Hownsgill Energy Facility, Air Quality Response Note

Introduction

Air Quality Consultants Ltd (AQC) has prepared this document in response to comments received on assessments prepared by the company in support of planning application reference DM/20/03267/WAS Land Adjacent to Hownsgill Industrial Park, Templetown. The comments were written by Aecom, who were commissioned by the Durham County Council to review the assessments on their behalf.

Responses

AQC's overarching response to the comments is to acknowledge that the inference of Aecom's comments is that none of the concerns raised are major, and would not alter the conclusions of the assessments.

The Aecom comments are reproduced in the table below. Responses to each of the individual comments are provided in the final column of the table.

Relevant section	Notes	Aecom Comments	AQC Response
Environmental Statement Chapter 10 – Air Quality			
Introduction/Scope	Paragraph 10.1.1 Air quality assessment prepared by AQC on behalf of Enzygo Ltd.		
	Assessment considers impacts associated with the following sources: - Construction phase dust emissions - Operational phase stack emissions - Operational phase road traffic emissions - Operational odour emissions A Human Health Risk Assessment is also included.	Operational stack emissions assessment includes the quantification of emissions from the main EfW stack and backup boilers. Emissions from the emergency generator are screened out. This emergency plant will only be in operational for 13 hours/year for testing. The assessment does not provide an estimate of hours/year for emergency operation. An estimate would have been useful. It does not include emissions from the stack associated with the odour control system. If odour emissions from this source are considered to be negligible then justification should be provided. The assessment does provide a combined operational assessment where impacts from road traffic emissions are added to stack emissions impacts, if not in a slightly unconventional way.	It is not possible to estimate the hours per year of emergency generator operation with any degree of confidence, as there are so many factors influencing why it might or might not be required, many of which cannot be known until the facility is operational (i.e. they relate to whether or not there are technical faults the system, or the local power supply). The suggestion that they are very rarely used is based upon informal correspondence with specialists who have managed a number of such facilities. Emissions from the odour control stack were not modelled as it was not considered necessary. They have been assessed thoroughly in the odour risk assessment, which has identified a low risk of off-site odour impacts. The odour risk assessment effectively provides the justification as to why they were not modelled.

		ES Chapter 10 refers to the operational odour emissions assessment being described Appendix 10.3. Comments are provided on that appendix. ES Chapter 10 refers to the Human Health Risk Assessment being described Appendix 10.2.	It is acknowledged in later comments that the approach to the combined operational assessment that was adopted was "a sensible approach".
	Assessment screens out impacts associated with the following: - Construction phase site plant and site vehicle emissions - Construction phase vehicle movements on the public highway	Construction phase site plant is screened out due distance between the construction site and the nearest relevant sensitive receptors. Construction phase road traffic emissions is screened out of the assessment, due to the limited number of construction vehicle movements anticipated, with reference to EPUK/IAQM guidance. The actual number of construction vehicle movements per day is not provided and it is assumed not known at the time of the assessment. The assumption that the number of construction vehicles per day will be less than the EPUK/IAQM screening criteria is considered reasonable.	No response required.
	Assessment does not refer to the following sources: - Operational dust emissions	It may very well be the case that operational dust emissions are negligible even before mitigation. However, I think some mention of this as a potential source should have been included, whether relating to the Refuse Derived Fuel or the bottom ash.	As is acknowledged in the comment, operational dust emissions can be expected to be minimal. AQC is not aware of any history of dust issues at modern energy from waste facilities and is not aware of operational dust being a routine consideration in air quality assessments for such facilities (it has not been considered necessary in the dozens of assessments AQC has previously carried out). It should also be noted that dust emissions will be controlled by the site's Environmental Permit, and the PPG states *"It is not necessary for air quality assessments that support planning applications to duplicate aspects of air quality assessments that will be done as part of non-planning control regimes, such as under Environmental Permitting Regulations"*. It is anticipated that a dust management plan (if deemed necessary by the EA) would effectively manage any risk of fugitive dust emissions.
	Assessment considers stack emissions impacts on: - Discrete ecological receptors, selected in line with appropriate Environment Agency (EA) guidance relating to Environmental Permit (EP) applications.	All relevant ecological receptors appear to have been accounted for, following relevant EA EP guidance. Human health receptors appear to represent locations of greatest impact in each direction, based on the contour plots provided in Appendix 10.1.	No response required.

	- Discrete human health receptors, including the nearest air quality sensitive receptors in each direction of the source. - A nested cartesian receptor grid	Receptor grid is considered suitable for identifying the maximum off-site impacts and preparing suitable contour plots.	
	The assessment of stack emissions considers all of the pollutants listed within the Industrial Emissions Directive.	The full suite of stack emissions pollutants is considered in line with EA EP guidance.	No response required.
Legislation and Planning Context	Chapter lists relevant documents and refers to Appendix 10.1 as providing more detail on these.	The list in ES Chapter 10 and the descriptions in ES Appendix 10.1 seems to include all relevant documents.	No response required.
Assessment Methodology	Consultation undertaken through formal Scoping exercise.	Scoping report (ES Appendix 1) is comprehensive and Durham County Council (DCC) did provide a Scoping Response. However, it is felt that some further consultation with DCC would have been beneficial, including discussions on receptor selection and other model inputs not defined within the Scoping Report, local knowledge on existing sources that could have cumulative impacts with the EfW, and amenity complaints history, considering the potential for dust and odour impacts associated with the EfW.	The comments on further consultation with the Council are acknowledged and accepted. Although further consultation with the Council was not carried out, it would not have affected the conclusions of the assessment. Regarding cumulative odour impacts, a *negligible risk* of impacts as a result of site's odour emissions is identified in the odour risk assessment. If the site in isolation will not have any odour impacts, there is no real risk of it contributing significantly to cumulative impacts, especially considering the distance between it and any high sensitivity receptors. Any such impacts would be the result of the other sites, and thus not 'cumulative'. The same is true for operational dust impacts, as the site will represent a negligible source and is distant from sensitive receptors.
	Study area and receptors selected in line with relevant EA EP guidance	Commented upon previously. Operational odour receptors include nearest residential properties and industrial/commercial premises in each direction of the site.	No response required.
	Baseline air quality is established through the usual secondary sources of information, including outputs from Defra's Pollution Climate Mapping (PCM) model at background and roadside locations.	In the absence of local monitoring data and difficulties in gathering new data due to the ongoing pandemic, this is considered to be a sensible approach.	No response required.
	A stack height assessment for the main EfW stack has been undertaken and is described in ES Appendix 10.1.	Comments are provided on that appendix.	No response required.
	Construction dust assessment in line with IAQM construction dust guidance, with more details provided in ES Appendix 10.1.	Industry standard approach.	No response required.

