

Network Improvements on the UK Dover (DVR) Interface

Gateway Documentation:
Stage 2 Develop and Assess
ACP-2025-006

NATS

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Change History

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

Action	Role	Date
Produced	Airspace Change Expert Transformation Strategy and Development	January 2026
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Referenced Documents

Ref No	Name and description	Links
1.	CAP1616 Edition 5.1	Link
2.	Statement of Need	Link
3.	Network Improvements on the UK Dover (DVR) Interface airspace change portal page	Link
4.	Assessment Meeting Minutes	Link
5.	ERNIP Part 2: ARN Version 2024 – 2030	Link
6.	Stage 1 Define document	Link
7.	Air Navigation Guidance 2017 (ANG2017)	Link
8.	CAP1711: Airspace Modernisation Strategy 2023–2040 Part 1: Strategic objectives and enablers	Link
9.	CAP1616i: Environmental Assessment Requirements and Guidance for Airspace Change Proposals	Link
10.	CAP1616f: Guidance on Airspace Change Process for Permanent Airspace Change Proposals	Link
11.	CAP1385: Performance-based Navigation (PBN): Enhanced Route Spacing Guidance, 2 nd edition	Link

1. Introduction

1.1 Background

- 1.1.1 This document forms part of the documentation required under the Civil Aviation Authority's (CAA) CAP1616 Airspace Change Process [Ref 1], specifically Stage 2 Develop and Assess.
- 1.1.2 The purpose of this document is to describe NATS' longlist of design options that address the Statement of Need [Ref 2] and align with the Design Principles (DPs).
- 1.1.3 It will also describe the engagement undertaken with stakeholders, summarising the feedback from the engagement activities, and describing how stakeholder feedback has been incorporated into the development work.
- 1.1.4 Additionally, it provides the Design Principle Evaluation (DPE); this is a qualitative assessment, of each design option against each of the DPs, which progresses those design options which fit best and (where appropriate) discounts those which fit least.
- 1.1.5 For the remaining viable design options, an Initial Options Appraisal (IOA) compares the potential impacts of each design option against the baseline ('do nothing') scenario, resulting in a shortlist of options to progress to Stage 3 for further development.

1.2 Statement of Need

- 1.2.1 During Stage 1, NATS submitted a DAP1916 Statement of Need (SoN) form [Ref 2].
- 1.2.2 The objectives of this airspace change proposal, as raised in the SoN, are provided below. The full document is published on the CAA's airspace change portal [Ref 3].

This ACP seeks to improve connectivity between the UK ATS route network and adjacent FIR boundaries by introducing new / revised ATS route, waypoints and / or COPs. This will enhance connectivity, whilst improving fuel efficiency and reducing greenhouse gas emissions. This ACP will also seek to reduce controller workload by improving flight plan predictability.

A network hotspot on the London, Brussels and Paris FIR/UIRs has been identified by European Network Manager (NM). This is creating inefficiencies within the network.

The network bottleneck is currently managed dynamically, leading to high controller workload and inefficient flight profiles for a high volume of traffic.

The issue has added complexity due to the proximity of national airspace boundaries within the UK, France and Belgium. There are 4 ANSPs affected by the issue – NATS (UK), DSNF (France) and skyes (Belgium) and EUROCONTROL Maastricht.

A revised route structure and associated ATC procedures across the Anglo/Franco/Belgian interface would enable controller workload reduction, improved traffic presentation to adjacent ANSPs, enable more efficient flight planning and increased throughput, whilst remaining compatible with current and future London FIR/UIR routings.

Two parallel routings within the London FIR traverse the London/Brussels FIR boundary, cross at adjacent COPs, and converge to a single route within Brussels FIR:

- Traffic overflying Brussels FIR flight plans: ATS routes – KONAN (COP) – FRA

- Traffic inbound to Brussels FIR flight plans: ATS routes – VABIK (COP) – ATS routes

Due to the high volume of traffic utilising the route through KONAN, 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

In 2024 approximately 200,000 flights planned via KONAN and approximately 16,500 via VABIK.

1.3 ACP categorisation level

- 1.3.1 It should be noted that the scaling level of an ACP is only confirmed at the end of Stage 2. However, NATS is aware that this airspace change, which seeks to improve connectivity between the UK ATS route network and adjacent FIR boundaries, will have no impact on aircraft tracks below 7,000ft and understands that by the definitions in the CAP1616 this change is expected to be categorised as a Level 2 ACP, see Assessment Meeting minutes [Ref 4]. As such, the appropriate Level 2 requirements of CAP1616 will be followed.

1.4 Scope of this airspace change proposal

- 1.4.1 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.
- 1.4.2 The European Network Manager (NM) 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 5] 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.
- 1.4.3 Mitigating this hotspot 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.
- 1.4.4 This ACP seeks to improve connectivity between the UK Air Traffic Service (ATS) route network and adjacent Flight Information Region (FIR)/ Upper Information Region (UIR) boundaries by introducing new/ revised ATS routes, waypoints and/ or co-ordination points (COPs). This ACP specifically focuses on the VABIK and KONAN COPs (see Figure 1) on the London FIR/ UIR boundary with France and Belgium.
- 1.4.5 The primary area of scope for this airspace change proposal is illustrated with a purple box in Figure 1; it should be noted however, to facilitate connectivity and to create an efficient network design, adjustments to traffic flows may extend beyond this area. The changes for this proposal are FL75 and above.



Figure 1: The scope for this airspace change proposal is shown as a purple box, the VABIK and KONAN COPs are highlighted in yellow, and the London FIR/UIR boundary is highlighted with a dotted red line. The relevant ATS route structure in the lower airspace environment (up to FL245) and the upper airspace environment (at FL245 and above) is shown in the top and bottom diagrams respectively. (Top) Lower ATS Routes, South Sheet [UK AIP ENR 6-68, November 2025]. (Bottom) Upper Airspace Control Area, Free Route Airspace (FRA) and Upper ATS Routes [UK AIP ENR 6-70, November 2025].

1.5 Other ACPs relevant to this airspace change

1.5.1 The proposed implementation date for this ACP is 2027.

1.5.2 Prior to 2027, three European airspace changes are expected in proximity to KONAN or VABIK [Ref 3, Appendix B]. These changes will not impact UK airspace design but are acknowledged here for completeness:

- Free Route Airspace France NE Step 1 (completed November 2025);
- Free Route Airspace France NE Step 2 (proposed 2026) and;
- Free Route Airspace France NE Step 3 (planned November 2026).

1.5.3 In addition, two London Stansted Airport ACPs (ACP-2023-057 and ACP-2024-013) have been identified, through stakeholder feedback, which propose 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. NATS will continue to track the progression of these ACPs during the Stage 3 work to ensure that the network connectivity for any new/re-aligned ATS routes are compatible with any agreed airspace change proposals.

1.6 Design Principles

- 1.6.1 Following CAA acceptance of the SoN and the subsequent assessment meeting [Ref 4], NATS engaged representative stakeholder groups on the creation of a set of DPs and their priorities during Stage 1.
- 1.6.2 Details of the Stage 1 engagement activities, the feedback received and how this influenced the final set of DPs can be found in the Stage 1 Define document [Ref 6]. A summary of the final DPs is provided in Table 1 below.
- 1.6.3 For Stage 1, NATS submitted the final DPs alongside evidence of engagement to the CAA, which was approved in June 2025.

Table 1: Final Design Principles resulting from the Stage 1 engagement process.

Design Principle	Priority	Description
MDP Safety	A	The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety.
DDP Operational (Capacity)	A	The airspace change proposal should provide the greatest capacity benefits.
MDP Environment	B	The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017 [Ref 7].
DDP Environmental (Greenhouse Gas Emissions)	B	The airspace change proposal should minimise greenhouse gas emissions at or above 7,000ft.
MDP Policy	C	The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernisation strategy (AMS) [Ref 8] or Secretary of State and CAA's policy and guidance.
DDP Technical (Other Aviation Stakeholders)	C	The airspace change proposal should consider the impacts on air navigation service providers (ANSPs) and other aviation stakeholders such as nearby airport operators.

1.7 Stage 2 Engagement summary

- 1.7.1 The longlist of viable design options presented in this document were developed and tested through two-way engagement with the same stakeholders who were identified in Stage 1. The full list of stakeholders, engagement timeline and methodology is provided in Appendix A.
- 1.7.2 Stakeholders were contacted by email and invited to participate in the Stage 2 engagement activities for this proposal. Material was provided describing the baseline scenario, design constraints and considerations, and the design options. The slides provided in the stakeholder briefing pack can be found on the CAA's public [airspace change portal](#) page for this proposal.

- 1.7.3 Stakeholders were encouraged to provide feedback through an online questionnaire (Microsoft Forms), and email responses were also accepted.
- 1.7.4 The stakeholder feedback was collated and subsequently used to update the baseline scenarios and the design options, which are discussed in sections 2 and 3. Where stakeholder feedback has been used to inform Subject Matter Expert (SME) evaluation of the DPs, including any decisions on design options, this is clearly stated.
- 1.7.5 In total, thirteen stakeholders (29% of those contacted) provided a response; no responses were received from organisations or individuals not on the stakeholder list.
- 1.7.6 A copy of this Stage 2 Develop and Assess document, which includes all the design options, stakeholder feedback, the DPE, and a glossary of the technical terms used, has been shared with all participating stakeholders.

2. Baseline Scenario ('Do Nothing')

- 2.1.1 The typical current-day flight operation and the forecast traffic growth from 2027 (the proposed implementation date, i.e. Year 1) to 2036 (10 years from the proposed implementation date, i.e. Year 10) was described in detail in Section 4 of the Stage 1 Define document [Ref 6].
- 2.1.2 For Stage 2, the forecast traffic growth has been updated with the most credible and up-to-date data that is available from 2025.
- 2.1.3 This option is considered the baseline ('do nothing') option if no airspace change was to take place; an updated description is provided in the following section.

Airspace Design

- 2.1.4 The scope of this airspace change proposal is above FL75.
- 2.1.5 Controlled airspace within the scope of the proposed change is Class A from FL75 to FL195; above FL195 the airspace is Class C.
- 2.1.6 The routes passing through either VABIK or KONAN which are impacted by this proposal are provided in Table 2.¹

Table 2: Current ATS routes passing through COPs VABIK and KONAN. Route descriptions sourced from the UK AIP ENR 3.2, November 2025.

COP	Route Name	Levels Lowest/Highest ²	Route section within the scope of the proposed change	Direction through the COP	Navigation Specification
VABIK	L18	FL75/FL460	MID-MAY-WIZAD-DVR-VABIK	Eastbound	RNAV5
	Q70	FL105/FL460	BENSU-BIG-DET-ITVIP-MOKBU-VABIK	Eastbound	RNAV5
KONAN	L9	FL75/FL245	GOXUL-BIG-DIKVU-EMKAD-UMTUM-DVR-KONAN	Bi-directional	RNAV5
	L607	FL105/FL460	ALHAD-BIG-KONAN	Eastbound	RNAV5
	M84	FL105/FL460	NONVA-ABTUM-KONAN	Eastbound	RNAV5
	UL9	FL245/FL460	GOXUL-BIG-DIKVU-LAVRI-EMKAD-UMTUM-DVR-KONAN	Eastbound	RNAV5

- 2.1.7 As well as the London FIR/UIR boundary, a number of airspace structures are within the scope of the proposed change, as described in Table 3 and shown in Figure 2. Note, changes to airspace structures and traffic flows outside of the London FIR/UIR are not within the scope of this airspace change proposal.

Table 3: Airspace structures within the scope of this airspace change proposal, above FL75 and within the London FIR/UIR.

Airspace Structure	Lower Limit	Upper Limit	Classification
Clacton CTA 7	FL65	FL195	Class A
Clacton CTA 9	FL105	FL195	Class A
London TMA 1	2,500ft	FL195	Class A
London TMA 3	3,500ft	FL195	Class A
London TMA 8	5,500ft	FL195	Class A
London TMA 20	4,500ft	FL195	Class A

¹ At this early stage of the design work, the ATS routes through VABIK and KONAN are the main consideration for this change proposal. However, as the detailed design work progresses in Stage 3, other proximate traffic flows/COPs may also be considered to facilitate connectivity and to create an efficient network design; full details of all proposed route changes will be provided as appropriate at Stage 3.

² The presented levels are the extremities of the route section. The actual levels within the impacted area will be within these limits but may not extend to these limits.

