

CAA Operational Assessment

Title of airspace change proposal	SAIP AD3
Change sponsor	NATS
Project no.	ACP-2017-76
SARG project leader	
<i>Case study commencement date</i>	
<i>Case study report as at</i>	7 Aug 2018

Instructions

In providing a response for each question, please ensure that the 'status' column is completed using the following options:

- yes
- no
- partially
- n/a

To aid the SARG project leader's efficient project management it may be useful that each question is also highlighted accordingly to illustrate what is:

resolved Green not resolved Amber not compliant Red

Executive Summary

This proposal seeks to introduce a change to existing RNAV routes to improve connectivity at the Southern FIR boundary through waypoints, LELNA, ORTAC and ORIST. It aligns with a simultaneous, coordinated change to the Channel Islands Control Zone (CICZ) which will facilitate new SIDs and STARs serving Jersey and Guernsey airports. The proposed changes in the UK's area of interest are contained within existing controlled airspace managed by London Area Control (LAC) Sector 21, over the English Channel.

The proposed changes will alter traffic flows in both directions between the Solent Group Airports and those of the Channel Islands and, through incorporating partial systemisation, are aimed at improving segregation and traffic distribution. The ACP does not involve changes to existing waypoints and all changes occur above 7000ft above mean sea level (amsl).

Target date for implementation is AIRAC 12/2018 to align with DNSA/Jersey ACP timelines.

1.	Justification for change and options analysis (operational/technical)	Status
1.1	Is the explanation of the proposed change clear and understood?	Yes
	The explanation is clear and accords with the detail submitted within the SoN in January 2018. The explanation directly references the requirement for efficient alignment and connectivity of UK routes with Channel Islands Control Zone (CICZ), specifically the new SIDs and STARs associated with Jersey and Guernsey airports.	
1.2	Are the reasons for the change stated and acceptable?	Yes
	<p>The reasons for change are twofold:</p> <ul style="list-style-type: none"> to introduce changes to existing RNAV routes at the southern FIR boundary in order to improve connectivity between Solent Airports and the Channel Islands Control Zone (CICZ). align with a simultaneous, coordinated change to the CICZ which will introduce new SIDs and facilitate new STARs serving Jersey and Guernsey Airports. 	
1.3	Have all appropriate alternative options been considered, including the 'do nothing' option?	Yes
	<p>The Options Appraisal considered 3 options, including a baseline 'do nothing' option. From the outset NATS made clear their desire to keep the ACP within the bounds of a Level 2 ACP on the following grounds:</p> <ul style="list-style-type: none"> implementation to align with changes to Jersey/Guernsey SIDs/STARs – time constraint AIRAC 12/2018 avoid potential time constraint and cost to Solent Group Airports associated with procedure design and consultation that would result from a major restructuring of Sector 21. 	
1.4	Is the justification for the selection of the proposed option sound and acceptable?	Yes
	<p>Justification for the proposed option is based on it being safe, fit for purpose and achievable within the constrained timeline. As a Level 2 change the sponsor proposed that consultation would be targeted rather than involving a broader stakeholder audience and therefore did not place a financial or resource burden on Solent Group Airports.</p> <ul style="list-style-type: none"> The baseline 'do nothing' option was discarded due to it not supporting the simultaneous, coordinated change to the CICZ which will introduce new SIDs and facilitate new STARs, serving Jersey and Guernsey Airports. Option 1 involved major restructuring to Sector 21 and was discarded on the basis that, as a prospective Level 1 change, it was unlikely to be achievable within the desired timeframe, was likely to involve changes and potential unwelcome expense for Solent Group Airport procedures and additional benefits of full systemisation were projected to be minimal. Consequently, a single option was proposed. 	

