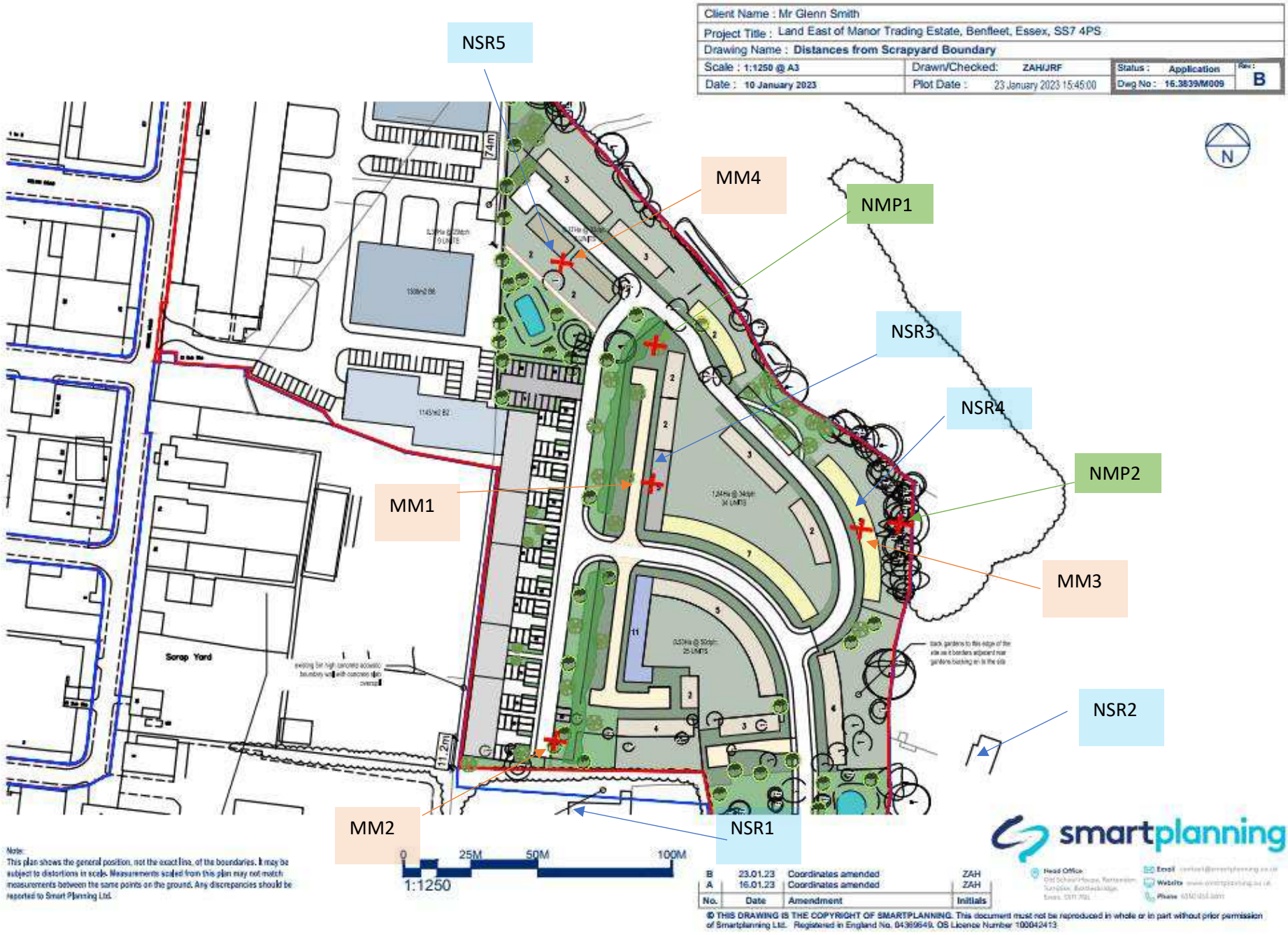
Appendix A – Site Plan (SP1)

Appendix A – Site Plan (SP2) – Location of Manual and Fixed Monitoring Positions



Client Name : Mr Glenn Smith	
Project Title : Land East of Manor Trading Estate, Benfleet, Essex, SS7 4PS	
Drawing Name : **Distances from Scrapyard Boundary**	
Scale : 1:1250 @ A3	Drawn/Checked: ZAH/JRF
Date : 10 January 2023	Plot Date : 23 January 2023 15:45:00
Status : Application	Rev : B
Dwg No : 16.3839/M009	

Note:
This plan shows the general position, not the exact line, of the boundaries. It may be subject to distortions in scale. Measurements scaled from this plan may not match measurements between the same points on the ground. Any discrepancies should be reported to Smart Planning Ltd.

No.	Date	Amendment	Initials
B	23.01.23	Coordinates amended	ZAH
A	16.01.23	Coordinates amended	ZAH

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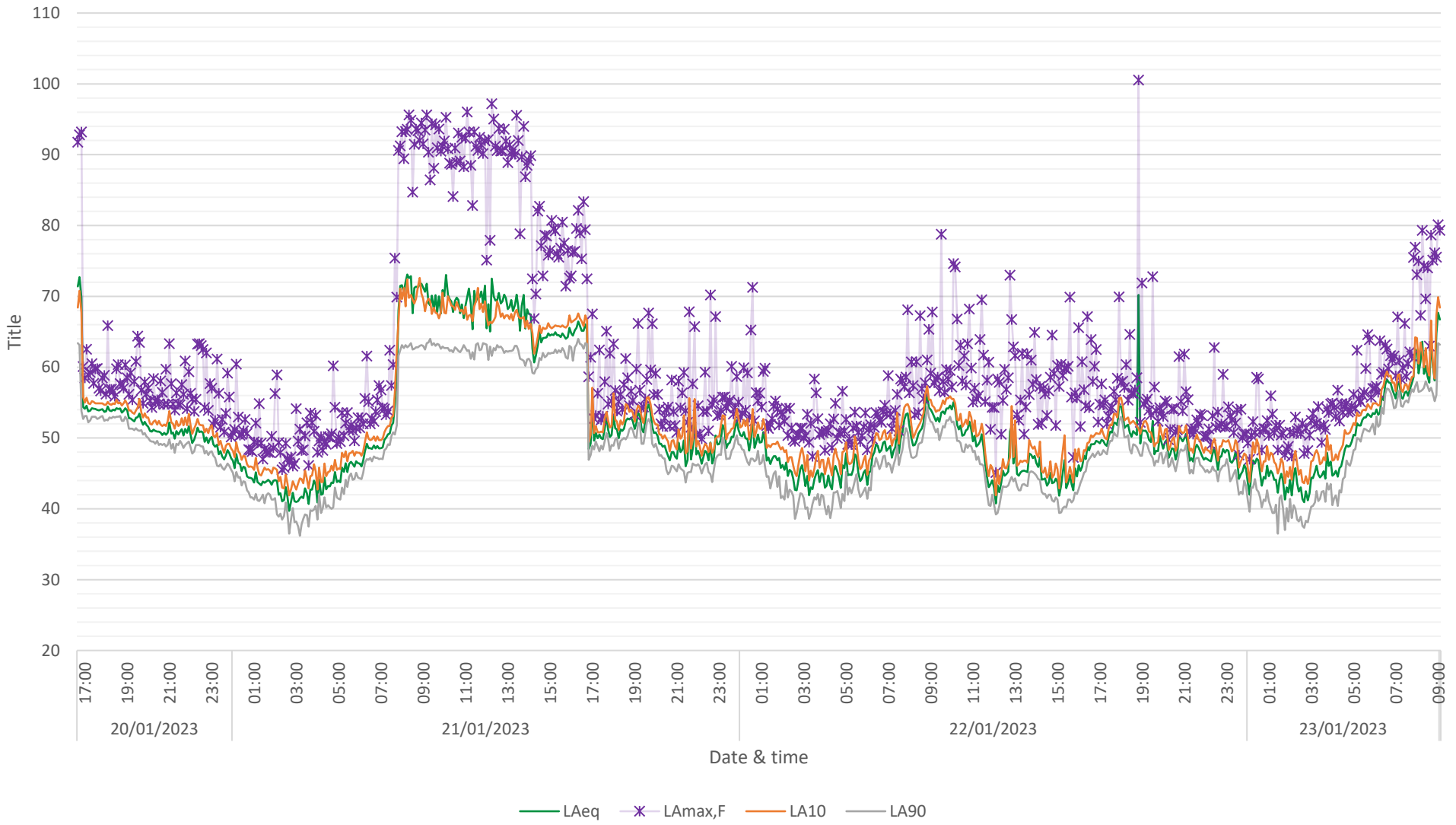
Appendix A – Site Plan (SP3) – Proposed Development Layout

Appendix B - Time History 1 (TH1)

