

ANNUAL NOISE REPORT

APRIL 2006 – MARCH 2007



INTRODUCTION

Robin Hood Airport has enjoyed another successful year with growth in Air Transport Movements (ATM's) and passengers. During the second year of operation the Airport has served over 980, 000 passengers.

Dublin, Alicante and Malaga remain as the top three destinations for passengers followed by our new route this year to Katowice, Poland. During the second year of operation the Airport has monitored inbound passenger numbers which has indicated circa 10% of total passenger numbers are inbound to the region.

Efforts to minimise the impact of noise continue to be an important focus for Robin Hood Airport. The second year of operation has been a period the Airport has spent time with the local community seeking views on our Airspace Change Consultation. Each and every County Council, District Council, Parish Council and environmental interest group within a 30km of the Airport was consulted, including our own Airport Consultative Committee (ACC), Airport Noise Monitoring Sub Committee (NMSC) and Health Impact Group (HIG). The Airport also reviewed and expanded the Sound Insulation Grant Scheme (SIGS) to include a further 195 properties, exceeding the requirements of the Section 106 Planning Agreement.

This report is prepared for the Noise Monitoring Sub Committee and contains statistical information on aircraft operations, noise concerns and noise levels to assist in the on going review of noise issues and the development of noise management strategies.



AIRPORT NOISE

Noise is an inevitable consequence of Airport operations especially from airborne aircraft in the immediate vicinity of the Airport. Airborne aircraft noise is the noise that arises from an aircraft as it commences its take off run on the runway until it has reached a height along the departure track at which point it does not significantly contribute to the Airport noise contours on the ground. It also includes the noise from arriving aircraft as they descend to the Airport, especially during final approach when they are aligned with the runway.

REGULATIONS AND POLICIES

The Airport has adopted a Quiet Operations Policy (QOP) to ensure that aviation services are operated as quietly as possible. The policy has been developed in conjunction with the Local Authority and requires all operators to meet all conditions/obligations with which the Airport has to comply. The operational requirements of the QOP are detailed in the UK Air Pilot to ensure that all operators that use Robin Hood Airport are aware of the restrictions.

- Restrictions on Training and Non-Commercial General Aviation activity (ie no training flights on Sundays or Bank Holidays, or between 23:00 to 07:00)
- All engine testing to take place in the screened engine test area and prohibition of aircraft engine testing between 23:00 to 07:00
- Adoption of a Preferential Runway Use, Runway 20 as preferred approach and Runway 02 as preferred departure – subject to safety and weather conditions at all times
- Ensure all departing aircraft adopt Noise Preferential Routings (NPR's) to minimise the over-flying of built up areas
- Penalising airlines that infringe the Airport night noise violation levels
- Avoiding the use of reverse thrust on landing, wherever possible, particularly during the night period
- Minimising the use of Auxiliary Power Units on the ground,
- Operating a night flying policy to limit operations by the noisiest aircraft between 23:00 and 07:00 hours.
- Operating a Sound Insulation Grant Scheme
- The operation of a Noise Monitoring System
- Maintaining a public noise complaint handling service
- Maintaining a technical Noise Monitoring Sub Committee to consider noise issued related to the Airport.

UK AERONAUTICAL INFORMATION PUBLICATION (UK AIP)

The UK AIP is a manual containing information about UK Airports and their standard flight and noise abatement procedures. The Airport Company has placed an instruction in the AIP for every operator of aircraft using the aerodrome to ensure that at all times aircraft are operated in a manner calculated to cause the least disturbance possible in areas surrounding the aerodrome.

For Example: *On take off from Runway 02 aircraft make a minor track adjustment to the left to track north to minimize the effect to the villages of Blaxton and Finningley.*

NIGHT NOISE SANCTIONS SCHEME

In November 2005 the Airport introduced a Noise Sanctions Scheme. The aim of the Noise Sanctions Scheme is to penalise aircraft that generate unreasonable noise levels above the aircraft type expected noise level. The imposition of sanctions in the form of financial penalties is designed to encourage operators to ensure their aircraft are operated as quietly as reasonably possible, and to deter excessively noisy movements.

