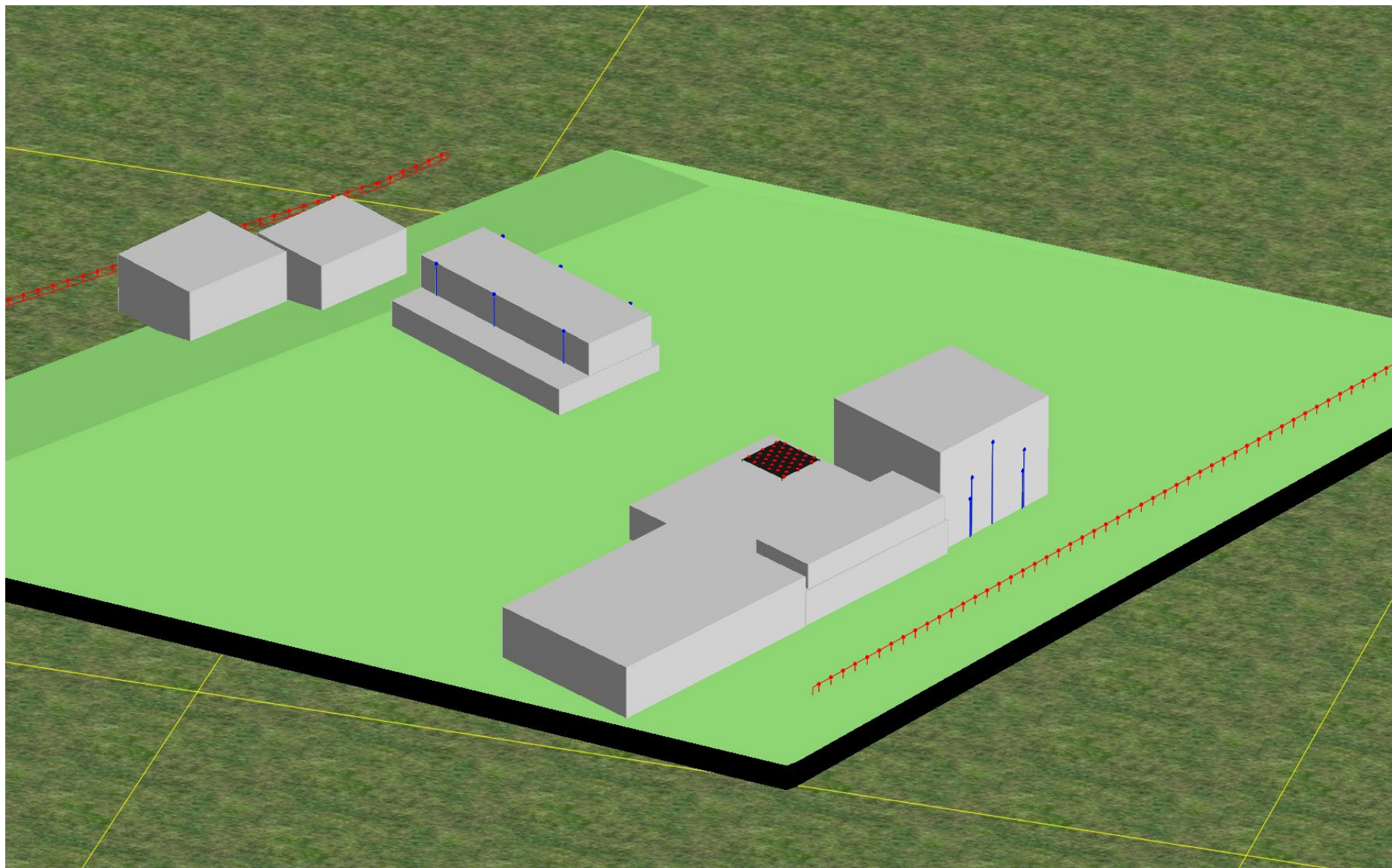
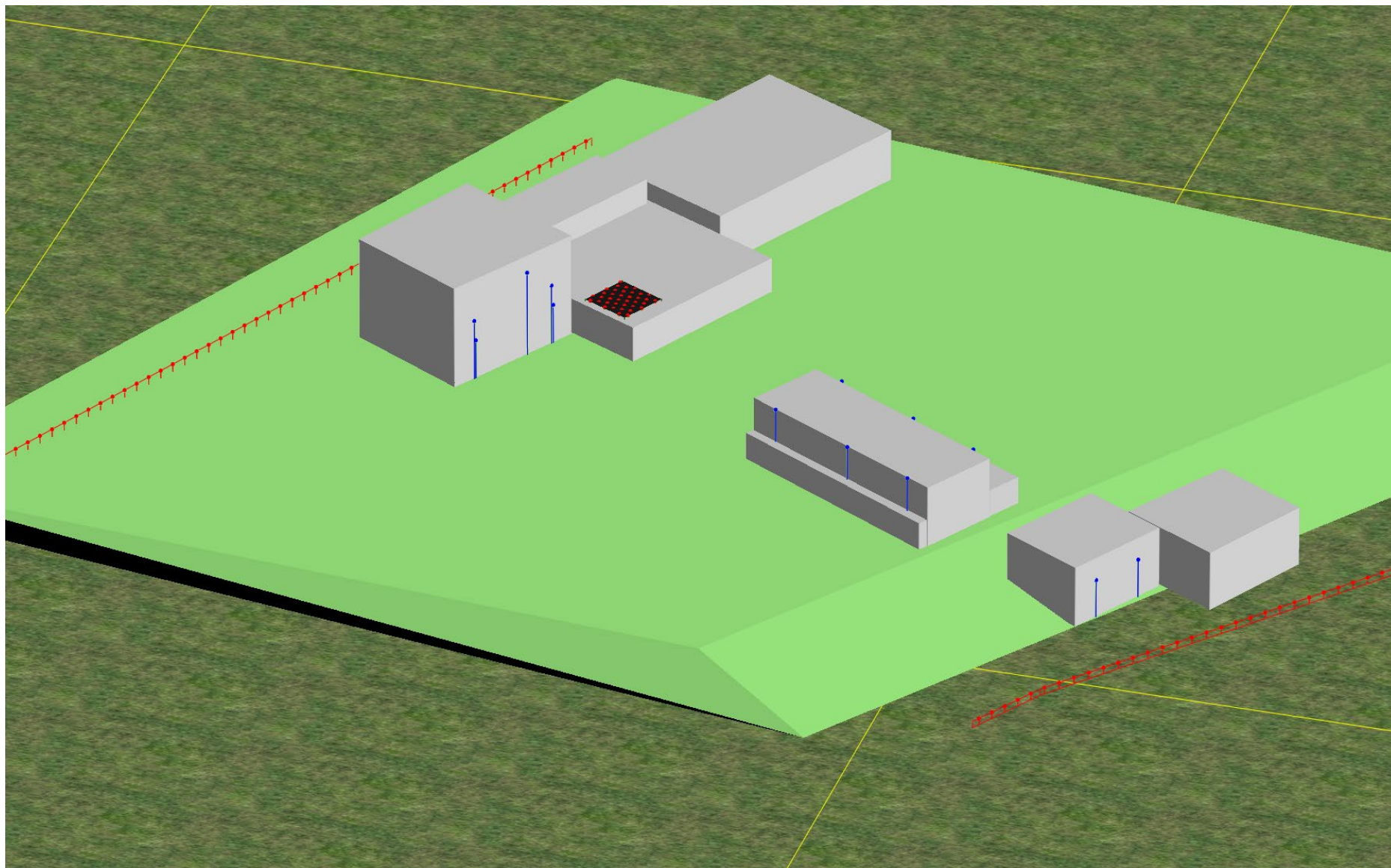


