



RiverOak Strategic Partners

# Revised Noise Mitigation Plan

TR020002/D4/2.4

Examination Document

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**Project Name:** Manston Airport Development Consent Order  
**Application Ref:** TR020002  
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# RIVEROAK STRATEGIC PARTNERS

## MANSTON AIRPORT NOISE MITIGATION PLAN

RiverOak Strategic Partners Limited ('RiverOak') has always been aware that the issue of noise created by the operation of a redeveloped Manston Airport would be one of the issues of principal concern for the residents of the districts of Thanet and Canterbury. This has been borne out in both informal and statutory consultation to date. RiverOak understands those concerns and wishes to offer a range of commitments on future noise related activities at the airport in the form of a Noise Mitigation Plan. The commitments are designed to provide clarity to residents and reduce their concerns to the extent possible. While it is not obligatory to offer a Noise Mitigation Plan when an application for a Development Consent Order is made, it is RiverOak's belief that it is right to do so. It is also right that those potentially affected by noise were given a chance to comment upon the provisions of the plan during the statutory consultation period before it was finalised and included in RiverOak's application. In July 2018 RiverOak submitted the Environmental Statement in support of the DCO application. Chapter 12 presented the assessment of operational aircraft noise from the proposals. This Chapter sets out a methodology for identifying the significant adverse effects on health and quality of life on individual receptors in accordance with UK Government Noise Policy and the likely significant effects on community receptors in accordance with the requirements of the EIA regulations.

The UK's overarching noise policy aims are set out in the Government's Noise Policy Statement for England<sup>1</sup> (NPSE) as follows:

### Noise Policy Aims

**Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:**

- **avoid significant adverse impacts on health and quality of life;**
- **mitigate and minimise adverse impacts on health and quality of life; and**
- **where possible, contribute to the improvement of health and quality of life.**

The three aims are embedded into UK Aviation Policy<sup>2,3</sup>. In line with best practice, the ES assessment has responded to this by setting effect levels for residential receptors to identify the onset of noise effects. These include the:

- LOAEL – Lowest Observed Adverse Effect Level - the level above which adverse effects on health and quality of life can be detected; and
- SOAEL – Significant Observed Adverse Effect Level - The level above which significant adverse effects on health and quality of life occur.
- UAEL – Unacceptable adverse effect - Level above which adverse effects are unacceptable.

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<sup>1</sup> Department for the Environment, Food and Rural Affairs (2010), Noise Policy Statement for England.

<sup>2</sup> Department for Transport (2013) Aviation Policy Framework, Paragraph 3.13.

<sup>3</sup> Department for Transport (DfT). (June 2018). Airports National Policy Statement: new runway capacity and infrastructure at airports in the South East of England, Paragraph 5.68.

The effect levels for aircraft noise adopted for Manston airport are based on the most recent evidence and best practice and are set out below:

Time of day	LOAEL	SOAEL	UAEL
Day (0700 – 2300)	50 dB $L_{Aeq,16hr}$ (free-field) <sup>1</sup>	63 dB $L_{Aeq,16hr}$ (free-field) <sup>3</sup>	69 dB <sup>3</sup>
Night (2300 – 0700)	40 dB $L_{Aeq,8hr}$ (free-field) <sup>2</sup>	55 dB $L_{Aeq,8hr}$ (free-field) <sup>2</sup>	
Night (2300 – 0700)	60 dB $L_{ASmax}$ (outside) for any nightly event <sup>2</sup>	80 dB $L_{ASmax}$ (outside) for more than 18 nightly events <sup>4</sup>	

Effect levels derived from the following information sources (for more details refer to Chapter 12 of the ES):

<sup>1</sup> WHO (1999) Guidelines for Community Noise

<sup>2</sup> WHO (2009) Night Noise Guidelines for Europe

<sup>3</sup> A precautionary UAEL set in line with Aviation Policy Framework requirement (Para 3.36) “to offer households exposed to levels of noise of 69 dB  $L_{Aeq,16h}$  or more, assistance with the costs of moving”

<sup>4</sup> Based on the findings of Basner et. al. (2006) Aircraft noise effects on sleep: Application of the results of a large polysomnographic field study.

The airport operator will take reasonable steps to design and operate the airport to minimise the population exposed to aircraft noise above the LOAEL set out above within the context of the ICAO balanced approach to the management of aviation noise<sup>4</sup>.

RiverOak has considered a number of operating procedures to minimise the effects of noise including inset thresholds, increased runway length, steeper approach profiles and a runway preference scheme to minimise the overflight of the most densely populated areas including Ramsgate<sup>5</sup>. The runway preference scheme was predicted to offer large reductions in the population adversely effected by noise and therefore the airport operator will seek to operate take-offs from Runway 28 and landings on Runway 10 subject to such operations being in accordance with CAA guidance and the aircraft operator’s own limitations and safety management systems (See Paragraph 14). Given that the runway preference scheme is subject to later approvals, the scheme was not taken into account for the purposes of the assessment presented in the ES. Nonetheless it is expected that the CAA would seek to adopt the least impacting flight path option as such the assessment provided within the ES represents a worst-case scenario.

This Noise Mitigation Plan includes measures to minimise the adverse effects of noise and provide certainty to communities on how noise will be managed in the long-term including:

- A cap on the annual air transport movements at the airport (Paragraph 1);

<sup>4</sup> EU Regulation 598/2014 on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Union airports within a Balanced Approach

<sup>5</sup> Osprey Consulting Services - Review of Potential Aircraft Noise Abatement Operational Procedures. Report 70992-011 Version 2.1 for RiverOak Strategic Partners 18 December 2017.

- the use of a night-time ‘noise quota’, common at other UK airports, where aircraft are given an independently assessed score known as a quota count according to how noisy they are. An annual quota is imposed on aircraft movements. This provides control over the total amount of noise from aircraft rather than the total number of aircraft<sup>6</sup> (Paragraph 1);
- A scheduled night flight ban between the hours of 2300 and 0600 (Paragraph 1);
- A ban on the noisiest aircraft (with quota count 8 or 16) at night (Paragraph 1);
- A noise insulation scheme for residential properties (Paragraph 2);
- A noise insulation scheme for sensitive non-residential buildings (Paragraph 3);
- A commitment to regular and ongoing consultation with schools (Paragraph 4);
- A purchase and relocation assistance scheme for residential properties (Paragraph 5);
- A clear and transparent process for identifying eligibility for noise insulation, purchase or relocation (Paragraph 6);
- Annual reporting on matters relating to noise (Paragraph 7).
- The establishment of a Community Consultative Committee (Paragraph 8) and a Community Trust Fund (Paragraph 9) which will receive funding from the airport operator under the plan;
- A ban on routine training flights other than for General Aviation (Paragraph 10);
- A ban on open field testing of jet engines at night (Paragraph 11);
- Reverse thrust limitation procedures (Paragraph 12);
- Low power / Low drag approach procedures (Paragraph 13);
- Monitoring of noise levels from aircraft and fines for noisy aircraft (Paragraph 16);
- Fines for aircraft that stray from approved flightpaths without good reason (Paragraph 17);

Noise insulation and ventilation will be offered to some residential dwellings with the aim that noise from the airport does not give rise to significant adverse effects on health and quality of life that could otherwise be expected when airborne noise exceeds the SOAEL set out above (See Paragraph 2). To provide certainty that the noise insulation will avoid significant effects on health and quality of life (the first aim of government noise policy) the airport operator will cover the cost of the noise insulation at affected dwellings. An approved contractor will be appointed to manage the installation of the insulation and ventilation (See Paragraph 6). The effectiveness of the scheme, in terms of the performance of the noise insulation and ventilation provided and the take up of the scheme will be monitored through the Community Consultative Committee. This commitment goes beyond the Aviation Policy recommendation<sup>7</sup> to offer “financial assistance towards insulation”.

A purchase and relocation scheme will be offered to residential dwellings with the aim that noise from the airport does not give rise to unacceptable adverse effects on health and quality of life that would otherwise be expected when airborne noise exceeds the precautionary UAEL set out above. Full details are provided in Paragraph 5.

Effects on health and quality of life are primarily avoided and minimised through the control of airborne noise at residential dwellings. It is recognised that effects can also occur when people are engaged in noise sensitive activities away from their home. Reasonable steps will also be taken to control aircraft noise at sensitive non-residential buildings.

The noise mitigation plan includes a noise insulation scheme for schools and community buildings within the 60 dB  $L_{Aeq}$  (16 hour) day time contour. The airport operator will provide noise insulation and ventilation

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<sup>6</sup> The night time period quota figure has been arrived at based on a typical mix of aircraft operating within the noise levels that have been assessed in the environmental statement, rather than taking the noisiest possible aircraft.

<sup>7</sup> Paragraph 2.39 of Department for Transport (2017) Consultation Response on UK Airspace Policy: A Framework for balanced decisions on the design and use of airspace.

for buildings to achieve acoustic conditions inside sensitive rooms appropriate for the type of building affected. In addition the airport operator has committed to continually review the mitigation needs of schools within the 50dB  $L_{Aeq}$  (16 hour) day time contour presented in Chapter 12 of the ES by first establishing the baseline conditions at the school prior to the operation of the airport, and then annually assessing the potential benefits of mitigation for that school with the potential to fund mitigation via the Community Consultative Committee. For more details see Paragraph 3. These measures go beyond the Aviation Policy requirement to “offer acoustic insulation to noise-sensitive buildings, such as schools and hospitals, exposed to levels of noise of 63 dB  $L_{Aeq,16h}$  or more”<sup>8</sup>.

It is difficult to directly mitigate the effects of noise on external amenity areas resulting from the re-opening of the airport. The Applicant therefore proposes to fund a Community Trust Fund (See Paragraph 9) to be spent on community projects within the 50 dB  $L_{Aeq}$  (16 hour) day time contour and 40 dB  $L_{Aeq}$  (8 hour) contours. The fund, which will be managed by the Community Consultative Committee, may be used to offset the effects of noise from the airport either directly (for example with mitigation for sensitive buildings or the enhancement / creation of external amenity spaces) or indirectly (for example with the provision of educational materials or equipment for schools).

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<sup>8</sup> Paragraph 3.37 of the Aviation Policy Framework.

# NOISE MITIGATION PLAN

## 1 Aircraft quota count and movement restrictions

1.1 Aircraft taking off or landing at the airport are described in this plan as follows:

- 1.1.1 Exempt aircraft;
- 1.1.2 Aircraft having a quota count of 0.25;
- 1.1.3 Aircraft having a quota count of 0.5;
- 1.1.4 Aircraft having a quota count of 1;
- 1.1.5 Aircraft having a quota count of 2;
- 1.1.6 Aircraft having a quota count of 4;
- 1.1.7 Aircraft having a quota count of 8;
- 1.1.8 Aircraft having a quota count of 16.

