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PROJECT TECHNICAL MEMORANDUM

JOB TITLE	:	Oldham Street, Manchester – Unit 1 Block B
REF	:	HT: 31482/PTM1
DATE	:	16 April 2024
FROM	:	Giovanni De Rienzo
ISSUED TO	:	Neil Large

RE: OLDHAM STREET, MANCHESTER – UNIT 1 BLOCK B COMPANIO BAKERY NOISE IMPACT ASSESSMENT

1.0 Introduction

Companio Bakery occupies Unit 1, Block B within the new development at 76 – 82 Oldham Street.

Manchester City Council have previously imposed Condition 10 (Planning Portal reference PP-12804699) on the development which advises the following:

"10) No loading or unloading shall be carried out on the site outside the hours of:

07:30 to 20:00 - Monday to Saturday,

10:00 to 18:00 - Sundays/Bank Holidays"

As part of the bakery operation, outgoing deliveries are intended to be made in the morning hours as early as 06:30. As such, a variation to the condition has been requested.

Environmental Health at Manchester City Council have reviewed the proposed variation and advised as follows,

"I have looked at the variation to the servicing hours and more information is required before I can make comment. They have submitted an acoustic report from when the development was proposed and so contains a baseline noise survey. However they have not provided an noise assessment of the proposed servicing/delivery operations at the times proposed within the variation of hours. Therefore at this stage we cannot be sure that the noise from proposed operation will not cause noise disamenity."

Hann Tucker Associates have therefore been instructed to undertake a noise impact assessment for the extended outgoing delivery hours and advise on the likely noise impact to nearby residential dwellings.

2.0 Manchester City Council Requirements

Manchester City Council advises how to assess commercial noise impacts in their Planning and Noise Technical Guidance dated October 2022, as follows:

"3.7.1.5 Industrial / commercial developments

BS 4142 should be used to assess the likely impact of noise from industrial and commercial sources at noise sensitive premises (section 3.5). One of the indications of the impact of a BS 4142 assessment is the lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

The Council consider that new developments should contribute and enhance the area in which they are located and where possible i.e. prevent 'noise creep', contribute to the improvement of people's health and quality of life as per the NPSE. With this in mind, the design objective should be:

'The development should be designed so as to achieve a rating level of 5dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location.'

Where this criterion cannot be achieved, the various noise control measures considered as part of the assessment should be fully explained (i.e. relocation of noise sources, use of quieter equipment, enclosures, screening, restriction of the hours of operation) and the achievable noise level should be identified. This information will allow a judgement to be made concerning the application and its likely impact on the surrounding area.

In addition to the above, maximum noise levels should also be adequately controlled. Where particular uses generate high noise levels of a short duration (e.g. loud bangs) on a regular basis, these should aim to be controlled so as not to exceed 60 dB (L_{Amax}) at the façade of noise sensitive premises nearby in accordance with the recommendations of the WHO (section 3.6).

Deliveries and collections are usually controlled by restricting operational hours but depending on the extent of these activities, a Noise Management Plan (NMP) may be requested, which would include an assessment of noise. This would usually involve assessing the noise upon arrival, loading/unloading period and then departure.

The NMP may also need to include controls such as acoustically sealed delivery bays, and restrictions on vehicle mounted refrigeration units and audible alarm systems. Where applicable, the noise assessment will take account of multiple noise sources operating simultaneously and report the cumulative impact"

3.0 Environmental Noise Survey

3.1 Procedure

A fully automated environmental noise survey was previously undertaken to support the planning application for Blocks A and B at 76 – 82 Oldham Street, in order to establish continuous noise readings over a 24 hour period. Measurements were taken continuously of the A-weighted (dBA) L_{90}, L_{eq} and L_{Fmax} sound pressure levels over 15 minute periods. Supplementary continuous automated measurements were made over shorter periods in order to verify night-time L_{Fmax} events.

Position 1 of the survey pertains to Block B of the development where Companio Bakery operate from.

The full survey details and methodology can be found within our report ref. 24535/AR1 Rev2 dated 24 May 2019.

3.2 Existing Noise Levels

We have extrapolated the existing Position 1 noise levels measured between the proposed extended hours of 06:30 – 07:30 to establish criteria to assess the bakery noise impact against.

The following $L_{Aeq,\ 15\ minute}$ and $L_{90,\ 15\ minute}$ noise levels were measured.

Time	Measured $L_{Aeq,15min}$	Measured $L_{A90,15min}$
06:30 – 06:45	54.9 dB	49.2 dB
06:45 – 07:00	56.8 dB	52.1 dB
07:00 – 07:15	56.7 dB	50.3 dB
07:15 – 07:30	55.0 dB	51.4 dB

4.0 Criterion

In line with Manchester City Council requirements, *'The development should be designed so as to achieve a rating level of 5dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location.'*

In this instance, a typical background level is difficult to establish as there are only 4No. 15 minute measurements during the proposed extended operating hours. As such, for robustness, we would propose assessing against the lowest (49.2 dB $L_{A90,15min}$) of the 4No. measurements. Thus, to achieve MCC requirements, the rating level should not exceed 44.2 dB.

5.0 Noise Impact Assessment

5.1 Proposals

We understand the proposal is for outgoing deliveries which will require the use of a single 3.5 tonne van and will include moving and loading of plastic crates onto the vehicle. The potential noise impacts therefore include vehicular movements (arrival/departure etc) and moving/loading of crates between the bakery and the van (moving and loading of crates etc).

