

CAP1616 Gateway documentation

Stage 1: Define Gateway

Design Principles

Operational Service Enhancement Project:
East Anglia Area: London/Amsterdam FIR/UIRs



NATS

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References

Reference	Description	Link
1	CAA CAP1616 Airspace Change Process - Guidance	Link
2	CAA Airspace Change portal for ACP-2021-061	Link

1. Introduction

1.1 This document forms part of the document requirements of the CAP1616 Airspace Change Process (Ref 1) Stage 1 Define Gateway, Step 1B Design Principles. This document may be read in conjunction with the Step 1A Documentation and the Statement of Need available from the [Airspace Change Portal](#) (Ref 2).

1.2 NATS En-Route Limited (NERL) is the sponsor proposing this change, as part of the NERL Operational Service Enhancement Project (OSEP), which delivers a series of small-scale changes within UK airspace to enable substantial benefits to the operation, our customers, and the environment.

1.3 This Airspace Change Proposal (ACP) will improve the connectivity of the Air Traffic Services (ATS) route network and airspace structures between the London and Amsterdam Flight/ Upper Information Regions (FIR/UIRs), within the area shown by the red box in Figure 1.

1.4 The proposed changes will facilitate more efficient flight planning, enable fuel benefits and reduce CO₂ emissions, reduce ATC complexity, and optimise the airspace using Flexible Use of Airspace (FUA) principles.

1.5 It is anticipated this change would be categorised within CAP1616 as a Level 2B and we have scaled our stakeholder list at this early stage to reflect this.

1.6 This document describes how NERL has developed the Design Principles (DPs) which will underpin the development of the design options for this ACP, through two-way engagement with stakeholders.

1.7 It details the stakeholders and how these were selected. Evidence is provided to demonstrate the stakeholder engagement which has been undertaken.

1.8 Further engagement on specific design concepts / options will be carried out in Stage 2, with formal consultation occurring in Stage 3. The design concepts will be evaluated against the final DPs as presented herein.

1.9 Throughout the CAP1616 process NERL will continually evaluate the stakeholder list and adjust it to ensure it remains relevant to the changes being proposed. This means stakeholders could be added to the list. In the event of a change to the stakeholder list, the impacted stakeholder will be contacted to confirm they are satisfied with being included on this list. It is assumed that stakeholders included in the Stage 1 Design Principle engagement will be included in all subsequent engagement and consultation activities, unless requested by the stakeholder.

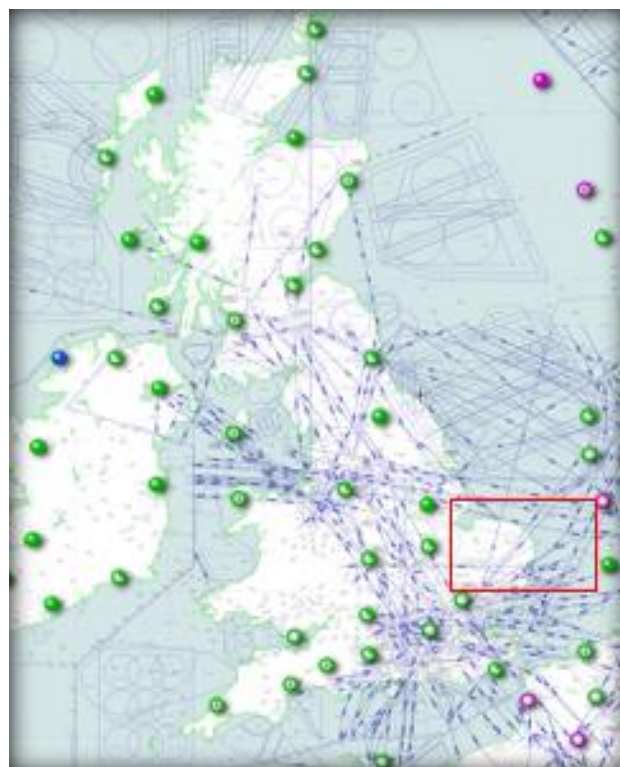


Figure 1 ACP Indicative change area

2. Engagement Audience

2.1 At the Assessment Meeting, NERL stated that as this ACP proposes change predominantly contained within the Upper Airspace, the stakeholders would be limited to top 10 airlines, relevant NATMAC members, relevant ANSPs and the MoD. The identified stakeholders are:

