

ACP-2020-026 Future Combat Airspace

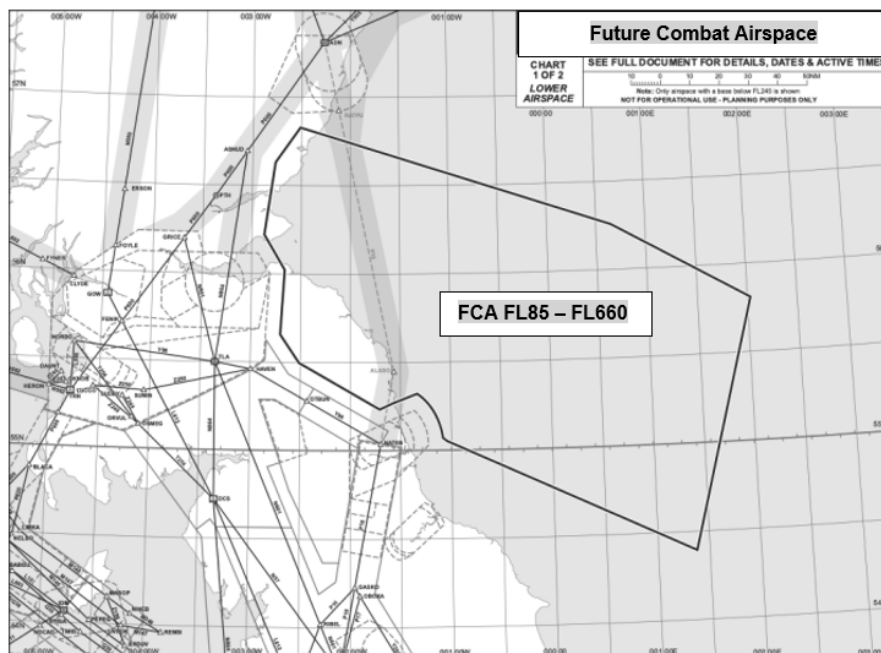
Frequently Asked Questions

Please find a summary of responses to potential questions that are likely to form part of Stage 3 – Consultation, for ACP-2020-026 (*Future Combat Airspace*).

Please note that this is a live document and will evolve as the Consultation Stage progresses.

What is being proposed?

Our proposal is for a permanent segregated portion of airspace – known as Special Use Airspace (SUA), towards the Northeast of the UK and activated for Large Force Exercises. Minimum dimensions would be 90 nautical miles (nm) x 160 nautical miles and from Flight Level (FL) 85 to FL660, predominantly based over the sea, but with an overland portion on the shortest edge. Following feedback from Stakeholders, it is clear that the airspace should avoid Control Areas, Terminal Control Areas and allow all airports connection to the route network. The Ministry of Defence proposes to activate the airspace for the shortest possible durations and only for large scale exercises that will be planned well in advance.



Why isn't "do nothing" an option?

The current Managed Danger Areas are not of sufficient size for Large Force Exercises, which routinely involve 10+ aircraft.

Should the exercise participants spill outside of the Danger Area they must be controlled by a tactical unit. These tactical units can only control 8 aircraft at a time meaning that numbers involved in the exercise would have to be reduced.

If a control service cannot be provided, aircraft would have to remain in Class G/Class C (within an active TRA) airspace up to FL245. Modern aircraft weapons and tactics require manoeuvre and weapon release above this level. This restriction would result in crucial training serials being unavailable.

Why is the proposed base of the area FL85?

To facilitate multi-domain,¹ collective training the airspace must be of the correct dimensions for the aircraft to operate as they would during peer-peer combat operations. For modern air systems this requires lateral dimensions of 160nm x 90nm, vertical dimensions required are from FL85 to FL660.

A base level of FL85 also provides the greatest opportunity for Visual Flight Rules (VFR) traffic to proceed in an unhindered manner in close proximity to the Special Use Airspace – allowing maximum freedom of manoeuvre for other airspace users.

A higher base level also causes minimum noise disruption to any potential communities in the vicinity of the Special Use Airspace where that overlaps the land.

Why is segregation needed?

Within the proposed SUA, high energy manoeuvres would take place with the use of ordnance, munitions, and explosives; electrical and optical hazards would also be present. Air Combat Training (ACT) and Intercept Training involve aircraft manoeuvring dynamically at the extremes of their operational envelope within 3 dimensions with a turning performance of up to 9G and with closing speeds of up to 32 miles per minute through large blocks of airspace.

Due to these high energy manoeuvres and unpredictable changes in heading and level, the airspace should be segregated to ensure that safety is not compromised for either exercise or other airspace traffic.

Does it need to be positioned over Sea?

