

**EAST DEVON DISTRICT LOCAL PLAN
NOISE IMPACT APPRAISAL/EXETER AIRPORT
(A5441/R2)**

ENGINE TESTING NOISE TRIALS: 15TH JUNE 2001

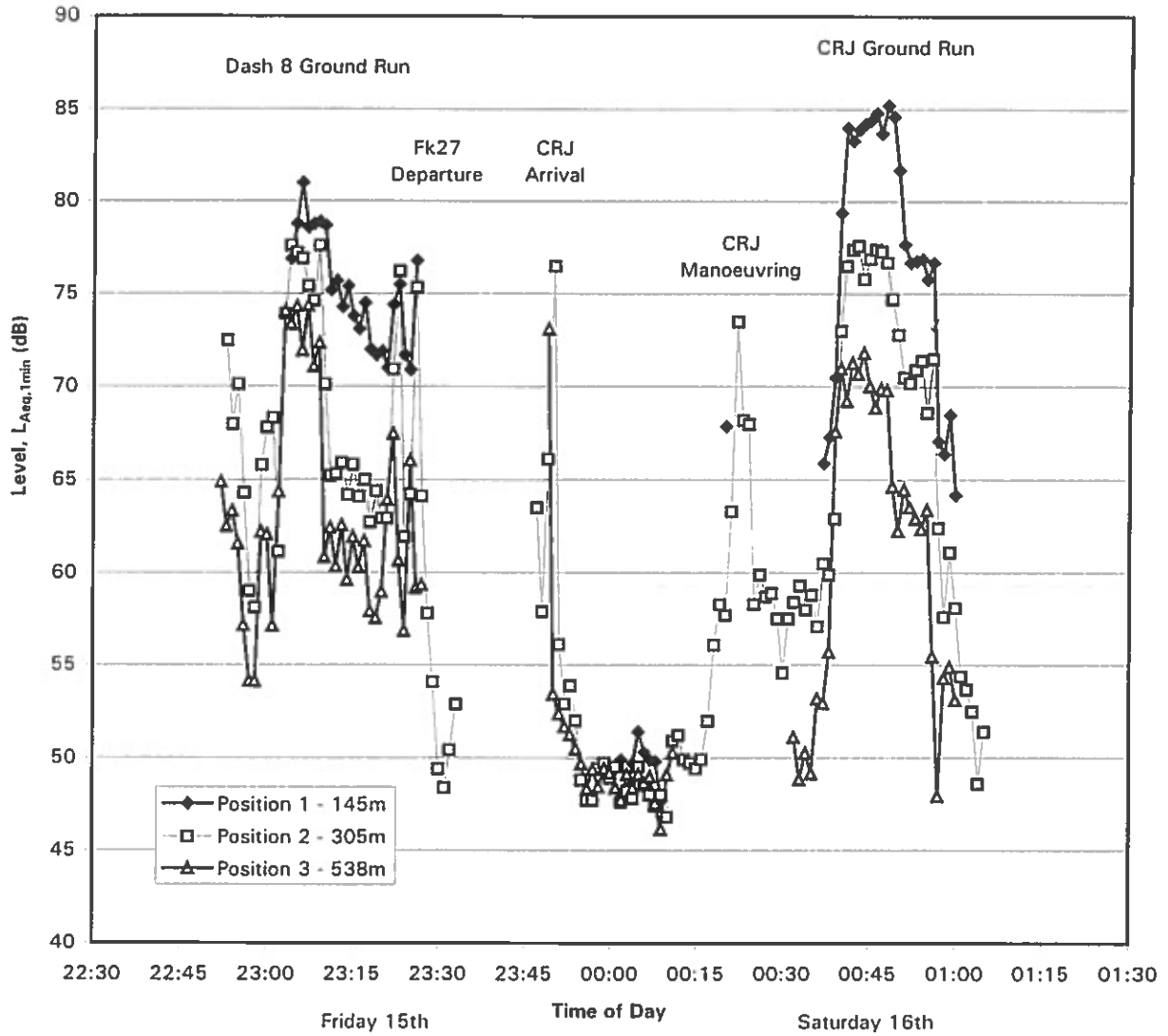
APPENDIX 4

Information from Bickerdike Allen Partners

- Noise information at locations BAP1, BAP2 & BAP3

Levels at Exeter International Airport

Ground Running Trial - June 2001



Bickerdike Allen Partners

A5441

East Devon District Local Plan

Start Time	Pos BAP1 - 145m L _{Aeq} dB	Pos BAP2 - 305m L _{Aeq} dB	Pos BAP3 - 538m L _{Aeq} dB
22:48			
22:49			
22:50			
22:51			
22:52			64.9
22:53		72.5	62.5
22:54		68	63.3
22:55		70.1	61.6
22:56		64.3	57.1
22:57		59	54.2
22:58		58.1	54.1
22:59		65.8	62.2
23:00		67.8	62.1
23:01		68.3	57.1
23:02		61.1	64.4
23:03		73.9	74.1
23:04	76.9	77.6	73.4
23:05	78.8	77.2	74.3
23:06	81	76.9	71.9
23:07	78.6	75.4	74.4
23:08	78.8	74.6	71.1
23:09	78.9	77.6	72.3
23:10	78.7	70.1	60.8
23:11	75.2	65.2	62.4
23:12	75.7	65.3	60.3
23:13	74.3	65.9	62.5
23:14	75.4	64.2	59.6
23:15	73.8	65.8	61.9
23:16	73.1	64.1	60.3
23:17	74.5	65	61.7
23:18	72	62.7	57.9
23:19	71.7	64.4	57.5
23:20	71.9	62.9	59.0
23:21	71	62.9	63.9
23:22	74.4	70.9	67.5
23:23	75.5	76.2	60.7
23:24	71.7	61.9	56.9
23:25	70.9	64.2	66.0
23:26	76.8	75.3	59.2
23:27		64.1	59.3
23:28		57.8	
23:29		54.1	
23:30		49.4	
23:31		48.4	
23:32		50.4	
23:33		52.9	
23:34			

Bickerdike Allen Partners

Start Time	Pos BAP1 - 145m L _{Aeq} dB	Pos BAP2 - 305m L _{Aeq} dB	Pos BAP3 - 538m L _{Aeq} dB
23:35			
23:36			
23:37			
23:38			
23:39			
23:40			
23:41			
23:42			
23:43			
23:44			
