

Amendments to the London UIR/FIR on the border with Shannon UIR/FIR

NATS

Gateway Documentation:
Stage 4 Update and Submit
Airspace Change Proposal
ACP-2024-031

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Change History

| Issue | Month Year | Change in this issue |
|---------|------------|----------------------|
| Issue 1 | Dec 2024 | First issue |
| | | |

Roles

| Action | Role | Date |
|----------------------|---|----------|
| Produced | Airspace Change Specialist Airspace & Future Operations | Dec 2024 |
| Reviewed Approved | Airspace Implementation Manager Airspace & Future Operations | Dec 2024 |
| Reviewed Approved | Airspace Concepts Manager Airspace & Future Operations | Dec 2024 |

Referenced Documents

| Ref Number | Name and Link | |
|------------|---|------|
| 1. | Airspace Change Portal ACP-2024-031 | Link |
| 2. | Airspace Modernisation Strategy | Link |
| 3. | Significant Point Name Codes (5LNC) and ATS Route Designators (SARG Policy 126) | Link |

1. Introduction

1.1. Background

- 1.1.1. This document forms part of the document set required in accordance with the requirements of the UK Civil Aviation Authority (CAA) CAP1616 Airspace Change Process.
- 1.1.2. Following the Assessment Meeting, this Airspace Change Proposal (ACP) has been assessed by the CAA as a Level 3 change. The CAA outlined the process requirements for this, which are documented in the Assessment Meeting minutes (Ref 1).
- 1.1.3. This document aims to provide adequate evidence to satisfy Stage 4, Airspace Change Proposal CAP1616h.
- 1.1.4. The change sponsor for this change is NATS En Route Limited (NERL).

1.2. Drivers for Change

- 1.2.1. There are 2 key drivers for the changes within the proposal:
 - The current airspace design creates a 'bottleneck' scenario on the UIR boundary, which increases workload for Air Traffic Control (ATC) and does not provide optimal flight efficiencies. This impacts both NERL ATC and Shannon ATC.
 - Shannon ATC have identified inefficiencies with the extant airspace design for traffic arriving and departing Cork Airport (EICK), which increases controller workload and limits efficient descent profiles.

1.3. Aims of the Proposal

- 1.3.1. This change forms part of the plan for delivery of the AMS. It seeks to:
 - Reduce ATC workload
 - Optimise flight efficiency

1.4. Assumptions and Constraints

- 1.4.1. This change is limited to airspace over the sea, and all above FL165.

1.5. Summary of Proposed Changes

- 1.5.1. There are 2 elements to this ACP, both on the London/Shannon boundary.
 - 1) Create an additional co-ordination point (COP) on the London/Shannon UIR border. Traffic will be able to flight plan either BAGSO (current COP) or the new COP, dependent on destination. This reduces controller workload and enhances flight efficiency for affected flights.
 - 2) Realignment and lowering of BHD CTA6 to accommodate a new COP and direct routings, facilitating an inbound/outbound flow for EICK traffic. This reduces controller workload and enhances flight efficiency for affected flights.

1.6. Timeline for implementation

- 1.6.1. It is intended to implement this ACP in June 2025 (AIRAC 25/06).
- 1.6.2. This ACP needs to be co-ordinated with changes by Irish Air Navigation Service (AirNav Ireland).

2. Stage 1: Define

2.1. Statement of Need

- 2.1.1. The Statement of Need (DAP1916) was first submitted in July 2024. A second version was submitted in October 2024, which increased the scope of the ACP to include the BHD CTA6 changes.
- 2.1.2. Following the assessment meeting, the statement of need was updated to remove potential ambiguity highlighted by the CAA. Version 3 of the Statement of Need states:

Objective:

The objective of this change is to enable more efficient flight plannable options for traffic crossing the London/Shannon border.

Issue/opportunity to be addressed:

There are two elements to this ACP:

Issue 1: Network pinch point at BAGSO: It is identified that there is a need for an additional exit point on the London/Shannon boundary. This relates to the upper airspace (traffic above FL245) so affects the London Upper Information Region (UIR).

Currently, the single exit point from the London UIR (BAGSO), limits capacity and does not facilitate the most efficient flight plannable routings within this airspace. This proposal seeks to reduce workload for controllers, improve traffic presentation to Shannon, and enable optimal flight level for efficient routings by introducing an additional point for traffic to exit UK airspace.

