# Operational Service Enhancements Project: -New and/or Revised Arrival Procedures ACP-2021-062

Gateway Documentation: CAP1616 Stage 1, Define

**Step 1B Design Principles** 

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# Roles

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# 1. Introduction

- 1.1 This document forms part of the document requirements of the CAP1616 airspace change process, 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 <u>Airspace Change Portal</u>.
- 1.2 As part of the NATS Operational Service Enhancements Project (OSEP), NATS have commenced an Airspace Change Proposal (ACP) to improve connectivity between the UK Air Traffic Service (ATS) route network and airfields by introducing and/or amending arrival procedures between the en-route network and the airfield hold.
- 1.3 This will enhance connectivity whilst improving fuel efficiency and reducing greenhouse gas emissions. This airspace change will also seek to reduce pilot/controller workload where practicable by improving flight plan predictability.
- 1.4 Within the requirements of the CAP1616 airspace change process, an airspace change sponsor, NATS in this case, needs to identify and communicate the Design Principles (DPs) which are to be applied to the airspace change design.
- 1.5 Draft DPs have been proposed and distributed via email (Ref A1) to stakeholders for feedback and comment, along with context as to the purpose behind them, background information on OSEP, and a link to the ACP on the Airspace Change Portal. This engagement with stakeholders enables NATS to understand the design considerations which are important to the stakeholders.
- 1.6 NATS made it clear that these draft DPs were for discussion and that we would welcome feedback to inform the final DPs. Feedback was received from the following 11 Stakeholders:
  - British Balloon and Airship Club (BBAC)
  - British Gliding Association (BGA)
  - British Helicopter Association (BHA)
  - easyJet
  - Gama Aviation
  - Loganair
  - Luchtverkeersleiding Nederland (LVNL)
  - Ministry of Defence (MoD)
  - Maastricht Upper Area Control (MUAC)
  - Naviair
  - UK Flight Safety Committee (UKFSC)
- 1.7 The expected changes in this ACP will only affect traffic above 7000ft. As such, there will be no change in impact to the local environment, and NATS did not target organisations whose primary interest is environmental impacts such as noise, visual intrusion, tranquillity or local air quality.
- 1.8 This document describes how stakeholders' feedback has influenced the DPs for this Airspace Change.
- 1.9 A provisional priority was assigned to each of the draft DPs prior to distribution based on NATS' interpretation of the importance of each DP and if there was a requirement to adhere to the DP, as in the case of Safety.



1.10 Engagement on specific design 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.

# 2. Document Layout

- 2.1 <u>Section 3</u> contains the Executive Summary and lists the finalised DPs and their priority assignment.
- 2.2 <u>Section 4</u> describes how the draft DPs were formulated, how the stakeholders were selected and summarises the feedback received from stakeholders following engagement. The priority assignment of each DP is also confirmed.
- 2.3 Each DP is structured using the following format:

We asked	The original discussion text of a potential DP (we sent this out to stakeholders to provide feedback)
You Said	A summary of how feedback has influenced the DP
We did	Amended final DP wording and confirmed the DP Priority

2.4 <u>Section 5</u> summarises the engagement activity, number of responses and stakeholders who were included in the engagement.



# 3. Executive Summary

3.1 The following list summarises the final DPs which have resulted from engagement with relevant stakeholders. Priorities are ranked 1 to 3 with 1 being the highest. These priorities will be considered when the DPs are used to evaluate/rank design options in the later stages of the airspace change process. In particular, any option which does not meet a high priority DP will not be considered for progression. How the DPs have evolved is described in detail within the following sections.

No	Design Principle	Priority	Category	Notes
1	Maintain or enhance current levels of safety.	1	Safety	
2	Must accord with the CAA's published Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it.	1	Policy	The CAA have stated that this DP is required by all change sponsors. CAP1711 describes what airspace modernisation must deliver
3	The proposed change will facilitate the reduction in CO <sub>2</sub> emissions per flight.	2	Environmental	
4	The proposed change will facilitate the reduction in fuel burn per flight.	2	Economic	
5	The impacts on MoD airspace users should be minimised	2	Operational	
6	The impacts on civilian airspace users should be minimised	2	Operational	
7	The proposed changes should reflect the expected vertical and lateral profile of arriving aircraft	2	Operational	
8	The proposed airspace change will maintain an appropriate standard of PBN.	2	Operational	
9	The proposed change must pass a NATS cost benefit analysis.	2	Technical	
10	The proposed change will not alter flights at or below 7000 ft	1	Operational	
11	The proposed change should not adversely impact neighbouring ANSP operations	2	Operational	



12	The volume of controlled airspace required for this change should be the minimum necessary to deliver an efficient airspace design, taking into account the needs of UK airspace users	2	Technical	
13	The proposed change should not increase pilot/ controller workload	2	Operational	



# 4. Airspace Design Principles: Feedback and Evaluation

# 4.1 Draft Design Principles

4.1.1 NATS maintains a database of previous Design Principles used for NATS En-Route Ltd (NERL) and other Sponsor ACPs. NATS draws on this database for guidance when drafting initial design principles and adapts them as necessary to make them relevant before sharing this draft list with stakeholders for feedback. These draft design principles address key issues an airspace change should deliver such as maintaining safety, alignment with policy and improving environmental impacts. In line with the CAP1616 airspace change process, this initial list of draft Design Principles (Ref A1) is shared with stakeholders for their input and feedback. Stakeholders are able to propose additional DPs, changes to DP wording, changes to DP priorities, or suggest a DP is not required, which will be considered for revision in the final Design Principle list.

## 4.2 Engagement Audience

- 4.2.1 This ACP is looking at improving connectivity between the UK ATS route network and airfields by introducing and/or amending arrival procedures connecting the route network to the airfield hold. This will enhance connectivity whilst improving fuel efficiency and reducing greenhouse gas emissions. It also seeks to reduce pilot/controller workload where practicable by improving flight plan predictability. NATS has identified a list of stakeholders who are likely to be impacted by this change, see Table 1.
- 4.2.2 This stakeholder list has been formed from:
  - The relevant members of the National Air Traffic Management Advisory Committee (NATMAC). The NATMAC list provides a panel of representatives from all aspects of aviation; only NATMAC members which are considered to represent organisations which operate within enroute airspace have been included in this engagement:
    - Airlines impacted by this change with representation through the NATMAC list, i.e., Airlines UK, BA, Low Fare Airlines and Heavy Airlines.
    - Organisations representing stakeholders which could be impacted by this change are also included, i.e., the Guild of Air Traffic Control Officers (GATCO) representing Air Traffic Control Officers.
    - The Ministry of Defence (MoD) are 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.
    - NATMAC members representing individuals or organisations on the ground or lower (sub 7000ft) airspace are not expected to be impacted by this change and have not been included.
  - This change is looking at introducing improved connectivity between the UK ATS route network and airfields within London and Scottish airspace above FL70 (7,000 ft). In 2019, 10 operators accounted for over 62% of UK commercial traffic and have been targeted for engagement. The 2019 traffic sample is the most up-to-date and credible data, as data from later years would have been skewed due the impact of the Covid-19 pandemic on the aviation industry. These 10 operators provided representation



for domestic, short- and long-haul flights but did not include freight carriers. 2 additional operators (FedEx and DHL) were included so that cargo operators were also represented.

- 6 Biz Jet operators are included to provide representation of the Biz Jet community.
- 10 Air Navigation Service Providers (ANSPs) are potentially impacted by this change:
  - NERL operates as the Air Navigation Service Provider (ANSP) for the UK airspace where connectivity will be introduced. As this is a NATS sponsored ACP, NERL are not formally included as stakeholders.<sup>1</sup>
  - The UK Flight Information Regions (FIRs) are surrounded by airspace manged by 10 separate ANSPs other than NATS. As arrival aircraft following a published procedure into UK airfields could impact the interface with 9 of these neighbouring FIRs, these 9 ANSPs are included as stakeholders.
  - Owing to the existing arrival structures within the UK FIR, NATS considers any change proposed within this ACP as unlikely to impact operations within the Reykjavik FIR. Therefore Isavia, the ANSP responsible for the Reykjavik FIR, has not been included as a stakeholder. However, should it become apparent that any change considered may impact Isavia's operation, they will be added to the stakeholder list in Stage 2 and included in all subsequent engagement.
- UK space port stakeholders are potentially impacted by the change due to the potential proximity to planned operations. Representation for UK space ports is currently not available through the NATMAC, and as such the United Kingdom Space Agency (UKSA) has been targeted to represent UK-wide space port stakeholders. In addition, 6 other stakeholders have been included, variously representing space ports and space operators within the UK FIR.
- 4.2.3 The expected changes in this ACP will only affect traffic above 7000ft. As such, there will be no change in impact to the local environment, and NATS did not target organisations whose primary interest is environmental impacts such as noise, visual intrusion, tranquillity or local air quality.
- 4.2.4 Only the organisations listed in Table 1 have been formally contacted for feedback. However, NATS will welcome feedback from any individual or organisation which considers the changes within this ACP may impact them. No responses were received from non-targeted stakeholders.
- 4.2.5 Throughout the CAP1616 process NATS 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.
- 4.2.6 The changes this ACP will seek to deliver are unlikely to impact any airfield's operation. Therefore, no airfields have been directly engaged with, in recognition that, until the impacted procedures and airports are identified, it would be disproportionate to do so at this stage. Airfield representation has been provided through the NATMAC (for example, the Airport Operators Association). Once the impact is fully

<sup>&</sup>lt;sup>1</sup> NATS uses the same email account for requesting ACP stakeholder engagement as well as responding to requests for ACP stakeholder engagement. As such, although a response is not required, a response might be received and will be included for transparency.



understood, any impacted airfields will be added to the stakeholder list in Stage 2 and included in all subsequent engagement.