1.2 Exempt aircraft for the purposes of paragraph 1.1.1 are those aircraft which on the basis of their noise data are classified at less than 84 EPNdB and indicated as exempt in Part 2 of Appendix 1 to this Plan. Paragraph 1.7 does not apply to the taking off or landing of such aircraft.

1.3 Subject to paragraph 1.2, the quota count of an aircraft on taking off or landing is to be calculated on the basis of the noise classification for that aircraft on take-off or landing as appropriate as follows:

Noise Classification	Quota Count
84 - 86.9 EPNdB	0.25
87 – 89.9 EPNdB	0.5
90 - 92.9 EPNdB	1
93 – 95.9 EPNdB	2
96 – 98.9 EPNdB	4
99 – 101.9 EPNdB	8
Greater than 101.9 EPNdB	16

- 1.4 An aircraft cannot take-off or be scheduled to land at night between 2300 and 0600.
- 1.5 An aircraft cannot take-off or land during the Night Time Period where:
  - 1.5.1 the operator of that aircraft has not provided (prior to its take-off or prior to its landing time as appropriate) sufficient information to enable the airport operator to verify its noise classification and thereby its quota count; or
  - 1.5.2 the operator claims that the aircraft is an exempt aircraft within paragraph 1.2, but the aircraft is not indicated as such an aircraft in Part 2 of Appendix 1 to this plan.
- 1.6 Any aircraft which has a quota count of 8 or 16 cannot take-off or land at the airport during the Night Time Period.
- 1.7 The airport will be subject to an annual quota during the Night Time Period of 3028. Each landing and take-off at the airport during the Night Time Period is to count towards this annual quota.
- 1.8 Emergency flights and flights operated by relief organisations for humanitarian reasons will not count towards the quota set in paragraph 1.7, or the cap set in paragraph 1.9, and will not be subject to the restrictions in paragraph 1.4.
- 1.9 The airport will be subject to a total annual air transport movement limit of 26,468.
- 1.10 The airport will be subject to a total annual General Aviation movement limit of 38,000.

## **2 Noise insulation and ventilation scheme – residential properties**

- 2.1 A noise insulation and ventilation scheme for residential properties will be offered by the airport operator to avoid significant adverse effects on health and quality of life. The scheme will take into account both day time and night time noise exposure. Eligibility for the scheme is consistent with current and emerging Government policy.
- 2.2 Where, upon application to the airport operator via the Community Consultative Committee, the freehold owner of a residential property (or a leasehold occupier with written consent to apply from the freeholder) is deemed eligible for assistance under the scheme, they will receive up to £10,000 towards acoustic insulation and ventilation.
- 2.3 In order to provide the reassurance that payments made will be used for the purposes intended (i.e. insulation and ventilation), upon receipt of a successful claim, the airport operator shall appoint an approved contractor to install the necessary insulation and ventilation. Works will be paid for by the airport operator.
- 2.4 Noise insulation measures may include but will not be limited to:
  - 2.4.1 secondary Glazing
  - 2.4.2 high performance double glazing
  - 2.4.3 roof insulation

- 2.4.4 sound insulated doors; and
- 2.4.5 mechanical ventilation.
- 2.5 Only one application will be considered per property.
- 2.6 Residential properties with habitable rooms within the 63dB LAeq (16 hour) day time contour will be eligible for noise insulation and ventilation detailed in paragraphs 2.2 to 2.4.
- 2.7 Residential properties which are not eligible under paragraph 2.4 but which have bedrooms which fall within the 55dB LAeq (8 hour) night time contour will be eligible for noise insulation and ventilation detailed in paragraphs 2.2 to 2.4.
- 2.8 A property must have been in residential use on the date that the Manston Airport Development Consent Order 20[ ] is made in order to be eligible for noise insulation and ventilation detailed in paragraph 2.2 to 2.4.
- 2.9 Further details of how an application for noise insulation and ventilation must be made are provided in paragraph 6.

### **3 Noise insulation scheme – noise-sensitive buildings**

- 3.1 The airport operator will provide reasonable levels of noise insulation and ventilation for schools and community buildings within the 60 dB LAeq (16 hour) day time contour.
- 3.2 For the purposes of this paragraph a reasonable level of noise insulation and ventilation is defined according to the use of the building in question. In the case of schools, “reasonable” in this context means:
  - 3.2.1 taking account of the existing building structure;
    - (a) a level of insulation and ventilation designed to achieve acoustic conditions inside rooms consistent with BB93: acoustic design of schools – performance standards; or
    - (b) where existing conditions already exceed acoustic conditions defined in BB93, a level of insulation and ventilation designed, as a minimum, to maintain existing acoustic conditions inside classrooms.
    - (c) alternative ventilation which avoids overheating in classrooms.
- 3.3 For all other buildings design criteria suitable for the use of the building would be defined on a case by case basis and dependent on their established use on the date the Manston Airport Development Consent Order 20[ ] is made.
- 3.4 In addition, the applicant will assess the need for mitigation at all schools within the 50dB LAeq (16 hour) day time contour. This assessment will include:
  - 3.4.1 consultation visit to understand the needs and concerns of the school/community building in question;



- 3.4.2 noise measurements to be taken at the school prior to commencements of operation of the airport to establish the baseline environment;
  - 3.4.3 proposals for noise mitigation and/or alternative compensation measures to be developed as required and agreed with the community consultation committee; and
  - 3.4.4 installation of such measures as may be required through the Community Trust Fund.
- 3.5 A building must be in use as a school or a community building on the date that the Manston Airport Development Consent Order 20[ ] is made to benefit from the commitment in paragraph 3.1.

#### **4 Schools Liaison**

The airport operator will invite the headteachers of all schools within the 50 dB LAeq (16 hour) day time contour to quarterly liaison meetings where the impacts of the airport on the local schools will be discussed.

#### **5 Purchase and relocation assistance scheme**

- 5.1 A purchase and relocation assistance scheme will be offered by the airport operator to enable those homeowners exposed to the highest levels of airport related noise to move away from the airport.
- 5.2 When it receives a successful application to the purchase and relocation assistance scheme the airport operator will offer to purchase the property for its market value (in the absence of the proposed development) and in addition to this the applicant will receive relocation assistance payments of:
  - 5.2.1 £5,000; and
  - 5.2.2 2.5% of the purchase price for the property up to a maximum of £15,000.
- 5.3 Only one application will be considered per property.
- 5.4 Owners of residential properties within the 69 dB LAeq (16 hour) contour will be eligible for the payments detailed in paragraph 5.2 if:
  - 5.4.1 they are the freehold owner of the property when applying (if the applicant currently lives elsewhere the property in question must be the only residential property that they own in the UK);
  - 5.4.2 they plan to move to a quieter area outside the 69 dB LAeq (16 hour) contour for the airport; and they have owned, or have been living in the property continually since the making of the Manston Airport Development Consent Order was made. All properties predicted to be eligible for relocation assistance (as defined by the Year 20 69 dB LAeq (16 hour) contour presented in Chapter 12 of the ES) will be valued by an independent surveyor within 6 months of the making of the DCO.

- 5.5 The relocation settlement shall take account of any reduction in property value resulting from a change in the noise environment following the opening of the airport.
- 5.6 If the owner of a residential property meets the eligibility requirements set out in paragraph 5.4 but elects not to apply for the purchase and relocation scheme then the airport operator will on written request provide sound insulation for the property as described in paragraphs 2.2 to 2.4 above.

## **6 Making a claim**

- 6.1 As described in paragraph 7 the airport operator will report the forecast noise exposure from Manston Airport annually and will publish these forecasts in an annual report. The airport operator will use these forecasts to identify properties which may be eligible for a claim.
- 6.2 The airport operator will notify potentially eligible properties, in writing, that they may be eligible for noise insulation and ventilation.
- 6.3 If the freehold owner of a residential property (or a leasehold occupier with written consent to apply from the freeholder) wishes to make a claim for noise insulation and ventilation under this scheme an application must be made, in writing, to the airport operator via the Community Consultative Committee.
- 6.4 The Community Consultative Committee will make the decision as to whether a claim is valid based solely on the provisions of this Noise Mitigation Plan.

## **7 Airport operator reporting responsibilities**

- 7.1 The airport operator will produce an annual report to be submitted to the Community Consultative Committee that will include as a minimum the following information:
- 7.1.1 An aviation forecast for the next calendar year to include all flights (passenger, freight and General Aviation) expected to take off and land at the airport
- 7.1.2 Forecast LAeq noise contours including:
- (a) 69 dB LAeq (16 hour)
  - (b) 63dB LAeq (16 hour) day time;
  - (c) 55dB LAeq (8 hour) night time;
  - (d) 60 dB LAeq (16 hour) day time; and
- 7.1.3 A report on the actual flight numbers for the previous year to include passenger, freight and General Aviation.
- 7.1.4 A detailed report outlining all claims and actions taken in respect of the provision of noise insulation and ventilation.
- 7.1.5 A report on any claims and payments relating to the relocation scheme.

- 7.1.6 A report on any claims and payments made relating to the Community Trust Fund (established under paragraph 9).
- 7.1.7 A report on any breaches and fines associated with the aircraft noise monitoring policy (paragraph 16) and the off-track flight policy (paragraph 17).
- 7.2 This report will be provided annually on a date to be agreed by the Community Consultative Committee in advance of the commencement of operations. At this stage it is expected that a report would be provided by 30<sup>th</sup> June in the year subsequent to any given operating year.

## **8 Community Consultative Committee**

- 8.1 The airport operator will establish a Community Consultative Committee in accordance with section 35 of the Act and with the guidance contained in “Guidelines for Airport Consultative Committees” (Department for Transport, 17 April 2014).
- 8.2 The Community Consultative Committee will include an independent chair and secretary who will be paid by the airport operator.
- 8.3 The Community Consultative Committee shall be the body responsible for making recommendations to the airport operator relating to claims for noise insulation and ventilation, relocation and for administering applications to the Community Trust Fund.
- 8.4 In the event that the Community Consultative Committee is unable to fulfil its duties, a managing agent will be appointed by the airport operator to ensure that claims that would otherwise be directed to the Community Consultative Committee are dealt with in a timely and appropriate manner.
- 8.5 The CCC will comprise representatives from:
  - 8.5.1 Thanet District Council;
  - 8.5.2 Dover District Council;
  - 8.5.3 Canterbury District Council; and
  - 8.5.4 community representatives to be elected annually under a procedure to be defined by the independent chair and secretary in consultation with those public bodies listed above.
- 8.6 The Director of Public Health will be offered the opportunity to contribute to Community Consultative Committee meetings either in person or in writing.
- 8.7 The Community Consultative Committee will meet quarterly in suitable premises on the airport and the agenda and minutes of each meeting will be published.
- 8.8 The Community Consultative Committee will be responsible for offering those members of the community who have benefitted from the noise insulation scheme the opportunity to provide feedback on the effectiveness of the measures provided.

