

CAA Operational Assessment

Title of airspace change proposal	Future Combat Airspace (Temporary 2)
Change sponsor	MOD
Project reference	ACP-2021-007
Account Manager	
Case study commencement date	12 May 22
Case study report as at	15 Jun 22
Instructions	
In providing a response for each question, please e	nsure that the 'status' column is completed using the following options:
YES • NO • PARTIALLY • N/A	
To aid the SARG Lead it may be useful that each que	estion is also highlighted accordingly to illustrate what is:
resolved yes not resolved PARTIALLY not complia	nt <mark>NO</mark>

Executive Summary

This is one of 2 ongoing Airspace Change Proposals (ACPs) related to the development of an airspace solution to support large and complex Ministry of Defence (MOD) exercises. Previously, ACP-2020-42 was completed for the running of a trial over 2 phases, firstly utilising the previous Cobra Air Combat Airspace (CACA) (a NATS and MOD agreement for airspace sharing) in Oct/Nov 20, but with improved notification methods and Airspace Management (ASM) arrangements, partly achieved through the publication of the structure as a Temporary Danger Area (TDA). The second phase of the trial in Mar 21 utilised a bespoke TDA (designated EG D597), Flight Plan Buffer Zone (FBZ), and additional waypoints, where publication and notification were in line with UK and Eurocontrol procedures to ensure appropriate flight planning behaviours. ACP-2021-007 then followed, which established further use of EG D597 for exercises in Sep 21 and Mar 22 (although the Mar exercise was subsequently cancelled by the MOD).

Whilst there is an ACP underway to develop a permanent solution for the MOD (ACP-2020-026), this is currently in Stage 3 of the CAP1616 process and is not expected to propose a solution until circa Q3 2023. As such, the Sponsor has submitted this ACP that proposes re-use of EG D597 for large-scale military exercises planned for Aug/Sep 22, Mar 23 and Aug/Sep 23. The CAA has approved an extension to the normal 90-day limitation for the use of a

TDA over this extended period, subject to CAA approval of the proposal. This is articulated in a CAA letter that contains 3 conditions that are relevant to the assessment of this ACP:

- 1. Conformation by the MoD that sufficient resource will be allocated to progress the permanent ACP to avoid delay.
- 2. Engagement submitted as part of the ACP should reflect the full nature of the ask.
- 3. Should the permanent airspace change (ACP-2020-026) be approved and implemented prior to any of the 2023 activations, the change sponsor must withdraw this temporary airspace change.

This proposal offers no changes to the TDA, FBZ, or supporting waypoints, but suggests that activation periods are modified compared to the previous approvals; from approx. 9 planned iterations of 3 hours duration for each of the exercises in Sep 21 and Mar 22 to:

- Aug 22: 5 activations of 3hrs 15mins.
- Sep 22: 8 activations of 4 hrs.
- Mar 23: 8 activations of 4 hrs.
- Aug 23: 8 activations of 4 hrs.
- Sep 23: 8 activations of 4 hrs.

Environmental Conclusion

The Air Navigation Guidance 2017 enables the CAA to disregard the environmental impacts of military aircraft when the proposal has been submitted by, or on behalf of, the MoD. However, the consequential environmental impacts from other airspace users (i.e. civil aviation) that are a result of the proposed change must be assessed in accordance with the relevant requirements for the type of change. For a temporary change the CAA would normally only assess the noise impact as all other environmental impacts are likely to be negligible for such a short duration. The CAA is satisfied that this temporary airspace change is not expected to impact the typical behaviour of civil aircraft below 7,000ft, and thus is not anticipated to result in adverse noise impact on health and quality of life.

1.	Justification for change and options analysis (operational/technical)	Status
1.1	Is the explanation of the proposed change clear and understood?	YES
	Reuse of TDA EG D597, with FBZ and supporting waypoints for exercises. The MOD would again support Newcastle flight specifically by EG D597 ie those normally route to/from the East over the North Sea. This will be achieved by 78 Squadro ATS in Class G for the connection to/from Controlled Airspace (CAS).	-
1.2	Are the reasons for the change stated and acceptable?	YES
	Temporary activation of airspace in which to complete specific and named large scale military exercises in Aug and Sep and Sep 23.	2022, and Mar, Aug
1.3	Have all appropriate alternative options been considered, including the 'do nothing' option?	YES
	'Do nothing' was considered in the Trial ACP, and it has been reconfirmed in this ACP that the MOD has an enduring requised to support large scale exercises. There are limited options for this interim measure: - Utilise EG D597 as a known entity.	irement for airspace
	 Utilise existing Special Use Airspace (SUA) structures plus other areas of non-segregated airspace. Considered su MOD objectives could be achieved due to safety concerns. 	b-optimal and not all
1.4	Is the justification for the selection of the proposed option sound and acceptable?	YES
	EG D597 is already known to be suitable for MOD requirements for now. 'Do nothing' would not be acceptable to MOD of non-segregated airspace and a reduced scope would be the likely outcome.	where greater use

