MR Noise Appendices

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A. Appendix A

Appendix A

Glossary

General terms

Airborne sound	Sound propagating through the air.
Airborne sound insulation	The ability of building elements or structures to reduce airborne sound transmission.
Frequency	The number of cycles per second. The unit of frequency is the Hertz (Hz). Frequency gives a sound its distinctive tone.
Frequency band	A continuous range of frequencies between stated upper and lower limits (see also 'Octave band' and 'One-third octave band').
Ground-borne noise	Noise which is transferred by vibration of the ground (and can be re-radiated as noise within a building)
Ground-borne vibration	Vibration which is transferred via the ground.
Sound pressure level	A logarithmic measure of the effective sound pressure of a sound relative to a reference value, measured in decibels, dB. Sound pressure levels are dependent on the conditions under which they are measured.
Spectrum	The composition of a particular sound in terms of separate frequency bands.
Structure-borne sound	Sound which is transferred by vibration via the structure of a building.

Acoustic parameters

'A' weighting	Frequency weighting based on the frequency response of the human ear which has been found to correlate well with the subjective response to sound.
C_{tr}	The correction to a sound insulation quantity (such as R_w or $D_{nT,w}$) to take account of a specific sound spectrum with low frequency sound energy.
Decibel (dB)	A logarithmic unit used for many acoustic values to indicate the level with respect to a reference level
Hz	Hertz (Hz) is the unit of frequency (see also 'Frequency')
$L_{n,f}$	The impact sound pressure level in a stated frequency band, flanking via a floor connecting adjacent rooms. A lower numerical quantity represents a better performance.
$L_{n,f,w}$	A single number weighted quantity used to characterize the flanking impact sound pressure level via a floor connecting adjacent rooms. A lower numerical quantity represents a better performance.
L'_{nT}	The impact sound pressure level in a stated frequency band, corrected for the reverberation time. A lower numerical quantity represents a better performance.
$L'_{nT,w}$	A single number weighted quantity used to characterise the impact sound insulation of floors. A lower numerical quantity represents a better performance.

$L_{Aeq,T}$	Equivalent A-weighted sound pressure level of a steady noise that has the same acoustic energy as a fluctuating noise over the measurement period (T). When not weighted it is denoted $L_{eq,T}$.
$L_{Amax,T}$	The highest A-weighted sound pressure level measured in the period (T) with either fast (L_{AFmax}) or slow (L_{ASmax}) time weightings. When not weighted it is denotedL_{Fmax} or L_{Smax}.
Octave band	A frequency band in which the upper limit of the band is twice the frequency of the lower limit.
One-third octave band	A frequency band in which the upper limit of the band is the cube root of two times the lower limit of the band or more simply one third of an octave band.
RMS acceleration	RMS acceleration levels in each of three axes in one-third-octave bands, measured using the 'slow response' exponential time weighting.
R	Sound reduction index. A quantity, measured in a laboratory, which characterises the airborne sound insulation of a material or building element in a stated frequency band. A higher numerical quantity represents a better performance.
R_w	Weighted sound reduction index. A single number quantity which characterises the airborne sound insulation of a material or building element in the laboratory. A higher numerical quantity represents a better performance.
R'	Apparent sound reduction index. The on-site equivalent of the sound reduction index, R, which is measured in the presence of flanking paths. A higher numerical quantity represents a better performance.
R'_w	Apparent weighted sound reduction index. The on-site equivalent of the weighted sound reduction index, R_w. A higher numerical quantity represents a better performance.
VDV	Vibration Dose is a parameter that combines the magnitude of vibration and the time for which it occurs. When assessing intermittent or time-varying vibration it is necessary to use the Vibration Dose Value (VDV), a cumulative measurement of the vibration level received over an 8-hour or 16-hour period.

B. Appendix B

Appendix B

Richard Pollitt, Trafford Council email correspondence (to Debra Harrison), sent 15 November 2021

Harrison, Debra

From: Pollitt, Richard
Sent: 15 November 2021 14:25
To: Harrison, Debra
Cc: Belfield, Peter
Subject: FW: Former B & Q, Greatstone Road. Appellant Noise Evidence

Debra,

I have reviewed the three documents produced by Holtz Acoustics produced in relation to the disputed noise issues associated with the proposed residential development at the former B & Q site, Greatstone Road, Stretford. I would like to confirm the following additional information.

Noise from Concerts

Lancashire County Cricket Club (LCCC) hold a license which allows the hosting of large scale music concerts, a condition of the license is the requirement that music noise levels (MNL) do not exceed 80 dB LAeq,15min at certain residential receptors. If the Council were ever required review the premises license this could potentially have the outcome of significantly affecting the viability of concerts being held at LCCC. Members of public may also call for the review of a premises license.

Holtz Acoustics have undertaken noise modelling of a concert event held at Lancashire County Cricket Club utilising data collected during the recent Courteeners concert. Our review of the noise model provided by Holtz finds that the noise levels associated with concerts has potentially been underestimated. The model suggests that noise levels at the usual front of house concert noise monitoring location/mixing desk would be below 95dB. Our experience, and supporting data from Vanguardia over many years of noise monitoring during concerts, suggests that this would not be the case and that noise levels would be more likely to be those as referred to in the recent Vanguardia report reference APP/Q4245/W/20/3258552 VC-103597-EA-RP-001 R02. There are significant differences between the Vanguardia noise model and the Holtz noise model which will need to be resolved. However, we feel that the Vanguardia noise model is potentially more representative, based on our experience, of noise levels achieved during music concerts at LCCC.

