

# Permitting decisions

## Bespoke permit

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We have decided to grant the permit for Daventry Waste Water Treatment Facility operated by Henley Biomass Limited.

The permit number is EPR/AP3536YX.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

### Purpose of this document

This decision document provides a record of the decision making process. It summarises the decision making process in the decision checklist to show how all relevant factors have been taken in to account.

This decision document provides a record of the decision making process. It:

- highlights key issues in the determination
- summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account
- shows how we have considered the consultation responses.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit. The introductory note summarises what the permit covers.

# Key issues of the decision

## Site Description

The main features of the permit are as follows:

This permit allows the operator to carry out the physico-chemical treatment of non-hazardous waste (landfill and compost leachate) under Chapter 1, part 2, Section 5.4 Part A(1)(a)(ii) physico-chemical treatment of non-hazardous waste for the purposes of disposal.

This permit is for a listed activity which is part of a multi-operator installation. The other part of the installation is a small waste incineration plant (SWIP) operated by Pedigree Power LLP under permit EPR/NP3333JA, which is a directly associated activity to this permit.

The installation is located at Browns Road, Daventry, Northamptonshire, NN11 4NS (Grid Reference Easting: 455480 Northing: 262530).

Waste is received on site by road tanker and is delivered in to one of two storage tanks. The addition of hydrogen peroxide and sulphuric acid oxidises sulphides, minimising odour, and controls pH. Aeration is undertaken to remove volatile species such as volatile organic compounds (VOCs) and ammonia. Displaced air is vented via pipework to a carbon filter to remove the compounds driven off. The tanks and carbon filters are located within a concrete bund and vent into the evaporator unit building.

The leachate is pumped, via a duplex filter to remove solids, to one of four evaporator units located within an enclosed building. Each unit consists of a holding tank, evaporative heat exchanger, exhaust fan and flue, waste water distribution system and solids removal system. The leachate is sprayed on to hot pipes and through the process of thin film evaporation solids are washed off into the bottom of the unit with the water vapour being emitted via a stack. The remaining solids are scraped onto a conveyor, deposited into a covered container and removed off-site for disposal.

Each unit has the capacity to treat 950 litres of leachate per hour, with a proposed annual throughput of 67,000 tonnes, producing 225 tonnes of sludge per year.

The evaporator units utilise low grade steam generated by the SWIP operated by Pedigree Power LLP under permit EPR/NP3333JA. The steam is piped to the evaporators, is cooled by the leachate and is recirculated back to the SWIP. There are no combustion activities covered by this permit.

The main emission from the units is ammonia, other chemicals are expected to be negligible.

The whole installation facility is constructed on an impermeable surface. All site drainage is to an underground tank which discharges to an unnamed surface water drain. The tank is fitted with a penstock valve so it can be isolated if required.

There are several local wildlife sites (LWSs) and proposed LWSs within 2 km of the installation. There are also human sensitive receptors located nearby which have been included in impact assessments together with the conservation designations.

## Treatment process

The layout of the whole installation is shown below:

