

Dealt with by: Environmental Health

Our Ref: SMD/2024/0055

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Date: 9th December 2024

MEMORANDUM: PLANNING CONSULTATION
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LOCATION

Land South OF Cellarhead Substation and West of Rownall Road , Wetley Rocks , Staffordshire

PROPOSED DEVELOPMENT

Erection of a Flexible Energy Facility, associated works, landscaping and habitat creation.

Potential Areas Of Environmental Concern.

1. Construction Impacts (Condition)
2. Unexpected Contamination (Condition)
3. Artificial Lighting (Condition)
4. Plant and Machinery Noise (Condition)
5. Battey Leakage (condition)

General Comments –

Noise:

Applicant's Noise Assessment - A noise assessment has been submitted to address the potential noise impacts of the proposed development. The assessment has been undertaken by an acoustics specialist company Ian Sharland Ltd ref. M5485 dated – 25th January 2024. Supplementary information has been supplied to support the assessment and address Environmental Health queries two memos dated 8th October 2024, memo dated 5th December and by emails dated 24th and 29th October 2024.

Background Sound Levels -The assessment was undertaken measurements at 3 sites over 4 days to determine that representative background sound levels La90 at all Noise Sensitive Receptors as daytime (07:00-23:00) 35dBA and night time (23:00-07:00) 27dBA. These are relatively low levels of sound and if complied with should ensure amenity of NSRs is protected, assuming a 13dB attenuation for an open window, this would equate to internal levels during the night as 14dB and day being approx. 22dB.

It is worth noting these levels are well below BS8233:2014 Guidance on Sound insulation for Buildings and World Health Organisation Community Noise guideline Levels which are in summary 30db night time bedroom and 35db daytime living area.

Predicted Noise Levels – The proposed plant, sound power levels and required attenuation is set out in section 4.1 to 4.5, manufacturer specifications have been requested to support advice set out in 4.2 and 4.3, the acoustician has not been able to provide these. The distances to the

NSRs are set out in sections 4.6 to 4.7. Noise mapping software iNoiseV2020 has been used to determine noise impact levels at Ground and Upper floor of NSRs. The predicted noise impact levels at the façade of the NSRs are set out in are reported in 4.10. These levels appear relatively low and if considered with an open window (-13dB) then internal sound levels will not impact residential amenity. But it is important to note the Environmental Health Department cannot validate the accuracy of the software used. Any inaccuracies reported will be the responsibility of the applicant, acoustician, installers and operators to address if permission is granted.

BS4142:2014+A1:2019; Rating Commercial Noise – A correction for tonality of +2dB has been selected by the acoustician. This correction when added to the highest facade level results in a rating level for day and night. The rating levels for day and night show -9db below selected background during the day and no exceedance at night.

Uncertainty: The acoustician has determined the uncertainty level as +/- 3dB. Revised advice in memo dated 8th October 2024 amends this to +3/-4dB.

Low Frequency Noise (LFN) – The addendum to the assessment date 8th October 2024 determines that LFN concerns can be addressed through BS4142 rating assessment or through mutually agreed condition in compliance with University of Salford NANR45 procedure. It is not clear how this could be accommodated or enforced. A mutually agreed condition would be required and could cause significant compliance measurements costs to the operator if numerous complaints of LFN were received. All measurements to assess LFN should be 'c' weighted.

Summary Environmental Health Opinion on Applicant Acoustic Submission – The advice contained with the Acoustic Design Specification, addendums and emails predict no adverse impact to amenity and that the noise impacts of the development would not exceed pre-existing background noise levels. The applicant has submitted maximum day and nighttime noise rating limits which should be made a condition of development if permission is granted. There is no room for error in the predicted night time rating levels so acoustician involvement from the outset would be crucial to ensure appropriate plant and attenuation is selected and is low noise. In addition there should be a requirement to conduct pre-completion compliance testing. An additional condition should be agreed and imposed to take account of any LFN impacts post development but the practicality and cost of this is a concern. The lack of information on plant acoustic specification is a concern as is the potential that other BESS schemes may compromise the enforceability any condition imposed by the LPA. If upon completion the BESS scheme is not complaint with the condition then responsibility for compliance will be on the operator.