APPENDIX C

Noise Prediction Model





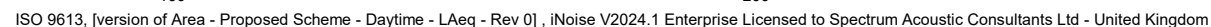
18-19 Bancroft, Hitchin

Predicted Ambient Noise Levels - Daytime LAeq,16hr

Report: Table of Results
 Model: Proposed Scheme - Daytime - LAeq - Rev 0
 LAeq per octave: total results for receivers
 Group: (main group)
 Group Reduction: Yes

Name			Day									
Receiver	Description	Height	Total	31	63	125	250	500	1000	2000	4000	8000
_A	R1. Apartment 1 (front)	4.50	65	--	43	48	54	57	62	59	51	40
_A	R1. Apartment 1 (rear)	4.50	62	--	41	50	51	54	58	56	50	44
_A	R10. House H5 (front)	4.50	50	--	31	38	39	42	47	44	36	20
_A	R10. House H5 (rear)	4.50	47	--	30	37	37	39	42	40	35	26
_A	R2. Apartment 2 (front)	4.50	65	--	43	48	54	57	62	59	51	40
_A	R2. Apartment 2 (rear)	4.50	53	--	34	42	42	45	48	47	42	35
_A	R3. Apartment 3 (front)	7.00	65	--	42	47	53	56	61	59	51	39
_A	R3. Apartment 3 (rear)	7.00	63	--	44	53	54	56	58	55	49	43
_A	R4. Apartment 4 (front)	7.00	65	--	42	47	53	56	61	59	51	39
_A	R4. Apartment 4 (rear)	7.00	55	--	34	43	45	48	50	48	42	35
_A	R5. Apartment 5 (front)	10.00	64	--	42	47	52	56	60	58	50	38
_A	R5. Apartment 5 (rear)	10.00	59	--	40	50	50	52	54	51	46	39
_A	R6. House H1	1.50	57	--	37	41	46	47	52	52	48	37
_A	R7. House H2	1.50	57	--	37	42	46	47	53	52	48	38
_A	R8. House H3 (front)	4.50	50	--	29	34	38	41	46	44	38	24
_A	R8. House H3 (rear)	4.50	42	--	28	33	33	34	36	34	28	17
_A	R9. House H4 (front)	4.50	50	--	30	35	38	40	46	44	36	21
_A	R9. House H4 (rear)	4.50	43	--	28	35	34	35	38	36	30	20

