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Noise Predictions and Modelling

Project Ref.: 20638

Site Address:

12 Pilgrims Lane, Camden NW3 1SN

For:

Sterling N3 Constructors Ltd

55 The Fairway,

Northolt UB5 4SL

ES Monitoring Ltd.
262 Cavendish Rd, SW12 0BT

Contents

Introduction

This document presents the methodology for computerised noise modelling of the demolition and construction works at 12 Pilgrims Lane, Camden, consisting of the careful partial demolition/dismantling of the existing building from lower ground to roof level, excavation and underpinning of lower ground floor areas, and reconstruction of internal elements in addition to extended areas.

The modelling was undertaken in January 2024 by Duncan Arkley MIOA of Environmental Sensors Limited.

Calculation Procedure

Software

Computerised noise modelling was undertaken using the SoundPLAN 8.2 Noise Propagation software. This implements calculations in accordance with ISO 9613-2:1996 Acoustics. *'Attenuation of sound during propagation outdoors – General method of calculation'*. [(1)]

Source noise levels

Due to the unavailability of in-situ noise measurements, and the need for noise modelling to be undertaken in advance of deployment to site, source noise data has been taken from Annex C of BS 5228:2009 [(2)]. Where an exact match was not listed in the Standard, averaging of the sound level data for similar items has been undertaken.

The majority of plant noise data in this Annex are provided as sound pressure levels, SPL $L_{Aeq,T}$ at a distance of 10m with hemispherical propagation. In accordance with the standard, 28dB(A) has been added to the broadband $L_{Aeq,T}$ as appropriate to estimate L_{WA} sound levels. To obtain spectral values of Sound Power Level L_W, 28dB was added to each octave band as provided for SPL at 10m.

Equipment types relative to the various project stages have been determined based on information provided by the Client. Where a project phase has been detailed without additional Client information on operations, assumed noise sources have been considered. Plant and machinery on-times are assumed to allow for a 2 hour-2 hour off alternation as per standard practice. Roadside deliveries and removals have been allocated an allowance of 5 hours per day, assuming 1 hour per vehicle and a maximum number of 5 vehicles per day of each type according to the original CMP issued.

Source noise levels based on the machinery being used are contained in Appendix A.

Calculation parameters

Prediction points at 1m from facades have had 3dB added to the calculated free-field levels. Hard ground propagation has been assumed, where relevant.

Weather effects are assumed to be dry, with no wind and a 10°C stable temperature.

The noise calculations have been undertaken in accordance with the Plant Sound Power method described in Annex F.2.3.1 of BS 5228:2009 [(2)].

Façade noise levels at the closest receptors have been calculated starting from a height of 1.5m above ground level, with additional floors as necessary.

Reflections were calculated up to third order, where the reflecting surface is less than 25m from the source. This was to emulate a potential focussing effect, which may occur when demolition takes place between two concrete slabs where no building façade is present.

For areas where a large area of activity is planned, such as the roof removal or the lower ground floor structural works, noise levels are considered over the area of potential operations. As the site is relatively small, point source locations are assumed based on their proposed works, and are spread throughout the site as may be expected for the types of works taking place and the work's locations. This is more prominent for internal hammering/nail guns/circular saws, as well as 2 no. mini excavators present as modelled to the rear of the building close to the lower ground floor excavation points.

Sources considered per project phase

In absence of detailed activities per project phase, assumptions have been made for representative activities based on the information received. For reference, the sources considered in the modelling are listed below per project phase.

Lower ground floor demolition/breakout stage includes:

- Skip lorry at front
- Lorry at front
- Telescopic delivery lorry at front
- 1 no. mini digger
- 1 no. handheld pneumatic breaker

Ground floor demolition/strip out stage includes:

- Skip lorry at front
- Lorry at front
- Telescopic delivery lorry at front
- 3 no. lump hammers (breaking plasterboard)
- 1 no. circular saw (handheld)
- 1 no. electric drill (handheld)

First floor demolition stage includes:

- Skip lorry at front
- Lorry at front
- Telescopic delivery lorry at front
- 3 no. lump hammers (breaking plasterboard)
- 2 no. circular saw (handheld)

Roof demolition/dismantling stage includes:

- Skip lorry at front
- Lorry at front
- Telescopic delivery lorry at front
- Hand tools at roof (hammer breaking partition x 2)
- Lifting platforms to east and west

Structural works for basement/LGF includes:

- Skip lorry at front
- Lorry at front
- Telescopic delivery lorry at front
- Concrete mixer/discharge/pumping at front
- Metalworks for underpinnings (cutting/welding)

Remaining construction phase includes:

- Skip lorry at front
- Lorry at front
- Telescopic delivery lorry at front
- 3 no. lump hammers
- 2 no. circular saw (handheld)
- 2 no. electric nail guns

Presentation of results

The demolition and noise inducing construction activity has been broken down into 6 phases for the purpose of the noise mapping exercise, which are as follows:

1. Lower ground floor demolition and breakout
2. Ground floor demolition
3. 1st floor demolition
4. Roof level demolition
5. Lower ground floor structural works/piling
6. Ground and 1st floor internal and structural works

Results have been presented as working day $L_{Aeq,10hr}$ sound pressure levels at the nearest affected facades. To account for the 60% on-time of all plant (2 hours on, 2 hours off), a -2.2dB correction has been made to the sound power levels. Therefore, in order to estimate $L_{Aeq,1hr}$, +2.2dB can be added to the presented noise levels.

A -2dB correction may be made to all predictions to account for Echo Barrier or similar screening to be used on scaffolding if utilised. The actual benefit of the screening will vary, depending on installation and the state of the barrier, and -2 dB is thought to be a relatively pessimistic estimate.

The predictions are presented as numerical data in Appendix B and as noise maps in Appendix C. Results between $L_{Aeq,10hr}$ of 60dB(A) and 70dB(A) of construction noise are highlighted in amber, while results between $L_{Aeq,10hr}$ of 70dB(A) and 80dB(A) of construction noise are highlighted in red. Finally, levels in excess of 80dB(A) are highlighted in blue. Note that such exceedances would only occur for short periods whilst the activity is being undertaken in close proximity to the receiver façade.

The results provided at for weekdays (Monday to Friday), where a 2-on 2-off working pattern would be expected to be observed.

Works prior to the activities noted above are primarily site setup and preparation activities, and not heavy demolition or dismantling. Therefore, no predictions have been made for this period.

The highest noise levels for each phase modelled is summarised in the table below.

Activity	Highest $L_{Aeq,10hr}$ during phase
Lower ground floor demolition and breakout	78
Ground floor demolition	74
1st floor demolition	80
Roof level demolition	74
Lower ground floor structural works	75
Ground and 1st floor internal and structural works	77

Table 1 Summary of highest level predicted during demolition at each floor level

Uncertainty

The plant sound power levels are thought to be pessimistic compared to actual values, given that smaller plant may be employed on site than those to which the sound levels relate.

Plant quantities, types, powers and activities can all have an effect on the noise level at the nearest receptors. Our model is based on a combination of the data provided by the Client, and experience of works on similar sites.

References

The noise modelling has been undertaken in accordance with the following guidance documents.

1. **International Standards Organization.** *ISO 9613-2: 1996 Acoustics. Attenuation of sound during propagation outdoors - General method of calculation.* s.l. : International Standards Organization, 1996. ISO 9613-2:1996.

2. **British Standards Institute.** *BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites - Part 1: Noise.* s.l. : BSI, 2014. BS 5118-1:2009+A1:2014.

3. **Association of Noise Consultants.** *Construction noise - A good practice guide to the preparation, submission and management of Section 61 consents.* s.l. : Association of Noise Consultants, 2021.

Appendix A – Plant sound levels

Reference source (BS5228)	BS5228 Sound Pressure Level at 10m, per 1/1 octave band (Hz)							
	63	125	250	500	1k	2k	4k	8k
C1.19 lump hammer	66	66	68	68	63	57	55	51
C5.36 Hand held circular saw	84	86	78	78	77	78	82	80
C8.21 skip wagon	82	84	78	75	71	70	65	59
C5.6 Hand-held pneumatic breaker	90	79	75	78	78	73	91	92
C4.69 Core drill (electric)	75	74	75	72	74	75	80	80
C4.67 Mini tracked excavator	87	79	76	70	68	64	57	48
C4.1 Articulated dump truck	90	87	77	79	75	73	67	63
C4.28 Concrete mixer truck discharging / pumping	79	80	73	72	69	68	59	53
C4.53 Lorry with lifting boom	81	78	76	74	72	69	64	56
C4.57 Lifting platform	78	76	62	63	60	59	58	49
C4.95 Handheld cordless nail gun	63	65	65	66	65	69	64	61
C2.34 Lorry	73	78	78	78	74	73	68	66
C3.31 Hand-held welder	67	68	69	68	69	66	61	56
C3.35 Hand-held gas cutter	74	76	66	58	56	56	55	55

Table 2 Sound pressure levels of plant (source: BS 5228 Annex C)

