Technical Memorandum

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TITLE : Response to EHO Comments regarding proposed restriction to servicing hours

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INTRODUCTION

This Technical Memo has been prepared as a supplement to the noise impact assessment (EC19813-3 dated 3rd February 2023) for the new food to go offering at the MFG Levenshulme service station.

During a previous planning application process concerns had been raised by the EHO that noise from delivery/servicing and waste collection vehicles could have an adverse impact on the local residents and that the servicing hours be restricted to 0730-2000hrs Monday to Saturday, with no deliveries/waste collections permitted on Sundays and Bank Holidays.

The proposed hours are very restrictive, possibly unduly so, when considered in the context of the existing noise climate.

The preferred hours for the servicing/waste collection would be restricted to daytime only, 0700-2300hrs seven days a week, to ensure efficient store operations and avoid adverse noise impacts at night .It would certainly be important that the servicing/waste collections could occur each day of the week when the site is trading, this includes Sundays and Bank Holidays.

REVIEW OF CURRENT NOISE CLIMATE

EEC Ltd had undertaken a survey over the weekend of Friday 23rd July 2021 through to Monday 25th July 2021.

As indicated in our report the monitoring location measured noise levels representative of the dwellings 8-10 Cringle Road. Other dwellings around the service station would be expected to experience higher levels of traffic noise due to their proximity to the A6, that is the dominant noise source in the area.

The image below is a reproduction of Figure 1 showing the service station and the immediate surroundings and the noise measurement location.

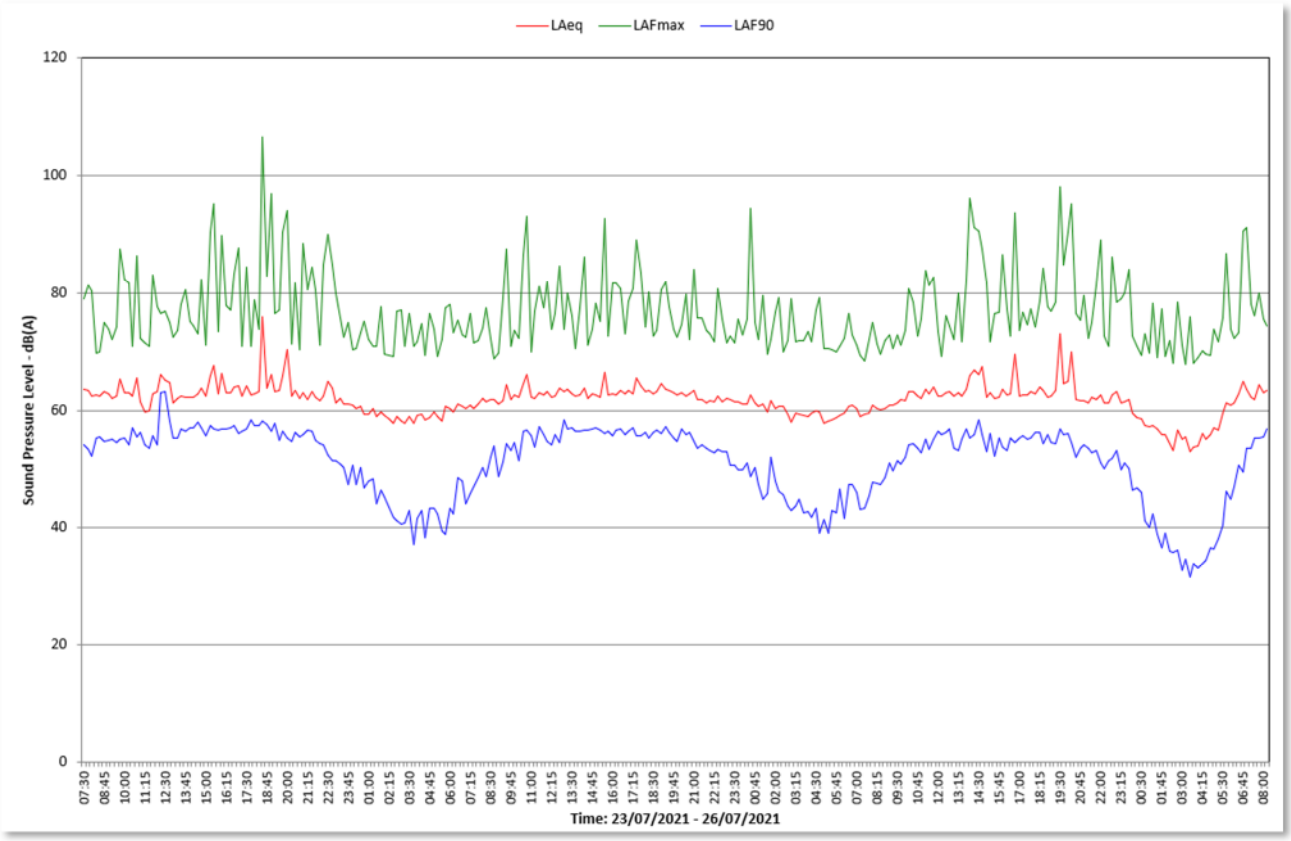
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Figure 1: Site layout and nearest dwellings