Issue 2: Inefficient traffic flows to/from EICK: There is a need to revise the CAS on the boundary (Berryhead CTA6), for traffic in and out of EICK. This would reduce controller workload and improve flight efficiency with improved continuous climb/ descent profiles.

Both elements are in support of the AMS.

Current airspace design:

1) BAGSO area: Currently, single co-ordination point (COP), BAGSO, is utilised for traffic to flight plan to cross the London/Shannon UIRs. Connectivity to BAGSO is via ATS routes. Airspace to the north of BAGSO is FRA and currently has no permitted free route trajectories which provide connectivity between London and Shannon UIRs.

2) Berryhead CTA 6

Current CTA box extends within London FIR (Flight Information Region) from LEDGO on FIR border to waypoint BOGMI. Lateral dimensions contain ATS route N160, vertical dimensions are FL175-195.

Current prevailing air traffic situation:

1) BAGSO area: Approximately 20,500 flights per annum (Sep 23 - Aug 24 data) flight plan via BAGSO

2) BHD CTA 6: Utilised by traffic in and out of EICK. Approximately 2,400 flights per annum (Aug 23 – Sep 24 data) flight plan via LEDGO.

2.2. Area of Scope

2.2.1. Figure 1 shows the two areas of change, described in the Statement of Need.

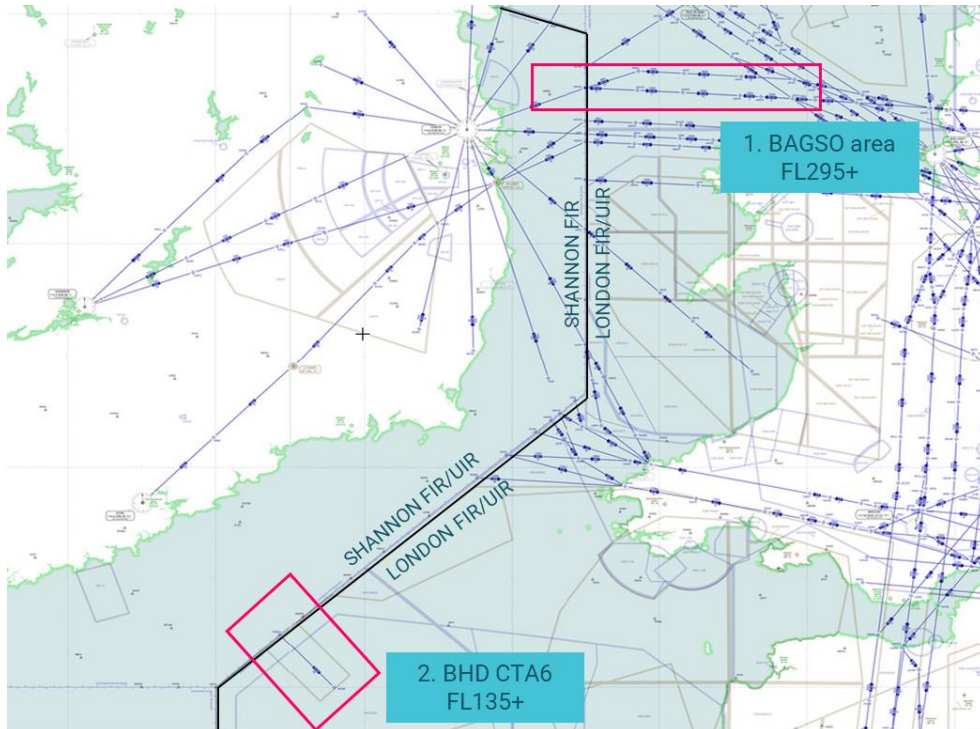


Figure 1 Area of Scope for proposed changes

2.3. Current Day Scenario: Component 1: BAGSO area

Airspace Design

2.3.1. The airspace in scope shown in Figure 1. The relevant airspace is Class C, above FL245. Waypoint BAGSO is a co-ordination point (COP) on the London/Shannon UIR boundary. Within the London UIR, connectivity is via ATS routes M144, M145 and UL70.

2.3.2. Airspace to the north of BAGSO above FL255 is Free Route Airspace (FRA). Airspace within the Shannon UIR is also FRA. There is no COP to facilitate flight planable Free Route connectivity between London and Shannon UIRs.

