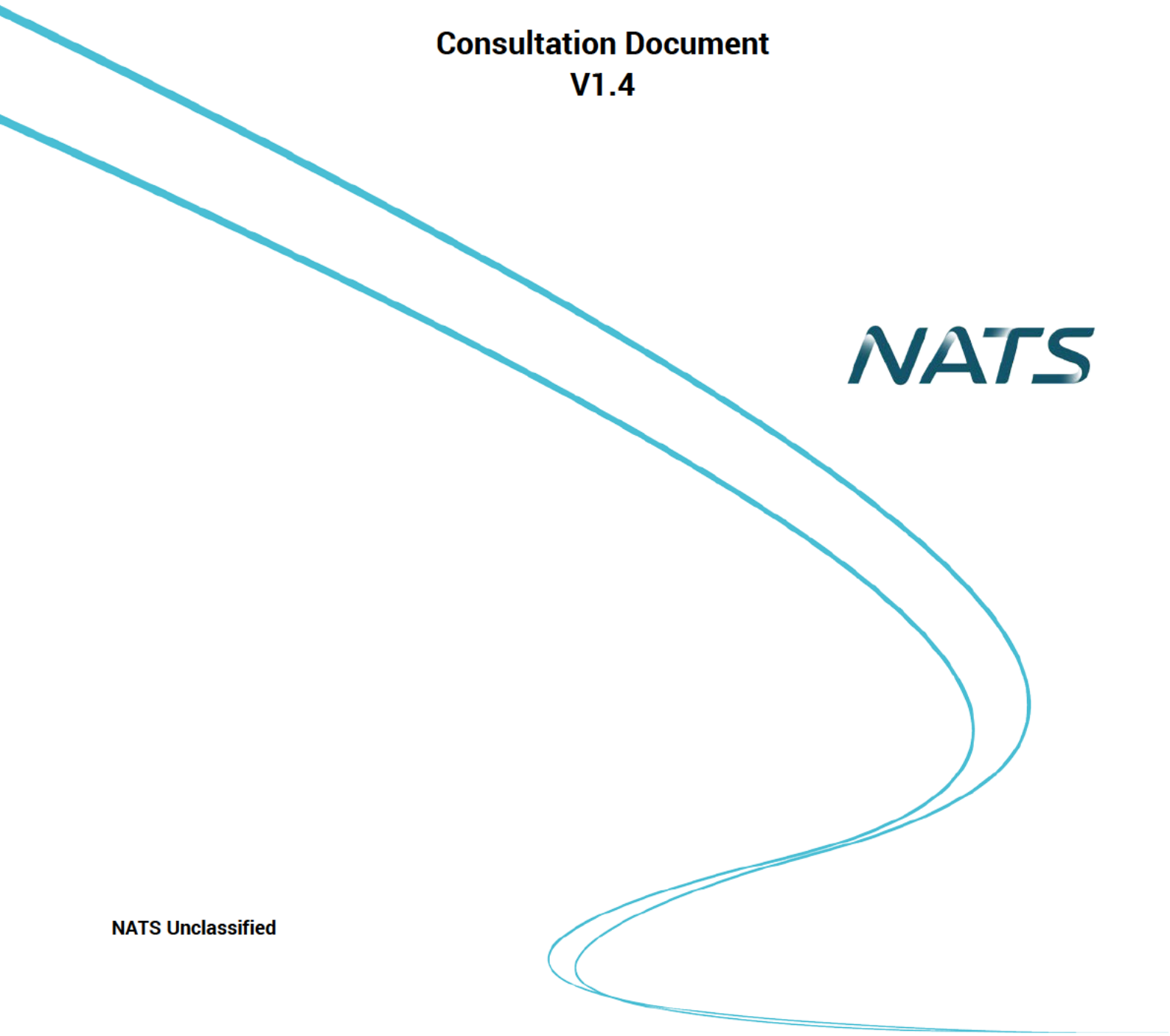
Removal of London Stansted LYD 6R/5S SIDS

