

CHEQUERHOUSE FARM - PERMIT VARIATION APPLICATION SUPPORTING DOCUMENT

Chequerhouse Farm Limited

Version:	1.3	Date:	24th July 2026		
Doc. Ref:	098-024-CHF-SUP	Author(s):	DY	Checked:	CFL
Client No:	098	Job No:	024		

Oaktree Environmental Ltd, Lime House, 2 Road Two, Winsford, Cheshire, CW7 3QZ
Tel: 01606 558833 | E-Mail: sales@oaktree-environmental.co.uk | Web: www.oaktree-environmental.co.uk

Registered in the UK | Company Number: 4850754



Oaktree Environmental

Waste, Planning & Environmental Consultants



Document History:

Version	Issue date	Author	Checked	Description
1.0	18/06/2026	DY		Draft for client comment
1.1	22/06/2026	DY	CFL	Submitted to EA with permit application
1.2	15/07/2026	DY		Updated in response to EA duly making queries, issued to client for comment
1.3	24/07/2026	DY		Issued to EA

Contents

Document History:	i
Contents	ii
List of Appendices:	iii
1 Introduction	4
1.1 Overview	4
1.2 Details of Site Operator	4
1.3 Documents Consulted	4
1.4 Pre-Application Report	4
2 Operating Techniques	5
2.1 Description of Site Operations	5
2.2 Environmental Management System	7
2.3 Best Available Techniques	7
2.4 Technical Standards	7
3 Emissions and Control	14
3.1 Fugitive Emissions	14
3.2 Odour	17
3.3 Noise and Vibration	17
3.4 Point Source Emissions to Air	18
3.5 Point Source Emissions to Water, Land and Sewer	19
3.6 Emissions Monitoring	19
4 Waste	20
5 Raw Materials	21
6 Energy Efficiency	24
7 Environmental Risk Assessment	25

List of Appendices:

- Appendix I - Permit Boundary and Site Layout Plan**
- Appendix II - Pre-Application Report**
- Appendix III - Environmental Management System**
- Appendix IV - Odour Management Plan**
- Appendix V - Noise Management Plan**
- Appendix VI - Accident Prevention Measures – Biomass Boilers**
- Appendix VII - BAT Assessment**
- Appendix VIII - Dust and Bioaerosol Management Plan**
- Appendix IX - Climate Change Risk Assessment**

1 Introduction

1.1 Overview

1.1.1 This document contains supporting information which accompanies the Environmental Permit variation application being submitted by Chequerhouse Farm Limited for the addition of two poultry houses and ancillary structures at Chequerhouse Farm. This application has been completed on behalf of Chequerhouse Farm Limited by Oaktree Environmental Ltd.

1.1.2 Reference should be made to Appendix I for a plan showing the permit boundary and proposed site layout (Drawing no MFC125 A 02 51).

1.2 Details of Site Operator

1.2.1 This permit is being applied for by Chequerhouse Farm Limited.

1.3 Documents Consulted

1.3.1 The following guidance documents have been consulted for the purpose of completing this permit application:

- How to Comply with your Environmental Permit for Intensive Farming Version 2, Environment Agency (EA), 2010;
- EPR Intensive Farming – Applying for a Permit, EA, 2009; and,
- <https://www.gov.uk/guidance/intensive-farming-risk-assessment-for-your-environmental-permit>

1.4 Pre-Application Report

1.4.1 A pre-application report was provided by the EA which included an ammonia screening assessment. The report concluded that impacts screen out with no requirement for ammonia modelling. Reference should be made to Appendix II for the pre-application report.

2 Operating Techniques

2.1 Description of Site Operations

- 2.1.1 This section provides an overview of operations to be undertaken at Chequerhouse Farm.
- 2.1.2 Reference should be made to Appendix I for proposed permit boundary and layout plan. The site will contain the following principal infrastructure:
- Six poultry houses;
 - Weighbridge;
 - Implement store;
 - Office;
 - Messing facilities;
 - Feed silos;
 - Backup generator;
 - Cold store;
 - Wash down pad;
 - Water storage tank;
 - Pump house;
 - Three biomass boilers and fuel silos (subject to viability);
 - Biomass store (subject to viability);
 - Liquefied Petroleum Gas (LPG) tanks;
 - Attenuation reservoir;
 - Sealed underground tanks for collection of house washdown water; and,
 - Small sewage treatment plant for treating effluent from welfare facilities.
- 2.1.3 This variation application is for the addition of two poultry houses, increasing the site stocking capacity up to a maximum of 378,000 broilers. Chicks will be delivered to site from a hatchery and transported to a meat processing factory at the end of each growing period. The growing cycle length between delivery of chicks to site and transportation off-site will be between 5 and 8 weeks.

