

Notice of request for more information

The Environmental Permitting (England & Wales) Regulations 2016

Fortum Carlisle Limited

Company Secretary

24 Old Queen Street

London

SW1H 9HP

Application number: EPR/SP3609BX/A001

The Environment Agency, in exercise of its powers under paragraph 4 of Part 1 of Schedule 5 of the above Regulations, requires you to provide the information detailed in the attached schedule. The information is required in order to determine your application for a permit duly made on 12/06/2020.

Send the information to either the email or postal address below by 19/08/2021. If we do not receive this information by the date specified then we may treat your application as having been withdrawn or it may be refused. If this happens you may lose your application fee.

Email address:

[REDACTED]

Postal address:

[REDACTED]

Name	Date
[REDACTED]	24/06/2021

Authorised on behalf of the Environment Agency

Notes

These notes do not form part of this notice.

Please note that we charge £1,200 where we have to send a third or subsequent information notice in relation to the same issue. We consider this to be the first notice on the issues covered in this notice.

The notes in italics that appear after information requests in the attached schedule do not form part of the notice. The notes are intended to assist you in providing a full response.

Schedule

Diesel generators

1. Confirm the number of stand-by diesel generators and their sizes.

Best Available Techniques

2. Provide an updated BAT assessment to include consideration of the following options for BAT 20:
 - b) Reduction of the flue-gas flow
 - e) Low-temperature flue-gas heat exchangers
 - i) Dry bottom ash handling

Background:

BAT: In order to increase energy efficiency of the incineration plant, BAT is to use an appropriate combination of techniques as listed in BAT 20 of the BREF.

Feedstock sampling

3. Confirm how sampling for analysis will be completed.
4. Provide clarity on how bulky waste EWC 20 03 07 will be managed to ensure suitable size for the grate.

Abatement/bat

5. SCR by catalytic filter bags:
 - i. Confirm if you considered their use in consideration of the BAT C – specifically for BAT 29 and BAT 30.
 - ii. If not please carry out an assessment and provide justification/clarification as to why they are not appropriate.
6. Provide justification for not using direct boiler injection for acid gas abatement (BAT).
7. Confirm that no by-pass will be used in the process.

Background:

Section 2.6.4 of the Supporting Information states: The bag filter will not require a flue gas bypass station ... This statement does not say that a bypass of the bag filter or other emissions abatement systems will not be used at other times.

8. Clarify the difference in lime and hydrated lime, specifically their handling, use and effectiveness.

Background:

In the Supporting Document, Section 2.1.1, Table 3 - Raw materials and their effect on the environment it states: lime will be used as a primary raw material, Lime is injected and removed with the APC residues at the bag and hydrated lime is the reagent to be used in the back-up acid gas abatement system.

FPP – Quarantine area

9. Provide a contingency plan for the quarantine area in the event it is required for a hot load while it is being used for an unacceptable load.

Background:

In the Schedule 5 response dated 11/6/21 question 4 states:

The quarantine area will be used for the temporary storage of any wastes identified as unacceptable, prior to transfer off-site. This may include hot loads. Any waste placed within the quarantine area will be removed in a timely manner (i.e. within 24 hours), so it is highly unlikely for a situation to arise whereby the quarantine area is already 'full' and another load needs to be placed within the quarantine area. Any hot loads would be placed in a location within the quarantine area which is away from any loads which have already been transferred to this area.

10. Provide a contingency plan for the quarantine area in the event it is required for two unacceptable loads, the response provided as part of your to the Schedule 5 dated 31/3/2021 is not acceptable.

Background:

in the unlikely event that there is more than one pile of waste within the Facility (for example, two loads requiring storage in the quarantine area), a separation distance of 6 m between the two piles will be maintained as good practice, unless the size of each waste pile is too large to accommodate this.

11. Provide details of the timescales unacceptable waste will remain onsite.
12. Provide an updated plan showing the receptors within 1km of the installation Appendix A12 provided as part of your response to the Schedule 5 dated 31/3/2021 only extends 920m to the east of the site.