23:45			
23:46			
23:47		63.5	
23:48		57.9	
23:49		66.1	73.1
23:50		76.5	53.4
23:51		56.1	52.4
23:52		52.9	51.7
23:53		53.9	51.3
23:54		52	50.5
23:55		48.8	49.7
23:56		47.7	48.4
23:57		47.7	49.4
23:58		49.4	48.5
23:59		49.7	49.4
00:00		48.9	49.2
00:01	49.4	49.5	48.4
00:02	49.9	47.6	47.7
00:03	48.2	48.2	49.1
00:04	49.7	47.8	48.4
00:05	51.4	49.5	49.1
00:06	50.3	48.5	48.6
00:07	49.9	48	49.0
00:08	49.8	47.4	47.6
00:09	47.7	48	46.2
00:10		46.8	49.1
00:11		50.9	50.3
00:12		51.2	
00:13		49.9	
00:14		49.7	
00:15		49.4	
00:16		49.9	
00:17		52	
00:18		56.1	
00:19		58.3	
00:20	67.9	57.7	
00:21		63.3	
00:22		73.5	
00:23		68.2	
00:24		68	

Bickerdike Allen Partners

Start Time	Pos BAP1 - 145m L _{Aeq} dB	Pos BAP2 - 305m L _{Aeq} dB	Pos BAP3 - 538m L _{Aeq} dB
00:25		58.3	
00:26		59.9	
00:27		58.7	
00:28		58.9	
00:29		57.5	
00:30		54.6	
00:31		57.5	
00:32		58.4	51.1
00:33		59.3	48.9
00:34		58	50.3
00:35		58.8	49.2
00:36		57.1	53.2
00:37	65.9	60.5	53.0
00:38	67.3	59.9	55.7
00:39	70.5	62.9	67.6
00:40	79.4	73	71.0
00:41	84	76.5	69.3
00:42	83.3	77.4	71.3
00:43	83.9	77.6	70.7
00:44	84.2	75.8	71.8
00:45	84.4	76.9	70.0
00:46	84.8	77.4	68.9
00:47	83.7	77.3	69.9
00:48	85.2	76.7	69.8
00:49	84.6	74.7	64.7
00:50	81.7	72.8	62.3
00:51	77.7	70.5	64.5
00:52	76.7	70.2	63.5
00:53	76.8	70.9	62.9
00:54	76.9	71.4	62.4
00:55	75.8	68.6	63.4
00:56	76.7	71.5	55.5
00:57	67.1	62.4	48.0
00:58	66.4	57.6	54.3
00:59	68.5	61.1	54.9
01:00	64.2	58.1	53.1
01:01		54.4	
01:02		53.7	
01:03		52.5	
01:04		48.6	
01:05		51.4	
01:06			
01:07			
01:08			
01:09			
01:10			

