

MEMORANDUM

CARBON AND SUSTAINABILITY

To: Alex Harrison
Planning and Building Control
Services

Date: 5th June 2025

From: Sophia Norfolk
Principal Environment Officer

Ext: 07547 956846

Copy to: Olivia Flint
Environment Lead

Re: **Land at Manor Farm and land north of Wraysbury Reservoir, Slough
(P/10076/013)**

Dear Alex,

Please find my comments in relation to air quality and environmental noise considerations of the scheme: Land at Manor Farm and land north of Wraysbury Reservoir, Slough (P/10076/013).

Proposal

Demolition of existing buildings and redevelopment to comprise a Data Centre (Use Class B8) and Battery Energy Storage System (BESS) with ancillary substation, offices, associated plant, emergency backup generators and associated fuel storage, landscaping, sustainable drainage systems, car and cycle parking, and new and amended vehicular and emergency access from Poyle Road and other associated works.

Background Information

The development site consists of two parcels of land. Parcel A to the north consists of a commercial/industrial area associated with concrete processing which was granted on appeal (original reasons for refusal included flood risk, impact on the green belt, harm to visual and residential amenity, insufficient information on noise and vibration, and insufficient information on traffic related impacts). Parcel B to the south consists of arable land.

Air Quality Comments

An air quality assessment has been prepared by Air Quality Consultants (Logika Group) in support of this application, dated December 2024. Prior consultation was undertaken in October 2024 whereby the approach to the operational and construction assessment was agreed. This review has been undertaken in respect to human health receptor impacts only.

The methodology outlined for both the construction and operational assessments are accepted. It is noted that in prior consultation feedback, it was requested that all generator testing arrangements are considered, as some data centre operators test generators individually, but others test groups of generators or all generators operating simultaneously for a short period once per year to replicate an emergency operating scenario. Only one testing regime has however been modelled, which is each of the 47 generators being tested for a maximum of one hour per month, with only one generator being tested at a time. This testing regime shall be secured via condition to ensure that the conclusions of the air quality assessment remain valid.

The above described testing regime results in very minor increases in NO₂, PM₁₀ and PM_{2.5} during operation. The greatest change is 1%, with the highest concentration modelled at receptors R2 (Ibbotson Court) and R9 (Bath Road) at 25.9µg/m³. This is still however far below the air quality objective and as such, is described as negligible. This is also the case for short term impacts in relation to the 200µg/m³ objective. The development's contribution towards particulate matter is also low (<0.1µg/m³) and therefore deemed negligible. These conclusions are accepted.

It is noted that the impact of an emergency operation scenario on air quality has not been considered, however it was noted at the EIA screening stage that the battery energy storage system can provide back up energy in the event of a power failure and these systems help data centre operators to reduce reliance on diesel generators. Under Section C of the EIA report it was stated that "the development will include diesel generators that will only be used if the first two power sources fail". This, in conjunction with the rarity of power outage events, suggests that emissions during emergency operations are likely to be limited. In any case, the data centre will not be permitted to operate without an environmental permit from the Environment Agency, which will require the potential impact of emergency operations to be considered in more detail.

The assessment of construction phase impacts focuses on dust emission, which concludes that risk of dust soiling is low to medium, whilst risk to human health is low. The appropriate construction mitigation outlined in Appendix A6 is expected to feature within the Construction Environment Management Plan (CEMP) which is required via condition. Construction phase vehicle emissions have been considered, however it is estimated that construction traffic will be below 25 HGVs AADT and therefore below screening criteria outlined within EPUK/IAQM guidance. This is accepted, provided that the vehicles will meet emission criteria outlined within the Low Emission Strategy.

In summary, the air quality impact at nearby receptors as a result of this development is expected to be low. The following mitigation will however be required:

Mitigation Requirements

- Electric vehicle re-charging infrastructure is stated to be provided to 17 parking spaces. These should be provided in line with table 7 of the LES Technical Report.
- A Construction Environmental Management Plan (CEMP) shall be produced and submitted to SBC for approval prior to commencement of works
- The CEMP shall include non-road mobile machinery (NRMM) controls in line with table 10 of the LES Technical Report
- All construction vehicles shall meet a minimum Euro 6/VI Emission Standard
- The generator testing regime shall be limited to one hour per month, with only one generator operating at a time, as specified within the air quality assessment.

