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By email

Date: 8th February 2024
Reference: R9838-3 Rev 1

RE: Roman Fields, Campdown – Noise Assessment

We have reviewed the comments of Havant Borough Council in relation to the noise assessment for planning application APP/23/00488 dated 31 January 2024. We provide our comments and additional information below.

I have reproduced relevant sections of the HBC document below in italics and respond after each.

"Whilst it is recommended in the noise assessment that Mechanical ventilation (MVHR) will be required in the blocks of flats along the eastern boundary, it is not clear whether this will be provided to all 3 floors, and needs to be clarified."

It is confirmed that MVHR will be provided to all floors of the apartment buildings to the east of the site as well as all other buildings identified in Figure 8 of our report.

"In the noise assessment, no indication is given as to what the noise levels are likely to be at 6 – 8 metre height ie second floor apartments, as opposed to those in the lee of the acoustic fence. The apartments / flats to the east of the site, are to be provided with west facing balconies, as external amenity areas? It is further advised that noise levels there will be in excess of 55 dB $L_{Aeq, 16 hr}$."

"Whilst the ground and first floors of the apartments in the shadow of the suggested eastern boundary mitigation measures will potentially benefit from the proposed acoustic fence mitigation and other proposed measures suggested with windows closed, the top floors of the 3 storey apartments nearest the A3M are unlikely to enjoy the same benefits, without sealed facades or potentially additional mitigation measures and little likelihood of anyone being able to enjoy the benefits of open windows on an level, especially at night."

To the east of the site, average L_{Aeq} and L_{Amax} noise levels at the upper floors of the apartment blocks will be higher than those on the ground floor due to reduced screening. This difference was taken into account in our assessment in both the noise break-in calculations and noise mitigation recommendations.

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Noise contours for the day and night periods to the east of the site are shown in Figures 1 and 2 below assuming a receptor height of 7.3 m. This corresponds to the height of the centre of the windows on the top floor of the easterly apartments.

Apartments in this part of the site will be provided with MVHR and acoustic glazing to ensure acceptable internal noise levels are achieved.

As noted in the HBC comments, our report acknowledges that daytime noise levels will be in excess of 55 dB $L_{Aeq, 16 \text{ hr}}$ for east-facing balconies in this area of the site. Alternative external amenity space will be available within a 5 minute walk of these properties and this is therefore considered acceptable in planning terms.

"The L_{Amax} levels at 8 metres are also likely to be higher at this level. It is noted that night-time $L_{Amax, f}$ levels are given as 81 dB as a representative level. To understand the max levels a bit more, these should be given as the number of occurrences above 80 dB for each of the nights recorded and also how many occurrences above 90 dB."

Table 1 below shows the number of occurrences above 80 dB $L_{Amax, f}$ and 90 dB $L_{Amax, f}$ per night at Location 1 as requested.

Day and Date	No of Occurrences	
	Night-time Typical $L_{Amax, f} > 80 \text{ dB}$	Night-time Typical $L_{Amax, f} > 90 \text{ dB}$
Friday 2/12/2022	43	0
Saturday 3/12/2022	33	1
Sunday 4/12/2022	42	0
Monday 5/12/2022	45	2
Tuesday 6/12/2022	48	0

Table 1: Summary of $L_{Amax, f}$ occurrences

"Whilst noise contour maps are given for day & night, in the noise assessment, it is considered that a vertical grid noise contour or heat map should be provided, in order to clarify the travel of the noise sound waves over the proposed A3M boundary barrier and the potential impact on the taller buildings. An indication would then also be provided as to the noise levels at the different floor levels."

The way in which noise from the A3M diffracts over the barrier to the easterly apartments will vary along the eastern site boundary due to differing barrier heights and relative distances between the motorway / barrier / apartments. It is therefore not possible to produce the requested vertical grids. Noise contours for the day and night periods to the east of the site are shown in Figures 1 and 2 below assuming a receptor height of 7.3 m. This corresponds to the height of the centre of the windows on the top floor of the easterly apartments. Noise contours of ground and first floor levels are provided in our report and therefore predicted noise levels at all floor heights have been provided taking into account the screening from the acoustic barrier.

"In regard to the proposed barrier it's advised the 3 to 4 metre high acoustic fence will have a minimum surface density of 15 kg / square metre to minimise the road traffic noise from the A3M. I would ask for clarity that this density of fence will suffice as opposed to possibly a higher density material."

It is confirmed that this superficial density exceeds the minimum density requirement of CRTN, therefore a higher fence weight would not provide any additional reduction in noise levels.