Appendix B – Noise predictions

Noise predictions (LAeq,10hr) Façade levels

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Residence	GF	SE	51	46.7	50.2	44.2	44.8	50.1
Residence	F 1	SE	52	52.5	50.5	44.8	45.6	50.8
Residence	F 2	SE	51.9	48.6	53.5	48.2	48.4	53.1
Residence	GF	NE	55.8	55.6	56.5	48.4	47.4	54.9
Residence	F 1	NE	54.7	55.2	53.9	47.6	47.5	54.4
Residence	F 2	NE	59.2	52.1	58.6	53.2	52	57.7
Residence	GF	NW	60.7	60.2	66.2	60.1	60.5	63.7
Residence	F 1	NW	62.8	61.8	68.4	61.1	61.7	64.7
Residence	F 2	NW	64.5	61.2	68.8	61.4	61.8	63.8
Residence	GF	NW	62.8	62.5	67.2	62.5	63.1	64.9
Residence	F 1	NW	65.3	64.5	69.7	64.2	64.9	66.7
Residence	F 2	NW	66.9	64.6	69.9	64.4	64.9	65.9
Residence	F 2	SE	49.9	46.2	51.8	45.3	43.8	51.9
Residence	GF	NW	60.7	60.2	64.3	59.9	60.6	63.1
Residence	F 1	NW	62.2	61.2	67.3	60.6	61.2	64.5
Residence	F 2	NW	63.6	60.9	67.6	60.9	61.3	64.8
Residence	GF	NW	62.8	62.4	66.4	62.5	63	64.9
Residence	F 1	NW	65.8	64.8	68.9	64.5	65.1	67.4
Residence	F 2	NW	68	65	68.4	64.7	65.1	67
Residence	GF	N	58.5	58.3	62.7	57.7	58.1	63
Residence	F 1	N	60.4	60.4	65.1	59.8	60.3	65.5
Residence	GF	S	55	49.8	54.9	49.2	49	56.1
Residence	F 1	S	57.2	53.6	55.9	50.8	50.4	58.1
Residence	GF	S	48.6	46.1	53.9	43.9	43.8	54.8
Residence	F 1	S	49.7	47.6	57.1	47.3	46.1	58.6
Residence	GF	N	66.9	66.8	71.3	66.7	67.6	69.9
Residence	F 1	N	68.1	67.9	72.6	67.6	68.5	72.5
Residence	F 2	N	68.7	68.3	72.6	67.7	68.4	72.9
Residence	GF	S	52.9	47.8	49.4	45.2	45.7	49.4
Residence	F 1	S	55.8	48.2	50	46.1	46.5	51.3
Residence	F 2	S	55.7	49.7	51.8	49.1	48.8	52.2
Residence	GF	N	70.2	70.1	73.3	70	70.9	72.7
Residence	F 1	N	71.7	71.3	75.1	70.8	71.6	75.5
Residence	GF	S	55.3	52.7	61.8	53.2	51.2	63.9
Residence	F 1	S	55.8	53.9	61.1	54.7	52.7	65.7
Residence	GF	E	56.4	54.8	62.6	55.4	53.4	65.2
Residence	F 1	E	57	55.8	63.7	56.8	54.7	67.4
Residence	GF	S	60.2	53.7	60.5	53.6	52.7	58.9
Residence	F 1	S	64.3	58.3	60.7	54.2	53	61.2
Residence	GF	N	73.5	73.5	75.2	73.4	74.1	74.4

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Residence	F 1	N	74.7	74.4	77.6	73.9	74.6	76
Residence	GF	E	73.3	73	74.6	73	73.6	74.8
Residence	F 1	E	75	73.5	75.8	73.4	73.9	76.9
Residence	GF	S	64.7	62.7	65.2	62.6	62.9	65.7
Residence	F 1	S	67.4	64.3	66.9	63.6	63.8	68.3
Residence	GF	NE	66.6	65.6	68.3	65.7	66.4	69.4
Residence	F 1	NE	68.6	66.3	70.9	66.5	67	72.2
Residence	F 2	NE	67.2	66.3	70.9	66.6	67.1	72.5
Residence	GF	E	66.2	65.3	69	65.5	66.1	69.1
Residence	F 1	E	67.9	65.9	71.1	66.1	66.6	72
Residence	F 2	E	67.5	66	71	66.3	66.7	72
Residence	GF	SE	65.7	64.5	68.3	64.8	65.3	68.3
Residence	F 1	SE	67.5	65.2	70.1	65.4	65.9	70.8
Residence	F 2	SE	67.3	65.2	70	65.5	66	70.9
Residence	GF	E	61.3	57.9	66.3	59	58.4	66.5
Residence	F 1	E	64.2	58.9	68.5	60	59.3	69.7
Residence	F 2	E	65	60.5	68.4	61.3	60.8	70
Residence	GF	W	53.8	52	53.5	51	51.1	54
Residence	F 1	W	54.7	53.4	54.8	52.7	52.7	56.6
Residence	F 2	W	55.9	55.2	57.7	55.3	54.8	60.1
Residence	GF	N	49.6	47.4	49.8	45.1	45.3	49.7
Residence	F 1	N	50.1	48.4	51.4	47	47	52.1
Residence	F 2	N	52.8	51.9	54.8	51.9	51.5	56.3
Residence	F 3	N	62.3	58.7	64.2	58.3	57.6	67.3
Residence	GF	W	51.1	49.5	51.2	49.2	48.7	57.6
Residence	F 1	W	52.4	51	56.7	51.4	50.5	61.4
Residence	F 2	W	55.2	53.1	57.7	53.9	53	62.8
Residence	F 3	W	59.7	57.4	62.6	56.6	55.9	64.4
Residence	GF	W	48.6	45.7	47.9	43.4	43.5	48.2
Residence	F 1	W	49.5	46.2	48.9	44.4	44.3	49.6
Residence	F 2	W	52.8	47.7	51.2	47.2	46.6	51.7
Residence	F 3	W	60.3	57.3	60.4	56.7	56.4	62.8
Residence	GF	NW	41.5	41.7	42	43.2	42.6	41.6
Residence	F 1	NW	48.9	46.4	48.5	44.8	44.8	49.3
Residence	F 2	NW	50.9	48.1	51.2	47.6	47.1	51.7
Residence	F 3	NW	57.6	56.1	59.5	55.3	54.9	62
Residence	GF	E	60.2	60	60.8	59.7	60.5	62.1
Residence	F 1	E	61	60.9	61.7	60.4	61.1	62.8
Residence	F 2	E	61.5	61.6	61.6	60.6	61.2	63.4
Residence	F 3	E	63.3	60.7	63.5	59.1	59.5	62.8
Residence	GF	E	63.8	63.4	66.7	63.3	64	67.3
Residence	F 1	E	65.9	64.6	68.7	63.9	64.6	68.3

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Residence	F 2	E	68	64.6	68.7	64	64.6	68.1
Residence	F 3	E	66.3	63.7	68	63.6	64.1	67.6
Residence	GF	E	65.6	64.8	67.6	64.8	65.3	68
Residence	F 1	E	67.6	66.1	69.6	65.4	65.9	69.6
Residence	F 2	E	68.6	66	69.3	65.5	65.9	69.3
Residence	F 3	E	66.7	64.9	68.6	64.9	65.2	68.6
Residence	GF	NW	47	44.8	47.3	43.2	43.3	48
Residence	F 1	NW	48.1	46	48.8	45.2	45	49.6
Residence	GF	SE	54.7	53.8	60.1	53.8	54.5	58
Residence	F 1	SE	54.8	54	60.6	53.9	54.2	57.7
Residence	GF	SE	47.5	41	50.2	38.2	38.7	50.1
Residence	F 1	SE	47.8	41.2	52.8	38.3	38.8	52.8
Residence	F 2	SE	44.9	41.1	49.1	38.7	38.8	52.3
Residence	F 3	SE	45	41.4	47.3	39.3	39.3	50.3
Residence	GF	SE	52.5	50.4	57.3	42.4	40.7	57.4
Residence	F 1	SE	54.7	51.9	58.1	43.5	41.3	58.5
Residence	F 2	SE	55.6	51.7	57.5	45	41.2	59.1
Residence	F 3	SE	57.3	54.6	57.2	45.6	41.9	60.2
Residence	GF	SE	53.9	52.4	60.5	43.6	42.4	58.6
Residence	F 1	SE	56.4	53.8	59.5	44.5	42.9	60.1
Residence	F 2	SE	57.6	52.7	58.7	46.1	42.5	60.3
Residence	F 3	SE	59.2	56.3	58.3	46.8	43.4	61.2
Residence	GF	SE	52.8	47.1	58.3	42.4	42.8	57.7
Residence	F 1	SE	54.4	48.7	54.8	41.3	43.1	57.4
Residence	F 2	SE	49.5	45.2	52	42	41.9	55.7
Residence	F 3	SE	49.6	45.3	50.9	42.6	42.3	53.7
Residence	GF	SE	56.2	53.6	62.9	47.2	44.7	61.7
Residence	F 1	SE	59.4	56.2	61.2	48.5	45.5	62.6
Residence	F 2	SE	60.6	54.8	60.4	49.4	45.3	63.5
Residence	F 3	SE	62.7	58.5	60.2	50.2	45.9	64.4
Residence	GF	SE	57	55.9	63.7	46.7	45.3	62.3
Residence	F 1	SE	60.2	58.6	63.6	48.7	46.1	63.7
Residence	F 2	SE	62.7	58	63	49.5	46.4	65.3
Residence	F 3	SE	64.7	61.3	62.8	50.3	47.2	66.2
Residence	GF	NW	47.3	45.8	47.2	44.2	44.5	48.5
Residence	F 1	NW	48.4	47.8	48.6	46.6	47.1	50.1
Residence	F 2	NW	48.6	48.2	48.8	47	47.3	50.7
Residence	F 3	NW	49.1	48.7	49.2	47.6	47.7	52.7
Residence	GF	NW	53.6	51.6	53.2	48.7	48.7	59.9
Residence	F 1	NW	54.6	53.2	55.1	51	51.4	61.1
Residence	F 2	NW	55.2	53.8	55.2	51.6	51.8	62.2
Residence	GF	SW	54.6	50.8	53.5	46.3	46.6	55.7