Aircraft found, without reasonable cause, to have exceeded the noise limits during the night time period (23:00 to 07:00) will be subject to a financial penalty of at least £500. Aircraft found exceeding the noise limits during the daytime are investigated and operators asked to modify their operations. For the period of this report one Airline (Spanair operated on behalf of Thomsonfly) has breached the Noise Sanctions Scheme on three occasions, specifically for three early morning departures. In two cases the noise level limit was breached only marginally by 0.8dB.

Date/Time	Airline	Aircraft	Aircraft Registration	Flight Number	Departing RWY	Noise Level LA _{MAX} (dB)*	NMT	Penalty
08.07.06 06:31	TOM	MD83	ECGNY	6833	20	87.1	2	£700
24.07.06 06:42	TOM	MD83	ECGNY	3781	2	85.8	1	£500
22.07.06 06:44	TOM	MD83	ECGNY	6833	2	85.8	1	£500

* Corrected Noise Level taking into account the location of the noise monitor and aircraft tailwind

Table 1: Noise Sanctions Scheme Aircraft Breaches April 2006 - May 2007

Definition	Limit, dB(A)
Aircraft with a QC on departure of 4* and a MTOW greater 100 tonnes	94
Aircraft with a QC on departure of 4* and a MTOW less than 100 tonnes	90
Aircraft with a QC on departure of 2 and a MTOW greater than 100 tonnes.	89
Aircraft with a QC on departure of 2 and a MTOW less than 100 tonnes	85
Aircraft with a QC on departure of 1 or less	85

*This applies to non scheduled operations

Table 2: Noise Sanctions Scheme Noise Level Limits

AIRCRAFT AND AIRPORT OPERATIONS

RUNWAY UTILISATION

At Robin Hood Airport there is one runway that can be used in two directions, i.e the aircraft can approach from the south and depart towards the north (Runway 02) or diametrically opposed (Runway 20). The runways are identified as Runway 02 and 20, because when an aircraft is lined up ready to depart or is on final approach the compass bearing is approximately 200° or 020°.

The Section 106 Agreement 2.1 requires the Airport to adopt a preferred runway to minimise noise impact from aircraft as best possible.

2.1 The Developer will require aircraft operators to use Runway 20 as the preferred approach runway and Runway 02 as the preferred departure runway subject at all times to safety requirements and having a regard to air traffic and the standard separation requirements of NATS, weather conditions, approach aid limitations and aircraft performance.

The Airport has implemented the preferred runway approach, and this is delineated in the UK AIP, and the Quiet Operations Policy that is given to all airlines. Runways are selected using wind speed and direction at the airport to ensure stable, safe operation of aircraft at low altitudes. The pilot retains the final decision on runway selection. Figure 1 illustrates a strong preferential runway for arrivals to the north (RWY 20) and an almost equal split on departures for both runways. Year on year there will be slight differences with the runway usage which is primarily attributable to weather in that year of operation.