- 8.9 The Community Consultative Committee will provide an annual report to the operator addressing any concerns that it or members of the public may have in relation to the operation of the airport or performance and implementation of noise insulation and ventilation measures.

## **9 Community Trust Fund**

- 9.1 The airport operator will establish a Community Trust Fund into which all penalties applied under paragraphs 16 and 17 of this plan will be paid.
- 9.2 The proceeds of the fund established under paragraph 9.1 will be applied by the Community Consultative Committee established under paragraph 8 of this plan to projects that can offer a direct benefit to communities living within the 50 dB LAeq (16 hour) day time contour and 40 dB LAeq (8 hour) night time contours.
- 9.3 The airport operator will contribute £50,000 per annum to the Community Trust Fund.
- 9.4 The Community Trust Fund will be administered by the Community Consultative Committee and it is therefore its responsibility to administer the funds responsibly, appropriately and in line with the conditions outlined in this plan. The types of project that are envisaged for the Community Trust Fund may include but are not limited to:
- 9.4.1 insulation grants for noise sensitive community buildings outside the SOAEL level;
  - 9.4.2 grants relating to the creation or enhancement of public outdoor spaces;
  - 9.4.3 grants for groups or facilities using outdoor recreational spaces; and
  - 9.4.4 grants for schools aimed at enhancing the teaching environment.

## **10 Training flights**

Other than General Aviation training that is based at Manston Airport, there will be no routine training flights.

## **11 Engine testing**

There will be no open field testing of jet engines during the Night Time Period.

## **12 Reverse thrust**

- 12.1 The airport operator will establish a policy which minimises the use of reverse thrust except where operationally essential.
- 12.2 The airport's entry in the UK Aeronautical Information Publication (AIP) AD 2.21 'Noise Abatement Procedures' will contain, inter alia, the following requirements relating to reverse thrust:
- 12.2.1 Pilots are requested to avoid the use of reverse thrust or reverse pitch above idle power settings on landing, consistent with the safe operation of the aircraft.

- 12.2.2 To minimise disturbance in areas adjacent to the airport, Captains are requested to avoid/reduce the use of reverse thrust after landing, whenever possible consistent with safe operation of the aircraft.
- 12.2.3 In the apron areas minimum engine power shall be used as far as possible, and use of reverse thrust for manoeuvring to and from a stand is not permitted.

### **13 Aircraft approach**

- 13.1 Aircraft operators will be encouraged to keep noise disturbance to a minimum by operating a low power/low drag procedure subject to ATC speed control requirements and the maintenance of safe operation of the aircraft.
- 13.2 The Airport's entry in the UK Aeronautical Information Publication (AIP) AD 2.22 'Flight Procedures' will contain, inter alia, the following requirements relating to aircraft approach:
- 13.2.1 Noise abatement Procedures – All aircraft inbound or outbound from the aerodrome are required to conform to the following procedures; notwithstanding that these may at any time be departed from to the extent necessary for avoiding immediate danger, or in compliance with ATC instructions:
- (a) Continuous Descent Approaches (CDA).
  - (b) Turbo-jet and turbo-prop aircraft are expected to apply continuous descent, low power, low drag approach techniques at all times.
  - (c) Subject to ATC instructions, inbound aircraft are to maintain as high an altitude as practical and adopt a low power, low drag, continuous descent approach profile. The object will be to join the glidepath at the appropriate height for the distance without level flight.
  - (d) To facilitate these techniques aircraft should be flown no faster than 250kts from the Speed Limiting Points and below FL100 and 250kts-210kts during the intermediate approach phase. Thereafter speed should be managed so as to achieve a continuous descent using as little power or drag as possible. ATC may impose speed control if required for separation purposes.
  - (e) ATC will provide regular range checks. Pilots who require additional track mileage to facilitate a successful CDA should inform ATC as soon as the requirement is apparent.
  - (f) Except where required by the Instrument Approach Procedures, inbound aircraft in both VMC and IMC should, whenever possible avoid flight below 3000 ft over towns and other populated areas.
  - (g) Unless otherwise instructed by ATC, aircraft using the ILS or RNAV in IMC or in VMC shall not descend below 2000ft before intercepting the glidepath, and for runway 28 shall intercept the glidepath prior to the coast, nor thereafter fly below the glidepath.

## **14 Runway Operation**

- 14.1 When weather conditions allow, and taking into account other operational and safety considerations including runway utilisation, the airport operator will seek to operate take-offs from Runway 28 and landings on Runway 10 subject to such operations being in accordance with CAA guidance and the aircraft operator's own limitations and safety management systems.
- 14.2 The Airport's entry in the UK Aeronautical Information Publication (AIP) AD 2.21 'Noise Abatement Procedures' will contain, inter alia, the following requirement relating to Runway Preference:
- 14.2.1 During suitable wind conditions aircraft will be required to use runway 28 for departure, and runway 10 for arrival. This procedure is subject to operator safety guidance limits consistent with the safe operation of the aircraft.

## **15 Wake turbulence**

The airport operator will implement the Wake Turbulence Policy at Appendix 2 to this plan.

## **16 Aircraft noise monitoring**

- 16.1 Permanent fixed noise monitoring terminals will be located under each of the aircraft departure flight paths at a distance of 6.5km from the start of take-off roll.
- 16.2 During the Day Time Period the operator of any departing aircraft that exceeds 90 dB LASmax at the relevant noise monitoring terminal will be subject to a penalty of £750 and a further penalty of £150 for each additional decibel exceeded above 90 dB LASmax.
- 16.3 The operator of any flight departing between 0600 and 0700 aircraft that exceeds 82 dB LASmax at the relevant noise monitoring terminal will be subject to a penalty of £750 and further penalties of £150 for each additional decibel exceeded above 82 dB LASmax.

## **17 Off-track Flight**

- 17.1 The airport operator will install a NTK system which will track aircraft in flight.
- 17.2 Through the Airspace Change Process the airport operator will seek to establish NPRs which will be designed to avoid overflying of densely populated areas.
- 17.3 The airport operator will require each aircraft operator to ensure that 95% of all departures within a calendar year remain within the NPR.
- 17.4 Any aircraft operator which fails to meet the target in paragraph 17.3 and subsequently fails to work collaboratively with the airport operator after being notified of persistent departures outside of the NPRs will be subject to a track keeping penalty of £500 per aircraft departure.

## **18 Interpretation**

- 18.1 For the purposes of this plan:

'the Act' means the Civil Aviation Act 1982;

'the airport' means Manston Airport'

'airport operator' means the person for the time being having the management of Manston Airport;

'Airspace Change Process' means the process by which airspace change sponsors apply to the Civil Aviation Authority for a permanent change to UK airspace design;

'air transport movement' means a landing or a take-off of an aircraft which excludes those associated with General Aviation;

'ATC' means air traffic control;

'Annex 16' means Annex 16 (Volume 1 – Aircraft Noise) to the Convention on International Civil Aviation signed on behalf of the United Kingdom at Chicago on December 1944;

'Day Time Period' means the period from 0700 hours to 2300 hours;

'CDA' means continuous descent approach;

'EPNdB' means effective perceived noise in decibels;

'IMC' means Instrument Meteorological Conditions;

'General Aviation' means all civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire;

'LAeq (8 hour) contour' means equivalent continuous sound level of aircraft noise during the average 'summer night'. This is based on the daily average aircraft movements that take place between 2300 and 0700 local time during the 92-day period from 16 June to 15 September inclusive;

'LAeq (16 hour) day time contour' means equivalent continuous sound level of aircraft noise in the 16 hour average 'summer day'. This is based on the daily average aircraft movements that take place between 0700 and 2300 local time during the 92-day period from 16th June to 15th September inclusive;

'LASmax' means the maximum A-weighted sound level measured during an aircraft fly-by event; 'low power/low drag procedure' means a noise abatement technique for arriving aircraft in which the pilot delays the extension of wing flaps and undercarriage until the final stages of the approach;

'maximum certificated landing weight' means the maximum landing weight authorised in the certificate of airworthiness;

'maximum certificated take-off weight' means the maximum take-off weight authorised in the certificate of airworthiness;

'NPR' means a specific flight path which aircraft with a maximum take-off weight in excess of 5700 kg are to follow up until an altitude of 4,000 ft or as directed by ATC;

'Night Time Period' means the period from 2300 hours to 0700 hours;

an aircraft is deemed to have taken off or landed during the Night Time Period if the time recorded by the appropriate ATC control unit as 'airborne' or 'landed' respectively falls within that period;

'NTK' means Noise and Track Keeping System;

'noise classification' means the noise level band in EPNdB, for take-off or landing, as the case may be, for the aircraft in question, as defined in Part 2 of Appendix 1 to this Notice;

'quota' means the maximum permitted sum of the quota counts of all aircraft taking off from or landing at the airport during the relevant period;

'quota count' means the amount of the quota assigned to one take-off or to one landing by the aircraft in question, this number being related to its noise classification as specified in paragraph 1.3 of this plan; and 'start of take-off roll' means the point at which an aircraft which is aligned with the runway centreline begins to move forward with the intent to take-off;

'RNAV' means required (area) navigational performance; and

'VMC' means visual meteorological conditions



## APPENDIX 1

### NOISE CLASSIFICATION

#### PART 1

- 1 The noise classification for an aircraft on take-off or landing as appropriate means
  - 1.1 for the purposes of landing:
    - 1.1.1 in the case of an aircraft certificated to the standards of Chapter 2, 3, 4 or 5 of Annex 16 (or the equivalent standards): the certificated approach noise level of the aircraft at its maximum certificated landing weight, minus 9 EPNdB; and
    - 1.1.2 in the case of a propeller aircraft with a maximum take-off weight not exceeding 5,700 kg and any other aircraft not certificated to the standards of Chapter 2, 3, 4 or 5 of Annex 16 (or the equivalent standards): the noise level indicated in relation to that aircraft in the noise data supplied for this purpose to the CAA.
  - 1.2 for the purposes of take-off:
    - 1.2.1 where the aircraft is certificated to the standards of Chapter 3, 4 or 5 of Annex 16 (or the equivalent standards): half the sum of the flyover and the sideline noise levels in EPNdB as measured at the certification points specified in that Annex during the noise certification of the aircraft at its maximum certificated take-off weight;
    - 1.2.2 where the aircraft is certificated to the standards of Chapter 2 of Annex 16 (or the equivalent standards): half the sum of the flyover and the sideline noise levels in EPNdB as measured at the certification points specified in that Annex during the noise certification of the aircraft at its maximum certificated take-off weight, plus 1.75 EPNdB; and
    - 1.2.3 where the aircraft is a propeller aircraft with a maximum take-off weight not exceeding 5,700 kg or any other aircraft not certificated to the standards of Chapter 2, 3 or 5 of Annex 16 (or the equivalent standards): the noise level indicated in relation to that aircraft in the noise data supplied for this purpose to the CAA.
  - 1.3 Subject to paragraph 1 of this Schedule, the current noise classifications for aircraft on take-off or landing as appropriate are indicated in the tables in Part 2 of this Schedule, which are not exhaustive.
  - 1.4 In paragraph 1 of this Appendix, 'the equivalent standards' means:
    - 1.4.1 in the case of Chapter 2 of Annex 16: FAR 36, Stage 2;
    - 1.4.2 in the case of Chapter 3 of Annex 16: FAR 36, Stage 3;
    - 1.4.3 in the case of Chapter 4 of Annex 16: FAR 36, Stage 4;
    - 1.4.4 in the case of Chapter 5 of Annex 16: FAR 36, Stage 2 and 3.

