

# **Application for Variation (2)**

**Maelor Poultry Processing Plant  
EPR/AB3591ZQ**

**Maelor Foods Limited  
Pickhill Lane  
Cross Lanes  
Wrexham  
LL13 0UE**

**6<sup>th</sup> January 2020**

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**Prepared by:**

Adrian Kesterson CEnv, MIEMA  
Director  
Expirea Environmental Consultancy Ltd.

5 Clumber Road West  
Nottingham  
NG7 1EF

☎ 07845 668696

✉ [adrian@expirea.co.uk](mailto:adrian@expirea.co.uk)  
[www.expirea.co.uk](http://www.expirea.co.uk)



## Table of Contents

<b>1</b>	<b>Non-Technical Summary .....</b>	<b>5</b>
1.1	Process description .....	5
1.2	Environmental setting .....	5
<b>2</b>	<b>The Permit Installation .....</b>	<b>6</b>
2.1	Plans and drawings .....	6
2.2	Licensing history .....	6
2.3	Proposed changes to the permit .....	6
<b>3</b>	<b>Emissions to the Environment .....</b>	<b>7</b>
3.1	Emissions to air .....	8
3.2	Emissions to water, land & sewer .....	8
<b>4</b>	<b>Management Systems .....</b>	<b>8</b>
<b>5</b>	<b>Operating Techniques &amp; BAT .....</b>	<b>9</b>
5.1	Delivery & Lairage .....	9
5.2	Stunning and bleeding .....	10
5.3	Wastewater emissions and effluent treatment .....	10
5.4	Site drainage .....	10
5.5	Raw Materials .....	10
<b>6</b>	<b>Odour Control .....</b>	<b>11</b>
<b>7</b>	<b>Noise &amp; Vibration .....</b>	<b>11</b>
<b>8</b>	<b>Energy Efficiency .....</b>	<b>12</b>
<b>9</b>	<b>Water Consumption .....</b>	<b>12</b>
<b>10</b>	<b>Accidents and emergencies .....</b>	<b>12</b>
<b>11</b>	<b>Site condition report .....</b>	<b>12</b>
11.1	Closure and Permit Surrender .....	12
<b>12</b>	<b>Monitoring .....</b>	<b>12</b>
<b>13</b>	<b>Environmental impact assessment .....</b>	<b>13</b>
13.1	Odour nuisance potential .....	13
13.2	Noise nuisance potential .....	13
13.3	Water pollution potential .....	13
<b>Appendices .....</b>		<b>14</b>
<b>Appendix 1 – Installation Plan including Boundary and Holding Building .....</b>		<b>14</b>
<b>Appendix 2 – Site Drainage Plan .....</b>		<b>14</b>
<b>Appendix 3 – Holding Building Schematic .....</b>		<b>14</b>
<b>Appendix 4 – Holding Building Dimensions Drawing .....</b>		<b>14</b>
<b>Appendix 5 – Odour Management Plan V5 .....</b>		<b>14</b>
<b>Appendix 6 – Site Condition Report .....</b>		<b>14</b>

<b>Appendix 7 – Environmental Risk Assessment.....</b>	<b>14</b>
<b>Appendix 8 – Revised sections of Aspects &amp; Impacts Registers.....</b>	<b>14</b>

# 1 Non-Technical Summary

Maelor Foods Limited operate an installation for slaughtering poultry and processing chicken portions in accordance with our environmental permit, reference EPR/AB3591ZQ, as varied. We are applying to vary our permit to include the following changes to our installation:

1. Extension of installation area to the south to include:
  - a) Use of a new live bird vehicle holding building for the temporary holding of live bird vehicles pending offloading into the lairage when there are delays on the slaughter line.
  - b) Additional adjacent land for hard standing for vehicle movements to the new live bird holding area and for general storage.
2. A second gas stunning pit is to be configured to minimise downtime of the kill line and bottlenecks during peaks in deliveries of live birds.

These changes are primarily for animal welfare benefits in keeping the birds cool during holding periods and will not increase production capacity. The changes will have minimal impact on environmental emissions and consumptions. Fans will blow air into the building for cooling birds when the building is in use and air will be drawn out to maintain the airflow. There are other new emission points to the environment.