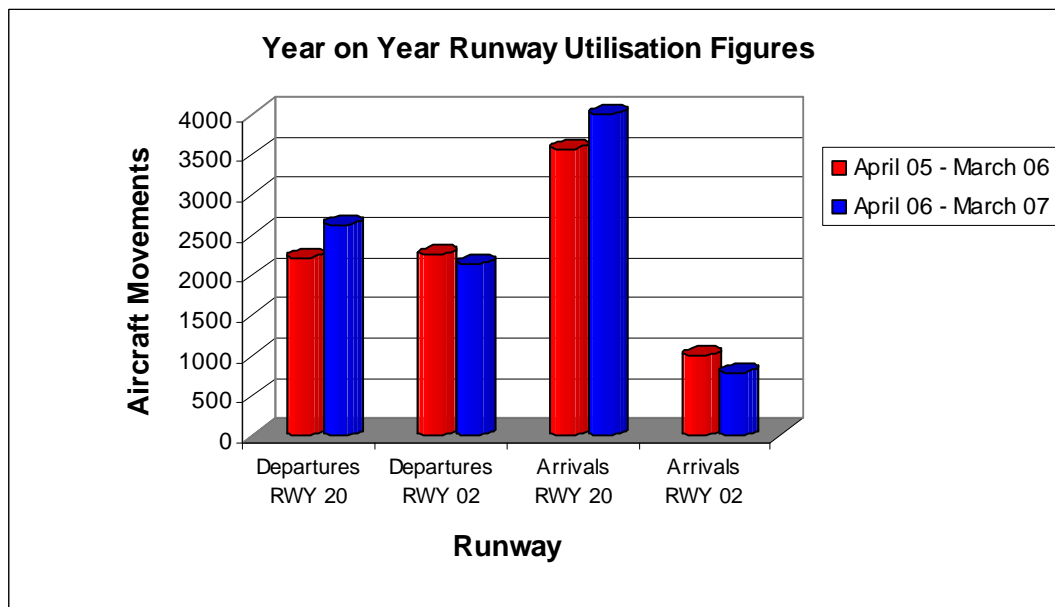


Figure 1: Year on Year Runway Utilisation Figures

OPERATIONAL FACTS AND CONSIDERATIONS

- Aircraft must land and take off into the wind for safety reasons where the wind is in excess of 5 knots
- Aircraft may climb more slowly during warmer weather because the air is less dense
- Aircraft on long haul flights or aircraft loaded to maximum take off weight may climb more slowly
- Aircraft avoid dangerous weather, such as downdrafts and updrafts of wind generated by thunderstorms, which are a hazard to light aircraft
- Aircraft on approach to Runway 20 will line up with the runway centre line and 3° glide slope using the Instrument Landing System
- Aircraft on departure follow a compass heading, which may result in a splay from the centreline as the wind pushes the aircraft

AIRCRAFT TYPE

Figure 2 below shows the number of different commercial aircraft that frequently use Robin Hood Airport. The chart does not show all aircraft types (i.e smaller propeller aircraft). The Thomsonfly Boeing 737-300 remains the most frequent turbo fan aircraft used at Robin Hood Airport. The Boeing 767-300, De Havilland DH8 -400 and Airbus A320 are new aircraft types to feature at Robin Hood Airport during the 2006/07 period and we have seen the disappearance of the Boeing 737-200.

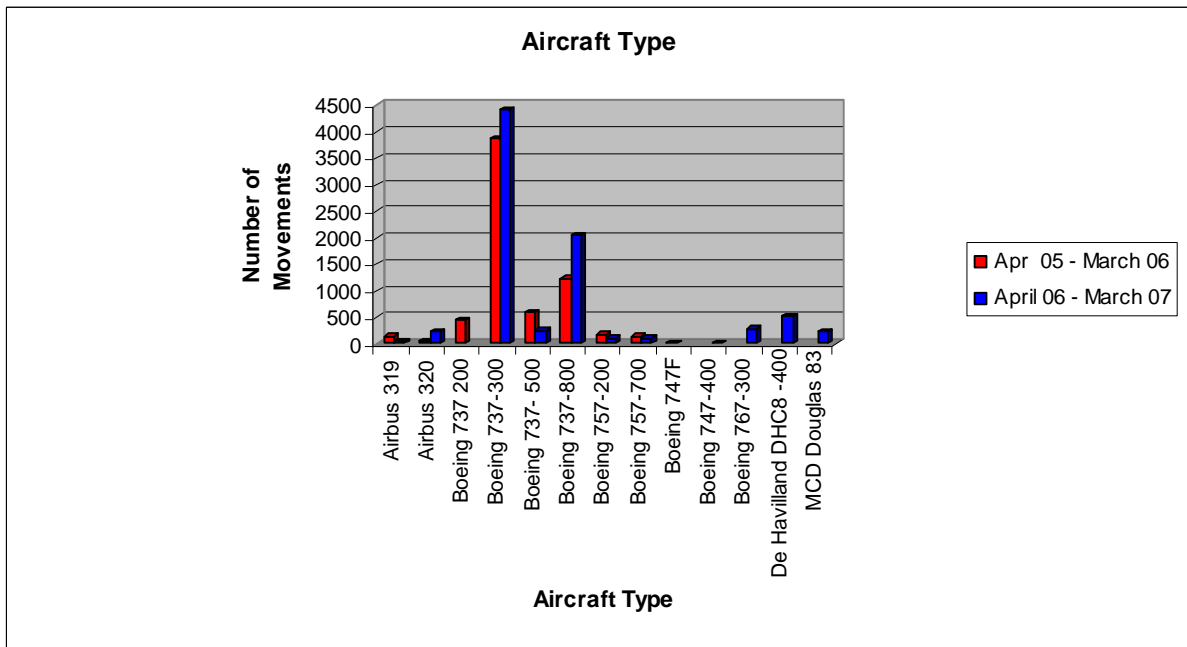


Figure 2: Number of Frequent Commercial Aircraft Type Movements in 2006/07

DAILY AIRCRAFT MOVEMENTS

Figure 3 displays the most frequent aircraft type movements over the second year compared to the first year of operation and the movements throughout a 24 hour period. The peak of departures and arrivals are around midday at Robin Hood Airport.

