

Farnborough Airport

Environment Report January – March 2006



Aviation

Farnborough Airport Environment Report

January – March 2006

TAG Farnborough Airport Ltd
Farnborough
Hampshire
GU14 6XA

INTRODUCTION

- 1.1 In continued compliance with the requirements of the agreement in place under Sections 106 and 299A of the Town and Country Planning Act 1990, between TAG Farnborough Airport and Rushmoor Borough Council, TAG hereby submits a report for the first quarter of 2006, (January to March) detailing results of environmental monitoring as required by that agreement. In line with the paragraph 2 (t), the content of this report was revised prior to the publication of the report covering January to March 2005, in consultation with Rushmoor Borough Council Planning department, to focus on monitoring results data only. For background information please refer to Environment Reports published prior to this date.

2 NOISE MONITORING

- 2.1 The two permanent noise monitoring terminals (at Farnborough College and Twezeldown racecourse) remain in operation. The portable noise monitor has been on location on the proposed hotel development site within the airfield boundary, following its return from repair by the system manufacturers. Unfortunately plant noise levels recorded in this area caused the unit to overload therefore where necessary the data has been excluded. Having stabilised once more, a new location is currently being sought for this piece of equipment.
- 2.1 Figures 1, 2 and 3 below show Leq data for correlated aircraft Event noise, (E), Total Leq levels recorded and Background (Back) noise, calculated as comparable Leq_(A) values, by day of month and NMT for January, February and March respectively.

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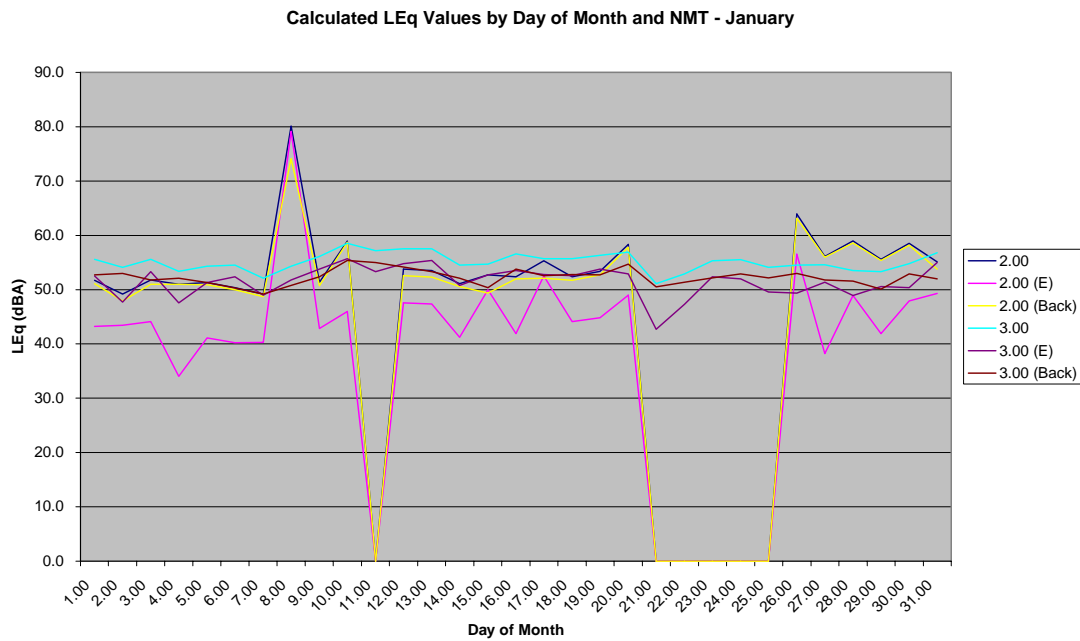


Figure 1: Noise as Leq Total, Event (E) and Background (Back) by Day of month and NMT for January 2006