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Residence	F 1	SW	54.2	49.2	53.7	47.3	47	55.2
Residence	F 2	SW	54.2	50	54.2	48.7	47.9	55.5
Residence	GF	SE	57.6	56.6	59.4	46	46.3	61
Residence	F 1	SE	60.4	57.3	58.9	48.1	46.7	61.8
Residence	F 2	SE	60.5	57.4	58.7	49	47.2	62.3
Residence	GF	NE	49.4	45.7	49.1	42.3	43.2	50.4
Residence	F 1	NE	49.4	45.8	49.3	42.8	43.4	50.5
Residence	F 2	NE	49.5	46	49.6	43.5	43.9	50.9
Residence	GF	SE	64.9	60.7	65.5	57.5	51	64.4
Residence	F 1	SE	75.1	64.8	72.8	62.6	54.6	73.7
Residence	F 2	SE	77.6	63	72.2	63.7	56.4	76.6
Residence	GF	SE	61	58	62.4	53.7	48.5	65.8
Residence	F 1	SE	66.8	60.3	63.8	56	49.7	71
Residence	F 2	SE	71.3	61.1	63.8	57.5	51.4	71.9
Residence	GF	NW	56.9	54.7	61.6	51.6	51.9	60.8
Residence	F 1	NW	57.9	57.1	63.6	54.5	55	64.9
Residence	F 2	NW	58.4	58.3	63.8	55.4	55.6	64.2
Residence	GF	NW	60.5	59.7	61.1	53.4	55.6	59.7
Residence	F 1	NW	60.8	61.8	64.8	55.7	56.9	60.8
Residence	F 2	NW	60.1	63.5	62.8	56.6	57.4	61
Residence	GF	NW	67.8	63.2	74.4	55.1	58.4	69.6
Residence	F 1	NW	73.9	71.7	80.4	61.4	62.6	76.8
Residence	F 2	NW	65.3	68.2	79.9	64.7	62.2	75.9
Residence	GF	NW	58.5	53.8	63.6	54.7	52.5	61.1
Residence	F 1	NW	68.3	61.3	70.3	58.8	57.7	68.7
Residence	GF	SE	57.3	54.5	57.6	47.4	46.9	57.9
Residence	F 1	SE	58.9	56.9	57.1	48.5	47.9	58
Residence	GF	NW	62.6	61.8	65.4	62.1	61.7	65.4
Residence	F 1	NW	66.7	64.8	69.6	64.5	64.5	69.4
Residence	F 2	NW	70.8	65.7	69.3	65	64.9	71.2
Residence	GF	SE	56.4	56.3	59.6	47.8	46.3	58
Residence	F 1	SE	58.2	59.4	57.8	47.1	47.3	57.1
Residence	F 2	SE	54.9	50.2	56.8	49.8	48.8	56
Residence	GF	NW	63.4	63.1	65.1	63.2	63.6	65.4
Residence	F 1	NW	66.6	65.7	69.3	65.6	66.1	68.9
Residence	GF	SE	56.6	55.9	57.1	48.5	48	56.3
Residence	F 1	SE	54.4	55.1	55.1	47	47.3	55.4
Residence	F 2	SE	51.9	48.3	49.2	39.5	39.6	48.8
Residence	F 2	NW	56.4	54.8	57.8	48.9	45.4	58.9
Residence	F 2	NW	57.2	54.1	60.8	49.6	45.5	60.2
Residence	F 2	SE	51	46.2	47.1	38.3	38.7	47.8
Residence	F 2	NW	51.5	45.5	59	45.5	42.5	59.7

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Residence	F 2	SE	48.8	43.4	45.8	37.4	37.5	47.4
Residence	F 2	SE	53.8	51	55.9	45.2	42.9	53.1
Residence	F 2	NW	60	58.8	66.4	51.4	48.5	63.3
Residence	F 2	SE	53	50.8	56.3	45.6	43.5	54.7
Residence	F 2	NW	60.3	58.3	66.1	51.1	48.8	61.5
Residence	F 2	SE	49.5	43.8	46.8	37.5	37	47.6
Residence	F 2	NW	51.4	44.6	58.5	44.8	42	58.8
Residence	GF	NW	57.5	55.5	61	49.7	46.6	59.1
Residence	GF	SE	54.1	49.5	51.7	41.6	41.8	51.5
Residence	F 1	NW	63.9	64.8	71.9	53.5	51.6	68.8
Residence	GF	NW	60	58.8	66.4	51.4	48.5	63.3
Residence	F 1	NW	63.7	63.5	71.2	53.4	51.7	68.4
Residence	GF	SE	53.8	51	55.9	45.2	42.9	53.1
Residence	F 1	SE	54.7	53	57.2	46.6	44.2	54.5
Residence	GF	SE	53.6	48.9	52	43.7	42.7	52.9
Residence	F 1	SE	54.4	51.7	55.6	46.2	44.5	56
Residence	F 1	NW	60.3	58.3	66.1	51.1	48.8	61.5
Residence	F 1	SE	53	50.8	56.3	45.6	43.5	54.7
Residence	F 1	SE	53.7	51	56.8	46	45	55.4
Residence	GF	E	70	69	72	69.1	70	73
Residence	F 1	E	73.8	69.7	72.8	69.7	70.6	76.3
Residence	F 2	E	77.5	69.7	72.3	69.6	70.5	76
Residence	GF	S	70.8	70.6	71.9	70.6	71.7	72
Residence	F 1	S	72.2	71.3	73.5	71.2	72.2	73
Residence	F 2	S	73.5	71.1	73.3	71.1	72.1	73.1
Residence	GF	N	53.8	51.6	53.1	49.5	50	53.5
Residence	F 1	N	54.3	52	54.8	50.7	50.8	55.9
Residence	F 2	N	54.7	52.3	57.7	51.7	51.4	57.5
Residence	GF	E	55.6	53.2	55	50.6	51.2	55.1
Residence	F 1	E	56	53.7	56.7	51.9	52.2	57
Residence	F 2	E	56.6	54.7	61	53.8	53.9	60.6
Residence	GF	N	55.9	53.1	59	50.6	51.3	59.5
Residence	F 1	N	56	53.6	59.9	51.8	52	60.7
Residence	F 2	N	56.4	54.4	62.6	53.1	53.3	62.2
Residence	GF	E	51.4	61.5	59.2	47.6	45.4	56.6
Residence	F 1	E	53.8	61.6	58.4	48.5	46	57.2
Residence	F 2	E	56.2	61.6	59	48.7	46.1	56
Residence	F 3	E	58.5	56.9	58.7	49.7	47	55.8
Residence	F 4	E	55.8	54.5	58.2	50.3	47.6	55.6
Residence	GF	S	58.4	57.4	67.7	54.4	55.6	64.4
Residence	F 1	S	61.8	60.6	69.2	56.2	57.1	67.6
Residence	F 2	S	64.5	62.3	69	57.1	57.6	67.6

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Residence	F 3	S	64.2	61.2	67	57.5	58.2	64.5
Residence	F 4	S	61.2	59.6	66.2	58.4	58.5	62.7
Residence	GF	N	48.6	46	47.9	42	42.8	48.2
Residence	F 1	N	48.7	46.1	47.9	42.2	43.1	48.3
Residence	F 2	N	48.4	45.8	47.7	42.1	43	48.1
Residence	F 3	N	47.2	45.1	46.9	42.2	43.1	47.2
Residence	F 4	N	47.1	45.2	46.6	42.4	43.3	46.9
Residence	GF	N	49.6	45.7	48.2	42.6	43.6	48.4
Residence	F 1	N	49.5	45.6	48.2	42.6	43.5	48.4
Residence	F 2	N	49.3	45.2	47.9	42.6	43.4	48.1
Residence	F 3	N	48.9	44.6	47.6	42.1	42.9	47.4
Residence	GF	S	56.1	57.5	68.8	53.2	53.5	68.9
Residence	F 1	S	61	61.5	69.2	54.9	55.2	70.3
Residence	F 2	S	62.9	63.5	69.2	57.6	57.8	71.7
Residence	F 3	S	62.4	63.6	67.6	61.7	62.2	71.7
Residence	GF	N	50.1	46	48.2	42	42.9	48.1
Residence	F 1	N	50	45.8	48	41.9	42.8	47.9
Residence	F 2	N	49.7	45.3	47.6	41.5	42.3	47.4
Residence	F 3	N	49.4	44.8	47	40.4	41.2	46.7
Residence	F 4	N	49.5	45.4	47.4	41.7	42.4	47.4
Residence	GF	S	53.2	52.5	63.1	49.7	49.9	63.6
Residence	F 1	S	54.5	55.3	64	51.8	51.6	64.8
Residence	F 2	S	57.8	58.9	65.6	56.2	56.6	67.3
Residence	F 3	S	62.7	60.5	66.2	59.3	59.7	68.9
Residence	F 4	S	64.8	62.9	65.4	61.9	62.6	68.9
Residence	GF	S	58.7	58.2	59	58.1	58.2	59
Residence	F 1	S	60.2	59.9	61	59.9	60.4	61
Residence	F 2	S	61	60.4	63.8	60.4	61	63.5
Residence	F 3	S	63	60.4	65	60.8	61.3	67.7
Residence	F 4	S	67	61.9	64.5	61.9	62.5	68.2
Residence	GF	N	49.7	45.7	47.3	41.6	42.5	47.7
Residence	F 1	N	49.6	45.6	47.1	41.5	42.3	47.6
Residence	F 2	N	49.4	45.2	46.9	41.2	41.9	47.3
Residence	F 3	N	49	44.9	46.3	40.4	41.2	46.8
Residence	F 4	N	49.2	45.7	46.8	41.8	42.4	47.6
Residence	GF	N	49.3	44.2	47.2	40.6	41.4	47.3
Residence	F 1	N	49.3	44.1	47.2	40.6	41.4	47.2
Residence	F 2	N	49.2	44.1	47.1	40.5	41.3	47.1
Residence	F 3	N	48.7	43.7	46.6	39.5	40.3	46.5
Residence	F 4	N	48.9	44.2	46.9	40.6	41.2	47.3
Residence	GF	S	51.7	47.9	55.7	49.1	46.9	58.3
Residence	F 1	S	53.2	50.9	57.6	52.6	50.9	60.2