All shown dB values are A-weighted



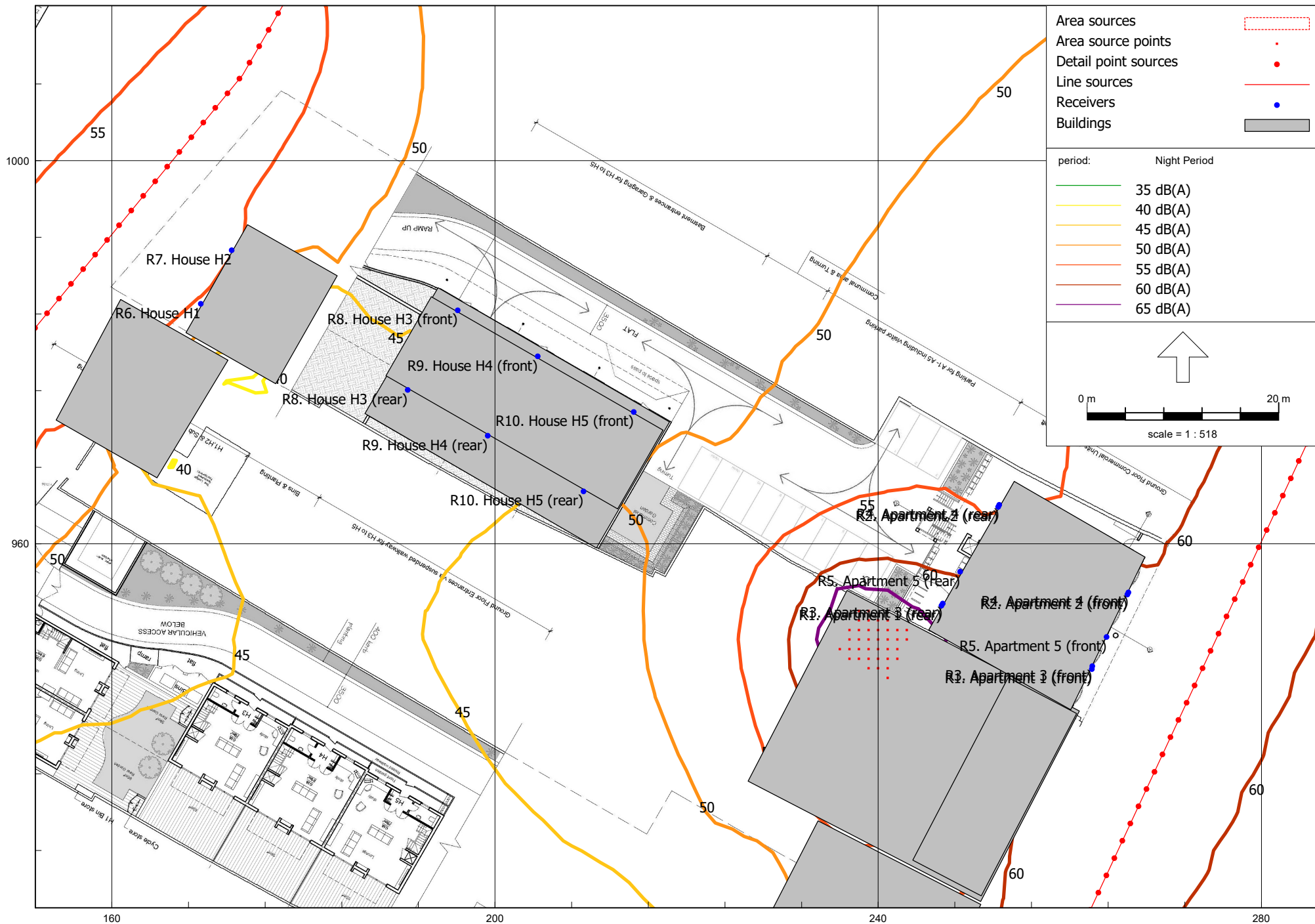
18-19 Bancroft, Hitchin

Predicted Ambient Noise Levels - Night-time LAeq,8hr

Report: Table of Results
 Model: Proposed Scheme - Night-time - LAeq - Rev 0
 LAeq per octave: total results for receivers
 Group: (main group)
 Group Reduction: Yes

Name			Night									
Receiver	Description	Height	Total	31	63	125	250	500	1000	2000	4000	8000
_A	R1. Apartment 1 (front)	4.50	59	--	35	39	47	51	56	53	42	33
_A	R1. Apartment 1 (rear)	4.50	61	--	36	47	48	51	54	55	55	47
_A	R10. House H5 (front)	7.00	47	--	26	36	36	38	42	41	37	23
_A	R10. House H5 (rear)	7.00	47	--	25	35	36	39	41	42	41	30
_A	R2. Apartment 2 (front)	4.50	59	--	35	39	47	51	56	53	42	33
_A	R2. Apartment 2 (rear)	4.50	52	--	28	39	39	42	44	46	47	38
_A	R3. Apartment 3 (front)	7.00	58	--	34	38	46	50	55	53	42	32
_A	R3. Apartment 3 (rear)	7.00	61	--	38	50	51	53	53	54	54	46
_A	R4. Apartment 4 (front)	7.00	58	--	34	38	46	50	55	53	42	32
_A	R4. Apartment 4 (rear)	7.00	53	--	29	40	41	45	46	47	47	38
_A	R5. Apartment 5 (front)	10.00	58	--	34	38	45	50	54	52	41	31
_A	R5. Apartment 5 (rear)	10.00	57	--	35	47	47	49	50	50	50	42
_A	R6. House H1	4.50	53	--	23	30	33	38	43	51	48	33
_A	R7. House H2	4.50	54	--	23	31	33	39	43	52	48	33
_A	R8. House H3 (front)	7.00	46	--	23	31	33	35	40	42	37	21
_A	R8. House H3 (rear)	7.00	42	--	22	31	32	34	36	37	34	20
_A	R9. House H4 (front)	7.00	46	--	24	33	34	36	40	41	36	19
_A	R9. House H4 (rear)	7.00	44	--	23	33	33	35	38	38	36	24

All shown dB values are A-weighted



18-19 Bancroft, Hitchin

Predicted Ambient Noise Levels - Night-time LAFmax - Apartment 1

Report: Table of Results
 Model: Proposed Scheme - Night-time - LAFmax - Rev 0
 LAeq per octave: by Source/Group for receiver _A - R1. Apartment 1 (front)
 Group: (main group)
 Group Reduction: Yes

