



**LONDON ASHFORD AIRPORT (LYDD)  
SUPPLEMENTARY INFORMATION AND  
SUPPLEMENTARY ENVIRONMENTAL INFORMATION  
April 2009:**

**REVIEW OF SUBMITTED INFORMATION ON AVIATION  
OPERATIONAL ASPECTS**

**April 2009**

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## 1. Introduction

1.1 This document reviews the London Ashford Airport (Lydd) *Supplementary Information and Supplementary Environmental Information* (Indigo Planning Ltd, March 2009), hereinafter referred to as 'Mar 09 SEI'. Spaven Consulting was commissioned to produce this document by the Lydd Airport Action Group (LAAG) on 13 March 2009.

1.2 This document reviews those parts of the Mar 09 SEI which deal with, or impinge on, aviation operational aspects of the Lydd Airport proposals, as contained in the two noise assessments – Volume 4 Appendix 3: Community Noise Assessment (Runway Extension), and Volume 4 Appendix 4: Community Noise Assessment (Terminal Building) – of the Mar 09 SEI. These two appendices now replace the following documents already submitted by London Ashford Airport in support of their December 2006 planning applications for a runway extension and new terminal building:

- Chapter 16 of the Environmental Statement
- Appendix 15.1 of Volume 3B of the 2007 Supplementary Information
- Appendix 15.2 of Volume 3B of the 2007 Supplementary Information
- Appendix 8 of the 2008 Supplementary Information
- Appendix 9 of the 2008 Supplementary Information.

1.3 For the purposes of this analysis, there are no practical differences between the noise assessment for the runway extension and the noise assessment for the new terminal building. Consequently all references in this document are to Volume 4 Appendix 3: Community Noise Assessment (Runway Extension).

1.4 References to the relevant paragraphs in Volume 4 Appendix 3: Community Noise Assessment (Runway Extension) are contained in square brackets in the text below.

## 2. General points

2.1 After more than two years and four attempts to portray flight path and aircraft operational information correctly in support of the planning applications for a runway extension and new terminal building at Lydd Airport, the Mar 09 SEI has now accepted a number of the points raised in previous submissions from LAAG, such as:

- the inability of all but the smallest aircraft to turn left on departure from runway 21
- the unavailability of flight paths through the Lydd Range most of the time
- the incorrect portrayal of the location of the Dungeness Power Station restricted airspace
- the incorrect portrayal of the routes between Lydd and en route airspace by airliners and other IFR traffic
- acceptance that current conditions at Lydd Airport do not include regular use by airliners.

2.2 As a result, the Mar 09 SEI is a significant improvement over previous submissions by LAA. However it remains seriously flawed because of inaccurate portrayal of flight paths and other issues, discussed below. As a consequence, any noise assessment based on these flight path assumptions remains unreliable.

### 3. Noise Assessment (Runway Extension)

3.1 [16.1.2] The characterisation of baseline conditions continues to be misleading. The argument that the "baseline" should be considered to be traffic levels of 300,000 passengers a year because that is what the current airport facilities could support is disingenuous, since there is no evidence of any growth towards that level of traffic.

#### *Fleet mix*

3.2 [16.3.11 and Appendices 16.4, 16.4A and 16.5] This section remains highly problematic. First, while paragraph 16.3.11 groups aircraft into four categories, it appears to include only civil aircraft types. But Appendix 16.4A includes the C-130 – a military transport aircraft – as one of the Group 2 types using Lydd most frequently for the purposes of the noise model.

3.3 Second, the tables of actual movements by different aircraft types in 2005, presented in Appendix 16.4, contain a number of anomalies which raise questions about the reliability of the data. For example:

- No movements by Trislanders are shown for the months of January, March, April, May, June, July or August. Since this was the only aircraft type conducting commercial passenger operations at Lydd in 2005, and these activities normally peak in the summer months, this is highly unlikely to be correct.
- There is evidence of double- or treble-counting in the table, for example variants of the PA28 are listed three times on the 4th, 5th and 6th pages of the table.