The below graph is also taken from our report and presents the noise levels measured over the weekend at the monitoring location. Full tabulated results area also included in our noise impact assessment.

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As highlighted in the EHO's comments, the noise levels do go down to relatively low levels during the quietest nighttime periods, however as can be seen in the graph the noise levels during the daytime across the weekend are consistently well above 50dB(A). As presented in our noise impact assessment that reviewed the proposed new HVAC plant for the food to go offering, the lowest representative background noise level during the daytime (0700-2300hrs) was 52dB(A) which was measured on the Sunday. Noise level on the other days of the survey were 2 -3 dB higher.

SERVICING NOISE IMPACT ASSESSEMENT

The typical servicing arrangement for the new food to go offering will consist of the following:

- Deliveries made using a 12t refrigerated lorry – expected to be no more than one on any single day
- Stock will be unloaded via a tail lift and wheeled into the Food to Go unit in metal cages typically 3 – 4 cages maximum.

There will be no more than 3 No. additional bins added for the food to go operation and this are expected to be collected in line with the current arrangements as part of existing and established operations.

To enable a noise impact assessment of the expected activities we have modelled using CadnaA software by Datakustik. Calculations are undertaken using the General Method of Calculation from ISO9613-2. Within the noise model, buildings and the immediate local topography have been accounted for

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The source data used in the model is taken from measurements of sound pressure levels of specific delivery activities made at a number of similar operations around the country. A single main HGV delivery takes up to 15-30minutes. The following data has been used in our calculation model based on a single delivery. The values include noise associated with the lorry arrival, manoeuvring into position on the forecourt, unloading via a tail lift and the departure of the lorry. The noise levels assume that the refrigeration unit on the unit will not be operational and that only white noise reversing alarms would be used:

- Food to go typical delivery operation- 91.7dB(A) Sound power level $L_{eq,1hour}$/63.7dB(A) at 10m sound pressure level $L_{eq,1hour}$;
- Max Noise Levels (door slam/cage movements) – 74dB(A) at 10m L_{max}

The following images present the results of the CadnaA model for a delivery to the service station. This is consistent with the current permitted daytime deliveries over a BS4142 reference assessment period of 1 hour.

The results of the model indicate the properties most affected by noise from the delivery servicing operation are the dwellings of 8-10 Cringle Road. The specific noise level including the arrival, unloading and departure of the lorry will be:

- Overall noise level 51 dB $L_{Aeq,}$ for the unloading
- A maximum noise level from door slam/cage movement 56 dB L_{Amax}