Information from Cole Jarman Associates

- Noise information at locations W1 & W2

W1 Dash 8

Time	LAeq	Ama	LA1	LA10	LA50	LA90	LA95						
23:03	62.5	67.6	67.0	65.0	61.0	59.0	59.0						
23:04	59.9	65.6	65.0	63.0	58.0	56.0	55.0						
23:05	60.3	63.8	64.0	62.0	60.0	58.0	58.0						
23:06	64.8	70.1	70.0	69.0	63.0	59.0	58.0						
23:07	58.3	62.3	62.0	61.0	57.0	54.0	54.0						
23:08	60.4	67.3	67.0	63.0	59.0	56.0	56.0						
23:09	59.9	65.2	65.0	63.0	60.0	48.0	45.0						
23:10	46.0	47.7	48.0	47.0	46.0	44.0	44.0						
23:11	47.2	50.4	50.0	49.0	47.0	46.0	46.0						
23:12	46.9	50.3	50.0	49.0	47.0	44.0	44.0						
23:13	49.0	53.5	53.0	51.0	48.0	47.0	46.0						
23:14	49.3	52.0	52.0	51.0	49.0	48.0	48.0						
23:15	50.7	54.1	54.0	53.0	50.0	48.0	48.0						
23:16	50.6	54.2	54.0	52.0	50.0	48.0	47.0						
23:17	50.8	56.5	56.0	55.0	50.0	45.0	44.0						
23:18	46.3	49.6	49.0	47.0	46.0	45.0	44.0						
23:19	48.3	53.2	53.0	51.0	47.0	45.0	45.0						
23:20	51.2	57.0	57.0	53.0	50.0	48.0	48.0						
23:21	52.4	57.6	57.0	54.0	52.0	50.0	49.0						
23:22	54.4	61.2	61.0	58.0	53.0	50.0	50.0						
	61.0												
	50.1												
15A003													
Spectrum @ 23.05													
Frequency	Sound Level dB												
50	44.2												
63	49												
80	67.6												
100	54												
125	45.7												
160	58.8												
200	51.1												
250	58.4												
315	56.5												
400	55												
500	52.1												
630	50.9												
800	52.7												
1k	52.3												
1k25	49.4												
1k6	48.2												
2k	45												
2k5	41.9												
3k15	36.2												
4k	29.3												
5k	24.9												

Figure 6020/W1/D1: Clyst Hayes
 Engine Test Noise Levels at Position W1
 Dash 8: Wind 180 deg. 6 - 9 knots

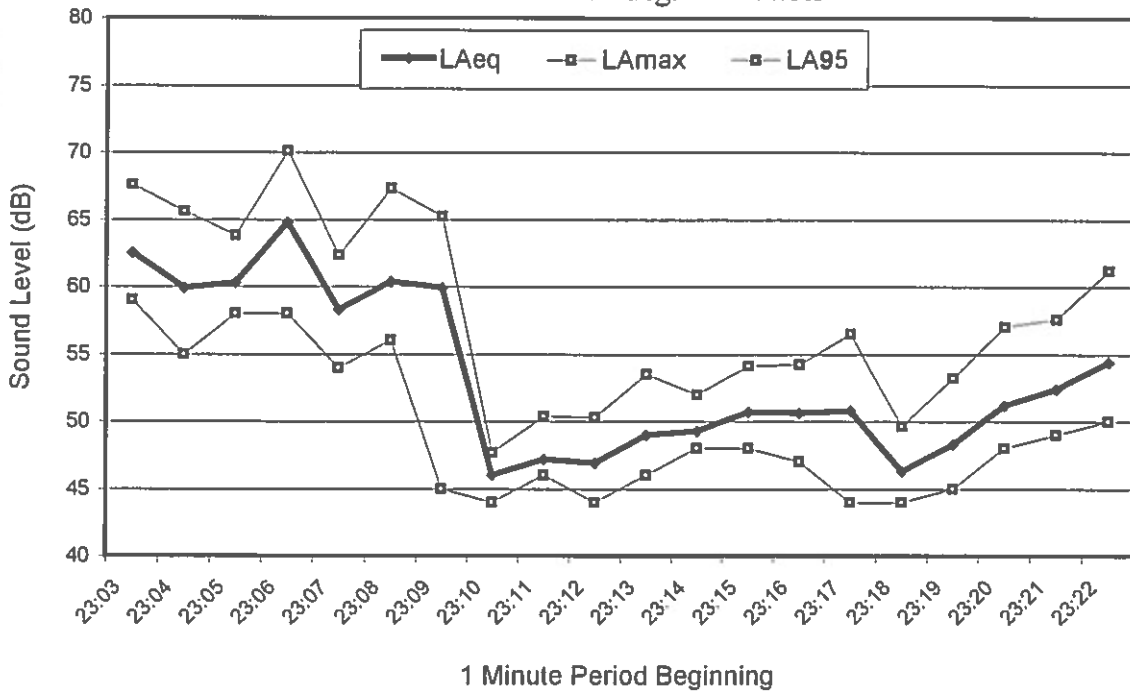


Figure 6020/W1/TOB1: Clyst Hayes
 Engine Test Spectrum at Position W1
 Dash 8: Wind 180 deg. 6 - 9 knots