Worthing CTA 1	FL65	FL195	Class A
Worthing CTA 2	FL75	FL195	Class A
Worthing CTA 3	FL75	FL195	Class A
Worthing CTA 5	FL105	FL195	Class A
EGD136 Shoeburyness (hours as notified)	SFC	13,000ft	n/a
EGD138D Shoeburyness (hours as notified)	SFC	60,000ft	n/a

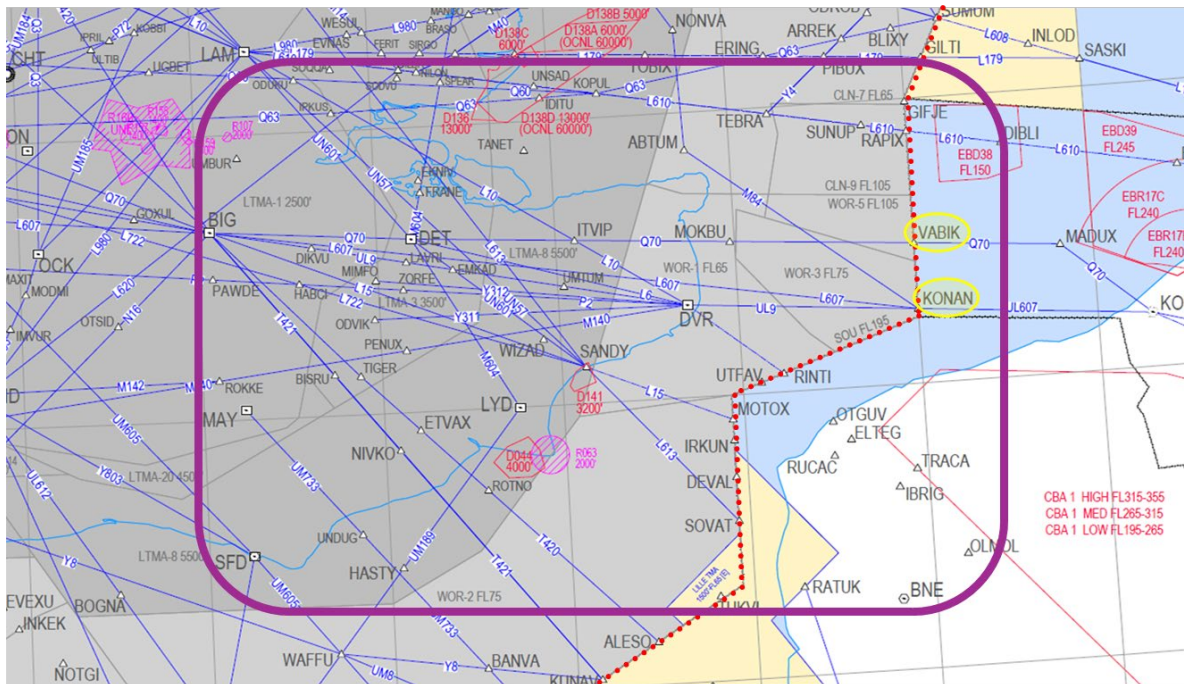


Figure 2: Adapted internal airspace map illustrating the airspace structures relevant to this airspace change proposal. The scope for this airspace change proposal is shown as a purple box, the VABIK and KONAN COPs are highlighted in yellow, and the FIR boundary is highlighted with a dotted red line. [NATS, adapted internal UK Airspace map, 2025].

Airspace Usage

- 2.1.8 There are three main traffic groups currently using either VABIK or KONAN, these are: London TMA departures; Brussels TMA arrivals and; network overflights.
- 2.1.9 Traffic is positioned across the FIR/UIR boundary such that Brussels TMA traffic routes via VABIK, and London TMA departures/overflights route via KONAN.
- 2.1.10 In 2025, 224,818 flights flight planned through either VABIK or KONAN³. Table 4 shows the total number of flight plans through each COP and further categorises the number of flights that were London TMA⁴ departures, including the number of departure flights originating from two of London's busiest airports: London Heathrow and London Gatwick.

³ CFMU (Central Flow Management Unit) Eurocontrol flight plan data for flights (planned) in the UK FIR, January to December 2025.

⁴ For this analysis, the London TMA airfields are defined as: London Heathrow, London Gatwick, London Stansted, London Luton and London City and London Biggin Hill airports.

Table 4: Traffic via VABIK or KONAN. CFMU flight plan data for flights (planned) in the UK FIR, January to December 2025.

Traffic Sample	VABIK Flights (per annum)/ % of traffic		KONAN Flights (per annum)/ % of traffic		Totals
All traffic via VABIK or KONAN (London TMA ⁵ departures, Brussels TMA arrivals and network overflights)	16,313	(7.3% of total VABIK and KONAN traffic)	208,505	(92.7% of total VABIK and KONAN traffic)	224,818
London TMA⁵ departures via VABIK or KONAN	3,347	(20.5% of VABIK traffic)	151,885	(72.8% of KONAN traffic)	155,232
London Heathrow⁶ departures via VABIK or KONAN	2,775	(82.9% of London TMA traffic)	65,152	(42.9% of London TMA traffic)	67,927
London Gatwick⁷ departures via VABIK or KONAN	79	(2.4% of London TMA traffic)	28,953	(19.1% of London TMA traffic)	29,032

- 2.1.11 Table 4 demonstrates that a significant volume of traffic is London TMA departing traffic. This creates complexity due to the proximity of the London TMA airports to the London FIR/ UIR boundary, resulting in multiple interactions/ crossing traffic flows within a small region of airspace. The overall demand and relative proportion of London TMA traffic within this area would increase further if the planned expansion of London Heathrow Airport and/ or London Gatwick Airport is realised. Additionally, the data demonstrates the uneven distribution of traffic in the current route structure with 93% of the traffic routing via KONAN and only 7% of traffic routing via VABIK.
- 2.1.12 Figure 3 shows the density of flights for VABIK and KONAN (August 1st - 31st 2025, 22,442 flights). The top figure illustrates the density plots for the lower airspace environment (below FL245) and the bottom figure illustrates the upper airspace environment (FL245 and above). Due to the volume of traffic flight planning via VABIK or KONAN, to maintain throughput aircraft are vectored from their planned flight paths. Specifically, for the upper airspace environment 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.
- 2.1.13 In current-day operations, traffic flight plans to cross the UIR boundary up to FL510⁸, with the majority of traffic crossing the boundary at FL245 or above, as illustrated in Figure 3, bottom figure.

⁵ For this analysis, the London TMA airfields are defined as: London Biggin Hill, London City, London Gatwick, London Heathrow, London Luton and London Stansted airports.

⁶ London Heathrow traffic could increase due to planned expansion. For further details of their plans, see the airports' website: <https://www.heathrow.com/company/about-heathrow/expansion>

⁷ London Gatwick traffic could increase due to planned expansion. For further details of their plans, see the airports' website: <https://www.gatwickairport.com/company/future-plans.html>

⁸ Based on SME opinion: ATC (air traffic controllers).

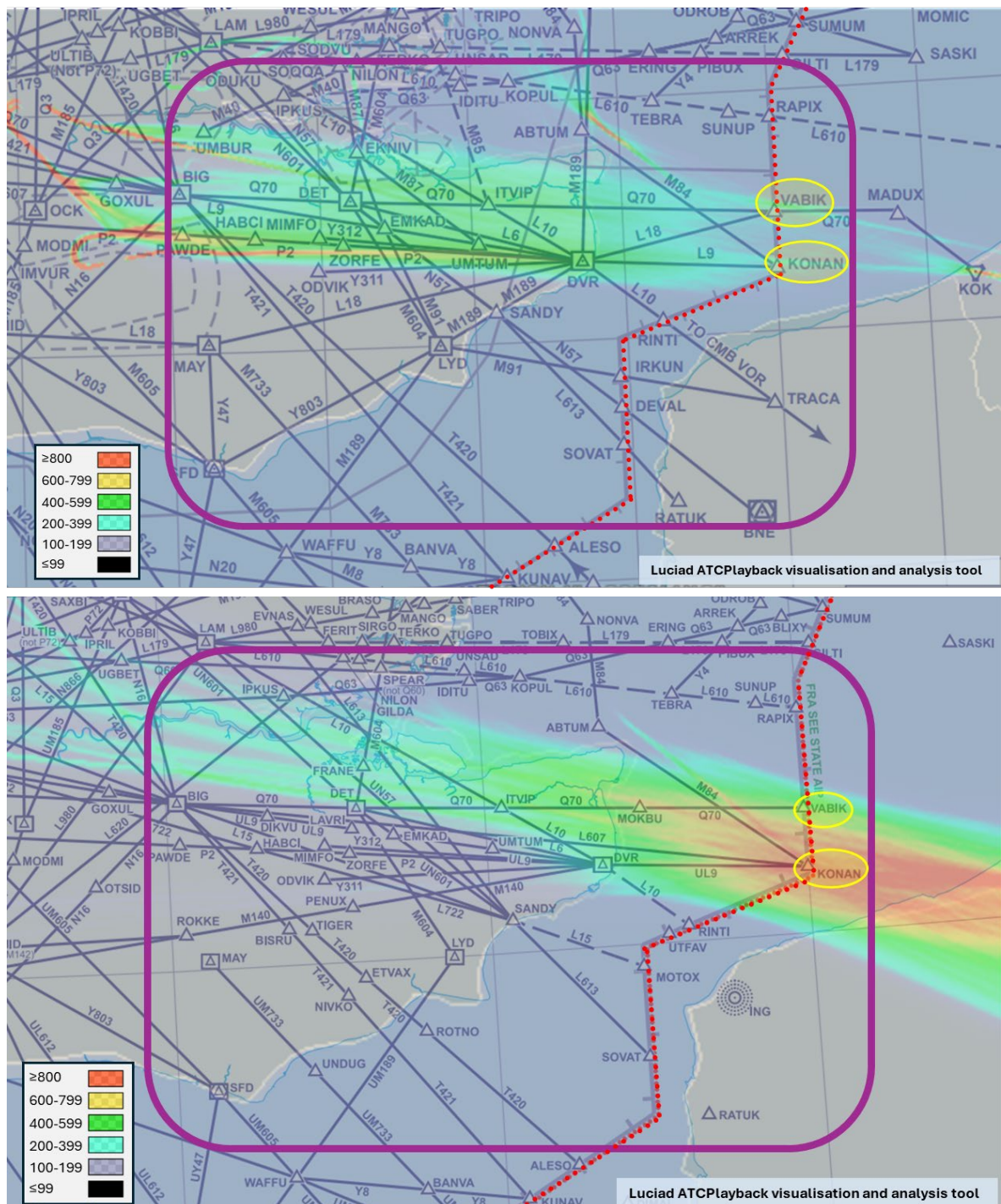


Figure 3: Flight density plots illustrating radar data for flights in the London FIR, (August 1st-31st 2025, 22,442 flights). (Top) The top figure illustrates the flight density plots associated with the Lower ATS route Structure (below FL245), (map overlay Lower ATS Routes, South Sheet [UK AIP ENR 6-68, November 2025]). (Bottom) The bottom figure illustrates the flight density plots associated with the Upper ATS route Structure (FL245 and above), (map overlay Upper Airspace Control Area, Free Route Airspace (FRA) and Upper ATS Routes [UK AIP ENR 6-70, November 2025]). The scope for this airspace change proposal is shown as a purple box, the VABIK and KONAN COPs are highlighted in yellow, and the FIR boundary is highlighted with a dotted red line.

2.1.14

Based on the 2025 EUROCONTROL CFMU traffic data (actuals), NERL analytics team has forecast annual traffic figures for 2027 (year 1) and 2036 (year 10) using NATS Nov25 Base Forecast, see Table 5; values are shown for the traffic flows through the VABIK and KONAN boundary COPs, in addition to the proximate boundary COPs RINTI and UTFAV. Note: NATS long-term traffic forecasts are updated regularly to incorporate the latest available data. At the time of writing, NATS Nov25 Base Forecast is the most up-to-date projection and represents the most likely traffic growth scenario, based on NATS market knowledge and economic forecasts.

Table 5: Actual traffic figures for 2025 [EUROCONTROL CFMU traffic data] and forecast traffic figures for 2027 and 2036.

COP / Year	2025 (current day scenario)	2027	2036	Growth from current day scenario
KONAN	215,071	220,061	239,778	11.5%
VABIK	16,795	17,556	21,122	25.8%
RINTI	2,320	992	1,023	-55.9%
UTFAV	1,740	3,115	3,215	84.8%
Total	235,926	241,724	265,138	12.4%

- 2.1.15 It should be noted that in May 2025, UTFAV was implemented within the primary area of scope of this ACP. UTFAV is positioned 18.5nm southwest of KONAN along the London UIR boundary. The introduction of UTFAV impacted traffic from London Gatwick Airport and London Luton Airport which were previously flight planning via RINTI; this traffic now routes via UTFAV. As a result, traffic crossing the UIR boundary at RINTI has reduced, as shown in Table 5.
- 2.1.16 This airspace change is not expected to impact traffic growth across the FIR/UIR boundary therefore the forecast annual traffic figures presented in Table 5 applies to both the baseline ('do nothing') option and the design options presented in section 3.

Operational Inefficiencies: Delay

- 2.1.17 Airspace usage will increase as traffic increases. However, due to airspace constraints traffic throughput will be capped (an Air Traffic Flow Management (ATFM) technique to limit the number of aircraft entering or moving within airspace), resulting in aircraft delays to level-out the peaks and troughs in demand. Currently, this is achieved by ATC applying minimum departure intervals (MDIs) (ground-based delay).
- 2.1.18 Stakeholder feedback highlights that frequent delays are currently experienced as a result of congestion within this busy region of airspace.
- 2.1.19 Over the 10-year time horizon, it is expected that the requirement to cap traffic (and therefore impose delay) will likely worsen with the forecasted increase in traffic levels.

Environmental Impacts

- 2.1.20 Aircraft are routinely deviated from their planned flight paths due to the high density of traffic within the area. This can result in increased track mileage or reduced cruising heights, both of which can increase greenhouse gas emissions.
- 2.1.21 Stakeholder feedback highlights that aircraft are not achieving optimal flight levels within the current airspace, leading to flight inefficiencies.
- 2.1.22 Over the 10-year time horizon, it is expected that the impacts of inefficient flight profiles will likely worsen with the forecasted increase in traffic levels.
- 2.1.23 The ACP focuses on traffic flows above 7,500ft, and is not anticipated to change traffic patterns below 7,000ft. Therefore, in line with CAP1616f [Ref 10], other environmental impacts are not considered within the baseline ('do-nothing') scenario.

Military operations

- 2.1.24 Military stakeholder feedback has identified that 78 Squadron (Swanwick) southeast sector encompasses the airspace associated with this airspace change.
- 2.1.25 In addition, UK TACAN routes TACAN BLUE 3 (TB3), TACAN BLUE 6 (TB6) and TACAN BLUE 7 (TB7), see Figure 4, are utilised (although infrequently) by military traffic at FL250-FL260 within the affected area.

