

Our ref: CDIS/1187/23/233 v1.0
20th September 2023

Mr Philip Fletcher
Philip Fletcher Architectural Design Services



Sent by email only: [REDACTED]

Dear Mr Fletcher

**NOISE ASSESSMENT FOR THE ERECTION OF A DETACHED BUNGALOW
LAND TO THE REAR OF 7A STATION ROAD, DODWORTH, BARNSELY, S75 3JD (APP REF: 2022/0008)**

1.00 INTRODUCTION

1.01 RP Acoustics Ltd (RPA) has been commissioned to undertake a noise assessment to aid in the discharge of Condition 16 of planning approval ref: 2022/0008, for the erection of a detached dormer bungalow at land to the rear of 7A Station Road, Dodworth, S75 3JD, (the development site).

1.02 Planning permission for the development was granted by Barnsley Metropolitan Borough Council in June 2022. Condition 16 states:

'No development shall commence until details of an updated noise survey and an associated scheme for protecting the dwelling from noise has been submitted to and approved in writing by the Local Planning Authority. Thereafter the development shall be carried out in accordance with the approved details with the approved mitigation measures being installed prior to the occupation of the dwelling and retained thereafter for the lifetime of the development.'

1.03 The requirement for an updated noise survey is considered in the Officer Report for the development site, which states:

The site is located in an edge of centre location in close proximity to some commercial uses. The closest of which is a small commercial unit located immediately to the North (7a) which the agent has is the same owner as the application site. To reflect this, an amended site plan has been submitted which shows 7a within the blue line boundary. The commercial unit was most recently used as a sandwich shop but is now closed – and in the past has been used as a hot food takeaway. There is the potential that this use (or another use in Use Class E) is resurrected but a change into another hot food takeaway would require a change of use application. In any case, the proposal needs to be assessed in terms of the impact which the commercial uses will have on the future residents for the proposed dwelling. A little further afield are two long-established drinking establishments – the Dodworth Tap (c.30m to the North) and Dodworth Central WMC (c.20m to the East). The agent has provided a noise impact assessment (Dated 2020) which referenced that the proposed dwelling/garden is most likely to be affected by no. 7A's extraction unit which will exert the most significant noise impact. No significant direct concerns were made in the NIA which would restrict the development, but several recommendations were made to alleviate this potential impact. This included the following:

- Installation of a in-duct silencer to the extraction system of no. 7a,
- Erection of an acoustic barrier along the Northern and Eastern perimeters of the site.
- Appropriate glazing to the East and West façade of the dwelling.
- Roof insulation and construction methods/materials.

Pollution Control have been consulted on the application and have assessed the noise report with no direct objection subject to these measures being fulfilled. These measures have also been acknowledged and agreed by the agent however the submitted noise report was in relation to the previous scheme and contained various measures which were somewhat out of the control of the developer. I.e., the installation of an in-duct silencer off site with no firm evidence presented which indicates that the developer/applicant owns this land/site as well. As such, it is felt that there are no real concerns with the development in terms of noise pollution for future and existing residents but an updated noise survey and associated scheme for protecting the dwelling from noise has been submitted to and approved by the LPA.

- 1.04 Based on the comments contained in the Officer Report, the rationale for an updated noise assessment is based on the requirement to control noise emissions associated with the commercial use of 7A Station Road, rather than the general environmental noise levels measured at the development site. Mitigation measures to control noise emissions associated with the commercial use of 7A Station Road detailed in the original noise assessment (undertake by others), relied on the works being undertaken at 7A Station Road (namely the installation of an in-duct silencer in the kitchen extraction system).
- 1.05 This report addresses the issues identified above, and has been prepared for Philip Fletcher Architectural Design Services and its client for the sole purpose described above. No extended duty of care to any third party is implied or offered.
- 1.06 A glossary of acoustic terms used in the main body of the text is contained in Appendix 1.