2.	Airspace description and operational arrangements	Status
2.1	Is the type of proposed airspace design clearly stated and understood?	YES
	An existing temporary structure, published and managed in accordance with standard protocols.	
2.2	Are the hours of operation of the airspace and any seasonal variations stated and acceptable?	YES
	- Aug 22: 5 activations of 3hrs 15mins.	
	 Sep 22: 8 activations of 4 hrs. Mar 23: 8 activations of 4 hrs. 	
	- Aug 23: 8 activations of 4 hrs.	
	- Sep 23: 8 activations of 4 hrs.	
	Is any interaction with adjacent domestic and international airspace structures stated and acceptable	
2.3	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
	SUA and associated waypoints/Direct Routes (DCTs) are described in the proposal as no change to previous iterations, elements remaining within the London Flight Information Region (FIR)/Upper Flight Information Region (UIR), and the Connectivity with the Air Traffic Services (ATS) Network is considered – overall there is an anticipated net benefit in ter Traffic (GAT), although some Newcastle flights to/from Scandinavia require special handling by 78 Sqn, with an anticipated miles. The Eurocontrol Network Manager (NM) has been engaged throughout the process. The CAA will need to issue notification for further use of EG D597.	Scottish FIR/UIR. rms of General Air ated increase in track
2.4	Is the supporting statistical evidence relevant and acceptable?	YES
	Some historical data has been provided relating to previous activations of EG D597. Traffic levels are expected to be in are no quantified forecasts of impacted traffic or benefits/disbenefits. However, there are qualitative statements from regarding the anticipated impacts; the key stakeholders are aware of the proposal and have been involved in engagem they had the opportunity to influence the design and present any concerns regarding impacts. Whilst it has not been p Sponsor to develop a full understanding of the impact on civil traffic for the later iterations due to uncertainty regarding have committed to continuing engagement with the aviation stakeholders throughout. For previous ACPs where EG DS set of operating procedures was developed. This has been developed further for this ACP with the agreements now co	stakeholders eent events where ossible for the ng traffic levels, they 597 was activated, a

mix on complexity and workload of operations complete and	YES
essed by establishing the SUA, waypoints and associated DCTs/operating pro in the SUA; ingress and egress procedures were raised as a potential concer o be finalised, this matter is now addressed within the LOA.	
Memoranda of Understanding included and, if so, do they contain res (ATSD) and airspace management requirements?	YES
are now covered in the draft LOA. This will need to be finalised and agreed I	by all signatories
(low flying, gliding, parachuting, microlight site etc) in the vicinity of e operating agreements or ATC Procedures can be devised, what to resolve any conflicting interests?	
ninimum acceptable to meet the exercise requirements and have been discuption continue engagement activities throughout, including with NATS, Newcast	
is compliant with ICAO SARPs, airspace design & FUA regulations,	YES
elopment of this airspace is to provide a design using recognised structures Flexible Use of Airspace (FUA), ASM and integration with the ATS Network.	•
ted and justification for that classification acceptable?	YES
	ed and justification for that classification acceptable? andard airspace structures, albeit temporary.

Within the constraints of safety and efficiency, does the airspace classification permit access to as many classes of user as practicable?	YES
Sponsor has committed to continue engagement with stakeholders throughout in order to identify any potential issues not	already
Is there assurance, as far as practicable, against unauthorised incursions? (This is usually done through the classification and promulgation.)	YES
Standard airspace structures promulgated through appropriate means, much of which is over the High Seas and all above F (FL)85. FBZ in place to correctly account for GAT flight plans.	light Level
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
above FL195). MOD agreement to provide services to those flights in/out Newcastle airport directly affected by the activati	on of EG D597;
Are appropriate arrangements for transiting aircraft in place in accordance with stated commitments?	YES
SEE 2.10, 2.11, 2.12.	
Are any airspace user group's requirements not met?	NO
Suitable engagement has taken place between the Sponsor and the Borders Gliding Club, with a commitment from the Spo	nsor to ensure
	of user as practicable? By the nature of the exercises, EG D597 will not normally be accessible to non-participants whilst activity is underway; how Sponsor has committed to continue engagement with stakeholders throughout in order to identify any potential issues not considered. The Borders Gliding Club are satisfied that early engagement on planned dates of activation allows them to dec activities. Is there assurance, as far as practicable, against unauthorised incursions? (This is usually done through the classification and promulgation.) Standard airspace structures promulgated through appropriate means, much of which is over the High Seas and all above F (FL)85. FBZ in place to correctly account for GAT flight plans. 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? Arrangements in place for the correct routing of ATS Network traffic around the area, much of which is in Controlled Airspa above F1195). MOD agreement to provide services to those flights in/out Newcastle airport directly affected by the activatit this does not include Newcastle flights that would ordinarily be subject to the existing arrangements for when derogated services are not available. Are appropriate arrangements for transiting aircraft in place in accordance with stated commitments? See 2.10, 2.11, 2.12.