Water Quality

13. Please provide more information on the discharge to sewer and the associated risk assessment:
- Demonstrating that the discharge to sewer for treatment is BAT and that it provides an equivalent level of treatment and protection of the environment as if the effluent were treated on-site, in accordance with Article 15 (1) of the Industrial Emissions Directive.
 - Information on the quality of the effluent discharged to sewer and the daily volume. This should include consideration of the boiler treatment water chemicals noted in Table 3 of the Supporting Information and any other potential pollutants (see tables listing hazardous chemicals and elements here: <https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit>).
 - Please include your risk assessment, you may use the H1 screening tool to complete this assessment. The relevant risk assessment for a discharge containing hazardous chemicals and elements is detailed here: <https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit> (This methodology includes the use of sewage treatment reduction factors).
 - We understand that you may need to estimate the quality and volume of the effluent. Justification for these should be provided and any permit would include an Improvement Condition to monitor the effluent once the process is operational, followed by an update to the H1 assessment.

Water Management Systems

14. As part of your response to question 15 of the schedule 5 dated 11/05/21 Appendix H is referenced, however this has not been provide. Please provide this.
15. Provide a consolidated document to clarify the water systems and drainage system on site:
- Clearly describe all drainage systems on site taking into consideration where the water is sourced from, its use on site and how it leaves site.
 - Provide details of the source of the surface water that will go to Cargo Beck and confirm whether it is only 'uncontaminated' surface water going to Cargo Beck.
 - Confirm the clean surface water system and dirty effluent water are totally separate systems.
 - Provide clarify on whether the systems are sealed or contained.
 - Use consistent wording to distinguish between sources type and routes of all waters.
 - Provide clarity on what the Make Up and Neutralisation Tanks are.

Background:

There are number of supporting documents detailing onsite water use and drainage onsite:

- *Supporting Information*

- *Heat and Power Plan which states:* It is proposed that heat will be transferred to a closed hot water circuit via a heat exchanger and supplied to consumers through a pre-insulated buried *hot water pipeline, before being returned to the Facility for reheating.*
- *Fire Prevention Plan*
- *Environmental Permit application – Non-Technical Summary*
- *Human Risk assessment*

There are also a number of water descriptions/names throughout these documents leaving it confusing to follow their source, onsite use and exit offsite.

16. Dirty water pits:

- Clarify if they are covered tanks or open pits.
- Provide clarify how they will be maintained if they are underground tanks.
- Confirm they will meet containment conditions included in permit:

All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

Background:

In the Schedule 5 received on 11/5/2021 the response to question 20 of states:

‘underground tanks for dirty process waters (the ‘dirty water pit’);’

‘Regular preventative maintenance of the drainage systems at the site will ensure that its integrity is maintained throughout the lifetime of the Facility. Preventative maintenance will include for periodically emptying collector pits and undertaking visual inspections of the concrete or other material from which the pits are constructed. Should it be identified that damage has occurred to the structure, repairs will be undertaken to ensure that integrity is suitably maintained.’

17. Assess risk and describe measures that will be used to minimise odour from process water.

Background: The Odour Management Plan does not consider odour arising from water used to wash down the waste reception hall and waste bunker.

Storage Handling

18. Provide clarity on the storage details of all raw materials:

- Confirm details of all materials brought onsite in bulk and then transferred to silos
- Confirm details of all materials brought onsite in containers
- Confirm the secondary containment of both of the above

Background:

Some of the sections of your supporting documents are unclear specifically:

- *Section 1.4 the facility*
- *Section 2.1.2 Reagent storage*
- *2.1.3.2 NOx abatement*

Compliance

19. Provide information as follows to show whether Fortum Carlisle limited will be able to comply with the conditions of an Environmental Permit should one be issued:

- Details of emission limit breaches or incidents such as fires at other incinerator plants operated by Fortum that have resulted in formal or informal enforcement action.
- Details of breaches of emission or breaches of other licences or regulations.
- Measures that were put in place to prevent re-occurrence and whether those measures were successful at preventing re-occurrence.
- Measures that will be put in place to prevent occurrence of such breaches or incidents at the Kingmoor Energy Recovery Facility.

