



Ministry
of Defence

Headquarters Air Command

Room 1W27, Spitfire Block
Royal Air Force
High Wycombe
Buckinghamshire
HP14 4UE

12 Feb 2021

ACP-2020-24 Stage 1B DEFINE Submission

This document forms part of the Airspace Change Proposal process as defined in CAP 1616. It reiterates the Statement of Need and outlines the engagement to date which has been part of the iterative process that has led to the creation of Design Principles (DPs).

Statement of Need

“Currently the E-3D Sentry AEW Mk 1 utilises the UK AEW areas for UK training and operations. In 2023 the E-7 Airborne Early Warning Wedgetail Mk 1 will enter RAF service. Though fulfilling the same role as the Sentry, advances in technology mean that the Wedgetail will not be able to utilise the same orbits, although existing ones may still be utilised by our NATO/visiting forces partners. The Wedgetail will be required to fly 100 nm by 20 nm racetracks. In some UK AEW areas such as UK 1, 7 and 9 these racetrack parameters can be accommodated in the existing airspace structure. However, agreed structures /routes or suitable orbit/racetrack areas will be required in the North Sea area where the current Orbit Areas are not sufficient.”

Stakeholder Engagement

The MOD believes there is a case for limited stakeholder engagement during Stages 1 and 2 of the ACP and presented the case to the CAA at Reference 1. The MOD stated that it believed NATS to be the only stakeholder. The MOD gave the following reasons:

- It is a working assumption that the proposed orbit areas will not be segregated;
 - The defined areas will allow interaction on the NATS equipment to ensure controllers are alerted to a potential confliction;
 - Confliction resolution will be tactically managed against the specific aircraft, not the airspace;
 - The airspace will define the scope of the area where the E7 has non-deviating status, which is similar to how the current E3 orbit areas.
- Due to the levels required for orbit, the areas will be fully contained in Class C;
- Through engagement and negotiation, it is believed that NATS are likely to influence the location of the orbit areas, hopefully this process will naturally mean that NATS will be able to provide some kind of indication on potential impact on airlines;
- If there are any activation protocols to be worked through, input may be requested from the NATS/MOD joint and integrated Airspace Management Cell.

The MOD stated that if, during the course of engagement with NATS, it became clear that another stakeholder comment is required (for example, due to proximity to international FIR boundaries), then the MOD would inform the CAA and engage with specific stakeholders over specific issues.

Owing to the above reasons, the MOD believes the following:

- The GA community has no vested interest (levels, controlled airspace);

- The Airlines should not be considered as stakeholders for engagement purposes (not segregated airspace);
- This will be of no interest to any Aerodromes (levels, controlled airspace).

However, at Stage 3, the MOD will reassess the requirement to consult with the Airlines. This will depend on proposed locations of orbit areas and an assessment, in conjunction with NATS/Network Manager, of the potential impact. The MOD will, at the appropriate time, seek reassurance from the CAA that the proposed consultation strategy will be accepted.

The CAA accepted the rationale at Reference 2.

The MOD drafted 4 DPs (a-d), forwarded them to NATS for consideration and requested feedback. NATS provided feedback with one minor amendment to DP(c) and added a further 6 DPs (e-j in Table 1 below) for consideration.

Engagement Chronology

- 11 Dec 20 - MOD presents set of 4 DPs (a-d in Table 1 below) to NATS [Reference 3].
- 21 Jan 21 - NATS provide feedback and 6 further DPs (e-j in Table 1 below) to MOD [Reference 4].

DP No	DRAFT DPs
a	<i>Must be safe. The defined airspace must provide ATS providers a known traffic environment to ensure safe separation against GAT.</i>
b	<i>Defined areas must be sufficient in location to achieve training and operational objectives.</i>
c	<i>Defined areas must be sufficient dimension to achieve task.</i>
d	<i>Minimise the impact to Commercial Air Traffic flow.</i>
e	<i>Airspace management and FUA principles will be applied to ensure collaborative decision making protocols and management processes are established</i>
f	<i>Defined areas must not increase sector complexity or affect sector capacity</i>
g	<i>Defined areas shall not be segregated airspace but will align to current or revised procedures detailed within current NATS/MOD interface documents.</i>
h	<i>The defined areas will detail the separation standard required between GAT and the OAT using the designated area</i>
i	<i>The design shall seek to rationalise existing areas where appropriate</i>
j	<i>The design shall minimise the impact on all ATM stakeholders. This will include NATS and other ANSPs (including foreign ANSPs) so as not to over complicate airspace, sector design and service provision.</i>

Table 1 - Draft DPs presented by MOD & NATS

- 01 Feb 21 - Meeting held online to discuss revised set of DPs. Summary of meeting below and at Reference 5. The following points were noted:
 - DP(a) accepted.
 - DP(b) accepted.
 - DP(c) NATS suggested this DP was amended from “Defined areas must be sufficient dimensions to achieve task.” to “Defined areas must be the minimum dimension to achieve task.” Amendment accepted by MOD.

