

Newcastle International Airport

Osprey Consultancy Services Ltd (Osprey CSL)

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Overview

- Who Are Osprey?
- Standard Instrument Departures(SIDs) Overview
- Features of a SID
- The Airspace Change Process



About Osprey CSL

- Privately owned technical consultancy founded in 2006
- Specialising in operational and engineering support to both civil and military aviation projects
- Independent – work with Government Agencies, Regulatory Authorities, Equipment Providers and Airport Operators

Instrument Flight Procedure (IFP) Design





A wholly owned subsidiary of
Osprey Consulting Services Limited

IFP Design

- Operate under gCAP, a wholly owned Company of Osprey CSL
- Approved Procedure Designers with the UK Civil Aviation Authority
- IFP team based in Northallerton
- IFP sole contractors to No1 Aeronautical Information Documents Unit (AIDU) Royal Air Force



- Commissioned in 2018 to consider options for departures to the West
- Report delivered in 2018
- Initial work was completed under CAP725 Framework
- Any future CAP1616 ACP submission may be prejudiced by the release of specific tracks



Performance Based Navigation (PBN) Standard Instrument Departures (SIDs)



PBN Standard Instrument Departures

- SIDs are CAA Approved instrument departures published in the State AIP
- PBN SIDs
 - Provide a navigation solution to enable Departing aircraft to adhere to the 3km Noise Abatement Procedure at Newcastle
 - Some dispersion will always be apparent during PBN initial turns due to Aircraft performance, wind effect and avionics performance.



Features of SIDs

- Provide a safe 'known obstacle' environment for departing aircraft by defining routes
- Instrument Flight Procedures allow flight planners to accurately assess fuel requirements leading to less emissions and cost savings
- No turns permitted below 500ft Above Aerodrome Level (AAL)
- 3.3% Standard procedure design gradient
- Fleet specific climb rates $<10\%$

Airspace Change Process

Civil Aviation Publication (CAP) 725 /1616 Airspace Change Process

Safety and Airspace Regulation Group



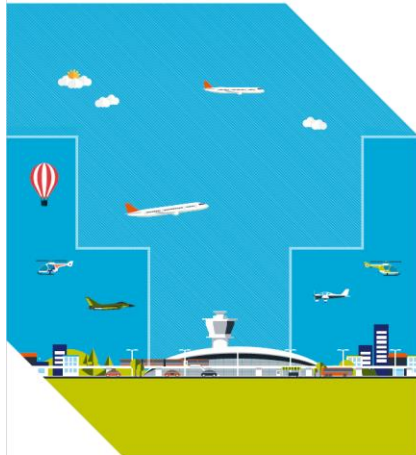
CAA Guidance on the Application of the Airspace
Change Process

CAP 725



Airspace Design:
Guidance on the regulatory process
for changing airspace design including
community engagement requirements