Please refer to our guidance at:

Odour & Odour Management Plan (OMP)

20. Provide clarification on the documentation and acceptance procedures that will be in place in relation to odorous waste.
21. Clarify: 1. Whether you intend to receive odorous wastes. 2. Whether all waste deliveries will be suspended in the event of an odour issue.
22. Provide a definition of what 'Where appropriate' means in relation to the OMP

Background:

Section 4.2 Control Measures states: Where appropriate, documented pre-acceptance and acceptance procedures for incoming waste will be developed to ensure that 'unacceptable' wastes (that may potentially be odorous) are not delivered to the Facility.

Section 4.2.1 Receipt and Management of Wastes states: Where appropriate, prior to periods of planned maintenance, waste stored within the waste bunker will be 'run-down' so that it does not contain significant quantities of old and potentially odorous material during planned shutdown period...

23. Provide clarification:
 - i. when an air abatement system utilising carbon filters will be used to ensure negative pressure and reduction of odour.

And

- ii. what is meant by 'deemed necessary' in the following statement in Section 4.2.1 Receipt and Management of Wastes:

An air extraction and abatement system utilising carbon filters may be used if deemed necessary to maintain negative pressure and reduce odour within the waste bunker area

24. Please amend the OMP to include:
 - i. the frequency of walkover surveys
 - ii. Whether staff not already exposed to odour will carry out olfactory surveys.
 - iii. Whether doors will be kept closed during normal operation to ensure minimal risk of escape of odours, other than as required for receipt of waste and other operational requirements (these should be specified).
 - iv. The waste acceptance criteria should specify that no malodorous materials will be accepted, and should set out suitable criteria for determining what constitutes a "malodorous" material.

25. Provide clarification and evidence as to what is meant by the following statement:

High tolerance to odour/less annoyance due to industrial nature of premises

Background:

Appendix B of the Odour Management Plan considers the Kingmoor Park Central, Kingmoor Park East, Kingmoor Park South, Kingstown Industrial Estate and Kingmoor Park Industrial Estate to all have a "high tolerance to odour". This ignores the presence of commercial and office properties, leisure, educational and childcare locations. Also some or many of the industries are non-odorous industries or industries where the odour may be considered pleasant. Some handle food such as the nearby Lakeland Bake. No evidence has been provided that such locations can be considered to have a "high tolerance to odour".

26. Confirm whether the reception hall doors are self-closing and if the time they are open will be minimised.

Noise

27. Provide clarification what is meant by in the 'event that low noise equipment is not deemed necessary'.
28. Provide details of the procedure(s) that will be 'in place in the event that low noise equipment is not deemed necessary'.
29. Please clarify what is meant by 'normal industry practice' in relation to the appropriate location of the equipment and buildings.
30. In relation to Mobile plants on site please provide a details of what broadband type noise reversing alarm are.
31. Provide comment on whether any amendments are required to noise assessment (considering withdrawn application to make a non-material amendment to planning permission). *Within this non-material amendment the representative value is based on three surveys carried out between 7/11/2019 and 11/11/2019.*
 - i. Why was this application made and then withdrawn?
 - ii. Are any changes required (e.g. noise or design of the plant)?

The information within the noise assessment is inconsistent to the non-material amendments applied for (then later withdrawn).

