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Dear Jane

CONCRETE BATCHING PLANT, GREAT JACKSON STREET, MANCHESTER

Further to recent discussions, I write with an assessment of the potential noise impact due to the proposed extended operation of the concrete batching plant at Great Jackson Street.

INTRODUCTION

Planning approval for a temporary concrete batching plant on Great Jackson Street was originally granted on 25 October 2016 (planning reference 113767/FO/2016). Under a non-material amendment, (planning reference 114702/NMC/2016), the batching plant was permitted to operate for five years.

Continued temporary use of the batching plant until 30 November 2025 was granted on 30 November 2020 (planning reference 128203/FO/2020).

It is now proposed that the batching plant will be used to manufacture concrete for the Crown Street Phase 3 project, the Trinity Islands Plot C project and other ongoing construction projects in Manchester which would require the operation of the batching plant for a further three years beyond its currently approved lifespan.

As new noise-sensitive receptors have been introduced to the area since the previous planning applications for the batching plant, this update of the acoustic assessment for the batching plant has been prepared.

LOCATION

Figure 1 identifies the location and layout of the concrete batching plant (site edged red).

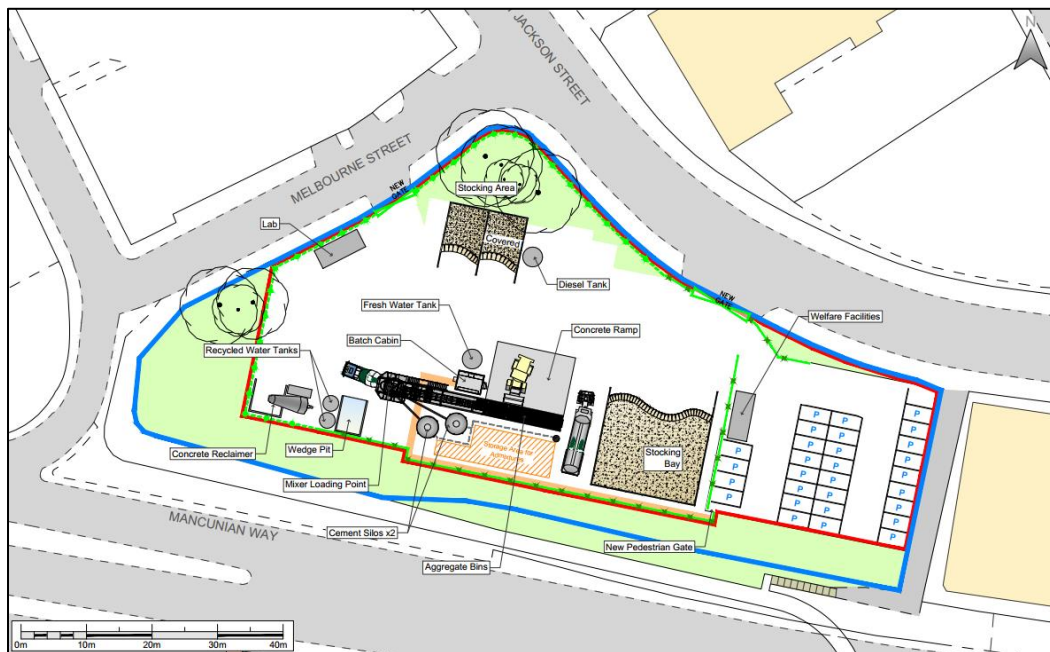


Figure 1: Batching plant location and layout

Figure 2 identifies the locations of the closest existing and planning-approved residential buildings to the batching plant. The closest noise-sensitive receptors that have been introduced to the area since the previous approval for the concrete batching plant are the recently completed Three60 tower (Plot C5) of Crown Street Phase 2, the planning-approved residential development at Plots C and E of the Crown Street Phase 3 development and Plot F1, Great Jackson Street.