## 1.1 Process description

The process description of the permitted activities is revised to cover the provisions being introduced for accommodating live bird delivery vehicles in the temporary holding building if there are delays in offloading them in the lairage.

The changes to be covered by this variation are:

1. An extension of the installation area to the south to include:
  - a) A building for temporary holding of the live bird vehicles when there are delays in offloading them into the production line.
  - b) Additional hard-standing area between new live bird holding building and wastewater treatment plant for vehicle movements, general storage and HGV trailer parking.
2. An additional gas stunning chamber in the kill line to minimise production delays and improve bird welfare.

Other than these changes the operation of the installation is unchanged.

## 1.2 Environmental setting

There are no changes to the environmental setting of the installation.

## **2 The Permit Installation**

### **2.1 Plans and drawings**

Appendix 1 shows the revised Installation Plan including new live bird vehicle holding building and the new installation boundary.

Appendix 2 shows the revised Site Drainage Plan.

Appendix 3 shows the Live Bird Holding Building Schematic Drawing.

Appendix 4 shows the Live Bird Holding Building Elevations & Dimensions.

### **2.2 Licensing history**

The Maelor Poultry Processing Plant installation was permitted under the EPR Regulations on 29<sup>th</sup> August 2017 under permit reference EPR/EP3835GD and is issued to Maelor Foods Limited.

The first variation to the permit was issued on 1<sup>st</sup> March 2019 and covered a change to monitoring locations W2 & W3, addition of a point source emission to air from the wastewater treatment plant after covering the primary wastewater tanks and addition of a DERV fuelling facility.

This is the second application for a variation to the permit.

### **2.3 Proposed changes to the permit**

The prescribed activities undertaken at the installation are essentially unchanged except for the following:

To keep live birds cool and maintain animal welfare criteria during periods when the delivery vehicles are unable to immediately offload into the lairage, Maelor Foods are converting an existing transport depot (aka Lloyd Fraser Building) located adjacent to the installation boundary.

This building will be able to accommodate up to 7 live bird vehicles and will allow ambient air to be drawn into the building and circulated by fans to provide cooling of the live birds on the vehicles.

The new holding building is outside of the existing installation boundary. A site investigation report has been undertaken for this new area to support this variation application. Opportunity has been taken to include this and adjacent land to the south of the existing installation area which is to be resurfaced into a hard-standing area for vehicle movements, HGV parking and general storage.

The surface water drainage from the new area of the installation will be linked into the existing surface water drainage system. We will be routing the drains from the holding building into our existing trade effluent foul drains as the building will be cleaned intermittently using chemicals

as we do in the lairage. The cleaning water effluent will be treated in our wastewater treatment plant before discharge to the River Dee. The site drainage plan has been revised accordingly.

Fans will blow air towards the parked vehicles to provide cooling of the live birds and air will be exhausted out at the rear of the building via a series of vents.

The live bird vehicles generally have an associated low-level odour from the faeces emitted by the birds during transit. There may be a short-term low-level odour associated with the air exhausted out of the building while vehicles are inside the holding building but this will be very infrequent and short duration. Any odour will be similar but no worse than that from the lairage building exhaust which is discharged directly to air. It is not proposed to undertake any treatment of this emission to air. However, if after operational experience the odour from the holding building is proven to cause unacceptable offsite odour concentrations, we have made provision to install a scrubber at the rear of the building to treat the exhausted air.

In addition to the use of the live bird holding building to improve bird welfare we are also aiming to minimise the periods when live bird vehicles need to use the holding building. Operational experience from the first 2 years has identified the gas stun chamber as the main bottleneck in the slaughter process. If there is a fault here or if several vehicles arrive consecutively this slows or halts the production line. To negate this, we intend to configure a second gas stun chamber that is already structurally formed alongside the current one. This will be used as back up or during peak flows of live birds. The production capacity of the plant will be unchanged.

These changes are covered by a standard type of variation as per NRW's guidance on fees for environmental permitting.