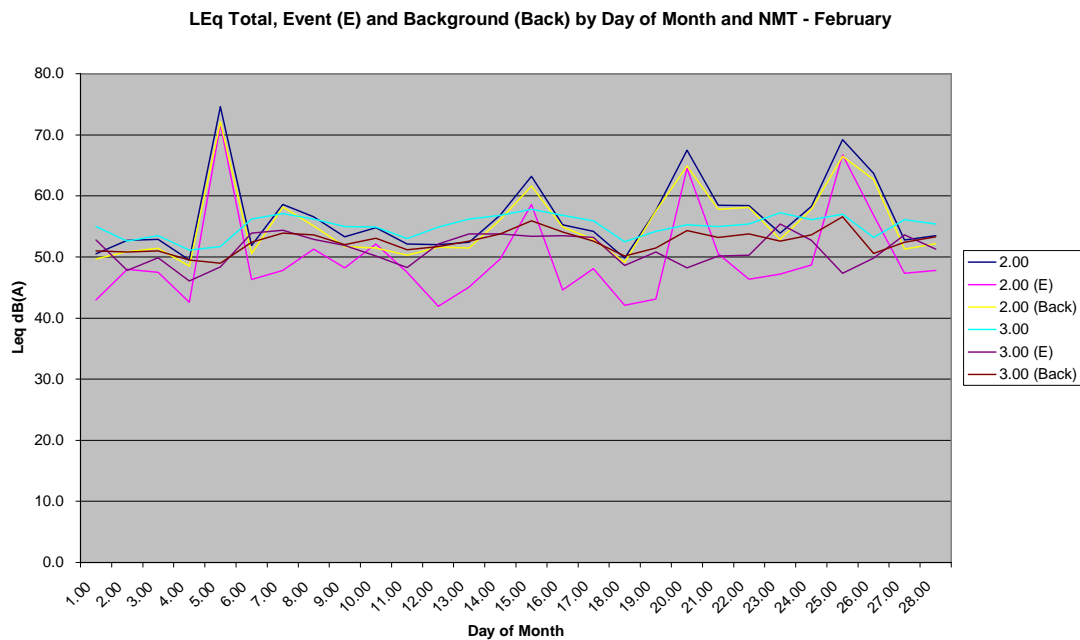


Figure 2: Noise as Leq Total, Event (E) and Background (Back) by day of month and NMT for February 2006

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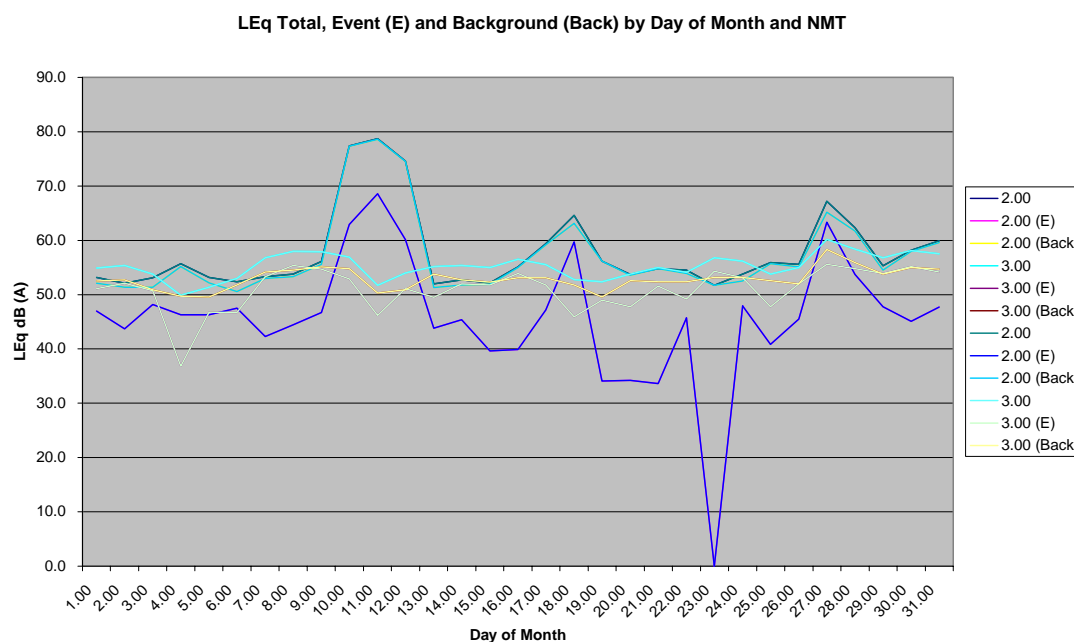


Figure 3: Noise as Leq Total, Event (E) and Background (Back) by day of month and NMT for March 2006

2.4 Noise contours produced using the FAA’s Integrated Noise Model (INM) for operations in 2005 were submitted to Rushmoor in mid February (in accordance with the requirements of the agreement between TAG and Rushmoor). The results of the modelling exercise undertaken are given below in Table 1, along with those of previous exercises and those included with the planning agreement.