- 4.2.7 In the event of a change to the stakeholder list, the impacted stakeholder will be notified of their inclusion. It is assumed that all stakeholders included in the Stage 1 Design Principle engagement will be included in all subsequent engagement and consultation activities, unless they request to be removed.
- 4.2.8 Stakeholder feedback on each of the draft DPs as well as any amendments to DPs proposed, are detailed below including NATS' response.

## 4.3 Priority Level

4.3.1 Each draft design principle was assigned a provisional priority level prior to distribution to stakeholders for feedback. These levels were rated **1-3** with **1** being the highest. During Stage 2 of the CAP1616 process, NATS will develop design options and use the design principles to evaluate the design options. The priority levels will be used during this process to prioritise which design principles should most be adhered to.

## 4.4 DP1 Safety

- 4.4.1 Original Discussion Text: "Maintain or enhance current levels of safety."
- 4.4.2 <u>Summary and Priority:</u> NATS did not receive any feedback which suggested any changes to this DP. NATS has assigned this DP as "**Priority 1**" as the maintenance, or where possible improvement, of safety is at the forefront of any airspace change.

#### 4.5 **DP2 Policy**

4.5.1 Original Discussion Text: "*Must accord with the CAA's published Airspace Modernisation Strategy* (*CAP1711*) and any current or future plans associated with it". (Notes: The CAA have stated that this DP is required by all change sponsors. CAP1711 describes what airspace modernisation must deliver).

#### How has feedback influenced this DP?

Stakeholder	Feedback	NATS' Response
Amsterdam (Luchtverkeersleiding Nederland, LVNL)	Add 'known' to the design principle. How can a change be in line with unknown future plans.	Design Principle 2 "Must accord with the CAA's published Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it", has been written by the regulator and we cannot change it, but we fully understand your feedback, thank-you.

4.5.2 **Summary and Priority:** This DP has been written by the regulator and NATS cannot change it. NATS has assigned this DP as "**Priority 1**" as we must follow the relevant guidance.

#### 4.6 DP3 Environmental

4.6.1 Original Discussion Text: "The proposed change will facilitate the reduction in CO2 emissions per flight."



4.6.2 <u>Summary and Priority:</u> NATS did not receive any feedback which suggested any changes to this DP. NATS has assigned this DP as "**Priority 2**" as this ACP will identify opportunities to improve efficiencies in the vertical and/or lateral path for aircraft arriving into UK airfields, which will reduce greenhouse gas emissions.

## 4.7 DP4 Economic

- 4.7.1 Original Discussion Text: "The proposed change will facilitate the reduction in fuel burn per flight."
- 4.7.2 **Summary and Priority:** NATS did not receive any feedback which suggested any changes to this DP. NATS has assigned this DP as "**Priority 2**" as this change is seeking to improve arrival procedures connecting the route network to the hold, providing more efficient flight-plannable routes and resulting in aircraft burning less fuel.

#### 4.8 DP5 Operational

- 4.8.1 Original Discussion Text: "The impacts on MoD airspace users should be minimised."
- 4.8.2 **Summary and Priority:** NATS did not receive any feedback which suggested any changes to the wording of this DP. NATS had provisionally assigned this DP as "**Priority 3**". However, to ensure consistency with the comments made against the priority classification of DP11 (see section 4.14), any negative impact on MoD airspace users should also be kept minimal. As such NATS has re-assigned this DP as "**Priority 2**."

#### 4.9 DP6 Operational

4.9.1 Original Discussion Text: "The impacts on civilian airspace users should be minimised."

#### How has feedback influenced this DP?

Stakeholder	Feedback	NATS' Response
British Gliding Association (BGA)	Sponsor should note the following: gliders in the UK are flown above 7000' both for thermal soaring (mainly IMC cloud climbs) and during wave soaring. Most wave soaring in the UK (which is very often above 7000') occurs in the more mountainous areas or directly downwind of these mountainous areas. However, wave climbs above 7000' can also occur almost anywhere.	The expected changes are unlikely to impact gliding areas as these are often outside controlled airspace or within the protection of Temporary Reserved Areas (Gliding).

4.9.2 Summary and Priority: NATS did not receive any feedback which suggested any changes to the wording of this DP. NATS had provisionally assigned this DP as "Priority 3". However, to ensure consistency with the comments made against the priority classification of DP11 (see section 4.14), any negative impact on civilian airspace users should also be kept minimal. As such NATS has re-assigned this DP as "Priority 2."



# 4.10 **DP7 Environmental**

4.10.1 Original Discussion Text: "The proposed changes should reflect the operational profile of arriving aircraft."

#### How has feedback influenced this DP?

Stakeholder	Feedback	NATS' Response
Amsterdam (Luchtverkeersleiding Netherland, LVNL)	Meaning CDO and CCO? From ToD? Be more specific in the design principle?	Design Principle 7 "The proposed changes should reflect the operational profile of arriving aircraft" will be updated in accordance with your feedback to "The proposed changes should reflect the expected vertical and lateral profile of arriving aircraft".

4.10.2 <u>Summary and Priority</u>: In accordance with feedback received and to remove ambiguity regarding the operational profile improvements, this DP wording has been revised to "*The proposed changes should reflect the expected vertical and lateral profile of arriving aircraft*". NATS has assigned this DP as "**Priority 2**" as this ACP, in line with the Statement of Need (Ref 2) will introduce and/or amend the published procedures for aircraft arriving at some UK airfields to follow a more efficient lateral or vertical path.

#### 4.11 DP8 Technical

- 4.11.1 Original Discussion Text: "The proposed airspace change will maintain an appropriate standard of PBN."
- 4.11.2 <u>Summary and Priority:</u> NATS did not receive any feedback which suggested any changes to this DP. NATS has assigned this DP as "**Priority 2**" as any changes proposed within this ACP should maintain the appropriate standard of Performance Based Navigation (PBN).

#### 4.12 DP9 Technical

4.12.1 Original Discussion Text: "The proposed change must pass a NATS cost benefit analysis."

#### How has feedback influenced this DP?

Stakeholder	Feedback	NATS' Response
UK Flight Safety Committee (UKFSC)	It is hard to comment on this without understanding the basis on which such a CBA would be conducted. Is the benefit to NATS or to the operational service?	This project seeks opportunities to deliver benefits through CO <sub>2</sub> , fuel savings, reduced routing inefficiency, safety improvements and alleviating capacity hotspots, to our customers. This design principle (DP9) will allow us to transparently reject those options we consider to not deliver benefits proportionately to the risk/uncertainty and costs involved in delivering the change.



		To provide our customers with improvements associated with OSEP deployments, any changes progressed should provide value and benefit.
Maastricht Upper Area Control (MUAC)	[Comment made against DP 11] We would suggest that this is equally important as the Cost/Benefit of NATS (DP 9), i.e. Prio 1.	This Design Principle (DP9) will allow us to transparently reject those options we consider to not deliver benefits proportionately to the risk/uncertainty and costs involved in delivering this change. However, we acknowledge the impact to neighbouring ANSPs is of equal importance and have therefore reassigned this DP as Priority 2

4.12.2 <u>Summary and Priority:</u> NATS did not receive any feedback which suggested any changes to the wording of this DP. NATS had provisionally assigned this DP as "Priority 1"; while the OSEP project is driven by a desire to deliver small scale changes to reduce the impact of aviation on the environment, and provide cost benefits to our customers, there remains a focus on ensuring the costs associated with implementing the change are proportional to the benefit to stakeholders. However, in accordance with feedback received that the cost/benefit to NATS (this DP) and the impact on neighbouring ANSP operations (DP11 Operational) are of equal importance, NATS has re-assigned this DP as "Priority 2."

# 4.13 DP10 Operational

- 4.13.1 Original Discussion Text: "The proposed change will not alter flights at or below 7000 ft."
- 4.13.2 **Summary and Priority:** NATS did not receive any feedback which suggested any changes to this DP. NATS has assigned this DP as "**Priority 1**" as any change altering flights below 7000 ft are outside the scope of this ACP.

# 4.14 DP11 Operational

4.14.1 Original Discussion Text: "The proposed change should not adversely impact neighbouring ANSP operations."

# How has feedback influenced this DP?

Stakeholder	Feedback	NATS' Response
Maastricht Upper Area Control (MUAC)	We would suggest that this is equally important as the Cost/Benefit of NATS (DP 9), i.e. Prio 1.	Noted, see section 4.12.
Amsterdam (Luchtverkeersleiding Netherland, LVNL)	Principle 11 can be read as if NATS can force a change without neighboring ANSP's consent if the impact on the neighboring ANSP's is not adverse in the eyes of NATS.	We have identified and engaged the potentially impacted stakeholders and will continue to actively engage with them throughout the process to ensure their needs are considered. There are existing processes to ensure that any changes that may impact neighbouring ANSPs will be mutually



	agreed prior to implementation, and these will continue to be followed.

4.14.2 <u>Summary and Priority:</u> NATS did not receive any feedback which suggested any changes to this DP. NATS has assigned this DP as "**Priority 2**" as any change should remain compatible with the existing procedures for aircraft arriving and leaving the UK FIR. However, in accordance with feedback received that the impact on neighbouring ANSP operations (this DP) and the cost/benefit to NATS (DP9 Technical) are of equal importance, NATS has re-assigned DP9 as "**Priority 2**" see section 4.12.2.

## 4.15 DP12 Technical

4.15.1 Original Discussion Text: "The volume of controlled airspace required for this change should be the minimum necessary to deliver an efficient airspace design, taking into account the needs of UK airspace users."