	<ul style="list-style-type: none"> Option 2, involving a minimal airspace restructure, fully met seven out of the eleven design principles; including all of those ranked as high priority. 	
2.	Airspace description and operational arrangements	Status
2.1	Is the type of proposed airspace design clearly stated and understood?	Yes
	This ACP proposes to use existing and established airspace structures within Sector 21.	
2.2	Are the hours of operation of the airspace and any seasonal variations stated and acceptable?	Yes
	This ACP does not propose any changes to the hours of operation of the airspace. Remain H24.	
2.3	Is any interaction with adjacent domestic and international airspace structures stated and acceptable including an explanation of how connectivity is to be achieved? Has the agreement of adjacent States been secured in respect of High Seas airspace changes?	Yes
	<p>This ACP was partly predicated by the requirement to align existing routes with the introduction of new SIDs/STARS for Jersey and Guernsey airports. Consequently, engagement and consultation by the sponsor has been conducted with adjoining ANSPs at every stage.</p> <p>The ACP proposes to use existing airspace structures within Sector 21.</p> <p>A copy of the Route Separation Assurance Document (RSAD) and Airspace Design Definition (ADD) are at Annex 13 and Annex 18</p>	
2.4	Is the supporting statistical evidence relevant and acceptable?	Yes
	The sponsor has provided comprehensive statistics of aircraft types and numbers which flew between Solent Group airports and those of the Channel Islands in 2017 together with route density plots.	
2.5	Is the analysis of the impact of the traffic mix on complexity and workload of operations complete and satisfactory?	Yes
	There is no anticipated change to traffic mix and increased systemisation is supportive of reducing levels of complexity.	
2.6	Are any draft Letters of Agreement and/or Memoranda of Understanding included and, if so, do they contain the commitments to resolve ATS procedures (ATSD) and airspace management requirements?	In progress

	<p>The following Letters of Agreement are included:</p> <ul style="list-style-type: none"> • NATS / Brest • NATS / Jersey • NATS / Southampton 	
2.7	Should there be any other aviation activity (low flying, gliding, parachuting, microlight site etc) in the vicinity of the new airspace structure and no suitable operating agreements or ATC Procedures can be devised, what action has the change sponsor carried out to resolve any conflicting interests?	N/A
	There is no aviation activity (low flying, gliding, parachuting, microlight site etc) in the vicinity of the airspace structure related to this ACP	
2.8	Is the evidence that the airspace design is compliant with ICAO SARPs, airspace design & FUA regulations, and Eurocontrol guidance satisfactory?	Yes
	CAP1385 has been applied	
2.9	Is the proposed airspace classification stated and justification for that classification acceptable?	Yes
	This ACP proposes to use existing and established airspace structures within Sector 21. There is no change to airspace classification.	
2.10	Within the constraints of safety and efficiency, does the airspace classification permit access to as many classes of user as practicable?	Yes
	The airspace classification remains unchanged and therefore accessible to the same users as currently have access.	
2.11	Is there assurance, as far as practicable, against unauthorised incursions? (This is usually done through the classification and promulgation.)	Yes
	The airspace classification remains unchanged and is therefore assured, as far as practicable, against unauthorised incursions.	
2.12	Is there a commitment to allow access to all airspace users seeking a transit through controlled airspace as per the classification, or in the event of such a request being denied, a service around the affected area?	Yes

	This ACP proposes to use existing and established airspace structures within Sector 21. Extant procedures are unaffected by this ACP.	
2.13	Are appropriate arrangements for transiting aircraft in place in accordance with stated commitments?	Yes
	This ACP proposes to use existing and established airspace structures within Sector 21. Extant procedures are unaffected by this ACP.	
2.14	Are any airspace user group's requirements not met?	No
	Consultation was targeted at specific stakeholders which included airline operators, adjacent ANSPs and Solent Group and Channel Island airports. Consultation documentation was made available to other, non-targeted, parties through posting on the NATS website.	
2.15	Is any delegation of ATS justified and acceptable? (If yes, refer to Delegated ATS Procedure).	N/A
	There is no change to delegation of ATS associated with this ACP.	
2.16	Is the airspace design of sufficient dimensions with regard to expected aircraft navigation performance and manoeuvrability to contain horizontal and vertical flight activity (including holding patterns) and associated protected areas in both radar and non-radar environments?	
	There is no change to the current dimensions of CAS. However, the SAIP AD3 design proposes a reduced spacing against Controlled Airspace containment. Full detail, including mitigation procedures, are contained in the SAIP AD3 - RSAD . Email correspondence from Inspector ATS (En-Route Operations) confirms that he is content with the RSAD submission.	
2.17	Have all safety buffer requirements (or mitigation of these) been identified and described satisfactorily (to be in accordance with the agreed parameters or show acceptable mitigation)? (Refer to buffer policy letter.)	
	As per 2.16	