LEq dB (A)	Actual January – December 2005 movements (19586 actual movements)	Previous predicted area January – December 2005 movements (19479 movements at 2004 mix)	Predicted January – December movements for 2006 (20723 movements at 2005 fleet mix)
55	3.62	3.79	3.79
60	1.57	1.57	1.63
65	0.88	0.84	0.90

Table 1: Results of INM Modelling exercise

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The 55 dBA used in agreement with Rushmoor, is below that deemed to be the trigger of "low annoyance" in the Wilson Committee Report (1963) traditionally used as a method of assessing the probability of annoyance due to aircraft noise.

- 2.5 The FAA's INM is stated in the European Environmental Noise Directive (Directive 2002/49/EC) as the preferred European Standard tool for assessing noise impact from aircraft.
- 2.6 Daily Leq Figures are given in Appendix 1. Overall LEq values recorded during quarter 1 2006, are on average slightly lower than those of the same period last year. A breakdown of aircraft movement numbers by type is given in Table 2 below.

3 AIRCRAFT MOVEMENTS

- 3.1 Table 2 shows all aircraft movements over the three-month period by movement category. Figure 4 gives a summary of movements by category, for weekends.

Table 2: Movements summary by type.

Category	January	February	March	Quarter 1, 2006	Total 2006
Business	1324	1357	1536	4217	4217
Helicopter	88	49	73	210	210
Subtotal (Planning Agreement Movements)	1412	1406	1609	4427	4427
Flying club	10	10	19	39	39
Military	19	16	8	43	43
Diversion	30	43	17	90	90
Other	97	120	106	323	323
SBAC	0	0	0	0	0
Total	1568	1595	1759	4922	4922

Movements by Category for Quarter 1, 2006

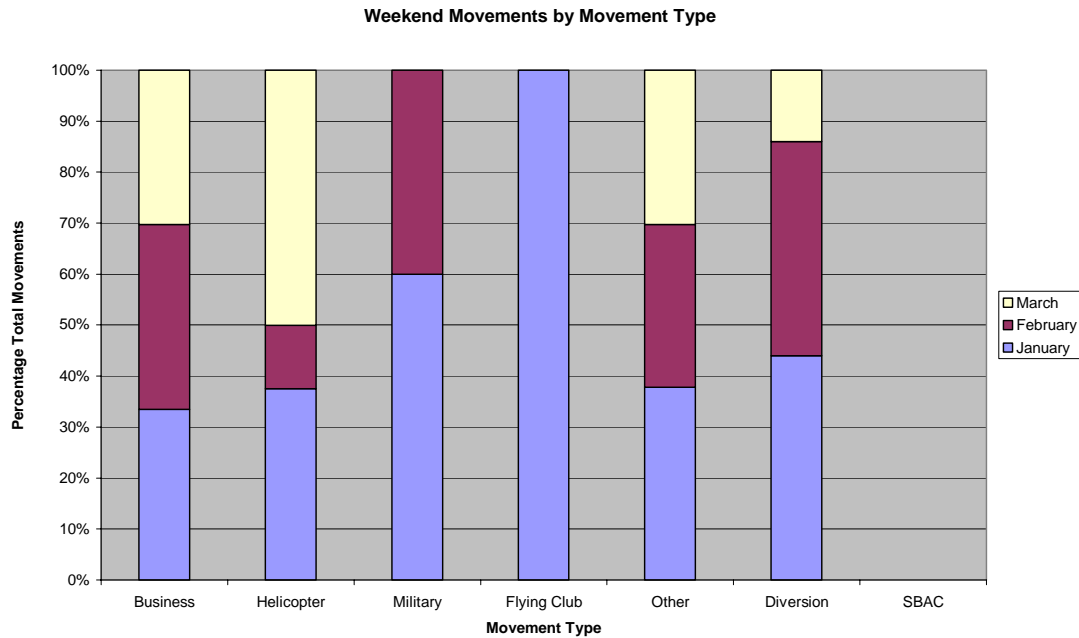


Figure 4: Weekend Movements* by Type for Quarter 1, 2006

* Includes Bank Holidays

3.2 Figures 5 - 7 below give information on runway use, including operation. Operation refers to whether the movement was a Departure or Arrival. The overall runway usage split for arrivals and departures was 21% Arrivals Runway 06, 19% Departures Runway 06, 28% Arrivals Runway 24, 29% Departures Runway 24 and 3% for Other Movements (including helicopter movements) for the quarter.