## PART 2

**Note:** Aircraft are listed alphabetically in the following arrivals and departures tables according to type. The engine type and any acoustical or other treatment necessary to enable the aircraft to achieve its noise classification are also indicated. Each of the entries in the columns headed EXEMP (i.e. EXEMPT), QC/0.25, QC/0.5, QC/1, QC/2, QC/4, QC/8 and QC/16 indicates the maximum certificated landing or take-off weight (as appropriate) for that aircraft which will meet the QC rating. For example, a B747-400 with PW4056 engines and no acoustical treatment will be classified for departures as QC/2 if it has a maximum certificated take-off weight of up to and including 292.19 tonnes. However, it will be classified as QC/4 if its maximum certificated take-off weight is more than 292.19 tonnes but not more than 370.57 tonnes; or as QC/8 if its maximum certificated take-off weight is more than 370.57 tonnes but not more than 394.63 tonnes.

Part 2 - Noise classification according to type - ARRIVALS

ARRIVALS	Aircraft	Engine	Remarks	Noise Level Band (EPNdB)							Maximum certificated landing weight - tonnes								
				<84	84-86.9	87-89.9	90-92.9	93-95.9	96-98.9	99-101.9	>101.9	EXEMP	QC/0.25	QC/0.5	QC/1	QC/2	QC/4	QC/8	QC/16
				Quota Count															
Agusta A109S	PW207C						3.17												
Agusta A109A II	Allison 250-C20B					2.60													
Agusta A109E	PW206C						3.00												
Agusta A119	PT6B-37A					2.72													
Airbus A300B2-1C	CF6-50C,C2R											128.00							
Airbus A300B2-203	CF6-50C2	Mod 2150 (short nozzle)										130.00							
Airbus A300B2-203	CF6-50C2	Mod 3305,2150 (short nozzle)										130.00							
Airbus A300B2-203	CF6-50C2											130.00							
Airbus A300B2-320	JT9D-59A	Mod 3305										134.00							
Airbus A300B2-320	JT9D-59A											136.00							
Airbus A300B2K-3C	CF6-50C,C2R	Mod 3305,2150 (short nozzle)										130.00							
Airbus A300B2K-3C	CF6-50C,C2R											130.00							
Airbus A300B4-103	CF6-50C2	Mod 2150										133.00							
Airbus A300B4-103	CF6-50C2	Mod 3305,3373										133.00							
Airbus A300B4-103	CF6-50C2											133.00							
Airbus A300B4-120	JT9D-59A											133.00							
Airbus A300B4/C4/F4-203	CF6-50C2	Mod 2150 (short nozzle)										134.00							
Airbus A300B4/C4/F4-203	CF6-50C2	(long nozzle)										134.00							
Airbus A300B4-220	JT9D-59A											134.00							
Airbus A300B4-2C	CF6-50C2,C2R	Mod 3305,2150 (short nozzle)										134.00							
Airbus A300B4-2C	CF6-50C2,C2R	Mod 3373										134.00							
Airbus A300B4-2C	CF6-50C2,C2R											133.00							
Airbus A300B4-601	CF6-80C2A1											138.00							
Airbus A300B4-603	CF6-80C2A3											138.00							
Airbus A300B4-605R	CF6-80C2A5											140.00							
Airbus A300B4-620	JT9D-7R4H1											138.00							
Airbus A300B4-622	PW4158	Mod 8550 (JAS-kit)										138.00							
Airbus A300B4-622	PW4158											138.00							
Airbus A300B4-622R	PW4158	"B-package" equipped										140.00							
Airbus A300B4-622R	PW4158	Mod 8550 (JAS-kit)										140.00							
Airbus A310-203	CF6-80A3											121.50							
Airbus A310-203C	CF6-80A3	Mod 5327,5771 & 604										122.00							
Airbus A310-203C	CF6-80A3											122.00							
Airbus A310-204	CF6-80C2A2										122.00								
Airbus A310-221	JT9D-7R4D1											118.50							
Airbus A310-222	JT9D-7R4E1											121.50							
Airbus A310-304	CF6-80C2A2										123.00								
Airbus A310-308	CF6-80C2A8										123.00								
Airbus A310-322	JT9D-7R4E1											123.00							
Airbus A310-324	PW4152	Mod 8921 ("B-package")										123.01							
Airbus A310-324	PW4152											124.00							
Airbus A310-325	PW4156A											124.00							
Airbus A318-112	CFM56-5B9/P										57.50								
Airbus A319-111	CFM56-5B5										68.00								
Airbus A319-111	CFM56-5B5/P	Mod No 25800-SAC									68.00								
Airbus A319-111	CFM56-5B5/P	Mod. No 25800-SAC and 27772	58.00								62.50								
Airbus A319-112	CFM56-5B6										68.00								
Airbus A319-112	CFM56-5B6/P										68.00								
Airbus A319-114	CFM56-5A5										68.00								
Airbus A319-115	CFM56-5B7										62.50								
Airbus A319-132	IAE V2524-A5										62.50								
Airbus A319-133	IAE V2527M-A5										62.50								
Airbus A320-111	CFM56-5-A1										67.00								
Airbus A320-211	CFM56-5-A1										68.00								
Airbus A320-212	CFM56-5-A3	Eng mods 20775,21478									68.00								
Airbus A320-214	CFM56-5B4/P	Engine Mod No 25800 SAC									68.00								
Airbus A320-216	CFM56-5B6/P or CFM56-5B6/3										66.00								
Airbus A320-231	V2500-A1										68.00								
Airbus A320-231	V2500-A1Mod 22461	"BUMP" Rating									68.00								
Airbus A320-232	V2527-A5										64.50								
Airbus A320-251n	CFM LEAP-1A26										67.40								
Airbus A320-271n	PW1127G-JM										67.40								
Airbus A321-111	CFM56-5B1 or CFM56-5B1/2										80.00								
Airbus A321-112	CFM56-5B-2										80.00								
Airbus A321-131	V2530-A5										80.00								



Part 2 - Noise classification according to type - ARRIVALS

ARRIVALS	Aircraft	Engine	Remarks	Maximum certificated landing weight - tonnes									
				Noise Level Band (EPNdB)		Quota Count							
				<84	84-86.9	87-89.9	90-92.9	93-95.9	96-98.9	99-101.9	>101.9		
EXEMP	QC/0.25	QC/0.5	QC/1	QC/2	QC/4	QC/6	QC/16						
B727-300	RR Tay 651-54	Dee Howard QF modification				62.40							
B737-200ADV	JT8D-15 or -15A	NORDAM LGW-H hushkit				46.72							
B737-200/-200C(ADV)	JT8D-15/-17 & A engs. at -15 thr	NORDAM hushkit see STC SA5730NM				48.53							
B737-200/-200C(ADV)	JT8D-17 & A engs. at -17 thr	NORDAM hushkit see STC SA5730NM				48.53							
B737-200/-200C(ADV)	JT8D-9/-15/-17 & A engs at -9 thr	NORDAM hushkit see STC SA5730NM				48.53							
B737-200/200C NON ADV	JT8D-15/-17 & A engs. at -15 thr.	NORDAM hushkit see STC SA5730NM						47.63					
B737-200ADV	JT8D-15 or -15A	NORDAM LDV hushkit (STC ST00131SE)				48.53							
B737-300	CFM56-3B1							54.43					
B737-300	CFM56-3B2							54.89					
B737-300	CFM56-3C1							52.53					
B737-300	CFM56-3C1	Winglets						51.70					
B737-400	CFM56-3B2/3C1	Treated forward acoustic panel						56.25					
B737-400	CFM56-3B2/3C1	Hardwall forward acoustic panel						56.25					
B737-500	CFM56-3-B1	18500lb SLST						51.71					
B737-500	CFM56-3-B1	20000lb SLST						51.71					
B737-500	CFM56-3-B1(R)							49.90					
B737-500	CFM56-3-B2	18500lb SLST						51.71					
B737-500	CFM56-3-C1	18500lb SLST						51.71					
B737-500	CFM56-3-C1	20000lb SLST						51.71					
B737-600	CFM56-7B20	20000lb SLST			54.66								
B737-700	CFM56-7B20	20000lb SLST			60.78								
B737-700	CFM56-7B22	22000lb SLST			60.78								
B737-700	CFM56-7B24	24000lb SLST			60.78								
B737-700	CFM56-7B27	27000lb SLST					60.78						
B737-700-IGW	CFM56-7B27/3B3	Including STC ST 00830SE winglets					60.78						
B737-800	CFM56-7 at 7B24 Thrust Rating	With Winglets and with Flaps 40 Degrees						66.36					
B737-800	CFM56-7B24	24000lb SLST						66.36					
B737-800	CFM56-7B26	Winglets						66.36					
B737-800	CFM56-7B26	26000lb SLST						66.36					
B737-800	CFM56-7B27	27000lb SLST						66.36					
B737-800	CFM56-7B27	With Winglets and with Flaps 40 degrees						65.32					
B737-800	CFM56-7B27/B1	Winglets						66.36					
B737-900	CFM56-7B26	26000lb SLST						66.81					
B737-900ER	CFM56-7B27	Winglets						71.35					
B747-100/200/300	JT9D-7R4G2	with -300R nacelles								285.76			
B747-100/200/300	RB211-524B2									265.35			
B747-100/200/300	RB211-524C2									265.35			
B747-100/200/300	RB211-524D4								289.99	302.00			
B747-200	JT9D-70A									285.76			
B747-200	JT9D-7Q									304.48			
B747-200	RB211-524D4-19/22									285.76			
B747-200	RB211-524D4X-19/22									289.89	302.09		
B747-200/-300	CF6-50E/E1									285.76			
B747-200/-300	CF6-50E2									285.76			
B747-200B	CF6-50E									265.35			
B747-200B	RB211-524D4	RRN nacelles								285.76			
B747-200F	CF6-50E2									299.37			
B747-300	CF6-50E2									285.76			
B747-300	CF6-80C2B1								298.69	320.00			
B747-300	JT9D-7R4G2									285.76			
B747-300/200 B,C & F	CF6-50E									285.76			
B747-400	CF6-80C2B1F	with and without the N1 modifier								295.74			
B747-400	CF6-80C2B5F	With N1 modifier								296.00			
B747-400	PW4056	Package B/Phase 1 engine								285.76			
B747-400	PW4056	Package B/Phase 1 engine (FB2B)								285.76			
B747-400	PW4056 (-3)	Phase III (FB2C)								285.76			
B747-400	PW4056									295.08			
B747-400	PW4056 (-1C)	Package A/B Phase 1 (FB2C)								295.74			
B747-400	PW4056 (-3)	Applicable to S/N 26055 and 26056								285.76			
B747-400	PW4056 (-3)	Basic rating 56750lb Phase III(FB2C)								295.74			
B747-400	PW4056 (-3)	Phase III (FB2C) & Noise reduction inlet							285.76	295.74			
B747-400	PW4056 (-3)									285.76	302.09		
B747-400	RB211-524G									295.74			
B747-400	RB211-524H2									295.74			
B747-400D	CF6-80C2B1F	With N1 Modifier								270.80			

