

Environment Agency permitting decisions

Bespoke Variation

We have decided to issue the variation for Sowerby Woods Resource Park operated by Shanks Waste Management Limited.

The variation number is EPR/XP3839FJ/V003.

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:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

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

Structure of this document

- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

Key issues of the decision

Site Summary

Sowerby Woods Resource Park is a Mechanical Biological Treatment (MBT) facility for up to 75,000 tonnes per year of municipal waste. The facility is located approximately 3 miles north of Barrow-in-Furness town centre. The site is located on an industrial estate which includes a waste transfer station.

The process itself is undertaken in a single building. All incoming wastes are deposited in a reception pit from where they are shredded and transferred by crane to a "biodrying hall". In this hall the wastes are dried aerobically by drawing air from the building through the shredded wastes for around 12 to 15 days. This process reduces the waste mass by approximately 25% and stabilises the waste. The extracted air from the reception pit and biodrying hall is fed into a wood chip-filled biofilter to control odours and is emitted from here to atmosphere via a stack. The biofilter is enclosed and has 8 extraction points feeding into a single duct, which vents to a stack.

This variation is for the following changes:

- Installation of a wet chemical scrubber using sulphuric acid to pre-treat the extracted air to remove ammonia before the air is passed to the biofilter;
- Modification of the design of the biofilter (replacement of the media, splitting it into four discrete sections, improved roofing, installation of spray irrigation, condensate collection system, and improved process monitoring equipment);
- Changes to the emissions monitoring requirements;
- Addition of an additional point source emission for the Carbon Monoxide monitor vent (A3) which was previously not included as an emission point.

The operator submitted on 16/05/2017 an amendment to the variation application for the following changes to the installation:

- Increasing the biofilter stack (emission point A1) from 18 m to 28 m;
- Alteration to the emission parameters from the biofilter;
- Amendment to the Odour Management Plan (now V8) to reflect the above changes.

We have determined the application based on the additional information.

Odour Emissions

As part of this variation we have assessed the odour emissions from the varied activities. Point source emissions of odours included in the assessment are the stack serving the biofilter (A1) and the newly included Carbon Monoxide (CO) vent (A3).

The CO vent is small, situated on the inlet to the biofilter, and is required for the correct operation of two CO monitors, a fire-safety feature. An assessment of the impact was undertaken in an air dispersion model undertaken and submitted with the variation (Report ref 47071151 August 2014), which concluded that the impact of the vent emissions on overall odour emissions from the CO vent was an insignificant contribution to overall odour emissions from the facility. We agree with that assessment.

The emissions of odour from the scrubber/amended biofilter via emission point A1 (including amended emissions and stack height) have been modelled by the operator and we have reviewed the assessment. We have reviewed the odour emissions modelling. Overall, based on the applicants input parameters and assessment approach, the model outputs can be considered representative.

Existing biofilter emission predictions (scenario 1 – pre-installation of the scrubber system, existing stack height) were compared to the following scenarios (operator's descriptions):

Scenario 2 – Future Normal Daily Operation (Post Modification, Optimistic Emission Rate)

Future Operation with emission rates based on the mean of expected values and 95% removal efficiency within the biofilter system. Representative of typical emissions when the abatement system is performing within its design specifications. Based on data reported in SNIFFER ER3610 the odour emission concentration emitted for this scenario is considered to be similar to the level of performance observed by the best performing 25% of similar biofilters in that study.

Scenario 3 – Future Normal Operation (Post Modification, Typical Emission Rate)

Future Operation with emission rates based on the mean of expected values, but with the upper 95% confidence interval applicable to BS EN 13725. Based on data reported in SNIFFER ER36 the odour emission concentration emitted for this scenario is considered to be typical of the level of performance observed for other similar biofilters.