#### How has feedback influenced this DP?

Stakeholder	Feedback	NATS' Response
British Gliding Association (BGA)	The BGA endorse and strongly support this design principle. Efficiency in this context should mean protective design AND safe airspace provision for all other users operating in the area.	Noted, thank-you.
UK Flight Safety Committee (UKFSC)	This should be priority 1. Minimum necessary volume should be built into all ACPs as a standing requirement (I accept that is a CAA call).	Whilst maintaining access for all airspace users is a priority and NATS are mindful of this in all airspace changes, NATS considers that where a robust justification exists, additional controlled airspace (CAS) can be proposed to provide a safe and efficient airspace. This is consistent with the Design Principles with previous NERL ACPs. NATS will therefore re-assign this DP as Priority 2.

4.15.2 <u>Summary and Priority:</u> NATS did not receive any feedback which suggested any changes to the wording of this DP. NATS had provisionally assigned this DP as "**Priority 3**". However, following the feedback received NATS has re-assigned this DP as **"Priority 2."** 

# 4.16 DP13 Operational

- 4.16.1 Original Discussion Text: "The proposed change should not increase pilot/ controller workload."
- 4.16.2 <u>Summary and Priority</u>: NATS did not receive any feedback which suggested any changes to this DP. NATS has assigned this DP as "**Priority 2**" as this ACP will seek to reduce pilot/controller workload where practicable.



# 4.17 Proposed New DP (LVNL)

Stakeholder	Feedback	NATS' Response
Amsterdam (Luchtverkeersleiding Netherland, LVNL)	Add: design principle: impacted stakeholders shall be consulted for every change.	As part of the CAP1616 we have to identify, engage and consult with impacted stakeholders. The proposed additional design principle <i>"impacted stakeholders shall be consulted for every change" is</i> covered by the CAP1616 process, and is not something the design options can be evaluated against. Please refer to CAP1616 for further information.

4.17.1 **Summary:** NATS has considered the Design Principle proposed by LVNL and do not consider it is required as it relates to the process and is not something a design option can be evaluated against.

## 4.18 General Feedback (BGA)

4.18.1 The BGA provided the following feedback:

"On Slide 9 of the presentation document[OSEP\_Arrival\_Procedures\_Assessment\_Meeting\_Presentation (1)] in section 2 (Unknown Airspace Affected) there is a statement that "Engagement will be limited to ANSPs, NATMAC, Top10 airlines and MoD" . . . The BGA would contest this assumption because gliders in the UK are flown above 7000' both for thermal soaring (most thermal soaring use of 7000'+ is IMC cloud climbs) and during wave soaring. Most wave soaring in the UK (which is very often above 7000') occurs in the more mountainous areas or directly downwind of these mountainous areas. However, wave climbs above 7000' can also occur almost anywhere. Even though the BGA is represented on NATMAC we believe that the BGA should be confirmed as one of the principal stakeholders for this ACP. Hopefully, there will not be many potentially significant impacts on gliding operations as a result of any changes that may be proposed."

4.18.2 NATS provided the following response:

"The BGA have been targeted as we recognise that they might be impacted by the proposed airspace change. Stakeholders are divided into either 'targeted' or else 'non-targeted' categories; the BGA are a specifically targeted stakeholder."

#### 4.19 General Feedback (LVNL)

4.19.1 LVNL provided the following feedback:

"Also some questions: is the explanation of the design principle available? An explanation should give the necessary guidance to the principle. How is dealt with conflicting priorities and when can de deviated from a priority and based om what, decided by whom? Is that guidance available?".

4.19.2 NATS provided the following response:

"Any UK airspace change must be completed in accordance with the Civil Aviation Authority (CAA) CAP 1616 process. Please reference the definition of a Design Principle in the CAP1616; I have included a



copy for your reference. If you have any further questions about the process please contact the CAA at <u>airspace.policy@caa.co.uk</u>."

# 5. Engagement Evidence

- 5.1 NATS proposed 13 draft DPs which could be used to evaluate the design options which address the issue detailed in the Statement of Need (Ref 2). These DPs were shared by email with 63 stakeholders for feedback (See Section 4). This list of stakeholders comprised of 30 NATMAC representatives (representing airspace users identified as potentially being impacted by the change), 10 airlines<sup>2</sup> (representing over 62% of UK commercial traffic and includes the different types operation which could be impacted by these changes), 2 cargo operators, 6 Biz Jet operators, 7 UK space ports stakeholders and 9 ANSPs which neighbour the UK FIR. The complete list of stakeholders is provided in Table 1.
- 5.2 As well as feedback on NATS' draft DPs, stakeholders were invited to propose additional DPs they considered necessary for consideration.
- 5.3 1 additional DP was proposed by LVNL. This was related to the CAP1616 process and will not be included as an additional DP.
- 5.4 Stakeholders were given 6 weeks to provide feedback on these draft DPs. The changes this ACP seeks to make will have the potential to provide substantial benefits to airspace users with limited, if any, negative impact, to stakeholders. NATS therefore considers that whilst the changes are addressing an issue which exists throughout the entirety of the UK FIR, a 6-week engagement period for Stage 1 DP stakeholder engagement is sufficient.
- 5.5 NATS has engaged with the stakeholders listed in Table 1 below in the development of these DPs. In the initial engagement, feedback was sought on the draft DPs. We received feedback from 11 stakeholders on the DPs presented. Table 1 provides a summary of the engagement activity for this proposal. Email engagement evidence is provided in <u>Annex A.</u>

# 5.6 "We Asked" – Emails sent to targeted aviation stakeholders

5.6.1 Emails were sent on 21<sup>st</sup> April 2022 to 63 stakeholders; Table 1 identifies all those stakeholders contacted. A reminder email was sent part-way through the engagement (12<sup>th</sup> May 2022) and a final reminder was sent in the final week (27<sup>th</sup> May 2022) to seek maximum stakeholder participation.

<sup>&</sup>lt;sup>2</sup> BA are included as an airline operator (as they account for 11.5% of UK commercial air traffic) as well as a NATMAC member. They have only been counted as a single stakeholder for DP engagement.



# 5.8 "You Said" – Stakeholder Responses

5.8.1 The response rate was 17% (11/63 Stakeholders). These can be seen in Table 1.

## 5.9 **"We Did"**

- 5.10 Following engagement, the wording of the DPs and the priority levels were revised, as shown in sections 4.4 to 4.19.
- 5.11 A copy of this document was sent to stakeholders on 16<sup>th</sup> June 2022 (Ref A19). This provided feedback on the two-way engagement and demonstrated the development of the DPs following this engagement.

# 5.12 Stakeholder Engagement Record

Note: any other organisation or individual were welcome to provide input into the DP development process.

	Stakeholder	Engagement Emails					
		Ini	tial	Rem	inder	Fir	nal
		Engagement	Responses	Engagement	Responses	Engagement	Responses
		<u>A1</u>	<u>A4 - A18</u>	<u>A2</u>	<u>A4 - A18</u>	<u>A3</u>	<u>A4 - A18</u>
	Airlines UK	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Airspace4All	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Aircraft Owners and Pilots	Sent		Sent		Sent	
	Association (AOPA)	21/04/2022		12/05/2022		27/05/2022	
	Airport Operators Association	Sent		Sent		Sent	
	(AOA)	21/04/2022		12/05/2022		27/05/2022	
	Airspace Change Organising Group	Sent		Sent		Sent	
	(ACOG)	21/04/2022		12/05/2022		27/05/2022	
	Association of Remotely Piloted	Sent		Sent		Sent	
	Aircraft Systems UK (ARPAS-UK)	21/04/2022		12/05/2022		27/05/2022	
	Aviation Environment Federation	Sent		Sent		Sent	
	(AEF)	21/04/2022		12/05/2022		27/05/2022	
	British Airways (BA)	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Bae Systems	Sent		Sent		Sent	
0		21/04/2022		12/05/2022		27/05/2022	
MAG	British Airline Pilots Association	Sent		Sent		Sent	
ATI		21/04/2022		12/05/2022		27/05/2022	
Z	British Balloon and Airship Club	Sent	Received	n/a			
	(BBAC)	21/04/2022	22/04/2022				
	Aviation Approximation (PPCA)	Sent		Sent		Sent	
	Pritich Cliding Association (PCA)	21/04/2022	Dessived	12/05/2022		21/05/2022	
	British Gliding Association (BGA)	21/04/2022	02/05/2022	n/a			
		21/04/2022	19/05/2022				
	British Helicopter Association	Sent	Received	n/a			
	(BHA)	21/04/2022	21/04/2022	117 CA			
	General Aviation Safety Council	Sent		Sent		Sent	
	(GASCo)	21/04/2022		12/05/2022		27/05/2022	
	British Skydiving	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Drone Major	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	General Aviation Alliance (GAA)	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Guild of Air Traffic Control Officers	Sent		Sent		Sent	
	(GATCO)	21/04/2022		12/05/2022		27/05/2022	



