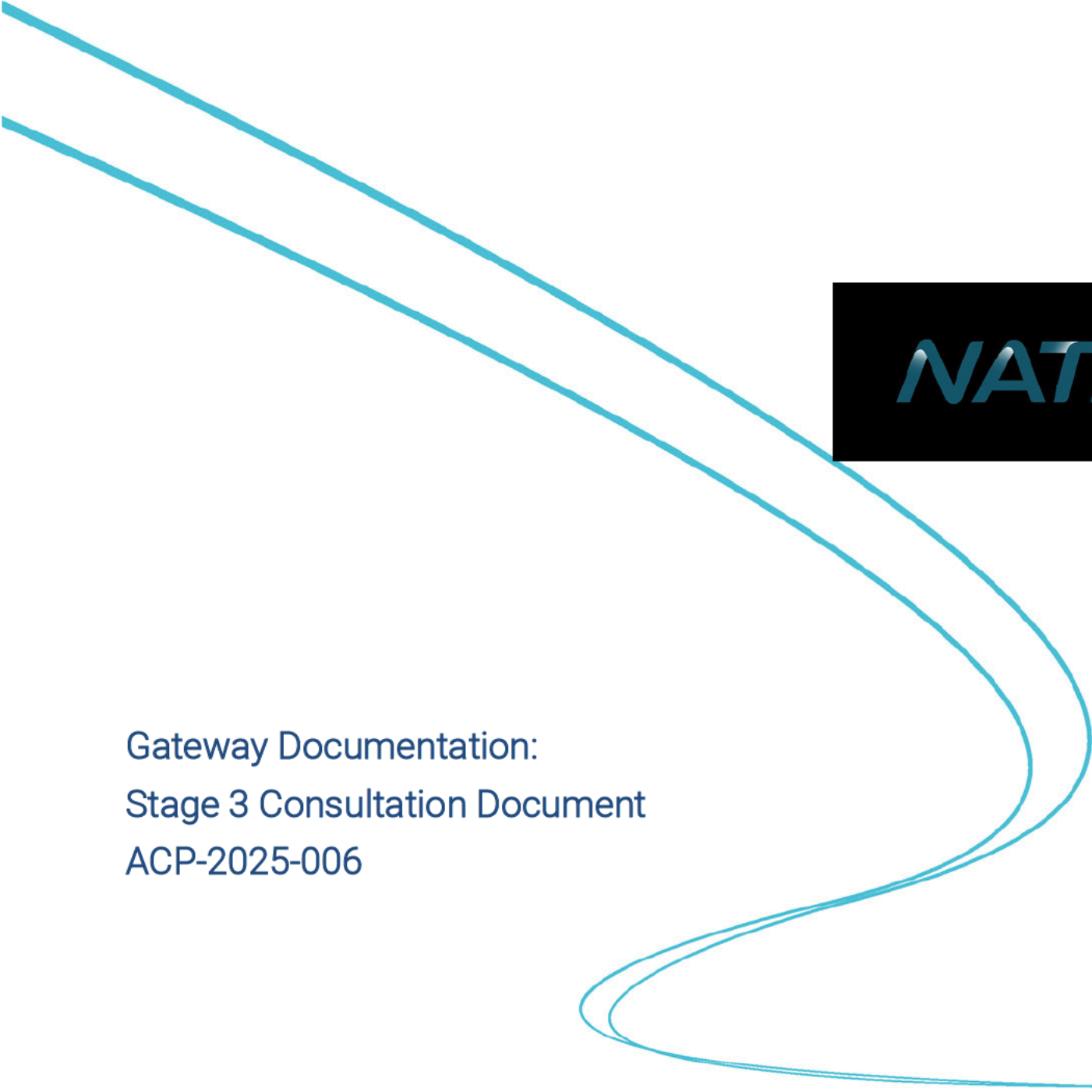


Network Improvements on the UK Dover (DVR) Interface

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NATS

Gateway Documentation:
Stage 3 Consultation Document
ACP-2025-006

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Document History

Issue	Month/Year	Changes this issue (most recent first)
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Roles

Action	Role	Date
Produced	Airspace Change Proposal (ACP) Specialist Capital Programmes and Transformation	September 2026
Reviewed Approved	Operations Development ATCO Capital Programmes and Transformation	September 2026
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Referenced Documents

Ref no	Name and description	Links
1.	ERNIP Part 2: ARN Version 2024 – 2030	Link
2.	CAP1616: Airspace Change Process V5.1	Link
3.	Citizen Space Consultation Space	Link
4.	Airspace Change Portal: Network Improvements on the UK Dover (DVR) Interface	Link
5.	SARG Policy 124: ATS Network Policy with Neighbouring States	Link
6.	Eurocontrol MUAC 2024 Annual Report	Link
7.	CAP1711: Airspace Modernisation Strategy 2023–2040 Part 1: Strategic objectives and enablers	Link
8.	UK Airspace Design Service	Link
9.	Air Navigation Guidance 2017 (ANG2017)	Link
10.	CAP1616i: Environmental Assessment Requirements and Guidance for Airspace Change Proposals	Link
11.	SARG Policy 126: Policy for the Design of Controlled Airspace Structures	Link
12.	Air Navigation Guidance 2026 (ANG2026)	Link
13.	The Civil Aviation Authority (Air Navigation) Directions 2026	Link
14.	CAP1616: Airspace Change Process V6	Link

1. Executive Summary

1.1 Background to this proposal

- 1.1.1 The change seeks to deliver long planned for improvements to connectivity between the UK air traffic service (ATS) route network and adjacent Flight Information Regions (FIRs) and Upper Flight Information Regions (UIRs).
- 1.1.2 There is a Level 2 proposal as it will alter flight paths above 7,000ft above mean sea level (amsl), with medium impact to aviation stakeholders.

1.2 Summary of Proposed Design and Impacts

- 1.2.1 Option 1: 3 COPs (Coordination Points) was progressed from Stage 2. This consists of the removal of current KONAN and VABIK COPs and the introduction of three new COPs on the European boundary.
- 1.2.2 As the design progressed, four new COPs (OPFIM, MUCPI, BOLZE and STEVU) have been proposed, one COP (KONAN) retained, and two (RAPIX and VABIK) withdrawn. This has been designed in close collaboration with NATS' neighbouring ANSPs.
- 1.2.3 MUCPI, BOLZE and STEVU are the three new COPs for traffic currently flight planning eastbound via KONAN or VABIK. For Maastricht's separation purposes, RAPIX has been replaced with OPFIM, to be used by the same traffic as today. KONAN is being retained for as a Belgian / UK COP at skeyes' request for airspace definition / containment purposes and will not be flight plannable as an exit point from UK airspace. Westbound traffic via KONAN, will be provided non-ATS route flight plannable connectivity (DCTs) from new point BOLZE to join the UK ATS network.
- 1.2.4 Other changes include changes to other waypoints and ATS routes, to align with new COPs; aircraft being designated a COP based on their LTMA departure airport or previous routing within UK airspace; speed speeds are proposed for some LTMA traffic; and a standard instrument departure (SID) truncation introduced for certain London Gatwick departures.
- 1.2.5 There will be no change to controlled airspace boundaries or GA access, with RNAV 5 access being retained.
- 1.2.6 Initial assessments indicate potential enabled savings of approximately 200,784.0nm, 1,714.6 tonnes of fuel and 5,449.6 tonnes of CO₂e¹, compared to the Baseline "Do Nothing" in 2028. By 2037, these numbers have grown to 211,688.2, 1,809.7 and 5,751.9 respectively.
- 1.2.7 Additionally, there is expected to be an improvement in airspace capacity and resilience, alongside a reduction in ATCO and pilot workload.

1.3 How to Respond and Next Steps

- 1.3.1 Stakeholders can submit feedback via [Citizen Space](#) until 23:59 on 25.11.2026.
- 1.3.2 The proposed implementation date for the airspace change is not before Winter 2027 / 2028.

¹ CO₂e, or carbon dioxide equivalent, is a unit of measure which translates all greenhouse gases into the equivalent amount of carbon dioxide need to generate the same warming effect.

2. Introduction

2.1 About this Airspace Change Proposal (ACP)

- 2.1.1 This Airspace Change Proposal (ACP) is sponsored by NATS, which is the provider of Air Traffic Services (ATS_ within the en-route network in the United Kingdom. The CAA's reference for this change is ACP-2025-006.
- 2.1.2 This ACP forms part of the EUROCONTROL 'Central High Project' (CEHI), which aims to improve the interface between DSNA (Direction des Services de la Navigation Aérienne), EUROCONTROL Maastricht, skeyes (Belgium) and NATS.
- 2.1.3 The European Network Manager has identified the Dover (DVR) interface region as a network hotspot which is creating inefficiencies within the network (for further details see ERNIP Part 2 ^(Ref 1) section 7.4 and proposal 105.010b). This network bottleneck is currently managed dynamically, leading to high controller workload and inefficient flight profiles for high volumes of traffic.
- 2.1.4 This ACP seeks to improve connectivity between the UK ATS route network and adjacent Flight Information Region (FIR) / Upper Information Region (UIR) boundaries by introducing new and revised ATS routes, waypoints and/or coordination points (COPs). By removing the identified hotspot, NATS will enable a reduction in controller workload, improved traffic presentation to adjacent Air Navigation Service Providers (ANSPs), more efficient flight planning, and increased traffic throughput.

2.2 About this Document and Scope

- 2.2.1 This document forms part of the document set required in accordance with the requirements of the CAA's CAP1616 Airspace Change Process ^(Ref 2). This document aims to provide adequate evidence to satisfy Stage 3 Consult / Engage Gateway.
- 2.2.2 This consultation document explains the history, impacts and benefits of the proposal. This consultation document is designed to be read in conjunction with the Consultation Strategy (how NATS will conduct the consultation) and the Full Options Appraisal (detailed analysis of the chosen proposal). These are the core Stage 3 documents and can be found in the Citizen Space Consultation Page ^(Ref 3).
- 2.2.3 For a complete history of all airspace change process-related documentation to date, please refer to this ACP's CAA Portal page ^(Ref 4).

2.3 Background

- 2.3.1 The basis of the development and design of the chosen proposal had emerged from previous work which NATS had undertaken as part of an improvement effort within the Functional Airspace Block Europe Central (FABEC²) - an alliance of European air navigation service providers.
- 2.3.2 FABEC identified the interface between the UK, France, and Belgium within the DVR area as a region of air traffic congestion and complexity.

² FABEC was initiated in June 2006 to comply with the Single European Sky legislation and create more efficient, safe, and environmentally friendly airspace.

- 2.3.3 As a result, NATS became engaged in FABEC initiatives³ to enhance safety, reduce delay and improve environmental performance within this region of airspace in coordination with the members of the DVR Interface Working Group: Reims Area Control Centre (ACC), Paris ACC, the French Air Force, skeyes, Maastricht Upper Area Control (MUAC), LVNL, and the Belgian Air Force.
- 2.3.4 In support of this work, NATS planned a series of operational changes⁴ from 2010, which included a proposal to improve eastbound traffic flows via a new systemised route structure comprising three parallel eastbound routes.
- 2.3.5 The proposed triple-route structure, which was tested in a real-time development simulation⁵, demonstrated potential but was not progressed at the time due to delays in the wider FABEC programme.
- 2.3.6 The activity remained paused during the uncertainty of the COVID-19 pandemic, when many airspace initiatives were paused across Europe as traffic levels reduced and operational priorities shifted.
- 2.3.7 As traffic levels have recovered post-pandemic, demand has once again increased across the network, reintroducing and amplifying the original capacity and complexity challenges in the DVR interface region.
- 2.3.8 The underlying issues have therefore persisted and intensified, with the region formally recognised as a network hotspot by the European Network Manager and current operations relying heavily on tactical vectoring to manage high traffic volumes.
- 2.3.9 This ACP therefore represents the continuation and advancement of those earlier design concepts to deliver a more structured, efficient and predictable airspace environment which would be able to accommodate the air traffic growth that is expected in the next decade.

2.4 Where are NATS in the Airspace Change Process?

- 2.4.1 The CAP1616 airspace change process is summarised in the flowchart below on the left (Figure 1). The process is designed to ensure that technical requirements are met and that all relevant stakeholders are consulted. This has seven stages as shown below. Details of Stage 3 from CAP1616 Edition 5.1 is shown on the right (Figure 1).

³ NATS has been involved in the Standing Committee – Operations, the Hot Spot Task Force and the DVR Working Group as an associate member of FABEC.

⁴ Five operational changes, DL1-DL5, were planned in this region; DL1-3 were changes to NATS internal processes which did not require external consultation. DL4 provided a new interface agreement with Reims ACC and was the subject of a previous ACP which was approved and implemented on 17th November 2011. DL5 proposed a new triple-route structure and was the final change in the series.

⁵ The simulation in April 2011 was organised at the Eurocontrol Experimental Centre to validate the airspace design developed by the DVR Working Group; see [FABEC Airspace Design](#) P145-P147 for a description of the simulation activity and the findings.

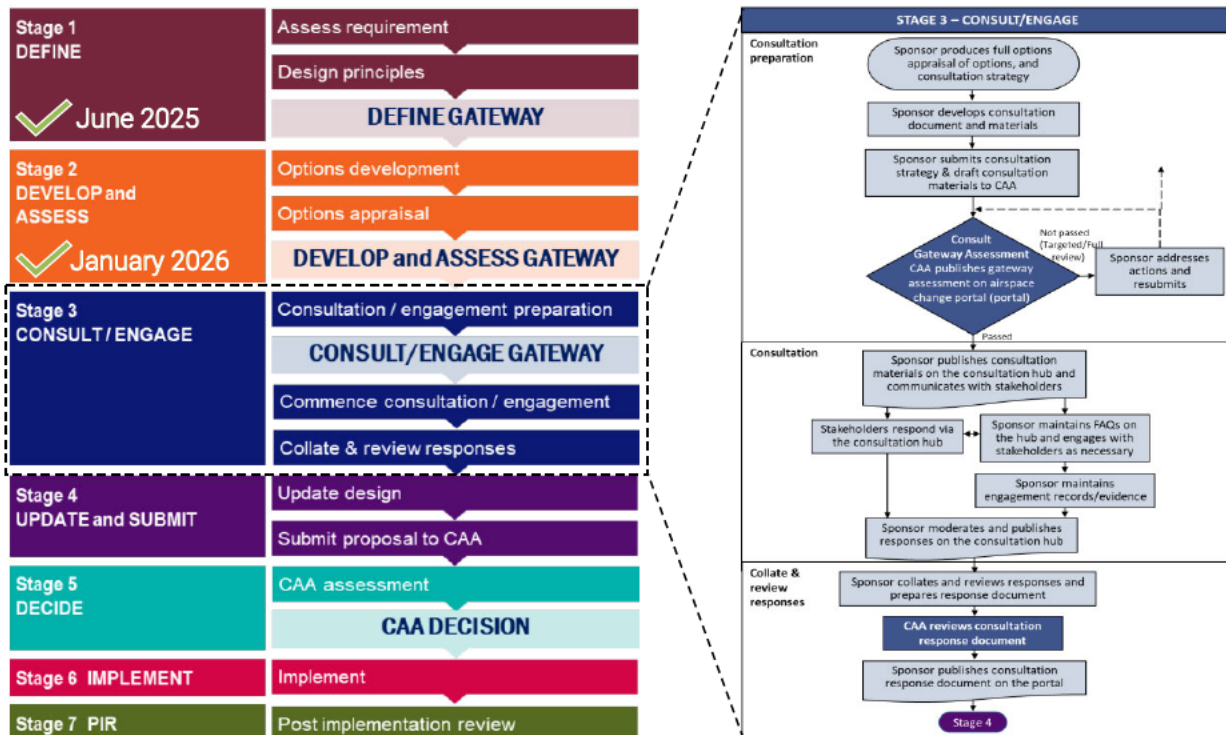


Figure 1 - Airspace Change Process - Overview (left) and Stage 3 (right). Source: CAP1616 V5.1

- 2.4.2 Stage 1 was completed on 10 April 2025 after NATS submitted a Statement of Need, the current-day scenario, design principles, and engaged with stakeholders.
- 2.4.3 In Stage 2, alongside the baseline ('do nothing') option, two airspace design options were created, described, engaged upon, and formally evaluated against the Statement of Need and Design Principles.
- 2.4.4 The baseline represented continuation of the current airspace structure without change and provided the reference case against which potential impacts were assessed. This was not supported by stakeholders as it would not have addressed the identified operational inefficiencies and would therefore fail to deliver the required improvements for future demand. Therefore, this (do-nothing) option was discounted.
- 2.4.5 The other two design options were developed in line with the Statement of Need, applicable design constraints, and stakeholder-agreed Design Principles.
- 2.4.6 Option 1: 3 COPs suggested replacing the existing two COPs with three new ones and introducing a more structured routing system. This approach simplified how aircraft move through the area by reducing crossing flight paths, requiring less intervention from air traffic controllers. As a result, it improved efficiency, allowing aircraft to climb more smoothly, follow more direct routes, and reduce delays and fuel use. It is considered the more effective long-term solution, although it relies on neighbouring countries making coordinated changes for it to work fully.
- 2.4.7 Option 2: 5 COPs retained the existing COPs and added three new ones, creating a mixed system of old and new routes. While this option was easier to introduce because it required fewer changes from other ANSPs, it led to a more complex airspace structure. Aircraft routes were more likely to cross or interact, meaning controllers would need to intervene more often to maintain safe separation.
- 2.4.8 Each option was evaluated qualitatively through the Design Principle Evaluation (DPE) and Initial Options Appraisal (IOA) processes, drawing on subject matter

expert input and stakeholder feedback to assess their viability. This structured assessment enabled comparison of the options against the baseline and determined that Option 1: 3 COPs should progress to the next stage of the airspace change process. Although Option 2 offered some benefits, it introduced increased operational complexity, while also resulting in comparatively greater environmental impacts and reduced flexibility for future airspace development. These disadvantages were considered disproportionate to the benefits offered and presented a higher level of delivery and integration risk.