2.18	Do ATC procedures ensure the maintenance of prescribed separation between traffic inside a new airspace structure and traffic within existing adjacent or other new airspace structures?	Yes
	The sponsor has stated that ATC procedures will ensure that prescribed separation is achieved. A copy of the AD3 Route Separation Assurance Document is at Annex 13	
2.19	Is the airspace structure designed to ensure that adequate and appropriate terrain clearance can be readily applied within and adjacent to the proposed airspace?	Yes
	This ACP proposes to use existing and established airspace structures within Sector 21.	
2.20	If the new structure lies close to another airspace structure or overlaps an associated airspace structure, have appropriate operating arrangements been agreed?	In progress
	<p>The following draft Letters of Agreement are included:</p> <ul style="list-style-type: none"> • NATS / Brest - NATS/BREST LOA • NATS / Jersey - NATS / JERSEY LOA • NATS / Southampton - NATS / SOUTHAMPTON LOA <p>Procedures and operating agreements will be implemented as per MATS Part II.</p>	
2.21	Where terminal and en-route structures adjoin, is the effective integration of departure and arrival routes achieved?	N/A
	This ACP affects en-route only. It is reliant on existing arrangements for integration of departure and arrival routes which are deemed effective.	
3. Supporting resources and communications, navigation and surveillance		Status (CNS) infrastructure
3.1	Is the evidence of supporting CNS infrastructure together with availability and contingency procedures complete and acceptable? The following are to be satisfied:	
	<ul style="list-style-type: none"> • Communication: Is the evidence of communications infrastructure including RT coverage together with availability and contingency procedures complete and acceptable? Has this frequency been agreed with AAA Infrastructure? 	Yes

	This ACP proposes to use existing and established airspace structures within Sector 21. The communications infrastructure system has been demonstrated through use to be adequate for the region.	
	<ul style="list-style-type: none"> Navigation: Is there sufficient accurate navigational guidance based on in-line VOR or NDB or by approved RNAV-derived sources, to contain the aircraft within the route to the published RNP value in accordance with ICAO/ Eurocontrol standards? For example, for nav aids, has coverage assessment been made, such as a DEMETER report, and if so, is it satisfactory? 	Yes
	This ACP proposes to use existing and established airspace structures within Sector 21. <ul style="list-style-type: none"> RNAV1 Navaid coverage (DME/DME) is deemed adequate and demonstrated in the DEMETER Analysis at Annex 14 	
	<ul style="list-style-type: none"> Surveillance: Radar provision – have radar diagrams been provided, and do they show that the ATS route/airspace structure can be supported? 	Yes
	This ACP proposes to use existing and established airspace structures within Sector 21.	
3.2	Where appropriate, are there any indications of the resources to be applied, or a commitment to provide them, in line with current forecast traffic growth acceptable?	Yes
	NATS have acknowledged the requirement for sufficient qualified staff to provide the required air traffic services. Section 2 of the Stage 3 Options Appraisal states that a training plan is in place.	
4.	Maps/charts/diagrams	Status
4.1	Is a diagram of the proposed airspace included in the proposal, clearly showing the dimensions and WGS84 co-ordinates? (We would expect sponsors to include clear maps and diagrams of the proposed airspace structure(s) – they do not have to accord with aeronautical cartographical standards (see airspace change guidance), rather they should be clear and unambiguous and reflect precisely the narrative descriptions of the proposals.)	Yes
	A diagram of the proposed traffic flows and routes is at Figure 4, p14 of SAIP AD3 - ACP . The diagram includes FL and Nav Spec detail. This information supports the WGS data submitted separately and contained at WGS84 attachment.	
4.2	Do the charts clearly indicate the proposed airspace change?	Yes

	Yes.	
4.3	Has the change sponsor identified AIP pages affected by the change proposal and provided a draft amendment?	Draft only at this stage
	A draft list of AIP pages affected by the proposed change is at AIP Changes .	
4.4	Has the change sponsor completed the WGS84 spreadsheet and submitted to the CAA for approval?	Yes
	WGS84 data has been checked and confirmed by AR	
5.	Operational impact	Status
5.1	Is the change sponsor's analysis of the impact of the change on all airspace users, airfields and traffic levels, and evidence of mitigation of the effects of the change on any of these, complete and satisfactory? Consideration should be given to:	Yes
	a) Impact on IFR General Aviation traffic, on Operational air traffic or on VFR General Aviation traffic flow in or through the area.	
	IFR flow schematics are contained in Section 6.2 of SAIP AD4 - ACP The ACP does not impact VFR operations.	
	b) Impact on VFR Routes.	
	This ACP has no impact on VFR traffic or routes.	
	c) Consequential effects on procedures and capacity, i.e. on SIDs, STARs, holds. Details of existing or planned routes and holds.	Yes

