

Community Noise Monitoring

Stanford on Soar, 2 August – 12 September 2011

Introduction

As a thriving regional airport, over 4 million passengers fly through East Midlands Airport each year. In addition, around 300,000 tonnes of mail and cargo are handled at the airport by logistics companies including DHL, UPS and Royal Mail. We are committed to our local communities, and understand that aircraft noise can be intrusive.

In response to requests from residents and the Parish Council of Stanford on Soar, the Airport's Environment Department conducted noise monitoring at a residential property on Leake Lane, Stanford on Soar. A noise monitor was installed between 2 August and 12 September 2011 with the aim of analysing noise levels in relation to UK Planning Policy Guidance concerning noise.

East Midlands Airport is equipped with one Runway which operates in two modes – Runway 09 (due east), and Runway 27 (due west). To ensure the safe operation of aircraft it is a requirement that take-offs and landings are performed into the wind, as such the active Runway mode is dictated by the prevailing wind direction.

To minimise the impact of aircraft noise on local population centres, the Airport operates a system of noise preferential routes (see appendix 1) for departing aircraft. The effect of these routes is that aircraft departing from the airport with a destination to the south during periods of easterly winds are likely to operate in the vicinity of Stanford on Soar. Whilst it is not desirable for aircraft to overfly any populated area, the departure route in question was designed to ensure aircraft do not operate over the more densely populated areas of Loughborough and Leicester.

As landing aircraft usually need to undertake a period of straight flight towards the airport's Runway, to safely reduce speed and altitude, it is not possible to re-route these operations and as a result when aircraft operate on Runway 27 (i.e. land from the east) they routinely pass a point approximately 1,800ft above mean sea level around 2.5km to the north of the monitoring location. In recent years the airport has operated a preferential Runway policy whereby aircraft continue to operate on Runway 27 even when there is a light easterly wind. This policy enables aircraft to continue to operate on Runway 27 and by implication to avoid aircraft departing from the airport over Stanford on Soar. This policy has increased the proportion of westerly operations from typically 70% to more than 80%. The practical effect of this policy has been to reduce the number of aircraft departing over Stanford-on-Soar by around one third.

Methodology

Noise monitoring equipment was installed in the garden of a residential property located approximately 8.3km to the south east of the airport and is a distance of approximately 2.5km from the approach path which is followed by any aircraft arriving at the airport from the East.

Noise levels were continuously monitored between 2 August and 12 September 2011. There were however several occasions on which technical issues resulted in gaps in the data obtained, these were between:

- 21 August (approximately 1am) – 22 August (approximately 8am);
- 23 August (approximately 1pm) – 24 August (approximately 8am);
- 28 August (approximately 1am) – 30 August (approximately 8am) and;
- 3 September (approximately 1pm) – 5 September (approximately 8am).

In reviewing noise levels at the property, it is important to note that the noise monitoring equipment used detects noise events from all sources. As such, a variety of sources contribute to noise levels, including traffic using Leake Lane which is adjacent to the monitoring location, or the A6006 Melton Road to the north.

In relation to the collation of data, noise levels were recorded and are hereafter reported in A weighted decibels, dB(A), which seek to replicate the response of the human ear, with L_{Aeq} values representing the “average” noise energy over a given time period, and L_{Amax} figures being the highest or maximum noise level during a given time period.

All times hereafter are given in the 24hr format (HHMM), and refer to British Summer Time (BST) unless otherwise stated. This report considers daytime hours to be from 0700-2300 (local time) and night hours to be from 2300-0700 (local time), this being consistent with UK Department for Environment, Food and Rural Affairs (DEFRA) best practice, UK PPG24 Planning Policy Guidance, and the published airport noise contour maps.

Results

A complete results dataset is attached as appendix 2, this details hourly and period (i.e. day, or night) L_{Aeq} and L_{Amax} figures, and also indicates the Runway in use. Appendix 3 provides a useful summary of this data.

Discussion

Runway operation

During the sampling period, as would be expected, aircraft operated predominantly on Runway 27 (arriving over Kegworth). There were however a number of operations on Runway 09 which enabled noise levels to be analysed during periods of easterly winds with aircraft departing over Stanford on Soar. Figure 1 demonstrates the percentage of operations in each Runway mode for each day and night period during the noise monitoring exercise. This graphic also demonstrates a number of periods during which only a very small percentage of operations were in an Easterly orientation, highlighting that Air Traffic Controllers at the airport were successful in applying our preferential Runway policy.

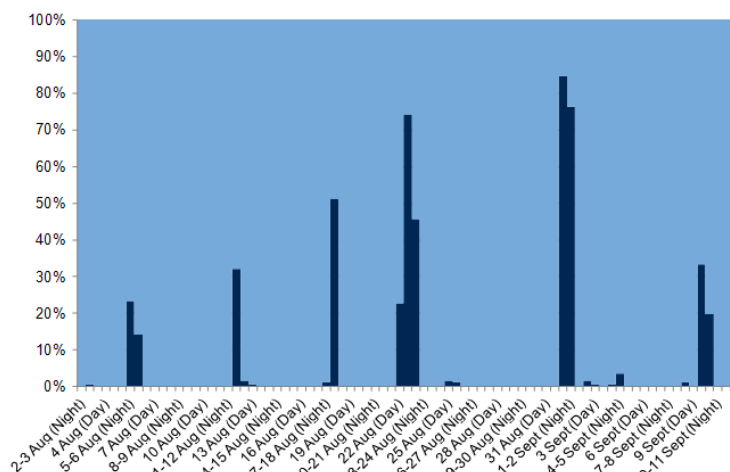


Figure 1. Operations by Runway (%) for day and night periods, 2nd August to 12th September 2011.
Runway 09 = Dark Blue, Runway 27 = Light Blue.

LEQ and Planning Guidance Notes

In order to place these noise levels in context it is useful to consider the guidance provided by Planning Policy Guidance Note PPG24, Planning and Noise. Whilst this document applies to new developments it also provides a very useful context for this study.

PPG24 defines four noise exposure categories (NECs), detailed in table 2, which assumes a property is subject to a number of differing noise sources, the most sensitive case used by PPG24. Table 3 shows the distribution of these noise exposure categories in the day and night time periods, and figure 2 L_{Aeq} levels throughout the sampling period.

NEC	DAYTIME (LEQ)	NIGHT (LEQ)
A	<55 dB	<45 dB
B	55-63 dB	45-57 dB
C	63-72 dB	57-66 dB
D	>72 dB	>66 dB

Table 2. NEC Boundaries ('Mixed Source')

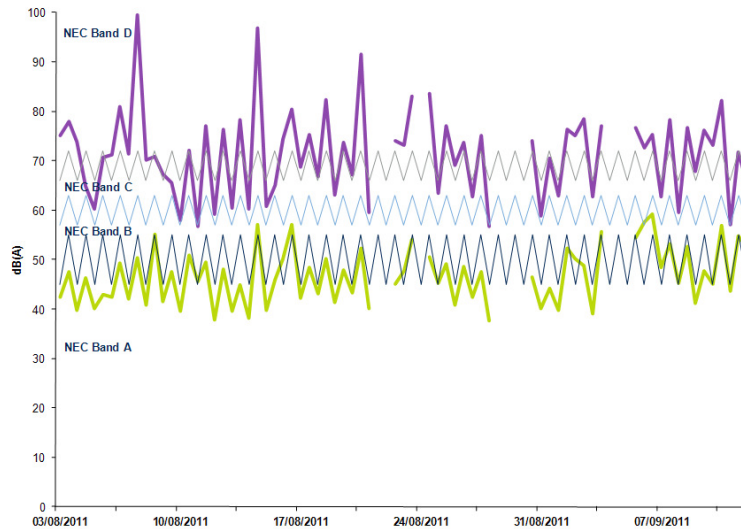


Figure 2. Hourly L_{Amax} (Purple) and L_{Aeq} (Green) values, with NEC bands (relating to L_{Aeq}) labelled.