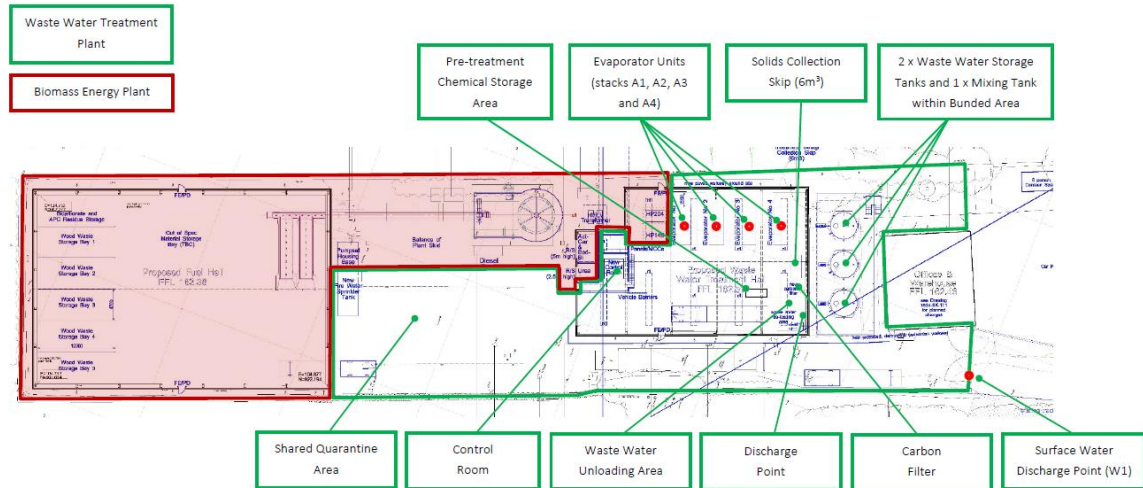


Figure 1.2: Site Plan Showing the Proposed Development and Surrounding Site

Non-hazardous waste (landfill and compost leachates) is delivered to site by road tanker and discharged into the above ground storage tanks located adjacent to the Waste Water Treatment Hall. Unloading is undertaken within the building. The waste then undergoes pre-treatment within the storage tanks prior to evaporation in the evaporation plant.

The pre-treatment processes consist of the following stages:

- The addition of Hydrogen Peroxide to oxidise the dissolved sulphides and reduce the sulphurous odour compounds within the waste water;
- The addition of sulphuric acid to correct the pH and reduce ammoniacal nitrogen and calcium carbonate concentrations within the waste water;
- The recirculation and aeration of the waste water to volatilise and release any residual VOC's, SVOC's, methane and non-methane gases as well as aerobically reducing the COD of the effluent prior to filtration. The displaced air is put through a carbon filter to remove VOCs; and
- Filtration of the liquid effluent through a 500 µm filter to remove suspended solids.

The waste water is then pumped from the storage tanks to the holding tank in the evaporator unit. The level in the holding tank is monitored and maintained automatically by the control system.

The site will operate four evaporator units each with the capacity to process 950 litres of non-hazardous landfill leachate per hour. Low grade steam from the adjacent SWIP provides the heat source for the evaporator units located within the Waste Water Treatment Hall. Each evaporator unit comprises a holding tank, evaporative heat exchanger, exhaust fan and flue, waste water distribution system and solids removal system.

The pre-treated effluent is pumped from the holding tank to a header above the evaporative heat exchanger where it is discharged above the tube bundles. The effluent runs over the tube bundles and discharges into the holding tank below.

The steam passes through the tube bundles of the evaporative heat exchanger and is returned to the condensate collection system for recirculation to the SWIP.

As steam passes through the tube bundles, sufficient evaporative energy is transferred to the waste water passing over the external surfaces to form water vapour through the process of low temperature, thin film evaporation. Any solid matter deposited on the tube bundles during evaporation is washed off by the continuous flow of waste water into the holding tank. Any water that isn't evaporated straightaway falls to the bottom of the evaporator and is then recirculated and sprayed over the tube bundles again.

Air is induced through the evaporator unit by the exhaust fan and discharged via a flue to atmosphere. As the air passes through the evaporator unit it is heated and water vapour is drawn into the airstream and absorbed before being discharged to atmosphere. The waste discharge rate over the tube bundles is controllable to match the evaporation rate with available heat.

Solid matter in the holding tank in the bottom of the evaporator is removed utilising slow moving paddles that wipe the material from the bottom of the tank and deposit it on a dewatering system comprising a conveyor and rollers. The solid matter is passed through the rollers and liquid removed is returned to the holding tank. The resultant sludge is discharged into a container for disposal.

### **Multi-operator installation issues**

The installation comprises a waste treatment plant (a listed activity under Section 5.4 A(1)(a)(ii) of Schedule 1, Part 2 of the EPR, which is served by the Biomass Energy Plant (SWIP) operated by Pedigree Power LLP. This decision document deals with the permit for the waste treatment activity only.

Henley Biomass Limited will be the legal operator of the waste treatment plant and will have control of the waste treatment operations at the site. Pedigree Power LLP will be the legal operator of the Biomass Energy Plant and will have control of all Biomass Energy Plant operations on site.

