

sharps acoustics

**Land Opposite And South Of
Pumping Station, Aston Flamville
Road, Burbage, Leicestershire**

Discharge of planning condition 18 of planning
permission reference 23/00673/OUT RevB

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Contents

1.0 Introduction 1

2.0 Noise survey details..... 1

3.0 Findings and recommendations..... 3

4.0 Conclusions 4

Appendices

- Appendix A: Aerial view of site and surroundings**
- Appendix B: Graphs of survey results**
- Appendix C: Noise contours**
- Appendix D: Noise mitigation requirements**

1.0 Introduction

- 1.1 Sharps Acoustics LLP (SAL) has been commissioned by Bloor Homes to provide this report to discharge condition 18 of planning permission (reference 23/00673/OUT) granted by Hinkley and Bosworth Borough Council on 8th April 2024 for the following development at Land Opposite And South Of Pumping Station, Aston Flamville Road, Burbage, Leicestershire.

Residential development of up to 343 dwellings (Class C3), including provision of public open space, associated infrastructure and all matters (access only) (re-submission of 22/01037/OUT) reserved except access.

- 1.2 Although the permission relates to land to both the north and south of Aston Flamville Rd, Bloor Homes interest relates only to the land to the north of Aston Flamville Rd and so this report deals only with this area.

- 1.3 Condition 18 requires (as amended by Application reference: 25/01061/NMA):

Prior to the commencement of development within any phase, a noise assessment to determine which, if any, residential properties are affected by noise from Woodside garage, Burbage dance studio and the road network shall be submitted to and approved, in writing, by the Local Planning Authority. The assessment shall have been undertaken by a competent person, shall include periods for daytime as 0700-2300 hours and night-time as 2300-0700 hours, and identify appropriate noise mitigation measures. All residential units shall thereafter be designed so as not to exceed the noise level criteria as referenced in BS8233:2014 Guidance on sound insulation and noise reduction for buildings.

- 1.4 This report provides details of and results from a noise survey carried out at the site over a 48 hour period to determine the noise from these sources and sets out our findings and recommendations.

2.0 Noise survey details

- 2.1 The site comprises a triangular shaped field of approximately 4.7 hectares on the edge of Burbage village (a southern suburb of the neighbouring town of Hinkley). The field is accessed from Aston Flamville Road and at the time of our survey was laid to grass; we understand has been previously used for grazing cattle.

- 2.2 The site is surrounded by fields, and the locality appeared to be predominantly rural in nature. There are residential premises to the west in Burbage village and approximately 10 detached residential premises on the southeast corner of the site along Aston Flamville Road. In addition, there is a van hire business (Tallis Hire at Woodside Garage), occupying several buildings along the northeast corner of the field.

- 2.3 A noise survey was undertaken at four locations around the site (locations shown in Figure A1 in Appendix A) between 5th March 2026 and 7th March. Three Norsonic 140 fully integrating sound level meters (Class
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1) were used and a calibration check was carried out before and after each survey, with no drift apparent. All survey locations were free field locations at 1.5m above ground level.

2.4 Measurements were made at each location for the following periods:

Location	Start	End
1	5 th March, 1100 hours	7 th March, 1000 hours
2	5 th March, 1015 hours	7 th March, 0900 hours
3	5 th March, 1215 hours	6 th March, 1200 hours
4	6 th March, 1215 hours	7 th March, 1015 hours

2.5 Location 1 was on the northern boundary approximately 17 meters from the kerb line of Sapcote Road and location 2 was approximately 5 metres from the kerb line of Aston Flamville Road. Both roads have single lanes in both direction and 60 mph speed limits. Location 3 was close to the northeast boundary opposite Woodside Garage (Tallis Van Hire) and location 4 was on southeast boundary opposite Manor View (Burbage Dance Studio).

2.6 Throughout the survey period the weather was sunny on the first day thereafter overcast, cold and dry, typical of the winter season.

2.7 At all the survey locations ambient and background noise climates were dominated by road traffic along the main roads and when traffic was absent, the M69 (850 metres distant) could be heard. There was occasional sound from birdsong in the nearby hedges and high altitude aircraft. Throughout setting up and attending the site during the day from 1000 to 1400 hours and early evening 1900 to 2100 hours there was no significant or measurable sound from Tallis Hire or Burbage Dance Studio. On occasion during the daytime, children's voices could be discerned for short periods coming from Green Acres Pre-school and Nursery to the rear of Manor View.

