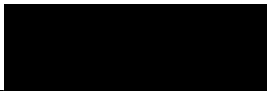


Design Note – Planning Conditions Note

Project Embassy Village, Manchester	Project No. 1037115	Date 26/01/2026
Purpose of note For Information	Document No. 1037115-MEMO-AS-002	Revision P04

Document validation (latest issue)

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1.0 Introduction

Cundall has been commissioned to assist with Planning and Noise matters at the Embassy Village development, Manchester.

The purpose of this memorandum is to document the requirements of Planning Conditions 17, 18 and 19 attached to the planning decision notice (Ref: 137608/JO/2023).

This document details the verification measurements undertaken with a view to prove compliance with these conditions and recommend that they are discharged.

2.0 Condition 17

Planning Condition 17 attached to this decision relates to entertainment noise associated with the development and states the following;

"17)a) The 'Village Hall' premises shall be acoustically insulated and treated to limit the break out of noise in accordance with a noise study of the premises and a scheme of acoustic treatment that has been submitted to and approved in writing by the City Council as local planning authority. The scheme shall be implemented in full before the use commences or as otherwise agreed in writing by the City Council as local planning authority.

Where entertainment noise is proposed the L_{Aeq} (entertainment noise) shall be controlled to 10dB below the LA_{90} (without entertainment noise) in each octave band at the facade of the nearest noise sensitive location, and internal noise levels at structurally adjoined residential properties in the 63Hz and 125Hz octave frequency bands shall be controlled so as not to exceed (in habitable rooms) 47dB and 41dB, respectively.

b) Prior to occupation of the development a verification report will be required to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic consultant's report. The report shall also undertake post completion testing to confirm that acceptable criteria have been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the agreed noise criteria.

Reason: To safeguard the amenities of the occupiers of the building and occupiers of nearby properties.

Cundall has undertaken a noise survey at the proposed development, full details of which are provided in Report Ref: 1037115-CDL-XX-ZZ-RP-AS-45300 Rev P01.

The octave-band spectra of the modal measured $L_{A90,15min}$ periods have been used to define these limits. The following noise limits are proposed, set at 10 dB below the existing L_{A90} (excluding entertainment noise), and are not to be exceeded at 1 m from the façade of the noise-sensitive receptors:

	Octave band centre frequency (Hz)						
	63	125	250	500	1k	2k	4k
Daytime & Evening (07:00 – 23:00)							
Existing background level, dBA	37	40	45	49	52	48	37
MCC noise limits, dBA	27	30	35	39	42	38	27
Night-time (23:00 – 23:00)							
Existing background level, dBA	23	29	33	38	44	43	37
MCC noise limits, dBA	13	19	23	28	34	33	27

Table 2-1: Entertainment noise limits

It is understood that the Village Hall will be staffed from 8am – 11pm and will therefore not operate during the night-time hours of 11pm – 7am.

It is understood that there will be no PA system installed in the Village Hall, instead only small speakers akin to home television systems are intended to be used in the space.

It is understood that activities within the Village Hall mainly comprise of training and study activities, with speakers mostly being expected to be used to maximum potential during communal activities such as televised sports or film nights.

The maximum permissible level from entertainment noise within the Village Hall necessary to achieve compliance with the above noise-sensitive receptor limits can be calculated based on the sound insulation reduction through the Village Hall façade and the acoustic distance attenuation to the nearest receptor.

The nearest noise-sensitive receptor is the Vie Building to the north of the site, approximately 20 m away from the site boundary.

According to the minimum façade specifications provided in the Fisher Acoustics report (Ref: PR0651-REP01A-MPF), the glazed elements represent the weakest acoustic element of the external building envelope, as specified below:

Window type	Sound Reduction Index (dB) @ Octave Band Centre Frequency (Hz)						
	63	125	250	500	1k	2k	4k
TYPE A (approx. 47 dB Rw)	27	34	41	45	45	50	55

Figure 2-1: Fisher acoustics reported glazing specification

Based on the above, the proposed limiting entertainment noise levels within the Village Hall are as follows:

	Octave band centre frequency (Hz)						
	63	125	250	500	1k	2k	4k
Daytime & Evening (07:00 – 23:00)							
Proposed limiting entertainment noise levels within Village Hall	88	98	> 100	> 100	> 100	> 100	> 100

Table 2-2: Entertainment noise limits in Village Hall

The above noise levels are synonymous with very high levels of entertainment noise that may be found in bars and night clubs.