	Runway 09			Runway 27		
NEC	Day	Night	Total	Day	Night	Total
A	2	0	2	28	25	53
B	0	2	2	6	7	13
C	0	0	0	0	1	1

Table 3. Distribution of LEQ levels in relation to NEC categories.

The above results show that when Runway 27 is in use, the sampling location is considered within NEC A during the vast majority of day and night time periods. However during periods of easterly winds and Runway 09 operations (approximately 20% of the time) the exposure categories are NEC A (Day) and B (Night). When considering the average of all periods sampled (displayed in Appendix 2), the location would however be within NEC A (Day) and NEC B (Night) during periods of both easterly and westerly wind. Using the complete data set obtained, and assuming a 20:80 split between operations on Runways 09 and 27 respectively, over an annual period the location would be considered as NEC A during the day ($L_{Aeq} = 49.9$ dB), and NEC B during the night ($L_{Aeq} = 50.0$ dB).

Within NEC A the guidance considers that *'Noise need not be considered as a determining factor in granting planning permission, although the noise level at the high end of the category should not be regarded as a desirable level'*.

Within NEC B the guidance considers that *'Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection against noise'*.

***L_{Amax}* Events**

The guidance in PPG24 also makes provision for areas that experience intermittent high noise events at night, such as aircraft operations, with the guidance noting that *'Sites where individual noise events regularly exceed 82 dB L_{Amax} in any hour should be treated as being in NEC C.'* Maximum noise values for each hour of day and night periods are detailed in Appendices 2 and 3.

Appendix 2 also specifies the aircraft type and origin/destination associated with the greatest L_{Amax} event of each period. It is notable from those details that, during westerly operations (aircraft arriving from the east), the vast majority of L_{Amax} events cannot be correlated to aircraft operations. However, when aircraft depart from the airport and fly over Stanford on Soar, the vast majority of L_{Amax} events are correlated to aircraft operations. The aircraft types responsible for L_{Amax} events during periods of Easterly operations are wide ranging and reflect those types operating at the airport in general.

Conclusion

Day and night noise levels at the monitoring location are similar. Although peak noise events are greater during easterly operations when aircraft overfly Stanford on Soar, average noise levels were found to be lower than during periods of westerly wind. Considering LEQ values during both day and night time periods, the monitoring location is assessed to fit into NEC A during the day and NEC B at night. Several noise events were observed to exceed 82 dB, however, many of these events were not correlated to aircraft operations and the events do not *"regularly exceed 82 dB L_{Amax} in any hour"*, as the PPG24 guidance requires.

Further Information

For further information, or to review our wider environmental policies please visit www.eastmidlandsairport.com/environment or contact us:

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Appendix 1



Appendix 2

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 02/08 - 03/08	23:00	44.6	67.4		
	00:00	41.3	75.0		
	01:00	34.5	46.9		
	02:00	34.6	47.8		
	03:00	34.8	49.6		
	04:00	36.9	51.8	Runway in use	27
	05:00	47.2	69.7	L _{Amax} NIGHT (dB)	75.0 @ 00:17
	06:00	44.6	56.1	L _{Aeq,8h} NIGHT (dB)	42.3 (No EMA a/c)
Day 03/08	07:00	45.3	59.4		
	08:00	45.5	56.2		
	09:00	52.8	74.6		
	10:00	48.7	77.3		
	11:00	44.0	66.8		
	12:00	43.1	58.9		
	13:00	42.5	58.7		
	14:00	41.8	59.1		
	15:00	48.5	59.7		
	16:00	48.9	65.8		
	17:00	44.9	54.4		
	18:00	45.3	56.0		
	19:00	45.4	68.2		
	20:00	53.7	77.9	Runway in use	27
	21:00	42.3	53.2	L _{Amax} DAY (dB)	77.9 @ 20:55
	22:00	40.2	56.1	L _{Aeq,16h} DAY (dB)	47.6 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 03/08-04/08	23:00	36.7	48.3		
	00:00	40.6	73.8		
	01:00	31.8	44.5		
	02:00	33.3	50.5		
	03:00	34.9	50.8		
	04:00	36.4	56.2	Runway in use	27
	05:00	42.9	61.8	L _{Amax} NIGHT (dB)	73.8 @ 00:20
	06:00	44.6	56.0	L _{Aeq,8h} NIGHT (dB)	39.8 (No EMA a/c)
Day 04/08	07:00	47.3	55.7		
	08:00	49.4	64.8		
	09:00	46.8	54.9		
	10:00	46.0	55.0		
	11:00	46.9	54.9		
	12:00	47.1	57.5		
	13:00	45.6	57.8		
	14:00	43.7	54.1		
	15:00	49.6	60.5		
	16:00	46.1	54.6		
	17:00	46.6	59.7		
	18:00	44.7	59.8		
	19:00	44.9	64.0		
	20:00	45.7	63.1	Runway in use	27
	21:00	42.0	53.7	L _{Amax} DAY (dB)	64.8 @ 08:47
	22:00	40.3	50.7	L _{Aeq,16h} DAY (dB)	46.3 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 04/08-05/08	23:00	39.1	48.2		
	00:00	38.0	48.4		
	01:00	35.9	46.9		
	02:00	37.7	51.3		
	03:00	36.6	51.8		
	04:00	36.3	51.2	Runway in use	27
	05:00	43.7	55.8	L _{Amax} NIGHT (dB)	60.3 @ 06:29
	06:00	43.8	60.3	L _{Aeq,8h} NIGHT (dB)	40.0 (No EMA a/c)
Day 05/08	07:00	45.7	55.7		
	08:00	45.5	58.9		
	09:00	44.0	54.5		
	10:00	42.9	54.0		
	11:00	43.1	54.2		
	12:00	43.0	61.5		
	13:00	41.5	52.8		
	14:00	40.7	57.0		
	15:00	41.5	50.9		
	16:00	42.2	58.6		
	17:00	41.5	54.1		
	18:00	41.9	70.7		
	19:00	43.9	57.6		
	20:00	43.5	61.7	Runway in use	27
	21:00	42.6	56.8	L _{Amax} DAY (dB)	70.7 @ 18:20
	22:00	39.9	56.1	L _{Aeq,16h} DAY (dB)	43.0 (B76Y, CVG-EMA)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 05/08-06/08	23:00	38.7	49.2		
	00:00	37.3	49.2		
	01:00	35.1	46.9		
	02:00	34.0	50.0		
	03:00	37.2	58.2		
	04:00	37.0	51.1	Runway in use	27
	05:00	42.0	54.1	L _{Amax} NIGHT (dB)	71.2 @ 06:30
	06:00	49.7	71.2	L _{Aeq,8h} NIGHT (dB)	42.4 (B738, EMA-ACE)
Day 06/08	07:00	56.3	75.3		
	08:00	50.7	73.0		
	09:00	47.5	69.7		
	10:00	45.3	57.0		
	11:00	43.9	54.5		
	12:00	46.1	59.7		
	13:00	46.0	59.6		
	14:00	46.8	65.8		
	15:00	47.6	65.9		
	16:00	55.5	81.0		
	17:00	45.7	60.2		
	18:00	45.2	57.6		
	19:00	45.4	65.9		
	20:00	40.7	51.1	Runway in use	27
	21:00	39.6	48.3	L _{Amax} DAY (dB)	81.0 @ 16:50
	22:00	39.3	50.4	L _{Aeq,16h} DAY (dB)	49.2 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 06/08-07/08	23:00	37.9	49.2		
	00:00	38.9	48.6		
	01:00	39.7	60.4		
	02:00	47.3	71.4		
	03:00	40.0	56.7		
	04:00	38.1	51.6	Runway in use	27
	05:00	41.5	55.2	L _{Amax} NIGHT (dB)	71.4 @ 02:12
	06:00	43.5	51.8	L _{Aeq,8h} NIGHT (dB)	42.1 (B752, PFO-EMA)
Day 07/08	07:00	46.4	54.2		
	08:00	47.8	56.1		
	09:00	48.4	67.6		
	10:00	49.7	58.8		
	11:00	50.2	61.5		
	12:00	51.0	69.1		
	13:00	50.5	61.4		
	14:00	59.3	99.5		
	15:00	44.8	55.2		
	16:00	45.7	58.3		
	17:00	45.4	68.7		
	18:00	42.5	67.2		
	19:00	43.1	52.4		
	20:00	48.8	58.0	Runway in use	27
	21:00	48.3	57.1	L _{Amax} DAY (dB)	99.5 @ 14:42
	22:00	39.6	50.0	L _{Aeq,16h} DAY (dB)	50.4 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 07/08-08/08	23:00	36.0	50.8		
	00:00	43.1	65.7		
	01:00	35.7	52.0		
	02:00	33.3	54.5		
	03:00	34.0	48.9		
	04:00	36.7	60.3	Runway in use	27
	05:00	43.2	60.6	L _{Amax} NIGHT (dB)	70.1 @ 06.48
	06:00	45.8	70.1	L _{Aeq,8h} NIGHT (dB)	40.8 (No EMA a/c)
Day 08/08	07:00	47.1	62.3		
	08:00	49.0	61.7		
	09:00	53.7	63.3		
	10:00	56.1	66.5		
	11:00	56.2	66.3		
	12:00	53.6	62.6		
	13:00	54.6	63.9		
	14:00	54.9	66.5		
	15:00	55.0	67.7		
	16:00	54.5	65.4		
	17:00	56.5	66.7		
	18:00	58.7	70.3		
	19:00	59.0	70.8		
	20:00	57.2	66.8	Runway in use	27
	21:00	50.2	60.5	L _{Amax} DAY (dB)	70.8 @ 19:24
	22:00	47.4	59.2	L _{Aeq,16h} DAY (dB)	55.2 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 08/08-09/08	23:00	43.5	57.0		
	00:00	41.1	49.9		
	01:00	39.2	51.4		
	02:00	40.3	51.8		
	03:00	38.2	53.8		
	04:00	38.9	53.5	Runway in use	27
	05:00	43.2	58.0	L _{Amax} NIGHT (dB)	67.3 @ 06:12
	06:00	44.0	67.3	L _{Aeq,8h} NIGHT (dB)	41.6 (No EMA a/c)
Day 09/08	07:00	45.8	55.9		
	08:00	47.5	60.9		
	09:00	47.8	65.6		
	10:00	46.1	54.2		
	11:00	46.6	56.2		
	12:00	46.6	55.4		
	13:00	48.8	55.3		
	14:00	50.4	59.4		
	15:00	49.3	58.8		
	16:00	50.6	58.0		
	17:00	48.8	58.9		
	18:00	47.8	63.1		
	19:00	45.5	59.4		
	20:00	44.5	64.8	Runway in use	27
	21:00	43.3	60.2	L _{Amax} DAY (dB)	65.6 @ 09:21
	22:00	40.9	53.8	L _{Aeq,16h} DAY (dB)	47.5 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 09/08-10/08	23:00	38.6	53.1		
	00:00	37.9	52.8		
	01:00	35.0	49.9		
	02:00	36.4	51.9		
	03:00	36.0	55.9		
	04:00	35.9	48.6	Runway in use	27
	05:00	43.0	58.0	L _{Amax} NIGHT (dB)	58.0 @ 05:33
	06:00	43.6	53.9	L _{Aeq,8h} NIGHT (dB)	39.5 (No EMA a/c)
Day 10/08	07:00	47.5	57.2		
	08:00	48.5	62.9		
	09:00	47.8	55.1		
	10:00	48.7	63.3		
	11:00	52.5	65.1		
	12:00	54.8	72.1		
	13:00	54.7	64.6		
	14:00	52.9	65.2		
	15:00	47.9	61.2		
	16:00	50.6	59.8		
	17:00	51.9	63.4		
	18:00	52.3	65.3		
	19:00	49.1	57.5		
	20:00	47.6	60.0	Runway in use	27
	21:00	47.0	57.0	L _{Amax} DAY (dB)	72.1 @ 12.14
	22:00	47.8	57.5	L _{Aeq,16h} DAY (dB)	50.9 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 10/08-11/08	23:00	46.7	56.3		
	00:00	47.2	54.5		
	01:00	44.5	53.6		
	02:00	44.3	54.0		
	03:00	46.3	55.1		
	04:00	44.8	55.5	Runway in use	27
	05:00	44.3	56.8	L _{Amax} NIGHT (dB)	56.8 @ 05:24
	06:00	45.0	52.5	L _{Aeq,8h} NIGHT (dB)	45.5 (No EMA a/c)
Day 11/08	07:00	49.5	57.3		
	08:00	49.9	59.7		
	09:00	48.9	54.9		
	10:00	48.8	57.2		
	11:00	49.6	66.2		
	12:00	47.3	57.7		
	13:00	49.0	59.0		
	14:00	54.7	77.0		
	15:00	52.6	62.3		
	16:00	51.5	62.7		
	17:00	50.0	64.9		
	18:00	46.7	54.6		
	19:00	45.5	64.0		
	20:00	41.6	54.2	Runway in use	27
	21:00	40.1	52.0	L _{Amax} DAY (dB)	77.0 @ 14:17
	22:00	39.9	63.4	L _{Aeq,16h} DAY (dB)	49.4 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 11/08-12/08	23:00	39.4	56.5		
	00:00	36.4	48.8		
	01:00	34.2	48.9		
	02:00	34.8	48.4		
	03:00	35.9	54.6		
	04:00	33.7	48.5	Runway in use	27
	05:00	39.6	53.7	L _{Amax} NIGHT (dB)	59.1 @ 06:32