- Top 10 airlines: NERL has extracted data which identifies the top users of the relevant airspace for 2023. This identified the top 10 airlines as:

- KLM	- Lufthansa
- Ryanair	- TUI
- Wizzair	- Aer Lingus
- Jet2	- Delta
- easyJet	- Emirates
- Relevant National Air Traffic Management Advisory Committee (NATMAC) members: we limited this to those organisations which have members which operate in the upper airspace¹:

- Airlines UK	- Heavy Airlines
- Low Fare Airlines	- Guild of Air Traffic Control Officers (GATCO)
- Relevant ANSP's:
 - Maastricht Upper Area Control (MUAC) operates as the ANSP for the Dutch airspace adjacent to the change boundary.
 - LVNL (Dutch ANSP) is the ANSP operating the lower airspace adjacent to the change boundary.
- Ministry of Defence (MoD): engaged with through Defence Airspace and Air Traffic Management (DAATM). DAATM is a focal point for all aviation matters which may impact military airspace and operations. DAATM collects feedback from all branches of the military which may be impacted to provide a single response.

2.2 Only the organisations listed have been formally contacted for feedback. However, NERL will welcome feedback from any individual or organisation which considers the changes within this ACP may impact them.

3. Design Principle Development

3.1 NERL drafted 11 Design Principles (DPs), which address key strategic issues this airspace change should deliver, such as maintaining safety, alignment with policy and improving environmental impacts, which could be used to evaluate design options addressing the Statement of Need. We assigned a provisional priority level (A-C) to each of the draft DPs, with A being the highest priority. These priorities will be considered when the DPs are used to evaluate design options in the later stages of the airspace change process.

3.2 We shared these draft Design Principles with our targeted stakeholders (Section 2) for their input and feedback. Stakeholders were emailed on 18 August 2023. As this was in the British summer holiday period and nearing a Bank Holiday weekend, we provided a 4-week window for feedback to ensure stakeholders had sufficient time to respond. This period was considered proportional as this change is expected to provide substantial benefits to airspace users with limited negative impacts to the targeted identified stakeholders.

3.3 We received responses from two stakeholders, MUAC and MoD. No feedback was received in relation to the wording of the draft DPs. One additional Design Principle was proposed by MUAC. NERL reviewed this

¹ This includes organisations representing additional airlines; it was deemed relevant to include these should they wish to provide a response on behalf of their members.

and determined it was suitable to add to the list as an additional DP and wrote to MUAC to inform them as such. Evidence of this engagement activity is provided in Appendix A.

3.4 At the end of the initial engagement period, we again wrote to stakeholders, informing them of the response received and that there were no proposed changes to the original DPs but an additional DP had been added. Stakeholders were given 1 week to indicate 'Approve / Disprove' and submit any comments. No responses were received to this engagement email.

