

Stag Brewery



Technical Note – Play Space Noise

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Client Name: Reselton Properties Limited

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This document has been prepared and checked in accordance with Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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1. Introduction

- 1.1. Chapter 9 (Noise and Vibration) of the March 2022 Environmental Statement (ES) presents an assessment of the likely significant noise and vibration effects. With regard to noise from play space Chapter 9 of the March 2022 ES stated at paragraph 9.88:
- 1.2. *“Although there would be the potential for local play facilities to generate a degree of noise, the levels generated would be relatively low and would in general not be of concern to local residents. Of primary concern would be noise effects associated with larger more formalised play space and sports pitches such as those associated with the proposed school.”*
- 1.3. Chapter 9 of the March 2022 ES presents an assessment of the potential noise effects from the proposed full sized artificial all weather 3G artificial grass sport pitch and external Multi Use Games Area (MUGA) associated with the proposed school. In Table 9.27 of the March 2022 ES, the residual effects were reported as *“Negligible to permanent, local, intermittent adverse effects up to minor level during usage of sports pitch and MUGA”*. This is insignificant.
- 1.4. London Borough Richmond-upon-Thames (LBRuT) has subsequently raised a query regarding the potential noise effects from all play areas associated with the proposed Development. As inferred in paragraph 9.88 of the March 2022 ES, the other play space (i.e. those proposed within the Development that are not the sports pitch or the MUGA) would not typically be assessed and presented in support of a planning application as a statutory or policy led requirement, and are termed ‘informal play spaces’. Informal play space is considered equivalent to residential gardens to the proposed residential Blocks. At the request of LBRuT noise from play space, as illustrated in page 16 Figure ‘Play Strategy’ of the Landscape Design – Planning Addendum Rev 00 July 2022 document, has been assessed and is the subject of this Technical Note.

- 1.5. Further to the above, assessment of noise from the proposed school rooftop play space as illustrated in drawing C645_23_P_RF_001 Rev B Proposed Roof Plan has also been assessed. This was not assessed in the ES as this play space was considered equivalent to a school playground with intermittent use at breaks and lunch time and not a formalised play space such as the sports pitch and MUGA.

2. Assessment of School Rooftop Play Space

- 2.1. The Rooftop Play area is located on top of the third storey of the proposed school building. Surrounding the Rooftop Play area is a 1.1m high edge solid barrier with netting above. The Rooftop Play area is at a higher level (approximately 10.6m above ground level) than the height of the closest existing residential receptors on Watney Road and Lower Richmond Road (ground floor receptor location 1.5m above ground level). Existing residential receptors therefore benefit from distance attenuation and screening of noise generated from children playing within this Rooftop Play area. Predicted noise from the Rooftop Play area are presented in Table 1. The calculations take account of both distance and screening attenuation. A nominal 10dB screening has been applied on the basis that there is no line of sight from a receptor at ground level to the Rooftop Play area. It is also assumed that not all 1,200 pupils would occupy the Rooftop Play area at the same time, and for assessment purpose it is assumed 600 pupils would be within the Rooftop Play area. Of the 600 pupils, it has been assumed 200 would be engaged in normal conversation (60dB(A) at 1m), 200 using raised voices (70dB(A) at 1m) and 200 shouting (80dB(A) at 1m). The source noise levels are as extracted from Acoustics of Schools: a design guide, BB93, November 2015.

Table 1: Predicted Noise From Rooftop Play

Sensitive Receptor	Horizontal Distance Rooftop Play to SR (m)	Distance Attenuation	Barrier Attenuation	Rooftop Play Noise Level at SR	Prevailing Noise Level dB $L_{Aeq,T}$	Combined Noise Level dB $L_{Aeq,T}$	Change in Ambient
SR A Watney Road	95	40	10	54	58	59	1
SR B Williams Lane	135	43	10	51	58	59	1
SR C Lower Richmond Road	60	36	10	58	71	71	0

- 2.2. Based on the above assumptions, when the Rooftop Play area is in use with 600 pupils then a change in the ambient noise level of +1dB is predicted at receptors on Watney Road and Williams Lane, with no change at receptors on Lower Richmond Road, which is considered to be insignificant (Refer to Table 9.8 of March 2022 ES for magnitude criteria).
- 2.3. With regard to future residential receptors within the proposed Development, some residents of Blocks 14 and 15 would look directly down on the Rooftop Play area and therefore be subject to an increase in ambient noise levels when this area is in use. The proposal indicates 8 storeys for Block 15 and 6 storeys for Block 14. This could be dealt with by a suitably worded planning

condition to ensure the daytime internal ambient noise levels achieve 35dB $L_{Aeq,T}$ when the Rooftop Play area is in use.

