Air Quality Statement 1

Air Quality Neutral

Block 4, Union Park

July 2025

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HDR Consulting Limited UK
204 West George Street
Glasgow
G2 2PQ

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Phlorum Limited

Southern Office: Unit 12, Hunns Mere Way, Woodingdean, Brighton, East Sussex, BN2 6AH

T: 01273 307 167 E: info@phlorum.com W: www.phlorum.com

Air Quality Neutral

Introduction

In March 2025, Phlorum prepared an Environmental Statement (ES) Chapter (*Chapter 6 Air Quality*) for the development of a fourth data centre block (UP4) at the Union Park Data Centre Campus in Hayes (UB3 4QQ). The planning application (Ref: *75111/APP/2025/739*) was submitted to the London Borough of Hillingdon (LBH) on the 18th of March 2025.

GLA Comments

The Greater London Authority (GLA) has reviewed the Air Quality ES Chapter, and has provided several comments, recommendations and suggested Planning Conditions, associated with the scheme's compliance with London Plan[1] policy.

Comment #6 in the GLA's response states the following:

"An Air Quality Neutral Assessment was undertaken. It has been determined that the proposed development is air quality neutral. The trips generated by the Development are below the transport emissions benchmark. Development will be all electric (excluding backup generators), thus it can be considered neutral in terms of building emissions. The generators have been excluded as per the LPG, however these generators are not considered "life-safety". The exclusion of generators from Air Quality Neutral should be agreed with the LPA.

Initial Screening Rationale

Whilst the GLA agree that the development will achieve Air Quality Neutrality with respect to transport emissions, they suggest that the standby generators should have been included in the building emissions calculations.

The Air Quality ES Chapter rationalises the decision to screen out the standby generators from the calculations for the following reasons:

"Regarding emissions from standby generators, GLA's guidance states:

> *"Backup plant installed for emergency and life safety power supply, such as diesel generators, may be excluded from the calculation of predicted building emissions. Normally, it would be expected that the use of these generators for anything other than an emergency and operational testing (less than 50 hours per year) would be prevented by planning condition. The NOx and particulate matter emissions of generators used for purposes other than an emergency,*

[1] Greater London Authority. (2021). *The London Plan.*

such as selling power into the national grid, must be included in Air Quality Neutral calculations".

The generators at the Proposed Development are installed for emergencies only and have limited runtimes, so it is reasonable to exclude the generators from the Air Quality Neutral calculations.

To further support this decision, GLA's guidance also states that its Air Quality Neutral policies only relate to aspects of a development which will not be controlled by an Environmental Permit. The adjacent data centres (UP1, UP2 and UP3) are all subject to Environmental Permits issued by the Environment Agency, so it is reasonable to expect that UP4 will also be subject to this."

It is accepted that standby generators at data centres are not *directly* used for life safety systems. However, power outages at data centres can cause serious impacts on various critical infrastructure, such as data security; finance; communication networks; transportation; and healthcare systems. In September 2024, the UK Government classified data centres as "*critical national infrastructure*"[2].

Consequently, it is reasonable to consider standby generators for data centres to be as critical as systems designed specifically for life safety support. The decision to screen out the standby generators on this basis is justified.

Scope of Air Quality Statement 1

Phlorum maintains its position that the Air Quality Neutral Assessment undertaken in the ES Chapter was undertaken in line with the requirements of the GLA guidance[3].

This Air Quality Statement includes a revised assessment of building emissions (i.e. to include the standby generators) for context and completeness, before offering further justification for the screening approach undertaken in the ES Chapter.

Revised Air Quality Neutral Assessment

Revised Calculations

Appendix 6.4 of the submitted ES details the predicted standby generator emissions caused by their routine operation. For reasons listed under Table A6.4.4, the emissions per annum are calculated using conservative inputs, so are likely to tend towards a worst-case estimate.

[2] BBC (2024). *Data centres as vital as NHS and power grid, government says*. Accessible at https://www.bbc.co.uk/news/articles/c23ljy4z05mo
[3] Greater London Authority. (2023). *Air Quality Neutral Guidance.*

During routine testing, the standby generators are expected to emit approximately 178,430 grams of NO_X.annum^{-1}. The proposed data centre's gross internal area (GIA) is 18,910 m^2. As such, the standby generators emit approximately 9.44 g NO_X.m^{-2}.annum^{-1}.

The GLA guidance contains no building emissions benchmarks specifically relevant to data centres. The guidance notes that where a land-use is not presented, the assessment should consider the nearest applicable land-use type. Data centres are most closely aligned with Storage and Distribution (B8) land uses. According to the guidance, a gas boiler network[4] for a Storage and Distribution facility should have a building emissions benchmark of 1.01 g NO_X.m^{-2}.annum^{-1}. Evidently, this means the proposed data centre would not comply with Air Quality Neutral requirements for a B8 Storage and Distribution land use in the absence of mitigation, assuming the standby generators were included in the building emissions calculations.