3.5 NERL therefore proposes the Design Principles for this ACP as presented below:

No	Design Principle	Priority	Category	Stakeholder Feedback & impact
1	Maintain or enhance current levels of safety.	A	Safety	No comments; progressed as proposed
2	Must accord with the CAA's published Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it.	A	Policy (AMS)	No comments; progressed as proposed
3	The proposed airspace design will maintain or enhance operational resilience of the ATC network.	B	Operational (Resilience)	No comments; progressed as proposed
4	The proposed route amendments will facilitate the reduction of CO ₂ emissions per flight.	B	Environmental (CO ₂ emissions)	No comments; progressed as proposed
5	The proposed route amendments will enable reduced fuel burn per flight.	B	Economic (fuel)	No comments; progressed as proposed
6	The proposed airspace amendments will maintain or enhance MoD operational needs, commensurate with FUA principles.	B	Technical (MoD requirements)	No comments; progressed as proposed
7	The proposed airspace design will provide a basis for future Free Route Airspace deployments within the London UIR.	B	Technical (Modernisation)	No comments; progressed as proposed
8	The proposed changes will facilitate the reduction of ATC workload.	B	Operational (workload)	No comments; progressed as proposed
9	The proposed changes will reduce network complexity.	B	Operational (complexity)	No comments; progressed as proposed
10	The proposed amendments to the route network will provide a compatibility with and the possibility to enhance the interface with Maastricht Upper Area Centre (MUAC).	B	Operational (MUAC connectivity)	DP proposed by MUAC and agreed by NERL. No comments; progressed as proposed
11	The proposed changes will be contained within the extant airspace i.e. above FL195 (no additional airspace required).	C	Technical (Minimise CAS)	No comments; progressed as proposed
12	The design minimises operational impact to airspace users.	C	Operational (Training)	No comments; progressed as proposed

Table 1 Design Principles: stakeholder feedback and finalisation

4. Conclusion

4.1 We developed draft Design Principles which support the Statement of Need. We identified relevant stakeholders and have engaged with them for feedback on these DPs.

4.2 No feedback was received suggesting any amendments to the proposed DPs. We received a request for one additional DP, which aligns with the project objectives and has been included.

4.3 We sent a finalised version of the Design Principles to our stakeholders and have received no further comments. This evolution has resulted in the finalised list of DPs as detailed above in Section 3.

Appendix A: Engagement Evidence

NERL has engaged with targeted stakeholders in the development of these DPs. Table 2 shows a record of the engagement activity. Examples of the emails (engagement evidence) are provided below, labelled A1-A4:

	Stakeholder	Initial Engagement Email (A.1 Initial Engagement e-mail, sent 18 th August 2023)	Response to Initial Engagement Email (A2 & A3)	Final Engagement Email (A4)
Airline: Top 10 User of affected airspace	KLM	Sent 18/08/2023		Sent 19/09/2023
	Ryanair	Sent 18/08/2023		Sent 19/09/2023
	Wizzair	Sent 18/08/2023		Sent 19/09/2023
	Jet2	Sent 18/08/2023		Sent 19/09/2023
	easyJet	Sent 18/08/2023		Sent 19/09/2023
	Lufthansa	Sent 18/08/2023		Sent 19/09/2023
	TUI	Sent 18/08/2023		Sent 19/09/2023
	Aer Lingus	Sent 18/08/2023		Sent 19/09/2023
	Delta	Sent 18/08/2023		Sent 19/09/2023
Emirates	Sent 18/08/2023		Sent 19/09/2023	
NATMAC members	Airlines UK	Sent 18/08/2023		Sent 19/09/2023
	Low Fare Airlines	Sent 18/08/2023		Sent 19/09/2023
	Heavy Airlines	Sent 18/08/2023		Sent 19/09/2023
	GATCO	Sent 18/08/2023		Sent 19/09/2023
ANSP	LVNL	Sent 18/08/2023		Sent 19/09/2023
	MUAC	Sent 18/08/2023	Approve proposed DPs; additional DP proposed; response acknowledged	Sent 19/09/2023
MoD	DAATM	Sent 18/08/2023	Approve proposed DPs; response acknowledged	Sent 19/09/2023