	Stakeholder	Engagement Emails					
		Ini	tial	Reminder		Final	
		Engagement	Responses	Engagement	Responses	Engagement	Responses
		<u>A1</u>	<u>A4 - A18</u>	<u>A2</u>	<u>A4 - A18</u>	<u>A3</u>	<u>A4 - A18</u>
	Honourable Company of Air Pilots	Sent		Sent		Sent	
	(HCAP)	21/04/2022		12/05/2022		27/05/2022	
	Helicopter Club of Great Britain	Sent		Sent		Sent	
	(HCGB)	21/04/2022		12/05/2022		27/05/2022	
	Heavy Airlines	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Iprosurv	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Isle of Man CAA	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Light Aircraft Association (LAA)	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Low Fare Airlines	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Ministry of Defence – Defence	Sent	Received	n/a			
		21/04/2022	29/04/2022				
	Management (MOD DAATM)						
	PPL/IR (Europe)	Sent		Sent		Sent	
	LIK Airprox Roard (LIKAR)	21/04/2022		12/05/2022		21/05/2022 Sont	
		21/04/2022		12/05/2022		27/05/2022	
	LIK Flight Safety Committee	Sent		Sent	Received	n/a	
	(UKESC)	21/04/2022		12/05/2022	13/05/2022	11/4	
	EasvJet	Sent		Sent		Sent	Received
	,	21/04/2022		12/05/2022		27/05/2022	27/05/2022
	Ryanair	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Loganair	Sent	Received	n/a			
		21/04/2022	21/04/2022				
	Jet2	Sent		Sent		Sent	
S		21/04/2022		12/05/2022		27/05/2022	
	Tui	Sent		Sent		Sent	
IRL		21/04/2022		12/05/2022		27/05/2022	
◄	KLM	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Wizz Air	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Aer Lingus	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Eastern Airways	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	



	Stakeholder	Engagement Emails					
		Ini	tial	Rem	ninder	Fi	nal
		Engagement	Responses	Engagement	Responses	Engagement	Responses
		<u>A1</u>	<u>A4 - A18</u>	<u>A2</u>	<u> A4 - A18</u>	<u>A3</u>	<u>A4 - A18</u>
	British Airways (BA) <sup>3</sup>	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	FedEx	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	DHL	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Polaris (Avinor)	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Koebenhavn (Naviair)	Sent	Received	n/a			
		21/04/2022	04/05/2022		T	1	
	Amsterdam (Luchtverkeersleiding	Sent		Sent	Received	n/a	
	Netherland LVNL)	21/04/2022		12/05/2022	24/05/2022		
	Brussels	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
S	Paris	Sent		Sent		Sent	
ISN		21/04/2022		12/05/2022		27/05/2022	
◄	Brest	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Shanwick	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Shannon (IAA)	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Maastricht Upper Area Control	Sent	Received	n/a			
	(MUAC)	21/04/2022	21/04/2022				
	NATS <sup>4</sup>	n/a		1			
	Gama Aviation	Sent	Received	n/a			
		21/04/2022	27/04/2022		T		ſ
	Titian Airways	Sent		Sent		Sent	
ors		21/04/2022		12/05/2022		27/05/2022	
erati	Netjets	Sent		Sent		Sent	
be		21/04/2022		12/05/2022		27/05/2022	
et C	EFS flights	Sent		Sent		Sent	
liz J		21/04/2022		12/05/2022		27/05/2022	
	Zenith Aviation	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Lux Aviation	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	

<sup>&</sup>lt;sup>3</sup> BA are included in the NATMAC list and also as 1 of the top 10 airlines; they have only been counted as a single stakeholder for DP engagement.

<sup>&</sup>lt;sup>4</sup> As the UK ANSP NATS are listed as a Stakeholder. However, NATS are the sponsor of this change and are not included in external engagement.



	Stakeholder						
		Ini	tial	Rem	inder	Final	
		Engagement	Responses	Engagement	Responses	Engagement	Responses
		<u>A1</u>	<u>A4 - A18</u>	<u>A2</u>	<u>A4 - A18</u>	<u>A3</u>	<u>A4 - A18</u>
	United Kingdom Space Agency	Sent		Sent		Sent	
	(UKSA)	21/04/2022		12/05/2022		27/05/2022	
Ś	Virgin Orbit	Sent		Sent		Sent	
der		21/04/2022		12/05/2022		27/05/2022	
lohi	Spaceport Cornwall	Sent		Sent		Sent	
ake		21/04/2022		12/05/2022		27/05/2022	
s st	Snowdonia Aerospace Centre	Sent		Sent		Sent	
Do		21/04/2022		12/05/2022		27/05/2022	
a d	Black Arrow Space Technologies	Sent		Sent		Sent	
pac		21/04/2022		12/05/2022		27/05/2022	
× S	Space Wales	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	
	Aerospace Cornwall	Sent		Sent		Sent	
		21/04/2022		12/05/2022		27/05/2022	

Table 1: NATS OSEP Arrival Procedures Stage 1B Email Engagement Record

## 6. Conclusion

- 6.1 Throughout the DP engagement, we supplied stakeholders with a set of draft DPs, to promote discussion and invite their feedback.
- 6.2 Based on stakeholder feedback the wording of 1 draft DPs was revised as follows:
  - DP7 "The proposed changes should reflect the expected vertical and lateral profile of arriving aircraft".
- 6.3 Based on stakeholder feedback the priorities of 4 draft DPs were revised as follows:
  - DP5 "The impacts on MoD airspace users should be minimised." Priority 2
  - DP6 "The impacts on civilian airspace users should be minimised." Priority 2
  - DP9 "The proposed change must pass a NATS cost benefit analysis." Priority 2
  - DP12 "The volume of controlled airspace required for this change should be the minimum necessary to deliver an efficient airspace design, taking into account the needs of UK airspace users." Priority 2
- 6.4 This evolution has resulted in the list of DPs as detailed in the <u>Executive Summary.</u>



# A. Annex A: Design Principle Email Engagement Activity

# A1 Initial DP Engagement e-mail, 21st April 2022

Dear Colleague,

NATS is currently progressing a series of Airspace Change Proposals (ACP's) as part of our Operational Service Enhancements Project (OSEP) which seeks to deliver small scale changes across NATS' En-route (NERLs) airspace between now and 2027. These changes will deliver benefits through enabled fuel savings to customers, reduced routing inefficiency, safety improvements and/or alleviating capacity hotspots.

The ACPs which are currently ongoing are listed below, although other ACPs might be added in the future:

- <u>ACP-2021-060</u> Operational Service Enhancements Project:- Improving Access to Inactive SUAs.
- <u>ACP-2021-061</u> Improved Connectivity Through New and/ or Amended ATS Routes/ Waypoints.
- <u>ACP-2021-062</u> Operational Service Enhancements Project:- New and/ or Revised Arrival Procedures (this one).
- <u>ACP-2021-020</u> Operational Service Enhancements Project:- P18 Extension of Times of Availability NATEB ADN.
- <u>ACP-2019-055</u> New Amsterdam / London UIR Crossing Point

Aircraft arriving to many airfields follow a UK AIP published procedure to connect from the ATS route network to a point where an approach procedure can commence, usually a hold. Depending on the airfield this might be a published Standard Terminal Arrival Route (STAR) or a series of flight-plannable direct routes. The published procedures do not necessarily follow the most efficient lateral or vertical path or connect with the most suitable point on the ATS route network. This results in aircraft burning more fuel and emitting more CO<sub>2</sub> than necessary.

This change, ACP-2021-062, is seeking to improve connectivity between the UK ATS route Network and Airfields by introducing and/or amending arrival procedures connecting the route network to the airfield hold. This will enhance connectivity whilst improving fuel efficiency and reducing greenhouse gas emissions.

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 submission. This is required as part of the UK CAP1616 Airspace Change process. Below are the draft set of DPs for this Airspace Change. Please can you review these and give us your comments.

A Priority has been assigned to each Design Principle with 1 being the highest priority.

If you have any suggestions for additional design principles, we will 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.

#	Design Principle	Category	Priority	Notes	Stakeholder Comments
1	Maintain or enhance current levels of safety.	Safety	1		
2	Must accord with the CAA's published Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it.	Policy	1	The CAA have stated that this DP is required by all change sponsors. CAP1711 describes what airspace	



				modernisation must	
3	The proposed change will facilitate the reduction in CO <sub>2</sub> emissions per flight.	Environmental	2	deliver	
4	The proposed change will facilitate the reduction in fuel burn per flight.	Economic	2		
5	The impacts on MoD airspace users should be minimised	Operational	3		
6	The impacts on civilian airspace users should be minimised	Operational	3		
7	The proposed changes should reflect the operational profile of arriving aircraft.	Operational	2		
8	The proposed airspace change will maintain an appropriate standard of PBN.	Operational	2		
9	The proposed change must pass a NATS cost benefit analysis.	Technical	1		
10	The proposed change will not alter flights at or below 7000 ft	Operational	1		
11	The proposed change should not adversely impact neighbouring ANSP operations	Operational	2		
12	The volume of controlled airspace required for this change should be the minimum necessary to deliver an efficient airspace design, taking into account the needs of UK airspace users	Technical	3		
13	The proposed change should not increase pilot/ controller workload	Operational	2		
14	Add further suggested Design Principles HERE				

We would appreciate your feedback for the OSEP-Arrival Procedures draft DPs by 3<sup>rd</sup> June 2022. Many thanks for your time.

Best regards,





# A2 First DP Reminder e-mail, 12th May 2022

Dear Colleague,

Please see the email below relating to the formulation of Design Principles (DPs) which will be used during the submission NATS is currently undertaking to improve connectivity between the UK ATS route Network and Airfields by introducing New and/or Revised Arrival Procedures.

If you have already responded thank you for your time. If not, this DP review closes on the 3<sup>rd</sup> June 2022, in 3 weeks' time. If you would like to provide feedback please do so before this date. We would value any input you provide.

Best regards,

NATS Airspace Change Team



#### Dear Colleague,

NATS is currently progressing a series of Airspace Change Proposals (ACP's) as part of our Operational Service Enhancements Project (OSEP) which seeks to deliver small scale changes across NATS' En-route (NERLs) airspace between now and 2027. These changes will deliver benefits through enabled fuel savings to customers, reduced routing inefficiency, safety improvements and/or alleviating capacity hotspots.