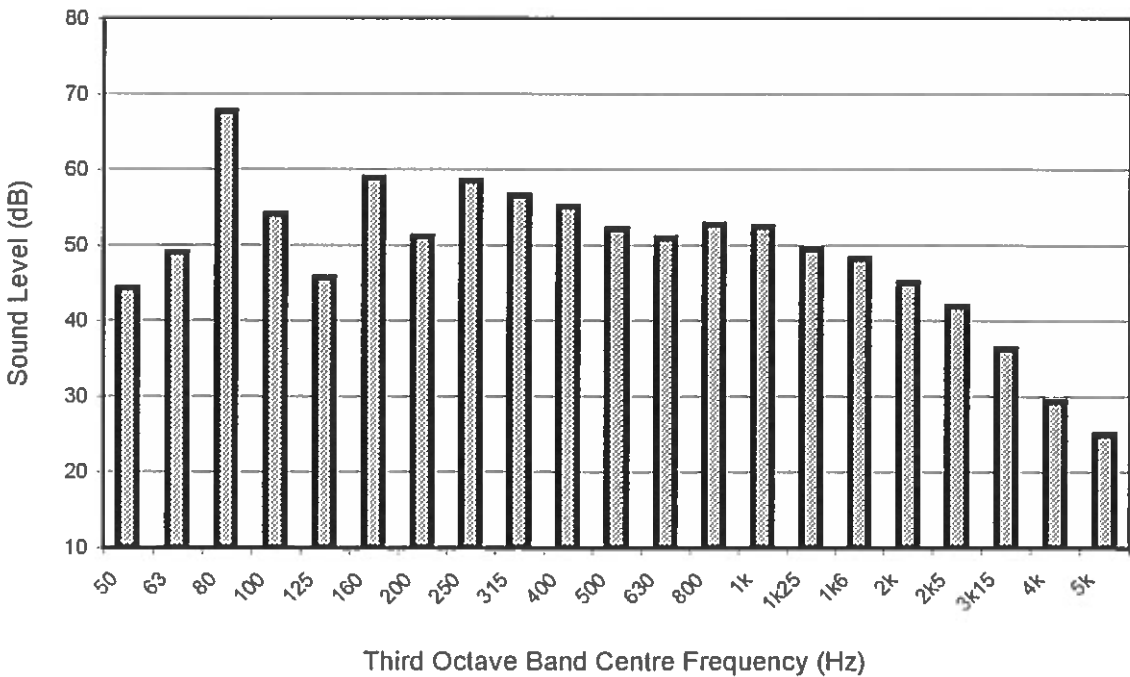


Figure 6020/W1/D2: Clyst Hayes
 Engine Test Noise Levels at Position W1
 CRJ: Wind 170 deg. 10 - 12 knots

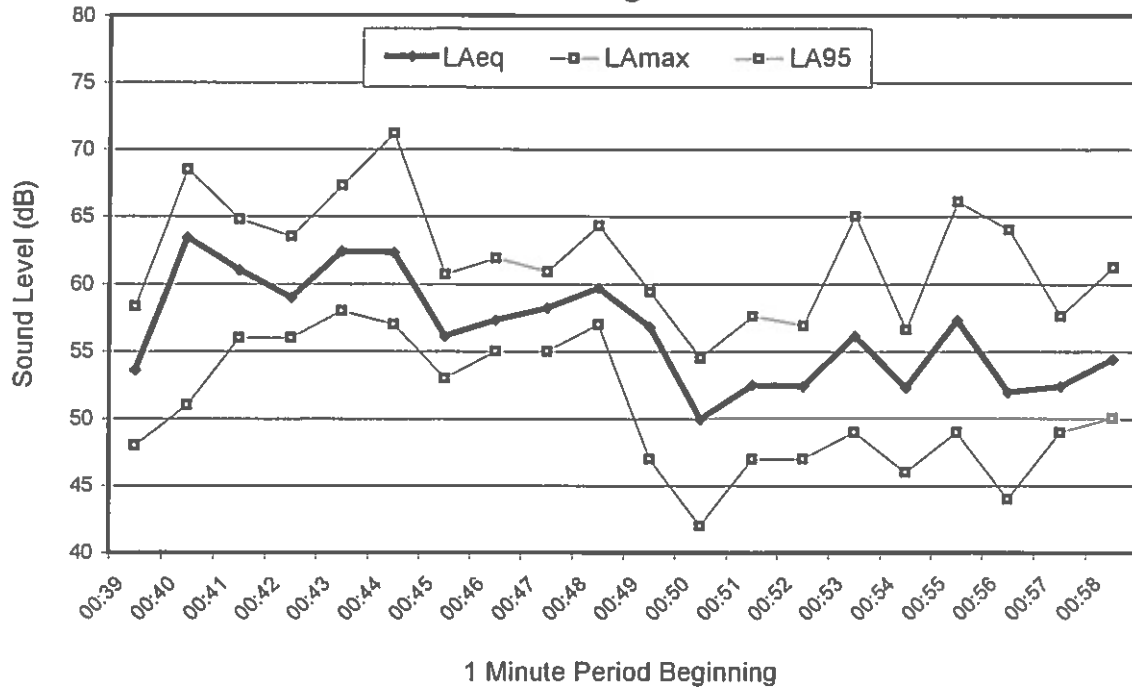


Figure 6020/W1/TOB2: Clyst Hayes
 Engine Test Spectrum at Position W1
 CRJ: Wind 170 deg. 10 - 12 knots