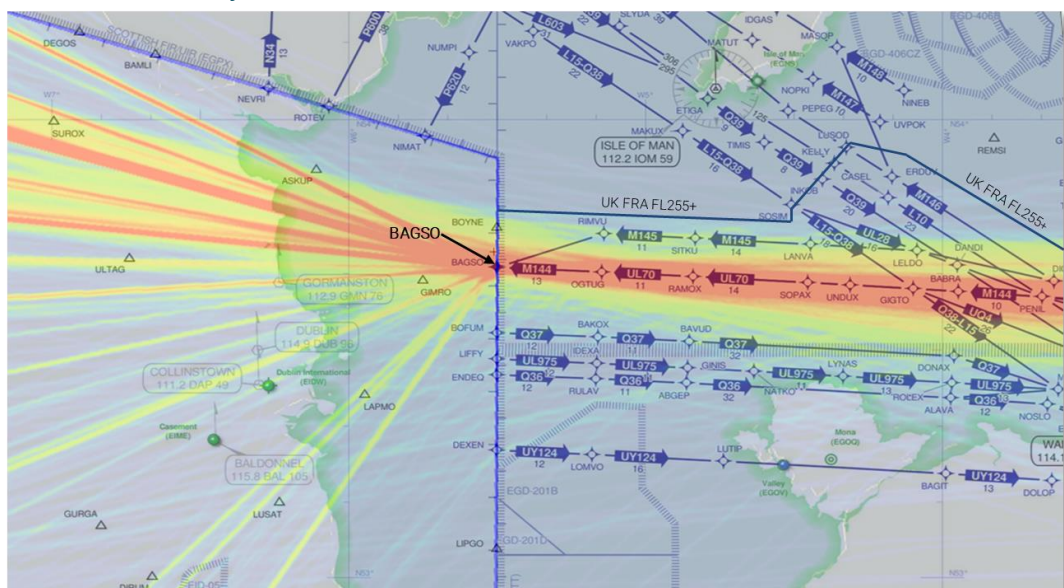


Figure 2 BAGSO Area: Extant airspace design and usage - FL245+ (traffic density: September 2024)

Airspace Usage

- 2.3.3. Within London UIR, air traffic services (ATS) are provided by NATS ANSP. Traffic heading westbound to transatlantic destinations or Irish airfields (excluding Dublin) must flight plan via BAGSO COP.
- 2.3.4. Within the UK, air traffic control (ATC) stream the traffic through BAGSO, as shown in Figure 2. In Irish airspace, ATS is provided by AirNAV, the Irish ANSP. Traffic is distributed according to destination.
- 2.3.5. Approximately 20,500 flights per annum cross BAGSO at FL300+¹, and are within the scope of this change proposal.
- 2.3.6. Other traffic utilises BAGSO within lower airspace (below FL245) (Dublin Airport inbounds; Manchester Group departures). These are not within scope of this proposal and there are no changes proposed to this traffic.

Operational efficiency, complexity, choke points, delays

- 2.3.7. The current airspace design creates a network 'pinch point' above FL245. To mitigate this, currently ATC use vertical separation to tactically manage the traffic flow. This increases ATC workload for both NATS ATC, and for AirNAV ATC.
- 2.3.8. This tactical vertical separation also reduces flight efficiency, as aircraft are not achieving the levels in the flight plan.
- 2.3.9. Since 28 November 2024, aircraft are being tactically routed to exit north of BAGSO in Free Route Airspace. This change has been implemented in conjunction with AirNAV (Shannon ATC) to improve flight efficiency.
- 2.3.10. The introduction of a COP as proposed within this ACP would enable this to be flight plannable, providing workload benefits and further efficiency benefits.

2.4. Current Day Scenario: Component 2: BHD CTA 6/7 area

Airspace Design

- 2.4.1. BHD CTA 6, within the London FIR on the boundary of Shannon FIR, provides the protection of controlled airspace for EICK arrivals and departures, and deconflicts from TRA001. Figure 3 shows the current CTA and surrounding structures.
- 2.4.2. BHD CTA 6 extends from LEDGO to BOGMI, encompassing ATS route N160. The vertical parameters are FL175-FL195. BHD CTA 6 is Class A airspace. The surrounding airspace is Class G, up to FL195 when it becomes Class C.
- 2.4.3. BHD CTA 7 sits above BHD CTA6, the vertical parameters are FL195-FL245. BHD CTA 7 is Class C airspace. Surrounding BHD CTA7 is TRA001.
- 2.4.4. BHD CTA 6/7 overlap the Southwest Danger Area Complex, specifically area EGD064A, which extends FL50 – FL660. BHD CTA6/7 are not available when the MDA is active.
- 2.4.5. TRA001 (FL195 - FL245) wraps around BHD CTA7. TRA001 is usually activated when the MDA is active.

