

784-B029681

21st September 2022

Response to comments received from the Environmental Health Officer at Knowsley Council (KC). The comments were received by Tetra Tech on 9th September 2022 regarding the submitted Noise Assessment [ref 784-B029681 dated February 2022] for planning application reference 22/00109/FUL.

Tetra Tech Responses in Blue

KC Comment 1

“How have the vehicle movements been calculated? Has a transport assessment been undertaken and reviewed by the Highways Department at KMBC.”

Tetra Tech Response 1

Hourly HGV trips have been calculated based on the floorspace and class use of the proposed development (Classes E (G)(II) (III), B2 AND B8), as detailed within the supporting Transport Statement prepared by Tetra Tech, reference 784-B024793, dated 11th February 2022.

NCC Comment 2 and 3

“Will forklift trucks with reversing beepers be used within the site? If yes, the noise from these activities have not been accounted for within the assessment.”

“The car park noise data has been detailed as 54.0 dB as a maximum, however there has been no calculation regarding the number of times this will occur during the night-time works.”

Tetra Tech Response 2 and 3

Forklift truck (FLT) activities were omitted from the initial noise assessment as HGV movements, deliveries and the use of dock levellers were considered to be the most significant source of noise associated with the development. However, FLT's have been incorporated into the assessment presented below.

Car Park noise has been assessed in the initial report as an area source in the model equivalent to a noise level of 54 dB at a height of 1.5m in the centre of the car park. A maximum instantaneous noise level (e.g. door slam) have been assessed as a point source equivalent to 71.9 dB at a distance of 3m.

The results of the Noise Intrusion Assessment including all noise sources and the recommended mitigation are presented below.

Table 1.0 Daytime Noise Intrusion Levels L_{Aeq} 1 hour – Including Mitigation

Location	External L_{Aeq} Noise Level at 1 metre from façade	Internal L_{Aeq} with windows-open	Internal L_{Aeq} with windows-closed	Criteria L_{Aeq}
R01	32.5	17.5	2.5	35
R02	32.9	17.9	2.9	35
R03	39.9	24.9	9.9	35
R04	38.4	23.4	8.4	35
R05	39.4	24.4	9.4	35

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Location	External L_{Aeq} Noise Level at 1 metre from façade	Internal L_{Aeq} with windows-open	Internal L_{Aeq} with windows-closed	Criteria L_{Aeq}
R06	37.4	22.4	7.4	35
R07	38.1	23.1	8.1	35
R08	38.7	23.7	8.7	35
R09	30.6	15.6	0.6	35
R10	23.7	8.7	0.0	35
R11	21.4	6.4	0.0	35
R12	23.5	8.5	0.0	35
R13	24.3	9.3	0.0	35
R14	24.2	9.2	0.0	35
R15	26.8	11.8	0.0	35
R16	26.7	11.7	0.0	35

All values are sound pressure levels in dB re: 2×10^{-5} Pa.

Table 2.0 Night-time Noise Intrusion Levels $L_{Aeq, 15mins}$ – Including Mitigation

Location	External L_{Aeq} Noise Level at 1 metre from façade	Internal L_{Aeq} with windows-open	Internal L_{Aeq} with windows-closed	Criteria L_{Aeq}
R01	33.8	18.8	3.8	30
R02	36.6	21.6	6.6	30
R03	44.9	29.9	14.9	30
R04	43.9	28.9	13.9	30
R05	44.2	29.2	14.2	30
R06	42.4	27.4	12.4	30
R07	42.5	27.5	12.5	30
R08	42.5	27.5	12.5	30
R09	32.8	17.8	2.8	30
R10	27.4	12.4	0.0	30
R11	25.0	10.0	0.0	30
R12	26.8	11.8	0.0	30
R13	27.0	12.0	0.0	30
R14	26.8	11.8	0.0	30
R15	30.4	15.4	0.4	30
R16	29.1	14.1	0.0	30

All values are sound pressure levels in dB re: 2×10^{-5} Pa.

The assessment shown in the tables above indicates that internal L_{Aeq} noise levels from all potential noise sources, during the daytime and the night-time periods are predicted to be below the WHO/BS 8233 noise intrusion criteria at all sensitive receptors.

For indicative purposes, the daytime noise contour plot (inclusive of all potential noise sources) is presented in Figure 1.0.

Figure 1.0 Noise Contour Plot Daytime ($L_{Aeq,1hour}$) – Including Mitigation

The L_{Amax} noise level assessment for the night-time period including the recommended mitigation is presented below inclusive of the L_{Amax} noise sources detailed above, together with HGV/LGV loading/unloading events and HGV/LGV movement maximum noise levels.

Table 1.0 Night-time Noise Intrusion Levels L_{Amax} (Night-time) + Mitigation

Location	External L_{Amax} Noise Level at 1 metre from façade	Internal L_{Amax} with windows-open	Internal L_{Amax} with windows-closed	Criteria L_{Amax}
R01	42.9	27.9	12.9	45
R02	46.1	31.1	16.1	45
R03	55.5	40.5	25.5	45
R04	55.1	40.1	25.1	45
R05	55.4	40.4	25.4	45
R06	52.9	37.9	22.9	45
R07	54.4	39.4	24.4	45
R08	53.8	38.8	23.8	45
R09	40.6	25.6	10.6	45
R10	36.5	21.5	6.5	45
R11	33.2	18.2	3.2	45
R12	34.5	19.5	4.5	45

Location	External L _{Amax} Noise Level at 1 metre from façade	Internal L _{Amax} with windows-open	Internal L _{Amax} with windows-closed	Criteria L _{Amax}
R13	35	20.0	5.0	45
R14	34.8	19.8	4.8	45
R15	38.6	23.6	8.6	45
R16	37.2	22.2	7.2	45

All values are sound pressure levels in dB re: 2x 10⁻⁵ Pa.

The results presented above show that maximum internal noise levels from all potential noise sources are below the WHO/BS 8233 guidance criteria level of 45 dB at all the closest sensitive receptors. Which is an indication of a low impact.

NCC Comment 4

Noise mitigation measures include the inclusion of a 6m noise acoustic barriers and two 3.5m acoustic barriers at the side of the commercial units. Will these be acceptable with planning? Without the acoustic barriers noise from the development will have an impact on the residents to the west of the site.

Tetra Tech Response 4

As identified in the noise assessment and discussed above, mitigation measures are necessary to achieve the target noise criteria at surrounding residential properties. The use of acoustic barriers are a well-recognised means of controlling noise from a development of this class use and are considered achievable in terms of planning. The proposed barriers will be of solid construction with no gaps and have a minimum surface density of at least 10kg/m².

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