Name Source/Group	Description	Height	Night Total	31	63	125	250	500	1000	2000	4000	8000
A	R1. Apartment 1 (front)	4.50	94	--	70	74	82	86	91	88	77	67
	Bancroft LAFmax	0.25	83	--	59	63	71	75	80	78	67	58
	Bancroft LAFmax	0.25	83	--	59	63	71	75	80	77	67	58
	Bancroft LAFmax	0.25	83	--	59	63	71	75	80	77	66	57
	Bancroft LAFmax	0.25	83	--	58	62	71	75	79	77	66	57
	Bancroft LAFmax	0.25	82	--	58	62	70	74	79	76	66	56
	Bancroft LAFmax	0.25	82	--	58	62	70	74	79	76	65	56
	Bancroft LAFmax	0.25	81	--	57	61	69	73	78	75	65	55
	Bancroft LAFmax	0.25	81	--	57	60	68	72	77	75	64	55
	Bancroft LAFmax	0.25	80	--	56	60	68	72	77	74	64	54
	Bancroft LAFmax	0.25	80	--	56	60	67	71	76	74	63	53
	Bancroft LAFmax	0.25	79	--	55	59	67	71	76	73	63	53
	Bancroft LAFmax	0.25	79	--	55	59	66	70	76	73	62	52
	Bancroft LAFmax	0.25	78	--	54	58	66	70	75	72	62	52
	Bancroft LAFmax	0.25	78	--	54	58	65	69	75	72	61	51
	Bancroft LAFmax	0.25	77	--	53	57	65	69	74	72	61	50
	Bancroft LAFmax	0.25	77	--	53	57	64	68	73	71	60	50
	Bancroft LAFmax	0.25	76	--	53	56	64	68	73	71	60	49
	Bancroft LAFmax	0.25	76	--	52	56	63	67	73	70	59	48
	Bancroft LAFmax	0.25	76	--	52	56	63	67	72	70	59	48
	Bancroft LAFmax	0.25	75	--	51	55	63	66	72	69	58	47
	Bancroft LAFmax	0.25	75	--	51	55	62	66	72	69	58	47
	Bancroft LAFmax	0.25	74	--	51	54	62	66	71	69	58	46
	Bancroft LAFmax	0.25	74	--	50	54	62	65	71	68	57	46
	Bancroft LAFmax	0.25	73	--	50	53	61	65	70	68	57	45
	Bancroft LAFmax	0.25	73	--	50	53	61	65	70	68	57	45
	Bancroft LAFmax	0.25	73	--	49	53	60	64	70	67	56	44
	Bancroft LAFmax	0.25	73	--	49	53	60	64	69	67	56	44
	Bancroft LAFmax	0.25	72	--	49	52	60	63	69	67	55	43
	Bancroft LAFmax	0.25	72	--	48	52	59	63	69	67	55	43
	Bancroft LAFmax	0.25	72	--	47	52	59	63	68	66	55	42
	Bancroft LAFmax	0.25	71	--	48	52	59	63	68	66	55	42
	Bancroft LAFmax	0.25	71	--	47	51	59	62	68	66	54	41
	Bancroft LAFmax	0.25	71	--	47	51	58	62	68	65	54	41
	Bancroft LAFmax	0.25	70	--	46	50	58	61	67	65	53	40
	Bancroft LAFmax	0.25	70	--	46	50	57	61	67	64	53	39
	Bancroft LAFmax	0.25	69	--	45	50	57	60	66	64	52	39
	Bancroft LAFmax	0.25	69	--	45	49	56	60	66	64	52	38
	Bancroft LAFmax	0.25	69	--	45	49	56	60	65	63	51	38
	Plant	0.25	29	--	16	23	18	20	21	21	21	11
	GSW LAFmax	0.25	21	--	3	6	4	7	12	19	13	-11
	GSW LAFmax	0.25	21	--	3	6	4	7	12	19	13	-9
	GSW LAFmax	0.25	21	--	3	6	4	7	11	19	13	-9

All shown dB values are A-weighted

Predicted Ambient Noise Levels - Night-time LAFmax - House 1

Name			Night									
Source/Group	Description	Height	Total	31	63	125	250	500	1000	2000	4000	8000
A	R6. House H1	4.50	76	--	47	53	56	61	66	74	70	55
	GSW LAFmax	0.25	67	--	35	42	47	52	57	65	61	47
	GSW LAFmax	0.25	67	--	35	43	47	52	56	65	61	47
	GSW LAFmax	0.25	67	--	34	43	46	51	56	64	61	46
	GSW LAFmax	0.25	66	--	34	42	45	50	55	64	60	45
	GSW LAFmax	0.25	65	--	33	42	44	50	54	63	59	44
	GSW LAFmax	0.25	65	--	34	41	44	49	54	62	59	44
	GSW LAFmax	0.25	64	--	34	41	43	49	53	62	58	43
	GSW LAFmax	0.25	64	--	33	40	43	48	53	62	58	44
	GSW LAFmax	0.25	63	--	33	40	43	48	53	61	57	42
	GSW LAFmax	0.25	62	--	32	39	42	47	52	60	57	41
	GSW LAFmax	0.25	62	--	31	38	41	46	51	59	56	40
	GSW LAFmax	0.25	60	--	30	37	40	44	50	58	54	39
	GSW LAFmax	0.25	60	--	30	37	39	44	49	58	54	38
	GSW LAFmax	0.25	59	--	29	36	38	43	49	57	53	37
	GSW LAFmax	0.25	59	--	28	35	38	42	48	57	52	36
	GSW LAFmax	0.25	58	--	28	34	37	42	47	56	52	35
	GSW LAFmax	0.25	54	--	28	35	37	41	45	52	46	29
	GSW LAFmax	0.25	47	--	27	32	33	36	39	45	38	21
	GSW LAFmax	0.25	44	--	25	30	31	33	35	41	35	18
	Bancroft LAFmax	0.25	42	--	30	30	34	35	38	34	20	-1
	Bancroft LAFmax	0.25	42	--	30	30	34	35	38	34	20	-1
	GSW LAFmax	0.25	42	--	24	29	29	31	33	39	33	16
	Bancroft LAFmax	0.25	41	--	29	29	33	34	37	33	19	-1
	Bancroft LAFmax	0.25	41	--	30	29	33	34	37	33	19	-1
	Bancroft LAFmax	0.25	41	--	30	29	33	34	37	33	19	-1
	Bancroft LAFmax	0.25	41	--	30	30	33	34	37	33	19	-2
	Bancroft LAFmax	0.25	41	--	30	29	33	34	37	33	19	-1
	Bancroft LAFmax	0.25	41	--	30	29	33	34	37	33	19	-1
	Bancroft LAFmax	0.25	41	--	30	29	33	34	37	33	19	-2
	Bancroft LAFmax	0.25	41	--	30	30	33	34	37	33	18	-2
	Bancroft LAFmax	0.25	41	--	30	29	33	34	37	33	19	-2
	Bancroft LAFmax	0.25	41	--	30	30	33	34	37	33	18	-3
	Bancroft LAFmax	0.25	41	--	29	29	32	33	37	33	19	0
	Bancroft LAFmax	0.25	41	--	29	29	32	33	37	33	19	0
	Bancroft LAFmax	0.25	41	--	29	29	32	33	37	33	19	0
	Bancroft LAFmax	0.25	41	--	29	29	32	33	37	33	19	0
	GSW LAFmax	0.25	41	--	23							