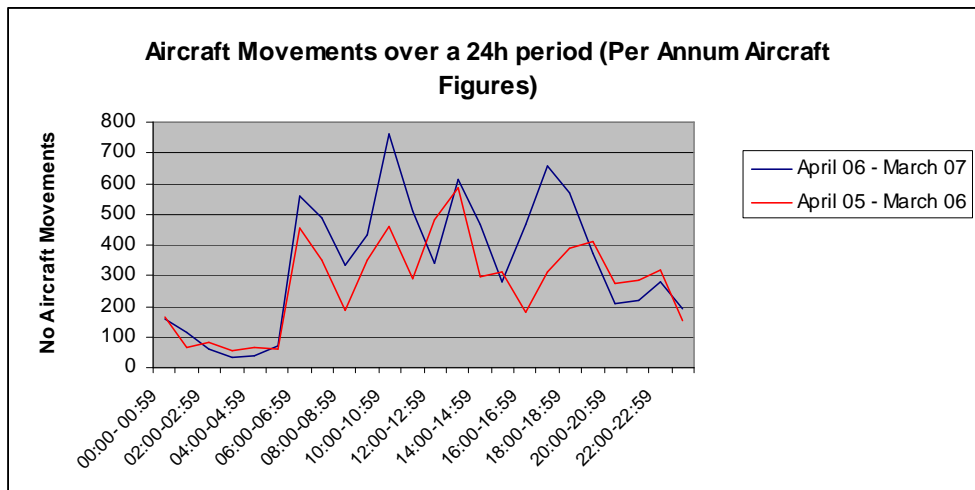


Figure 3: Aircraft Movement (Most Frequent Types) at Robin Hood Airport over a 24 hour period.

QUOTA COUNT POINT SYSTEM

The Robin Hood Airport Quota Count Point System (QCP) is based upon the night restrictions developed by the Government for Heathrow, Gatwick and Stansted Airports. The scheme classifies aircraft according to the noise they generate during arrival and departure. The restrictions apply to a specified 'noise quota' period (23:30 – 06:00 hours) during which time aircraft are restricted by noise quota. The noisiest types are not allowed to operate at night.

Under the QCP, aircraft are grouped into QC bands between 0.5 to QC 16 from quieter modern aircraft to noisy larger aircraft respectively. Some of the very quietest types are classified as exempt and have a QC value of zero and no restriction applies.

The 2006/07 winter usage of QCP's is low due to the closure of the runway at night from November 2006 to March 2007. The runway was closed to upgrade the Air Ground Lighting on the runway.

Year	Air Traffic Movements			
	Summer		Winter	
	Limit	Usage	Limit	Usage
2005/6	3500	421	2200	70.5
2006/7	3875	447	2425	23

Table 3: Quota Count Point Usage

NOISE MONITORING

Airborne noise is monitored at two fixed Noise Monitoring Terminals (NMT's) at Boston Park Farm to the north of the runway and at (RAF) Bawtry to the south of the runway. The noise monitor locations were agreed with Doncaster MBC.

EXAMPLES OF NOISE MONITORING RESULTS

The noise statistics below show the L_{Amax} and SEL average recorded noise levels (Boeing 737-300) for the periods May 05 – March 06 and April 06 – March 07 at Boston Park monitor and RAF Bawtry monitor. The L_{Amax} is the maximum noise level measured with slow time weighting and represents the highest level of environmental noise occurring during a correlated noise event.

The Single Event Level (SEL) is a measure of aircraft noise from a single event which takes account of the duration as well as the intensity, being the level maintained constantly for a period of one second that would deliver the same A weighted energy as the given noise event. The SEL and the L_{Amax} vary slightly at NMT1 compared to NMT2 because NMT2 is located nearly 1km nearer the Airport than NMT1. NMT1 is located at a greater distance because Boston Park Farm is the only suitable location to provide power and communications to the fixed noise monitor. The measured noise levels illustrate a steady constant over the two year period of operation with only on average a 2dB variation month on month over the year.