NATS then selected Option 1: 3 COPs to progress as it was seen to deliver the greatest benefit and Stage 2 was officially completed on 27 January 2026.

2.4.9 This ACP is now at Stage 3, where NATS will oversee consultation and engagement with all relevant stakeholders.

2.4.10 The Department for Transport (DfT) have published new Air Navigation Guidance ^(Ref 12) and Directions ^(Ref 13); accordingly, the CAA have updated CAP1616 ^(Ref 14). These documents come into effect from October 2026. In accordance with the ANG2026, this ACP will continue under ANG2017 ^(Ref 9) and CAP1616 V5.1 ^(Ref 2) (as described in Figure 1).

2.5 Categorisation Level

2.5.1 The changes included within this submission are to the en-route airspace, altering flight paths above 7,000ft amsl only with medium impact to aviation stakeholders only. In line with the guidance set out in the CAP1616, the CAA has categorised this ACP as a Level 2 change ^(Ref 3).

2.6 Why Must This Change Happen Now?

2.6.1 This ACP has been developed in accordance with SARG Policy 124 (ATS Network Policy with Neighbouring States). The policy requires that airspace design considers the operation of the wider European network, including interactions with neighbouring ANSPs ^(Ref 5). Reflecting this, the Network Improvements on the UK DVR Interface project (ACP2025-006) is part of the Central High project ^(Ref 6). This is a collaborative initiative between NATS, DSNA, skeyes, EUROCONTROL MUAC, and military stakeholders to improve the airspace interface between their respective areas of responsibility. To resolve the identified network bottleneck all parties (including NATS) must work collaboratively and to an agreed timeline. Therefore, this project must happen now, to align with and facilitate European network changes.

2.6.2 Furthermore, this ACP aligns with the objectives of the Civil Aviation Authority (CAA) Airspace Modernisation Strategy (AMS) (CAP1711) ^(Ref 7). The AMS is the CAA's plan for UK airspace from 2023 to 2040. With proposed implementation of this change no earlier than Winter 2027 / 2028, it is opportune with regards to the AMS timeframe.

Table 1 - ACP Alignment with the Strategic Objectives of the AMS

AMS Strategic Objectives	Alignment
Maintaining and, where possible, improving the UK's high levels of aviation safety	The DVR interface region is a network hotspot which is currently managed dynamically. This leads to high controller workload and the requirement to manage traffic throughput to ensure safety. NATS supports the prioritisation and continuous improvement of aviation safety, and this ACP seeks to develop an improved airspace design, mitigating this hotspot through a reduction in controller workload, which would, additionally, help manage residual operational risk.
Integration of diverse users – including needs of defence and security	This ACP seeks to ensure that there is no detrimental impact on different airspace users by ensuring that the airspace maintains close alignment with existing arrangements; there are no new volumes of controlled airspace proposed and no changes to airspace classification or use.
Simplification – reducing complexity and improving efficiency	This ACP seeks to secure the most efficient use of airspace and the expeditious flow of traffic, through a reduction in ATC workload, thereby accommodating increasing traffic demand, improving airspace network resilience and reducing delays for airspace users.
Environmental sustainability – an overarching principle applied through all modernisation activities, in accordance with the Government's environmental objectives	This ACP seeks to provide environmental benefits by enabling more efficient flight profiles; an improved airspace design could support a reduction in tactical deviations from aircraft planned flight paths, in addition to more continuous climb profiles, which would enable a reduction in fuel burn and CO ₂ emissions.

- 2.6.3 The network improvements at the DVR interface boundary are also aligned with UK Airspace Design Service (UKADS) work as we prepare the international interface for the wider systemisation of the London TMA (LTMA) region ^(Ref 8). UKADS is to deliver LTMA changes to enable the 3rd runway at Heathrow, which is planned for 2035. By separating flows and reducing reliance on a single convergence point, these changes begin to establish the structured, predictable route network that UKADS will ultimately develop at a system-wide level. In particular, the DVR improvements help create defined entry and exit points at the UK–Europe boundary, which are essential for UKADS to design integrated, end-to-end routes across the LTMA. This supports the UKADS objective of delivering a coordinated, holistic airspace design, rather than a series of disconnected local changes.

Efficiency, Capacity and Resilience

- 2.6.4 The current airspace design can lead to congestion and delays, particularly during peak times. A redesigning ATS route structure could reduce the number of crossing and converging traffic flows, thereby reducing the amount of ATC intervention (vectoring) required to separate traffic which, in turn, would ease this network bottleneck, increase ATCO ability to handle traffic, and improve resilience to unexpected events.

Controller Workload

- 2.6.5 Due to the high volume of traffic utilising the routes through the FIR / UIR boundary COPs, currently traffic is tactically positioned and transferred between ANSPs on

radar headings. This leads to inefficient flight profiles and an increased workload for ATC across all affected ANSPs. This change aims to reduce controller workload by decreasing the amount of necessary radio transmissions as fewer aircraft would be subject to radar vectoring.

Environment

- 2.6.6 Due to the volume of traffic in the area, aircraft often receive tactical deviations (either laterally or vertically) from their planned flight paths, creating environmental inefficiencies. This proposal aims to facilitate more continuous climb profiles and allowing flights to cross the FIR / UIR boundary at higher levels than today.

2.7 Stakeholders

- 2.7.1 stakeholder is a third party interested in an ACP. The primary stakeholder groups for this consultation are:
- Neighbouring ANSPs
 - Top 10 airlines including the Lead Operator Carrier Panel (LOCP)
 - Impacted airports
 - Relevant National Air Traffic Management Advisory Committee (NATMAC) members
- 2.7.2 Any individual or organisation may submit a response to this consultation, but our targeted communications to inform organisations and individuals will be limited to the aviation stakeholders listed in Appendix: List of Stakeholders.
- 2.7.3 A summary of our previous stakeholder engagement is provided in the Consultation Strategy document (available on the CAA's Citizen Space consultation platform ^(Ref 3)). For details of all stakeholder engagement, see our Stage 1 and Stage 2 publications on the CAA's airspace change portal ^(Ref 4).

3. Current Airspace (Baseline)

3.1 Introduction

- 3.1.1 The following section describes the current airspace which forms the baseline (do nothing) scenario.
- 3.1.2 It should be noted that “doing nothing” is not considered as a viable option and was discounted in Stage 2, as it did not provide the necessary capacity improvements. It is included here, as a baseline for comparison purposes only.

3.2 Coordination Points (COPs) and Traffic Figures

- 3.2.1 The DVR sector (Sector 15), the focus of this ACP, has direct interface with multiple other ANSPs: Brussels ACC (<FL245) and Maastricht UAC (>FL245) across the Brussels FIR / UIR plus Paris ACC (<FL265) and Reims UAC (>FL265) across the Paris / France FIR / UIR. Figure 2 shows the interface of these external agencies and their geographical location.

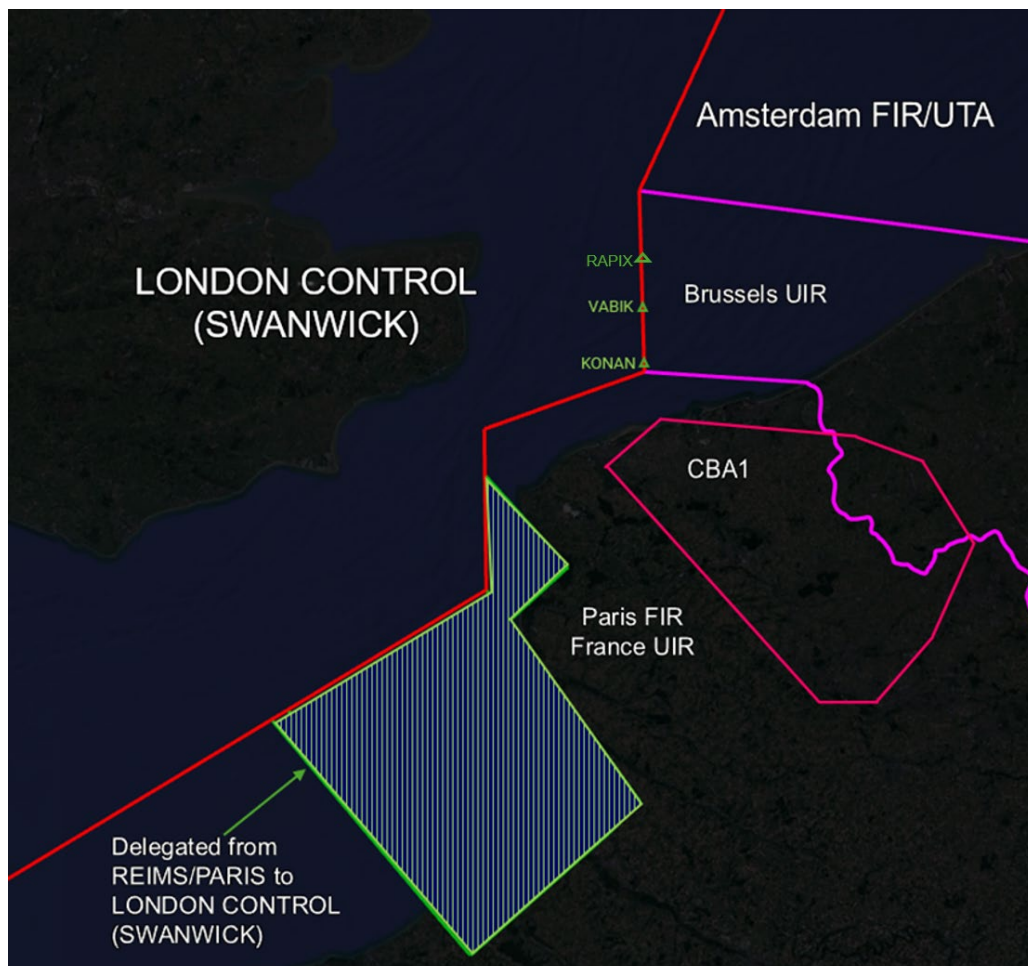


Figure 2 - Map showing the interface between London Area Control and neighbouring countries - French, Belgian and Dutch FIR / UIRs. RAPIX, VABIK and KONAN COPs illustrated [Adapted from Upper Air Route Structure chart by Eurocontrol, effective 19.2.2026]

- 3.2.2 Specifically, the changes in this ACP relate to the positioning of two boundary COPs, VABIK and KONAN (also shown in Figure 2). There are three main traffic groups currently using either VABIK or KONAN COPs whilst heading east. These are:
- 1) London Terminal Control Area (TMA) departures (approximately 70% of all flights)
 - 2) Brussels TMA arrivals
 - 3) network overflights
- 3.2.3 The traffic in today's operation is positioned across the FIR / UIR boundary such that primarily Brussels TMA arrival traffic routes via VABIK, and London TMA departures / overflights route via KONAN.
- 3.2.4 A COP north of VABIK, would mean RAPIX would no longer be correctly separated based on our international partners' spacing requirements. Therefore, it is proposed to move the position of RAPIX slightly north to maximise the flexibility within the DVR region
- 3.2.5 The density of flights for RAPIX, VABIK and KONAN (13,988 flights) is shown below (Figure 3). This data is for 8th August 2025 to 31st August 2025, which is considered a representative busy summer period including the bank holiday weekend.
- 3.2.6 Due to the volume of traffic flight planning via VABIK or KONAN, to maintain throughput aircraft are vectored from their planned flight paths; this is evident from the large high-density swathe across the two COPs, as opposed to two distinct traffic flows in accordance with the underlying ATS route structure.
- 3.2.7 In current-day operations, traffic flight plans to cross the UIR boundary up to FL510⁶, with most traffic crossing the boundary at FL245 or above.

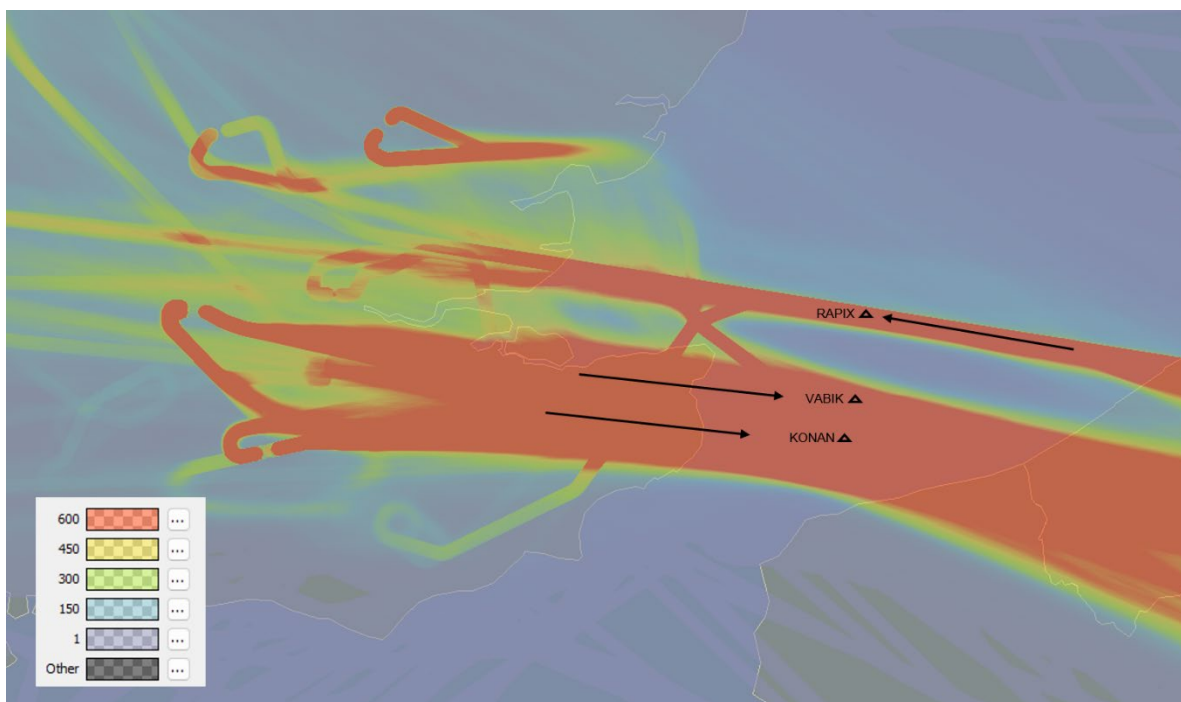


Figure 3 - RAPIX, VABIK, and KONAN Traffic 18.08.25 - 31.08.25. Source: NATS Radar Data, Background Map: ATC Playback

⁶ Based on subject matter expert (SME) opinion: Air traffic controllers.

- 3.2.8 The majority of traffic via KONAN is eastbound, however, there is some westbound traffic. In 2025, 80 flights filled westbound KONAN – DVR⁷, of which 77 (96%) were from Belgian airports.

3.3 European Airspace of Note

- 3.3.1 Immediately outside of the London FIR / UIR, is CBA1 – a Military Cross Border Area established within the French and Belgian FIR / UIRs (shown in Figure 2). It is primarily used for security threats, with short-notice activation (as little as 20 - minutes' warning), and occasionally for air-to-air refuelling training, which requires advance notification.
- 3.3.2 Activation of CBA1 affects traffic in the southern DVR interface region. However, it is rarely activated (SME (ATCO) input suggests this is <5 occurrences per year). It is divided into three vertically separated sections that can be activated independently or together.

3.4 Current ATS Routes and Waypoints

- 3.4.1 Currently, there are several routes that would be subject to change by this ACP. Table 2 provides a textual description of the ATS routes and the waypoints they join, contained within the scope of this ACP. All those can also be seen illustrated in Figure 5.

⁷ At or above FL60.

Table 2 – List of the ATS routes contained within the scope of this ACP

Route	Routing (Waypoints)	Navigation Specification
L6	DET – DVR	RNAV5
L9 (UL9)	NORRY - LINDY - GOXUL – BIG – DIKVU – EMKAD – UMTUM – DVR – KONAN	RNAV5
L10	BUZAD – BPK – LAM – ITVIP – DVR - RINTI	RNAV5
L15	MOTOX – SANDY – BIG – BETPO – FINMA- PIXUP- HON	RNAV5
L18	NUCHU – NUBRI – NIGIT – VAPID – MID – MAY – WIZAD – DVR - VABIK	RNAV5
L607	NUCHU – ELSOF – ALHAD – BIG – KONAN	RNAV5
L610	RAPIX – SUNUP – TEBRA	RNAV5
M84	ODUKU – TOVGU – CLN – EVMEK – NONVA – ABTUM - KONAN	RNAV5
M85	DAGGA - ITVIP	RNAV5
M87	SOQQA – SODVU – EKNIV - UMTUM	RNAV1
M140	OXLOW – SAM – ROKKE – PENUX - DVR	RNAV5
M142	OXLOW - ROKKE	RNAV1
N27	ICTAM – DEGGE – RODNI – HEN - SAXBI	RNAV5
P2	SIRIC – NIGIT – PAWDE – HABCI – ZORFE - DVR	RNAV1
Q70	COWLY – BIG – DET – ITVIP – MOKBU - VABIK	RNAV5
Y47	BENBO – SFD - MAY	RNAV5
Y311	ODVIK - DVR	RNAV5
Y312	MIMFO - DVR	RNAV5

3.5 Departure Connectivity

3.5.1 There are three aspects of departure connectivity which are relevant to this change.

3.5.2 Firstly, some operators currently experience flight planning challenges due to a vertical disconnect between the published lower level of ATS route segments and final altitude at the end of an airport SID. A flight profile analysis, visual representation of the concerned LTMA SIDs can be seen in Appendix: Departure Connectivity Analysis. This analysis confirms that departures, on the impacted SIDs, reach at least 7,000ft prior to the SID end point.