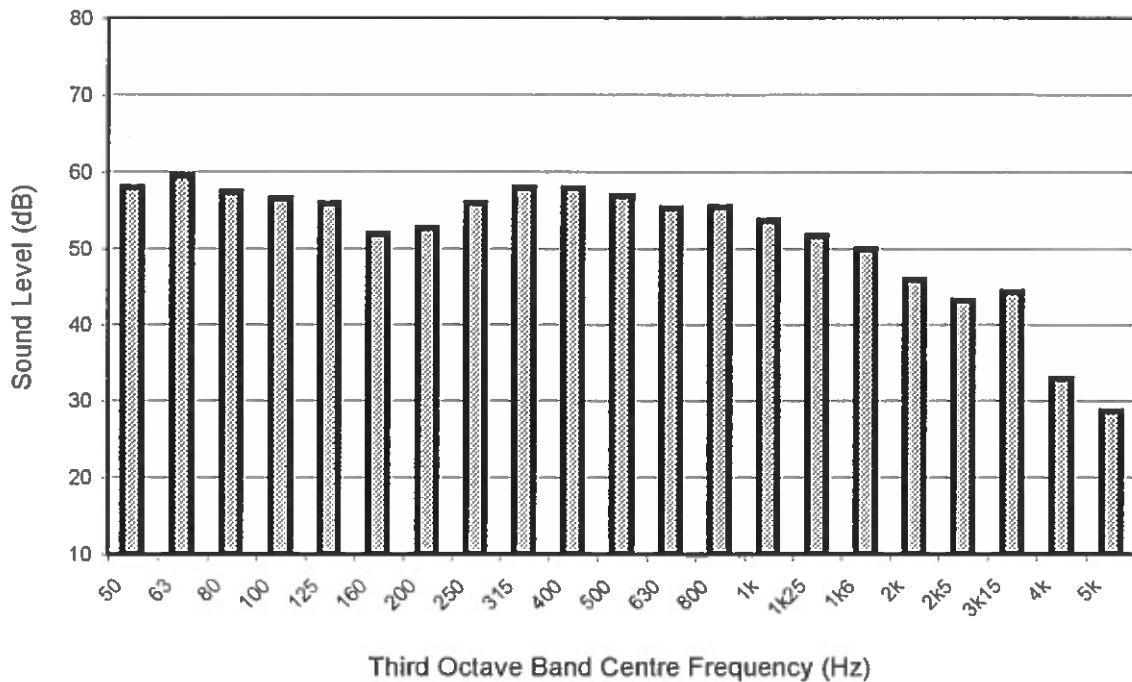


Figure 6020/W2/D3: Clyst Hayes
 Engine Test Noise Levels at Position W2
 Dash 8: Wind 180 deg. 6 - 9 knots

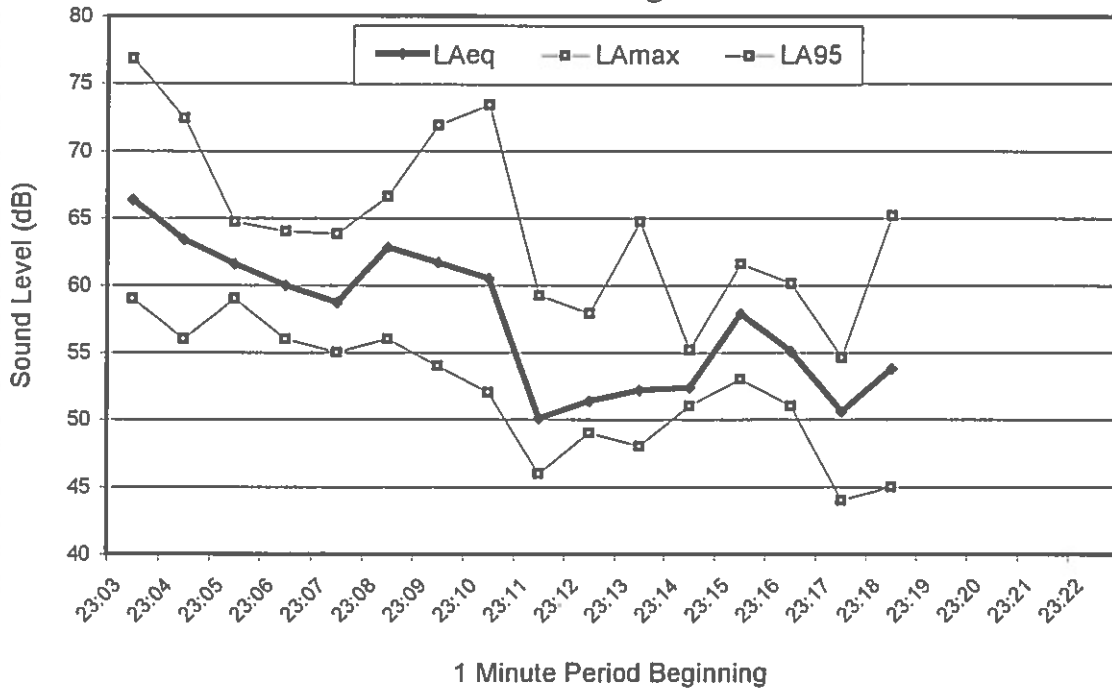
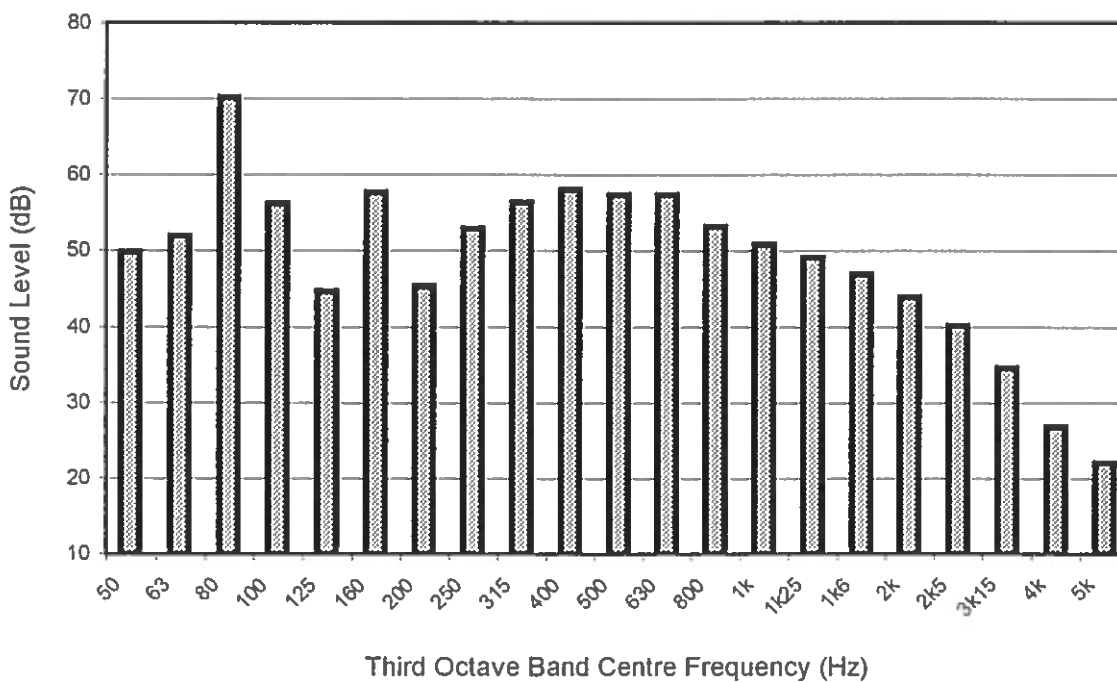