Scenario 4 – Future Abnormal Operation

The maximum flow rate is the same as the future normal scenarios. However, the release rate was estimated at a reduced removal efficiency and abatement system inlet concentration. The reduction in removal efficiency to 75% was calculated due to the small possibility of a failure of an entire building filter section and/or failure of the scrubber whilst maintaining the maximum operational flow. However, this abnormal condition is highly unlikely to occur simultaneously in practice. Therefore, the geometric mean of the inlet concentrations has been used to calculate the emission rate at the lower assumed removal efficiency. In practice, under such operational conditions reduced operations would be adopted to reduce the flow rate proportionately.

Scenario 5 – Future Emergency Operation

The release rate was estimated at a reduced removal efficiency and abatement system inlet concentration. A reduction to 50% removal efficiency resulting from complete failure of 2 biofilter sections and simultaneous failure of the scrubber is assumed whilst maximum operational flow is maintained. Again, this emergency operational scenario is highly unlikely to occur simultaneously in reality. Therefore the geometric mean of the inlet concentrations has been used to calculate the remission rate at the lower assumed removal efficiency. In practice if this combination of circumstances was to occur then reduced operations would be adopted which would reduce the flow rate proportionately.

Scenario 1 Current Operation 98th %ile Odour Concentration			
Receptor	Location	Type	Odour Concentration (OU _E /m ³)
R1	Industrial Estate 1	Occupational	0.7
R2	Industrial Estate 2	Occupational	0.5
R3	Industrial Estate 3	Occupational	0.3
R4	Industrial Estate 4	Occupational	0.5
R5	Park Rd House 1	Residential	0.1
R6	Rark Rd House 2	Residential	0.1
R7	Robb's Water Farm	Residential	0.1
R8	Sinkfall Farm	Residential	0.1
R9	Sowerby Cottages	Residential	0.1
R12	Golf Course 1	Recreational	0.2
R13	Golf Course 2	Recreational	0.2
R14	Golf Course 3	Recreational	0.2
R15	Rakesmoor Farm	Residential	0.1
n/a	Maximum in modelled domain	n/a	1.1

Scenario 2 Future Normal (optimistic) 98th %ile Odour Concentration			
Receptor	Location	Type	Odour Concentration (OU _E /m ³)
R1	Industrial Estate 1	Occupational	0.2
R2	Industrial Estate 2	Occupational	<0.1
R3	Industrial Estate 3	Occupational	<0.1
R4	Industrial Estate 4	Occupational	0.2
R5	Park Rd House 1	Residential	0.1
R6	Rark Rd House 2	Residential	0.1
R7	Robb's Water Farm	Residential	0.1
R8	Sinkfall Farm	Residential	0.1
R9	Sowerby Cottages	Residential	0.1
R12	Golf Course 1	Recreational	0.1
R13	Golf Course 2	Recreational	0.1
R14	Golf Course 3	Recreational	0.1
R15	Rakesmoor Farm	Residential	<0.1
n/a	Maximum in modelled domain	n/a	0.5

Scenario 3 Future Normal (typical) 98th %ile Odour Concentration			
Receptor	Location	Type	Odour Concentration (OU _E /m ³)
R1	Industrial Estate 1	Occupational	0.3
R2	Industrial Estate 2	Occupational	<0.1
R3	Industrial Estate 3	Occupational	<0.1
R4	Industrial Estate 4	Occupational	0.4
R5	Park Rd House 1	Residential	0.2
R6	Rark Rd House 2	Residential	0.2
R7	Robb's Water Farm	Residential	0.1
R8	Sinkfall Farm	Residential	0.1
R9	Sowerby Cottages	Residential	0.2
R12	Golf Course 1	Recreational	0.2
R13	Golf Course 2	Recreational	0.3
R14	Golf Course 3	Recreational	0.2
R15	Rakesmoor Farm	Residential	0.1
n/a	Maximum in modelled domain	n/a	1.0