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Residence	F 2	S	57.2	52.5	59	53.4	52.2	63.3
Residence	F 3	S	65.2	54.6	60.5	54.9	54	66.8
Residence	F 4	S	68.6	55.9	59.3	55.7	55.9	67.1
Residence	GF	N	48.9	44.7	46.9	40.5	41.2	47.4
Residence	F 1	N	48.8	44.7	46.9	40.6	41.3	47.4
Residence	F 2	N	48.8	44.7	46.9	40.6	41.2	47.3
Residence	F 3	N	48.3	44.1	46.4	39.9	40.5	46.8
Residence	F 4	N	48.4	44.5	46.7	40.9	41.4	47.5
Residence	GF	S	53.3	49.2	52.7	47.4	46.2	64
Residence	F 1	S	56.2	50.6	54	49.7	48.5	64.9
Residence	F 2	S	59.4	51.9	54.3	50.1	49.5	65
Residence	F 3	S	63.7	52.5	54.2	51.4	50.9	62.7
Residence	F 4	S	66.3	54.4	56.8	53.6	53.7	62.5
Residence	GF	S	51	52.3	47.1	45	45.4	51.1
Residence	F 1	S	52.6	48.6	50.7	47.3	46.5	54.9
Residence	F 2	S	54.2	48.1	51.2	48.3	47.7	55
Residence	F 3	S	52.8	49.9	52.4	50.5	50.2	55.8
Residence	F 4	S	53.3	51.4	52.8	52.1	51.7	56.8
Residence	GF	N	49	45.8	47.2	42.1	43	48.1
Residence	F 1	N	48.9	45.8	47.2	42.2	43.1	48.2
Residence	F 2	N	48.8	45.5	46.7	41.6	42.5	47.9
Residence	F 3	N	48.4	45.3	46.8	41.8	42.6	47.8
Residence	F 4	N	48.6	45.8	47.2	42.7	43.5	48.4
Residence	GF	S	47.1	43.8	45.9	41.3	41.8	46.3
Residence	F 1	S	47.9	45	49.7	44.3	43.9	50.4
Residence	F 2	S	48.2	45.6	50.1	45.2	44.7	50.9
Residence	F 3	S	48.9	46.5	50.7	46.7	46.2	52.6
Residence	F 4	S	49.6	47.9	50.3	48.5	47.9	53.8
Residence	GF	N	47.8	45.1	46.3	41.5	42.5	46.8
Residence	F 1	N	47.8	45.1	46.3	41.7	42.6	46.9
Residence	F 2	N	47.1	44.6	45.7	41	42	46.2
Residence	F 3	N	47.2	44.7	45.8	41.3	42.2	46.3
Residence	F 4	N	47.5	45.2	46.3	42.4	43.2	47
Residence	GF	N	46.7	44.2	45.2	40.2	41.1	45.7
Residence	F 1	N	46.7	44.2	45.3	40.4	41.2	45.8
Residence	F 2	N	45.9	43.5	44.5	39.6	40.5	44.9
Residence	F 3	N	45.9	43.6	44.6	39.9	40.7	45
Residence	F 4	N	46.2	44.1	45	41.1	41.8	45.8
Residence	GF	S	48	45.6	47.4	43.4	43.9	48.5
Residence	F 1	S	48.9	46.1	48.3	44.6	44.9	50.5
Residence	F 2	S	49.4	46.6	48.8	45.4	45.7	52
Residence	F 3	S	50.3	47.5	49.5	46.8	47	54

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Residence	F 4	S	52.2	49.4	51.7	49.4	49.4	55.1
Residence	GF	S	47	43.3	45.5	41.3	42	48.4
Residence	F 1	S	47.6	44.5	48.1	43.7	43.8	50.7
Residence	F 2	S	47.9	45.1	48.8	44.7	44.7	51.4
Residence	F 3	S	48.5	46.1	49.8	46	46	52.4
Residence	F 4	S	49.2	47.8	51	48.2	48.2	55.6
Residence	GF	S	47.1	44.8	46.3	42.4	42.9	47.6
Residence	F 1	S	47.9	45.2	47.4	43.7	43.9	49.8
Residence	F 2	S	48.4	45.8	48	44.6	44.8	51.6
Residence	F 3	S	49.2	46.7	48.9	46.1	46.2	53.6
Residence	F 4	S	51.2	49.2	50.9	49.3	49.3	55.4
Residence	GF	S	43.7	41.3	42.4	38.3	39.3	43.2
Residence	F 1	S	43.7	41.4	42.5	38.5	39.4	43.2
Residence	F 2	S	43.7	41.5	42.7	38.7	39.6	43.5
Residence	F 3	S	44.1	42.2	43.6	40.1	40.8	44.5
Residence	F 4	S	44.8	43.3	45.6	41.7	42.3	47.1
Residence	GF	N	45.4	42.8	44.1	39.8	40.6	44.8
Residence	F 1	N	45.4	42.8	44.1	39.9	40.7	44.8
Residence	F 2	N	44.3	41.8	43.1	38.7	39.6	43.9
Residence	F 3	N	44.3	42	43.3	39	39.9	44
Residence	F 4	N	44.7	42.5	43.9	40.2	41	44.7
Residence	GF	N	47.3	45.2	46.4	41.5	42.3	47
Residence	F 1	N	47.2	45.2	46.4	41.4	42.3	47
Residence	F 2	N	47.2	45.2	46.4	41.5	42.4	47
Residence	F 3	N	47.3	45.4	46.6	42	42.8	47.2
Residence	F 4	N	47.8	46.3	47.6	44	44.6	48.2
Residence	GF	S	46.3	44.2	45.7	41.8	42.3	47.4
Residence	F 1	S	47	45	46.8	43.3	43.5	49
Residence	F 2	S	47.5	45.4	47.3	43.9	44.1	50.8
Residence	F 3	S	48	45.7	47.8	45.3	45.4	52.7
Residence	F 4	S	50.2	48.2	49.6	48.3	48.4	54
Residence	GF	N	46.8	44.4	45.7	40.9	41.8	46
Residence	F 1	N	46.2	44	45.3	40.6	41.5	45.6
Residence	F 2	N	46.3	44.1	45.4	40.7	41.6	45.7
Residence	F 3	N	46.4	44.3	45.6	41.2	42	45.9
Residence	F 4	N	47	45.3	46.8	43.2	43.8	47.1
Residence	GF	S	46.2	43.8	45.9	41.5	42	55.2
Residence	F 1	S	46.7	44.4	46.7	42.7	43.1	55.6
Residence	F 2	S	47.1	44.7	47.4	43.6	43.9	55.7
Residence	F 3	S	48.2	46	48.6	45.3	45.6	55.8
Residence	F 4	S	49.8	47.9	51.5	47.8	48	56.3
Residence	GF	N	46.1	44	45	41	41.9	45.5

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Residence	F 1	N	45.7	44	45.1	41.1	42	45.4
Residence	F 2	N	45.8	44.1	45.2	41.2	42.2	45.5
Residence	F 3	N	45.9	44.3	45.4	41.6	42.5	45.7
Residence	F 4	N	46.3	44.9	46.2	42.9	43.6	46.6
Residence	GF	S	45.4	43.3	45.1	41.1	41.7	44.6
Residence	F 1	S	45.4	43.3	45.5	41.9	42.3	45.4
Residence	F 2	S	46	44	46.3	42.8	43.2	46.2
Residence	F 3	S	46.8	44.8	47.6	43.9	44.3	47.1
Residence	F 4	S	48	46.1	50.4	45.9	46	48.9
Residence	GF	N	45.7	43.9	44.9	41	41.9	45.5
Residence	F 1	N	45.7	44	45	41.1	42	45.6
Residence	F 2	N	45.7	44	45	41.3	42.1	45.7
Residence	F 3	N	45.8	44.1	45.2	41.6	42.4	46
Residence	F 4	N	46.2	44.7	45.9	42.8	43.5	46.8
Residence	GF	N	47.9	46.2	47.5	43.1	43.8	47.7
Residence	F 1	N	47.9	46.2	47.8	43.3	43.9	47.8
Residence	F 2	N	48	46.4	47.9	43.4	44.1	47.9
Residence	F 3	N	48.2	46.6	48	44	44.6	48.3
Residence	F 4	N	48.8	47.5	49.3	45.9	46.2	49.5
Residence	GF	S	60.6	60.7	65.1	60.2	61.2	64.6
Residence	F 1	S	61.3	61.4	66.1	61.1	62	65.7
Residence	F 2	S	62	61.6	66.1	61.2	62	65.9
Residence	F 3	S	62.4	61.6	65.9	61	61.8	64.9
Residence	GF	N	48.7	47.1	48.3	43.8	44.5	48.6
Residence	F 1	N	48.7	47.2	48.5	44.1	44.6	49.3
Residence	F 2	N	48.8	47.3	49	44.3	44.9	49.9
Residence	F 3	N	49.2	47.7	49.5	45.3	45.8	51.3
Residence	GF	S	64	64.1	68	63.9	64.6	66
Residence	F 1	S	64.7	64.8	69.2	64.7	65.3	67
Residence	F 2	S	65.1	64.9	69.2	64.7	65.3	67.1
Residence	F 3	S	65.7	64.9	69.1	64.8	65.3	67
Residence	GF	N	50.8	48.9	49.9	46.2	47	50.1
Residence	F 1	N	51	49	50.1	46.4	47.2	50.3
Residence	F 2	N	51.3	49.2	50.3	46.8	47.5	50.5
Residence	F 3	N	52	50	51.3	48.1	48.8	51.4
Residence	GF	S	65.7	65.6	69.7	65.6	66.3	68
Residence	F 1	S	66.4	66.3	70.2	66.4	67	68.6
Residence	F 2	S	66.8	66.4	70.2	66.4	67	68.4
Residence	F 3	S	67.5	66.3	70	66.3	67	68
Residence	GF	N	52.1	49.7	50.9	46.9	47.7	57.7
Residence	F 1	N	52.6	49.8	51	47.2	47.9	58.1
Residence	F 2	N	53.5	50.1	51.2	47.6	48.4	58.1

