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NOISE IMPACT ASSESSMENT REPORT – ADDENDUM

67 GRAND PARADE, LONDON N4 1DU

FOR

FUTURE-IST LTD



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The preparation of this report by Sound Licensing Ltd. has been undertaken within the terms of the proposal using all reasonable skill and care. Sound Licensing Ltd accepts no responsibility for the data provided by other bodies and no legal liability arising from the use by other persons of data or opinions contained in this report.

1. EXECUTIVE SUMMARY

The Client intends to relocate 2 No. air conditioning units from their existing location at the site, as a result of which, will affect the results of the noise impact assessment prepared by Sound Licensing (Report Reference: 67 GRAND PARADE, N4.NIA). This addendum report will provide updated calculations to determine the noise impact at the nearest sensitive receptors.

In accordance with BS 4142:2014+A1:2019 guidance, the predicted noise impact due to the operation of the mechanical plant, with previously recommended noise mitigation installed, ***“is an indication of the specific sound source having a low impact”***. The predicted noise level of the mechanical plant at the nearest noise sensitive properties is considered to comply with the London Borough of Haringey Council’s policy.

2. NEAREST SENSITIVE RECEPTORS AND DISTANCE FROM MECHANICAL PLANT

The nearest sensitive residential receptors were noted to be the first-floor windows located on the rear inset façade and rear extension façade of 67A Grand Parade and the ground-floor windows located on the front façade of 2 Stanhope Gardens. At approximate distances of:

Receptor	Distance (m)					
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
67A Grand Parade Inset	12	12	3.5	5.5	20	21.5
67A Grand Parade Rear	3.5	3.5	5.5	4.5	12	13
2 Stanhope Gardens	14.5	14	22.5	20	5	3

3. NOISE LEVEL PREDICTIONS

Calculations to predict the noise of the air conditioning units operating at 1m from the facade of the residential property is given below. Full calculations are provided in Appendix B.

The rating noise level at 1m from 67A Grand Parade Inset, with the mechanical plant operating, with recommended mitigation installed, is predicted to be **34dB L_{Ar,T}** which is **8dB(A) below** the typical background noise level (42dB L_{A90,1hour}).

The rating noise level at 1m from 67A Grand Parade Rear, with the mechanical plant operating, with recommended mitigation installed, is predicted to be **37dB L_{Ar,T}** which is **5dB(A) below** the typical background noise level (42dB L_{A90,1hour}).

The rating noise level at 1m from 2 Stanhope Gardens, with the mechanical plant operating, with recommended mitigation installed, is predicted to be **37dB L_{Ar,T}** which is **5dB(A) below** the typical background noise level (42dB L_{A90,1hour}).