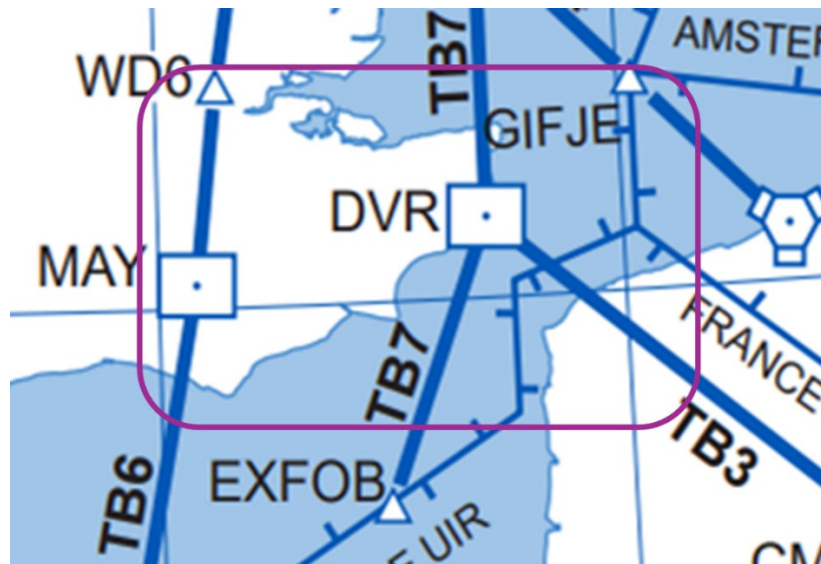


Figure 4: UK TACAN Routes TB7 and TB3 lie within the scope of this airspace change proposal (shown as a purple box). [ENR 6-1 UK Military AIP, December 2025].

Stakeholder feedback

2.1.26 Stakeholder feedback relevant to the baseline ('do nothing') option is provided in Table 6 below.

Table 6: Baseline ('do nothing') option stakeholder feedback

Stakeholder	Feedback	Impact
Brussels Airlines London Luton Airport London Gatwick Airport London Heathrow Airport London Stansted Airport	Do nothing is not supported	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
London Luton Airport London Gatwick Airport London Stansted Airport	Increased delays, as a result of "Do Nothing", are not acceptable	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
London Heathrow Airport	In today's operation, Heathrow DET departures experience frequent delays due to combined departures from London Heathrow Airport, London Luton Airport, London Stansted Airport or London Gatwick Airport, or as a result of congestion within neighbouring FIR/UIR airspace.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the baseline scenario and the Design Principle Evaluation.
London Stansted Airport	It is assumed the baseline has been assessed in line with CAA approved long extant process for collecting and measuring data.	NATS confirms the CAA's CAP1616 airspace change process has been adhered to. No impact.
Lufthansa Airline	Please do not stay on the baseline scenario (do nothing) as we (Lufthansa) may participate in the new scenarios with less slots and better flight level for our flights to / from Frankfurt and Munich.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the baseline scenario and the Design Principle Evaluation.
MOD	78 Sqn's (Swanwick) "southeast" sector encompasses this airspace. It should be noted that a TACAN route utilised by military traffic is in	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the

	close proximity to the affected area. (...) these routes are used relatively infrequently (...).	baseline scenario and the Design Principle Evaluation.
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Summary

The baseline ('do nothing') option is not supported by stakeholders. The airlines and airports have raised concerns around the current levels of congestion in this busy airspace region, and the resultant delays and inefficient flight profiles. Over the 10-year time horizon, the detrimental impacts on delay and flight profiles will likely worsen with the forecasted increase in traffic levels.

For the full detailed DPE see Appendix B Design Principle Evaluation Proforma.

3. Design Option Development

3.1 Summary of Design Work

- 3.1.1 As the proposed change is associated with the London FIR/ UIR boundary, any changes in UK airspace must align with changes in neighbouring ANSP airspace. Therefore, close collaborative work has been undertaken with neighbouring ANSPs (specifically, DSNA, EUROCONTROL Maastricht and skeyes) to create viable cross-border designs. This project is part of the larger EUROCONTROL 'Central High Project' with previous (earlier) deployments⁹ enabling this change.
- 3.1.2 Early concept design work focused on the potential scale of change; from the minimum required to reduce the network hotspot; to extensive changes to reduce the hotspot and maximise airspace potential.

3.2 Design Considerations/ Assumptions

- 3.2.1 This change is dependent on neighbouring ANSPs (specifically, DSNA, EUROCONTROL Maastricht and skeyes) aligning airspace change across the FIR/UIR boundary coincidentally.
- 3.2.2 During the Stage 2 design work, the following design constraints were identified:
- Changes below 7,000ft are outside the scope of this ACP, therefore all design options will ensure that there are no changes to flight paths/airspace structures below 7,000ft, including the end points (network connectivity) for standard instrument departures (SIDs).
 - Changes beyond the London FIR/UIR are out of scope of this ACP¹⁰, therefore all design options must ensure viable cross-border operability with neighbouring ANSPs.
 - All design options must support the high complexity/density traffic across the London FIR/UIR interface, redistributing the traffic without negatively impacting ATC workload.
 - All design options must be compatible with existing London Terminal Control and London Area Control sectorisation, to minimise the impact on ATC training.
 - All design options must be compatible with proximate traffic flows, specifically:
 - to DNSA Reims (southeast of this airspace change)
 - from EUROCONTROL Maastricht to London Clacton sectors (north of this airspace change).
- 3.2.3 These design constraints, alongside the SoN and the DPs, have been applied to the design option development work. Due to the existing routes/traffic flows proximate to the VABIK and KONAN COPs, sectorisation restrictions, the limitations associated with FIR/UIR boundary changes and the impact on cross-border operations, there is limited scope for multiple design options for this airspace change proposal. Two realistic design options have been identified, presented in sections 3.3 and 3.4, and, alongside the baseline ('do nothing') option, these form the longlist of design options for this airspace change proposal.

⁹ Changes were made to Cross Border Area 1 (CBA1) in April 2025 [Ref 5], this allowed for boundary COP UTFAV to be established, moving traffic away from RINTI and creating additional space for the consideration of a new COP in the vicinity of KONAN (this ACP).

¹⁰ Neighbouring ANSPs are also conducting airspace changes to support changes in proximity to VABIK/KONAN. Whilst NATS cannot enforce changes on other ANSPs based on our design/s, engagement within the EUROCONTROL 'Central High Project' (involving DSNA, EUROCONTROL Maastricht, skeyes and NATS) is currently on-going to understand the desire and feasibility for change and to develop a viable solution for all parties.

3.3 Option 1: 3 COPs

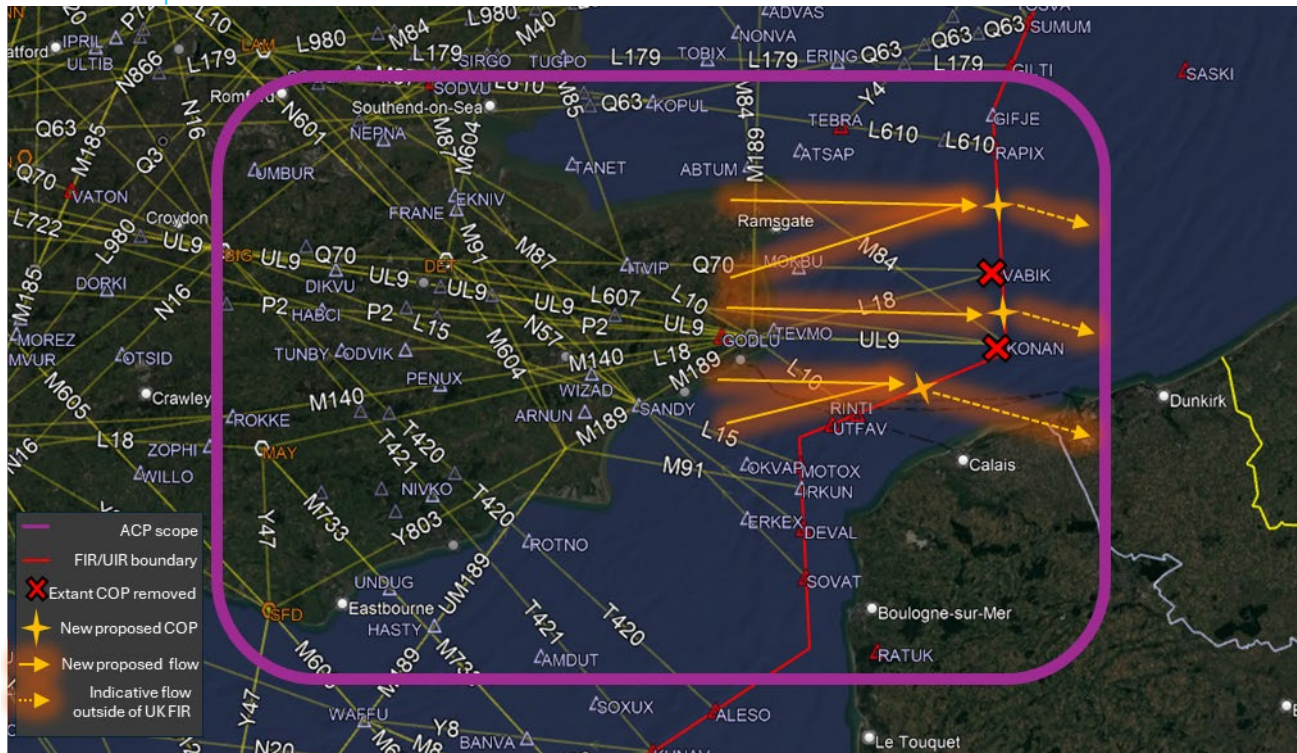


Figure 5: Option 1: 3 COPs. This option removes the extant VABIK and KONAN boundary COPs and introduces 3 new boundary COPs associated with a new systemised route structure. Note: specific changes to current ATS routes and the positioning of new ATS routes are yet to be determined precisely; flight paths are illustrated 'approximately' here to aid visualisation of the 3 COPs concept only. [November 2025 AIRAC overlayed onto Google Earth, 2025].

Table 7: Option 1: 3 COPs

Description & Potential Impacts

For Option 1: 3 COPs, the two current FIR/UIR boundary COPs (VABIK and KONAN) are removed and replaced with three new boundary COPs; one is located to the north of the extant VABIK COP, one to the southwest of the extant KONAN COP, and one is in-between the extant VABIK and KONAN COPs.

All traffic currently routing via VABIK and KONAN will be redistributed across the 3 new COPs, via a systemised route structure based on departure airport¹¹, rather than flight destination (as per today).

The current VABIK ATS routes (L18, Q70) and KONAN ATS routes (L9, L607, M84, UL9) will be adjusted to optimise alignment with the new route structure or removed.

Capacity (ATC Workload)

This new route structure should more **evenly assign traffic** to the routings and would reduce the number of crossing traffic flows, thereby reducing the amount of ATC intervention (vectoring) required to separate traffic which, in turn, would **reduce ATC workload** and mitigate the need to apply delays for capacity.

Stakeholder feedback indicates that this option is favoured to support the forecasted increase in traffic, alleviate the congestion and complexity of the airspace, and reduce ATC workload and delays.

Environment

By allowing aircraft to follow the route structure and reducing tactical deviations from their planned flight paths, this option would also **enable a reduction in track mileage and fuel burn**.

¹¹ Although traffic distribution will be considered to make sure that the design is safe and operable, detailed traffic distribution between these three COPs would form part of the Method of Operations (MoPs) not the airspace design.

With reduced conflicts between the traffic flows, this option could **facilitate more continuous climb profiles**, expediting climb to the optimal cruising altitude with fewer level-offs, and allowing flights to cross the FIR/UIR boundary at higher levels than today.

Capacity/resilience

This option increases the number of routes across the FIR/UIR boundary whilst remaining compatible with proximate traffic flows, enabling an increase in traffic throughput, which would **increase the capacity and resilience** of the airspace network and **reduce delay**.

Training

In this option, all new ATS routes will connect to the extant ATS route structure (including extant SID end points), and the existing London Terminal Control and London Area Control sectorisation is maintained, reducing the impact of connectivity changes across London airspace and **minimizing the ATC training** impact.

Controlled Airspace

This option is expected to result in a minor change to the lateral boundary between Worthing CTA 3 and CTA 5 to support route containment.

Adjacent ANSPs

For this option to be viable, complementary and concurrent changes to the procedures and ATS route structure in adjacent ANSP airspace is required; changes will be required within Brussels lower airspace (Brussels FIR, below FL245), Brussels upper airspace (Brussels UIR, FL245 and above), and France upper airspace (France UIR, FL195 and above) to enable cross-border interoperability. Such changes could provide additional benefit through improved traffic presentation across the FIR/UIR boundary. Stakeholder feedback has highlighted the benefit of simplifying the airspace and route structure across the FIR/UIR boundary with this option.

Other aviation stakeholders

Military stakeholder feedback considers this option will have **limited impact on proximate TACAN routes** and 78 Squadron (Swanwick) southeast sector operations, provided Military ATC are fully briefed on any changes to the airspace and procedures.

Stakeholder feedback

Stakeholder feedback relevant to Option 1: 3 COPs is provided in Table 8 below. Overall, feedback shows stakeholders support the objectives to reduce delay, improve climb profiles, and increase capacity.

Table 8: Option 1: 3 COPs stakeholder feedback

Stakeholder	Feedback	Impact
British Airways MOD easyJet Emirates EUROCONTROL Maastricht London City Airport London Luton Airport	Preferred this option / support this option	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
British Airways London City Airport London Gatwick Airport Virgin Atlantic	Could alleviate congestion/ complexity and reduce associated delays.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
British Airways	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.	For Stage 2, the ACP focuses on the airspace design, rather than the distribution of traffic, which forms part of the Method of Operations (MoPs) and will be further developed at Stage 3. NATS will consider your preference(s) when we continue to work with neighbouring ANSPs at that stage. It should be noted that preference will be given to the design which is considered to work best for the overall network. No impact.