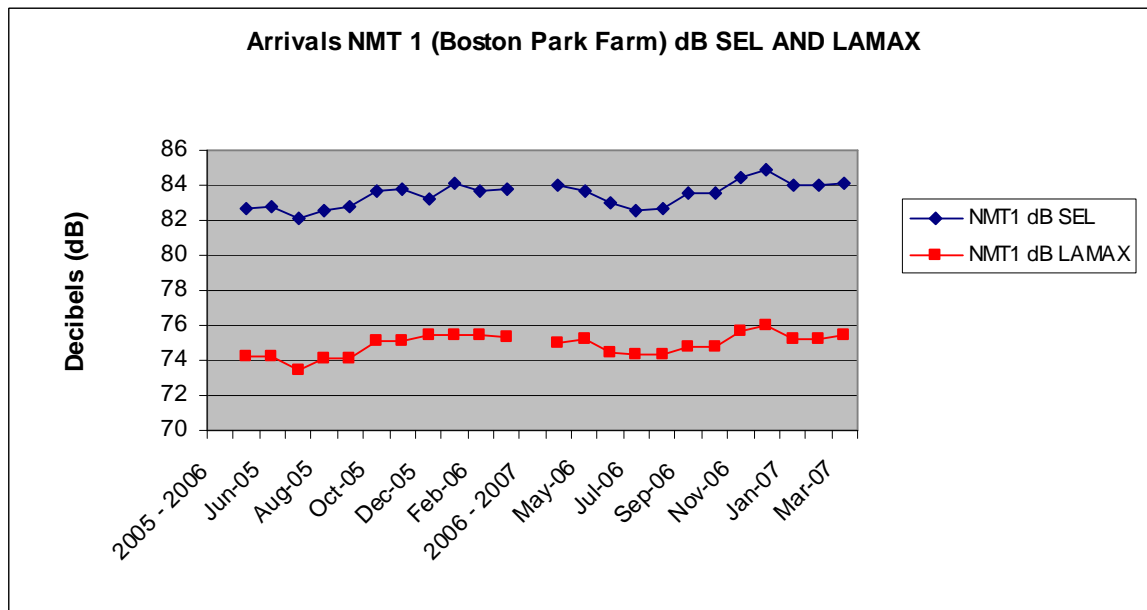


Figure 4: Arrivals NMT 1 (Boston Park Farm) dB SEL and LAMAX

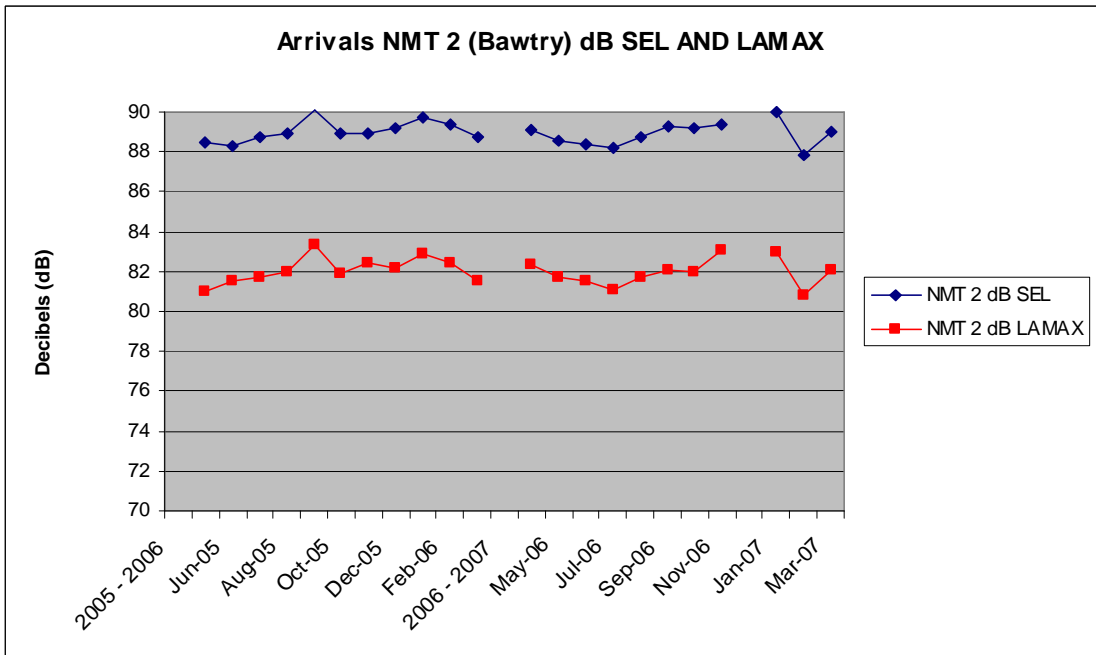


Figure 5: Arrivals NMT 2 (Bawtry) dB SEL and LAMAX

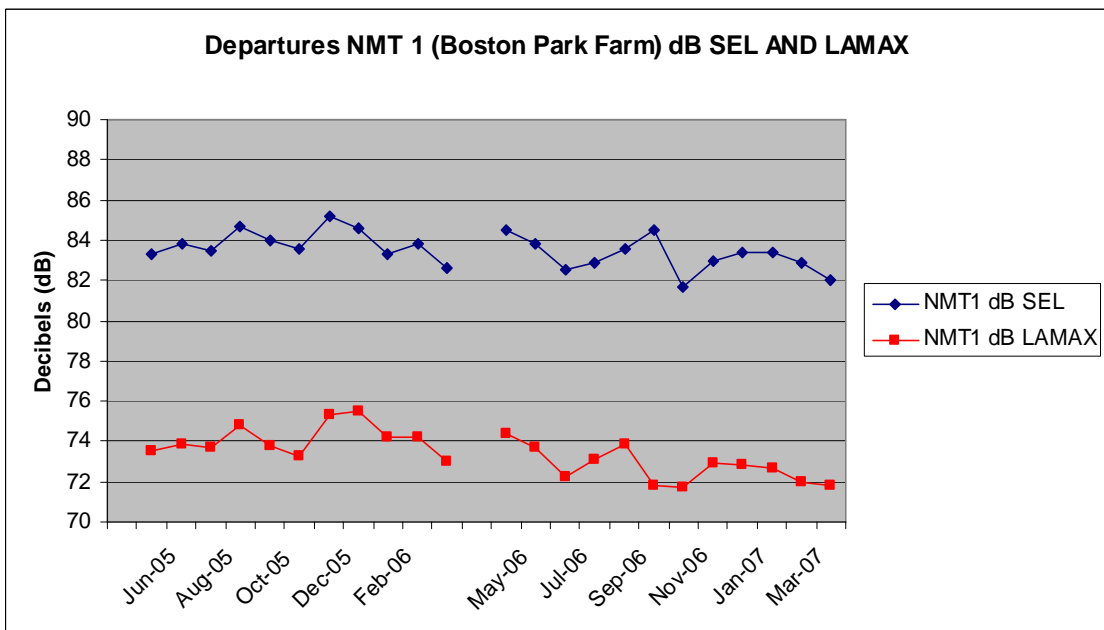


Figure 6: Departures NMT1 (Boston Park Farm) dB SEL and LAMAX

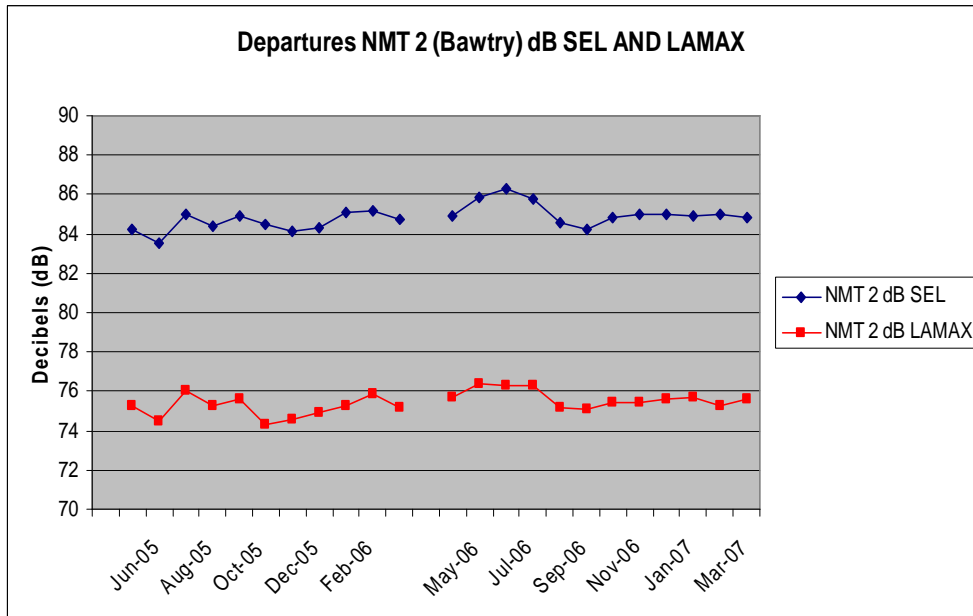


Figure 7: Departures NMT2 (Bawtry) dB SEL AND LAMAX

NOISE COMPLAINTS

The Airport operates a Public Noise Management System to accurately record the nature of the noise complaint made by the local community to the Airport Company, to investigate the potential source of the complaint and to respond to the complainant.

A complaint can be made by telephone, letter or email to the Airport, critical information from the caller includes the date, time and contact details. With this information complaints can be investigated using the Airport Management and Operational Support System (AMOSS) and data from the two fixed Noise Monitoring Terminals.

All noise complaints received by the Airport are collated and reported to the Noise Monitoring Sub Committee on a quarterly basis.



Month	April 05 – March 06		April 06 – March 07		April 07 – March 08	
	Number of Complaints	Number of Complainants	Number of Complaints	Number of Complainants	Number of Complaints	Number of Complainants
Jan			68	23	74	13
Feb			75	25	58	11
March			89	37	53	15
April			93	41		
May	108	62	118	45		
June	103	59	110	34		
July	88	52	125	30		
Aug	91	22	39	27		
