

Condition A13: HGY/2022/4476 – Responses to LBH 23.05.23

LBH Comments – 12.05.23	Responses																									
1. It is not clear why a correction for 1% of annual opening has been made to the noise levels. It appears irrelevant for how many hours windows may be open for during the year. The question is directly asking what the internal noise levels would be when the windows are open at their maximum capacity.	The 1% annual opening was included as a way to show how the noise levels would be achieved through the year, where windows were open for 1% of the annual night time periods to be opened to purge heat. Therefore, the below table shows that for 99% of the year BS 8233: 2014 Criteria will be achieved. <table border="1" data-bbox="846 464 1980 852"> <thead> <tr> <th data-bbox="846 464 1279 507"></th><th colspan="2" data-bbox="1279 464 1606 507">Location</th></tr> <tr> <th data-bbox="846 507 1279 550"></th><th data-bbox="1279 507 1606 550">Position 1</th><th data-bbox="1606 507 1980 550">Position 2</th></tr> </thead> <tbody> <tr> <td data-bbox="846 550 1279 611">Recorded Façade Level</td><td data-bbox="1279 550 1606 611">L_{Aeq} 8 HOUR 63 dB</td><td data-bbox="1606 550 1980 611">L_{Aeq} 8 HOUR 55 dB</td></tr> <tr> <td data-bbox="846 611 1279 662">Open Window Maximum Reduction</td><td data-bbox="1279 611 1606 662">-15 dB(A)</td><td data-bbox="1606 611 1980 662">15 dB(A)</td></tr> <tr> <td data-bbox="846 662 1279 715">Correction for 1% Annual Opening 10 x Log (¹/I₁₀₀)</td><td data-bbox="1279 662 1606 715">-20 dB(A)</td><td data-bbox="1606 662 1980 715">-20 dB(A)</td></tr> <tr> <td data-bbox="846 715 1279 759">Calculated Internal Noise Level</td><td data-bbox="1279 715 1606 759">L_{Aeq} 8 HOUR 28 dB</td><td data-bbox="1606 715 1980 759">L_{Aeq} 8 HOUR 20 dB</td></tr> <tr> <td data-bbox="846 759 1279 804">BS 8233: 2014 Criteria</td><td data-bbox="1279 759 1606 804">L_{Aeq} 8 HOUR 30 dB</td><td data-bbox="1606 759 1980 804">L_{Aeq} 8 HOUR 30 dB</td></tr> <tr> <td data-bbox="846 804 1279 852">Conclusion</td><td data-bbox="1279 804 1606 852">Criteria Achieved</td><td data-bbox="1606 804 1980 852">Criteria Achieved</td></tr> </tbody> </table> The 1% where the noise criteria would not be achieved relates to when it would be necessary to open windows when external temperatures exceed 26 degrees between 23:00 hrs and 07:00 hrs, equating to 1 or 2 nights a year, if any. The results for this 1% scenario are provided in the table below.			Location			Position 1	Position 2	Recorded Façade Level	L _{Aeq} 8 HOUR 63 dB	L _{Aeq} 8 HOUR 55 dB	Open Window Maximum Reduction	-15 dB(A)	15 dB(A)	Correction for 1% Annual Opening 10 x Log (¹ /I ₁₀₀)	-20 dB(A)	-20 dB(A)	Calculated Internal Noise Level	L _{Aeq} 8 HOUR 28 dB	L _{Aeq} 8 HOUR 20 dB	BS 8233: 2014 Criteria	L _{Aeq} 8 HOUR 30 dB	L _{Aeq} 8 HOUR 30 dB	Conclusion	Criteria Achieved	Criteria Achieved
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Conclusion	Criteria Achieved	Criteria Achieved																								

	Location	
	Position 1	Position 2
Recorded Façade Level	L _{Aeq} 8 HOUR 63 dB	L _{Aeq} 8 HOUR 55 dB
Open Window Maximum Reduction	-15 dB(A)	15 dB(A)
Calculated Internal Noise Level	L _{Aeq} 8 HOUR 48 dB	L _{Aeq} 8 HOUR 40 dB
BS 8233: 2014 Criteria	L _{Aeq} 8 HOUR 30 dB	L _{Aeq} 8 HOUR 30 dB
Conclusion 23:00 - 0700 hrs	Criteria Not Achieved when external temp. is greater than 26°C	Criteria Not Achieved when external temp. is greater than 26°C

Therefore, the noise criteria will be achieved for 99% of the year with only rare events where potentially windows might need to be open at night to purge heat where temperatures exceed 26°C, in accordance with the overheating strategy.