The ACPs which are currently ongoing are listed below, although other ACPs might be added in the future:

- <u>ACP-2021-060</u> Operational Service Enhancements Project:- Improving Access to Inactive SUAs.
- <u>ACP-2021-061</u> Improved Connectivity Through New and/ or Amended ATS Routes/ Waypoints.
- <u>ACP-2021-062</u> Operational Service Enhancements Project:- New and/ or Revised Arrival Procedures (this one).
- <u>ACP-2021-020</u> Operational Service Enhancements Project:- P18 Extension of Times of Availability NATEB ADN.
- <u>ACP-2019-055</u> New Amsterdam / London UIR Crossing Point

Aircraft arriving to many airfields follow a UK AIP published procedure to connect from the ATS route network to a point where an approach procedure can commence, usually a hold. Depending on the airfield this might be a published Standard Terminal Arrival Route (STAR) or a series of flight-plannable direct routes. The published procedures do not necessarily follow the most efficient lateral or vertical path or connect with the most suitable point on the ATS route network. This results in aircraft burning more fuel and emitting more CO<sub>2</sub> than necessary.

This change, ACP-2021-062, is seeking to improve connectivity between the UK ATS route Network and Airfields by introducing and/or amending arrival procedures connecting the route network to the airfield hold. This will enhance connectivity whilst improving fuel efficiency and reducing greenhouse gas emissions.

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 submission. This is required as part of the UK CAP1616 Airspace Change process. Below are the draft set of DPs for this Airspace Change. Please can you review these and give us your comments.

A Priority has been assigned to each Design Principle with 1 being the highest priority. If you have any suggestions for additional design principles, we will 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.

#	Design Principle	Category	Priority	Notes	Stakeholder Comments
1	Maintain or enhance current levels	Safety	1		
	of safety.				
2	Must accord with the CAA's	Policy	1	The CAA have stated that	
	published Airspace Modernisation			this DP is required by all	
	Strategy (CAP1711) and any			change sponsors.	
	current or future plans associated			CAP1711 describes what	
	with it.			airspace modernisation	
				must deliver	
3	The proposed change will facilitate	Environmental	2		
	the reduction in CO <sub>2</sub> emissions per				
	flight.				
4	The proposed change will facilitate	Economic	2		
	the reduction in fuel burn per flight.				
5	The impacts on MoD airspace	Operational	3		
	users should be minimised				
6	The impacts on civilian airspace	Operational	3		
	users should be minimised				
7	The proposed changes should	Operational	2		
	reflect the operational profile of				
	arriving aircraft.				
8	The proposed airspace change will maintain an appropriate standard	Operational	2		
	of PBN.				
9	The proposed change must pass a	Technical	1		
	NATS cost benefit analysis.				
10	The proposed change will not alter	Operational	1		
	flights at or below 7000 ft				
11	The proposed change should not	Operational	2		
	adversely impact neighbouring				
	ANSP operations				
12	The volume of controlled airspace	Technical	3		
	required for this change should be				
	the minimum necessary to deliver				
	an efficient airspace design, taking				
	into account the needs of UK				
	airspace users				
13	The proposed change should not	Operational	2		
	increase pilot/ controller workload				
14	Add further suggested Design				
	Principles HERE				

We would appreciate your feedback for the OSEP-Arrival Procedures draft DPs by 3rd June 2022. Many thanks for your time.



Best regards,





# A3 Second (Final) DP Reminder e-mail, 27th May 2022

Dear Colleague,

Please see the email below relating to the formulation of Design Principles (DPs) which will be used during the submission NATS is currently undertaking to improve connectivity between the UK ATS route Network and Airfields by introducing New and/or Revised Arrival Procedures.

If you have already responded thank you for your time. If not, this DP review closes on the 3<sup>rd</sup> June 2022, in 1 weeks' time. If you would like to provide feedback please do so before this date. We would value any input you provide.

Best regards,

NATS Airspace Change Team



#### Dear Colleague,

NATS is currently progressing a series of Airspace Change Proposals (ACP's) as part of our Operational Service Enhancements Project (OSEP) which seeks to deliver small scale changes across NATS' En-route (NERLs) airspace between now and 2027. These changes will deliver benefits through enabled fuel savings to customers, reduced routing inefficiency, safety improvements and/or alleviating capacity hotspots.

The ACPs which are currently ongoing are listed below, although other ACPs might be added in the future:

- <u>ACP-2021-060</u> Operational Service Enhancements Project:- Improving Access to Inactive SUAs.
- <u>ACP-2021-061</u> Improved Connectivity Through New and/ or Amended ATS Routes/ Waypoints.
- <u>ACP-2021-062</u> Operational Service Enhancements Project:- New and/ or Revised Arrival Procedures (this one).
- <u>ACP-2021-020</u> Operational Service Enhancements Project:- P18 Extension of Times of Availability NATEB ADN.
- <u>ACP-2019-055</u> New Amsterdam / London UIR Crossing Point

Aircraft arriving to many airfields follow a UK AIP published procedure to connect from the ATS route network to a point where an approach procedure can commence, usually a hold. Depending on the airfield this might be a published Standard Terminal Arrival Route (STAR) or a series of flight-plannable direct routes. The published procedures do not necessarily follow the most efficient lateral or vertical path or connect with the most suitable point on the ATS route network. This results in aircraft burning more fuel and emitting more CO<sub>2</sub> than necessary.

This change, ACP-2021-062, is seeking to improve connectivity between the UK ATS route Network and Airfields by introducing and/or amending arrival procedures connecting the route network to the airfield hold. This will enhance connectivity whilst improving fuel efficiency and reducing greenhouse gas emissions.

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 submission. This is required as part of the UK CAP1616 Airspace Change process. Below are the draft set of DPs for this Airspace Change. Please can you review these and give us your comments.

A Priority has been assigned to each Design Principle with 1 being the highest priority.

If you have any suggestions for additional design principles, we will 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.

#	Design Principle	Category	Priority	Notes	Stakeholder Comments
1	Maintain or enhance current levels	Safety	1		
	of safety.				
2	Must accord with the CAA's	Policy	1	The CAA have stated that	
	published Airspace Modernisation			this DP is required by all	
	Strategy (CAP1711) and any			CAD1711 deperihee what	
	with it			airspace modernisation	
	with tit.			must deliver	
3	The proposed change will facilitate	Environmental	2		
	the reduction in CO2 emissions per				
	flight.				
4	The proposed change will facilitate	Economic	2		
	the reduction in fuel burn per flight.				
5	The impacts on MoD airspace	Operational	3		
	users should be minimised				
6	The impacts on civilian airspace	Operational	3		
7	The proposed changes should	Operational	2		
'	reflect the operational profile of	operational	2		
	arriving aircraft.				
8	The proposed airspace change will	Operational	2		
	maintain an appropriate standard of PBN				
9	The proposed change must pass a	Technical	1		
	NATS cost benefit analysis.				
10	The proposed change will not alter	Operational	1		
	flights at or below 7000 ft				
11	The proposed change should not	Operational	2		
	adversely impact neighbouring				
	ANSP operations				
12	I ne volume of controlled airspace	rechnical	3		
	the minimum necessary to deliver				
	an efficient airspace design, taking				
	into account the needs of UK				
	airspace users				
13	The proposed change should not	Operational	2		
	increase pilot/ controller workload				
14	Add further suggested Design				
	Principles HERE				

We would appreciate your feedback for the OSEP-Arrival Procedures draft DPs by 3<sup>rd</sup> June 2022. Many thanks for your time.



Best regards,





# A4 Response of BBAC to Initial Engagement email, 22<sup>nd</sup> April 2022

From:

Sent: 22 April 2022 17:22

To: Airspace Consultation

**Subject:** [EXTERNAL] Re: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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.

APPROVE

BBAC



# A5 Response of BGA to Initial Engagement email, 3rd May 2022

From: Sent: 03 May 2022 20:48 To: Airspace Consultation

Cc:

**Subject:** [EXTERNAL] Re: FW: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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.

Hi,

This topic was sent to me for review by

Thanks,

Feedback from the BGA re ACP-2021-062

On Slide 9 of the presentation document [OSEP\_Arrival\_Procedures\_Assessment\_Meeting\_Presentation (1)] in section 2 (Unknown Airspace Affected) there is a statement that "Engagement will be limited to ANSPs, NATMAC, Top10 airlines and MoD" (See slide copied from the presentation below

Addressing the identified issues

Stakeholder Fatigue

NATS are proposing three new OSEP ACPs all affecting similar stakeholders

Potential for law response
Where able communication will be combined to limit stakeholder fatigue

Uktrown Airspace Affected

The OSEP project is looking at fundamental inefficiencies within the UK network, as such the same
inefficiency could exist in more than one location.

Changes will only affect raffic above 7000 ft and therefore only airspace users will be impacted.

Changes will only affect traffic above 7000 ft and therefore only airspace users will be impacted.

Changes will only affect traffic above 7000 ft and therefore only airspace users will be impacted.

Changes and of the OSEP project stakeholders are able to propose design options within the scope of the
ACP for consideration.

Alignment with existing ACPs

Stakeholders will be actively engaged so that changes will remain compatible with existing ACPs.

Distachol

The BGA would contest this assumption because gliders in the UK are flown above 7000' both for thermal soaring (most thermal soaring use of 7000'+ is IMC cloud climbs) and during wave soaring. Most wave soaring in the UK (which is very often above 7000') occurs in the more mountainous areas or directly downwind of these mountainous areas. However, wave climbs above 7000' can also occur almost anywhere.

