

SOVEREIGN INDUSTRIAL ESTATE, HUYTON, LIVERPOOL, L36 6AW

AIR QUALITY TECHNICAL RESPONSE NOTE

This technical note has been prepared in response to comments received from the Environmental Health and Consumer Protection Officer of Knowsley Council, dated 7th August 2024, regarding the submitted Air Quality Assessment prepared by Tetra Tech Limited (“Tetra Tech”), (ref: 784-B048969, dated 23rd April 2024) undertaken in support of a planning application (ref: 23/02782/FUL) for the “*Erection of 1no. retail unit (use Class E(A) with external display area and car parking and servicing arrangements. Partial demolition, reconfiguration and refurbishment of existing employment building to create 2no. industrial/warehouse buildings with ancillary offices (use Classes E(G)(III), B2 and B8) with servicing and car parking; retention and amendment of existing site accesses along with internal estate roads; 2no. substations; landscaping; and associated works*” at Sovereign Industrial Estate, Huyton, Liverpool, L36 6AW.

This is an addendum of the air quality assessment ref: 784-B048969, dated 23rd April 2024.

Tetra Tech have reviewed the comments received and responses are provided in **blue** as follows.

Knowsley Council Air Quality Comment 1

“The report discusses the Knowsley Council ASR report for 2020, indicating that the years 2021 to 2023 were affected by COVID and not at the correct levels. However, as detailed within the previous memo in relation to Air Quality, the NO₂ levels within the vicinity of the site should be discussed, as they were higher in some areas than that of the levels in 2019. H6 which was positioned closest to the development site, was one such area with increased NO₂ levels.”

Tetra Tech Response 1

2019 is considered to be the most representative to use within the air quality assessment, due to the effect the COVID-19 pandemic and associated governmental restrictions had on movement and pollutant concentrations during the pandemic and post-pandemic years 2020 to 2023. As such, the air quality assessment was undertaken using available 2019 monitoring results, DEFRA background concentrations, meteorological data and baseline traffic data.

Diffusion site H6 was relabelled as H6a, H6b in the 2021 ASR report and then it was reported as decommissioned in the 2022 ASR report. Table 1 below shows the NO₂ concentrations for this location between 2017-2021 (from the 2022 ASR which has the latest data for this location).

Table 1. Published Non-Automatic NO₂ Monitoring Concentrations at H6

Receptor	NO ₂ Published Non-Automatic Monitoring Concentrations (µg/m ³) (2022 ASR report)							
	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Road type	2017	2018	2019	2020	2021
H6 (H6a, H6b)	345878	389437	Roadside	29.2	30.0	32.1	28.6	-

As indicated by Table 1, H6 (or H6a, H6b) shows a decrease in NO₂ concentrations between 2019-2020.

Additionally, the background data presented in Table 6-2 of the air quality assessment shows the levels of NO₂ are well below the air quality objective. The table below shows the background concentrations for the years 2019 to 2028 at monitoring location H6 and selected receptors R1 to R14 locations.

Table 2. Published Background Concentrations at Selected Receptors

Receptor	NO ₂ Published Background Concentrations (µg/m ³) (Background Maps 2018)									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
R1	19.42	18.54	17.70	16.89	16.22	15.52	14.88	14.37	13.89	13.46
R2	19.42	18.54	17.70	16.89	16.22	15.52	14.88	14.37	13.89	13.46
R3	18.33	17.53	16.76	16.02	15.41	14.76	14.18	13.71	13.27	12.88
R4	16.32	15.46	14.85	14.26	13.78	13.26	12.80	12.45	12.12	11.82
R5	16.03	15.23	14.62	14.03	13.56	13.03	12.57	12.22	11.88	11.59
R6	19.42	18.54	17.70	16.89	16.22	15.52	14.88	14.37	13.89	13.46
R7	16.32	15.46	14.85	14.26	13.78	13.26	12.80	12.45	12.12	11.82
R8	16.32	15.46	14.85	14.26	13.78	13.26	12.80	12.45	12.12	11.82
R9	23.73	22.63	21.47	20.35	19.42	18.48	17.62	16.89	16.21	15.60
R10	18.15	17.24	16.46	15.72	15.11	14.46	13.88	13.43	13.00	12.61
R11	13.27	12.67	12.19	11.72	11.35	10.93	10.56	10.29	10.04	9.81
R12	19.42	18.54	17.70	16.89	16.22	15.52	14.88	14.37	13.89	13.46
R13	18.33	17.53	16.76	16.02	15.41	14.76	14.18	13.71	13.27	12.88
R14	19.42	18.54	17.70	16.89	16.22	15.52	14.88	14.37	13.89	13.46
H6	19.42	18.54	17.70	16.89	16.22	15.52	14.88	14.37	13.89	13.46

Receptors ID R1, R2, R6, R12 and R14 are the ones closest to the development site. For all the receptors and H6 monitoring site, the background concentrations continue to be below the air quality objective (AQO) for NO₂ (40 µg/m³ annual mean), throughout the years.

