

31 May 2018

## Policy Statement

### **STANDARD INSTRUMENT DEPARTURE TRUNCATION POLICY**

#### **1 Introduction**

- 1.1 This Policy Statement (PS) presents CAA policy and guidance to Air Navigation Service Providers (ANSPs) on action required to truncate existing conventional and certain RNAV1 Standard Instrument Departure (SID) procedures where an ANSP determines environmental benefits (flight plan enabled fuel benefits) can be achieved by reducing the length of a SID without change to the existing track over the ground or SID vertical profiles. This should alleviate aircraft operators' flight planning for unnecessary fuel uplift when departing airports with current lengthy SIDs.
- 1.2 SID truncations requiring a new ATS route designator should have a saving of at least 10NM to justify the acquisition/utilisation of a new route designator or 5LNC and the time taken to process the application.
- 1.3 Changes to SIDs are conducted in accordance with the Airspace Change Process and its supporting guidance ([CAP 1616: Airspace Design: Guidance on the regulatory process for changing airspace design including community engagement requirements](#)). Specific technical requirements for SID truncation are contained in this policy document and should be used in conjunction with the process described in CAP 1616.

#### **2 Background**

- 2.1 Many SIDs within the UK FIR are lengthy in their design and terminate at a typically low altitude. It is believed the establishment of SIDs has previously been associated with a variety of reasons including ATC tactical planning, reduced workload on the RT, and direct routings to significant waypoints on departure routes.
- 2.2 Fuel uplift planning has become more critical in recent years, and whilst continuing to comply with operating rules<sup>1</sup> it has become clear that some airline operators consider the full length and final end altitude of a SID whilst others do not. This results in unnecessary fuel carriage when aircraft are routinely climbed to a FL well above the SID (e.g. a SID of 70 NM ending at 5000ft). Except for recent new SID designs constrained by existing ATM tactical requirements, SIDs have been designed like this from their inception and were no doubt predicated upon the performance profiles of the aircraft in operation at the time and ATM requirements of the ANSP.

#### **3 Policy Applicability**

- 3.1 This policy applies when it is proposed that:
  - the end segment of a SID is replaced by a new RNAV ATS route; or

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<sup>1</sup> See Regulation (EU) 965/2012 paragraphs CAT.OP.MPA.150, CAT.OP.MPA.151 and associated Acceptable Means of Compliance.  
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- where the end segment of a SID is already aligned with an existing ATS route; and
- there is no change to the track over the ground or vertical profiles; and
- the SID is truncated at, or after, the final altitude/level attainment point is first reached and terrain clearance remains assured with the establishment of any ATS routes incorporated to replace the truncated section.

3.2 If sponsors wish to truncate a SID prior to the final end altitude, or when a truncation would affect the lateral profile, a full SID re-design is required. In this case, standard procedures for SID designs in CAP 778 and CAP 785 apply.

#### **4 CAP 1616 - Scalability of SID Truncation Proposals**

4.1 CAP 1616 sets out the specific requirements for airspace change proposals, scaled to the appropriate level of the change. As a SID truncation involves no changes to aircraft track over the ground and vertical profile, and results in replacing the end of a SID with an ATS route segment, the application of CAP 1616 will be scaled to the appropriate level, normally 2C. The template at Appendix 1 to Annex A has therefore been tailored to suit the nature of a Level 2C change and comply with CAP 1616.

#### **5 SID Truncation Proposal Submission**

5.1 SID truncation proposals should adhere to the requirements set out in Annex A. Notification of a proposal must be submitted to the CAA via a DAP 1916 in accordance with CAP 1616. Following the Assessment Meeting, details of the proposed SID Truncation Request should be submitted to SARG Airspace ([airspace@caa.co.uk](mailto:airspace@caa.co.uk)) in accordance with Annex A.

#### **6 CAP 778 Requirements**

6.1 There are no changes to CAP 778 requirements

6.2 The use of 5LNCs should be limited to the essential required as 5LNC resource is scarce. Consideration should be given to the possibility of cancelling extant 5LNCs to offset the establishment of new points.

#### **7 CAP 785 Requirements**

7.1 There is no need for a formal design proposal to be submitted by an Approved Procedure Designer providing the truncation only results in the removal of straight line segments at the end section of a SID which, other than the truncation, does not involve any change in design of the SID or replacement ATS routes. Any new waypoints and track and distance between waypoints must be checked for navigation infrastructure coverage<sup>2</sup> and be verified by SARG prior to formal approval. Notwithstanding the above, sponsors should also provide confirmation that the retained portion of the truncated SID remains fit for purpose. If this is not the case, further action is to be determined on a case by case basis.