	06:00	41.8	59.1	L _{Aeq,8h} NIGHT (dB)	37.9 (No EMA a/c)
Day 12/08	07:00	44.7	55.2		
	08:00	44.8	58.9		
	09:00	43.5	55.4		
	10:00	47.2	67.4		
	11:00	51.0	76.3		
	12:00	48.3	71.9		
	13:00	52.7	73.9		
	14:00	52.0	72.0		
	15:00	47.2	67.4		
	16:00	51.6	70.4		
	17:00	48.9	71.6		
	18:00	43.7	55.9		
	19:00	44.4	65.0		
	20:00	43.6	64.8	Runway in use	27
	21:00	41.0	55.7	L _{Amax} DAY (dB)	76.3 @ 11:36
	22:00	39.2	52.0	L _{Aeq,16h} DAY (dB)	48.1 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)			
Night 12/08-13/08	23:00	39.2	52.3			
	00:00	39.0	50.2			
	01:00	38.0	51.6			
	02:00	37.5	48.5			
	03:00	39.6	56.6			
	04:00	37.7	48.3	Runway in use	27	
	05:00	41.5	60.5	L _{Amax} NIGHT (dB)	60.5	@ 05:25
	06:00	41.8	57.2	L _{Aeq,8h} NIGHT (dB)	39.6	(No EMA a/c)
Day 13/08	07:00	41.9	54.9			
	08:00	44.4	59.1			
	09:00	45.4	56.1			
	10:00	47.7	55.6			
	11:00	46.4	57.3			
	12:00	44.5	56.3			
	13:00	43.9	56.9			
	14:00	46.3	78.3			
	15:00	42.1	54.1			
	16:00	48.4	76.3			
	17:00	45.9	65.9			
	18:00	46.4	69.5			
	19:00	42.2	63.1			
	20:00	40.4	58.0	Runway in use	27	
	21:00	38.1	52.7	L _{Amax} DAY (dB)	78.3	@ 14:50
	22:00	37.5	50.2	L _{Aeq,16h} DAY (dB)	44.8	(No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 13/08-14/08	23:00	35.9	47.2		
	00:00	39.3	60.2		
	01:00	35.4	47.3		
	02:00	34.6	56.6		
	03:00	33.7	50.9		
	04:00	34.2	46.7	Runway in use	27
	05:00	41.0	54.1	L _{Amax} NIGHT (dB)	60.2 @ 00:22
	06:00	42.1	59.8	L _{Aeq,8h} NIGHT (dB)	38.2 (B733, MLA-EMA)
Day 14/08	07:00	42.1	71.5		
	08:00	40.9	54.5		
	09:00	43.8	60.4		
	10:00	43.8	69.5		
	11:00	45.8	59.4		
	12:00	43.7	54.9		
	13:00	45.0	53.1		
	14:00	44.8	59.6		
	15:00	46.8	56.1		
	16:00	45.9	64.6		
	17:00	68.1	96.9		
	18:00	57.2	90.5		
	19:00	59.5	81.0		
	20:00	42.9	56.1	Runway in use	27
	21:00	38.7	51.4	L _{Amax} DAY (dB)	96.9 @ 17:14
	22:00	38.6	50.7	L _{Aeq,16h} DAY (dB)	57.1 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 14/08-15/08	23:00	35.7	56.8		
	00:00	35.0	54.3		
	01:00	33.4	48.2		
	02:00	31.9	48.9		
	03:00	32.8	51.2		
	04:00	35.5	47.3	Runway in use	27
	05:00	43.2	60.7	L _{Amax} NIGHT (dB)	60.7 @ 05:13
	06:00	45.8	57.6	L _{Aeq,8h} NIGHT (dB)	39.7 (No EMA a/c)
Day 15/08	07:00	46.6	54.1		
	08:00	46.3	64.6		
	09:00	43.8	57.9		
	10:00	44.8	58.6		
	11:00	45.6	53.6		
	12:00	45.4	55.1		
	13:00	46.7	64.7		
	14:00	47.0	58.2		
	15:00	47.1	65.1		
	16:00	46.7	54.5		
	17:00	47.9	64.0		
	18:00	46.3	56.0		
	19:00	45.8	54.5		
	20:00	44.1	52.4	Runway in use	27
	21:00	44.2	55.5	L _{Amax} DAY (dB)	65.1 @ 15:20
	22:00	41.9	51.5	L _{Aeq,16h} DAY (dB)	45.9 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 15/08-16/08	23:00	58.7	74.4		
	00:00	38.9	50.5		
	01:00	36.1	49.6		
	02:00	37.7	52.6		
	03:00	36.9	60.8		
	04:00	37.9	51.3	Runway in use	27
	05:00	42.5	56.9	L _{Amax} NIGHT (dB)	74.4 @ 23:14
	06:00	45.4	60.2	L _{Aeq,8h} NIGHT (dB)	50.1 (No EMA a/c)
Day 16/08	07:00	49.1	60.8		
	08:00	57.1	77.2		
	09:00	55.7	73.5		
	10:00	58.0	80.4		
	11:00	47.6	56.9		
	12:00	57.3	72.4		
	13:00	61.9	78.2		
	14:00	62.6	75.7		
	15:00	62.0	72.6		
	16:00	53.9	70.7		
	17:00	50.3	66.3		
	18:00	52.4	70.5		
	19:00	54.7	71.7		
	20:00	50.9	70.2	Runway in use	27
	21:00	47.5	63.5	L _{Amax} DAY (dB)	80.4 @ 10:00
	22:00	51.5	72.4	L _{Aeq,16h} DAY (dB)	57.1 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 16/08-17/08	23:00	47.2	68.8		
	00:00	37.1	57.2		
	01:00	35.1	50.3		
	02:00	36.3	50.3		
	03:00	36.1	50.3		
	04:00	38.9	57.5	Runway in use	27
	05:00	42.5	52.5	L _{Amax} NIGHT (dB)	68.8 @ 23:58
	06:00	46.1	62.9	L _{Aeq,8h} NIGHT (dB)	42.3 (No EMA a/c)
Day 17/08	07:00	46.5	58.7		
	08:00	46.1	60.0		
	09:00	45.1	56.3		
	10:00	48.6	70.6		
	11:00	51.5	75.0		
	12:00	48.0	68.4		
	13:00	48.9	74.2		
	14:00	48.4	66.8		
	15:00	48.9	69.6		
	16:00	48.8	71.6		
	17:00	48.6	73.5		
	18:00	50.9	74.4		
	19:00	49.0	73.8		
	20:00	48.0	69.3	Runway in use	27
	21:00	49.3	75.2	L _{Amax} DAY (dB)	75.2 @ 21:09
	22:00	41.0	51.3	L _{Aeq,16h} DAY (dB)	48.5 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 17/08-18/08	23:00	42.6	66.6		
	00:00	40.6	54.7		
	01:00	40.1	59.2		
	02:00	45.2	65.2		
	03:00	44.5	66.8		
	04:00	36.7	49.5	Runway in use	27
	05:00	43.0	58.8	L _{Amax} NIGHT (dB)	66.8 @ 03:04
	06:00	45.7	57.4	L _{Aeq,8h} NIGHT (dB)	43.1 (No EMA a/c)
Day 18/08	07:00	46.6	56.4		
	08:00	51.7	69.8		
	09:00	47.8	70.8		
	10:00	46.1	70.0		
	11:00	47.6	68.1		
	12:00	46.7	62.2		
	13:00	52.7	72.1		
	14:00	50.7	73.5		
	15:00	53.2	74.2		
	16:00	47.7	67.5		
	17:00	56.3	82.4		
	18:00	52.4	73.4		
	19:00	47.5	70.7		
	20:00	43.3	59.1	Runway in use	09
	21:00	42.8	59.1	L _{Amax} DAY (dB)	82.4 @ 17:51
	22:00	42.5	55.4	L _{Aeq,16h} DAY (dB)	50.2 (A321, EMA-KGS)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 18/08-19/08	23:00	39.7	51.2		
	00:00	38.3	49.2		
	01:00	36.7	57.4		
	02:00	36.6	49.6		
	03:00	38.3	49.7		
	04:00	38.8	50.5	Runway in use	27
	05:00	44.1	63.1	L _{Amax} NIGHT (dB)	63.1 @ 05:20
	06:00	46.2	56.3	L _{Aeq,8h} NIGHT (dB)	41.3 (No EMA a/c)
Day 19/08	07:00	48.8	70.7		
	08:00	45.9	57.6		
	09:00	47.7	73.7		
	10:00	44.9	60.5		
	11:00	46.9	70.4		
	12:00	46.1	69.2		
	13:00	46.8	70.0		
	14:00	46.0	69.3		
	15:00	48.3	69.2		
	16:00	47.6	63.7		
	17:00	49.5	60.1		
	18:00	50.9	57.6		
	19:00	51.8	63.3		
	20:00	46.9	60.9	Runway in use	27
	21:00	43.5	55.6	L _{Amax} DAY (dB)	73.7 @ 08:34
	22:00	43.2	52.8	L _{Aeq,16h} DAY (dB)	47.8 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 19/08-20/08	23:00	42.7	51.2		
	00:00	45.3	54.0		
	01:00	44.2	54.7		
	02:00	43.9	66.9		
	03:00	40.4	58.0		
	04:00	39.3	58.1	Runway in use	27
	05:00	40.9	59.5	L _{Amax} NIGHT (dB)	67.2 @ 06:23
	06:00	45.2	67.2	L _{Aeq,8h} NIGHT (dB)	43.2 (No EMA a/c)
Day 20/08	07:00	43.6	55.2		
	08:00	45.7	59.1		
	09:00	59.5	91.6		
	10:00	45.0	59.5		
	11:00	56.9	77.4		
	12:00	47.2	56.1		
	13:00	57.3	79.8		
	14:00	47.0	68.6		
	15:00	51.1	75.8		
	16:00	53.2	72.7		
	17:00	50.3	69.4		
	18:00	47.5	66.4		
	19:00	47.8	63.8		
	20:00	41.0	53.9	Runway in use	27
	21:00	41.0	53.4	L _{Amax} DAY (dB)	91.6 @ 09:23
	22:00	39.7	51.1	L _{Aeq,16h} DAY (dB)	52.3 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 20/08-21/08	23:00	40.0	57.5		
	00:00	40.2	59.5		
	01:00	ND	ND		
	02:00	ND	ND		
	03:00	ND	ND		
	04:00	ND	ND	Runway in use	27
	05:00	ND	ND	L _{Amax} NIGHT (dB)	59.5 @ 00:09
	06:00	ND	ND	L _{Aeq,8h} NIGHT (dB)	40.1 (B733, AGP-EMA)
Day 21/08	07:00	ND	ND		
	08:00	ND	ND		
	09:00	ND	ND		
	10:00	ND	ND		
	11:00	ND	ND		
	12:00	ND	ND		
	13:00	ND	ND		
	14:00	ND	ND		
	15:00	ND	ND		
	16:00	ND	ND		
	17:00	ND	ND		
	18:00	ND	ND		
	19:00	ND	ND		
	20:00	ND	ND	Runway in use	27
	21:00	ND	ND	L _{Amax} DAY (dB)	ND @ ND
	22:00	ND	ND	L _{Aeq,16h} DAY (dB)	ND

