
Our Ref: NIA/1545/26/645/V2.0/97 High Street, Wombwell

16th June 2026

Mr Philip Fletcher
302 New Road
Staincross
Barnsley
S75 6GP



Dear Sir,

NOISE IMPACT ASSESSMENT

CONVERSION OF LOFT TO FORM ADDITIONAL FLAT WITH NEW REAR EXTERNAL STAIRS, REAR DORMER AND ROOFLIGHTS AT 97 HIGH STREET, WOMBWELL, BARNSELY, S73 8HS

BARNSELY METROPOLITAN BOROUGH COUNCIL PLANNING APPLICATION 2025/0597

1.00 INTRODUCTION

- 1.01 RP Acoustics Limited has been commissioned by Mr Sarwat Jabbar to carry out a noise impact assessment for the conversion of loft to form additional flat with new rear external stairs, rear dormer and rooflights at 97 High Street, Wombwell, Barnsley, S73 8HS (hereafter referred to as the application site).
- 1.02 The assessment has been undertaken to accompany Planning Application 2025/0597 submitted to Barnsley Metropolitan Borough Council Planning Application.
- 1.03 The objectives of the noise impact assessment were to:
- Determine the ambient and maximum noise levels at the application site
 - Assess the noise impact in accordance with relevant guidance and British Standards
 - Identify any noise mitigation measures as required
- 1.04 This report sets out the methodology and findings of the assessment. It has been prepared on behalf of Mr Sarwat Jabbar for the sole purpose described above and no extended duty of care to any third party is implied or offered. Third parties making reference to the report should consult Mr Sarwat Jabbar (applicant), Mr Philip Fletcher (applicant's agent) and RP Acoustics Limited.
- 1.05 A glossary of acoustic terms is contained in Appendix 1 for reference.

2.00 APPLICATION SITE SETTING AND PROPOSED CHANGE OF USE

- 2.01 The application site is located in a mixed use (residential and commercial) area on High Street in Wombwell town centre. The application site location plan is reproduced in Appendix 2 for reference.
- 2.02 The floor plans and elevations are reproduced in Appendix 3 for reference.
- 2.03 The existing underlying first floor space is a residential dwelling flat.

3.00 BASELINE NOISE SURVEY

- 3.01 A 24-hour baseline noise survey was undertaken from 1500 hours on Friday 15th May 2026. For the purpose of the assessment the following noise monitoring positions were adopted in a reflective field position:
- NMP1 was located a few millimetres from the 2nd floor Velux window overlooking High Street
 - NMP2 was located a few millimetres from the 2nd floor dormer window overlooking the rear courtyard
- 3.02 Baseline noise measurements were undertaken using NTi Audio XL2 Type 1 integrating sound level meters with a 90 mm windshield. The measurement system calibration was verified before and after measurement sessions with no drift in level noted.
- 3.03 The following table contains a summary of the baseline noise measurement data rounded to the nearest decibel (note: in accordance with British Standard 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings (BS 8233) Annex G Paragraph G.2.1. a – 6 dB façade enhancement has been applied to the noise measurement data in order to establish free field noise levels).

Table 3.1 – Baseline Noise Measurement Data

Date	Time	L _{Aeq} (dB)	L _{A90} (dB)	L _{A10} (dB)	L _{A1} (dB)	Comments
Saturday 16/05	0700–1500	55	45	58	64	High Street traffic dominant as evidenced by L _{A10} being 3 dB higher than L _{A90} daytime
Friday 15/05	1500–2300	54	45	57	64	
Friday 15/05	2300–0700	48	32	50	61	
Day Time Ambient Noise Level 54 dB L_{Aeq} (0700–2300) Night Time Ambient Noise Level 48 dB L_{Aeq} (2300–0700) 11th Highest Night Time Maxima 68 dB L_{AFMax} (2300–0700, 1 minute logging)						
Saturday 16/05	1500–1600	37	34	40	46	Fully screened from traffic
Circa 16 dB lower than front façade due to being fully screened from traffic						

- 3.04 For reference, octave band analysis of the road traffic noise at the application site illustrates consistency with the 'C' spectrum i.e. free flowing traffic.