- 2.1.4 Between each crop cycle, the houses will be power washed, disinfected, fumigated and prepared for the arrival of the next batch of chicks. Wash water from house cleanout will be channelled to sealed underground tanks and subsequently exported from the farm by a cleanout contractor in a sealed tanker lorry. Used litter will be taken away from the farm, supplied on contract to a power station as a fuel source. If such manure management measures change, the EA will be informed.
- 2.1.5 House preparation will include bedding floors with wood chips/shavings and pre-warming the houses. Heating for the farm will be provided using LPG. Subject to viability/feasibility, biomass heating will also be used.
- 2.1.6 As the birds grow, the house ventilation rate increases and the temperature is reduced throughout the growing period. Feed will be supplied from a local mill and stored on site in purpose designed galvanised steel bulk bins. Diets will be formulated according to the bird requirements and stage of growth. Water is to be provided via nipple drinkers, which is designed to minimise spillage. Low energy lighting systems will be used throughout the farm.
- 2.1.7 Broiler mortalities which arise during the crop cycle will be removed from houses and held in a small lockable cold store prior to collection by licensed contractor under the DEFRA fallen stock scheme. Numbers will be recorded.
- 2.1.8 The farm will be primarily ventilated by high velocity roof exhaust fans. This will provide optimum and efficient dilution and dispersion of residual emissions, minimising potential for impacts. Gable end fans will be used occasionally, during periods of very warm/hot weather.
- 2.1.9 Clean surface water from roof and yard areas will be collected in an attenuation reservoir, treated and re-used on the farm, maximising the sustainability of the operation.
- 2.1.10 A Small Sewage Treatment Plant will be installed to treat effluent arising from welfare facilities. It is understood that this will meet the qualifying criteria to be classed as exempt from requiring a permit.

2.2 Environmental Management System

- 3.2.1 The farm will be operated in accordance with a comprehensive management system during day to day operations at the farm. Reference should be made to Appendix III which contains the Environmental Management System (EMS).
- 3.2.2 The EMS identifies the measures that will be taken to prevent, or, where this is not practicable, to reduce emissions from the site.
- 3.2.3 The EMS will be subject to continuous review and revision throughout the operation of the site.

2.3 Best Available Techniques

- 2.3.1 The farm will comply with all the relevant Best Available Techniques (BAT) conclusions in European Union Commission Implementing Decision (EU) 2017/302 of 15 February 2017.¹ Reference should be made to Appendix VII for the BAT Assessment.

2.4 Technical Standards

2.4.1 Operations

- 2.4.1.1 The operation of the farm will be in accordance with the following guidance and legislation:
- EPR 6.09 Sector Guidance Note: How to Comply with your Environmental Permit for Intensive Farming Version 2, Environment Agency (EA), 2010 ("EA Sector Guidance Note"); and,

¹ *Commission Implementing Decision (EU) 2017/302 - establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs (notified under document C (2017) 688).*

- Commission Implementing Decision (EU) 2017/302 of 15 February 2017 Establishing Best Available Techniques (BAT) Conclusions for the intensive rearing of poultry or pigs ("BAT Conclusions Document").

2.4.2 Feed

- 2.4.2.1 Selection and use of feed will be in accordance with the Sector Guidance Note and BAT Conclusions Document. In order to reduce total nitrogen and phosphorous excreted, animals will be fed in line with a feed plan tailored to their growth stage. Phased feeding will be undertaken with the nutrient composition adjusted over time to match the animals' changing nutritional needs. This approach will also reduce excess nitrogen intake.
- 2.4.2.2 Protein content of the feed will be reduced throughout the growing period. Broilers will be fed a minimum of three diets during the growing cycle.
- 2.4.2.3 Feed formulation will be undertaken in accordance with recognised industry standards. Feed will be supplied by a supplier who has nutrition specialist(s) at the place of production.
- 2.4.2.4 Phosphorous levels will be reduced throughout the growing cycle.
- 2.4.2.5 Feeding systems will be managed in line with the preventative maintenance and inspection regime in order to minimise feed being wasted. This reduces the potential for nutrient losses to the environment.

2.4.3 Housing

- 2.4.3.1 Housing design and management will be in accordance with the EA Sector Guidance Note.
- 2.4.3.2 The sheds will be fully insulated with a U-Value of approximately 0.4 W/m²/°C or better to reduce condensation and heat lost.
- 2.4.3.3 The sheds will be fan ventilated with a fully littered floor equipped with non-leaking drinking systems. Ventilation will primarily be provided by high velocity roof exhaust fans with gable end fans used for heat extraction during periods of extreme weather.

- 2.4.3.4 Litter will be kept loose and friable. The quality is regularly inspected to ensure it does not become excessively wet or dry. Steps as described within the EA Sector Guidance Note will be taken to rectify any changes to the quality of the litter.
- 2.4.3.5 Temperature in the sheds will be continually managed and adjusted to meet the health and welfare needs for the age and number of the birds.
- 2.4.3.6 LPG Heaters will be spaced regularly within the sheds to prevent cold spots and extremes of temperature.
- 2.4.3.7 The poultry houses will be accessed via the control room, which will prevent drafts.
- 2.4.3.8 A computer will automatically control ventilation and heating so that heat is not wasted by being drawn out of the building unnecessarily.
- 2.4.3.9 The ventilation management system will control the ventilation rates depending on the health and welfare needs of the birds and the outside weather conditions.