Part 2 - Noise classification according to type - ARRIVALS

ARRIVALS	Engine	Remarks	Maximum certificated landing weight - tonnes										
			Noise Level Band (EPNdB)	<84	84-85.9	87-89.9	90-92.9	93-95.9	96-98.9	99-101.9	>101.9		
			Quota Count	EXEMP	QC/0 25	QC/0 5	QC/1	QC/2	QC/4	QC/6	QC/16		
Aircraft	Engine	Remarks											
B747-400D	CF6-80C2B1F							270.80					
B747-400F	CF6-80C2B1F							302.09					
B747-400F	CF6-80C2B5F							302.09					
B747-400F	CF6-80C2B5F	ERF, Engine includes N1 modifier						296.19					
B747-400F	PW4056(-1C)	Pkg A/B Ph I (FB2C) & Noise reduction inlet					285.76	302.08					
B747-400F	PW4056 (-3)	Phase III (FB2C)						302.09					
B747-400F	PW4062A							302.09					
B747-400SF	PW4056 (-3)	Phase III (FB2C)						295.74					
B747-8F	GEEx-2B67/B7B						346.09						
B747-SP	JT9D-7A							210.92					
B747-SP	JT9D-7F							215.46					
B747-SP	JT9D-7J							215.46					
B747-SP	RB211-524B2							204.12					
B747-SP	RB211-524D4								185.97				
B747-SP-Z5	RB211-524D4								215.45				
B747-SR	JT9D-7A								255.83				
B747SR/-100	CF6-45A2	With -200"GB" nacelles							255.83				
B747SR/-100/200/300	JT9D-3A	"100CN" nacelle						188.99	208.65				
B747SR/-100/200/300	JT9D-3A	"200CN" nacelle						199.19	235.87				
B747SR/-100/200/300	JT9D-7	"100CN" nacelle						198.99	235.87				
B747SR/-100/200/300	JT9D-7	"200CN" nacelle						206.64	244.94				
B747SR/-100/200/300	JT9D-7A	"100CN" nacelle						202.19	235.87				
B747SR/-100/200/300	JT9D-7A	"200CN" nacelle						213.79	255.83				
B747SR/-100/200/300	JT9D-7F	"100CN" nacelle						188.49	215.46				
B747SR/-100/200/300	JT9D-7F	"200CN" nacelle						198.39	235.87				
B747SR/-100/200/300	JT9D-7J	"200CN" nacelle						198.39	235.87				
B757-200	PW2037					93.89							
B757-200	PW2040					93.89							
B757-200	RB211-535C						95.25						
B757-200	RB211-535E4				95.26								
B757-300	RB211-535E4B				101.61								
B767-200	CF6-80A						131.60						
B767-200	JT9D-7R4D	Package "A" Eng. Install No BG700 series					120.00	131.54					
B767-200	JT9D-7R4D	Package "B" Eng. Install No BG800/BG900 series					118.00	131.54					
B767-200	JT9D-7R4E						136.07	163.30					
B767-200/-200 ER	CF6-80A2	50KLb rating						136.08					
B767-200/-200 ER	CF6-80C2B						136.08						
B767-200/-200 ER	CF6-80C2B2						136.08						
B767-200/-200 ER	CF6-80C2B2F2						131.50						
B767-200/-200 ER	CF6-80C2B4						136.08						
B767-200/-200 ER	CF6-80C2B4 F	N1 modifier					136.08						
B767-200/-200 ER	JT9D-4RE							119.34	136.05				
B767-200/-200 ER	JT9D-7R4D								122.47				
B767-200/-200 ER	JT9D-7R4E								136.08				
B767-200/-200 ER	JT9D-7R4E4								136.08				
B767-200/-200 ER	PW4050						125.90						
B767-200/-200 ER	PW4052 (FB2T)						136.08						
B767-200/-200 ER	PW4056 (FB2B)						136.08						
B767-200/-200 ER	PW4056 PHASEIII (FB2C)	With noise reduction inlet					136.08						
B767-200/-200 ER	PW4060						125.90						
B767-200/-200 ER	PW4060 PHASEIII (FB2C)	With noise reduction inlet					136.08						
B767-200/-200 ER	PW4060A						125.90						
B767-300	CF6-80C2B6F	With N1 modifier					140.40						
B767-300 & -300ER	CF6-80C2B2F						139.30						
B767-300 & -300ER	CF6-80C2B4						145.15						
B767-300 & -300ER	CF6-80C2B6						145.15						
B767-300 & -300ER	CF6-80C2B6 (fadec)						145.15						
B767-300 & -300ER	CF6-80C2B7F (fadec)						145.15	154.22					
B767-300 & -300ER	PW4056 (FB2B)							145.15					
B767-300 & -300ER	PW4056 PHASEIII (FB2C)	With noise reduction inlet					145.15						
B767-300 & -300ER	PW4060 (FB2B)							145.15					
B767-300 & -300ER	PW4060 PHASEIII (FB2C)	With noise reduction inlet					145.15						
B767-300 & -300ER	PW4062 PHASEIII (FB2C)	With noise reduction inlet					145.15						
B767-300 & -300ER	RB211-524G						134.59	145.15					
B767-300 & -300ER	RB211-524H						134.59	145.15					













Part 2 - Noise classification according to type - ARRIVALS

ARRIVALS	Engine	Remarks	Noise Level Band (EPNdB)	Maximum certificated landing weight - tonnes								
				Quota Count	<84	84-86.9	87-89.9	90-92.9	93-95.9	96-98.9	99-101.9	>101.9
					EXEMP	QC/0 25	QC/0 5	QC/1	QC/2	QC/4	QC/8	QC/16
Aircraft	Engine	Remarks	Quota Count	EXEMP	QC/0 25	QC/0 5	QC/1	QC/2	QC/4	QC/8	QC/16	
MD-80	JT8D-217C				68.00							
MD-82	JT8D-217C				68.00							
MD-82	JT8D-219				68.00							
MD-83	JT8D-219				68.00							
MD-87	JT8D-217A				58.97							
MD-87	JT8D-217C				59.00							
MD-87	JT8D-219				59.00							
MD-88	JT8D-219				63.28							
MD-90-30	IAE V2525-D5			64.41								
MD 900 Explorer	PW 206A			2.84								
Mooney M20J	Lycoming IO-360-A3B6D			1.22								
Mooney M20K	Teledyne TSIO-360-GB1			1.32								
Partenavia P68B	LYC IO-360-A1B6			1.99								
Piaggio P-180	PW PT6A-66			4.94								
Pilatus PC-12/45	PT6A-67B	With Hartzell Prop HC-E4A-3D/E10477K		4.50								
Pilatus PC-12/47	PT6A-67B	With Hartzell Prop HC-E4A-3D/E10477K		4.50								
Piper PA-23-250	LYC IO-540-C4B5			2.36								
Piper PA-E23-250	LYC IO-540-C4B5			2.36								
Piper PA-28-161	LYC O-320-D3G	Sensenich 74DM6-0-60		1.06								
Piper PA-28-236	LYC O-540-J3A5D	Hartzell HC-F2YR-1F/F8468A-4R Propeller		1.36								
Piper PA-31-350	LYC TIO-540-J2BD			3.18								
Piper PA-31	LYC TIO-540-2AC			2.95								
Piper PA-34-200T	Lycoming TSIO-360-E	Seneca II		2.09								
Piper PA-34-200T	Teledyne TSIO-360-E	Seneca II		2.09								
Piper PA-34-220T	Continental TSIO-360-KB	Seneca III		2.13								
Piper PA-60-600P	LYC IO-540-S1A5I-P1A5			2.72								
Puma (ECF) SA330F/G	Turbomeca IVA							E				
Raytheon 390 Premier 1	Williams-Rolls FJ44-2A			5.26								
Rockwell Commander 690C	Garrett TPE 331-625-4K	Turbo Commander		4.68								
SAAB SF340A	GE CT7-5A			12.02								
SAAB SF340A	GE CT7-5A2				12.34							
SAAB SF340A	GE CT7-7E			12.02								
SAAB 2000	Allison AE 2100A			22.00								
Sabreliner 65	TFE 731-3R			9.89								
Sabreliner 80	CF760-2D-2						9.98					
Shorts SD330	P&W PT6A-45R			10.25								
Shorts SD360	P&W PT6A-65AR			11.84								
Shorts SD360	P&W PT6A-65R			11.84								
Shorts SD360-300	P&W PT6A-67R				12.02							
Sikorsky S76A	Allison 250-C30S							E				
Sikorsky S76B	P&W PT6B-36A							E				
Sikorsky S76C+	Turbomeca Arriel 2S1						5.31					
Sikorsky S-92A	GE-CT7-8								12.02			
SN-601 Corvette	JT15D-4			6.00								
Sukhoi RRU-95B	Sam146-1S17	Superjet 100			41.00							
Swearingen Merlin III	TPE331-11U-601G			E								
Transall C160	RR Tyne MK22				47.00							
TU-154M	D-30 Ku-154 (SAM)	With noise suppressors						80.00				
TU-204-100	PS-90A						88.20					
TU-204-120C	RR RB211-535E4				89.50							
TU-204C	PS-90A						91.50					
Yak-40	A1-25						14.70					
Yak-42	D-36	With noise suppressors						50.00				