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18-19 Bancroft, Hitchin

Predicted Ambient Noise Levels - Night-time LAFmax - House 5

Report: Table of Results
 Model: Proposed Scheme - Night-time - LAFmax - Rev 0
 LAeq per octave: by Source/Group for receiver _A - R10. House H5 (front)
 Group: (main group)
 Group Reduction: Yes

Name			Night									
Source/Group	Description	Height	Total	31	63	125	250	500	1000	2000	4000	8000
A	R10. House H5 (front)	7.00	78	--	56	60	66	69	75	73	62	46
	Bancroft LAFmax	0.25	67	--	44	48	55	58	64	62	50	35
	Bancroft LAFmax	0.25	67	--	44	48	55	58	64	62	50	35
	Bancroft LAFmax	0.25	67	--	44	48	55	58	64	62	50	35
	Bancroft LAFmax	0.25	67	--	44	47	54	58	64	62	49	35
	Bancroft LAFmax	0.25	67	--	44	47	54	57	64	61	49	34
	Bancroft LAFmax	0.25	67	--	44	47	54	57	63	61	49	34
	Bancroft LAFmax	0.25	66	--	43	47	54	57	63	61	49	34
	Bancroft LAFmax	0.25	66	--	43	47	54	57	63	61	49	33
	Bancroft LAFmax	0.25	66	--	43	47	54	57	63	61	48	33
	Bancroft LAFmax	0.25	66	--	43	47	53	57	63	61	48	33
	Bancroft LAFmax	0.25	66	--	43	46	53	56	63	60	48	32
	Bancroft LAFmax	0.25	66	--	43	46	53	56	62	60	48	32
	Bancroft LAFmax	0.25	65	--	42	46	53	56	62	60	47	31
	Bancroft LAFmax	0.25	65	--	42	46	53	56	62	60	47	31
	Bancroft LAFmax	0.25	65	--	42	46	53	56	62	60	47	31
	Bancroft LAFmax	0.25	65	--	42	46	52	55	62	59	47	30
	Bancroft LAFmax	0.25	60	--	40	43	50	52	57	53	38	21
	Bancroft LAFmax	0.25	55	--	39	42	47	48	52	47	33	16
	Bancroft LAFmax	0.25	53	--	38	40	44	45	49	44	30	14
	GSW LAFmax	0.25	52	--	22	29	31	36	41	50	45	27
	GSW LAFmax	0.25	52	--	19	28	31	36	41	50	45	27
	GSW LAFmax	0.25	52	--	22	29	31	35	41	50	45	27
	GSW LAFmax	0.25	52	--	22	29	31	35	41	50	45	27
	GSW LAFmax	0.25	52	--	22	29	31	35	41	50	45	27
	GSW LAFmax	0.25	52	--	22	28	31	35	41	50	45	26
	GSW LAFmax	0.25	50	--	20	27	29	34	40	48	44	25
	Bancroft LAFmax	0.25	50	--	36	37	41	43	45	44	32	16
	Bancroft LAFmax	0.25	50	--	36	37	41	43	45	44	32	16
	Bancroft LAFmax	0.25	50	--	35	37	41	43	45	44	32	16
	Bancroft LAFmax	0.25	50	--	35	37	41	43	45	44	32	16
	Bancroft LAFmax	0.25	50	--	35	37	41	43	45	44	32	16
	Bancroft LAFmax	0.25	49	--	35	37	41	43	45	41	29	14
	Bancroft LAFmax	0.25	49	--	35	37	41	43	45	41	29	14
	Bancroft LAFmax	0.25	49	--	35	37	41	42	45	41	29	13
	Bancroft LAFmax	0.25	49	--	35	36	41	42	45	41	29	14
	Bancroft LAFmax	0.25	49	--	35	36	41	42	45	41	29	13
	Bancroft LAFmax	0.25	48	--	36	37	40	40	43	40	26	11
	GSW LAFmax	0.25	48	--	20	27	29	33	38	46	40	22
	Bancroft LAFmax	0.25	47	--	35	37	40	40	42	36	23	8
	Bancroft LAFmax	0.25	46	--	35	35	38	38	42	39	26	11
	Bancroft LAFmax	0.25	46	--	34	33	36	37	40	41	29	13
	Bancroft LAFmax	0.25	45	--	34	34	37	37	41	38	26	11

All shown dB values are A-weighted

APPENDIX D

Intrusive Noise Calculations

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	18-19 Bancroft, Hitchin
Project number:	24109
Date:	27/02/2025