	<p>Proposed changes will alter traffic flows in the airspace between the Solent Group Airports and the Channel Islands; including routes between these Airports. The changes affect flows in both directions through existing waypoints LELNA, ORIST and ORTAC which are positioned on the FIR boundary. No new waypoints are being created. The following changes are proposed:</p> <ul style="list-style-type: none"> • New alignment of Z171 would route southbound RNAV1 departures and Channel Islands arrivals via LELNA, rather than ORTAC. • Realignment of Y110 would route northbound RNAV1 departures via ORIST, instead of ORTAC. • Other traffic flows would continue to flight plan as today. <p>These proposed changes would better segregate and distribute traffic in this area of airspace. IFR flow schematics are contained in Section 6.2 of SAIP AD3 ACP</p>	
	d) Impact on airfields and other specific activities within or adjacent to the proposed airspace.	N/A
	This ACP does not impact Solent Group Airports.	
	e) Any flight planning restrictions and/ or route requirements.	Yes
	<p>Flow schematics are contained in Section 6.2 of SAIP AD3 - ACP. Flight planning and route requirements are laid down in the Airspace Design Definition (ADD)</p> <p>RNAV1 traffic above FL105 to route via LELNA or ORIST.</p> <ul style="list-style-type: none"> • All other traffic (below FL105) to route via ORTAC, with exception of Channel Islands traffic to/from Solent Group which can still flight plan via ORTAC at FL135 and below 	
5.2	Does the change sponsor consultation material reflect the likely operational impact of the change?	Yes
Case study conclusions – to be completed by SARG project leader		Yes/No
	Has the change sponsor met the SARG airspace change proposal requirements and airspace regulatory requirements above?	Yes

The sponsor has complied with the CAP1616 process through submission of appropriate documentation in line with a Level 2A change and has stepped through the required gateways. The sponsor identified a suitable set of Design Principles and has provided appropriate rationale for progressing this ACP under a single option.		
Outstanding issues		
Serial	Issue	Action required
1	Letters of Agreement are being developed between the following: <ul style="list-style-type: none"> • NATS / Brest • NATS / Jersey • NATS / Southampton 	NATS to progress
2	AIP submission	Sponsor to advise when final version is determined
Additional compliance requirements including post-implementation review requirements (to be satisfied by change sponsor)		
Serial	requirement	
1		
2		
Recommendations		Yes/No
Is the approval of the Ministry of Defence required in respect of national security issues surrounding the airspace change?		No
General summary		

This proposal seeks to introduce a change to existing RNAV routes to improve connectivity at the Southern FIR boundary through waypoints, LELNA, ORTAC and ORIST. It aligns with a simultaneous, coordinated change to the Channel Islands Control Zone (CICZ) which will facilitate new SIDs and STARs serving Jersey and Guernsey airports. The proposed changes in the UK's area of interest are contained within existing controlled airspace managed by London Area Control (LAC) Sector 21, over the English Channel.

The proposed changes will alter traffic flows in both directions between the Solent Group Airports and those of the Channel Islands and, through incorporating partial systemisation, are aimed at improving segregation and traffic distribution. The ACP does not involve changes to existing waypoints and all changes occur above 7000ft above mean sea level (amsl).

The sponsor identified a suitable set of Design Principles and has provided appropriate rationale for progressing this ACP under a single option. Feedback following the consultation phase has been recorded and updated design, through adjustment to level caps, is reflected in the final submission. The ACP is not predicated on growth in traffic numbers, requires no change to airspace classification and has no impact upon any non-commercial related traffic.

The proposal is complementary to the coordinated change to the Channel Islands Control Zone (CICZ) which will facilitate new SIDs and STARs serving Jersey and Guernsey airports.



Comments and observations

From the outset, the sponsor has embraced the CAP1616 process, seeking to deliver the required supporting documents in a timely manner.

Engagement and consultation has been targeted and effected with the appropriate group of stakeholders and the final design has taken account of stakeholder feedback.

The final proposal accords with the Statement of Need.

Operational assessment sign-off/ approvals	Name	Signature	Date
Operational assessment completed by:			7 Aug 2018
Operational assessment approved by:			09/08/2018

Manager Airspace Regulation comments:			
Head AAA comment/ approvals	Name	Signature	Date
Operational assessment conclusions approved by:	Head AAA		
Head AAA Comments:			
Group Director Safety and Airspace Regulation Group (GD SARG) decision/approval	Name	Signature	Date
GD SAR decision:			20 Aug 2018
GD SAR comments:			
Approved			