Brussels Airlines	Scenarios with possible higher altitudes coming from airports located in Northern France, Belgium and the Netherlands should be made.	This option supports more continuous climb profiles which may enable Brussels inbounds to cross the FIR/UIR boundary at higher levels than current operations. For Stage 2, the ACP focuses on the airspace design, rather than the distribution of traffic, which forms part of the Method of Operations (MoPs) and will be further developed at Stage 3. NATS will consider your preference(s) regarding traffic from Northern France and the Netherlands when we continue to work with neighbouring ANSPs at that stage. It should be noted that preference will be given to the design which is considered to work best for the overall network. No impact.
easyJet	Option 1 [this option] is our preferred choice as it will deliver improvements in capacity, efficiency, and delay reduction while avoiding unnecessary complexity.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
Emirates	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.	For Stage 2, the ACP focuses on the airspace design, rather than the distribution of traffic, which forms part of the Method of Operations (MoPs) and will be further developed at Stage 3. NATS will consider your preference(s) when we continue to work with neighbouring ANSPs at that stage. It should be noted that preference will be given to the design which is considered to work best for the overall network. No impact.
EUROCONTROL Maastricht	It would mean that we have a common boundary and route structure in upper and lower airspace which makes the situation less complex.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the design option and the Design Principle Evaluation.
London City Airport	It is simpler and more flexible and ultimately NERL are the experts and if it is their preferred option then this should be supported. We trust NERL's judgement and therefore support this as the preferred option over Option 2.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
London Heathrow Airport	We believe this change will support forecast increases in traffic, reduce delays and reduce controller workload.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
London Luton Airport	Environmental considerations for London Luton Airport's airlines and increasing complexity could lead to delays which we are trying to avoid with the change.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
London Stansted Airport	We require a solution that meets the forecasted demand and is acceptable to the receiving Area Control Centres. We have no preference of delivery. If Option 1 meets the required demand and achieves the capacity required, we are satisfied.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
Lufthansa	Makes sense but in my opinion the problem with too much traffic will be delegated to Maastricht as traffic flows will be divided to different airports within Maastricht.	NATS thank you for your feedback. This change is being proposed in close collaboration with neighbouring ANSPs, including EUROCONTROL Maastricht. The implementation of any option which impacts external airspace and/or operations

		will require agreement from the affected parties prior to implementation. No impact.
MOD	78 Sqn's (Swanwick) "southeast" sector encompasses this airspace. The amendment of routing points as per option 1, would mean that conflicting traffic to certain aircraft being worked by 78 Sqn controllers would present in slightly different positions to that currently anticipated. It should be noted that a TACAN route utilised by military traffic is in close proximity to the affected area. That said, these routes are used relatively infrequently and even when active the impact caused to aircraft using them would be limited, providing 78 Sqn controllers are fully briefed on the new procedures prior to the change being implemented.	NATS thank you for your feedback. NATS will continue to engage with DAATM throughout the airspace change process to make sure there is no overall impact on national security. Consideration of this stakeholder feedback has been included in the design option and the Design Principle Evaluation.
MOD	Increased traffic predictability, however, it should be noted this preference is very marginal and overall, the difference in the impact between the two options is minimal.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
Virgin Atlantic	Unsure why this is the preferred option.	The baseline ('do nothing') option will, as the traffic increases, result in increased ATC workload and airline delays, and therefore is not a favourable option. The benefits associated with Option 1: 3 COPs outweigh the benefits associated with Option 2: 5 COPs. Additionally, the increased complexity and ATC workload associated with Option 2: 5 COPs makes it unfavourable. No impact.

Summary

Option 1: 3 COPs improves connectivity between the UK ATS route network and adjacent FIR boundaries by removing the extant VABIK and KONAN boundary COPs and introducing 3 new boundary COPs associated with a new systemised route structure. This option enables ATC workload reduction, improved fuel efficiency, increased traffic throughput, increased capacity and resilience, a reduction in delay, improved traffic presentation across the FIR/UIR boundary and simplification of the airspace and route structure. This option is compatible with extant sectorisation, provides connectivity to the extant ATS route structure, and also maintains compatibility with proximate traffic flows. A minor lateral adjustment to the Worthing CTA 3 and CTA 5 boundaries is required to support this option. The viability of this option is, however, primarily dependent on complementary and concurrent changes within the Brussels FIR, Brussels UIR and France UIR; if agreement on such changes is not reached, further development of this option would need to be discontinued. This option is the favoured option from stakeholder feedback.

Benefits

- Provides a more even traffic distribution.
- Reduces the number of crossing traffic flows.
- Reduces the need for ATC intervention to separate traffic, reducing ATC workload and increasing airspace capacity.
- Allows aircraft to follow their planned flight path, reducing track mileage and fuel burn.
- Enables more continuous climb profiles.
- Increases the number of routes across the FIR/UIR boundary, increasing traffic throughput, capacity and resilience.

- Reduces delay.
- Compatible with proximate traffic flows.
- Connects to the extant ATS route structure.
- Compatible with existing London Terminal Control and London Area Control sectorisation; minimizes ATC training impact.
- Improves traffic presentation across the FIR/UIR boundary.
- Simplifies the airspace and route structure across the FIR/UIR boundary.
- Minimal impact on military operations

Issues

- Dependent on complementary and concurrent changes within the Brussels FIR, Brussels UIR and France UIR to enable cross-border interoperability.

For the full detailed DPE see Appendix B Design Principle Evaluation Proforma.

3.4 Option 2: 5 COPs

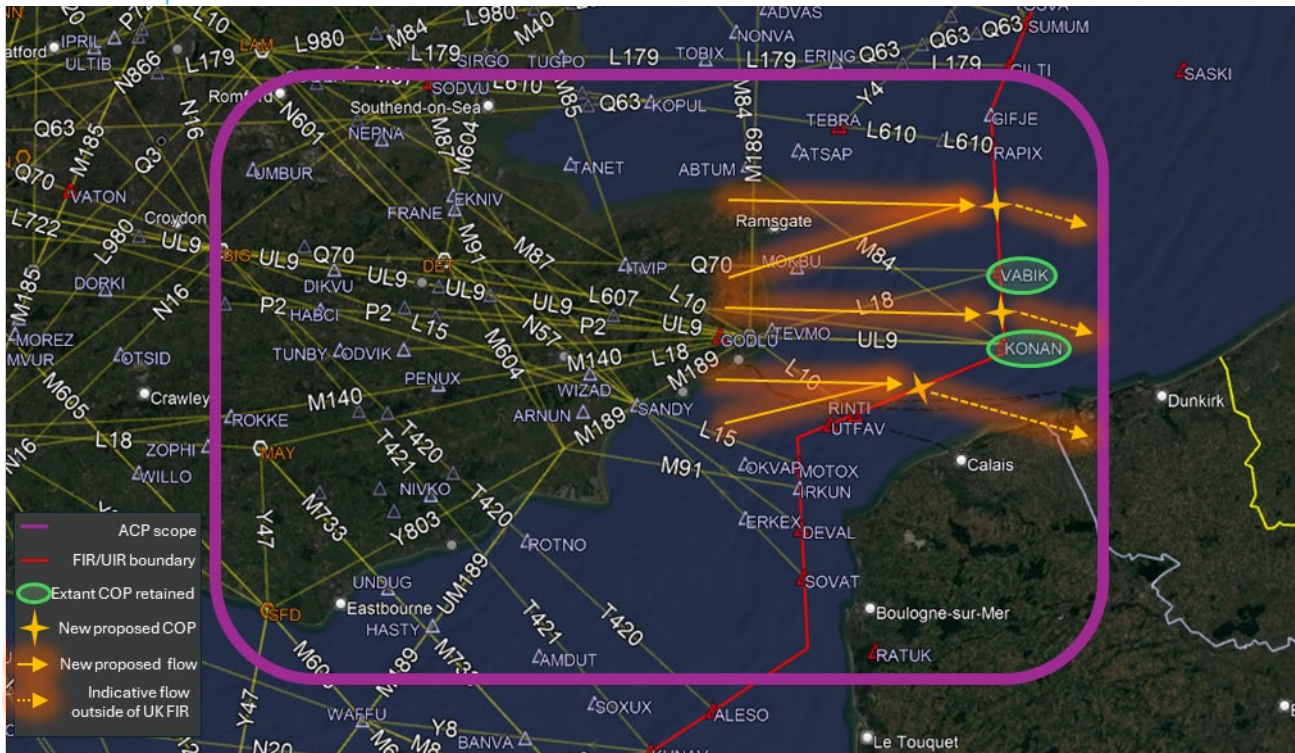


Figure 6: Option 2: 5 COPs. This option retains the extant VABIK and KONAN boundary COPs and introduces 3 new boundary COPs associated with a new part-systemised route structure. Note: specific changes to current ATS routes and the positioning of new ATS routes are yet to be determined precisely; flight paths are illustrated 'approximately' here to aid visualisation of the 5 COPs concept only. [November 2025 AIRAC overlayed onto Google Earth, 2025].

Table 9: Option 2: 5 COPs

Description & Potential Impacts

For Option 2: 5 COPs, the two current FIR/UIR boundary COPs (VABIK and KONAN) are retained and, additionally, three new boundary COPs are introduced; one is located to the north of the extant VABIK COP, one to the southwest of the extant KONAN COP, and one is in-between the extant VABIK and KONAN COPs.

High-level traffic currently routing via KONAN will be redistributed across the three new COPs, via a part-systemised route structure based on departure airport¹², rather than flight destination (as per today).

Consistent with current operations, Brussels TMA inbounds will continue to route via L18 and Q70 to VABIK, and low-level traffic will continue to route via L9 to KONAN.

The current VABIK ATS routes (L18, Q70) and KONAN ATS routes (L9, L607, M84, UL9) will be adjusted to optimise alignment with the new route structure or removed.

Adjacent ANSPs

The benefit of this option is the ability to support cross-border operations with a reduced requirement for changes to the procedures and ATS route structure in adjacent ANSP airspace. For this option, no/minimal change will be required within Brussels lower airspace (Brussels FIR, below FL245); complementary and concurrent changes to the procedures and ATS route structure are required within Brussels upper airspace (Brussels UIR, FL245 and above) and France upper airspace (France UIR, FL195 and above) only. As such, this option **reduces the dependency and risk associated with effecting cross-border changes** concurrently with neighbouring ANSPs.

¹² Although traffic distribution will be considered to make sure that the design is safe and operable, detailed traffic distribution between these three COPs would form part of the Method of Operations (MoPs) not the airspace design.

Capacity (ATC Workload)

Stakeholder feedback has highlighted the importance of reduced delay for this airspace change. The new route structure in this option should more **evenly assign traffic** to the routings, however traffic routing to the extant VABIK and KONAN COPs may not be route separated from traffic flows to the new COPs. As such, some crossing and proximate traffic flows would still require ATC intervention (vectoring) to separate traffic, limiting the potential for this option to reduce ATC workload and retaining the need, particularly as traffic increases, to apply delays to manage the traffic demand and to ensure safety.

Environment

In this option, there is insufficient space on the FIR/UIR boundary to achieve lateral separation between each of the five COPs and, as a result, not all aircraft could be left to follow the route structure (i.e. some tactical deviations from their planned flight paths would be expected to ensure aircraft are separated), thereby limiting the potential for this option to reduce track mileage and fuel burn.

Stakeholder feedback has highlighted the importance of improved climb profiles for this airspace change. Due to conflicts between the traffic flows, the potential for this option to facilitate more continuous climb profiles, expediting climb to the optimal cruising altitude with fewer level-offs, would be limited by the requirement to use vertical separation to deconflict traffic flows within this busy volume of airspace.

Capacity/resilience

Stakeholder feedback has highlighted the importance of increased capacity for this airspace change. This option increases the number of routes across the FIR/UIR boundary; however, it creates conflicting traffic flows, increasing airspace complexity with a mixture of crossing, climbing and descending traffic which will require substantial tactical intervention to ensure safety. As such, despite the increased number of routes, the ability to increase traffic throughput, and to improve the capacity and resilience of the airspace network is considered limited in this option.

Training

In this option, all new ATS routes will connect to the extant ATS route structure (including extant SID end points), and the existing London Terminal Control and London Area Control sectorisation is maintained, reducing the impact of connectivity changes across London airspace and **minimizing the ATC training** impact.

Controlled Airspace

This option is expected to result in a minor change to the lateral boundary between Worthing CTA 3 and CTA 5 to support route containment.

Other aviation stakeholders

Military stakeholder feedback considers this option will have **limited impact on proximate TACAN routes** and 78 Squadron (Swanwick) southeast sector operations, provided Military ATC are fully briefed on any changes to the airspace and procedures.

Some airline stakeholders have expressed a preference for this option, over Option 1: 3 COPs, and perceive benefits in route flexibility, the segregation of lower-level traffic, reduced ground-delays, and a reduction in ATC workload across the FIR/ UIR boundary. It should be noted that NATS SMEs do not consider this to be an accurate reflection of the overall impacts of introducing Option 2: 5 COPs; the increased complexity of the airspace design is likely to exacerbate restrictions on the operation and, with the forecasted increase in traffic levels over the 10-year time horizon, issues with delay and inefficient aircraft profiles are likely to persist in this region of airspace.

Stakeholder feedback

Stakeholder feedback relevant to Option 2: 5 COPs is provided in below.