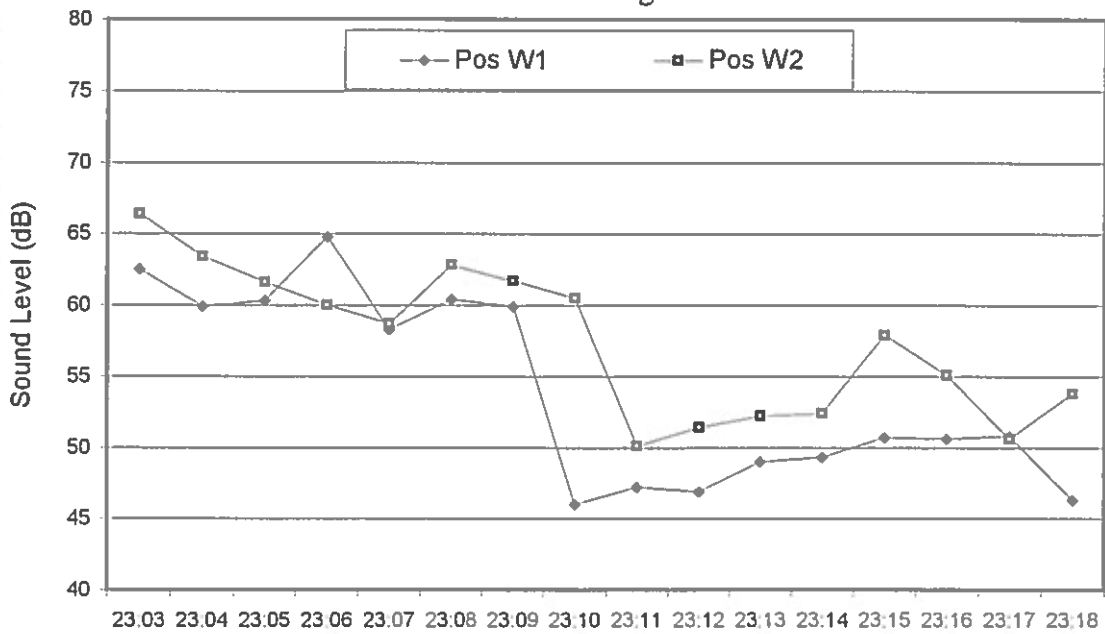
Figure 6020/W2/TOB3: Clyst Hayes
 Engine Test Spectrum at Position W2
 Dash 8: Wind 180 deg. 6 - 9 knots



W2 Dash 8

Time	Pos W1	Pos W2
23:03	62.5	66.4
23:04	59.9	63.4
23:05	60.3	61.6
23:06	64.8	60.0
23:07	58.3	58.7
23:08	60.4	62.8
23:09	59.9	61.7
23:10	46.0	60.5
23:11	47.2	50.1
23:12	46.9	51.4
23:13	49.0	52.2
23:14	49.3	52.4
23:15	50.7	57.9
23:16	50.6	55.1
23:17	50.8	50.6
23:18	46.3	53.8

Figure 6020/C1: Clyst Hayes
 Engine Test Noise Level Comparison
 Dash 8: Wind 180 deg. 6 - 9 knots