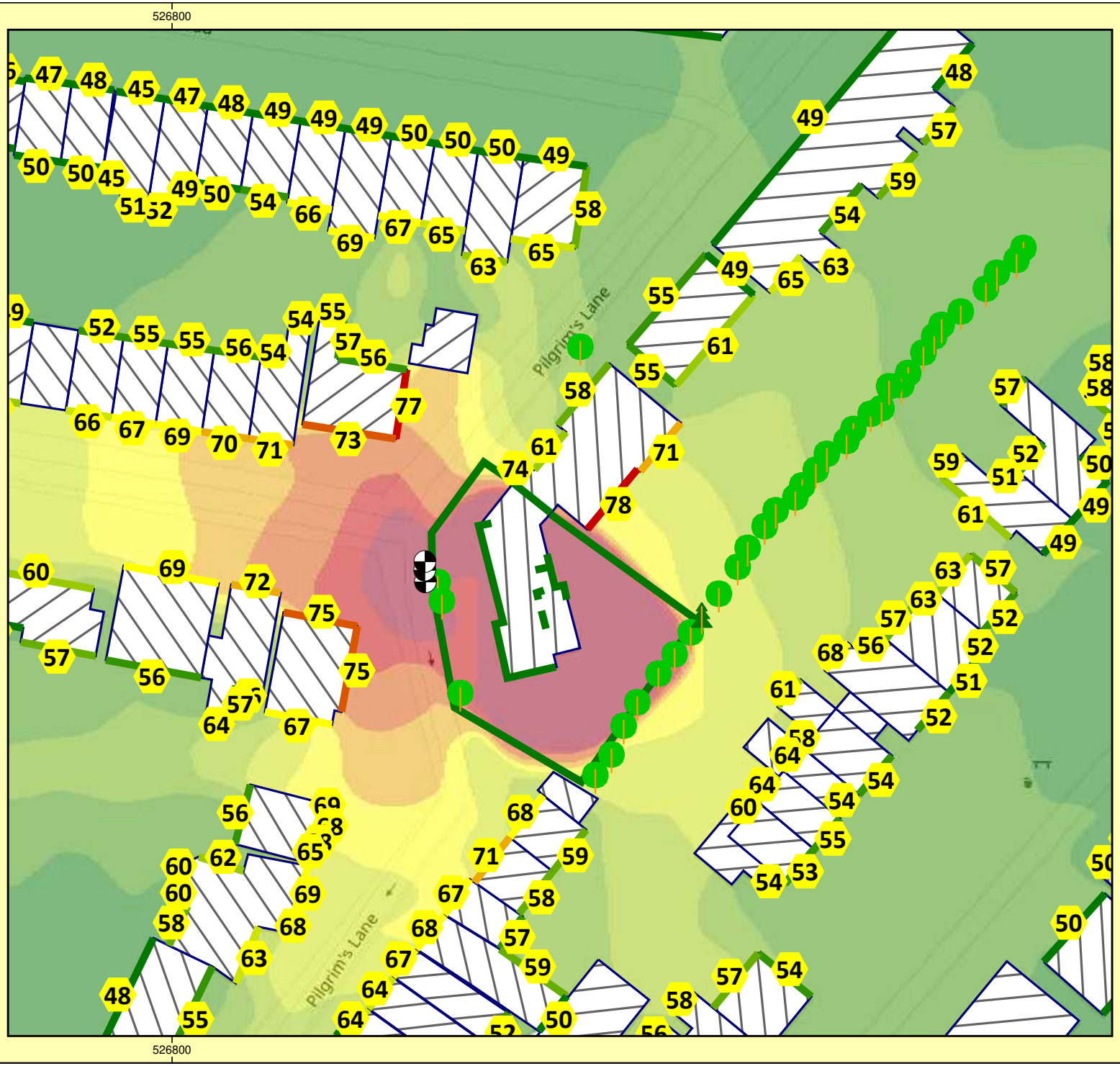
Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Residence	F 3	N	55.2	51	52.1	49.1	49.8	58.4
Residence	GF	S	66.9	66.8	70.7	66.7	67.6	68.8
Residence	F 1	S	67.7	67.6	71.2	67.5	68.3	69
Residence	F 2	S	68.2	67.6	71.2	67.5	68.3	68.8
Residence	F 3	S	68.9	67.5	71	67.5	68.3	68.8
Residence	GF	N	52.1	50.3	51.7	47.5	48.3	51.5
Residence	F 1	N	52.2	50.4	52	47.7	48.5	51.6
Residence	F 2	N	53	50.6	52.7	48.2	48.9	52.1
Residence	F 3	N	54.5	51.5	53.8	49.8	50.3	53.3
Residence	GF	S	67.8	67.7	72	67.6	68.6	69.4
Residence	F 1	S	68.7	68.4	72.5	68.4	69.3	69.8
Residence	F 2	S	69.4	68.4	72.5	68.4	69.2	69.9
Residence	F 3	S	70.1	68.3	72.1	68.3	69.2	69.8
Residence	GF	N	53.4	51.2	52.6	48.6	49	52.9
Residence	F 1	N	53.5	51.4	52.7	49.1	49.3	53.6
Residence	F 2	N	54.4	51.7	53.1	49.8	49.9	56.4
Residence	F 3	N	56.1	52.8	54.2	51.6	51.6	58.5
Residence	GF	S	68.8	68.5	71.9	68.5	69.6	69.9
Residence	F 1	S	69.8	69.3	72.5	69.1	70.2	70.6
Residence	F 2	S	71	69.2	72.4	69.1	70.1	70.7
Residence	F 3	S	71.2	69	72.2	69	70	70.4
Residence	GF	N	54.1	51.9	53.3	49.1	49.7	53.6
Residence	F 1	N	54.1	52	53.5	49.8	50	54
Residence	F 2	N	53.7	51.4	53.1	50.2	49.9	54.2
Residence	F 3	N	54.3	52.1	53.9	52	51.2	57.3
Residence	GF	N	52.9	50.8	52.2	47.7	48.6	52.4
Residence	F 1	N	52.9	50.9	52.3	48	48.9	52.6
Residence	F 2	N	53.1	51.2	52.6	48.6	49.4	52.8
Residence	F 3	N	53.8	52.2	53.7	50.5	51.2	53.8
Residence	F 1	S	47.7	44.1	46.1	38.6	39.5	45.9
Residence	F 2	S	47.8	44.3	46.3	39	39.8	46.1
Residence	F 3	S	47.8	44.3	46.3	39.2	39.8	46.1
Residence	F 4	S	47.8	44.6	46.4	40.1	40.7	46.3
Downshire Hill 2	GF	NW	58.1	55.5	59.9	48.1	46.7	58.9
Downshire Hill 3	GF	NE	54.1	53.6	61.3	49.3	47	59.3
Downshire Hill 3	GF	NW	57.4	56	61.7	49.4	47.4	59.4
Downshire Hill 4	GF	SE	53	50.8	56.3	45.6	43.5	54.7
Downshire Hill 4	GF	NW	60.3	58.3	66.1	51.1	48.8	61.5
Downshire Hill 4A	GF	NW	55.6	51.9	54.2	43.8	43.8	53.2
Downshire Hill 6	GF	SE	54.1	49.5	51.7	41.6	41.8	51.5
Downshire Hill 6	GF	NW	61.2	58.4	65.5	51.5	48.9	62.8
Downshire Hill 7	GF	SE	51.9	48.3	49.2	39.5	39.6	48.8

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Downshire Hill 7	F 1	SE	52.1	49.2	50.2	40.6	40.3	49.3
Downshire Hill 7	F 2	SE	53	52.2	53	44.7	43.4	52.8
Downshire Hill 7	F 1	NW	61.3	60.1	66.5	52.9	49.1	64.7
Downshire Hill 7	F 2	NW	67.6	66.1	70.6	54.6	52.5	68.8
Downshire Hill 7	GF	NW	56.4	54.8	57.8	48.9	45.4	58.9
Downshire Hill 7	F 1	NW	58.4	58.7	65.2	51.5	47.6	63.2
Downshire Hill 7	F 2	NW	63.3	63.9	67.6	53.2	50.4	65.5
Downshire Hill 8	GF	NW	57.2	54.1	60.8	49.6	45.5	60.2
Downshire Hill 8	F 1	NW	59.8	57.5	66.3	52	48	64.2
Downshire Hill 8	F 2	NW	64.4	62.1	69.5	52.9	50.4	66.6
Downshire Hill 8	GF	NW	57	53.6	62.4	49.8	45.7	61.5
Downshire Hill 8	F 1	NW	59.5	56.7	66.4	51.9	47.9	65.5
Downshire Hill 8	F 2	NW	63.5	60.3	69.1	52.2	49.8	67
Downshire Hill 8	GF	SE	50.6	45.4	48.6	37.9	38.4	47.5
Downshire Hill 8	F 1	SE	50.8	45.8	49	38.9	39	48.1
Downshire Hill 8	F 2	SE	51.9	49.3	52.4	43.6	42	51.9
Downshire Hill 8	GF	SE	51	46.2	47.1	38.3	38.7	47.8
Downshire Hill 8	F 1	SE	51.2	46.6	48	39.4	39.3	48.3
Downshire Hill 8	F 2	SE	52.3	50.2	51	43.7	42.2	52
Downshire Hill 10	GF	SE	49.5	43.8	46.8	37.5	37	47.6
Downshire Hill 10	F 1	SE	49.6	44.2	48.1	39.2	37.7	48.7
Downshire Hill 10	F 2	SE	51.2	48	51.9	43.9	41	53
Downshire Hill 10	GF	SW	55.4	49.8	60.3	48.1	44.3	62.4
Downshire Hill 10	F 1	SW	57.7	53.4	62.9	50.1	46.4	65.5
Downshire Hill 10	F 2	SW	61	56.5	62.7	50.6	47.7	67.1
Downshire Hill 10	GF	NW	54.2	47	60.5	47.4	43.7	61.5
Downshire Hill 10	F 1	NW	56	49.2	63.1	49.6	45.8	63.7
Downshire Hill 10	F 2	NW	58.8	52.4	63.2	50.3	46.8	64.1
Downshire Hill 10	GF	NW	51.4	44.6	58.5	44.8	42	58.8
Downshire Hill 10	F 1	NW	52.3	45.2	58.5	46.3	42.6	59.4
Downshire Hill 10	F 2	NW	53.8	46.3	58.3	48	44.3	60.5
Downshire Hill 11	GF	NW	51.5	45.5	59	45.5	42.5	59.7
Downshire Hill 11	F 1	NW	52.9	48.9	59.7	47.4	43.9	61.2
Downshire Hill 11	F 2	NW	54.9	50.5	59.3	49.7	45.3	61.4
Downshire Hill 11	GF	NW	52.4	42.7	57.9	45.6	41.3	59.4
Downshire Hill 11	F 1	NW	54.4	46	60	47.7	42.9	60.7
Downshire Hill 11	F 2	NW	57	49.7	60.3	48.2	44.1	61.1
Downshire Hill 11	GF	NE	48.6	42.9	46.3	38.7	38.2	47.5
Downshire Hill 11	F 1	NE	48.9	43.2	47.3	40.8	39.1	48.7
Downshire Hill 11	F 2	NE	50.5	44.7	50.4	45.3	41.7	53.1
Downshire Hill 11	GF	SE	48.8	43.4	45.8	37.4	37.5	47.4
Downshire Hill 11	F 1	SE	48.9	43.8	46.6	38.9	38.1	48.1