Objector's Noise critique – A critique of the applicant's noise assessment has been submitted undertaken by Acoustics Environment 25th July 2024, the applicant's acoustician who has responded in the addendum memos. The critique raises concerns re. use and application of BS4142:2014, acoustic correction, LFN, use of BS8233:2014 and considerations of WHO noise Guidelines.

BS4142:2014Methods for Rating and Assessing Industrial and commercial sound – the objector raises concerns in how the applicant has used and applied this standard under different points.

(i) Survey of ambient and background sound levels – The critique raises concerns with wind speed levels and duration of monitoring when background sound levels were established. The applicant has explained their position in addendum memo dated 8th October. The background levels reported are low and if noise levels from the BESS do not exceed these then local residential amenity should be protected. Background sound level data has been provided.

(ii)Acoustic Feature Corrections – The objector raises concerns re. only +2db acoustic correction in sections 3.13 – 3.15 given the amount of noise producing plant and likelihood of hums and buzzes. 3.12 also raises concern that there is no correction for intermittency. The use of 1/3

octave informative method may be insufficient to identify audibility of tones. In response the applicant defends +2db position but indicates a condition could address these concerns using a rating value as a limit. Any design or operation of the site would be required to be compliant with these rating levels.

(iii)Uncertainty – The objector raises concerns about the validity of the +3db level proposed by the applicant given there is no details on acoustic or attenuation specification. The applicant has responded to this with an amended +3/-4db correction.

BS8233: The critique criticises the use of BS8233:2014 to show amenity is protected. It argues that BS8233 is not an appropriate rating tool for introduction of new noise sources as it takes no account for the adverse impacts to existing acoustic amenity.

WHO Guidelines – the objector refers to WHO Guidelines for community noise and highlights the impact of LFN in areas where there are low background sound levels. The objector raises concern that A weighted predictions are insufficient to determine LFN and C-weighting should be used. The applicant proposes a agreed LFN condition to be agreed but this could prove complicated and costly to the operator.

Prediction of Facility Noise – The objector raise concerns re. –

Verification of manufacturers sound power data;
Lack of in-situ verification for predictions provided;
Verification of distances between source and receptor;
Predictive modelling software;
Directionality of sound;
Atmospheric absorption;
Prominence of tones;
Meteorological conditions;
Type of noise source – area or point.

Additionally critique disputes Environmental Health use of background sound levels in planning conditions. Environmental Health response is – our standard condition is extracted from RIAMs but a condition is proposed below is based on the reported background sound levels and an acoustic correction to set a fixed rating limit as proposed by the applicant. The noise rating submitted and a compliance test should be imposed if permission is granted.

Summary Environmental Health Opinion on Objector Critique – the objector disputes the validity of the applicant's assessment on a broad range of points. Ultimately in our opinion what remains outstanding after the applicant's response to the critique is the concerns about the acoustic correction, the level of uncertainty due to the fact no actual plant or machinery has been agreed and the potential for LFN to be caused. The lack of acoustic specification on plant proposed or an in-situ assessment contributes to this uncertainty. The critique disputes the robustness of the assessment, application of criteria. The objector also questions the use of background sound levels in any condition, an alternative is proposed.

Environmental Health Comments –

Applicant's and objector's submissions – Both submissions argue equally for and against the development as outlined above. There are conditions which can address many of the noise concerns in the critique but it does raise valid concerns which might be difficult to address if they are not or cannot be addressed during the plant selection, installation and attenuation phases of the development. Both submissions provide grounds for approval or refusal.

Predicted Noise Impact – the predicted noise impacts according the applicant are low and if

these predictions are accurate then there should be no adverse impact to amenity. But if there are errors in the acoustic correction or uncertainty then the proposed rating would be exceeded, there could be excessive exceedance, potentially causing impacts to neighbour amenity and a breach to any condition relating to the applicant's own predicted rating values. The cost of achieving compliance could be high. Would the applicant be willing or financially able to replace expensive but noisy plant to achieve compliance?