Scenario 4 Abnormal Operation 98th %ile Odour Concentration			
Receptor	Location	Type	Odour Concentration (OU _E /m ³)
R1	Industrial Estate 1	Occupational	0.4
R2	Industrial Estate 2	Occupational	0.1
R3	Industrial Estate 3	Occupational	<0.1
R4	Industrial Estate 4	Occupational	0.5
R5	Park Rd House 1	Residential	0.2
R6	Rark Rd House 2	Residential	0.2
R7	Robb's Water Farm	Residential	0.1
R8	Sinkfall Farm	Residential	0.1
R9	Sowerby Cottages	Residential	0.2
R12	Golf Course 1	Recreational	0.3
R13	Golf Course 2	Recreational	0.3
R14	Golf Course 3	Recreational	0.3
R15	Rakesmoor Farm	Residential	0.1
n/a	Maximum in modelled domain	n/a	1.3

Scenario 5 Emergency Operation 98th %ile Odour Concentration			
Receptor	Location	Type	Odour Concentration (OU _E /m ³)
R1	Industrial Estate 1	Occupational	0.8
R2	Industrial Estate 2	Occupational	0.1
R3	Industrial Estate 3	Occupational	<0.1
R4	Industrial Estate 4	Occupational	1.1
R5	Park Rd House 1	Residential	0.4
R6	Rark Rd House 2	Residential	0.4
R7	Robb's Water Farm	Residential	0.3
R8	Sinkfall Farm	Residential	0.3
R9	Sowerby Cottages	Residential	0.4
R12	Golf Course 1	Recreational	0.6
R13	Golf Course 2	Recreational	0.7
R14	Golf Course 3	Recreational	0.6
R15	Rakesmoor Farm	Residential	0.2
n/a	Maximum in modelled domain	n/a	2.6

We can conclude that an increased stack height will improve the dispersion of emissions from the biofilter stack, and therefore reduce the concentration of odour perceived at modelled receptor locations.

Odour Management Plan

MBT plants in general present a significant possibility of odour which may cause offence beyond the site boundary and an odour management plan (OMP) is therefore required as part of the operational techniques for the facility. The facility currently operates under agreed OMP (version 5.09.12). A revised OMP was submitted (OMP V5) with the variation.

We reviewed OMP V5. The OMP was prepared with reference to our H4 guidance on Odour, but we considered that not all the requirements of H4 were met and that further information was required concerning the following areas:

- Correction of factual errors in the OMP.
- Justification for the use of only odour monitoring data from the period 12th February – 16th April 2015 when calculating potential odour impacts when much more data is available.
- Details of upgrades to the leachate discharge system design which has been installed and the potential for odour release.
- Further details of performance monitoring of the biofilter and scrubber system.
- Further details of contingency actions in the event of operational issues with the biofilter and scrubber.
- Inconsistency between the between the modelled emission under normal operating scenarios and the outlet concentration set out in the OMP.

A Schedule 5 Notice requesting further information to cover these issues was sent on 08/04/2016 and the applicant responded answering the questions and providing a revised OMP V6 on 06/05/2016.

The operator subsequently updated the OMP to version V7 (21/10/20176 and a latest version, V8 received with the amendment to the application concerning the biofilter stack height increase). We have reviewed V7 and consider it deficient with the requirements of our H4 Odour management guidance note. V8 changes only the stack height so is not significantly different to V7.

In particular the following issues were noted (summarised):

- Missing procedures, specifications and plans, and incorrect references to tables and appended documents throughout;
- A reduction in scope of, or removal of agreed procedures and details from the existing OMP (for example fan arrangements, destruction efficiency of the biofilter, Shredder pit management, Reception pit management);
- A lack of justification for assumptions made in many sections;
- Ambiguous phrasing or language in many sections, making the OMP less enforceable;
- The air changes per hour figures are not in accordance with the latest understanding for investigations undertaken by the operator;
- Missing or out of date contingency actions.

The existing permit and current approved OMP (version 5.09.12) require that the building is maintained under negative pressure and all odorous air is extracted and abated by the biofilter. We consider that the actual performance of the installation falls short of this expected standard and that this may be causing fugitive emissions of odours from the building.

We therefore do not accept the revised OMP provided for the facility.

We agree with the scope and suitability of key measures in respect of the operation of the new scrubber and biofilter design covered by the variation application, for dealing with odours extracted from the MBT building. This should not be taken as confirmation that the details of equipment specification design, operation and maintenance are suitable and sufficient. That remains the responsibility of the operator.

