



RiverOak Strategic Partners

Revised 2.4 Noise Mitigation Plan (Tracked)

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Examination Document

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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 Development Consent Order 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 England¹ (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^{2,3}. 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.

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

² Department for Transport (2013) Aviation Policy Framework, Paragraph 3.13.

³ 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) ¹	63 dB $L_{Aeq,16hr}$ (free-field) ³	69 dB ⁴
Night (2300 – 0700)	40 dB $L_{Aeq,8hr}$ (free-field) ²	55 dB $L_{Aeq,8hr}$ (free-field) ²	
Night (2300 – 0700)	60 dB L_{ASmax} (outside) for any nightly event ²	80 dB L_{ASmax} (outside) for more than 18 nightly events ⁵	

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

¹ WHO (1999) Guidelines for Community Noise

² WHO (2009) Night Noise Guidelines for Europe

³ Aviation Policy Framework requirement (Para 3.39) to “offer financial assistance towards acoustic insulation to residential properties which experience an increase in noise of 3dB or more which leaves them exposed to levels of noise of 63 dB $L_{Aeq,16h}$ or more”

⁴ 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”

⁵ 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 noise⁴.

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 Ramsgate⁵. 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.

⁴ 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

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

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);
- A contour based noise limit capping the annual average noise level (LAeq) produced by ATM's and General Aviation movements.
- 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 aircraft⁶ (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 and ventilation scheme for residential properties (Paragraph 2);
- A noise insulation and ventilation 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 and ventilation, 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 [increased](#) 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 and ventilation 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 recommendation⁷ 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.

⁶ 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.

⁷ 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.

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 and ventilation scheme for schools and community buildings within the 60 dB $L_{Aeq(16\text{ hour})}$ day time contour. The airport operator will provide noise insulation and ventilation 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 $L_{Aeq(16\text{ hour})}$ 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”⁸.

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 $L_{Aeq(16\text{ hour})}$ day time contour and 40 dB $L_{Aeq(8\text{ hour})}$ 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).

⁸ 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 between the hours of 2300 and 0700 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 between the hours of 2300 and 0700.
- 1.7 The airport will be subject to an annual quota between the hours of 2300 and 0700 of 3028. Each landing and take-off at the airport during that time period is to count towards this annual quota. An aircraft is deemed to have taken off or landed during the time period if the time recorded by the appropriate ATC control unit as 'airborne' or 'landed' respectively falls within it;
- 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 The area enclosed by the 50dB(A) Leq16hr (0700-2300) contour shall not exceed 35.8 sq km, and the area enclosed by the 40dB(A) Leq8hr (23.00-07.00) contour shall not exceed 47.4 sq km. Future calculation, monitoring and reporting of the application and any breaches to the contour is discussed in Section 7 below.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 and ventilation 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 20[].

- 5.5 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 Manston Airport Development Consent Order 20[].
- 5.6 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.
- 5.7 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 and ventilation 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 occupiers of properties, in writing, of the potential eligibility of the properties for the noise insulation and ventilation scheme and of potential eligibility for the purchase and relocation assistance scheme.
- 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 report on any breaches of the contour area limits described in Section 1 above.
 - 7.1.5 A detailed report outlining all claims and actions taken in respect of the provision of noise insulation and ventilation.
 - 7.1.6 A report on any claims and payments relating to the relocation scheme.
 - 7.1.7 A report on any claims and payments made relating to the Community Trust Fund (established under paragraph 9).
 - 7.1.8 A report on any breaches and fines associated with the aircraft noise monitoring policy (paragraph 16) and the off-track flight policy (paragraph 17).
 - 7.1.9 A report on complaints received and all responses to those complaints. There is a presumption that all complaints received should receive a response.
 - 7.1.10 A report on any breaches of the mandated noise levels outlined in Section 16 below including fines levied and paid into the Community Trust Fund.
 - 7.1.11 A report on any off-track flight reports as described in Section 17 below, corrective action taken and fines levied and paid into the Community Trust Fund.
- 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 30th June in the year subsequent to any given operating year.
- 7.3 A separate quarterly report will be submitted to the community consultative committee that provides information relating to any complaints received and how they have been addressed. This report will also contain details of any monitored noise level breaches (as noted in Section 16 below) and off track flights (as noted in Section 17 below). These quarterly reports will be included within the annual report as described above.
- 7.4 The Community Consultative Committee will review all reports received from the airport operator. The airport operator will be expected to formally respond to any recommendations made by the Community Consultative Committee, taking any actions deemed necessary within the bounds of this noise mitigation plan.

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 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.

- 8.3 The Community Consultative Committee will include an independent chair and secretary who will be paid by the airport operator.
- 8.4 The independent Chair will be appointed in consultation with Thanet District Council, Dover District Council and Canterbury City Council. Following appointment, the independent chair will establish the terms of reference for the committee based on this Noise Mitigation Plan. The Chair will also be responsible for appointing the Secretary.
- 8.5 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.
- 8.6 The Community Consultative Committee will comprise representatives from:
- 8.6.1 Thanet District Council;
 - 8.6.2 Dover District Council;
 - 8.6.3 Canterbury District Council; ~~and~~
 - 8.6.4 Users of the airport (number of representatives and election procedure to be defined by the independent chair); and
 - ~~8.6.4~~8.6.5 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.
- 8.7 The Director of Public Health will be offered the opportunity to contribute to Community Consultative Committee meetings either in person or in writing.
- 8.8 The Community Consultative Committee will meet quarterly in suitable premises on the airport and the agenda and minutes of each meeting will be published.
- 8.9 The Community Consultative Committee will be responsible for offering those members of the community who have benefitted from the noise insulation and ventilation scheme the opportunity to provide feedback on the effectiveness of the measures provided.
- 8.10 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.
- 8.11 The Community Consultative Committee will publish its annual reports and those reports provided by the airport on either a dedicated website or a section of the airport's website (means to be determined by the Community Consultative Committee in its first six months of operation)
- ~~8.10~~8.12 The Community Consultative Committee will hold at least one 'open' public meeting per year in order to hear views from the wider community. The form and location of this meeting will be established by the Community Consultative Committee in the first six months of its operation.

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. This sum will be reviewed annually in consultation with the Community Consultative Committee.
- 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 Noise insulation and ventilation 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

- 10.1 All training flights taking place at Manston Airport will be subject to the movement cap for General Aviation (38,000 movements per annum).

11 Engine testing

- 11.1 There will be no open field testing of jet engines between the hours of 2300 and 0700.
- 11.2 Any daytime open field testing will take place only within the airfield itself and in areas already used by aircraft in normal operations.

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 ~~£750-2000~~ 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 ~~£750-2000~~ and further penalties of £150 for each additional decibel exceeded above 82 dB LASmax.
- ~~16.3~~ 16.4 The level of fines levied shall be increased on an annual basis in line with CPI inflation.

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 night;

'LAeq (16 hour) day time contour' means equivalent continuous sound level of aircraft noise during the average day;

'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;

'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.

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.