strong Odour may be offensive if persistent	6 Very Strong Odour is offensive exposure considered undesirable																								
7 Extremely Strong Odour is offensive and action required to avoid further exposure																											
Constant or Intermittent	Duration																										
Does the complainant have any other comments about the odour?																											
Are there any other complaints relating to the installation, or to that location?		If yes please give details (dates etc.)																									
Location of complaint Please mark on map location of complaint. ✗																											
Wind Direction Log <table border="1"> <thead> <tr> <th></th> <th>Time</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>30 minutes before complaint</td> <td>15:00</td> <td>30</td> </tr> <tr> <td>20 Minutes before complaint</td> <td>15:10</td> <td>30</td> </tr> <tr> <td>10 Minutes before complaint</td> <td>15:20</td> <td>3</td> </tr> <tr> <td>Time of Complaint</td> <td>15:30</td> <td>333</td> </tr> <tr> <td>10 minutes after complaint</td> <td>15:40</td> <td>304</td> </tr> <tr> <td>20 minutes after complaint</td> <td>15:50</td> <td>252</td> </tr> <tr> <td>30 minutes after complaint</td> <td>16:00</td> <td>174</td> </tr> </tbody> </table> <p>Plot the above direction data onto the wind chart below</p>					Time	Direction	30 minutes before complaint	15:00	30	20 Minutes before complaint	15:10	30	10 Minutes before complaint	15:20	3	Time of Complaint	15:30	333	10 minutes after complaint	15:40	304	20 minutes after complaint	15:50	252	30 minutes after complaint	16:00	174
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20 minutes after complaint	15:50	252																									
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Weather Information (Please attach screenshot of weather station data log)																											
Weather Conditions	Average Wind Speed	Average Wind Direction	Average Temperature																								
Operating Conditions at time of complaint																											
Describe what was happening on site at the time? Any abnormal events, weather conditions or maintenance issues at the time or ongoing? E.g. power cut, abnormal weather (very hot or cold), chemical scrubber or ETP fault?																											
ABP and sludge collection times																											

Complaint Report Form

Time and date of complaint:	Name and address of complainant:
Telephone number of complainant:	

Date noticed:	
Time noticed:	
Location, if not at above address:	
Weather conditions (i.e., dry, rain, fog, snow):	
Temperature (very warm, warm, mild, cold or degrees if known):	
Wind strength (none, light, steady, strong, gusting):	
Wind direction (e.g. from SW):	
Complainant's description of odour or noise or other nuisance:	
<input type="checkbox"/> What does it smell or sound or look like?	
<input type="checkbox"/> Severity (see below):	
<input type="checkbox"/> Duration (time):	
<input type="checkbox"/> Constant or intermittent in this period:	
<input type="checkbox"/> Does the complainant have any other comments about the odour or noise or other nuisance?	
Are there any other complaints relating to the installation, or to that location? (either previously or relating to the same exposure):	
Any other relevant information:	
Do you accept that odour or noise or other nuisance is likely to be from our activities?	
What was happening on site at the time?	
Operating conditions at time of occurrence (e.g. odour abatement plant parameters, ABP's collections etc.):	
Actions taken:	

Form completed by:	Date	Signed
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<p><u>ODOUR SEVERITY KEY</u></p> <p>0 - No Odour Present - no odour perceived</p> <p>1 - Very Weak - probably some doubt whether odour present</p> <p>2 - Weak - odour character is barely recognisable</p> <p>3 - Distinct - odour character is recognisable</p> <p>4 - Obvious - odour character is easily recognisable</p> <p>5 - Strong - odour may be offensive if persistent</p> <p>6 - Very Strong - odour is offensive, exposure to this level considered undesirable</p> <p>7 - Extremely Strong - odour is offensive, instinctive reaction to avoid further exposure</p>	<p><u>NOISE SEVERITY GUIDE</u></p> <p>0 - No Noise Present - no noise perceived</p> <p>1 - Very faint - probably some doubt whether noise present</p> <p>2 - Faint - noise character is barely recognisable</p> <p>3 - Distinct - noise character is recognisable</p> <p>4 - Obvious - noise character is easily recognisable</p> <p>5 - Loud - noise may cause minor annoyance - disruption of tranquillity</p> <p>6 - Very Loud - moderate annoyance – must talk louder</p> <p>7 - Extremely Loud - serious annoyance – forced to go inside</p>
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