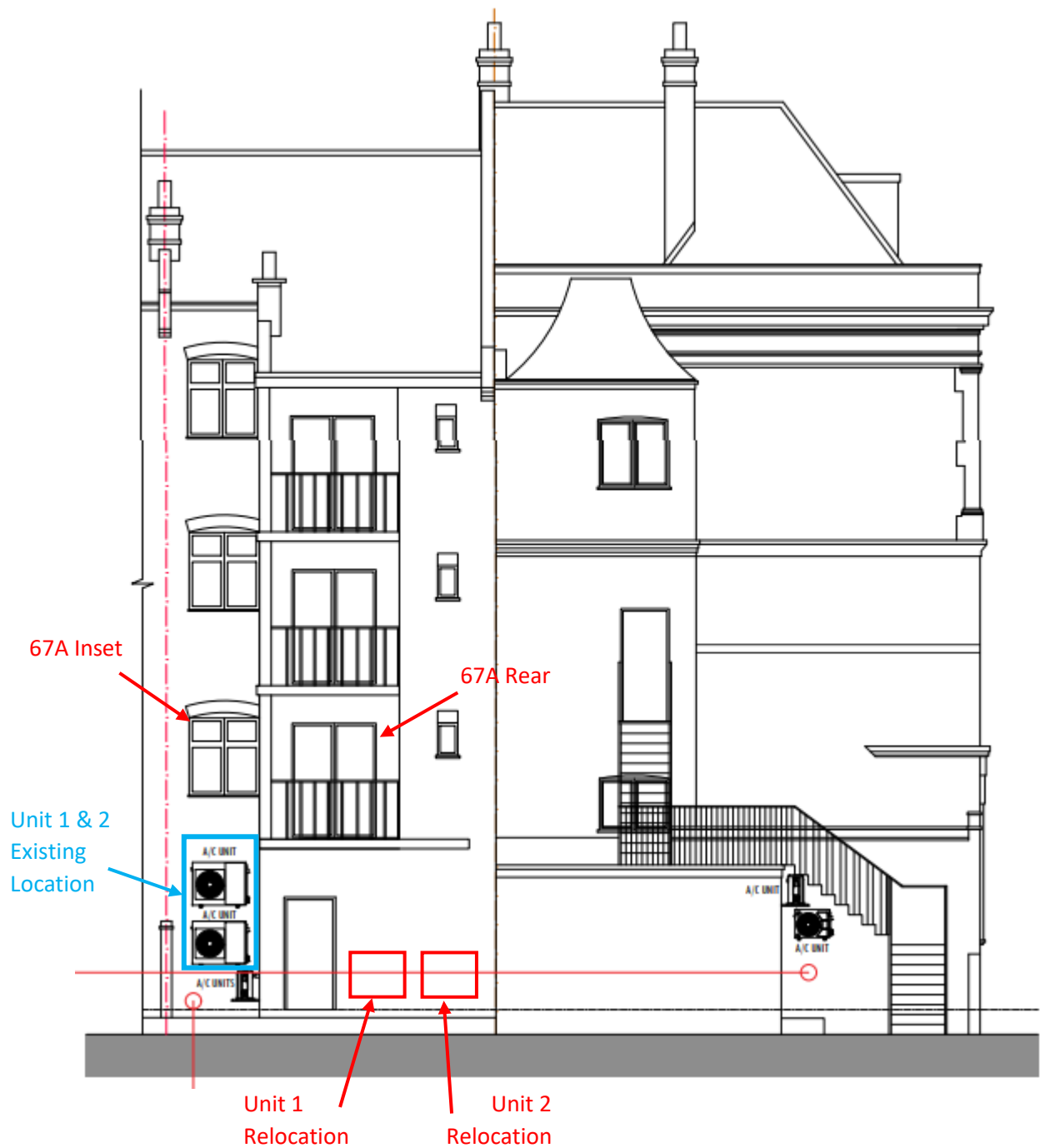
In accordance with BS 4142:2014+A1:2019 guidance, the rating noise, with the previously recommended mitigation measures installed, ***“is an indication of the specific sound source having a low impact”***. *The lower the rating level is relative to the measured background level, the less likely it is that the specific sound source will have an adverse impact.*

4. CONCLUSION

The Client intends to relocate 2 No. air conditioning units from their existing location at the site, as a result of which, will affect the results of the noise impact assessment prepared by Sound Licensing (Report Reference: 67 GRAND PARADE, N4.NIA).

The operation of the air conditioning units, with previously recommended noise mitigation installed, in accordance with BS 4142:2014+A1:2019 guidance, indicates to creating a low impact. All worst-case scenarios have been applied to the assessment. The predicted cumulative operating noise level of the air conditioning units, with previously recommended noise mitigation installed, is demonstrated to comply with the London Borough of Haringey Council’s policy.

APPENDIX A – Plans

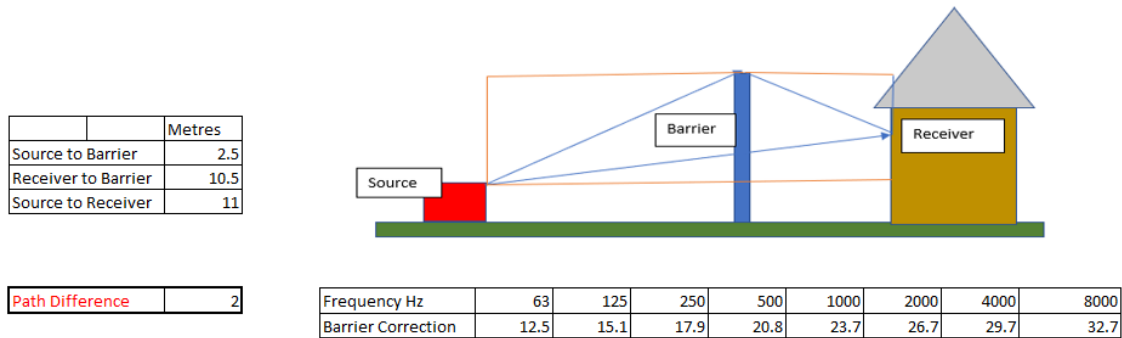


APPENDIX B – Calculations

67A Grand Parade Inset

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation



Building Screening Attenuation Calculation – Unit 1

Attenuation per double distance required =
(6dB for LpA recommended)