#### **8 Impact on NPRs**

8.1 Sponsors must confirm there is no impact to NPRs. Where changes to SID designators require a textual amendment, i.e. a name change to Aerodrome Noise Abatement procedures, these details are to be included in the draft AIP amendments.

8.2 When proposals involve SID truncations to any airports designated by the Secretary of State, the CAA Case Officer is to advise the DfT of the SID designator change and that the

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<sup>2</sup> DEMETR is appropriate for DME/DME procedures.

proposal is nothing more in practice than a nomenclature change, with confirmation from the CAA that tracks or the shape and size of the NPR are not being affected in any way.

## **9 Impact on Adjacent SIDs**

- 9.1 Sponsors must confirm that truncating a SID will have no impact on the vertical profile of adjacent SIDs from other airports.

## **10 Environmental Analysis Requirements for a SID Truncation Request**

- 10.1 Details of the estimated enabled flight planned fuel saving and CO2 are the only environmental requirement to be included

## **11 Consultation**

- 11.1 A SID truncation proposal must include evidence to indicate that the appropriate airport operator, the airport ANSP and appropriate Area Control Centre (ACC) have agreed to the change and that appropriate adaptation and flight planning requirements have been considered and changes can be accommodated on the AIRAC date required.

Annex:

- A. SID Truncation Submission Process.

## Annex A

### **SID TRUNCATION SUBMISSION REQUESTS - GUIDANCE ON APPLICATION PROCESS**

1. The sponsor must submit the DAP 1916 by e-mail to SARG Airspace ([airspace@caa.co.uk](mailto:airspace@caa.co.uk)) with a Statement of Need.
2. SARG Airspace will acknowledge the DAP 1916 and confirm that the application falls under the requirements of CAP 1616 and this policy. Once a Case Officer has been assigned to the task, the proposal as outlined in Appendix 1 is to be submitted directly to [airspace@caa.co.uk](mailto:airspace@caa.co.uk) which is to include the details as described below.
3. Proposals to truncate SIDs must have joint sponsorship from the ANSP and the Airport associated with the SID.
4. Sponsor to complete Appendix 1

### **NEW SID DESIGNATOR AND 5LNC REQUESTS**

5. A request for a new SID designator, any new associated 5-Letter Name Codes (5LNCs) and ATS route designators (if applicable), are to be included with this request (5LNCs should be reserved beforehand using the normal ICARD process). CAA policy statement 'Significant Point Name Codes (5LNC) and ATS Route Designators'<sup>3</sup> Section 2 provides further details concerning the reservation of ATS Route Designators via the ICAO EUR/NAT Region coordinator in Paris.

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<sup>3</sup> <http://publicapps.caa.co.uk/modalapplication.aspx?catid=1&pagetype=65&appid=11&mode=detail&id=5335>

## APPENDIX 1 – INSTRUCTIONS FOR COMPLETION.

### 1. **Stage 1.**

1.1 In Appendix 1 paragraph 1, the sponsor is to complete the details as shown.

### 2. **Stage 2.**

2.1 In Appendix 1 paragraph 2, the sponsor is to state if any other options were considered and whether they were discounted and why. As options for SID truncations are merely limited to the position where the SID may be truncated an options appraisal is likewise limited.

2.2 In the SID truncation proposal analysis, the Case Officer will confirm the option appraisal (including any safety assessment) and design principles which are constrained by the nature of the proposal, are appropriate and will confirm the appropriate scaling level of the proposal.

### 3. **Stage 3.**

3.1 Consultation may be limited to the appropriate airport operator. Evidence is required to be submitted that the appropriate airport operator and ANSPs have agreed to the change. In Appendix 1 paragraph 3.1 a statement to confirm that consultation has been conducted with the relevant aerodrome authority is to be provided, together with the aerodrome's agreement to the proposal.

3.2 No consultation material is required.

3.3 The final options appraisal and safety assessment must be included with the submission as shown in Appendix 1.

3.4 In the SID truncation analysis, the Case Officer will confirm the options and safety assessment, and consultation with the appropriate airport authority has been completed.

### 4. **Stage 4.**

4.1 In paragraph 4.1 of Appendix 1, the following details are required for the revised 'truncated' SID:

- The specific SID Truncation details together with co-ordinate and ATS route details in an accompanying WGS 84 spreadsheet and the draft AIP amendment as attachments to the Appendix.
- Revised SID designator (see CAA policy statement 'The Designation of Standard Instrument Departures (SIDs) and Standard Approach Procedures (STARs) in the UK Flight Information Regions'<sup>4</sup>).
- The position at which the SID will be truncated. This should also be indicated on the existing SID Chart and attached as an Attachment for subsequent UK AIP amendment (clearly annotated PDF copies of existing charts are acceptable).