	Further confirmation is provided that the emergency generator has been screened out of the assessment due to the limited number of known operational hours (given as approximately 13 hours/year).	Reasonable to screen out such limited emissions. However, it would be useful to include an estimate of anticipated emergency operation, if possible (potentially based on experience from other sites operated by the applicant). Where sources that have limited hours of operation are discussed, reference and consideration should be given to the IAQM Position Statement on the Assessment of Air Quality Impacts from Combustion Plant with Limited Hours of Operation.	The comment acknowledges that it is reasonable to have screened out these emissions, and AQC would emphasise that this is especially the case given the substantial distance between the source and any sensitive receptors. Discussion around the likely hours of operation has already been provided.
	Operational road traffic emissions impacts are screened using the relevant EPUK/IAQM screening criteria given in guidance.	Industry standard approach.	No response required.
	Model parameters for the main EfW stack provided by the applicant, with emission concentration data taken from the relevant BAT Reference (BREF) Document and Industrial Emissions Directive.	Industry standard approach.	No response required.
	Backup boilers anticipated to operate for 760 hours per year, when the EfW is down for scheduled maintenance. Model parameters for the backup gas boilers sourced from technical datasheets for that plant	Noted that the EfW is still modelled assuming 8760 hours/year, for conservatism. Presumably stack height and internal diameter at release point was provided by the applicant. No mention of Medium Combustion Plant Directive. If the backup boilers fall under the remit of the MCPD, then this should be accounted for within the assessment.	The boilers would fall under the remit of the MCPD and their NOx emission rate of 70 mg/Nm^3 at 3% O_2 is below the MCPD limit of 100 mg/Nm^3. The Environment Agency will enforce this requirement at the Environmental Permitting stage.
	Dispersion model accounts for the influence of buildings, varying terrain and varying surface roughness.	Industry standard approach.	No response required.
	Post-processing of model outputs in line with EA EP guidance (NO_X to NO_2 conversion, calculating deposition rates)	Industry standard approach.	No response required.
	Significance criteria in line with EA EP guidance, but NO_2 and PM_{10} effects also considered in line with EPUK/IAQM guidance	Industry standard approach.	No response required.
	The assessment does not consider there to be any major proposed developments that would contribute to local emissions to the extent that the baseline would change. The assessment does include nearby committed development as air quality sensitive receptors.	Confirmation of proposed emissions sources in the area should be confirmed with Council Planning Officers. Likewise, Council Planning Officers should also confirm if all new receptors that are representative of	The assessment included all nearest sensitive receptors, including worst-case receptors close to busy roads where the impacts of the proposed development would be greatest. Any committed development receptors not captured in the assessment are unlikely to experience adverse air quality effects. Should the

		local committed developments have been accounted for.	Council identify any such locations, these can be examined.
	List of limitations provided, associated with model input data. Limitations offset by conservative assumptions, including operation of the EfW for 8760 hours/year, when in reality it will have 4-5 weeks downtime/year, and emission concentrations at regulatory maxima.	Would have been helpful if anticipated emission concentrations could have been provided, based on other plant operated by the applicant. But that is of course dependent on if such comparable data exists.	Emission concentrations will be quite dependent on the fuel input to the facility, thus facilities that operate with the same technology will not necessarily have the same emissions, as they will inevitably have a different fuel input, which will be dictated by the nature of the local waste that the facility accepts, once operational (which cannot be known at this stage). It is more robust and is generally best practice to rely upon the emission limit values as has been done in the air quality assessment.
Baseline	Assessment states that no existing industrial or waste management sources have been identified that could likely affect air quality in the study area. It also states that no significant existing sources of odour have been identified in the vicinity of the proposed development, and it is assumed that no cumulative odour impacts need to be considered.	It is noted that Greencore Prepared Meals Limited have a facility close to the EfW that operates under an EP. Although it is also noted that the EP for that facility does not include set limits for emissions to air[1]. The Decision Notice for the EP2 states that dispersion modelling was not undertaken considered required for that facility by the EA. The EP also provides some reference to potential odour emissions from the site. It would have been useful for the assessment to consider this facility as cumulative source of emissions to air, even if it was just to confirm the low risk of such impacts. It is also noted that the operation of an existing anaerobic digester facility, located approximately 2km northeast of the EfW site, has led to a number of complaints with regards to odour. If complaints have been raised by receptors potentially affected by odour emissions from the EfW, then cumulative impacts may arise. DCC may be able to correlate complaints with locations close to EfW receptors.	No existing facilities were identified that were considered likely to affect air quality in any substantial way. The comments on the permit for the Greencore Prepared Meals Limited facility would appear to support this conclusion; it is not a significant source and would not contribute significantly to baseline levels of air pollutants or odour at the nearest sensitive receptors, which are a considerable distance away. As has already been stated, a *negligible risk* of impacts as a result of site's odour emissions is identified in the odour risk assessment. If the site in isolation will not have any odour impacts, there is no real risk of it contributing significantly to cumulative impacts, especially considering the distance between it and any high sensitivity receptors. Any such impacts would be the result of the other sites, in this case the anaerobic digestion facility, and thus not 'cumulative'. The odour assessment is considered robust and the presence of other odour sources would not affect its conclusions.
	The assessment notes that there is no existing monitoring data undertaken in the area. As such, background/baseline data is sourced from a number of secondary sources, as described in ES Appendix 10.1.	Standard Industry Practice.	No response required.
Identification and Evaluation of Key Impacts	Construction dust assessment identifies a low risk of impacts regarding dust soiling and human health (no ecological receptors within the zone of potential impacts).	Assessment appears to follow the guidance and assessment of impact risk seems valid on the information reported (in Appendix 10.1).	No response required.

