

Stag Brewery AGP & MUGA

Briefing Note – Noise Emissions

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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. We have been asked to assess the acoustic benefits to be delivered by the installation of a 2.5m acoustic fence along the northern and western perimeters of the proposed Artificial Grass Pitch at the Stag Brewery.
- 1.2. Accordingly, this Briefing Note presents the results of the predicted noise emissions from the Stag Brewery AGP and MUGA based on advice within Sport England's 'Artificial Grass Pitch (AGP) Acoustics – Planning Implications¹'. Sport England advocate that noise emissions where possible should not exceed 50dB L_{Aeq,1hour} from AGPs.
- 1.3. Noise emissions are predicted based on a source noise level of 58dB L_{Aeq,1h} 10m from the centre-line 1.5m above ground level using CadnaA noise modelling software. Noise contour plots at 1.5m above ground level have been generated for the current mitigation scenario and for an enhanced mitigation scenario. Predicted noise levels incident on the nearest existing and future residential properties are also presented.
- 1.4. The current mitigation scenario includes provision of EPDM inserts on the mesh weld fence, which will reduce impact noise² from 93dB(A) to 66dB(A) as measured at a distance of 300mm from the fence panel. This is considered to represent acceptable noise mitigation for the wider existing and proposed residents.
- 1.5. In accordance with LBRuT preference, enhanced mitigation consisting of a 2.5m high acoustic barrier set back from the mesh weld fence adjacent to the AGP on the northern and western boundary has been assessed.

2. Results

- 2.1. Figure 1 presents the noise contour plot with the currently proposed mitigation and Figure 2 presents the noise contour plot with enhanced mitigation, namely 2.5m high acoustic barrier.

¹ Sport England. (2015) Artificial Grass Pitch (AGP) Acoustics – Planning Implications. New Guidance for 2015.

² Zaun Ltd. EPDM Inserts noise reduction test method and results.

Figure 1: Current Mitigation Predicted Noise Levels dB $L_{Aeq,1hour}$ (1.5m above ground level)

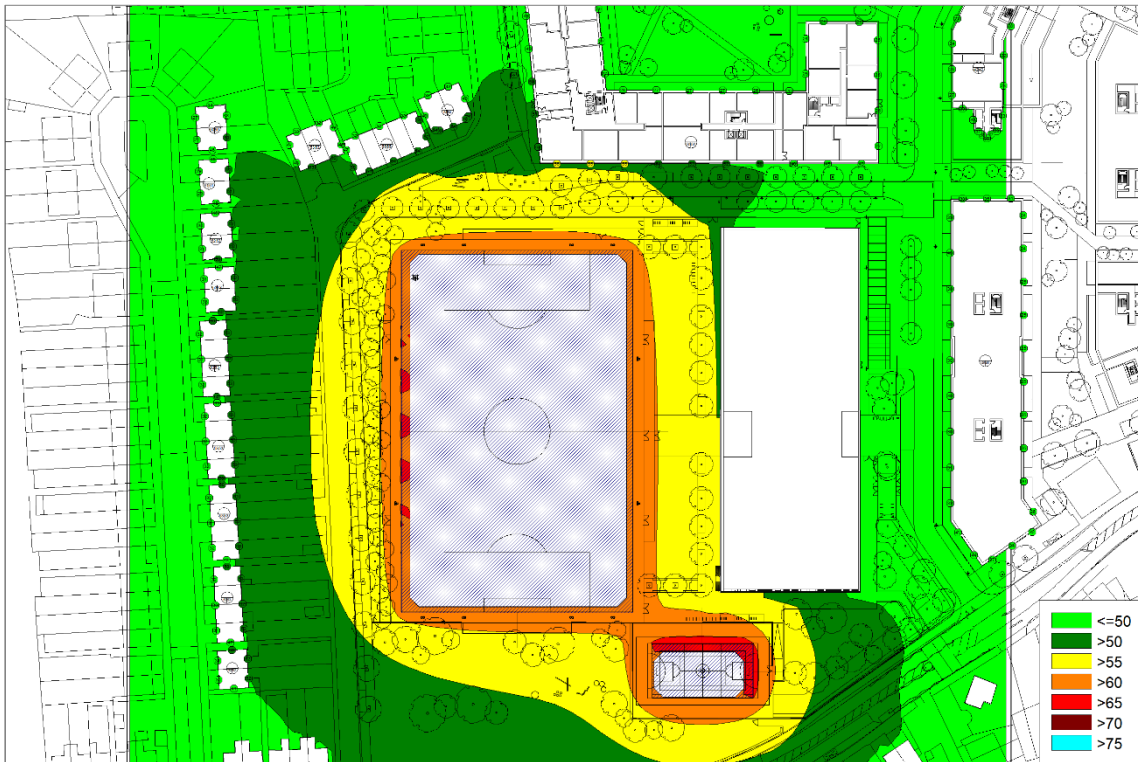
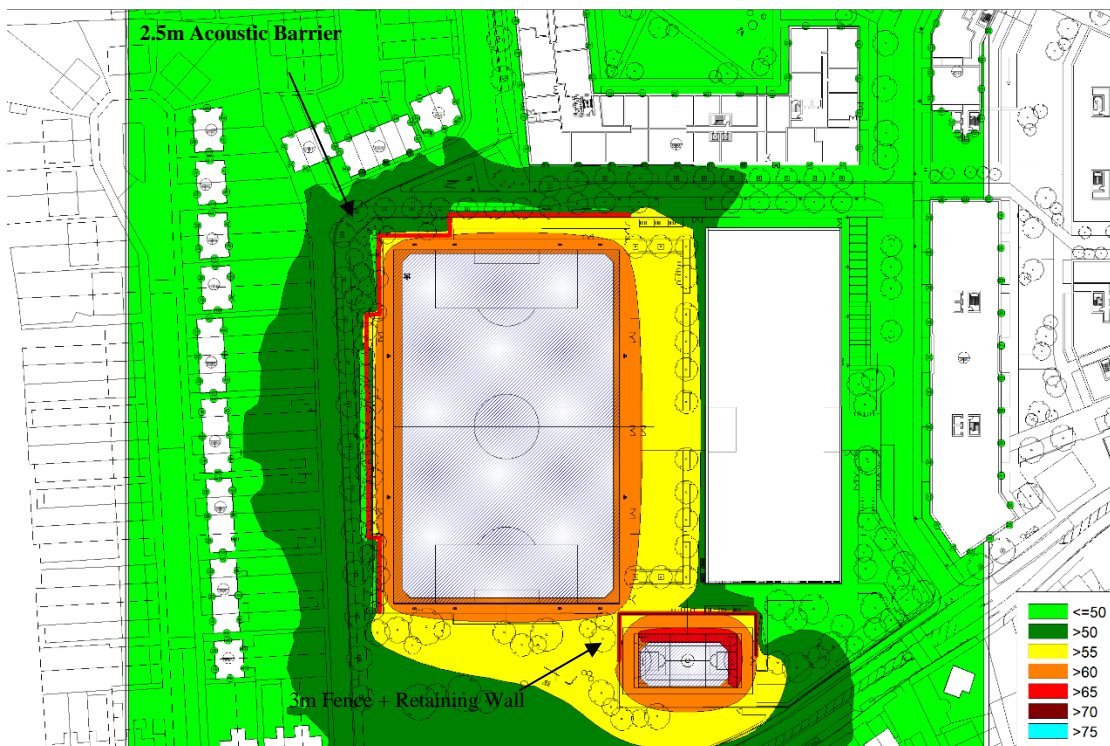