Plot:	Apartment 1
Room:	LKD

Daytime ($L_{Aeq,16hr}$)				Octave band centre frequency										Broadband term	
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k			
EXTERNAL NOISE LEVEL															
External noise level			Façade 1	$L_{eq,1}$	69	64	63	60	62	58	50	41		$L_{Aeq,1}$	65 dB
Façade correction factor				C	0	0	0	0	0	0	0	0			
INCIDENT FAÇADE NOISE LEVEL															
Incident noise level			Façade 1	$L_{eq,ff}$	69	64	63	60	62	58	50	41		$L_{Aeq,ff}$	65 dB
ROOM DATA															
Room description and reverberation time	Volume	434	Living Room	RT60	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3			s
FAÇADE ELEMENTS (Façade 1)															
Glazing	Area	5	Generic 10/6-16/6	Rw	23	24	24	32	37	37	44	47		Rw / Rw+Ctr	35 / 32 dB
Wall	Area	11.5	Brick and block external wall	Rw	34	40	44	45	51	56	60	63		Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	2	Greenwood EHA574 (Acoustic trickle)	Dn,e	34	34	40	39	42	49	43	43		Dn,e,w / Dn,e,w+Ctr	44 / 42 dB
None			--												
RESULTS															
Total calculated indoor noise level				$L_{eq,2}$	37	31	28	20	16	9	1	-		$L_{Aeq,2}$	23 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	18-19 Bancroft, Hitchin
Project number:	24109
Date:	27/02/2025

Plot:	Apartment 1
Room:	Bedroom

Daytime ($L_{Aeq,16hr}$)				Octave band centre frequency										Broadband term	
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k			
EXTERNAL NOISE LEVEL															
External noise level			Façade 1	$L_{eq,1}$	69	64	63	60	62	58	50	41		$L_{Aeq,1}$	65 dB
Façade correction factor				C	0	0	0	0	0	0	0	0			
INCIDENT FAÇADE NOISE LEVEL															
Incident noise level			Façade 1	$L_{eq,ff}$	69	64	63	60	62	58	50	41		$L_{Aeq,ff}$	65 dB
ROOM DATA															
Room description and reverberation time	Volume	60	Bedroom	RT60	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2			s
FAÇADE ELEMENTS (Façade 1)															
Glazing	Area	5	Pilkington Optiphon 10/16argon/8.8	Rw	27	28	31	42	45	50	58	62		Rw / Rw+Ctr	44 / 38 dB
Wall	Area	11.5	Brick and block external wall	Rw	34	40	44	45	51	56	60	63		Rw / Rw+Ctr	50 / 47 dB
Vent	No. off.	1	Greenwood EHA574 (Acoustic trickle)	Dn,e	34	34	40	39	42	49	43	43		Dn,e,w / Dn,e,w+Ctr	44 / 42 dB
None			--												
RESULTS															
Total calculated indoor noise level				$L_{eq,2}$	41	35	29	22	19	9	5	-		$L_{Aeq,2}$	26 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	18-19 Bancroft, Hitchin
Project number:	24109
Date:	27/02/2025

Plot:	Apartment 1
Room:	Bedroom

Night time ($L_{Aeq,8hr}$)				Octave band centre frequency										Broadband term			
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k					
EXTERNAL NOISE LEVEL																	
External noise level			Façade 1	$L_{eq,1}$	61	55	56	54	56	52	41	34	$L_{Aeq,1}$			59 dB	
Façade correction factor				C	0	0	0	0	0	0	0	0					
INCIDENT FAÇADE NOISE LEVEL																	
Incident noise level			Façade 1	$L_{eq,ff}$	61	55	56	54	56	52	41	34	$L_{Aeq,ff}$			59 dB	
ROOM DATA																	
Room description and reverberation time	Volume	60	Bedroom	RT60	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2				s	
FAÇADE ELEMENTS (Façade 1)																	
Glazing	Area	5	Pilkington Optiphon 10/16argon/8.8	Rw	27	28	31	42	45	50	58	62	Rw / Rw+Ctr			44 / 38 dB	
Wall	Area	11.5	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr			50 / 47 dB	
Vent	No. off.	1	Greenwood EHA574 (Acoustic trickle)	Dn,e	34	34	40	39	42	49	43	43	Dn,e,w / Dn,e,w+Ctr			44 / 42 dB	
None			--														
RESULTS																	
Total calculated indoor noise level				$L_{eq,2}$	33	26	22	16	13	3	-	-	$L_{Aeq,2}$			19 dB	

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	18-19 Bancroft, Hitchin
Project number:	24109
Date:	27/02/2025

Plot:	Apartment 1
Room:	Bedroom

Night time ($L_{A\text{Max}}$)				Octave band centre frequency										Broadband term			
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k					
EXTERNAL NOISE LEVEL																	
External noise level			Façade 1	$L_{\text{Max},1}$	85	79	80	78	80	77	66	59	$L_{A\text{Max},1}$			83 dB	
Façade correction factor				C	0	0	0	0	0	0	0	0					

INCIDENT FAÇADE NOISE LEVEL												
Incident noise level	Façade 1	$L_{\text{Max,ff}}$	85	79	80	78	80	77	66	59	$L_{\text{AMax,ff}}$	83 dB

ROOM DATA														
Room description and reverberation time	Volume	60	Bedroom	RT60	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2	s	

FAÇADE ELEMENTS (Façade 1)															
Glazing	Area	5	Pilkington Optiphon 10/16argon/8.8	Rw	27	28	31	42	45	50	58	62	Rw / Rw+Ctr	44 / 38 dB	
Wall	Area	11.5	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB	
Vent	No. off.	1	Greenwood EHA574 (Acoustic trickle)	Dn,e	34	34	40	39	42	49	43	43	Dn,e,w / Dn,e,w+Ctr	44 / 42 dB	
None			--												

RESULTS												
Total calculated indoor noise level	$L_{\text{Max},2}$	57	50	46	40	37	28	21	12		$L_{A\text{Max},2}$	43 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	18-19 Bancroft, Hitchin
Project number:	24109
Date:	27/02/2025