2.15	Is any delegation of ATS justified and acceptable? (If yes, refer to Delegated ATS Procedure).	YES
	Largely unchanged. The normal position of uncertainty regarding the provision of derogated services provided by 78 Sqn there is a commitment to provide services to those Newcastle flights directly impacted by the activation of EG D597 ie th to/from Scandinavia via Class G airspace.	
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?	YES
	SUA established to be the minimum required to contain the hazardous activity and an FBZ established to correctly handl traffic. Associated military activity is expected to operate in accordance with agreed ingress/egress procedures (an adapt previous activations). Other non-associated military activity may take place outside the SUA, although some adjacent Da be available for booking at the same time as EG D597 to eliminate an unacceptable cumulative impact. EG D597 and any suppression of other Danger Areas will be managed by the UK Airspace Management Cell in accordance with common pr	tation following nger Areas will not associated
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.)	YES
	The FBZ already developed for EG D597 is again proposed to ensure correct handling of flight plans around the area.	
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? See 2.16, 2.17.	YES
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
	EG D597 base level of FL85 and mostly over the High Seas, no changes to published airport departure/arrival procedures	

2.20	If the new structure lies close to another airspace structure or overlaps an associated airspace structure, have appropriate operating arrangements been agreed?	YES
	Overlapping/adjacent Danger Areas (operated by the MOD) will be suppressed for the duration of the activation of EG temporal buffers.	D597 including
2.21	Where terminal and en-route structures adjoin, is the effective integration of departure and arrival routes achieved?	N/A

3.	Supporting resources and communications, navigation and surveillance(CNS) infrastructure	Status
3.1	Is the evidence of supporting CNS infrastructure together with availability and contingency procedures complete and acceptable? The following are to be satisfied:	
	• 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?	N/A
	No Change.	
	 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 navaids, has coverage assessment been made, such as a DEMETER report, and if so, is it satisfactory? 	N/A
	No Change.	
	Surveillance: Radar provision – have radar diagrams been provided, and do they show that the ATS route/airspace structure can be supported?	N/A
	No Change.	
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
	The Sponsor has committed to ensuring that services are provided to Newcastle traffic directly affected by activation o	f EG D597.

	Maps/charts/diagrams	Status
	Is a diagram of the proposed airspace included in the proposal, clearly showing the dimensions and WGS84 co- ordinates?	
4.1	(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
	Charts provided within the submission. No proposed changes to EG D597, FBZ or associated waypoints, which are cont SUP for the previous activations.	ained within the AIP
4.2	Do the charts clearly indicate the proposed airspace change?	YES
4.3	Has the change sponsor identified AIP pages affected by the change proposal and provided a draft amendment?	YES
	No changes to the main sections of the AIP. An indicative AIP SUP has been provided as part of the submission, which n to first activation.	eeds finalising prior
	Has the change sponsor completed the WGS84 spreadsheet and submitted to the CAA for approval?	N/A

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:	
	a) Impact on IFR General Aviation traffic, on Operational air traffic or on VFR General Aviation traffic flow in or through the area.	YES
	Mostly qualitative analysis, based on engagement with NATS, Newcastle and Teesside. Arrangements in place for the converse Network traffic around the area, much of which resides in CAS. MOD agreement to provide services to those flights in/or airport directly affected by the activation of EG D597; this does not include Newcastle flights that would ordinarily be substantiated services are not available; existing measure already provide alternative routings for services are not available.	out Newcastle ubject to the existing
	b) Impact on VFR Routes.	N/A
	c) Consequential effects on procedures and capacity, i.e. on SIDs, STARs, holds. Details of existing or planned routes and holds.	YES
	No anticipated direct impact on SIDs, STARs or holding. There is uncertainty about the impact of EG D597 on airspace cap of flights hard to predict due to COVID recovery. NATS have stated that there was a slight net benefit during the previous D597 due to the ability to file more direct flight plans. The Sponsor has committed to continued engagement in order to levels for the proposed activation periods. Longer term uncertainties will need to be considered within the ACP for a per	activation of EG discuss likely traffic
	d) Impact on airfields and other specific activities within or adjacent to the proposed airspace.	YES
	Services provided by MOD for some Newcastle flights ie those routing to/from the East over the North Sea; existing alter available for other flights when derogated services are not available. There is still uncertainty regarding traffic levels so the monitored by the Sponsor through ongoing engagement.	-