Consultation Document
V1.4



NATS

Roles

Action	Role	Date
Produced	Airspace Change Assurance, NATS Future Airspace & ATM	16/10/2020
Approved	ATC Lead – Airspace, NATS Swanwick ATM Development	16/10/2020
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Drafting and Publication History

Issue	Month/Year	Changes this issue
1.0	October 2020	Draft submitted to the CAA for Stage 3A Gateway
1.1	October 2020	The following sections have been updated: - Section 5.3 – LYD SIDs typing error updated
1.2	November 2020	Following CAA Gateway Review, the following sections have been updated: - Section 5.2 – Paragraph 3 expanded to include RNP1 DET1D SID - Section 5.5 – Benefits section adjusted to align with full options appraisal - Section 6 – Environmental section adjusted to align with full options appraisal
1.4	November 2020	Following CAA Gateway review, the following sections have been updated: - Section 5.2 – Paragraph 5.2 expanded to include a comparison between DET 1S and DET 1D SIDs.

References

Ref No	Description	Hyperlinks
1	Removal of London Stansted LYD 6R/5S SIDS CAA web page – progress through CAP1616	Link
2	Stage 1 Assessment Meeting Presentation	Link
3	Stage 1 Assessment Meeting Minutes	Link
4	Stages 1-3 Multi-Gateway Documentation	Link

Contents

1. Executive Summary

This ACP proposes that an ATS route is created from DET VOR to LYD VOR. This would replace the final segment of the Stansted LYD 6R/5S Standard Instrument Departures (SIDs), and hence would allow the removal of these SIDs. The DET 1R/1S SIDs which follow exactly the same track to DET would be used instead (see Figure 3). This is a technical flight planning change and will not have any impact on aircraft tracks over the ground. This change is necessary to remove the dependency on the LYD DVOR which is planned to be removed from service.

2. Introduction

NATS En-route Ltd (NERL) is currently in the process of rationalising its Doppler Very High Frequency Omnidirectional Range (DVOR) navigation beacons. Whilst maintaining or improving safety, this program aims to reduce costs and the dependency on ground-based navigation aids by decommissioning and removing ageing superfluous DVORs. This program will also remove any existing dependency on these navigation aids from any current en-route procedures e.g. Standard Terminal Arrival Routes (STARs).

The LYD DVOR in the south of England was selected to be removed from our network of ground-based navigation aids and the Airspace Change Proposal (ACP) which dealt with the associated network changes was approved in October 2018. The LYD DVOR is scheduled to be decommissioned by the end of 2023.

The LYD DVOR has the following airport instrument flight procedure dependencies which were not captured in the original NERL ACP as this was focussed on en-route procedures: 2 SIDs at London City Airport, with whom NATS are working closely; and the Stansted LYD 6R/5S SIDs. This ACP is concerned with the removal of the Stansted LYD 6R/5S SIDs and as explained above, is in support of the wider DVOR programme of work.

This document forms part of the document set required in accordance with the requirements of the UK Civil Aviation Authority (CAA) CAP1616 airspace change process and aims to provide adequate evidence to satisfy *Stage 3 Consult Gateway, Step 3A Draft Consultation Document*. The ACP reference is ACP-2020-066.

Three Design Options:

- Do nothing,
- Option 1- RNAV replication of the LYD 6R/5S SIDs and
- Option 2- Removal of the LYD 6R/5S SIDs

were considered for this ACP. Only Option 2- Removal of the LYD 6R/5S SIDs, was selected to progress to consultation. The other two options were discounted as they did not fully meet the Design Principles.

This consultation is intended to gather feedback on the proposed option 2.

3. Engagement Activities Completed to Date

Engagement activities have been carried out in accordance with the plan described in the Stage 1 Assessment Meeting Minutes (Ref 3) and are detailed in the Stages 1-3 Multi Gateway Documentation (Ref 4). Note all related documentation is available on the CAA Airspace change portal here.