Silvertree Environmental Limited will be providing personnel to the Waste Treatment Plant and SWIP at Daventry under an Operations and Maintenance (O&M) contract for Henley Biomass Limited and Pedigree Power LLP. The O&M contract will detail the operational requirements, reporting mechanisms, KPIs and management at the site. Under the terms of the O&M contract, Silvertree report up to the management team at Henley Biomass Limited regarding all matters relating to operational or financial decisions making.

There are some joint operating issues for the installation:

- A shared area for waste quarantine purposes – this is within the area of the waste treatment plant permit;
- Shared drainage infrastructure for surface water: Uncontaminated surface water drainage from the SWIP and the waste treatment plant will flow to an underground tank, which under normal circumstances flows via a penstock valve to a surface water via discharge point (W1). The valve can be shut in the event of a spillage and the water removed for treatment;
- Shared firewater storage: Under their Fire Prevention Plan, Pedigree will use the capacity of the underground tank for firewater storage. In the event of a fire at the SWIP, the penstock valve will be shut and the tank will retain the firewater for appropriate disposal after the incident. In addition, it is also proposed to pump firewater from the penstock into the water treatment plant bund as a contingency should additional storage volume be required;
- All steam produced by the SWIP will, after use for electricity generation, be utilised by the waste treatment plant for evaporating waste in the 4 evaporator units. These also provide cooling of the steam from the SWIP prior to return for reuse in the SWIP.

We are satisfied that the Applicant is the person who will have control over the operation of the installation and associated activities after the granting of the Permit; and that the Applicant will be able to operate the installation and associated activities so as to comply with the conditions included in the Permit.

### **Emissions to air**

There are four point source emissions to air from the plant – the four evaporator stacks A1 – A4. The carbon filter vent serving the storage and mixing tank is not considered a separate point source as it vents into the treatment building and will eventually exhaust via the evaporator stacks (air is drawn from within the building by the evaporators to aid the evaporation process). There are no combustion processes within the waste treatment facility and hence there will be no combustion products emitted to air.

A number of substances have been selected and identified as potentially being present in the waste water once it has been treated via the pre-treatment system. Primarily these relate to ammoniacal nitrogen, however toluene, ethylbenzene, naphthalene and phenol have been modelled to provide a worst case impact assessment model. The operator provided an Air Quality Assessment of the potential contaminants

which could affect ground level air quality at receptors (SOL1703HB01 Volume 2: Annex C1 – Risk Assessment and Air Quality Assessment).

We have reviewed the assessment and agree with the operator's conclusions regarding human health impact. All modelled species were considered insignificant apart for ammonia.

#### Annual mean and Maximum Hourly Mean Concentrations predicted by the Operator

Predicted Annual Mean Concentration as a Percentage of the EAL					
	Ammonia	Toluene	Ethylbenzene	Naphthalene	Phenol
Grid Maximum PC	24.6%	0.0%	0.0%	0.0%	0.0%
ES ( $\mu\text{g}/\text{m}^3$ )	180	260	4,410	530	200

Maximum Predicted Hourly Mean Concentration as a Percentage of the EAL					
	Ammonia	Toluene	Ethylbenzene	Naphthalene	Phenol
Grid Maximum PC	62.1%	0.0%	0.0%	0.0%	0.1%
ES ( $\mu\text{g}/\text{m}^3$ )	2,500	1,089	55,200	8,000	3,900

For ammonia the following were the PC predicted at the nearest sensitive receptor:

Predicted Ammonia Annual Mean and Hourly Mean Concentration as a Percentage of the EAL			
Annual mean	Ammonia	Hourly mean	Ammonia
Receptor PC	2.4%	Receptor	6.9%
ES ( $\mu\text{g}/\text{m}^3$ )	180	ES ( $\mu\text{g}/\text{m}^3$ )	2,500

The predicted short term impact screens out as insignificant, and the long term impact is slightly over the insignificance criteria.