	e) Any flight planning restrictions and/ or route requirements.	YES
Flight planning for ATS Network traffic is addressed, with a likely net benefit due to shorter routes compared to when EG D323 is active Services provided by MOD for some Newcastle flights; existing alternative routing available for other flights when derogated services available.		
5.2	Does the change sponsor consultation material reflect the likely operational impact of the change?	YES
	No consultation required, engagement has been maintained since before the trial ACP and the Sponsor has committed to engagement for these proposed activations of EG D597. Further engagement and consultation will be required as part of t proposed permanent solution.	

se study conclusions – to be completed by Airspace Regulator (Technical)	Yes/No
as the change sponsor met the SARG airspace change proposal requirements and airspace regulatory requirements pove?	YES
s proposal is for a temporary airspace change as defined in CAP1616 Edition 4 (paragraph 296) for specific events. Subject to this pro roved by the CAA, the Sponsor has been granted permission for use of the temporary structures over a period longer than the usual e paragraphs 297 and 306). The justification for this is contained in a CAA authorisation letter (available on the <u>CAA Airspace Portal</u>).	l 90-day maximun
geted engagement has taken place regarding the reuse of EG D597, and whilst there are some uncertainties for the longer term, esp ards to Newcastle traffic and the impact on workload/airspace capacity, much of this is relevant for the ACP for the permanent solut	•
temporary airspace structures, along with their associated airspace management and operational procedures, have been tested thr vations, with some supporting comments having been cited by stakeholders. A few adjustments have been made resulting from eng vious activations, including details relating to the ingress/egress of exercise traffic. Newcastle Airport continues to express concern r ertainty on the provision of derogated services by 78 Sqn (formerly known as the Pennine radar task); however, the Technical Airspace opinion that any issues generated as a result of a lack of derogated services exist anyway irrespective of the activation of EG D597. A ady in place to provide network connectivity when derogated services are not available, which requires the use of longer routes in C pace for affected traffic. However, the MOD has expressed a commitment to provide services to Newcastle aircraft routing to/from t are affected directly as a result of the activation of EG D597. Additionally, the Sponsor has committed to maintain engagement with ing this period and, under the ACP for a permanent solution, is undertaking efforts to conduct a greater degree of analysis.	gagement on regarding the ace Regulator is of Arrangements are Controlled the North Sea

There is nothing currently indicating that safety is negatively affected by the activation of EG D597. By containing the exercise traffic more comprehensively in a published volume of airspace, and by providing flight-plannable routing around the area, many safety aspects are improved compared to other options for managing the large-scale MOD exercises.

RECOMMENDATIONS/CONDITIONS/PIR DATA REQUIREMENTS	Yes/No
Are there any Recommendations which the change sponsor <u>should try</u> to address either before or after implementation (if approved)? If yes, please list them below.	NO
<u>GUIDANCE NOTE:</u> Recommendations are something that the change sponsor <u>should try</u> to address either before or after implementation, if indeed the airspace change proposal is approved. They may relate to an area in which the change spo upon a third party to actually come to an agreement and consequently they do not carry the same 'weight' as a Condition	
Are there any Condition(s) which the change sponsor <u>must fulfil</u> either before or after implementation (if approved)? f yes, please list them below.	YES
<u>GUIDANCE NOTE:</u> Conditions are something that the change sponsor <u>must fulfil</u> either before or after implementation, if airspace change proposal is approved. If their proposal is approved, change sponsors <u>must observe</u> any condition(s) conto regulatory decision; failure to do so <u>will usually</u> result in the approval being revoked. Conditions should specify the consec to meet that condition, whether that be revoking the ACP or some alternative.	ained within the
- Finalise/issue AIP SUP before first activation.	
- Finalise/sign-off LOA before first activation.	
 Continue engagement with Stakeholders throughout in order to report, collate and investigate occurrences/ha evaluate traffic levels and impacts from the airspace design. 	zards, and
 In accordance with CAP 1616 (paragraphs 304 and 305), the change sponsor is to collate, monitor and report to level and contents of complaints associated with the temporary airspace arrangements once implemented and 	the CAA on the
period of operation.	