- DP(d) amalgamated with DP(f) to read “Minimise the impact to Commercial Air Traffic flow, sector complexity and sector capacity.”
 - DP(e) accepted.
 - DP(f) deleted. Some discussion was had regarding the phrasing of this DP. Placing any area within a sector is likely to increase complexity, but it was acknowledged that capacity might not be affected. The anticipated orbit levels would be FL270 – FL330. Which is unlikely to be in part of a sector where capacity is likely to be affected. It was felt appropriate to amalgamate DP(f) with DP(d) as above.
 - DP(h) accepted.
 - DP(i) accepted. The intention here is to reduce / remove / repurpose areas which are or will become surplus to requirements (e.g. HIHAZ areas for Sentinel when it goes out of Service).
 - DP(j) accepted. NATS explained the additional work that would be required for cross-border areas to be set up, which would include setting up procedures with foreign ANSPs.
- 03 – 11 Feb 21 – At Reference 6 MOD suggested amendment to DP(i) in Table 1 by adding text “; *any subsequent airspace/ construct changes must consider further re-design of orbit locations*”. NATS preferred to leave DP(i) as agreed in the meeting on 1 Feb 21 [Reference 7] and on balance the MOD felt was felt that the intent of the text could not be met by its insertion in a DP for this ACP [Reference 8].

Agreed Design Principles

Table 2 shows the final 9 DPs that were agreed and that the MOD will take forward to Stage 2 of the ACP.

DP No	Agreed DPs
a	Must be safe. The defined airspace must provide ATS providers a known traffic environment to ensure safe separation against GAT.
b	Defined areas must be sufficient in location to achieve training and operational objectives.
c	Defined areas must be the minimum dimension to achieve task.
d	Minimise the impact to Commercial Air Traffic flow, sector complexity and sector capacity.
e	Airspace management and FUA principles will be applied to ensure collaborative decision making protocols and management processes are established.
f	Defined areas shall not be segregated airspace but will align to current or revised procedures detailed within current NATS/MOD interface documents.
g	The defined areas will detail the separation standard required between GAT and the OAT using the designated area.
h	The design shall seek to rationalise existing areas where appropriate.
i	The design shall minimise the impact on all ATM stakeholders. This will include NATS and other ANSPs (including foreign ANSPs) so as not to over complicate airspace, sector design and service provision.

Table 2 - Final DP Selection

Next Steps

This document will be submitted to the CAA as evidence to support Step 1B of the CAP 1616 airspace change process.

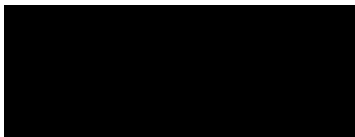
This will complete the documentary evidence for the Stage 1 Assessment Gateway (document deadline 12 Feb 21, for the CAA's Assessment Gateway scheduled for 26 Feb 21).

The planned CAP 1616 timeline is as follows:

CAP 1616 Gateway	Planned Date
Stage 1 – Define	26 Feb 21
Stage 2 – Develop & Assess	28 Jan 22
Stage 3 – Consult	25 Mar 22
Stage 4 – Update and Submit ACP	30 Sep 22
Stage 5 – Decide	01 Feb 23
Stage 6 - Implement	AIRAC 06/23

References

1. Email from DAATM to CAA outlining justification for limited engagement (dated 15 Jul 20)
2. Email from CAA to DAATM & MOD accepting justification for limited engagement (dated 20 Jul 20)
3. Email from MOD to NATS presenting draft Design Principles (dated 11 Dec 20)
4. Email from NATS to MOD providing feedback to draft Design Principles (dated 21 Jan 21)
5. Email from MOD to NATS and ISTAR FHQ summarising meeting that took place on 1 Feb 2021 (dated 2 Feb 21)
6. Email from MOD to NATS suggesting amendment to draft DP(i) (dated 3 Feb 21)
7. Email from NATS to MOD expressing preference to leave draft DP(i) as agreed (dated 4 Feb 21)
8. Email from MOD to NATS agreeing to leave draft DP(i) unamended (dated 11 Feb 21)




ACP Sponsor