The changes we would like to make to our permit are:

- a) Table S3.1 in Schedule 4 to include new emission point(s) to air for the new live bird holding building exhaust(s) as below:

<b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements</b>						
Emission Point Ref & location	Source	Parameter	Limit (inc unit)	Reference period	Monitoring frequency	Monitoring standard or method
Exhaust fans outlet from live bird vehicle holding building	Building air	No parameter set	No limit set	-	-	-

- b) The installation plan has been updated to show the live bird holding building and the new installation boundary. This is provided in Appendix 1 and should replace the site plan shown in Schedule 7 of the permit.

### 3 Emissions to the Environment

The emissions from the installation associated with the changes proposed by this variation application are discussed below. The proposed monitoring for these discharge points is shown in Section 12 and the environmental impact assessment of these discharges is provided in Section 13.

### 3.1 Emissions to air

The new point source emissions to air associated with this variation application will arise from the emissions from extraction vents at the rear of the live bird vehicle holding building when vehicles are parked inside. The entry in Table 1 below is consistent with the similar unnumbered vents for the lairage in permit Table S3.1.

**Table 1 - Air emission points**

Emission point Ref & location	Parameter	Source	Quantity / Unit
Exhaust vents at rear of live bird holding building	None	Live bird vehicle holding building	NA

### 3.2 Emissions to water, land & sewer

There are no new point source releases to water, land or sewer from the installation. The cleaning effluent from the holding building will be treated in our existing wastewater treatment plant (WWTP). The building will only require intermittent cleaning and the increase in wastewater flow from this area is a small fraction of the overall wastewater volume to be treated by the WWTP. Our emissions to the River Dee from emission point W1 will remain within our existing permit limits.

## 4 Management Systems

The installation and facilities are operated in accordance with our Operating Procedures, Quality Documents and our internal EMS which includes our environmental related procedures, plans and registers.

The management systems that address the changes covered by this variation are listed below and have been updated to address the changes:

- Odour management plan revised to include the assessment of odour emissions from the new live bird holding building.
- Environmental impact assessments and the Aspects and Impacts Register have been reviewed but the generic controls already address noise and odour emissions from the new live bird holding building so are unchanged. These documents have been updated to cover the controls for preventing water pollution from site drainage and the risks of oil contamination from vehicle movements.

A documented preventative maintenance system is in place and the new facilities are to be included in this. Key plant such as extraction systems and fans will be included.

Copies of these documents and associated records are available on request and will be readily available for viewing by our NRW Regulatory Officer.

## 5 Operating Techniques & BAT

We have referred to the following Guidance Notes to assess the best techniques to be used for the changes to our activities covered by this variation application:

Netregs Guidance for Pollution Prevention:

- [GPP 2: Above ground oil storage tanks](#)
- [PPG 7: Safe storage - The safe operation of refuelling facilities](#)

[Slaughterhouse & Animal By Products BREF](#)

[Food Drink & Milk BREF](#)

[Environment Agency Guidance EPR 6.11 Treating & Processing Poultry](#)

There are no changes made in the following process areas:

- Scalding
- De-feathering
- Evisceration
- Chilling
- Meat cutting and portioning
- Animal by-products and blood storage and handling
- Waste management
- Utilities

### 5.1 Delivery & Lairage

The arrival of live bird vehicles is scheduled and timed to minimise the delay between arrival at site and offloading of the live birds in the lairage. Occasionally delays in transit or process line outages can mean that vehicles cannot be immediately sent to the lairage for offloading.

Many Operators choose to drive the vehicles around the site slowly to provide some ambient air cooling of the live birds to ensure their welfare. This can create additional noise, discomfort for the birds and other operational hazards due to vehicle movements.

Maelor Foods have acquired the former transport depot adjacent to the installation and have converted this to allow up to seven live bird vehicles to be parked inside so the live birds can be cooled by air fans in a less stressful manner. The live bird vehicles will be moved to the lairage as soon as the lairage is available to receive them.

There is no guidance on BAT for dealing with live bird arrivals during delays in the production line other than minimising faeces during live bird transit by control of feeding times before transit which we do. There is also minimal guidance on BAT for lairages which is essentially what the holding building is, but without bird unloading and of course it is only to be used occasionally. We therefore see no other controls than those specified below for handling wastewater, odour and noise from the holding building.