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/617602/Permit_.pdf

[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/617603/Decision_document.pdf

	For operational impacts, screening of the stack process contributions at the point of maximum offsite impact identified that annual mean contributions to NO_2, Total Organic Carbons and some group III metals (cadmium, arsenic, lead, chromium, Manganese and nickel) could not be deemed insignificant at this stage. Screening of the stack process contributions at ecological receptors identified that all impacts are considered insignificant, in line with EA EP guidance.	Standard Industry Practice for industrial stack emissions. Note at this stage, impacts are reported at point of maximum offsite impact, which many not be (and in this instance unlikely to be) a location with sensitive exposure. It would have been useful if the assessment had included the coordinates of the maximum offsite impact.	The location of maximum impact can be inferred for annual mean impacts from the contours presented in Figure 14. The location of maximum impact for short-term impacts will vary depending on the averaging period. Coordinates can be provided if the Council considers it beneficial.
	The Predicted Environmental Concentration (PEC) (the Process Contribution from the stack, plus the ambient baseline concentration) is then reported for the pollutants that were not previously screened as insignificant. All pollutants covered by this part of the assessment are reported to have PEC that are below the EA EP guidance screening criteria	Upon first review, the PEC results reported here seem confusing. Previously the PC reported for some pollutants showed an exceedance of some of the Environmental Assessment Level as a result of the stack contribution alone. However, the PEC reported shows no exceedances and the ES Chapter 10 does not clearly explain why this occurs. ES Appendix 10.1 provides clarity. The PEC reported in ES Chapter 10 is actually based on the worst-case selected receptor, rather than the location of maximum impact. Furthermore, the Group III metals that could not be screened as insignificant at the previous stage have also been factored down by comparison with measured Group III metal monitoring data. This approach is consistent with the relevant EA EP guidance, although some discussion would have been useful in the ES Chapter 10, to avoid confusion.	The ES chapter was intended to provide a summary of the assessment and its conclusions and it appears this summarisation has resulted in an unintended lack of clarity. However, full and clear results are detailed in the technical appendix, as the latter part of the comment identifies.
	The assessment then considers the combined impact of stack emissions and road traffic emissions, after confirming that anticipated traffic impacts fall below the screening criteria given in EPUK/IAQM guidance. The assessment identifies that the combined impact of road traffic emissions and stack emissions would be negligible following EPUK/IAQM guidance and remain insignificant following the EA EP guidance.	The contribution of road traffic emissions is not quantified by detailed modelling. Instead, the assumption has been made that as the traffic impact falls beneath the most conservative screening criteria set out by EPUK/IAQM guidance (<25 two-way HGV movements per day) then the contribution of emissions associated with those flows cannot be more than negligible. The consultant assumes the top end of the negligible scale of contributions possible in the guidance (0.2 $\mu g/m^3$) and adds that contribution on to the PEC at the worst affected receptor to provide an estimate of combined road traffic and stack emissions. Whilst this is an unconventional approach, the logic does make sense and the modelling of the road traffic contribution from the operation of the EfW is unlikely	The comments acknowledges that this is an unconventional approach, but a robust one. It provides a very simple, yet robust assessment, which is considered better for the reader/reviewer as compared to having to read through pages of detail on road traffic emissions dispersion modelling, only to come to the same conclusion.

		to be any higher than the impact assumed and would not alter the conclusions of the assessment.	
	Reference is then made to the HHRA and Odour assessment, which are described in ES Appendix 10.2 and 10.3 respectively, with no significant effects reported.	ES Appendix 10.2 and ES Appendix 10.3 are reviewed separately.	No response required.
Design response and Mitigation	Refers to the appropriate levels of construction dust mitigation suggested by IAQM for the level of risk identified. Refers to ES Appendix 10.1 where the measures are listed.	In line with industry standard practice. However, there is no mention of a Construction Environmental Management Plan or Dust Management Plan within ES Chapter 10. It is recommended that commitment to the required level of dust control is secured by some means, such as planning condition.	A planning condition requiring a Construction Environmental Management Plan or Dust Management Plan would be typical for this kind of development.
	Refers to the all necessary abatement and Continuous Emissions Monitoring of stack emissions, and that no additional measures are proposed.	The necessary abatement presumably refers to the stack height determination described in ES Appendix 10.1.	The 'necessary abatement' refers to the sophisticated emissions control technology to be installed at the facility, although the stack height determination could also be considered part of the mitigation by design.
	No additional mitigation measures are suggested for odour.	Mitigation measures that aren't additional presumably relate to the odour abatement described in ES Chapter 5 and ES Appendix 10.3.	This is correct, the mitigation by design is that described in the 'Process Description' and 'Source Odour Potential' sections of the Odour Impact Assessment (Section 4) in Appendix 10.3
Environmental Statement Appendix 10.1 – Air Quality			
Introduction	Paragraph 1.1 states that the Air quality assessment described in the appendix is prepared by AQC on behalf of Project Genesis.		No response required.
Assessment Criteria	Table 2 provides Environmental Assessment Levels	It is not clear which cells footnote b and c refer to. Assume b relates to 24-hour NO_X and c to nitrogen and acid deposition Critical Loads	These assumptions are correct.
Assessment Approach	Table 4 provides receptor heights	It is noted that all ecological receptors are modelled at a height of 1.5 m. Ecological receptors are commonly modelled at a height of 0m, particularly when the habitat of concern is not woodland.	Ecological receptors have been modelled at 1.5 m above ground level to be consistent with Defra's national modelling of ecosystem impacts, i.e. this is the average height of the monitors which underpin the Concentration Based Estimated Deposition (CBED) model which generates predictions used by UK Government. The deposition velocities applied refer to a height above ground, typically 1 or 2 m, although in practice the precise height makes little difference. As such, the use of either 0 m or 1.5 m would make no difference to the conclusions of the assessment, although AQC does consider 1.5 m to be the most appropriate value to use, regardless of the 'common' approach used by other consultants.

	Paragraph 4.8 discusses the emergency generator and its infrequent use being the reason why it is not included in the assessment.	An estimate of anticipated hours of emergency operation would have been useful, as well as a description of what constitutes an emergency scenario.	The anticipated hours of operation comment has already been addressed. Emergency generators at energy from waste facilities typically only operate under the following circumstances: 1. For routine testing of the generator itself; 2. To safely shutdown the plant in the event of an unexpected loss of power; 3. If an electrical disturbance (e.g. lightning strike) were to trip the plant itself (this, in theory, should not happen, but can); and 4. Provision of parasitic load during failure of the plant turbine if there is insufficient supply from the grid (e.g. during a power cut).
	Table 5 lists the modelled emission parameters for the main EfW stack	These have been reviewed and appear reasonable. Calculated values (exit velocity and normalised flow rate) have been recalculated using the parameters provided and we calculate very similar values (any difference likely due to rounding error).	No response required.
	Table 7 lists the modelled emission parameters for the backup boiler stacks	These have been reviewed and appear reasonable. Calculated values (exit velocity and normalised flow rate) have been recalculated using the parameters provided and we calculate very similar values (any difference likely due to rounding error). Clarity should be provided as to whether the backup boiler plant will need to meet the requirements of the Medium Combustion Plant Directive.	The backup boiler will meet the emissions requirements of the Medium Combustion Plant Directive.
	Paragraph 4.17 sets out conservative assumptions made, including the modelling of the EfW in operation for 8760 hours/year, when in reality, it will be down for routine maintenance for 4-5 weeks of the year; boilers only operational for 760 hours/year, but assumed could be operational at any hour, including the worst met conditions at each receptor.	Agree that this approach is more conservative than could have modelled.	No response required.
	Paragraph 4.19 states that Albemarle meteorological station is the most representative of met conditions in the study area.	Consultation was not undertaken for agreement on the most representative met site for this assessment. However, upon review, Albemarle is likely to be the most representative source of met data available due to its proximity to the site, set back from coastal influences. Would have been useful to see a sensitivity analysis comparing at least 1 year of data from another nearby met site.	This suggested sensitivity analysis is beyond the scope of the requirements of the Environment Agency guidance that has been relied upon for much of the assessment, and is not a routine requirement of these kinds of air quality assessments. It would also be very unlikely to change the conclusions of the assessment.