The requirement for supersonic flight leads to geographical requirements. The Military Aviation Authority (MAA) Regulatory Article 2310 has a number of regulations for non-operational supersonic flight.

“In the UK Flight Information Region (FIR), all supersonic flights should be conducted over the sea . . . Aircraft Commanders should ensure their Aircraft is at least 10 nautical miles (nm) out to sea and along a line of flight at least 20° divergent from the mean line of the coast.” “Supersonic flights with the Aircraft pointing towards the land, turning, or flying parallel to the coast should take place at least 35 nm from the nearest coastline.”

¹ Multi domain training involves operating alongside the Army and Navy. In the modern environment it also incorporates cyber and space elements.

Why is part of the proposed airspace over land?

Our crews must be trained to be able to counter threats from the ground as well as from the air. In addition to any air threats, there is a requirement to place targets and ground threats on the land. Joint Threat Emitters (JTEs) can simulate ground to air missile systems and anti-aircraft fire. They are mobile units comprising a control module and an emitter.

With air-to-air refuelling available, why does the training area need to be close to home bases?

Large Force Exercises will almost always be supported by tankers – however sometimes these assets aren't available due to higher priority taskings.

The F-35 and Typhoon aircraft have a fuel duration of approximately 1hr 45, dependant on weather/weapons load/diversions/min fuel etc. With limited or sometimes no refuelling assets available the training area needs to be close enough for aircraft to arrive, complete the serial and return to their base of operation post exercise.

How often will the airspace be activated?

The aim of this airspace change is not to move all training away from existing Managed Danger Areas (MDA). As a guide it is proposed that the new airspace would be used for limited Large Force Exercises only, these exercises are known well in advance and this information can therefore be circulated with stakeholders in advance of activation in order to minimise disruption.

How will this proposal satisfy Flexible Use of Airspace (FUA) principles and Airspace Management (ASM) policy?

Civil Aviation Publication (CAP) 740 describes the principle objective of ASM 'as achieving the most efficient use of the airspace through dynamic time-sharing and, at times, the segregation of airspace amongst various categories of airspace users on the basis of short-term needs. This proposal, although for a permanent change, would only seek activations of the SUA when training serials are occurring, the airspace would be managed by the UK Airspace Management Cell and all activations will be undertaken via the publication of the Airspace Utilisation Plan.

How does this proposal impact Commercial Air Traffic flow, sector complexity and sector capacity?

This proposal aims to establish segregated airspace, separated from commercial air routes temporally and laterally. In addition to avoiding air routes, the proposed SUA seeks to avoid lower airspace structures such as TMAs and CTAs. It is planned to maintain connections to airports and avoid the Oceanic flow. Where existing routes are blocked, alternative routing points are proposed.

What is a Large Force Exercise?

A Large Force Exercise (LFE) is defined as training activity which comprises more than 10 aircraft in a single package.

What type of aircraft will take part?

The 4 roles of military air power which make up the components of an air operation are: (1) Control of the Air (2) Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) (3) Attack and (4) Air Mobility. In addition, military aircraft will be supported by contracted aircraft; these contracted partners facilitate a range of services. Examples of the types of participating aircraft are shown below:

Control of the Air/Attack – Activity which secures freedom of movement and is broken down further into defensive and offensive counter-air. For this role, the UK uses Typhoon and F-35 Lightning aircraft.



Typhoon Aircraft



F-35 Lightning

Intelligence, surveillance², target acquisition and reconnaissance³ – this activity provides situational awareness and gathers information about potential targets and threats. Aircraft used in this role include the RC135 Rivet Joint and will eventually include the E7 Wedgetail.



RC 135 Rivet Joint



E7 Wedgetail

Air Mobility – This involves the movement of troops and equipment. For the airspace in this proposal, the assets involved would be air-to-air refuellers such as the RAF-operated Airbus A330 Voyager and the American KC-135.

² Surveillance - The systematic observation of aerospace, surface, or subsurface areas, places, persons, or things, by visual, aural, electronic, photographic, or other means.

³ Reconnaissance – military observation of a region to locate an enemy or ascertain a strategic feature.



A-330 Voyager refuelling a Typhoon



KC-135 refuelling

Adversary “Red” Air – These are aircraft which role play as the enemy and will simulate the firing of weapons and will take part in electronic warfare activities such as radar or GPS jamming. In addition to military aircraft, civilian airframes are contracted to provide a service using the below platforms.



DA-42



Falcon 20



Honeybadger

In addition to air threats, there is a requirement to place targets and ground threats on the land. Joint Threat Emitters (JTEs) can simulate ground to air missile systems and anti-aircraft fire. These units comprise a control module and an emitter.



Joint Threat Emitter