3.4 [Appendix 16.4A] This is the fleet mix assumed for the purposes of the noise model. It is divided into the four groups of aircraft types set out in paragraph 16.3.11. However some of the aircraft types listed are placed in the wrong Group. For example:

- Of the 14 types listed as being in Group 3, five have maximum takeoff weights of less than 5700kg so should be in Group 4. These are the C525, BE20, L200, P180 and PC12.
- The Falcon 2000 ("F2TH") is listed as a Group 2 aircraft. However it has a similar maximum takeoff weight to the C750 which is listed under Group 3.
- The Trislander is listed as flying an assumed 678 movements a year in the 2005 baseline. However Appendix 16.4 lists the Trislander as flying only 137 movements in that year, while CAA figures show that

this type flew 378 air transport movements at Lydd in 2005. These anomalies require explanation.

The importance of ensuring that aircraft types are correctly allocated to the four Groups lies in the different flight paths which the different Groups are assumed to fly. By including five types in Group 3 which should be in Group 4, the noise model will be underestimating the number of aircraft turning left on departure from runway 21.

3.5 [Appendix 16.4A] The figures for numbers of movements, particularly by jet types in Group 2, do not accord with those in Appendix 16.4. Taken together, the five jet types – BAe146, GLF4, CL60, ERJ135 and F2TH – are assumed in this table to be flying 47 movements a year at Lydd. However, according to Appendix 16.4, in 2005 these types only flew 12 movements at Lydd. If these incorrect figures are used as the basis for the noise model, they will be overestimating the baseline jet noise almost four-fold.

3.6 [Appendix 16.4A, Figure 16.1, Figure 16.2] There is a mismatch between the stated flight paths used by the different Groups of aircraft in Appendix 16.4A, and those depicted on the flight path maps at Figures 16.1 and 16.2:

- Appendix 16.4A shows Group 2 aircraft only using Flight Paths 1, 4 and 6 on runway 03, whereas Fig.16.1 shows them only using FP 1, 3 and 5.
- Appendix 16.4A shows Group 2 aircraft only using Flight Paths 7, 8, 9, 10 and 12 on runway 21, whereas Fig.16.2 shows them only using FP 7, 8, 9, 10 and 11.
- Appendix 16.4A shows Group 3 aircraft only using Flight Paths 1, 3, 4 and 6 on runway 03, whereas Fig.16.1 shows them only using FP 1, 3, 4 and 5.
- Appendix 16.4A shows Group 3 aircraft only using Flight Paths 7, 8, 9, 10 and 12 on runway 21, whereas Fig.16.2 shows them only using FP 7, 8, 9, 10 and 11.

Some, but not all, of these errors appear to stem from a transposition of FP5 and FP6 in the headings of the tables in Appendix 16.4A.

3.7 [16.3.25 to 29] The assumption of a 70/30 modal split remains problematic. While this may be broadly representative of use of the runways in 2005, it cannot be used as a predictor of future use because of the practical limitations on use of runway 03 for landing by larger aircraft. There are three principal issues:

- Paragraph 16.3.27 suggests that Group 1 aircraft would not be able to carry out the required turning approach to runway 03 when danger area D044 is active "due to their limited turning capabilities". However no assessment appears to have been conducted of the ability of Group 2 aircraft – particularly larger and faster jet types – to carry out this manoeuvre.
- The assumption that all Group 2 aircraft, including the BAe146 and turboprop airliners such as the Dash-8, can land on runway 03 even when D044 is active, appears to assume that they can do so in instrument conditions. Since there is no current or proposed

instrument approach to runway 03, this would require these aircraft to fly an ILS approach to runway 21 then break off when visual with the runway and fly a visual circling approach to the west of the airport to land on runway 03. While this is a CAA approved manoeuvre it is highly unlikely to be an acceptable basis for commercial air transport operations because it would require passenger-carrying aircraft to fly within a few hundred metres of an active danger area and execute a tight turn at low level over a built-up area on to a very short final approach.