Sept	109	21	38	23		
Oct	84	26	35	24		
Nov	33	20	146	17		
Dec	42	25	32	10		
Total	658	287	968	336		

Table 4: Noise Complaints April 2005 – March 2007

NOISE CONCERNS BY TYPE OF OPERATION AND AREA

The majority of complaints are related to arriving aircraft on final approach to Runway 02. The climb rate and Noise Preferential Route (NPR) for departing aircraft takes aircraft away from the centre of Bawtry to the east or west. Arriving aircraft operate lower and at a much slower rate with only one route to the runway which incorporates a path over to the west of Bawtry.

The Airport reviewed the Sound Insulation Grant Scheme In January 2007 to include an additional 195 properties which reflects those properties disturbed by arriving aircraft on Runway 02. Other complaints relate to aircraft 'off track' and training aircraft conducting circuits to the east of the Runway.

NOISE PREFERRED ROUTES

A Noise Preferred Route (NPR) applies to all aircraft departing from the airport on an instrument flight plan. NPR's allow aircraft to follow a route to join the national airways system aiming to minimise noise to residents as best possible. NPR's also allow Air Traffic Control to maintain separation distances between aircraft.

The NPR's are shown on the map as 3km swaths that aircraft are obliged to operate within. Not all aircraft shall attain a path within the swathe due to external factors such as wind and aircraft separation.



Figure 8: Noise Preferential Routes Robin Hood Airport

AIRSPACE

Having determined the operational requirements to establish different airspace arrangements based on operational safety, airport growth and other airspace users the Airport formally embarked on developing an airspace change in accordance with Airspace Change Policy. A new guidance documents (CAP725) produced by the CAA required a more detailed assessment on the impact of the airspace change. The environmental impact was considered from the start of the airspace design process by the Airport (in accordance with new CAP725) in parallel with aircraft safety and the needs of other airspace users.

The Airport consulted with over 300 consultees, including Parish Councils, Local Authority's, Airspace users and environmental groups responding to questions and delivering presentations. The Airport is expected to submit a formal submission of the airspace design to the Directorate of Airspace Policy in October 2007.

SOUND INSULATION GRANT SCHEME

The Sound Insulation Grant Scheme (SIGS) was developed prior to the Airport opening based on movement forecasts up to and including 2007. The scheme makes available up to £3000 for glazing and up to £500 for loft insulation for each residential property within the scheme. The scheme is based on noise exposure levels derived from modelling aircraft noise. The noise contours produced from the modelling use a 63 dB L_{Aeq} 16 hour day noise contour, a 55 dB L_{Aeq} 8 hour night contour and a 90 dB SEL contour.

