

APPENDIX 13.2
DEMOLITION AND CONSTRUCTION NOISE ASSESSMENT

Appendix 13.2: Demolition and Construction Noise Assessment

The significance criteria for the noise assessment of the Works are based on 'The ABC Method' from BS 5228-1:2009 + A1 2014. An extract describing this method is provided below on **Table 13.2.1**.

Table 13.2.1: ABC Categories

Assessment category and threshold value period (L_{Aeq})	Threshold Value, in decibels (dB)		
	Category A ^{A)}	Category B ^{B)}	Category C ^{C)}
Night-time (23.00-07.00)	45	50	55
Evenings and weekends ^{D)}	55	60	65
Daytime (07.00-19.00) and Saturdays (07.00-13.00)	65	70	75
<p>NOTE 1 A potential significant effect is indicated if the $L_{Aeq,T}$ noise level arising from the site exceeds the threshold level for the category appropriate to the ambient noise level.</p> <p>NOTE 2 If the ambient noise level exceeds the threshold values given in the table (i.e. the ambient noise level is higher than the above values), then a significant effect is deemed to occur if the total L_{Aeq} noise level for the period increases by more than 3 dB due to construction activity.</p> <p>NOTE 3 Applied to residential receptors only.</p>			
<p>^{A)} Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.</p> <p>^{B)} Category B: threshold values to use when the ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.</p> <p>^{C)} Category C: threshold values to use when the ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.</p> <p>^{D)} 19.00-23.00 weekdays, 13.00-23.00 Saturdays and 07.00-23.00 Sundays.</p>			

Source: BS 5228-1:2009, Page119

Predicted construction noise levels both with and without mitigation are summarised in **Table 13.2.2** to **Table 13.2.5**.

Predicted Construction Noise Levels – With No Mitigation

Table 13.2.2: Predicted Construction Noise Levels SR A – Worst Case with No Mitigation

Construction Phase / Activity	Noise level at NSR (dB(A))	Period	Ambient noise level (dB(A))	Ambient noise level rounded to 5dB (dB(A))	Category	Site Noise Level (dB(A))	Threshold value (dB(A))	Value over threshold (dB(A))	Significance
Site clearance and demolition	74	Daytime	51	50	A	74	65	9	Moderate adverse
Piling, foundations and ground slabs	70	Daytime	51	50	A	70	65	5	Moderate adverse
Superstructure	69	Daytime	51	50	A	69	65	4	Minor adverse
External works	72	Daytime	51	50	A	72	65	7	Moderate adverse

Table 13.2.3: Predicted Construction Noise Levels SR A – Typical Case with No Mitigation

Construction Phase / Activity	Noise level at NSR (dB(A))	Period	Ambient noise level (dB(A))	Ambient noise level rounded to 5dB (dB(A))	Category	Site Noise Level (dB(A))	Threshold value (dB(A))	Value over threshold (dB(A))	Significance
Site clearance and demolition	71	Daytime	51	50	A	71	65	6	Moderate adverse
Piling, foundations and ground slabs	67	Daytime	51	50	A	67	65	2	Minor adverse
Superstructure	66	Daytime	51	50	A	66	65	1	Minor adverse
External works	68	Daytime	51	50	A	68	65	3	Minor adverse

Table 13.2.4: Predicted Construction Noise Levels SR B – Worst Case with No Mitigation

Construction Phase / Activity	Noise level at NSR (dB(A))	Period	Ambient noise level (dB(A))	Ambient noise level rounded to 5dB (dB(A))	Category	Site Noise Level (dB(A))	Threshold value (dB(A))	Value over threshold (dB(A))	Significance
Site clearance and demolition	78	Daytime	65	65	B	78	70	8	Moderate adverse
Piling, foundations and ground slabs	74	Daytime	65	65	B	74	70	4	Minor adverse
Superstructure	73	Daytime	65	65	B	73	70	3	Minor adverse
External works	69	Daytime	65	65	B	69	70	-1	Negligible

Table 13.2.5: Predicted Construction Noise Levels SR B – Typical Case with No Mitigation

Construction Phase / Activity	Noise level at NSR (dB(A))	Period	Ambient noise level (dB(A))	Ambient noise level rounded to 5dB (dB(A))	Category	Site Noise Level (dB(A))	Threshold value (dB(A))	Value over threshold (dB(A))	Significance
Site clearance and demolition	73	Daytime	65	65	B	73	70	3	Minor adverse
Piling, foundations and ground slabs	69	Daytime	65	65	B	69	70	-1	Negligible
Superstructure	68	Daytime	65	65	B	68	70	-2	Negligible
External works	64	Daytime	65	65	B	64	70	-6	Negligible

Predicted Construction Noise Levels – With Mitigation

Table 13.2.6: Predicted Construction Noise Levels SR A – Worst Case with Mitigation

Construction Phase / Activity	Noise level at NSR (dB(A))	Period	Ambient noise level (dB(A))	Ambient noise level rounded to 5dB (dB(A))	Category	Site Noise Level (dB(A))	Threshold value (dB(A))	Value over threshold (dB(A))	Significance
Site clearance and demolition	68	Daytime	51	50	A	68	65	3	Minor adverse
Piling, foundations and ground slabs	64	Daytime	51	50	A	64	65	-1	Negligible
Superstructure	63	Daytime	51	50	A	63	65	-2	Negligible
External works	66	Daytime	51	50	A	66	65	1	Minor adverse

Table 13.2.7: Predicted Construction Noise Levels SR A – Typical Case with Mitigation

Construction Phase / Activity	Noise level at NSR (dB(A))	Period	Ambient noise level (dB(A))	Ambient noise level rounded to 5dB (dB(A))	Category	Site Noise Level (dB(A))	Threshold value (dB(A))	Value over threshold (dB(A))	Significance
Site clearance and demolition	65	Daytime	51	50	A	65	65	0	Negligible
Piling, foundations and ground slabs	61	Daytime	51	50	A	61	65	-4	Negligible
Superstructure	60	Daytime	51	50	A	60	65	-5	Negligible
External works	62	Daytime	51	50	A	62	65	-3	Negligible

Table 13.2.8: Predicted Construction Noise Levels SR B – Worst Case with Mitigation

Construction Phase / Activity	Noise level at NSR (dB(A))	Period	Ambient noise level (dB(A))	Ambient noise level rounded to 5dB (dB(A))	Category	Site Noise Level (dB(A))	Threshold value (dB(A))	Value over threshold (dB(A))	Significance
Site clearance and demolition	72	Daytime	65	65	B	72	70	2	Minor adverse
Piling, foundations and ground slabs	68	Daytime	65	65	B	68	70	-2	Negligible
Superstructure	67	Daytime	65	65	B	67	70	-3	Negligible
External works	63	Daytime	65	65	B	63	70	-7	Negligible

Table 13.2.9: Predicted Construction Noise Levels SR B – Typical Case with Mitigation

Construction Phase / Activity	Noise level at NSR (dB(A))	Period	Ambient noise level (dB(A))	Ambient noise level rounded to 5dB (dB(A))	Category	Site Noise Level (dB(A))	Threshold value (dB(A))	Value over threshold (dB(A))	Significance
Site clearance and demolition	67	Daytime	65	65	B	67	70	-3	Negligible
Piling, foundations and ground slabs	63	Daytime	65	65	B	63	70	-7	Negligible
Superstructure	62	Daytime	65	65	B	62	70	-8	Negligible
External works	58	Daytime	65	65	B	58	70	-12	Negligible