Plot:	House 1
Room:	LKD

Daytime ($L_{Aeq,16hr}$)				Octave band centre frequency											
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k	Broadband term		
EXTERNAL NOISE LEVEL															
External noise level			Façade 1	$L_{eq,1}$	63	57	55	50	52	51	47	38	$L_{Aeq,1}$	57 dB	
Façade correction factor				C	0	0	0	0	0	0	0	0			
INCIDENT FAÇADE NOISE LEVEL															
Incident noise level			Façade 1	$L_{eq,ff}$	63	57	55	50	52	51	47	38	$L_{Aeq,ff}$	57 dB	
ROOM DATA															
Room description and reverberation time		Volume	146	Living Room	RT60	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3	s	
FAÇADE ELEMENTS (Façade 1)															
Glazing		Area	8	Generic 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr	29 / 25 dB
Wall		Area	50	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr	50 / 47 dB
Vent		No. off.	2	Greenwood 4000 SBW (Hit and miss)	Dn,e	32	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr	33 / 32 dB
None				--											
RESULTS															
Total calculated indoor noise level					$L_{eq,2}$	41	33	33	22	21	16	12	-	$L_{Aeq,2}$	28 dB

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	18-19 Bancroft, Hitchin
Project number:	24109
Date:	27/02/2025

Plot:	House 1
Room:	Bedroom 3

Daytime (<i>L</i> _{Aeq,16hr})				Octave band centre frequency										Broadband term			
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k					
EXTERNAL NOISE LEVEL																	
External noise level			Façade 1	<i>L</i> _{eq,1}	63	57	55	50	52	51	47	38	<i>L</i> _{Aeq,1}			57 dB	
Façade correction factor				C	0	0	0	0	0	0	0	0					
INCIDENT FAÇADE NOISE LEVEL																	
Incident noise level			Façade 1	<i>L</i> _{eq,ff}	63	57	55	50	52	51	47	38	<i>L</i> _{Aeq,ff}			57 dB	
ROOM DATA																	
Room description and reverberation time	Volume	24	Bedroom	RT60	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2				s	
FAÇADE ELEMENTS (Façade 1)																	
Glazing	Area	1	Generic 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr			29 / 25 dB	
Wall	Area	14	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr			50 / 47 dB	
Vent	No. off.	1	Greenwood 4000 SBW (Hit and miss)	Dn,e	32	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr			33 / 32 dB	
None			--														
RESULTS																	
Total calculated indoor noise level				<i>L</i> _{eq,2}	40	32	31	22	24	19	13	-	<i>L</i> _{Aeq,2}			28 dB	

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



Project:	18-19 Bancroft, Hitchin
Project number:	24109
Date:	27/02/2025

Plot:	House 1
Room:	Bedroom 3

Night time ($L_{Aeq,8hr}$)				Octave band centre frequency										Broadband term			
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k					
EXTERNAL NOISE LEVEL																	
External noise level			Façade 1	$L_{eq,1}$	49	46	42	41	43	50	47	34	$L_{Aeq,1}$			53 dB	
Façade correction factor				C	0	0	0	0	0	0	0	0					
INCIDENT FAÇADE NOISE LEVEL																	
Incident noise level			Façade 1	$L_{eq,ff}$	49	46	42	41	43	50	47	34	$L_{Aeq,ff}$			53 dB	
ROOM DATA																	
Room description and reverberation time	Volume	24	Bedroom	RT60	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2				s	
FAÇADE ELEMENTS (Façade 1)																	
Glazing	Area	1	Generic 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr			29 / 25 dB	
Wall	Area	14	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr			50 / 47 dB	
Vent	No. off.	1	Greenwood 4000 SBW (Hit and miss)	Dn,e	32	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr			33 / 32 dB	
None			--														
RESULTS																	
Total calculated indoor noise level				$L_{eq,2}$	26	21	18	13	15	18	13	-	$L_{Aeq,2}$			22 dB	

Calculated Indoor Ambient Noise Levels (as per BS 8233:2014 Annex G)