Table 10: Option 2: 5 COPs stakeholder feedback

Stakeholder	Feedback	Impact
Brussels Airlines Lufthansa Virgin Atlantic	Preferred this option / support this option	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
British Airways	Limited benefit over option 1.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
Brussels Airlines	Scenarios with possible higher altitudes coming from airports located in Northern France, Belgium and the Netherlands should be made.	This design option would involve no change to Brussels inbounds. For Stage 2, the ACP focuses on the airspace design, rather than the distribution of traffic, which forms part of the Method of Operations (MoPs) and will be further developed at Stage 3. NATS will consider your preference(s) regarding traffic from Northern France and the Netherlands when we continue to work with neighbouring ANSPs at that stage. It should be noted that preference will be given to the design which is considered to work best for the overall network. No impact.
Brussels Airlines	More flexibility.	For this design option, Belgium traffic would only operate via VABIK. Therefore, there would not be no change in flexibility compared to current operations. No impact.
Emirates	In general, our flights do not require low level routes departing London. In option 2, increased capacity which might be offset by increased complexity does not sound promising. At the end of the day, we want options on high level routes and reduce delays on the ground.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
EUROCONTROL Maastricht	This is MUAC's second best option	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
London City Airport	Keeping KONAN and VABIX as they are today for lower-level traffic would appear to be more complex and potentially restrictive. It may restrict on quieter days the flexibility for aircraft to use more ideal flight levels.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.
London Gatwick Airport	Need more information to support NERL's consideration that COPs would not be laterally separated. Would there not be sufficient altitude separation between the high level and low-level COPs?	There are separate routes for high-level traffic and low-level traffic in Option 2. Some aircraft would be climbing and others descending (to make the relevant level constraints at the FIR/UIR boundary). Without lateral separation at the COPs however, the airspace design is too complicated to leave aircraft on their navigation whilst assuring safety. No impact.
London Stansted Airport	We require a solution that meets the forecasted demand and is acceptable to the receiving Area Control Centres. We have no preference of delivery. If option 2 meets the required demand	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.

	and achieves the capacity required, we are satisfied.	
Lufthansa	Would be my preferred option as traffic flown into central Europe are separated over England. This may reduce high workload on Central European ATC with less slots and better routes.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation
MOD	The impact for option 2 is much the same as option 1, mentioned above. There would be minor impact to military traffic operating within the area and on the previously mentioned TACAN routers, however providing sufficient engagement is undertaken with 78 Sqn, that could easily be sufficiently mitigated.	NATS thank you for your feedback NATS will continue to engage with DAATM throughout the airspace change process to make sure there is no overall impact on national security. Consideration of this stakeholder feedback has been included in the design option and the Design Principle Evaluation.
Virgin Atlantic	Could the increased complexity be dealt with some vertical re-sectorisation? With a level-cap on KONAN and VABIK, inadequate lateral separation should not be an issue.	There are separate routes for high-level traffic and low-level traffic in Option 2. Some aircraft would be climbing and others descending (to make the relevant level constraints at the FIR/UIR boundary). Without lateral separation at the COPs however, the airspace design is too complicated to leave aircraft on their navigation whilst assuring safety. No impact.
Virgin Atlantic	Segregation of low-level Brussels traffic, and other 'local' European destinations, e.g. Luxemburg appears sensible.	NATS thank you for your feedback. Consideration of this stakeholder feedback has been included in the Design Principle Evaluation.

Summary

Option 2: 5 COPs improves connectivity between the UK ATS route network and adjacent FIR boundaries by introducing 3 new boundary COPs associated with a new part-systemised route structure, whilst retaining the extant VABIK and KONAN boundary COPs. This option will support cross-border operations whilst reducing the requirement for changes to the procedures and ATS route structure in adjacent ANSP airspace. However, a significant issue with this option is that it creates conflicting traffic flows, increasing airspace complexity. The route structure for this option does not ensure lateral separation for all traffic flows and substantial tactical intervention (vectoring and vertical restrictions) will be required to ensure traffic separation. As such the ability to provide ATC workload reduction, improve fuel efficiency, increase traffic throughput, increase capacity and resilience, and reduce delay is considered limited with this option. This option is compatible with extant sectorisation and provides connectivity to the extant ATS route structure. A minor lateral adjustment to the Worthing CTA 3 and CTA 5 boundaries is required to support this option.

Benefits

- Reduces the changes required in adjacent ANSP airspace to enable cross-border interoperability.
- Provides a more even traffic distribution.
- Connects to the extant ATS route structure.
- Compatible with existing London Terminal Control and London Area Control sectorisation; minimizes ATC training impact.
- Minimal impact on military operations

Issues

- Creates conflicting traffic flows
- Potential to support ATC workload reduction is limited.
- Potential to reduce delay is limited.

- Potential to reduce track mileage and fuel burn is limited.
- Potential for more continuous climb profiles is limited.
- Potential to increase traffic throughput, capacity and resilience is limited.

For the full detailed DPE see Appendix B Design Principle Evaluation Proforma.

3.5 Other stakeholder feedback

3.5.1 Other stakeholder feedback, not specific to a particular design option, is included in Table 11.

Table 11: Other stakeholder feedback

Stakeholder	Feedback	Impact
London Heathrow Airport	As with any Level 2 Airspace Change, it is important that the proposed change does not alter flight behaviours below 7,000ft, and it is therefore important to ensure changes do not result from new direct routings below 7,000ft to potentially new FIR exit points.	This airspace change will have no impact on aircraft tracks below 7,000ft. No impact.
London Heathrow Airport	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 Minimum Departure Interval (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.	Quantification of delay, capacity and environmental impacts will be provided as appropriate in Stage 3 following completion of the detailed design work. For the Stage 2 work a qualitative assessment for each design option has been completed, see Appendix B for the Design Principle Evaluation and section 5 for the Initial Options Appraisal. No impact.
London Stansted Airport	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/re-aligned 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.	NATS thank you for your feedback NATS will track the progression of these ACPs during the Stage 3 work to ensure that the network connectivity for any new/re-aligned ATS routes are compatible with any agreed airspace change proposals.
MOD	Should have nil impact to 78 Sqn. There are some residual concerns about the positioning of the new reporting points (and consequently civil tracks) vis-à-vis the extant military TACAN routes. If the military were to funnel more traffic along these it could potentially interfere with civil operations. The routes are virtually unused at this moment; and if activity were to pick-up the existing coordination methods should enable both civil and military aircraft to utilise the airspace safely.	NATS thank you for your feedback NATS will continue to engage with DAATM throughout the airspace change process to make sure there is no overall impact on national security. No impact.
MOD	The key mitigation for any impact to military operations will be ensuring that 78 Sqn's controllers are fully briefed on any developments	NATS thank you for your feedback NATS will continue to engage with DAATM throughout the airspace change process to make sure there is no overall impact on national security. No impact.

4. Design Principle Evaluation (DPE)

4.1 Design Principles Assessment Criteria

4.1.1

Table 12 below summarises the assessment criteria used to determine whether each Design Option meets/ partially meets/ does not meet each Design Principle. This assessment shows how each design option aligns with the Design Principles developed at Stage 1. The evidence is qualitative and based on combining input from experienced SMEs with feedback from stakeholders (see section 3) and the evolving design work. A summary for each design option is provided in this section; for the detailed assessment see Appendix B Design Principle Evaluation Proforma.

Table 12: Assessment criteria used to evaluate Design Options against Design Principles. MDP = Mandatory Design Principle, DDP = Discretionary Design Principle.

Design Principle	Description	Priority	Qualitative Criteria for Met, Partial, Not Met		
			Not Met	Partial	Met
MDP Safety	The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety.	A	Significant adverse impact on safety	Minor adverse impact on safety	Safety maintained or enhanced
DDP Operational (Capacity)	The airspace change proposal should provide the greatest capacity benefits.	A	Capacity decreased compared to today	Capacity remains similar to today	Capacity increased compared to today
MDP Environment ¹³	The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017.	B	Aircraft emissions (per flight) increased compared to today	Aircraft emissions (per flight) remain similar to today	Aircraft emissions (per flight) decreased compared to today
DDP Environmental (Greenhouse Gas Emissions)	The airspace change proposal should minimise greenhouse gas emissions at or above 7,000ft.	B	Aircraft emissions (per flight) increased compared to today	Aircraft emissions (per flight) remain similar to today	Aircraft emissions (per flight) decreased compared to today
MDP Policy ¹⁴	The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernisation strategy (AMS) or Secretary of State and CAA's policy and guidance.	C	Significant inconsistencies noted at this stage	Minor inconsistencies noted at this stage	No inconsistencies noted at this stage
DDP Technical (Other Aviation Stakeholders)	The airspace change proposal should consider the impacts on air navigation service providers (ANSPs) and other aviation stakeholders such as nearby airport operators.	C	Overall impact, on other airspace users, worse than today	Overall impact, on other airspace users, similar to today	Overall impact, on other airspace users, better than today

4.2 Design Options Acceptance Criteria

4.2.1

In order to not be overly restrictive, and to enable all suitable options to progress to the next stage, the following logic, see Table 13, will be applied to assess the design options to determine which will be discounted and which will be progressed to the next stage.

Table 13: Design Options acceptance criteria

Priority	Description as Written in Stage 1	Impact on Design Progression
A	"A" is the top priority and must be met.	Any priority "A" DPs must be met.
B	"B" is the second priority, after "A" is achieved.	Any priority "B" DPs must be partially met or met.
C	"C" design principles are to be considered after both "A" and "B".	At least one priority "C" DP must be partially met or met.

¹³ The ANG2017 includes three objectives, in summary: limit/ reduce the number of people adversely affected by aircraft noise; reduce global emissions; and minimise local air quality impacts. CAP1616i states that noise and local air quality relate to airspace changes below 7,000ft. Therefore, these are not within the scope of this ACP. As a result, this DP will only assess the objective to "ensure that the aviation sector makes a significant and cost-effective contribution towards reducing global emissions" (ANG2017, pg. 8).

¹⁴ This DP will consider the degree of alignment with the AMS strategic objectives (safety, integration of diverse airspace users, simplification of the airspace system and environmental sustainability).

4.3 Baseline ('Do Nothing') - REJECTED

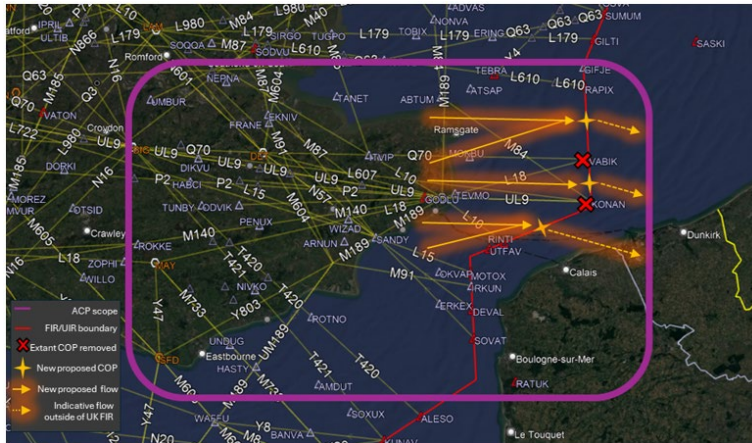
4.3.1 This option represents the existing airspace design i.e. the 'do nothing' option. It maintains the extant VABIK and KONAN boundary COPs and traffic flows across the London FIR/UIR boundary.

Design Principle	Description	Priority	Qualitative criteria for Met, Partial, Not Met
MDP Safety	The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety.	A	MET: Maintained – maintains safety as per today by restricting traffic throughput
DDP Operational (Capacity)	The airspace change proposal should provide the greatest capacity benefits.	A	PARTIAL: no change to capacity
MDP Environment	The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017.	B	NOT MET: increased tactical intervention inhibits optimal flight profiles, increasing emissions.
DDP Environmental (Greenhouse Gas Emissions)	The airspace change proposal should minimise greenhouse gas emissions at or above 7,000ft.	B	NOT MET: increased tactical intervention inhibits optimal flight profiles, increasing emissions.
MDP Policy	The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernisation strategy (AMS) or Secretary of State and CAA's policy and guidance.	C	NOT MET: does not align with the AMS strategic objectives.
DDP Technical (Other Aviation Stakeholders)	The airspace change proposal should consider the impacts on air navigation service providers (ANSPs) and other aviation stakeholders such as nearby airport operators.	C	PARTIAL: no change to the impact on other aviation stakeholders.

4.3.2 The baseline ('do nothing') option did not meet the progression requirements set for the DPE, hence this option was **REJECTED** and will not be progressed.

For the full detailed DPE see Appendix B Design Principle Evaluation Proforma.

4.4 Option 1: 3 COPs – PROGRESSED



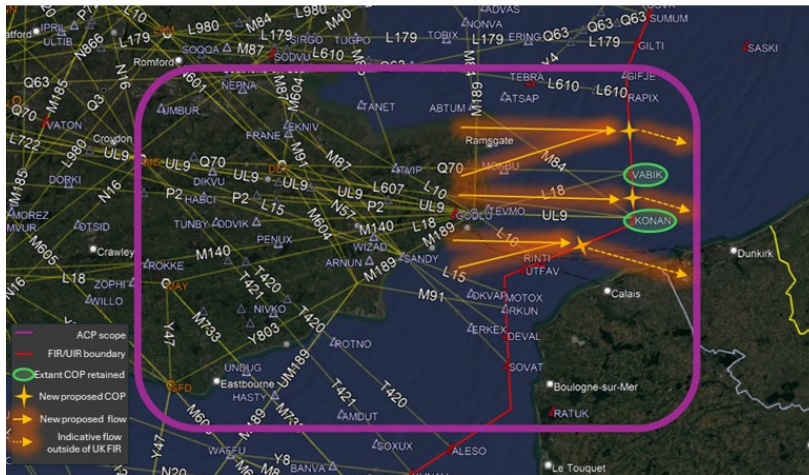
This option removes the extant VABI and KONAN boundary COPs and introduces 3 new boundary COPs associated with a new systemised route structure.

Design Principle	Description	Priority	Qualitative criteria for Met, Partial, Not Met
MDP Safety	The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety.	A	MET: Maintained – route systemisation to safely manage traffic throughput
DDP Operational (Capacity)	The airspace change proposal should provide the greatest capacity benefits.	A	MET: increases effective capacity through reduced ATC workload
MDP Environment	The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017.	B	MET: supports more optimal flight profiles, reducing emissions.
DDP Environmental (Greenhouse Gas Emissions)	The airspace change proposal should minimise greenhouse gas emissions at or above 7,000ft.	B	MET: supports more optimal flight profiles, reducing emissions.
MDP Policy	The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernisation strategy (AMS) or Secretary of State and CAA's policy and guidance.	C	MET: Good alignment with the AMS.
DDP Technical (Other Aviation Stakeholders)	The airspace change proposal should consider the impacts on air navigation service providers (ANSPs) and other aviation stakeholders such as nearby airport operators.	C	PARTIAL: requires change within adjacent ANSP airspace

4.4.1 Option 1: 3 COPs is considered a viable option and has been **PROGRESSED** to the next stage.

For the full detailed DPE see Appendix B Design Principle Evaluation Proforma.