Even though the BGA is represented on NATMAC we believe that the BGA should be confirmed as one of the principal stakeholders for this ACP. Hopefully, there will not be many potentially significant impacts on gliding operations as a result of any changes that may be proposed.

(BGA Airspace)



# A6 NATS Response to BGA email, 12th May 2022

From: Airspace Consultation

Sent: 12 May 2022 13:00

To:

Subject: RE: [EXTERNAL] Re: FW: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

Hi

Thank-you for your email.

The BGA have been targeted as we recognise that they might be impacted by the proposed airspace change. Stakeholders are divided into either 'targeted' or else 'non-targeted' categories; the BGA are a specifically targeted stakeholder.

We look forward to your feedback on the design principles.

Best regards,





## A7 BGA response to NATS email, 19th May 2022

From: Sent: 19 May 2022 09:30 To: Airspace Consultation

Cc:

Subject: Re: FW: [EXTERNAL] Re: FW: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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 Sir/Madam,

Many thanks.

Following my previous email please now find our specific responses in the table below.

Regards,

From: Airspace Consultation Sent: 12 May 2022 13:00

To:

Subject: RE: [EXTERNAL] Re: FW: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

Hi

Thank-you for your email.

The BGA have been targeted as we recognise that they might be impacted by the proposed airspace change. Stakeholders are divided into either 'targeted' or else 'non-targeted' categories; the BGA are a specifically targeted stakeholder.

We look forward to your feedback on the design principles.

Best regards,

NATS Airspace Change Team



From: Sent: 03 May 2022 20:48 To: Airspace Consultation Cc:

Subject: [EXTERNAL] Re: FW: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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.

Hi,

© 2022 NATS (En-route) plc Issue 1.1 CAP1616 OSEP: Arrival Procedures Step 1B Design Principles



This topic was sent to me for review by

Thanks,

#### Feedback from the BGA re ACP-2021-062

On Slide 9 of the presentation document [OSEP\_Arrival\_Procedures\_Assessment\_Meeting\_Presentation (1)] in section 2 (Unknown Airspace Affected) there is a statement that "Engagement will be limited to ANSPs, NATMAC, Top10 airlines and MoD" (See slide copied from the presentation below)

#### Addressing the identified issues



- Stakeholder Fatigue
  - NATS are proposing three new OSEP ACPs all affecting similar stakeholders
  - Potential for low response
  - Where able communication will be combined to limit stakeholder fatigue
- Unknown Airspace Affected
  - The OSEP project is looking at fundamental inefficiencies within the UK network, as such the same
  - inefficiency could exist in more than one location.
     Changes will only affect traffic above 7000 ft and therefore only airspace users will be impacted.
  - Engagement will be limited to ANSPs. NATMAC. Top 10 airlines and MoD
- Options proposed below 7000 ft
  - As part of the OSEP project stakeholders are able to propose design options within the scope of the ACP for consideration.
  - Any option proposed which could affect traffic below 7000 ft will not be progressed.
- Alignment with existing ACPs
  - Stakeholders will be actively engaged so that changes will remain compatible with existing ACPs.

AA1S Austic

The BGA would contest this assumption because gliders in the UK are flown above 7000' both for thermal soaring (most thermal soaring use of 7000'+ is IMC cloud climbs) and during wave soaring. Most wave soaring in the UK (which is very often above 7000') occurs in the more mountainous areas or directly downwind of these mountainous areas. However, wave climbs above 7000' can also occur almost anywhere.

Even though the BGA is represented on NATMAC we believe that the BGA should be confirmed as one of the principal stakeholders for this ACP. Hopefully, there will not be many potentially significant impacts on gliding operations as a result of any changes that may be proposed.

(BGA Airspace)

From: Airspace Consultation Sent: 21 April 2022 13:21

Subject: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

Dear Colleague,

NATS is currently progressing a series of Airspace Change Proposals (ACP's) as part of our Operational Service Enhancements Project (OSEP) which seeks to deliver small scale changes across NATS' En-route (NERLs) airspace between now and 2027. These changes will deliver benefits through enabled fuel savings to customers, reduced routing inefficiency, safety improvements and/or alleviating capacity hotspots.

The ACPs which are currently ongoing are listed below, although other ACPs might be added in the future:

- <u>ACP-2021-060</u> Operational Service Enhancements Project:- Improving Access to Inactive SUAs.
- ACP-2021-061 Improved Connectivity Through New and/ or Amended ATS Routes/ Waypoints.
- <u>ACP-2021-062</u> Operational Service Enhancements Project:- New and/ or Revised Arrival Procedures (this one).
- ACP-2021-020 Operational Service Enhancements Project:- P18 Extension of Times of Availability NATEB ADN.
- <u>ACP-2019-055</u> New Amsterdam / London UIR Crossing Point



Aircraft arriving to many airfields follow a UK AIP published procedure to connect from the ATS route network to a point where an approach procedure can commence, usually a hold. Depending on the airfield this might be a published Standard Terminal Arrival Route (STAR) or a series of flight-plannable direct routes. The published procedures do not necessarily follow the most efficient lateral or vertical path or connect with the most suitable point on the ATS route network. This results in aircraft burning more fuel and emitting more CO<sub>2</sub> than necessary.

This change, ACP-2021-062, is seeking to improve connectivity between the UK ATS route Network and Airfields by introducing and/or amending arrival procedures connecting the route network to the airfield hold. This will enhance connectivity whilst improving fuel efficiency and reducing greenhouse gas emissions.

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 submission. This is required as part of the UK CAP1616 Airspace Change process.

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

A Priority has been assigned to each Design Principle with 1 being the highest priority.

If you have any suggestions for additional design principles, we will 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.

#	Design Principle	Category	Priority	Notes	Stakeholder Comments
1	Maintain or enhance current levels of safety.	Safety	1		
2	Must accord with the CAA's published Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it.	Policy	1	The CAA have stated that this DP is required by all change sponsors. CAP1711 describes what airspace modernisation must deliver	
3	The proposed change will facilitate the reduction in CO <sub>2</sub> emissions per flight.	Environmental	2		
4	The proposed change will facilitate the reduction in fuel burn per flight.	Economic	2		
5	The impacts on MoD airspace users should be minimised	Operational	3		
6	The impacts on civilian	Operational	3		Sponsor should note the following : gliders in the UK are flown above



airspace users should be minimised		7000' both for thermal soaring (mainly IMC cloud climbs) and during wave soaring. Most wave soaring in the UK (which is very often above 7000') occurs in the more mountainous areas or directly downwind of these mountainous areas. However, wave climbs above 7000' can also occur almost anywhere.
--	--	---

7	The proposed changes should reflect the operational profile of arriving aircraft.	Operational	2	
8	The proposed airspace change will maintain an appropriate standard of PBN.	Operational	2	
9	The proposed change must pass a NATS cost benefit analysis.	Technical	1	
10	The proposed change will not alter flights at or below 7000 ft	Operational	1	
11	The proposed change should not adversely impact neighbouring ANSP operations	Operational	2	
12	The volume of controlled airspace required for this change should be the minimum necessary to deliver an efficient airspace design,	Technical	3	The BGA endorse and strongly support this design principle. Efficiency in this context should mean protective design AND safe airspace provision for all other users operating in the area.



	taking into account the needs of UK airspace users			
13	The proposed change should not increase pilot/ controller workload	Operational	2	
14	Add further suggested Design Principles HERE			

We would appreciate your feedback for the OSEP-Arrival Procedures draft DPs by 3<sup>rd</sup> June 2022. Many thanks for your time.

Best regards,





# A8 Response of BHA to Initial Engagement email, 21st April 2022

From: Sent: 21 April 2022 13:36

To: Airspace Consultation

Subject: [EXTERNAL] RE: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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.

Approve

CEO BHA



# A9 Response of easyJet to Second (Final) DP reminder e-mail, 27th May 2022

From:

Sent: 27 May 2022 13:00

To: Airspace Consultation

**Subject:** [EXTERNAL] RE: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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.

Approve.

Sorry I didn't see voting enabled on the message.

Kind regards,

Flight Operations Technical Manager

fly us: <u>www.easyJet.com</u> holiday with us: <u>www.easyjet/holidays</u> tweet us: <u>www.twitter.com/easyJet</u> friend us:<u>www.facebook.com/easyJet</u> follow us: <u>www.instagram.com/easyJet</u>



easyJet Airline Company Ltd, Hangar 89, London Luton Airport, LU2 9PF



# A10 Response of Gama Aviation to Initial Engagement email, 27th April 2022

From:

Sent: 27 April 2022 18:06

To: Airspace Consultation

**Subject:** [EXTERNAL] Re: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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.

I approve!

Best regards,



Gama Aviation

:Air Traffic Specialist

Your mission, our passion.

gamaaviation.com



ACE 2022, Time to meet up in person again

All our business aviation teams will be on site at EBACE 2022 Charter, Management, Maintenance and FBO Please contact us to arrange a meeting, let's talk.



Your mission, our passion gamaaviation.com



# A11 Response of Loganair to Initial Engagement email, 21st April 2022

From:

Sent: 21 April 2022 15:22

To: Airspace Consultation

**Subject:** [EXTERNAL] RE: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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 afternoon

Loganair has no comment on the design principles as presented. ACP-2021-062.

Regards,

Manager Flight Support

Web: <u>http://www.loganair.co.uk</u>



# A12 Response of MoD to Initial Engagement email, 29th April 2022

From:

Sent: 29 April 2022 09:58

To: Airspace Consultation

Subject: [EXTERNAL] RE: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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 are content with the DPs below and have no further comments.

