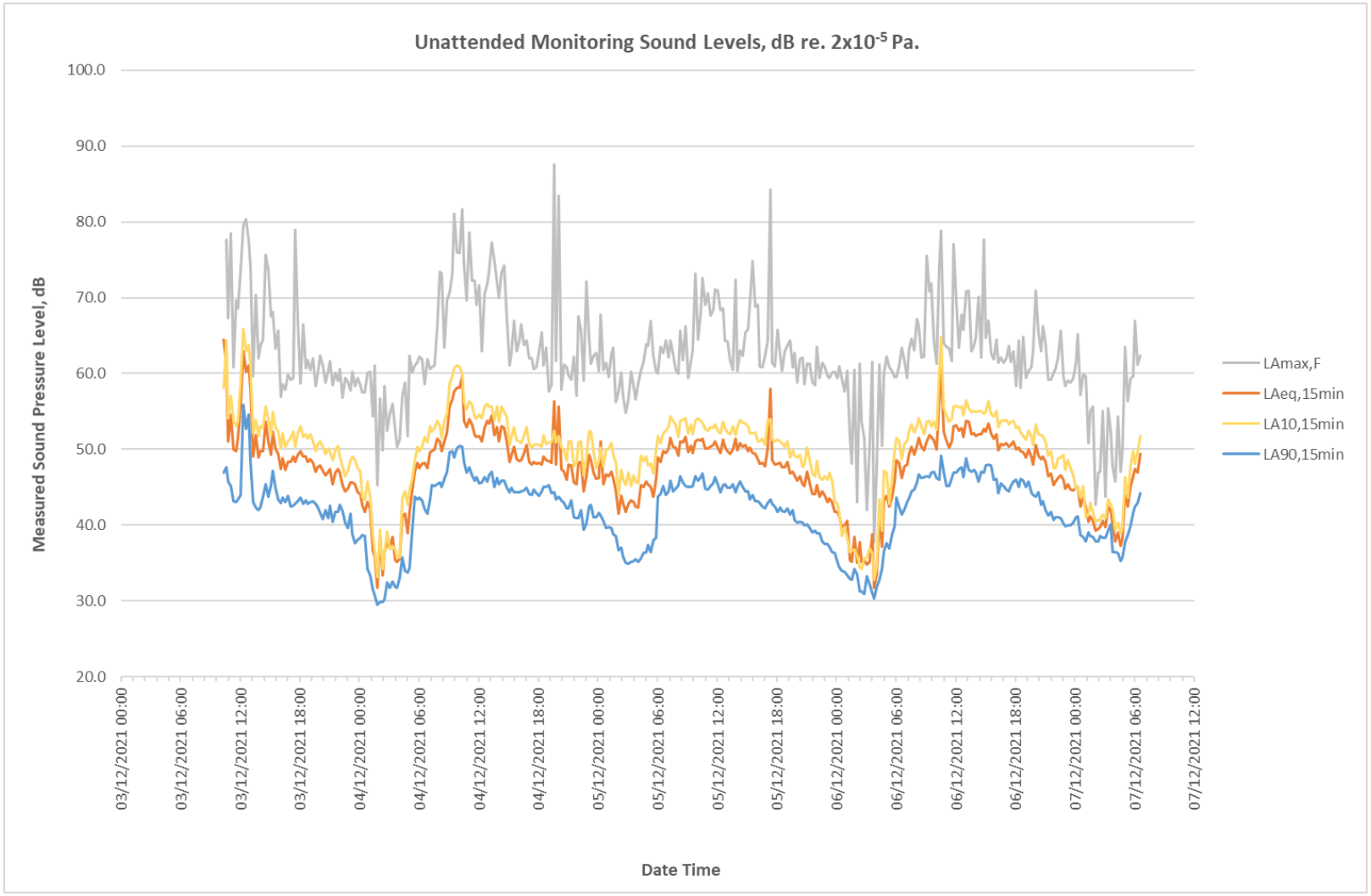
APPENDIX 6.1-6.8: NOISE AND VIBRATION APPENDICES

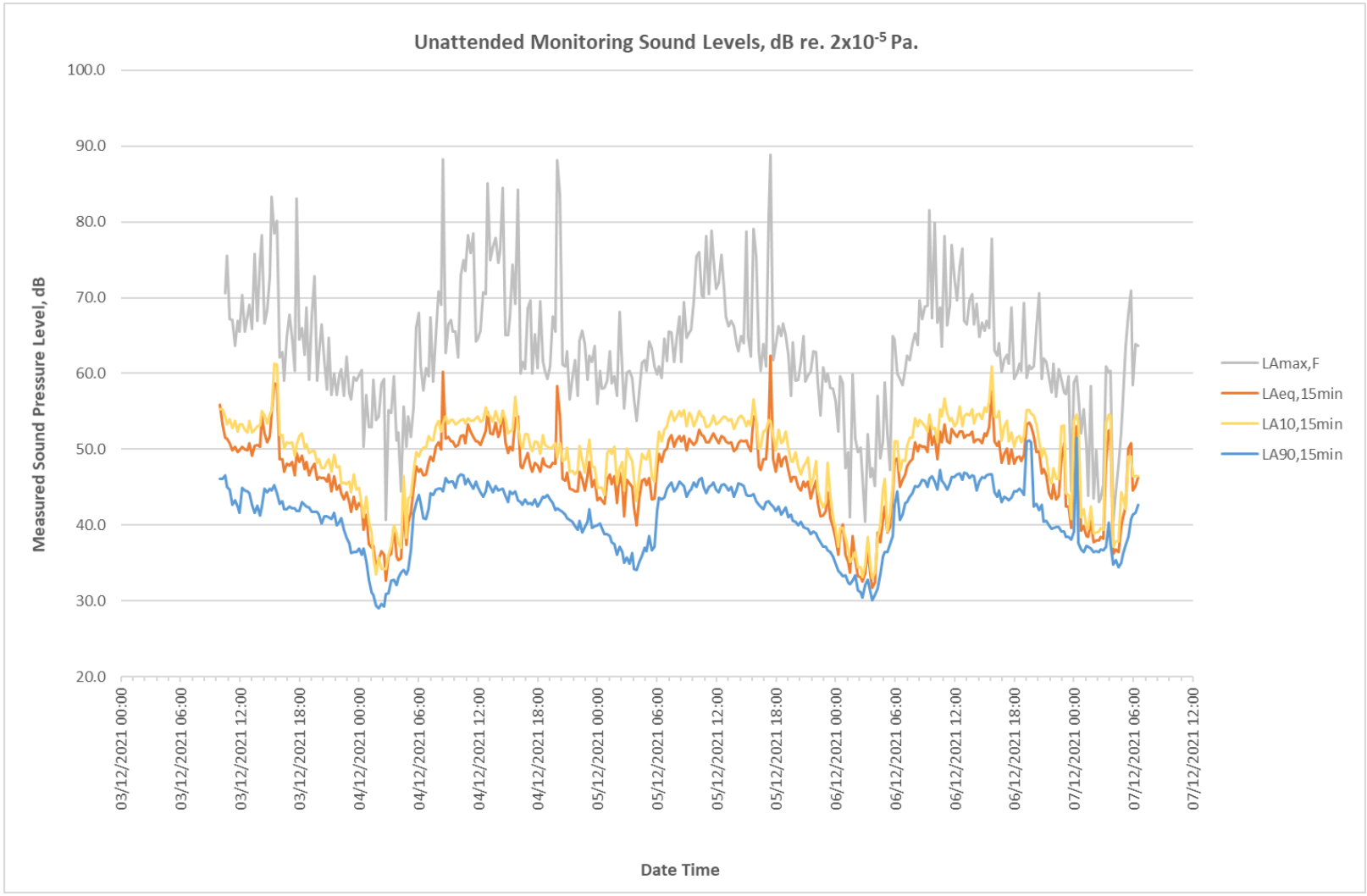
APPENDIX 6.1 GLOSSARY OF TERMS

Term	Definition
Decibel (dB)	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s1 and s2 is given by 20 log10 (s1/s2). The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is 20μPa.