2.4.4 General Management

- 2.4.4.1 In accordance with the management system at the farm, the buildings will be regularly inspected and maintained. The walls of the poultry houses will be kept clean. The site will be regularly inspected and well maintained.

2.4.5 Livestock Numbers and Movements

- 2.4.5.1 Records will be maintained for livestock numbers, including movements onto and off the installation, including mortalities. These records will be available for inspection.

2.4.6 Manure and House Washdown Water Management

- 2.4.6.1 Wash water from house cleanout will be channelled to sealed underground tanks and subsequently exported from the farm by a cleanout contractor in a sealed tanker lorry. Used litter will be taken away from the farm, supplied on contract to a power station as a fuel

source. If such manure management measures change, the EA will be informed. In the unlikely event that there is an issue with the power station, meaning that manure cannot be exported to the facility, immediate arrangements would be made for disposal to an alternative appropriately licensed facility. In the unlikely event of an excess of manure arising, immediate arrangements for alternative disposal/recovery will be made through contacting an appropriately licenced facility within one day.

2.4.7 Improvement Programme

2.4.7.1 The farm is not yet constructed/operational, so no improvement program is relevant/required.

2.4.8 Emission Points

2.4.8.1 Emission points are outlined within the table below.

Table 2.1 – Emission Points

Emission Point Source/Description and Location	Source
Air	
Roof fan outlets on poultry houses 1 to 6	Poultry houses 1 to 6
Gable end fans on poultry house 1 to 6	Poultry houses 1 to 6
Flues serving biomass boilers	3no. biomass boilers
Standby generator exhaust	Standby generator
Vent on diesel tank	Diesel tank
Water	
Clean surface water drainage, discharge from attenuation reservoir	Uncontaminated surface water from roof and yard areas
Land	
Small Sewage Treatment Plant (Exempt from requiring permit, in accordance with binding rules)	Effluent from toilets and messing/welfare facilities

2.4.8.2 There will be no emissions to sewer.

2.4.9 Fugitive Emissions

- 2.4.9.1 Appropriate measures for preventing and minimising fugitive emissions will be in place in accordance with the EA Sector Guidance Note.
- 2.4.9.2 Buildings will be maintained in state of good repair. Areas around buildings will be kept free from build-up of manure and spilt feed. Footbaths will be managed so that they do not overflow.
- 2.4.9.3 During house cleanout, house washdown water will be collected in sealed underground tanks and subsequently exported from site in a sealed tanker lorry by licensed contractor. Spent disinfectants will also be collected within the tanks. Only DEFRA approved chemicals will be used.
- 2.4.9.4 A diverter valve will be used to divert yard surface water to sealed tanks during house cleanout operations. Following completion of cleanout, this will be flushed through with water and then clean surface water drainage directed back to the attenuation reservoir.
- 2.4.9.5 The sealed underground tanks will be built to conform to specifications within the EA Sector Guidance.

2.4.10 Dust

- 2.4.10.1 Reference should be made to Appendix VIII for a Dust and Bioaerosol Management Plan (DBMP) prepared for the farm. This has been included since there are receptors within 100m of the installation boundary. Dust control measure will comply with the EA Sector Guidance Note and BAT Conclusions Document

2.4.11 Carcass Management

- 2.4.11.1 Broiler mortalities which arise during the crop cycle will be removed from houses and held in a small lockable cold store prior to collection by licensed contractor under the DEFRA fallen stock scheme. Numbers will be recorded.

2.4.12 Pests

- 2.4.12.1 No manure will be stored on-site, this exported from site at the end of each growth cycle. House washdown water will be collected in sealed underground tanks.
- 2.4.12.2 The installation will be managed so as to minimise the attraction of pests, birds, flies and scavengers through good housekeeping, suitable chilled storage for fallen stock and the appropriate storage of feed.
- 2.4.12.3 Site management will ensure that feed storage systems, bedding stores and fallen stock storage areas are maintained in a secure condition to minimise access by vermin, wild animals and flies.
- 2.4.12.4 The site will be inspected routinely for evidence of pest activity, including rodents and flies. Where pest activity is identified, appropriate corrective measures will be implemented, including the use of a specialist pest control contractor where necessary.

2.4.13 Bunding and Containment

- 2.4.13.1 Diesel storage tanks will be sited on impermeable surface and include suitable bunding.
- 2.4.13.2 The LPG tanks will be sited and protected to the following specifications:
- Tanks will be sited on hardstanding or impermeable base and with an appropriate standoff from drains/sumps and other structures;
 - Tanks will be sited as far as practicable away from areas where vehicles are regularly manoeuvring;
 - Tanks will be protected from collision damage by installation of Armco barriers mounted on steel posts and,
 - LPG tanks will be required to be constructed to a robust specification, minimising risk of tank failure.

2.4.13.3 The tanks will be clearly marked showing the product within and also the tank capacity.

2.4.13.4 Bunding and containment measures will meet the requirements of the EA Sector Guidance Note and The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) Regulations 2010.