	Paragraph 4.20 and Figure 5 relate to how building downwash is treated in the dispersion model.	Whilst Figure 5 does provide a useful illustration of how buildings are accounted for in the model, the inclusion of a table listing building dimensions would have made the approach more transparent. Would have been useful to see a sensitivity analysis of model output with the building downwash module turned off.	The building dimension information can be provided if the Council would consider it beneficial. With the main buildings being less than half the height of the stack, the building downwash effects within the model will have been limited, and it was not considered necessary to test a scenario without buildings. Doing so would not have affected the conclusions of the assessment
	Paragraph 4.21 describes the terrain data used to inform the dispersion model.	Resolution of terrain data considered proportionate to the assessment. Would have been useful to see a sensitivity analysis of model output with the terrain data not applied.	It was considered more robust to focus on scenarios that incorporated terrain effects, given the undulating nature of the local topography. However, models run without terrain effects would only have produced slightly different outputs, which would not have affected the conclusions of the assessment.
	Paragraph 4.22 described the variable Surface Roughness file used to inform the modelling.	Good level of detail considering varied landscape. Would have been useful to see a sensitivity analysis of model output with alternative Surface Roughness assumptions.	The analysis used the best quality and most accurate surface roughness inputs available, and it is considered that there would be little benefit to sensitivity testing with less appropriate values.
	Paragraph 4.23 described the stack height assessment, whereby no model parameters were change. Stack heights modelled between 25m and 60m at 5m intervals.	Reasonable approach.	No response required.
Baseline Conditions	Paragraph 5.2 states that a search of Defra's UK Pollutant Releas and Transfer Register was undertaken, which did not identify any significant industrial or waste management sources that are likely to affect the study area, in terms of air quality.	It is noted that Greencore Prepared Meals Limited have a facility close to the EfW that operates under an EP. Although it is also noted that the EP for that facility does not include set limits for emissions to air. The Decision Notice for the EP states that dispersion modelling was not undertaken considered required for that facility by the EA. The EP also provides some reference to potential odour emissions from the site. It would have been useful for the assessment to consider this facility as cumulative source of emissions to air, even if it was just to confirm the low risk of such impacts. It is also noted that the operation of an existing anaerobic digester facility, located approximately 2km northeast of the EfW site, has led to a number of complaints with regards to odour. If complaints have been raised by receptors potentially affected by odour emissions from the EfW, then cumulative impacts may arise. DCC may be able to correlate complaints with locations close to EfW receptors.	These comments have already been addressed above.

	Paragraph 5.5 describes the use of Defra's PCM roadside output to represent baseline conditions for NO_2, in the absence of local monitoring data. The nearest PCM road link is 2km away from the site. As there are no PCM links closer to the site, this is used to represent a conservative estimate of baseline conditions adjacent to roads close to the site.	In the absence of local NO_2 monitoring data, this is considered more conservative than using the PCM background concentration data.	No response required.
	Paragraphs 5.6 to 5.13 summarises the background concentration and flux data and the various sources where it was obtained from.	All appropriate sources of background data referred to.	No response required.
Construction Phase Impact Assessment	Paragraph 6.1 screens out construction vehicle movements based on the assumption that HGV movements will fall below the 100 two-way movements given in EPUK/IAQM guidance.	I suggest this is a relatively safe assumption given the scale of the site and works involved.	No response required.
	Paragraph 6.3 concerns the screening out of NRMM and site traffic emissions.	It is stated that the NRMM and site traffic will operate more than 400m away from any sensitive receptors. However, this measurement seems to apply to existing sensitive receptors and does not account for the committed development c.200m to the north. Despite this, we are still in agreement that NRMM and site traffic emissions will have limited impact even over this shorter distance.	The comment is correct in that the statement has failed to account for receptors within the committed development to the north, but is also correct in saying that, regardless of this omission, there is no risk of significant impacts as a result of NRMM and site traffic emissions.
	Paragraph 6.13 described summarises the various dust sensitive receptors within 350m of the site.	Again, this paragraph does not seem to account for the committed development c.200m to the north of the site. However, its inclusion would not alter the conclusion of the assessment	As above
Stack Height Testing	Paragraphs 7.1 to 7.3 describe that the stack height assessment focuses on the pollutants that could not be screened as insignificant in the first stage of the main assessment (annual mean NO_2, annual mean Total Organic Compounds, annual means for a selection of Group III metals).	Approach described is reasonable. Minor point, but stack height assessment also focused on 1-hour mean NO_2, which was screened as insignificant at the first stage of the main assessment.	This observation is correct and the report should have clarified that this short-term 1-hour mean NO_2 was included so that at least one set of short-term impacts was presented, despite it having been screened out as insignificant at the first stage of the main assessment.
	Tables 19, 20 and 21 provide analysis of stack height assessment results	Tables all seem to contain the same error – labelling of Max on Grid and Max at Sensitive Receptors are assumed to be the wrong way around. Tables currently report higher concentrations at the sensitive receptor. This contradicts the data as presented in Figures that follow each table.	The observation is correct that this is an ordering error; the first column of each of the tables should say "Max at Sensitive Receptor" for the first row of results and "Max on Grid" for the second row of results. The grid coordinates and receptor numbers of the maxima can be provided in the Council would consider it beneficial, although AQC's opinion is that these are