E - QC estimated

Part 2 - Noise classification according to type - DEPARTURES

DEPARTURES	Engine	Remarks	Maximum certificated take-off weight - tonnes											
			Noise Level Band (EPNdB)	<84	84-86.9	87-89.9	90-92.9	93-95.9	96-98.9	99-101.9	>101.9			
			Quota Count	EXEMP	QC/0.25	QC/0.5	QC/1	QC/2	QC/4	QC/8	QC/16			
Aircraft	Engine	Remarks												
Agusta A109S	PW207C					3.17								
Agusta A109A II	Allison 250-C20B					2.60								
Agusta A109E	PW206C							3.00						
Agusta A119	PT6B-37A					2.72								
Airbus A300B2-1C	CF6-50C.C2R									142.00				
Airbus A300B2-203	CF6-50C2	Mod 2150 (short nozzle)								142.00				
Airbus A300B2-203	CF6-50C2	Mod 3305,2150 (short nozzle)								142.00				
Airbus A300B2-203	CF6-50C2									142.00				
Airbus A300B2-320	JT9D-59A	Mod 3305								157.50				
Airbus A300B2-320	JT9D-59A									142.00				
Airbus A300B2K-3C	CF6-50C.C2R	Mod 3305,2150 (short nozzle)								137.00				
Airbus A300B2K-3C	CF6-50C.C2R									142.00				
Airbus A300B4-103	CF6-50C2	Mod 2150								157.50				
Airbus A300B4-103	CF6-50C2	Mod 3305,3373								157.50				
Airbus A300B4-103	CF6-50C2									157.50				
Airbus A300B4-120	JT9D-59A									160.00				
Airbus A300B4/C4/F4-203	CF6-50C2	Mod 2150 (short nozzle)								165.00				
Airbus A300B4/C4/F4-203	CF6-50C2	(long nozzle)								165.00				
Airbus A300B4-220	JT9D-59A									165.00				
Airbus A300B4-2C	CF6-50C2.C2R	Mod 3305,2150 (short nozzle)								150.00				
Airbus A300B4-2C	CF6-50C2.C2R	Mod 3373								150.00				
Airbus A300B4-2C	CF6-50C2.C2R									157.50				
Airbus A300B4-601	CF6-80C2A1									165.00				
Airbus A300B4-603	CF6-80C2A3									165.00				
Airbus A300B4-605R	CF6-80C2A5									171.70				
Airbus A300B4-620	JT9D-7R4H1									165.00				
Airbus A300B4-622	PW4158	Mod 8550 (JAS-kit)								171.70				
Airbus A300B4-622	PW4158									171.70				
Airbus A300B4-622R	PW4158	"B-package" equipped A300-622 are equiv								171.70				
Airbus A300B4-622R	PW4158	Mod 8550 (JAS-kit)							158.49	171.70				
Airbus A310-203	CF6-80A3									142.00				
Airbus A310-203C	CF6-80A3	Mod 5327,5771 & 604								129.79	142.00			
Airbus A310-203C	CF6-80A3									133.19	142.00			
Airbus A310-204	CF6-80C2A2									144.79	160.00			
Airbus A310-221	JT9D-7R4D1									141.59	142.00			
Airbus A310-222	JT9D-7R4E1									141.99				
Airbus A310-304	CF6-80C2A2									144.69	157.00			
Airbus A310-308	CF6-80C2A8										164.00			
Airbus A310-322	JT9D-7R4E1										153.00			
Airbus A310-324	PW4152	Mod 8921 ("B-package")									157.00			
Airbus A310-324	PW4152										157.00			
Airbus A310-325	PW4156A										164.00			
Airbus A318-112	CFM56-5B9/P					64.50								
Airbus A319-111	CFM56-5B5						72.00							
Airbus A319-111	CFM56-5B5/P	Mod No. 25800-SAC					72.00							
Airbus A319-111	CFM56-5B5/P	Mod Nos 25800-SAC and 27772				66.50	75.50							
Airbus A319-112	CFM56-5B6						72.00							
Airbus A319-112	CFM56-5B6/P						73.50							
Airbus A319-114	CFM56-5A5						64.00	74.00						
Airbus A319-115	CFM56-5B7					62.00	76.50							
Airbus A319-132	IAE V2524-A5						75.50							
Airbus A319-133	IAE V2527M-A5					66.00	75.50							
Airbus A320-111	CFM56-5-A1						67.19	77.00						
Airbus A320-211	CFM56-5-A1						67.79	78.00						
Airbus A320-212	CFM56-5-A3	Eng mods 20775,21478					70.49	78.00						
Airbus A320-214	CFM56-5B4/P	Engine Mod. No. 25800 SAC					73.50	83.00						
Airbus A320-216	CFM56-5B6/P or CFM56-5B6/3						77.00							
Airbus A320-231	V2500-A1						74.89	77.00						
Airbus A320-231	V2500-A1Mod 22461	"BUMP" Rating					75.70	78.00						
Airbus A320-232	V2527-A5						77.00							
Airbus A320-251n	CFM LEAP-1A26					79.00								
Airbus A320-271n	PW1127G-JM					77.00	79.00							
Airbus A321-111	CFM56-5B1 or CFM56-5B1/2						76.05	90.00						
Airbus A321-112	CFM56-5B2						75.30	90.00						
Airbus A321-131	V2530-A5						83.30	90.00						

Part 2 - Noise classification according to type - DEPARTURES

DEPARTURES	Aircraft	Engine	Remarks	Maximum certificated take-off weight - tonnes															
				Noise Level Band (EPNdB)		84-86.9		87-89.9		90-92.9		93-95.9		96-98.9		99-101.9		>101.9	
				Quota Count	EXEMP	QC/0.25	QC/0.5	QC/1	QC/2	QC/4	QC/8	QC/16							
Airbus A321-211	CFM56-5B3/P	Engine Mod. 25800 SAC					85.00	95.00											
Airbus A321-211	CFM56-5B3/P	Engine Mods 25800 SAC and 27772					89.00	95.00											
Airbus A321-214	CFM56-5B-4	Single or double annular combustors				75.30	83.00												
Airbus A321-231	V2533-A5					75.00	95.00												
Airbus A321-232	V2530-A5					83.00	93.50												
Airbus A330-202	CF6-80E1A4	Engine rated at 70,000 lb							230.00										
Airbus A330-202	CF6-80E1A4	Winglets and with cutback							233.00										
Airbus A330-202	CF6-80E1A4B	Winglets and with Mod. 52776 - Thrust Bump							233.00										
Airbus A330-223	PW4168A or PW4170								238.00										
Airbus A330-301	CF6-80E1A2								230.00										
Airbus A330-302	CF6-80E1A4 or CF6-80E1A4/B								235.00										
Airbus A330-243	RR Trent 772B							165.00	250.00										
Airbus A330-342	RR Trent 772								230.00										
Airbus A330-343	RR Trent 772-60, 772B-60 or 772C-60								212.00	235.00									
Airbus A330-322	PW4168								217.00										
Airbus A340-211	CFM56-5C2								231.50	270.00									
Airbus A340-311	CFM56-5C2								233.99	270.00									
Airbus A340-312	CFM56-5C3								270.00										
Airbus A340-313	CFM56-5C4								276.50										
Airbus A340-313	CFM56-5C4	Engine Mod. 44260 - Thrust Bump							275.00	260.00									
Airbus A340-541	RR Trent 553								372.00										
Airbus A340-542	RR Trent 556A2-61								380.00										
Airbus A340-642	RR Trent 556								368.00										
Airbus A350-941	RR Trent XWB-84					240.00	275.00												
Airbus A380-841	RR Trent 970							490.00	569.00										
Airbus A380-842	RR Trent 972							490.00	569.00										
Airbus A380-851	EA GP7270 or GP7270E							490.00	569.00										
Airbus Helicopters AS365N2	Arriel 1C2							4.25											
Antonov 12 CUB	Ivchenko AI - 20K	'CUB' is the NATO designation							61.00										
Antonov 12 BK	Ivchenko AI - 20M								61.00										
Antonov 12 B	Ivchenko AI - 20M	AB-6B1 propeller										61.00							
Antonov 22	NIK-12MA	AV-90 propeller														250.00			
Antonov 26	Ivchenko AI - 24T											24.00							
Antonov 72	D-36-1A																		
Antonov 124-100	D-18T w/SAW																392.00		
Antonov 225	D-18T	With acoustic treatment															540.00		
ATR42-200	P&W PW120	Full Power							15.75										
ATR42-300	P&W PW120	Full Power							17.00										
ATR42-320	P&W PW121	Full Power							16.80										
ATR72-101/-102	P&W PW124	Full Power							19.99										
ATR72-201/-202	P&W PW124	Full Power							21.50										
ATR72-210	P&W PW127	Full Power							21.50										
ATR72-212A	P&W PW127F or PW127M	Hamilton Standard 56F-1 propeller							23.50										
B707-300B ADV/C	JT8D-7	Quiet Skies Stage 3 Hushkit											152.73						
B717-200	BR700-715A1-30	18,500 lb SLST							54.89										
B717-200	BR700-715C1-30	21,000 lb SLST							54.89										
B727-100 (FED EX.)	JT8D-7/A/B	With Boeing nacelle											76.88						
B727-100 (FED EX.)	JT8D-9 or -9A	With Burbank Aeronautical Corp. nac.											76.88						
B727-100RE	2x JT8D-217 / 1x JT8D-9/9A	VALSAN hushkit								56.70									
B727-17RE	2x JT8D-217 / 1x JT8D-9/9A	VALSAN hushkit											79.61						
B727-200	JT8D-15/A	FedEx Hushkit												86.36					
B727-200 (FED EX.)	JT8D-7/A/B	With Burbank Aeronautical Corp. nac.												80.93					
B727-200 (FED EX.)	JT8D-7B(A) (B)	With Boeing nacelle												78.30					
B727-200 (FED EX.)	JT8D-7B(A) (B)	With Burbank Aeronautical Corp. nac.												78.30					
B727-200 (FED EX.)	JT8D-9/A	With Burbank Aeronautical Corp. nac.											76.88						
B727-200	JT8D-7	STC SA4833NM												80.74					
B727-200	JT8D-9	STC SA4833NM												78.46					
B727-200	JT8D-17	STC ST00350AT & SA5839NM												88.36					
B727-200	JT8D-17R	STC SA5839NM												86.41					
B727-200RE	2x JT8D-217C / 1x JT8D-15	VALSAN hushkit												86.41					
B727-200RE	2x JT8D-217C / 1x JT8D-17	VALSAN hushkit												90.04					
B727-200RE	2x JT8D-217C / 1x JT8D-17A	VALSAN hushkit												95.03					
B727-200RE	2x JT8D-219 / 1x JT8D-7,7A or 7B	VALSAN hushkit												76.88					
B727-200RE	2x JT8D-217 / 1x JT8D-15	BFGoodrich Super27 modification												88.68					
B727-200	2x JT8D-217C & 1x JT8D-17	STC SA4363NM												88.67					