3.5.3 Secondly, above FL100, aircraft are permitted to accelerate above 250kts to their desired climb speed. This can result in significantly different speed profiles and aircraft catching up the previous departure from a given airport. To manage the scenario, tactical intervention is required resulting in additional 'stepped climbs' or track extension. Whilst aircraft may be flying fast (and perceived to be getting to their destination quicker), they are not achieving the most efficient flight plan. Overall, the speed benefits are lost, and ATCO and pilot workload are higher than

necessary. This problem is especially relevant for the major London airports (London Gatwick, London Heathrow, London Luton, and London Stansted⁸) where departure density is high, and they often have multiple consecutive departures towards the same boundary COP.

- 3.5.4 Table 3 shows the average speeds observed for climbing traffic from each of these airports. This information is based on NATS radar data, March to May 2025, outbound via KONAN or VABIK at FL150 – FL250.

Table 3 - Current Average Climb Speeds per Airport

Airport	Mean Indicated Airspeed
London Gatwick	284kts
London Heathrow	305kts
London Luton	280kts
London Stansted	292kts ⁹

- 3.5.5 Thirdly, a review of London Gatwick's DVR SID (only used for easterly standby runway (08L)). Considering the proposed changes on the boundary and associated ATS routes, it is thought that a review of this SID may be required to achieve the best climb profiles in the new airspace.

3.6 Arrival Connectivity

- 3.6.1 There are two standard arrival routes (STARs) that are currently using the KONAN COP, as shown in Figure 4. Those are KONAN 1C used by low-level traffic to London City Airport and Biggin Hill Airport and KONAN 2G, used by London Gatwick Airport but only available at nighttime.

⁸ As per London Stansted's Stage 2 feedback (see Table 16) they have ACPs to truncate their Clacton and Detling SIDs. These are due to be implemented in October 2026. The Detling SID is most relevant to this ACP. At the time of writing, this truncation had not occurred. However, NATS acknowledge this should occur during this consultation period, and therefore, change the baseline / impacted SIDs.

⁹ A key aircraft (by proportion of traffic) at London Stansted is the B738 Max, which climbed at between 280 and 285kts over the same period.

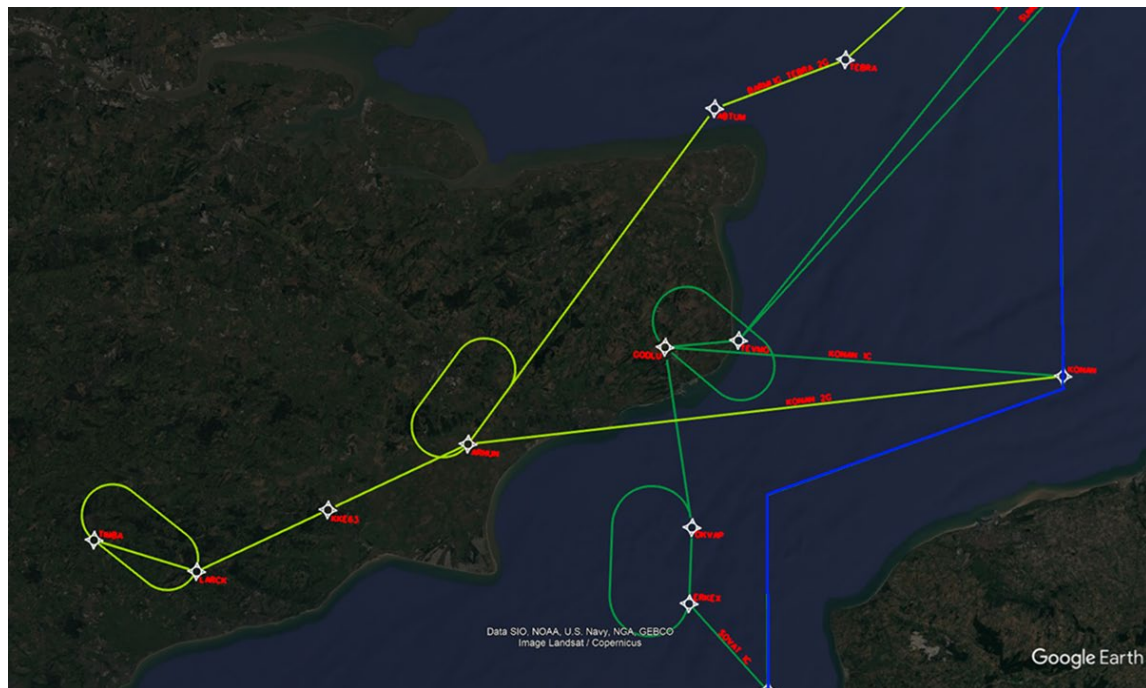


Figure 4 - KONAN 1C (dark green) for London City and Biggin Hill airports and KONAN 2G for Gatwick Airport (light green). Background Map: Google Earth Pro

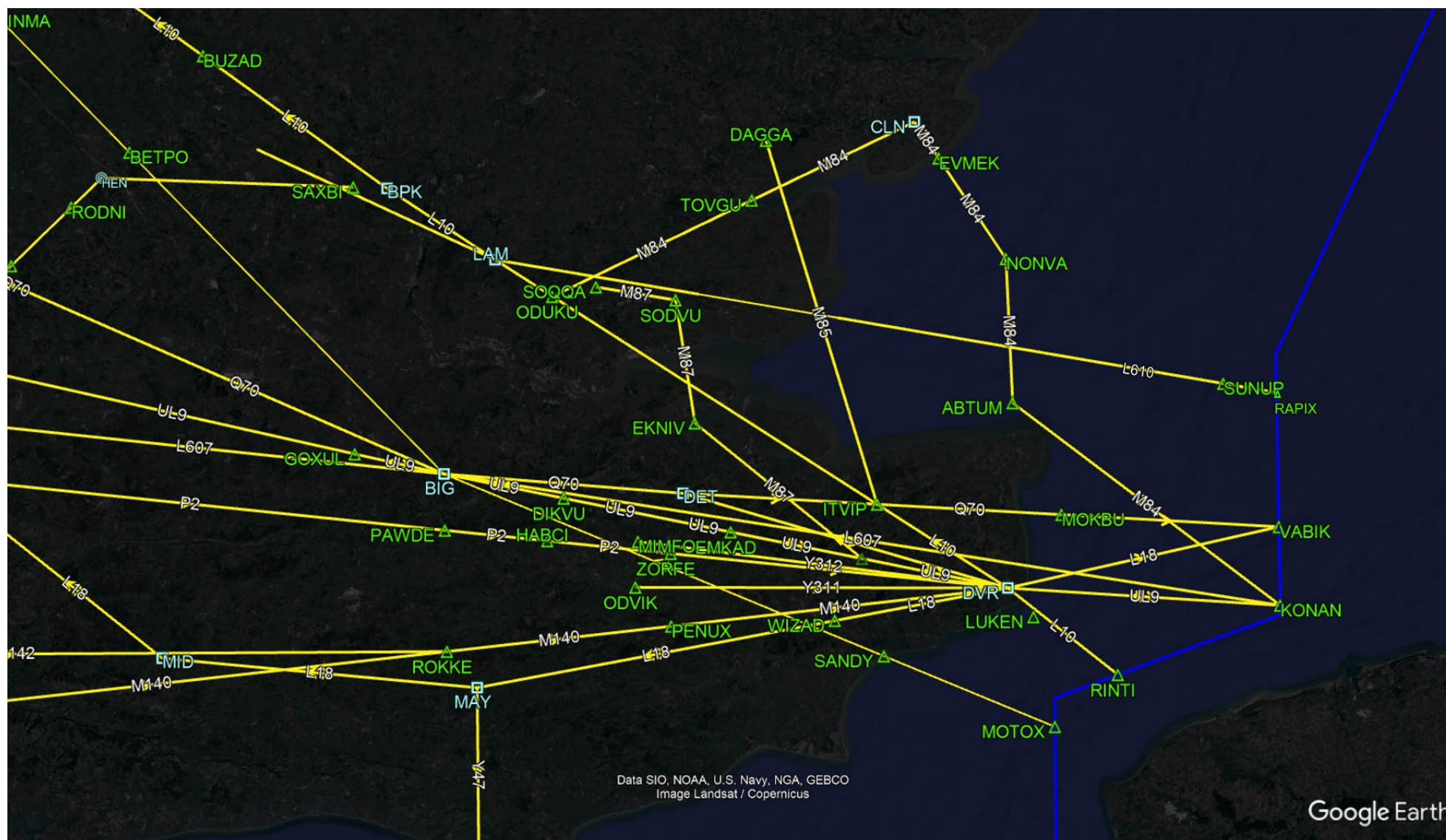


Figure 5- Current ATS Routes within this ACP. Background Map: Google Earth Pro

3.7 Controlled Airspace (CAS)

3.7.1 There are five airspace volumes in proximity to RAPIX, VABIK and KONAN. These are shown in Figure 6 and described in Table 4.



Figure 6 - CAS Volumes. Background Map: Google Earth Pro

Table 4 - CAS Volumes

CAS Volume	Classification	Level
Clacton CTA 7	A	FL65 – FL195
Clacton CTA 9	A	FL105 – FL195
Worthing CTA 1	A	FL65 – FL195
Worthing CTA 3	A	FL75 – FL195
Worthing CTA 5	A	FL105 – FL195

3.8 Traffic Forecast

3.8.1 For Stage 3, the forecast traffic growth has been updated with the most credible and up-to-date data that is available from 2025.

- 3.8.2 Based on the 2025 EUROCONTROL CFMU traffic data (actuals), NERL analytics team has forecast annual traffic figures for 2028 (year 1) and 2037 (year 10) using NATS November 2025 Base Forecast¹⁰, see Table 5.
- 3.8.3 Other than London Gatwick Arrivals, NATS have not provided a traffic forecast for traffic heading westbound via KONAN as the numbers are very small and any growth would be within the margin of error of a forecast.
- 3.8.4 This change will have no impact on the traffic volume or distribution via RAPIX, and any changes to RAPIX are of negligible impact and introduced only as an enabler for changes to KONAN / VABIK. As a result, no impact assessment is being completed on RAPIX. Accordingly, providing a detailed traffic forecast is disproportionate in terms of resource versus benefit. In 2025, 73,471 flights filed westbound via RAPIX.

Table 5 - Forecast Traffic Figures for 2028 and 2037

Traffic Flow	2028	2037
Bournemouth Departures	829	829
Farnborough Departures	1,100	1,132
London Biggin Hill Departures	2,569	2,754
London City Departures	7,569	8,249
London Gatwick Arrivals	154	163
London Gatwick Departures	31,345	32,449
London Heathrow Departures	71,525	74,930
London Luton Departures	13,289	13,769
London Southend Departures	192	192
London Stansted Departures	34,777	36,120
RAF Northolt Departures	457	465
Other UK Departures	17,718	18,362
Overflights ¹¹	41,701	51,664
Total	223,224	241,077

¹⁰ NATS long-term traffic forecasts are updated regularly to incorporate the latest available data. At the time of writing, NATS November 2025 Base Forecast was the most up-to-date projection and represents the most likely traffic growth scenario, based on NATS' market knowledge and economic forecasts.

¹¹ Overflights are all non-UK arrivals or departures.

4. Proposed Changes

4.1 Justification

- 4.1.1 The DVR project focusses on traffic leaving the London FIR / UIR boundary via KONAN and VABIK. The European Network Manager has identified the region as a network hotspot, which is creating inefficiencies within the wider European network.
- 4.1.2 This bottleneck is currently managed tactically, leading to high controller workload and inefficient flight profiles for a high volume of traffic.
- 4.1.3 The project seeks to introduce a revised route structure and associated ATC procedures across the boundary. The anticipated benefits include more efficient climb profiles, reduced controller intervention, and improved predictability for flight crews. In addition, it would create improved traffic presentation to adjacent ANSPs, more efficient flight planning and increased throughput rate. In the longer term, the introduction of these segregated flows is a key enabler for wider London TMA systemisation, including future UKADS developments.
- 4.1.4 Please, be aware that ATS routes designators and waypoint names used within this document are not yet confirmed and may be subject to change as the project progresses.

4.2 Summary of Proposed Changes

- 4.2.1 The proposed design involves separating the current traffic flows into three distinct streams. This would be achieved both from a flight planning perspective and through the creation of parallel route structures and enables lateral separation of traffic before entering the European network. It involves the removal of the current KONAN and VABIK COPs and replacing them with three new ones.
- 4.2.2 To facilitate this change, the design also requires the change of some of the existing waypoints and ATS routes, in addition to some of departure and arrival procedures within London TMA airfields. These proposals are discussed in more details in the following sections of this consultation document.

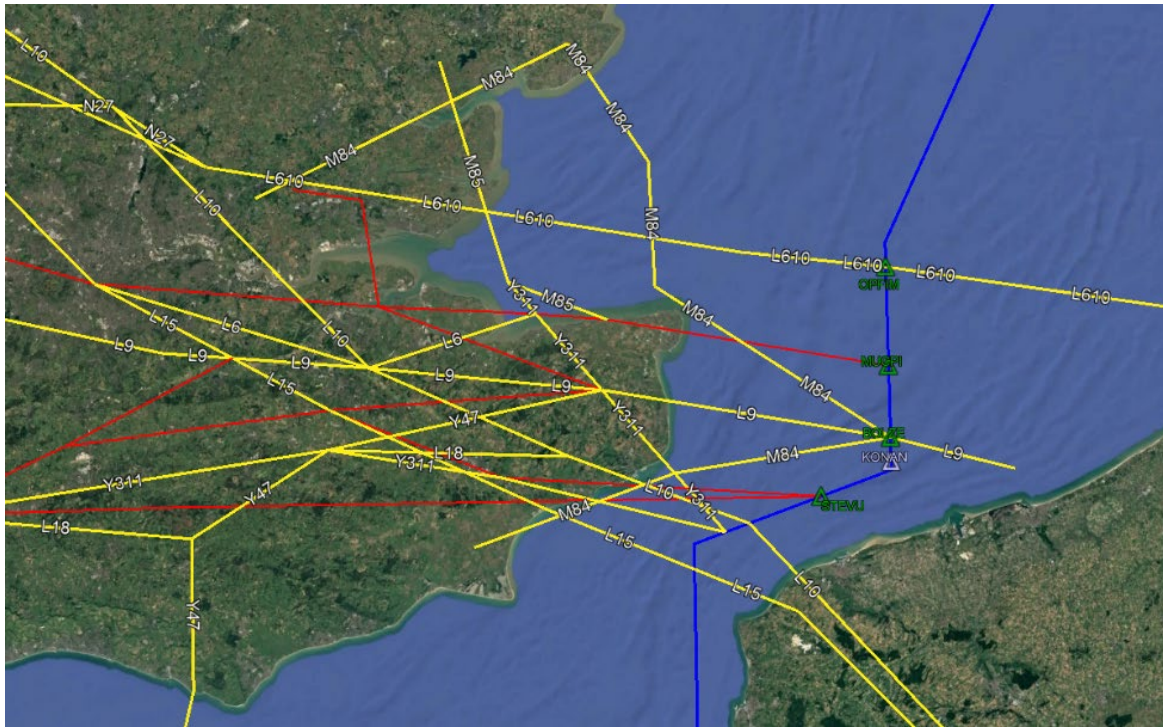


Figure 7 - Overview of Change. Background Map: Google Earth Pro

4.3 Coordination Points (COPs)

- 4.3.1 The option progressed from Stage 2, was for three COPs. The initial idea proposed three COPS as the replacement of KONAN and VABIK with MUCPI, BOLZE and STEVU. With traffic being allocated to a COP based on their LTMA departure airport or previous routing within UK airspace, therefore, reducing track miles and crossing traffic, resulting in better overall flight efficiencies.
- 4.3.2 As the design has progressed during Stage 3, to enable the main three COP replacement for KONAN and VABIK, a fourth new COP has been proposed, OPFIM. Furthermore, it was decided that KONAN would no longer be removed for low level westbound traffic following discussions with skeyes.
- 4.3.3 OPFIM is being proposed to replace RAPIX; 0.9nm north of current day location. This change is to accommodate our neighbouring ANSPs' spacing requirements, making sure it is 10nm separated from MUCPI. OPFIM will have the same operational role as current day RAPIX.
- 4.3.4 It has been agreed to maintain KONAN (within the proposal) for containment purposes within the Belgian airspace. Accordingly, the attached ATS route (L607) will also be retained for continuity purposes. Within the UK, KONAN will not be flight plannable for traffic exiting the UK.
- 4.3.5 The proposed COPs have been agreed with neighbouring ANSPs.
- 4.3.6 Table 6 describes the proposed COPs, their location, and usage. They are visually depicted in Figure 8.