		It would have been useful to know the max grid coordinate and the max receptor number.	only really relevant for the stack height that has actually been taken forwards in the design.
Operational Phase Impact Assessment	Paragraph 8.6 confirms that the detailed assessment, following the screening of insignificant pollutants at the point of max offsite impact, now focuses on the worst-impacted receptor.	This particular point was not clear in ES Chapter 10	Noted.
	Table 26, 27, 28, 29, 30, 31 and 32 provides the impact and PEC for the pollutants not previously deemed insignificant.	Would have been useful to see listed which receptor is being referred to as the worst-case impact, although the contour plots provided for some pollutant do help.	This level of detail was not considered necessary, given that impacts are screened out, but can be provided if the Council would consider it beneficial.
	Figure 15 shows a contour plot for 1-hour mean NO_2	Not a big issue, but the scale for contours not particularly useful. A further band (2 – 5) may have helped?	The benefit of adding such a contour, when all of the concentrations are below the screening threshold, is unclear.
	Paragraph 8.18 describe how the Group III metals were factored down following the screening of the PC.	This particular point was not clear in ES Chapter 10. Would have been useful if this calculation could have been presented in the Appendix.	This comment is acknowledged for future reporting, although the calculation is a very simple multiplication.
	Paragraph 8.22 describes the contribution from road traffic emissions	The contribution of road traffic emissions is not quantified by detailed modelling. Instead, the assumption has been made that as the traffic impact falls beneath the most conservative screening criteria set out by EPUK/IAQM guidance (<25 two-way HGV movements per day) then the contribution of emissions associated with those flows cannot be more than negligible. The consultant assumes the top end of the negligible scale of contributions possible in the guidance (0.2 µg/m^3) and adds that contribution on to the PEC at the worst affected receptor to provide an estimate of combined road traffic and stack emissions. Whilst this is an unconventional approach, the logic does make sense and the modelling of the road traffic contribution from the operation of the EfW is unlikely to be any higher than the impact assumed and would not alter the conclusions of the assessment.	This comment has already been addressed above
Environmental Statement Chapter 14 – Amenity			
Baseline Conditions	Paragraph 14.5.8 bullet points refer to Odour Management Scheme and Dust Assessment, and another bullet refers to the odour abatement system.	None of the other air quality related documents reviewed seem to reference an Odour Management Scheme. DCC should confirm with the applicant that this is an anticipated deliverable, pre or post-planning submission. Nowhere in the air quality related deliverables are operational phase dust impacts considered. Even if such impacts are negligible without additional	An odour management plan will be a requirement of the environmental permit for the facility. The comments regarding operational dust have already been addressed.

		mitigation, I would have thought it worth a mention, given the nature of refuse derived fuel and bottom ash. The Odour Abatement System is described in some detail the ES Appendix 10.3 and ES Chapter 5.	
Identification and Evaluation of Key Impacts	Paragraph 14.6.9 refers to a Dust Management Plan for the construction phase only.	None of the other air quality related documents reviewed seem to reference a Dust Management Plan. DCC should confirm with the applicant that this is an anticipated deliverable, pre or post-planning submission. Again, nowhere in the air quality related deliverables are operational phase dust impacts considered. Even if such impacts are negligible without additional mitigation, I would have thought it worth a mention, given the nature of refuse derived fuel and bottom ash.	As has already been stated above, a planning condition requiring a Construction Environmental Management Plan or Dust Management Plan would be typical for this kind of development. The comments regarding operational dust have already been addressed.
	Paragraph 14.6.17 describes odour controls and states that the EfW will only accept waste that has already been segregated and cleaned, the building will be operated under negative pressure with the implementation of an odour management system.	This is described in more detail in the ES Appendix 10.3 and ES Chapter 5.	No response required.
Environmental Statement Appendix 10.3 – Odour Assessment			
Introduction	Paragraph 1.3 states that the odour assessment follows the IAQM's risk-based methodology	Considered appropriate given the fugitive nature of the majority of potential emissions.	No response required.
Assessment Approach	Paragraph 3.14 describes the odour sensitive receptors considered	This includes the committed developments to the north and north-northwest.	No response required.
Odour Impact Assessment	Paragraphs 4.1 to 4.5 provide a detailed description of site processes, including odour mitigation: - Delivery of waste by sealed lorry - Storage and handling of all refuse derived fuel with process building that is operated under negative pressure, with roller doors and air knives. - Treatment of internal air by odour management system, including oxidation and activated carbon, followed by a bag-house filter before treated air is released to atmosphere via a stack situated on the roof of the main building. - Deodoriser misting system will be used periodically within the building Bottom ash not expected to be odorous, but will still be stored within the odour-managed process building	Odour control measures described here and in ES Chapter 5. Measures sound comprehensive.	No response required.

	Paragraphs 4.6 to 4.11 defines the potential for odours. It is stated that the majority the refuse derived fuel is not particularly odorous in the first instance, as it has already been treated and aged before it is delivered to site. Any residual odorous materials within the waste that is fed into the incinerator will be destroyed by the combustion process	Overall Odour Source potential is defined as small. Whilst the in-built mitigation measures are comprehensive. A more precautionary approach could have been undertaken, considering odour is likely to be a key issue with local stakeholders. However, due to the other factors considered in the odour assessment (namely pathway effectiveness), a more conservative source odour potential would have given slight adverse risk at a limited number of receptors and still likely arrive at the same insignificant conclusion.	The odour source potential of small is considered appropriate given the extensive mitigation by design proposed. However, as is acknowledged in the comment, a more conservative approach would not affect the conclusions anyway.
	Paragraph 4.13 and Table 6 describe the pathway effectiveness of receptors, based on their proximity to the site and their orientation to the site, relative to predominant wind directions.	Takes into account committed development to the north and north-northwest of the site and uses met data from Albemarle met station. Majority of receptors have an effective pathway, with the nearest industrial/commercial premises and the committed development directly to the north having a moderately effective pathway.	The second paragraph of this comment should say "Majority of receptors have an **in**effective pathway".
	Paragraph 4.16 states that physical barriers would increase dispersion and reduce odour concentrations at these receptors.	Minor point, but whilst I agree the barriers will reduce odour concentrations at receptors, it will because they hinder the dispersion between source and receptor, not increase dispersion.	Barriers will typically present an obstruction to airflow, which will increase turbulence and mixing and thus increase dispersion within an air mass. But it is also agreed that they will hinder the direct transport of the pollutants to the receptors.
Environmental Statement Appendix 10.2 – Human Health Risk Assessment			
Introduction	Paragraph 1.2 states that the HHRA is based on the USEPA Human Health Risk Assessment Protocol, and uses the IRAP model.	As noted in the paragraph, this is considered appropriate by the Environment Agency, and is considered to be suitable for this assessment.	No response required.
Scope	Paragraph 2.2 states that the standard EA practice for a HHRA is to consider only PCDD and PCDFs, and that metals, acid gases and PM are adequately assessed by comparison against relevant criteria, as detailed in the AQA (Appendix 10.1).	It is noted in the Scoping Opinion Request (Paragraph 10.3.13) that the assessment would consider emissions of dioxin-like PCBs as well as dioxins and furans. However, no assessment of these substances has been undertaken. In our experience of the assessment of similar facilities, the EA has requested that these substances be included as part of a permit application, and we would consider it necessary to include these substances within the HHRA. In addition, dioxin-like PCBs are included in the BAT Reference document for Waste Incineration. From our experience, we would consider metals to present the greatest risk to human health through both carcinogenic and non-carcinogenic health effects. Polyaromatic Hydrocarbons (PAHs) can also present	Although not presented in Table 1 of the HHRA Assessment report, dioxin-like PCBs were included in the assessment. The emission rate for PCBs was determined using the Best Available Technique Associated Emission Levels (BAT-AELs) set out in the draft BAT Reference document, which provides a BAT-AEL for dioxins of 0.04 ng TEQ/Nm^3 and a BAT-AEL for dioxins plus PCBs of 0.06 ng TEQ/Nm^3. Therefore, an emission rate of 0.02 ng TEQ/Nm^3 for PCBs was used. As the fate, transport and bioaccumulation properties are not known for all PCB congeners, the USEPA approach (also commonly applied in the UK) is to use