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Downshire Hill 11	F 2	SE	50.3	47.3	50	43.5	41.2	52.3
Downshire Hill 12	GF	SE	44.9	39.7	42.3	34.6	34.9	44
Downshire Hill 12	F 1	SE	45	39.9	42.8	35.4	35.3	44.4
Downshire Hill 12	F 2	SE	45.1	40	43.4	36.5	35.9	45.1
Downshire Hill 12	F 3	SE	46.8	41.5	47.8	41.6	38.8	49.8
Downshire Hill 12	GF	SW	47.5	41.8	44.5	37.1	36.3	46.3
Downshire Hill 12	F 1	SW	47.8	42.2	46	39.5	37.5	47.7
Downshire Hill 12	F 2	SW	49.1	44	49.9	44.4	40.3	52.6
Downshire Hill 12	F 3	SW	57.9	51.8	59.3	48.8	45	62.8
Downshire Hill 12	GF	NW	46.3	42.3	44.9	37.4	37	45.7
Downshire Hill 12	F 1	NW	47.8	47	47.2	39.7	38.3	49.3
Downshire Hill 12	F 2	NW	49.6	48.5	50.6	43.9	40.5	52.7
Downshire Hill 12	F 3	NW	57.7	52.1	59.5	48.1	45	61.4
Downshire Hill 12	GF	NW	46.3	42.3	45	37.5	37.1	45.9
Downshire Hill 12	F 1	NW	48	46.9	48.2	39.9	38.5	50.5
Downshire Hill 12	F 2	NW	49.9	48.5	51	44.1	40.5	53.3
Downshire Hill 12	F 3	NW	57.7	52.1	59.4	48.1	44.9	61.3
Downshire Hill 12	GF	NW	46.4	42	47.5	38.1	37.5	46.4
Downshire Hill 12	F 1	NW	48.1	48.3	52.9	41	39.1	50.8
Downshire Hill 12	F 2	NW	50.3	50	53.2	44.8	40.7	53.7
Downshire Hill 12	F 3	NW	57.7	51.9	58.5	47.8	44.1	60.2
Downshire Hill 12	GF	NW	45.6	40.3	49	38.3	37.5	46.4
Downshire Hill 12	F 1	NW	47.3	44.5	55.1	41.6	38.8	51.5
Downshire Hill 12	F 2	NW	48.7	46.1	54.4	44.7	40.2	53.5
Downshire Hill 12	F 3	NW	53.9	49.1	58	47	42.7	59.1
Downshire Hill 12	GF	NE	44.4	39.8	43.2	34.9	35.8	43.5
Downshire Hill 12	F 1	NE	44.5	40.3	44.1	35.8	36.2	44.3
Downshire Hill 12	F 2	NE	44.6	40.4	44.3	36.5	36.6	44.7
Downshire Hill 12	F 3	NE	45.6	41.4	46.6	40	38.5	47.8
Downshire Hill 48	GF	SW	46.3	42.8	44.1	35.5	36.1	45
Downshire Hill 48	GF	NW	46.9	43.6	47.2	39	37	46.8
Downshire Hill	GF	SE	50.1	44.6	48.3	37.7	37.9	47.9
Downshire Hill	F 1	SE	50.3	44.9	48.8	38.8	38.6	48.5
Downshire Hill	F 2	SE	51.6	48.3	52.4	43.6	41.7	52.3
Downshire Hill	GF	NE	53.8	52.2	58.2	46.8	43.3	61.1
Downshire Hill	F 1	NE	55.2	54.6	61.5	48	44.7	62.8
Downshire Hill	F 2	NE	57.3	57.2	60.6	49.6	46.3	63.7
Downshire Hill	GF	NW	56.9	54.3	63.5	50.3	46.1	63.7
Downshire Hill	F 1	NW	59.2	57.4	67.1	52.1	48.2	66.6
Downshire Hill	F 2	NW	62.6	60.2	68.3	52.7	49.7	67.8
Hopkins House	GF	NW	49.4	46.7	52.1	42.2	40	52.2
Hopkins House	F 1	NW	50.5	49.3	55.4	44.7	41.2	53.9

Receptor Name	*Floor*	*Façade Facing*	Stage					
			1	2	3	4	5	6
Hopkins House	GF	SE	46.5	42.9	43.6	35.3	36.1	44.7
Hopkins House	F 1	SE	47.1	45.1	47	38.6	38.4	47.3
King Charles Lodge	GF	NW	48.9	46.2	49.3	41.6	39.9	48.8
King Charles Lodge	F 1	NW	49.7	48.1	52.6	44.2	41.5	51.8
King Charles Lodge	GF	NW	48.5	45.8	49.3	40.4	38.9	48.3
King Charles Lodge	F 1	NW	49.5	47.3	55.7	42.9	39.9	50.8
King Charles Lodge	GF	NW	48.3	44.6	48.3	39.5	38	48
King Charles Lodge	F 1	NW	48.9	45.9	51	41.7	39	50.4
King Charles Lodge	GF	SE	46.7	43.1	44.5	35.7	36.8	45
King Charles Lodge	F 1	SE	47.4	45.3	47.6	38.8	38.9	47.3
King Charles Lodge	GF	SE	46.9	43.8	45.6	35.8	36.6	44.9
King Charles Lodge	F 1	SE	47.4	45.4	48	39.1	38.7	47.3
King Charles Lodge	GF	SE	47.1	43.3	45.1	35.3	36.3	45.9
King Charles Lodge	F 1	SE	47.5	44.8	47.4	38.6	38.5	47.4

Appendix C – Noise Mapping Results.



Customer:
Sterling N3 Constructors Ltd.

Project-No. 20638

es acoustics

Map
1

Projected Combined Noise Map
-LGF level breakout and demolition
-No additional screening
-Noise map calculation at 1.5m elevation
-Highest facade noise level shown per floor

Project engineer: D. Arkley
Created: 16/01/2024
Processed with SoundPLAN 8.2, Update 29/09/2022

Levels Leq:10hr
in dB(A)

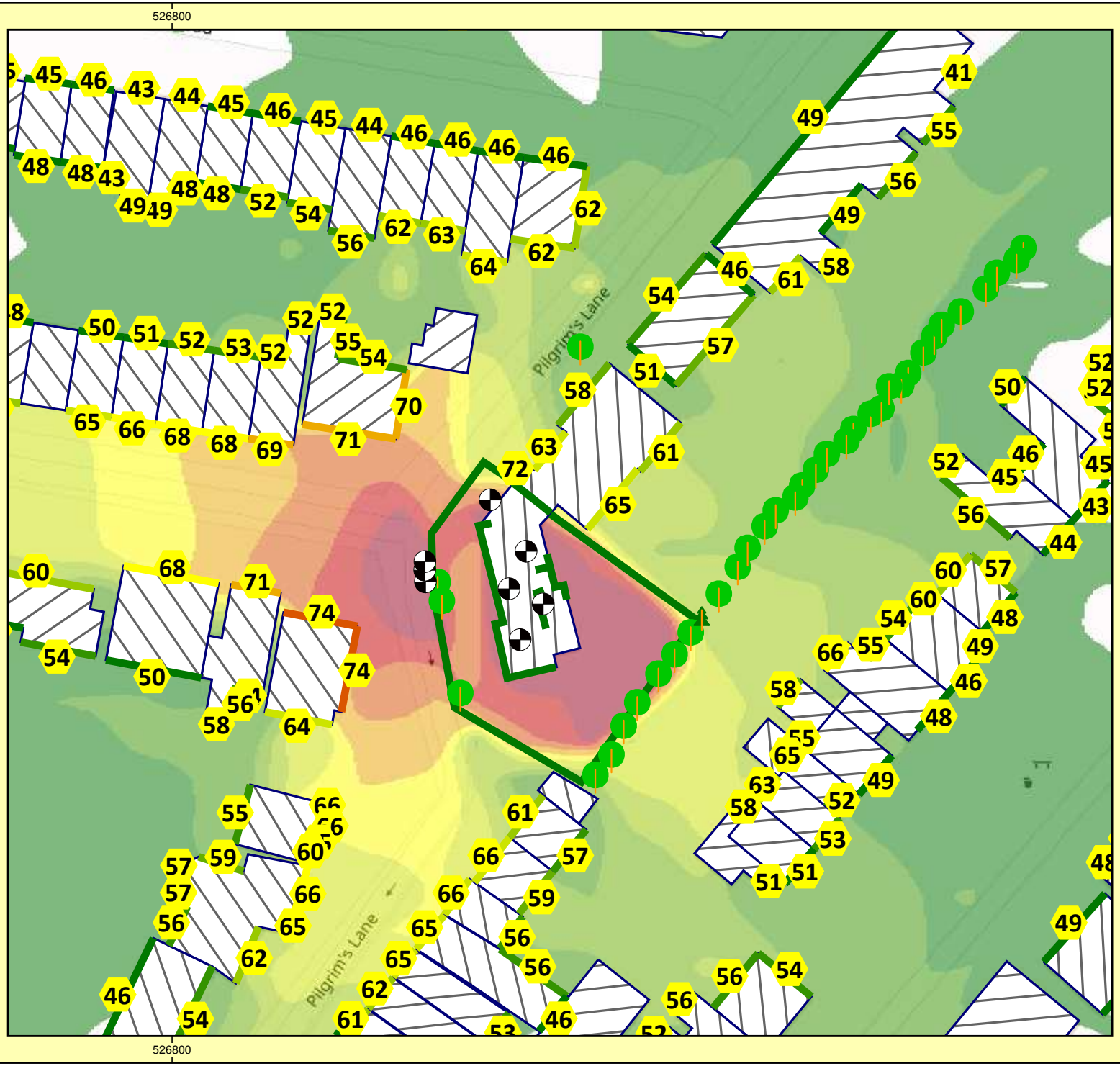
45 - 48	
48 - 51	
51 - 54	
54 - 57	
57 - 60	
60 - 63	
63 - 66	
66 - 69	
69 - 72	
72 - 75	
75 - 78	
>= 78	

N

Length scale 1:718

0 5 10 20 30 40 m

C:\Users\d-ark\Desktop\SoundPlan\12 Pilgrims Lane, Camden\Lower ground demo.sgs



Customer:
Sterling N3 Constructors Ltd.