We have audited the air quality assessment and have made observations on their methodology and assumptions. We have conducted our own check modelling and sensitivity analysis regarding our observations. We find that the long term PCs for ammonia are not insignificant at some receptors. However, background ammonia concentrations are low and the PECs are unlikely to exceed the ES for ammonia. The short term PCs for ammonia at the sports facility are not insignificant. However, background concentrations are low and the PECs are unlikely to exceed the ES for ammonia. See also the revised assumptions for ammonia emission rates discussed in the ecological impact section below, which means these figures are likely to be very conservative.

We have not set emission limits for the above. We have set monitoring for ammonia and total volatile organic compounds (TVOCs) in table S3.1 in accordance with pre-operational condition PO1.

#### Ecological Impact

An assessment of ecological receptors and an in-combination assessment of the impact on ecological sites was requested via Schedule 5 Notice dated 28/02/2018. In the schedule 5 Notice we also asked the operator to provide evidence of the expected concentration of ammoniacal nitrogen contained in waste water after the pre-treatment process, and for evidence of the expected proportion of ammoniacal nitrogen contained in waste water that will be emitted as ammonia gas in the evaporators.

The original assessment for the treatment plant only considered the impact of emissions on human receptors. As an extreme worst-case, it was assumed that 100% of the substances present within the wastewater would be emitted to atmosphere. The consultant has used mass balance calculations and Henry's law to derive the concentration of ammonia in total ammoniacal nitrogen. They report that a conservative estimate of the actual proportion of ammoniacal nitrogen emitted to atmosphere as ammonia is approximately 30%. Although we are unable to replicate the numbers in their mass balance, we agree that it is likely to be conservative.

The operator carried out an Air Quality Assessment that looked at the impact of ammonia, nutrient nitrogen deposition and acid deposition at following the nearby ecological sites based on their new derived emission rate. We have tested sensitivity to the worst case emission rates in our check modelling. We have checked these locations and are satisfied they are representative. We have also checked the critical level value for

ammonia and critical load values for nutrient nitrogen and acid deposition using APIS and are satisfied that they are representative.

Ref	Receptor
ER1	Elderstubbs Farm Pasture Local Wildlife Site (LWS)
ER2	Elderstubbs Farm Pasture LWS
ER3	Elderstubbs Farm Pasture LWS
ER4	Oak Spinney (Daventry) LWS
ER5	Pond Spinney LWS
ER6	Staverton Clump LWS
ER7	Staverton Wood LWS
ER8	Staverton Wood LWS
ER9	Stepnell Spinney LWS
ER10	Stepnell Spinney LWS
ER11	Elderstubbs Farm Pasture South Potential Wildlife Site (PWS)
ER12	Elderstubbs Farm Pasture South PWS
ER13	Elderstubbs Farm Pasture South PWS
ER14	Elderstubbs Farm Pasture South PWS
ER15	PWS
ER16	PWS
ER17	PWS
ER18	PWS
ER19	PWS
ER20	Staverton Golf Club Quarry PWS
ER21	PWS
ER22	PWS
ER23	PWS

Their results are as follows:

Predicted Annual Mean Ammonia Concentrations			
Ref	Receptor	PC ( $\mu\text{g}/\text{m}^3$ )	PC as % of Critical Level
ER1	Elderstubbs Farm Pasture LWS	0.63	21.1%
ER2	Elderstubbs Farm Pasture LWS	1.09	36.5%
ER3	Elderstubbs Farm Pasture LWS	1.45	48.2%
ER4	Oak Spinney (Daventry) LWS	0.18	6.1%
ER5	Pond Spinney LWS	0.15	4.9%
ER6	Staverton Clump LWS	0.26	8.8%
ER7	Staverton Wood LWS	0.39	12.9%
ER8	Staverton Wood LWS	0.29	9.7%
ER9	Stepnell Spinney LWS	0.26	8.7%
ER10	Stepnell Spinney LWS	0.25	8.4%
ER11	Elderstubbs Farm Pasture South PWS	3.18	105.9%
ER12	Elderstubbs Farm Pasture South PWS	2.55	85.0%
ER13	Elderstubbs Farm Pasture South PWS	2.07	69.0%
ER14	Elderstubbs Farm Pasture South PWS	1.76	58.7%
ER15	PWS	0.43	14.2%
ER16	PWS	0.57	18.9%
ER17	PWS	0.53	17.7%
ER18	PWS	0.20	6.7%
ER19	PWS	0.14	4.5%
ER20	Staverton Golf Club Quarry PWS	0.23	7.5%
ER21	PWS	0.16	5.4%
ER22	PWS	0.18	6.0%
ER23	PWS	0.19	6.3%

