

**TOWN AND COUNTRY PLANNING ACT 1990 - SECTION 77 AND TOWN  
AND COUNTRY PLANNING (INQUIRIES PROCEDURE) (ENGLAND)  
RULES 2000**

**APPLICATIONS BY LONDON ASHFORD AIRPORT LTD**

**SITE AT LONDON ASHFORD AIRPORT LIMITED, LYDD, ROMNEY  
MARSH, TN29 9QL**

**NOTE IN RESPONSE TO POINTS RAISED  
IN CROSS-EXAMINATION ON 11 MARCH  
2011**

**MALCOLM SPAVEN MA (Hons) MSc  
on behalf of Lydd Airport Action Group**

**PLANNING INSPECTORATE REFERENCE: APP/L2250/V/10/2131934**

**LPA REFERENCES: Y06/1647/SH and Y06/1648/SH**

**INQUIRY DOCUMENT REFERENCE: LAAG/10/J**

**DATE: 14 March 2011**

**1. Origin of text in LAAG letter to Shepway District Council 7 December 2010**

1.1 I was asked by Mr Village whether I wrote the text at the end of the letter referred to above, summarising LAAG's position on omissions in the flight paths data, and in particular whether I was responsible for describing the ILS procedure for runway 21 as "the procedure of choice".

1.2 I have carried out a search of all documents on my computer for the phrase "procedure of choice". The only document of which I was the author which came up in that search was my LAAG/10/E at paragraph 4.7, where I describe the RNAV approach as the procedure of choice when the ILS is out of service.

1.3 I also carried out a search of my e-mail archive, using the same search terms. It produced no results.

1.4 I conclude from this that the text in the LAAG letter of 7 December 2010 was not written by me.

## **2. Fuel load assumptions used in landing distance calculations at LAAG/10/A paragraph 7.18**

2.1 I agreed to provide a note on the basis for the calculations behind my statement in LAAG/10/A paragraph 7.18 that "(w)ith a full load of passengers, the landing weight of the [Boeing 737-800] aircraft is unlikely to be less than 60,000 kg (132,000 lbs)." In particular, I was asked to specify the assumptions I made about fuel load for a Boeing 737-800 landing at Lydd in these circumstances.

2.2 I have gone back to the original source – the official Boeing performance specifications, dated December 2010. This is reproduced at Appendix 1 to this note. It provides the figures for the empty weight of the aircraft and the weight of the maximum fuel load. I used the standard weights for holiday charter and other passengers, flight crew, cabin crew and hold baggage set out in the Air Navigation (General) Regulations 2006.

2.3 My calculations are reproduced in Appendix 2 to this note. They show that a Boeing 737-800 with a full passenger load on a holiday charter flight would have to have less than 10% of its fuel remaining to achieve a landing weight below 60 tonnes, and a Boeing 737-800 with a full passenger load on a scheduled European flight would have to have less than 5% of its fuel remaining to achieve a landing weight below 60 tonnes.

### **3. Difference between ICAO 'Standards' and 'Recommended Practices'**

3.1 It was suggested during my cross-examination that it might have been helpful to the Inspector to explain in my evidence the difference between an ICAO 'Standard' and an ICAO 'Recommended Practice'.

3.2 At Appendix 3 to this note I have reproduced an excerpt from the foreword to ICAO Annex 2 which sets out the definitions. The definitions are common across all ICAO Annexes, including Annex 10 (Aeronautical Telecommunications), to which I refer in paragraph 2.9 of LAAG/10/H. In summary:

- 'Standards' are specifications to which Contracting States "will conform"
- 'Recommended Practices' are specifications to which Contracting States "will endeavour to conform".

3.3 I have also attached at Appendix 4 a copy of the Civil Aviation Authority (Chicago Convention) Directions 2007. I referred to this during my cross-examination. This places legal obligations on the CAA as follows:

- subject to two exceptions, to implement specified ICAO provisions, including the Standards and Recommended Practices in Annex 10 and the procedures in Document 8168 (an excerpt from which was submitted to the inquiry by LAA on 11 March)
- where the CAA considers it inappropriate to transpose an ICAO provision into UK law, and it has the power to implement that provision by other means, it shall do so, and document and publish those alternative means of compliance
- if the CAA considers it impracticable or inappropriate to transpose an ICAO provision into UK law or guidance, it must inform and consult the Secretary of State prior to notifying any Difference to ICAO or publishing such a Difference in the United Kingdom AIP.