We have therefore set an improvement condition for the operator to review the OMP for the installation to address the deficiencies in the plan, particularly in fugitive emissions management. The operator is still required to operate to their existing approved OMP (version 5.09.12) in the meantime.

However we do approve the operation of the scrubber and revised biofilter design, subject to conditions in the permit, which set out additional appropriate measures the operator needs to take. These include the

operational techniques (Table S1.2 of the permit) set out in the variation application (and subsequent amendments), the Schedule 5 Notice response (excluding the OMP) plus the Scrubber use and maintenance system manual, which was submitted by the operator as part of their EMS.

Discussions between ourselves and the operator (outside of the scope of this variation) are ongoing regarding the consideration of other techniques to mitigate odour at the facility, but it is considered important that this should not prevent or delay the potential improvements to the treatment of extracted air offered by the redesigned abatement system.

We have set process monitoring requirements in Table S3.5 of the permit for the scrubber system and the biofilter. We have also set condition 4.2.6 requiring an annual report on the efficiency of the biofilter. This is a condition from our biowaste template permit and is now required for new facilities with biofilters. We consider that the condition is appropriate for this site and have imposed it as part of the conditions needed for control of the biofilter operation. Table S4.1 is also amended for the reporting requirement under condition 4.2.6.

Emissions Monitoring

The operator has requested changes to the monitoring schedule for emissions to air from A1. In summary these are:

- Replace benzene monitoring with VOC monitoring;
- Amend the ammonia monitoring frequency to monthly;
- Change Hydrogen sulphide monitoring to quarterly;
- Change total bacteria monitoring to six monthly;
- Change odour monitoring to monthly in triplicate.

We have removed the monitoring requirement at A1 (biofilter stack) for benzene and hydrogen sulphide. Monitoring since the commencement of operations has established that these are not emitted in significant quantities, and therefore further monitoring is not considered necessary. Benzene monitoring is replaced by a requirement for Volatile Organic Compounds (VOCs) monitoring, as a complex range of organic compounds is produced as part of the process and is better characterised by VOC monitoring than by benzene, which was set as a surrogate.

We have set the monitoring frequencies for ammonia and odour to monthly. These are considered the principal emissions from the stack and so the monitoring programme is now better targeted.

We have also set the monitoring frequency for bioaerosols from A1 for Total bacteria and *Aspergillus fumigatus* six-monthly to formalise the arrangement which was to be agreed after the first year of operation. The requirement to monitor Gram negative bacteria has been removed. These revised proposals are in accordance with our new guidance on monitoring of bioaerosols, (M9).

Biodiversity, Heritage, Landscape and Nature Conservation

The emission to air from the biofilter can contain ammonia, which can also cause both nutrient nitrogen and acid deposition. The impacts of the proposed changes to the biofilter set-up were modelled by the applicant and we have reviewed their modelling. The proposed changes result in a reduced ammonia emission from the existing situation with subsequent nutrient nitrogen and acid deposition reductions. The potential impact to nearby ecological receptors (listed below) of the variation to the facility has been assessed.

Receptor Name	OS Coordinates		Type of Receptor	Distance from Facility (m)
Duddon Estuary 1	319278	473348	SPA/Ramsar/SSSI	1060
Duddon Estuary 2	319440	473833	SPA/Ramsar/SSSI	880
Morecambe Bay 1	318960	468641	SAC/SPA/Ramsar	5160
Morecambe Bay 2	321378	468701	SAC/SPA/Ramsar	5040
Morecambe Bay 3	326920	469154	SAC/SPA/Ramsar	7990
Sandscale Haws	319446	473932	NNR	905
Sowerby Wood	319926	473522	LWS	380
Park Road Woods	320444	473690	LWS	160
Roanhead Mines	320705	474710	LWS	1160
Goldmire Valley	321520	473390	LWS	1250
Hagg Spring Wood 1	321714	473544	AW	1420
Hagg Spring Wood 2	321870	474229	AW	1680
Chapel Hills Wood	321761	474648	AW	1780
Long Bank Wood	322047	474566	AW	1980

For the statutory and non-statutory sites all process contributions (PCs) for the operator's Model Scenario 3 (Normal operation, pessimistic emission rate as described above) are well below the screening criteria. Impacts are shown below. We have concluded that there is no significant impact on the European sites and an Appendix 11 form has been completed to document the decision. For the SSSI sites we concluded the operations are unlikely to damage the SSSIs and a Countryside and Rights of Way (CROW) Appendix 4 form was completed to document the decision. We conclude there is no likely significant effect on the non-statutory sites.

