James Hughes
London Borough of Haringey
Civic Centre
High Road
Wood Green
N22 8LE

26th November 2018

Technical Note – Air Quality Data Response

Dear Mr Hughes,

It is understood that a number of objections have been raised which claim the results presented in the air quality chapter for the Tottenham Hale Centre application are based upon out of date air quality data. In addition, an objection has specifically cited details of air quality concentrations presented in The Mayor of London's School Air Quality Audit Programme for Welbourne Primary School, which has been published by the GLA, and has stated that the plans do not include sufficient mitigation for such concentrations.

The results of dispersion modelling presented within the Environmental Statement (ES) Chapter 9: Air Quality have been verified using measured 2016 annual mean concentrations of nitrogen dioxide from a number of monitoring sites in the local area. At the time the modelling work was completed, these represented the latest available fully ratified data. It is acknowledged that that since this time, monitoring data for 2017 has become available. However, the use of 2016 data to verify the modelling work is still considered to represent a robust approach, as locally measured concentrations of annual mean nitrogen dioxide (as presented in the Air Quality Annual Status Report for 2017 published by LBH) have remained fairly constant in recent years. Furthermore, the use of 2017 data to verify the modelling work would be likely to result in lower predicted concentrations, as the measured concentrations at the monitoring sites used for model verification have reduced between 2016 and 2017.

Figure 5 within the Welbourne Primary School report (as referred to by the objector) shows a nitrogen dioxide concentration map around Welbourne Primary School, which includes the western extent of the application site. The annual mean concentrations in Figure 5 have been taken from the maps of modelled pollutant concentrations in the London Atmospheric Emissions Inventory (LAEI), which are published by the GLA for the whole of Greater London. The objector states that Figure 5 shows that the highest

nitrogen dioxide concentrations at the proposed development will be between 76 to 97 µg/m^3, which is above the national annual mean objective of 40 µg/m^3.

Whilst the data presented within the LAEI are useful for generalising concentration trends across a wider area, there are a number of features which make it difficult to derive detailed and specific information on local air quality conditions, and care should be taken in its interpretation. Concentrations in the LAEI are predicted at points on a coarse grid of receptors (20 m apart) and therefore may not accurately reflect the significant reduction in pollutant concentrations experienced over the first 5-10 m from the kerb of a road. In addition, these concentrations are predicted at a fixed ground floor level and it should be considered that pollutant concentrations reduce rapidly with height. The annual mean objective for nitrogen dioxide only applies at the residential units of the proposed development, which are located at higher floors (in general, the lowest residential units are on the second to third floors). Furthermore, the concentrations presented in Figure 5 are predictions for 2013; concentrations provided in the LAEI for later years (when the proposed development would be in operation), are significantly lower (concentrations in the LAEI decline approximately 25-30% between 2013 and 2020 in this area).

In summary, the dispersion modelling results presented within ES Chapter 9: Air Quality are significantly more robust than those in the LAEI concentration maps for 2013 and it is the results within ES Chapter 9: Air Quality that should be relied upon in assessing the air quality conditions for future residents of the proposed development. The model results have been verified using more recent and relevant air quality monitoring data than those used in the LAEI, and use a bespoke local dispersion model taking into account the specific locations of local sources and the locations of all the proposed residential units (including heights).

Yours Sincerely,

Dr Joshua Nunn