Except for one receptor (ER11), predicted concentrations are less than 100% of the critical level of  $3 \mu\text{g}/\text{m}^3$ . The Operator stated that:

*At ER11, the predicted concentration is slightly above 100% but less than 100% at the other receptors considered for this habitat site. It should be noted that this represents a worst-case with respect to the assumed NH<sub>3</sub> emission, the highest concentration within the habitat and the worst-case meteorological year. Taking the average meteorological year would result in a predicted NH<sub>3</sub> concentration at this location of  $2.2 \mu\text{g m}^{-3}$  (73% of the critical level).*

<b>Predicted Nutrient Nitrogen Deposition</b>				
<b>Ref</b>	<b>Receptor</b>	<b>PC (kg N/ha/a)</b>	<b>PC as % of Critical Load</b>	<b>Critical Load (kg N/ha/a)</b>
ER1	Elderstubbs Farm Pasture LWS	3.3	16.4%	20
ER2	Elderstubbs Farm Pasture LWS	5.7	28.5%	20
ER3	Elderstubbs Farm Pasture LWS	7.5	37.6%	20
ER4	Oak Spinney (Daventry) LWS	1.4	14.3%	10
ER5	Pond Spinney LWS	1.2	11.6%	10
ER6	Staverton Clump LWS	2.1	20.5%	10
ER7	Staverton Wood LWS	3.0	30.1%	10
ER8	Staverton Wood LWS	2.3	22.8%	10
ER9	Stepnell Spinney LWS	2.0	20.5%	10
ER10	Stepnell Spinney LWS	2.0	19.6%	10
ER11	Elderstubbs Farm Pasture South PWS	16.5	82.6%	20
ER12	Elderstubbs Farm Pasture South PWS	13.3	66.3%	20
ER13	Elderstubbs Farm Pasture South PWS	10.8	53.8%	20
ER14	Elderstubbs Farm Pasture South PWS	9.2	45.8%	20
ER15	PWS	3.3	33.3%	10
ER16	PWS	4.4	44.2%	10
ER17	PWS	2.8	13.8%	20
ER18	PWS	1.6	31.3%	5
ER19	PWS	1.1	21.3%	5
ER20	Staverton Golf Club Quarry PWS	1.8	17.6%	10
ER21	PWS	0.8	4.2%	20
ER22	PWS	1.4	14.0%	10
ER23	PWS	1.5	14.8%	10

For all receptors, the PC is less than 100% of the critical load and the impact is assessed as insignificant.

<b>Predicted Nutrient Acidification</b>				
<b>Ref</b>	<b>Habitat Site</b>	<b>PC (keq/ha/a)</b>	<b>PC as % of Critical Load</b>	<b>Critical Load (keq/ha/a)</b>
ER1	Elderstubbs Farm Pasture LWS	0.31	6%	4.856
ER2	Elderstubbs Farm Pasture LWS	0.54	11%	4.856
ER3	Elderstubbs Farm Pasture LWS	0.70	14%	4.856
ER4	Oak Spinney (Daventry) LWS	0.14	5%	2.924
ER5	Pond Spinney LWS	0.11	4%	2.924
ER6	Staverton Clump LWS	0.19	16%	1.155
ER7	Staverton Wood LWS	0.26	9%	2.924
ER8	Staverton Wood LWS	0.20	7%	2.924
ER9	Stepnell Spinney LWS	0.20	7%	2.924
ER10	Stepnell Spinney LWS	0.19	6%	2.924
ER11	Elderstubbs Farm Pasture South PWS	1.45	30%	4.856
ER12	Elderstubbs Farm Pasture South PWS	1.09	23%	4.856
ER13	Elderstubbs Farm Pasture South PWS	0.99	20%	4.856
ER14	Elderstubbs Farm Pasture South PWS	0.74	15%	4.856
ER15	PWS	0.32	7%	4.596
ER16	PWS	0.41	9%	4.596
ER17	PWS	0.26	5%	4.856
ER18	PWS	0.16	4%	4.570
ER19	PWS	0.12	3%	4.571
ER20	Staverton Golf Club Quarry PWS	0.19	16%	1.142
ER21	PWS	0.07	1%	4.856
ER22	PWS	0.14	5%	2.924
ER23	PWS	0.15	5%	2.924