The option described in this document will result in no change to the traffic mix or flight paths flown today. Therefore, there will be no impact to stakeholders on the ground or other airspace users. Only procedures at

Stansted Airport will be affected. As such, the engagement activities to date have been limited to Stansted Airport.

4. Current Airspace

4.1 LYD 6R/5S Departures

The current LYD 6R (Runway 22) and LYD 5S (Runway 04) SIDs are used by Stansted Airport departures to the South East. The LYD 6R/5S SIDs are coincident with the DET 1R/1S SIDs up until the Detling DVOR, where the DET 1R/1S departures join the UK Air Traffic Service (ATS) route network. The LYD 6R/5S departures continue direct to the LYD DVOR, maintaining 5,000 ft where they join the network. The LYD 6R/5S and DET 1R/1S SIDs are shown in Figure 1.

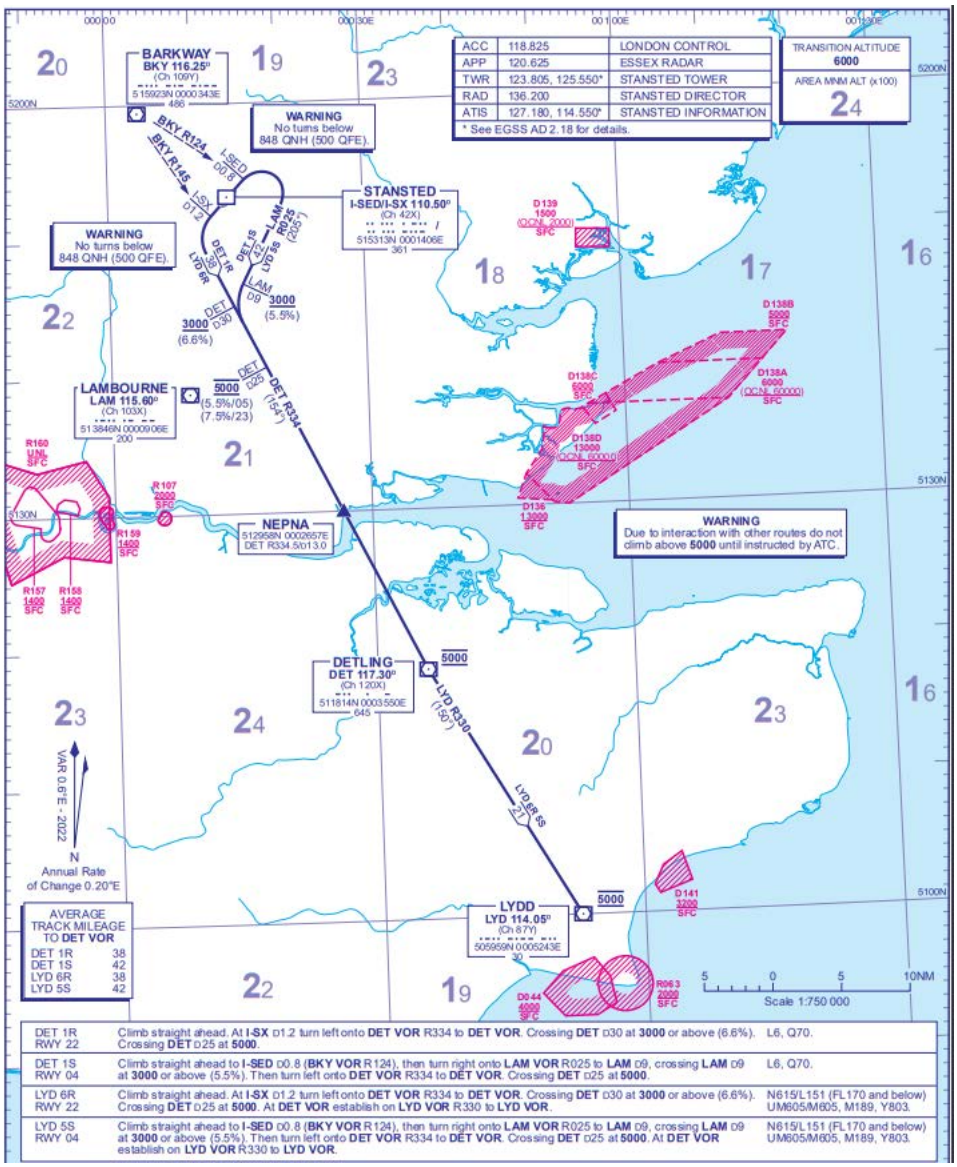

Figure 1: Standard Instrument Departure Chart for LYD 6R/5S and DET 1R and 1S. (UK AIP AD 2.EGSS-6-4)