Given the intended use of the Village Hall, such elevated noise levels are not considered applicable or achievable in practice based on the sound system equipment being installed. On this basis, there is no realistic risk of the above limiting levels being exceeded or for adverse impact on the amenity of nearby residential receptors. It is therefore advised that Condition 17 can be discharged with confidence.

The Village Hall is not structurally adjoined to any of the residential dwellings on the proposed development, and as such the criteria quoted for this element of the condition is not applicable.

3.0 Condition 18

Planning Condition 18 attached to this decision relates to noise break in and vibration associated with the development and states the following:

"(18).a) The residential accommodation shall be acoustically insulated against noise from the nearby road network and overhead train and Metrolink lines, and any other actual or potential sources of noise, in accordance with the Environmental Noise and Vibration Study dated March 2021 by Fisher Acoustics to achieve the following noise criteria within apartments:

Bedrooms (night time 23:00 to 07:00) - 30 dB L_{Aeq} (individual noise events shall not exceed 45 dB L_{AmaxF} by more than 15 minutes);

Living rooms (daytime 07:00 to 23:00) - 35 dB L_{Aeq}

Gardens and terraces (daytime) - 55 dB L_{Aeq} ."

Due to the proximity of the development to the train and Metrolink lines above the development it will be necessary for vibration criteria to apply which can be found in BS 6472: 2008 "Guide to evaluation of human exposure to vibration in buildings". Groundborne noise/re-radiated noise shall also be factored into the assessment and design.

b) The approved noise insulation scheme shall be completed and a post-completion verification report (including validation that the work undertaken throughout the development conforms to the recommendations and requirements of the above approved acoustic report by Fisher Acoustics and including the results of postcompletion testing to confirm that the internal noise criterion have been met) shall be submitted to and approved in writing by the City Council as local planning authority before any of the dwelling units are first occupied. Any instances of non-conformity with the above approved acoustic report by Fisher Acoustics shall be detailed within the post-completion report along with any measures required to ensure compliance with internal noise criteria. Those measures shall be implemented in full before any of the dwelling units are first occupied.

Reason: To secure a reduction in noise from the main roads and surrounding road networks and any other potential sources of noise, in order to protect future residents from noise nuisance, pursuant to policies SP1, H1 and DM1 of the Core Strategy.

3.1 Compliance measurements

In order to assess the plant noise levels affecting nearest noise sensitive receptors, a sound level meter was left in one of the pods closest to the Ring Road (and therefore considered worst case as all pods are assumed to be equally effected by overhead rail noise) to take continuous noise level measurements from 17:15 on 22 January 2026 to 08:45 on 23 January 2026.

Noise measurements were made using a Casella CEL-63x (serial number 1211404) precision sound level meter, in accordance with BS 7445:2003. The meter was field-calibrated before and after with no significant drift witnessed. Laboratory calibration certificates for all equipment are available upon request.

Monitoring equipment was set up by competently trained Cundall staff.

3.2 Results summary

A summary of noise level measurements undertaken in the bedroom is presented below. All values have been rounded to the nearest integer value (as fractions of a decibel are imperceptible) and are given in dBA.

The ANC Measurement of Sound Levels in Buildings v1.0 (June 2020) guidance advises that measurements should be undertaken when rooms are in a "normally furnished condition", as furnishings influence reverberation

time values and resultant internal noise levels. In an unfurnished condition, longer reverberation times are typically present, whereas a furnished room would be expected to exhibit a reverberation time closer to 0.5 seconds.

As in-situ measurements were undertaken in an unfurnished space with a subjectively high reverberation time, a reduction in internal noise levels of 3 dB has been reasonably applied to account for reduced internal noise levels once the room is furnished and in normal use.

Measurement period	$L_{Aeq,T}$	15 th Highest Night-time $L_{AFmax,2min}$
Daytime (07:00 – 23:00)	33	n/a
Night-time (23:00 – 07:00)	29	47

Table 3-1: Internal ambient noise level measurements

It can be seen from the above results that the daytime and night-time L_{Aeq} levels comply with the requirements of Planning Condition 18.