Project-No. 20638

es acoustics

Map
2

Projected Combined Noise Map
-Ground floor level demolition
-No additional screening
-Noise map calculation at 1.5m elevation
-Highest facade noise level shown per floor

Project engineer: D. Arkley
Created: 16/01/2024
Processed with SoundPLAN 8.2, Update 29/09/2022

Levels Leq:10hr
in dB(A)

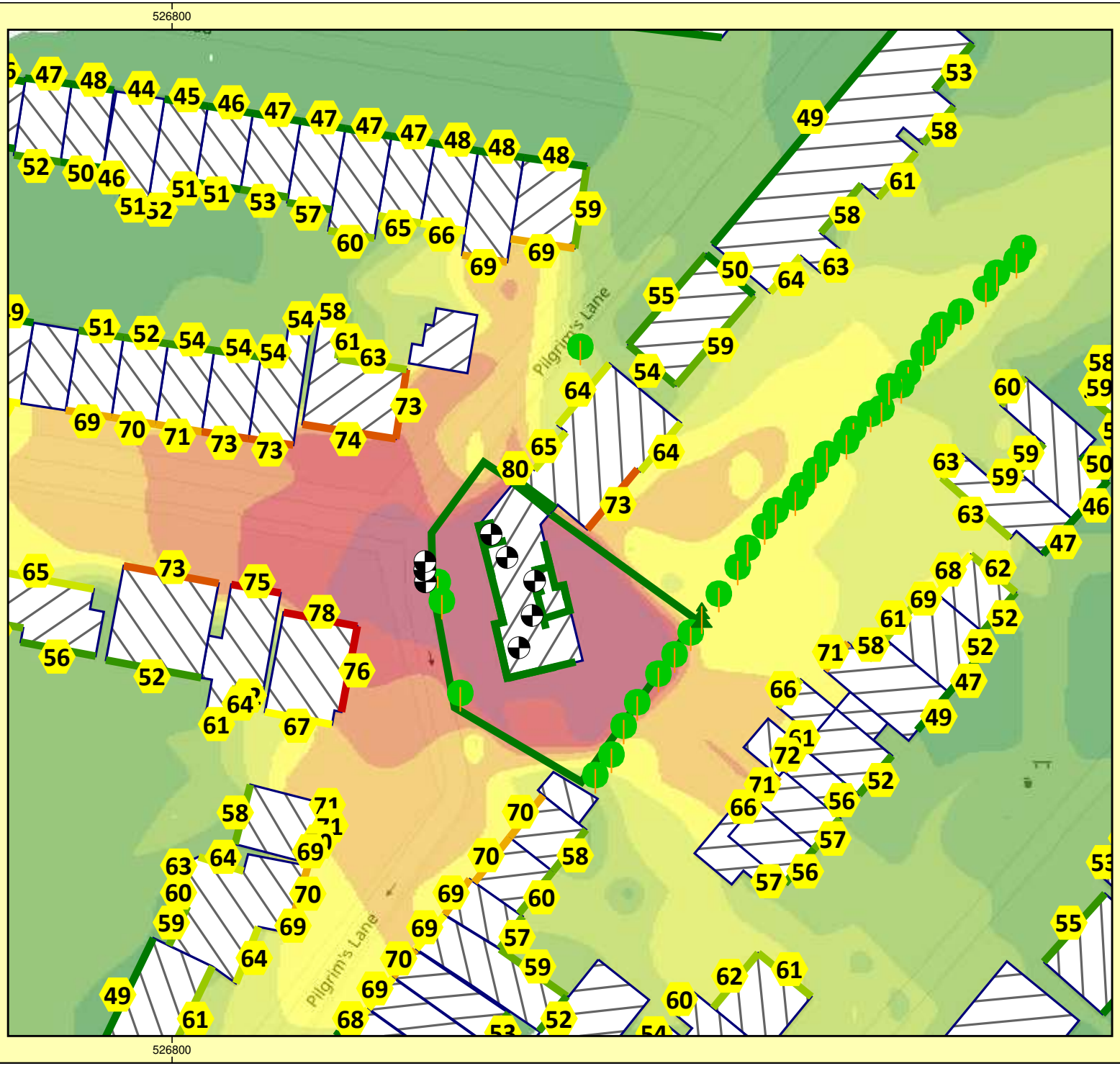
45 - 48	
48 - 51	
51 - 54	
54 - 57	
57 - 60	
60 - 63	
63 - 66	
66 - 69	
69 - 72	
72 - 75	
75 - 78	
>= 78	

N

Length scale 1:718

0 5 10 20 30 40 m

C:\Users\d-ark\Desktop\SoundPlan\12 Pilgrims Lane, Camden\ground floor demo.sgs



Customer:
Sterling N3 Constructors Ltd.

Project-No. 20638

es acoustics

Map
3

Projected Combined Noise Map
-1st floor level demolition
-No additional screening
-Noise map calculation at 1.5m elevation
-Highest facade noise level shown per floor

Project engineer: D. Arkley
Created: 16/01/2024
Processed with SoundPLAN 8.2, Update 29/09/2022

Levels Leq:10hr
in dB(A)

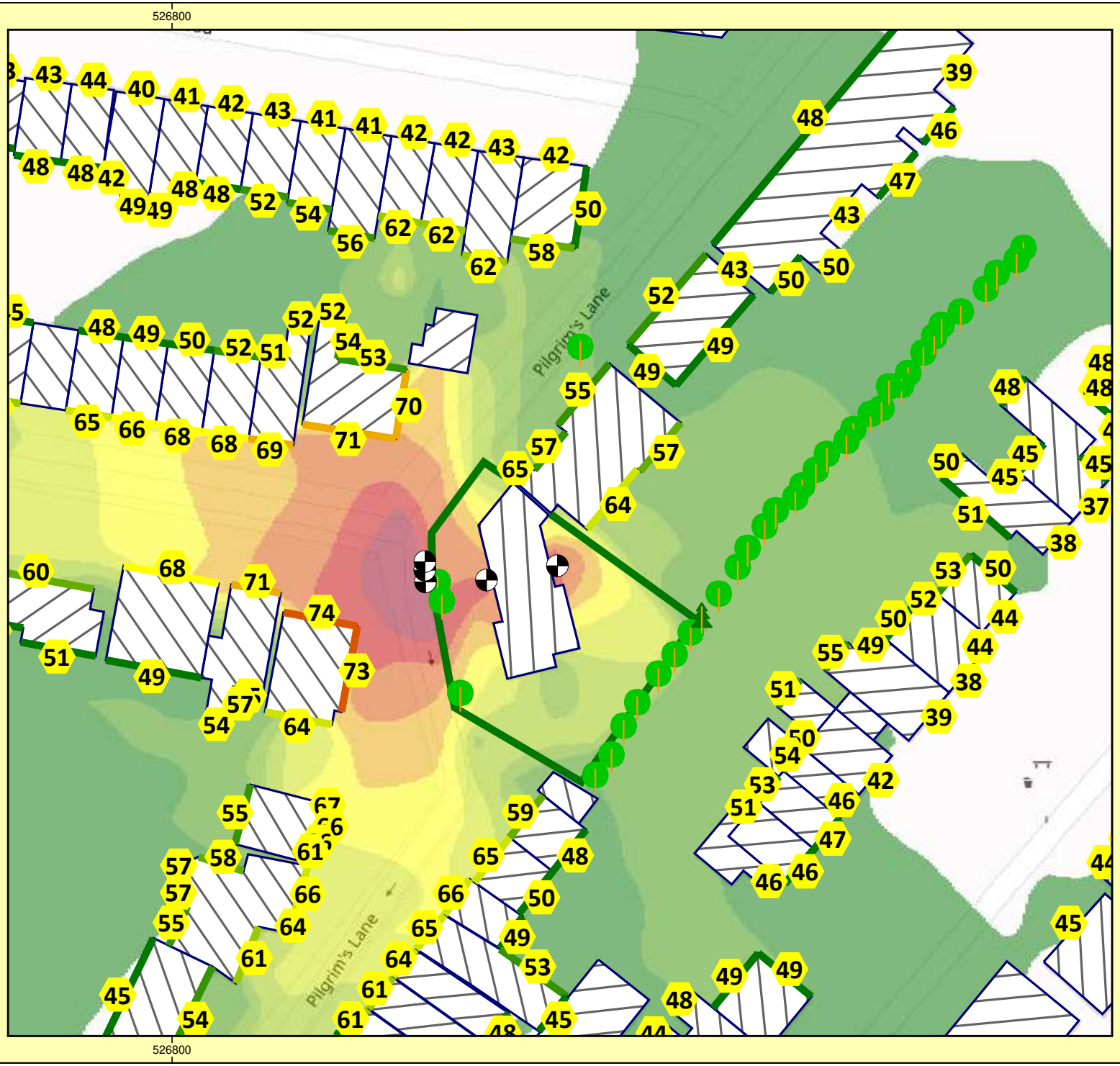
45 - 48	
48 - 51	
51 - 54	
54 - 57	
57 - 60	
60 - 63	
63 - 66	
66 - 69	
69 - 72	
72 - 75	
75 - 78	
>= 78	

N

Length scale 1:718

0 5 10 20 30 40 m

C:\Users\d-ark\Desktop\SoundPlan\12 Pilgrims Lane, Camden\1st floor demo.sgs



Customer:
Sterling N3 Constructors Ltd.