"In a similar vein I would also request clarity be provided as to who will ultimately be responsible for providing the long term maintenance of the proposed acoustic barriers, to ensure continuous mitigation in the future."

It is confirmed that a site management company will be put in place and will ensure long term maintenance of the acoustic barriers. Further details will be provided by the applicant.

"No indication has been noted at this time, that the likes of air source heat pumps or air conditioning plant are being proposed for any of the residential properties. This should be clarified in the ADS referred to below."

It is confirmed that any ASHP or air conditioning plant will be assessed in the Acoustic Design Statement, which will be required by condition for the site, in accordance with relevant guidance.

"Should the Local Planning Authority be minded to approve this application, I would request that as this is a very noisy site, especially due to its proximity to the A3M, that it be conditioned that an Acoustic Design Statement be provided that comprehensively shows that residential accommodation on this site will be sustainable and suitable."

It is noted that an Acoustic Design Statement will be required by condition and confirm that this will reflect the final masterplan and all noise mitigation measures. Full acoustic specifications will be provided for glazing and MVHR systems.

24 Acoustics has reviewed the proposed planning conditions which relate to noise and would make the following comments:

Condition 1: Recommend that Table 4 of BS 8233:2014 is referenced for clarity and that the word 'especially' is removed. Recommend addition of a target night-time noise limit of 45 dB L_{Amax} in bedrooms for regular events.

A suggested alternative wording to Condition 1 is as follows:

"Prior to the commencement of the development, a noise assessment, alongside a noise mitigation scheme for protecting the proposed dwellings from noise generated by College Road and the A3M, shall be submitted to and approved in writing by the local planning authority. The proposed scheme shall achieve the following noise levels, based on Table 4 of BS 8233:2014:

- a) internal day time (07.00 hours to 23.00 hours) noise levels shall not exceed 35dB $L_{Aeq, 16hr}$ for living rooms;
- b) internal night-time (23.00 hours to 07.00 hours) noise levels shall not exceed 30dB $L_{Aeq, 8 hr}$, with individual noise events not exceeding 45dB L_{Amax} for regular events at night in bedrooms.

The proposed mitigation scheme shall include alternative ventilation systems, to reduce the need for windows to be opened where required. This may consist of mechanical heat recovery ventilation system with cool air by-pass or equivalent.

The agreed noise mitigation measures shall be fully installed/implemented prior to occupation of any of the affected dwellings and then permanently retained in good working order thereafter."

Condition 2: Recommend that this condition be omitted as Approved Document O is in force under Building Regulations. This is therefore a matter for Building Control rather than planning.

Condition 3: 24 Acoustics consider that testing should be as per the planned mitigation method and therefore testing generally with open windows is not necessary hence this requirement should be removed.

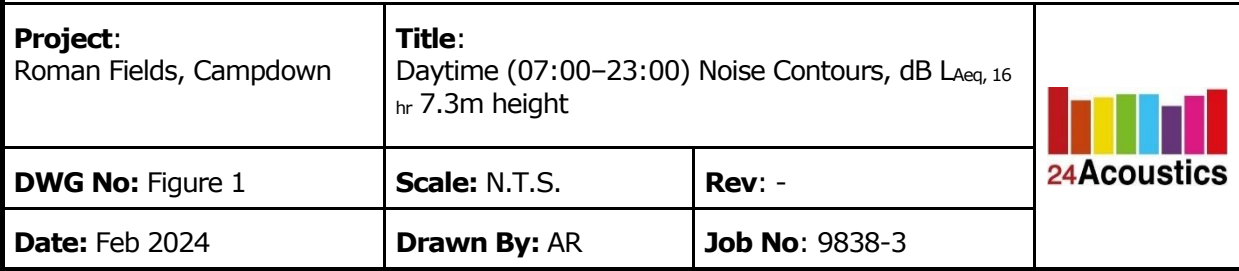
I trust the above is of interest. Should you have any queries please do not hesitate to contact me.

Yours sincerely

For 24 Acoustics Ltd

A handwritten signature in black ink that reads "Aileen Reed".

Aileen Reed BEng MIOA
Principal Consultant





Project:
Roman Fields, Campdown

Title:
Nighttime (23:00–07:00) Noise Contours,
dB L_{Aeq} , 8 hr 7.3m height

DWG No: Figure 2

Scale: N.T.S.

Rev: -

Date: Feb 2024

Drawn By: AR

Job No: 9838-3