- The acknowledgement that Group 1 aircraft would never be able to land on runway 03 raises the question of how often these aircraft would have to divert to another airport, or the flight cancelled, because the tailwind is in excess of the limit for landing on runway 21. Assumptions about diversion/cancellation rates will affect the predicted number of Group 1 aircraft using the airport. However there is no evidence of any such calculation being made.

Table 16.1 shows that the assumed 70/30 modal split has been applied to all scenarios. However, under 'Future Assessment 300,000 ppa with runway extension', which includes Group 1 aircraft, the balance must shift towards greater use of runway 21 because Group 1 aircraft must always land on that runway. The assumed 70/30 split is therefore invalid.

3.8 [Appendix 16.5] In these tables for fleet mix after the construction of the runway extension, the Trislander has been omitted from Group 4; it has been replaced by the PA34 Seneca, a much smaller and quieter aircraft. Since the Trislander is the only aircraft carrying out regular commercial operations at Lydd, and there is no proposal for LyddAir to abandon its operations, it should be expected that operations by this or a comparable type should be provided for in the noise model.

#### *Use of flight paths through Lydd Range*

3.9 [16.9.3 and 16.9.4] These paragraphs suggest that flight paths through the Lydd Range danger area, D044, would be available for all flights before 0830 and for at least 37% of the time during the day. This remains a highly problematic proposition, for two reasons:

- While there may be periods during the day when firing is not taking place on the Lydd Range, it is understood that the Ministry of Defence is not prepared to accept flights through the range unless (a) the range has not yet commenced operations at the beginning of the day, or (b) the range has ceased operations for the rest of the day. The implication that airport operations may be able to take advantage of short periods during the day when range firing is temporarily suspended is therefore unreliable.
- Even if aircraft were able to make straight-in approaches to runway 03 through the range danger area when it is not active, the question remains of how aircraft operating under the Instrument Flight Rules (IFR - all commercial air transport aircraft other than Lydd Air, and all business jets) would make such an approach. There are no current or proposed instrument approaches to runway 03. Unless the cloudbase

was high enough and the visibility good enough for IFR flights to make a visual approach, the only option would be as it is today – to make an ILS approach to runway 21, break off when visual and circle to the west of the airport to land on runway 03. While the availability of the D044 airspace to aircraft landing in runway 03 would increase the viability of this approach procedure for commercial air transport aircraft, it would not permit the approach paths depicted in Figure 16.21 (see below for further comments on this point).

3.10 [16.9.5 and Figure 16.21] For departures from runway 21, the depicted additional flight paths – FP16, 17 and 18 – are correctly shown. However, as noted above, the additional flight paths depicted in Figure 16.21 for arrivals on runway 03 are not accurate. FP15 – straight in over the sea – would only be usable by aircraft on a visual approach, which will only be possible in the best weather conditions. FP13 would not be usable by the majority of Group 2 and 3 aircraft unless on a visual approach, because the flight path shown – approximately 5.8km radius from the runway threshold – is beyond the approved Visual Manoeuvring (Circling) approach area for most of the aircraft types in Groups 2 and 3. These aircraft – and probably Group 1 aircraft too – would be more likely to use the flight path depicted as FP14 in Figure 16.21.

*Flight path figures – runway 03 [Figure 16.1]*

3.11 Figure 16.1 shows that an effort has been made by the consultants to correct the erroneous positioning of the D044 range boundary and the R063 Dungeness Power Station restricted airspace in all previous submissions from LAA. However, while the depiction of D044 now appears to be more accurate (although still showing its northern boundary further south than it should be), R063 is now shown as being approximately 350 metres further north than it should be.

3.12 As noted above in paragraph 3.6, there is a mismatch between the flight paths shown in Figure 16.1 and those listed in the tables in Appendix 16.4A.

3.13 As regards FP1, as depicted on the diagram this shows a gradual left turn over the town of Lydd followed by a much steeper turn on to the final approach. Group 2 and many Group 3 aircraft would have extreme difficulty flying this profile. They would be expected to fly a constant radius turn in order to give a more stable approach. However as noted in paragraph 3.7 above, it remains highly doubtful that any commercial air transport operator would approve regular passenger-carrying operations which required a tight circling approach to runway 03, avoiding D044 by no more than a few hundred metres.

