

Birch Tree Poultry Site Environmental Risk Register

| Risk Ref. | What harm can be caused and who can be harmed                            |   |   |  | Assessing the risk   |  |  | Managing the risk   |   |
|-----------|--|---|---|--|--|--|--|---|---|
|           | Source   | Receptor  | Harm  | Pathway  | Probability of exposure  | Consequence  | What is the overall risk?  | Risk management   | Residual risk                             |
|           | <i>What has the potential to cause harm?</i>                             | <i>What is at risk? What do I wish to protect?</i>            | <i>What are the harmful consequences if things go wrong?</i>                          | <i>How can the hazard get to the receptor?</i> | <i>How likely is this contact?</i>   | <i>What is the harm that can be caused?</i>  | <i>What is the overall magnitude of the risk?</i>                                    | <i>What measures will you take to reduce the risk?</i>  | <i>Magnitude of risk after management</i> |
|           | <b>Ammonia Emissions</b>   |   |   |  |  |  |  |   |   |
| NH4-1     | Ammonia emissions from vent fans   | Birch Tree Poultry Site & surrounding areas                   | Harmful to local wildlife   | Air  | <b>See Ammonia Modelling Report</b>  |  |  | The current risk has been reduced by changing the site form laying hens to rearing pullets. Further risk mitigation can be managed via control of the vent fans as per the Odour Management Plan    | Low                                       |
|           | <b>Odour Risks</b>   |   |   |  |  |  |  |   |   |
| O-1       | Smell from Vent Fans   | Birch Tree Poultry Site & surrounding areas                   | Nuisance to local population.   | Air - winds from North East to North West      | Medium/low - Prevailing wind from west, and fan operation sporadic, therefore exposure only occasional   | Odour annoyance  | Not significant as will only be occasional and would require specific wind direction | See Odour Management Plan   | Low                                       |
| O-2       | Smell from Incinerator   | Birch Tree Poultry Site & surrounding areas                   | Nuisance to local population.   | Air - winds from North East to North West      | Medium/low - Prevailing wind from west, and incinerator operation sporadic, therefore exposure only occasional   | Odour annoyance  | Not significant as will only be occasional and would require specific wind direction | See Odour Management Plan   | Low                                       |
| O-3       | Smell from removal of poultry litter                                     | Birch Tree Poultry Site & surrounding areas                   | Nuisance to local population.   | Air - winds from North East to North West      | Low - Removal of manure is 2 days every 6 months   | Odour annoyance  | Not significant as will only be occasional and would require specific wind direction | See Odour Management Plan   | Low                                       |
| O-4       |  |   |   |  |  |  |  |   |   |
|           | <b>Noise Risks</b>   |   |   |  |  |  |  |   |   |
| N-1       | Noise from Fan Operation   | Birch Tree Poultry Site & surrounding areas                   | Nuisance to local population.   | Site close enough to residents to be audible   | Medium/low - Prevailing wind from west, and fan operation sporadic, therefore exposure only occasional   | Noise annoyance  | Not significant as will only be occasional and would require specific wind direction | See Noise Management Plan   | Low                                       |
| N-2       | Engine Noise from Deliveries of Feedstock                                | Birch Tree Poultry Site & surrounding areas                   | Nuisance to local population.   | Site close enough to residents to be audible   | Medium noise but only for short period during delivery.  | Noise annoyance  | Significant annoyance if undertaken out of hours                                     | Feed deliveries to be undertaken during working hours. Also - see noise management plan   | Low                                       |
| N-3       | Engine Noise from Clean out operation                                    | Birch Tree Poultry Site & surrounding areas                   | Nuisance to local population.   | Site close enough to residents to be audible   | Low - Removal of manure is 2 days every 6 months   | Noise annoyance  | Significant annoyance if undertaken out of hours                                     | Clean out to be undertaken during working hours. Also - see noise management plan   | Low                                       |
| N-4       |  |   |   |  |  |  |  |   |   |
|           | <b>Fugitive Emissions</b>  |   |   |  |  |  |  |   |   |
|           | <b>To Air</b>  |   |   |  |  |  |  |   |   |
| FA-1      | Dust from yard   | Residence surrounding Site                                    | Nuisance to local population. Harm to human health – respiratory irritation & illness | Air - winds from North East to North West      | Traffic on site outside of clean out times is very low   | Annoyance of dust landing on neighbouring property. Respiratory issue if significant discharge     | Not significant if plant operated correctly and any mud cleared up immediately       | Clear up any deposited mud and keep yard generally clean  | Low                                       |
| FA-2      | Any airborne particles which could impact on the growth of flora / fauna | European Sites - Sites of Special Scientific Interest (SSSIs) | Lack of potential floral growth in SSSIs  | Airborne, windblown                            | Negligible   | Medium   | Very Low   | Current EA guidance that bioaerosols (airborne particles) go to background levels 250 m from source. Since there are no SSSIs in this range, then there is considered to be no danger.              | Very low                                  |
| FA-3      | Bioaerosol Emissions to local population                                 | Residence surrounding Site                                    | Nuisance to local population. Harm to human health – respiratory irritation & illness | Air - winds from North East to North West      | Low - Bioaerosols are the airborne transportation of microorganisms. This can only occur where they are open to the atmosphere. However - there are no residence with 100m of the site | Annoyance of smell to neighbouring properties. Toxic substance if inhaled in sufficient quantities | Low  | Current EA guidance that bioaerosols (airborne particles) go to background levels 250 m from source. Since there are no domestic dwellings in this range, then there is considered to be no danger. | Very Low                                  |
| FA-4      |  |   |   |  |  |  |  |   |   |