3. Assessment of Play Space Noise

- 3.1. Supplementary Planning Guidance ‘Shaping Neighbourhoods: Plan And Informal Recreation’ issued as part of the London Plan, does not provide specific guidance with regard to noise it only states ‘*The design of play space should take into accountnoise (from busy main roads for instance)*’ and ‘*avoid locations to avoid noise disturbance*’.
- 3.2. The location of the proposed play space together with the targeted age range are presented on page 16 Figure ‘Play Strategy’ of the Landscape Design – Planning Addendum Rev 00 July 2022 document. The potential noise from these areas at a distance of 15m has been predicted based on BB93 noise sources data, distance attenuation based on a point source with an increase in the overall level based on the number of children which the play space can accommodate (+10 x Logarithm of the number of children). Of these children it is assumed for calculation purposes that 45% would be engaged in normal conversation (60dB(A) at 1m), 45% using raised voices (70dB(A) at 1m) and 10% shouting (80dB(A) at 1m).
- 3.3. The predicted noise at a distance of 15m is indicated on Figure 1 and in Table 2. The predicted noise levels are indicative based on the assumptions stated above.

Table 2: Predicted Noise Level From Play Space At 15m

ID (refer to Figure 1)	Play Space Location	Year Group	No. of Children	Indicative Noise Level at 15m (dB(A))
A	North Block 18	5-11 yrs	13	58
B	Courtyard Block 19	Under 4	95	66
C	Courtyard Block 19	5 11 yrs	86	66
D	Courtyard Block 19	Under 4	26	61
E	West Block 21	Under 4	12	57
F	East Block 17	5-11 yrs	14	58
G	East Block 15	Under 4	5	54
H	East Block 15	Under 4	20	60
I	East Block 18	12+ yrs	18	59
J	East Block 4	12+ yrs	12	57
K	East Block 3	Under 4	25	61
L	East Block 3	Under 4	38	62
M	North Block 2	5-11 yrs	47	63
N	West Block 7	5-11 yrs	40	63
O	West Block 7	5-11yrs	46	63

ID (refer to Figure 1)	Play Space Location	Year Group	No. of Children	Indicative Noise Level at 15m (dB(A))
P	East Block 1	12+ yrs	39	62
Q	West Block 8	Under 4	32	62
R	West Block 8	5-11 yrs	34	62
S	North Block 5	12+ yrs	14	58
T	West Block 11	5-11 yrs	3	51
U	West Block 11	5-11 yrs	10	57
V	West Block 11	5-11 yrs	8	56
W	West Block 10	Under 4	7	55
X	West Block 10	Under 4	10	57
Y	East Block 11	Under 4	8	56
Z	East Block 11	5-11 yrs	9	56
AA	East Block 11	Under 4	8	56
AB	North Block 11	12+ yrs	3	51
AC	North Sports Pitch	5-11 yrs	21	60
AD	South Sports Pitch	Under 4	26	61
AE	South Sports Pitch	5-11 yrs	25	61

- 3.4. Noise from the play space at a distance of 15m is predicted to range from 51 to 66dB(A) depending on the number of children using the play space. The assessment is based on it being used at full capacity. This is considered to be comparable to noise arising from residential gardens and should be reviewed in the context of the source noise levels stated in BB93, namely a noise level of 60dB(A) at 1m from a person during normal conversation, increasing to 70dB(A) for a raised voice. This scenario occurs as people are walking and talking down a street, pathway or sitting down talking to each other. Although use of the play space is likely to give rise to localised increase in prevailing ambient noise levels when in use, they are predicted to be at a noise level that should be acceptable and therefore on balance regarded as 'insignificant' in term of their potential effect.

4. Conclusion

As set out above, the assessments undertaken regarding noise generated by use of the Rooftop Play area and the play spaces within the proposed Development indicate insignificant effects to existing and future residential receptors.

Figure 1: Indicative Noise Levels Identified at 15m at each of the play spaces identified on page 16 of the Stag Brewery Landscape Design Planning Addendum