2.8 For information purposes it can be noted:

- Measurements of sound level were all made with the A-weighting, which is a filter applied to the sound level meter to simulate the frequency response of the human ear, which is more sensitive to high frequency sound than low.
- L_{Aeq} is the equivalent continuous noise level which is a method of averaging the varying noise level over the time period into a single figure value. The L_{Aeq} has the same sound energy as the fluctuating level over that period. The L_{Aeq} is also known as the "ambient level" and in BS4142 the L_{Aeq} in the absence of the proposed development sound is known as the "residual level".
- L_{Amax} is the highest level within the measurement period.
- L_{A90} is the noise level exceeded for 90% of the time and is referred to as the background noise level.

2.9 Survey results are shown graphically in Figures B1, B2, B3 and B4 in Appendix B and are summarised in Table 3.1 below.

Table 3.1: Summary of survey results

Location	Period	L _{Aeq,T} , dB	Typical L _{A90} , dB
1	0700 to 2300 hours	64	52
	2300 to 0700 hours	57	32
2	0700 to 2300 hours	63	51
	2300 to 0700 hours	55	39
3	0700 to 2300 hours	59	54
	2300 to 0700 hours	53	32
4	0700 to 2300 hours	57	50
	2300 to 0700 hours	48	38

3.0 Findings and recommendations

- 3.1 On the basis of the measured noise levels and observations made during the attended surveys, there is negligible noise from the garage and the dance studio affecting this site. The sole source of noise which requires mitigation is from road traffic.

External Amenity Areas

- 3.2 Based on measured levels from locations 1 and 2, a 3D computer noise model was run to predict noise levels around the site at a height of 1.5m and 4.5m (for day and night time conditions). An initial review of noise levels in garden areas found that, to control noise levels in these spaces to below 55dB (the upper design target recommended in BS8233), some screening would be required in the form of close boarded garden fences with heights as follows:

Garden 01: 1.8 m

Garden 24: 2.4 m

Garden 43: 1.8 m

Garden 66: 2.4 m

Garden 74: 2.4 m

Garden 105: 1.8 m

- 3.3 Figure C1 in Appendix C shows the extent and location of this screening (as bold green lines).
- 3.4 These screens were then incorporated within the model and the model re-run to determine noise levels around the site. The output from this model, in the form of noise contours, is shown in Figures C2 and C3 in Appendix C for day and night time periods (0700 to 2300 and 2300 to 0700 hours), respectively.

Façade Mitigation

- 3.5 BS8233 states that the noise reduction offered through a façade with a partially open window for ventilation is around $L_{Aeq,T} 15\text{dBA}$. Therefore, where external noise levels exceed $L_{Aeq,16\text{Hr}} 50\text{dBA}$ during the day and $L_{Aeq,8\text{Hr}} 45\text{dBA}$ at night noise mitigation would be required to control external noise intrusion.
- 3.6 Whilst many properties on the site can be ventilated by openable windows, noise mitigation would be required for some plots to ensure that internal noise levels would meet the recommended desirable internal targets from BS8223. Two levels of noise mitigation would be required, as set out in Table 3.1 below.

Table 3.1: Mitigation requirements

Mitigation package	Glazing performance, $R_w + C_{tr}$	Passive ventilation performance, $D_{n,eW}$
Mitigation A	34	38
Mitigation B	25	35

- 3.7 Figures D1 and D2 in Appendix D have been marked up to show which facades would need which mitigation package requirements. Orange lines show those facades where mitigation package A would be required, blue lines show those facades where mitigation package B would be required. Living rooms, dining spaces and bedrooms on these facades would need the relevant mitigation packages installed, as set out in Table 3.1. Since windows would need to remain closed to meet desirable internal noise levels, alternative means of ventilation would need to be provided. Where passive means of ventilation (eg. trickle vents) are proposed, these would need to meet the performance in Table 3.1.
- 3.8 The calculations to determine these noise mitigation strategies are based on a cavity masonry construction with a single trickle vent per room which should be checked by a suitably qualified ventilation engineer. Furthermore, the glazing performance is based on all glazing elements meeting this minimum noise requirement as a whole including contributions from the window, frame, locking mechanism and all other parts.
- 3.9 It should be noted that the above glazing and ventilation strategy does not mean that the windows cannot be openable, and the ability to open the windows should be retained for purge ventilation and occupier preference.