4.2 Current traffic numbers

The traffic details of aircraft which flight planned via LYD in 2019 and so far in 2020 (January-September) Vs the numbers of those that actually flew over LYD are shown in Table 1.

Year	Flight Planned Via LYD	Actually flew over LYD
2019	1,076	96
2020 (January - September)	504	15

Table 1: Flight details for Stansted Airport LYD departures

In 2019, <9% of aircraft which filed for a LYD departure actually flew over the DVOR. Aircraft flying the LYD SIDs only climb to 5,000 ft by LYD. A traffic sample from June 2019, Figure 2, shows that no aircraft departing London Stansted flew over LYD at less than FL200 with most reaching FL70 by DET, demonstrating that the majority of aircraft are tactically instructed to leave the SID by air traffic control (ATC) before reaching LYD.

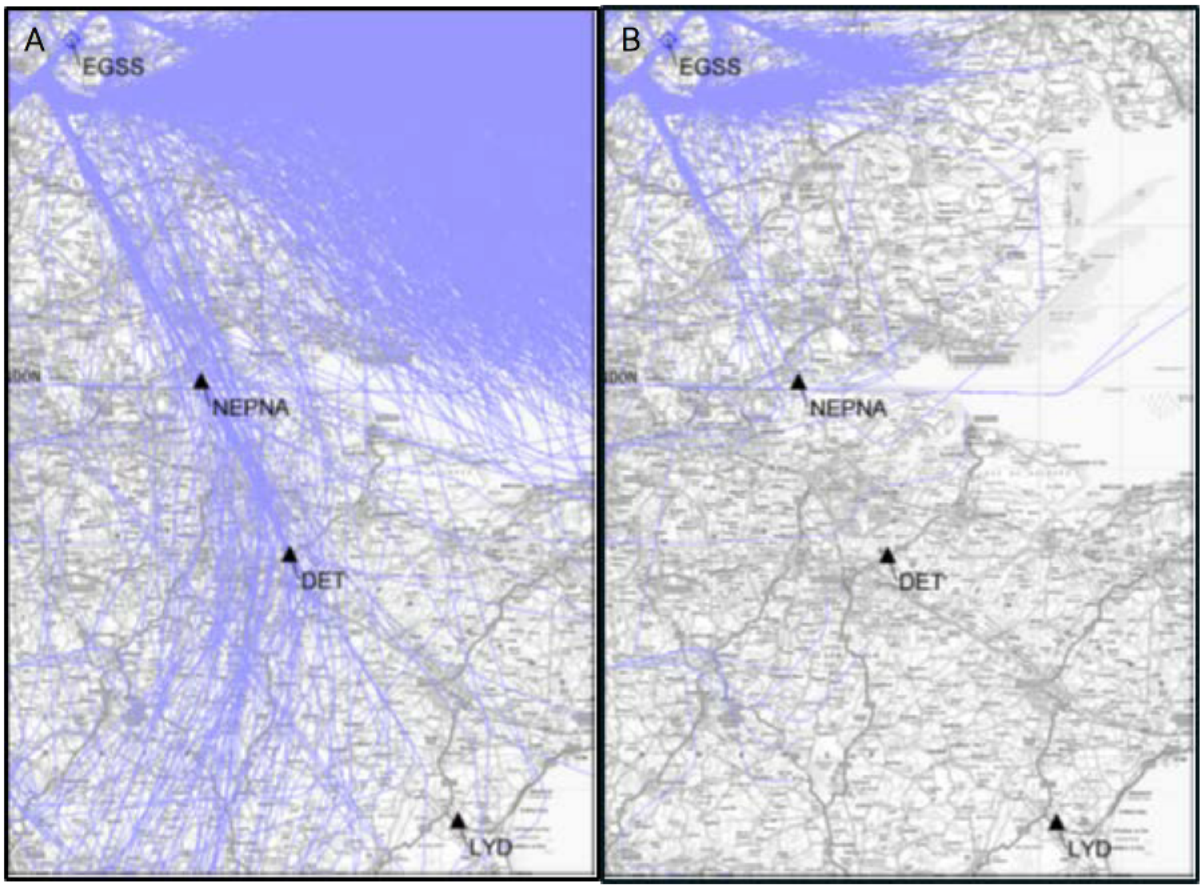

Figure 2: Tracks of aircraft departing Stansted Airport to the South and East in June 2019. A- Aircraft up to FL200, B- Aircraft up to FL70.

5. Proposed Changes

5.1 Justification behind the proposed changes

In order to facilitate the eventual removal and decommissioning of the LYD DVOR, the LYD 6R/5S SIDs for London Stansted Airport will need to be removed from the UK AIP.

5.2 Design Principles, evaluation to date and options appraisal

Previous work and documents, described in the stages 1-3 Multi-Gateway document (Ref 4), explained the principles we used to influence the design decisions, and each design option was evaluated and appraised.

As the change being proposed is very minor, only a single design option, Option 2, which fully met the Design Principles, is being considered. The "do nothing" baseline option has been discounted as they fail to *remove the Stansted Airport procedure dependencies on the LYD DVOR through appropriate and proportional design changes (DP2)*. "Option 1 – RNAV Replication of the Stansted LYD 6R/5S SIDs" met the first 2 Design Principles. However, this option had the potential to negatively impact on stakeholders on the ground and could potentially lead to a disproportionate Level 1 change for the number of aircraft affected.

This ACP introduces the possibility that aircraft currently flying a LYD 6R/5S departure could now be instructed to fly a DET 1D departure, a noise preferential route to avoid Great Dunmow. This RNP1 route has the potential to concentrate tracks over the ground. However, this change will affect <2 flights a day on average, comfortably less than the Planned and Permanent Redistribution of air traffic (PPR) threshold of 13 flights per day and as such can be considered negligible. This ACP will not alter the profile of any flights which will subsequently fly a DET 1R/1S or introduce new controlled airspace. Figure 3 below shows that the centrelines of the DET 1S and DET 1D are coincident and that the majority of aircraft departing London Stansted via DET or LYD departure route fly close to this centreline until being tactically vectored by ATC.