**Note:** If approved, SARG will advise the sponsor to submit this chart to AIS using the Formal Change Request to the UK AIP.

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<sup>4</sup> <http://publicapps.caa.co.uk/modalapplication.aspx?catid=1&pagetype=65&appid=11&mode=detail&id=5300>

- When a new waypoint is required, a validation check of co-ordinates is required in accordance with CAA policy statement 'Significant Point Name Codes (5LNC) and ATS Route Designators'<sup>5</sup>. This validation request is to be submitted in the WGS84 spreadsheet to be provided with the SID Truncation application.
- If the truncation is at a newly established position, the new 5LNC of the truncation point or, if appropriate, the established position at the truncation point, will become the new SID designator. The SID designator is to be confirmed with SARG.
- Changes to associated distance to truncation point from previous waypoint; details are to be indicated on the AIP chart to be amended (comments in Adobe PDFs are acceptable). **Note:** sponsors must confirm appropriate navaid infrastructure is available to support the revised SID termination position.
- The remaining portion of the existing SID subjected to truncation (from the truncation position) to the original termination position will become the new ATS route if there is no existing ATS route established.

4.2 A safety assessment is to be provided which is to cover the following details:

- Confirmation that any interacting ATS routes / procedures are not affected.
- Confirmation that extant RCF procedures have been examined and that either the current RCF procedures remain suitable and do not require revision, or if required, a revised RCF procedure is proposed. In the event of the latter, the proposed draft revision to RCF for the relevant UK AIP Aerodrome's AD 2.22 Flight Procedures entry is to be included.
- The following action is specifically required for the SID Truncation submission prior to submitting the request. The sponsor is to ensure that the extant RCF procedure is reviewed and that the impact of truncating a SID is assessed with regard to the extant RCF procedure in order to determine whether change to the RCF may be required. This is to ensure that aircraft experiencing RCF would not commence a climb to the flight planned cruising levels earlier than desirable, given the potential to cause a conflict with other interacting procedures which, as a result of the SID truncation, could otherwise potentially occur earlier compared to the extant SID (this is entirely dependent on the RCF procedures described in the UK AIP Aerodrome AD 2.22 section and when a climb to flight planned cruising level is initiated – either as described in the relevant AD 2.22 section or in accordance with the national procedures).
- Confirmation that the SID truncation will be contained within controlled airspace.
- Adaption and Flight Planning Implications.
  - Proposals are additionally to demonstrate that appropriate adaptation and flight planning requirements have been considered and changes can be effected on the AIRAC date required.
- Confirmation there is no change to NPRs.
- Details of any name changes to details in NPR tables; where applicable the detail are to be provided with the draft AIP amendment.

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<sup>5</sup> <http://publicapps.caa.co.uk/modalapplication.aspx?catid=1&pagetype=65&appid=11&mode=detail&id=5335>

- Changes to SID chart should be shown in an attached AIP chart detailing all the relevant changes.

4.3 In paragraph 4.2, the following details are required for a new ATS Route:

- An appropriate ATS Route designator assigned to the route (note above requirement to reserve the route designator).
- New or revised ATS route details are to be provided in the WGS84 spreadsheet format (i.e. the complete AIP amendment) and are to be attached to the submission request.

#### 4.4 Final Options Appraisal

The sponsor must include a Final Options Appraisal including the details listed at CAP 1616 Table E2 of the environmental impacts including CO2 emission and fuel burn see P161 CAP 1616 and controller interactions.

### 5. **Stage 5.**

5.1 The Case Officer will complete a full analysis of the proposal as soon as possible after it is received and will present a recommendation to the Gateway Panel at the first available gateway meeting. Given the nature of the proposal, the CAA is prepared to permit a SID Truncation Proposal to be sequentially assessed under more than one Gateway in the same Gateway Meeting.

5.2 On receipt of the truncation submission proposal, SARG Airspace will verify truncation position co-ordinates (if not at existing waypoint), verify remaining track and distance associated with the new ATS route and check navaid infrastructure.

### 6 **Stage 6.**

6.1 Once verification is complete, the Case Officer will confirm approval of the SID truncation proposal to the sponsor and will authorise that the appropriate AIP amendments and AIS change request may be submitted to AIS. This will include a copy of the completed application form.

6.2. The sponsor is to copy the AIS change request to the appropriate SARG Case Officer.

### 7 **Stage 7.**

7.1 As the SID Truncation proposals result in no changes to track over the ground or vertical profile, as this is a nomenclature change, there are no Post Implementation Requirements to be met, therefore no post implementation action is required.