In January 2007 the Airport reviewed the Sound Insulation Grant Scheme. The changes to the scheme incorporated actual experience gained from the activity during the first year of operation, including for example the measurements gained from the siting of the mobile noise monitor, runway usage, the measured noise levels at the fixed Noise Monitoring Terminal (NMTs), the incidence and distribution of noise complaints and feedback from community representatives who sit on the Airport Consultative Committee, Community and Noise Sub Committee. The SIGS was extended to include a further 195 properties taking the total to 247 properties within the scheme.

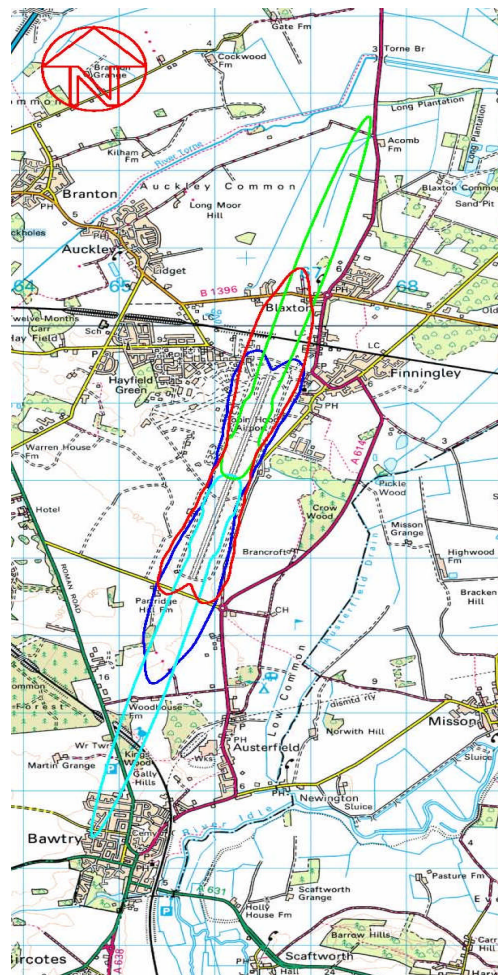


Figure 9: Sound Insulation Grant Scheme Boundary (90 SEL Footprints)

NOISE MONITORING SUB COMMITTEE

APPENDIX A

TERMS OF REFERENCE

General

1. In accordance with the S 106 agreement between Doncaster Metropolitan Borough Council and Peel Airports Limited (Airport Operator), the Airport Consultative Committee (ACC) has established a Noise Monitoring Sub-Committee.

Function

2. The Noise Monitoring Sub-Committee's function is, on behalf of the ACC, to monitor and review the Quiet Operations policy of the Airport Operator.

Composition

3. The composition of the Sub-Committee is shown at Annex A.

Chairmanship

4. The Sub-Committee will elect the Chairman and Vice-Chairman at its inaugural meeting

Duties

5. The Sub-Committee will work in consultation with the Airport Noise Manager to:
- Ensure that the Quiet Operations Policy is implemented, monitored and reviewed.
 - Ensure that the Quota Count System is implemented and reported in accordance with policy.
 - Ensure that the Quiet Operations Policy and Noise Reporting procedures are set out in a manner readily understandable by members of the public.
 - Receive quarterly reports on noise complaints.
 - Report on a quarterly basis to the ACC on the implementation of the Noise Operations Policy and on noise complaints, highlighting significant trends.
 - Produce a draft annual report on the operation and performance of the Quiet Operations Policy, for consideration by the ACC.
 - Review, every two years, the Sound Insulation Grant Scheme.

Meetings

6. The Sub-Committee is to meet quarterly before the regular ACC meetings in order that the reports mentioned at paragraph 4 are available for consideration by the ACC.

Agendas and Papers

7. Agendas and relevant papers will be produced in accordance with the ACC Constitution.

MEMBERSHIP NOISE MONITORING SUB-COMMITTEE

Authority/Body

Seats

Doncaster MBC Environmental Health Officer	1
Bassetlaw DC Environmental Health Officer	1
Ward Councillors – Torne Valley and Finningley	2
Health Impact Group Representative	1
Airport Users – CHC/TUI	3
Parish Councils Liaison Group	1
Noise Advisor to RHADS	1
Chairman of ACC (ex officio)	1