		a risk to health on a comparable scale to dioxins and furans. We would consider the absence of these substances to cause an underestimate of the potential health effects of emissions from the facility. Furthermore, the AQA only compares metals, acid gases, PAHs and PM against ambient AQ standards, and does not consider Soil Guideline Values, dietary intake, or carcinogenic and non-carcinogenic risk. As metals and PAHs can present a significant risk to human health, we would consider it appropriate to include these within any HHRA.	a surrogate substance to represent a combination of PCBs. Aroclor 1254 is representative of higher chlorinated (i.e. greater toxicity) PCBs and was therefore used to provide a robust assessment. There is no TEQ factor available for aroclor 1254, therefore a TEQ factor of 0.1 ng TEQ/ng was used as a worst-case, as this is the highest TEQ factor defined for any PCB. This TEQ factor has been combined with the volumetric emission rate from the facility to calculate a mass emissions rate for aroclor 1254 of 1.90 x 10-9 g/s. EALs have been set for ambient concentrations of metals, and these are considered to be sufficiently protective of human health. There are no EALs for airborne concentrations of dioxins, so these must be assessed by modelling human body intake. For example, in the Decision Document for the Rivenhall Energy from Waste plant (Ref: EPR/FP3335YU/V002, dated 3 June 2020), the Environment Agency state: *"In addition to an assessment of risk from dioxins, furans and dioxin-like PCBs, the HHRAP model enables a risk assessment from human intake of a range of heavy metals. In principle, the respective environmental standards for these metals are protective of human health. It is not therefore necessary to model the human body intake."*
	Paragraph 2.3 states that ingestion of contaminated drinking water has not been considered, nor dermal routes of exposure.	Considered appropriate given the scale of the facility and the distance from the reservoirs.	No response required.
	Paragraph 2.4 states that locally caught fish is unlikely to form a substantial part of the population's diet.	This is considered appropriate, as the consumption of freshwater fish is not considered to constitute a significant proportion of protein within the UK diet.	No response required.
Assessment Approach	Paragraph 3.3 states that the maximum permissible emission rate for the sum of all dioxins and furans as 0.1 ng I-TEQ/Nm^3, as stated in the IED.	An updated BAT Reference document (BRef) for Waste Incineration (WI) was formally adopted in December 2019, and includes an updated emission rate of 0.04 ng I-TEQ/Nm^3 for the sum of all dioxins and furans, and 0.06 ng WHO-TEQ/Nm^3 for dioxins, furans and dioxin-like PCBs. The AQA used the updated emissions rates from the BRef where these are lower than in the IED, including for dioxins and furans. It is considered that the emission rate used in	An emission rate of 0.1 ng TEQ/Nm^3 was used for dioxins and furans (but not for dioxin-like PCBs, for which an emission rate of 0.02 ng TEQ/Nm^3 was used, as described above). Although the value of 0.1 ng TEQ/Nm^3 differs from that in the new BRef, the value used in the HHRA is higher and therefore worst-case. The assessment has shown that there will be no significant impacts using the higher value, and this

		the HHRA should be consistent with that used in the IED.	conclusion would not change if the HHRA were to be updated to use the emission rates from the new BRef.
	Paragraph 3.6 states that ADMS-5 dispersion model has been used.	While this model is considered appropriate for this assessment, model version number should be provided.	ADMS-5 version 5.2.
	Paragraph 3.7 states that a worst-case deposition velocity of 0.01m/s has been used for dry deposition	It is not clear on how this is considered 'worst-case', as a higher deposition rate would decrease concentration further from the stack, while a lower velocity would increase concentrations, thus affecting the point of maximum impact. Further justification should be provided on the use of a deposition velocity.	The range of 0.001 m/s to 0.1 m/s for potential deposition velocities stated in the HHRA report contains a typo and should read 0.001 m/s to 0.01 m/s. A deposition velocity of 0.01 m/s provides a worst-case by increasing deposition closer to the stack, before pollutants have had much opportunity to disperse. Although a lower deposition velocity would result in greater deposition further from the stack, the pollutants would also be able to disperse further, and thus become less concentrated, prior to deposition.
	Paragraph 3.8 states that the maximum parameters from each of the five years of meteorological data has been used for each receptor location.	This is considered to be appropriate and provide a conservative assessment.	No response required.
	Paragraph 3.10 states that the IRAP model has been used.	This model is considered appropriate for this assessment, however model version details should be provided.	IRAP-h View version 4.5.5.
	Table 2 provides details of the receptors used in this assessment	Receptor locations used are considered to be representative of points of maximum impact. It would be useful to include the coordinates of each receptor, and a number of receptors at a greater distance from the facility to allow an assessment of how quickly impacts may change with distance from the facility, and the potential impacts on receptors in the wider area away from the point of maximum impact.	The receptor coordinates can be provided if the Council would consider this beneficial. As all impacts have been shown to be insignificant at the worst-case receptors, the benefit of adding receptors further from the facility, at which impacts will also be insignificant, is unclear.
	Table 3 provides the site-specific parameters used in the assessment	The assumptions used are considered to be appropriate for this assessment, however no reference or justification has been provided for annual mean irrigation value.	Local information regarding annual mean irrigation was not available, so an average of values calculated for other sites in the UK was used.
	Paragraphs 3.22 to 3.26 set out the outputs of the IRAP model used in this assessment	For the pollutants assessed, these outputs are considered appropriate	No response required.
Assessment Criteria	Section 4 provides the assessment criteria used in this assessment.	The majority of the assessment criteria used are considered to be appropriate. Further commentary is provided below on where criteria is not considered to be appropriate.	No response required.