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|           | <b>To water</b>   |  |   |   |   |   |  |   |   |
| FW-1      | Rainwater from Roofs & Yard                             | Ground water                                       | Pollution of the ground & groundwater   | soakaway through ground / surface run off   | Very low - yard & roof area is not contaminated   | Pollution of ground water   | Very Low   | Operate site to ensure yards and roofs are kept clean   | Very Low                                  |
| FW-2      | Dirty Wash Water  | Ground water                                       | Pollution of the ground & groundwater   | soakaway through ground / surface run off   | Very low - there are dedicated drains which leads to a dirty water store.                         | Pollution of ground water   | Very Low as pathway does not exist unless protection measures breached           | System to be checked to ensure fully operational, and dirty water tanks to be emptied before full   | Very Low                                  |
| FW-3      | Diesel  | Ground water                                       | Pollution of the ground & groundwater   | soakaway through ground / surface run off   | Low - diesel storage for generator is in bunded tank  | Pollution of ground water   | Very low for tank unless breached.   | Integrity of tank to be regularly checked.  | Very Low                                  |
| FW-4      |   |  |   |   |   |   |  |   |   |
|           | <b>Pests</b>  |  |   |   |   |   |  |   |   |
| FP-1      | Flies   | Residence surrounding Site                         | Nuisance to local population. Health & Hygiene  | Airborne  | Low - general operation of site has no feedstock for flies to breed.                              | Health and Hygiene risk to local population together with nuisance  | Low  | Ensure manure cleared up immediately after clean out  | Low                                       |
| FP-2      | Rodents   | Residence surrounding Site                         | Nuisance to local population. Health & Hygiene  | Land borne  | Low - general operation of site has no feedstock for rodents to breed. Pest control also in place | Health and Hygiene risk to local population together with nuisance  | Low  | Rat poison should be placed around the site to control the vermin population  | Low                                       |
| FP-3      |   |  |   |   |   |   |  |   |   |
|           | <b>Mud/Litter</b>                                       |  |   |   |   |   |  |   |   |
| FM-1      | Mud from vehicles taking manure / dirty water to fields | Surrounding residence, Site operators, Road Users  | Nuisance to local population. Danger to road users if spread onto public highway. General safety hazard on site | Spread by vehicles  | Ensure fields are in suitable condition prior to transportation                                   | Nuisance to local population. Danger to road users if spread onto public highway. General safety hazard on site | Not significant if consideration is given before clean out operation             | Clear up any deposited mud and keep yard generally clean  | Low                                       |
| FM-2      | Litter / Waste  | Surrounding residence, Site operators              | Nuisance to local population. Health & Hygiene  | windborne   | Low - process does not create litter / waste  | Nuisance to local population. General safety hazard on site   | Not significant if any litter / waste generated is disposed of into bins / skips | Only litter waste will be personally generated by operatives or service personnel   | Very Low                                  |
| FM-3      |   |  |   |   |   |   |  |   |   |
|           | <b>Accidents</b>  |  |   |   |   |   |  |   |   |
| A-1       | Discharge from overfilled dirty water tank              | Birch Tree Poultry Site & surrounding areas        | Pollution of surface & ground water with dirty water tank   | soakaway through ground / surface run off   | Very low - tanks are of sufficient volume to take expected volumes                                | Pollution of ground water   | Very Low as pathway does not exist unless procedures breached                    | Dirty water tank to be checked daily during clean out operation   | Very Low                                  |
| A-2       | Spillage / failure of fuel & oil                        | Ground water                                       | Pollution of surface & ground water with fuel or oil  | Fuel or oil release, then surface run-off and/ or percolation   | Low   | Pollution of ground water, contamination of ground  | Low  | Fuel and oil can contaminate the water and ground. If enough is spilled, a fire may start.<br>All Fuel or Oil is stored securely in the generator Building.<br>Should a spill occur then the spill kit should immediately be retrieved from the CHP building and the spillage contained.<br>The spent spill kit should then be suitably disposed of depending on its level of contamination | Very Low                                  |
| A-3       | Fire within poultry buildings                           | Birch Tree Poultry Site & surrounding areas        | Nuisance to local population. Injury to staff, fire-fighters or arsonists/ vandals.                             | Air transport of smoke. Contaminated firewater by runoff from site and via surface water drains and ditches | Low   | Nuisance to local population. Health and Safety   | Low  | Fire alarm system in operation within buildings - to be maintained as per installers instructions   | Very Low                                  |

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| A-4       | Vandalism  | Birch Tree Poultry Site & surrounding areas        | Nuisance to local population. Injury to staff, arsonists/ vandals.         | Vandalism would increase the probability on other risks above  | Low   | Depends on individual risk                  | Low   | The plant is kept secure. All equipment is locked away. The main mechanical parts (CHP & Pumps) are all within locked buildings.   | Low                                       |
| A-5       | Flood  | Local water courses. Ground and groundwater.       | Drains.  | Surface water drainage system. Diffusion into ground.  | Possible  | Low   | Medium  | Greatest flood risk from flash flood run off. However, land falls away from site.<br><br>Inform EA. Take appropriate corrective and preventative actions to minimise environmental impact.   | Low                                       |
| A-6       | Spread of contaminated fire water following fire | Birch Tree Poultry Site & surrounding areas        | Pollution of surface & ground water with partially or fully digested waste | Fire Water within the containment area would flow across the impervious concrete yard and into the pumping station | Low - because of the containment area the fire water should be contained. | Pollution of ground water                   | Low   | Fire waters should be contained within the bund. Within the Accident Management Procedures, for a Type B emergency, instruction 4 notes that the site pumping station should be disabled such that contaminated fire water will be contained and not circulated around the site. Upon completion of any fire suppression, suitable contractors should be employed to tanker away any contaminated water. | Very Low                                  |
| A-7       |  |  |  |  |   |   |   |  |   |