4.00 ACOUSTIC STANDARDS AND GUIDANCE

Planning & Noise: Professional Practice Guidance on Planning & Noise 2017 (ProPG)

- 4.01 ProPG has been produced to provide practitioners with guidance on the recommended approach to the management of noise within the planning system in England. The Institute of Acoustics, Chartered Institute of Environmental Health and the Association of Noise Consultants have worked together to produce the guidance, which encourages better acoustic design for new residential development and aims protect people from the harmful effects of noise.

- 4.02 ProPG advocates a Stage 1 Initial Site Noise Risk Assessment to provide an indication of the likely risk of adverse effects from noise were no subsequent mitigation to be included as part of the development proposal. It should indicate whether the proposed site is considered to pose a negligible, low, medium or high risk from a noise perspective and is intended to provide a sense of the noise challenge at a potential residential development site and should be interpreted flexibly having regard to the locality, the project and the wider context (as shown in Figure 4.1 below).

Figure 4.1 – ProPG Stage 1 Initial Site Noise Risk Assessment
(Blue Box = High Street Façade)

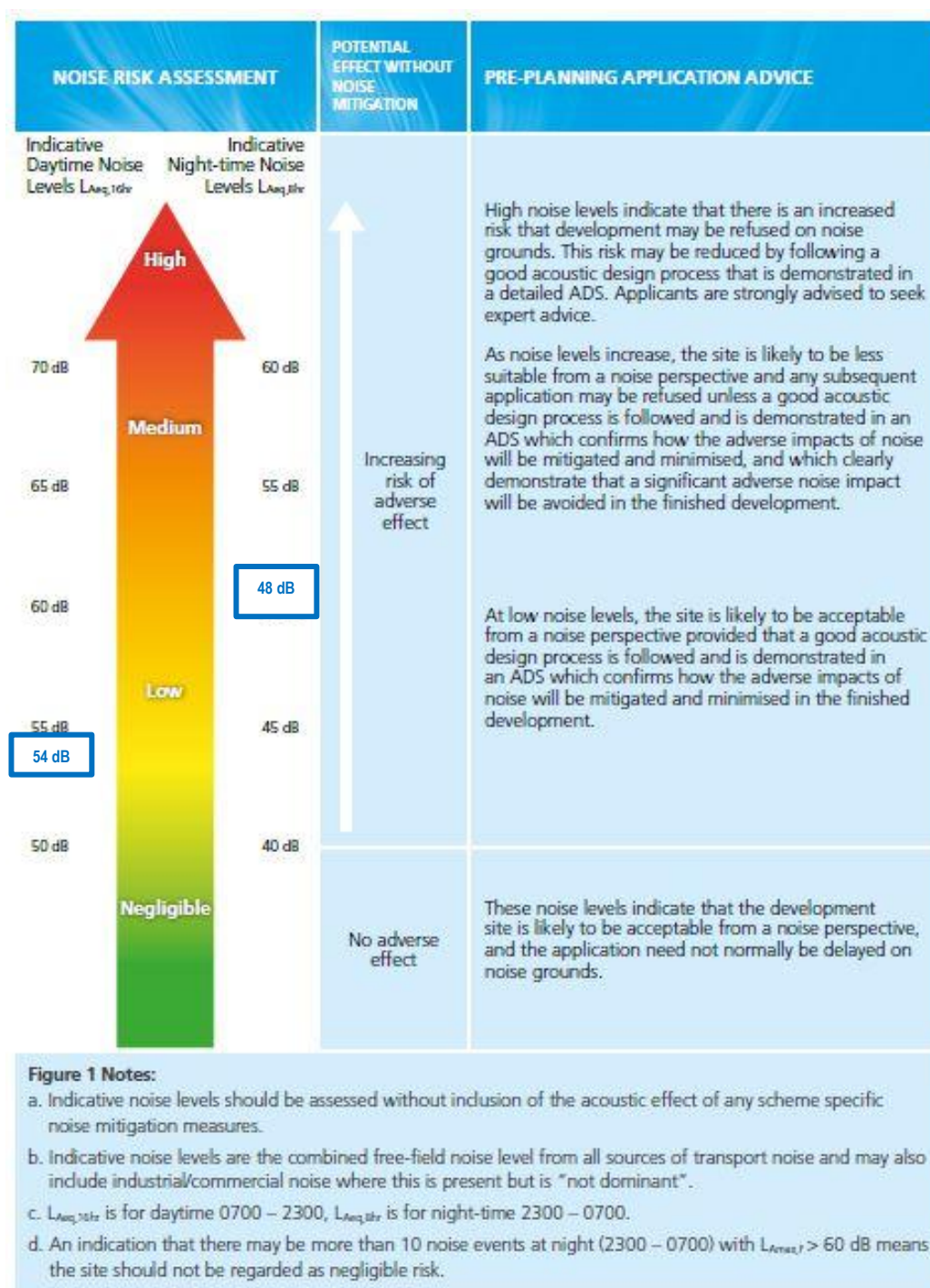


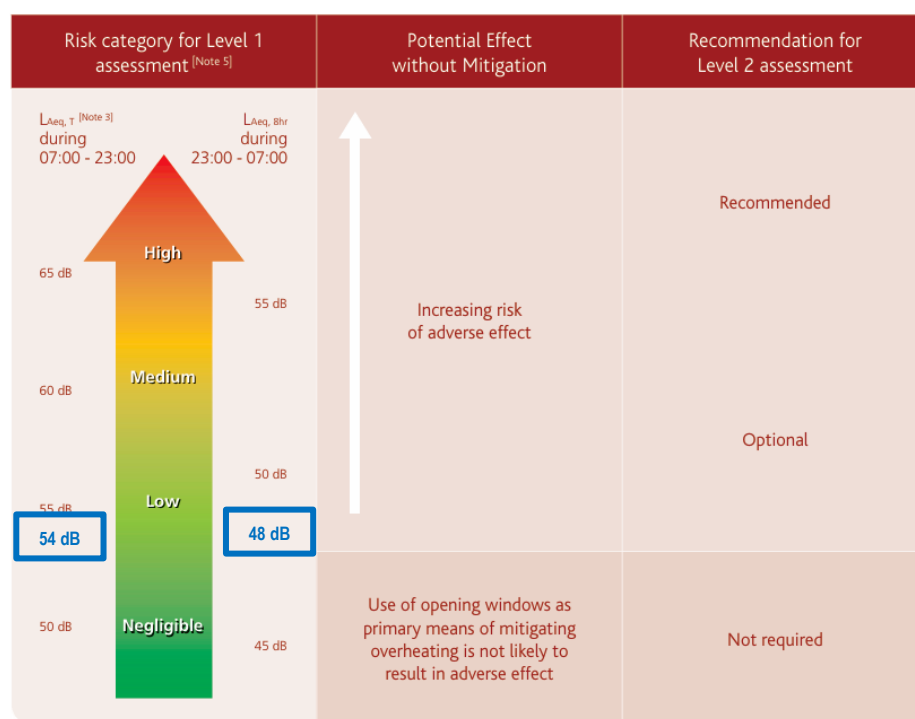
Figure 1. Stage 1– Initial Site Noise Risk Assessment

- 4.03 With reference to Figure 4.1, the application site is categorised as being **low risk** from noise.

Acoustics, Ventilation and Overheating Residential Design Guide 2020 (AVO)

- 4.04 The AVO Guide has been produced by the Association of Noise Consultants and the Institute of Acoustics and is intended to be used by acoustics practitioners as well as all those involved in the planning, development, design and commissioning of new dwellings. It recommends an approach to acoustic assessments for new residential development that take due regard of the interdependence of provisions for acoustics, ventilation, and overheating. Application of the AVO Guide is intended to demonstrate good acoustic design as described in ProPG.
- 4.05 AVO guidance makes a clear distinction between provisions for fresh air to achieve whole dwelling ventilation rates (Approved Document F ventilation) and provisions for ventilative cooling to mitigate overheating (overheating condition). In terms of noise effect, the important distinction is that the overheating condition applies only for part of the time. AVO sets out a Level 1 site risk assessment based on external noise levels and the assumption that opening windows are the primary means of mitigating overheating (as shown in Figure 4.2 below).