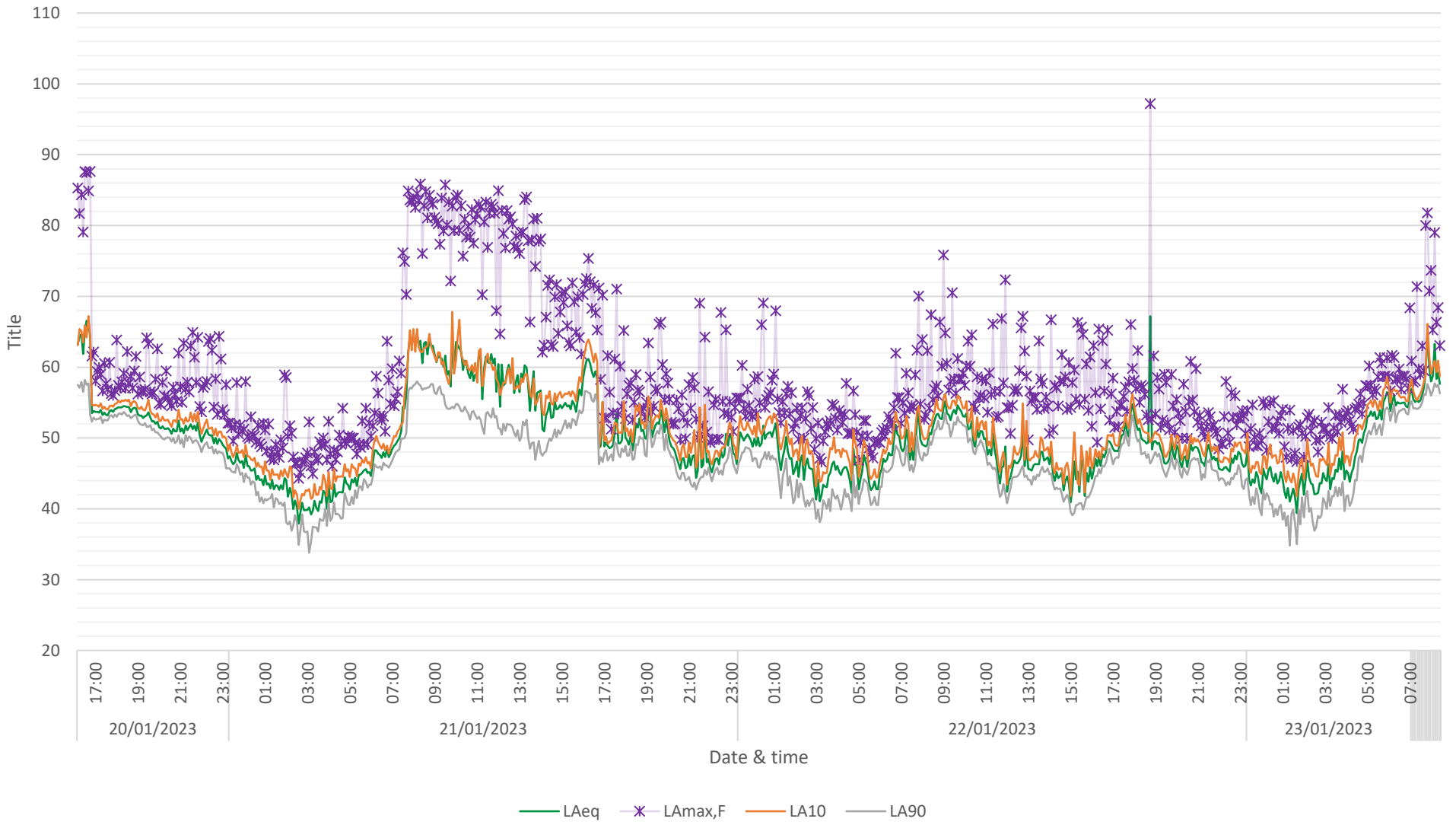
Land East of Manor Trading Estate, South Benfleet
Friday 20 January 2023 - Monday 23 January 2023
Position 1

ACOUSTICS



Appendix B - Time History 2 (TH2)

Land East of Manor Trading Estate, South Benfleet
Friday 20 January 2023 - Monday 23 January 2023
Position 2



Appendix C – Typical LA90 Histograms

Position 1

Figure 1: Histogram of the LA90 licensed hours (Monday – Friday 07:30-18:30, Saturday 07:30-17:30)

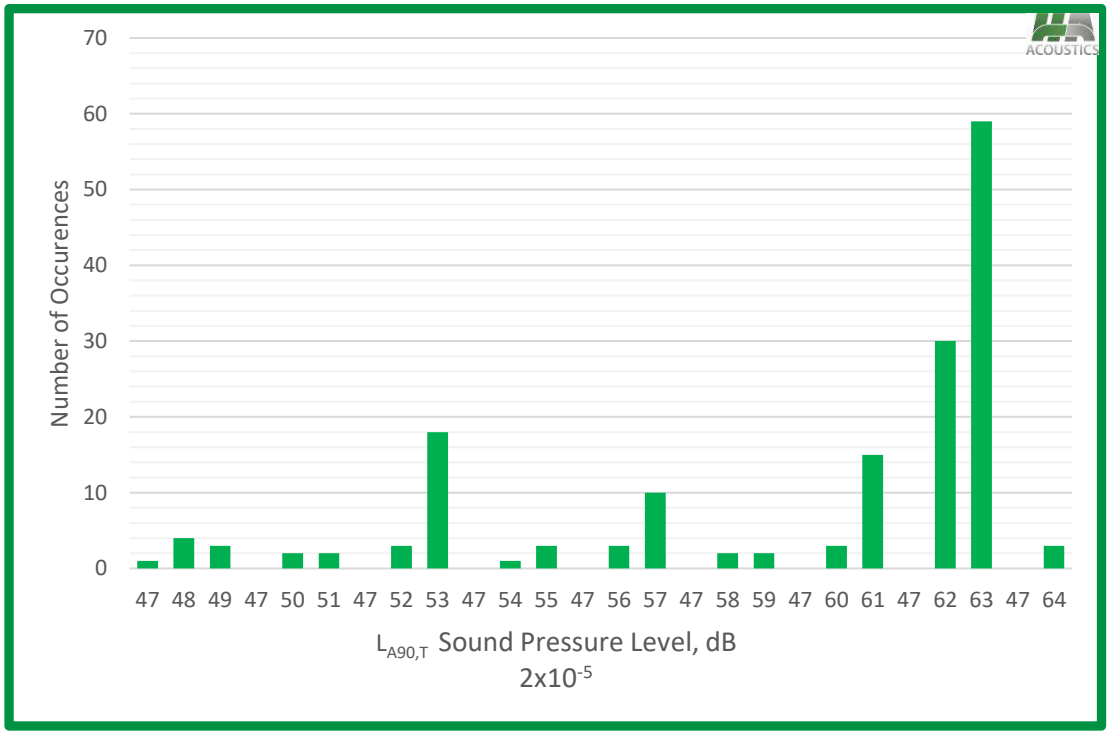


Figure 2: Histogram of the LA90 without Benfleet Scrap in Operation (Monday-Friday 18:30-19:30, Saturday 17:30-18:30)

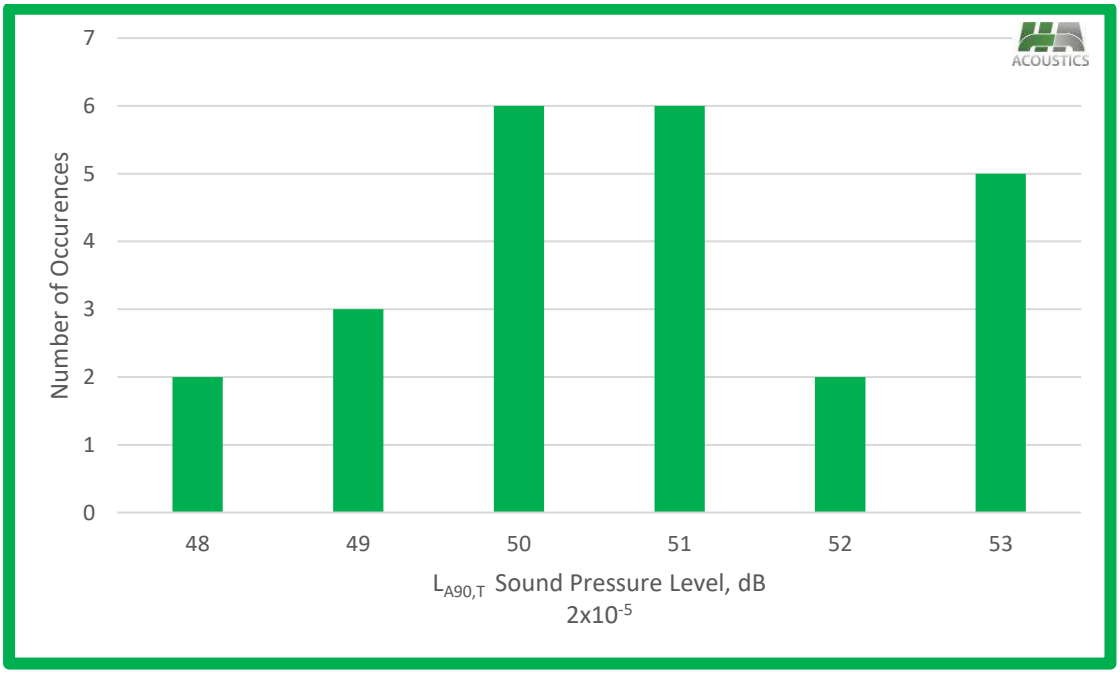


Figure 3: Histogram of the LA90 Night-time Hours (23:00-07:00)