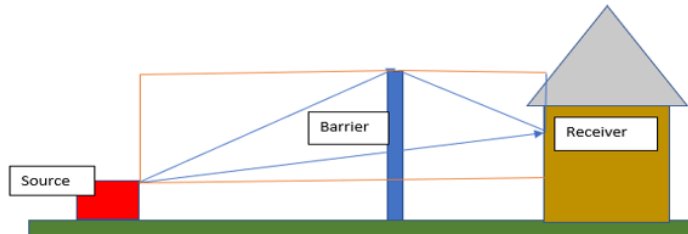
ion per double distance required = 6dB for LpA recommended)				6	dB			Metres	Ref Dist'
					Enter Distance =			11	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	67	59	55	53	54	47	43	37	68.23
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	40.8	42.9	46.4	49.8	54	48.2	44	35.9	57.13
LPA at New Dist'	19.97	22.07	25.57	28.97	33.17	27.37	23.17	15.07	36.31
BARRIER	12.5	15.1	17.9	20.8	23.7	26.7	29.7	32.7	
LPA After Insert	7.49	7.00	7.70	8.19	9.44	0.66	-6.54	-17.64	15.22

Unit 1 @ 11m = 15dB $L_{Aeq,T}$

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	2.5
Receiver to Barrier	10.5
Source to Receiver	11



Path Difference	2
-----------------	---

Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	12.5	15.1	17.9	20.8	23.7	26.7	29.7	32.7

Building Screening Attenuation Calculation – Unit 2

Attenuation per double distance required =
(6dB for LpA recommended)

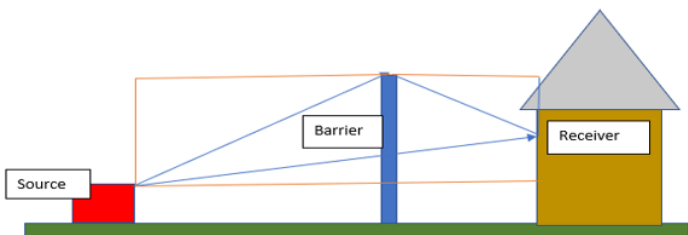
	6	dB						Metres	Ref Dist'
								Enter Distance =	11
									1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	67	59	55	53	54	47	43	37	68.23
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	40.8	42.9	46.4	49.8	54	48.2	44	35.9	57.13
LPA at New Dist'	19.97	22.07	25.57	28.97	33.17	27.37	23.17	15.07	36.31
BARRIER	12.5	15.1	17.9	20.8	23.7	26.7	29.7	32.7	
LPA After Insert	7.49	7.00	7.70	8.19	9.44	0.66	-6.54	-17.64	15.22

Unit 2 @ 11m = 15dB $L_{Aeq,T}$

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	0.2
Receiver to Barrier	3.5
Source to Receiver	3.5



Path Difference	0.2
-----------------	-----

Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	6.5	7.7	9.5	11.7	14.2	17.0	19.8	22.8

Barrier Screening Attenuation Calculation – Unit 3

Attenuation per double distance required =
(6dB for LpA recommended)

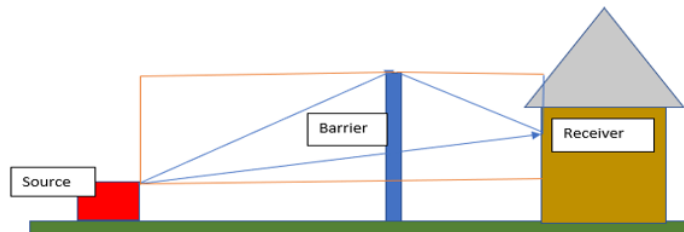
ion per double distance required = 6dB for LpA recommended)				6	dB			Metres	Ref Dist'
					Enter Distance =			2.5	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	59	51	47	47	47	40	31	26	60.34
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	32.8	34.9	38.4	43.8	47	41.2	32	24.9	50.05
LPA at New Dist'	24.84	26.94	30.44	35.84	39.04	33.24	24.04	16.94	42.09
BARRIER	6.5	7.7	9.5	11.7	14.2	17.0	19.8	22.8	
LPA After Insert	18.34	19.22	20.98	24.18	24.84	16.28	4.21	-5.84	29.49

Unit 3 @ 2.5m = 29dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	0.2
Receiver to Barrier	4.5
Source to Receiver	4.5



Path Difference	0.2
-----------------	-----

Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	6.5	7.7	9.5	11.7	14.2	17.0	19.8	22.8

Barrier Screening Attenuation Calculation – Unit 4

Attenuation per double distance required =
(6dB for LpA recommended)

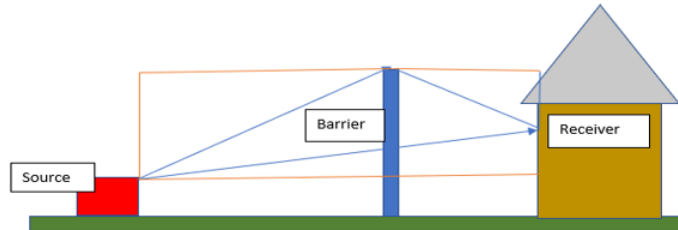
ion per double distance required = 6dB for LpA recommended)				6	dB			Metres	Ref Dist'
				Enter Distance =				4.5	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	59	51	47	47	47	40	31	26	60.34
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	32.8	34.9	38.4	43.8	47	41.2	32	24.9	50.05
LPA at New Dist'	19.74	21.84	25.34	30.74	33.94	28.14	18.94	11.84	36.98
BARRIER	6.5	7.7	9.5	11.7	14.2	17.0	19.8	22.8	
LPA After Insert	13.23	14.12	15.88	19.07	19.73	11.18	-0.90	-10.94	24.38