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 21/08-22/08	23:00	ND	ND		
	00:00	ND	ND		
	01:00	ND	ND		
	02:00	ND	ND		
	03:00	ND	ND		
	04:00	ND	ND	Runway in use	27
	05:00	ND	ND	L _{Amax} NIGHT (dB)	ND @ ND
	06:00	ND	ND	L _{Aeq,8h} NIGHT (dB)	ND
Day 22/08	07:00	ND	ND		
	08:00	44.0	49.5		
	09:00	44.7	69.1		
	10:00	48.8	71.3		
	11:00	43.3	61.9		
	12:00	42.0	53.6		
	13:00	41.1	54.5		
	14:00	44.3	64.1		
	15:00	45.9	64.5		
	16:00	45.3	65.7		
	17:00	44.2	58.9		
	18:00	42.9	54.6		
	19:00	42.5	59.2		
	20:00	49.3	72.4	Runway in use	27
	21:00	41.4	74.1	L _{Amax} DAY (dB)	74.1 @ 21:14
	22:00	53.0	73.2	L _{Aeq,16h} DAY (dB)	45.0 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)			
Night 22/08-23/08	23:00	52.1	73.2			
	00:00	46.1	69.7			
	01:00	51.9	70.3			
	02:00	47.7	68.7			
	03:00	35.4	54.7			
	04:00	38.6	56.6	Runway in use	09	
	05:00	42.6	65.0	L _{Amax} NIGHT (dB)	73.2	@ 23:07
	06:00	43.7	58.5	L _{Aeq,8h} NIGHT (dB)	47.7	(No EMA a/c)
Day 23/08	07:00	50.0	72.4			
	08:00	51.3	70.3			
	09:00	54.4	74.3			
	10:00	53.4	73.5			
	11:00	58.5	83.0			
	12:00	49.9	71.6			
	13:00	ND	ND			
	14:00	ND	ND			
	15:00	ND	ND			
	16:00	ND	ND			
	17:00	ND	ND			
	18:00	ND	ND			
	19:00	ND	ND			
	20:00	ND	ND	Runway in use	27	
	21:00	ND	ND	L _{Amax} DAY (dB)	83.0	@ 11.44
	22:00	ND	ND	L _{Aeq,16h} DAY (dB)	54.1	(B735, EMA-JER)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 23/08-24/08	23:00	ND	ND		
	00:00	ND	ND		
	01:00	ND	ND		
	02:00	ND	ND		
	03:00	ND	ND		
	04:00	ND	ND	Runway in use	27
	05:00	ND	ND	L _{Amax} NIGHT (dB)	ND @ ND
	06:00	ND	ND	L _{Aeq,8h} NIGHT (dB)	ND
Day 24/08	07:00	ND	ND		
	08:00	43.6	50.6		
	09:00	49.3	66.5		
	10:00	46.8	70.0		
	11:00	46.0	67.8		
	12:00	52.4	75.7		
	13:00	55.5	75.2		
	14:00	53.6	68.4		
	15:00	56.1	83.5		
	16:00	51.0	76.5		
	17:00	49.3	66.8		
	18:00	48.3	56.9		
	19:00	44.5	52.6		
	20:00	42.6	66.3	Runway in use	27
	21:00	41.2	51.7	L _{Amax} DAY (dB)	83.5 @ 15.59
	22:00	41.3	59.8	L _{Aeq,16h} DAY (dB)	50.6 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 24/08-25/08	23:00	39.0	52.1		
	00:00	37.4	49.7		
	01:00	33.5	47.8		
	02:00	39.8	56.4		
	03:00	45.1	54.4		
	04:00	49.7	58.7	Runway in use	27
	05:00	48.1	58.6	L _{Amax} NIGHT (dB)	63.5 @ 06.52
	06:00	47.4	63.5	L _{Aeq,8h} NIGHT (dB)	45.3 (No EMA a/c)
Day 25/08	07:00	46.6	60.8		
	08:00	50.3	70.2		
	09:00	48.0	68.6		
	10:00	51.2	69.5		
	11:00	54.7	76.6		
	12:00	49.5	71.6		
	13:00	46.7	64.0		
	14:00	51.7	69.3		
	15:00	48.6	70.2		
	16:00	46.0	56.6		
	17:00	47.1	64.3		
	18:00	45.5	75.2		
	19:00	51.0	77.1		
	20:00	46.1	62.5	Runway in use	27
	21:00	41.1	68.0	L _{Amax} DAY (dB)	77.1 @ 19.46
	22:00	39.9	52.6	L _{Aeq,16h} DAY (dB)	49.1 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 25/08-26/08	23:00	38.3	50.7		
	00:00	38.7	59.2		
	01:00	36.3	60.0		
	02:00	37.1	51.1		
	03:00	38.4	54.0		
	04:00	36.4	48.6	Runway in use	27
	05:00	43.7	69.0	L _{Amax} NIGHT (dB)	69.0 @ 05.47
	06:00	45.8	60.3	L _{Aeq,8h} NIGHT (dB)	40.8 (No EMA a/c)
Day 26/08	07:00	46.7	61.8		
	08:00	50.5	73.6		
	09:00	49.4	63.3		
	10:00	50.2	66.3		
	11:00	49.3	61.1		
	12:00	47.8	59.0		
	13:00	52.9	62.8		
	14:00	49.9	63.3		
	15:00	48.5	59.3		
	16:00	47.6	61.8		
	17:00	49.0	67.0		
	18:00	45.1	59.2		
	19:00	47.5	65.7		
	20:00	43.1	60.0	Runway in use	27
	21:00	42.2	58.8	L _{Amax} DAY (dB)	73.6 @ 08.14
	22:00	42.7	53.2	L _{Aeq,16h} DAY (dB)	48.5 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 26/08-27/08	23:00	48.7	60.6		
	00:00	40.2	51.4		
	01:00	36.3	56.2		
	02:00	36.8	58.9		
	03:00	37.9	61.5		
	04:00	37.9	61.8	Runway in use	27
	05:00	40.3	59.4	L _{Amax} NIGHT (dB)	62.7 @ 06.57
	06:00	43.4	62.7	L _{Aeq,8h} NIGHT (dB)	42.4 (A320, VAR-EMA)
Day 27/08	07:00	43.6	59.6		
	08:00	45.2	59.3		
	09:00	47.3	71.5		
	10:00	47.7	75.1		
	11:00	47.7	56.3		
	12:00	46.5	61.8		
	13:00	49.4	61.1		
	14:00	51.1	66.9		
	15:00	50.9	62.3		
	16:00	49.2	59.9		
	17:00	50.4	62.0		
	18:00	43.9	55.6		
	19:00	42.7	56.1		
	20:00	46.7	70.5	Runway in use	27
	21:00	39.2	48.1	L _{Amax} DAY (dB)	75.1 @ 10.29
	22:00	39.2	53.2	L _{Aeq,16h} DAY (dB)	47.6 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 27/08-28/08	23:00	38.3	48.3		
	00:00	36.9	56.8		
	01:00	ND	ND		
	02:00	ND	ND		
	03:00	ND	ND		
	04:00	ND	ND	Runway in use	27
	05:00	ND	ND	L _{Amax} NIGHT (dB)	56.8 @ 00.37
	06:00	ND	ND	L _{Aeq,8h} NIGHT (dB)	37.7 (No EMA a/c)
Day 28/08	07:00	ND	ND		
	08:00	ND	ND		
	09:00	ND	ND		
	10:00	ND	ND		
	11:00	ND	ND		
	12:00	ND	ND		
	13:00	ND	ND		
	14:00	ND	ND		
	15:00	ND	ND		
	16:00	ND	ND		
	17:00	ND	ND		
	18:00	ND	ND		
	19:00	ND	ND		
	20:00	ND	ND	Runway in use	27
	21:00	ND	ND	L _{Amax} DAY (dB)	ND @ ND
	22:00	ND	ND	L _{Aeq,16h} DAY (dB)	ND

