

APPENDIX D.5.2.2 - OPERATIONS BUILDING FACADE NOISE BREAKOUT ASSESSMENT

Job Number: JAL 5201
 Client: AWE Aldermaston
 Receptor: Aldermaston Manor House Hotel
 Date: 22-Apr-10
 Consultant: DG
 QA: RM/TAD

Sound Power Level at Louvres of Operational Building (assuming 80 dB(A) internal noise level)

Segment ID	Segment Name	dB(A)	Octave bands with mid frequency in Hz								Distance to receptor (m)
			63	125	250	500	1 k	2 k	4 k	8 k	
D=1	Side 1	79	90	86	84	77	69	63	61	57	375
D=2	Side 2	71	82	78	76	69	61	55	53	49	345
D=3	Side 3	80	90	86	84	77	69	63	61	57	330
D=4	Side 4	77	88	84	82	75	67	61	59	55	354
D=5	Side 5	77	87	83	81	74	66	60	58	54	388
D=6	Side 6	71	82	78	76	69	61	55	53	49	N/A
D=7	Side 7	79	90	86	84	77	69	63	61	57	N/A
D=8	Side 8	83	94	90	88	81	73	67	65	61	N/A
Sum		84	95	91	89	82	74	68	66	62	

Specific Noise Level at Receptor (Calculated using ISO 9613:1996 [*1])

Segment ID	Segment Name	dB(A)	Octave bands with mid frequency in Hz							
			63	125	250	500	1 k	2 k	4 k	8 k
D=1	Side 1	18	33	23	22	16	8			
D=2	Side 2	11	26	16	16	9	1			
D=3	Side 3	20	35	25	24	18	9	2		
D=4	Side 4	16	32	21	21	15	6			
D=5	Side 5	15	31	20	20	14	5			
Total		24	39	29	28	22	14	6		

Other Contributions

Roof	20
Walls	23
IVA Chillers	19

Non-Test Operation

	Daytime	Nighttime
Specific Noise Level (dBA)	28	28
Background Noise Level (dBA)	38	36
Specific minus Background (dB)	-10	-8

[*1] - International Organization for Standardization (ISO) (1996). ISO 9613: Acoustics – Attenuation of sound during propagation outdoors. ISO Switzerland.