	Paragraphs 4.1 and 4.2 state the criteria for cancer risk used in this assessment.	The HHRAP uses a lifetime risk value of 1 in 100,000 to determine is cancer risk is considered to be acceptable. This is considered appropriate in this assessment. However, guidance published by the Chartered Institute of Water and Environmental Management use an annual risk value of 1 in 1,000,000, and this has been accepted for assessments in the UK. It is considered that both criteria should be used for a UK based assessment (although it is noted that if the lifetime risk is not exceeded, then the annual risk will not be exceeded either).	This is noted although, as correctly pointed out, assessment against a lifetime risk value of 1 in 100,000 is more robust.
	Paragraphs 4.7 and 4.8 provide the assessment criteria for infant exposure through breast milk.	While it is agreed that there is no UK assessment criteria for acceptable infant exposure, the USEPA HHRAP reports a national average background for nursing infants of 60 pg TEQ $kg^{-1}d^{-1}$ for all dioxins and furans. The COT TDI for dioxins and furans is also significantly below the assessment criteria stated for 2,3,7,8-TCDD alone. The USEPA background value and/or the COT TDI would provide a higher level of protection that the assessment criteria used. In addition, no reference has been provided to support the use of the stated assessment criteria for 2,3,7,8-TCDD. A reference should be provided.	The COT TDI relates to long-term exposure to dioxins and dioxin-like PCBs over a lifetime, and is therefore not applicable to the comparatively short period during which an infant is nursing. The COT statement on the tolerable daily intake for dioxins and dioxin-like polychlorinated biphenyls (2001) states that "*because of the long half-life, short-term exceedances of the tolerable intake are not expected to result in adverse effects*." We can provide a comparison with the USEPA background value if the Council would consider this beneficial. Gair Consulting Ltd's Waste to Energy Facility, Wheelabrator Kemsley North (WKN): Human Health Risk Assessment (2020) cites a threshold value of 50 pg-TEQ/kg/d of the congener 2,3,7,8-TCDD as being potentially harmful.
	Paragraphs 4.12 to 4.14 refer to the use of generic screening criteria from the Environment Agency.	The EA screening criteria relate to the potential change in ambient concentrations of substances emitted from a facility, and not in regard to health effects. It is therefore considered that the use of such screening criteria is not appropriate for use in this assessment.	The screening criterion of 1% was originally developed based on the likelihood of large existing sources having combined effects, with the intention of targeting mitigation where it could do most good. The criterion has subsequently been used in relation to a variety of different standards and by a number of different regulators. Ultimately it reflects a value which can be considered extremely small in relation to a standard. There is no official guidance on assessing changes to health effects but it is common practice to use the 1% criterion in HHRA assessments in the UK.
Results	Section 5 provides the results of the assessment undertaken based on the inputs and criteria discussed in pervious sections.	The results appear to be consistent based on the stated inputs and assessment criteria.	No response required.

Conclusions	Section 6 provides a summary of the conclusions of the assessment.	The conclusions are generally agreed with based on the results presented in the report; however it is not considered that the health effects should be discounted or reported as insignificant, but that health effects are unlikely to be significant on the population *as a whole.*	The conclusions (with the exception of hazard risk) are based on statistical criteria and are thus applicable to the population as a whole. The hazard quotient indicates the potential for an effect, with no adverse health effects expected for values below 1; it cannot be translated to a probability that adverse health effects will occur and is unlikely to be proportional to risk.

Conclusion

The comments provided by Aecom on the air quality and odour assessments and HHRA for the Hownsgill energy facility have been responded to where relevant. The comments are minor, and it is hoped that the responses provide sufficient clarification and explanation to resolve any further queries. The comments and suggestions do not alter the conclusions of the assessments that the impacts of the proposed development in terms of air quality, odours and human health are not significant.

Air Quality CONSULTANTS

Regulation 25 Response:
Air Quality and Odour: Land Adjacent to Hownsgill Industrial Park DM/20/03267/WAS

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Experts in air quality management & assessment

Document Control

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1 Introduction

1.1 This note addresses a Regulation 25 request from Durham County Council requesting further information on the potential cumulative air quality and odour impacts relating to the application for a proposed energy facility (herein referred to as the 'Proposed Energy Facility') at Hownsgill Industrial Park in Consett (reference DM/20/03267/WAS).

1.2 The Regulation 25 request requires consideration of cumulative air quality and odour effects relating to the following two developments:

- The Greencore food manufacturing facility (planning reference: 1/1996/1277/1113), herein referred to as the 'Greencore Facility'; and
- An Anaerobic Digester at Thomas Swan (planning reference: CMA/1/84), herein referred to as the 'Anaerobic Digestion Facility'.

1.3 It is important to note that both of these developments are operational and therefore form part of the EIA baseline and are not cumulative development. However, an analysis of the potential impacts relating to emissions of air quality and odours from these sites is provided below to address the Regulation 25 request.

1.4 The response below makes reference to two key documents submitted in support of the planning application for the Proposed Energy Facility:

- The air quality assessment technical report (report reference: J4203A/1/F2, dated: 3 November 2020), herein referred to as the 'Air Quality Assessment'; and
- The odour risk assessment report (report reference: J4203A/2/F2, dated: 20 October 2020), herein referred to as the 'Odour Assessment'.

1.5 The following sections address the potential for cumulative air quality and odour effects arising from the operation of these developments. The assessment of air quality considers both emissions to air (such as point source/combustion emissions) and fugitive dust emissions.

2 Greencore Food Manufacturing Facility

2.1 The Greencore Facility lies 200 m to the southwest of the Proposed Energy Facility and is a manufacturing process making ready meals. The site operates in accordance with an Environmental Permit issued by the Environment Agency (permit number EPR/SP37635VQ).

Emissions to Air

2.2 The Environmental Permit identifies that the Greencore Facility has 4 emissions points related to gas-fired boilers used to produce heat for the manufacturing processes. All boilers are discharged via flues at high level above the roof of the facility. As the boilers are natural gas fired, the only relevant pollutant emissions from the Greencore Facility would be nitrogen dioxide. The nearest sensitive receptors to the Greencore Facility are at Hownsgill Farm (Receptor 14 in Figure 3 of the Air Quality Assessment) which is 400 m from the Greencore Facility and dwellings at Genesis Way (Receptor 17 in Figure 3 of the Air Quality Assessment) which are over 500 m from the Greencore Facility. At these distances, taking account of the dispersion of emissions from the Greencore boilers above roof of the facility, the contribution to nitrogen dioxide concentrations will be very small and are appropriately captured in the baseline concentrations used in the Air Quality Assessment.