2.4.14 Foodstuff

2.4.14.1 Feed will be kept in silos adjacent to the poultry houses. No liquid feed is to be stored at the site.

2.4.15 Odour

2.4.15.1 There are a small number of receptors within 400m of the farm.

2.4.15.2 In accordance with the EA Sector Guidance and BAT Conclusions Document, an Odour Management Plan is in place, included within IV of this document.

2.4.16 Noise

2.4.16.1 There are a small number of receptors within 400m of the farm.

2.4.16.2 In accordance with the EA Sector Guidance and BAT Conclusions Document, a Noise Management Plan is in place, included within V of this document.

3 Emissions and Control

3.1 Fugitive Emissions

3.1.1 Potential Fugitive Emissions

3.1.1.1 There are a number of potential fugitive sources of emission to air from the site, including the following:

- Dusts, fibres and particulate matter; and,
- Ammonia.

3.1.1.2 Potential fugitive emissions to land include the following:

- Nutrients from manure;
- Nutrients from feed;
- Nutrients from dust;
- Washdown water; and,
- Spillages.

3.1.2 Control of Fugitive Releases to Air

Dusts, Fibres and Particulate Matter

3.1.2.1 The main potential sources of dust and particulates are the bedding and feed. For feed, the highest risk of emissions occurs at the time of delivery. This will be managed to prevent dust emissions from feed bins and delivery vehicles. For bedding, the first application of bedding creates the greatest risk of dust and particulate release. This will be controlled by using bedding that does not have significant dust content and by minimal use of air extraction equipment during placement of bedding material.

3.1.2.2 There is also potential for secondary dust emissions from dust build up in feed storage areas, around ventilation outlets and on yard and access roads. Areas of dust build up will be noted

and regularly inspected and cleaned ventilation equipment adjusted and controlled to minimise the discharge of dust from houses. Site cleanliness will be strictly enforced, preventing potential sources of dust building up.

- 3.1.2.3 Reference should be made to Appendix VIII for a Dust and Bioaerosol Management Plan (DBMP) prepared for the farm. This has been included since there are receptors within 100m of the installation boundary.

Ammonia Emissions

- 3.1.2.4 The measures to minimise odour generation, discussed later, also serve to minimise the generation of ammonia.
- 3.1.2.5 A pre-application report was provided by the EA which included an ammonia screening assessment. The report concluded that impacts screen out with no requirement for ammonia modelling.

3.1.3 Fugitive Emissions to Land

Control of Emissions from Manure

- 3.1.3.1 Manure will not be stored outside the poultry houses at any time. All manure will be exported from site and taken to a power station for energy recovery.

Control of Emissions from Feed

- 3.1.3.2 A policy of cleanliness and checks on feed deliveries will ensure any spillage or escape of feed will be cleared immediately into a waste bin and disposed of appropriately. This will prevent the build up of feed which could cause excessive nutrient build up in soils in the vicinity of the site.

Control of Nutrients from Dust

- 3.1.3.3 The practices outlined above to minimise airborne dusts will also prevent dust build up on areas where the result would be a release of excess nutrients into soil or watercourses.

Drainage and Control of Washdown Water

- 3.1.3.4 Reference should be made to the infrastructure plan in Appendix I for details of clean surface water drainage and house washdown water drainage, including routing.
- 3.1.3.5 During house cleanout, house washdown water will be collected in sealed underground tanks and subsequently exported from site in a sealed tanker lorry by licensed contractor.
- 3.1.3.6 A diverter valve will be used to divert yard surface water to sealed tanks during house cleanout operations. Following completion of cleanout, this will be flushed through with water and then clean surface water drainage directed back to the attenuation reservoir.
- 3.1.3.7 House washdown water will be spread on land to aid growing of crops.

Control of Spillages

- 3.1.3.8 All potentially polluting materials stored on site, such as fuels and disinfectants will be stored in clearly labelled drums and tanks which are kept on impermeable pavement and contained within bunds, on pallets or in cabinets capable of holding 110% of the volume of the largest container, or 25% of the total volume of multiple containers (whichever is the larger). Staff will be made aware of spillage control procedures.

Complaints Procedure

- 3.1.3.9 If complaints are received, they will be recorded and dealt with in accordance with the complaints procedure, which forms part of the EMS, and associated noise, dust and odour management plans. Reference should be made to Appendix III for a copy of the EMS.

3.2 Odour

3.2.1 The potential sources of odour emission are as follows:

- Odour release during feed delivery and storage;
- Odour release from ventilation system;
- Odour release from carcass disposal;
- Odour release from litter;
- Odour release during house clean out; and,
- Odour release from house washdown water.

3.2.2 An OMP has been prepared as part of this application, in accordance with latest guidance. Reference should be made to Appendix IV for a copy of the OMP, which will be appended to the EMS. The OMP has identified all potential sources of odour and outlined mitigation that will be used to control potential odour to an acceptable level.

3.2.3 An Odour Risk Assessment has also been completed in Section 7 of this document. The risk assessment has concluded that impacts from odour will not be significant, provided the OMP is implemented.