Cumulative Impact of BESS Schemes in Locality- There are currently 8 ongoing applications, permissions and appeals relating to BESS schemes in the area of Cellarhead substation. Two have been granted permission but are not yet operating. The noise impacts from BESS schemes is currently a relatively unknown. The amount of land being devoted to what essentially will be industrial operations has the potential to change the sound environment of this rural area. At the time of writing a new application has been submitted SMD/2024/0423 at land associated with Greenfields Thorney Edge Road, Bagnall, the boundary of this site is approx. 350m from the boundary of this site under consideration. These applications if both granted permission would place properties known as Platts Farm, Field View Farm and Far Little Waste Farm between two BESS sites and potentially adversely impacted by both. It would further compromise and complicate how any proposed noise limiting condition could be enforced in the future especially at these properties.

Acoustic Correction - The predicted noise levels are low but there is an uncertainty in the type of noise which might be emitted e.g tonal nature, intermittency as plant begins operation during low background times of the evening and night, the number of fans suddenly starting up in the evening when background noise levels are low in the evening and night. The applicant's acoustician has advised they have been involved in other sites and the tonal emissions were modest and limited to the sub-station which justifies their +2db correction (no data has been provided to support this advice). The objector's critique disputes the modest +2db correction. We are also concerned with the modest +2db correction. If this is found to be too low upon installation then remediation to ensure compliance with the proposed condition could prove costly. An assessment of an operating BESS site in a similar location would have been beneficial to demonstrate and address concerns raised.

Low Frequency Noise – There is no evidence to support the concern that low frequency noise might be caused by the development, but there is also no evidence to prove it will not be caused. There is a risk that given the amount of plant on site and the low background sound levels (no masking sound) that LFN could be caused. The proposal to address this through a condition could cause significant complication and cost to the applicant while if caused could be a significant issue for local residential amenity. The lack of an assessment on an in-situ site does cause a gap in our understanding of how the site would operate acoustically.

Subjective Observation: An evening site visit was made to a BESS scheme in the Waterswallows area of Buxton. The noise emissions observed were very low at the boundary but this site is in a commercial industrial area with relatively high sound levels so noise from the BESS was readily masked. No record of complaint has been received against that development.

Nuisance (Construction): Conditions advised.

Lighting: Condition advised.

Contamination: Unexpected contamination and battery leakage conditions are advised.

Recommendation

The Environmental Health Department have been provided with two acoustic submissions. Both submissions have been undertaken by qualified acousticians. These submissions offer different views on the proposal. Based on the applicant's submission and additional memos no adverse

noise impact is predicted. But the objectors acoustician disputes this finding for a number of reasons questioning the robustness of the assessment, unknown acoustic specification and the potential for LFN given the type of plant and machinery being installed in this rural area.

The fact this type of development is new and the acoustic impacts to a rural area unknown, does complicate the situation. The additional concern for Environmental Health is that there are a relatively large number of BESS schemes planned for this area, some already permitted. This has the potential to cause an industrial hum in an area which currently experiences low background sound levels.

Conditions are advised below if permission is granted.

Proposed Conditions if Approved

1. Construction and Environmental Management Plan:

No phase of the development hereby permitted shall take place except for works of site clearance and demolition until a Construction and Environmental Management Plan for that phase of the site has been submitted to and approved in writing by the Local Planning Authority, which shall include the following details:-