Mitigation

The GLA guidance states that where a development does not achieve Air Quality Neutrality for either transport or building emissions the proposals should, in the first instance, identify whether design amendments and on- or off-site mitigation could enable the development to achieve the benchmarks. Due to the already extensive mitigation built into the scheme design (see Air Quality Statement 2[5] for further details), this proposed development cannot feasibly offer further mitigation to reduce emissions enough to reach the building emissions benchmark.

The guidance goes on to suggest that where a development is still unable to achieve neutrality, "*it may be possible, at the discretion of the local planning authority, to agree an offsetting payment instead*".

ES Chapter 6 includes details of a proposed air quality emissions offsetting payment to address the introduction of new emissions sources to the local area. The methodology for calculating the offsetting payment is detailed in Appendix 6.4 of the ES and has been agreed with LBH. The offsetting fee totals £79,658; a value which will be secured via a Section 106 agreement and that will be used by LBH to fund measures outlined in their Air Quality Action Plan[6].

Following this financial contribution, it is reasonable to consider the development to achieve Air Quality Neutrality, even if its standby generators are considered within the Air Quality Neutral Assessment.

[4] *Note: the guidance provides no benchmarks for liquid fuels, as all fuels which emit particulate matter (PM) are considered to not achieve Air Quality Neutrality.*
[5] Phlorum (2025). *13528D_AQ Statement 2 – Air Quality Positive*.
[6] LBH (2019). *Air Quality Action Plan 2019 – 2014*.

Limitations of the Guidance

Whilst the GLA's 2023 guidance[3] is an improvement on its superseded 2014 version, there are still some key limitations associated with its application. Of relevance to this development, the document does not provide specific guidance on how data centres should be assessed in terms of air quality neutrality.

As has already been highlighted in this Air Quality Statement, data centres are now considered by the UK Government to be critical infrastructure. Power outages at data centre facilities should therefore be considered as emergencies, so the infrastructure in place to maintain power at data centres should be exempt from the usual Air Quality Neutral requirements.

Moreover, the GLA guidance states that where a land-use is not prescribed in the list of building emissions benchmarks, the nearest applicable land-use should be used as a proxy. The most relevant land-use proxy is Storage and Distribution (B8). However, the difference between a data centre and a typical storage and distribution unit is substantial.

Data centres inherently have huge energy demands due to the need to operate numerous data servers and cooling systems non-stop (i.e. all hours of the year), whereas a storage and distribution unit would likely only need energy for lighting, heating and ventilation, and would likely only operate at full power during scheduled work hours. It is also reasonable to expect a storage and distribution unit to have a larger GIA than a data centre, due to the spatial requirements associated with receiving, storing and shipping goods.

As such, it is unreasonable to expect a data centre to be able to achieve a building emissions benchmark for a storage and distribution facility, noting that the benchmark is calculated based exclusively on energy demand and the GIA of the building(s).

Pre-Application Consultations

Irrespective of the above arguments, Phlorum notes that the GLA would consider the matter resolved if the Local Planning Authority, LBH, agreed with the decision to screen out the standby generators from the Air Quality Neutral Assessment calculations.

Although a formal EIA Scoping Request was not submitted to LBH, an Air Quality Scoping Note[7] was submitted to LBH in November 2024 to give LBH the opportunity to provide their thoughts on the assessment scope. Phlorum's Scoping Note highlighted the intention to screen out the standby generators from the building emissions calculations.

Details of LBH's scoping response are provided in ES Chapter 6. Importantly, no concerns were raised regarding this aspect of the proposed assessment scope, so it is reasonable to assume that LBH are in agreement with Phlorum's approach to screen out the standby generators from the building emissions calculations.

[7] Phlorum (2024). *Air Quality Scoping Note: Block 4 – Union Park Data Centre*. 13528A V3.

Conclusions

For the reasons explained in this Air Quality Statement, Phlorum considers the scheme to achieve Air Quality Neutrality for a development of this type. To summarise, the key reasons are as follows:

- Data centres are critical national infrastructure, so it is reasonable to consider the associated standby generators as "emergency plant", which the GLA's Air Quality Neutral guidance recommends be exempt from assessment calculations;
- Although including the standby generators in the assessment would lead to the development exceeding the building emissions benchmarks (for a B8 Storage and Distribution land use), the Applicant is offering a significant financial contribution to the Local Planning Authority, to offset incremental emissions increases. This is an approach advocated by the GLA's Air Quality Neutral guidance;
- The GLA's guidance does not offer a fair method to assess data centres, noting that these developments typically have substantial energy demands relative to their building footprints; and
- The London Borough of Hillingdon raised no concerns with Phlorum's approach to screen out the standby generators from the Air Quality Neutral assessment.

Phlorum trusts that this Air Quality Statement has sufficiently addressed the GLA's concerns, allowing them to agree that the development is complaint with London Plan Policy SI1.

Phlorum Limited

Head Office & Registered Office:
Unit 12
Hunns Mere Way
Woodingdean
Brighton
East Sussex
BN2 6AH
T: 01273 307 167

Western Office:
One Caspian Point
Pierhead Street
Cardiff Bay
Cardiff
CF10 4DQ
T: 029 2092 0820

info@phlorum.com
www.phlorum.com

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