¹ This figure excludes departures from the Manchester Group airfields and Dublin arrivals, as these are out of scope of this proposal.

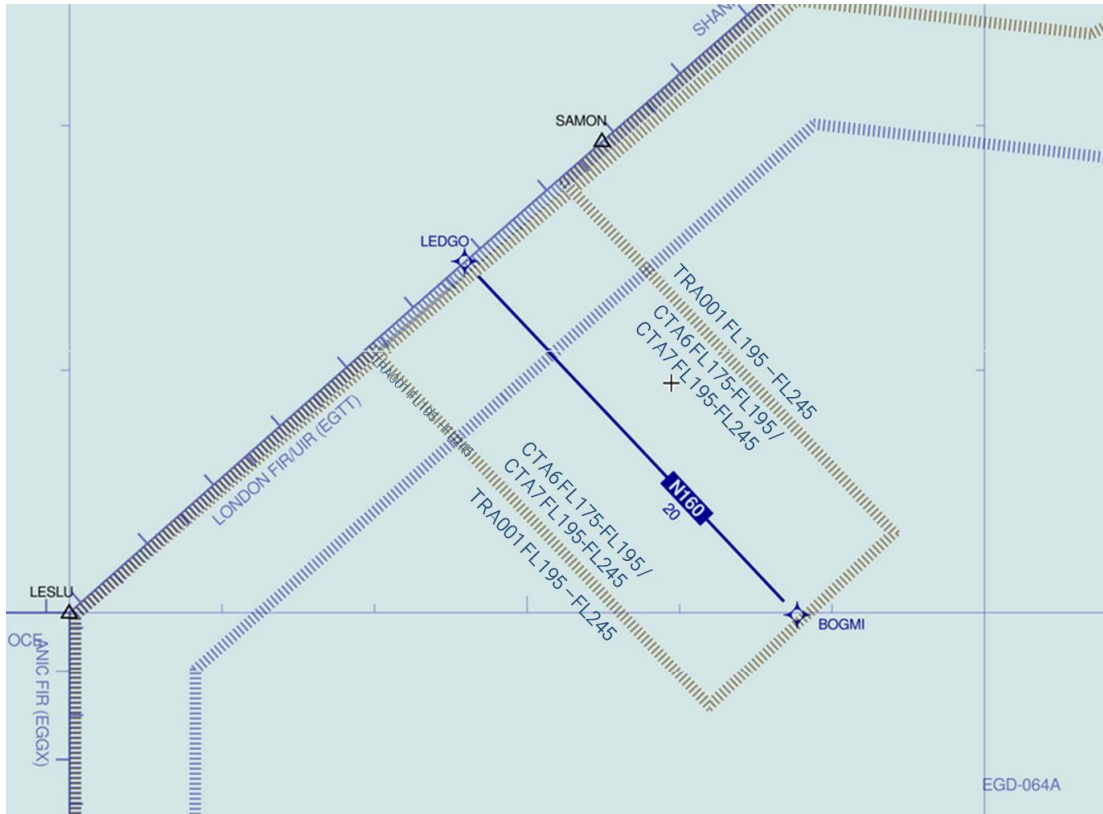


Figure 3 Extant BHD CTA6/7 and surrounding airspace structures.

Airspace Usage

2.4.6. Figure 4 shows the airspace structures described above and a density map of EICK arrivals and departures to demonstrate airspace usage, described further below.