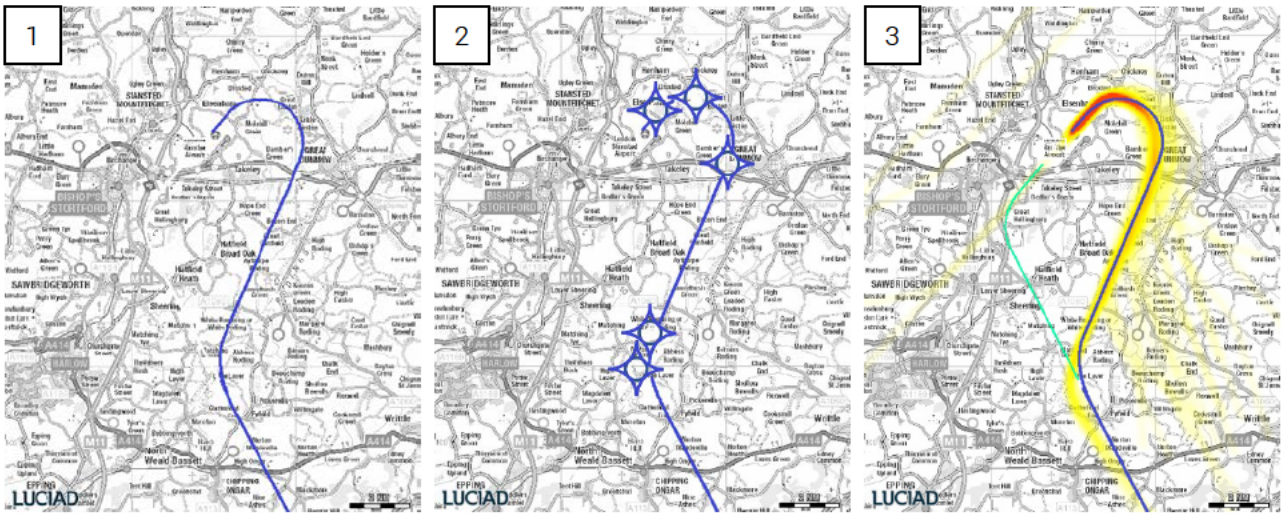

Figure 3: Images 1 and 2 show the coincident DET 1S and DET 1D SIDs. Image 3 shows a Density plot of all aircraft departing London Stansted routing via DET (LYD and DET SIDs) in June 2019

In the unlikely event that there are unexpected issues caused by this proposal, reversion to the pre-implementation state would not be possible due to the scheduled decommissioning and subsequent removal of the LYD DVOR.

5.3 Proposed Change Option 2- Removal of EGSS LYD SIDs

Option 2 proposes to completely remove Stansted Airport LYD SIDs. Aircraft which currently fly the LYD 6R/5S SIDs will be able to fly the DET 1R/1S SIDs which are coincident with the LYD 6R/5S up until the DET DVOR. NERL is proposing to extend the existing ATS route, M604, south from DET to LYD. This extension will maintain network connectivity by replacing the portion of the LYD 6R/5S SIDs not covered by the DET 1R/1S SIDs, see Figure 4.

The extended portion of M604 will be Route Availability Document (RAD) restricted to London Stansted departures which currently use the LYD 6R/5S SIDs. This restriction will ensure that there is no change to traffic mix or flight tracks, (lateral or vertical) observed over the ground.

