Chapter 8: Air Quality

INTRODUCTION

8.1 The air quality chapter of the December 2023 ES has been reviewed in the context of the Amended Proposed Development to determine if the conclusions of this assessment remain valid. In addition, consideration has been given to any updates or changes to baseline conditions, policy or methodology.

8.2 The proposed amendments relevant to this ES chapter are:

- Changes to the overall massing of the proposed building to create a simpler, rectangular form with rounded corners, as well as changes to the podium (to increase the number of levels from four to six) and the amount of publicly accessible space has changed;
- Changes to the façade of the building to allow natural ventilation to occur; and
- Update to the proposed construction programme, with a revised estimated completion date of Q1 2031, from Q2 2030.

LEGISLATION, PLANNING POLICY AND GUIDANCE

8.3 In the air quality chapter of the December 2023 ES, air quality effects were assessed against the legislation, policy and guidance in place at the time of writing. Since the December 2023 ES, there has only been one relevant change to legislation, policy and guidance:

- Institute of Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction v2.2, which was published in January 2024 and replaces the old IAQM guidance document which was used in the previous assessment.

8.4 The update to the IAQM's guidance document has no significant effect on the outcome or conclusions of the construction dust risk assessment undertaken in the December 2023 ES; however, the dust emission magnitude of the earthworks would change from medium to small under the new guidance, resulting in less stringent earthworks mitigation measures being required. A worst-case scenario has therefore already been assessed in the December 2023 ES so there is no need for further consideration is this addendum.

ASSESSMENT METHODOLOGY

8.5 There are no changes to the assessment methodology set out within the air quality chapter of the December 2023 ES. Consequently, the assessment methodology and significance criteria stated in the air quality December 2023 ES chapter remain applicable and valid.

BASELINE CONDITIONS

Current Baseline Conditions

8.6 The air quality chapter of the December 2023 ES presented the local air quality monitoring data, from monitoring units deployed by the London Borough of Camden (LBC), up to the year of 2022, with data taken from the 2022 Air Quality Annual Status Report (ASR)[1]. However, since completion of the December 2023 ES a new ASR[2] has been published, containing the monitoring information for the year 2023. The 2023 concentrations show minimal changes from the 2022 concentrations at the relevant available monitoring units.

8.7 As such, the baseline conditions are similar to the conditions discussed in the air quality chapter of the December 2023 ES and therefore have not been revisited. The baseline conditions as set out within the air quality December 2023 ES chapter remain valid.

Evolution of the Baseline

8.8 There are no changes to the evolution of the baseline scenario set out within the air quality chapter of the December 2023 ES, and as such it remains the same and valid.

RECEPTORS AND RECEPTOR SENSITIVITY

8.9 No amendments have been made to the receptors considered in the air quality December 2023 ES chapter.

IMPLICATIONS OF THE PROPOSED AMENDMENTS

8.10 The Amended Proposed Development has the potential to impact on the findings of the air quality chapter of the December 2023 ES. The previous assessment considered:

- The impacts of the Proposed Development on local air quality in terms of dust and particulate matter emissions during the deconstruction and subsequent construction works;
- The emissions from road traffic generated by the construction works and the completed and occupied development;
- The air quality impacts of existing sources on future users of the Proposed Development;
- The emissions from testing and maintenance of the emergency diesel generator; and
- The air quality neutrality of the Proposed Development.

Summary of the Findings of the Air Quality December 2023 ES Chapter

8.11 An assessment of air quality impacts associated with emissions from the development-generated traffic during the construction and operational phases of the Proposed Development was undertaken using atmospheric dispersion modelling software. The dispersion modelling found a 'negligible' change in NO_2, PM_{10} and $PM_{2.5}$ concentrations at the existing sensitive receptors as a result of the Proposed Development and that the predicted concentrations were below the air quality objectives in the peak construction year (2026), as well as the first year of occupation (2030). In addition, it was demonstrated that the pollutant concentrations for relevant future users of the Proposed Development would be below the respective air quality objectives, and thus air quality conditions would be acceptable.

8.12 A qualitative assessment of the dust and particulate matter emissions during the construction period was also undertaken to identify suitable best practice mitigation measures to reduce dust emissions such that the overall effect would be 'not significant'. Furthermore, the Proposed Development was assessed as air quality neutral as it would be 'car-free' and heat and hot water for the development would be provided via an all-electric system comprising Air-Source Heat Pumps (ASHPs), supplemented by photovoltaic panels (PVs).

8.13 At the time of preparation of the December 2023 ES, there were two options being considered for life-safety power provision:

- Option 1, the inclusion of a life-safety generator at basement level; and
- Option 2, provision of dual utility power supplies from two diverse UKPN substations, and the usage of the space allocated for the life-safety generator (Option 1) for a future installation of a tenant generator.

8.14 There was insufficient information available for both options to assess the impact of the generators on air quality, so no assessment was undertaken for the air quality chapter of the December 2023 ES. It was instead proposed that the air quality impacts associated with life-safety provision would be assessed as part of a planning condition.

