

Technical design note

Project name	26263_ Sovereign Business Park Huyton		
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This Technical Note is in response to comments made on 13th December 2022 from Environmental Health & Consumer Protection at Knowsley Council (KC) with regards to **Air Quality** for planning application 22/00109/FUL - DEMOLITION OF BUILDINGS AND THE ERECTION OF 2 NO. INDUSTRIAL UNITS TOGETHER WITH THE PART DEMOLITION/PART EXTENSION AND REMODELLING OF EXISTING INDUSTRIAL BUILDING TO FORM 7 NO. UNITS (USE CLASSES E (G)(II) (III), B2 AND B8) WITH ANCILLARY OFFICE SPACE. RECONFIGURATION OF CAR PARKING INCLUDING SERVICE AND VEHICULAR CIRCULATION AREAS, LANDSCAPING, INFRASTRUCTURE WORKS AND OTHER ASSOCIATED WORKS.

KC Comment	Hydrock Response
Diurnal Traffic Profile is taken from 2019, have the new developments within the area that will increase the traffic in the area been accounted?	The diurnal profile used in the model has been calculated based on DfT Road traffic statistics (TRA) dataset. TRA0307 provides 'Motor vehicle traffic distribution by time of day and day of the week on all roads, Great Britain: 2019', which shows the average hourly traffic flow in each combination of weekday and hour, relative to the average hour across the whole year for main roads in England. This was considered appropriate for use within the assessment as a pre-covid worst-case baseline year of 2019 has been utilised. Traffic data within both the 'do-minimum' and do-something' scenarios includes for the committed developments listed within Appendix A, as requested within the FOI response from KC.

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The report details that background pollutant concentrations are held at 2019 (no future improvements assumed) within model limitations however, within section 4.3.1 it details that the background concentrations from 2019 and 2023 were appropriate source of background concentrations in the dispersion model. The Defra background concentration show a decrease from 2019 to 2023 due to the future improvements assumed, however from the data provided it is confirmed that this is not correct, and the levels of pollutants have increased (apart from year of Covid). This was also confirmed by Defra.	The Air Quality Assessment presents both a main assessment (utilising 2023 traffic data, background concentrations and emission factors) presented within Section 6 of the report. The Air Quality Assessment also presents a worst-case sensitivity assessment (utilising 2023 traffic data, 2019 background concentrations and emission factors) presented within Appendix E of the report. The background concentrations utilised have been sourced from the Defra UK-Air grid squares and are considered suitable for this type of modelling assessment. The sensitivity assessment presented within Appendix E, has been undertaken as a conservative assessment assuming no improvement in background concentrations and emission factors. The results of the sensitivity assessment also conclude a negligible impact at all considered receptor locations and therefore a not significant effect.
The report details the KMBC passive diffusion tube monitoring up to 2020, however information sent by this department via email to Lauren Massingham in an FOI gave monitoring results for 2021 and 2022, why was this information not incorporated within the discussion – the results identify levels higher than discussed within the report. Results in 2021 for H2a, H2b was 41.10µg/m³, H3a, H3b was 50.16µg/m³, H5a, H5b was 40.95µg/m³, H6a, H6b was 48.81µg/m³ and H8A, H8b was 50.45µg/m³.	This data can be included within the baseline assessment, specifically Table 8 of the Air Quality Assessment; however, it should be noted that 2022 is the current year and therefore data should be treated with caution until ratified by Defra and annualised appropriately. It would not be suitable for detailed modelling. The FOI response also states that the 2022 ASR (containing 2021 data) is awaiting comments from Defra and therefore not available. It also states that the 2022 data will be assessed next year. This confirms that neither years data would be considered appropriate for use within the detailed modelling. In terms of model verification, COVID-19: Supplementary Guidance released in April 2021 states the following with regards to dispersion modelling and model verification: <i>"The use of 2019 as a verification year would be recommended under such a direction, as the most recent year available without the effects of the pandemic"</i> Based on the guidance, while 2021 and 2022 data were not presented, it would not alter the outcome of the assessment as the appropriate 2019

KC Comment	Hydrock Response
	base year was utilised to verify the model and provide a suitable sensitivity assessment.
Whilst the air quality assessment submitted with the application demonstrated that the air quality level at the proposed site will not exceed the AQO's, it did not, in our opinion, correctly assess the impact this development will have on the air quality levels at the Whitefield Lane / Cronton Road junction. Poor air quality is linked to ill health and the local authority is required to take steps to ensure that air quality meets the National Air Quality Objectives, as far as possible. In 2016, a report by the Royal College of Paediatrics and Child Health and the Royal College of Physicians estimated that 40,000 deaths per year are attributable to outdoor air pollution in the UK. Poor air quality has been linked to cancer, asthma, stroke and heart disease, diabetes, obesity, and changes linked to dementia. This application cannot be considered in isolation and we shouldn't keep adding to the pollution levels in an area which is already known to be almost on the limit for nitrogen dioxide. We believe this development will contribute to the air quality issue in the area and therefore the Environmental Health Team objects to this application.	The Air Quality Assessment methodology was agreed with KC via the FOI request. <i>"Thank you for the information in relation to the proposed Air Quality Assessment, we are in agreement with the proposals and would like you to add into the assessment the developments that have been granted through planning within the area that could add additional pressures on to air quality in the area."</i> As requested, committed developments, stated within Appendix A, were included within both the 'do-minimum' and 'do-something' scenarios. Modelled receptor locations, shown in Figure 4, covered the junction of interest and worst-case receptors were chosen due to the sensitive nature of this area. While the assessment itself considered the development in isolation, committed developments are included within the traffic data and have therefore been accounted for. The main assessment details no exceedences of the relevant AQALs at any modelled receptor location. The worst-case robust sensitivity assessment does highlight 3 receptor locations (R2, R3 and R12) where there are exceedences of the annual mean NO₂ AQAL in both the 'do-minimum' and 'do-something' scenarios. This sensitivity assessment is considered worst-case using 2023 traffic data, 2019 background concentrations and 2019 emissions. While stated that 2019 background concentrations might not reduce as expected, emissions are likely to reduce as the fleet improves. Mitigation measures are stated within the Assessment, Section 7, and implementation of these measures will help to reduce pollution levels within the area.