4.5 Option 2: 5 COPs – REJECTED



This option retains the extant VABIK and KONAN boundary COPs and introduces 3 new boundary COPs associated with a new part-systemised route structure.

Design Principle	Description	Priority	Qualitative criteria for Met, Partial, Not Met
MDP Safety	The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety.	A	MET: Maintained – maintains safety as per today by restricting traffic throughput
DDP Operational (Capacity)	The airspace change proposal should provide the greatest capacity benefits.	A	PARTIAL: potential to increase traffic throughput is limited.
MDP Environment	The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017.	B	PARTIAL: potential to support more optimal flight profiles is limited.
DDP Environmental (Greenhouse Gas Emissions)	The airspace change proposal should minimise greenhouse gas emissions at or above 7,000ft.	B	PARTIAL: potential to support more optimal flight profiles is limited.
MDP Policy	The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernisation strategy (AMS) or Secretary of State and CAA's policy and guidance.	C	PARTIAL: introduces additional airspace complexity
DDP Technical (Other Aviation Stakeholders)	The airspace change proposal should consider the impacts on air navigation service providers (ANSPs) and other aviation stakeholders such as nearby airport operators.	C	PARTIAL: requires change within adjacent ANSP airspace

4.5.1 Option 2: 5 COPs did not meet the progression requirements set for the DPE, hence this option was **REJECTED** and will not be progressed.

For the full detailed DPE see Appendix B Design Principle Evaluation Proforma.

5. Initial Options Appraisal (IOA)

5.1 Methodology

- 5.1.1 The objective of the IOA is to qualitatively appraise those airspace design options which have progressed successfully through the DPE.
- 5.1.2 Each design option is assessed against key factors, as described in CAP1616f [Ref 10, P36-P41], in order to understand the impacts of the airspace change proposal.
- 5.1.3 The assessment comparisons are:
- the year of implementation with the proposed airspace change versus the same year without the proposed airspace change (year 1)
 - 10-years after implementation with the proposed airspace change versus the same year without the proposed airspace change (year 10).
- 5.1.4 An assessment of the baseline ('do nothing') option is included in the IOA for comparison purposes only, as this option was discounted in the DPE.
- 5.1.5 The evidence supplied is qualitative and high level; the assessment criteria (see section 5.2) is based on the opinions of SMEs (including ATC, airspace change specialists and safety experts) and feedback derived from stakeholder engagement. The assessments focus on eliminating bias by establishing clear assessment objectives and criteria upfront and ensuring the use of diverse perspectives in the evaluation process.
- 5.1.6 The qualitative assessments include consideration of the traffic forecasts for the 10-year assessment period, see Table 5. The traffic forecast has been updated from Stage 1, to ensure the most credible and up-to-date data is presented within this submission. Considering the early maturity of the design concepts, a qualitative assessment is provided at this time. At Stage 3, following more detailed design work, a more quantitative appraisal will be provided as appropriate.
- 5.1.7 The IOA also provides a brief, plain English, safety statement, see section 6. The safety statement is an initial indication of the safety implications for this airspace change proposal and includes qualitative statements on the potential impacts the design options could have on maintaining a high standard of safety.

5.2 IOA Assessment criteria

- 5.2.1 Table 14 is based on CAP1616f [Ref 10, P36-P41]; it summarises the impact assessment criteria for the key factors in the IOA.

Table 14: IOA assessment criteria

Group	Impact	Level of Analysis ¹⁵	Evidence ¹⁵
Communities	Noise	n/a	n/a
Communities	Local Air quality	n/a	n/a
Wider society	Greenhouse gas emissions	Qualitative	A qualitative assessment of changes to greenhouse gas emissions compared with the 'do nothing' baseline.
Wider society	Tranquillity	n/a	n/a
Wider society	Biodiversity	n/a	n/a
Wider society	Capacity/resilience	Qualitative	A qualitative assessment of changes to airspace capacity and resilience compared with the 'do nothing' baseline.

¹⁵ Air Navigation Guidance (2017) states that at or above 7,000ft reducing greenhouse gas emissions should be prioritised over noise. This is reflected in CAP1616i which states that noise metrics, tranquillity and biodiversity only apply to changes below 7,000ft and 1,000ft for local air quality.

General Aviation	Access	Qualitative	A qualitative assessment of changes to General Aviation access to controlled airspace compared with the 'do nothing' baseline.
General Aviation/ commercial airlines	Economic impact from increased effective capacity	Qualitative	A qualitative assessment of changes to commercial airline economic impacts from increased effective capacity compared with the 'do nothing' baseline.
General Aviation/ commercial airlines	Fuel burn	Qualitative	A qualitative assessment of changes to commercial airline fuel burn compared with the 'do nothing' baseline.
Commercial airlines	Training costs	Qualitative	A qualitative assessment of changes to commercial airline training costs compared with the 'do nothing' baseline.
Commercial airlines	Other costs	Qualitative	A qualitative assessment of changes to other relevant commercial airline costs compared with the 'do nothing' baseline.
Airport/ ANSP	Infrastructure costs	Qualitative	A qualitative assessment of changes to ANSP infrastructure costs compared with the 'do nothing' baseline.
Airport/ ANSP	Operational costs	Qualitative	A qualitative assessment of changes to ANSP operational costs compared with the 'do nothing' baseline.
Airport/ ANSP	Deployment costs	Qualitative	A qualitative assessment of ANSP deployment costs compared with the 'do nothing' baseline.
Airport/ ANSP	Other costs	Qualitative	A qualitative assessment of other costs compared with the 'do nothing' baseline.

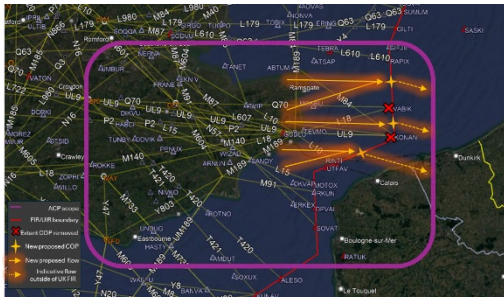
5.3 Baseline ('Do Nothing')

- 5.3.1 This option represents the existing airspace design i.e. the 'do nothing' option. It maintains the extant VABIK and KONAN boundary COPs and traffic flows across the London FIR/UIR boundary.
- 5.3.2 This option is provided for comparison purposes only; the baseline ('do nothing') option was discounted in the DPE.

Table 15: Baseline ('Do Nothing'), Initial Options Appraisal

Group	Impact	Level of Analysis
Communities	Noise	N/A
N/A		
Communities	Local air quality	N/A
N/A		
Wider society	Greenhouse gas emissions	Qualitative
Increase in greenhouse gas emissions. In the baseline ('do nothing') scenario there is no change to the existing airspace design, however traffic growth (by ~10%) over the 10-year period is anticipated. Increased ATC intervention (e.g. increased step-climbs, increased track mileage) and restrictions to traffic throughput (for example through the use of ground delays) may be required to manage the increasing volume of conflicting traffic. This could inhibit optimal flight profiles which would be detrimental to CO₂ emissions.		
Wider society	Tranquillity	N/A
N/A		
Wider society	Biodiversity	N/A
N/A		
Wider society	Capacity/ resilience	Qualitative
Detrimental impact on resilience. In the 'do nothing' scenario, there is no change to the existing airspace design, therefore there is no change to capacity. However, as traffic levels increase over the 2027-2036 time period, the ability to withstand and recover from air traffic management disruptions or failures, whilst maintaining an acceptable and safe level of service, would be increasingly diminished within this complex and dense airspace region.		
General Aviation	Access	Qualitative
There is no change to the airspace design, therefore there is no change to General Aviation access.		
General Aviation / Commercial Airlines	Economic impact from increased effective capacity	Qualitative
Detrimental economic impact. In the 'do nothing' scenario, as traffic levels increase over the 2027-2036 time period, demand through the airspace would be managed by restricting traffic throughput (for example through the use of ground delays, as per today) resulting in increased economic disbenefit to airlines (e.g. lost revenue, higher operational expenses, increased fuel burn, reduced aircraft utilization etc.).		
General Aviation / Commercial Airlines	Fuel burn	Qualitative
Increase in fuel burn. In the baseline ('do nothing') scenario there is no change to the existing airspace design, however traffic growth (by ~10%) over the 10-year period is anticipated. Increased ATC intervention (e.g. increased step-climbs, increased track mileage) and restrictions to traffic throughput (for example through the use of ground delays) may be required to manage the increasing volume of conflicting traffic. This could inhibit optimal flight profiles which would be detrimental to fuel burn.		
Commercial Airlines	Training costs	Qualitative
There is no change to the airspace design, therefore there are no airline training costs.		
Commercial Airlines	Other costs	Qualitative
There is no change to the airspace design, therefore there are no airline other costs.		
Airport / ANSP	Infrastructure costs	Qualitative
There is no change to the airspace design, therefore there are no ANSP infrastructure costs.		
Airport / ANSP	Operational costs	Qualitative
There is no change to the airspace design, therefore there are no ANSP operational costs.		
Airport / ANSP	Deployment costs	Qualitative
There is no change to the airspace design, therefore there are no ANSP deployment costs.		
Airport / ANSP	Other costs	Qualitative
There is no change to the airspace design, therefore there are no ANSP 'other' costs.		

5.4 Option 1: 3 COPs



This option removes the extant VABIK and KONAN boundary COPs and introduces 3 new boundary COPs associated with a new systemised route structure.

Table 16: Option 1: 3 COPs, Initial Options Appraisal

Group	Impact	Level of Analysis
Communities	Noise	N/A
N/A		
Communities	Local Air quality	N/A
N/A		
Wider society	Greenhouse gas emissions	Qualitative
Greenhouse gas emissions may be improved compared to the baseline ('do nothing') option. 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.		
Wider society	Tranquillity	N/A
N/A		
Wider society	Biodiversity	N/A
N/A		
Wider society	Capacity/ resilience	Qualitative
Capacity/resilience may be improved compared to the baseline ('do nothing') option. The new systemised route structure should more evenly assign traffic routings and reduce the number of crossing traffic flows. As traffic levels increase over the 2027-2036 time period, this would reduce the amount of ATC intervention (e.g. vectoring, level-offs) required to separate traffic, reducing ATC workload and mitigating the need to apply delays for capacity. Additionally, this option increases the number of routes across the FIR/ UIR boundary enabling an increase in traffic throughput, improving the capacity and resilience of the airspace network.		
General Aviation	Access	Qualitative
General Aviation access would remain unchanged from the baseline ('do nothing') option. This option does not impact General Aviation.		
General Aviation / Commercial Airlines	Economic impact from increased effective capacity	Qualitative
Economic impacts may be improved compared to the baseline ('do nothing') option. The option increases the number of routes crossing the 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, in particular as traffic levels increase over the 2027-2036 time period. The resultant increase in airspace capacity should provide economic benefit to airlines by reducing the financial costs associated with airspace delays (e.g. lost revenue, higher operational expenses, increased fuel burn, reduced aircraft utilization etc.).		
General Aviation / Commercial Airlines	Fuel burn	Qualitative
Fuel burn may be reduced compared to the baseline ('do nothing') option. 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.		
Commercial Airlines	Training costs	Qualitative
Airline training costs are not expected with the implementation of this option		
Commercial Airlines	Other costs	Qualitative
Routine AIRAC updates will ensure that the required data revisions to aircraft FMS (Flight Management System) and flight planning systems takes place for this airspace change. There are no other known costs which would be imposed on commercial aviation.		
Airport / ANSP	Infrastructure costs	Qualitative
Infrastructure costs (ANSP) may be increased compared to the baseline ('do nothing') option. The implementation of this option by NATS within the London FIR/UIR would require complementary changes to take place in the Brussels FIR (EBBU), Brussels UIR (EBUR), and France UIR (LFFF) impacting skyes (Belgium), EUROCONTROL Maastricht and DSN ANSPs respectively. Adaptation updates to relevant ANSP systems would be required to accommodate flight plan processing, map displays, electronic flight data etc. associated with the new ATS route structure. This is typically done in line with routine AIRAC implementation processes. Note: NATS cannot quantify infrastructure costs for other ANSPs; the scale of changes outside of the London FIR/UIR is unknown at this point, however, NATS is closely working alongside neighbouring ANSPs as part of this coordinated airspace change.		

Group	Impact	Level of Analysis
Airport / ANSP	Operational costs	Qualitative
Operational costs are not expected with the implementation of this option.		
Airport / ANSP	Deployment costs	Qualitative
Deployment costs (ANSP) would be increased compared to the baseline ('do nothing') option. The implementation of this option would require ATC training and validation; costs could include use of simulator facilities including engineering/support staff, data preparation & testing, safety/HF/validation analysts etc. Note: NATS cannot quantify deployment costs for other ANSPs; the scale of changes outside of the London FIR/UIR is unknown at this point, however, NATS is closely working alongside neighbouring ANSPs as part of this coordinated airspace change.		
Airport / ANSP	Other costs	Qualitative
There are no other known costs which would be imposed on ANSPs with the implementation of this option.		

Conclusion

Option 1: 3 COPs introduces a new systemised route structure enabling more efficient flight profiles which would enable a reduction in fuel burn and CO₂ emissions. By reducing ATC workload and increasing the number of routes across the FIR/UIR boundary this option would improve the capacity and resilience of the airspace. In addition, this option should provide economic benefit to airlines by increasing airspace capacity and therefore reducing the financial costs associated with airspace delays.

The implementation of this option is, however, primarily dependent on complementary and concurrent changes within the Brussels FIR, Brussels UIR and France UIR, and NATS is continuing to work closely alongside neighbouring ANSPs as part of this coordinated airspace change.

For these reasons Option 1: 3 COPs is considered viable and will be **PROGRESSED** to Stage 3.

5.5 IOA Summary

5.5.1 A single option, Option 1:3 COPs, was carried forward from the DPE to the IOA.

5.5.2 As a result of the qualitative IOA, it was concluded that this option is viable and will be progressed to Stage 3.

5.5.3 Option 1: 3 COPs is the single viable option (the 'shortlist') being considered for progression of this airspace change proposal and is considered NATS 'preferred' design option.