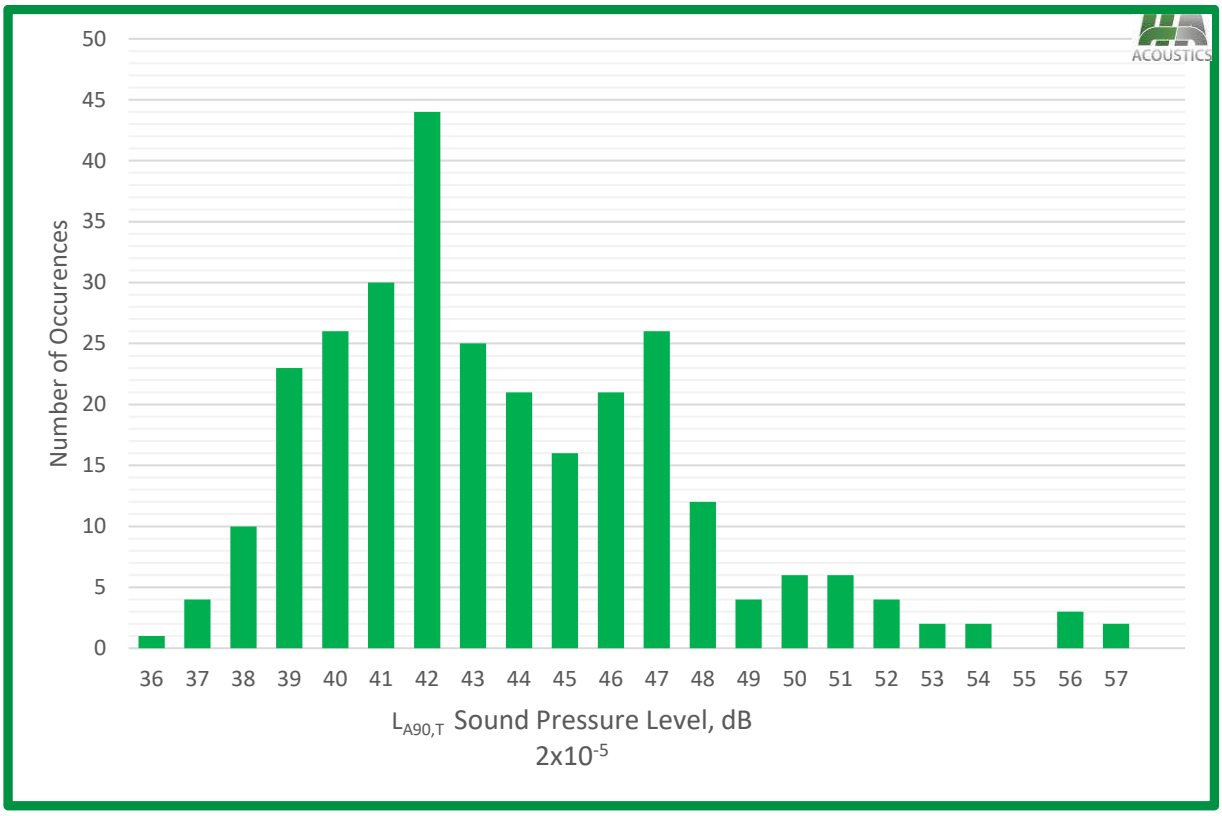
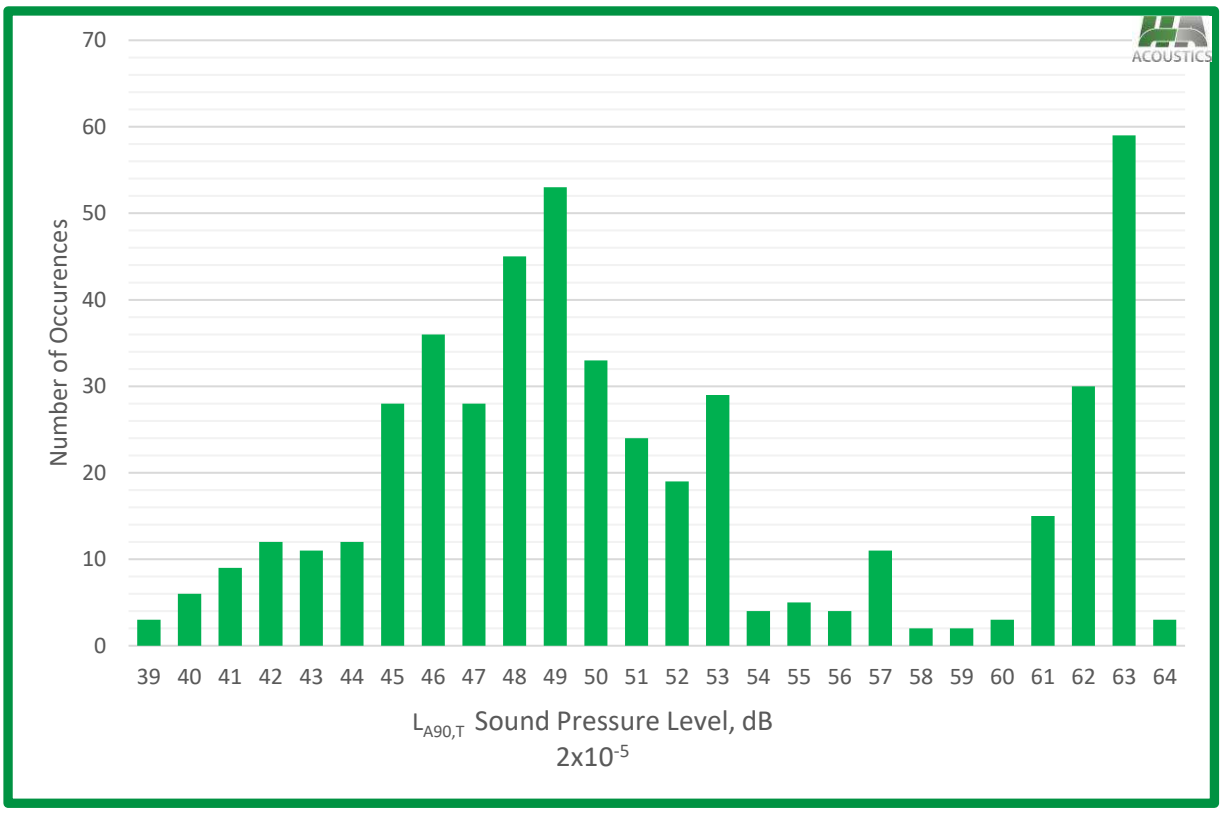


Figure 3: Histogram of the LA90 Daytime Hours (07:00-23:00)



Position 2

Figure 5: Histogram of the LA90 licensed hours (Monday – Friday 07:30-18:30, Saturday 07:30-17:30)

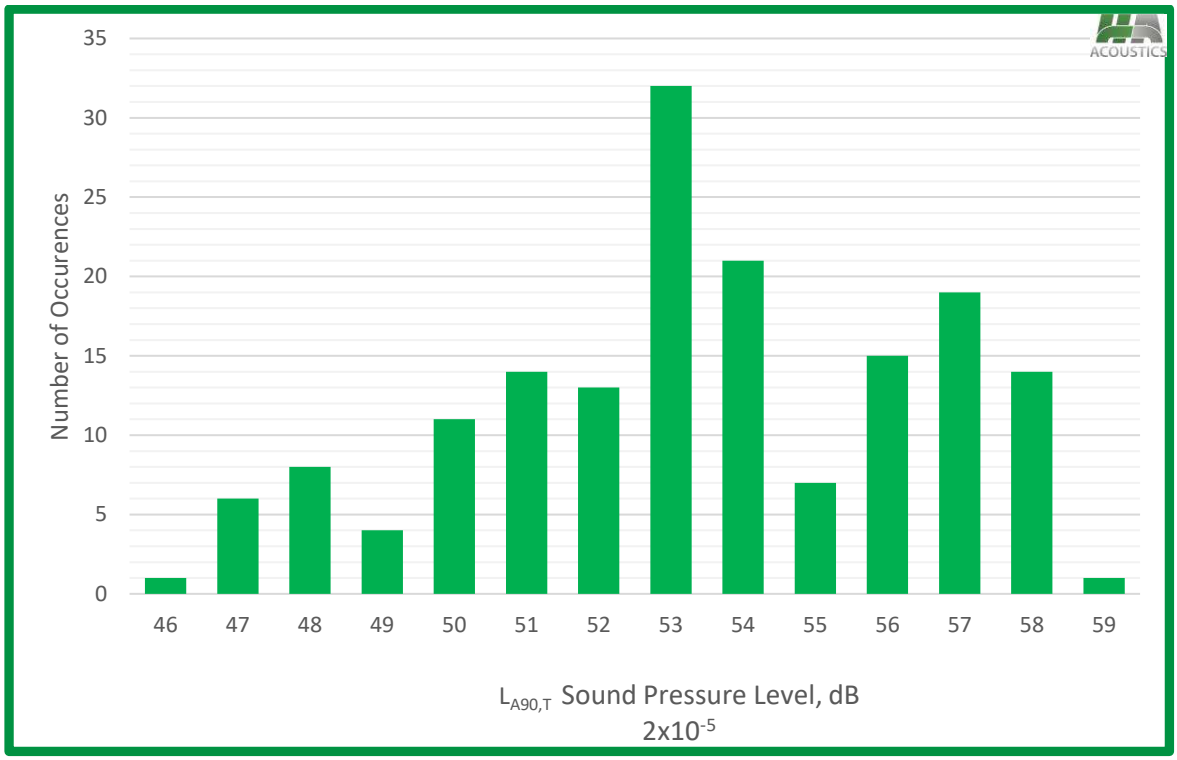


Figure 6: Histogram of the LA90 without Benfleet Scrap in Operation (Monday-Friday 18:30-19:30, Saturday 17:30-18:30)