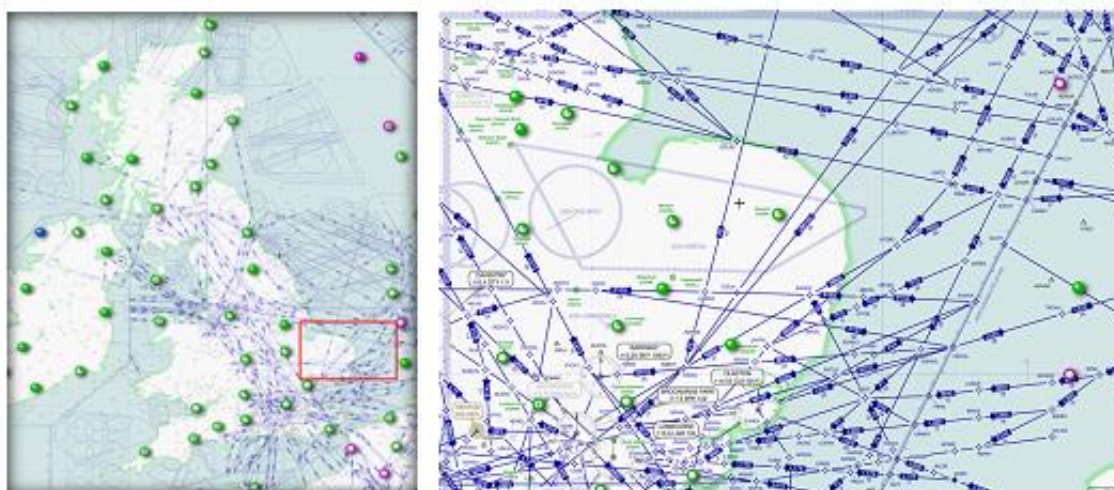
Table 2 Email Engagement Record

A.1 Initial Engagement e-mail, sent 18th August 2023

From: Airspace Consultation
Sent: 18 August 2023 15:19
Subject: NATS Airspace Change Proposal - East Anglia area - London / Amsterdam UIRs

Dear Colleague

NATS is undertaking an Airspace Change Proposal (ACP) to improve the connectivity of the ATS route network and airspace structures between the London and Amsterdam Upper Information Regions (UIRs). The figures below indicate the proposed change area.



This ACP is being progressed under the NATS Operational Service Enhancement Project (OSEP), which endeavours to deliver a series of small scale changes across NERL airspace. Further details on this change can be viewed at the ACP portal page ([link](#)).

These changes will deliver against one or more of the following areas:

- enable fuel savings to customers
- reduce CO₂ emissions
- reduce ATC complexity
- optimise the airspace using FUA principles
- facilitate more efficient flight planning
- provide operationally efficient airspace volumes for Military airspace users

The proposal scope includes the Military Training Areas in the East Anglia area.

We are currently at Stage 1 of the CAP1616 ACP process ([link](#)). As part of this process, we would like to involve you in the formulation of the Design Principles (DPs) which will be used during this proposal.

Below are the draft set of Design Principles for this Airspace Change. Please can you review these and give us your feedback.

If you have any suggestions for additional Design Principles, we welcome your input.

If you are content with the proposed Design Principles, please press the 'Approve' voting button or reply 'Approve'.

If you have comments, please reply to this email and annotate the table below.

No	Design Principle	Priority	Category	Stakeholder Comments
1	Maintain or enhance current levels of safety.	A	Safety	
2	Must accord with the CAA's published Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it.	A	Policy (AMS)	
3	The proposed airspace design will maintain or enhance operational resilience of the ATC network.	B	Operational (Resilience)	
4	The proposed route amendments will facilitate the reduction of CO ₂ emissions per flight.	B	Environmental (CO2 Emissions)	
5	The proposed route amendments will enable reduced fuel burn per flight.	B	Economic (fuel)	
6	The proposed airspace amendments will maintain or enhance MoD operational needs, commensurate with FUA principles	B	Technical (MoD Requirements)	
7	The proposed changes will be contained within the extant airspace i.e. above FL195 (no additional airspace required).	C	Technical (Minimise CAS)	
8	The proposed airspace design will provide a basis for future Free Route Airspace deployments within the London UIR.	B	Technical (Modernisation)	
9	The design minimises operational impact to airspace users.	C	Operational (Training)	
10	The proposed changes will facilitate the reduction of ATC workload.	B	Operational (workload)	
11	The proposed changes will reduce network complexity.	B	Operational (complexity)	

We would appreciate your feedback on these DPs by close of play 15 September 2023, and thank you for your time.