CAP 1616



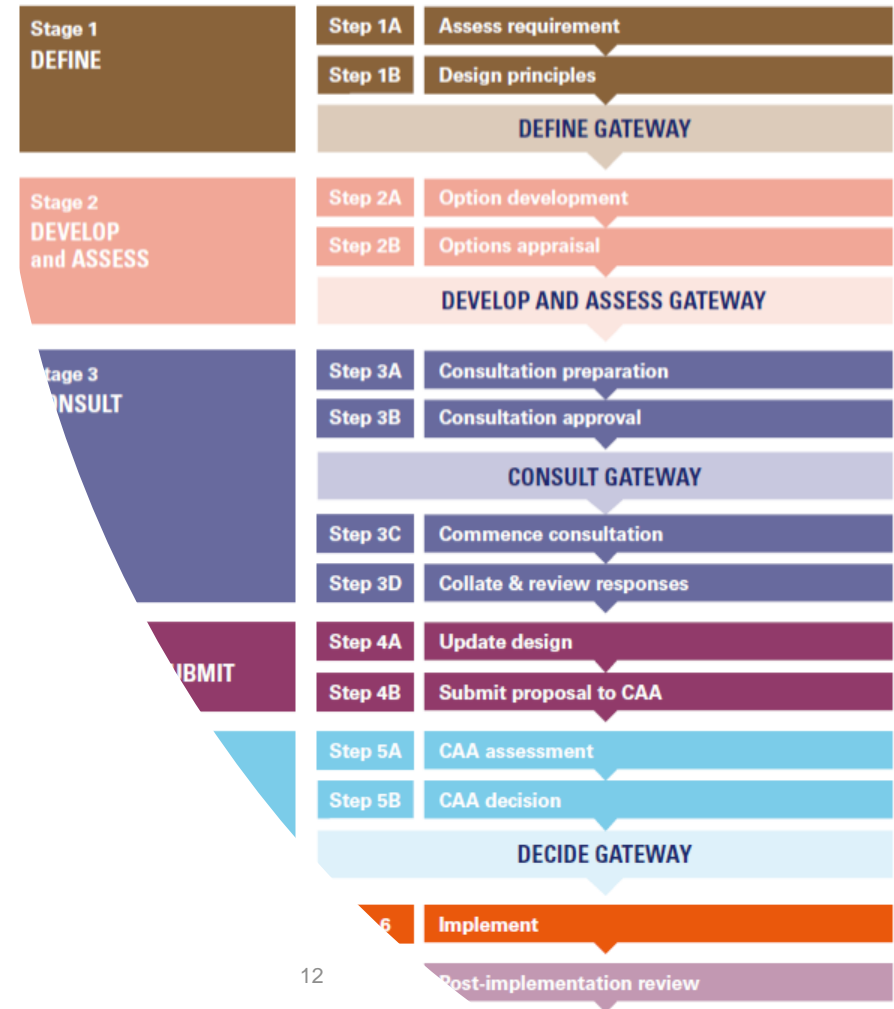
Other categories

CAP 1616 – Seven Stage Process

- Seven Stages – Approx. 5 Year timeframe
 - Develop a comprehensive list of design options
 - Options Appraisal to develop a shortlist of options
 - Detailed design of selected options
 - Ground Validation of options
 - Re-design following consultation and Civil Aviation Authority (CAA) comment
 - Stakeholder engagement support
 - Safety Assessments
 - Iterative as described in accordance with CAP 1616

The airspace change process (permanent changes to the notified airspace design)

Figure 1: Overview of the airspace change process



CAP 1616 Airspace Change Process

Airspace Design Stage 1: Define

Stage 1 Define

Process overview

Stage 1 DEFINE	<p>Step 1A Assess requirement The change sponsor prepares a Statement of Need setting out what airspace issue it is seeking to address. Having reviewed the Statement of Need, the CAA meets with the change sponsor to agree whether an airspace change is a relevant option to consider, and to have a first discussion about the appropriate scale of the airspace change process.</p> <p>Step 1B Design principles The design principles encompass the safety, environmental and operational criteria and strategic policy objectives that the change sponsor aims for in developing the airspace change proposal. They are developed through engagement with stakeholders and form a qualitative structure against which design options can be evaluated. Early engagement with stakeholders, optionally facilitated by a third party, may help to avoid disagreement later in the process.</p>
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DEFINE Gateway

Introduction

91. The first stage of the process, the 'Define' stage, is divided into Step 1A, where the change sponsor prepares a Statement of Need setting out what airspace issue or opportunity it seeks to address, and Step 1B, the development of design principles. Step 1A is applied to all Levels of permanent change to the airspace design. Step 1B is applied to Levels 1 and 2 but not Level 0. Stage 1 completes with the CAA's sign-off of the 'Define' gateway.

Step 1A Assess requirement

92. Once a change sponsor has identified the need for a change in airspace design, the first step is for the change sponsor to prepare a Statement of Need. The change sponsor then meets with the CAA to discuss the need for a change and how the change sponsor will progress through the airspace change process.

Statement of Need

93. The Statement of Need must set out clearly the identified need as to why an airspace change is being considered. More information is at [Appendix A](#).

94. The change sponsor must be explicit in what issue or opportunity it is seeking to address and what outcome it wishes to achieve. The change sponsor initiates the airspace change process by submitting the Statement of Need to the CAA using the online form 'DAP1916' on the [CAA website](#), which the CAA will email back to the sponsor as the published version for it to upload to the portal, where it will be visible to all. The CAA will consider allowing the change sponsor to redact commercially (or national security) sensitive material from the published version.

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Change categories Gateway Airspace Design Other categories Steps 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

- Stage 1
 - Step 1A Assess Requirement
 - Statement of Need
 - Is an ACP relevant option
 - Appropriate scale of Airspace Change
 - Step 1B Design Principles
 - Engagement with stakeholder
 - Qualitative structure against which design options can be evaluated
 - Safety, Environmental, Operational and strategic policy objectives



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