

To:
London Borough of Hillingdon
c/o Dr Ana Grossinho
Air Quality Experts Global
[by email only]

CC:
Val Beale – LB Hillingdon
Helen Kinsman, Peter Betts – Virtus Data Centres
Nick Green – Savills

Memo

Subject: Air Quality Conditions

Dear Ana,

Thanks again for making the time to speak to Helen and I yesterday. This memo provides a summary of the Applicant's thoughts in light of recent engagement on the matter of air quality conditions for the proposed four additional generators to be deployed at the existing LONDON7 data centre. As a note for context/clarity, these four additional generators and associated elements of the proposal have been informally referred to as "LONDON7.5" (as an inference to an extension to the existing LONDON7 data centre). As discussed, the Applicant will look to provide the LPA with a document which clearly defines the context and strategy of how these four proposed additional generators integrate with the existing data centres within the wider campus.

The first section of this memo relates to a revised damage cost assessment, while the second section sets out the Applicant's proposed approach to content/commitments which would be enshrined within an Emission Reduction and Management Plan to be subsequently submitted to the LPA. We would value your and the Council's feedback ahead of preparing a formal submission.

1. Environmental Damage Cost with SCR NOx Abatement

The 30-year environmental damage costs for the four generators have been revised, assuming the following:

- Generator run times and run scenarios are consistent with what has been previously prepared and submitted;
- NOx emissions from any generator operation longer than 20 minutes after starting have been assumed to be reduced by 87% to account for the expected effect of SCR abatement ("NOx scrubbers");
- Unit damage costs for "Part A – Category 3" have been used. We note the recent feedback received in relation to this assumption (and the suggestion that the "Commercial" category could be more appropriate in this instance). However it is expected that the additional four proposed generators would be required by the Environment Agency to be incorporated, via variation, to the over-arching, campus-wide environmental permit, which is for a Part A installation.

The revised 'Central Estimate' damage cost is £42,478, while the 'High Sensitivity Estimate' damage cost is £153,641. A copy of the updated calculations is attached.

2. Emission Reduction and Management Plan

- A. The Plan would be based upon a 30 year period (linked to the expected generator life cycle).
- B. At each year following commencement of operations, the collected emission monitoring data shall be submitted to the LA to verify the generators' emission performance and compare real world annual emissions with the annual emissions on which the damage cost was calculated. Any shortfall against the assumed emission performance assumed shall be calculated and submitted to the LPA no later than end of first month of year of monitoring +1.

Should the total annual emissions for NO_x and/or PM_{2.5} be higher than the accounted for in the damage cost calculations, the LA will be entitled to seek a proportionate payment by the Applicant to contribute funding towards the London Borough of Hillingdon's Local Air Quality Action Plan to further protect residents from exposure to local pollution levels. The calculations are to be based on g/s per backup generator at 5% O₂, multiplied by the total operating hours (testing + maintenance, etc.) to derive annual emission in tonnes/year which would then be valued using the damage cost calculation approach.

- C. Every 5 years from commencement of operation of the generator sets, the Applicant will undertake an evaluation of cleaner technologies available at that time, aimed at identifying progressions/developments in technology which may have applicability and relevance to reducing emissions associated with back-up power supply. The Applicant will feed back to the LPA, the findings of these evaluations, along with details of any emission reductions realised in the preceding 5 year period due to any interventions (operational or infrastructural) taken.
- D. In Year 30 of operation of the proposed development, the evaluation of cleaner technologies available at that time will be supplemented by a commitment to engage the LPA to a way forward to implementing cleaner technologies (including the scope and timeline). This will be supported by a cost benefit analysis to be undertaken by the Applicant and shared with the LPA, as well as consideration of broader sustainability principles.
- E. The Plan will include:
 - i. an emission monitoring program by the Applicant to track emissions performance during operation. This will include a commitment to agreeing a strategy and timeline for implementing corrective measures with the LPA in the event that emissions are determined to be significantly higher than the tabulated Year 0 operation emissions;
 - ii. a description of committed measures to be deployed to secure regular and proper maintenance of the generators and associated emissions abatement equipment;
 - iii. any additional requirements as per the EA permit.

Enclosed:

Air_Quality_Damage_Cost_Appraisal_Toolkit_SCR Scenario_30Year_Rev1.xlsx

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