3.14 Some of the FP1 traffic will have initially flown an instrument approach to runway 21, to then break off when becoming visual and fly a low level circling manoeuvre to the west of the airport. These aircraft may be flying as low as 500-600 feet over Littlestone and New Romney. They will therefore contribute to the noise environment to the north of the airport as well as in the

vicinity of the town of Lydd. However Figure 16.1 shows FP1 as generating no noise impact beyond approximately 1km north of Lydd.

3.15 As regards FP3, as noted in previous LAAG submissions, there is no provision in the current en route airways structure over the English Channel for aircraft to climb out of Lydd south-eastwards towards France. Flight Path 3 would only ever be an option for VFR traffic such as the LyddAir Trislander flights to Le Touquet.

3.16 As regards FP4, it is not clear why Group 3 and 4 aircraft are expected to fly this route, but not Group 2.

3.17 Flight Path 6 is shown as being flown by Group 4 aircraft only. However there is no reason why this flight path could not be flown by all other aircraft types.

*Flight path figures – runway 21 [Figure 16.2]*

3.18 As with Figure 16.1, the boundary of R063 is shown approximately 350 metres too far north.

3.19 There is no flight path shown for aircraft using the NDB approach to runway 21. This is an omission which has been consistent throughout all of LAA's submissions and has been consistently pointed out by LAAG but has still not been corrected. This flight path would take aircraft over New Romney.

3.20 FP9 and FP10 apparently show aircraft of all types flying a visual approach, joining from the east over the sea. However there is no equivalent flight path for visual approaches joining from the north or west. There is no reason why such an approach path should not be available. These visual approach paths from the north/west would pass over New Romney and would therefore increase aircraft noise in that area.

3.21 Paragraph 16.3.13 states "the length of the flight paths shown represents the extent to which each flight path affects the noise climate at ground level". However the depiction of Flight Paths 11 and 12 apparently shows Group 4 (light aircraft) types such as the Cessna 152 still affecting the noise climate several kilometres offshore, well after take-off from runway 21, while Flight Path 11 stops a short distance after passing Lydd town, apparently indicating that Boeing 737s and Airbus A319s will cease to affect the noise climate only a mile after take-off. This is untenable.

#### **4. Summary and conclusions**

4.1 The Mar 09 SEI makes some significant corrections to information on flight paths in previous submissions from LAA. However serious flaws remain in the portrayal of flight paths. Any assessment of noise based on this flight path information remains unreliable.

4.2 The baseline aircraft movements data used for construction of the noise model show anomalies in the counting of several types of aircraft.

4.3 The grouping of aircraft types into four size-related categories for the purposes of flight paths and noise impact contains significant errors.

4.4 The number of movements by Group 2 jet types used for the baseline is overstated approximately four-fold.

4.5 There are significant mismatches between the stated flight paths used by the different Groups of aircraft in Appendix 16.4A, and those depicted on the flight path maps at Figures 16.1 and 16.2.

4.6 There remain serious questions over the feasibility of commercial passenger transport aircraft performing the manoeuvres necessary to land on runway 03 while danger area D044 is active.

4.7 No assessment has been made of the frequency with which Group 1 aircraft would have to divert or have their flight cancelled due to a northerly/easterly wind preventing landing at Lydd. Without such an assessment the assumed 70/30 modal split for future operations is invalid.

4.8 Trislander operations have been omitted from the future noise assessment and have not been replaced by an appropriate equivalent type.

4.9 Figures are quoted for the expected proportion of time when flights may operate through the Lydd Range airspace. However access other than before or after the operational day at the range is understood not to be possible.

4.10 The proposed mitigation of flying through the range airspace when it is not active takes no account of the non-availability of instrument approaches to runway 03.

4.11 Depicted flight paths for aircraft approaching runway 03 when the range is not active would only be usable for visual approaches.

4.12 There are numerous errors and inaccuracies in the depiction of flight paths in Figures 16.1 and 16.2.

4.13 Overall, the inaccuracies and incorrect assumptions with regard to flight paths render any noise assessment invalid.

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