2.00 SITE SETTING AND DEVELOPMENT PROPOSALS

- 2.01 The application site is located in a mixed residential and commercial environment and is bound by:
- The rear of 7A Station Road and an electricity sub-station to the north, with Station Road beyond.
 - Baslow Crescent to the east, with the Dodworth Central Social Club beyond.
 - Existing residential development to the south and west.
- 2.02 An annotated aerial image of the site and its environs, including a development site overlay, is contained in Appendix 2.1.
- 2.03 The development proposals consist of a detached dormer bungalow, with associated access, parking and landscaping. Proposed plans/elevations are contained in Appendix 2.2.
- 2.04 Planning permission for the existing hot food takeaway at 7A Station Road has recently been granted (app ref: 2022/1248). The approved development consists of a new shop front, a replacement kitchen extraction flue and a single storey extension to the rear. Condition 4 requires that the rating level of plant associated with the takeaway does not exceed 38 dB $L_{Aeq,1 \text{ hour}}$ at the nearest noise sensitive receptor. Condition 6 restricts the operating times to between 11:00 and 23:00 hours daily.

3.00 NOISE CLIMATE IN THE VICINITY OF THE DEVELOPMENT SITE

- 3.01 A Noise Impact Assessment (NIA) undertaken by Acoustic Solutions (ref: 1965-62-20) was submitted as part of the application for the development site. As part of the NIA, noise measurements in the vicinity of the application site were undertaken on 29th and 30th August 2020. Of these measurements, monitoring position 1 (ASMP1) was located to the north east of the sub-station, at 4 metres to the near side kerb of Station Road and monitoring position 2 (ASMP2) was located to the south west of 7A Station Road (note: takeaway unit vacant at the time of the survey). The approximate locations of ASMP1 and ASMP2 are identified in Appendix 2.1.
- 3.02 Based on the NIA, the typical daytime noise level at ASMP1 consisted of road traffic on Station Road and was 53 dB $L_{Aeq,16 \text{ hour}}$ (Note: whilst ASMP1 was located at 4 metres from the kerb of Station Road, the proposed development is set back circa 17 metres from the road and screened by intervening structures). Based on the NIA, the typical daytime noise level at ASMP2 consisted of road traffic on Station Road and was 46 dB $L_{Aeq,16 \text{ hour}}$.
- 3.03 Based on the NIA, the typical night time noise level at ASMP1 consisted of intermittent road traffic on Station Road and was 41 dB $L_{Aeq,8 \text{ hour}}$ (Note: whilst ASMP1 was located at 4 metres from the kerb of Station Road, the proposed development is set back circa 17 metres from the road and screened by intervening structures). Based on the NIA, the typical night time noise level at ASMP2 consisted of intermittent road traffic on Station Road and was 36 dB $L_{Aeq,8 \text{ hour}}$.
- 3.04 In addition to the measurements of the actual noise environment, as part of the NIA, predictions were made of the noise contribution of noise sources associated with the re-opening of 7A station Road as a hot food takeaway. This element of the NIA is no longer relevant given the limiting noise levels set by Condition 4 of app ref: 2022/1248.

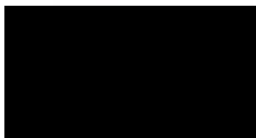
3.05 NOTE: In addition to the measurements detailed above, a noise measurement was undertaken by RPA on 20th April 2023 as part of an assessment for 7A Station Road (MP1 to rear of 7A Station Road, see Appendix 2.1). The measured noise level between 21:48 to 22:48 hours was 45 L_{Aeq,1 hour} and is consistent with the Acoustic Solutions measurements undertaken in 2020.

4.00 CONCLUSIONS AND RECOMMENDATIONS

4.01 With cognisance to the requirements of BS 8233:2014 '*Guidance on sound insulation and noise reduction for buildings*' (BS 8233) and based on (i) the measured noise levels detailed above and, (ii) the limiting noise levels for plant at 7A Station Road imposed by Condition 4 of app ref: 2022/1248, no specific noise attenuation scheme for the development site is considered necessary.

I trust the foregoing is sufficient for your needs. Should you have any queries regarding the above, please do not hesitate to contact me.

Yours sincerely



Richard Pennell. MIOA
For RP Acoustics Ltd

Appendix 1

Glossary of Acoustic Terms

Sound Pressure Level (L_p)

The basic unit of sound measurement is the sound pressure level. As the pressures to which the human ear responds can range from 20 μ Pa to 200 Pa, a linear measurement of sound levels would involve many orders of magnitude. Consequently, the pressures are converted to a logarithmic scale and expressed in decibels (dB) as follows:

$$L_p = 20 \log_{10}(p/p_0)$$

Where L_p = sound pressure level in dB; p = rms sound pressure in Pa; and p_0 = reference sound pressure (20 μ Pa).

