Noise Impact Assessment Scope of Works

From	**Thomas Crabb, Environmental Noise Solutions Limited**
To	**Katie Milnes, Strata**
Subject	**Noise Impact Assessment, Land south of A1077 Barrow Road, Barton upon Humber**
Date	**22 October 2025**

Introduction

Planning permission is sought for a proposed residential development at land south of A1077 Barrow Road, Barton upon Humber (hereafter referred to as 'the site') under Planning Application ref: PA/2023/1607, which was submitted to North Lincolnshire Council (NLC) in October 2023.

Development proposals are for 196 no. dwellings with associated access roads and landscaping.

In November 2023, the Environmental Protection Officer requested a Noise Impact Assessment to be submitted by Strata as part of the Full Planning Application PA/2023/1607.

This report was submitted and consultee comments were subsequently received by the Environmental Protection Officer on the 21st October.

These comments outlined the following key matters need to be agreed with the Environmental Protection Officer:

i) the scope of additional surveys; and
ii) noise mitigation measures

We therefore include our scope of works for a noise survey and assessment of the above site to address the noise concerns of Environmental Protection at NLC.

Site Description

The site is located in a residential setting on the eastern fringe of Barton-upon-Humber.

Potential noise sources impacting upon the site include:

- Road traffic on the A1077 Barrow Road
- Road traffic on a proposed new link road connecting the A1077 to the A15
- Wren Kitchens Barton Site

Assessment Methodology

Assessment of the impact of noise at the site will be undertaken in accordance with the requirements of:

- National Planning Policy Framework (NPPF)
- The Noise Policy Statement for England (NPSE)
- Planning Practice Guidance on Noise (PPG)
- ProPG Planning and Noise: New Residential Development (ProPG)
- Building Regulations Approved Document O – Overheating (ADO)
- BS7445 Description of environmental noise

If significant industrial noise from Wren Kitchens is also noted, then an assessment may also be undertaken in line with BS4142:2014+A1:2019: Methods for Rating and Assessing Industrial and Commercial Sounds (BS 4142).

Where not already covered by the above guidance, reference may also be made to the following documents:

- World Health Organisation Environmental Noise Guidelines for the European Region 2018
- World Health Organisation Guidelines for Community Noise (1999)
- World Health Organisation Night Noise Guidelines for Europe (2009)
- BS8233:2014 Guidance on sound insulation and noise reduction for buildings

Previous Noise Surveys Undertaken

Noise surveys have previously been undertaken on the site on Tuesday 14th March 2023 and additionally on Monday 14th July, Wednesday 16th July and Thursday 17th July 2025 (as outlined within Table 3.1. of the Noise Impact Assessment).

Such surveys demonstrated that road traffic does not vary significantly from day to day at this site (please refer to Table 3.1 of the Noise Impact Assessment, which shows that noise levels are ±1 dB when comparing measurements from March 2023 and 3 separate days in July 2025).

Shortened measurements during the daytime and night-time (0400-0700) were surveyed allowing calculations of daytime and night-time levels to take place.

Further Noise Surveys Proposed

Long-term unattended noise measurements will be undertaken at the northern boundary of the site over at least **72 continuous hours** during the week (i.e. between Monday and Friday). As the site is not secure, it is likely that monitoring equipment will have to be secured to a tree, post or streetlight in close proximity to the kerb edge.

In order to determine the propagation characteristics of road traffic on the A1077, short-term manned measurements will be undertaken at set distances from the kerb edge (e.g. 5 metres, 10 metres, 20 metres) simultaneously with the long-term position. The simultaneous noise level differences obtained can then be used to apply distance corrections to the long-term noise data to represent noise levels at the development footprint.

A manned measurement will also be undertaken at the northern boundary of the site during the night-time (2300–0300 hours) in order to determine whether any distant noise from Wren Kitchens is measurable at the site boundary at times when road traffic is less likely to be dominant.