Table 6 – Proposed COPs

Design Name	Coordinates	Rationale
OPFIM	51 27 30 N 002 00 00 E	New - Provides correct separation from MUCPI - Waypoint on realigned ATS route: L610
MUCPI	51 17 31 N 002 00 00 E	New - Northerly outbound COP - Traffic approaching the south-east from the north - Departures from London Biggin Hill, London City, London Luton, London Stansted, London Southend and RAF Northolt airports - Waypoint on realigned ATS route: Q70
BOLZE	51 10 09 N 002 00 00 E	New - Central outbound COP - Brussels TMA inbound traffic - Traffic approaching the south-east from the west - Departures from London Heathrow Airport - Night-time and low-level daytime arrival point for London Gatwick Airport arrivals previously via KONAN - Arrivals for London City and Biggin Hill airports previously via KONAN1C - Waypoint on realigned ATS routes: L9 / M84
KONAN	51 07 50 N 002 00 00 E	Retained - Retained for containment purposes with Belgian airspace - Not be flight plannable for traffic exiting the UK
STEVU	51 04 28 N 001 48 18 E	New - Southern outbound COP - Traffic approaching the south-east from the south-west - Departures from Bournemouth, London Farnborough, London Gatwick and Southampton airports - Waypoint on realigned ATS routes: P2 / M140 / Y312
RAPIX	51 26 38 N 002 00 00 E	Withdrawn Replaced with new COP (OPFIM)
VABIK	51 14 47 N 002 00 00 E	Withdrawn Replaced by three new COPs (MUCPI, BOLZE, and STEVU)



Figure 8 - Relevant COPs. Proposed new COPs are green, proposed withdrawn COPs are red, proposed retained COP is white. Background Map: Google Earth Pro

- 4.3.7 Within Stage 2, a five COP design was discounted. However, as described in 4.3 and shown in Table 6, four new COPS plus retention of KONAN is now being proposed. This is to enable the main three COP design for the focal eastbound traffic flow to be progressed. Table 14 within section 9.4 Design Evolution During this ACP, explains how this design is aligned with Option 1: 3 COPs which progressed from Stage 2.

4.4 Route Changes

- 4.4.1 As a result of the proposed new COPs, described above, there are several ATS routes that have been amended. A list and description can be seen in Table 7 and their geographical representation is in Figure 9.

Table 7 – Proposed new ATS routes

Route	Route change	Dover Region Route Description	Indicative Navigation Specification ¹²
L6	OMDOC – DET – UPFIB	Provides connectivity for high-level traffic via OMDOC exiting the UK at BOLZE (e.g. Brussels Airport arrivals) and departing traffic routing via DET to MUCPI	RNAV5
L9 (UL9)	CPT – NORRY – LINDY – GOXUL – BIG – NUCHU – ELISO – ALHAD – BIG – ICOPE – DET – FITTU – OXJOT – BOLZE	UL9 being removed and amalgamated with proposed L9 Provides connectivity for eastbound traffic to BOLZE	RNAV5
L10	BUZAD – BPK – MODKA – DET – KEFEH – RINTI	Provides low-level connectivity for low-level traffic to / from RINTI (as today)	RNAV5
L15	HON – PIXUP – FINAM – BETPO – OMDOC – ICOPE – MIMFO – SANDY – MOTOX	Connectivity for high level departures leaving the UK at MOTOX	RNAV5
L18	NUCHU – NUBRI – NIGIT – VAPID – MID – MAY – ODVIK – KEFEH	Amended connectivity for departures via ODVIK exiting the UK at STEVU	RNAV5
L610	OPFIM – ISGAZ – TEBRA	Connectivity for westbound previously via RAPIX. Remaining points west of TEBRA unaffected	RNAV5
M84	ODUKU – TOVGU – CLN – EVMEK – NONVA – ABTUM – OWLIC – BOLZE LYD – PUCXA – BOLZE	Provided amended connectivity for outbound traffic via ABTUM – MUCPI / BOLZE and traffic via LYD / PUCXA – BOLZE	RNAV5
M85	DAGGA – NUCBE – ECJET	Provided amended connectivity for outbound traffic via DAGGA – MUCPI / BOLZE / UTFAV	RNAV5
M87	SOQQA – SODVU – EKNIV – OXJOT	Provides connectivity for departures via EKNIV exiting the UK at MUCPI / BOLZE	RNAV1
M140	OXLOW – SAM – MID – ROKKE – STEVU	Eastbound high-level connectivity for traffic exiting the UK at STEVU	RNAV1
M142	OXLOW – MID – OTSID – ICOPE – MIMFO – OXJOT	Eastbound connectivity for departures from Solent and Farnborough via STEVU and London Gatwick Airport departures via BOLZE	RNAV1
N27	ICTAM – DEGGE – RODNI – HEN – SAXBI – BPK – LAM	To allow connectivity for London Gatwick and London Biggin Hill airports departures via BPK (due to deviation of L10 away from LAM)	RNAV5
P2	SIRIC – NIGIT – MIMFO – KEFEH – PUCXA – STEVU	Eastbound high-level connectivity for overflying traffic exiting the UK either via BOLZE or STEVU, plus departures via MIMFO exiting the UK at STEVU	RNAV1

¹² These specifications are indicative at this point and will be confirmed during Stage 4. Furthermore, the indicative RNAV specification refers to the area(s) of the ATS route within scope of this change, not the full length of the routes.

Route	Route change	Dover Region Route Description	Indicative Navigation Specification ¹²
Q70	COWLY – BENSU – OMDOC – MODKA – EKNIV – UPFIB – ECJET – OWLIC – MUCPI	Eastbound connectivity for traffic exiting the UK at MUCPI	RNAV1
Y47	BENBO – SFD – MAY – ODVIK – OXJOT	Provides connectivity for departures via ODVIK exiting the UK at BOLZE	RNAV5
Y311	MID – ODVIK – WIZAD – UTFAV – PUCXA – DVR – OXJOT – UPFIB – NUCBE	Provides connectivity for departures via NUCBE / ODVIK to UTFAV	RNAV5
Y312	OTSID – MIMFO – WIZAD – STEVU	Provides connectivity for departures via OTSID / WIZAD to STEVU	RNAV1

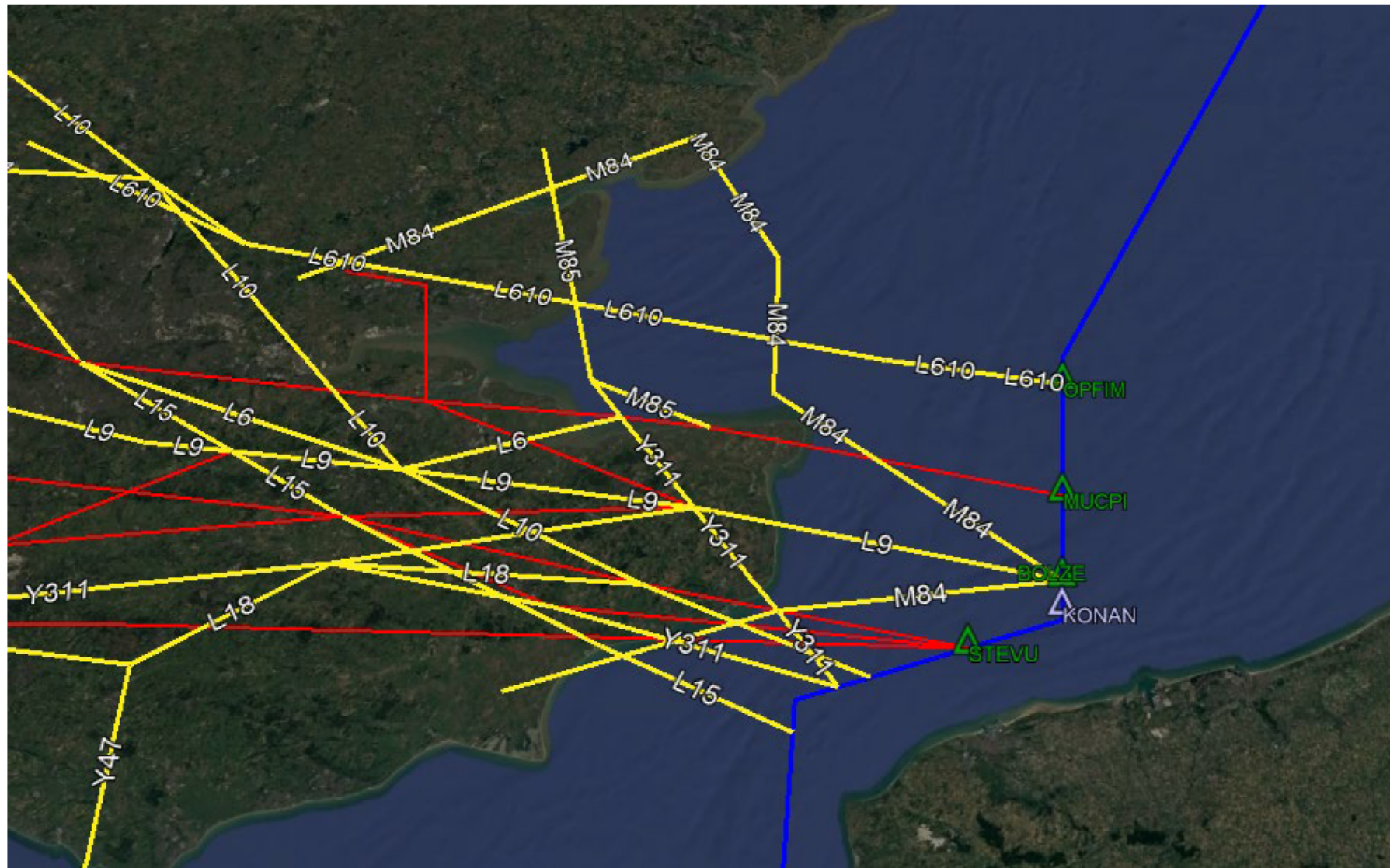


Figure 9 - New / updated ATS routes proposed within this design. Red routes are RNAV1, yellow routes are RNAV5. Background Map: Google Earth Pro

4.5 Waypoints

4.5.1 As a result of realigned ATS routes, described above, this change also proposes new waypoints. Table 8 lists the new waypoints and Figure 10 shows a visual representation of those points and the new COPs.

Table 8 – Proposed new waypoints

Design Name	Coordinates	Usage
ECJET	51 22 37 N 001 15 16 E	Waypoint on realigned ATS routes: M85 / Q70
UPFIB	51 23 28 N 001 03 07 E	Waypoint on realigned ATS routes: L6 / Q70 / Y311
OMDOC	51 26 55 N 00 09 11 W	Waypoint on realigned ATS routes: Q70 / L6 / L15
OXJOT	51 15 42 N 001 13 38 E	Waypoint on realigned ATS routes: L9 / M87 / Y47 / M142 / Y311
ISGAZ	51 28 06 N 001 52 27 E	Waypoint on realigned ATS route: L610
KEFEH	51 09 09 N 001 06 31 E	Waypoint on realigned ATS routes: P2 / L18 / L10
PUCXA	51 07 16 N 001 24 57 E	Waypoint on realigned ATS routes: Y311 / P2 / M84
MODKA	51 25 07 N 000 25 05 E	Waypoint on realigned ATS routes: Q70 / L610
ICOPE	51 19 20 N 000 13 36 E	Waypoint on realigned ATS routes: L9 / L15
OWLIC	51 20 07 N 001 36 30 E	Waypoint on realigned ATS routes: M84 / Q70
NUCBE	51 26 47 N 000 58 36 E	Waypoint on realigned ATS routes: M85 / Y311



Figure 10 – Proposed new waypoints and COPIs. Background map: Google Earth Pro

4.5.2 The following waypoints (Table 9) are proposed to be withdrawn from the design.

Table 9 - Withdrawn Waypoints

Waypoint	Reason for Withdrawal
DIKVU	Withdrawn as the ATS routes have been realigned or removed
PENUX	Withdrawn as the ATS routes have been realigned or removed
LAVRI	Withdrawn as the ATS routes have been realigned or removed
PAWDE	Withdrawn as the ATS routes have been realigned or removed
ZORFE	Withdrawn as the ATS routes have been realigned or removed
MOKBU	Withdrawn as the ATS routes have been realigned or removed
SUNUP	Withdrawn as the ATS routes have been realigned or removed

4.6 Departure Connectivity

4.6.1 This ACP proposes the following changes to departure connectivity.

4.6.2 To resolve the (vertical) disconnect between the published lower level of ATS route segments and final altitude at the end of an airport SID, NATS propose that the published lower levels of ATS routes will be reviewed. As part of this change, the lowest published levels of some ATS routes may extend below 7,000ft to ensure alignment with published SID profiles. These components will be detailed at Stage 4 of the ACP. The proposed changes within the ACP will not affect flown trajectories for aircraft below 7,000ft.

- 4.6.3 To reduce the number of instances of aircraft catching up on the previous departure, this ACP is proposing a maximum climb speed for jet traffic¹³ departing London Gatwick, London Heathrow, London Luton, and London Stansted airports through this region until FL260.¹⁴ This is proposed to be not above 280kts for traffic from London Luton and London Stansted, and not above 290kts for those from London Heathrow and London Gatwick.
- 4.6.4 Given the observed climb rates in Table 3, traffic from London Luton and London Stansted airports primarily climb at around 280kts. Similarly, London Gatwick traffic often climbs below 290kts. Therefore, these climb restrictions are expected to have minimal impact on these operations. However, traffic from London Heathrow, often climb above 290kts. Therefore, they are expected to have a negative impact on their operation in terms of climb performance.
- 4.6.5 Additionally, this proposal suggests a change to London Gatwick's DVR SID. For improved connectivity to the proposed ATS network, this ACP is proposing truncating the DVR SID in proximity to the point circled in Figure 11.



Figure 11 - DVR SID chart and proposed truncation point in red circle. Source: UK AIP London Gatwick AD2.24 07.04.2026

- 4.6.6 However, a basic truncation would result in a new waypoint, just 0.2nm from current waypoint ODVIK; which would be unfavourable due to proximity to ODVIK. Therefore, this proposal is to re-route the SID from TUNBY to ODVIK and truncated it there, where traffic can then join Y311 to DVR. Although the SID has an “at 6,000ft” restriction abeam ODVIK, all traffic is climbed above this restriction in advance. The proposed deviation will occur where all traffic is at or above 7,000ft plus only applies to traffic departing from the northern runway, which is very infrequently used.



Figure 12 - Proposed DVR SID and ATS connectivity (purple arrow). Source: Adapted from UK AIP London Gatwick AD2.24 07.04.2026

¹³ Non-jet traffic tends to be lower and slower, therefore, do not require a speed restriction.

¹⁴ This concept is already utilised by Manchester Airport's LISTO 2S and LISTO 2Z SIDs and is successful in maintaining aircraft separation.

- 4.6.7 NATS recognised that London Gatwick Airport have recently implemented an RNAV substitution of the DVR SID, and therefore a truncation of this procedure will require Instrument Flight Procedure (IFP) Regulator approval.
- 4.6.8 If this truncation was not to occur, then traffic *could* still be accommodated at DVR. However, it would not be able to take advantage of the new systemised route structure being offered by this proposal. Therefore, traffic may have less efficient climb than if they entered the proposed ATS route network at ODKV.

4.7 Arrival Connectivity

- 4.7.1 To facilitate the removal of KONAN as a flight plannable point within the UK, two associated STARs would no longer be valid; these are described in Table 10 and are illustrated in Figure 13. Traffic would now route direct from the boundary COP to join another existing STAR.
- 4.7.2 No new STARs are proposed as part of this ACP.

Table 10 - Withdrawn STARs

STAR Designator	Reason for Withdrawal	New Traffic Routing
London City and Biggin Hill airports KONAN1C	Removal of KONAN for flight planning within the UK	Traffic will route through BOLZE to join the SOVAT1C at GODLU.
London Gatwick Airport KONAN2G	Removal of KONAN for flight planning within the UK	Traffic will route through BOLZE to join TEBRA2G STAR at ARNUN.

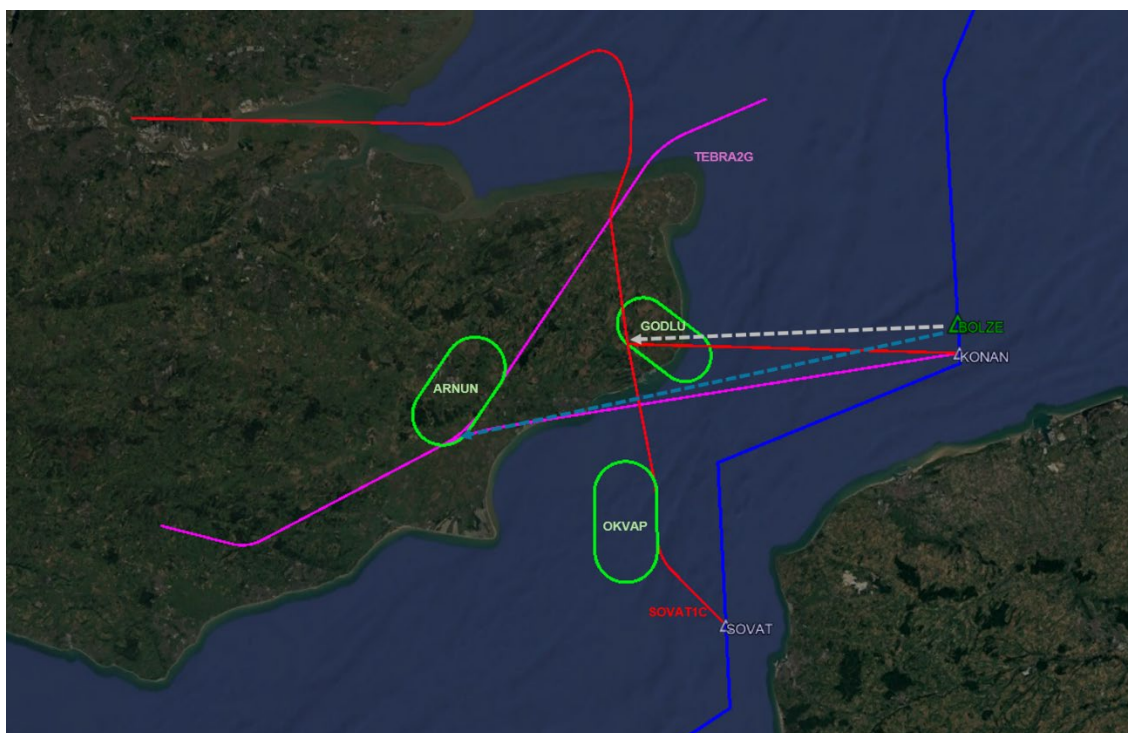


Figure 13 - Relevant STARs (solid lines) and proposed DCT routes (dashed lines). Background map: Google Earth Pro

- 4.7.3 Although KONAN is being retained as part of this proposal, NATS would prefer to not have KONAN flight plannable within the UK (for complexity reasons). Therefore, these STARS are being removed within this proposal. All analytics / metrics quoted are based on these STARS being removed. If stakeholder believe there are operational issues with removing these STARS then they should provide that feedback during consultation response.