Project-No. 20638

es acoustics

Map
4

Projected Combined Noise Map
-Roof level dismantling
-No additional screening
-Noise map calculation at 1.5m elevation
-Highest facade noise level shown per floor

Project engineer: D. Arkley
Created: 16/01/2024
Processed with SoundPLAN 8.2, Update 29/09/2022

Levels Leq:10hr
in dB(A)

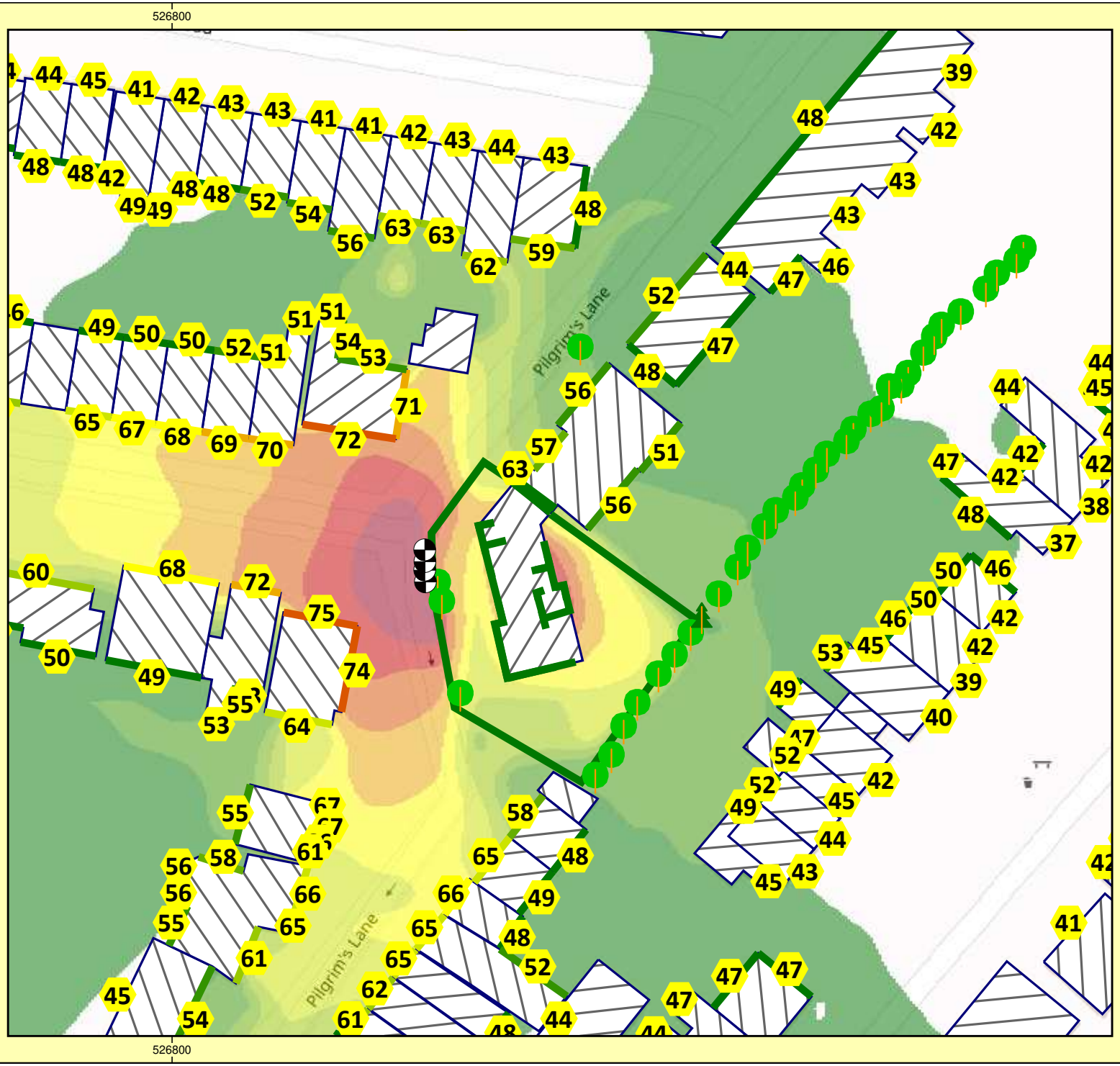
45 - 48	
48 - 51	
51 - 54	
54 - 57	
57 - 60	
60 - 63	
63 - 66	
66 - 69	
69 - 72	
72 - 75	
75 - 78	
>= 78	

N

Length scale 1:718

0 5 10 20 30 40 m

C:\Users\d-ark\Desktop\SoundPlan\12 Pilgrims Lane, Camden\Roof level demo.sgs



Customer:
Sterling N3 Constructors Ltd.

Project-No. 20638

es acoustics

Map
5

Projected Combined Noise Map
-LGF structural construction
-No additional screening
-Noise map calculation at 1.5m elevation
-Highest facade noise level shown per floor

Project engineer: D. Arkley
Created: 16/01/2024
Processed with SoundPLAN 8.2, Update 29/09/2022

Levels Leq:10hr
in dB(A)

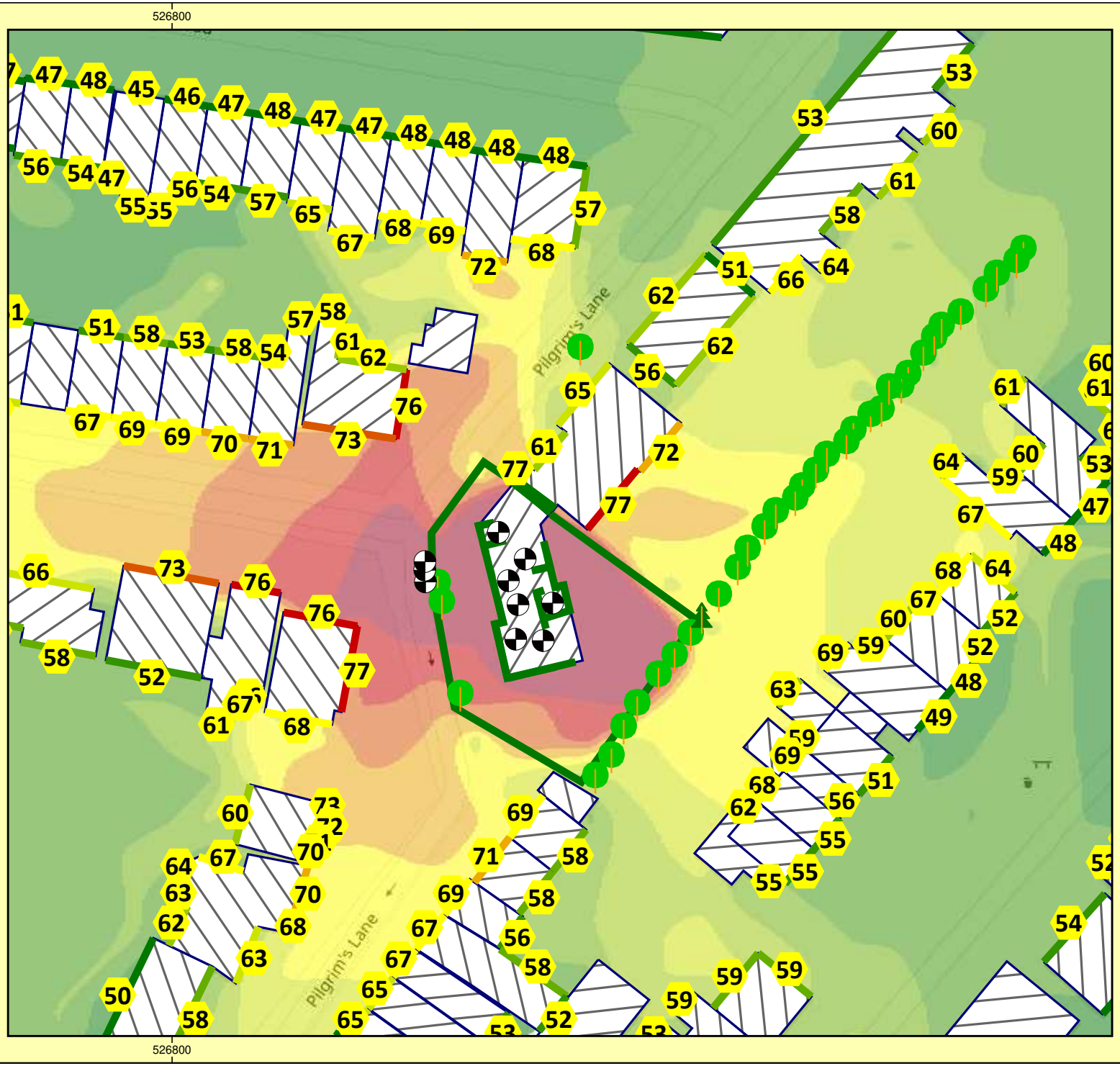
45	48
48	51
51	54
54	57
57	60
60	63
63	66
66	69
69	72
72	75
75	78
>=	78

N

Length scale 1:718

0 5 10 20 30 40 m

C:\Users\d-ark\Desktop\SoundPlan\12 Pilgrims Lane, Camden\LGF structural.sgs



Customer:
Sterling N3 Constructors Ltd.

Project-No. 20638

es acoustics

Map
6

Projected Combined Noise Map
-Ground & First floor construction
-No additional screening
-Noise map calculation at 1.5m elevation
-Highest facade noise level shown per floor

Project engineer: D. Arkley
Created: 16/01/2024
Processed with SoundPLAN 8.2, Update 29/09/2022

Levels Leq:10hr
in dB(A)

45 - 48	
48 - 51	
51 - 54	
54 - 57	
57 - 60	
60 - 63	
63 - 66	
66 - 69	
69 - 72	
72 - 75	
75 - 78	
>= 78	

N

Length scale 1:718

0 5 10 20 30 40 m

C:\Users\d-ark\Desktop\SoundPlan\12 Pilgrims Lane, Camden\GF 1F construction.sgs