Figure 4.2 – AVO Level 1 Site Risk Assessment Relating to Overheating Condition
(Blue Box = High Street Façade)



- Note 1** The noise levels suggested assume a steady road traffic noise source but may be adapted for other types of transport. All levels are external free-field noise levels.
- Note 2** The values presented in this table should not be regarded as fixed thresholds and reference can also be made to relevant dose-response relationships, [15, 17].
- Note 3** A decision must be made regarding the appropriate averaging period to use. The averaging period should reflect the nature of the noise source, the occupancy profile and times at which overheating might be likely to occur. Further guidance can be found within the 2014 IEMA Guidelines [23].
- Note 4** Refer also to references [1, 17, 18, 22] for further guidance regarding individual noise events. Where 78dB LAFmax is normally exceeded during the night-time period (23:00-07:00), a Level 2 assessment is recommended.
- Note 5** The risk of an adverse effect occurring will also depend on how frequently and for what duration the overheating condition occurs. Refer to Figure 3-2.
- Note 6** To evaluate the risk category for a dwelling, all three aspects of external noise exposure (i.e. daytime, night-time and individual noise events) should be evaluated. The highest risk category for any of the three aspects applies.

- 4.06 With reference to Figure 4.2, the application site is categorised as being **negligible to low risk** from overheating. For reference the above categorisation does not consider the orientation of the façade. As the sun rises in the east and sets in the west, the High Street façade (north east facing) will not be exposed to prolonged periods of sunshine. On this basis, the High Street façade is categorised as being **negligible risk** from overheating.

Building Regulations Approved Document O 'Overheating' (BRADO)

- 4.07 BRADO is applicable to new build residential developments and is **not applicable to a material change of use** (as is the case with the application site). Notwithstanding this, BRADO provides useful context in terms of a justification or otherwise for an alternative means of ventilation at the application site.
- 4.08 BRADO requires that reasonable provision must be made in respect of: limit unwanted solar gains in summer; and provide an adequate means of ventilate to remove heat from the indoor environment. BRADO details a simplified method for demonstrating compliance with limiting solar gains in summer months which is suitable for any building.
- 4.09 BRADO also states *'In locations where external noise may be an issue (for example, where the Local Planning Authority considered external noise to be an issue at the planning stage), the overheating mitigation strategy should take account of the likelihood that windows will be closed during sleeping hours (11 pm to 7 am). Windows are likely to be closed during sleeping hours if noise within bedrooms exceeds the following limits: a) 40 dB $L_{Aeq,T}$ averaged over 8 hours (between 11 pm and 7 am); and b) 55 dB L_{AFMax} more than 10 times a night (between 11 pm and 7 am).'*
- 4.10 BRADO therefore objectively defines when relying on opening windows to remove excess heat does not comply with the requirement to take account of noise at night. Where an open window for the removal of excess heat will result in the above noise levels being exceeded, the overheating mitigation strategy must adopt an alternative means.
- 4.11 In accordance with BRADO, it therefore follows that, based on 15 decibels attenuation for a partially open window for thermal comfort, where external noise levels are not above 55 dB L_{Aeq} (2300–0700) and 70 dB L_{AFMax} (2300–0700) (11th highest), an alternative means of ventilation is not justified.
- 4.12 For reference, night time ambient and maximum noise levels at the High Street façade are relatively low at 48 dB L_{Aeq} (2300–0700) and an 11th highest night time maxima of 68 dB L_{AFMax} (2300–0700). As a consequence, BRADO levels will be achieved with partially open windows and therefore an alternative means of mechanical ventilation is not justified.
- 4.13 Furthermore, as stated, the High Street façade, which is exposed to road traffic noise albeit at relatively low levels, is north east facing and thus not subject to prolonged periods of sunshine and is therefore categorised as being **negligible risk** from overheating.