3.3 Noise and Vibration

3.3.1 The potential sources of noise include the following:

- Vehicles travelling to and from farm;
- Vehicles travelling around site;
- Feed transfer from lorry to bins;
- Ventilation fans;
- Alarm systems;
- Personnel on site; and,
- Maintenance works.

- 3.3.2 A Noise Management Plan (NMP) has been prepared as part of this application, in accordance with latest guidance. Reference should be made to Appendix V for a copy of the proposed NMP which will be appended to the EMS. The NMP has identified all potential sources of noise and outlined mitigation that will be used to control potential noise to an acceptable level.
- 3.3.3 A Noise Risk Assessment has also been completed in Section 7 of this document. The risk assessment has concluded that impacts from noise will not be significant, provided the NMP is implemented.

3.4 Point Source Emissions to Air

- 3.4.1 The point source emissions to air at the farm will include the fans used to ventilate the poultry houses, vents on LPG tanks, flues serving the biomass boilers, should these be installed, and exhaust serving the standby generator.
- 3.4.2 Potential emissions from the exhaust fans include ammonia, dust and odour. These will be controlled and mitigated as described earlier within this document.
- 3.4.3 Potential emissions from the vents on the LPG tanks include propane/odour, but would only arise in an emergency situation when pressure in the tanks needs to be relieved via pressure relief valves to prevent tank rupturing.
- 3.4.4 The standby generator will not be used on a regular basis, used in the event of power failure on the farm and is to be periodically run to ensure all systems are operating correctly. As such, this will not be a significant source of potential emissions.
- 3.4.5 Subject to feasibility/viability, biomass heating will also be used on the farm, providing a renewable/sustainable source of heating. Up to three biomass boilers may be installed, the locations of which are shown on the Site Layout Plan. The model of boiler to be installed would be an ETA HACK VR BG3. The thermal input for each boiler is 531.8KW at nominal load, resulting in an aggregated thermal input of 1,595.4KW at nominal load. The boilers would be fuelled by virgin wood chip/pellets and qualify for Renewable Heat Incentive (RHI).

Potential emissions include Nitrogen Oxides (NO_x) and particulate matter. However, the boilers must comply with emissions limits for these pollutants in order to qualify for RHI.

- 3.4.6 The exhaust flues serving each boiler would be at least 1m higher than buildings within 25m, and greater than 3m from ground level. The flues would be approximately 125m from the nearest residential properties, >500m from the nearest Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar and >100m from the nearest ancient woodland, National Nature Reserve (NNR), Local Nature Reserve (LNR) and Local Wildlife Site (LWS).
- 3.4.7 Given the above, no further assessment of air impacts required, in accordance with government permitting risk assessment criteria and it can be concluded that impacts will not be significant.
- 3.4.8 Accident prevention measures for the biomass boilers are included in Appendix VI. These measures were approved by the EA as part of the original EP application. No changes are being proposed to the biomass boilers compared to the approved permit.

3.5 Point Source Emissions to Water, Land and Sewer

- 3.5.1 There will be no new point source emissions to sewer. Potential point source emissions to land/water will include the controlled discharge from the attenuation reservoir which will discharge clean roof and yard water to local ditches/drain, as shown on the site layout plan.
- 3.5.2 A small Sewage Treatment Plant will be used to treat effluent arising from welfare facilities. However, it is anticipated that this will be exempt from requiring a permit.

3.6 Emissions Monitoring

- 3.6.1 There are no requirements for emissions monitoring to be undertaken for point source emissions.

4 Waste

4.1 The table below outlines the estimated livestock waste arising from the farm, expected quantities and the disposal/recovery routes for each waste stream identified.

Table 4.1 – Recovery and Disposal Routes for Livestock Waste/Manure

Waste	Estimated Quantity	Treatment Method (Recovery or Disposal)	Justification for Treatment Choice and Outline of how Disposal is Minimised
Manure	900 tonnes/annum	Recovery	Manure is to be exported to a power station for energy recovery
House Washdown Water	450,000 litres/annum	Recovery	House washdown water is to be used as a fertiliser on arable land, replacing mineral based fertilisers
Fallen Stock	1 tonne/annum	Recovery	Disposed of, in accordance with the DEFRA fallen stock scheme

Table 4.2 – Estimated Quantities of Non-Livestock Waste Generated

Waste	Source	Estimated Annual Quantity	Storage/Disposal /Treatment Method
Non-hazardous solid waste	Farm and messing areas	3 tonnes	1,100 litre eurobin. General disposal
Waste oil	Generator	80 litres	Exported from site for specialist recovery

4.2 The site operator is committed to following the requirements of the waste hierarchy at Chequerhouse Farm, whilst complying with the appropriate requirements for maintaining animal welfare, biosecurity and general hygiene requirements for successful production of healthy poultry.

5 Raw Materials

5.1 The table below outlines the expected type and quantity of raw materials and resources that will be used at the farm. Reference should be made to Materials Safety Data Sheets (MSDS) for full list of hazards/environmental impact.