4.0 Conclusions

- 4.1 No noise mitigation is required to control noise from the garage or the dance studio.
- 4.2 Noise in garden areas would be controlled to meet the requirements of BS8233 with close boarded timber garden fences of heights shown in paragraph 3.3 and Figure C3 in Appendix C.
- 4.3 Noise in living rooms, dining spaces and bedrooms around the site would meet “desirable” target levels, as defined in BS8233 for the majority of the site with windows open and no noise mitigation being

required. However, some living rooms, dining spaces and bedrooms (on facades shown in Figures D1 and D2 in Appendix D) would need noise mitigation, as shown in Table 3.1 above.

- 4.4 With these noise mitigation measures in place, all internal and external noise levels would meet the requirements set in BS8233, as required by condition 18 of the planning permission reference 23/00673/OUT.

Appendix A: Aerial view of site and surroundings

Figure A1: Aerial view showing survey locations



Appendix B: Graphs of survey results

Figure B1: Graphs of results from Location 1

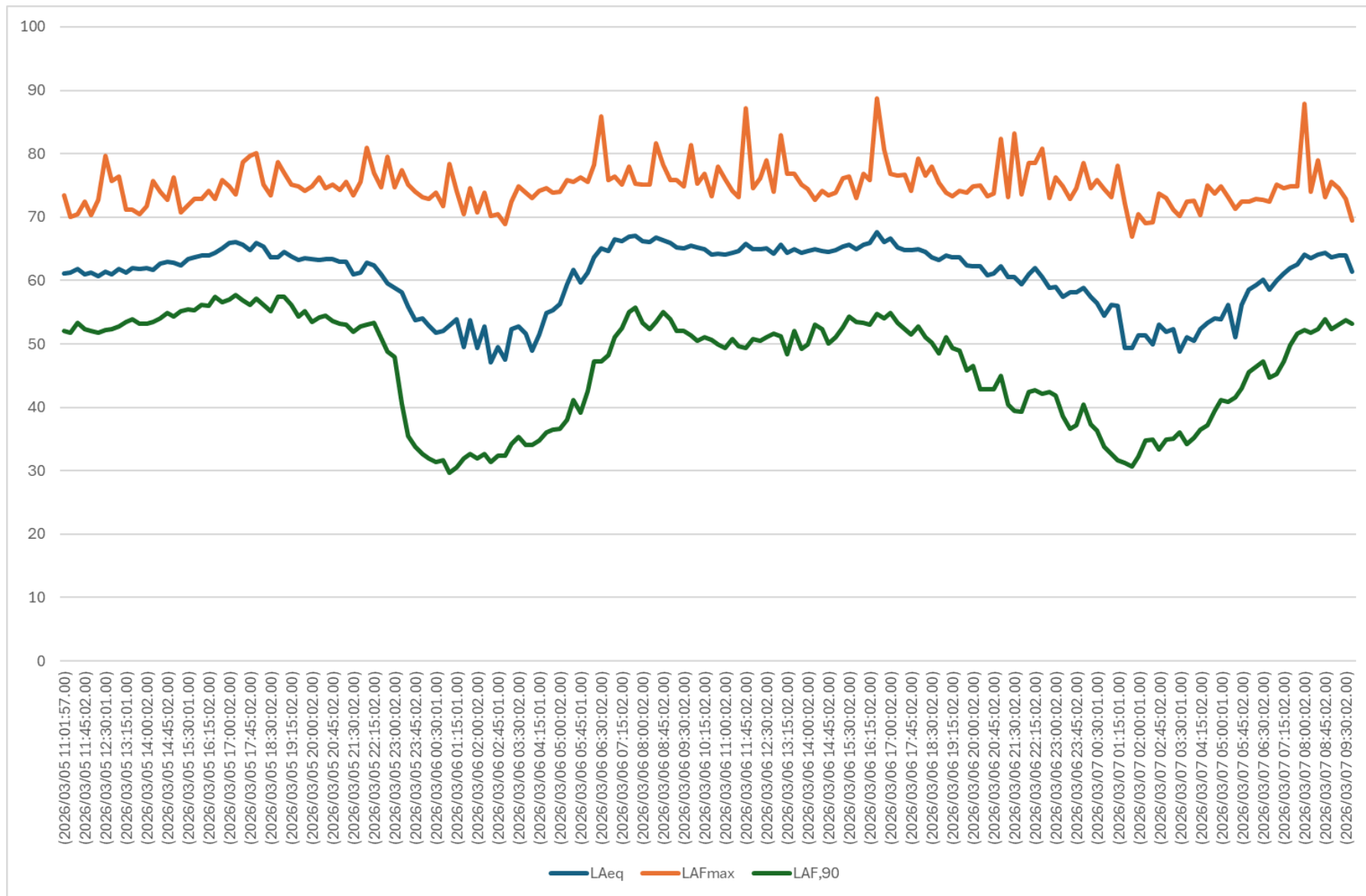


Figure B2: Graphs of results from Location 2

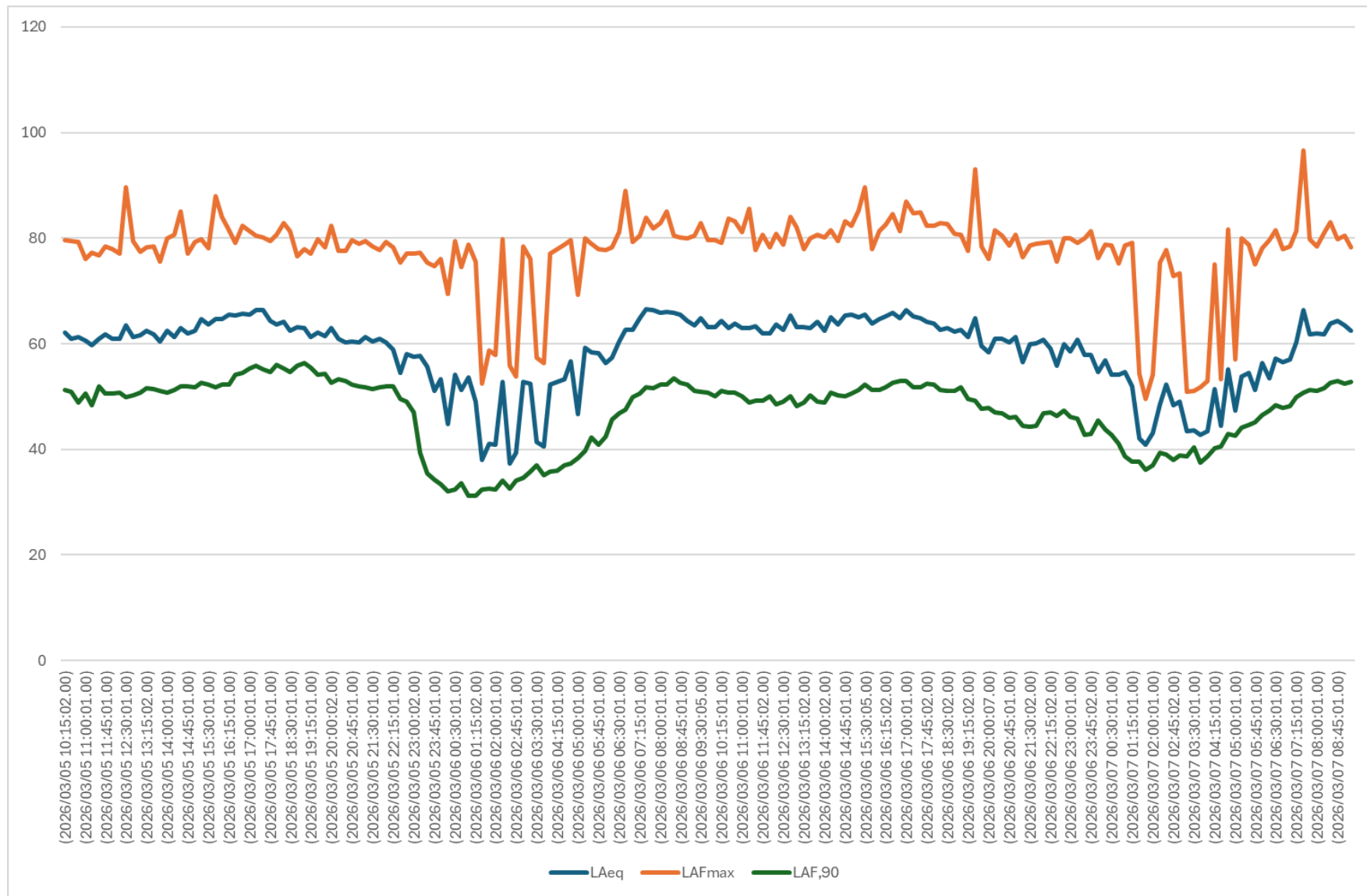


Figure B3: Graphs of results from Location 3

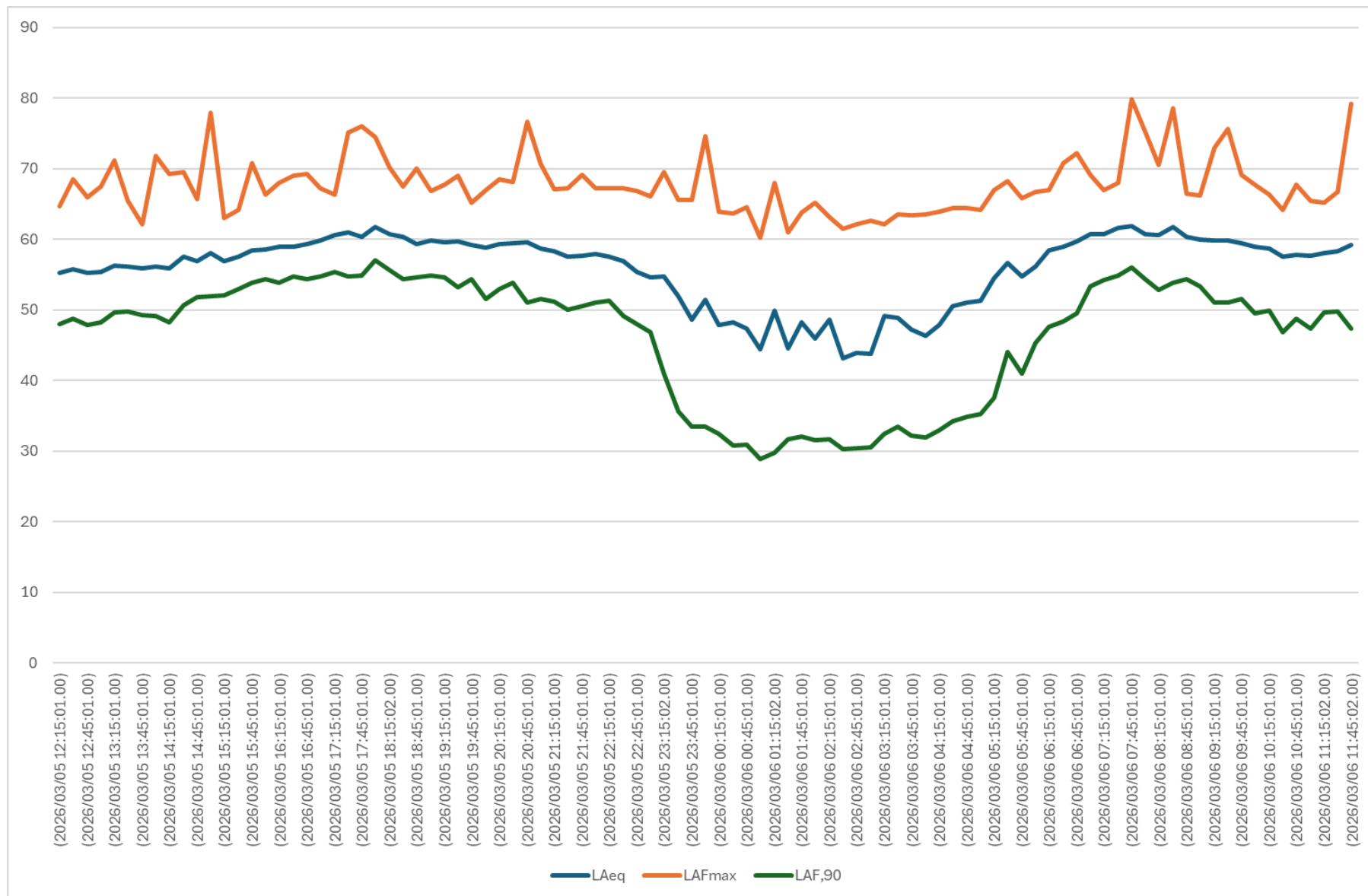
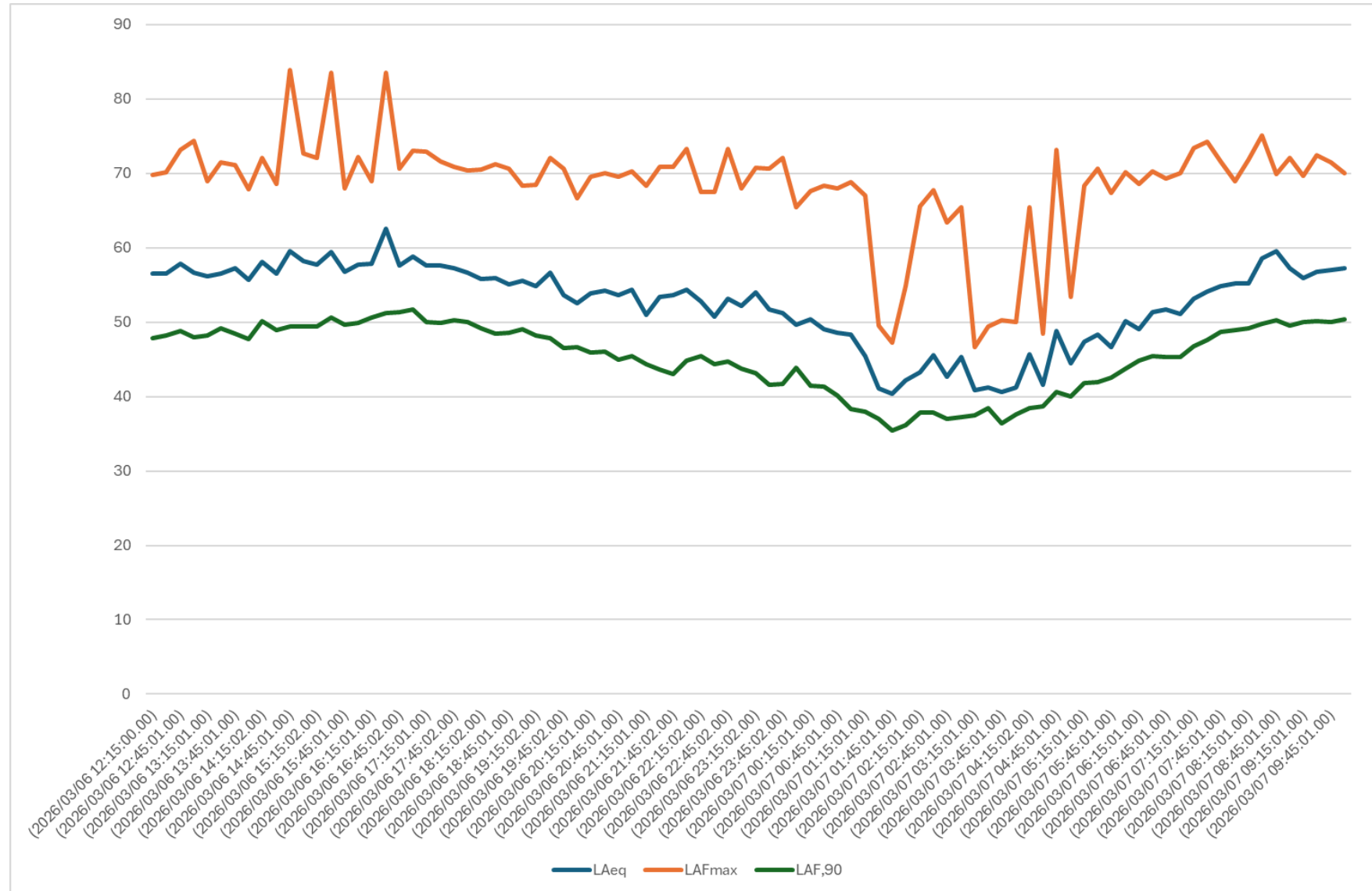