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 28/08-29/08	23:00	ND	ND		
	00:00	ND	ND		
	01:00	ND	ND		
	02:00	ND	ND		
	03:00	ND	ND		
	04:00	ND	ND	Runway in use	27
	05:00	ND	ND	L _{Amax} NIGHT (dB)	ND @ ND
	06:00	ND	ND	L _{Aeq,8h} NIGHT (dB)	ND
Day 29/08	07:00	ND	ND		
	08:00	ND	ND		
	09:00	ND	ND		
	10:00	ND	ND		
	11:00	ND	ND		
	12:00	ND	ND		
	13:00	ND	ND		
	14:00	ND	ND		
	15:00	ND	ND		
	16:00	ND	ND		
	17:00	ND	ND		
	18:00	ND	ND		
	19:00	ND	ND		
	20:00	ND	ND	Runway in use	27
	21:00	ND	ND	L _{Amax} DAY (dB)	ND @ ND
	22:00	ND	ND	L _{Aeq,16h} DAY (dB)	ND

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 29/08-30/08	23:00	ND	ND		
	00:00	ND	ND		
	01:00	ND	ND		
	02:00	ND	ND		
	03:00	ND	ND		
	04:00	ND	ND	Runway in use	27
	05:00	ND	ND	L _{Amax} NIGHT (dB)	ND @ ND
	06:00	ND	ND	L _{Aeq,8h} NIGHT (dB)	ND
Day 30/08	07:00	ND	ND		
	08:00	47.8	64.0		
	09:00	47.6	59.4		
	10:00	47.4	55.4		
	11:00	48.8	69.5		
	12:00	49.9	70.9		
	13:00	47.0	74.1		
	14:00	45.1	61.8		
	15:00	46.1	61.7		
	16:00	45.7	53.7		
	17:00	45.7	55.6		
	18:00	45.8	63.5		
	19:00	44.5	55.5		
	20:00	42.5	54.0	Runway in use	27
	21:00	42.3	65.9	L _{Amax} DAY (dB)	74.1 @ 13.11
	22:00	41.2	57.4	L _{Aeq,16h} DAY (dB)	46.4 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 30/08-31/08	23:00	39.8	51.3		
	00:00	38.9	49.2		
	01:00	34.3	49.5		
	02:00	36.0	57.4		
	03:00	36.9	54.9		
	04:00	36.6	49.9	Runway in use	27
	05:00	41.3	58.9	L _{Amax} NIGHT (dB)	58.9 @ 05.39
	06:00	45.4	57.8	L _{Aeq,8h} NIGHT (dB)	40.1 (No EMA a/c)
Day 31/08	07:00	46.5	58.1		
	08:00	45.9	59.9		
	09:00	44.2	54.3		
	10:00	42.6	54.3		
	11:00	43.0	57.1		
	12:00	43.2	56.4		
	13:00	42.3	53.8		
	14:00	43.1	68.6		
	15:00	46.2	68.1		
	16:00	44.2	60.9		
	17:00	ND	ND		
	18:00	47.4	70.5		
	19:00	43.0	54.5		
	20:00	42.3	51.9	Runway in use	27
	21:00	40.3	52.5	L _{Amax} DAY (dB)	70.5 @ 17.25
	22:00	41.7	61.0	L _{Aeq,16h} DAY (dB)	44.2 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 31/08-01/09	23:00	38.6	53.1		
	00:00	37.6	54.1		
	01:00	33.1	55.9		
	02:00	35.7	48.9		
	03:00	36.7	56.9		
	04:00	35.6	47.9	Runway in use	27
	05:00	40.3	56.5	L _{Amax} NIGHT (dB)	62.9 @ 06.58
	06:00	45.7	62.9	L _{Aeq,8h} NIGHT (dB)	39.7 (No EMA a/c)
Day 01/09	07:00	48.2	66.2		
	08:00	58.8	75.6		
	09:00	46.6	68.7		
	10:00	53.3	74.7		
	11:00	51.5	72.7		
	12:00	45.9	59.6		
	13:00	52.9	73.7		
	14:00	51.5	73.6		
	15:00	54.0	73.4		
	16:00	50.2	71.4		
	17:00	54.6	76.3		
	18:00	50.9	71.6		
	19:00	48.2	70.4		
	20:00	53.0	73.4	Runway in use	09
	21:00	43.8	61.0	L _{Amax} DAY (dB)	76.3 @ 17.28
	22:00	50.3	72.0	L _{Aeq,16h} DAY (dB)	52.4 (A321, EMA-AYT)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)			
Night 01/09-02/09	23:00	55.5	75.1			
	00:00	43.5	68.7			
	01:00	54.2	73.3			
	02:00	50.0	72.1			
	03:00	36.5	51.4			
	04:00	40.4	59.5	Runway in use	09	
	05:00	41.0	65.5	L _{Amax} NIGHT (dB)	75.1	@ 23.35
	06:00	47.4	71.7	L _{Aeq,8h} NIGHT (dB)	50.1	(A300, LEJ-EMA)
Day 02/09	07:00	48.8	62.8			
	08:00	49.5	74.2			
	09:00	48.2	70.5			
	10:00	48.6	68.5			
	11:00	56.5	78.5			
	12:00	52.4	73.0			
	13:00	46.1	67.8			
	14:00	44.4	54.3			
	15:00	45.1	56.5			
	16:00	46.4	60.0			
	17:00	46.7	59.6			
	18:00	45.8	54.8			
	19:00	44.6	57.4			
	20:00	41.9	52.1	Runway in use	27	
	21:00	41.7	55.5	L _{Amax} DAY (dB)	78.5	@ 11.58
	22:00	41.8	52.4	L _{Aeq,16h} DAY (dB)	48.8	(No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)			
Night 02/09-03/09	23:00	39.8	57.6			
	00:00	36.6	49.5			
	01:00	36.1	62.7			
	02:00	34.9	49.0			
	03:00	34.8	46.8			
	04:00	36.1	51.8	Runway in use	27	
	05:00	40.5	56.0	L _{Amax} NIGHT (dB)	62.7	@ 01.38
	06:00	44.0	62.1	L _{Aeq,8h} NIGHT (dB)	39.1	(No EMA a/c)
Day 03/09	07:00	47.1	68.4			
	08:00	47.1	67.3			
	09:00	47.2	77.1			
	10:00	51.2	73.2			
	11:00	55.8	67.9			
	12:00	61.9	73.1			
	13:00	ND	ND			
	14:00	ND	ND			
	15:00	ND	ND			
	16:00	ND	ND			
	17:00	ND	ND			
	18:00	ND	ND			
	19:00	ND	ND			
	20:00	ND	ND	Runway in use	27	
	21:00	ND	ND	L _{Amax} DAY (dB)	77.1	@ 09.43
	22:00	ND	ND	L _{Aeq,16h} DAY (dB)	55.7	(No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 03/09-04/09	23:00	ND	ND		
	00:00	ND	ND		
	01:00	ND	ND		
	02:00	ND	ND		
	03:00	ND	ND		
	04:00	ND	ND	Runway in use	27
	05:00	ND	ND	L _{Amax} NIGHT (dB)	ND @ ND
	06:00	ND	ND	L _{Aeq,8h} NIGHT (dB)	ND
Day 04/09	07:00	ND	ND		
	08:00	ND	ND		
	09:00	ND	ND		
	10:00	ND	ND		
	11:00	ND	ND		
	12:00	ND	ND		
	13:00	ND	ND		
	14:00	ND	ND		
	15:00	ND	ND		
	16:00	ND	ND		
	17:00	ND	ND		
	18:00	ND	ND		
	19:00	ND	ND		
	20:00	ND	ND	Runway in use	27
	21:00	ND	ND	L _{Amax} DAY (dB)	ND @ ND
	22:00	ND	ND	L _{Aeq,16h} DAY (dB)	ND