GUIDANCE NOTE: PIR data requirements concerns any specific data which the change sponsor **must** collate post-implementation, if indeed the airspace change proposal is approved. Please use this section to list any such requirements so that they can be captured in the regulatory decision accordingly.

General summary

The Sponsor has presented a pragmatic option for satisfying MOD requirements in the interim period whilst a permanent solution is being developed. Re-use of EG D597 provides a standard airspace structure that is published in a standard way for visibility by all airspace users, including ATS network traffic.

Comments and observations

Operational assessment sign-off	Name	Signature	Date
Operational assessment completed by Airspace Regulator (Technical)			14 Jun 22
Operational assessment approved by Manager Airspace Regulation			16 Jun 22

Manager Airspace Regulation Comments and Decision:

To consider the operational impact it is important to consider the overall duration of the proposal. In this instance this ACP requires the approval of a structure beyond the normal maximum length permitted for a temporary structure. This consideration has significant implications when considering the use of a temporary process, a process which is scaled when compared to the permanent process. This scaling is fundamentally enabled by concepts of proportionality driven by the normal limited duration of a temporary structure.

The CAA considered this point in a letter sent to the Sponsor on the 1 April 2022. This letter accepted the rationale provided by the MoD that this was both an extraordinary requirement and was not being requested to avoid having to undertake a permanent change. Critically this acceptance of the extraordinary nature was informed by the previous routine use of an Airspace Coordination Notice (ACN) to accommodate this training, contrasted against the unexpected removal of the availability of the airspace sharing arrangement enabled though the ACN. This therefore resulted in an unpredictable situation where planned critical MoD training could no longer be conducted. Furthermore, the acceptance of this extraordinary rationale was also dependent upon the Sponsor satisfying specific conditions set out within the CAA letter to the Sponsor.

As part of the submission of this ACP the following conditions have now been satisfied:

Condition 1 has been satisfied through the specific bounding of the requests to only those Exercise dates named in the letter from the CAA dated 1 Apr 2022 and covering dates in August-September 2022, March 2023 and August-September 2023.

Condition 2 has been satisfied through assurance received by the MoD that adequate resource would be provided to ensure the

progression of the work associated with the permanent ACP, this was contained within the letter received on 31 May 22.

Condition 3 has been satisfied through acknowledgement of this requirement within the ACP submission and will be included as a specific condition of the approval.

Therefore, enabling the consideration to the ACP beyond the normal maximum length,

When considering the proposal itself, this reflects a structure that has been successfully trialled on previous occasions, where this proposal has made minor amendments to account for the lessons identified in those previous iterations. Furthermore, the use of a formalised structure as enabled by this ACP will ensure incorporation of this activity within the Airspace Utilisation Plan (AUP), thereby supporting Commercial Air Traffic (CAT) flight planning processes.

The issues identified by Newcastle Airport are likely reflective of the lack of existing derogated services to support shorter routings for certain flights when compared to routing available using the existing airway's structure. It is noted these Military Exercises have however historically occurred in that region impacting Newcastle inbounds. The drive for this ACP was in part to address some of the concerns associated with the previous ACN arrangement and its impact to the flight planning arrangements for CAT. This ACP will ensure incorporation of these Exercises within the AUP and thus support the flight planning processes to enable impacted traffic to instead plan to utilise the existing controlled airspace. This will therefore likely result in aircraft that had previously utilised this shorter routing to instead plan to utilise the longer routings. The actual tracks flown may to a degree be mitigated by MoDs position to support the provision of derogated services to those Newcastle flights directly impacted by the activation of this structure. Furthermore, from a wider air space system perspective there may be potential efficiency savings realised due to the associated agreement to supress activation of the EG D323 complex whilst this temporary structure is activated.

From a wider engagement perspective, the temporary process requires engagement with directly affected aviation stakeholders. In this instance the Sponsor has satisfied that requirement, this has however identified a dependency on the completion of Letters of Agreement to mitigate wider impact and therefore supports the condition of approval noted above.

The decision of this temporary ACP therefore takes these impacts into account, where this proposal should not negatively impact safety but instead could negatively impact efficiency of certain CAT flights. These impacts have been considered against MoDs requirement to conduct this training alongside the proposed mitigations and the extraordinary points noted above. In addition to the conditions proposed

within this assessment, subject to the Sponsor ensuring that they will provide derogated services to aircraft inbound and outbound of Newcastle airport that are directly impacted by this temporary structure, it is proportionate in this instance to approve this ACP.