Environmental Noise Comments

An environmental noise assessment has been prepared by Sharps Redmore (dated 12th December 2024) in support of this application.

Assessment criteria

In the absence of local guidance on acceptable noise levels, the applicant has outlined their own noise level criteria based on other planning application examples and available guidance. It should be noted that the 2dB relaxation of noise criteria applicable to the Akzo Nobel application was a bespoke agreement that is not applicable to this site, and it is expected that SBCs requirement that plant noise does not exceed the background sound level at the nearest noise sensitive receptor, is maintained.

Noise survey

The assessment is informed by a noise survey conducted between 9 and 11 July 2024 (Tuesday – Thursday), at three measurement locations which intended to represent six identified noise sensitive properties. Each monitoring position is approximately 100-200m from the represented receptor. The monitors recorded noise for a period of 34, 26 and 44.75 hours, respectively.

During the survey, the dominant noise sources were identified as overflying aircraft associated with Heathrow Airport. Average noise levels across the three monitoring sites were similar, between 66dB – 67dB LAeq16h, 56dB – 57dB LAeq8h, and 44dB LA90. Details provided within Appendix B indicate that the chosen LA90 modal value is appropriate.

Methodology

Section 4 of the report outlines the noise input assumptions and predicted noise levels. Plant noise from the site has been modelled using ‘sound plan’, with full details of the plant included, provided in Appendix C of the report. Where plant data has not been available, library data from similar sites has been used. Input assumptions have been provided, for example all plant have been assumed to operate at 100% capacity during both the day and

night, which appears to be a reasonable worst case, and considers impacts to receptors at different heights (e.g. bedrooms on first floor of residential buildings).

Section 4.4 outlines the scenarios that have been modelled. This includes data centre operations, BESS operations, and a combination of both. The data centre operation scenarios specifically include normal operations (all chillers operating, no generators), emergency operations (all chillers and all standby generators operating), and testing operations during the day time (all chillers and three generators on test). The testing schedule does not appear to have been provided, however it is noted in the air quality assessment that generators will be tested for one hour per month, with only one generator operating at one time (which will be secured via condition), therefore suggesting that the testing scenario with three generators operating together is a robust worst case approach.

It is noted in Section 4.5 that noise from ancillary plant (including the substation), has not been included due to insufficient information available, stating that based on experience, noise from this plant is insignificant. To verify this claim, the selected plant details shall be required via condition, with supporting evidence of noise level at the receptors.

Results

The predicted noise levels at the identified receptors for the above operating scenarios is provided in Table 6. When comparing with the night time background noise level limit of 44dB, normal generator operations comply with this limit, whilst emergency operations result in an exceedance of between 2dB – 16dB at receptors R1-R4 during the night, however this is expected to be an unlikely scenario. With the BESS operating in isolation, an exceedance of 2dB is experienced at R5. When the generators operate in combination with the BESS, a 2dB exceedance occurs at R5 and R6 only (although the dB figure appears to be incorrect and should be 36dB instead of 46dB – therefore this has been discounted).

It is explained in paragraph 4.7 that to minimise the impact of uncertainty from using a combination of manufacturer's data and library data, a louvred screen is proposed for the generator area, which could be replaced with an acoustic louvred screen. Since there are exceedances at R5 during the night, it is recommended that this replacement is considered, however it is noted that for this receptor, noise from the BESS is dominant. It is therefore required that a noise mitigation plan is submitted as condition, which reduces the noise impact during the night at this receptor.

Summary

In conclusion, the proposed development is expected to have a low noise impact overall, however one receptor experiences an exceedance of the background sound level during normal operations at night (R5 by 2dB) which should be mitigated.

There are no noise objections provided that the following conditions are fulfilled:

- Details of the selected plant shall be submitted, with supporting evidence of noise level at the receptors.
- Submission of a noise mitigation plan which reduces the noise impact during the night at Receptor R5.

Kind regards,

Sophia Norfolk
Principal Environment Officer