The intended primary position is marked yellow below – this position is worst-case in terms to proximity to Barrow Road and Wren Kitchens. A simultaneous manned position representative of the development footprint is shown in light blue, but additional distance measurements may also be taken to determine propagation characteristics. Further measurements at the quieter boundaries of the site (marked pink) may also be taken.

All measurements will be undertaken in a free field environment at 4 metres above ground level using Type 1 integrating sound level meters with traceable calibration.

Environmental Protection at NLC have previously questioned the use of measurements at 4 metres above ground level with cognisance to the recommended height of 1.2–1.5 metres as defined in BS7445.

As is often the case with agricultural land adjacent to roads, ground levels at the northern boundary of the site are slightly below the road surface of the A1077 and therefore measurements at 1.2-1.5 metres may not have unobstructed line-of-sight to the road. In contrast, measurements at 4 metres above ground level have unobstructed views to the road surface and a greater view of the horizon. As a consequence, ENS has consistently found that noise levels adjacent to roads are higher at 4 metres when compared to 1.5 metres and therefore the higher levels have been robustly adopted as worst-case to represent upper floor bedrooms.

Notwithstanding the above, comparative measurements at 1.5 metres will also be undertaken.

The long-term position is required to be at height as this is secured to a streetlight for safety. This has no impact on the results of the assessment as this is simply a control position, and the gathered long-term noise data will have to be corrected to represent the noise levels at the development footprint.

The long-term noise data as measured adjacent to the A1077 will also be used to assess future noise from the link road, corrected for distance as appropriate to represent the development footprint.

For reference, Environmental Protection at NLC have previously commented that road traffic should be considered a line-source rather than a point-source. However, previous comparative measurements undertaken at the site have shown that the A1077 propagates as a point-source, with traffic noise levels decreasing by 6 dB per doubling of distance. To clarify, this is because traffic flows on the A1077 are not sufficiently high for the road to act as a continuous line, with vehicles instead acting as a series of moving point sources, as demonstrated in the measured levels. This has no bearing on the assessment at the site, which will use level differences of simultaneous road traffic measurements instead of relying on calculated propagation.

Report

A report will be prepared to detail the methodology of the assessment, results and recommendations, where required, for specialist fenestration, ventilation and boundary screening for the proposed residential development.

To clarify, this will include an assessment of external noise, including noise levels with and without mitigation (boundary screening), full details of recommended mitigation measures and all calculations.

Following analysis on the noise survey results, ENS will provide recommendations with regards to the Good Acoustic Design Process as defined in ProPG.

It is likely that internal targets noise levels in plots adjacent to the A1077 and the proposed link road will only be achieved with windows closed. With respect to this, Paragraph 2.34 of ProPG states:

'Where the LPA accepts that there is a justification that the internal target noise levels can only be practically achieved with windows closed, which may be the case in urban areas and ***at sites adjacent to transportation noise sources****, special care must be taken to design the accommodation so that it provides good standards of acoustics, ventilation and thermal comfort without unduly compromising other aspects of the living environment. In such circumstances, internal noise levels can be assessed with windows closed but with any façade openings used to provide "whole dwelling ventilation" in accordance with Building Regulations Approved Document F (e.g. trickle ventilators) in the open position (see Supplementary Document 2). Furthermore, in this scenario the internal* L_{Aeq} *target noise levels should not generally be exceeded.'*

With reference to the above, it should be noted that:

- The building envelope requirements specified in the report will ensure that the internal L_{Aeq} target noise levels are not exceeded with windows closed
- The ventilation strategy in the report will accord with the requirements of Approved Document F
- The report will include commentary on the noise implications with respect to the requirements of Approved Document O, which will be considered by an overheating assessor as part of a Building Regulations submission and is therefore mandatory

Beyond ensuring that the design provides good standards of acoustics, ventilation and thermal comfort, and therefore showing that adverse impacts can be mitigated, it is not the purpose of the noise impact assessment to justify the use of closed windows at the site. This is ultimately a planning decision which should consider noise in the wider context of the development. As stated in ProPG:

'It is Government policy that noise should not be considered in isolation or separately from the economic, social and other environmental dimensions of proposed development.'

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

Thomas Crabb
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