It is also noted that the L_{AFmax} values represent a marginal exceedance of 2 dB relative to the 45 dB criterion. Previous guidance set out within the Fisher Acoustic report concluded that additional mitigation to address re-radiated rail noise is not required. At this stage of the development design, it is not anticipated that further practicable mitigation measures could be implemented to reduce maximum noise events below the 45 dB L_{AFmax} criterion. This is considered to reflect the inherent characteristics and location of the site, with the exceedance being limited in magnitude.

4.0 Condition 19

Planning Condition 19 attached to this decision relates to external plant noise associated with the development and states the following;

“19a) Before first occupation of the development the buildings, together with any externally mounted ancillary equipment, shall be acoustically insulated in accordance with the Environmental Noise and Vibration Study dated March 2021 by Fisher Accoustics in order to secure a reduction in the level of noise emanating from the equipment to achieve a rating level of 5dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location.

b) Prior to occupation of the development a verification report to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic consultant's report shall be submitted to and approved in writing by the City Council as local planning authority. The verification report shall also undertake post completion testing to confirm that acceptable criteria has been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the agreed noise criteria and timescales for the implementation of those measures.

Reason: To safeguard the amenities of the occupiers of nearby residential accommodation, pursuant to policies SP1 and DM1 of the Core Strategy.

4.1 Compliance measurements

In order to assess the plant noise levels affecting nearest noise sensitive receptors, attended daytime measurements have been undertaken on the 19 January 2026.

Noise measurements were made using an NTi XL2 (serial number A2A-16315-E0) precision sound level meter, in accordance with BS 7445:2003. The meter was field-calibrated before and after with no significant drift witnessed. Laboratory calibration certificates for all equipment are available upon request.

Monitoring equipment was set up by competently trained Cundall staff and all measurement have been reported for free-field conditions.

It was confirmed by site operatives that all external noise generating plant was fully commissioned at the time of the measurements.

During the site visit undertaken, it was noted that ASHPs facing the worst case receptors on the other side of Bridgewater Canal were not running with the exception of one ASHP – and as such measurements were undertaken for this unit. The approximate measurement locations are shown in Figure 4-1 below.



Figure 4-1: Noise measurement position

The following was noted by on site engineers with regards to the above noise measurement positions:

- 1) Measurement undertaken @1m from only ASHP noted to be running opposite worst case receptors
- 2) Measurement undertaken in line with edge of rail archway and noise from ASHP noted to be imperceptible
Measurement undertaken with ASHP switched off with no perceptible change in noise climate compared with Position 2

4.2 Results summary

A summary of source level measurements of external noise generating plant at one metre from ground floor ASHP noise sources are detailed below. All values have been rounded to the nearest integer value (as fractions of a decibel are imperceptible) and are given in dBA.

Measurement	L _{Aeq,T}	L _{AFmax}	L _{AFmin}	Plant operating condition	Subjective impression
1	59	85	61	ON	Plant faintly audible
2	55	81	59	ON	Plant not audible
3	56	84	66	OFF	-

Table 4-1: Plant source level measurements

4.2.1 Assessment of noise levels at NSR

Using the source level measurements of external plant as presented in Table 4-1, the specific sound level at the nearest noise-sensitive receptor has been calculated allowing for standard distance attention reductions.

The predicted levels properties on the opposite side of Bridgewater Canal are shown below.

For this assessment the night-time plant noise limit of 48 dB (as provided in the Fisher Acoustics report (Ref: PR0651-REP01A-MPF)) has been accepted as the worst-case noise limit. The BS 4142 assessment using this limit is detailed below in Table 4-2.

No BS 4142 feature corrections were noted during measurement on site and as such these have not been included in the table below.

	A-weighted sound pressure level (dBA)
Measured $L_{Aeq,T}$ @ 1m	59
Distance attenuation (25m)	-28
Calculated specific noise level	31
BS 4142 Rating Level at Receiver	31
Condition 19 noise limits (5 dB below representative background sound level)	48
Assessment of BS 4142 Rating Level Relative to Background	-17 dB below Condition 19 night-time noise limit (22 dB below representative background sound level)

Table 4-2: Plant noise rating calculation

It can be seen from the table above that the rating level of items of the measured plant meet criteria set out in the Condition 19. Though this assessment is for only one item of plant running, it is noted that even with all items of plant running on the development, a total of 12 ASHPs identical to the one measured, that without consideration of greater distances and barrier mitigation this would result in a level 11 dB above that presented above which would still fall under the proposed plant noise limits.

It is therefore advised on the basis of the above that Planning Condition 19 is discharged.