The frequency of use of the holding building is expected to be very occasional. Since we commenced operation in November 2017, we have experienced just two major breakdowns. This will be reduced further with the installation of the second gassing pit. Potentially there could also be delays when there are extreme weather conditions that could have an impact on animal welfare (snow, extreme low or high temperatures as an example).

## **5.2 Stunning and bleeding**

During the construction of the slaughterhouse concrete pits for two gas stunning chambers were cast into the floor. For the initial operational phase (restricted under planning consent to 400,000 birds per week) we were able to operate with just one chamber commissioned. Now we have planning consent to process 1 million birds per week, in line with our permit operating capacity we would like the flexibility to use the second gas stunning chamber. This would allow us to continue operating during periods such as transport delays when live bird arrivals can coincide or where gas stunning chamber No1 is offline for maintenance.

This will minimise the need for live bird vehicles to be held back in the holding building and will improve bird welfare.

Configuration of the 2<sup>nd</sup> gas stunning chamber will not increase production capacity as no other changes are being made to the other production areas.

## **5.3 Wastewater emissions and effluent treatment**

The internal drainage from washdowns of the holding building will be connected to the on-site wastewater treatment plant. The holding building will be cleaned as and when required which will be intermittent as the building will only be used when there is a delay to offloading the birds into the lairage.

The wastewater flow from this area is a small fraction of the overall wastewater volume to be treated by the WWTP which has adequate capacity to handle this. Our emissions to the River Dee from emission point W1 will remain within our existing permit limits.

## **5.4 Site drainage**

Site drainage is discussed in detail in the Site Condition Report in Appendix 5.

The western part of the new installation area will have refurbished storm water drainage that will feed into the existing surface water drainage system, discharging at points W2 and W3. The new area will be completely resurfaced in impermeable hardstanding and the surface water drains will feed into the existing system, passing through oil interceptors.

Wash water from the holding building will be drained to the wastewater treatment plant.

See the revised Site Drainage Plan in Appendix 2.

## **5.5 Raw Materials**

For the cleaning of the new live bird vehicle holding building we will use the same cleaning chemicals as we use in the lairage area. Details of these were provided with our original permit application. The additional amount of cleaning chemicals we will use will be a small fraction of our overall consumption and all existing measures will be taken to minimise consumption and review cleaning chemical specification and environmental impact.

At the moment we intend to use “grey water” (treated wastewater) from our wastewater treatment plant for cleaning in the new building. If this is impractical to configure for some reason, we will utilise our borehole water for this purpose.

There are no changes to chemicals and oil storage arrangements. All chemicals will remain in the on-site chemical store and oils/ AdBlue will remain in their current location next to the diesel tank.

## 6 Odour Control

Fans will blow air towards the parked live bird vehicles to provide cooling of the live birds and air will be exhausted out at the rear of the holding building via a series of vents.

The live bird vehicles generally have an associated low-level odour from the faeces emitted by the birds during transit. There may be a short-term low-level odour intensity associated with the air exhausted out of the building while vehicles are inside the holding building. This will be similar but no worse than, and much less frequent than the odour from the lairage building exhaust which is discharged directly to air.

Due to the low-level odour intensity and the infrequent operation of this building we do not foresee odour nuisance related to the holding building so we do not propose to undertake any treatment of the air exhausted from the building when in use. We note that there is no BAT requirement for treating odours from lairages which are of a low odour intensity and many sites have open lairages. However, if after operational experience the odour from the holding building is proven to cause unacceptable offsite odour concentrations on a regular basis, we have made provision to install a scrubber at the rear of the building to treat the exhausted air.

Our Odour Management Plan has been revised to include this as a new potential source of odour and describes the controls in place to prevent and minimise these potential odours and their impact.

We have also revised our risk assessment register to include the assessment of the potential impact of odour emissions from the new facility. See our Operational Odour Management Plan (V5) in Appendix 6.

## 7 Noise & Vibration

There are no significant noise sources introduced by the changes covered by this variation application.