32. Provide clarification for following aspects within noise assessment that have been identified within representations
 - i. Baseline survey
 - ii. Industrial activity
 - iii. Traffic
 - iv. Uncertainty of any measurement device
 - v. Classification / characterisation of locality type
 - vi. Corrections with regard to the tonality, impulsivity and intermittency
 - vii. Any other potential sources of noise interference.
33. Provide a detailed inventory of noise mitigation measures proposed to be employed – including acoustic design.
34. Confirm inconsistency with report referencing for R18.1107/DRK and R19.1109/DK.
The Noise Assessment Review report number appears to refer to more than one document (R18.1107/DRK & R19.1109/DK). R19.1109/DK was included in withdrawn non material amendment.
35. Confirm inconsistency with plant referencing (external plant) in section 1.3
Missing items x and xi.
36. Confirm inconsistency with 1.6
Version numbers do not appear to correspond to diagrams in application.
Provide figure 2 in greater resolution.
37. Comment on date of guidance used (later version available).
Planning practice guidance referenced (4.1.5) is 6 March 2014 but planning practice guidance at the time of application was 1 October 2019.
38. Provide further details for the locations of measurements undertaken and justify how these are representative for locations suitable for the assessment.
No indication that potential measurement locations have been identified (or identified as best for the assessment) as required by BS 4142

39. Receptor location

- Justify that receptor P3 grid reference is appropriate – *representation received states that location used is by a road and not representative of the receptor.*
- Justify that receptor P1 and P2 grid references are appropriate – *representation received states that location used is within a woodland and not representative of Lowry Hill.*
- Justify that receptor R2 grid references are appropriate – *representation received states that 4 locations have been used at differing distances to proposed installation.*
- Confirm single location for R2 or provide justification for the data provided in application. *Multiple locations for receptor R2 are shown - so location used is unknown.*
- Justify residential receptors assessed. *Representation received states that numerous residential receptors have been missed.*
- Provide a justification for the receptors used. *Representation received states that the reasons for selection of local receptors has not been provided.*

40. Provide clarification for which baseline survey is being referred to. *Representation received stating it is unclear whether the locations of the monitoring positions in section 3.12 refer to the “latest sound survey” in section 3.11 or the sound survey in table 3.12*

41. Provide clarification on tables 25 – 36 – where were measurements were undertaken?

Representation states that the location information in some of the results tables is inconsistent / not possible to know whether the measurements were made from Lowry Hill or Cargo Road. [Location: Lowry Hill Road, Carlisle ...Data: Baseline Sound Survey: Position 3 – Cargo Road].

42. Provide units of measurement for wind speed in Appendix 2.

this data is not confirmed in the report.

43. Provide conclusion of ground attenuation effects and how it might affect the noise measurements. *Provide justification for the correct ground effect value used.*

44. Clarify the headings in table 3.2 (1 day, 1 night, 2 day, 2 night) – *representation received that this is not clear and could mean 2 days in current reference.*

Representation also questions number of measurements shown in statistical summary table does not correspond to results table – confirm where the “Total number of values” and “Number of binned values” is derived from. Provide justification for binned values.

45. Please provide a justification for time used and under-representative claim. *Representation received referring to values being statistically analysed as unclear – e.g. refers to maximum night-time level as 52 (P1) but a higher value exists in appendix 2.*

It is unclear what the mean value corresponds to / how this has been calculated.

46. Section 5.2.11 – ecological receptors has used commercial assessment. Provide clarification on this aspect.

47. Provide clarification / justification for the following:-

- Provide further detail on HGV movement, including the duration (time) spent within site perimeter. HGV recorded at 103 dB(A) ~ 20 per hour. *It does not, however, state how long the noise assessment has assumed that each HGV will remain on site for.*
- Predictive noise from HGVs stated as 103dB. *Please confirm if this includes noise from delivery of waste. (BAT ref ~ Waste Incineration – noise from delivery of waste range from 104-109DB(A))*
- Appendix 3 lists fan stack noise as 95 dB(A) – above the BAT ref for chimney noise of 84-85 dB.
- Appendix 3 does not cover noise from energy transformation facility – aspect covered in BAT ref.
- Noise from disposal of residues – *one source identified as 108 dB (front loader for slag handling) appears greater than indicative noise in BATref. Confirm if this value is Sound Power Level (SWL) or Sound Pressure Level (SPL).*