Regards



# A13 Response of MUAC to Initial Engagement email, 21<sup>st</sup> April 2022

From:

Sent: 21 April 2022 16:22

To: Airspace Consultation

**Subject:** [EXTERNAL] RE: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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 afternoon,

MUAC would have one comment with regards to Design Principle 11. (See table below)

Other than that, we approve the contents of your email.

Best regards

EUROCONTROL Maastricht Upper Area Control Centre (MUAC)

www.eurocontrol.int/muac Follow us on:



From: Airspace Consultation

Sent: Thursday, 21 April 2022 14:21

Subject: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

Dear Colleague,

© 2022 NATS (En-route) plc Issue 1.1 CAP1616 OSEP: Arrival Procedures Step 1B Design Principles



NATS is currently progressing a series of Airspace Change Proposals (ACP's) as part of our Operational Service Enhancements Project (OSEP) which seeks to deliver small scale changes across NATS' En-route (NERLs) airspace between now and 2027. These changes will deliver benefits through enabled fuel savings to customers, reduced routing inefficiency, safety improvements and/or alleviating capacity hotspots.

The ACPs which are currently ongoing are listed below, although other ACPs might be added in the future:

- <u>ACP-2021-060</u> Operational Service Enhancements Project:- Improving Access to Inactive SUAs.
- <u>ACP-2021-061</u> Improved Connectivity Through New and/ or Amended ATS Routes/ Waypoints.
- <u>ACP-2021-062</u> Operational Service Enhancements Project:- New and/ or Revised Arrival Procedures (this one).
- <u>ACP-2021-020</u> Operational Service Enhancements Project:- P18 Extension of Times of Availability NATEB ADN.
- <u>ACP-2019-055</u> New Amsterdam / London UIR Crossing Point

Aircraft arriving to many airfields follow a UK AIP published procedure to connect from the ATS route network to a point where an approach procedure can commence, usually a hold. Depending on the airfield this might be a published Standard Terminal Arrival Route (STAR) or a series of flight-plannable direct routes. The published procedures do not necessarily follow the most efficient lateral or vertical path or connect with the most suitable point on the ATS route network. This results in aircraft burning more fuel and emitting more CO<sub>2</sub> than necessary.

This change, ACP-2021-062, is seeking to improve connectivity between the UK ATS route Network and Airfields by introducing and/or amending arrival procedures connecting the route network to the airfield hold. This will enhance connectivity whilst improving fuel efficiency and reducing greenhouse gas emissions.

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 submission. This is required as part of the UK CAP1616 Airspace Change process. Below are the draft set of DPs for this Airspace Change. Please can you review these and give us your comments.

A Priority has been assigned to each Design Principle with 1 being the highest priority.

If you have any suggestions for additional design principles, we will 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.

#	Design Principle	Category	Priority	Notes	Stakeholder Comments
1	Maintain or enhance current levels of safety.	Safety	1		
2	Must accord with the CAA's published Airspace Modernisation Strategy (CAP1711) and any current or	Policy	1	The CAA have stated that this DP is required by all change sponsors. CAP1711 describes what airspace modernisation must deliver	



	future plans			
	associated			
	with it.			
3	The proposed	Environmental	2	
	change will			
	facilitate the			
	reduction in			
	CO <sub>2</sub>			
	emissions per			
	Tilgnt.		0	
4	change will	Economic	Z	
	facilitate the			
	reduction in			
	fuel burn per			
	flight.			
5	The impacts	Operational	3	
	on MoD			
	airspace			
	users should			
	be minimised			
6	The impacts	Operational	3	
	on civilian			
	airspace			
	be minimised			
7	The proposed	Operational	2	
	changes	operational	2	
	should reflect			
	the			
	operational			
	profile of			
	arriving			
	aircraft.			
8	airspace	Operational	2	
	change will			
	appropriate			
	standard of			
0	The proposed	Technical	1	
9	change must	rechnical		
	pass a NATS			
	cost benefit			
	analysis.			
10	The proposed	Operational	1	
	change will			
	not alter			



	flights at or			
11	The proposed change should not adversely impact neighbouring ANSP operations	Operational	2	We would suggest that this is equally important as the Cost/Benefit of NATS (DP 9), i.e. Prio 1.
12	The volume of controlled airspace required for this change should be the minimum necessary to deliver an efficient airspace design, taking into account the needs of UK airspace users	Technical	3	
13	The proposed change should not increase pilot/ controller workload	Operational	2	
14	Add further suggested Design Principles HERE			

We would appreciate your feedback for the OSEP-Arrival Procedures draft DPs by 3<sup>rd</sup> June 2022. Many thanks for your time.

Best regards,





# A14 Response of Naviair to Initial Engagement email, 4<sup>th</sup> May 2022

From:

Sent: 04 May 2022 12:23

To: Airspace Consultation

Cc:

**Subject:** [EXTERNAL] SV: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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.

Approve

Yours sincerely

Airspace expert & Air traffic controller, ATCC Copenhagen





# A15 Response of UKFSC to First DP Reminder e-mail, 13<sup>th</sup> May 2022

From:

Sent: 13 May 2022 13:57

To: Airspace Consultation

Subject: [EXTERNAL] RE: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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.

-----NATMAC reply------

Please see comment on the attached DP form. Where no comment is made, the DP and priority selection is endorsed.

Kind regards

Chief Executive UK Flight Safety Committee

From: Airspace Consultation

Sent: 12 May 2022 16:34

Subject: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

Dear Colleague,

Please see the email below relating to the formulation of Design Principles (DPs) which will be used during the submission NATS is currently undertaking to improve connectivity between the UK ATS route Network and Airfields by introducing New and/or Revised Arrival Procedures.

If you have already responded thank you for your time. If not, this DP review closes on the 3<sup>rd</sup> June 2022, in 3 weeks' time. If you would like to provide feedback please do so before this date. We would value any input you provide.

Best regards,

NATS Airspace Change Team



#### Dear Colleague,

NATS is currently progressing a series of Airspace Change Proposals (ACP's) as part of our Operational Service Enhancements Project (OSEP) which seeks to deliver small scale changes across NATS' En-route (NERLs) airspace between now and 2027. These changes will deliver benefits through enabled fuel savings to customers, reduced routing inefficiency, safety improvements and/or alleviating capacity hotspots.

The ACPs which are currently ongoing are listed below, although other ACPs might be added in the future:

- <u>ACP-2021-060</u> Operational Service Enhancements Project:- Improving Access to Inactive SUAs.
- ACP-2021-061 Improved Connectivity Through New and/ or Amended ATS Routes/ Waypoints.
- <u>ACP-2021-062</u> Operational Service Enhancements Project:- New and/ or Revised Arrival Procedures (this one).
- <u>ACP-2021-020</u> Operational Service Enhancements Project:- P18 Extension of Times of Availability NATEB ADN.
- <u>ACP-2019-055</u> New Amsterdam / London UIR Crossing Point

Aircraft arriving to many airfields follow a UK AIP published procedure to connect from the ATS route network to a point where an approach procedure can commence, usually a hold. Depending on the airfield this might be a published Standard Terminal Arrival Route (STAR) or a series of flight-plannable direct routes. The published procedures do not necessarily follow the most efficient lateral or vertical path or



connect with the most suitable point on the ATS route network. This results in aircraft burning more fuel and emitting more  $CO_2$  than necessary.

This change, ACP-2021-062, is seeking to improve connectivity between the UK ATS route Network and Airfields by introducing and/or amending arrival procedures connecting the route network to the airfield hold. This will enhance connectivity whilst improving fuel efficiency and reducing greenhouse gas emissions.

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 submission. This is required as part of the UK CAP1616 Airspace Change process. Below are the draft set of DPs for this Airspace Change. Please can you review these and give us your comments.

A Priority has been assigned to each Design Principle with 1 being the highest priority.

If you have any suggestions for additional design principles, we will 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.

#	Design Principle	Category	Priority	Notes	Stakeholder Comments
1	Maintain or enhance current levels of safety.	Safety	1		
2	Must accord with the CAA's published Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it.	Policy	1	The CAA have stated that this DP is required by all change sponsors. CAP1711 describes what airspace modernisation must deliver	
3	The proposed change will facilitate the reduction in CO <sub>2</sub> emissions per flight.	Environmental	2		
4	The proposed change will facilitate the reduction in fuel burn per flight.	Economic	2		
5	The impacts on MoD airspace users should be minimised	Operational	3		
6	The impacts on civilian airspace users should be minimised	Operational	3		
7	The proposed changes should reflect the	Operational	2		



	oporational			
	profile of			
	arriving			
	aircraft.			
8	The proposed airspace change will maintain an appropriate standard of PBN.	Operational	2	
9	The proposed change must pass a NATS cost benefit analysis.	Technical	1	It is hard to comment on this without understanding the basis on which such a CBA would be conducted. Is the benefit to NATS or to the operational service?
10	The proposed change will not alter flights at or below 7000 ft	Operational	1	
11	The proposed change should not adversely impact neighbouring ANSP operations	Operational	2	
12	The volume of controlled airspace required for this change should be the minimum necessary to deliver an efficient airspace design, taking into account the needs of UK airspace users	Technical	3	This should be priority 1. Minimum necessary volume should be built into all ACPs as a standing requirement (I accept that is a CAA call).
13	The proposed change should not increase pilot/ controller workload	Operational	2	
14	Add further suggested Design Principles HERE			

We would appreciate your feedback for the OSEP-Arrival Procedures draft DPs by 3<sup>rd</sup> June 2022. Many thanks for your time.