1 Minute Period Beginning

Figure 6020/W2/D4: Clyst Hayes
 Engine Test Noise Levels at Position W2
 CRJ: Wind 170 deg. 10 - 12 knots

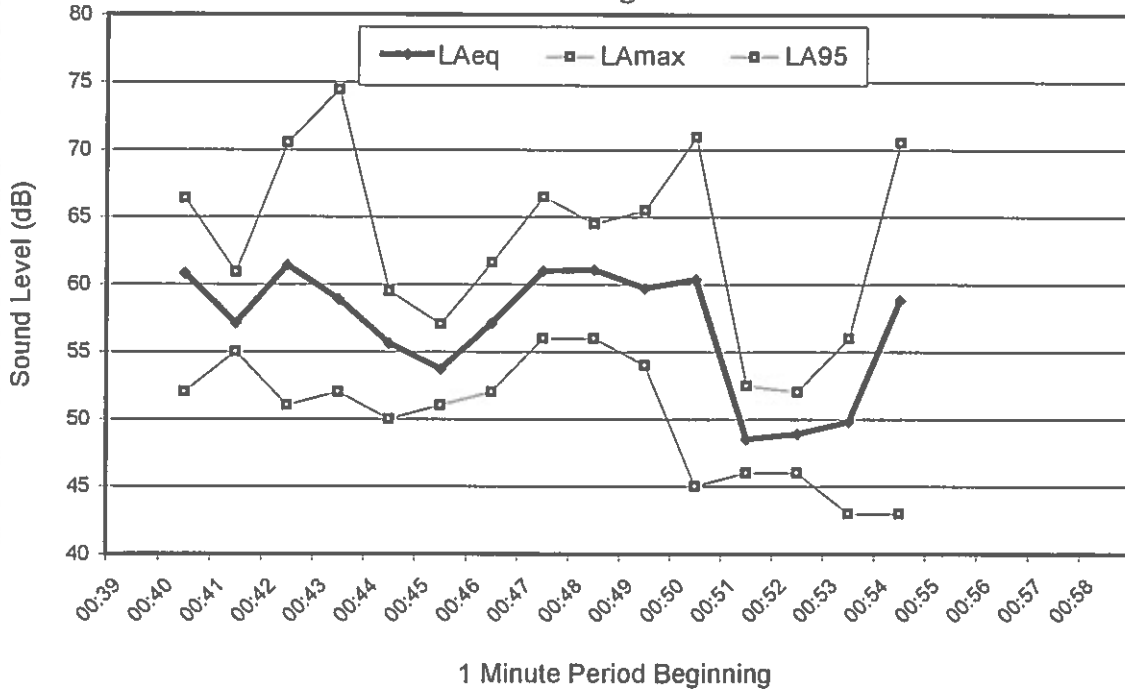
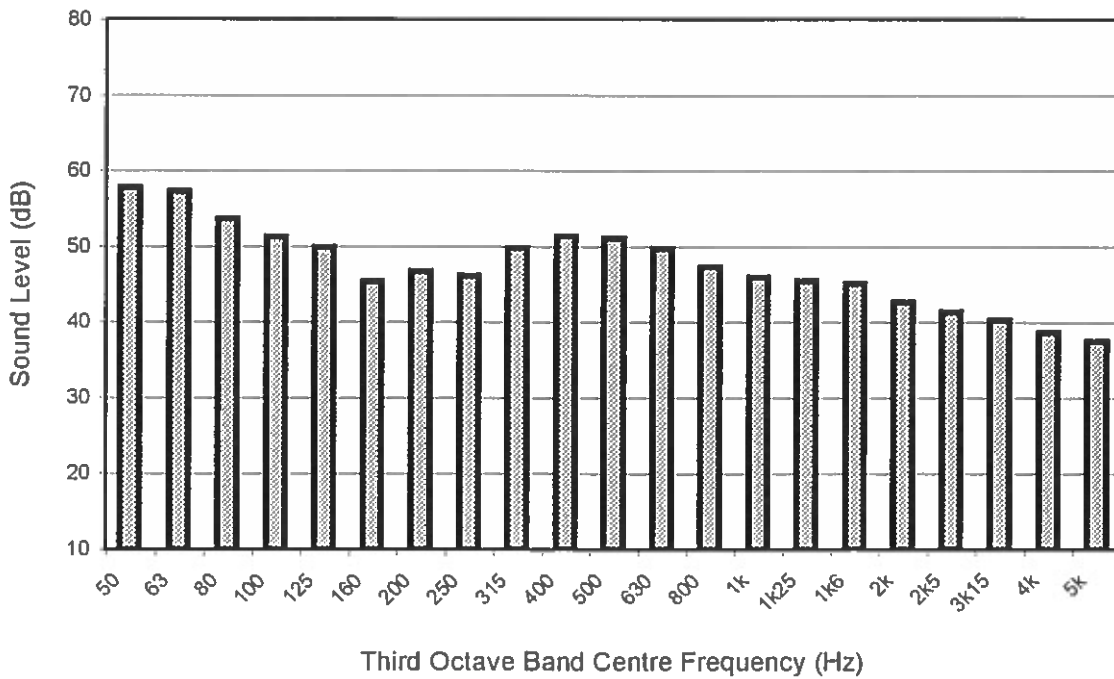
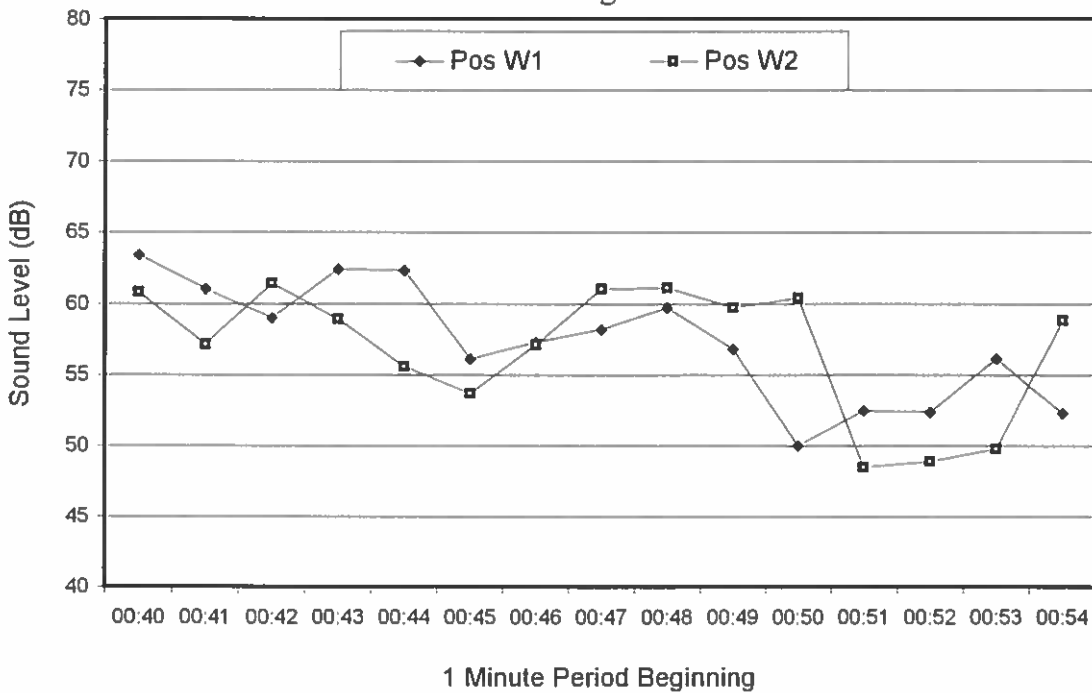