Table 5.1 – Types and Amounts of Raw Materials

Raw Material	Nature	Expected Annual Usage	Use	Potential Hazards/ Environmental Impact	Alternatives
Bedding	Wood chips/ shavings	310 tonnes	Bedding for housing	Non-hazardous	Alternatives under constant review
Diesel	Mineral oil	3,750 litres	100% use on site by plant	Mild irritant. Long term exposure may cause irreversible damage. Potential impact on soils, toxic in aquatic environment	Alternatives under constant review
Lubricating oil	Mineral oil or synthetic oil	210 litres	100% use on site by plant	Mild irritant. Long term exposure may cause irreversible damage. Potential impact on soils, toxic in aquatic environment	Alternatives under constant review
LPG	Liquid fuel	300,000 litres (maximum)	Heating for poultry houses, used as a backup fuel	Flammable liquid. Irritant to skin and eyes. Toxic to nervous system. Repeated or prolonged exposure to substance can produce damage to target organs	Alternatives under constant review
Biomass	Solid fuel	1,300	For use in biomass boilers, subject to viability	Non-hazardous	Alternatives under constant review
Feed	Mixture of feed ingredients	9,000 tonnes	Feed for broilers	Non-hazardous	Alternatives under constant review

Raw Material	Nature	Expected Annual Usage	Use	Potential Hazards/ Environmental Impact	Alternatives
Disinfectants	Biocide	1,800 litres	Used to disinfect/ washdown housing between crop cycles (DEFRA approved material only)	Potential irritant to skin and eyes, harmful if swallowed. No specific information on hazards	Alternatives under constant review
Detergents	Concentrated cleaner	300 litres	Used to maintain hygiene. DEFRA approved materials only	Minor risk of escape/ spillage, irritant in concentrated form, potential impact on environment/ aquatic environment.	Alternatives under constant review
Vaccines	Preventative treatment	Varied – records to be kept on site.	DEFRA approved materials only	None stored on site. Zero risk of escape/spillage	Alternatives under constant review
Medication	Preventative and clinical treatment	Varied – records to be kept on site.	DEFRA approved materials only	None stored on site, minimal risk of escape/spillage	Alternatives under constant review
Rodenticides	Vermin control	90kg	DEFRA approved materials only	None stored on site. Minor risk of escape/spillage, potential impact on wildlife	Alternatives under constant review
Herbicides	Weed control	75 kg	DEFRA approved materials only	None stored on site. Minor risk of escape/spillage. Misapplication may result in potential impact on environment/ aquatic environment	Alternatives under constant review

5.2 Fuels will be used in accordance with manufacturer guidelines and consideration will be given to environmental impacts when purchasing new plant and equipment for the site. Any compounds utilised as described above will be used as recommended by specialist suppliers.

Any quantities of materials used will be the minimum necessary to achieve a successful result. A review of raw and auxiliary materials use will be carried out at least every four years to assess new developments and any possible switch to alternatives with an improved environmental profile.

- 5.3 The use of water for cleaning will be minimised as far as hygiene requirements allow. The operator will review water use every four years. The audit will include a breakdown of water consumption by source. Details of the water use audit will be provided to the EA. A programme of continuous improvement will ensure opportunities to save water or exploit alternative sources are under constant review.
- 5.4 The proposals to collect, treat and re-use clean surface water on the farm will maximise sustainability of the farming operation, saving on precious resources.

6 Energy Efficiency

- 6.1 The poultry houses will be highly insulated with a high level of environmental control which will maximise energy conservation, whilst at the same time providing improved welfare conditions for livestock. All new equipment will be specified with energy efficiency as a priority.

- 6.2 All mobile and stationary plant and equipment utilised at the site will be subject to regular maintenance to optimise operating efficiency. A record of fuel consumption will be maintained and will be used to identify any abnormal fuel consumption that requires investigation. All staff will receive appropriate training for operations at the site which will include maintenance procedures and basic housekeeping (e.g. switching lights and equipment off when not in use).

- 6.3 The operator will review and record opportunities to improve energy efficiency at least every four years and take any appropriate action as deemed necessary by the review.

7 Environmental Risk Assessment

- 7.1 The tables below contain Environment Risk Assessments for noise, odour and fugitive emissions. These are supported by detailed dust, noise and odour management plans which are appended to this document.