- I. the hours of work, which shall not exceed the following: Construction and associated deliveries to the site shall not take place outside 08:00 to 18:00 hours Mondays to Fridays, and 08:00 to 13:00 hours on Saturdays, nor at any time on Sundays or Bank Holiday;
- II. the method and duration of any pile driving operations (including expected starting date and completion date);
- III. pile driving shall not take place outside 09:00 to 16:00 hours Mondays to Fridays, nor at any time on Saturdays, Sundays or Bank Holidays;
- IV. the arrangements for prior notification to the occupiers of potentially affected properties;
- V. the responsible person (e.g. site manager / office) who could be contacted in the event of complaint;
- VI. a scheme to minimise dust emissions arising from construction activities on the site.
- VII. a scheme for recycling/disposal of waste resulting from the construction works;
- VIII. the parking of vehicles of site operatives and visitors;
- IX. the loading and unloading of plant and materials;
- X. the storage of plant and materials used in constructing the development;
- XI. the erection and maintenance of security hoarding including decorative displays and facilities for public viewing, where appropriate;
- XII. details of measures to protect the public footpaths and amenity of users of the public

footpaths crossing the site during the construction works,

- XIII. any waste material associated with the demolition or construction shall not be burnt on site but shall be kept securely for removal to prevent escape into the environment,
- XIV. the details of any generator/s to be used on site. They should be sufficiently attenuated so that any noise generated shall be inaudible inside any nearby noise sensitive premise,
- XV. during construction/demolition phases amplified music and/or radios shall not be audible beyond the site boundary.

All works shall be carried out in accordance with the approved details. Any alteration to this Plan shall be approved in writing by the Local Planning Authority prior to commencement of the alteration.

Reason: *To protect the amenities of the area amenity of local residents and that of the surrounding area from noise disturbance.*

2. Report of Unexpected Contamination

In the event that contamination is found is any time when carrying out the approved development are is found at any time when carrying out the approved development it must be reported in writing immediately to the Local Planning Authority. Development should not commence further until an initial investigation and risk assessment has been completed in accordance with a scheme to be agreed by the Local Planning Authority to assess the nature and extent of any contamination on the site. If the initial site risk assessment indicates that potential risks exists to any identified receptors, development shall not commence until a detailed remediation scheme to bring the site to a condition suitable for the intended use by removing unacceptable risks to human health, buildings and other property and the natural and historical environment has been prepared, and is subject to the approval in writing of the Local Planning Authority.

Reason *To ensure that the proposed development meets the requirements of the National Planning Policy Framework in that all potential risks to human health, controlled waters and wider environment are known and where necessary dealt with via remediation and or management of those risks.*

3. BS4142 Limit on external noise levels produced by fixed external plant (To be agreed)

Proposed Condition – In consideration of the applicant's noise assessment and additional information supplied

(i) The rating level of sound emitted from any fixed plant and/or machinery associated with the development shall not exceed L_{Aeq} 35dB between the hours of 07.00–23.00 (measured over 15 minute at the nearest sound-sensitive premises) and shall not exceed L_{Aeq} 27 dB between 23.00–07.00 (measured over 15 minute at the nearest sound-sensitive premises). All measurements shall be made in accordance with the methodology of BS4142 (2014 + A1:2019) (Methods for rating and assessing industrial and commercial sound) and/or its subsequent amendments.

Where access to the nearest sound-sensitive property is not possible, measurements shall be

undertaken at an appropriate location and corrected to establish the noise levels at the nearest sound-sensitive property.

Any deviations from the time interval stipulated above shall be agreed upon in writing with the local planning authority.

(ii) Prior to first use a compliance test should be undertaken by the operator to demonstrate compliance with the required rating noise levels at the properties listed in section 4.10 of the submitted acoustic design specification Ian Sharland Limited M5485 dated 25/1/24. The scheme hereby approved shall not commence operation until compliance is shown in writing and approved by the LPA.

4. Proposed Low Frequency Noise Condition(Final Draft To Be Agreed)

(i) Prior to first use the operator shall undertake a low frequency noise assessment at all noise sensitive receptors as listed in the submitted Acoustic Design Specification ref. M5485 in compliance with the "Criterion curve for assessment of low frequency noise" within the University of Salford "Procedure for the assessment of low frequency noise complaints" guide. Where exceedance to the criterion curve is determined a scheme for compliance should be submitted for approval by the LPA? Once approved the compliance scheme shall be completed in full within 21 days.