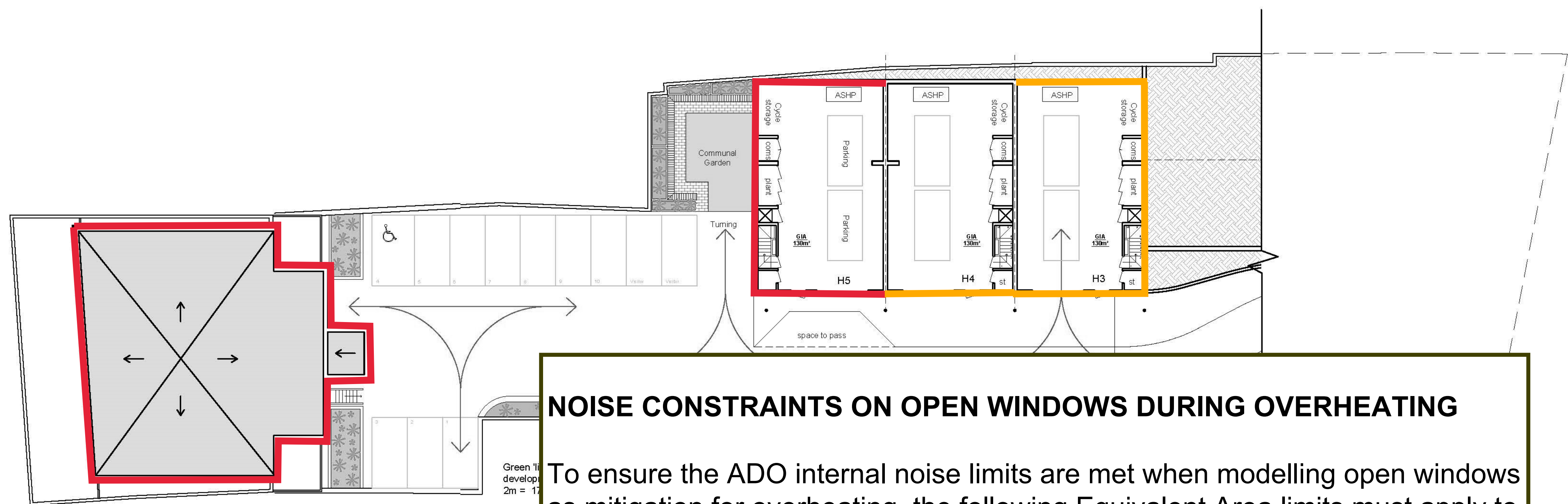
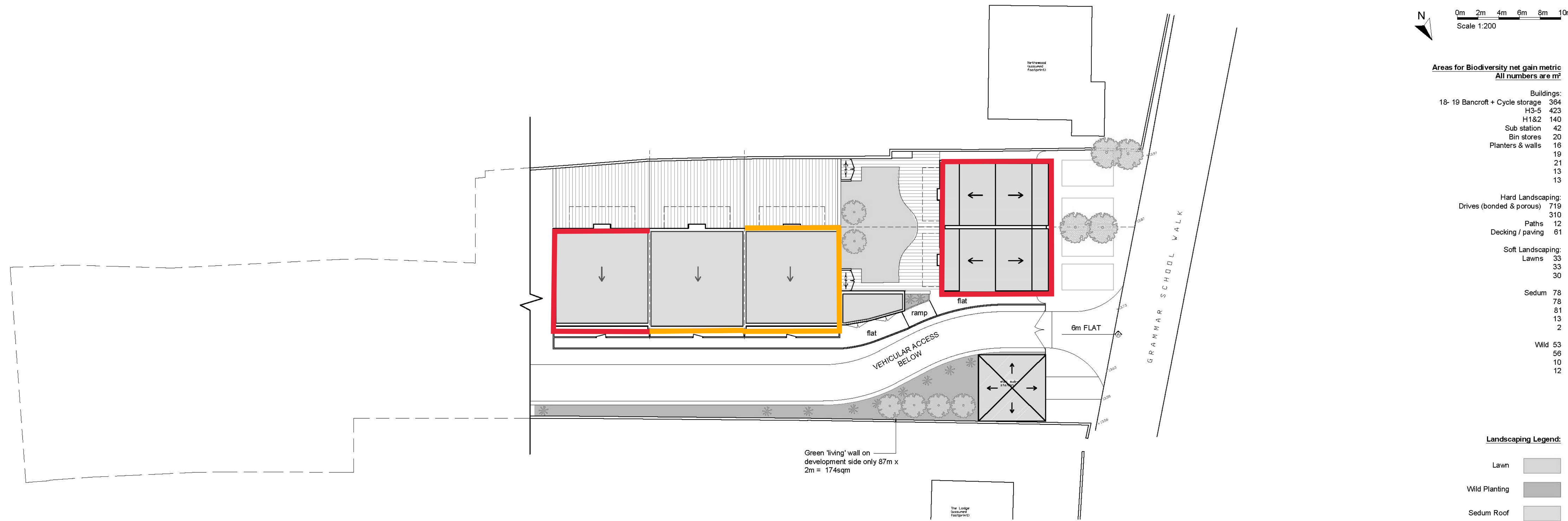
Project:	18-19 Bancroft, Hitchin
Project number:	24109
Date:	27/02/2025

Plot:	House 1
Room:	Bedroom 3

Night time ($L_{A\text{Max}}$)				Octave band centre frequency										Broadband term			
	Unit	Value	Description	Term	63	125	250	500	1k	2k	4k	8k					
EXTERNAL NOISE LEVEL																	
External noise level			Façade 1	$L_{\text{Max},1}$	61	58	56	55	57	64	60	48	$L_{A\text{Max},1}$			67 dB	
Façade correction factor				C	0	0	0	0	0	0	0	0					
INCIDENT FAÇADE NOISE LEVEL																	
Incident noise level			Façade 1	$L_{\text{Max},ff}$	61	58	56	55	57	64	60	48	$L_{A\text{Max},ff}$			67 dB	
ROOM DATA																	
Room description and reverberation time	Volume	24	Bedroom	RT60	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2				s	
FAÇADE ELEMENTS (Façade 1)																	
Glazing	Area	1	Generic 4/6-16/4	Rw	20	21	17	25	35	37	31	36	Rw / Rw+Ctr			29 / 25 dB	
Wall	Area	14	Brick and block external wall	Rw	34	40	44	45	51	56	60	63	Rw / Rw+Ctr			50 / 47 dB	
Vent	No. off.	1	Greenwood 4000 SBW (Hit and miss)	Dn,e	32	38	37	34	30	34	37	46	Dn,e,w / Dn,e,w+Ctr			33 / 32 dB	
None			--														
RESULTS																	
Total calculated indoor noise level				$L_{\text{Max},2}$	38	33	32	27	29	32	26	5	$L_{A\text{Max},2}$			36 dB	

APPENDIX D

ADO by-Façade Analysis



NOISE CONSTRAINTS ON OPEN WINDOWS DURING OVERHEATING

To ensure the ADO internal noise limits are met when modelling open windows as mitigation for overheating, the following Equivalent Area limits must apply to bedroom windows:

- Red facades: Windows closed
- Orange facades: $EA \leq 4\%$ of the bedroom floor area
- Unmarked facades: $EA \leq 13\%$ of the bedroom floor area

Colin Eades
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Client:

Owners of Hitchin

Project:

Redevelopment of
18 - 19 Bancroft,
Hitchin

Drawing
Title:

PROPOSED SITE ROOF
PLAN & LANDSCAPING

Dwg no

005

Drawn: AM

Date: JAN 2025

Checked: CE

Scale:

1:200 @ A1

Revisions:

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