5.00 NOISE MITIGATION MEASURES

- 5.01 Based on the relatively low ambient and maxima noise levels measured during the course of the baseline noise survey, standard double (rated ≥ 29 dB R_w) and standard trickle vents (rated ≥ 33 dB $D_{n,e,w}$ per 4,000 mm²) are considered appropriate for the new Velux windows on the High Street façade. An alternative means of mechanical ventilation is not required.

6.00 CONCLUSION

- 6.01 A noise impact assessment has been undertaken for the conversion of loft to form additional flat with new rear external stairs, rear dormer and rooflights at 97 High Street, Wombwell, Barnsley, S73 8HS. The ambient noise climate at the application site is relatively low such that standard double and standard trickle vents (with partially open windows to negate overheating) are considered appropriate in accordance with Planning & Noise: Professional Practice Guidance on Planning & Noise (ProPG), the Acoustics, Ventilation and Overheating Residential Design Guide (AVO) and Building Regulations Approved Document O 'Overheating' (BRADO). In conclusion, noise does not pose a material constraint to the granting of planning permission.

We trust the foregoing is to your satisfaction. Should you have any queries, please do not hesitate to contact us.

Yours sincerely

Richard Pennell
Member of the Institute of Acoustics
For and on behalf of 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 μPa 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 μPa).

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.

$L_{AF \max}$

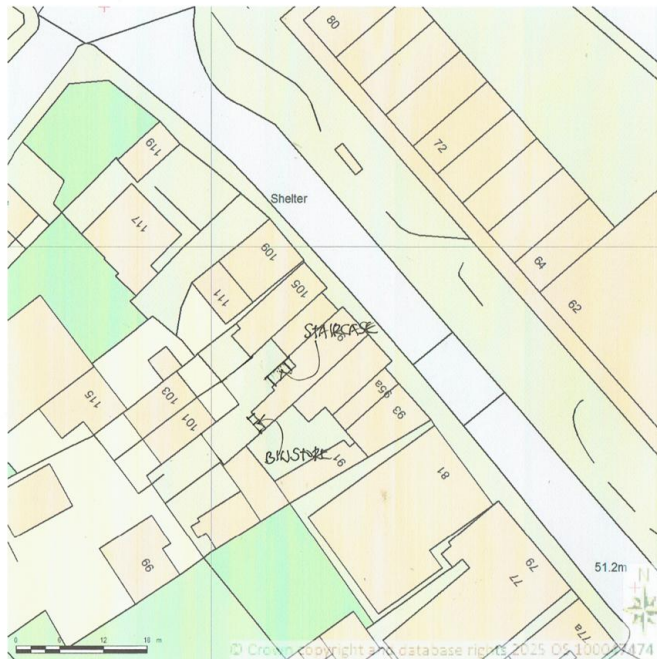
The maximum A-weighted noise level recorded during the measurement period. The subscript 'F' denotes fast time weighting, slow time weighting 'S' is also used.

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 that occur over different lengths of time.



BLOCK/SITE PLAN
AREA 90m x 90m
SCALE 1:500 on A4
CENTRE COORDINATES: 439817, 403188



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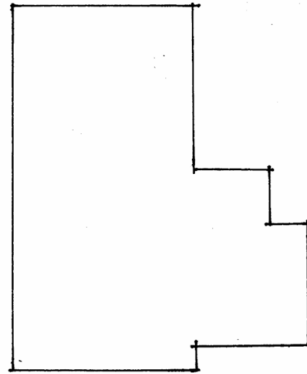
**SITE LOCATION PLAN
AREA 2 HA
SCALE 1:1250 on A4
CENTRE COORDINATES: 439817, 403188**



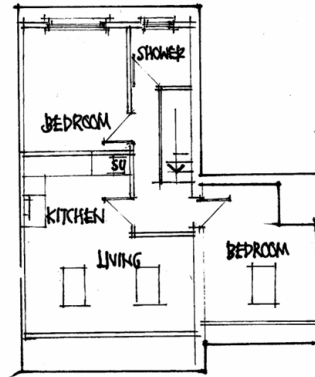
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APPENDIX 3 FLOOR PLANS AND ELEVATIONS