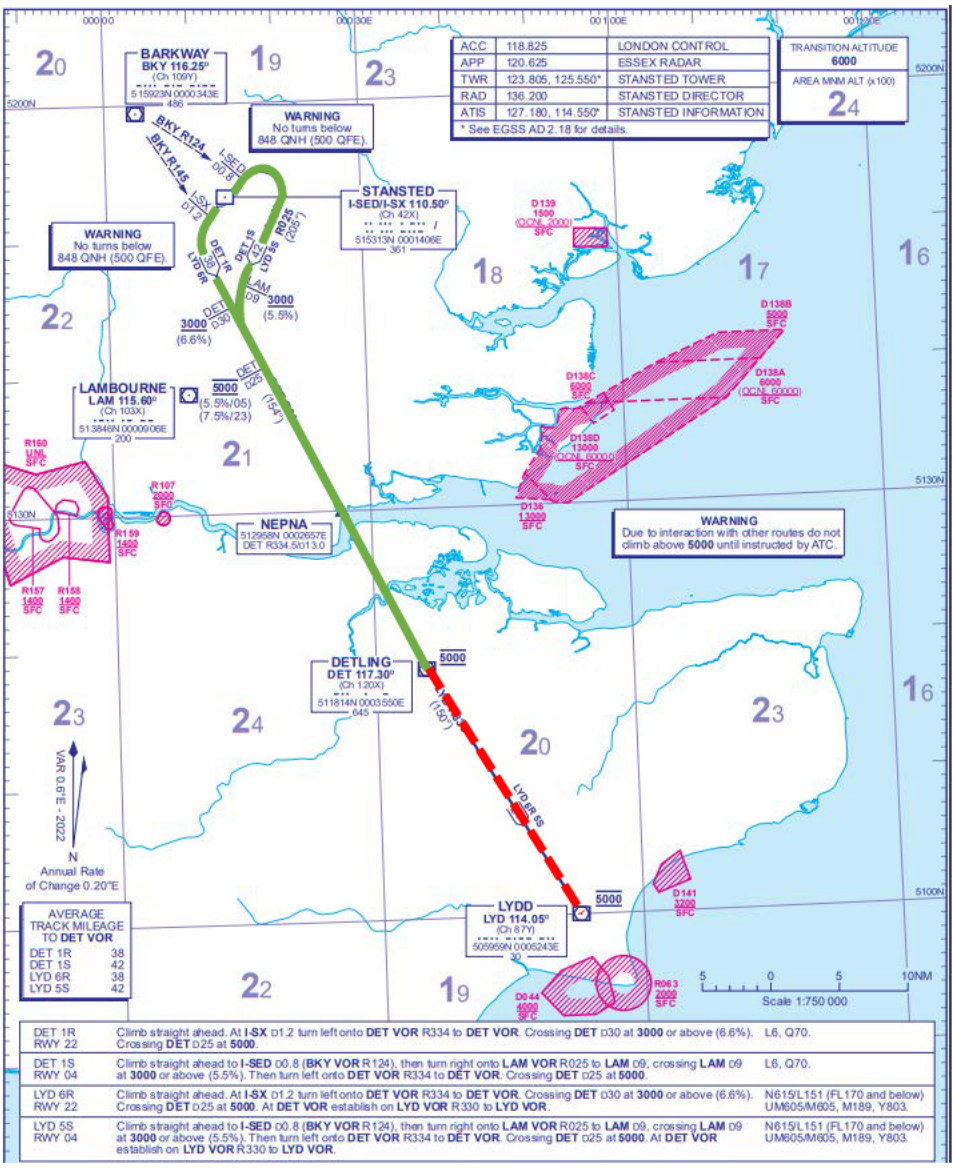

Figure 4: Proposed routing for South East Departures. Aircraft will fly the DET 1R/1S SIDs (green line) to DET before continuing onto the extended M604 (red dashed line) to join ATS route network.

5.4 Safety Assessment

Option 2 would maintain the current level of safety and no additional potential safety issues have been identified. As discussed during the Assessment Meeting (Ref 3), there would be no potential interface issues

between the Stansted DET SIDs and the extension of current ATS Route M604. The SIDs and the ATS Route would be contained within Controlled Airspace with no issues from either a flight planning acceptance or ATC perspective.

5.5 Benefits

In support of the wider NERL DVOR programme, this ACP will remove the outstanding Stansted Airport SID Dependencies on the LYD DVOR. This change will require no changes to the Electronic Flight Progress System (EFPS) as the DET SIDs are already in the system. Removal of the LYD SIDs effectively removes a portion of level flight from the flight plan. This will lead to some aircraft operators carrying less fuel and reducing fuel burn.

5.6 Dependencies

The Stansted Airport LYD 6R/5S SIDs are currently dependent on the LYD DVOR. As part of the NERL DVOR rationalisation program the LYD DVOR is due for decommissioning late in 2023 and any dependency on this navigation aid needs to be removed prior to then.

6. Environmental Impacts

This proposal will not lead to a significant change in the number of flights or flightpaths: lateral or vertical tracks of any aircraft routing currently flown. Some aircraft operators will calculate that they need less fuel then currently as this ACP will lead to a reduction in planned level flight on the SID. This could lead to a reduction in fuel/ CO_2/ greenhouse gas emissions. There is no expected impact on noise.

7. Consultation Timeframe

This ACP is targeting an implementation date of AIRAC 09/2021, 09th September 2021. This is one of the four major annual NAS builds which this proposal can be implemented in, because the proposed changes affect the NAS adaptation.

Since the impact to stakeholders will be very low, we believe a 2-week consultation period is sufficient and proportionate for this proposal. We have therefore requested a consultation period of 2 weeks with targeted stakeholders.

Subject to passing the consult gateway, NATS intend to commence the consultation on Monday 30th November 2020 and subsequently close it on Monday 14th December.