Table 7.1 – Odour Risk Assessment

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Feed delivery and storage	Residential properties within 400m of farm	Air	As outlined in OMP in Appendix IV	Unlikely, given risk management measures in place	Odour annoyance	Not significant
Litter management	Residential properties within 400m of farm	Air	As outlined in OMP in Appendix IV	Unlikely, given risk management measures in place	Odour annoyance	Not significant
Carcass disposal	Residential properties within 400m of farm	Air	As outlined in OMP in Appendix IV	Unlikely, given risk management measures in place	Odour annoyance	Not significant
House clean out	Residential properties within 400m of farm	Air	As outlined in OMP in Appendix IV	Unlikely, given risk management measures in place	Odour annoyance	Not significant
House washdown water management	Residential properties within 400m of farm	Air	As outlined in OMP in Appendix IV	Unlikely, given risk management measures in place	Odour annoyance	Not significant
Used litter	Residential properties within 400m of farm	Air	As outlined in OMP in Appendix IV	Unlikely, given risk management measures in place	Odour annoyance	Not significant

Table 7.2 – Noise and Vibration Risk Assessment

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Large vehicles travelling to and from the farm and on farm	Residential properties within 400m of farm	Air	As outlined in NMP in Appendix V	Unlikely, given risk management measures in place	Noise nuisance	Not significant
Fans	Residential properties within 400m of farm	Air	As outlined in NMP in Appendix V	Unlikely, given risk management measures in place	Noise nuisance	Not significant
Alarm system	Residential properties within 400m of farm	Air	As outlined in NMP in Appendix V	Unlikely, given risk management measures in place	Noise nuisance	Not significant
Standby generator	Residential properties within 400m of farm	Air	As outlined in NMP in Appendix V	Unlikely, given risk management measures in place	Noise nuisance	Not significant
Chickens	Residential properties within 400m of farm	Air	As outlined in NMP in Appendix V	Unlikely, given risk management measures in place	Noise nuisance	Not significant
Feed transfer from lorry to bins	Residential properties within 400m of farm	Air	As outlined in NMP in Appendix V	Unlikely, given risk management measures in place	Noise nuisance	Not significant
Personnel	Residential properties within 400m of farm	Air	As outlined in NMP in Appendix V	Unlikely, given risk management measures in place	Noise nuisance	Not significant
Repairs	Residential properties within 400m of farm	Air	As outlined in NMP in Appendix V	Unlikely, given risk management measures in place	Noise nuisance	Not significant
Roof exhaust fans and gable end fans	Residential properties within 400m of farm	Air	As outlined in NMP in Appendix V	Unlikely, given risk management measures in place	Noise nuisance	Not significant

Table 7.3 – Fugitive Emissions Risk Assessment

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Dust from litter, bedding and feed	Residential properties within 400m of farm	Air	As outlined in DBMP in Appendix VIII	Unlikely, given risk management measures in place	Dust nuisance	Not significant
Ammonia	Ecological sites	Air	See odour risk management measures in Appendix IV	Unlikely, given risk management measures in place	Damage to sensitive vegetation as a result of ammonia and nutrient nitrogen deposition	Not significant
Animal diseases	Human and livestock health	Air/direct contact	Good hygiene will be maintained on site Livestock regularly checked	Unlikely, given risk management measures in place	Impacts on human and livestock health	Not significant, if carefully managed
House washdown water from house clean out	Land and surface/ground waters	Land	Sealed underground tanks to be used to collect wash down water during house clean out	Unlikely, given risk management measures in place	Pollution of land, surface and ground waters	Not significant

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Clean surface water drainage from soakaways/French drains	Land and surface/ground waters	Land	Water from roof and yard areas to be collected in attenuation reservoir, treated and re-used on the farm. The attenuation reservoir has been sized to manage an extreme flood event. In the unlikely event that the capacity of the attenuation reservoir is reached, clean surface water can be discharged via soakaways/french drains. This will not pose a risk as the water will be clean and uncontaminated	Unlikely, given risk management measures in place	Pollution of land, surface and ground waters	Not significant
Flies	Residential properties within 400m of farm	Air	No manure stored outside the poultry houses	Unlikely, given risk management measures in place	Impacts on amenity, nuisance to humans and potential health impacts	Not significant

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Spillages of feed, manure and fuels	Land and surface/ground waters	Land	Immediate cleaning of any spillages during feed deliveries Fuels appropriately stored and care taken when filling plant and equipment with fuel Spill kits maintained on site	Unlikely, given risk management measures in place	Pollution of land, surface and ground waters	Not significant
Feed spillage	Land and surface/groundwaters	Surface water drainage system/surface runoff	As outlined in DBMP in Appendix VIII	Unlikely, given risk management measures in place	Contamination of land, surface waters and groundwaters	Not significant
LPG storage tank(s) – damage to tanks such as from collision	Land and surface/groundwaters /residential properties	Surface water drainage system/surface runoff	Tanks sited as far away from vehicle maneuvering areas as practicably possible Collision barriers used	Unlikely, given risk management measures in place	Contamination of land, surface waters and groundwaters. Risk of fire	Not significant
Biomass combustion – point source emissions	Residential properties within 400m of farm	Air	Boilers subject to emission limits under RHI Elevated exhaust flues for dilution and dispersion of residual emissions	Unlikely, given risk management measures in place	Impacts on Air Quality Standards	Not significant

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Biomass storage - dust	Residential properties within 400m of farm	Air	As outlined in DBMP in Appendix VIII	Unlikely, given risk management measures in place	Nuisance	Not significant