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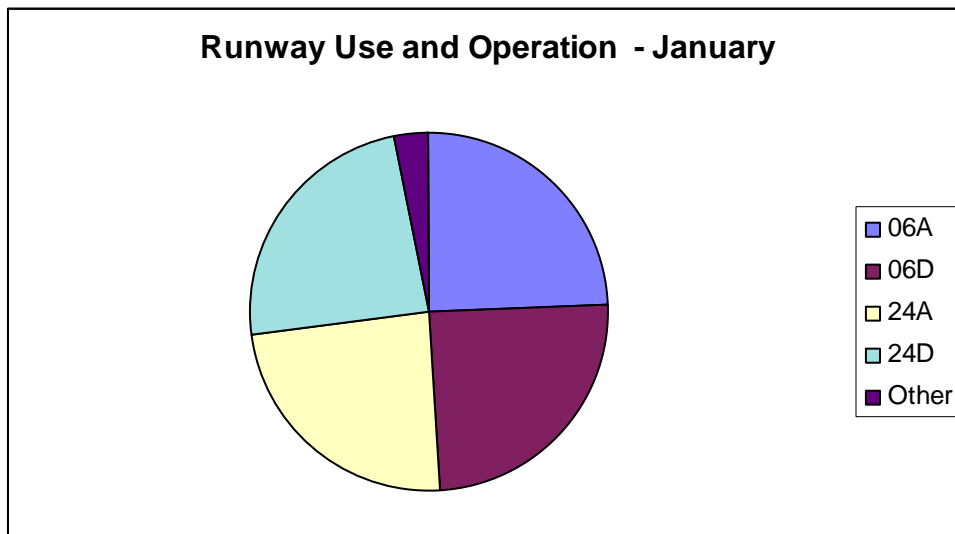


Figure 5: Monthly Movements by Runway Used and Operation January, 2006
Key: A – Arrival, D – Departure

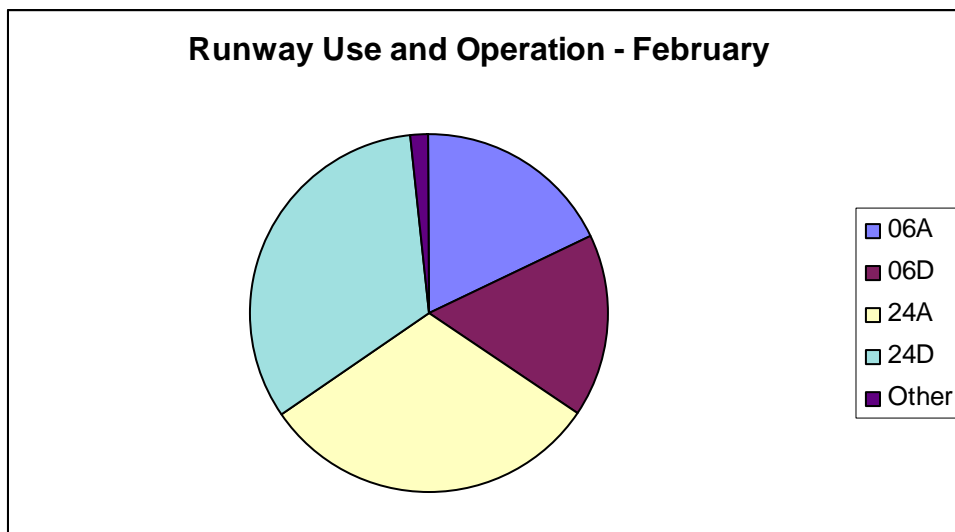


Figure 6: Monthly Movements by Runway Used and Operation February 2006
Key: A – Arrival, D – Departure