A-weighting Network

A frequency filtering system in a sound level meter, which approximates under defined conditions the frequency response of the human ear. The A-weighted sound pressure level, expressed in dB(A), has been shown to correlate well with subjective response to noise.

Equivalent continuous A-weighted sound pressure level, $L_{Aeq, T}$

The value of the A-weighted sound pressure level in decibels of continuous steady sound that within a specified time interval, T , has the same mean-square sound pressure as a sound that varies with time. $L_{Aeq, 16h}$ (07:00 to 23:00 hours) and $L_{Aeq, 8h}$ (23:00 to 07:00 hours) are used to qualify daytime and night time noise levels.

$L_{A10, T}$

The A-weighted sound pressure level in decibels exceeded for 10% of the measurement period, T . $L_{A10, 18h}$ is the arithmetic mean of the 18 hourly values from 06:00 to 24:00 hours.

$L_{A90, T}$

The A-weighted sound pressure level of the residual noise in decibels exceeded 90% of a given time interval, T . L_{A90} is typically taken as representative of background noise.

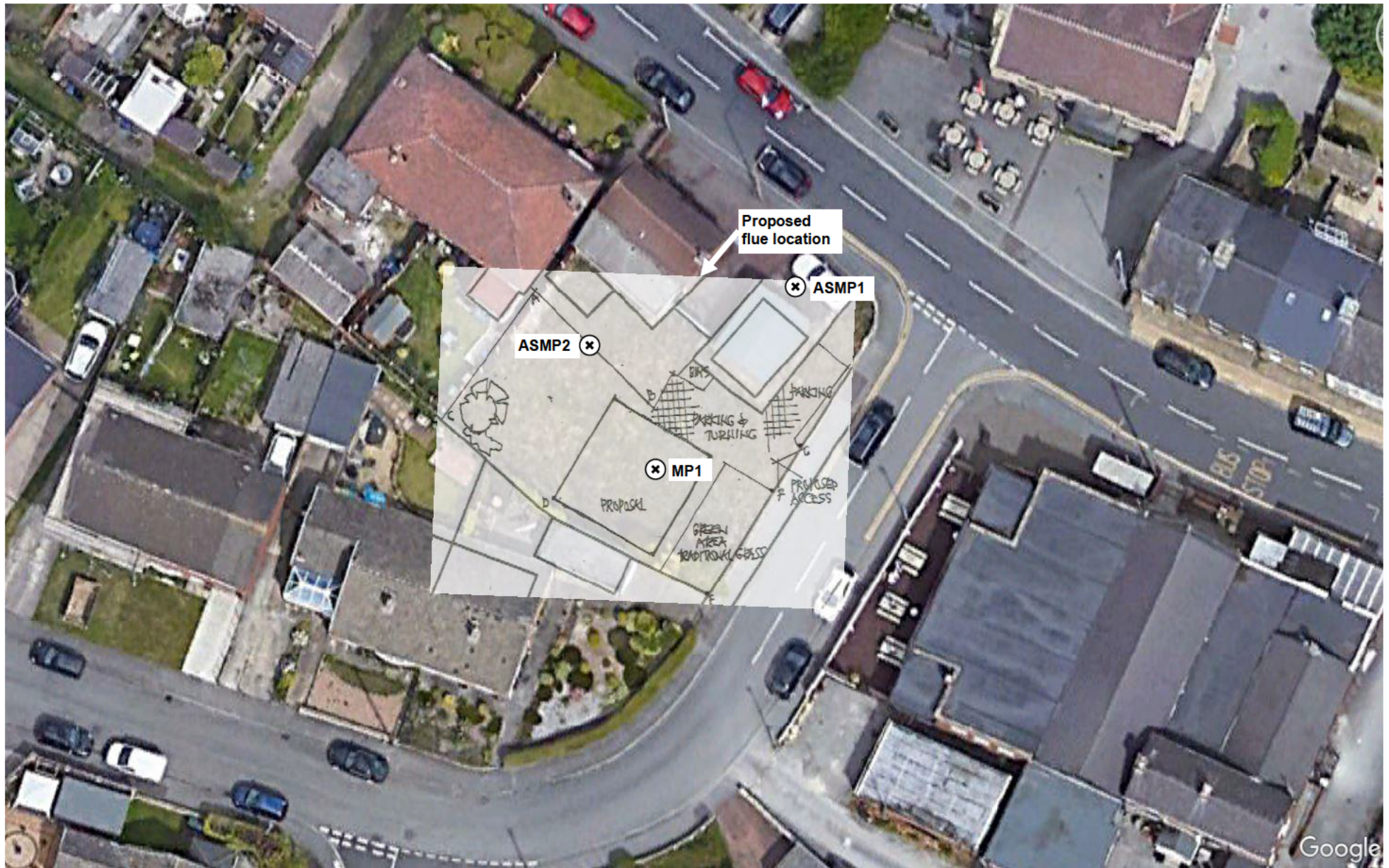
$L_{AF \max}$

The maximum A-weighted noise level recorded during the measurement period. The subscript 'F' denotes fast time weighting, slow time weighting 'S' is also used.

Sound Exposure Level (SEL or L_{AE})

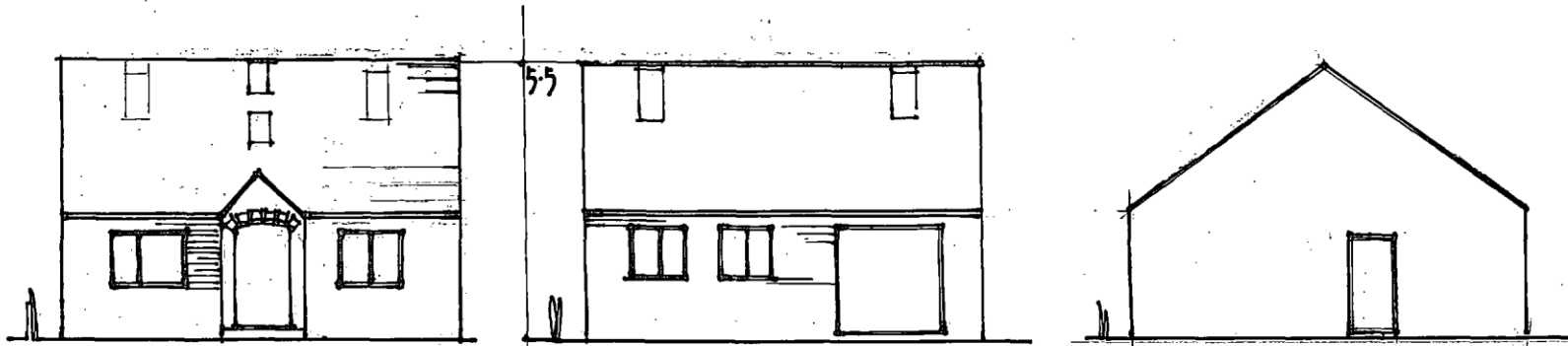
The energy produced by a discrete noise event averaged over one second, no matter how long the event actually took. This allows for comparison between different noise events which occur over different lengths of time.

Appendix 2.1: Annotated aerial image identifying the noise measurement positions (MPs)



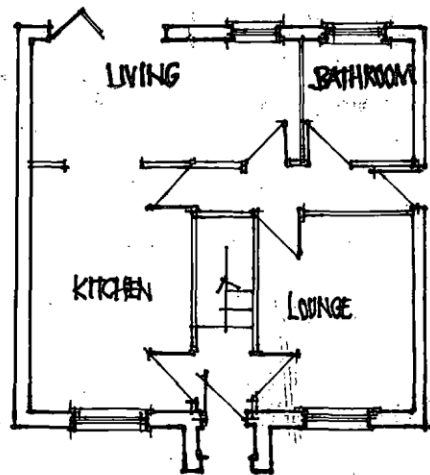
Appendix 2.2: Proposed plans and elevations

DETACHED BUNGALOW, BASLOW CRESCENT
PROPOSAL

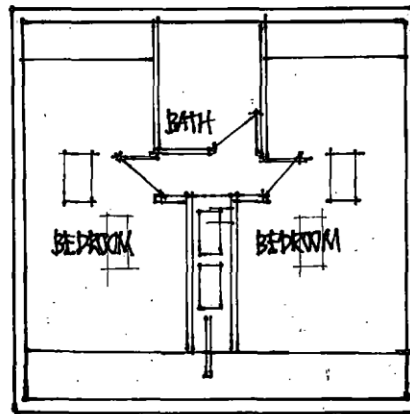


FRONT ELEVATION

REAR ELEVATION



GROUND FLOOR



FIRST FLOOR