Figure 2: 2.5m Acoustic Barrier AGP Predicted Noise Levels dB $L_{Aeq,1hour}$ (1.5m above ground level)



- 2.2. Table 1 presents the predicted noise levels incident at ground floor level from AGP and MUGA use on 14-20 Williams Lane (north-west of the AGP), 31-37 Watney Road (rear of properties west of the AGP) and Block 18 (north of the AGP).

Table 1: Predicted Incident Noise Level Ground Floor dB $L_{Aeq,1hour}$

Location	Current Mitigation	2.5m Barrier
14-20 Williams Lane	54	50
31-37 Watney Road (rear)	53	49
Block 18	56	51

- 2.3. It should be noted that current mitigation does not take account of in-situ screening afforded to residents on Watney Road provided by garden fencing/wall and garden sheds and garages as illustrated in the street view image in Photograph 1. On this basis the predicted noise levels for the current mitigation scenario are likely to be lower than presented within Table 1. Also, the environmental benefit to residents on Watney Road, through provision of an acoustic barrier along the full length of the western boundary of the AGP is likely to be limited due to the existing in-situ screening.
- 2.4. Table 2 presents the predicted change in the prevailing evening noise level based on the results of the baseline noise survey undertaken in support of the ES. At measurement location LT4, which was at the north-west corner of the redline boundary of the Stag Brewery development at the rear of properties on Williams Lane, the daytime and evening average measured noise levels were 60dB $L_{Aeq,12h}$ and 58dB $L_{Aeq,4h}$ respectively.

Table 2: Predicted Change In Evening Noise Level at Ground Floor dB $L_{Aeq,1hour}$

Location	Current Mitigation	2.5m Barrier
14-20 Williams Lane	1.5	0.6
31-37 Watney Road (rear)	1.2	0.5
Block 18	2.1	0.8

- 2.5. The results in Table 1 illustrate that the SE guideline noise level of 50dB $L_{Aeq,1h}$ would be satisfied at ground floor level at the existing residential receptors under the enhanced mitigation scenario consisting of a 2.5m acoustic barrier.
- 2.6. Table 2 indicates that noise emissions from the AGP and MUGA will combine with the prevailing ambient noise levels to cause a slight increase in the prevailing noise level which is however considered to be acceptable.
- 2.7. It should also be noted that as part of the scheme, visual screening will be provided by planting of trees which form part of the landscape design surrounding the AGP. Obscuring the view of a receptor to a noise source is generally thought to have positive benefits with residents less likely to be bothered about a source they can't see where predicted increases in noise levels are marginal.

Photograph 1: Street View Williams Lane (rear of Watney Road properties) Looking North



3. Conclusions

- 3.1. Assessment of the potential noise effect of emissions from usage of the AGP and MUGA concurrently, using Sport England guidance, indicates that prevailing noise levels will increase slightly with current mitigation, but based on the measured prevailing noise levels would be less than 3dB and is therefore considered acceptable.
- 3.2. Provision of enhanced acoustic mitigation, namely a 2.5m acoustic barrier along the western and northern boundary of the AGP is predicted to allow the SE guideline value to be satisfied at existing sensitive receptors at ground floor level. The benefit of the additional proposed mitigation along the western boundary of the AGP is likely to be limited at properties on Watney Road at ground floor level due to the presence of existing in-situ screening from garden fences/walls, garden sheds and garages which are considered to already provide/act as an acoustic barrier to noise.