Unit 4 @ 4.5m = 25dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	1
Barrier 1 to Barrier 2	11.8
Barrier 2 to Receiver	9.9
Source to Receiver	20



Path Difference	2.7
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Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	13.6	16.3	19.1	22.1	25.0	28.0	31.0	34.0

Building Screening Attenuation Calculation – Unit 5

Attenuation per double distance required =
(6dB for LpA recommended)

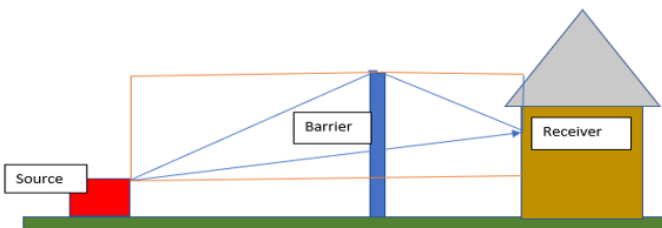
ion per double distance required = GdB for LpA recommended)	6	dB					Metres	Ref Dist'	
		Enter Distance =					19	1	
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	59	51	47	47	47	40	31	26	60.34
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	32.8	34.9	38.4	43.8	47	41.2	32	24.9	50.05
LPA at New Dist'	7.22	9.32	12.82	18.22	21.42	15.62	6.42	-0.68	24.47
BARRIER	13.6	16.3	19.1	22.1	25.0	28.0	31.0	34.0	
LPA After Insert	-6.36	-6.94	-6.30	-3.83	-3.60	-12.39	-24.59	-34.69	1.99

Unit 5 @ 19m = 2dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	0.5
Barrier 1 to Barrier 2	13
Barrier 2 to Receiver	9.9
Source to Receiver	21.5



Path Difference	1.9
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Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	12.3	14.9	17.7	20.6	23.5	26.5	29.5	32.5

Building Screening Attenuation Calculation – Unit 6

Attenuation per double distance required =
(6dB for LpA recommended)

6	dB							Metres	Ref Dist'
								Enter Distance =	20.5
									1
Frequency Hz									
	63	125	250	500	1000	2000	4000	8000	Total
	52	47	46	43	43	34	28	21	54.65
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	25.8	30.9	37.4	39.8	43	35.2	29	19.9	46.11
LPA at New Dist'	-0.44	4.66	11.16	13.56	16.76	8.96	2.76	-6.34	19.87
BARRIER	12.3	14.9	17.7	20.6	23.5	26.5	29.5	32.5	
LPA After Insert	-12.73	-10.21	-6.50	-7.00	-6.75	-17.53	-26.73	-38.83	-0.95

Unit 6 @ 20.5m = 0dB L_{Aeq,T}

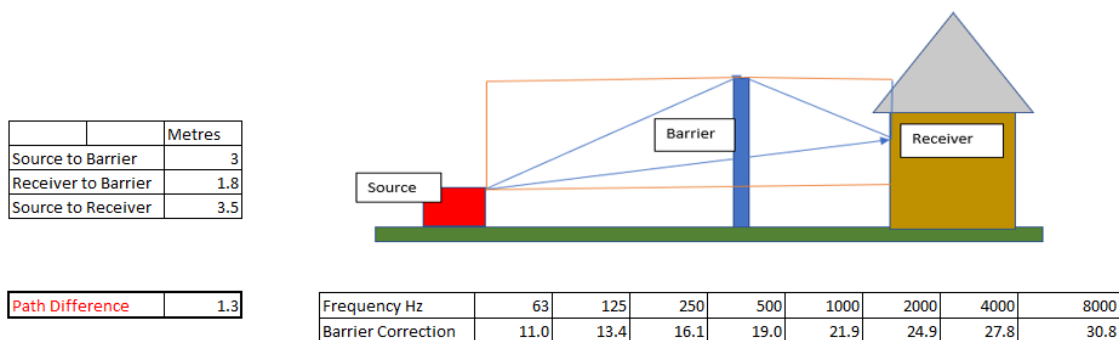
Adding dB									
Levels to be added (Max. of eight)									
Enter values	15	15	29	24	2	0	0	0	
Total = 30.5 dB									