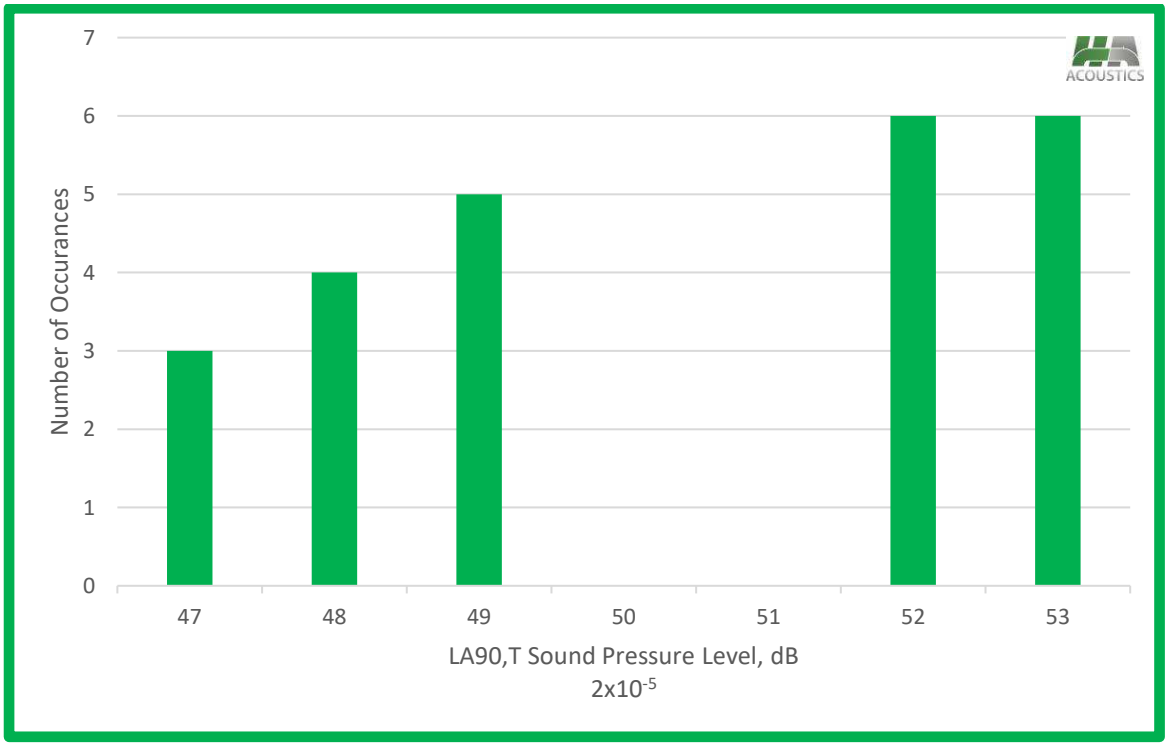


Figure 7: Histogram of the LA90 Night-time Hours (23:00-07:00)

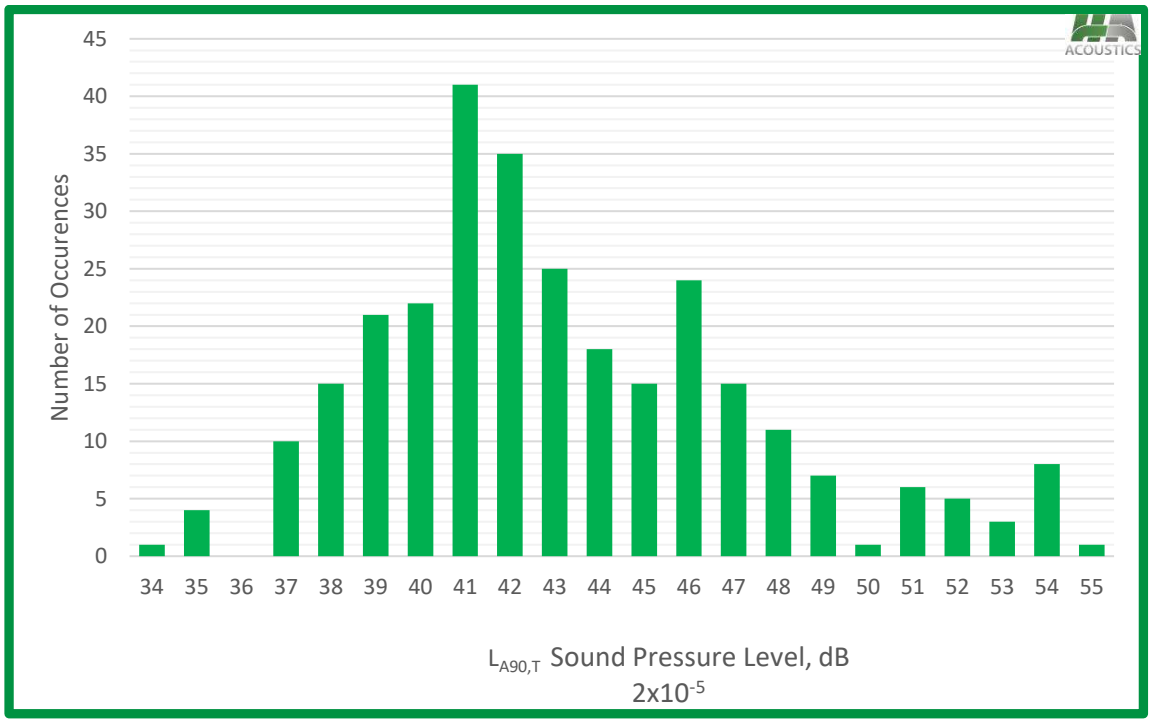
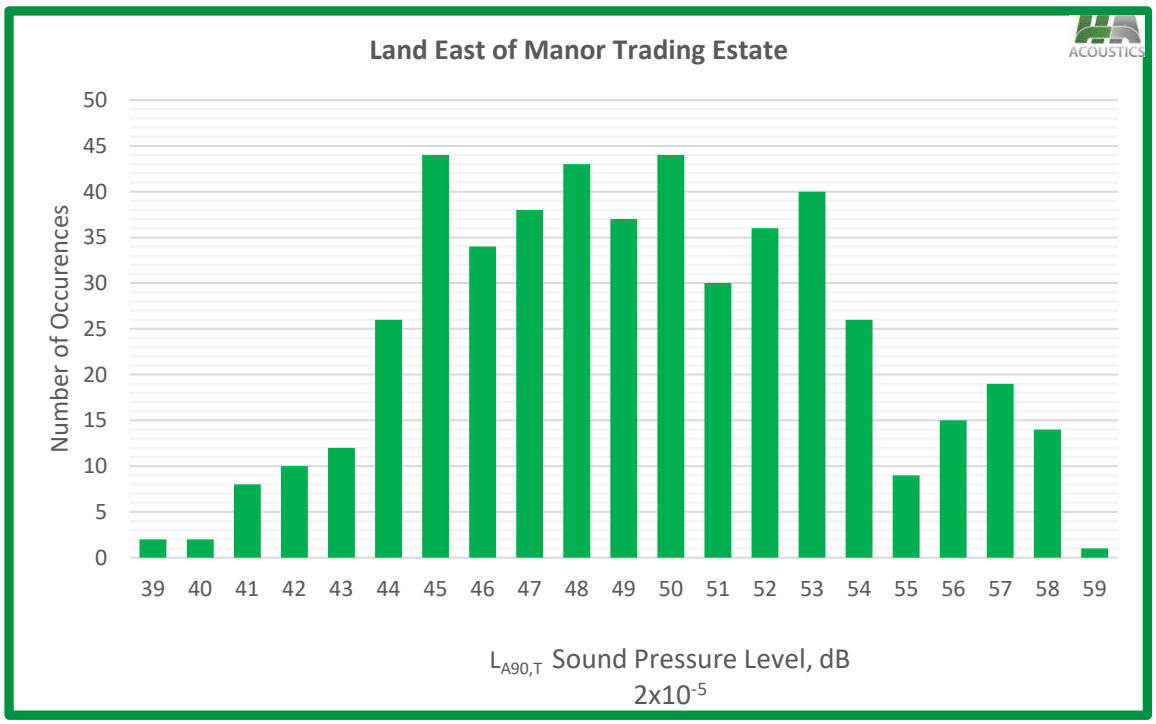
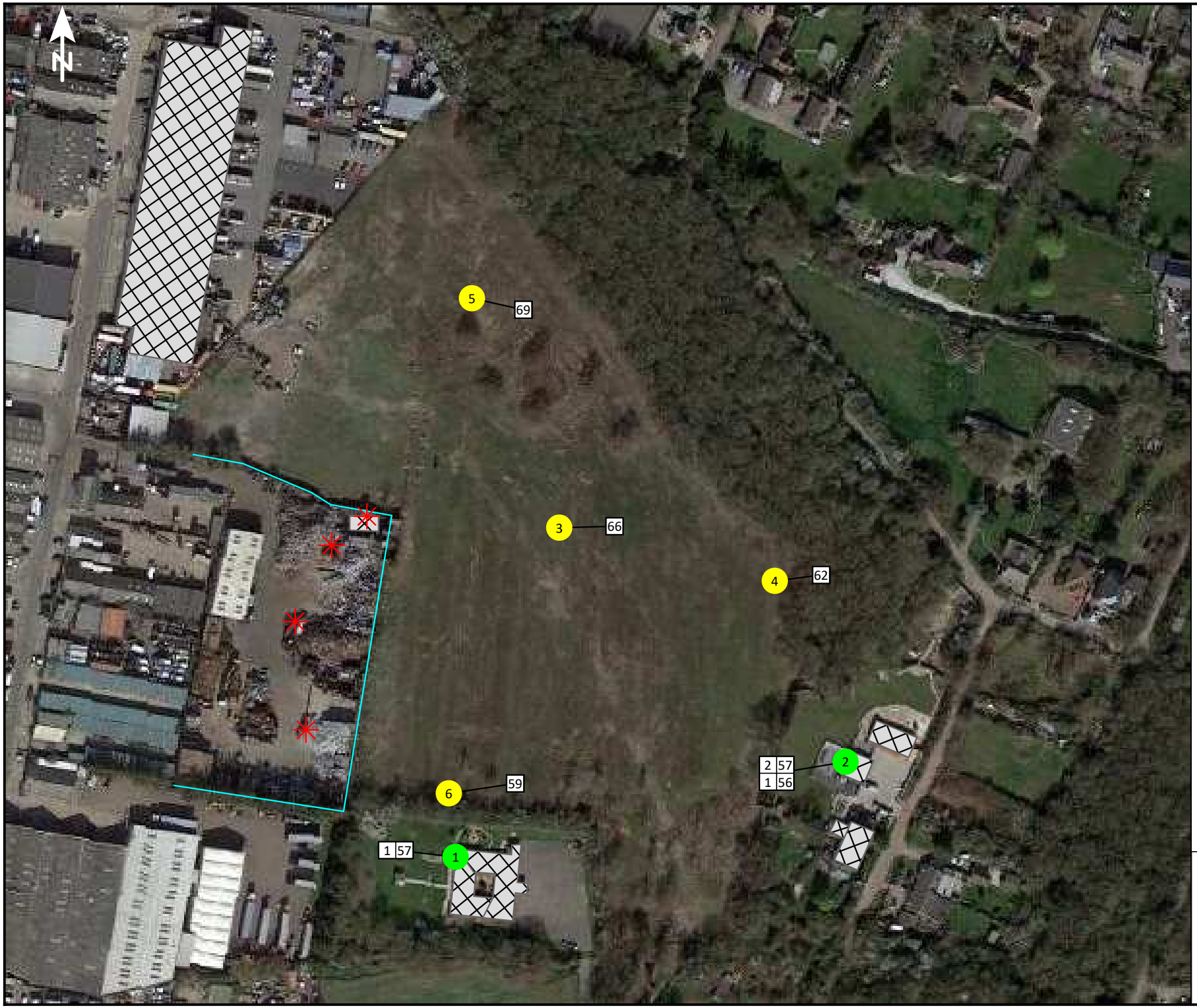