Atmospheric Ammonia at ecological receptors – Scenario 3			
Receptor Name	Ammonia Critical Level (Cle) ($\mu\text{g}/\text{m}^3$)	Ammonia PC ($\mu\text{g}/\text{m}^3$)	PC/CLe %
Duddon Estuary 1	1	0.006	0.6
Duddon Estuary 2	1	0.008	0.8
Morecambe Bay 1	3	0.001	<0.1
Morecambe Bay 2	3	<0.001	<0.1
Morecambe Bay 3	3	<0.001	<0.1
Sandscale Haws	3	0.007	0.2
Sowerby Wood	3	0.02	0.7
Park Road Woods	3	0.08	2.7
Roanhead Mines	3	0.006	0.2
Goldmire Valley	3	0.006	0.2

Atmospheric Ammonia at ecological receptors – Scenario 3			
Receptor Name	Ammonia Critical Level (Cle) ($\mu\text{g}/\text{m}^3$)	Ammonia PC ($\mu\text{g}/\text{m}^3$)	PC/CLe %
Hagg Spring Wood 1	3	0.005	0.2
Hagg Spring Wood 2	3	0.004	0.1
Chapel Hills Wood	3	0.004	0.1
Long Bank Wood	3	0.003	0.1

Nutrient Nitrogen deposition at ecological receptors – Scenario 3			
Receptor Name	Nitrogen Deposition Critical Load (CLo) ($\text{kgN}/\text{ha}/\text{year}$)	Nitrogen Deposition PC ($\text{kgN}/\text{ha}/\text{year}$)	PC/CLo %
Duddon Estuary 1	10	0.032	0.3
Duddon Estuary 2	10	0.043	0.4
Morecambe Bay 1	15	0.004	<0.1
Morecambe Bay 2	15	0.002	<0.1
Morecambe Bay 3	15	0.002	<0.1
Sandscale Haws	10	0.039	0.4
Sowerby Wood	10	0.159	1.6
Park Road Woods	10	0.622	6.2
Roanhead Mines	10	0.029	0.3
Goldmire Valley	10	0.031	0.3
Hagg Spring Wood 1	10	0.041	0.4
Hagg Spring Wood 2	10	0.035	0.3
Chapel Hills Wood	10	0.030	0.3
Long Bank Wood	10	0.025	0.3

Nutrient Nitrogen deposition at ecological receptors – Scenario 3			
Receptor Name	Acid Deposition Critical Load ($\text{keq}/\text{ha}/\text{year}$)	Acid Deposition PC ($\text{keq}/\text{ha}/\text{year}$)	PC/CLo %
Duddon Estuary 1	CLmaxS: 0.428	0.0023	0
Duddon Estuary 2	CLminN: 0.233 CLmaxN: 0.769	0.0031	0
Morecambe Bay 1	CLmaxS: 0.428	0.0003	0
Morecambe Bay 2	CLminN: 0.233	0.0002	0
Morecambe Bay 3	CLmaxN: 0.769	0.0001	0
Sandscale Haws	CLmaxS: 0.820 CLminN: 0.710 CLmaxN: 1.530	0.0028	0
Sowerby Wood	CLmaxS: 1.340 CLminN: 0.360 CLmaxN: 1.690	0.00113	0.6