A-weighting, dB(A)	The unit of sound level, weighted according to the A-scale, which takes into account the increased sensitivity of the human ear at some frequencies.
Noise Level Indices	Noise levels usually fluctuate over time, so it is often necessary to consider an average or statistical noise level. This can be done in several ways, so a number of different noise indices have been defined, according to how the averaging or statistics are carried out.
$L_{eq,T}$	A noise level index called the equivalent continuous noise level over the time period T. This is the level of a notional steady sound that would contain the same amount of sound energy as the actual, possibly fluctuating, sound that was recorded.
$L_{max,F}$	A noise level index defined as the maximum noise level during the period T. L_{max} is sometimes used for the assessment of occasional loud noises, which may have little effect on the overall L_{eq} noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.
$L_{90,T}$	A noise level index. The noise level exceeded for 90% of the time over the period T. L_{90} can be considered to be the 'average minimum' noise level and is often used to describe the background noise.
Free-Field	Far from the presence of sound reflecting objects (except the ground), usually taken to mean at least 3.5m
Ambient Noise Level	The totally encompassing sound in a given situation at a given time, usually composed of a sound from many sources both distant and near ($L_{Aeq,T}$).
Residual Noise Level	The ambient noise remaining at a given position in a given situation when specified sources are suppressed to a degree such that they do not contribute to the ambient noise level ($L_{Aeq,T}$)
Specific Noise Level	The equivalent continuous A-weighted sound pressure level at the assessment position produced by the specific noise source (the noise source under investigation) over a given time interval ($L_{Aeq,T}$)
Rating Noise Level	The specific noise level plus any adjustment for the characteristic features of the noise ($L_{Ar,Tr}$).