We understand from correspondence with Companio Bakery that loading activities typically last approximately 5 minutes. This will include loading of plastic crates inside the bakery, and then lifting of plastic crates from the premises and moving them by hand to the van. We understand that the van is proposed to be parked externally off site approximately 20m from the commercial premises and nearest residential dwellings above. Alternatively, the van may at times be parked internally in a local car park.

We have also been advised that Companio Bakery already operates from a separate ground floor commercial unit beneath residential dwellings and applies the same principles. Staff are trained to keep noise to a minimum during the early hours and to be considerate of neighbours.

For the noise impact assessment, the following should therefore be considered:

- The arrival and departure of the van.
- The movement of crates by hand from the bakery frontage to the van.
- The loading of crates onto the van.

5.2 Noise Data

Historical measured noise levels measured from goods vehicle movements undertaken by Hann Tucker Associates are presented in the table below. The table shows measured noise levels at various distances, and for various durations. These are considered to be representative of 'worst-case' noise levels.

Additionally, the SEL has been calculated and specific noise levels established based on "on-time" in accordance with BS 4142:2014.

Event	Duration of measurement (s)	Measured Specific Sound Level (dBA) at 5m	Calculated SEL (dB) at 5m	Proposed duration of event (s) over each 15 minute period	Calculated Specific Sound Level (dB) at 5m corrected for on-time over 15 minute period
Small or large van arriving/departing	20	62	75	40	45.5
Transporting of plastic crates by hand	-	See Note 1	-	-	-
Loading/unloading of boxes/crates to van	30	58	72	300	42.4
Cumulative Specific Sound Noise Level ($L_{eq,15min}$)					47.2

Note 1: We do not have in-house noise data for the handheld movement of plastic crates. Due to the nature of the task, it is anticipated that noise levels of this activity will be similar to general pedestrian walking noise levels with some ruffling of baked items which is likely to be inaudible above background noise levels at nearby residential receptors.

As an assessment is not possible in this case, we would instead recommend the bakery employ good practice and training for staff in accordance with a Noise Management Plan (NMP) to ensure that noise is kept to a minimum when moving the crates. Some examples of good management could be

1) No loud talking while moving crates,
2) Closing doors softly (or installing soft closers)
3) Avoiding loud dropping of crates until at the van off-site.

We understand similar training is already carried out at Companio Bakery's existing site, so we do not anticipate this to cause loss of amenity to nearby residential dwellings.

5.3 BS 4142:2014 Assessment

Based on HTA measured data, the table on the following page outlines our assessment in accordance with BS 4142:2014.

Results		Relevant Clause	Commentary
Cumulative Specific Sound Level	47.2 dB	7.3.8 7.3.9 7.3.10	Specific level of all sources corrected for residual level and on-time.
Acoustic feature correction	+3.0 dB	9.2	Intermittent feature correction added for van engine stopped/starting and intermittent nature of loading/unloading activities.
Rating level	50.2 dB	9.2	Calculated by adding acoustic feature corrections to the specific sound level.
Distance Loss to Nearest Proposed Dwelling at First Floor Level	-9.5 dB		Distance loss corrected for off-site van location 15m away.
Rating level at Nearest Dwelling	40.7 dB		
Background sound level	49.2 dB	8.1.1 8.1.3 8.3	Typical background sound level measured at the proposed development site during the night.
Excess of rating over background sound level	**-8.5 dB**	**11**	
Assessment indicates low impact to residents.		11	The rating level is 8.5 dB below the background noise level during the proposed extended hours indicating that there should be no observable impact in line with BS4142:2014
Uncertainty of the assessment	Low	10	The background sound level is based on repeatable measurements made over the proposed extended duration. The measurements of noise from ambient noise sources remained consistent throughout measurement period

As can be seen from the table above, the proposed activities are predicted to be 8.5 dB below the existing background noise level. This is mostly due to the short period of events, and due to the van being parked off site at least 15m from residential windows. In line with BS 4142:2014 this is therefore likely to have no observable impact and comply with MCC requirements.

5.4 L_{max} Assessment

Manchester City Council advise the following:

"*Where particular uses generate high noise levels of a short duration (e.g. loud bangs) on a regular basis, these should aim to be controlled so as not to exceed 60 dB (L_{Amax}) at the façade of noise sensitive premises nearby in accordance with the recommendations of the WHO (section 3.6).*"

In the case of the loading and unloading of goods we would anticipate the worst-case L_{max} noise levels to be when crates are loaded on to the van. We have historical library noise data for the moving of crates into a lorry which represents a worst-case scenario. The measured L_{Amax} at 3m was 71.1 dB.

A simple assessment is shown in the table below.

	Sound Pressure Level (dB)
Measured L_{Amax} at 3m	71.1
Distance correction (3m to 15m)	-14.0
Calculated L_{Amax} noise level at nearest residential window	57.1

As can be seen form the table above, L_{Amax} events from the loading activities should comply with MCC requirements.

6.0 Conclusion

A noise impact assessment for the proposed extended loading hours has been undertaken for Companio Bakery, occupying Unit 1, Block B within the new development at 76 – 82 Oldham Street.

The assessment, in accordance with BS 4142:2014, shows that the cumulative rating level over a typical 15 minute periods is likely to be approximately 8.5 dB below the existing background noise level at residential window, and thus should have no observable impact and should comply with MCC requirements.

An L_{Amax} assessment has been undertaken and shows compliance in accordance with MCC requirements.

As noted in Section 5.2, we do not anticipate the handheld moving of crates from the bakery to the off-site van to exceed the LA requirements, however we would advise some good practice measures are in place via staff training and a suitable NMP which will mitigate the risk further.

Yours sincerely



Giovanni De Rienzo
for HANN TUCKER ASSOCIATES