

Gemma Manthorpe
Rochdale Borough Council

Professional Consult Limited
534 Edenfield Road
Rochdale
OL12 7QJ

Our Ref: 21.105.1.L2
Date: 31/08/2023

Dear Gemma,

Proposed Residential Development, Land South of Cowm Top Rd – Technical Note for Noise

Professional Consult was appointed to undertake a Noise Impact Assessment (the 'Assessment') in support of a planning application (22/01190/FUL) for a residential development comprising 495 dwellings with associated access, car parking, landscaping and infrastructure at land south of Cowm Top Lane in Castleton, Rochdale.

Our Assessment (Ref. 21.105.1.R4, dated 12th August 2022) provided the following outcomes:

Noise levels in garden areas: Following noise mitigation, resultant noise levels will achieve the 58dB L_{Aeq,16hr} noise criteria level agreed with Rochdale Borough Council; and

Noise levels in habitable rooms: Noise levels in living rooms can meet the internal noise criteria limits provided in BS8233:2014, which is 35dB L_{Aeq,16hr} and for bedrooms, the noise criteria limit of 30dB L_{Aeq,8hr} and 45dB L_{Amax,fast} can be met with appropriate glazing and alternative ventilation being incorporated into the residential Plots.

Since the issue of our Assessment, consultee comments have been received from the Environmental Health Department at Rochdale Borough Council which states:

'This section has no objection in principle to the proposal, the updated noise impact assessment has shown that through improved design and mitigation the required external and internal noise levels can be met. we would recommend the following conditions:

The homes are constructed as per the detail of the submitted noise impact assessment, to achieve the following internal and external noise levels:

- 35 dB(A) Leq (1 hour) in the bedrooms with windows shut and other means of ventilation provided between 7 am and 11pm;
- 30dB(A) Leq 5mins in the bedrooms with windows shut and other means of ventilation provided between 11pm and 7am;
- 35 dB(A) Leq (1 hour) in the living room/s with windows shut and other means of ventilation provided between 7 am and 11pm;
- 40dB(A) Leq (1 hour) in other habitable rooms with windows shut and other means of ventilation provided at all times;
- Noise in external amenity areas shall not exceed 58 dB(A).

Upon completion and prior to occupation validation testing is undertaken to ensure the required sound levels are being achieved, this testing is to include homes exposed to the highest noise levels and the sample will be agreed prior to the testing.

The acoustic barrier(s) are to installed as documented in the noise impact assessment and must have a minimum mass of 15kg/m2 and be free from holes.'

The time-averages stated in the consultee comments are incorrect as they do not align with the time-averages stated in BS8233:2014 and thus the time-averages adopted within our Assessment, which are as follows:

Daytime (living rooms): $L_{Aeq,16hr}$, which means the A-weighted continuous equivalent noise level averaged over a 16hr period between 07:00 – 23:00; and

Night-time (bedrooms): $L_{Aeq,8hr}$, which means the A-weighted continuous equivalent noise level averaged over an 8hr period between 23:00 – 07:00.

The 16-hour daytime average noise level will capture morning and evening rush hour periods, and also quieter evening periods up to 23:00. The 8-hour night-time average noise level will capture early morning increases in road traffic movements on the road network up to 07:00 as well as the quietest periods of the night-time, typically found around 03:00.

The proposed time-averages of 1-hour during the daytime and 5-minutes at night effectively requires any 1-hour period during the daytime and any 5-minute period during the night-time to not exceed the 35dB noise limit for the daytime and 30dB noise limit for the night-time respectively. As noise mitigation, in terms of upgraded glazing and alternative ventilation, have been specified within our Assessment based on the wider time-averages, it is highly likely that there will be exceedances of the noise criteria in the habitable rooms, particularly during morning and evening rush-hour periods, when the road network has a higher noise level due to increased vehicle movements.

In summary, the time-averaged $L_{Aeq,5min}$ period, as proposed in the consultee comments, between 06:55 – 07:00 for example, will have a higher noise level than that which is averaged over the 8-hour time period 23:00 – 07:00 which will have included for the quieter night-time periods and thus a noise measurement taken within a bedroom over just this 5-minute period, will fail any noise validation test. Equally, the time averaged $L_{Aeq,1hr}$ period as proposed, between 17:00 – 18:00 for example, will be significantly higher than that averaged over the 16-hour wider daytime period from 07:00 – 23:00 and hence a living room will fail the noise validation test if a noise measurement was taken from 17:00 – 18:00.

With regards to the stated external noise limit of 58dB for outdoor amenity areas (gardens etc), this is applicable to the daytime period and accordingly requires the appropriate time-average of $L_{Aeq,16hr}$ being attached to the decibel level, ie 58dB $L_{Aeq,16hr}$. Without the 16-hr time-average, a garden area could fail a noise validation test if, for example, a short-term 'snap-shot' noise measurement was taken around 17:00 during a weekday.

In light of the above, we kindly request that the correct time-averaging periods as detailed in BS8233:2014, and consequently adopted in our Assessment, are attached to the proposed noise limits, as follows:

- ② 35 dB(A) Leq (16 hour) in the bedrooms with windows shut and other means of ventilation provided between 7 am and 11pm;
- ② 30dB(A) Leq (8 hour) in the bedrooms with windows shut and other means of ventilation provided between 11pm and 7am;
- ② 35 dB(A) Leq (16 hour) in the living room/s with windows shut and other means of ventilation provided between 7 am and 11pm;

Reference: 21.105.1.L1
Date: 31/08/2023
Project: Proposed Residential Development, Land South of Cowm Top Rd – Technical Note for Noise

- ② 40dB(A) Leq (16 hour) in other habitable rooms with windows shut and other means of ventilation provided at all times; and
- ② Noise in external amenity areas shall not exceed 58 dB(A) Leq (16 hour).

I trust that the above is clear, however please contact me should you need to discuss any part.

Yours sincerely,

For and on behalf of Professional Consult Limited



John Goodwin BSc (Hons), PGDip, MIOA, MEnvSc
Director