(ii) Upon complaint and reasonable request by the Local Planning Authority, the operator shall undertake a low frequency noise assessment at noise sensitive receptors (as listed in the submitted Acoustic Design Specification ref. M5485) to demonstrate compliance with the "Criterion curve for assessment of low frequency noise" within the University of Salford "Procedure for the assessment of low frequency noise complaints" guide. Where exceedance to the criterion curve is determined a scheme for compliance should be submitted for approval by the LPA? Once approved the compliance scheme shall be completed in full within 21 days.

Reason (3-4):- *To safeguard the amenity of local residents and that of the surrounding area from noise disturbance.*

5. Artificial Lighting

A site specific lighting scheme should be submitted for approval. It should contain details of all artificial lighting to be installed at the site, it shall be submitted to and approved in writing by the Local Planning Authority prior to the commencement of the development. It should demonstrate that any artificial lighting incorporated into this site in connection to this application shall not increase the pre-existing illuminance or cause glare at the adjoining light sensitive locations (residential) when the light (s) is (are) in operation.

Reason: *To protect the local amenities of the local residents by reason of excess of luminance.*

6. Maintenance of Batteries

All equipment and infrastructure associated with this development must be constructed and maintained throughout the life of the development so as to prevent any discharges or spillage that may cause pollution of the surrounding land, underground strata or watercourses.

Reason: *To prevent pollution of the Environment*

Advisory Note/ Informative:

Please be aware that the responsibility for safe development and secure occupancy of the site rests with the developer.

- A Demolition or refurbishment asbestos survey and risk assessment should be carried out prior to the demolition of the existing buildings. The enforcing authority for this type of work is the Health and Safety Executive (HSE) and it is recommended that you contact them directly to discuss their requirements: <http://www.hse.gov.uk/>
- Any approved noise scheme and measurements should pay due regard to the Professional Guidance on Planning and Noise (ProPG), British Standard BS8233: Sound insulation and noise reduction for buildings (Code of Practice), BS4142:2014 + A1: 2019 Methods for rating and assessing industrial or commercial sound and/or the Building Regulations 2010 Document E or other appropriate guidance
- During any demolition and construction activities (including landscaping) the contractor shall take all reasonable steps to prevent dust formation and prevent any dust formed from leaving the site boundary.
- If required, Contamination risk assessments shall be carried out in accordance with UK policy the Land contamination risk management framework (LCRM), published by the Environment Agency <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>
 - Submission of reports should also be made to the Environment Agency for comment with regard to their remit to protect ground and surface waters from pollution and their obligations relating to contaminated land.
 - The Local Planning Authority will determine the acceptability of reports on the basis of the information made available to it. Please be aware that should a risk of harm from contamination remain post development, where the applicant had prior knowledge of the contamination, the applicant is likely to be liable under Part II (a) of the Environmental Protection Act 1990 and as such become an "appropriate person". In this event the applicant will be lawfully responsible to remove the risk posed by the contamination.
 - Equally if during any site works a pathway for any contaminant on site is created and humans, waters, property or ecological systems are exposed to this, the applicant or those acting on behalf of the applicant will be liable under part II (a) of the Environmental Protection Act 1990 if the risks are not adequately addressed during the site redevelopment.
 - During investigation and remediation works the applicant and those acting on behalf of the applicant must ensure that site workers, public property and the environment are protected against noise, dust, odour and fumes
 - The applicant is advised that should there be a requirement as part of the Remediation Strategy to treat, reuse or remove contaminated material on the site, the Environment Agency must be consulted, as these activities may need to be licensed or permitted. Contaminated materials identified for removal off site must be disposed of in an appropriately licensed landfill site.
 - Staffordshire Moorlands District Council is keen to liaise with all stakeholders involved in this application. As such, we recommend that a proposed scope of works is forwarded to the Environmental Protection Department and agreed in principle prior to site investigation works being undertaken. The Environmental Protection Department is also prepared to review draft copies of reports prior to final submission to the Planning Department in order to ensure that works undertaken are sufficient to discharge the contaminated land conditions.

Regards,

Environmental Health