48. Provide further clarification on frequency of noise level checks. *Currently stated as 'noise level checks may be carried out regularly in operational areas'.* Provide further detail on "regularly" – and detail how any increases identified will be addressed.
49. Provide layout plans and elevations of the EfW that were used in the noise model in a readable and detailed form.
50. Provide further detail on doors, including commitment for self-closing / fast closing as per EPR 5.01. *Section 2.4.7 states that doors will be closed when not in use to prevent noise emissions but requires additional detail / clarification.*
51. Provide reference / details of source data used for SRI values provided in table 5.1 in section 5.1.3.
52. Confirm details for assumption of 5dB lower at night time than day time operation, and how this will be achieved. *What measures will achieve this reduction?*
53. Provide further clarification by layout diagram for the heights used in section 5.2.3
54. Confirm version number for CadnaA noise prediction modelling software used.
55. Provide clarification why the silencers on top of the boiler hall have not been considered. *Section 5.2.3 considers the height of boiler hall, but does not consider silencers on top of this.*
56. Provide further detail to show how location of buildings and screenings have been considered (BAT37), and techniques employed in order to minimise and reduce noise.
57. Provide additional information on employment of plant optimisation. Currently it is stated that this will be employed where appropriate – further detail of where this will be employed.
58. Provide detail on noisy activities with commitment that these will not be carried out at night where possible. *The mitigation strategy does not limit noisy operations to daytime.*

Other

59. Provide details on the maximum storage time of the bunker
60. Confirm that 250,000 tonnes per annum is the maximum capacity of the Installation
61. Clarify and provide details on what the Raw Water H.E is and where it fits into the process.
62. Clarify and provide details on what the driers are, specifically:
 - i. Where they fit into the process
 - ii. Their energy consumption – has this been included in your energy assessment.
 - iii. Their monitoring and maintenance regimes.

Annex: Further detail relating to question 24. These aspects should be justified.

i. Baseline survey

Prevailing weather conditions.

Background sound can be significantly affected by meteorological conditions, particularly where the main sources of residual sound are remote from the assessment location(s).” (BS4142:2014 8.1.4 Note 3). No sensitivity analysis (showing how different met conditions can influence impact) have been made for weather conditions.

No justification to show assessment performed at suitable met conditions. (Model assumes 10 degC and 70% humidity.

Representation received highlights tests as being carried out from Thursday 7th to Monday 9th June 2019 & weather data that follows is dated 7/11/2019 to 11/11/2019. Confirm any data gathered that was not used in the survey, and reasons why.

Provide clarification for the location of weather data used, and its appropriateness for all receptor locations. Provide clarification for any precipitation (which can make a difference to noise levels) and its impact at any sites given localised nature.

Night time measurements

The night time measurements minimums for LA90 at P1, P2 & P3 in the background survey are in keeping with description of “typical” quiet / suburban area but a recent BSW Saw Mills Noise Assessment at P3 for Cargo Road used a figure of 37 dB(a). This should be consistent.

Appendix 1 of the NAR defines rural night-time background noise as between 20 dB(a) and 40 dB(a). The Background Sound Survey in appendix 2 of the NAR records night-time minimum at P3 Cargo Road (NW) as 37 dB(a). Night-time minimum for P1 Lowry Hill Road is recorded at 36 dB(a), whereas night-time minimum for P2 Lowry Hill Road is recorded at 30 dB(a).

Provide clarification for the predicted maximum night-time levels for receptors Cargo and Lowry Hill of 37-42dB and 32-37dB which exceed limits for existing LA90 and LAeq (planning condition 25 for construction phase and operational life of the site) as highlighted in representation.