Figure 6020/W2/TOB4: Clyst Hayes
 Engine Test Spectrum at Position W2
 CRJ: Wind 170 deg. 10 - 12 knots



Time	Pos W1	Pos W2
00:40	63.4	60.8
00:41	61.0	57.1
00:42	59.0	61.4
00:43	62.4	58.9
00:44	62.3	55.6
00:45	56.1	53.7
00:46	57.3	57.1
00:47	58.2	61.0
00:48	59.7	61.1
00:49	56.8	59.7
00:50	50.0	60.4
00:51	52.5	48.5
00:52	52.4	48.9
00:53	56.1	49.8
00:54	52.3	58.8

Figure 6020/C2: Clyst Hayes
 Engine Test Noise Level Comparison
 CRJ: Wind 170 deg. 10 - 12 knots



Information from East Devon District Council

- Noise information at location ED1

File Note

Noise measurement taken at Exeter Airport on evening of 15th June and early morning of 16th June 2001.

Site meeting at 9.30 p.m (AW and AML in attendance from East Devon Environmental Health)

Bruel and Kjaer sound level meter 2237 used and calibrated at 93.6dB (All sound level meters used the same calibrator at the start of the measurement period)

Various measurement sites used AW and AML measured at the village of Rockbeare. The sound level meter was mounted on a tripod and facing the airport. It was in position approximately 3m from the picnic table and swings of the playing fields in the village itself.

Weather conditions damp, some cloud, showers intermittent, breezy.

Background Measurements.

Background measurements of 1 minute Leq dBA slow were taken in the playing fields of Rockbeare village between the hours of 22.39 hrs and 22.48hrs.

39.0
38.0
35.5
35.5.
41.5

Due to the rain earlier in the evening the tyre/road noise was clearly audible from the A30 dual carriageway due to excess surface water.

Measurements with Engine Testing.

A further set of measurements made with engine testing taking place.

Measurements of 1 minute Leq dBA SLOW were recorded between 22.50hrs and 23.06 hrs as follows

53.1
44.7
49.1
39.8
46.5
45.1
43.9

Further measurements with Engine Testing

A further set of measurements taken at same location between 00.34hrs and 00.46hrs
1 minute Leq SLOW dBA

36.7
39.7
42.2 (overload due to wind)
44.4
41.0
39.5
40.2
41.4
38.7

Return to Exeter Airport and agreed to exchange measurements next week.

Officer Opinion

The noise emanating from engine testing at the Airport was not intrusive and at the current noise levels and weather conditions complaints are unlikely to be justified at the residential properties bordering Rockbeare playing fields.

Anita Wilkinson
16th June 2001