Best regards,



# A16 NATS Response to UKFSC email, 24<sup>th</sup> May 2022

From: Airspace Consultation Sent: 24 May 2022 13:19 To:

Subject: RE: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

Hi

Thank-you for your email.

The Operational Service Enhancement Project (OSEP) is part of NATS commitment to enable environmental improvements through smallscale deployments. The OSEP project seeks to deliver benefit both to the NATS operation and to airspace users. This project seeks opportunities to deliver benefits through CO2, fuel savings, reduced routing inefficiency, safety improvements and alleviating capacity hotspots, to our customers.

This design principle (DP9) will allow us to transparently reject those options we consider to not deliver benefits proportionately to the risk/uncertainty and costs involved in delivering the change.

To provide our customers with improvements associated with OSEP deployments, any changes progressed should provide value and benefit.

We will revise DP9, and review the prioritisation of DP12, to reflect the feedback received. The final wording will be issued in the Stage 1B Design Principle documentation submitted to the CAA.

We welcome your response against DP9.

Best regards,





# A17 Response of LVNL to First DP Reminder e-mail, 24<sup>th</sup> May 2022

From:

Sent: 24 May 2022 09:20

To: Airspace Consultation Cc:

Subject: [EXTERNAL] RE: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

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,

Hereby my comments,

Approve, with some comments in the stakeholder comments box.

Also some questions: is the explanation of the design principle available? An explanation should give the necessary guidance to the principle. How is dealt with conflicting priorities and when can de deviated from a priority and based om what, decided by whom? Is that guidance available?

Add: design principle: impacted stakeholders shall be consulted for every change. Principle 11 can be read as if NATS can force a change without neighboring ANSP's consent if the impact on the neighboring ANSP's is not adverse in the eyes of NATS.

Best regards,



Van: Airspace Consultation

Verzonden: donderdag 21 april 2022 14:21

Onderwerp: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

Dear Colleague,

NATS is currently progressing a series of Airspace Change Proposals (ACP's) as part of our Operational Service Enhancements Project (OSEP) which seeks to deliver small scale changes across NATS' En-route (NERLs) airspace between now and 2027. These changes will deliver benefits through enabled fuel savings to customers, reduced routing inefficiency, safety improvements and/or alleviating capacity hotspots.

The ACPs which are currently ongoing are listed below, although other ACPs might be added in the future:

- <u>ACP-2021-060</u> Operational Service Enhancements Project:- Improving Access to Inactive SUAs.
- <u>ACP-2021-061</u> Improved Connectivity Through New and/ or Amended ATS Routes/ Waypoints.
- <u>ACP-2021-062</u> Operational Service Enhancements Project:- New and/ or Revised Arrival Procedures (this one).
- <u>ACP-2021-020</u> Operational Service Enhancements Project:- P18 Extension of Times of Availability NATEB ADN.
- <u>ACP-2019-055</u> New Amsterdam / London UIR Crossing Point

Aircraft arriving to many airfields follow a UK AIP published procedure to connect from the ATS route network to a point where an approach procedure can commence, usually a hold. Depending on the airfield this might be a published Standard Terminal Arrival Route (STAR) or a series of flight-plannable direct routes. The published procedures do not necessarily follow the most efficient lateral or vertical path or connect with the most suitable point on the ATS route network. This results in aircraft burning more fuel and emitting more CO<sub>2</sub> than necessary.

This change, ACP-2021-062, is seeking to improve connectivity between the UK ATS route Network and Airfields by introducing and/or amending arrival procedures connecting the route network to the airfield hold. This will enhance connectivity whilst improving fuel efficiency and reducing greenhouse gas emissions.



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 submission. This is required as part of the UK CAP1616 Airspace Change process. Below are the draft set of DPs for this Airspace Change. Please can you review these and give us your comments.

A Priority has been assigned to each Design Principle with 1 being the highest priority.

If you have any suggestions for additional design principles, we will 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.

#	Design Principle	Category	Priority	Notes	Stakeholder Comments
1	Maintain or enhance current levels of safety.	Safety	1		
2	Must accord with the CAA's published Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it.	Policy	1	The CAA have stated that this DP is required by all change sponsors. CAP1711 describes what airspace modernisation must deliver	Add 'known' to the design principle. How can a change be in line with unknown future plans.
3	The proposed change will facilitate the reduction in CO <sub>2</sub> emissions per flight.	Environmental	2		
4	The proposed change will facilitate the reduction in fuel burn per flight.	Economic	2		
5	The impacts on MoD airspace users should be minimised	Operational	3		
6	The impacts on civilian airspace users should be minimised	Operational	3		
7	The proposed changes should reflect the operational profile of arriving aircraft.	Operational	2		Meaning CDO and CCO? From ToD? Be more specific in the design principle?
8	The proposed airspace change will	Operational	2		



	maintain an appropriate standard of PBN.			
9	The proposed change must pass a NATS cost benefit analysis.	Technical	1	
10	The proposed change will not alter flights at or below 7000 ft	Operational	1	
11	The proposed change should not adversely impact neighbouring ANSP operations	Operational	2	
12	The volume of controlled airspace required for this change should be the minimum necessary to deliver an efficient airspace design, taking into account the needs of UK airspace users	Technical	3	
13	The proposed change should not increase pilot/ controller workload	Operational	2	
14	Add further suggested Design Principles HERE			

We would appreciate your feedback for the OSEP-Arrival Procedures draft DPs by 3<sup>rd</sup> June 2022. Many thanks for your time.

Best regards,





# A18 NATS Response to LVNL e-mail, 27th May 2022

From: Airspace Consultation

Sent: 27 May 2022 10:58

To:

Subject: RE: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

Hi

Thank-you for your email.

Any UK airspace change must be completed in accordance with the Civil Aviation Authority (CAA) CAP 1616 process. Please reference the definition of a Design Principle in the CAP1616; I have included a copy for your reference. If you have any further questions about the process please contact the CAA at

As part of the CAP1616 we have to identify, engage and consult with impacted stakeholders. The proposed additional design principle *"impacted stakeholders shall be consulted for every change"* is covered by the CAP1616 process, and is not something the design options can be evaluated against. Please refer to CAP1616 for further information.

We have identified and engaged the potentially impacted stakeholders, and will continue to actively engage with them throughout the process to ensure their needs are considered. There are existing processes to ensure that any changes that may impact neighbouring ANSPs will be mutually agreed prior to implementation and these will continue to be followed.

Design Principle 2 "Must accord with the CAA's published Airspace Modernisation Strategy (CAP1711) and any current or future plans associated with it", has been written by the regulator and we cannot change it, but we fully understand your feedback, thank-you.

Design Principle 7 "The proposed changes should reflect the operational profile of arriving aircraft" will be updated in accordance with your feedback to "The proposed changes should reflect the expected vertical and lateral profile of arriving aircraft".

Best regards,





# A19 NATS e-mail sharing 1B Design Principles document with stakeholders, 16<sup>th</sup> June 2022

From: Airspace Consultation

Sent: 16 June 2022 13:36

Subject: Airspace Change Design Principles for NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

Dear Colleague,

We wrote to you in April requesting feedback on the draft Design Principles for the NATS Operational Service Enhancements Project:- New and/or Revised Arrival Procedures

Thank you to those who responded and provided invaluable feedback to this process. Please find attached the response document which contains the final version of the design principles which we will be soon submitting to the CAA.

Kind regards





D. Annex D. Herendes	B.	Annex	B:	References
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Reference	Description	Link
1.	CAA Airspace Change portal for ACP-2021-062	<u>Link</u>
2.	Statement of Need	<u>Link</u>
3.	Assessment Meeting Minutes	<u>Link</u>
A1	Initial DP Engagement email	<u>A1</u>
A2	First DP Reminder email	<u>A2</u>
A3	Second (Final) DP Reminder email	<u>A3</u>
A4	BBAC Response email	<u>A4</u>
A5-A7	BGA DP Engagement emails	<u>A5-A7</u>
A8	BHA DP Response email	<u>A8</u>
A9	easyJet DP Response email	<u>A9</u>
A10	Gama Aviation DP Response email	<u>A10</u>
A11	Loganair Response email	<u>A11</u>
A12	MoD Response email	<u>A12</u>
A13	MUAC Response email	<u>A13</u>
A14	Naviair Response email	<u>A14</u>
A15-A16	UKFSC DP Engagement emails	<u>A15-A16</u>
A17-A18	LVNL DP Engagement emails	<u>A17-A18</u>
A19	NATS email sharing 1B Design Principles document with stakeholders	<u>A19</u>



# C. Annex C: Glossary of Terms

ACP	Airspace Change Proposal
ANSP	Air Navigation Service Provider
ATS	Air Traffic Service
ВА	British Airways
BBAC	British Balloon and Airship Club
BGA	British Gliding Association
ВНА	British Helicopter Association
САА	Civil Aviation Authority
САР	Civil Aviation Publication
CAS	Controlled Airspace
CO <sub>2</sub>	Carbon Dioxide
DAATM	Defence Airspace Air Traffic Management
DP	Design Principle
FIR	Flight Information Region
ft	Feet
GATCO	Guild of Air Traffic Controllers
IAA	Irish Aviation Authority
LVNL	Luchtverkeersleiding Nederland, Dutch ANSP
MoD	Ministry of Defence
MUAC	Maastricht Upper Area Control
NATMAC	National Air Traffic Management Advisory Committee
NATS	UK Air Navigation Service Provider
NAVIAIR	Danish ANSP
NERL	NATS En-Route Ltd.
OSEP	Operational Service Enhancements Project
PBN	Performance Based Navigation
UKFSC	UK Flight Safety Committee
UKSA	United Kingdom Space Agency