Best regards

NATS Airspace Change Team



4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk

A.2 Response of DAATM to Draft Design Principle email, 30 August 2023

From: [REDACTED]
Sent: 30 August 2023 06:17
To: Airspace Consultation
Subject: [EXTERNAL] RE: NATS Airspace Change Proposal - East Anglia area - London / Amsterdam UIRs

Follow Up Flag: Follow up
Flag Status: Flagged

CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Good Morning,

The MOD have reviewed the DPs below, can reply with 'approve' and have no further comment.

Regards

[REDACTED]

[REDACTED] SO2 Airspace Operations | Defence Airspace and Air Traffic Management |
Aviation House | 1E Beehive Ringroad, Crawley, West Sussex, RH6 0YR | Skype: [REDACTED]
| E-Mail: [REDACTED]

Deputy Chair RAF Orienteering Association



A3. Two-way engagement with MUAC in response to Draft Design Principle email, 8th September 2023

From: Airspace Consultation
Sent: 19 September 2023 08:42
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: NATS Airspace Change Proposal- East Anglia area - London/Amsterdam Uirs

Dear [REDACTED]
Thank you for your email. We have reviewed your proposed additional Design Principle and we have added it to the list of DPs for this ACP.
This interface is an important part of the proposed changes and it is useful to capture this explicitly within the DPs.
Many thanks for your feedback
Kind regards
[REDACTED]

From: [REDACTED]
Sent: 08 September 2023 10:53
To: Airspace Consultation <airspaceconsultation@nats.co.uk>
Cc: [REDACTED]
Subject: [EXTERNAL] NATS Airspace Change Proposal- East Anglia area - London/Amsterdam Uirs

CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Dear colleagues,

MUAC has no comments on the design principles delivered to us via mail (18Aug23)

In line with our comments made on the NATS Airspace Change Proposal -New Amsterdam/London UIR Crossing Point, I would like to ask you to add an extra Design Principle to allow for an enhanced connectivity to MUAC. The proposal is as follows:

Proposed amendments to the Route Network will provide a compatibility with and the possibility to enhance the interface with Maastricht Upper Area Centre (MUAC)

Thank you
Kind regards

[REDACTED]
Teamleader Airspace & Network Planning
Email: [REDACTED]
Telnr: [REDACTED]

A.4 Final DP e-mail, sent 19th September 2023

From: [REDACTED]
Sent: 19 September 2023 10:40
Subject: Final Design Principles: NATS Airspace Change Proposal - East Anglia area - London / Amsterdam UIRs

Dear Colleague

We recently wrote to you requesting feedback on the draft Design Principles (DPs) for the OSEP East Anglia area London/ Amsterdam UIRs Airspace Change Proposal.

Thank you to those who responded and provided valuable feedback to this process. We are now in the process of finalising the Design Principles for this change.

We received no feedback requesting any change of wording to any DP. We received one request for an additional Design Principle, which we have assessed and propose to add, as below.

If you have any comments on the proposed additional DP, or you wish to provide any other feedback, please respond to this email by Monday 25 September. A copy of the original email providing detail of the proposed change is attached below.

No	Design Principle	Priority	Category	Stakeholder Comments
12	The proposed amendments to the route network will provide a compatibility with and the possibility to enhance the interface with Maastricht Upper Area Centre (MUAC).	B	Operational (MUAC Connectivity)	

We intend to submit our Stage 1 documentation to the CAA for the October gateway, and we will notify you when this has been updated on the CAA portal.

Kind regards

Airspace Change Team



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