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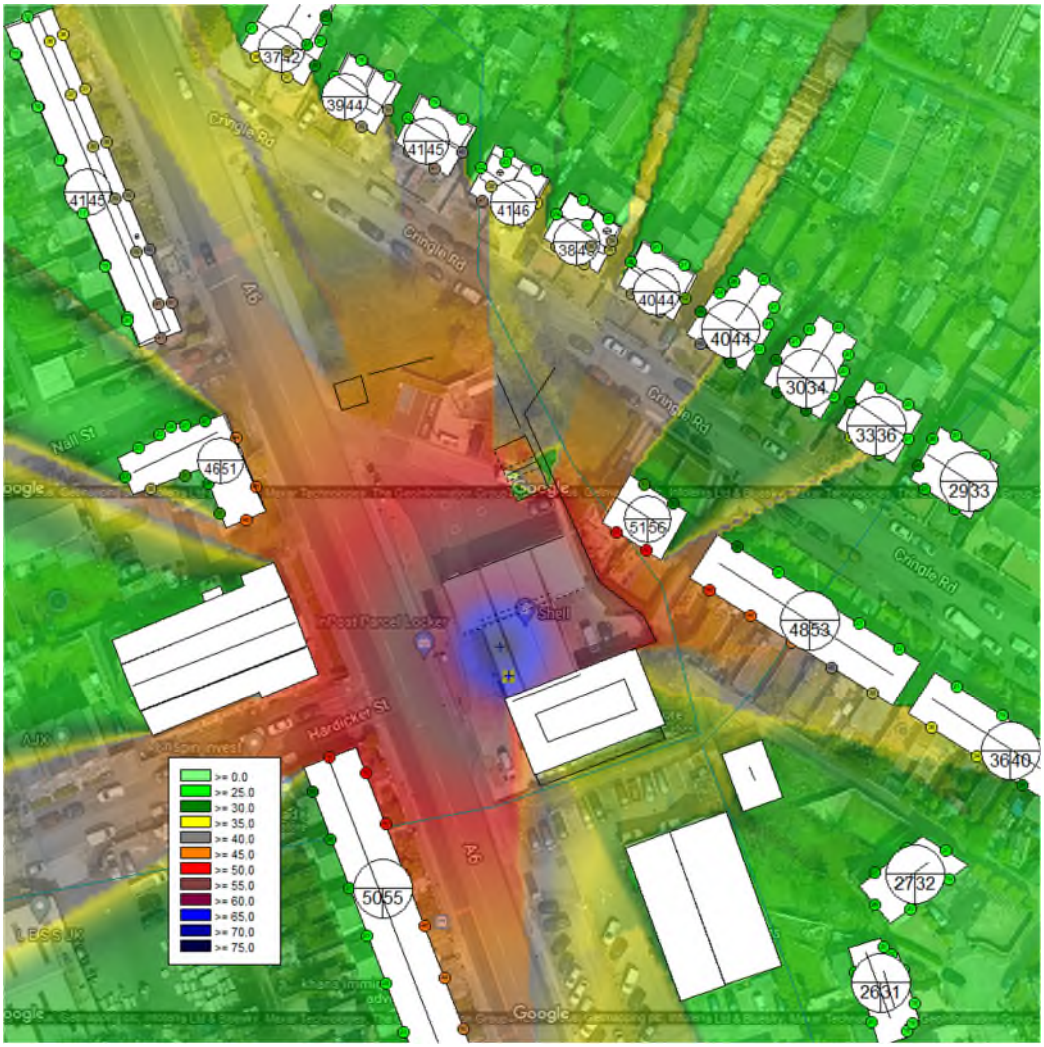