Additionally, the predicted modelled concentrations of NO₂ at the selected receptors are below the AQO. It should be noted that 2019 background concentrations were used to inform the assessment for all the modelled years as a worst-case scenario.

Knowsley Council Air Quality Comment 2

“The air quality assessment submitted with the application demonstrated that the air quality level at the proposed site will not exceed the AQO’s. The modelled information states the development will not have a significant effect

on the area, however it is not yet known what industries, (apart from the retail unit) will be using the buildings and therefore it is difficult to predict the correct traffic movements of the vehicles that will be in use”.

Tetra Tech Response 2

Tetra Tech has used traffic data provided by Rappor to inform the assessment.

Tetra Tech has contacted Rappor for clarification on the traffic data. Rappor has informed Tetra Tech that it is indeed unknown what type of industries will occupy the B2/B8 commercial warehouses. Additionally, Rappor confirmed that the transport assessment figures are based on typical B2/B8 warehousing uses, with trip rates agreed with the KBC Highways Officer.

Knowsley Council Air Quality Comment 3

“R6, positioned at the proposed access point, was identified as having a negligible impact in the air quality report. Environmental Health do not agree with this and believe introduction of HGV’s and cars along this access road (previously unused) will cause a localised increase in air pollution affecting residents within this area.

Tetra Tech Response 3

Tetra Tech has used the traffic data provided by Rappor to inform the assessment.

Rappor informed Tetra Tech that the proposed uses of Units A and B shall remain as B2/B8 Commercial Warehouses. Units A and B to be combined and a new access road constructed along the northwest boundary of the site to access the former warehouse (Unit D) which will necessitate the part demolition and reconfiguration of existing units, resulting in a total warehouse area of 19,588m² across all units with ancillary office uses of 604m². As such the B2/B8 industrial/warehousing element of the application shall be slightly reduced from the existing size in terms of floor space, but results in a minor increase in car movements due to the change in GFA of the office element. Therefore, the Tetra Tech air quality assessment presents a worse-case scenario in terms of traffic flows.

NO₂ predicted modelled results in 2028 with and without the development for R6 are 20.76 and 20.79 µg/m³ respectively. The percentage change in concentration relative to the air quality assessment level is less than 1%. In accordance with the impact descriptors for individual receptors shown in Table 3-1 of the air quality assessment report, adapted from Table 6.3 of the Land-Use Planning & Development Control: Planning for Air Quality, EPUK & IAQM, 2017, the long-term average concentration at this receptor falls under the ‘less than 75%’ of the air quality assessment level. It can therefore be concluded that even though there are predicted to be new traffic flows in 2028 where R6 is located, the impact following guidance is determined to be ‘negligible’.

Table 6.3: Impact descriptors for individual receptors.

Long term average Concentration at receptor in assessment year	% Change in concentration relative to Air Quality Assessment Level (AQAL)			
	1	2-5	6-10	>10
75% or less of AQAL	Negligible	Negligible	Slight	Moderate
76-94% of AQAL	Negligible	Slight	Moderate	Moderate
95-102% of AQAL	Slight	Moderate	Moderate	Substantial
103-109% of AQAL	Moderate	Moderate	Substantial	Substantial
110% or more of AQAL	Moderate	Substantial	Substantial	Substantial

Knowsley Council Air Quality Comment 4

“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.

The proposed mitigation measures identified associated with reducing air quality impact during construction are to be incorporated within the proposed construction management plan for development of the site.

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.”

Tetra Tech Response 4

Rappor informed Tetra Tech that they were not asked to address cumulative developments in terms of specific planning applications in the locality, but instead applied a TEMPRO growth factor to the 2024 base traffic surveys to obtain 2028 future year traffic flows, as agreed with the KBC highways officer.

Tetra Tech agrees that the proposed mitigation measures associated with reducing air quality impact during construction should be incorporated within the proposed construction management plan.

End of Document

Maria Lopez Vera
Senior Environmental Consultant

Matthew Smith

Associate Environmental Consultant

Nigel Mann

Director