For all receptors, the PC is less than 100% of the critical load and the impact is assessed as insignificant.

### **In-combination Assessment**

The operator also provided a comparison of the impact the treatment plant alone and in-combination with the SWIP. This found that the predicted impact of the SWIP is very small and that the treatment activity dominated the impacts on the ecological sites, for example:

Alone:

Predicted Annual Mean Ammonia Concentrations			
Ref	Receptor	PC ( $\mu\text{g}/\text{m}^3$ )	PC as % of Critical Level
ER11	Elderstubbs Farm Pasture South PWS	3.18	105.9%

In-combination:

Predicted Annual Mean Ammonia Concentrations			
Ref	Receptor	PC ( $\mu\text{g}/\text{m}^3$ )	PC as % of Critical Level
ER11	Elderstubbs Farm Pasture South PWS	3.18	106.0%

We audited the impact of the emissions from the waste treatment process alone and the impact of emissions from both waste treatment process and SWIP in-combination. Having completed our own sensitivity checks, our results indicate that the emissions will not have a significant effect at the ecological receptors. For the in-combination habitats assessment, our results at the new lower ammonia concentration indicate that:

The PC to long term ammonia concentration at all the ecological receptors are not significant.

The PC to nutrient nitrogen deposition and acid deposition at all ecological receptors are not likely to exceed the minimum critical load for the habitat type present at the site.

The in-combination impacts are likely to be not significant based on the ammonia concentration of 800 mg/l provided for the treatment plant. Although our numerical values do not exactly match the consultant's, we agree with the consultant's findings for habitats assessment that it is unlikely the proposed plant will cause significant harm at any ecological site.

We have set a pre-operational condition (PO1) for the operator to propose a programme of representative monitoring of emissions of ammonia, total volatile organic compounds (TVOCs), and odour to air from the evaporator units during the first 12 months of operation. An improvement condition (IC1) requires the operator to report on the monitoring undertaken as part of (PO1) and establish a removal efficiency for ammonia based on actual performance of the plant.

A further improvement condition (IC2) requires the operator to provide a report on the optimisation the chemical dosing system to minimise the emission of ammonia, and the optimisation of the aeration and carbon abatement system to minimise odour and VOC emissions.

## Odour

There is potential for the wastes treated to cause odour and the operator was required to produce an Odour Management Plan (OMP) in accordance with our H4 Odour Guidance.

Waste will be delivered by tanker, and off-loaded, stored and processed in a fully enclosed system. Air from the tanks will vent through an internal activated carbon filter. Additionally, hydrogen peroxide will be dosed into the storage tanks during reception.

The addition of hydrogen peroxide prior to the mixing and aeration process will remove a large proportion of the odorous sulphide compounds and will greatly reduce the potential for odour release from the main evaporation process. The use of sulphuric acid within the pre-treatment for pH correction will also stabilise free ammonia resulting in a reduced emission of ammonia from the evaporators.

The use of aeration is thought to significantly reduce odorous volatile organic compounds (VOCs) within the effluent. These are displaced to air via a carbon filter system which vents into the treatment hall.

Detailed dispersion modelling has been undertaken to determine the potential odour impacts associated from the evaporators. The modelling does not include assessment of fugitive emissions – only the evaporator stack emissions. Fugitive releases of odours and how these will be prevented or minimised are considered as part of the OMP.