Figure 8: Histogram of the LA90 Daytime Hours (07:00-23:00)





AD961 - 2023
Land East of Manor Trading Estate, Benfleet

Appendix D1 - Points Map
Existing Measured Site Conditions

Author: Josie Nixon MIOA

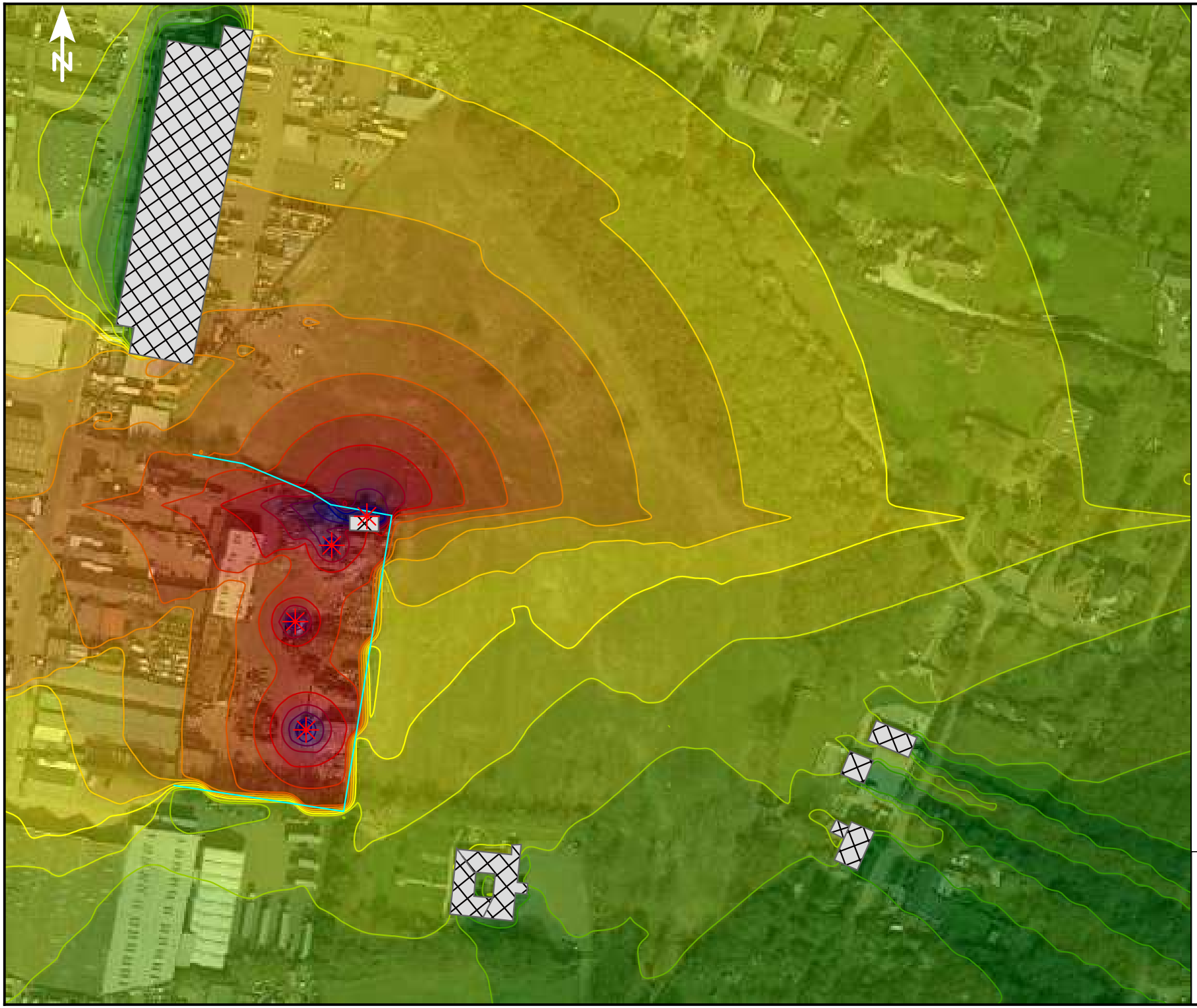
Signs and symbols

- Existing Barrier
- Receiver
- Receiver at building
- Source: Crusher/Grabber

1 : 1925

0 10 20 40 60 80 m

ACOUSTICS



AD961 - 2023
Land East of Manor Trading Estate, Benfleet

Appendix D2 - Noise Map
Existing Measured Site Conditions

Author: Josie Nixon MIOA

Signs and symbols

Existing Barrier

Source: Crusher/Grabber

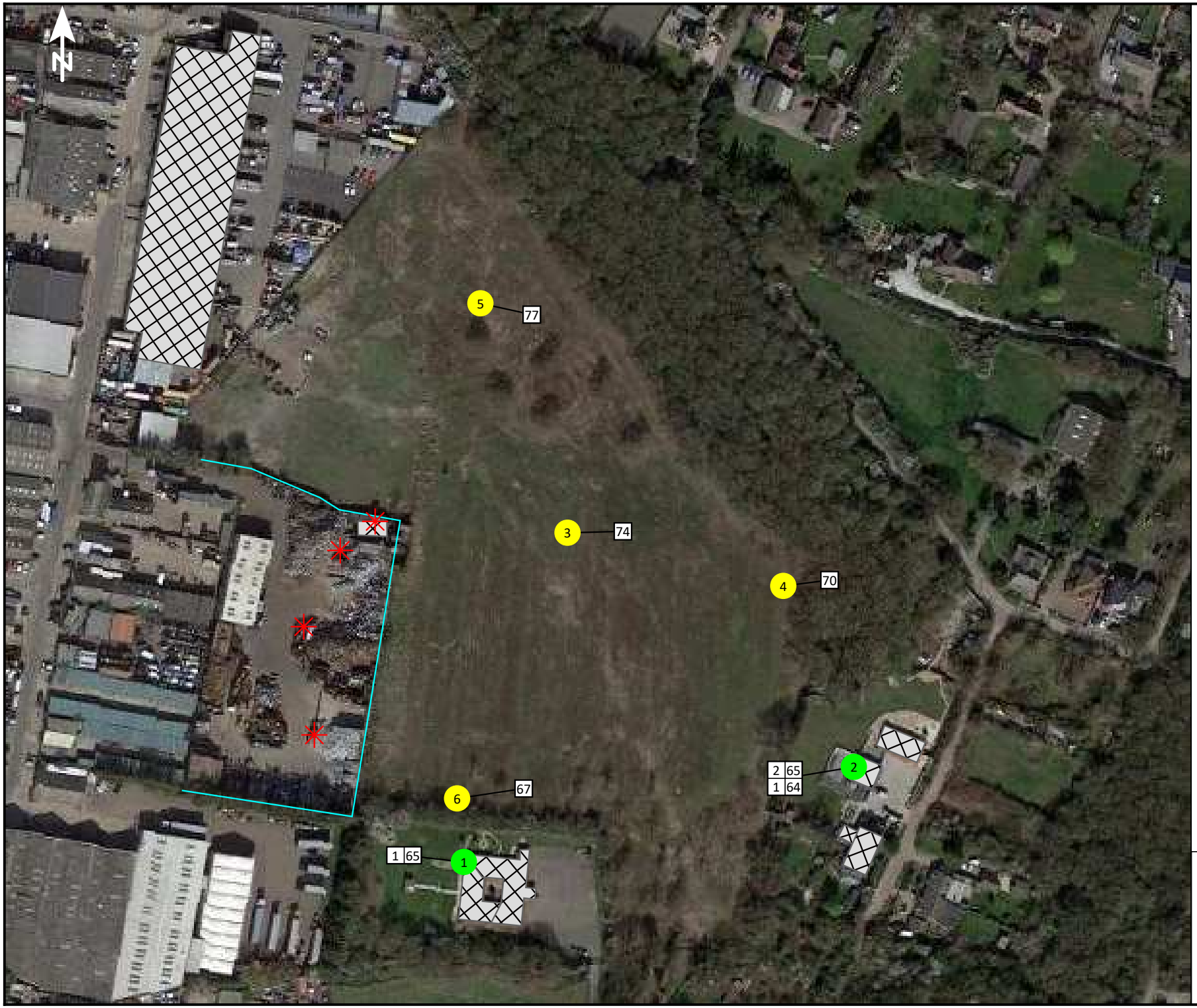
Levels in dB(A)

< 50
50 - 53
53 - 56
56 - 59
59 - 62
62 - 65
65 - 68
68 - 71
71 - 74
74 - 77
77 - 80
80 - 83
83 - 86
86 - 89
89 - 92
>= 92

1 : 1925

0 10 20 40 60 80 m

ACOUSTICS



AD961-2023
Land East of Manor Trading Estate, Benfleet

Appendix D3 - Points Map
Existing Measured Site Conditions incorporating 8dB Penalties