Cumulative Sound Pressure Level @ 1m from 67A Grand Parade Inset + Intermittency (3dB) = 34dB
L_{Ar,T}

67A Grand Parade Rear

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation



Building Screening Attenuation Calculation – Unit 1

Attenuation per double distance required =
(6dB for LpA recommended)

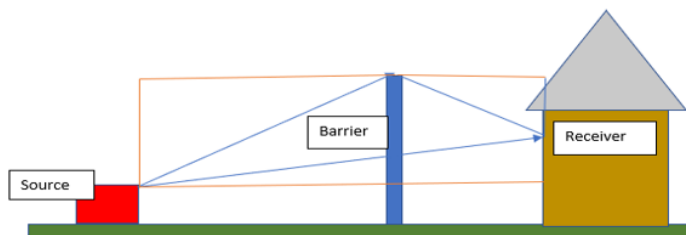
ion per double distance required = 5dB for LpA recommended)				6	dB			Metres	Ref Dist'
					Enter Distance =			2.5	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	67	59	55	53	54	47	43	37	68.23
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	40.8	42.9	46.4	49.8	54	48.2	44	35.9	57.13
LPA at New Dist'	32.84	34.94	38.44	41.84	46.04	40.24	36.04	27.94	49.18
BARRIER	11.0	13.4	16.1	19.0	21.9	24.9	27.8	30.8	
LPA After Insert	21.85	21.53	22.32	22.88	24.15	15.38	8.19	-2.91	29.83

Unit 1 @ 2.5m = 30dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	3
Receiver to Barrier	1.8
Source to Receiver	3.5



Path Difference	1.3
-----------------	-----

Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	11.0	13.4	16.1	19.0	21.9	24.9	27.8	30.8

Building Screening Attenuation Calculation – Unit 2

Attenuation per double distance required =
(6dB for LpA recommended)

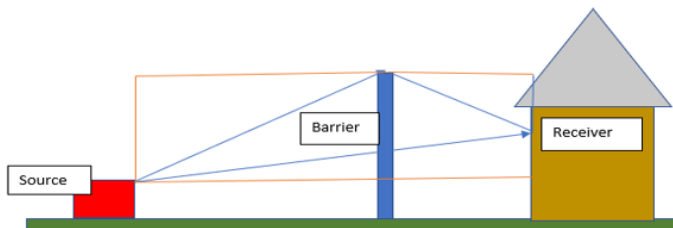
ion per double distance required = 5dB for LpA recommended)				6	dB			Metres	Ref Dist'
					Enter Distance =			2.5	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	67	59	55	53	54	47	43	37	68.23
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	40.8	42.9	46.4	49.8	54	48.2	44	35.9	57.13
LPA at New Dist'	32.84	34.94	38.44	41.84	46.04	40.24	36.04	27.94	49.18
BARRIER	11.0	13.4	16.1	19.0	21.9	24.9	27.8	30.8	
LPA After Insert	21.85	21.53	22.32	22.88	24.15	15.38	8.19	-2.91	29.83

Unit 2 @ 2.5m = 30dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier 1	0.2
Barrier 1 to Barrier 2	4.3
Receiver to Barrier 2	1
Source to Receiver	4.5



Path Difference	1
-----------------	---

Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	10.1	12.4	15.1	17.9	20.8	23.7	26.7	29.7

Barrier Screening Attenuation Calculation – Unit 3

Attenuation per double distance required =
(6dB for LpA recommended)

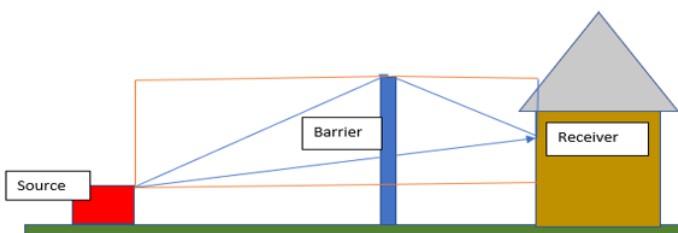
ion per double distance required =				6	dB			Metres	Ref Dist'
5dB for LpA recommended)				Enter Distance =				4.5	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	59	51	47	47	47	40	31	26	60.34
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	32.8	34.9	38.4	43.8	47	41.2	32	24.9	50.05
LPA at New Dist'	19.74	21.84	25.34	30.74	33.94	28.14	18.94	11.84	36.98
BARRIER	10.1	12.4	15.1	17.9	20.8	23.7	26.7	29.7	
LPA After Insert	9.59	9.39	10.26	12.86	13.16	4.40	-7.78	-17.88	18.53

Unit 3 @ 4.5m = 19dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier 1	0.2
Barrier 1 to Barrier 2	3.3
Receiver to Barrier 2	1
Source to Receiver	3.5