**SID TRUNCATION REQUEST – SUBMISSION DATE:**

**(INSERT DATE)**

**Existing SID:** Airport ICAO identifier plus SID designator:.....

**Proposed SID:** Airport ICAO identifier plus SID designator:.....

**SID Truncation Sponsor Details:**

EN-ROUTE ANSP		AIRPORT ANSP	
Unit		Unit	
Name		Name	
Contact details		Contact details	
Phone:		Phone:	
E mail:		E mail:	

**1. Stage 1**

**1.1 Statement of Need**

**For completeness and ease of reference, insert details from DAP 1916.**

**1.2 Date of Assessment Meeting/Teleconference/E mail Confirmation that proposal may be submitted..... (insert date).**

**1.3 Design Principles.** The SID Truncation Design Principles are listed below.

**Design Principles:**

## 2. Stage 2

2.1 **Options Appraisal.** The option proposed and options discounted (where applicable) are detailed below.

<p><b>Options:</b></p> <p><b>Options proposed and why:</b></p>  <p><b>Options discounted and why:</b></p>
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## 3. Stage 3

### 3.1 Consultation and Sponsor Confirmation Statement

This proposal has been submitted following consultation with the aerodrome authority. As sponsor/co-sponsor we confirm that that there is no change to track over the ground, no change to vertical profiles, no change to NPRs and no effect on adjacent SIDs.	
NERL	Aerodrome
Name	Name

## 4. Stage 4

### 4.1 SID Truncation Change Submission Details

Requirements	Details To Be Submitted by Sponsor
<b>New SID Designator</b> (To be Co-ordinated with SARG)	
<b>New 5LNC(s) (if applicable)</b>	
<b>Truncation Position</b>	
<b>Co-ordinates of Truncation Position (include validation request – see Annex A paragraph 10)</b>	

<b>Revised Track / Distance to Truncation Position</b>	<b>To be provided on proposed SID chart amendment. Include any amended radials and distances from appropriate nav aids.</b>
<b>Navaid coverage (to ensure position is definable)</b>	
<b>Safety Assessment Details</b>	
<b>Confirmation interacting ATS Routes/SIDs not affected.</b>	
<b>RCF Implications:</b>  <b>(1) Describe impacts of proposed change on extant RCF procedures (confirmation that they have been examined and remain fit for purpose, or</b>  <b>(2) If revised RCF procedures are required, state why, and provide the proposed details with the draft AIP amendment.</b>	
<b>Airspace Containment confirmation.</b>	
<b>Adaptation and AIRAC implementation confirmation – provide confirmation that changes have been co-ordinated with the aerodrome for the date proposed.</b>	
<b>AIP Amendments</b>	
<b>Confirmation there is no impact to NPRs.</b>	
<b>Name change to NPR tables in Aerodrome AD 2.21</b>	<b>Where applicable, change is detailed in the draft AIP amendment.</b>
<b>SID Chart Amendments</b>	
<b>Revisions to chart</b>	<b>Include as Attachment 1.</b>

<b>Any other amendments to SID Chart (include PDF copy of chart showing changes required)</b>	
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#### 4.2. ATS Route Details

**Submit details for New ATS Route in AIP Format at Attachment 2.**

Brief details of route to be included here – i.e.:

Route designator.

Start and end position.

Note: Change sponsor to provide the draft AIP amendment in the WGS84 Excel Spreadsheet format with the change submission.

#### 5. Options Appraisal

**Insert details.**

**When complete, please return with safety assessment and supporting maps attached to [airspace@caa.co.uk](mailto:airspace@caa.co.uk).**

**SARG Airspace Regulatory Approval use only.**

<b>Serial</b>	<b>Design Check</b>	<b>Design Approved / Not Approved</b>	<b>Verified By</b>
1a	<b>SID revised track and distance.</b>		
1b	<b>Co-ordinates verified.</b>		
1c	If errors evident, SID revised track and distance entered below.		
2a	<b>ATS Route track and distance.</b>		
2b	<b>ATS Route terrain clearance assured.</b>		
2c	If errors evident, ATS Route revised track and distance entered below.		
3	<b>Navaid infrastructure</b> (adequate coverage for new termination point).		
4	<b>RCF procedures.</b>		
5	<b>Interacting procedures.</b>		
6	<b>Airspace Containment.</b>		
7	<b>SID chart – proposed changes.</b>		
8	<b>SID chart proof from AIS.</b>		
9	<b>Final Options Appraisal.</b>		
10	<b>Safety Assessment.</b>		
11	<b>NPR Tables – proposed changes (if applicable).</b>		
12	<b>SID truncation proposal confirmed as a Level Zero change.</b>		
13	<b>DfT advised if changes made to SIDs at designated airports. (following approval)</b>		

Change recommended by:

**Name**.....

**Date**.....

Change referred back to sponsor for the following reason (insert details)

Change approved by:

**Name**.....

**Appointment**.....

**Date**.....