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 04/09-05/09	23:00	ND	ND		
	00:00	ND	ND		
	01:00	ND	ND		
	02:00	ND	ND		
	03:00	ND	ND		
	04:00	ND	ND	Runway in use	27
	05:00	ND	ND	L _{Amax} NIGHT (dB)	ND @ ND
	06:00	ND	ND	L _{Aeq,8h} NIGHT (dB)	ND
Day 05/09	07:00	ND	ND		
	08:00	59.6	74.9		
	09:00	59.7	76.7		
	10:00	53.6	71.5		
	11:00	54.2	66.5		
	12:00	53.3	64.7		
	13:00	54.4	67.1		
	14:00	48.5	64.4		
	15:00	51.7	63.6		
	16:00	53.3	63.9		
	17:00	53.2	70.3		
	18:00	54.6	76.1		
	19:00	51.7	72.8		
	20:00	48.5	72.0	Runway in use	27
	21:00	45.5	66.9	L _{Amax} DAY (dB)	76.7 @ 09.40
	22:00	48.0	58.5	L _{Aeq,16h} DAY (dB)	54.3 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 05/09-06/09	23:00	51.0	61.3		
	00:00	52.2	63.3		
	01:00	55.6	64.3		
	02:00	56.9	66.3		
	03:00	54.1	64.0		
	04:00	56.7	66.1	Runway in use	27
	05:00	60.4	70.4	L _{Amax} NIGHT (dB)	72.7 @ 06.56
	06:00	62.3	72.7	L _{Aeq,8h} NIGHT (dB)	57.7 (No EMA a/c)
Day 06/09	07:00	63.7	73.9		
	08:00	63.8	73.0		
	09:00	62.3	74.6		
	10:00	57.8	71.4		
	11:00	57.9	71.6		
	12:00	54.1	68.9		
	13:00	52.0	64.0		
	14:00	58.0	70.9		
	15:00	57.9	68.1		
	16:00	58.8	70.8		
	17:00	58.7	73.2		
	18:00	58.9	74.1		
	19:00	60.1	75.3		
	20:00	56.0	74.5	Runway in use	27
	21:00	52.4	68.2	L _{Amax} DAY (dB)	75.3 @ 19.55
	22:00	48.8	59.8	L _{Aeq,16h} DAY (dB)	59.2 (B733, EDI-EMA)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 06/09-07/09	23:00	50.9	61.3		
	00:00	51.2	61.4		
	01:00	50.7	62.7		
	02:00	47.6	60.2		
	03:00	45.6	54.3		
	04:00	44.4	54.1	Runway in use	27
	05:00	43.8	58.8	L _{Amax} NIGHT (dB)	62.7 @ 01.34
	06:00	46.4	62.1	L _{Aeq,8h} NIGHT (dB)	48.5 (No EMA a/c)
Day 07/09	07:00	48.0	55.2		
	08:00	50.6	60.6		
	09:00	55.0	72.4		
	10:00	57.0	76.8		
	11:00	52.0	62.9		
	12:00	55.5	75.5		
	13:00	55.5	75.0		
	14:00	49.3	63.2		
	15:00	51.2	62.5		
	16:00	51.0	61.5		
	17:00	51.5	63.9		
	18:00	51.2	61.4		
	19:00	48.0	61.6		
	20:00	58.7	78.2	Runway in use	27
	21:00	48.5	66.5	L _{Amax} DAY (dB)	78.2 @ 20.37
	22:00	43.6	55.7	L _{Aeq,16h} DAY (dB)	53.2 (B757, KEF-EMA)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 07/09-08/09	23:00	42.7	51.2		
	00:00	41.9	52.0		
	01:00	46.0	52.6		
	02:00	48.1	56.4		
	03:00	44.3	53.1		
	04:00	45.4	55.2	Runway in use	27
	05:00	45.1	54.2	L _{Amax} NIGHT (dB)	59.5 @ 06.02
	06:00	45.7	59.5	L _{Aeq,8h} NIGHT (dB)	45.3 (No EMA a/c)
Day 08/09	07:00	49.5	58.8		
	08:00	49.1	55.4		
	09:00	50.7	71.1		
	10:00	48.5	60.5		
	11:00	48.5	57.1		
	12:00	48.8	57.6		
	13:00	47.7	72.3		
	14:00	54.7	76.7		
	15:00	56.9	71.8		
	16:00	58.7	74.0		
	17:00	53.7	69.3		
	18:00	55.0	69.0		
	19:00	54.1	72.2		
	20:00	44.9	55.3	Runway in use	27
	21:00	42.8	59.5	L _{Amax} DAY (dB)	76.7 @ 14.14
	22:00	40.9	53.0	L _{Aeq,16h} DAY (dB)	52.7 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 08/09-09/09	23:00	40.1	66.8		
	00:00	37.4	50.0		
	01:00	36.3	49.5		
	02:00	39.0	60.2		
	03:00	38.2	52.2		
	04:00	40.8	50.3	Runway in use	27
	05:00	44.6	53.1	L _{Amax} NIGHT (dB)	67.8 @ 06.50
	06:00	44.7	67.8	L _{Aeq,8h} NIGHT (dB)	41.2 (No EMA a/c)
Day 09/09	07:00	48.1	57.4		
	08:00	48.8	58.9		
	09:00	48.5	67.3		
	10:00	44.9	61.0		
	11:00	46.6	70.2		
	12:00	48.8	65.3		
	13:00	48.1	70.4		
	14:00	53.4	76.2		
	15:00	48.6	62.2		
	16:00	48.2	62.1		
	17:00	47.1	57.9		
	18:00	45.9	56.8		
	19:00	45.5	68.8		
	20:00	41.2	50.8	Runway in use	27
	21:00	42.2	57.1	L _{Amax} DAY (dB)	76.2 @ 14.58
	22:00	39.3	52.2	L _{Aeq,16h} DAY (dB)	47.7 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 09/09-10/09	23:00	39.1	53.0		
	00:00	39.7	60.6		
	01:00	36.6	49.0		
	02:00	35.6	47.0		
	03:00	38.9	58.2		
	04:00	40.0	51.0	Runway in use	27
	05:00	41.1	61.7	L _{Amax} NIGHT (dB)	73.2 @ 06.35
	06:00	52.9	73.2	L _{Aeq,8h} NIGHT (dB)	45.0 (B738, EMA-ACE)
Day 10/09	07:00	54.0	74.1		
	08:00	51.2	72.0		
	09:00	53.9	74.3		
	10:00	53.2	67.1		
	11:00	58.5	78.1		
	12:00	64.1	82.2		
	13:00	57.1	67.1		
	14:00	59.5	71.2		
	15:00	58.4	68.6		
	16:00	56.0	63.9		
	17:00	54.4	71.6		
	18:00	54.7	67.0		
	19:00	54.6	68.1		
	20:00	49.7	57.8	Runway in use	27
	21:00	51.2	73.2	L _{Amax} DAY (dB)	82.2 @ 12.39
	22:00	51.8	61.9	L _{Aeq,16h} DAY (dB)	56.9 (No EMA a/c)