Path Difference	1
-----------------	---

Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	10.1	12.4	15.1	17.9	20.8	23.7	26.7	29.7

Barrier Screening Attenuation Calculation – Unit 4

Attenuation per double distance required =
(6dB for LpA recommended)

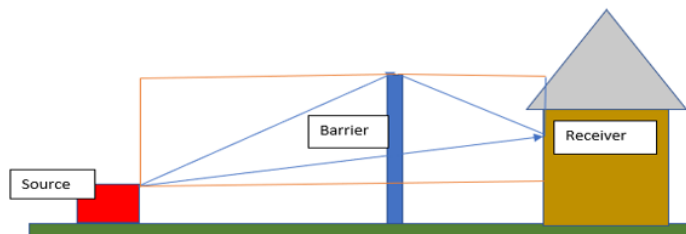
ion per double distance required = 6dB for LpA recommended)				6	dB			Metres	Ref Dist'
				Enter Distance =				3.5	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	59	51	47	47	47	40	31	26	60.34
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	32.8	34.9	38.4	43.8	47	41.2	32	24.9	50.05
LPA at New Dist'	21.92	24.02	27.52	32.92	36.12	30.32	21.12	14.02	39.17
BARRIER	10.1	12.4	15.1	17.9	20.8	23.7	26.7	29.7	
LPA After Insert	11.77	11.57	12.45	15.04	15.34	6.59	-5.60	-15.69	20.72

Unit 4 @ 3.5m = 21dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	0.4
Receiver to Barrier	12
Source to Receiver	12



Path Difference	0.4
-----------------	-----

Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	7.7	9.5	11.7	14.2	17.0	19.8	22.8	25.8

Building Screening Attenuation Calculation – Unit 5

Attenuation per double distance required =
(6dB for LpA recommended)

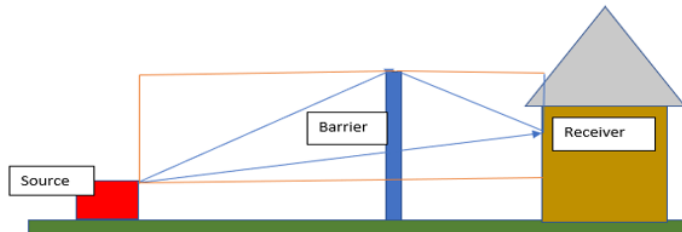
ion per double distance required = 6dB for LpA recommended)				6	dB			Metres	Ref Dist'
					Enter Distance =				11
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	59	51	47	47	47	40	31	26	60.34
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	32.8	34.9	38.4	43.8	47	41.2	32	24.9	50.05
LPA at New Dist'	11.97	14.07	17.57	22.97	26.17	20.37	11.17	4.07	29.22
BARRIER	7.7	9.5	11.7	14.2	17.0	19.8	22.8	25.8	
LPA After Insert	4.24	4.61	5.91	8.77	9.21	0.54	-11.61	-21.68	14.24

Unit 5 @ 14m = 14dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	0.2
Receiver to Barrier	12
Source to Receiver	12



Path Difference	0.2
-----------------	-----

Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	6.5	7.7	9.5	11.7	14.2	17.0	19.8	22.8

Building Screening Attenuation Calculation – Unit 6

Attenuation per double distance required =
(6dB for LpA recommended)

ion per double distance required = 5dB for LpA recommended)				6	dB			Metres	Ref Dist'
					Enter Distance =			12	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	52	47	46	43	43	34	28	21	54.65
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	25.8	30.9	37.4	39.8	43	35.2	29	19.9	46.11
LPA at New Dist'	4.22	9.32	15.82	18.22	21.42	13.62	7.42	-1.68	24.52
BARRIER	6.5	7.7	9.5	11.7	14.2	17.0	19.8	22.8	
LPA After Insert	-2.29	1.60	6.36	6.55	7.21	-3.34	-12.42	-24.46	12.22

Unit 6 @ 12m = 12dB $L_{Aeq,T}$

Adding dB								
Levels to be added (Max. of eight)								
Enter values	30	30	19	21	14	12	0	0
Total = 33.5 dB								

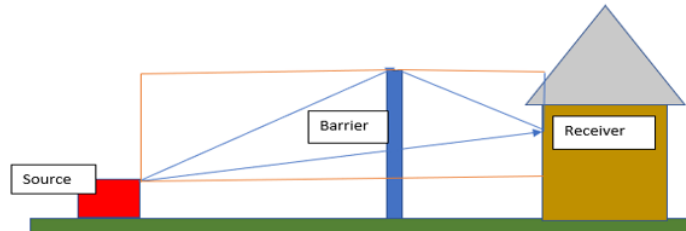
Cumulative Sound Pressure Level @ 1m from 67A Grand Parade Rear + Intermittency (3dB) = 37dB
 $L_{Ar,T}$