Nutrient Nitrogen deposition at ecological receptors – Scenario 3			
Receptor Name	Acid Deposition Critical Load (keq/ha/year)	Acid Deposition PC (keq/ha/year)	PC/CLo %
Park Road Woods	CLmaxS: 1.360 CLminN: 0.360 CLmaxN: 1.710	0.0444	2.3
Roanhead Mines	CLmaxS: 0.820 CLminN: 0.440 CLmaxN: 1.260	0.0021	0
Goldmire Valley	CLmaxS: 0.820 CLminN: 0.220 CLmaxN: 1.040	0.0022	0
Hagg Spring Wood 1	CLmaxS: 1.510 CLminN: 0.140 CLmaxN: 1.650	0.0029	0
Hagg Spring Wood 2	CLmaxS: 1.360 CLminN: 0.360 CLmaxN: 1.720	0.0025	0
Chapel Hills Wood	CLmaxS: 1.360 CLminN: 0.360 CLmaxN: 1.720	0.0021	0
Long Bank Wood	CLmaxS: 1.510 CLminN: 0.140 CLmaxN: 1.650	0.0018	0

Consolidation of permit

We have decided to issue the variation of the permit as an updating consolidation. An updating consolidation is the creation of a complete replacement permit using the existing conditions and adding any new conditions needed as a result of the variation.

We can update conditions when the following all apply to a permit:

- an operator applies to vary a permit;
- we want to update other conditions as well as the matters affected by the application;
- the wording is very close so the update could be regarded as administrative change.

The following conditions were varied as a result of the updating consolidation rather than as matters covered by the variation applied for by the operator:

- 1.3.1: consequential amendment to condition following change to table S1.1;
- 3.1.3: added as a requirement under the Industrial Emissions Directive;
- 3.4.2: amended to our latest template noise condition wording;

- 3.5.1 and 3.5.2: added as a new requirement for the control of bioaerosols, in accordance with our revised template conditions.
- 3.6.1: amended to our latest template pest condition wording;
- 3.7.1 and 3.7.2: addition of our template fire prevention conditions as the site handles combustible wastes;
- 4.3.1 and 4.3.2: revised notification conditions as a requirement under the Industrial Emissions Directive;
- Table S1.1: see discussion of the regulated facility.
- Table S3.4: amended wording in accordance with our new guidance on monitoring of bioaerosols (M9);
- Schedule 6: amended to include our latest revised and updated interpretations relevant to the facility.

We consider that the changes made satisfy the requirements for an updating consolidation.

Annex 1: decision checklist

This document should be read in conjunction with the Duly Making checklist, the application and supporting information and permit/ notice.