Author: Josie Nixon MIOA

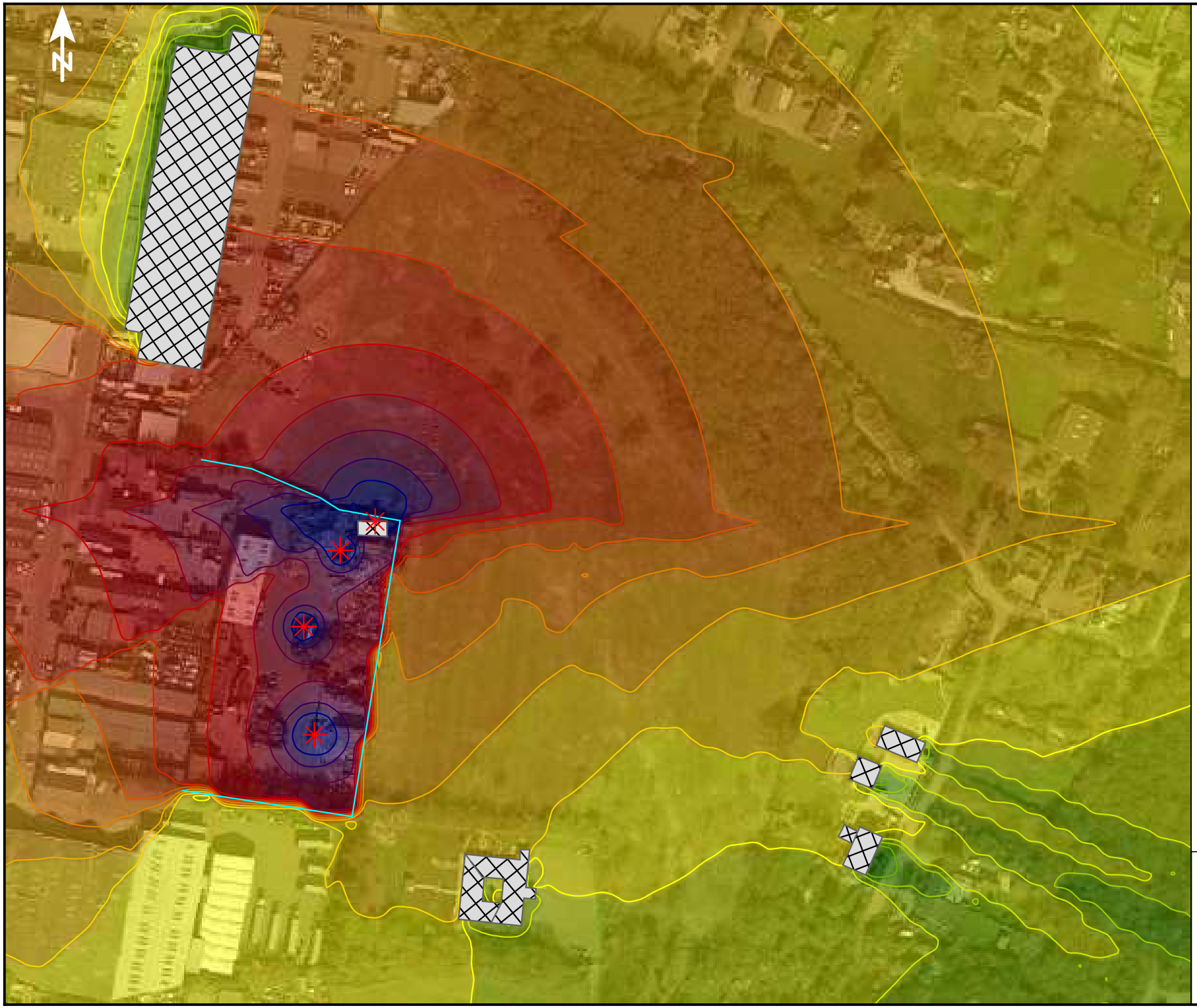
Signs and symbols

- Existing Barrier
- Receiver
- Receiver at building
- Source: Crusher/Grabber

1 : 1925

0 10 20 40 60 80 m

ACOUSTICS



AD961-2023
Land East of Manor Trading Estate, Benfleet

Appendix D4 - Noise Map
Existing Measured Site Conditions incorporating 8dB Penalties

Author: Josie Nixon MIOA

Signs and symbols

Existing Barrier

Source: Crusher/Grabber

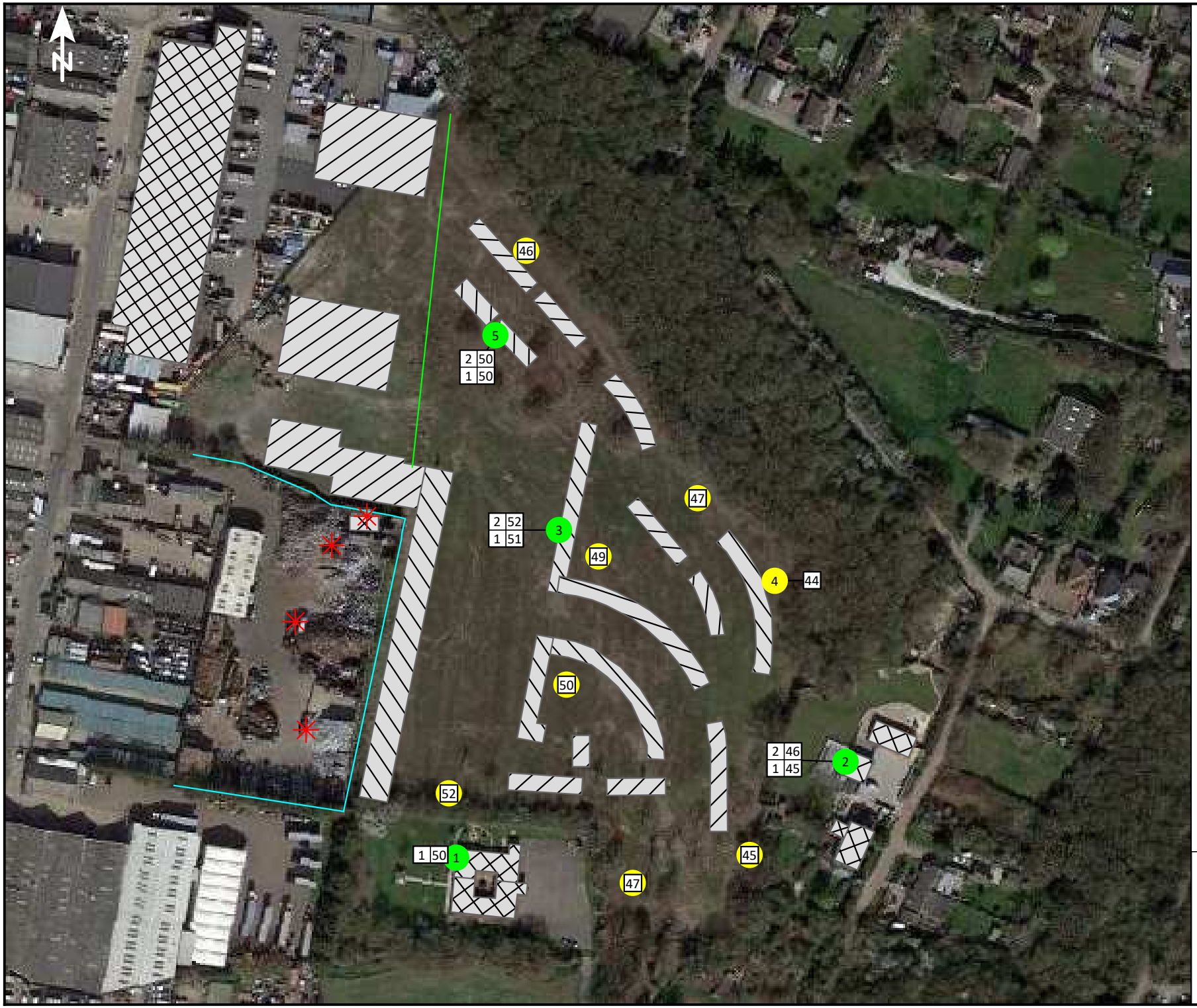
Levels in dB(A)

< 50
50 - 53
53 - 56
56 - 59
59 - 62
62 - 65
65 - 68
68 - 71
71 - 74
74 - 77
77 - 80
80 - 83
83 - 86
86 - 89
89 - 92
>= 92

1 : 1925

0 10 20 40 60 80 m

ACOUSTICS



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Land East of Manor Trading Estate, Benfleet

Appendix D5 - Points Map
Proposed Mixed-use Scheme
Predicted Noise Climate

Author: Josie Nixon MIOA

Corrected for licensed operational hours (11 of 16).