The extraction fans for the live bird vehicle holding building are to be positioned on the rear of the building facing away from the nearest housing in Pickhill Lane and the building will provide screening of any noise emitted. The extraction system will only operate for short periods when live bird vehicles are temporarily parked inside. We do not receive live bird deliveries overnight so the building will not be used during overnight periods (22:00 – 06:00).

Once we have operational experience, we can undertake qualitative assessments to verify that noise from the extraction equipment is not causing an offsite noise likely to cause nuisance. There will be scope to fit noise attenuation enclosures around any noisy equipment if this is a concern after we have operational experience.

The installation already includes similar noise sources from the fans and extraction systems on the main processing buildings which are much closer to the nearest receptors in Pickhill Lane.

The movement of live bird lorries for welfare cooling purposes around the site will be minimised by the availability of the holding building and will remove this as a noise source.

## **8 Energy Efficiency**

There will be additional fans to circulate and extract air from the live bird vehicle holding building on an occasional and intermittent basis. This energy usage will be minor in the overall scheme of the installation's energy use.

## **9 Water Consumption**

Our water consumption is not expected to increase due to the cleaning of the live bird holding building as we will be using grey water from the wastewater treatment plant. If we have to use borehole water for some reason the additional amounts will be a small fraction of our overall water consumption as the building will only require intermittent cleaning.

## **10 Accidents and emergencies**

Our emergency response plan has not been revised due to the new live bird holding building as we have not identified any additional potential hazards.

## **11 Site condition report**

The new live bird vehicle holding building is an existing building previously used as a transport depot and is located outside the existing installation boundary. We have therefore undertaken a further site investigation in this area and the adjacent land to the south of the existing installation to identify the baseline conditions. See the Site Condition Report for this investigation in Appendix 5.

### **11.1 Closure and Permit Surrender**

There are no changes required to our site closure plan due to the introduction of the new live bird holding facility and increase in installation area.

## **12 Monitoring**

There are no changes required to the permit monitoring criteria due to the introduction of the new live bird holding facility and additional hard-standing area.

# **13 Environmental impact assessment**

We have undertaken a qualitative environmental risk assessment in accordance with our EMS procedures for the live bird holding building – Appendix 7. We have also reviewed our environmental impact assessments along with a review of our Aspects and Impacts Register to assess the potential impacts from the new aspects introduced by this variation. See Appendix 8 which show the revised sections of these Registers.

## **13.1 Odour nuisance potential**

Our qualitative risk assessment concludes that the introduction of the new live bird vehicle holding facility will not increase the risk of offsite odour nuisance from the installation. This is based on the low-level odour intensity of the live bird vehicles and the infrequent and short duration of use of the building.

Odour emissions from our lairage are low-intensity and occur on a regular basis and have not led to offsite odours and odour complaints. Our odour management plan includes control effective control measures already.

We have however made provisions to install a scrubber to treat the air exhausted from the holding building if unacceptable offsite odour concentrations are proven to arise from this source on a regular basis. Should this be the case we would liaise with NRW on the design of a scrubber and organise changes to our permit and management systems accordingly.

## **13.2 Noise nuisance potential**

Our qualitative risk assessment concludes that the introduction of the new live bird vehicle holding facility will not increase the risk of offsite noise nuisance from the installation. This is based on the infrequent use, duration, day-time hours of operation and screening provided by the building. We have scope to fit noise attenuation around fans and extraction equipment serving the holding building if unacceptable offsite noise levels are proven to arise from this source on a regular basis. Our noise management plan includes control effective control measures already.

## **13.3 Water pollution potential**

Our qualitative risk assessments conclude that the introduction of the new live bird vehicle holding facility and new installation area will not increase the risk of water pollution from the installation. Revisions to the site drainage and our existing operating procedures and control measures will ensure this.

## **Appendices**

Appendix 1 – Installation Plan including Boundary and Holding Building

Appendix 2 – Site Drainage Plan

Appendix 3 – Holding Building Schematic

Appendix 4 – Holding Building Dimensions Drawing

Appendix 5 – Odour Management Plan V5

Appendix 6 – Site Condition Report

Appendix 7 – Environmental Risk Assessment

Appendix 8 – Revised sections of Aspects & Impacts Registers