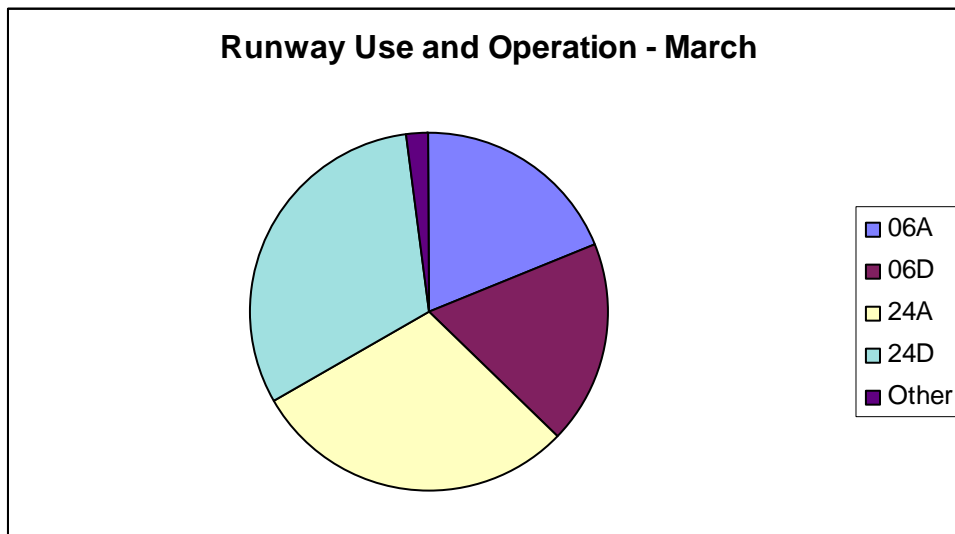


Figure 7: Monthly Movements by Runway Used and Operation March 2006
Key: A – Arrival, D – Departure,

3.3 The Maximum Take Off Weight (MTOW) is recorded within the NTMS for all fixed wing aircraft. Figure 8 gives a summary of aircraft over 50,000kg MTOW for the quarter

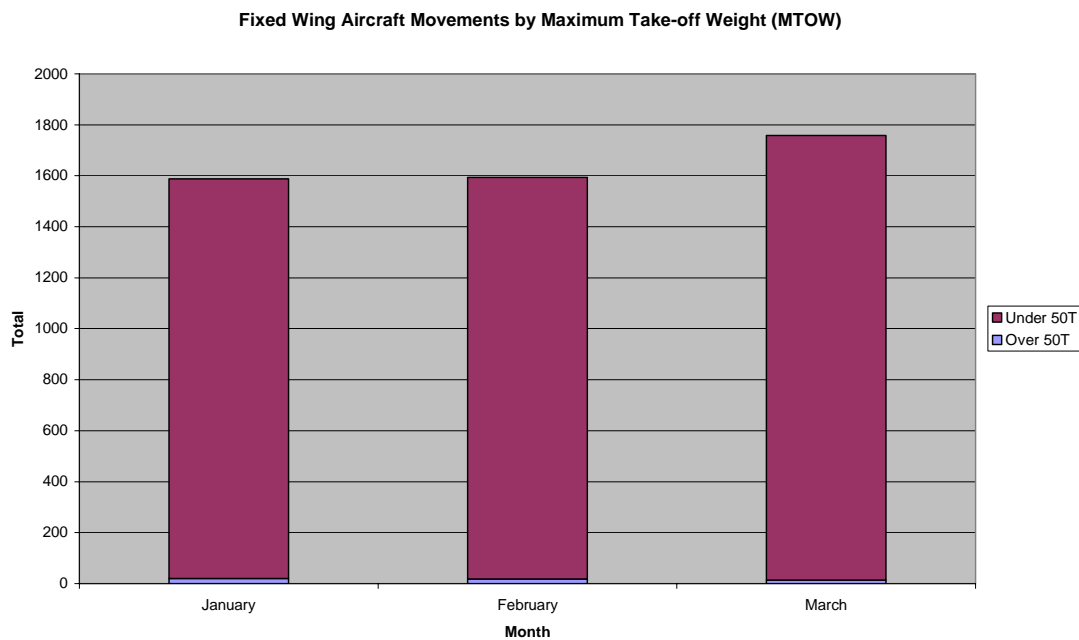


Figure 8: Movements by Maximum Take Off Weight (MTOW)

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3.5 All civil aircraft using Farnborough were compliant with the International Civil Aviation Organisation (ICAO) Chapter 3 classification, (a classification based primarily on measured engine noise.) No hush kitted aircraft used the airport this quarter. The new more stringent ICAO Chapter 4 Classification is being drafted and is due for release later this year.

3.6 Helicopters, light aircraft and military aircraft are not subject to the requirements of the ICAO noise certification scheme.

4. AIR QUALITY MONITORING

4.1 The locations of all of the nitrogen oxide diffusion tubes and Streetbox monitors have remained as reported previously. To see details of the locations of the monitors please refer to previous reports. Table 3 gives details of the National Air Quality Objectives applicable to NOx.

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Nitrogen Dioxide*	200µg/m ³ when expressed as an hourly mean not to be exceeded more than 18 times a year.	Hourly mean	31/12/2005
* It should be noted that the Nitrogen Dioxide objectives are provisional.			

Table3: The Air Quality (England) (Amendment) Regulations 2002

4.4 The results of the air quality survey consist of both raw and manipulated data taken from the diffusion tube laboratory analysis and downloaded computer data from the Learian automatic samplers.

