

22nd May 2024

Our ref: T445796-01

Camden Council

Sent by email to: Rebecca.Whitehouse@camden.gov.uk



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Dear Rebecca,

RSK has reviewed the following report submitted in support of the planning application:

- Arup Laboratory Feasibility Emissions Study report 297393-ARP-REP-AQA-0.3

We have made following observations on methodology and scope:

The overall scope (baseline review of the existing formaldehyde and benzene concentrations, an assessment of the potential changes in air quality arising from the operation of the laboratory extract discharges and determination of the emission rates which will keep process contribution at less than 10% of the relevant air quality standard, long-term and short-term EALs) is accepted, though the derivation and justification for the criteria is not clear, for example in comparison with the Environment Agency's Process Contribution screening criterion in relation to risk assessment for Environmental Permits of 10% of short-term or 1% of long-term environmental standards.

The air quality policies, guidance, legislation, and standards referred to are considered appropriate, though some of those described may not be necessarily specifically relevant to laboratory emissions.

The assessment of baseline conditions is considered appropriate, although the information used is not listed in the Methodology Section 4.1. The 'pilot study' which is the source of the formaldehyde baseline estimate appears to be rather old and is not referenced and no baseline concentrations are presented for benzene.

At the time of preparing the assessment, the substances used in the laboratory and therefore pollutants likely to be emitted from the laboratory extract discharges are unknown, therefore, the assessment has considered two solvents: benzene and formaldehyde. No discussion of likely emissions or justification for the selection of these pollutants is presented, and is a key limitation of this assessment.

The model selected (ADMS 6) is considered appropriate.

No justification of the significance criteria used in the assessment is presented. Environment Agency EAL are used, but it is not clear that the laboratory will be regulated by the Environment Agency therefore these may not be directly relevant and the report does not appear to consider other sources of criteria, for example The Air Quality Standards Regulations 2010 limit value for benzene is not referenced (though it is equivalent to the EAL).

The modelled domain and selection of receptors are considered appropriate. The sensitive human receptors closest to the Proposed Development have been considered in the assessment. It is noted that as the flues are at height, a variety of heights were modelled on the façade of each receptor building to ensure the highest impact was captured. The assessor

is asked to clarify how different height for different receptors was selected in Table 4 of the assessment.

The London city meteorological data has been used in the assessment which is considered appropriate.

The buildings relevant to the assessment and can have a significant effect on the dispersion of pollutants have been included in the assessment and therefore considered appropriate.

The Applicant is asked to clarify whether any potential sources of odour will be introduced at Site and whether mitigation is proposed to address this.

The 'background' pollutant concentrations used are not included in the modelling parameters table, so it is not clear what was assumed for benzene.

The dispersion model was run with emissions of 1g/s per strobic fan to determine the annual mean, and maximum daily and 30-minute mean process contributions across the study area. The maximum predicted process contributions of pollutants for the relevant averaging periods have been used to calculate the emission rates required to achieve 10% of relevant EALs. For each scenario, the short-term (Daily and 30 minute-mean) and long-term (annual mean) impacts were compared to the EALs. The emission factor from the averaging period with the highest process contribution, and therefore worst air quality impacts was used to calculate the results. This methodology is considered acceptable.

The stated exit velocity of 32m/s seems quite high. We would ask the assessor to confirm that this is correct.

The assessor is asked to clarify whether any nearby committed or consented schemes include sources of similar or other chemical emissions which could cumulatively affect air quality have been considered within the dispersion modelling assessment.

The assessor is asked to clarify if any mitigation measures are proposed within the proposed development.

Overall Review Conclusions

The reviewer concurs with the Applicant's findings that the Proposed Development would lead to 'not significant' effects on air quality due to two strobic fans with an effective height of 8m above building height, with an exit velocity of 32m/s. The calculated maximum cumulative allowable emission rate for formaldehyde and benzene was: • 0.004g/s per strobic fan for formaldehyde, which is equivalent to an annual total of 134kg per year or 15g per hour • 0.003g/s per strobic fan for benzene, which is equivalent to an annual total of 106kg per year or 12g per hour.

The reviewer has asked for some clarifications regarding the assessment methodology proposed in connection with the assessment attributable to the Scheme.

Summary of Action Points to be Addressed Before Determination

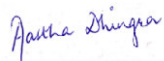
Further information on the pollutants likely to be used in and released from the laboratory is requested, so that confidence can be gained that the impacts have been robustly assessed before the planning application is consented.

We hope you will find our review and observations helpful. However, should you have any queries or wish to discuss any matters, please do not hesitate to contact us.

Yours sincerely,

For RSK Environment Limited

Prepared by:



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Reviewed by:



William Franklin
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