3.4 The net result of this is that if the CAA wished to issue an exception to the ICAO Annex 10 recommendations in relation to ILS procedure design, it would have to file that difference in the UK AIP. Differences from ICAO provisions are listed in Section GEN 1.7 of the UK AIP. The page relating to Annex 10 Volume 1 (Radio Navigation Aids) is reproduced at Appendix 5.

#### **4. Track mile calculations for approaches from the west using the ILS and RNAV approaches**

4.1 I was asked during cross-examination to explain to Mr Maskens the basis for my assessment that the RNAV approach had track mile advantages over the ILS approach for aircraft arriving at Lydd from the west.

4.2 I have revisited the calculations for the track miles required to be flown for an aircraft approaching from the west on the following basis:

- the aircraft is in Category C (typically, small to medium-sized airliners)
- in both cases the aircraft routes direct from the Seaford VOR to the entry fix for the procedure (ROMTI for the ILS, LONRU for the RNAV)
- for the ILS procedure, the aircraft flies at the maximum allowable speed for the procedure of 210 knots.

4.3 The calculations are set out in Table 1 below and should be viewed alongside the two procedure charts [CDs 16.6 and 16.13].

4.4 On the basis of these calculations, aircraft arriving from the west would save some 24 track miles by opting to fly the RNAV procedure rather than the ILS procedure.

<b>Table 1: Track miles to fly the ILS and RNAV procedures when arriving from the west</b>	
<i>Route segment</i>	<i>Distance (nautical miles)</i>
<b>A. ILS procedure</b>	
Seaford to ROMTI	34.4
ROMTI hold entry (3 mins @ 3.5 nm/min)	10.5
Outbound turn from ROMTI	3.5
Northbound leg to join DME arc + DME arc to Intermediate Fix (I-LDY D11.5)	21.8
Intermediate + Final Approach	11.5
<b>Total</b>	<b>81.7</b>
<b>B. RNAV procedure</b>	
Seaford to LONRU	39.8
LONRU to NURSI	5.0
Intermediate + Final Approach	12.5
<b>Total</b>	<b>57.3</b>

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737 AIRPLANE CHARACTERISTICS  
LIST OF ACTIVE PAGES

Page	Date				
Original 1 to 682	October 2005				
13-25	December 2010				
74	July 2010				
80	July 2010				
93-99	July 2010				
100-103	Deleted July 2010				
126-163	July 2010				
164-269	Deleted July 2010				
288-294	July 2010				
295-316	Deleted July 2010				

CHARACTERISTICS	UNITS	MODEL 737-800, -800 WITH WINGLETS		
MAX DESIGN TAXI WEIGHT	POUNDS	156,000	173,000	174,900
	KILOGRAMS	70,760	78,471	79,333
MAX DESIGN TAKEOFF WEIGHT	POUNDS	155,500	172,500	174,200
	KILOGRAMS	70,534	78,245	79,016
MAX DESIGN LANDING WEIGHT	POUNDS	144,000	144,000	146,300
	KILOGRAMS	65,317	65,317	66,361
MAX DESIGN ZERO FUEL WEIGHT	POUNDS	136,000	136,000	138,300
	KILOGRAMS	61,689	61,689	62,732
OPERATING EMPTY WEIGHT (1)	POUNDS	91,300	91,300	91,300
	KILOGRAMS	41,413	41,413	41,413
MAX STRUCTURAL PAYLOAD	POUNDS	44,700	44,700	47,000
	KILOGRAMS	20,276	20,276	21,319
SEATING CAPACITY (1)	TWO-CLASS	160	160	160
	ALL-ECONOMY	184	184	184
MAX CARGO - LOWER DECK	CUBIC FEET	1555	1555	1555
	CUBIC METERS	44.1	44.1	44.1
USABLE FUEL	US GALLONS	6875	6875	6875
	LITERS	26,022	26,022	26,022
	POUNDS	46,063	46,063	46,063
	KILOGRAMS	20,894	20,894	20,894

NOTE: (1) OPERATING EMPTY WEIGHT FOR BASELINE MIXED CLASS CONFIGURATION.  
CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

#### 2.1.11 GENERAL CHARACTERISTICS

*MODEL 737-800, -800 WITH WINGLETS*

Boeing 737-800 landing weights (kg)

