

ENVIRONMENT

Avant Homes
Moorthorpe Way
Sheffield
Noise Assessment Addendum

October 2019

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P01	07/10/2019	Issue	Mike Barrett BSc(hons), MIOA	Sarah Gilston BSc(hons), MSc, MIOA	Jim MacQueen BA (Hons)

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1. INTRODUCTION

- 1.1 BWB Consulting Ltd (BWB) was instructed to produce an addendum to the existing Noise Assessment relating to a proposed residential development off Moorthorpe Way, Sheffield. This is in relation to two additional areas being included within the red line. This includes for the proposed Local Equipped Area for Play (LEAP), the Multi Use Games Area (MUGA) and the Surface Water Attenuation area.

Site Setting

- 1.2 The Site is located off Moorthorpe Way and Moorthorpe Rise to the south-west of Owlthorpe in Sheffield: Central Grid Reference SK 4156 8261. The location of the Site (outlined in red) and the proposed MUGA and Leap are shown in **Figure 1**. The proposed LEAP and MUGA lie to the south of the site, whereas the proposed Surface Water Attenuation area is located to the northeast. The proposals are shown in **Figure 2**.

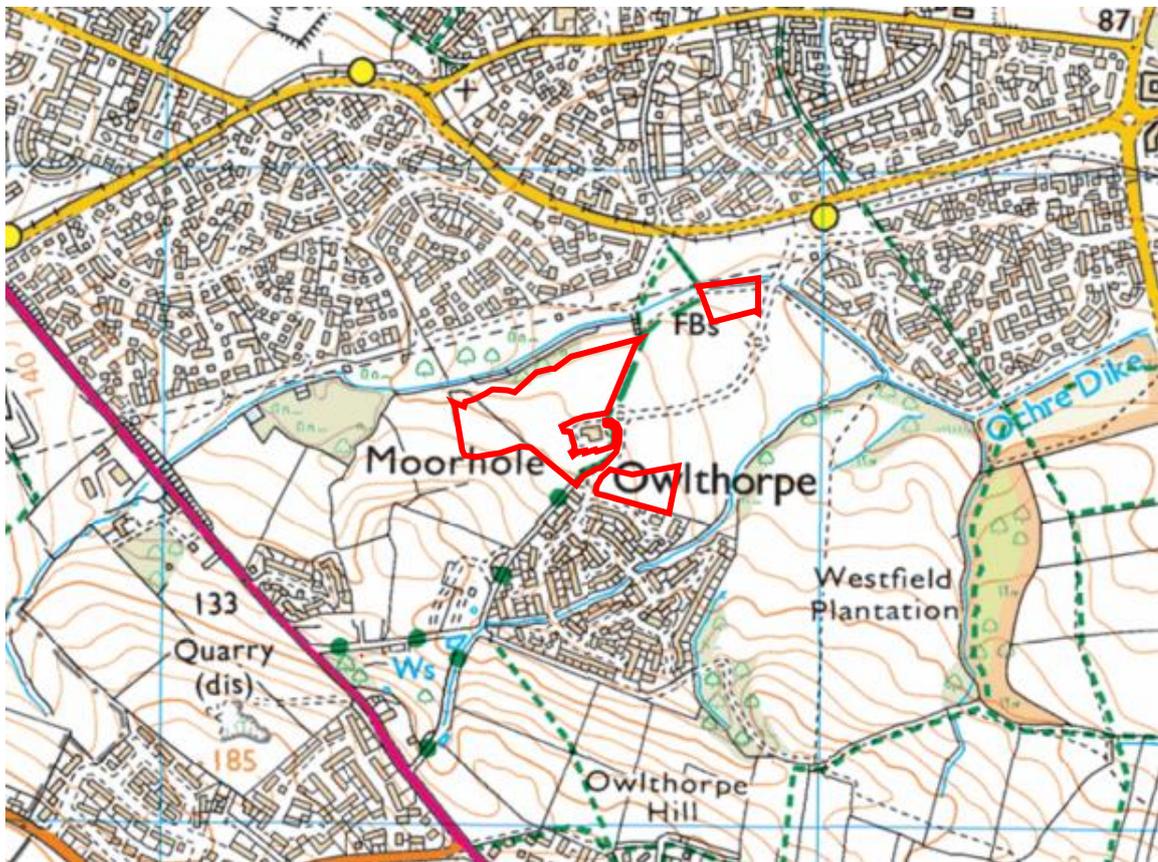


Figure 1: Location Plan



Figure 2: Proposed Development

Aims

- 1.3 The primary purpose of this addendum is to address concerns relating to noise associated with the proposed LEAP and MUGA. This is following comments from the dealing Planning Officer at Sheffield City Council (SCC) provided by e-mail on 20th September 2019:

“We have received an objection from an existing resident about the potential noise impact from the MUGA on the amenity of adjoining residents. It is noted that the noise assessment does not cover this aspect of the scheme. I will be grateful therefore if you can ask your noise consultants to produce an addendum to their report to cover this issue so that I will be able to respond to the issues raise in an evidence-based way. I note that there is useful advice on the Sport England Web site “Artificial Grass Pitch (AGP) Acoustics” - Whilst this relates to artificial grass it has useful guidance on noise from voices and impact noise on ball retaining fences etc.”

2. STANDARDS AND GUIDANCE

- 2.1 There is currently no standard or guidance document that relates specifically to the impact of noise generated by LEAP and MUGA developments onto existing or proposed residential receptors. SCC have requested that the potential impact is considered in the context of the Sport England AGP document, given that noise from activities on an AGP can include noise from raised voices and impact noise from balls.

Sport England Design Guidance Note – Artificial Grass Pitch (AGP) Acoustics – Planning Implications, 2015

- 2.2 The above guidance document expands on the general technical advice already available from Sport England. It provides details of acoustic implications associated with such facilities and follows on from an acoustic research programme involving detailed analysis of relevant noise guidance documents and site testing in a range of locations.
- 2.3 It proposes appropriate noise criteria and assessment methods and outlines practical measures that can be applied to reduce noise in particularly sensitive areas.
- 2.4 It refers to the World Health Organisation (WHO) document Guidelines for Community Noise (1999) which provides guidance for outdoor living areas that states that to avoid 'moderate annoyance' during the daytime and evening the noise level should not exceed 50 dB $L_{Aeq,T}$. WHO guidelines for residential development are typically calculated over a 16-hour daytime period. For an artificial grass pitch, a 16-hour assessment period may not truly reflect the noise impact as it takes into account times of use and non-use. It is suggested an appropriate assessment time period is for one hour, $L_{Aeq,1h}$ as this is typically the time period for a community sports session on an AGP.
- 2.5 The document identifies that, from measurement data, a typical free-field noise level of 58 dB $L_{Aeq,1h}$ at a distance of 10 metres (m) from the side line halfway marking has been determined as representative for noise from an AGP. The document goes on to state that, when a site is in an open location, noise levels of 50 dB $L_{Aeq,1h}$ can be achieved at a distance of 40 m at 1.5 m above local ground height.

3. ASSESSMENT

Existing Dwellings to the south of the LEAP and MUGA

- 2.6 The nearest existing dwellings are located to the south of the LEAP and MUGA on Moorthorpe Dell. The closest existing dwelling is approximately 40m from the MUGA and 42m from the LEAP. Drawing on the Sport England document, it is likely that noise from the use of these facilities would give rise to noise levels of 50 dB $L_{Aeq,1h}$. This would not exceed the WHO guideline value for the hours they are being used for.

Proposed Dwellings to the west of the LEAP and MUGA

- 2.7 The nearest proposed dwellings are located to the west of the LEAP and MUGA, as indicated in the proposed layout drawings. The closest proposed dwelling is approximately 42m from the LEAP and 80m from the MUGA. Drawing on the Sport

England document, it is likely that noise from the use of these facilities would give rise to noise levels below 50 dB $L_{Aeq,1h}$. This would not exceed the WHO guideline value for the hours they are being used for.

4. RESULTS AND SUMMARY

- 4.1 The assessment has shown that predicted noise levels from the proposed LEAP and MUGA are unlikely to generate noise above the threshold for moderate annoyance based on the information provided in the Sport England document. It is also important to note that the noise levels may be lower during periods of less intensive use.
- 4.2 Notwithstanding the above, the Sport England document observes that the impact noise of balls hitting strike boards, goal boards and fencing has the potential to generate higher noise levels than from users. In addition, there can be a difference in the character of that noise. Such impact noises can be found to be significantly reduced by the careful design and selection of perimeter fencing. Therefore it is recommended that, if any fencing is required around the perimeter of the areas, weldmesh fencing is used to enclose them, securely clamped with resilient fixings to avoid vibrations.
- 4.3 In summary, noise from the proposed LEAP and MUGA is likely to be at an acceptable level for existing and proposed noise sensitive receptors and no further noise mitigation is required, however best practice has been suggested for any perimeter fencing to be installed.