5.6 Addressing evidence gaps

5.6.1 Stage 3 will develop a detailed design for the preferred option which will enable more quantitative impact assessments including fuel burn, and CO₂e emissions analysis. Where required, qualitative assessments will be re-assessed and updated:

Noise

- Not applicable to this airspace change, see Table 14.

Local Air Quality

- Not applicable to this airspace change, see Table 14.

Fuel burn and Greenhouse Gases

- Fuel burn and CO₂e modelling analysis using the best available performance data from EUROCONTROL's Base of Aircraft Data (BADA) as the data source, which will be processed via a fast-time simulation application.
- Monetisation of the impacts of greenhouse gas emissions using the Department for Transport's [TAG](#) workbook for greenhouse gases.
- Fuel costs will be based on European market IATA jet fuel costs, converted from USD to GBP, both taken on a 'snapshot' date (which will be determined during the Stage 3 development work).

Tranquillity and Biodiversity

- Not applicable to this airspace change, see Table 14.

Capacity/Resilience

- We anticipate some improvements to capacity/ resilience. Following the detailed procedure design in Stage 3, any change in impacts will be reviewed and the qualitative assessments for capacity/ resilience will be updated as required.

Access

- We currently do not expect any change relating to access. However, following the detailed procedure design in Stage 3, any change in impacts will be reviewed and qualitative assessments for access will be updated as required.

Economic impact

- We anticipate some improvements to economic impact (airlines). Following the detailed procedure design in Stage 3, any change in impacts will be reviewed and qualitative assessments for economic impacts will be updated as required.

Other costs

- Where possible benefits and impacts will be monetised at Stage 3, including any airlines 'other' costs and ANSP infrastructure and deployment costs. Where impacts cannot be monetised, suitable justification or qualitative approaches as appropriate will be included within the assessments.

6. Safety Assessment

6.1 Overview

6.1.1 Safety assessment Baseline ('do nothing') scenario:

If there is no change to the current connectivity at the DVR interface, there would be no foreseeable change to the current safety performance; traffic demand through the airspace would be managed to make sure that safety was not compromised with the predicted increase in traffic.

This ACP seeks to address current inefficiencies in the route network, improving traffic presentation to adjacent ANSPs, and enabling more efficient flight planning and increased throughput. It has not been raised to address any specific safety concerns.

6.1.2 Safety assessment Option 1: 3 COPs:

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.

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.

6.1.3 Future activities:

Subject to safety analysis, a safety strategy will be captured within the Safety Assurance Plan in Stage 3. Appropriate safety cases will be written, as will an analysis of CAP1385 route separation criteria [Ref 11], as well as the relevant containment policies, of each route segment against adjacent proposed routes.

ATC simulations are scheduled during Stage 3 to provide ATC familiarisation and receive ATC feedback on the designs to progress the design development work.

Further safety and Human Factors analysis and activities will be conducted on the proposed design option/s that will include:

- Hazard Analysis
- Testing of safety scenarios/hazard mitigations in real-time development simulations

Work is ongoing to provide detailed safety assessments for subsequent CAP1616 stages. At this time, there are no indications to suggest the current option would be unsafely implemented.

7. Habitat Regulations Screening

7.1 Background

7.1.1 During Stage 2 of the CAP1616 process a Habitats Regulations Assessment (HRA) early screening criteria form is completed which identifies if a HRA will be required during future stages of the ACP.

7.1.2 The questions answered are shown in section 7.2 below; the conclusion made is that a habitats regulations assessment is not required.

7.2 Habitats Regulations Assessment – Early Screening Criteria

7.2.1 **Question 1:** Are there any changes to air traffic patterns or number of movements expected below 3,000ft due to the airspace change proposal?

7.2.2 Answer: No.

7.2.3 **Result:** If the answer to question 1 is 'no' then habitats regulations assessment is no longer required (CAP1616i).

8. Summary and Next Steps

8.1 Summary

- 8.1.1 The process for this airspace change proposal started in February 2025 with the submission of the SoN, and continued with the development of DPs via stakeholder engagement, followed by progression through the CAA's regulatory Stage 1 Gateway Assessment.
- 8.1.2 In Stage 2, alongside the baseline ('do nothing') option, two airspace design options were created, described, engaged upon, and formally evaluated against the DPs. A single option, Option 1: 3 COPs, progressed successfully through the DPE and was then subjected to a qualitative IOA including an assessment of safety considerations.
- 8.1.3 Throughout Stage 2, NATS has conducted comprehensive two-way engagement with its stakeholders. This has allowed NATS to inform and refine the baseline scenarios, the design options and the impact assessments based on stakeholder input. The outcome of this engagement has influenced the selection of the design options presented herein.
- 8.1.4 Option 1: 3 COPs is the single viable option identified from this process (the 'shortlist') which is considered suitable for progression to Stage 3 of the airspace change process. These design options are considered the set of LCY 'preferred' design options, and are as
- 8.1.5 An HRA screening form was completed, and the conclusion made that a habitats regulations assessment is not required.

8.2 Next Steps

- 8.2.1 Subject to CAA approval at Stage 2, the work will progress on to Stage 3 Consult, with a full public consultation, and planned implementation in March 2027.
- 8.2.2 Stage 3 will develop a detailed design for the preferred option which will enable more quantitative impact assessments including fuel burn, and CO₂e emissions analysis. Where required, qualitative assessments will be re-assessed and updated.

9. Appendix A Summary of Stakeholder Engagement Activities

9.1 Engagement timeline

9.1.1 Table 17 provides a chronology of the Stage 2 engagement activities.

9.1.2 Throughout Stage 2, two-way communication has been maintained between NATS and its stakeholders. The various emails are not detailed here but have been provided as evidence directly to the CAA.

Table 17: Chronology of the Stage 2 engagement activities

Date/2025	Activity
17 th June	Central High (CEHI) ANSP meeting (NATS, London Whitehall office) with BAF (Belgian Air Force), DSNA, EUROCONTROL Maastricht, FAF (French Air Force), and skeyes: proposed route structure discussions
19 th June	Concept update at the Lead Operator Carrier Panel (LOCP) meeting
3 rd July	TEAMS meeting with EUROCONTROL Maastricht: common boundary discussions
18 th Sept	CEHI ANSP meeting (TEAMS) with BAF, DSNA, EUROCONTROL Maastricht, and skeyes: feedback from early design/testing activities
24 th Sept	Engagement invite (via email) and briefing pack for the Stage 2 engagement
24 th Sept - 14 th Oct	Engagement response period (extended)
2 nd Oct	Feedback reminder emails sent
16 th Oct	CEHI ANSP meeting (TEAMS) with BAF, DSNA, EUROCONTROL Maastricht, FAF, and skeyes: concept update and planned activities
23 rd Oct	TEAMS meeting with skeyes: Brussels traffic options discussions
4 th Dec	CEHI ANSP meeting (TEAMS) with BAF, DSNA, EUROCONTROL Maastricht, FAF, and skeyes: concept update and planned activities
16 th Jan	Thank-you emails, and a copy of the Stage 2 Develop & Assess document sent to stakeholders including: all the design options, stakeholder feedback, and the DPE.

9.2 Methodology

9.2.1 During Stage 1, NATS SMEs (including ATC, airspace change specialists, and engagement leads) qualitatively assessed which areas are most likely to be impacted, as a result of this airspace change proposal, in order to determine our stakeholder list. Key stakeholders were identified across a broad spectrum of 'aviation' stakeholder groups. No 'non-aviation' stakeholders were considered relevant for this airspace change. NATS identified four stakeholder groups: neighbouring ANSPs; Top 10 airlines including Lead Operator Carrier Panel (LOCP)¹⁶ members; impacted airports and; relevant National Air Traffic Management Advisory Committee¹⁷ (NATMAC) members. For more details on stakeholder identification, see the Stage 1 Define document [Ref 6], section 3.

9.2.2 The Stage 2 engagement period initially ran from 24th Sept 2025 to 7th October 2025. However, following a request by London Heathrow Airport for additional time to provide a response, the engagement period was extended by one week, to 14th October 2025.

9.2.3 All stakeholders received an email invite and briefing pack at the start of engagement period. Those who had not responded received a reminder email on 2nd October 2025.

9.2.4 The engagement period was considered proportionate as all identified stakeholders were aviation stakeholders, with familiarity of the CAP1616 airspace change process. Specifically, stakeholders were considered familiar with the region of proposed change, and the current airspace design/procedures. In addition, the engagement materials and associated feedback questionnaire were purposefully succinct. All identified stakeholders

¹⁶ The LOCP is a regular forum hosted by NATS to inform and engage with their customers on a wide range of matters. It aims to work collaboratively with NATS customers on technical aspects of airspace design, in support of the NATS airspace programmes.

¹⁷ Included within the stakeholder list are certain stakeholders who we are required to contact as part of an airspace change: namely representatives from the NATMAC, which covers a wide variety of airlines and aviation organisations and the Ministry of Defence (MOD).

were considered to be regular internet users, and this engagement occurred via online channels (email and Microsoft Forms).

9.3 Stakeholder contact database

- 9.3.1 It is normally a CAP1616 process requirement to use the same stakeholders as Stage 1. However, for Stage 2 a single new organisation, Squadron 78, has been added to the stakeholder list¹⁸.
- 9.3.2 These stakeholders are identified as key stakeholders for this airspace change proposal, but NATS will continue to welcome feedback from all stakeholders throughout the process should they wish to provide it.
- 9.3.3 Table 18 lists the Stakeholders contacted, alongside an indication of whether they have responded to the Stage 2 engagement. Where a relevant response was provided in Stage 1, this is also indicated.

Table 18: Stakeholder contact database

Stakeholder	Engagement Response (Y/N)
ANSPs	
DSNA	N
EUROCONTROL Maastricht	Y
skeyes	N
Airlines and Lead Operator Carrier Panel (LOCP) Members	
Aer Lingus	N
Air Canada	N
Air India	N
Austrian Airlines	Relevant Stage 1 feedback, see Appendix D
British Airways	Y
British Business and General Aviation Association	N
Brussels Airlines	Y
Cargolux	N
Condor	N
Delta	N
DHL Air	N
easyJet	Y
Emirates	Y Additionally, relevant Stage 1 feedback, see Appendix D
Eurowings	N
FedEx	N
Italia Transport Aero	N
Jet 2	N
Logan Air	N
Lufthansa	Y
Qatar Airways	N
Ryanair	N
Singapore	N
Swiss International Airlines	Relevant Stage 1 feedback, see Appendix D
TUI Airways	N
Turkish Airlines	N
United Airlines	N
Virgin Atlantic	Y
Wizzair	N
Airports	
London Biggin Hill	N
London City	Y
London Gatwick	Y
London Heathrow	Y
London Luton	Y
London Southend	N
London Stansted	Y
RAF Northolt	N
Relevant NATMAC members	
Airlines UK	N
British Airline Pilots Association (BALPA)	N

¹⁸ DAATM were included in the original stakeholder list as part of Stage 1. During Stage 2, they asked NATS to engage directly with 78 Squadron, which is the MOD department most likely impacted by the change. Both DAATM and 78 Squadron provided a Stage 2 engagement response; these were combined into a single MOD response.

Guild of Air Traffic Control Officers (GATCO)	N
Honourable Company of Air Pilots (HCAP)	N
Low Fare Airline	N
Ministry of Defence (MOD) – Defence Airspace and Air Traffic Management (DAATM) and 78 Sqdn ¹⁹	Y

¹⁹ DAATM were included in the original stakeholder list as part of Stage 1. During Stage 2, they asked NATS to engage directly with 78 Squadron, which is the MOD department most likely impacted by the change. Both DAATM and 78 Squadron provided a Stage 2 engagement response; these were combined into a single MOD response.

10. Appendix B Design Principle Evaluation Proforma

10.1 Baseline ('Do Nothing') - REJECTED

Do Nothing	REJECT		
Description of option			
This option represents the existing airspace design i.e. the 'do nothing' option. It maintains the extant VABIK and KONAN boundary COPs and traffic flows across the London FIR/UIR boundary.			
Mandatory Design Principle: Safety (A)	NOT MET	PARTIAL	MET
In the 'do nothing' scenario, as traffic levels increase over the 2027-2036 time period, demand through the airspace would be managed by restricting traffic throughput (for example through the use of ground delays, as per today) to ensure that safety is not compromised.			
Discretionary Design Principle: Operational (Capacity) (Priority A)	NOT MET	PARTIAL	MET
In the 'do nothing' scenario, there is no change to the airspace design, therefore there is no change to capacity. The airlines and airports have raised concerns around the current levels of congestion in this busy airspace region, and the resultant delays and inefficient flight profiles.			
Mandatory Design Principle: Environment (Priority B)	NOT MET	PARTIAL	MET
In the 'do nothing' scenario, as traffic levels increase over the 2027-2036 time period, increased ATC intervention would be required to manage the increasing volume of conflicting traffic. This could inhibit optimal flight profiles (e.g. with increased step-climbs and increased track mileage) which would be detrimental to CO ₂ emissions. The airlines and airports have raised concerns around the current levels of congestion in this busy airspace region, and the resultant delays and inefficient flight profiles.			
Discretionary Design Principle: Environmental (Greenhouse Gas Emissions) (Priority B)	NOT MET	PARTIAL	MET
In the 'do nothing' scenario, as traffic levels increase over the 2027-2036 time period, increased ATC intervention would be required to manage the increasing volume of conflicting traffic. This could inhibit optimal flight profiles (e.g. with increased step-climbs and increased track mileage) which would be detrimental to CO ₂ emissions. The airlines and airports have raised concerns around the current levels of congestion in this busy airspace region, and the resultant delays and inefficient flight profiles.			
Mandatory Design Principle: Policy (Priority C)	NOT MET	PARTIAL	MET
The 'do nothing' scenario is not considered to align with the strategic objectives of the Airspace Modernisation Strategy (AMS) as, without airspace change, this option does not reduce complexity, improve efficiency, or improve the environmental performance of the airspace.			
Discretionary Design Principle: Technical (Other Aviation Stakeholders) (Priority C)	NOT MET	PARTIAL	MET
Military stakeholder feedback has highlighted limited activity associated with TACAN routes within this airspace.			
In the 'do nothing' scenario, there is no change to the airspace design; the airspace use and therefore the impact on other aviation stakeholders would remain unchanged.			
Conclusion			
Over the 10-year time horizon, the detrimental impacts on delay and flight profiles will likely worsen with the forecasted increase in traffic levels. This option is not supported by stakeholders and both the airlines and airports have raised concerns around the current levels of congestion in this busy airspace region, and the resultant delays and inefficient flight profiles.			
The baseline ('do nothing') option did not meet the progression requirements set for the DPE; 1 DP was MET (one A), 2 DPs were PARTIAL (one A, one C), and 3 DPs were NOT MET (two Bs, one C). Hence this option was REJECTED and will not be progressed.			