2 Stanhope Gardens

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier 1	4.2
Barrier 1 to Barrier 2	8.7
Receiver to Barrier 2	3.1
Source to Receiver	14.5



Path Difference	1.5
-----------------	-----

Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	11.5	14.0	16.7	19.6	22.5	25.5	28.5	31.5

Building Screening Attenuation Calculation – Unit 1

Attenuation per double distance required =
(6dB for LpA recommended)

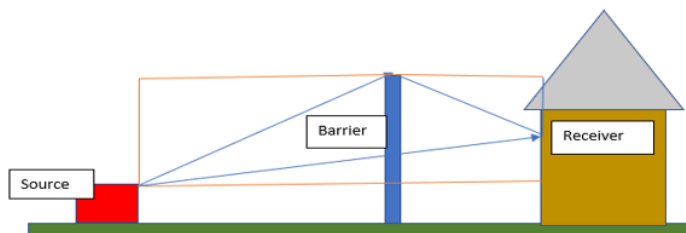
ion per double distance required = 6dB for LpA recommended)				6	dB			Metres	Ref Dist'
					Enter Distance =			13.5	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	67	59	55	53	54	47	43	37	68.23
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	40.8	42.9	46.4	49.8	54	48.2	44	35.9	57.13
LPA at New Dist'	18.19	20.29	23.79	27.19	31.39	25.59	21.39	13.29	34.53
BARRIER	11.5	14.0	16.7	19.6	22.5	25.5	28.5	31.5	
LPA After Insert	6.73	6.34	7.10	7.63	8.89	0.12	-7.07	-18.18	14.61

Unit 1 @ 13.5m = 15dB LAeq,T

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier 1	3.9
Barrier 1 to Barrier 2	8.7
Receiver to Barrier 2	3.1
Source to Receiver	14



Path Difference	1.7
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Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	11.9	14.4	17.2	20.1	23.0	26.0	29.0	32.0

Building Screening Attenuation Calculation – Unit 2

Attenuation per double distance required =
(6dB for LpA recommended)

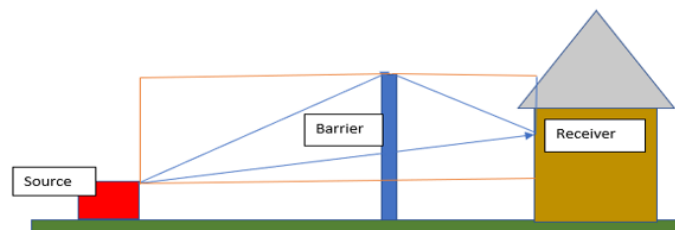
ion per double distance required = 6dB for LpA recommended)				6	dB			Metres	Ref Dist'
					Enter Distance =			13	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	67	59	55	53	54	47	43	37	68.23
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	40.8	42.9	46.4	49.8	54	48.2	44	35.9	57.13
LPA at New Dist'	18.52	20.62	24.12	27.52	31.72	25.92	21.72	13.62	34.86
BARRIER	11.9	14.4	17.2	20.1	23.0	26.0	29.0	32.0	
LPA After Insert	6.62	6.18	6.91	7.43	8.68	-0.09	-7.29	-18.39	14.43

Unit 2 @ 13m = 14dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	9
Barrier 1 to Barrier 2	14
Barrier 2 to Receiver	0.5
Source to Receiver	22.5



Path Difference	1
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Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	10.1	12.4	15.1	17.9	20.8	23.7	26.7	29.7

Building Screening Attenuation Calculation – Unit 3

Attenuation per double distance required =
(6dB for LpA recommended)

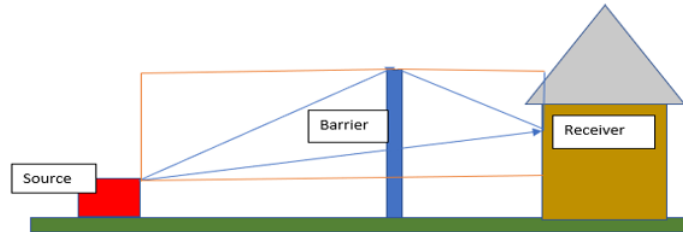
ion per double distance required = 6dB for LpA recommended)				6	dB			Metres	Ref Dist'
					Enter Distance =			21.5	1
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	59	51	47	47	47	40	31	26	60.34
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	32.8	34.9	38.4	43.8	47	41.2	32	24.9	50.05
LPA at New Dist'	6.15	8.25	11.75	17.15	20.35	14.55	5.35	-1.75	23.40
BARRIER	10.1	12.4	15.1	17.9	20.8	23.7	26.7	29.7	
LPA After Insert	-4.00	-4.20	-3.32	-0.72	-0.43	-9.18	-21.36	-31.46	4.95