[1] *LBC (2023) Air Quality Annual Status Report for 2022.*

[2] *LBC (2024) Air Quality Annual Status Report for 2023.*

POTENTIAL EFFECTS

Deconstruction and Construction

8.15 Amendments to the deconstruction and construction works required to facilitate the Amended Proposed Development are set out in the **ES Addendum Volume 1, Chapter 1: Introduction, Proposed Design Amendments and ES Addendum Approach**.

8.16 The change to the construction programme leads to completion a year later than previously assessed in the air quality chapter of the December 2023 ES, which assessed a first year of occupation of 2030. However, considering an earlier assessment year is worst-case because emission factors and background concentrations reduce with each year to reflect the transition in the vehicle fleet composition towards cleaner vehicles along with the implementation of local air quality measures. The change in opening year would, therefore, have a non-material impact on modelled pollutant concentrations and would not change the conclusions of the assessment.

8.17 Velocity Transport Planning (the appointed transport consultants for the scheme) have estimated that the Proposed Amendments will lead to a minor decrease (by approximately 2 trips per day) in the HGV trips generated during the peak construction year. This minor change in the development-generated traffic will have a non-material effect on predicted concentrations and impacts modelled in the air quality December 2023 ES chapter and will not change the conclusions of the assessment.

8.18 The design changes proposed will also not affect the conclusions of the construction dust risk assessment. It is recommended that the construction dust risk assessment is updated when the Dust Management Plan (DMP) is prepared to take account of the latest version of the IAQM's guidance document.

8.19 The proposed changes to the deconstruction and construction phases will therefore not affect the air quality assessment and the conclusions of the air quality December 2023 ES chapter remain robust and valid.

Completed Development

8.20 The Proposed Amendments will lead to an increase in the overall Gross Internal Areas (GIAs), from the previous design by a total of 2,284m^2. However, this increase results in minimal changes to the total number of vehicle trips associated with the operational phase of the Amended Proposed Development. Specifically, Velocity Transport Planning have estimated that the Proposed Amendments with changes to floor areas and reduction in some retail spaces and increase in office floorspace will lead to a minor decrease (by approximately 7 trips per day) in the maximum predicted delivery and servicing trips generated during the operational phases. This minor change in the development-generated traffic will have a non-material effect on predicted concentrations and impacts modelled in the air quality chapter of the December 2023 ES and will not lead to any changes to the conclusions of the assessment.

8.21 As no changes are proposed to the energy strategy and the Amended Proposed Development will still be 'car-free', the previous Air Quality Neutral assessment undertaken as part of the December 2023 ES remains valid, and the conclusions remain the same, i.e., that the Amended Proposed Development is air quality neutral both for the building and transport emissions.

8.22 Regarding the life-safety provision, it has been confirmed that, as a result of the Proposed Amendments, the exhaust flue will be run to the roof of the building, at an approximate height of 125m above ground level. At this location, it is considered that conditions will be optimal for the dispersion of the pollutants and since there are no sensitive receptors at the same, or greater heights than the roof, it is anticipated that the impacts from the emissions of the operation of a diesel-powered life-safety generator will be negligible. However, should Option 2 be selected and a tenant generator is later installed (see section 8.13), the recommendation from the previous assessment would still apply; that the air quality impacts associated with operation of such a generator should be assessed as part of a planning condition.

8.23 The proposed changes to the completed development will therefore not affect the air quality assessment so the conclusions of the air quality December 2023 ES chapter remain robust and valid.

MITIGATION, MONITORING AND RESIDUAL EFFECTS

8.24 The mitigation measures and residual effects remain the same as presented within the air quality chapter of the December 2023 ES.

CLIMATE CHANGE

8.25 The impacts of climate change discussed in the air quality chapter of the December 2023 ES are not affected by the Proposed Amendments and remain valid.

ASSESSMENT OF THE FUTURE ENVIRONMENT

Evolution of the Baseline Scenario

8.26 There are no changes to the evolution of the baseline scenario set out within the air quality chapter of the December 2023 ES, and as such it remains the same and valid.

Cumulative Effects Assessment

8.27 There are no changes to the cumulative list, and therefore the cumulative assessment remains as set out in the 2023 ES.

8.28 As mentioned within **ES Addendum Volume 1, ES Chapter 7: Traffic and Transport**, the UK Government has announced the recommencement of the High Speed Two (HS2) rail infrastructure project, which will generate construction and operational trips around Euston Station. The associated works for the respective projects are expected to overlap, but through the development of the Euston Tower Construction Logistics Plan (CLP) and Construction Management Plan (CMP) and regular communication with HS2 (who will be separately developing a Local Traffic Management Plan), it is anticipated the cumulative effects will be kept to a minimum as far as reasonably possible. As such, no significant cumulative effects in relation to air quality are expected due to the recommencement of the HS2 project.

LIKELY SIGNIFICANT EFFECTS

8.29 The Amended Proposed Development will not result in any changes to the likely significant effects in the air quality chapter of the December 2023 ES, and as such, the likely significant effects remain the same and the December 2023 ES remains robust and valid.