The positioning of the noise monitoring undertaken by Holtz acoustics in appendix B does not give confidence that representative noise measurements were taken during the recent LCCC concert that were used to inform the Holz noise model.

At this stage the noise model from Holtz Acoustics does not give sufficient reassurance that concert music noise at the proposed development will not result in adverse impact to residents and potentially could lead to justified noise complaints being received by Trafford Council. Justified noise complaints received by the Council could result in the LCCC premises license being reviewed to the detriment of concerts being held at LCCC.

Holtz Acoustics have relied upon the licensing noise condition as being a suitable criteria in relation to assessing noise impacts from concerts on future residents. However, the Council would have expected to see detailed calculations of internal noise levels occurring during concert events, which should include low frequency noise assessment, with a subsequent review against a suitable criteria.

The insulation specification, detailed in appendix F, appears to rely on the laboratory performance of the glazing provided and does not consider that the on-site performance may be compromised by low frequency effects and installation issues, these should be referred to within in the calculations.

It is the recommendation of Regulatory Services that the Council should commission an independent review of the objector and applicants submissions to provide specialist advice on how noise impacts from LCCC operations can be assessed and mitigated to reduce impacts on future site users.

Noise from Sporting Events

Noise from activities at Lancashire County Cricket Club (LCCC) associated with cricket matches and associated noise (e.g. music 'stings', crowd noise, plant and machinery) are not controlled by any license and any noise complaints received by Trafford Council would be investigated under statutory nuisance legislation.

Holtz Acoustics have carried out a further assessment of noise associated with cricket matches, a noise model has been produced which is based on the worst case stand noise levels given in the Vanguardia report reference APP/Q4245/W/20/3258552 VC-103597-EA-RP-001 R02 which was used to model a full capacity cricket ground.

Whilst Holtz report that original insulation specification would be sufficient to protect residents from noise during sporting events, this conclusion cannot yet be supported in view of the comments provided above in relation to concert noise and the potential for cumulative impacts from all LCCC operations.

Holtz refer to trickle vents as being the primary method of ventilation whilst windows are closed during cricket matches and concerts, however, both cricket matches and concerts will occur during warmer months and trickle ventilation may be an inadequate alternative to opening windows during warmer weather. It is felt that a specification should be provided of mechanical ventilation and heat recovery to confirm that a realistic alternative to opening windows is available to residents during matches and events held at LCCC.

Conclusion

Our review of the Holtz Acoustic report finds that there are number of areas of concern where we are not satisfied that impacts to future site users will be within reasonable margins. It has not been satisfactorily concluded that concert noise from LCCC will not exceed the license criteria at the proposed development or will meet appropriate planning criteria. Further assessment will be required to fully assess noise from operations at LCCC and what level of mitigation will be required.

Planning Conditions

In relation to including BS 8233 as the basis of the suggested planning conditions, the Council should seek specialist acoustic advice in relation to applying appropriate criteria due to the range of operations which are held at LCCC. An independent review of the objector and applicants submissions is needed to provide specialist advice on how noise impacts from LCCC operations can be assessed and mitigated to reduce impacts on future site users.

Regards

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C. Appendix C

Appendix C

Richard Pollitt, Trafford Council email correspondence (to Matthew Robinson), sent 10 December 2021

Matthew Robinson

From: Pollitt, Richard <Richard.Pollitt@trafford.gov.uk>
Sent: 10 December 2021 11:11
To: Matthew Robinson
Subject: FW: Trafford Council Data Inquiry [Filed 11 Dec 2021 19:29]

Follow Up Flag: Flag for follow up
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Categories: Filed by Mail Manager

Hi Matt,

As you may be aware, Holtz Acoustics submitted an FOI yesterday in relation to complaints received by the Council about concerts at LCCC. Rebecca Coley asked me to copy you in on my response, please see below.

Regards

Richard.

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From: Pollitt, Richard
Sent: 10 December 2021 11:09
To: 'James Patterson' <james@holtzacoustics.uk>
Subject: Trafford Council Data Inquiry

Dear James,

Thank you for your email of 9 December 2021 where you requested information about complaints made to Trafford Council in relation to noise from concert events held at Lancashire County Cricket Club between 1st January 2011 and 9 December 2021. The information requested is presented below:

Year	Artist	Complaint Numbers
2011	Kings of Leon	4
2011	Bon Jovi	2
2012	No concerts held	-
2013	No concerts held	-
2014	No concerts held	-
2015	Foo Fighters	42

2016	Rihanna	103
2016	Beyonce	31
2017	Courteeners	4
2017	One Love	0
2017	Radiohead	1
2018	Liam Gallagher	1
2019	No concerts held	-
2020	No concerts held	-
2021	Courteeners	1

Complaints received regarding noise from concerts at the LCCC Old Trafford venue are reviewed during and after each event with visits made to complaint addresses where possible whilst concerts are taking place to take noise measurements. Information is provided to complainants on compliance with the noise limits specified within the Premises Licence conditions. Complainants will be informed of the monitoring made by Council officers in conjunction with acoustic consultants employed by Lancashire County Cricket Club to ensure that the Premises Licence noise limit is met at the locations stipulated within the Licence.

Additional off site monitoring is undertaken by Council Officers for successive concert events if required. Noise complaints received and their distribution are reported to a de-brief meeting of the concert multi-agency safety advisory group. If necessary, additional noise mitigation measures will be requested and agreed at the meeting to address any areas of concern. These measures are reflected in the updated Noise Management Plan provided to the Council before each concert.

If you have any questions about the information, please contact me.

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