

## LONDON SOUTHEND AIRPORT AIRSPACE CHANGE PROPOSAL

Introduction of Standard Instrument Departure Procedures  
to Routes in the London Terminal Control Area –  
**Sponsor Consultation – 2016**

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and  
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## Executive Summary

**This consultation is about the introduction of formal Standard Instrument Departure (SID) procedures from London Southend Airport (LSA) to replace the former Preferred Departure Routes (PDRs) which have been in place for many years. The PDRs are no longer compatible with current Civil Aviation Authority (CAA) Policies or with the recently approved controlled airspace environment at London Southend Airport or with the changes to the wider Air Traffic Management (ATM) System which was introduced by NATS in the south-east of England in February 2016.**

The introduction of SID procedures is necessary to reflect current CAA Policies and because of the introduction of controlled airspace in the vicinity of LSA which provides connectivity to the London Terminal Control Area (LTMA). SID procedures provide connectivity to the route structure within and beyond the LTMA. The change from PDRs to SID procedures brings LSA into line with other airports connected to busy terminal airspace.

This consultation is being conducted under the CAA requirements specified in CAP725 “CAA Guidance on the Application of the Airspace Change Process”. The CAA specifies that the introduction of, or changes to, SID procedures falls within the scope of the CAP725 as an airspace change.

Current CAA Policy is that Instrument Departure Procedures from UK Airports should be designed in accordance with the design principles detailed in the ICAO<sup>1</sup> criteria for the construction of instrument and visual flight procedures, which are principally established to ensure safe obstacle clearance for departing aircraft. In addition, as the UK moves towards the application of Performance-Based Navigation (PBN) in accordance with the UK’s Future Airspace Strategy (FAS), the CAA recommends that all departure procedures should be designed as RNAV (Area Navigation) procedures with a navigation standard of RNAV 1. These terms are explained in the body of this document.

**It is emphasised that the Noise Abatement Procedures currently in place at London Southend Airport for departing aircraft do not change as a consequence of the introduction of SID procedures.**

**Nor are the SID procedures being introduced as a means to generate traffic growth over and above that which has been approved for LSA.**

The SID procedures have been designed to reflect as closely as possible the existing routes flown by departing aircraft, within the criteria for procedure design, whilst also being compatible with the major changes to the ATM System in the LTMA which have been introduced by NATS in February 2016.

This consultation will run from **26 February 2016 to 27 May 2016**, a period of 13 weeks. Details of how you can respond to the consultation are given in the body of this document.

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<sup>1</sup> ICAO: International Civil Aviation Organisation.

**NOTE:** Readers of previous LSA consultations may note that in this document the runways at LSA are designated as 05 and 23 whereas in previous consultations they were designated as 06 and 24. The change in local magnetic variation required the runway designations to change in November 2015. A brief explanation of runway designation is given in the Glossary at Appendix A.

## Arrangement of this consultation document

1. In this document we have tried to explain technical issues as clearly as possible so that those not familiar with aviation terminology can understand how and why we have developed the SID procedures in the way we have.
2. However, it is necessary that the consultation document covers and explains a number of complex technical issues, both as they apply generally to LSA operations and as they have been applied in the context of each individual departure route. Therefore, in order to make the document manageable, and to simplify public access to the data through the LSA website, we have divided the document into four basic parts. **This** introductory part contains the Executive Summary, a list of abbreviations and acronyms used, a list of source reference documents and a Contents Page covering the whole of the consultation document.
3. **Part A of the consultation document** is a preamble which first explains what SIDs are, how they are designed and how they differ from the long-standing PDRs, together with a brief outline of the modern aircraft navigation regime. It then describes the existing Noise Abatement Procedures (NAPs) in place at LSA for departing aircraft and the various noise measurement protocols that the CAA requires to be used in the environmental management and assessment of departure procedures. **It is emphasised that the NAPs do not change as a consequence of the introduction of SID procedures.**
4. **Part B of the document** then explains in detail each of the proposed SID procedures from each runway. The body of **Part B** gives an overview and explains those aspects which are common to all of the SID procedures. **Part B** is supported by technical **Annexes** which detail individually the SID procedure for each route. The technical **Annexes** are posted as separate individual documents on the LSA website for ease of reference. In this way the size of the main document is reduced and consultees can access separately the particular routes of interest to them. The technical **Annexes** discuss the design of each route and highlight where the routes might differ from the existing departure routes together with any changes to the environmental impact of the procedures. Where necessary, details of alternative alignments that have been considered are outlined.
5. Finally, in **Part C**, details are given about the conduct of the consultation itself and how you can give us your comments on the proposed procedures. **Whether you are an aviation or community stakeholder or a member of the general public we welcome your contribution to our consultation.**
6. The consultation document is supported by a number of **Appendices**, including a Glossary of Terms (Appendix A) explaining, as simply as possible, some of the technical terminology used.