	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)		
Night 10/09-11/09	23:00	45.6	56.9		
	00:00	39.3	52.7		
	01:00	37.3	50.3		
	02:00	39.5	53.5		
	03:00	39.4	49.4		
	04:00	39.1	51.0	Runway in use	27
	05:00	47.2	55.7	L _{Amax} NIGHT (dB)	57.1 @ 06.47
	06:00	47.7	57.1	L _{Aeq,8h} NIGHT (dB)	43.7 (No EMA a/c)
Day 11/09	07:00	49.3	59.8		
	08:00	53.2	63.6		
	09:00	56.2	65.3		
	10:00	56.4	66.1		
	11:00	55.8	66.1		
	12:00	59.8	71.8		
	13:00	56.6	66.4		
	14:00	52.7	65.0		
	15:00	57.2	68.3		
	16:00	56.5	69.1		
	17:00	54.4	69.4		
	18:00	50.5	60.3		
	19:00	47.8	59.3		
	20:00	48.6	62.0	Runway in use	27
	21:00	48.7	55.9	L _{Amax} DAY (dB)	71.8 @ 12.33
	22:00	46.3	52.7	L _{Aeq,16h} DAY (dB)	54.7 (No EMA a/c)

Night 11/09-12/09	Hour Beginning	L _{Aeq} (dBA)	L _{Amax} (dBA)			
	23:00	50.7	60.8			
	00:00	52.0	62.3			
	01:00	44.2	57.1			
	02:00	51.4	62.7			
	03:00	54.4	62.8			
	04:00	53.3	64.6	Runway in use	27	
	05:00	52.6	61.6	L _{Amax} NIGHT (dB)	65.5	@ 06.11
	06:00	55.5	65.5	L _{Aeq,8h} NIGHT (dB)	52.6	(No EMA a/c)

Airport Codes:

ACE Lanzarote
 AGP Malaga
 AYT Antalya
 CVG Cincinnati
 EDI Edinburgh
 EMA East Midlands Airport
 JER Jersey
 KEF Keflavik
 KGS Kos
 LEJ Leipzig
 MLA Malta
 PFO Paphos
 VAR Varna

Aircraft Type Codes:

A300 Airbus A300
 A320 Airbus A320
 A321 Airbus A321
 B733 Boeing 737-300
 B735 Boeing 737-500
 B738 Boeing 737-800
 B752 Boeing 757-200
 B757 Boeing 757
 B76Y Boeing 767F

Appendix 3

Date	Period	Runway in Use	L _{Aeq} (dBA)	L _{Amax} (dBA)	NEC
2-3 Aug	Night	27	42.3	75	A
3 Aug	Day	27	47.6	77.9	A
3-4 Aug	Night	27	39.8	73.8	A
4 Aug	Day	27	46.3	64.8	A
4-5 Aug	Night	27	40.0	60.3	A
5 Aug	Day	27	43.0	70.7	A
5-6 Aug	Night	27	42.4	71.2	A
6 Aug	Day	27	49.2	81	A
6-7 Aug	Night	27	42.1	71.4	A
7 Aug	Day	27	50.4	99.5	A
7-8 Aug	Night	27	40.8	70.1	A
8 Aug	Day	27	55.2	70.8	B
8-9 Aug	Night	27	41.6	67.3	A
9 Aug	Day	27	47.5	65.6	A
9-10 Aug	Night	27	39.5	58	A
10 Aug	Day	27	50.9	72.1	A
10-11 Aug	Night	27	45.5	56.8	B
11 Aug	Day	27	49.4	77	A
11-12 Aug	Night	27	37.9	59.1	A
12 Aug	Day	27	48.1	76.3	A
12-13 Aug	Night	27	39.6	60.5	A
13 Aug	Day	27	44.8	78.3	A
13-14 Aug	Night	27	38.2	60.2	A
14 Aug	Day	27	57.1	96.9	B
14-15 Aug	Night	27	39.7	60.7	A
15 Aug	Day	27	45.9	65.1	A
15-16 Aug	Night	27	50.1	74.4	B
16 Aug	Day	27	57.1	80.4	B
16-17 Aug	Night	27	42.3	68.8	A
17 Aug	Day	27	48.5	75.2	A
17-18 Aug	Night	27	43.1	66.8	A
18 Aug	Day	09	50.2	82.4	A
18-19 Aug	Night	27	41.3	63.1	A
19 Aug	Day	27	47.8	73.7	A
19-20 Aug	Night	27	43.2	67.2	A
20 Aug	Day	27	52.3	91.6	A
20-21 Aug	Night	27	40.1	59.5	A
21 Aug	Day	27	ND	ND	-
21-22 Aug	Night	27	ND	ND	-
22 Aug	Day	27	45.0	74.1	A
22-23 Aug	Night	09	47.7	73.2	B

23 Aug	Day	27	54.1	83	A
23-24 Aug	Night	27	ND	ND	-
24 Aug	Day	27	50.6	83.5	A
24-25 Aug	Night	27	45.3	63.5	B
25 Aug	Day	27	49.1	77.1	A
25-26 Aug	Night	27	40.8	69	A
26 Aug	Day	27	48.5	73.6	A
26-27 Aug	Night	27	42.4	62.7	A
27 Aug	Day	27	47.6	75.1	A
27-28 Aug	Night	27	37.7	56.8	A
28 Aug	Day	27	ND	ND	-
28-29 Aug	Night	27	ND	ND	-
29 Aug	Day	27	ND	ND	-
29-30 Aug	Night	27	ND	ND	-
30 Aug	Day	27	46.4	74.1	A
30-31 Aug	Night	27	40.1	58.9	A
31 Aug	Day	27	44.2	70.5	A
31 Aug-1 Sept	Night	27	39.7	62.9	A
1 Sept	Day	09	52.4	76.3	A
1-2 Sept	Night	09	50.1	75.1	B
2 Sept	Day	27	48.8	78.5	A
2-3 Sept	Night	27	39.1	62.7	A
3 Sept	Day	27	55.7	77.1	B
3-4 Sept	Night	27	ND	ND	-
4 Sept	Day	27	ND	ND	-
4-5 Sept	Night	27	ND	ND	-
5 Sept	Day	27	54.3	76.7	A
5-6 Sept	Night	27	57.7	72.7	C
6 Sept	Day	27	59.2	75.3	B
6-7 Sept	Night	27	48.5	62.7	B
7 Sept	Day	27	53.2	78.2	A
7-8 Sept	Night	27	45.3	59.5	B
8 Sept	Day	27	52.7	76.7	A
8-9 Sept	Night	27	41.2	67.8	A
9 Sept	Day	27	47.7	76.2	A
9-10 Sept	Night	27	45.0	73.2	B
10 Sept	Day	27	56.9	82.2	B
10-11 Sept	Night	27	43.7	57.1	A
11 Sept	Day	27	54.7	71.8	A
11-12 Sept	Night	27	52.6	65.5	B