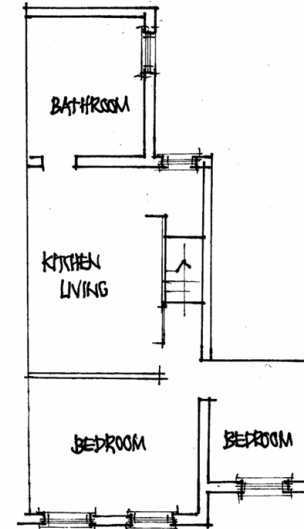
97 HIGH STREET, WOMBWELL



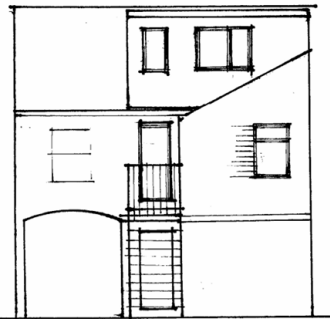
EXISTING LOFT



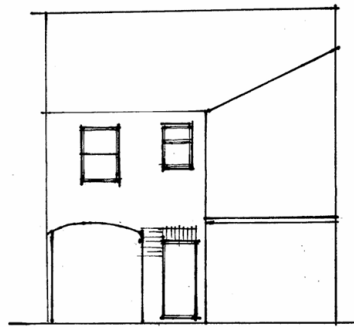
PROPOSED LOFT



EXISTING FIRST FLOOR



PROPOSED REAR ELEVATION



EXISTING REAR

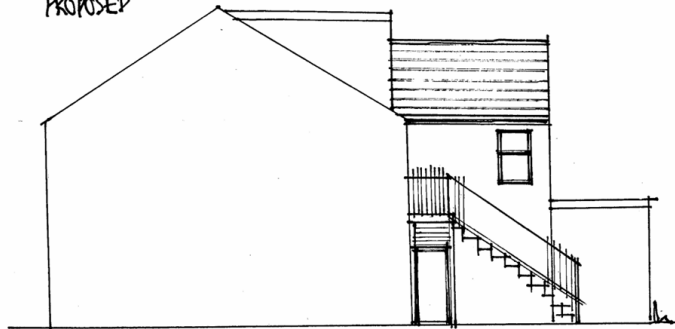
SCALE 1:100

APPENDIX 3 PROPOSED FLOOR PLANS AND ELEVATIONS

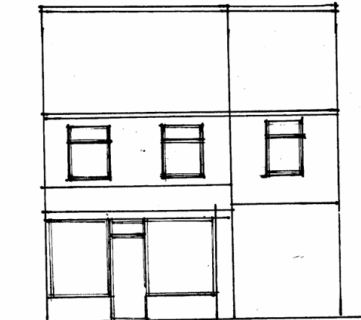
97 HIGH STREET, WOMBWELL
ELEVATIONS

SIDE ELEVATIONS

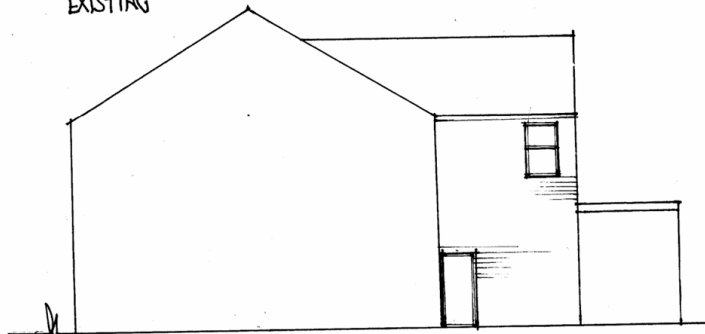
PROPOSED



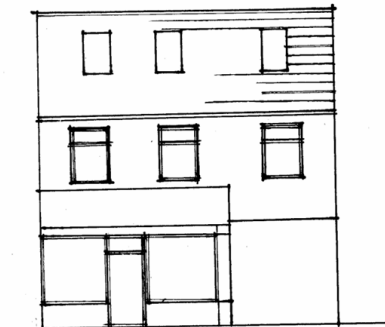
FRONT ELEVATION
EXISTING



EXISTING



PROPOSED



SCALE 1:100