Figure 2: Specific noise level and maximum noise level for a single delivery

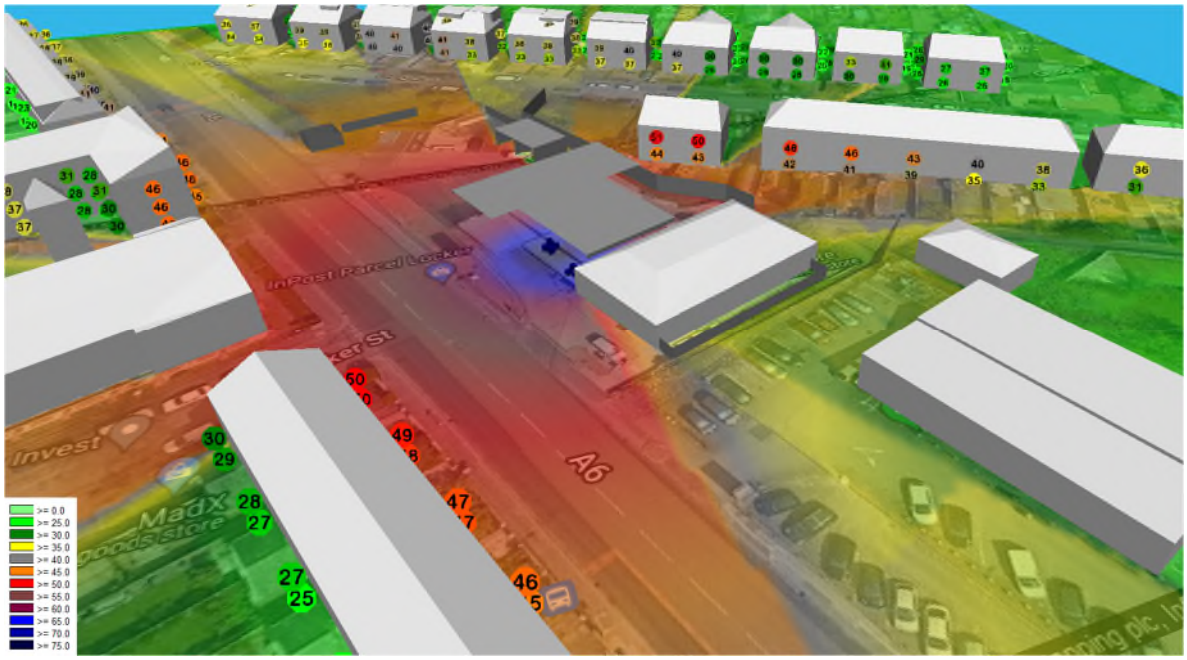


Figure 3: Isometric view of specific noise level at nearest dwellings – looking northeast

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In line with the requirements of current national planning policy an assessment in accordance with BS 4142:2014 has been carried out to assess the noise impact from the proposed delivery operation occurring during this period.

The following BS4142 assessment includes a 3dB character correction for the noise being 'readily distinctive' and a further 3 dB correction for 'tonality' for items such as cage movements within the trailer based on guidance contained within BS4142. The assessment has been carried out against the typical, representative background noise level during the proposed delivery window of 0700-2300hrs and used the lowest representative background noise level over the weekend survey.

Results		Relevant Clause	Commentary
Assessment made during the daytime, so reference time interval is 1 hour		7.2	
Calculated Specific Noise	51 dB $L_{Aeq,1\ hour}$	7.3.4 7.3.5	30 minute delivery operation
On time correction	-3dB		Delivery only taking no more than 30 minutes in an hour (-10log$_{10}$(30/60)
Acoustic Character Correction	+ 6 dB	9.2	Distinctive& tonal 3dB + 3dB
Rating Sound Level	(51-3+6)dB=54 dB $L_{Aeq,1\ hour}$	9.2	Overall 1 hour level
Background Noise Level	52 dB $L_{A90,1\ hour}$	8	Lowest Representative Daytime Background Noise Level between 0700-2300hrs
Difference	(54-52)dB= +2 dB	11	
Assessment indicates that the noise could be classified as being of low impact, depending on context		11	See further discussion below
Uncertainty of assessment	Not Significant	10	Test data has been used and background noise levels during the survey period were consistent

Table 1: BS4142 Assessment for deliveries between 0700-2300hrs outside 8-10 Cringle Road dwelling

As indicated in the above BS4142 assessment, the impacts of a typical delivery to the food to go site would be considered to be low, depending on context during the preferred servicing window of 0700-2300hrs every day.

When reviewing the overall noise impact the following details, relating to the context of the existing noise climate, are considered relevant.

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- The existing ambient noise level is consistently above 60 dB L_{Aeq} during the daytime which could be expected to provide some useful masking and ensure that the operating noise levels from the typical delivery operation are not causing a significant increase in the ambient noise levels, i.e. less than 2dB for the relatively short periods they occur.
- There will already be similar activities being undertaken for the existing service station and the new provision will not be significantly different.

The noise impact from the typical delivery to the food to go operator between 0700-2300hrs would therefore be considered to be low.

CONCLUSION

The EHO had requested that the periods of servicing and waste collections be restricted to protect the amenity of the local residents. The proposed hours though were felt to be unduly restrictive based on the existing noise climate around the service station. Having a larger servicing window will provide desirable flexibility to the operator to possibly ensure deliveries do not coincide with busy periods on the forecourt and enable better coordination.

Based on the above assessment granting permission for servicing and waste collections between 0700-2300hrs every day would not be considered to have any significant adverse impact on the nearby dwellings. The servicing operation would only occur during these periods and typically be no more than one delivery per day. To ensure the residential amenity is not affected it is not proposed for any deliveries to occur overnight when the background noise level do reduce and some adverse impact could be expected to occur.

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