Table 7.4 – Accident Risk Assessment

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Damage to LPG and diesel storage tanks such as from collision	Land and surface/groundwaters/residential properties	Surface water drainage system/surface runoff	Tanks sited as far away from vehicle manoeuvring areas as practicably possible. Collision barrier to be used around LPG tanks Regular inspection of tanks in accordance with maintenance and inspection program Regular inspection of containment measures	Unlikely, given risk management measures in place	Contamination of land, surface waters and groundwaters. Risk of fire	Not significant, if appropriate management measures in place

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Overflows from underground washdown water tanks during cleaning operation.	Land and surface/groundwaters	Surface water drainage system/surface runoff	If contaminated water has entered clean surface water drainage system, block off discharge to ditch from attenuation reservoir. Cover surface water drain inlets with sandbags Prevent further additions to the tanks Reduce tank contents to a safe level Use a vacuum tanker or pump to clear the spillage Investigate the cause of the tank overflow and take remedial action. Once the fault is rectified, resume cleaning operations If necessary, contact Environment Agency	Unlikely, given risk management measures in place	Contamination of land, surface waters and groundwaters	Not significant

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Overflows from above ground storage vessels, or failure of tanks eg diesel storage tank(s), propane storage tanks	Land and surface/groundwaters/residential receptors	Surface water drainage system/surface runoff/air	If possible, quickly stem the source of the liquid Diesel tanks are required to be appropriately bunded to contain contents in the event of tank failure Consult Material Safety Data Sheets, as applicable Crash barriers to be installed around LPG storage tanks to control risk from collision LPG tanks will be required to be constructed to a robust specification, minimising risk of tank failure. LPG tanks will be sited on an impermeable surface and with an appropriate standoff from drains/sumps and other structures Regular inspection of tanks in accordance with maintenance and inspection program	Unlikely, given risk management measures in place	Contamination of land, surface waters and groundwaters/air emissions	Not significant if appropriate design and management measures are in place

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Rupture of gas pipes	Residential properties, on-site workers	Air	Turn off gas supply	Unlikely, given risk management measures in place	Aerial emissions	Not significant if appropriate design and management measures are in place
Power failure leading to failure of ventilation systems and other process control systems	Land and surface/groundwaters/residential receptors	Surface water drainage system/surface runoff/air	Emergency generator to be used to provide power to site in event of power outage	Unlikely, given risk management measures in place	Poorer dilution and dispersion of residual emissions, failure of process control systems	Not significant if appropriate design and risk management measures are in place

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Fire	Livestock, properties surrounding site, surface/groundwaters	Via flammable materials	Emergency numbers available on site Fire extinguishers to be readily available Wiring to be checked regularly See EMS for fire response procedures to be followed In the event of fire, site not to be entered unless it is safe to do so, following completion of fire response procedures Evacuate livestock from buildings, if safe to do so Contact vet if necessary To prevent firewater runoff causing pollution, follow the same procedures as above for tank overflows	Unlikely, given risk management measures in place	Fire damage Toxic smoke Livestock mortalities Surface runoff from firefighting waters Risk of ignition of flammable liquids on-site	Not significant, if appropriate management measures are in place
Flooding or wind damage to structures on site	Land and surface/groundwaters	Rain ingress or wind damage	Structure integrity to be checked on annual basis Daily checks of site to be undertaken for any damage and action taken as necessary.	Unlikely, given risk management measures in place	Damage to buildings leading to contamination of land, surface and groundwaters	Not significant

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Biomass boilers – abnormal emissions, fire, boiler failure, collisions	Land and surface/groundwaters/residential properties	Surface water drainage system/surface runoff/air	As outlined within Biomass Boiler Accident Prevention Measures document within Appendix VI	Unlikely, given risk management measures to be in place	Fire damage, abnormal emissions/contamination of land, surface waters and groundwaters	Not significant
Disease outbreak	Residential properties surrounding farm, livestock	Air, land and water	Carcass disposal policy to be agreed with Animal and Plant Health Agency and EA Procedures to be agreed with Animal and Plant Health Agency and EA prior to commencement of cleaning and disinfection procedures	Unlikely, given risk management measures to be in place	Increased livestock mortalities, additional volumes of biocide stored and used, additional volumes of dirty water to be managed, additional volumes of waste materials and equipment to be disposed of.	Not significant
Flooding, wind damage	Land and surface/groundwaters/residential properties	Air, land and water	Emergency generator to be used to provide power to site in event of power outage	Unlikely, given risk management measures to be in place	Power outage	Not significant

Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	Overall Risk
Spillages of feed, manure and fuels	Land and surface/ground waters	Land	Immediate cleaning of any spillages during feed deliveries Fuels appropriately stored and care taken when filling plant and equipment with fuel Spill kits maintained on site	Unlikely, given risk management measures in place	Pollution of land, surface and ground waters	Not significant

Appendix I

Permit Boundary and Layout Plan

Appendix II

Pre-Application Report

Appendix III

Environmental Management System

Appendix IV

Odour Management Plan

Appendix V

Noise Management Plan

Appendix VI

Accident Prevention Measures – Biomass Boilers

Appendix VII

BAT Assessment

Appendix VIII

Dust and Bioaerosol Management Plan

Appendix IX

Climate Change Risk Assessment