4.8 Controlled Airspace (CAS)

- 4.8.1 The proposal does not propose the creation, amendment, or removal of any controlled airspace (CAS).
- 4.8.2 The ATS routes through the central COP (BOLZE) will be RNAV5. Unfortunately, the current airspace structure would not provide sufficient lateral containment under the current Policy for the Design of Controlled Airspace Structures ^(Ref 11) for this. To achieve the required containment (5nm from the route centreline), a small section of Worthing CTA 5 would require the base of CAS to be lowered to FL85 (from FL105) to align with Worthing CTA 3. The potentially impacted volume is marked by an orange triangle in Figure 14.

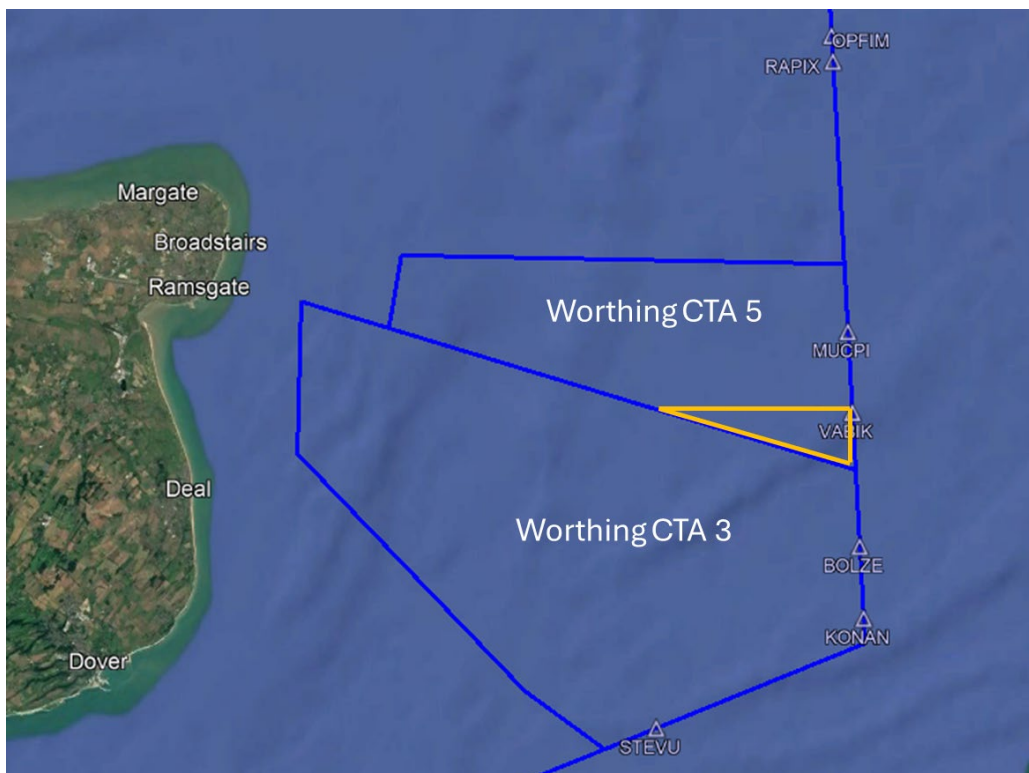


Figure 14 – Potentially impacted CAS volumes. Background map: Google Earth Pro

- 4.8.3 However, there is sufficient CAS for tactical use. Therefore, this consultation proposes not to change the CAS base and instead to radar monitor or vector any RNAV5 traffic at FL90 or FL100 to ensure it remains within the lateral confines of CAS. This decision has been made, by SMEs, as the number of RNAV5 traffic

operating <FL100 in the area is low¹⁵, meaning any increased ATCO workload would be manageable and the impacts (such as reduced airspace access and unfavourable flight plans) on other airspace users of lowering the base of CAS would be disproportionate.

- 4.8.4 If the design is progressed, as proposed here, then implementation will only occur after an exemption from the standard containment policy^(Ref 11) with the provision of an appropriate safety case, has been submitted and approved by the CAA. The exemption would allow for radar monitor of any RNAV5 traffic <FL100 via BOLZE, rather than changing the CAS boundary and the route being separate by design.

4.9 Neighbouring Air Navigation Service Providers' (ANSPs) Airspace Change

- 4.9.1 The introduction of the proposed three COP structure (MUCPI, BOLZE and STEVU) has been developed in close coordination with neighbouring ANSPs. It is designed to align fully with the airspace structures of neighbouring ANSPs, ensuring a harmonised operational concept and seamless coordination across FIR / UIR boundaries.
- 4.9.2 To enable these COPs, this design proposes a change to UK airspace due to operational requirements of neighbouring ANSPs. RAPIX is proposed to be replaced with OPFIM; this change is due to route separation policies for opposite direction traffic flows within European airspace. Similarly, KONAN is proposed to be retained due to airspace classification and definition requirements within Belgian airspace.
- 4.9.3 All ANSPs intend to implement the changes on a common agreed date, with coordinated design and acceptance activities already underway. This coordinated approach ensures that there are no discrepancies at airspace boundaries upon implementation, minimises transitional risks, and supports a stable, synchronised entry into operation for all stakeholders.

4.10 CBA1 Activation

- 4.10.1 Activation of CBA1 will alter the route flown by some traffic after exiting the London FIR / UIR via the proposed STEVU COP.
- 4.10.2 Whilst this is less than favourable, the decision to propose STEVU, as described in Table 6, is a balance of the pros and cons including the impacts of CBA1's activation.
- 4.10.3 A minimum of 7nm¹⁶ is proposed between the routes providing connectivity to each of the three COPs (MUCPI, BOLZE and STEVU). To maintain this level of separation, it would not be possible to place three COPs and avoid CBA1. For all COPs to avoid any impacts of CBA1's activation, there could only be two COPs, the same number as today / the baseline scenario. This was discounted at Stage 2 as it did not provide the requirement capacity improvements nor meet NATS' environmental and AMS objectives.
- 4.10.4 SME input suggests CBA1 is rarely activated, therefore the impact will be infrequent. Additionally, the airspace can be activated by levels and for different time periods, further minimising the impact on airspace users. However, where

¹⁵ According to NATS radar data, there were 37 RNAV5 flights at FL70 – FL100 in 2025.

¹⁶ 5nm is the minimum separation in Area Control (AC), to allow for contingency more than 5nm is required. Hence, 7nm being proposed.

CBA1 is activated at short notice, there would be an increase in pilot workload as they are tactically deviated away from their flight plan route.

- 4.10.5 Whether activated or not, flight planned routing within the UK area will remain consistent, providing flight planning predictability within the UK airspace. However, when activated, UK ATCOs will have to make sure that the traffic via the proposed central and southern COPs (BOLZE and STEVU) are level separated as their routes will merge after STEVU¹⁷ to avoid CBA1. Based on the activation rate of CBA1, this occasional additional ATCO workload has been assessed as proportionate; can be managed by short term air traffic flow management measures; and is outweighed by the benefits of having three COPs for most of the time.

4.11 Dependencies

- 4.11.1 All participating ANSPs are working towards a single, coordinated implementation date, with assurance, training, and validation activities conducted under separate programmes that converge at the point of deployment. This aligned implementation approach is essential to ensure that the benefits of the design can be realised at a network level and that no operational mismatch occurs at the FIR / UIR boundaries.
- 4.11.2 Within the Belgian and French FIRs / UIRs new waypoints are required plus the adaptation of ATS route structures to support the systemised flows originating from the UK. Amendments to the Letters of Agreement (LoAs) that set out the procedures for transfer of air traffic across the boundaries will be required. These coordinated changes are being developed collaboratively to ensure seamless alignment of design solutions, operational procedures, and traffic handling across FIR boundaries.
- 4.11.3 Notwithstanding this coordinated approach, the programme recognises the potential for delays or changes in status within neighbouring ANSP projects. If one or more of the dependent changes are delayed or withdrawn, NATS will assess the impact on the proposed UK implementation and agree an appropriate course of action. This may include consideration of whether the change can proceed or should be deferred pending alignment with external dependencies.

¹⁷ As this will happen outside of UK airspace, the methodology is not known to NATS and, therefore, not described here.

5. Impact of this Proposal

5.1.1 Sections 5.2 to 5.9 summarises the impacts of this proposal. For full details, including methodology and referenced sources, please see the Full Options Appraisal document.

5.2 Noise, Local Air Quality, Tranquillity, Biodiversity, and Local Communities

- 5.2.1 The Air Navigation Guidance 2017 (ANG 2017) ^(Ref 9) sets out altitude-based priorities for airspace changes in the UK, focusing on balancing noise pollution with CO₂ emissions. Noise impacts are prioritised in airspace change decisions up to 7,000ft; for airspace at or above 7,000ft, the priority shifts from local noise reduction to efficiency, specifically reducing CO₂ emissions. Therefore, noise impacts have not be assessed.
- 5.2.2 Due to the effects of mixing and dispersion, emissions from aircraft above 1,000ft above aerodrome level are unlikely to have a significant impact on local air quality ^(Ref 10). Therefore, these are not considered as part of the impacts of this proposal.
- 5.2.3 Given that all changes are altering flight paths above 7,000ft amsl only, there would be no consideration on the potential impacts of this ACP on tranquillity or biodiversity. This aligns with the requirements set out in CAP1616i ^(Ref 10).
- 5.2.4 Overall, NATS believe this proposal will have negligible impacts on local communities based on the above parameters.

5.3 Fuel Burn and CO₂

- 5.3.1 Fuel burn and CO₂e¹⁸ emissions analysis has been performed using computer simulations which modelled the operation of the proposed new ATS routes and COPs with the forecast traffic growth over a 10-year period (Table 11). The modelling forecasts there will be a fuel burn, and associated CO₂e benefit from Option 1: 3 COPs.

Table 11 – Fuel Burn and CO₂e Summary Table for 2028 and 2037

	2028 (Year 1)			2037 (Year 10)		
	Without Change (Total)	With Change (Total)	With Change (Delta)	Without Change (Total)	With Change (Total)	With Change (Delta)
Fuel Burn (tonnes)	737,260	735.545	-1,714.6	793,766	791,956	-1,809.7
CO₂e (tonnes)	2,343,282	2,337,832	-5,449.6	2,522,877	2,517,125	-5,751.9

¹⁸ CO₂e, or carbon dioxide equivalent, is a unit of measure which translates all greenhouse gases into the equivalent amount of carbon dioxide need to generate the same warming effect. Greenhouse gases are a cocktail of atmospheric gases, including water, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone (O₃) and synthetic fluorinated gases. Each omitted in different quantities and impacting global warming in different ways. The greenhouse gas figure is provided to allow stakeholders to compare the design option against the baseline. CO₂e is considered a good proxy to total greenhouse gas emissions and can be used for comparison purposes. Calculating each gas would be resource consuming and disproportionate to any additional benefit it would provide stakeholders.

- 5.3.2 Table 12 summarises the Cost Benefit Analysis for Option 1: 3 COPs compared to the baseline “do nothing”. It shows that over the 10-year period, from 2028 to 2037, there would be significant (£~17 million) financial benefits to deploying this change.

Table 12 - Summary of Cost Benefits Analysis

	Total Over the 10 Years (2028 – 2037)
CO ₂ e Traded	£3,093,415.0
CO ₂ e Non-traded	£5,979,790.3
Fuel burn	£7,889,734.0
Total	£16,962,939.30

- 5.3.3 The full analysis can be found in the Full Options Appraisal (FOA) document.
- 5.3.4 The net fuel burn (and associated CO₂e) performance is a balance between positive, neutral and negative contributors, as described below.

Positive Contributors

- 5.3.5 By allocating traffic to the COP based on their LTMA departure airport or previous routing within UK airspace (compared to destination, as per today), the majority of aircraft will be routing to their closest COP. Naturally, this reduces track mileage. Additionally, this reduces crossing and converging traffic, which should improve climb performance. Crossing and converging traffic can result in aircraft being levelled off or given additional track miles to keep them vertically or laterally separated, both of which result in increased fuel burn. Removing the crossing and converging flows, removes the associated fuel burn. Although each of these improvements is individually small, the volume of traffic in the area, means there are significant fuel burn improvements.
- 5.3.6 When CBA1 is activated, impacted traffic exiting the London FIR / UIR via STEVU will require rerouting, to avoid CBA1. This will result in either additional track mileage or different flight levels, both of which may be less than optimal. However, the occasional activation of CBA1, and associated impacts, are balanced against the positive benefits of STEVU COP when CBA1 is not activated. STEVU COP offers a third route across the boundary, improving distribution of traffic, reducing route congestion, and minimising track miles within the UK. Overall, on balance, the occasional impact of CBA1 being activated, is less damaging than not having STEVU at all.
- 5.3.7 Unusually, London Southend receives a track mileage increase as part of this proposal. However, they benefit for overall fuel burn improvements. This is because improved climb performance outweighs the increased track mileage.

Neutral Contributors

- 5.3.8 OPFIM is being proposed to replace RAPIX, 0.9nm north of current day location. This adds ~0.04nm (70 meters) to flight plan track miles. As a result, NERL proposes that this change is inconsequential and declare no impact for fuel / CO₂e.

Negative Contributors

- 5.3.9 Unfortunately, speed restrictions on traffic departing from London Gatwick, London Heathrow, London Luton and London Stansted airports could result in reduced climb speeds for some aircraft, resulting in them taking longer to get to a more fuel-efficient flight level. Compared to current climb speeds for aircraft departing London Luton and London Stansted airports, the proposed climb restriction is expected to have minimal impact on their operation. However, traffic from London Heathrow and London Gatwick airports, often climb above 290kts (the proposed restriction). Therefore, this climb restriction would result in increased fuel burn for some aircraft from these airports. Whilst this is disappointing, this must be balanced against reduced ATCO workload because of aircraft “catching up” with an aircraft in front and requiring tactical deviations. Similarly, it will provide predictability for airlines, who will be able to remain on their flight planned route.
- 5.3.10 Farnborough traffic is allocated to the southern COP, however, their traffic via current day KONAN tends to be heading to eastern or northern Europe. Therefore, using the southern COP keeps the traffic further south for longer, before heading north within European airspace. Similarly, London Biggin Hill track mile increase, as they are being allocated to the northern COP, forcing the traffic further north before heading south again in European airspace. As a result of increased track miles, these airports’ traffic has increased fuel burn.

5.4 Capacity

- 5.4.1 This proposal aims to improve airspace capacity to meet the current and future demanded traffic levels, without the need for departure delays, which are currently used to level demand within the airspace.
- 5.4.2 This proposal replaces two COPs (KONAN and VABIK) with three COPs (MUCPI, BOLZE and STEVU). Therefore, increasing the available flows from two to three which, naturally, increases potential throughput capacity compared to today.
- 5.4.3 The new systemised route structure should more evenly assign traffic routings and reduce the number of crossing and converging traffic flows. This will reduce the amount of ATC intervention (e.g. vectoring, level-offs) required to separate traffic, mitigating the need to apply delays for capacity because of Sector 15 (S15)¹⁹ (where this change primarily occurs).
- 5.4.4 This proposal includes RNAV5 routings via BOLZE. To maintain systemised separation, the base of CAS within a portion of Worthing CTA 5 would need to be lowered to FL85. However, this design does not propose this and instead RNAV5 traffic at FL90 and FL100 will be radar monitored by ATC. For these flights, there will be an increase in ATCO workload, compared to if they were systemised and separated by design. Therefore, reducing potential ATCO (and therefore, airspace) capacity. Given the very low amount of traffic RNAV 5 traffic cruising at FL90 or FL100 this capacity impact is negligible.
- 5.4.5 Whilst this proposal retains KONAN, it will not be flight plannable for traffic departing UK airspace. However, it will remain a flight plannable SID end point for some traffic, primarily from Belgium, heading westbound into UK airspace. This traffic will now be accommodated via DCT to the UK ATS route network. As this traffic is opposite direction to the main flow of traffic it will remain unsystemised but has no additional impact on capacity compared to the current operation.
- 5.4.6 Overall, the proposed changes will allow the airspace to absorb the forecasted demand by 2039 (10-years post-implementation).

¹⁹ This change will not impact delays relating to weather, or other sectors.

5.5 Resilience

- 5.5.1 As above, this design proposes net improvements to ATCO capacity. This increases the number of flights they can safely handle in each time period. Thus, improving resilience to network demand variations.

5.6 General Aviation (GA)

- 5.6.1 GA is an umbrella term for all civil aviation operations other than commercial scheduled air services. The most common type of GA activities are business jets and recreational flying by private light aircraft.
- 5.6.2 The airspace change does not propose any changes to Class G (uncontrolled) airspace, and so, there will be no impact to GA operations within Class G.
- 5.6.3 GA flights within the impacted CAS, will have to either follow the new procedures or remain within Class G airspace. For GA traffic who continue to operate within CAS, the impacts will be as per 5.7 Commercial Airlines, below.
- 5.6.4 For those who chose to remain within Class G airspace, rather than following the new airspace design, the impacts are likely to include significantly longer routes and inefficient flight paths. However, this proposal does not stop GA traffic from joining and following the new ATS network. Therefore, any pilot choosing not to, is doing so by choice rather than because of the airspace change. Accordingly, NATS do not expect this to occur, and the potential impacts have not been calculated.

