

██████████
Pollution Control
Bristol City Council
City Hall
College Green
Bristol BS1 5TR

Our Ref: 1700996-LT-NIA-0001.3
Date: 02 August 2024

Dear ██████████,

Ref: David Lloyd Greystoke Avenue Bristol – Noise – Response to EHO

Thank you for your review of the MZA Acoustics noise impact assessment report (reference 1700996-RP-NIA-0001.0) for the proposed extension to the David Lloyd Leisure club and your comments regarding the outdoor spa garden.

The concerns raised regarding supervision, alcohol consumption, and events as well as afternoon and evening noise have been duly noted. I have provided additional information in the following letter to address these concerns and ensure a comprehensive assessment.

Please note, this letter has been updated from the original version dated 26 January 2024 to reflect the changes to the site layout and subsequent updates captured in the latest noise impact assessment, document reference 1700996-RP-NIA-0001.3.

Alcohol and Events

Upon confirmation from David Lloyd Leisure, we can verify that the spa garden does not permit alcohol consumption or events such as birthday parties and hen dos. Therefore, we do not expect an increase in noise or change in noise character to what we have already predicted in our existing planning report.

Afternoon and Early Evening Spa Garden Use

In consideration of your comments on speech noise during the afternoon and early evening periods, David Lloyd Leisure have confirmed that the spa garden occupancy is only anticipated to be around 100% up until 19:00, however, baseline measurements were not taken during this time.

Subjectively, evening rush hour periods tend to extend longer than in the morning, so we would expect the mid-morning, during which we measured, to be quieter.

Additionally, the early evening period is likely to comprise more local community noise (e.g. residents arriving home from work/after-school activities and playing in or utilising outdoor amenity spaces), compared to the mid-morning period, during which site observations indicated there is very little community noise and activity.

Therefore, in absence of specific data for the early evening period, the use of the mid-morning period is considered to be a reasonably worst-case.

Consequently, our current assessment is considered representative for the general daytime and early evening period – assuming full occupancy, a predicted cumulative speech noise level of 39 dB $L_{Aeq,T}$ against a prevailing ambient level of approximately 43 – 49 dB $L_{Aeq,15min}$.

It is reiterated that the speech sources include a mixture of normal and raised speech and that each occupant would talk for 50% of the time. Considering the spa garden is intended to be a, primarily, relaxing space, this is considered unlikely to occur in reality – with it highly likely that conversations would be less frequent and at lower volumes.

Late Evening Spa Garden Noise Assessment

From 19:00 onwards, David Lloyd Leisure have confirmed that the spa garden occupancy is expected to decrease to roughly 30-40%.

The Bristol Westbury club is open until 22:00 Monday to Saturday and until 21:00 on Sundays, however occupants are typically required to begin leaving the club 30-minutes before closing and, therefore, the spa garden would contain fewer occupants approaching 21:30.

In absence of ambient noise level data at these times, the measured level between 22:45 and 23:00 has been used for comparison. This presents a worst-case scenario considering ambient levels are likely to be considerably lower than those between 19:00 and 21:30.

The table below (continued overleaf) presents the results of the spa garden use in the late evening based on 30-40% occupancy.

Calculation Step	Parameter
Hydro Pool	
Speech sound pressure level at 1 metre (allowing for normal to raised vocal effort)	65 dBA
Correction for number of occupants (2no.)	+3 dB
Correction for all occupants speaking 50% of the time	-3 dB
Correction for distance attenuation (38 metres)	-32 dB
Correction for screening provided by solid boundary walls (no line of sight)	-10 dB
Total speech noise level at receptor	23 dBA

Fire Place Seating Area	
Speech sound pressure level at 1 metre (allowing for normal to raised vocal effort)	65 dBA
Correction for number of occupants (5-6no.)	+7 to +8 dB
Correction for all occupants speaking 50% of the time	-3 dB
Correction for distance attenuation (25 metres)	-28 dB
Correction for screening provided by solid boundary walls (no line of sight)	-10 dB
Total speech noise level at receptor	31 to 32 dBA
Lounger Chair Area 1 (12 Loungers)	
Speech sound pressure level at 1 metre (allowing for normal to raised vocal effort)	65 dBA
Correction for number of occupants (4-5no.)	+7 dB
Correction for all occupants speaking 50% of the time	-3 dB
Correction for distance attenuation (31 metres)	-30 dB
Correction for screening provided by solid boundary walls (no line of sight)	-10 dB
Total speech noise level at receptor	28 to 29 dBA
Lounger Chair Area 2 (6 Loungers)	
Speech sound pressure level at 1 metre (allowing for normal to raised vocal effort)	65 dBA
Correction for number of occupants (2-3no.)	+3 to +5 dB
Correction for all occupants speaking 50% of the time	-3 dB
Correction for distance attenuation (44 metres)	-33 dB
Correction for screening provided by solid boundary walls (partial line of sight)	-5 dB
Total speech noise level at receptor	27 to 29 dBA
Cumulative speech noise level at receptor from all outdoor spa areas	34 – 35 dBA
Prevailing ambient noise level at receptor (L_{Aeq,15min} measured between 22:45 and 23:00)	37 dBA

With the spa garden at 30-40% occupancy, and utilising existing baseline measurements between 22:45 and 23:00 as a worst-case scenario, the calculations demonstrate speech noise levels will be comparable to, but marginally lower than the prevailing ambient level. A greater difference is expected during actual occupancy times.

Moreover, the absolute noise level from speech sources predicted at the receptor is relatively low, approximately 15 dB below WHO guidelines for noise levels in external amenity spaces, which also aligns with Sport England guidance.

It is also noted that noise levels of this order are likely to be practically inaudible to occupants internally.

Conclusion

From the above, we recommend that the assessment outcomes presented in the original planning report would still apply, with speech noise levels at the nearest receptors considered to correspond with PPG's Lowest Observed Adverse Effect Level (LOAEL) under worst-case assumptions.

We trust this clarifies the concerns raised, however we remain available if you have any further queries.

Yours sincerely,

Kyri Demetriou

Senior Acoustics Consultant