4.5 Nitrogen oxide results taken from the diffusion tubes and Learian Streetbox samplers indicate that NOx levels around the airfield have achieved the objective as set out by the Air Quality Regulations Amendment Regulations

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2002. Levels recorded by the monitoring network continue to remain at or below urban background levels. Continuing trends in the results obtained appear to indicate terrestrial sources of NO_x as the predominate sources of the NO_x; this is illustrated by the elevated levels consistently recorded for location 13 adjacent to the M3 motorway.

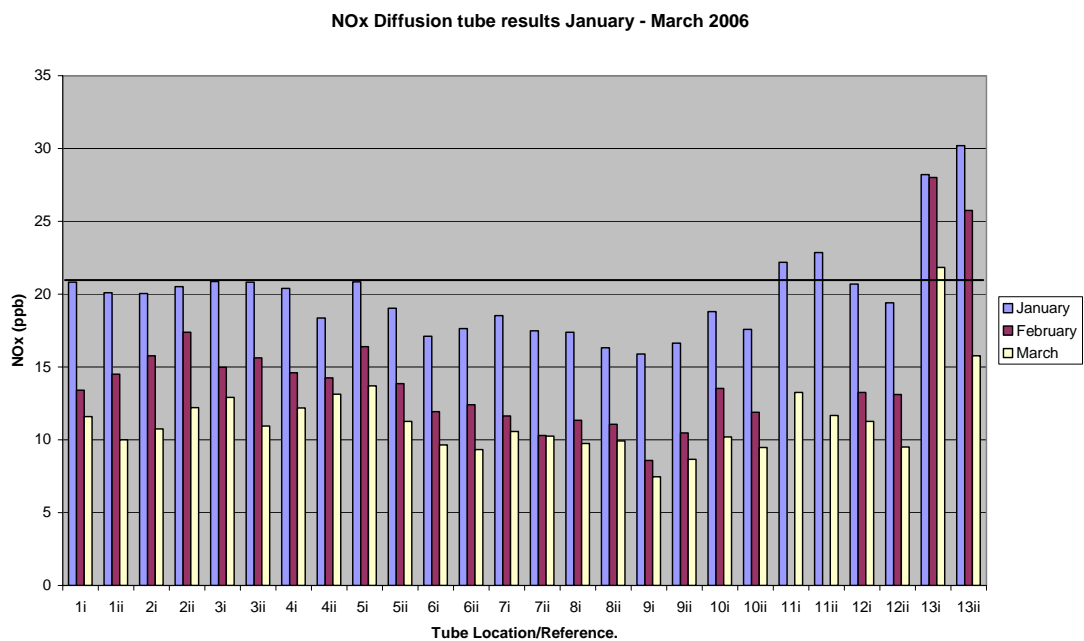


Figure 9: Nitrogen Oxides Diffusion Tube Results Quarter1, 2006, and Air Quality Regulations*, Hourly Mean

Key: **ppb** - parts per billion.

*Air Quality Regulations 1997 (as amended 2000)

4.6 Table 4 below gives the air quality monitoring results obtained from the two Learian Street Box automatic samplers. The Streetboxes are collocated with diffusion tubes, references as given.

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Location	January (ppb)	February (ppb)	March (ppb)
Kempton Close (co-located with diffusion tubes 1i and 1ii)	18.35	16.0	13.8
Farnborough College of Technology (collocated with diffusion tubes 2i and 2ii)	16.6	15.4	13.53

Key: **ppb** - parts per billion

Table 4: Learian Streetbox results for Quarter 1, January – March 2006.

5 CONCLUSION

- 5.1 Routine environmental monitoring of air quality, noise and aircraft movements continues to be undertaken by the airport. To date all monitoring undertaken has demonstrated compliance with regulatory requirements and those of the planning Consent and agreement granted by Rushmoor.
- 5.2 Movements allowed at the airport are restricted to those permitted by the terms of the planning consent and accompanying agreement. There have been no requests received or granted this quarter for use of the airport by hush-kitted aircraft. The level of flight activity at the airport is increasing steadily as anticipated.
- 5.4 Nitrogen oxide levels recorded by monitoring remain consistent. Temperature inversions have been noted to affect these levels over the winter months. Compared with the previous quarter their influence has been less readily identifiable. All monitoring results continue to be analysed for operational trends.
- 5.5 The activities at the airport remain within those required by the Section 106/299A agreement.

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Appendix 1

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Appendix 2