5.7 Commercial Airlines

- 5.7.1 Routine AIRAC updates will ensure that the required data revisions to aircraft Flight Management System (FMS) and flight planning systems takes place for this airspace change. These changes will need to be informed to pilots. However, airline training costs have not been calculated as part of this proposal, as these will be individual to the airline and consider business as usual. There are no other known costs which would be imposed on commercial aviation.
- 5.7.2 Positively, this proposal could have economic and environmental benefits for airlines. The option increases the number of routes crossing the London FIR / UIR boundary and provides systemised traffic flows which should alleviate the congestion and complexity of the airspace, reducing the requirement to impose delays to manage traffic throughput. The resultant increase in airspace capacity should provide economic benefit to airlines by reducing the financial costs associated with airspace delays (for example lost revenue, higher operational expenses, increased fuel burn, reduced aircraft utilization, and passenger compensation). Furthermore, by allowing aircraft to follow the new systemised route structure and reducing tactical deviations from their planned flight paths, this option enables a reduction in track mileage, reducing fuel burn and CO₂ emissions. Additionally, with reduced conflicts between the traffic flows, it enables more continuous climb profiles with fewer level-offs, which would also reduce fuel burn and CO₂ emissions.
- 5.7.3 When CBA1 is activated, traffic routing via STEVU will need to avoid CBA1 once within European airspace. The activation of CBA1 may result in a reduction of network capacity which may impact airlines through the use of Air Traffic Flow Measures (ATFM). CBA1 activation is rare as this area is primarily used for

airborne security events, and this is expected to remain a minimal impact to commercial airlines, as it is in the current operation.

5.8 Airports

- 5.8.1 Any changes to an airports' AIP will need to be endorsed by the airport. Therefore, proposed airport speed restrictions and SID changes will need to be endorsed by the airports. Whilst these changes will impact airlines operating from the airports, there will be no direct change to the operation of the airports.

5.9 Air Navigation Service Providers (ANSPs)

- 5.9.1 The implementation of this option by NATS within the London FIR / UIR would require complementary changes to take place in the Brussels FIR, Brussels UIR, and France UIR impacting skeyes (Belgium), EUROCONTROL Maastricht and DSNA ANSPs respectively. These ANSPs are all partners in this change as part of the CEHI project. Adaptation updates to relevant ANSP systems would be required to accommodate flight plan processing, map displays, electronic flight data to name a few, associated with the new ATS route structure. This is typically done in line with routine AIRAC implementation processes and is consider business as usual. The implementation of this option would require ATC training and validation; costs could include use of simulator facilities including engineering / support staff, data preparation and testing, safety / HF / validation analysts etc. However, the scale of the change, and associated costs, will vary depending on the ANSP and their individual training needs analysis.
- 5.9.2 In terms of non-economic impacts on other ANSPs, this proposal has been designed in collaboration with neighbouring ANSPs. As a result, there are two significant design features which are included to accommodate the European ANSP's designs. Firstly, RAPIX being replaced by OPFIM; and secondly, the retention of KONAN. Both design features are for the benefit of the wider project of changes and benefit other ANSPs.

5.10 Impact on Aviation Safety

- 5.10.1 A qualitative high-level safety appraisal indicates that nothing is presently foreseen with this proposed option that would negatively impact the level of safety achieved within the current operation.
- 5.10.2 Improving connectivity at the DVR interface through the introduction of a systemised route structure would reduce the need for ATC intervention to separate traffic, thereby reducing ATC workload and enabling the operation to safely manage increases in traffic demand without further increases in flight delay.
- 5.10.3 These changes are being assured in line with the NATS Safety Management System, supported by an Assurance Plan and a series of safety workshops. A Preliminary Hazard Identification (PHI) workshop was held in January 2026, followed by Hazard Identification and Risk Assessment (HIRA) workshops after development simulations in February 2026, involving operational controllers and subject matter experts.
- 5.10.4 The PHI identified several potential issues, none of which posed significant safety concerns, but all were carried forward and consolidated into four hazards during the HIRA process. Quantitative risk assessments found all hazards to be acceptable even before mitigation; however, improvement recommendations were

still developed in line with NATS policy and will be tracked in the Change Assurance Report.

5.10.5 Safety work will continue as the design progresses.

5.11 Reversion Statement

5.11.1 In the unlikely event the proposal requires reversal (once approved and implemented), permanent reversion to the pre-implementation state would be complex due to the significant changes to the airspace structure; the scale of change; and impact on neighbouring ANSPs.

5.11.2 Should there be unexpected issues caused by this proposal, short notice changes could be implemented via NOTAM or using Route Availability Document (RAD) restrictions.

5.11.3 For a permanent reversion, the changes would have to be reversed by incorporating this into an appropriate future AIRAC date. Large scale airspace changes are implemented a maximum of four times a year due to the lengthy lead times to allow for testing and preparation activities. The feasibility and scheduling for a reversion are additionally determined by the time needed to update multiple safety critical systems, and train Air Traffic Controllers.

5.11.4 It is also important to acknowledge that any change of COPs on the London FIR / UIR boundary needs to be discussed and agreed with foreign ANSPs, as it would impact their operations.

6. Consultation and Participation

6.1 How to Respond

- 6.1.1 The consultation will be hosted on 'Citizen Space', which is an online platform for sharing information about airspace change proposals. This consultation and all supporting documents can be accessed at the following link:
<https://consultations.airspacechange.co.uk/>
- 6.1.2 This also links to where responses to this consultation can be submitted through a feedback questionnaire. Respondents will not be able to submit a postal response to this consultation.
- 6.1.3 A link to the consultation will be provided on the NATS Customer Affairs website ([Customer Gateway/Airspace Change](#)) one of the information transfer mechanisms between NATS and customer airlines; and via the public NATS.aero website ([Airspace consultations - NATS](#)).
- 6.1.4 This consultation commences at 00:01 on Thursday, 1st October 2026 and will close at 23:59 on Wednesday 25th November 2026; a period of 8-weeks.
- 6.1.5 Stakeholders in Appendix: List of Stakeholders have been directly informed of this consultation. The consultation is not limited to these stakeholders, and anyone may respond.
- 6.1.6 When submitting feedback, respondents will be asked questions as per Appendix: Consultation Questionnaire. Respondents may also upload a document as part of their response.
- 6.1.7 All responses to the consultation will be published on the CAA's Citizen Space. Responses may be published anonymously, if stakeholders chose to redact your personal details, in which case, these will only be seen by NATS.
- 6.1.8 NATS will actively monitor the consultation platform and will respond to any queries sent via the consultation page within Citizen Space. It may be appropriate to upload a list of FAQs to Citizen Space should frequent queries arise.

6.2 What Happens with the Responses, and What Happens Next

- 6.2.1 All responses will be managed, moderated, and uploaded to the consultation platform. Any unacceptable content will be removed prior to publication.
- 6.2.2 On completion of the consultation, NATS will analyse the feedback and produce a feedback report, summarising themes arising from the consultation and NATS' response to these. The feedback report will be uploaded onto the consultation platform. 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 that would be submitted and refer to changes that have been made to take account of consultation feedback.
- 6.2.3 Subject to achieving approval, NATS would be looking implement the final version of this proposal no sooner than winter 2027 / 2028.

6.3 To Stay Informed

- 6.3.1 If you wish to register for updates for this ACP, you can do so on the ACP portal at the following link:
<https://airspacechange.caa.co.uk/>

7. Appendix: Consultation Questionnaire

7.1 About You

1. What is your name?
2. What is your email address?
3. Are you responding as an individual, or on behalf of an organisation?
Individual / Organisation
- 3b. If applicable, please provide the organisation's name below.
4. Please enter the postcode most relevant to your response (eg. home / work / organisation).
If you are responding from outside the UK, please provide a description of your location rather than a postcode.
5. Please note all responses will be published. Are you happy for your name to be included in the response document?

7.2 Your Feedback

6. To what extent do you support or object to the airspace changes described in this proposal?
Support / Neutral / Object
7. Do you agree or disagree that the proposed option would improve the network interface at the London FIR / UIR international boundary?
Agree / Neutral / Disagree
8. This ACP proposes that RNAV 5 traffic on L9 to BOLZE, at FL90 or FL100, will be radar monitored by air traffic controllers (ATCOs). Alternatively, the current Worthing CTA 5 could be split creating a new small volume of airspace with a lower base, thus creating sufficient lateral containment for RNAV 5 traffic at FL90 or FL100. Would you prefer:
RNAV 5 traffic radar monitored (as proposed)
A new CTA volume and RNAV 5 traffic being separated by design

This change proposes five coordination points (COPs) along the London FIR / UIR boundary (OPFIM, MUCPI, BOLZE, STEVU).

9. Do you wish to provide feedback on any aspect of the five boundary COPs?
Yes – *respondent moves onto next question*
No – *respondent moves onto Question 14*
10. Do you agree or disagree that this proposal will improve airspace capacity?
Agree / Neither agree nor disagree / Disagree / No comment
11. Do you agree with traffic to MUCPI, BOLZE and STEVU being distributed by their LTMA departure airport or previous routing within UK airspace?
Agree / Neither agree nor disagree / Disagree / No comment
12. Do you agree with retaining KONAN, but making it not be flight plannable for traffic exiting the UK?
Agree / Neither agree nor disagree / Disagree / No comment
13. Do you agree that replacing RAPIX with OPFIM will have a negligible impact on your operation?
Agree / Neither agree nor disagree / Disagree / No comment

This change proposes speed restrictions for some London airports and a standard instrument departure (SID) truncation for London Gatwick airport.

14. Do you wish to answer questions relating to departure connectivity?

Yes – *respondent moves onto next question*

No – *respondent moves onto Question 17*

15. Do you have any concerns regarding the proposed speed restrictions?

Yes / No / No comment

If yes, please provide more information.

16. Do you have any concerns regarding the proposed truncation to London Gatwick's DVR SID?

Yes / No / No comment

If yes, please provide more information.

This change proposes the removal of KONAN standard arrival route (STAR) to three London airports.

Specifically, the removal of KONAN1C for London City and Biggin Hill Airports and KONAN2G for London Gatwick Airport.

17. Do you wish to provide feedback on the proposed STAR removal?

Yes / No / No comment

If yes, please provide more information.

Within this proposal, traffic via STEVU COP will be impacted by the activation of CBA1 in France.

18. Do you wish to provide feedback on the impact of CBA1?

Yes / No

If yes, please provide more information.

Other feedback

19. Is there any other feedback you would like to provide?

[End of questionnaire]

8. Appendix: List of Stakeholders

- 8.1.1 As NATS is continuously monitoring the impact of this proposal and is striving to keep the stakeholder list appropriate. During the Stage 3 work, the stakeholders from Stage 2 were reviewed, to make sure they were still relevant, and several new organisations were added. The current stakeholder list is below.
- 8.1.2 Added during Stage 3 are the French Air and Space Force and Belgian Armed Forces, which have been continuously engaged with through the broader Eurocontrol forum. Manston Airport due to its geographic location and since RiverOak Strategic Partners (RSP) is conducting a consultation with a hope to reopen Manston Airport as a dedicated air freight hub.

Table 13 - Identified Stakeholders

Stakeholder	Included from Stage
Airlines and Lead Operator Carrier Panel (LOCP) Members	
Aer Lingus	Stage 1
Air Canada	Stage 1
Air India	Stage 1
Austrian Airlines	Stage 1
British Airways	Stage 1
British Business and General Aviation Association	Stage 1
Brussels Airlines	Stage 1
Cargolux	Stage 1
Condor	Stage 1
Delta	Stage 1
DHL Air	Stage 1
easyJet	Stage 1
Emirates	Stage 1
Eurowings	Stage 1
FedEx	Stage 1
Italia Transport Aero	Stage 1
Jet 2	Stage 1
Logan Air	Stage 1
Lufthansa	Stage 1
Qatar Airways	Stage 1
Ryanair	Stage 1
Singapore	Stage 1
Swiss International Airlines	Stage 1
TUI Airways	Stage 1
Turkish Airlines	Stage 1
United Airlines	Stage 1
Virgin Atlantic	Stage 1

Wizz Air	Stage 1
Air Navigation Service Providers (ANSPs)	
Belgian Armed Forces	Stage 3
Direction des Services de la Navigation Aérienne (DSNA)	Stage 1
EUROCONTROL Maastricht	Stage 1
EUROCONTROL Network Manager	Stage 3
French Air and Space Force	Stage 3
skeyes	Stage 1
Airports with Proposed Speed Restrictions	
London Gatwick	Stage 1
London Heathrow	Stage 1
London Luton	Stage 1
London Stansted	Stage 1
Other Impacted Airports	
London Biggin Hill	Stage 1
London City	Stage 1
London Southend	Stage 1
Manston	Stage 3
RAF Northolt	Stage 1
Relevant National Air Traffic Management Advisory Committee (NATMAC) Members	
Airlines UK	Stage 1
British Airline Pilots Association (BALPA)	Stage 1
Guild of Air Traffic Control Officers (GATCO)	Stage 1
Honourable Company of Air Pilots (HCAP)	Stage 1
Low Fare Airlines	Stage 1
Ministry of Defence (MOD): Defence Airspace and Air Traffic Management (DAATM) 78 Sqn	Stage 1

9. Appendix: Detailed Design History

- 9.1.1 This appendix describes the evolution of this ACP, outlining the development of the design from initial concept through to the design proposed in Chapter 4 Proposed Changes.

9.2 Early Design Origins (FABEC Programme)

- 9.2.1 The origins of the current design can be traced to mid-2000s airspace modernisation activities undertaken through the Functional Airspace Block Europe Central (FABEC), an alliance of European ANSPs.
- 9.2.2 FABEC identified the interface between the United Kingdom, Belgium, France and Maastricht within the DVR region as an area of significant air traffic congestion and operational complexity. In response, NATS became actively involved in FABEC initiatives aimed at enhancing safety, reducing delay, and improving environmental performance within this area of airspace. This work was carried out in collaboration with members of the DVR Interface Working Group, including Reims ACC, Paris ACC, the French Air Force, skeyes²⁰, Maastricht UAC, LVNL, and the Belgian Air Force.
- 9.2.3 Between 2010 and 2013, NATS developed a series of operational concepts to address these challenges. A key outcome of this work was the development of a proposal to improve eastbound traffic flows through the introduction of a systemised route structure comprising three parallel eastbound routes. This triple-route concept represented a transition away from reliance on a single convergence point and towards a more structured, flow-based model of airspace operation. The concept was tested through real-time simulation, which demonstrated its operational feasibility and potential to improve predictability and efficiency. However, due to delays in the wider FABEC programme, progression of the concept was deferred.
- 9.2.4 For the purposes of the current ACP, this triple-route structure has been revisited and used as the foundational concept for the development of design options, ensuring continuity with earlier European-level design work.

9.3 Pre-ACP Development

- 9.3.1 In advance of the formal initiation of the ACP, NATS undertook engagement with neighbouring ANSPs, including DSNA, EUROCONTROL (Maastricht UAC), and skeyes, through a programme of workshops and collaborative discussions held between 2022 and 2025.
- 9.3.2 These activities were largely conducted within the EUROCONTROL Central High Project framework and focused on exploring options to alleviate congestion at the DVR interface. Through this engagement, the KONAN and VABIK coordination points were confirmed as significant contributors to network inefficiency, with high levels of tactical vectoring required to manage demand. This phase established a common understanding among stakeholders of the need for a coordinated, cross-border solution that would improve flow management and reduce controller workload. It also ensured that any emerging design would be aligned with neighbouring ANSP operations and capable of being implemented in a coordinated

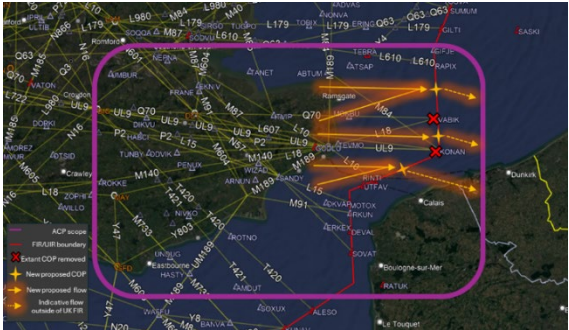
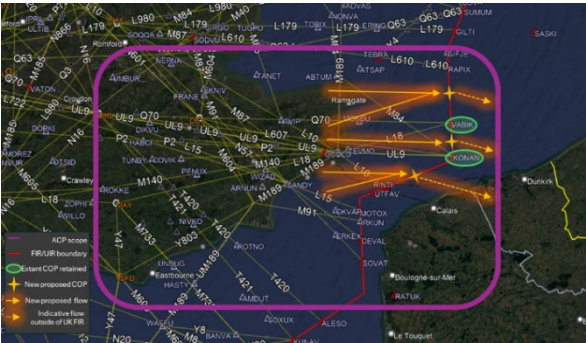
²⁰ Known as Belgocontrol at the time.

manner across multiple FIR / UIRs. The outcomes of this engagement directly informed the subsequent development of the Statement of Need and the design concepts taken forward into the CAP1616 process.