Aspect considered	Justification / Detail	Criteria met
Consultation		
Scope of consultation	The consultation requirements were identified and implemented. The decision was taken in accordance with our Public Participation Statement and our Working Together Agreements.	✓
Responses to consultation and web publicising	The web publicising and consultation responses (Annex 2) were taken into account in the decision. The decision was taken in accordance with our guidance.	✓
Operator		
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on the meaning of operator.	✓
The facility		
The regulated facility	<p>The extent/nature of the facilities taking place at the site required clarification. The decision on the facility was taken in accordance with RGN 2.</p> <p>The regulated facility is an installation which comprises the following activities listed in Part 2 of Schedule 1 to the Environmental Permitting Regulations and the following directly associated activities (DAAs).</p> <ul style="list-style-type: none"> • Section 5.4 A(1)(b)(i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving tonnes per day involving biological treatment. • DAA - Storage of raw materials including fuel and chemicals. • DAA - Storage pending recovery or disposal. • DAA - Physical treatment for the purposes of recycling. <p>The installation was originally permitted as a S5.3 A(1)(c)(ii) installation under the IPPC Directive, which was subsequently varied due to IED to S5.4 A(1)(a)(ii) - Disposal of non-hazardous waste in a facility with a</p>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>capacity exceeding 50 tonnes per day by physico-chemical treatment. We now view the biodrying operation primarily as a biological treatment activity and consider the new activity description (Section 5.4 A(1)(b)(i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving tonnes per day involving biological treatment) is the most apt description, and note that this is consistent with the similar MBT plants operated by the same Operator.</p> <p>Similarly the waste operations for recovery of the recyclable materials from the bio-dried waste are now viewed as a DAA to the installation listed activity rather than a separate waste operation.</p>	
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓
The site		
Extent of the site of the facility	<p>The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. A revised site plan was provided by the operator. During consultation on the draft permit it was noted that the site plan in the original permit contained a small area of land in the south west corner of the installation which is occupied by a neighbouring site user, which should therefore not be within the installation. This area near the gate has never been used for waste storage or treatment. We have accepted this as a correction to the permit rather than as an issue requiring partial surrender of the permit. A revised plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.</p>	✓
Planning permission	We are satisfied that planning permission is in place and is appropriate for the relevant waste operation(s) applied for.	✓
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>A full assessment of the application and its potential to affect the site(s)/species/habitat has been carried out as part of the permitting process. A full list of ecological receptors assessed and a brief discussion of the impacts is included in the Key Issues section. We consider that the application will not affect the features of the</p>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>site/species/habitat.</p> <p>We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p>	
Environmental Risk Assessment and operating techniques		
EIA	<p>In determining the application we have considered the Environmental Statement.</p> <p>We have also considered the planning permission.</p>	✓
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory.</p> <p>See Key Issues section for discussion of Odour and Biodiversity, Heritage, Landscape and Nature Conservation.</p> <p>The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all ammonia emissions may be categorised as environmentally insignificant.</p>	✓
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The applicable technical guidance is How To Comply and Sector Guidance Note S5.06 for Hazardous and Non-hazardous Waste Treatment.</p> <p>See Key Issues section for discussion of Odour emissions and the Odour Management Plan.</p> <p>The scrubber system requires the storage handling and use of sulphuric acid and spent scrubber liquor. The acid will be stored in appropriately bunded store, and a revised drainage arrangement is in place around the scrubber area, to contain any leak of acid. Spent scrubber liquor will be dealt with along with the existing site effluent and tankered off-site from the leachate sump.</p> <p>Emissions of ammonia have been previously screened out as insignificant, and so the Environment Agency agrees that the Applicant's proposed techniques are BAT for the installation.</p> <p>The proposed techniques are in line with the benchmark levels contained in the TGN and we consider them to represent appropriate techniques for the facility.</p>	✓

Aspect considered	Justification / Detail	Criteria met Yes
The permit conditions		
Updating permit conditions during consolidation.	We have updated previous permit conditions to those in the new generic permit template as part of permit consolidation. The new conditions have the same meaning as those in the previous permit(s).	✓
Raw materials	We have specified limits and controls on the use of raw materials and fuels. The operator is proposing a scrubber using sulphuric acid as part of the abatement system. We have required reporting of the amount of sulphuric acid used as part of the reporting requirements.	✓
Improvement conditions	Based on the information on the application, we consider that we need to impose improvement conditions. See Key Issues section.	✓
Incorporating the application	We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process. These descriptions are specified in the Operating Techniques table in the permit. See Key Issues section for the Odour Management Plan.	✓
Monitoring	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. 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.	✓
Reporting	We have specified reporting in the permit. We have amended the reporting requirements to reflect the amended monitoring for emission point A1. We have also set condition 4.2.6 which requires annual reporting of the efficiency of the biofilter. See Key Issues section. We have also set our standard reporting requirements in line with those required by our installation template conditions for annual reporting of energy, raw materials and water usage for installations.	✓
Operator Competence		

Aspect considered	Justification / Detail	Criteria met Yes
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with our guidance on Operator Competence.	✓
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: <i>“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 specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</i></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>	✓

Annex 2: Consultation and web publicising responses

Summary of responses to consultation and web publication and the way in which we have taken these into account in the determination process.