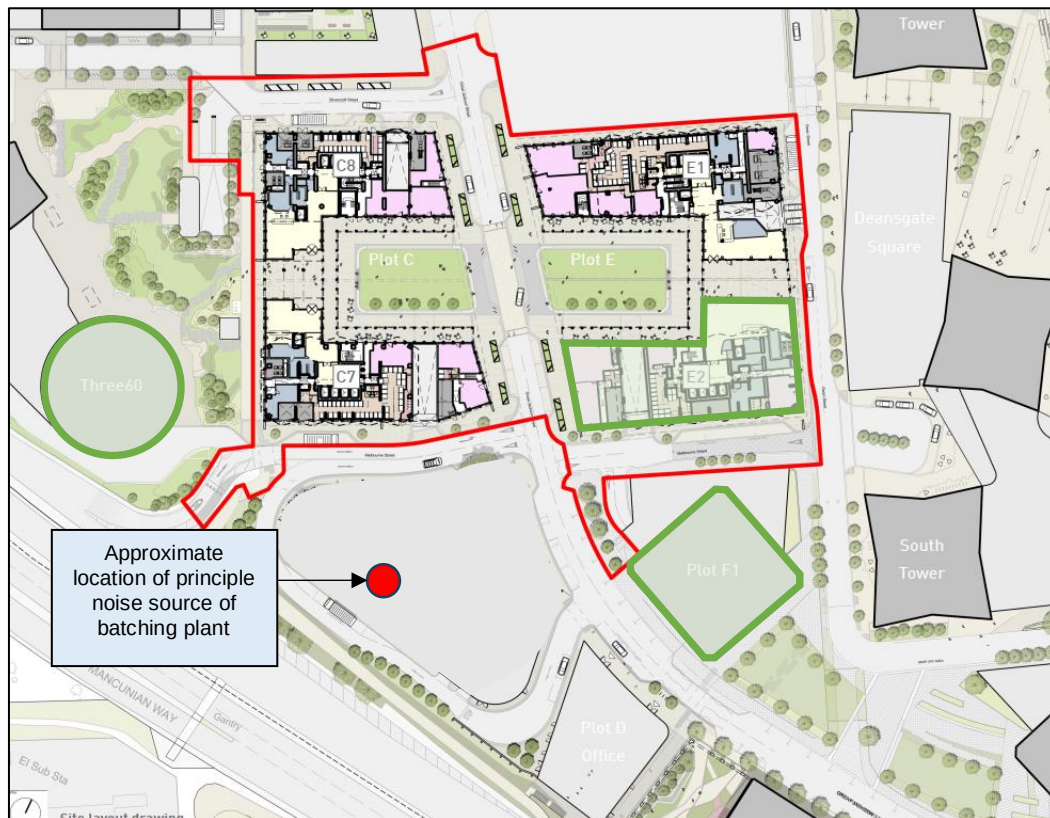


Figure 2: Closest residential receptors (edged green) to batching plant

It should be noted that Plots C7 and C8 of Crown Street Phase 3 are not expected to be occupied at the time that the batching plant ceases to operate. These buildings are not therefore considered to be noise sensitive receptors in the context of this assessment.

There are other existing and planning-approved noise sensitive receptors in the Great Jackson Street area. However, these receptors are all at a greater distance from the batching plant than the receptors identified in Figure 2 and would be subject to the same guideline criterion for construction noise. Therefore, if acceptable construction noise levels are achieved at the assessed receptors, then acceptable construction noise levels would also be achieved at these other receptors.

CONSTRUCTION NOISE IMPACT CRITERIA

Annex E of BS 5228-1: 2009+A1:2014 'Code of Practice for noise and vibration control on construction and open sites' provides guidance on the establishment of significance criteria for construction noise impact.

Example Method 1 within Annex E, termed the 'ABC Method' is for residential receptors only, and allows the setting of threshold noise levels above which a potential significant effect could be generated. For the appropriate period (night, evening/weekends or day), the ambient noise level is determined and rounded to the nearest 5 dB. This noise level is then compared with the noise level at the receptor in question due solely to site operations. If the noise level originating from the Site exceeds the appropriate category value, then a potential significant effect is indicated. Other project-specific factors, such as the number of receptors affected and the duration and character of the impact then need to be taken into consideration to determine if there is a significant effect.

Table 1 gives the threshold values and the notes below explain how the method is applied.

Assessment Category and Threshold Value Period	Threshold value (dB LAeq, T)		
	Category A ^A	Category B ^B	Category C ^C
Night time (23.00 - 07.00)	45	50	55
Evening and weekends D	55	60	65
Daytime (07.00 – 19.00)	65	70	75

Table 1: Example threshold of potential significant effect at dwellings

NOTE 1: A potential significant effect is indicated if the LAeq, T noise level arising from the Site exceeds the threshold level for the category appropriate to the ambient noise level.