Figure B4: Graphs of results from Location 4

Appendix C: Noise contours

Figure C1: Recommended screening (close boarded timber fences) to garden areas

KIL	2	3	4
HEN	2	3	3
LAW	2	3	8
WYA	2	4	5
WOL	2	4	3
HAR	2	4	14
PEE	2	4	6
DAW	2	4	8
ROY	2	4	6
Sub Total			83
Total Housing			105

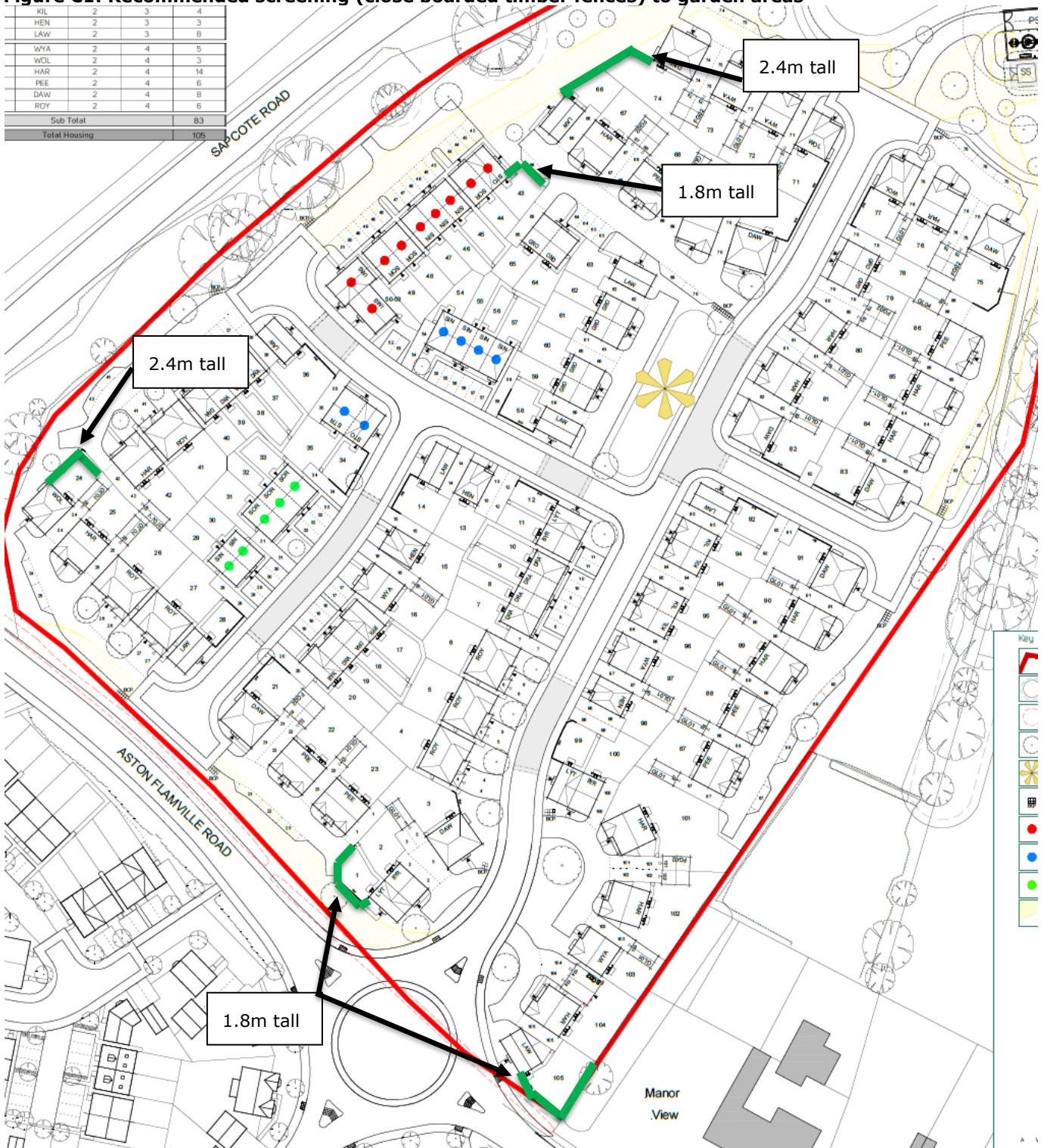


Figure C2: Noise contours – daytime





Appendix D: Noise mitigation requirements

Figure D1: Daytime noise mitigation required

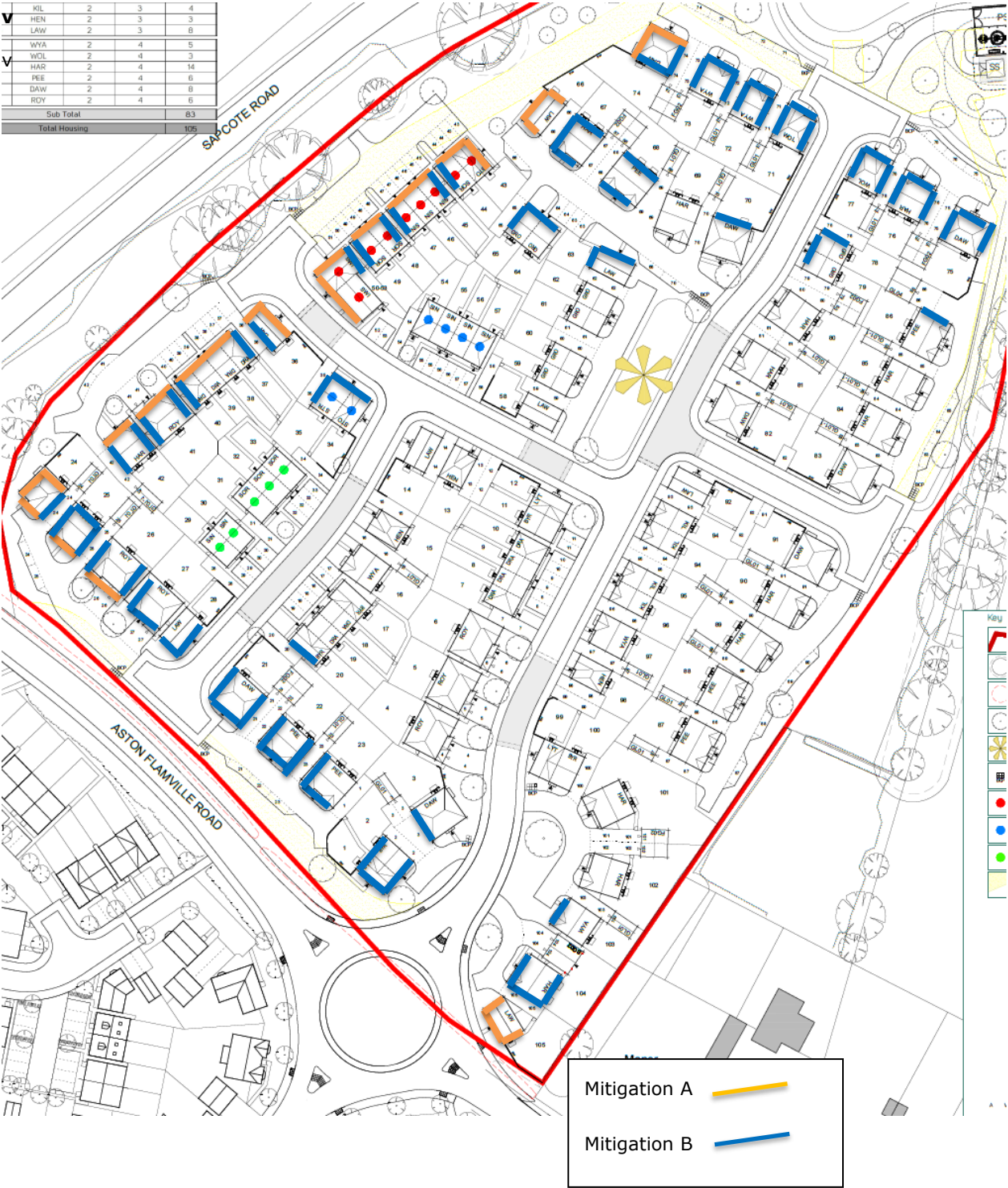


Figure D2: Night time noise mitigation required