Scenario 1:

Holiday charter, aircraft full of passengers, fuel tanks 10% full

Empty weight	41413
184 pax @ standard 76kg <sup>1</sup>	13984
2 x flight crew @ 85kg	170
4 x cabin crew @ 75kg	300
Hold baggage – 184 x 13kg <sup>2</sup>	2392
Fuel – 10% x 20894	2089
Total weight	60348

Scenario 2:

Scheduled European flight, aircraft full of passengers, fuel tanks 5% full

Empty weight	41413
184 pax @ standard 84kg <sup>3</sup>	15456
2 x flight crew @ 85kg	170
4 x cabin crew @ 75kg	300
Hold baggage – 184 x 13kg	2392
Fuel – 5% x 20894	1045
Total weight	60776

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<sup>1</sup> Air Navigation (General) Regulations 2006 Table 1  
<sup>2</sup> Air Navigation (General) Regulations 2006 Table 3  
<sup>3</sup> Air Navigation (General) Regulations 2006 Table 1

such a way as would facilitate incorporation, without major textual changes, into national legislation.

#### Status of Annex components

An Annex is made up of the following component parts, not all of which, however, are necessarily found in every Annex; they have the status indicated:

##### 1. — Material comprising the Annex proper:

- a) Standards and Recommended Practices adopted by the Council under the provisions of the Convention. They are defined as follows:

*Standard.* Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which Contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38.

*Recommended Practice.* Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interests of safety, regularity or efficiency of international air navigation, and to which Contracting States will endeavour to conform in accordance with the Convention.

- b) *Appendices* comprising material grouped separately for convenience but forming part of the Standards and Recommended Practices adopted by the Council.
- c) *Definitions* of terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have an independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.
- d) *Tables* and *Figures* which add to or illustrate a Standard or Recommended Practice and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

##### 2. — Material approved by the Council for publication in association with the Standards and Recommended Practices:

- a) *Forewords* comprising historical and explanatory material based on the action of the Council and including an explanation of the obligations of States with regard to the application of the Standards and Recommended Practices ensuing from the Convention and the Resolution of Adoption.
- b) *Introductions* comprising explanatory material introduced at the beginning of parts, chapters or sections of the Annex to assist in the understanding of the application of the text.
- c) *Notes* included in the text, where appropriate, to give factual information or references bearing on the Standards or Recommended Practices in question, but not constituting part of the Standards or Recommended Practices.
- d) *Attachments* comprising material supplementary to the Standards and Recommended Practices, or included as a guide to their application.

#### Selection of language

This Annex has been adopted in six languages — English, Arabic, Chinese, French, Russian and Spanish. Each Contracting State is requested to select one of those texts for the purpose of national implementation and for other effects provided for in the Convention, either through direct use or through translation into its own national language, and to notify the Organization accordingly.

#### Editorial practices

The following practice has been adhered to in order to indicate at a glance the status of each statement: *Standards* have been printed in light face roman; *Notes* have been printed in light face italics, the status being indicated by the prefix *Note*. There are no *Recommended Practices* in Annex 2.

The units of measurement used in this document are in accordance with the International System of Units (SI) as specified in Annex 5 to the Convention on International Civil Aviation. Where Annex 5 permits the use of non-SI alternative units these are shown in parentheses following the basic units. Where two sets of units are quoted it must not be assumed that the pairs of values are equal and interchangeable. It may, however, be inferred that an equivalent level of safety is achieved when either set of units is used exclusively.

Any reference to a portion of this document which is identified by a number includes all subdivisions of the portion.

## THE CIVIL AVIATION AUTHORITY (CHICAGO CONVENTION) DIRECTIONS 2007

These Directions are given to the Civil Aviation Authority by the Secretary of State for Transport in exercise of the powers conferred on her by section 6(2) (b), (c) and (d) of the Civil Aviation Act 1982<sup>1</sup>.

These Directions are given in order to ensure that the United Kingdom discharges its obligations under the Convention on International Civil Aviation done in Chicago on 7 December 1944 (“the Chicago Convention”) and after consultation with the Civil Aviation Authority.

### Citation and commencement

- 1 These Directions may be cited as the Civil Aviation Authority (Chicago Convention) Directions 2007.
- 2 These Directions shall come into force on 16 October 2007.