2.3 The assessment of emissions from the Proposed Energy Facility has been demonstrated to be negligible with respect to nitrogen dioxide (see paragraph 8.7 of the Air Quality Assessment). The assessment takes account of baseline concentrations which adequately capture the emissions from the Greencore Facility. As such, the cumulative air quality effects of the Greencore Facility and Proposed Energy Facility will be not significant.

Dust Emissions

2.4 The manufacturing processes at the Greencore Facility take place within a building and therefore fugitive emissions such as dust will be adequately controlled. The nature of the Greencore Facility for food manufacture is not conducive to dust emissions and the Environmental Permit for the facility does not include any conditions relating to control of dust or fugitive emissions, indicating there are no such emissions arising. As such, there will be no fugitive dust emissions from the Greencore Facility.

2.5 The Proposed Energy Facility has been designed to minimise the potential for any fugitive emissions by enclosing the waste reception, processing and treatment within a building, operated under negative pressure with centralised air extraction, as discussed in paragraph 4.10 of the Odour Assessment. The fugitive dust emissions from the Proposed Energy Facility will be negligible.

2.6 Overall, there will not be any fugitive dust emissions from either the Greencore Facility or the Proposed Energy Facility and as such the cumulative effects will be not significant.

Odour

2.7 The Environmental permit for the Greencore Facility includes conditions to control the release of odours from the processes and requires the facility to operate in accordance with an agreed odour management plan. It is therefore expected that through implementation of odour control measures outlined in the odour management plan, odours are adequately controlled.

2.8 The nearest high sensitivity receptors with respect to odours are at Hownsgill Farm (Receptor 7 in Figure 1 of the Odour Assessment) which is 400 m from the Greencore Facility and 600 m from the Proposed Energy Facility in an upwind direction. The nearest high sensitivity downwind receptors are at Knitsley Avenue (Receptor 5 in Figure 1 of the Odour Assessment) which are 700 m from the Greencore facility and 500 m from the Proposed Energy Facility.

2.9 The Odour Assessment for the Proposed Energy Facility describes that odours will be controlled by keeping the waste reception and processing areas enclosed in a building, kept under negative pressure and extract air treated with an odour control unit before discharge at high level. This will essentially eliminate odours from the process. The residual odour effects are demonstrated to be negligible and therefore insignificant (see Table 7 and paragraph 4.23 of the Odour Assessment). There are industrial receptors to the north of the Proposed Energy Facility (Receptors 8,9 and 10 in Figure 1 of the Odour Assessment), but these are of low sensitivity to odours.

2.10 Overall, the odour emissions from both the Greencore Facility and the Proposed Energy Facility will be well controlled and there is a considerable distance to the nearest high sensitivity receptors. As such, the cumulative odour effects will be not significant.

3 Thomas Swan Anaerobic Digestion Facility

3.1 The Anaerobic Digestion Facility lies 2 km to the northeast of the Proposed Energy Facility. Online records indicate the Anaerobic Digestion Facility was granted an Environmental Permit issued by the Environment Agency in November 2020 (permit number EPR/BT0561IZ) however the permit is yet to be published online by Defra so cannot be reviewed.

Emissions to Air

3.2 The Anaerobic Digestion Facility may operate gas engines used to generate energy from the biogas produced at the facility. Although use of such engines will result in emissions to air, the Anaerobic Digestion Facility is 2 km away from the Proposed Energy Facility which is a considerable distance over which the contributions of the Anaerobic Digestion Facility and Proposed Energy Facility to pollutant concentrations will be very small. There is no air quality assessment for the Anaerobic Digestion Facility with which to identify the contribution of emissions from the facility to local air quality, but as the Anaerobic Digestion Facility is upwind of Consett, it is likely to be very small at the mid-point between the facilities (around 1 km from either site) which is approximately at Delves Lane in Consett. Figures 14 and 15 of the Air Quality Assessment show that pollutant concentrations as a result of the Proposed Energy Facility will be very small at Delves Lane, and the assessment is clear that the air quality impacts are negligible and effects are not significant. The assessment takes account of baseline conditions which, although not specifically including emissions from the Anaerobic Digestion Facility, have sufficient headroom to any significant effects to allow for these emissions.

3.3 Overall, considering the negligible air quality impacts of the Proposed Energy Facility and the considerable distance between the facility and the Anaerobic Digestion Facility, the cumulative air quality effects of the Anaerobic Digestion Facility and Proposed Energy Facility will be not significant.

Dust Emissions

3.4 The Anaerobic Digestion Facility may be a source of fugitive dust emissions from storage and handling of feedstocks and solid digestate. However, images on the Anaerobic Digestion Facility show feedstock and digestate stores to be bunded and covered to minimise emissions. Any fugitive dust emissions will only affect locations in proximity to the Anaerobic Digestion Facility and the distance between the facility and the Proposed Energy Facility (2 km) is sufficiently far to eliminate any potential for cumulative effects. As discussed above, the Proposed Energy Facility has been designed to prevent fugitive emissions.

3.5 Overall, there will not be any fugitive dust emissions from the Proposed Energy Facility and there is a considerable distance to the Anaerobic Digestion Facility such that the cumulative effects will be not significant.

Odour

3.6 It is understood that the Anaerobic Digestion Facility is a source of odours that have generated localised complaints. The location and nature of the complaints are not known, but it is probable that these are from residents and businesses closest to the Anaerobic Digestion Facility. It is not probable that odours from the Anaerobic Digestion Facility will affect receptors close to the Proposed Energy Facility due to the considerable distance between the two sites (2 km).

3.7 The Odour Assessment for the Proposed Energy Facility describes that odours will be well controlled by keeping the waste reception and processing areas enclosed in a building, kept under negative pressure and extract air treated with an odour control unit before discharge at high level. This will essentially eliminate odours from the process. The residual odour effects are demonstrated to be negligible and therefore insignificant (see Table 7 and paragraph 4.23 of the Odour Assessment). As a result, irrespective of any odours from the Anaerobic Digestion Facility the Proposed Energy Facility will not cause local odour effects so the cumulative odour effects will be not significant.

4 Conclusion

4.1 In conclusion, the Air Quality Assessment and Odour Assessment submitted in support of the application for the Proposed Energy Facility robustly demonstrate that the air quality and odour effects of the construction and operation of the Proposed Energy Facility will be not significant. The assessments intrinsically consider baseline conditions, which includes the Greencore Facility and Anaerobic Digestion Facility. Nonetheless, the analysis provided in this note demonstrates that the cumulative air quality and odour effects resulting from the operation of the Proposed Energy Facility, Greencore Facility and Anaerobic Digestion Facility will be not significant.