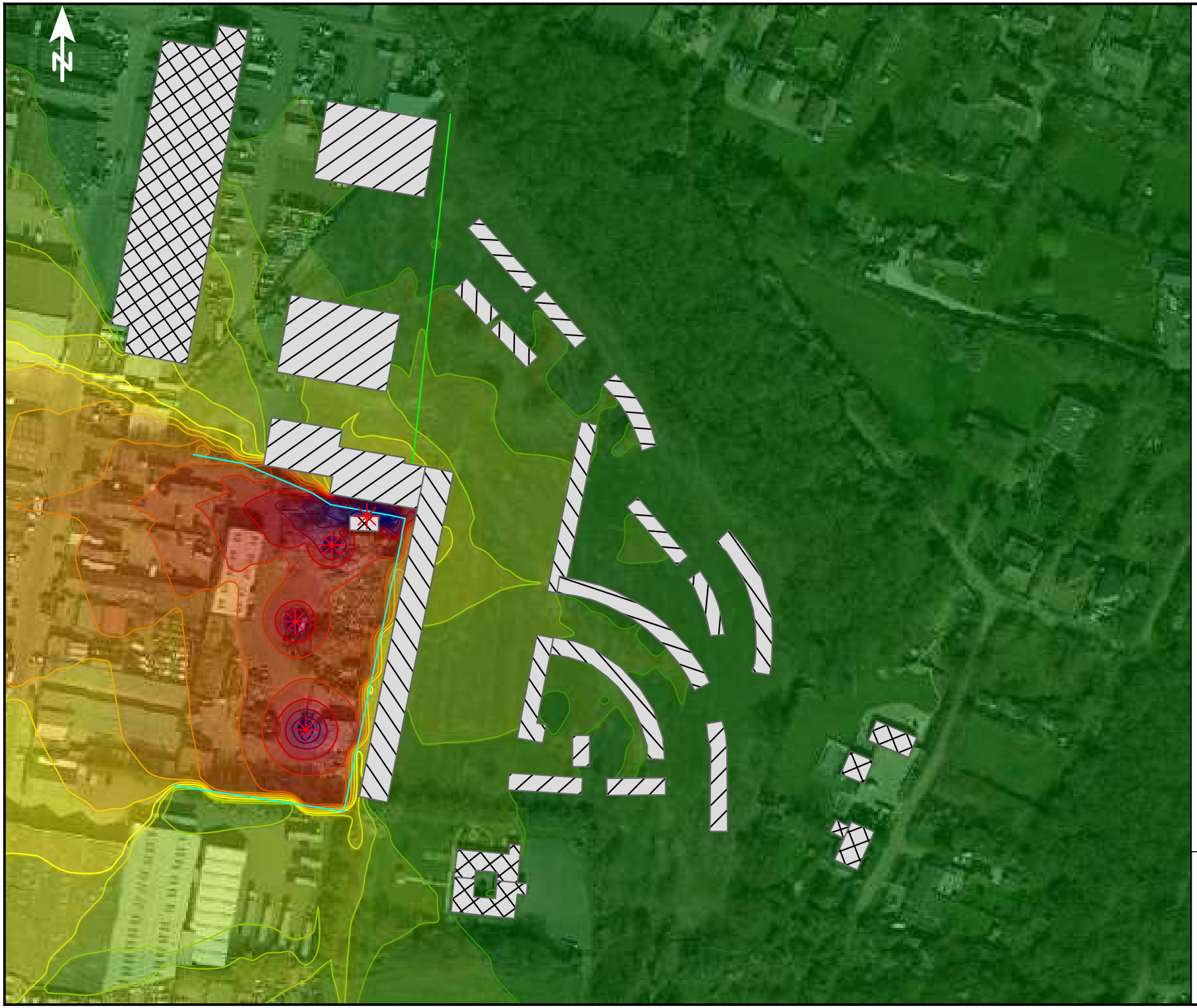
Signs and symbols

- Existing Barrier
- Proposed Barrier
- Receiver
- Receiver at building
- Source: Crusher/Grabber

1 : 1925

0 10 20 40 60 80 m

ACOUSTICS



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Land East of Manor Trading Estate, Benfleet

Appendix D6 - Noise Map
Proposed Mixed-use Scheme
Predicted Noise Climate

Author: Josie Nixon MIOA

Corrected for licensed operational hours (11 of 16)

Signs and symbols

- Existing Barrier
- Proposed Barrier
- Source: Crusher/Grabber

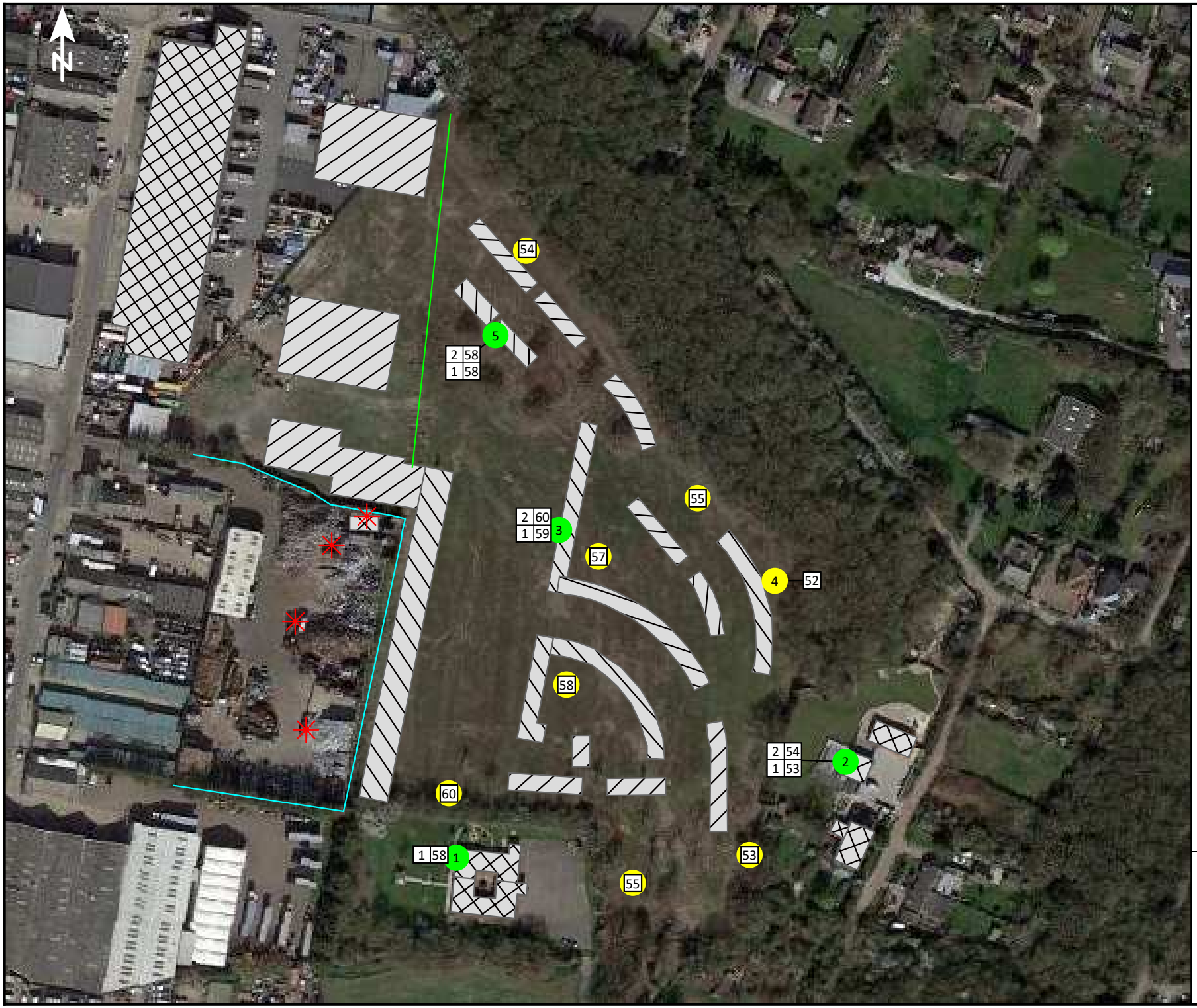
Levels in dB(A)

< 50
50 - 53
53 - 56
56 - 59
59 - 62
62 - 65
65 - 68
68 - 71
71 - 74
74 - 77
77 - 80
80 - 83
83 - 86
86 - 89
89 - 92
>= 92

1 : 1925

0 10 20 40 60 80 m

ACOUSTICS



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Land East of Manor Trading Estate, Benfleet

Appendix D7 - Points Map
Proposed Mixed-use Scheme
Predicted Noise Climate
incorporating 8dB Penalties

Author: Josie Nixon MIOA

Corrected for licensed operational hours (11 of 16)

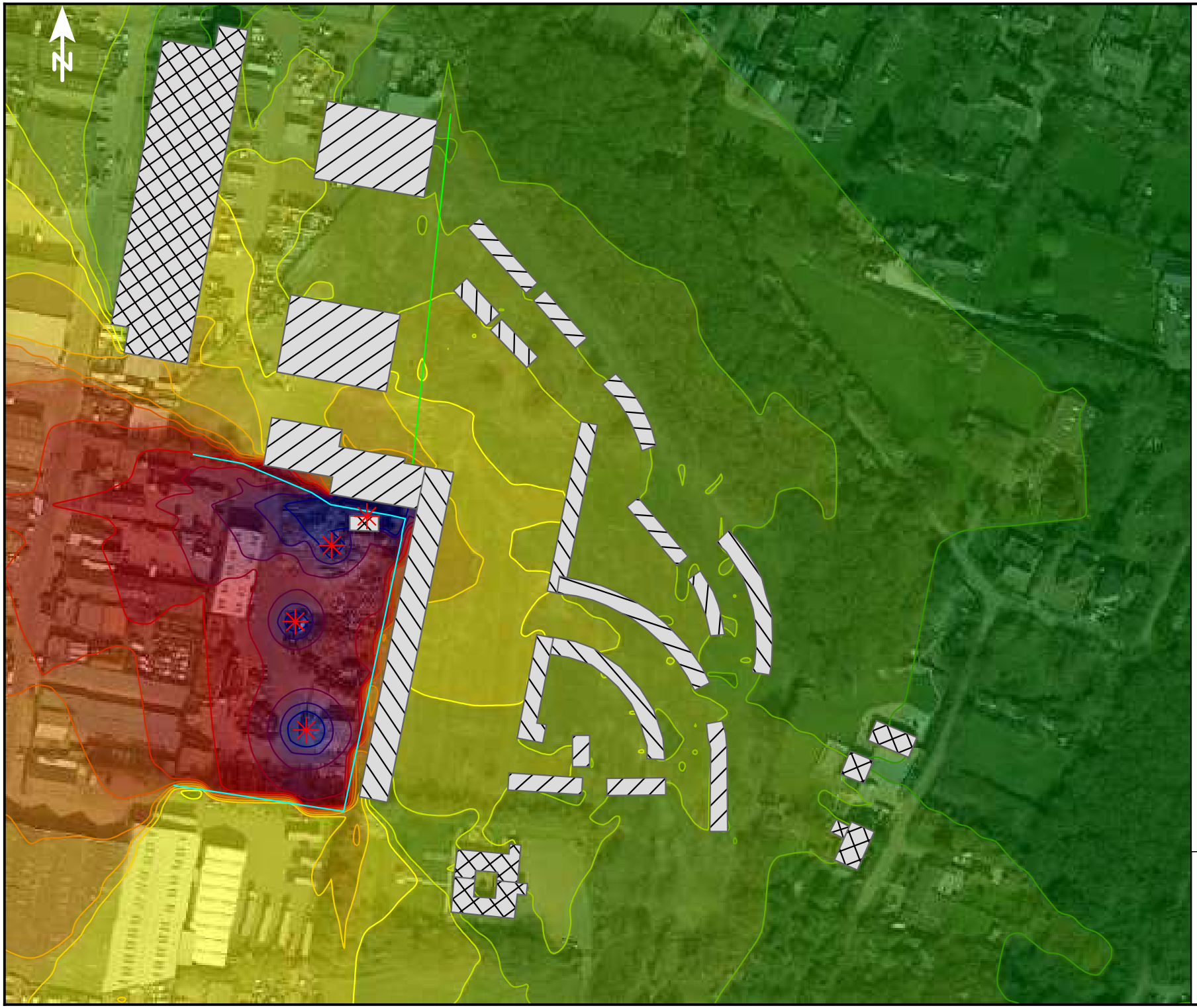
Signs and symbols

- Existing Barrier
- Proposed Barrier
- Receiver
- Receiver at building
- Source: Crusher/Grabber