At the end of the requested 2-week consultation the responses will be analysed and themed; any late responses may not be included in the subsequent analysis.

The consultation will be open to anyone, but will be targeted at those stakeholders listed in Annex A.

8. Consultation Participation

8.1 How to Respond

This consultation commences on Monday 30th November 2020 and ends on Monday 14th December 2020; a period of 2 weeks.

This consultation is being conducted by NATS. The CAA's Safety and Airspace Regulation Group (SARG) will oversee the consultation and ensure that it adheres to the CAP1616 process and government guidelines.

This consultation is running for 2 weeks and will target a specific stakeholder audience with whom we regularly have contact. All relevant material will be available from the CAA Airspace change portal and stakeholders will be able to upload a response through a consultation feedback questionnaire.

Please note that when submitting feedback, you will be asked to provide the following information:

- Your name, and your role if you are responding on behalf of an organisation
- Your contact details
- A feedback category: SUPPORT NO COMMENT AMBIVALENT OBJECT
- Your level of support for the following aspects of this proposal:
    - Option 2- Removal of EGSS LYD SIDs
- Your general feedback comments with an opportunity to provide more detailed comments on the above specific aspects. There will also be the opportunity to upload a document containing further information relevant to your feedback.

You may upload a document as part of your response.

All responses will be analysed, with any common themes extracted and summarised. NATS will actively monitor the consultation portal and will respond to any queries, alongside including any generic queries under a FAQ section. All responses will be passed on to the CAA.

8.2 What happens with the responses, and what happens next?

Responses are made via the CAA consultation portal. Should any responses contain commercially sensitive data then we would expect the CAA to redact that information as part of the CAA's moderating practice.

On completion of the consultation, we will analyse the feedback and produce a feedback report, summarising themes arising from the feedback, alongside NATS' response to any issues raised. The feedback report will be uploaded onto the airspace change portal. Any new requirements identified will be considered in the on-going design process, leading to the production of a formal ACP. The ACP will detail the final design which it is expected will be submitted, in December 2020, and make reference to changes that have been made to take account of consultation feedback. If significant changes have to be made to the proposed design as a result of feedback from consultation, a further period of consultation on the updated design would be necessary.

9. Reversion Statement

This ACP will not alter the profile of any flights (lateral or vertical) or introduce new controlled airspace. In the unlikely event that there are unexpected issues caused by this proposal, reversion to the pre-implementation state would not be possible due to the scheduled decommissioning and subsequent removal of the LYD DVOR.

10. Next Steps

There is one design option being proposed for this airspace design as described in section 5.3.

Please give your feedback to this proposal via the CAA Airspace change portal. Once consultation is concluded and all feedback is collated, the proposal will be updated accordingly and an ACP submitted to the CAA. If this proposal is approved by the CAA the intention is that the proposed changes will be implemented not before 20th May 2021.

11. Annex A – List of Stakeholders

This consultation will be limited to the following stakeholders:

Stansted Airport
Stansted ACC (Airport Consultative Committee)
Stansted Airport EIG (Environmental Issues Group)
Stansted Airport FLOPSC (Flight Operations Performance & Safety Committee)
(The above committees cover Stansted Airport's primary stakeholders including local community representatives and relevant representative airlines operating from Stansted.)
Relevant members of the NATMAC (National Air Traffic Management Advisory Committee)

12. Glossary

ACP	Airspace Change Proposal
AIP	Aeronautical Information Publication
AIRAC	Aeronautical Information Regulation And Control
ATC	Air Traffic Control
ATM	Air Traffic Management
ATS	Air Traffic Service
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication
DVOR	Doppler Very High Frequency Omnidirectional Range
EFPS	Electronic Flight Progress System
NERL	NATS E-route Ltd
PPR	Planned and Permanent Redistribution of air traffic
RAD	Route Availability Document
RNAV	Area Navigation
RNP	Required Navigation Performance
SID	Standard Instrument Departure
STAR	Standard Terminal Arrival Route

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