NOTE 2: If the ambient noise level exceeds the Category C threshold values given in the table (i.e. the ambient noise level is higher than the above values), then a potential significant effect is indicated if the total LAeq, T noise level for the period increases by more than 3 dB due to site noise.

A) Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.

B) Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.

C) Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.

D) 19.00 – 2300 weekdays, 1300 – 23.00 Saturdays and 07.00 – 23 00 Sundays

Example Method 2 within Annex E states that noise generated by construction activities of duration of one month or more is deemed to be potentially significant if the total noise (pre-construction ambient noise plus construction noise) exceeds the pre-construction ambient noise level by 5dB or more, subject to lower cut-off values during daytime, evening and night of 65dB, 55dB and 45dB LAeq respectively.

The criteria stated within example method 2 are generally applicable to the following building types:

- Residential
- Hotels and hostels
- Religious
- Education
- Health and/or community

For office and residential buildings, BS5228-1: 2009+A1:2014 refers to the 1976 revision of Advisory Leaflet 72 'Noise control on building sites, published by the Department of the Environment, which states

'Noise from construction and demolition sites should not exceed the level at which conversation in the nearest building would be difficult with the windows shut.....Noise levels, between say 07.00 and 19.00 hours, outside the nearest window of the occupied room closest to the Site boundary should not exceed:

- 70 dB(A) in rural, suburban and urban areas away from main road traffic and industrial noise
- 75 dB(A) in urban areas near main roads in heavy industrial areas.

These limits are for daytime working outside living rooms and offices. In noise-sensitive situations, for example, near hospitals and educational establishments, and when working outside normal working hours, such as between 19.00 and 22.00 hours, the allowable noise levels from building sites will be less. A reduction of 10 dB(A) may often be appropriate'.

Table 2 summarises the suggested significance criteria for the rating of construction noise affecting the noise sensitive premises around the Site.

Negligible	Minor	Moderate	Major
Site noise is equal to the threshold value	Site noise is 3dB to 5dB greater the threshold value	Site noise is 5dB to 10dB greater than the threshold value	Site noise is more than 10dB greater the threshold value

Table 2: Summary of construction noise impact magnitude

The pre-existing ambient noise levels at the facades of the closest noise sensitive receptors are between 65 dB LAeq 72 dB LAeq. Therefore a minimum construction noise threshold value of 70dB LAeq would be suggested by reference to Annex E of BS 5228-1: 2009+A1:2014.

POTENTIAL NOISE IMPACT

Concrete delivery wagons

The use of the concrete batching plant to provide concrete for the Crown Street, Phase 3 development will remove the need for concrete delivery wagons to use the wider road network, which will be a benefit in terms of noise impact to the wider environment. The findings of the Environmental Statement submitted for the Crown Street Phase 3 site (planning reference 137226/FO/2023), in particular that the noise impact of concrete delivery wagons on noise sensitive receptors close to the site would be negligible, would not be altered by the proposed batching plant, as the number of the wagons travelling to and from the site would be unchanged.

Concrete Batching Plant

The sound power level of concrete batching plants of a similar concrete output to that at Great Jackson Street is identified in BS5228-1:2009+A1:2014 as 108 dB LWA.

The calculated subsequent noise levels at the closest residential façades to the batching plant are given in Table 3, along with the approximate distance of the batching plant from each identified residential receptor and the derived threshold noise levels for potential significant effect at the receptors.

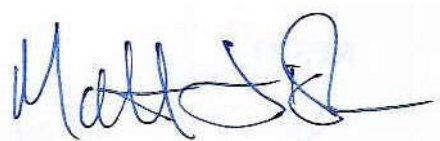
Noise Sensitive Receptor	Calculated Noise Level due to Concrete Batching Plant, LAeq (dB)	Threshold Values, daytime LAeq (dB)
Plot E2 Crown Street Phase 3 (60 metres)	70	70
Plot C5 (Three60) Crown Street Phase 2 (65 metres)	68	70
Plot F1 Great Jackson Street (60 metres)	70	70

Table 3: Calculated Noise Levels due to Batching Plant Operation

It can be seen that the calculated noise levels due to the batching plant are lower than the threshold values for each noise sensitive receptor and thus, based on the significance criteria given in Table 2, the potential noise impact of the batching plant is considered to be negligible.

If there is any aspect of the above that you would like to discuss then please do not hesitate to contact the undersigned.

Yours sincerely



MATT FISHER BEng(Hons) CEng MIOA
For and on behalf of Fisher Acoustics Limited