10.2 Option 1: 3 COPs - PROGRESSED

Option 1: 3 COPs	ACCEPT		
Description of option			
This option removes the extant VABIK and KONAN boundary COPs and introduces 3 new boundary COPs associated with a new systemised route structure. All traffic currently routing via VABIK and KONAN is redistributed across the 3 new boundary COPs. Current ATS routes through VABIK and KONAN are either adjusted to optimise alignment with the new route structure or removed.			
Mandatory Design Principle: Safety (Priority A)	NOT MET	PARTIAL	MET
This option simplifies the airspace, providing a systemised route structure which reduces the number of crossing traffic flows. As traffic levels increase over the 2027-2036 time period, this would enable ATC to safely manage the traffic demand without adversely impacting safety.			
Discretionary Design Principle: Operational (Capacity) (Priority A)	NOT MET	PARTIAL	MET
In this option, the new systemised route structure should more evenly assign traffic routings and reduce the number of crossing traffic flows. This would reduce the amount of ATC intervention (vectoring) required to separate traffic, reducing ATC workload and mitigating the need to apply delays for capacity. Additionally, this option increases the number of routes across the FIR/ UIR boundary enabling an increase in traffic throughput, improving the capacity and resilience of the airspace network. The potential for this option to support an increase in operational capacity is a key benefit, in particular as traffic levels increase over the 2027-2036 time period. Stakeholder feedback favours this option to support the forecasted increase in traffic, alleviate the congestion and complexity of the airspace, and reduce ATC workload and delays.			
Mandatory Design Principle: Environment (Priority B)	NOT MET	PARTIAL	MET
By allowing aircraft to follow the systemised route structure and reducing tactical deviations from their planned flight paths, this option enables a reduction in track mileage, reducing fuel burn and CO ₂ 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 CO ₂ emissions.			
Discretionary Design Principle: Environmental (Priority B) (Greenhouse Gas Emissions)	NOT MET	PARTIAL	MET
By allowing aircraft to follow the systemised route structure and reducing tactical deviations from their planned flight paths, this option enables a reduction in track mileage, reducing fuel burn and CO ₂ 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 CO ₂ emissions.			
Mandatory Design Principle: Policy (Priority C)	NOT MET	PARTIAL	MET
This option is considered to align with the strategic objectives of the Airspace Modernisation Strategy (AMS): Aviation safety: This option mitigates the DVR hotspot region through a reduction in controller workload, which would, additionally, help manage residual operational risk. Integration of diverse users: This option ensures 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: This option 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: This option seeks to provide environmental benefits by enabling more efficient flight profiles; the improved airspace design would 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			
Discretionary Design Principle: Technical (Other Aviation Stakeholders) (C)	NOT MET	PARTIAL	MET
This option requires complementary and concurrent changes to the procedures and ATS route structure in Brussels lower airspace (EBBU - Brussels FIR, below FL245), Brussels upper airspace (EBUR - Brussels UIR, FL245 and above) and France upper airspace (LFFF – France UIR, FL195 and above). Such changes could benefit those neighbouring ANSPs through improved traffic presentation across the FIR/UIR boundary. Stakeholder feedback has additionally highlighted the benefit of simplifying the airspace and route structure across the FIR/UIR boundary with this option. In this option, all new ATS routes connect to the extant ATS route structure (including extant SID end points), and the existing London Terminal Control and London Area Control sectorisation is maintained, reducing the impact of connectivity changes across London airspace. A minor lateral boundary change is anticipated to Worthing CTA 3 and Worthing CTA 5. Military stakeholder feedback considers this option will have limited impact on proximate TACAN routes and 78 Squadron (Swanwick) southeast sector operations, provided ATC are fully briefed on airspace and procedure changes.			
Conclusion			
This option is the favoured option from stakeholder feedback enabling ATC workload reduction, improved fuel efficiency, increased traffic throughput, increased capacity and resilience, a reduction in delay, improved traffic presentation across the FIR/UIR boundary and simplification of the airspace and route structure. 5 DPs were MET (two As, two Bs, one C), 1 DP was PARTIAL (one C), and 0 DPs were NOT MET. Option 1: 3 COPs is considered a promising candidate and has been PROGRESSED to the next stage.			

10.3 Option 2: 5 COPs - REJECTED

Option 2: 5 COPs	REJECT		
Description of option			
In this option, the two current VABIK and KONAN boundary COPs are retained and, additionally, three new boundary COPs are introduced. High-level traffic currently routing via KONAN is redistributed across the three new boundary COPs, via a part-systemised route structure. As per today, Brussels TMA inbounds will continue to route via L9 to VABIK, and low-level traffic will continue to route via Q70 and L18 to KONAN. All other ATS routes through VABIK and KONAN are either adjusted to optimise alignment with the new route structure or removed.			
Mandatory Design Principle: Safety (Priority A)	NOT MET	PARTIAL	MET
In this option, traffic routing to the extant VABIK and KONAN COPs may not be route separated from traffic flows to the new COPs. As such, some crossing and proximate traffic flows would still require ATC intervention (vectoring) to separate traffic, limiting the potential for this option to reduce ATC workload and retaining the need, in particular as traffic levels increase over the 2027-2036 time period, to apply delays to ensure safety. As such, it is considered that safety would need to be maintained by restricting traffic throughput (as today).			
Discretionary Design Principle: Operational (Capacity) (Priority A)	NOT MET	PARTIAL	MET
Stakeholder feedback has highlighted the importance of increased capacity for this airspace change. Although this option increases the number of routes across the FIR/ UIR boundary, it creates conflicting traffic flows, increasing airspace complexity with a mixture of crossing, climbing and descending traffic which will require substantial tactical intervention to ensure safety. As such, despite the increased number of routes, the ability to increase traffic throughput and to improve the capacity and resilience of the airspace network, in particular as traffic levels increase over the 2027-2036 time period, is limited in this option.			
Mandatory Design Principle: Environment (Priority B)	NOT MET	PARTIAL	MET
In this option, there is insufficient space to achieve lateral separation between each of the five COPs. As a result, not all aircraft would be left to follow the route structure (i.e. some flights would be tactically deviated from their planned flight paths to ensure that aircraft maintain separation), thereby limiting the potential for this option to reduce track mileage, fuel burn and CO ₂ . Stakeholder feedback has highlighted the importance of improved climb profiles for this airspace change. Due to conflictions between the traffic flows, ATC would need to use vertical separation (where appropriate) to deconflict the traffic flows. As such, the potential to facilitate more continuous climb profiles with fewer level-offs, reducing fuel burn and CO ₂ , is limited in this option.			
Discretionary Design Principle: Environmental (Greenhouse Gas Emissions) (Priority B)	NOT MET	PARTIAL	MET
In this option, there is insufficient space to achieve lateral separation between each of the five COPs. As a result, not all aircraft would be left to follow the route structure (i.e. some flights would be tactically deviated from their planned flight paths to ensure that aircraft maintain separation), thereby limiting the potential for this option to reduce track mileage, fuel burn and CO ₂ . Stakeholder feedback has highlighted the importance of improved climb profiles for this airspace change. Due to conflictions between the traffic flows, ATC would need to use vertical separation (where appropriate) to deconflict the traffic flows. As such, the potential to facilitate more continuous climb profiles with fewer level-offs, reducing fuel burn and CO ₂ , is limited in this option.			
Mandatory Design Principle: Policy (Priority C)	NOT MET	PARTIAL	MET
Increasing the number of routes across the FIR/UIR boundary and redistributing traffic more evenly to the routings should, theoretically, improve the simplicity, efficiency, and environmental performance of the airspace. Indeed, some airline stakeholders have expressed a preference for this option, with perceived benefits in route flexibility, the segregation of lower-level traffic, and a reduction in ATC workload. However, NATS SMEs do not consider this to be an accurate reflection of the overall impacts of this option; specifically, the conflicting traffic flows would require substantial tactical intervention (vectoring and vertical restrictions) to ensure traffic separation. With the forecasted increase in traffic levels over the 10-year time horizon, it is therefore considered that the ability to support ATC workload reduction, improve fuel efficiency, increase traffic throughput, increase capacity and resilience, and reduce delay, is limited. As such, this option is considered to provide only partial alignment with the strategic objectives of the Airspace Modernisation Strategy (AMS).			
Discretionary Design Principle: Technical (Other Aviation Stakeholders) (Priority C)	NOT MET	PARTIAL	MET
This option reduces the dependency and risk associated with effecting cross-border changes concurrently with neighbouring ANSPs, as no/minimal change is required within Brussels lower airspace (EBBU - Brussels FIR, below FL245); complementary and concurrent changes to the procedures and ATS route structure are required within Brussels upper airspace (EBUR - Brussels UIR, FL245 and above) and France upper airspace (LFFF – France UIR, FL195 and above) only. In this option, all new ATS routes connect to the extant ATS route structure (including extant SID end points), and the existing London Terminal Control and London Area Control sectorisation is maintained, reducing the impact of connectivity changes across London airspace. A minor lateral boundary change is anticipated to Worthing CTA 3 and Worthing CTA 5. Military stakeholder feedback considers this option will have limited impact on proximate TACAN routes and 78 Squadron (Swanwick) southeast sector operations, provided ATC are fully briefed on airspace and procedure changes.			
Conclusion			
The ability to provide ATC workload reduction, improve fuel efficiency, increase traffic throughput, increase capacity and resilience, and reduce delay is limited with this option; with the forecasted increase in traffic levels over the 10-year time horizon, issues with delay and inefficient aircraft profiles are likely to persist in this region of airspace. Option 2: 5 COPs did not meet the progression requirements set for the DPE; 1 DP was MET (one A), 5 DPs were PARTIAL (one A, two Bs, two Cs), and 0 DPs were NOT MET. Hence this option was REJECTED and will not be progressed.			

11. Appendix C: Airspace Modernisation Strategy Alignment

- 11.1.1 Table 19 demonstrates how this ACP aligns with the strategic objectives of the CAA's Airspace Modernisation Strategy, CAP1711 [Ref 8].

Table 19: 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 CO₂ emissions.

12. Appendix D: Other items

12.1.1 The following section reports on the progress of other items of stakeholder feedback from Stage 1 of this airspace change proposal.

Table 20: Relevant stakeholder feedback received during Stage 1 engagement

Feedback	Stakeholder	Impact
Swiss International Air Lines AG	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 sector.	For Stage 2, the ACP focuses on the airspace design, rather than the distribution of traffic, which forms part of the Method of Operations (MoPs) and will be further developed at Stage 3. NATS will consider your preference(s) when we continue to work with neighbouring ANSPs at that stage. It should be noted that preference will be given to the design which is considered to work best for the overall network. No impact.
Swiss International Air Lines AG	After departing from London area airports, a continuous climb from 7,000ft to the filed cruising level would be highly beneficial for reducing noise and greenhouse gas emissions.	The ability to effect more efficient profiles for aircraft (including fuel burn and CO ₂) is a key consideration for this proposal, with two Design Principles (MDP Environment and DDP Environmental Greenhouse Gas Emissions, see Table 1) to assess this objective. CAP1616i states that noise considerations relate to airspace changes below 7,000ft; therefore, these are not within the scope of this ACP. No impact.
Austrian Airlines	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 LHR.	For Stage 2, the ACP focuses on the airspace design, rather than the distribution of traffic, which forms part of the Method of Operations (MoPs) and will be further developed at Stage 3. NATS will consider your preference(s) when we continue to work with neighbouring ANSPs at that stage. It should be noted that preference will be given to the design which is considered to work best for the overall network. No impact.
Emirates	Putting Heathrow / Gatwick traffic via a southerly COP, then into France, could result in capacity issues within French airspace.	For Stage 2, the ACP focuses on the airspace design, rather than the distribution of traffic, which forms part of the Method of Operations (MoPs) and will be further developed at Stage 3. NATS will consider your preference(s) when we continue to work with neighbouring ANSPs at that stage. It should be noted that preference will be given to the design which is considered to work best for the overall network. No impact.

13. Appendix E: Glossary of terms; abbreviations and acronyms

ACP	Airspace Change Proposal
AIRAC	Aeronautical Information Regulation and Control
AMS	Airspace Modernisation Strategy
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control/ Air Traffic Controller
ATFM	Air Traffic Flow Management
ATS	Air Traffic Services
BADA	Base of Aircraft Data
CAA	Civil Aviation Authority
CBA	Cross Border Area
CEHI	EUROCONTROL Central High Project
COP	Coordination Point
DDP	Discretionary Design Principle
DP	Design Principle
DPE	Design Principle Evaluation
DSNA	Direction des Services de la navigation aérienne
DVR	Dover
FIR	Flight Information Region
FRA	Free Route Airspace
GBP	Great British Pound/ British Pound Sterling
HRA	Habitats Regulations Assessment
IATA	International Air Transport Association
IOA	Initial Options Appraisal
LOCP	Lead Operator Carrier Panel
MDI	Minimum Departure Interval
MDP	Mandatory Design Principle
NM	Nautical Mile
NM	Network Manager
SID	Standard Instrument Departure
SoN	Statement of Need
SME	Subject Matter Expert
TMA	Terminal Manoeuvring Area
UIR	Upper Information Region
USD	United States Dollar

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