Part 2 - Noise classification according to type - DEPARTURES

DEPARTURES			Maximum certificated take-off weight - tonnes								
			Noise Level Band (EPNdB)	<84	84-86.9	87-89.9	90-92.9	93-95.9	96-98.9	99-101.9	>101.9
Aircraft	Engine	Remarks	Quota Count	EXEMP	QC/0.25	QC/0.5	QC/1	QC/2	QC/4	QC/8	QC/16
B727-300	RR Tay 651-54	Dee Howard QF modification					76.88				
B737-200ADV	JT8D-15 or -15A	NORDAM LGW-H hushkit						54.20			
B737-200/200C NON ADV	JT8D-15 & -15 A at -15 thr	NORDAM hushkit see STC SA5730NM					54.20				
B737-200/200C(ADV)	JT8D-15/-17 & A engs. at -15 thr	NORDAM hushkit see STC SA5730NM					56.14	57.70			
B737-200/200C(ADV)	JT8D-17 & A engs. at -17 thr	NORDAM hushkit see STC SA5730NM					55.91	57.61			
B737-200/200C(ADV)	JT8D-9/-15/-17 & A engs at -9 thr.	NORDAM hushkit see STC SA5730NM					56.08	56.47			
B737-200ADV	JT8D-15 or -15A	NORDAM LGW hushkit (STC ST00131SE)						56.47			
B737-300	CFM56-3B1					62.82					
B737-300	CFM56-3B2					63.28					
B737-300	CFM56-3C1	Engine rated at 20,000 lb				62.82					
B737-300	CFM56-3C1	Winglets				62.82					
B737-400	CFM56-3B2	Engine rated at 22,000 lb				63.80					
B737-400	CFM56-3C1	Treated forward acoustic panel				65.00	68.04				
B737-400	CFM56-3B2/3C1	Hardwall forward acoustic panel		56.68	68.04						
B737-500	CFM56-3-B1	18500lb SLST				60.24					
B737-500	CFM56-3-B1	20000lb SLST				63.05					
B737-500	CFM56-3-B1(R)	18500lb SLST				59.10					
B737-500	CFM56-3-B2	18500lb SLST				60.24					
B737-500	CFM56-3-C1	18500lb SLST				60.24					
B737-500	CFM56-3-C1	20000lb SLST				63.05					
B737-600	CFM56-7B20	20000lb SLST		57.61							
B737-700	CFM56-7B20	20000lb SLST			70.08						
B737-700	CFM56-7B22	22000lb SLST			70.08						
B737-700	CFM56-7B24	24000lb SLST			70.08						
B737-700	CFM56-7B27	27000lb SLST					77.56				
B737-700-IGW	CFM56-7B27/3B3	Including STC ST 00830SE winglets					77.56				
B737-800	CFM56-7 at 7B24 Thrust Rating	With Winglets and with cutback			71.44						
B737-800	CFM56-7B24	24000lb SLST			76.67	79.02					
B737-800	CFM56-7B26	Winglets			77.00	79.02					
B737-800	CFM56-7B26	28000lb SLST			74.98	79.02					
B737-800	CFM56-7B27	27000lb SLST			73.10	79.02					
B737-800	CFM56-7B27	With Winglets and with cutback				79.02					
B737-800	CFM56-7B27/B1	Winglets				79.02					
B737-900	CFM56-7B26	28000lb SLST				76.68					
B737-900ER	CFM56-7B27	Winglets				85.14					
B747-100/200/300	JT9D-7R4G2	With -300R nacelles							318.79	377.84	
B747-100/200/300	RB211-524B2									362.89	376.80
B747-100/200/300	RB211-524C2									368.99	377.80
B747-100/200/300	RB211-524D4									377.80	
B747-200	JT9D-70A									371.95	
B747-200	JT9D-7Q									377.80	
B747-200	RB211-524D4-19/22									372.00	
B747-200	RB211-524D4X-19/22									377.84	
B747-200/300	CF6-50E1									377.84	
B747-200/300	CF6-50E2									374.29	377.84
B747-200B	CF6-50E									351.50	
B747-200B	RB211-524D4	RRN nacelles								377.84	
B747-200F	CF6-50E2									371.90	377.80
B747-300	CF6-50E2									362.87	
B747-300	CF6-80C2B1							310.79	375.30		
B747-300	JT9D-7R4G2									377.84	
B747-300/200 B, C & F	CF6-50E										285.76
B747-400	CF6-80C2B1F	With N1 modifier						317.19	396.89		
B747-400	CF6-80C2B1F							315.00	392.50	396.89	
B747-400	CF6-80C2B5F	With N1 modifier							365.00		
B747-400	PW4056	Package B/Phase 1 engine								394.63	
B747-400	PW4056	Package B/Phase 1 engine (FB2B)								396.89	
B747-400	PW4056(-3)	Phase III engine (FB2C)								396.89	
B747-400	PW4056							292.19	370.57	394.63	
B747-400	PW4056 (-1C)	Package A/B Phase 1 (FB2C)								396.89	
B747-400	PW4056 (-3)	Applicable to S/N 26055 and 26056								394.63	
B747-400	PW4056 (-3)	Basic rating 56750lb Phase III(FB2C)								396.89	
B747-400	PW4056 (-3)	Phase III(FB2C) & Noise reduction inlet								396.89	
B747-400	RB211-524G							319.00	396.89		
B747-400	RB211-524H2							322.50	396.89		

Part 2 - Noise classification according to type - DEPARTURES

DEPARTURES	Noise Level Band (EPNdB)	Maximum certificated take-off weight - tonnes									
		<84	84-86.9	87-89.9	90-92.9	93-95.9	96-98.9	99-101.9	>101.9		
Aircraft	Engine	Remarks	Quota Count	EXEMP	QC/0.25	QC/0.5	QC/1	QC/2	QC/4	QC/8	QC/16
B747-400D	CF6-80C2B1F	With N1 modifier.						313.39	377.80		
B747-400D	CF6-80C2B1F							312.29			
B747-400F	CF6-80C2B1F								396.89		
B747-400F	CF6-80C2B5F								396.89		
B747-400F	CF6-80C2B5F	ERF, Engine includes N1 modifier							412.77		
B747-400F	PW4056 (-1C)	Pkg A/B Ph I (FB2C) & Noise reduction inlet							396.89		
B747-400F	PW4056 (-1C)								396.89		
B747-400F	PW4056 (-3)	Phase III (FB2C)							394.63		
B747-400F	PW4062A								412.77		
B747-400SF	PW4056 (-3)	Phase III (FB2C)							394.63		
B747-8F	GErx-2B67/67B						412.77	447.70			
B747-SP	JT9D-7A									317.95	318.43
B747-SP	JT9D-7F/7J									299.37	
B747-SP	RB211-524B2									315.70	
B747-SP	RB211-524D4									318.42	
B747-SP-Z5	RB211-524D4									319.32	
B747-SR	JT9D-7A									276.70	
B747SR/-100	CF6-45A2	With "200"GB" nacelles							311.60	340.19	
B747SR/-100/200/300	JT9D-3A	With "100CN" nacelles									322.05
B747SR/-100/200/300	JT9D-3A	With "200CN" nacelles									322.05
B747SR/-100/200/300	JT9D-7	With "100CN" nacelles									332.94
B747SR/-100/200/300	JT9D-7	With "200CN" nacelles							304.99		332.94
B747SR/-100/200/300	JT9D-7A	With "100CN" nacelles									332.90
B747SR/-100/200/300	JT9D-7A	With "200CN" nacelles							324.59		332.94
B747SR/-100/200/300	JT9D-7F	With "100CN" nacelles									340.20
B747SR/-100/200/300	JT9D-7F	With "200CN" nacelles								326.99	340.19
B747SR/-100/200/300	JT9D-7J	With "200CN" nacelles								324.69	351.53
B757-200	PW2037						112.40				
B757-200	PW2040						115.90				
B757-200	RB211-535C				101.79	108.90					
B757-200	RB211-535E4				115.80						
B757-300	RB211-535E4B					117.93					
B767-200	CF6-80A					154.89	159.21				
B767-200	JT9D-7R4D	Package "A" Eng Install No BG700 series				136.59	156.50				
B767-200	JT9D-7R4D	Package "B" Eng Install No BG800/BG900 series				134.99	156.65				
B767-200	JT9D-7R4E					136.19	166.50				
B767-200/-200 ER	CF6-80A2	50Klb rating					144.39	159.21			
B767-200/-200 ER	CF6-80C2B				140.29	159.21					
B767-200/-200 ER	CF6-80C2B2					163.29					
B767-200/-200 ER	CF6-80C2B2F					153.80					
B767-200/-200 ER	CF6-80C2B4					175.54					
B767-200/-200 ER	CF6-80C2B4F	N1 Modifier			143.29	163.50					
B767-200/-200 ER	JT9D-4RE					136.19	163.30				
B767-200/-200 ER	JT9D-7R4D					135.17					
B767-200/-200 ER	JT9D-7R4E					136.19	166.50				
B767-200/-200 ER	JT9D-7R4E4					135.19	159.20				
B767-200/-200 ER	PW4050						170.20				
B767-200/-200 ER	PW4052 (FB2T)					159.20					
B767-200/-200 ER	PW4056 (FB2B)					162.79	181.44				
B767-200/-200 ER	PW4056 PHASE III (FB2C)	With noise reduction inlet			152.50	179.17					
B767-200/-200 ER	PW4060						172.00				
B767-200/-200 ER	PW4060 PHASE III (FB2C)	With noise reduction inlet			147.00	179.17					
B767-200/-200 ER	PW4060A						169.30				
B767-300	CF6-80C2B6F	With N1 modifier				178.29	185.10				
B767-300 & -300ER	CF6-80C2B2F					151.90					
B767-300 & -300ER	CF6-80C2B4					175.49	184.60				
B767-300 & -300ER	CF6-80C2B6					175.09	184.60				
B767-300 & -300ER	CF6-80C2B6 (fadec)	With N1 modifier				177.69	184.60				
B767-300 & -300ER	CF6-80C2B7F (fadec)						186.88				
B767-300 & -300ER	PW4056 (FB2B)						184.60				
B767-300 & -300ER	PW4056 PHASE III (FB2C)	With noise reduction inlet			149.00	186.88					
B767-300 & -300ER	PW4060 (FB2B)						184.60				
B767-300 & -300ER	PW4060 PHASE III (FB2C)	With noise reduction inlet			144.00	182.50	186.88				
B767-300 & -300ER	PW4062 PHASE III (FB2C)	With noise reduction inlet				174.00	186.88				
B767-300 & -300ER	RB211-524G					170.89	184.61				