Noise assessment comparison

In a recent noise assessment for the nearby BSW sawmill plant, LA90 of 37 dB(a) was used for background noise level. This was measured at a grid reference equivalent to at the location to the R1 Cargo beck site 650m northwest of the Application Site.

Representation highlights a representative level ought to account for the range of background sound levels and ought not automatically to be assumed to be either the minimum or modal value. It appears that it has been assumed that the median or most common statistical value is most appropriate.

Provide a justification to Note 1 of sub clause 8.1.4 of BS 4142:2014+A1:2019 [Note 1 : To obtain a representative background sound level a series of either sequential or disaggregated measurements should be carried out for the period(s) of interest, possibly on more than one occasion. A representative level should account for the range of background sound levels and should not automatically be assumed to be either the minimum or modal value].

ii. Industrial activity

Since May 2016 the area has undergone significant change therefore sound data may no longer reflect the sound levels within the areas identified. Consideration should be made for cumulative noise from Kingmoor Park industrial estate (three commercial receptors listed in section 2.5 of the Noise Assessment Review), a training centre (Gen 2 Engineering & Technology Training Ltd), a Cheerleading and Gymnastics Academy, a Football Coaching facility, BSW Timber Carlisle Mill and Mercedes Showroom).

Provide a justification relating to industrial activity in the locality within noise assessment.

iii. Traffic

There is no data provided about traffic during the noise survey.

Provide a justification for traffic considerations within the survey

iv. **Uncertainty of any measurement device**

Surveys carried out have not taken into account uncertainty; e.g. the risk of tolerances in predictions, measurements and other variables.

Provide assessment of appropriate measurement methods, instruments and metrics.

Provide calibration date of all equipment (including for recording weather conditions) used during the survey.

Provide calibration certification numbers in instrumentation table (paragraphs 4.33 and 4.34)

Provide clarification for data and time synchronisation. Representation received stating that evidence has not been provided for data and time validation.

v. **Classification / characterisation of locality type**

The report has not taken into account the character of the area (as required in the Cumbria Minerals and Waste Local Plan). BS4142:2014 emphasises that the response to sound is subjective and therefore factors such as the character of a neighbourhood and or local attitudes to the source of the sound can also significantly affect the impact and therefore should be considered as part of the assessment. For example the character of a suburban neighbourhood will be affected by sensitive receptors such as a school or nature reserve.

Provide further justification for appropriate classification / characterisations used.

vi. **Corrections with regard to the tonality, impulsivity and intermittency of the predicted noise**

To determine whether there will be tonal or impulsive issues. The developer is also required to provide a rating level (L_Ar, T_r) under BS4142:2014. There is no evidence for a rating level (L_Ar, T_r).

Provide evidence that expected noise will not include low frequency noise.

Justify +5dB penalty correction used.

Representation received stating that many of the noise sound sources are, by nature, intermittent (e.g. safety valve, HGV noise, doors) and no information is given as to how "intermittency" has been considered in assessment or mitigation.

Review noise mitigation strategy to ensure it considers noise from tonal, impulse & intermittency sources adequately in order to prevent the character of noise from being a nuisance.

- 6 dB for tonality,
- 9 dB for impulsivity,
- 3 dB for intermittency
- 3 dB for other sound characteristics.

Provide further detail on frequency and impact from safety valves (testing and operation).

vii. **Any other potential sources of noise interference.**

Potential interference, including wind and rain, birdsong, and passers-by should be taken into account. The assessment doesn't appear to have considered this (relevant considering receptors are located in woodland and places popular for walkers). There is no indication that an assessment of an appropriate background level has been made in accordance with Note 1 of sub clause 8.1.4 of BS 4142. Clause 4 of BS 4142 says: a) identify and understand all the sounds that can be heard, and identify their source.

Detail any potential sources of interference (background noise sources) identified during surveys (such as 07/11/19) or provide further detail of the variances shown. Daytime noise results show variation but no detail relating to this. Tables 1 – 36 (appendix 2) require observations to be included.