The modelling report states that they consider a benchmark range of 3 ouE/m<sup>3</sup> to 5 ouE/m<sup>3</sup> to be applicable for industrial receptors and argues that the 1.5 ouE/m<sup>3</sup> is not appropriate for non-septic waste waters. Our H4 guidance on odour gives an odour benchmark of 1.5 ouE/m<sup>3</sup> for the "most offensive" odours, including biological landfill type odours (as raw leachate could be characterised). The operator has presented the PCs



at all the sensitive human receptors. Their assessment results indicate that the PCs will be below an odour benchmark of 3 ouE/m<sup>3</sup>. The maximum PC of 2.16 ouE/m<sup>3</sup> occurs at an industrial site.

Our audit of the modelling report shows that not all the receptors are included and our check modelling added 3 more receptors to the west of the site. We also found an error in the conversion of units in the calculation of the odour emission rate. As a consequence it is likely that their modelled odour emission rate is an overestimate. In addition the modelled rate of treatment per evaporator per hour was 1200 litres, whereas the actual treatment rate is rate is 950 litres. The modelled scenario also did not include any reduction for the impact of the pre-treatment processes.

As per our calculations, the operator has over-predicted the odour emission rates and PCs at our odour emission rates are well below the 1.5 ouE/m<sup>3</sup> benchmark.

We have not set emission limits for odour as this is not routinely done. The odour condition in the permit and the OMP will be used to address any odour issues arising from the site.

As discussed above, we have set a pre-operational condition (PO1) for the operator to propose a programme of representative monitoring of emissions of ammonia, total volatile organic compounds (TVOCs), and odour to air from the evaporator units during the first 12 months of operation. An improvement condition (IC1) requires the operator to report on the monitoring undertaken as part of (PO1).

A further improvement condition (IC2) requires the operator to provide a report on the optimisation the chemical dosing system to minimise the emission of ammonia, and the optimisation of the aeration and carbon abatement system to minimise odour and VOC emissions.

## **OMP**

The operator provided an OMP as part the application. We assessed this against our H4 guidance, and asked a number of questions via schedule 5 Notice (dated 23/02/2018) to address shortcomings. A revised OMP was provided as part of the Schedule 5 response (dated 10/04/2018). This details the measures taken to reduce odour impact, including waste acceptance procedures, routine odour monitoring (sniff testing) and fugitive emissions measures, including waste storage, pre-treatment, abatement techniques, and maintenance (including holding critical items, such as replacement carbon) and incident response. We consider the OMP is suitable for the site and has been included as an operational technique in table S1.2. Condition 3.3.1 applies the requirements for prevention and minimisation of odour from the site, including application of the measures detailed in the OMP.

## Decision checklist

Aspect considered	Decision
<b>Receipt of application</b>	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
<b>Consultation</b>	
Consultation	<p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> <p>The application was publicised on the GOV.UK website.</p> <p>We have decided to carry out extra engagement because the application is high public interest</p> <p>We advertised the Application by a notice placed on our website, which contained all the information required by the IED, including telling people where and when they could see a copy of the Application.</p> <p>And was also available via email: &lt;pscpublicresponse@environment-agency.gov.uk&gt;</p> <p>Or mail from:</p> <p>Environment Agency Permitting and Support Centre Land Team Quadrant 2 99 Parkway Avenue Sheffield S9 4WF</p> <p>Anyone wishing to see these documents could do so and arrange for copies to be made.</p> <p>We have decided to carry out extra engagement because the application is high public interest, which consisted of targeted engagement with certain local residents and businesses and the application and the draft decision.</p> <p>We sent copies of the Application to the following bodies, which includes those with whom we have "Working Together Agreements":</p> <ul style="list-style-type: none"> <li>• Food Standards Agency (FSA)</li> <li>• Northamptonshire Fire Service</li> <li>• Health &amp; Safety Executive (HSE)</li> <li>• Public Health England (PHE) and Director of Public Health</li> <li>• Northamptonshire County Council</li> </ul>