9.4 Design Evolution During this ACP

- 9.4.1 This ACP commenced in early 2025 with the submission of a Statement of Need, defining the operational challenges associated with the DVR interface. The initial design concept aimed to improve connectivity between the UK ATS route network and adjacent FIR / UIR boundaries by introducing a more structured and systemised route network. This approach would enable aircraft to remain on flight planned trajectories where possible, reducing tactical intervention and improving efficiency.
- 9.4.2 During Stage 1, the proposal was refined to focus on improving connectivity, reducing controller workload through increased predictability, and delivering environmental benefits. It was also identified as an enabler for wider LTMA modernisation, including future systemisation and Free Route Airspace (FRA). Constraints included the need to maintain compatibility with existing departure routes and ensure alignment with neighbouring ANSPs. This was all reflected in draft design principles developed at Stage 1, which prioritised safety and capacity, followed by environmental performance and policy considerations. Stakeholder engagement confirmed broad agreement and no subsequent changes required to these design principles.
- 9.4.3 During Stage 2, design options were developed and assessed, including a baseline scenario, a three COPs systemised solution, and a five COPs alternative. The baseline and the five COPs option were rejected due to lack of capacity benefits. The three COPs option was selected as the preferred design, as it provided a balanced solution improving traffic organisation, reducing crossing flows, and enhancing predictability. Stakeholder feedback also agreed with this.
- 9.4.4 A qualitative Initial Options Appraisal (IOA) demonstrated that the preferred option would reduce controller workload, improve capacity and resilience, and deliver environmental benefits through more efficient routing and reduced vectoring. The design aligns with the AMS and the emerging UK ADS framework by introducing structured flows and defined boundary integration points, supporting future systemisation and reducing reliance on tactical control.
- 9.4.5 Within Stage 3, NATS and the neighbouring ANSPs continued to refine their designs and make sure they worked for all parties. This included replacing RAPIX with OPFIM, to provide the correct separation from MUCPI as required by the European ANSPs. Naturally, this resulted in changes to the associated ATS route and waypoints. Other changes include speed restrictions, on some SIDs to reduce ATCO workload; and AIP changes to improve aircraft / ATCO operational efficiency.
- 9.4.6 Table 14 compares the design proposed within this document, to the two designs proposed at Stage 2. From this, we can see that although the design being consulted on discusses five COPs, it is aligned with Option 1: 3 COPs which progressed from Stage 2.

Table 14 - Comparison of 3 COPs, 5 COPs and this Proposal

Design	Image from Stage 2	Summary
Option 1: 3 COPs		- Three COPs will be flight plannable - COPs separated by design - Changes to RAPIX, within this proposal, would be additional to the three COPs within the design
Option 2: 5 COPs		- Five COPs will be flight plannable - COPs not separated by design - Changes to RAPIX, within this proposal, would be additional to the five COPs within the design
This Proposal	N/A	- Three COPs will be flight plannable - KONAN will not be flight plannable for traffic exiting UK airspace - Balance between COPs separated by design, RNAV classification and ATCO workload - Changes to RAPIX, within this proposal, would be additional (but required enable) to the three COPs forming the core component of the design

9.5 Future Stages

- 9.5.1 The design will continue to be developed and refined through the remaining stages of the CAP1616 process. This will include further detailed design work; validation through simulation; and continued engagement with stakeholders. Additional analysis will be undertaken to quantify environmental and economic impacts and to support the development of a detailed safety case in accordance with the NATS Safety Management System. The implementation of the proposed design remains dependent on coordinated changes with neighbouring ANSPs, and this collaborative approach will continue to be a key aspect of the project as it progresses.

10. Appendix: Departure Connectivity Analysis

- 10.1.1 Figure 15 to Figure 19 show the potential impacted SIDs from London City, London Gatwick, London Heathrow, London Luton and London Stansted airports.
- 10.1.2 The analysis is of all NATS data in the period 01/06/2025 to 31/08/2025. The pink parts are where the aircraft are below 7,000ft; the yellow parts are where the aircraft are at or above 7,000ft. The SID is overlaid in black. The figures confirm that statistically all traffic had reach at least 7,000ft by the end of the SID²¹.

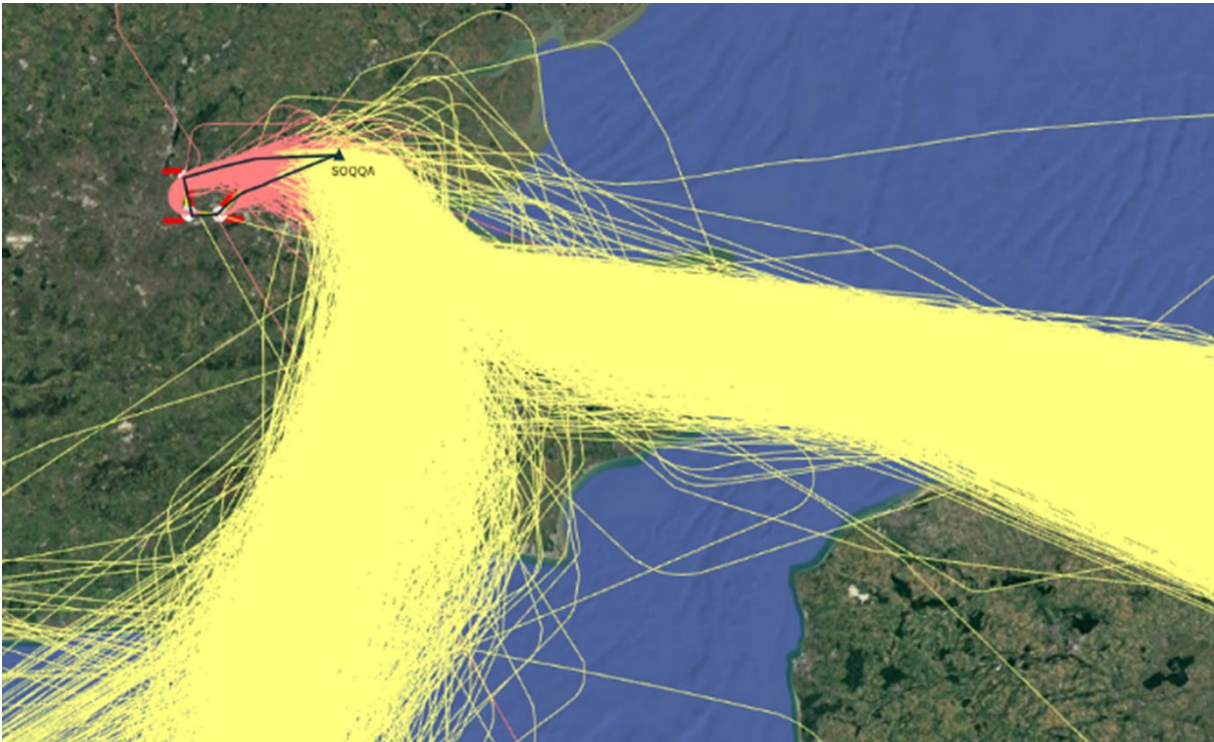


Figure 15 - London City SOQQA SID

²¹ There are some trajectories showing the aircraft below 7,000ft at / far beyond the SID end point. Given the infrequency of these, and the duration some reportedly stay below 7,000ft (including into European airspace) these are considered to be erroneous data.

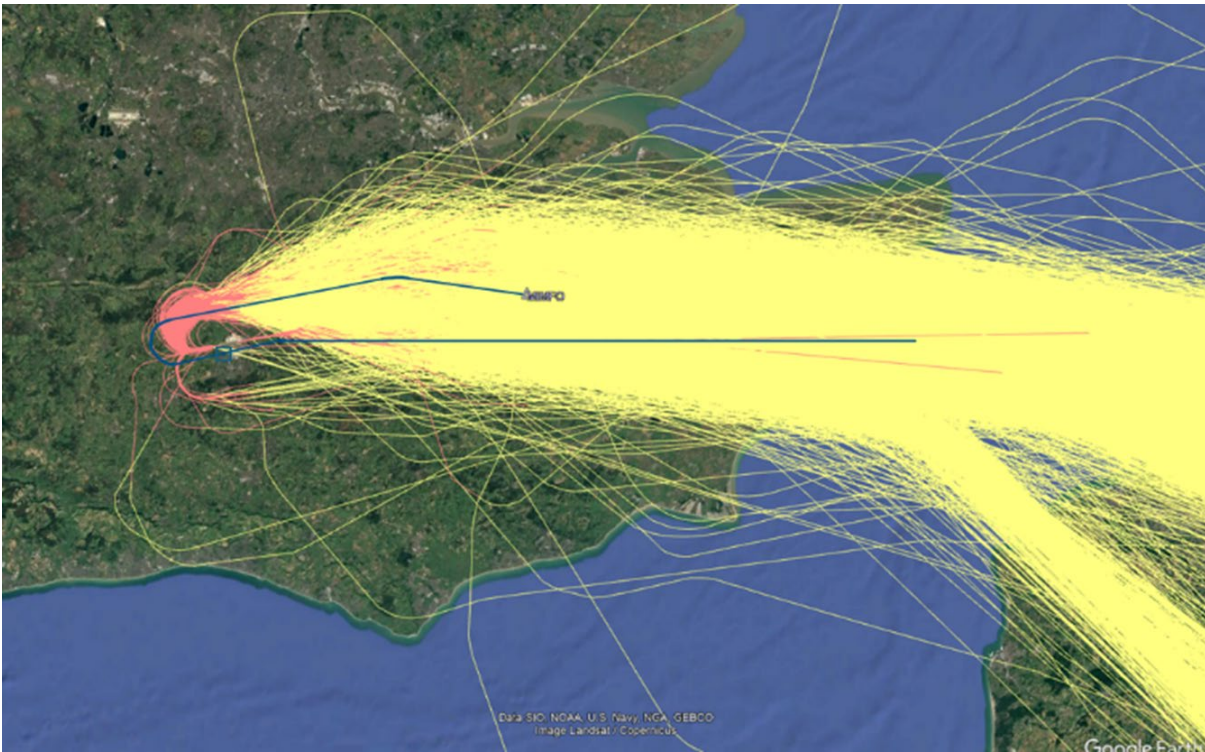


Figure 16 - London Gatwick MIMFO SID

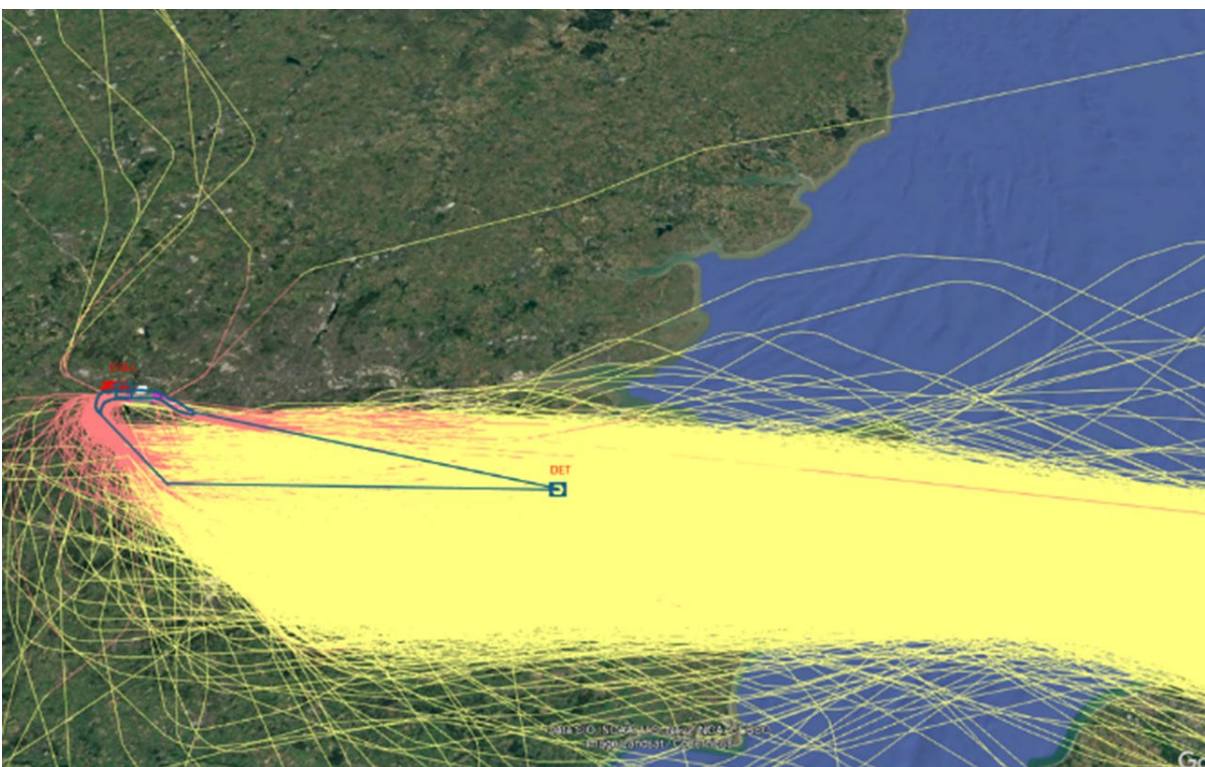


Figure 17 - London Heathrow DET SID

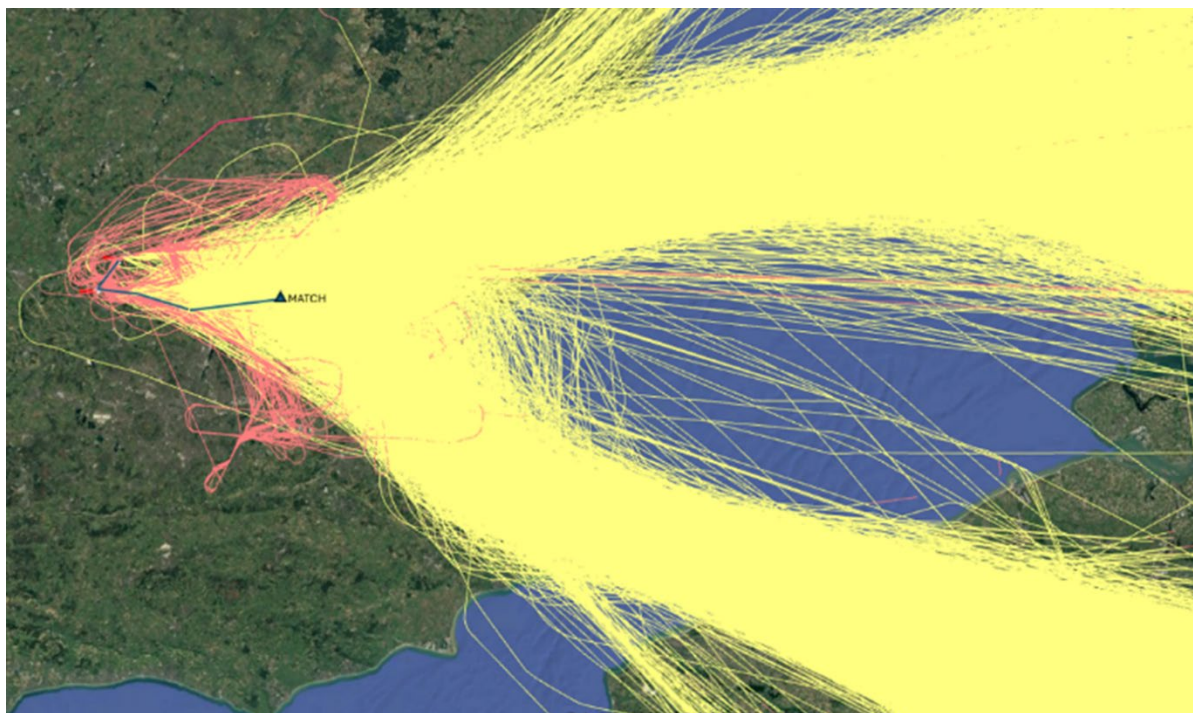


Figure 18 - London Luton MATCH SID

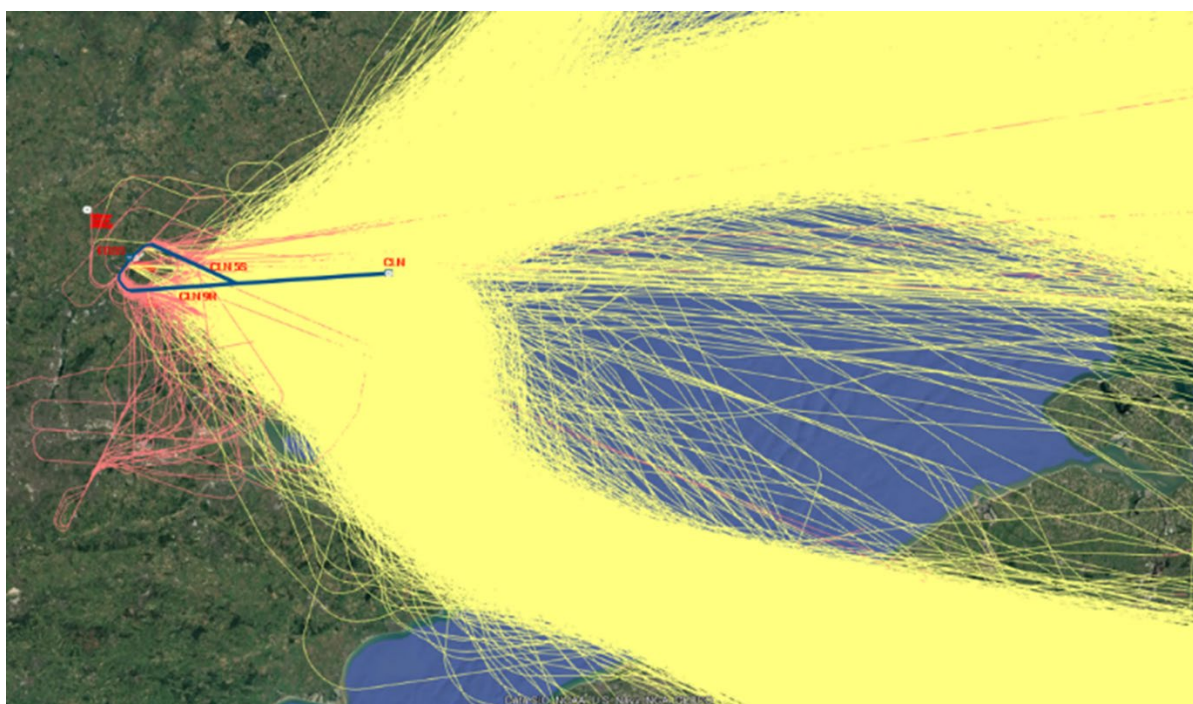


Figure 19 - London Stansted CLN SID

11. Appendix: Outstanding Stakeholder / CAA Feedback

11.1 Stakeholder Feedback from Stage 1 and 2

- 11.1.1 During Stage 1 and 2, NATS received feedback which was relevant to Stage 3 work, these have been addressed in the tables below.
- 11.1.2 For full details of all stakeholder feedback received in Stage 1 or 2, including NATS responses see, Stage 1 Define document and Stage 2 Develop and Assess document respectively ^(Ref 4).