Part 2 - Noise classification according to type - DEPARTURES

DEPARTURES	Engine	Remarks	Maximum certificated take-off weight - tonnes									
			Noise Level Band (EPNdB)		<84	84-86.9	87-89.9	90-92.9	93-95.9	96-98.9	99-101.9	>101.9
			Quota Count	EXEMP	QC/0 25	QC/0 5	QC/1	QC/2	QC/4	QC/6	QC/16	
Aircraft	Engine	Remarks										
Gulfstream G-IV SP	TAY 611-8		33.83									
Gulfstream G-V	BR700-710A1-10			41.05								
Gulfstream G-V SP (G550)	BR700-710C4-11			41.28								
Gulfstream G-VI (G650)	BR700-725A1-12		45.18									
Gulfstream 200	P&W PW305A		16.08									
Gulfstream G150	Honeywell TFE731-40-AR-200G			11.83								
Gulfstream G280	Honeywell AS907-2-1G		17.96									
Guppy	Allison 501 D22C	Hamilton Standard 54H60-123/7111B-2 propeller					E					
Hawker 750	TFE731-5BR		12.25									
Hawker 850XP	TFE731-5BR		12.70									
Hawker 900XP	TFE731-5BR		12.70									
Hawker 4000	PW308A		17.92									
IAI 1124	TFE 731-3-1G			10.50								
IAI Astra SPX	TFE 731-40R-200G			11.18								
IL-18D	IVA1-20M									64.00		
IL-62M	D-30Ku	With noise suppressors								167.00		
IL-62M	D-30Ku										167.00	
IL-76T (TD)	D-30KPD-30KP 2 ser )											170.00
IL-76TD-90 VD	PS-90A-76							195.00				
IL-96-300	PS-90A									250.00		
Learjet 23	CJ610-1/4							5.67				
Learjet 24	CJ610-1/4								5.90			
Learjet 24/24D	CJ610-6							6.12				
Learjet 24D	CJ610-6								6.12			
Learjet 24E	CJ610-6							5.85				
Learjet 24F	CJ610-6							6.12				
Learjet 24F-A	CJ610-6							5.67				
Learjet 25	CJ610-6									6.80		
Learjet 25 B/C/D/F XR	CJ610-6/8A									7.39		
Learjet 29/29	CJ610-8A									6.80		
Learjet 31A	TFE 731-2-3B			7.71								
Learjet 35/36	TFE 731-2-2B			8.16								
Learjet 35A	TFE 731-2-2B		8.04									
Learjet 35A/36A	TFE 731-2-2B		8.30									
Learjet 35A	TFE 731-2C			8.89								
Learjet 45	TFE731-20		9.20									
Learjet 45	TFE731-20R		9.30									
Learjet 45	TFE731-20AR-1B		9.75									
Learjet 45	TFE731-20BR-1B		9.52									
Learjet 55	TFE 731-3A-2B					9.51						
Learjet 60	PW305A		10.48									
Learjet M55	TFE 731-3A	Std nozzle				9.75						
Learjet M55	TFE 731-3A	With Aeronca thrust reverser				9.57						
Learjet M55C	TFE 731-3A-3AR	With reverser				9.75						
Learjet M55C	TFE 731-3A-3AR -3B	With reverser				9.75						
Lockheed L1011-1	RB211-22B							195.05				
Lockheed L1011-100	RB211-22B									211.37		
Lockheed L1011-200	RB211-524B									211.34		
Lockheed L1011-385-1-14 & -15	RB211-22B(+SB 72-8700)									215.00		
Lockheed L1011-385-1 -15	RB211-22B									211.37		
Lockheed L1011-385-1 -15 193T	RB211-22B								204.10			
Lockheed L1011-385-3	RB211-524B4									231.32		
Lockheed L1011-50	RB211-22B								204.12			
Lockheed L1011-500	RB211-524B									224.98		
Lockheed L1011-500	RB211-524B3									228.60		
Lockheed L1011-500	RB211-524B4									231.33		
Lockheed 1329-23E (Jetstar)	TFE 731-31E					20.07						
Lockheed L 188A	Allison 501D-13					51.26						
Lockheed L 188C	Allison 501D-13					51.26	52.62					
Lockheed L382G Hercules	Allison 501-D22A	Military version C130					70.31					
MD-11	CF6-80C2D1F									280.30		
MD-11	PW4460									280.30		
MD-11 Freighter	PW4462									285.99		
MD-80	JT8D-209						63.50					
MD-80	JT8D-217						63.50	72.80				

Part 2 - Noise classification according to type - DEPARTURES

DEPARTURES	Aircraft	Engine	Remarks	Maximum certificated take-off weight - tonnes															
				Noise Level Band (EPNdB)		84-86.9		87-89.9		90-92.9		93-95.9		96-98.9		99-101.9		>101.9	
				Quota Count	EXEMP	QC/0.25	QC/0.5	QC/1	QC/2	QC/4	QC/8	QC/16							
MD-80	JT8D-217A							63.50	72.80										
MD-80	JT8D-217C							63.50	72.80										
MD-82	JT8D-217C							67.80											
MD-82	JT8D-219							67.80											
MD-83	JT8D-219							63.50	72.80										
MD-87	JT8D-217A							67.80											
MD-87	JT8D-217C							67.80											
MD-87	JT8D-219							63.50	67.80										
MD-88	JT8D-219								72.58										
MD-90-30	IAE V2525-D5						70.76												
MD 900 Explorer	PW 206A			2.64															
Mooney M20J	Lycoming IO-360-A3B6D			1.22															
Mooney M20K	Teledyne TSIO-360-GB1			1.32															
Partenavia P68B	LYC IO-360-A1B6			1.99															
Piaggio P-180	PW PT6A-66			4.94															
Pilatus PC-12/45	PT6A-67B	With Hartzell Prop HC-E4A-3D/E10477K		4.50															
Pilatus PC-12/47	PT6A-67B	With Hartzell Prop HC-E4A-3D/E10477K		4.74															
Piper PA-23-250	LYC IO-540-C4B5			2.36															
Piper PA-E23-250	LYC IO-540-C4B5			2.36															
Piper PA-28-161	LYC O-320-D3G	Sensenich 74DM6-0-60		1.06															
Piper PA-28-236	LYC O-540-J3A5D	Hartzell HC-F2YR-1F/F#8468A-4R Propeller		1.36															
Piper PA-31-350	LYC TIO-540-J2BD			3.18															
Piper PA-31	LYC TIO-540-2AC			2.95															
Piper PA-34-200T	Lycoming TSIO-360-E	Seneca II		2.09															
Piper PA-34-200T	Teledyne TSIO-360-E	Seneca II		2.09															
Piper PA-34-220T	Continental TSIO-360-KB	Seneca III		2.13															
Piper PA-60-600P	LYC IO-540-S1A5/P1A5			2.72															
Puma (ECF) SA-330F/G	Turbomeca IVA									E									
Raytheon 390 Premier 1	Williams-Rolls FJ44-2A			5.67															
Rockwell Commander 690C	Garrett TPE 331-625-4K	Turbo Commander		4.68															
SAAB SF340A	GE CT7-5A	Full power			12.25														
SAAB SF340A	GE CT7-5A2			12.93															
SAAB SF340A	GE CT7-7E	Full power		12.25															
SAAB 2000	Allison AE 2100A			23.00															
Sabreliner 65	TFE 731-3R					10.89													
Sabreliner 80	CF700-2D-2						10.60												
Shorts SD330	P&W PT6A-45R				10.39														
Shorts SD360	P&W PT6A-65AR				12.00														
Shorts SD360	P&W PT6A-65R				12.00														
Shorts SD360-300	P&W PT6A-67R			12.29															
Sikorsky S76A	Allison 250-C30S									E									
Sikorsky S76B	P&W PT6B-36A									E									
Sikorsky S76C+	Turbomeca Arriel 2S1						5.31												
Sikorsky S-92A	GE-CT7-8										12.02								
SN-601 Corvette	JT15D-4			7.00															
Sukhoi RRJ-95B	Sam146-1S17	Superjet 100			45.88														
Swearingen Merlin III	TPE331-11U-601G			E															
Transall C160	RR Tyne MK22									49.15									
TU-154M	D-30 Ku-154 (SAM)	With noise suppressors									104.00								
TU-204-100	PS-90A									103.00									
TU-204-120C	RR RB211-535E4									103.00									
TU-204C	PS-90A									103.00									
Yak-40	A1-25						16.00												
Yak-42	D-36	With noise suppressors									54.00								

E - QC estimated

## **APPENDIX 2**

### **WAKE TURBULENCE POLICY**

Wake Turbulence is caused by spiralling movements of air from each wingtip on an aircraft. These movements are known as wake vortices and they trail behind the aircraft and descend as they rotate. Normally vortices will dissipate in the air. However on very rare occasions the vortices can strike roofs causing tiles to become displaced in the immediate vicinity of the airport.

Wake turbulence damage is usually verified by its pattern of damage. Only traditional slate or tiled roofs can be damaged and this damage is usually in the centre of the roof. The tiles are usually lifted and rotated, unlike damage usually caused by bad weather or winds.

The policy to be adopted for the airport will operate in the same way as established wake turbulence policies at other UK airports and can be summarised as follows:

- Anyone suspecting their property has been damaged by wake turbulence should call the airport operator immediately and if possible make a note of the time and date that the incident occurred. This will help to confirm whether the damage was caused by an aircraft.
- Within two days of the call, an independent surveyor accompanied by an experienced airport expert will visit to assess the damage.
- If urgent repairs are required immediately the property holder should take photographs of the damage to provide to the airport operator and the independent surveyor.
- If the damage is verified as being a result of wake turbulence caused by operations at the airport, arrangements will be made for repairs and in appropriate instances, for the roof to be strengthened.