



**MEASUREMENT AND
ASSESSMENT OF NOISE AMELIORATION MEASURES**

in way of

PROPOSED RESIDENTIAL DEVELOPMENT

at

**CELL F
NEWCASTLE GREAT PARK**

for

Newcastle Great Park

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1.0 INTRODUCTION

- 1.1 At the instruction of Newcastle Great Park, Noise and Vibration Associates (NVA) have carried out measurement and assessment of noise affecting the proposed residential development site within Newcastle Great Park Cell F (see Figure 1.0, overleaf).
- 1.2 The purpose of the survey was to examine noise levels and compare the results with relevant guidance (Reference 1), as would generally be required by the Planning Authorities.
- 1.3 This report presents the results of noise measurements taken on Tuesday (04/09/2007). An assessment of the results is also given in relation to relevant guidance:

**Ref 1: Department of the Environment Planning Policy Guidance: Sept 1994
"Planning and Noise". (PPG24)**

- 1.4 The assessment also makes preliminary suggestion of noise amelioration relevant to gardens and building envelope such that the appropriate noise levels due to external sources may be achieved.

2.0 MEASUREMENTS

- 2.1 Noise is predominantly due to road traffic on the A1(M) Western Bypass as it passes to the east of the proposed development site.
- 2.2 Noise was examined at 7 measurement positions at the location of proposed housing units that will be most exposed to noise from the A1(M) (see Figure 1.0 and Photos, below):

Figure 1.0: Proposed Development and Measurement Positions

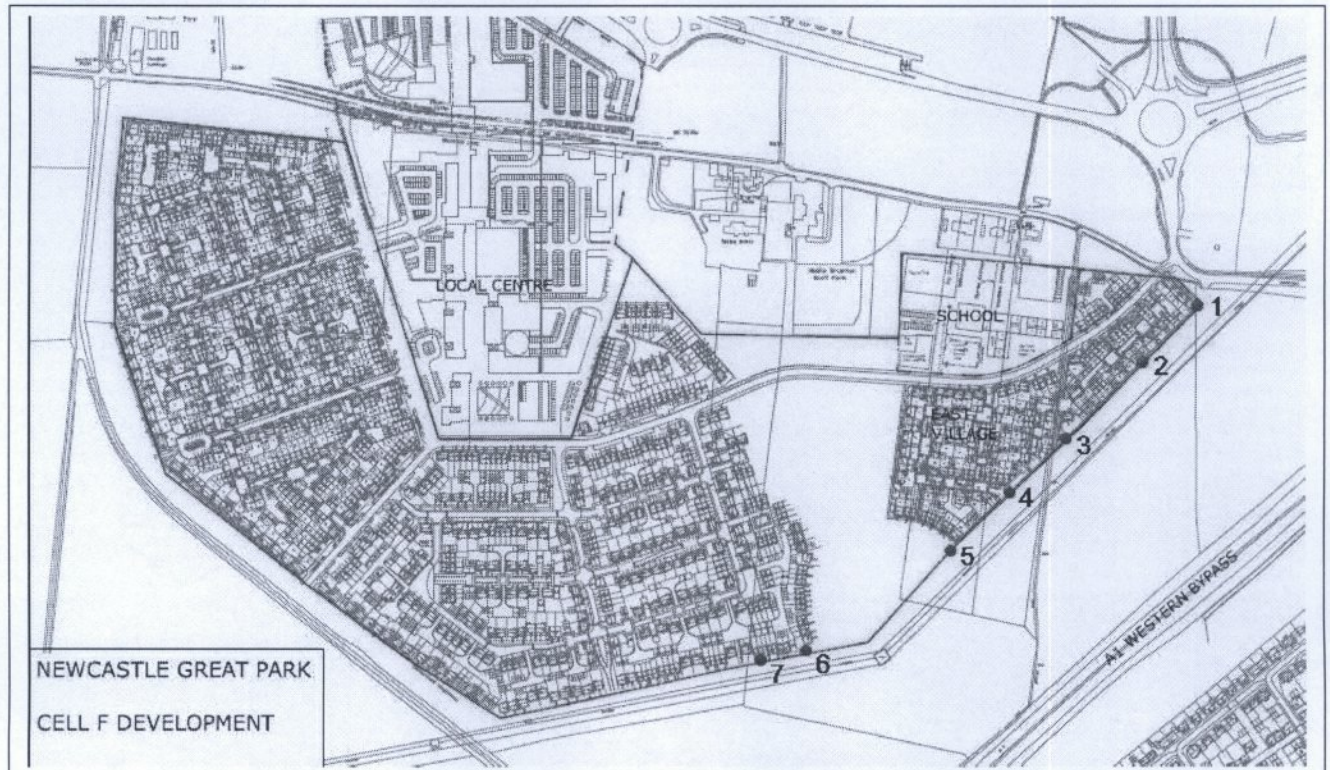


Photo 1: Position 6



Photo 2: Position 2**Photo 2: Position 5**

Various statistical noise measurements, including A-weighted Equivalent Continuous Noise Levels and A-weighted Percentile Noise Levels (Appendix 3.0), were taken on Tuesday 4 September 2007, in 3 consecutive hours between 10:00hrs and 14:00hrs.

The above procedure is sufficient to reliably determine 3 consecutive hourly values of LA_{10} , in accordance with the "shortened measurement procedure" as described in Calculation of Road Traffic Noise (Ref 3, para 43). As noise at the measurement positions was dominated by noise from the busy A1(M), a sampling time of 5 minutes in each hour was deemed sufficient (Ref 3, para 41.2).

All the statistical analysis was directly carried out within the Sound Level Meter (Type 1 Precision Grade, see Appendix 1) to yield Equivalent Continuous Noise Levels (L_{eq}), Percentile Noise Levels (L_{10}, L_{90}) and maximum/minimum (MAXL, MINL) noise levels during the measurement periods (see Appendix 3.0).

3.0 INSTRUMENTATION

- 3.1 All recordings and direct measurements were obtained with "Precision Grade" (Type 1) Sound Level Meter/Microphone (see Appendix 1.0 for full details).