Response received from
Barrow Borough Council
Brief summary of issues raised
<p>I have reviewed the available documents provided and we do not wish to comment further on this variation with the general understanding that the goal is to improve air quality emissions at this site.</p> <p>Within your recent correspondence, you had requested that we notify you of any issues relating to noise or other amenity issues at this site; I can confirm that we have had two complaints regarding odour and one regarding fly nuisance. Odour complaints were received on 10/07/2015 & 19/9/2014, while complaints regarding fly nuisance were received on 09/07/2013. These were reported to your department accordingly.</p> <p>Further more, we had previously consulted on the County Planning Application- 6/15/9004 RE: Consultation on a Waste County Matter on the 12/06/15 with regards to odour, dispersion and monitoring. We see that this forms part of the Environmental Permit.</p>
Summary of actions taken or show how this has been covered
<p>No comments noted.</p> <p>Complaints received noted. We are aware of the complaints made and these were investigated. Investigation of complaints received directly or passed to the Environment Agency is part of the ongoing regulation of the site. The odour complaints are potentially relevant to the application as the changes requested under the variation are intended to improve the treatment and dispersion of emissions to air (including odour) from the site.</p> <p>We are aware of the planning permission. A copy of the granted permission was submitted with the variation application.</p>

Response received from
Health & Safety Executive
Brief summary of issues raised
No comments.
Summary of actions taken or show how this has been covered
No action.

Response received from
Public Health England
Brief summary of issues raised
We recommend that any Environmental Permit issued for this site should contain conditions to ensure that the following potential emissions do not

impact upon public health: noise and fugitive dust emissions from vehicle movements, particulate matter during waste processing and odour arising from all stages of the process. Given these processes are inherently odorous we would support any contingency planning in case operations give rise to emissions with the potential to affect public health.

This consultation response is based on the assumption that the permit holder shall take all appropriate measures to prevent or control pollution, in accordance with the relevant sector guidance, industry best practice and guidance for preventing and responding to fires. It is recommended that further consideration is given to the implementation of fire prevention measures, and measures to minimise the public health impacts in the event of a fire incident, such as fire breaks and adequate access for firefighting.

As part of the variation of the permit, sulphuric acid will be used for the wet chemical scrubber. Under Health and Safety legislation we would expect that a Control of Substances Hazardous to Health Regulations (COSHH) assessment would be undertaken by the operator to ensure mitigation measures are in place to deal with any potential spillages onsite and offsite. We would recommend that this assessment also considers any possible risks to members of the public who might be affected by these work activities. We recommend the regulator confirms that this aspect of the assessment has been considered by the operator and is not an issue for concern.

Based solely on the information contained in the application provided, PHE has no significant concerns regarding risk to health of the local population from this proposed activity, providing that the applicant takes all appropriate measures to prevent or control pollution, in accordance with the relevant sector technical guidance or industry best practice.

Summary of actions taken or show how this has been covered

The Environmental Permit for the site contains conditions relating to the control of noise, fugitive dust and particulate, and odour. Impacts from vehicle movements off-site are not within the control of the permit.

Contingency plans regarding odour impacts off-site are contained in the existing OMP for the site, which is required by condition 3.3.

The variation does not concern matters that would affect fire breaks or impact access to the site for firefighting. Our standard fire prevention plan conditions have been applied, as discussed in the Key Issues section, as an Agency initiated variation.

Appropriate measures are in place for the prevention of spillages, and where necessary remediation procedures are part of the management system.

A second consultation using our Citizen Space system was undertaken on 24/05/2017 for the revised application details submitted regarding the biofilter stack. Responses are shown below.

Response received from
Barrow Borough Council
Brief summary of issues raised
No objection provided that the change does not conflict with any planning conditions
Summary of actions taken or show how this has been covered
The stack height change was granted planning permission (planning ref PI\1612\05) by Cumbria County Council on 07/02/2017. It is the operator's responsibility to comply with all necessary requirements of the planning permission. However, from our examination of the planning permission, there appears to be no conflict.

Response received from
Barrow Borough Council Env. Health
Brief summary of issues raised
No objection.
Summary of actions taken or show how this has been covered
No action.

Response received from
Public Health England
Brief summary of issues raised
No significant concerns regarding risk to health of the local population from this proposed activity, providing that the applicant takes all appropriate measures to prevent or control pollution, in accordance with the relevant sector technical guidance or industry best practice.
Summary of actions taken or show how this has been covered
No action.