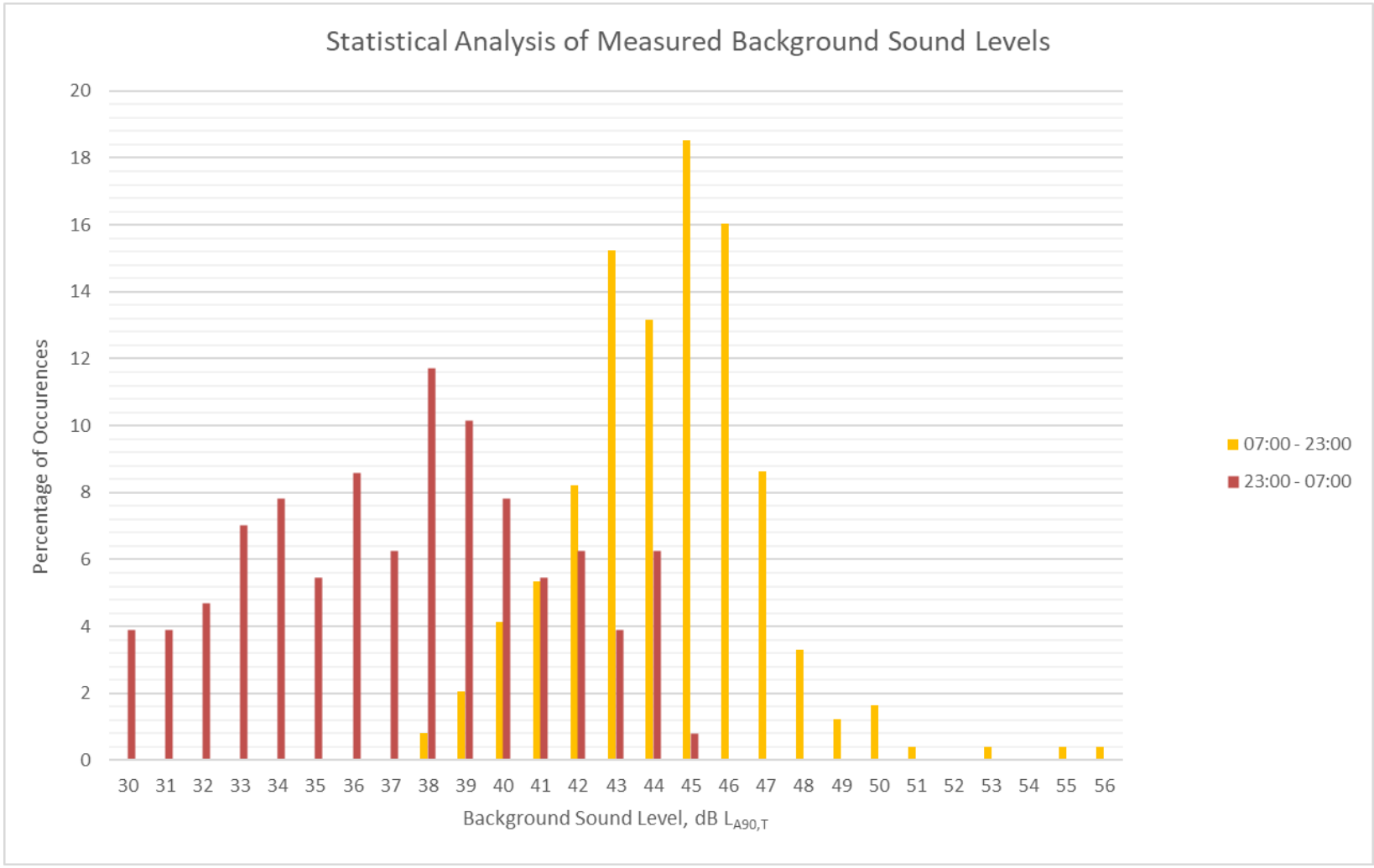
APPENDIX 6.2 UNATTENDED SURVEY DATA, P1



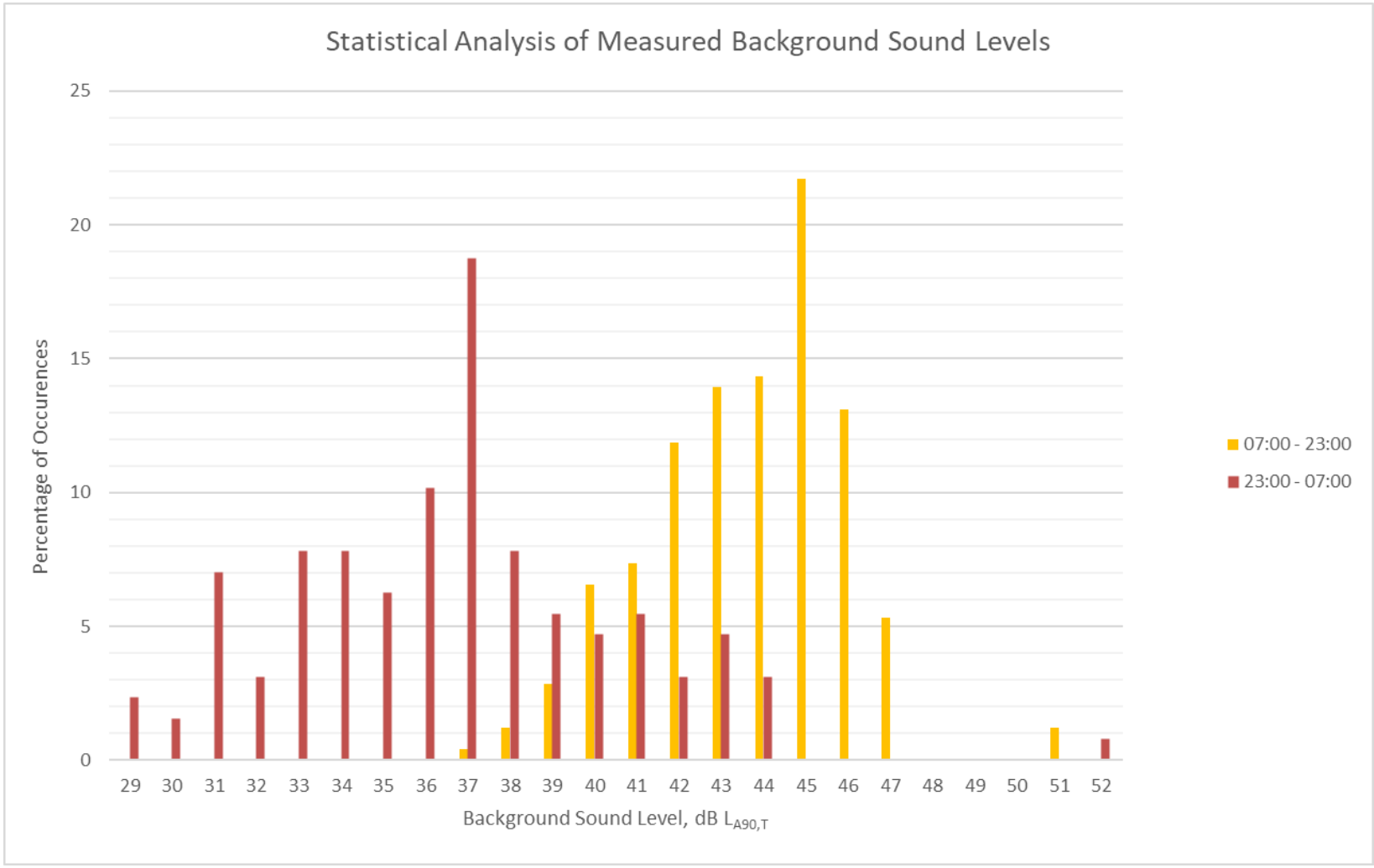
APPENDIX 6.3 UNATTENDED SURVEY DATA, P2



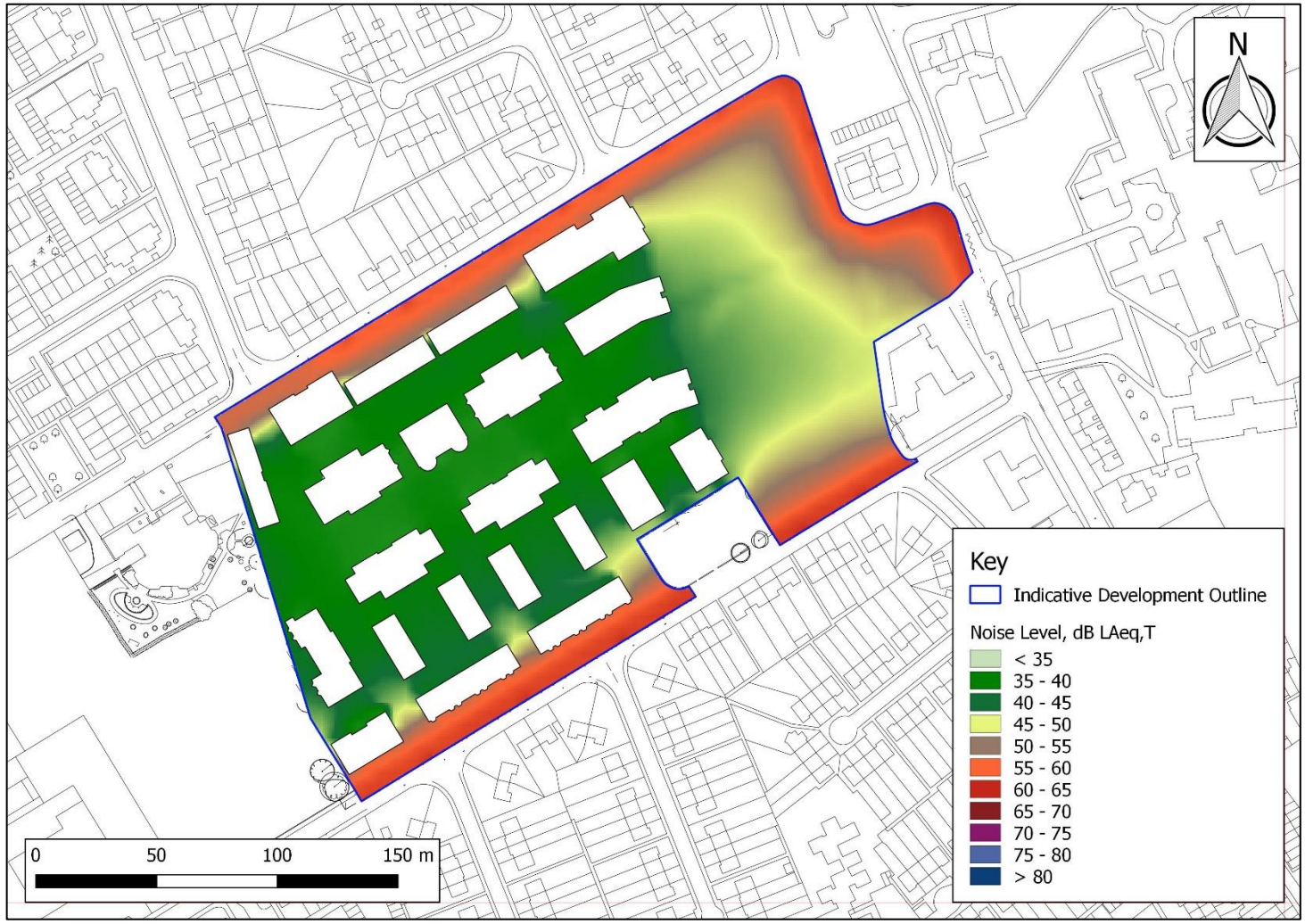
APPENDIX 6.4 STATISTICAL ANALYSIS OF BACKGROUND SOUND LEVELS, P1



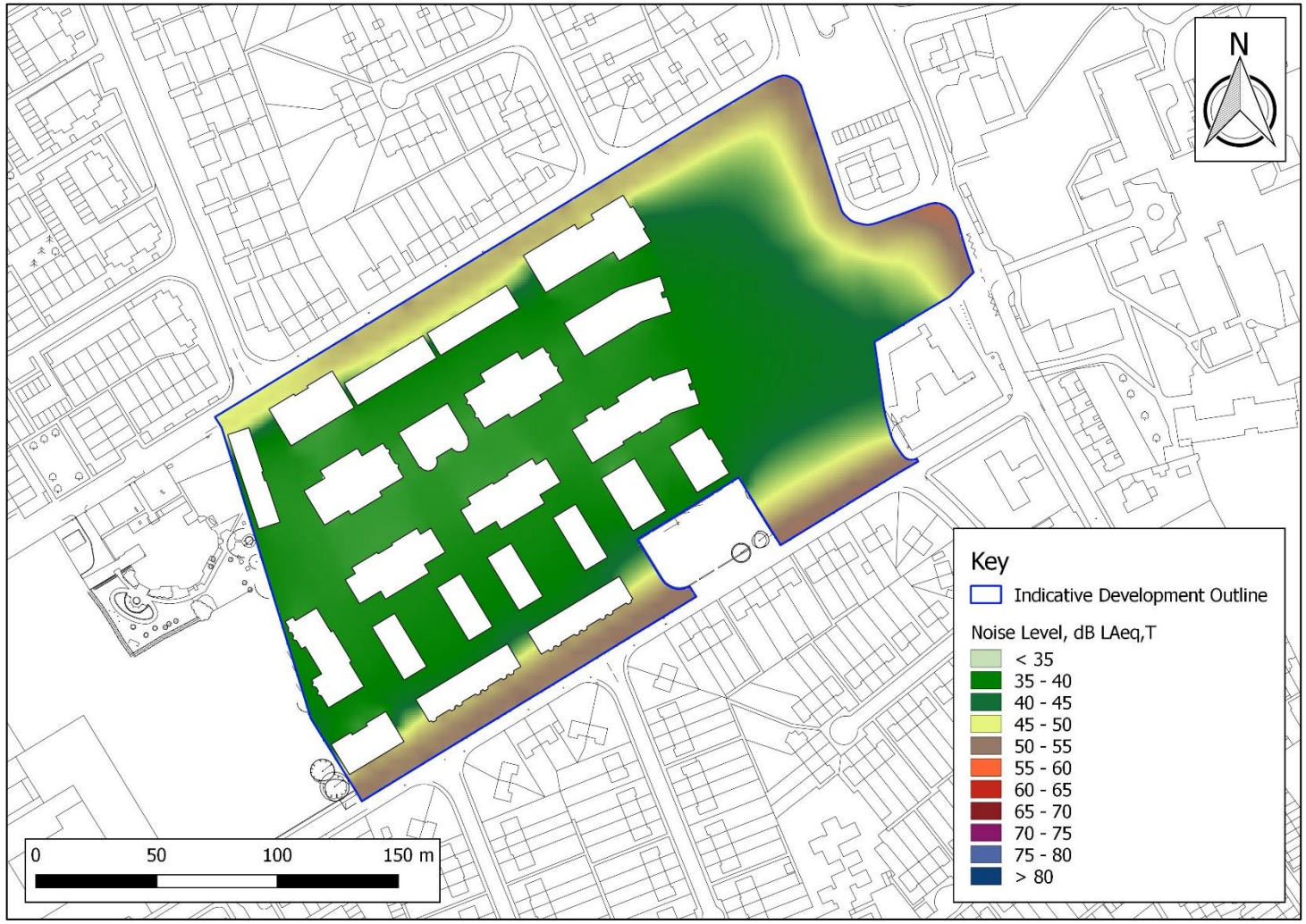
APPENDIX 6.5 STATISTICAL ANALYSIS OF BACKGROUND SOUND LEVELS, P2



APPENDIX 6.6 DAYTIME NOISE CONTOUR, 1.5M



APPENDIX 6.7 NIGHT-TIME NOISE CONTOUR, 4M



APPENDIX 6.8 ROAD TRAFFIC DATA

Road Link	Baseline		2030		2030 with development		Road Speed, kph
	AAWT 2-way	HGV %	AAWT 2-way	HGV %	AAWT 2-way	HGV %	
Woodville Road (east of Stuart Road)	1,146	8%	1,225	8%	1,492	7%	30
Asburnham Road (east of Sheridan Road)	2,073	9%	2,216	9%	2,429	9%	30
Woodville Road (west of Stuart Road)	995	3%	1,064	3%	1,277	3%	30
Ashburnham Road (west of Sheridan Road)	2,045	10%	2,187	10%	2,399	9%	30
Wiggins Lane	1,319	12%	1,411	12%	1,678	10%	30
Ashburnham Road (east of Ham Close)	2,243	9%	2,398	9%	2,665	8%	30
Ham Street (north of Ashburnham Road)	2,860	8%	3,058	8%	3,335	7%	30
Ham Street (south of Ashburnham Road)	1,404	2%	1,501	2%	1,613	2%	30
Ham Street (north of Wiggins Lane)	3,452	7%	3,690	7%	4,112	6%	30
Sandy Lane	4,277	7%	4,572	7%	4,994	6%	30
A307 (north of Sandy Lane)	16,164	6%	17,281	6%	17,628	5%	30
A307 (south of Sandy Lane)	13,084	5%	13,988	5%	14,063	5%	30