1 : 1925

0 10 20 40 60 80 m

ACOUSTICS



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Land East of Manor Trading Estate, Benfleet

Appendix D8 - Noise Map
Proposed Mixed-use Scheme
Predicted Noise Climate
incorporating 8dB Penalties

Author: Josie Nixon MIOA
Corrected for licensed operational hours (11 of 16)

Signs and symbols

- Existing Barrier
- Proposed Barrier
- Source: Crusher/Grabber

Levels in dB(A)

< 50
50 - 53
53 - 56
56 - 59
59 - 62
62 - 65
65 - 68
68 - 71
71 - 74
74 - 77
77 - 80
80 - 83
83 - 86
86 - 89
89 - 92
>= 92

1 : 1925

0 10 20 40 60 80 m

ACOUSTICS

Appendix E1 - Window Specification - Bedroom

Land East of Manor Trading Estate, Benfleet

BS EN 12354-3 Calculation to determine glazing specification

Habitable room data variables

Type of habitable room	Bedroom	**Based on assumed room sizes*
Volume	25	cubic metres
Total area - external façade(s	16	square metres
Total area - window(s)	6	square metres
L(k)	3	
Lmax (K)	3	
Trickle Ventilator(s)	5	
Solid Façade (exc. windows)	10	square metres
Reverberation Time	0.5	seconds

External noise level

	1:1 Octave Bands Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	dB(A)
Logged Log average daytime Leq	59	56	54	60	60	54	46	**63**
Logged Log average night-time Leq	50	44	44	45	46	35	26	**48**
Logged Lmax for duration of survey	62	58	57	57	54	45	44	**58**

Sound reduction of building fabric

	1:1 Octave Band Centre Frequency (Hz)							Rw /
	63	125	250	500	1000	2000	4000	Dn,e,W
38 Rw - Pilk 10/12/6mm	24	26	27	34	40	38	46	**38**
**Standard Masonry from Template Re	39	41	43	48	50	55	55	
49 Dn,e,w - Renson AK43 - Acoustic trickle vent	32	34	40	44	46	48	52	**49**

	1:1 Octave Band Centre Frequency (Hz)						
	63	*125*	*250*	*500*	*1000*	*2000*	*4000*
Reduction from façade	-21.6	-23.6	-24.9	-31.7	-36.8	-35.8	-42.8
Addition for Ctr	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Resultant internal noise level

	1:1 Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	dB(A)
Daytime internal Leq	42	37	34	34	29	23	9	**34**
Night-time internal Leq	33	25	24	19	15	4	-12	**21**
Night-time internal Lmax	40	34	32	26	17	10	1	**28**

Based on BS8233:2014 - Design Criterion:	LAeq	30
Based on BS8233: 1999 Lmax levels	LAmax	45

Appendix E2 - Window Speicfication - Living Room

ACOUSTICS

Land East of Manor Trading Estate, Benfleet

BS EN 12354-3 Calculation to determine glazing specification

Habitable room data variables

Type of habitable room	Living Room	**Based on assumed room sizes*
Volume	34	cubic metres
Total area - external façade(s	18	square metres
Total area - window(s)	8	square metres
L(k)	3	
Lmax (K)	3	
Trickle Ventilator(s)	10	
Solid Façade (exc. windows)	10	square metres
Reverberation Time	0.5	seconds

External noise level

	1:1 Octave Bands Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	dB(A)
Logged Log average daytime Leq	59	56	54	60	60	54	46	**63**
Logged Log average night-time Leq	50	44	44	45	46	35	26	**48**
Logged Lmax for duration of survey	62	58	57	57	54	45	44	**58**

Sound reduction of building fabric

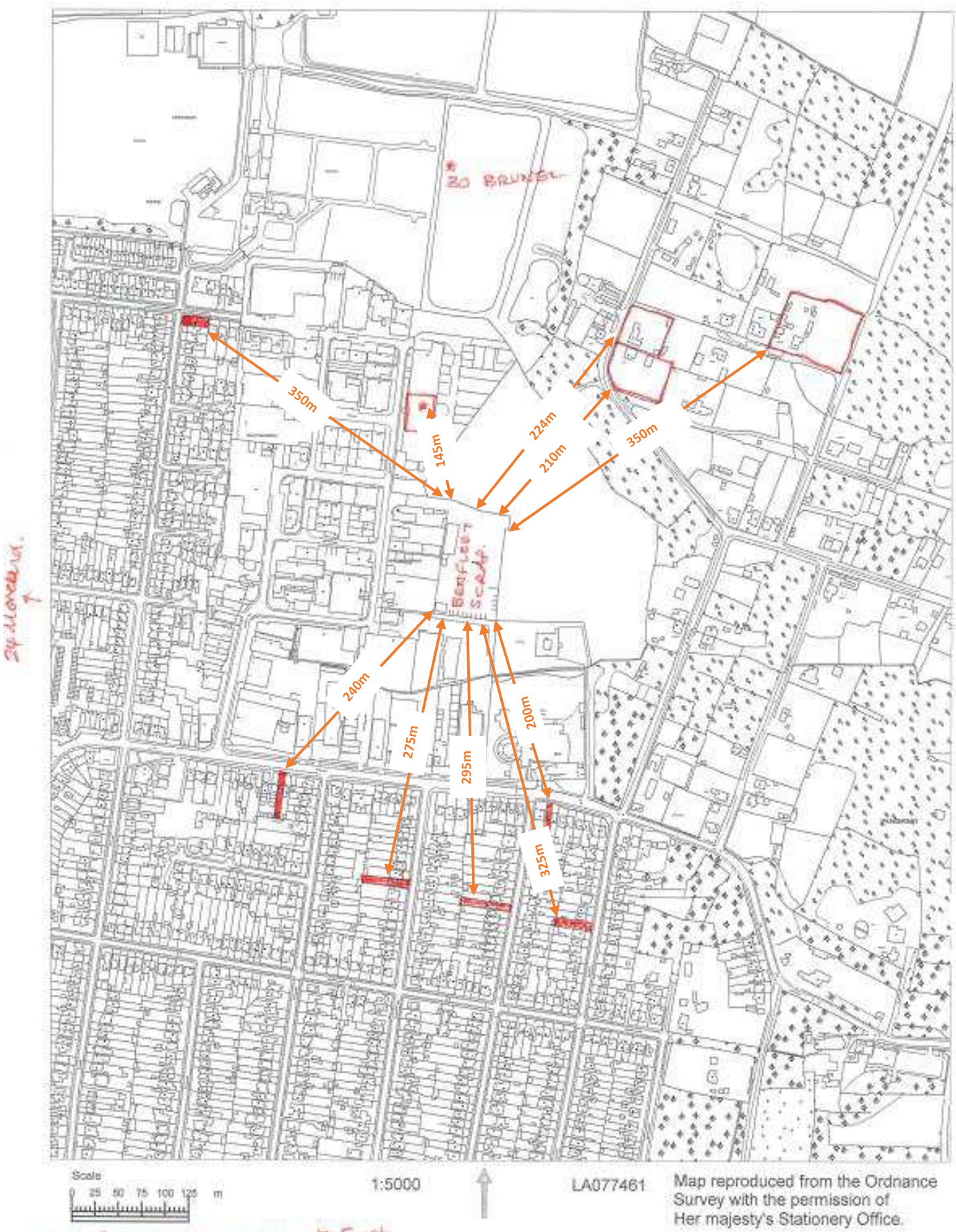
	1:1 Octave Band Centre Frequency (Hz)							Rw /
	63	125	250	500	1000	2000	4000	Dn,e,W
39 Rw - SG Phonip 9/6/8mm	28	30	29	32	41	46	49	**39**
**Standard Masonry from Template Re	39	41	43	48	50	55	55	
49 Dn,e,w - Renson AK43 - Acoustic trickle vent	32	34	40	44	46	48	52	**49**

	1:1 Octave Band Centre Frequency (Hz)							
	63	*125*	*250*	*500*	*1000*	*2000*	*4000*	
Reduction from façade	-24.4	-26.4	-26.8	-29.9	-37.3	-41.5	-44.5	
Addition for Ctr	5.0	5.0	5.0	5.0	5.0	5.0	5.0	

Resultant internal noise level

	1:1 Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	dB(A)
Daytime internal Leq	39	34	33	35	28	17	7	**34**
Night-time internal Leq	31	22	22	20	14	-2	-14	**20**
Night-time internal Lmax	37	31	31	27	17	4	0	**27**

Based on BS8233:2014 - Design Criterion: LAeq 35

Based on BS8233: 1999 Lmax levels LAmax n/a

Appendix F – Local Authority Provided Map Showing Approximate Location of Noise Complaints