### Definitions

- 3 For the purposes of these Directions:

“Annex” means an Annex to the Chicago Convention;

“CAA” means the Civil Aviation Authority;

“Crown Dependencies” means the Channel Islands, comprising the Bailiwicks of Jersey and Guernsey, and the Isle of Man;

“Difference” means a difference between the UK’s national regulations and practices and an ICAO provision;

“ICAO” means the International Civil Aviation Organisation;

“ICAO provision” means a Standard, Recommended Practice or a PANS;

“Overseas Territories” means those territories listed in Schedule 18 to the Air Navigation (Overseas Territories) Order (as amended)<sup>2</sup> plus Gibraltar;

“PANS” means a Procedure for Air Navigation Services adopted by ICAO;

“Recommended Practice” means any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interests of safety, regularity or efficiency of international air navigation, and to which Contracting States will endeavour to conform in accordance with the Chicago Convention;

“Specified Annexes” means the Annexes specified in the Schedule to these Directions and which are in force from time to time;

<sup>1</sup> c. 16

<sup>2</sup> SI 2001/2128, which has been amended by SIs 2003/433, 2004/2038, 2005/2763 and 2006/1911.

“Specified PANS” means the PANS specified in the Schedule to these Directions and which are in force from time to time;

“Standard” means any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which Contracting States will conform in accordance with the Chicago Convention;

“USOAP” means the Universal Safety Oversight Audit Programme implemented by ICAO whose scope includes the Specified Annexes plus Annexes 5, 12, 13 and 16.

### Application

- 4 Save for paragraphs 13 and 14 these Directions concern the discharge of the United Kingdom’s obligations under the Chicago Convention in so far as the obligations relate to the United Kingdom. Paragraph 13 of these Directions concerns the coordination of responses to State Letters relating to the Specified Annexes and Specified PANS on behalf of the United Kingdom, the Overseas Territories and the Crown Dependencies. Paragraph 14 of these Directions concerns the discharge of the United Kingdom’s obligations in connection with the USOAP which arise in relation to the United Kingdom, the Overseas Territories and the Crown Dependencies.
- 5 These Directions shall not prejudice the Civil Aviation Authority (Air Navigation) Directions 2001 or the Civil Aviation Authority (Overseas Territories) Directions 2003.

### Directions

- 6 When exercising its statutory functions the CAA shall ensure that it acts consistently with the obligations placed on the United Kingdom under the Chicago Convention.
- 7 Subject to the provisions of paragraphs 8 to 11, in relation to each of the Specified Annexes and Specified PANS the CAA will consider whether it is necessary to amend United Kingdom aviation legislation to ensure appropriate implementation of an ICAO provision. Where the CAA considers that such an amendment is necessary it will make a proposal to the Secretary of State.
- 8 Where
  - (a) the CAA considers it inappropriate to transpose an ICAO provision into domestic legislation and
  - (b) the CAA has discretionary power to enforce the requirements of such a provision through a certificate, licence, or other means of approvalthe CAA shall develop and publish such requirements as are necessary to implement the ICAO provision and shall ensure that it is able to verify adherence to those requirements. Where the CAA chooses to adopt or make

- use of requirements published by another State or international organisation it shall publish a statement to this effect.
9. Where the CAA considers that it is not appropriate to take action in accordance with paragraph 8 it shall ensure that suitable alternative measures are established to secure compliance with an ICAO provision. Such measures shall be documented and published.
  10. Where the CAA considers it impracticable or inappropriate to transpose an ICAO provision into UK legislation, or to take action in accordance with paragraphs 8 or 9, the CAA shall inform and consult the Secretary of State prior to notifying any Difference (whether interim or permanent) to ICAO or publishing such a Difference in the United Kingdom AIP.
  11. Where implementation of an ICAO provision is the responsibility of the European Community the CAA shall:
    - (a) assist in the development of any EC measure so as to ensure that the ICAO provision is implemented appropriately and is consistent with the interests of United Kingdom industry and airspace users;
    - (b) where appropriate and in accordance with these Directions implement in the United Kingdom any part of such an ICAO provision excluded from the EC measures;
    - (c) having consulted the Secretary of State, assist the relevant EC body in determining whether any Difference should be notified to ICAO and published in the United Kingdom AIP.
  12. Where the CAA shares responsibility for a Specified Annex with a government department, the CAA shall work with that department to establish the extent of UK compliance with an ICAO provision and shall consult the department on the terms of any Difference to be notified to ICAO by the CAA.