Aspect considered	Decision
	<ul style="list-style-type: none"> <li>• Daventry District Council</li> <li>• National Grid</li> </ul> <p>The comments and our responses are summarised in the <a href="#">consultation section</a>.</p>
<b>Operator</b>	
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of part of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.
<b>The facility</b>	
The regulated facility	<p>We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN 2 'Defining the scope of the installation'.</p> <p>The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.</p> <p>This permit applies to only one part of the installation - see the Key Issues section relating to the description of the site which describes which activities are under the control of the applicant. The names and permit numbers of the operators of other parts of the installation are detailed in the permit's introductory note.</p> <p>See the Key Issues section relating to the description of the site and issues relating to the multi-operator installation.</p>
<b>The site</b>	
Extent of the site of the facility	The operator has provided plans which we consider are satisfactory, showing the extent of the site of the facility and the location of the part of the installation to which this permit applies on that site. The plan is included in the permit.
Site condition report	The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.
Biodiversity, heritage, landscape and nature conservation	<p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.</p> <p>We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified. See Key Issues section.</p> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.</p>

Aspect considered	Decision
<b>Environmental risk assessment</b>	
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is unsatisfactory and required additional Environment Agency assessment with regard to odour – see Key Issues section on odour.</p> <p>The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment, all emissions may be categorised as environmentally insignificant ammonia. See Key Issues section.</p>
<b>Operating techniques</b>	
General operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.</p> <p>The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.</p>
Operating techniques for emissions that do not screen out as insignificant	<p>Emissions of ammonia cannot be screened out as insignificant. We have assessed whether the proposed techniques are BAT.</p> <p>The proposed techniques/emission levels for emissions that do not screen out as insignificant are in line with the techniques and benchmark levels contained in the technical guidance and we consider them to represent appropriate techniques for the facility. See Key Issues section.</p>
Operating techniques for emissions that screen out as insignificant	<p>Emissions of toluene, ethylbenzene, naphthalene, phenol, nutrient nitrogen deposition and acid deposition have been screened out as insignificant, and so we agree that the applicant's proposed techniques are BAT for the installation.</p>
Odour management	<p>We have reviewed the odour management plan in accordance with our guidance on odour management. See key Issues section.</p> <p>We consider that the odour management plan is satisfactory.</p>
<b>Permit conditions</b>	
Raw materials	<p>We have specified limits and controls on the use of raw materials and fuels.</p>
Waste types	<p>We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.</p> <p>We are satisfied that the operator can accept these wastes for the following reasons:</p> <ul style="list-style-type: none"> <li>• they are suitable for the proposed activities</li> <li>• the proposed infrastructure is appropriate</li> <li>• the environmental risk assessment is acceptable.</li> </ul> <p>We made these decisions with respect to waste types in accordance with sector guidance note S5.06.</p>

<b>Aspect considered</b>	<b>Decision</b>
Pre-operational conditions	Based on the information in the application, we consider that we need to impose pre-operational conditions. See key Issues section.
Improvement programme	Based on the information on the application, we consider that we need to impose an improvement programme. See Key Issues section.
Emission limits	We have decided that emission limits are not required in the permit. See key Issues section.
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified. See Key Issues section.</p> <p>Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate.</p>
Reporting	We have specified reporting in the permit. We made these decisions in accordance with sector guidance note S5.06.
<b>Operator competence</b>	
Management system	<p>There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.</p> <p>The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.</p>
Technical competence	<p>Technical competence is required for activities permitted.</p> <p>The operator is a member of an agreed scheme.</p> <p>We are satisfied that the operator is technically competent.</p>
Relevant convictions	<p>The Case Management System has been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.</p>
Financial competence	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.
<b>Growth Duty</b>	
Section 108 Deregulation Act 2015 – Growth duty	<p>We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all</p>

<b>Aspect considered</b>	<b>Decision</b>
	<p>specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.</p>

## Consultation

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public, and the way in which we have considered these in the determination process.

### Responses from organisations listed in the consultation section

<b>Response received from</b>
None received
<b>Brief summary of issues raised</b>
-
<b>Summary of actions taken or show how this has been covered</b>
-