## Abbreviations and Acronyms

	<b>Airports referenced in this document</b>
LSA	London Southend Airport
LCY	London City Airport
STN	London Stansted Airport
LGW	London Gatwick Airport
LHR	London Heathrow Airport
LUT	London Luton Airport
LBH	London Biggin Hill Airport
	Other airports are referenced by their unabbreviated names.
ACP	Airspace Change Proposal
AIP	Integrated Aeronautical Information Package
amsl	Above Mean Sea Level
ANSP	Air Navigation Service Provider
AONB	Area of Outstanding Natural Beauty
ATC	Air Traffic Control
ATM	Air Traffic Management
ATS	Air Traffic Services
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication
CAT	Commercial Air Transport
CTA	Control Area
CTR	Control Zone
DA	Danger Area
DfT	Department for Transport
DME	Distance Measuring Equipment (a ground-based navigation aid)
FAS	Future Airspace Strategy
FMS	Flight Management Systems
GA	General Aviation
GNSS	Global Navigation Satellite Systems (space-based navigation aids, e.g. GPS)
GVS	Gas Venting Station

IAS	Indicated Air Speed
ICAO	International Civil Aviation Organisation
IFP	Instrument Flight Procedure
IFR	Instrument Flight Rules
ILS	Instrument Landing System (a ground-based navigation aid)
IRS/IRU	Inertial Reference System / Inertial Reference Unit
ISA	International Standard Atmosphere
LAMP	NATS London Area Management Programme
LTC	London Terminal Control (NATS)
LTMA	London Terminal Control Area
NAP	Noise Abatement Procedure
NATS	The en-route and terminal ANSP (Previously National Air Traffic Services)
NDB	Non-Directional Beacon (a ground based navigation aid)
NTK	Noise and Track Monitoring Equipment
ODD	Omni-Directional Departure
PDR	Preferred Departure Route
PBN	Performance Based Navigation
RNAV	Area Navigation
RNP	Required Navigation Performance
RTF	Radio Telephony
SEL	Sound Exposure Level
SID	Standard Instrument Departure
TAS	True Airspeed
TMA	Terminal Control Area
VOR	VHF Omni-Directional Radio Range (a ground-based navigation aid)

## Reference Documents

- [1] CAP725 CAA Guidance on the Application of the Airspace Change Process
- [2] CAP778 Design and Operation of Departure Procedures in UK Airspace
- [3] CAP785 Approval of Instrument Flight Procedures
- [4] CAP1184 Transition to PBN in UK and Irish Airspace
- [5] ICAO Doc 8168 (PANS-OPS) Volume 2: Construction of Instrument and Visual Flight Procedures
- [6] ICAO Doc 9613 Performance Based Navigation Manual
- [7] CAA Future Airspace Strategy
- [8] CAA Policy Statement *Policy for the Application of PBN*
- [9] CAA Policy Statement *Guidance on PBN SID Replication for Conventional SID Replacement (19 Aug 2013)*
- [10] CAA Policy Statement *SID Truncation Policy (16 Jan 2014)*
- [11] DfT publication: Guidance to the CAA on environmental objectives relating to the exercise of its air navigation functions (January 2014)



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