#### **ICAO State Letters**

13. In relation to the Specified Annexes and Specified PANS the CAA will coordinate and submit to ICAO any necessary response to an ICAO State Letter. Wherever possible the CAA shall consult such bodies in the United Kingdom, the Crown Dependencies and Overseas Territories, and Europe as it deems appropriate.

#### **ICAO Universal Safety Oversight Audit Programme**

14. In order to provide a coherent approach to the USOAP, the CAA will act as the national safety oversight coordinator for the United Kingdom, the Overseas Territories and the Crown Dependencies.

Signed: Tim Figures  
Head of International and Safety Division  
Department for Transport

Date: 16 October 2007

**SCHEDULE**

Annexes to the Chicago Convention to which this Direction Applies

Annex 1 - Personnel Licensing

Annex 2 - Rules of the Air

Annex 3 - Meteorological Service for International Air Navigation

Annex 4 - Aeronautical Charts

Annex 6 - Operation of Aircraft

Annex 7 - Aircraft Nationality and Registration Marks

Annex 8 - Airworthiness of Aircraft

Annex 10 - Aeronautical Telecommunications

Annex 11 - Air Traffic Services

Annex 14 - Aerodromes

Annex 15 - Aeronautical Information Services

Annex 18 - The Safe Transport of Dangerous Goods by Air

Procedures for Air Navigation Services (PANS) to which this Direction Applies:

PANS – ABC (ICAO Abbreviations and Codes) – Doc 8400

PANS – OPS (Aircraft Operations) – Doc 8168

    Vol. I - Flight Procedures

    Vol. II - Construction of Visual & Instrument Flight Procedures

PANS – ATM (Air Traffic Management) – Doc 4444

PANS – TRG (Training) – Doc 9868

Regional Supplementary Procedures - Doc 7030



Annex 10 Aeronautical Telecommunications Vol I (Radio Navigation Aids) (6th Edition) (AMDT 83)			
Reference	S-Standard R-Recommended Practice	Difference	Remarks (Reasons For Difference)
Chapter 2 2.2.1	S	<b>General Provisions For Radio Navigation Aids</b> Whereas the UK is compliant with this requirement for ILS, ILS associated DME, En-route DME, VOR and NDBs it does not require regular flight testing of non-ILS aerodrome DME.	
Chapter 3 3.1.3.3.2	S	<b>Specifications For Radio Navigation Aids</b> Some localisers are promulgated in AIP as having specific areas where signals do not meet specifications.	This is world-wide standard practice where topography restricts or influences the signals.
3.1.3.3.2.1 3.1.3.3.2.2 and 3.1.3.3.2.3	S	UK requirements written in terms of usable signal.	
3.1.3.5.3.6	R	Several old CAT I and uncategorised systems do not meet this recommendation.	This is a function of aerial design and cannot be changed by simple adjustment. Airports are advised at flight inspection if their system could give false capture on certain types of receiver. This information is promulgated in the AIP.
3.1.5.1.5	R	Some CAT I systems have reference datum heights between 40 and 50 ft.	To insist on 50 ft at certain airports would reduce the useable runway length too much.
3.1.5.1.6	R	Some CAT 1 systems have a reference datum lower than 40 ft. These facilities are exclusive to particular aircraft types.	To insist on 40 ft at certain airports would reduce the useable runway length too much.
3.1.5.3.1	S	The UK accepts that some G/P have restricted coverage - this is published in AIPs for each specific system.	This is world-wide standard practice where topography restricts or influences the signals.
3.1.7.7.2	R	A few older beacons may not meet this recommendation.	There are very few markers in the UK. The old facilities will soon be replaced by DME or modern markers which meet the recommendation.
3.4.6.4	R	The UK allows a fall of up to 0.5 dB.	To achieve no fall in carrier when modulating is almost impossible. The UK requirement is practical and has no discernable effect on aircraft equipment.

Annex 10 Aeronautical Telecommunications Vol II (Communications Procedures including those with PANS status) (6th Edition) (AMDT 83)			
Reference	S-Standard R-Recommended Practice	Difference	Remarks (Reasons For Difference)
Chapter 3 3.5.1.1	S	<b>General Procedures for the International Aeronautical Telecommunication Service</b> UK complies only at ATC units and recommends compliance at certain AFIS units.	