Unit 3 @ 21.5m = 5dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	6.5
Barrier 1 to Barrier 2	14
Barrier 2 to Receiver	0.5
Source to Receiver	20



Path Difference	1
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Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	10.1	12.4	15.1	17.9	20.8	23.7	26.7	29.7

Building Screening Attenuation Calculation – Unit 4

Attenuation per double distance required =
(6dB for LpA recommended)

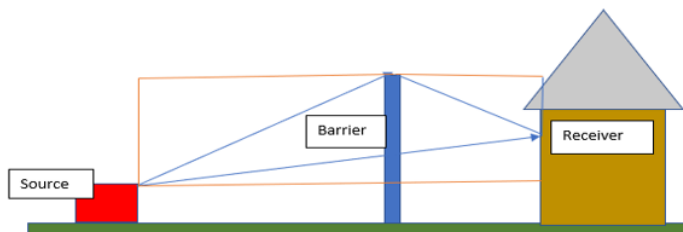
	6	dB					Metres	Ref Dist'
							Enter Distance =	19
								1
	Frequency Hz							
	63	125	250	500	1000	2000	4000	8000
	59	51	47	47	47	40	31	26
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1
LPA	32.8	34.9	38.4	43.8	47	41.2	32	24.9
LPA at New Dist'	7.22	9.32	12.82	18.22	21.42	15.62	6.42	-0.68
BARRIER	10.1	12.4	15.1	17.9	20.8	23.7	26.7	29.7
LPA After Insert	-2.92	-3.12	-2.25	0.35	0.65	-8.11	-20.29	-30.39
								6.02

Unit 4 @ 19m = 6dB $L_{Aeq,T}$

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	2
Receiver to Barrier	2
Source to Receiver	4



Path Difference	0
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Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8

Partial Barrier Screening Attenuation Calculation – Unit 5

Attenuation per double distance required =
(6dB for LpA recommended)

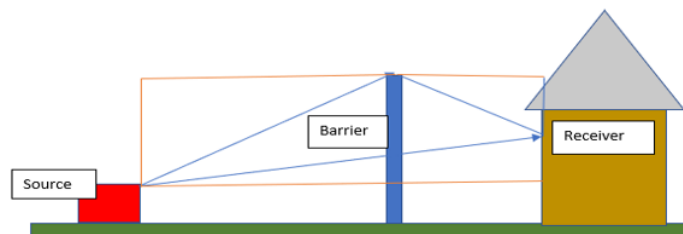
	6							Metres	Ref Dist'
								4	1
	Enter Distance =								
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	59	51	47	47	47	40	31	26	60.34
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	32.8	34.9	38.4	43.8	47	41.2	32	24.9	50.05
LPA at New Dist'	20.76	22.86	26.36	31.76	34.96	29.16	19.96	12.86	38.01
BARRIER	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
LPA After Insert	15.96	18.06	21.56	26.96	30.16	24.36	15.16	8.06	33.21

Unit 5 @ 4m = 33dB L_{Aeq,T}

Applicable where barrier breaks line of sight between source and receiver

Example Illustration of Barrier Attenuation

	Metres
Source to Barrier	0.2
Receiver to Barrier	2
Source to Receiver	2



Path Difference	0.2
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Frequency Hz	63	125	250	500	1000	2000	4000	8000
Barrier Correction	6.5	7.7	9.5	11.7	14.2	17.0	19.8	22.8

Barrier Screening Attenuation Calculation – Unit 6

Attenuation per double distance required =
(6dB for LpA recommended)

	6							Metres	Ref Dist'
								2	1
	Enter Distance =								
	Frequency Hz								
	63	125	250	500	1000	2000	4000	8000	Total
	52	47	46	43	43	34	28	21	54.65
'A' Weight	26.2	16.1	8.6	3.2	0	-1.2	-1	1.1	
LPA	25.8	30.9	37.4	39.8	43	35.2	29	19.9	46.11
LPA at New Dist'	19.78	24.88	31.38	33.78	36.98	29.18	22.98	13.88	40.09
BARRIER	6.5	7.7	9.5	11.7	14.2	17.0	19.8	22.8	
LPA After Insert	13.28	17.16	21.92	22.12	22.78	12.22	3.14	-8.90	27.78

Unit 6 @ 2m = 28dB L_{Aeq,T}

<u>Adding dB</u>								
<u>Levels to be added</u> (Max. of eight)								
<i>Enter values</i>	15	14	5	6	33	28	0	0
Total = 34.3 dB								

Cumulative Sound Pressure Level @ 1m from 2 Stanhope Gardens + Intermittency (3dB) = 37dB L_{Ar,T}