Table 15 - Stakeholder Feedback from Stage 1

Feedback	Stakeholder	NATS Response at Stage 3
A more southerly routing than KONAN would be highly efficient for flight from the London area airports to central Europe, especially Switzerland. Of course, this is subject to capacity in LFEE [France UIR] sector.	Swiss International Airlines	A COP south of current day KONAN is being proposed. This proposal distributes the traffic by LTMA departure airport, rather than arrival airport. Therefore, traffic to Central Europe will cross via all three COPs.
Please engage with flight planning providers, as shifting a route more to the north could easily end up in filing the entire flight on completely other routing, which than has effect on the left / right separation principal (splitting) of SIDs out of London Heathrow Airport.	Austrian Airlines	This proposal distributes the traffic by LTMA departure airport, rather than arrival airport. Therefore, traffic to from London Heathrow will all exit via the central COP.
Putting Heathrow / Gatwick traffic via a southerly COP, then into France, could result in capacity issues within French airspace.	Emirates	This proposal distributes the traffic by LTMA departure airport. London Gatwick traffic is proposed to exit via the southern COP. Meanwhile, London Heathrow traffic via the central COP. This design has been made in collaboration with the neighbouring ANSPs to avoid capacity issues within their airspace.
This proposal would need to demonstrate that capacity can be increased, both in terms of UK and neighbouring FIR airspace providers. Whilst this proposal targets the AC DVR sectors, Heathrow would request assurances that TMA SE sectors would also benefit, which in turn could reduce the number of MDIs [minimum departure interval] / ATFM [air traffic flow management] delays on Heathrow DET departures.	London Heathrow	The FOA document assesses the benefits of this proposal. In summary, there capacity benefits within the UK airspace. The design and operations outside the London FIR / UIR are out of scope of this ACP, so have not been demonstrated within the FOA. However, this design has been made in collaboration with the neighbouring ANSPs to avoid capacity issues within their airspace. This design will not change TMA SE sector traffic or workload. Any MDIs / ATFM delays to London Heathrow DET departures, because of TMA SE, will be unchanged.

Table 16 - Stakeholder Feedback from Stage 2

Feedback	Stakeholder	NATS Response at Stage 3
Departures should not be fixed to a single COP but ideally allow planning to any of the three new COPs. As a bare minimum, operator shall be allowed to plan either COP into France or COP into Belgium. This is to avoid situation where French ATC issue cleared take-off times due to staffing or weather, and operator is allowed to use only one COP into France due to route availability document restrictions.	Emirates	This proposal distributes the traffic by their LTMA departure airport or previous routing within UK airspace, rather than arrival airport. This design has been made in collaboration with the neighbouring ANSPs to avoid capacity issues.
London Stansted Airport (through ACP-2023-057 and ACP-2024-013) have proposed to terminate the DETLING SIDs (DET 2R/2S/2D) at new waypoint JUGSE (DET D25) and the CLACTON SIDs (CLN 9R/5S/2E) at waypoint GASBA. New / realigned ATS Routes should be considered to meet these joining points. This would provide better network connectivity from GASBA / JUGSE into the existing route structure and so optimise the benefits of these network improvements on the UK Dover (DVR) Interface (ACP-2025-006). Our submissions for ACP-2023-057 and ACP-2024-013 show aircraft are in well excess of 7,000ft by JUGSE / GASBA and so well placed to join the network.	London Stansted	Connectivity will be achieved to the design once the London Stansted Airport SIDs are confirmed.
The addition of three COPs also provides increased flexibility for departures from London Heathrow Airport, particularly during adverse weather conditions. This expanded routing capability allows for more effective navigation and contingency planning.	British Airways	This proposal distributes the traffic by LTMA departure airport. London Heathrow traffic is proposed to exit via the central COP. This design has been made in collaboration with the neighbouring ANSPs to avoid capacity issues.
Scenarios with possible higher altitudes coming from airports located in Northern France, Belgium and the Netherlands should be made.	Brussels Airlines	Changing altitudes for traffic from these airports is not within scope of this project. Brussels Airlines are included in the list of identified stakeholders, so will be able to read the details of this proposal.

Would appreciate demonstration of the benefits of this ACP, both in terms of delay and environmental impact once an options appraisal has been completed. The proposal should demonstrate that physical capacity will be increased, both for UK and neighbouring airspace, and clarify how the capacity increase will reduce the number of MDI delays on Heathrow DET departures. Any improvement within UK airspace is negated if congestion still occurs within Europe that continues to restrict potential benefits.	London Heathrow	The FOA document assesses the benefits of this proposal. In summary, there are delay and environmental benefits within the UK airspace. The design and operations outside the London FIR / UIR are out of scope of this ACP, so have not been demonstrated within the FOA. However, this design has been made in collaboration with the neighbouring ANSPs to avoid capacity issues within their airspace.
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11.2 CAA Recommendations from Stage 2

- 11.2.1 At the Stage 2 gateway, the CAA provided recommendations and requirements which they expected this project to address at Stage 3. Table 17 reports on the progress of this feedback.

Table 17 - CAA Feedback from Stage 2

Item	Requirement / Recommendation	Progress
Must consider the requirements of SARG Policy 124 (ATS Network Policy with Neighbouring States) and evidence this within the Stage 3 gateway submission.	Requirement	The SARG Policy 124 has been referenced in this document in subchapter 2.6.1.
Must provide a full description of what activities were undertaken to develop, refine and test the airspace design from concept to final design.	Requirement	A detailed design history is provided in Appendix: Detailed Design History.
Must discuss and agree the methodology for the greenhouse gas emissions modelling with the CAA before commencing their Stage 3 full options appraisal. (CAP1616i para 6.2). Specifically, this must include: - whether the baseline and design option modelled scenarios will be based on planned or actual flight tracks. - whether track mileage, fuel burn and greenhouse gas emissions will be quantified taking into account all impacted traffic routes within the ACP scope for the baseline and progressed option.	Requirement	The CAA has been informed in advance on the methodology for the greenhouse gas emissions modelling.

Item	Requirement / Recommendation	Progress
It is recommended to demonstrate that the proposed COPs have been optimised as far as reasonably practicable to maximise environmental benefit i.e. reduce track mileage when compared to the existing design.	Recommendation	The FOA document assesses the benefits of this proposal. In summary, there are environmental benefits within the UK airspace. Traffic distribution to COPs by their LTMA departure airport or previous routing within UK airspace; not changing the base of CAS; and the benefits of STEVU when CBA1 is not activated vs not having the additional COP all contribute to the optimisation of the environmental benefits of this proposal.
Should provide more information on any complementary / concurrent changes that are occurring in the within the Brussels FIR, Brussels UIR and France UIR that could impact any design elements and subsequent impacts on any appraisal indicators / affected stakeholders.	Recommendation	At a high-level, this is discussed throughout this document. However, as these complementary / concurrent changes are outside of NATS' remit, the full details of these are a) not know to NATS and b) out of scope of this consultation. Therefore, the full details are not provided. Furthermore, the Brussels UIR and France UIR are both designated as Free Route Airspace volumes and so traffic route allocation is controlled by the RAD.

12. Appendix: Glossary

Acronym	Definition	Brief description of the terms
ACC	Area Control Centre	A facility responsible for providing air traffic control services to aircraft operating in enroute airspace within a defined region.
ACP	Airspace Change Proposal	A formal submission outlining proposed changes to airspace design or operations, assessed under regulatory processes.
AIP	Aeronautical Information Publication	A publication issued by a country's civil aviation authority that contains detailed information necessary for air navigation, including regulations, procedures, and facilities.
AIRAC	Aeronautical Information Regulation and Control	A globally coordinated system for implementing aeronautical information changes at fixed 28-day intervals.
-	Airspace Capacity	The maximum number of aircraft movements or operations that can be safely managed within a given airspace.
AMS	Airspace Modernisation Strategy	A strategic framework setting out long-term plans to modernise airspace structure and operations.
amsl	Above Mean Sea Level	The height above the average sea level. This measurement can be used for routes both overland and water, giving a uniformed comparison where terrain (mountains etc) may change the actual height above the ground.
ANG	Air Navigation Guidance	Regulatory or advisory material issued to support the implementation of air navigation policies and procedures.
ANSP	Air Navigation Service Provider	An organisation responsible for providing air traffic management and related services.
ATC	Air Traffic Control	A service provided to ensure the safe and efficient movement of aircraft in controlled airspace.
ATCO	Air Traffic Control Officer	A licensed professional responsible for ensuring the safe and efficient movement of aircraft.
ATFM	Air Traffic Flow Management	A strategic process that ensures the safe, orderly, and efficient flow of air traffic by balancing demand with airspace and airport capacity.
ARN	Air Traffic Service Route Network	The published routes aircraft can use to file their flight plans.
ATS	Air Traffic Service	A collective term for services such as ATC, flight information, and alerting services.
-	Baseline Scenario (Do nothing)	A reference scenario representing current operations without any proposed changes, used for comparison in assessments.
CAA	Civil Aviation Authority	The national regulatory body responsible for aviation safety, airspace regulation, and oversight.
CAP	Civil Aviation Publication	Official publications issued by the CAA containing policy, guidance, or regulatory requirements.
-	Class A Class G	Airspace is classified A – G based on numerous factors such as traffic density and altitude. Class A is a form of controlled airspace. Class G is uncontrolled airspace.
CAS	Controlled Airspace	Airspace within which air traffic control service is provided in accordance with classifications.
CBA	Military Cross Border Area	A volume of airspace primarily used for security threats, with short-notice activation.
CEHI	Central European High Project	A collaborative initiative focused on airspace optimisation in the high-level European network.
CFMU	Central Flow Management Unit	A unit responsible for managing air traffic flow, ensuring the efficient use of airspace, and coordinating flight schedules.

Acronym	Definition	Brief description of the terms
CH ₄	Methane	A greenhouse gas emitted by aircraft, used as a key metric for environmental impact assessment.
CO ₂	Carbon Dioxide	A greenhouse gas emitted by aircraft, used as a key metric for environmental impact assessment.
CO ₂ e	Carbon Dioxide Equivalent	This is a unit of measure which translates all greenhouse gases into the equivalent amount of carbon dioxide need to generate the same warming effect. Greenhouse gases are a cocktail of atmospheric gases, including water, carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), ozone (O ₃) and synthetic fluorinated gases. Each omitted in different quantities and impacting global warming in different ways. CO ₂ e is considered a good proxy to total greenhouse gas emissions and can be used for comparison purposes.
COPs	Coordination Points	Predefined points in airspace where responsibility for an aircraft is transferred between control sectors or units.
COVID-19	Coronavirus disease	An infectious disease caused by the SARS-CoV-2 virus.
CTA	Control Area	Controlled airspace extending upwards from a specified lower limit above the surface.
DCT	Direct	A flight plannable route published in RAD allowing certain aircraft to fly directly between two points without following established routes.
DPE	Design Principle Evaluation	An assessment process used to evaluate airspace design options against defined principles and objectives.
DSNA	Direction des Services de la navigation aérienne	The French ANSP.
DVR	Dover	Area associated with the Dover region, commonly used in route planning.
ERNIP	European Route Network Improvement Plan	A strategic plan developed by the Network Manager to optimise the European route network.
FABEC	Functional Airspace Block European Central	A cross-border airspace initiative aimed at improving efficiency and capacity across multiple European states.
FAQ	Frequently Asked Question	A document addressing common queries related to a project or topic.
FIR	Flight Information Region	A defined airspace region in which flight information and alerting services are provided.
FL	Flight Level	A standardised altitude referenced to a specific atmospheric pressure setting (1013.25 hPa).
FMS	Flight Management System	An advanced onboard computer system that automate navigation, flight planning, and aircraft performance management.
FOA	Full Options Appraisal	A middle-stage assessment of potential options for an airspace change.
FRA	Free Route Airspace	A designated altitude block where aircraft can fly directly between entry and exit points rather than following rigid, predefined airway corridors.
ft	feet	A measure of distance above mean sea level using a local or regional pressure setting.
GA	General Aviation	Civil aviation operations other than commercial scheduled air services. The most common type of GA activities are business jets and recreational flying by private light aircraft.
HF	Human Factors	The scientific study and application of knowledge about human abilities, limitations, and behaviours to design systems, products, and environments that are safer, more intuitive, and more effective.

Acronym	Definition	Brief description of the terms
HIRA	Hazard Identification and Risk Assessment	A formal safety assessment process used to identify hazards and evaluate their associated risks in detail, typically after initial design work or simulation.
IFP	Instrument Flight Procedure	A set plan which pilots must follow in order to navigate based on their onboard tools rather than visual reference.
IOA	Initial Options Appraisal	An early-stage assessment of potential options for an airspace change.
-	Interface Region	An area of airspace where operations of adjacent ANSPs meet and interact.
kts	knots	In aviation, airspeed is measured in knots (kts). One knot is the same as one nautical mile (nm) per hour.
LFFF	France UIR	The upper airspace managed by the French ANSP.
LOCP	Lead Operator Carrier Panel	A forum representing airline stakeholders in discussions on airspace or operational changes.
LoAs	Letters of Agreement	A formal, signed document used to coordinate procedures, delegate responsibilities, and establish operating conditions between different aviation organisations.
LTMA	London Terminal Control Area	The TMA serving airports around London.
LVNL	Luchtverkeersleiding nederland	The Dutch ANSP.
MUAC	Maastricht Upper Area Control Centre	A multinational ATC centre providing upper airspace control for several European countries.
N ₂ O	Nitrous Oxide	A greenhouse gas emitted by aircraft, used as a key metric for environmental impact assessment.
NATMAC	National Air Traffic Management Advisory Committee	A UK-based advisory body representing stakeholders in airspace management discussions.
nm	Nautical Miles	In aviation, distances are measured in nautical miles (nm). 1nm is approximately 1.151 statute miles.
-	Network Manager	The European entity responsible for coordinating and optimising the performance of the ATM network.
NERL	NATS En-route PLC	The principle UK ANSP.
NOTAM	Notice to Air Missions	A time-critical notice providing essential information on changes to aeronautical facilities, services, or hazards.
O ₃	Ozone	A greenhouse gas emitted by aircraft, used as a key metric for environmental impact assessment.
-	Parallel routings	Multiple routes aligned in the same direction to distribute traffic and improve capacity.
PHI	Preliminary Hazard Identification	An early-stage safety assessment workshop used to identify potential hazards associated with a proposed change before detailed design or simulations are completed.
RAD	Route Availability Document	A European document defining route and airspace availability and restrictions for flight planning.
-	Radar vectoring	Instructions issued by ATC directing aircraft headings to manage traffic separation.
RNAV1	Area Navigation 1	A navigation specification requiring aircraft to maintain a lateral accuracy of ±1 nautical mile for 95% of the time.
RNAV5	Area Navigation 5	A navigation specification requiring aircraft to maintain a lateral accuracy of ±5 nautical miles for 95% of the time.
-	Sector	A precisely defined 3D volume of airspace and altitude for which a designated team of air traffic controllers holds responsibility.

Acronym	Definition	Brief description of the terms
S15	Sector 15	A volume of UK airspace located overhead the southeast of England.
SARG	Safety and Airspace Regulation Group	A division within the CAA that is responsible for safety oversight, airspace management, and authorisation of air traffic services.
SID	Standard Instrument Departure	A published procedure for departing aircraft from an aerodrome.
SME	Subject Matter Expert	A person who is considered an expert in the topic being discussed.
STAR	Standard Arrival Route	A published procedure for arriving aircraft into an aerodrome.
-	Systemisation	To modernise how the UK manages flights at lower altitudes, airspace is being redesigned into a more structured, predictable system – known as Systemised Airspace. This involves the redesign of airspace below 24,500 ft into a systemised network of defined, structured flight paths. By establishing these routes, aircraft can safely fly closer together, increasing airspace capacity and enabling more direct and efficient journeys.
-	Tactical deviation	A short-term change to an aircraft's planned route to resolve conflicts or improve flow.
TMA	Terminal Control Area	Controlled airspace surrounding major airports, where arriving and departing traffic is managed.
-	Traffic flow	The number of aircraft that can pass through a defined airspace within a given time.
UAC	Upper Area Control Centre	An ATC centre providing upper airspace control for several European countries.
UIR	Upper (Flight) Information Region	The upper portion of a Flight Information Region, typically covering higher altitudes.
UK	United Kingdom	The country of the United Kingdom.
UKADS	UK Airspace Design Service	A single guiding mind to coordinate and sponsor future airspace changes to deliver the holistic, modernised airspace design envisaged by the CAA's Airspace Modernisation Strategy.
-	Waypoint	A predetermined geographical position used for navigation and routing, defined by specific latitude and longitude coordinates.

End of Network Improvements on the UK Dover (DVR) Interface Stage 3 Consultation Document