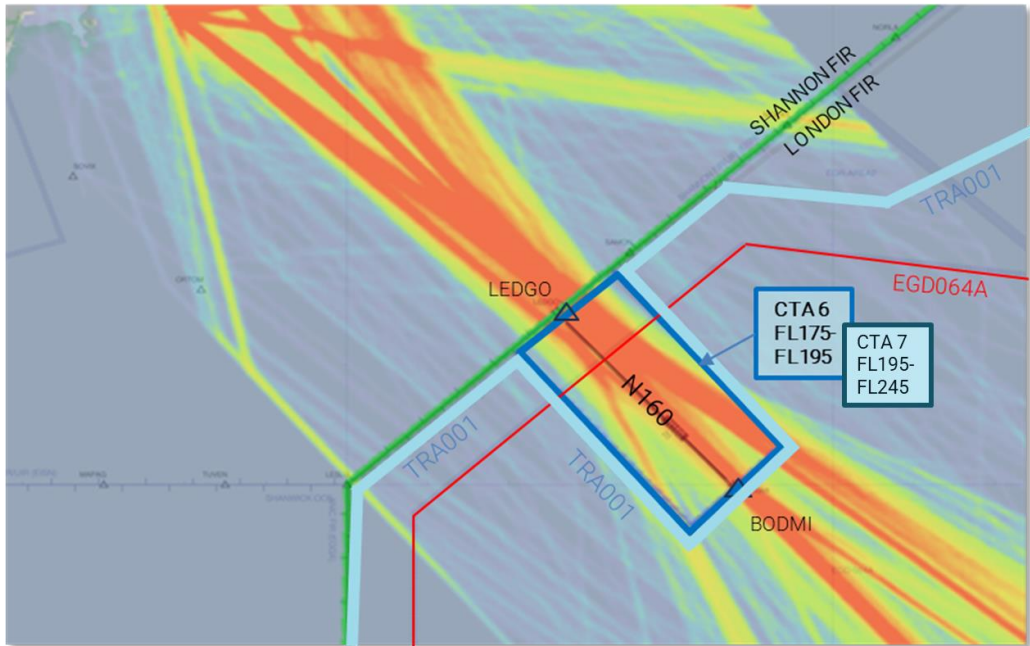


Figure 4 BHD CTA 6/7 Airspace structures and EICK traffic density map (Sep 2024)

2.4.7. Within the London FIR, NATS provide the ATC service. In Irish airspace, ATS is provided by AirNAV, the Irish ANSP.

- 2.4.8. Typically, EICK arrivals (approx. 1,600 flights per annum) descend through CTA 7 into 6, dropping below FL175 once across the FIR boundary, as shown in Figure 5 below.

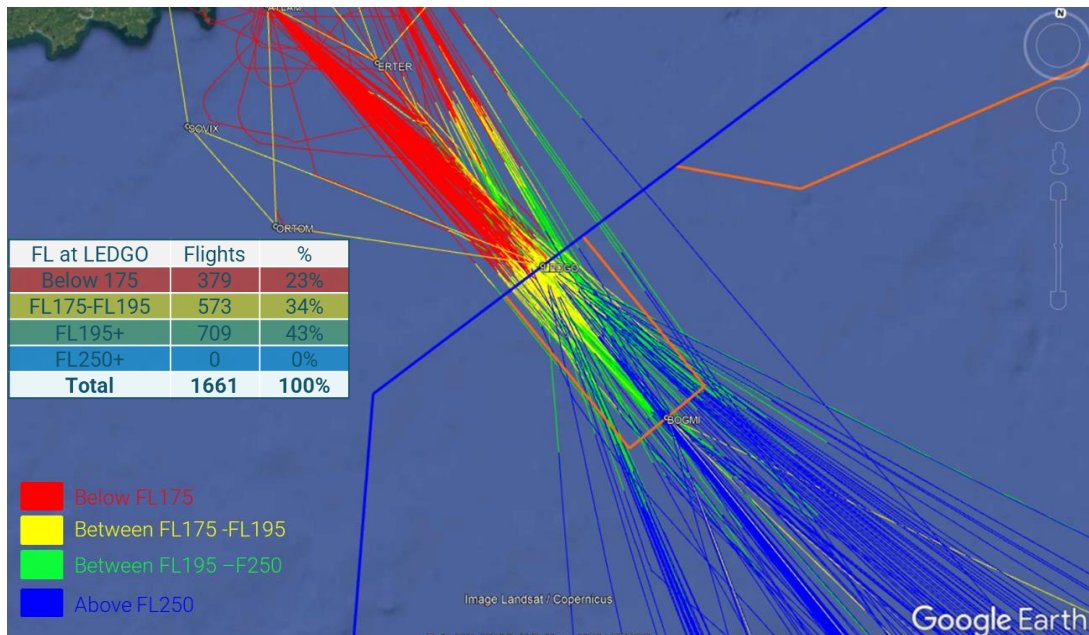


Figure 5 EICK arrivals by flight level (data for Sep 2024)

- 2.4.9. Typically, EICK departures (approx.,1,000 flights per annum²) are above BHD CTA6 at LEDGO, with the mean level at LEDGO FL237. Only 2% of flights are between FL175-FL195 at LEDGO (Figure 6). This also shows the routine dispersal of traffic across and outside the boundary of BHD CTA6/7.

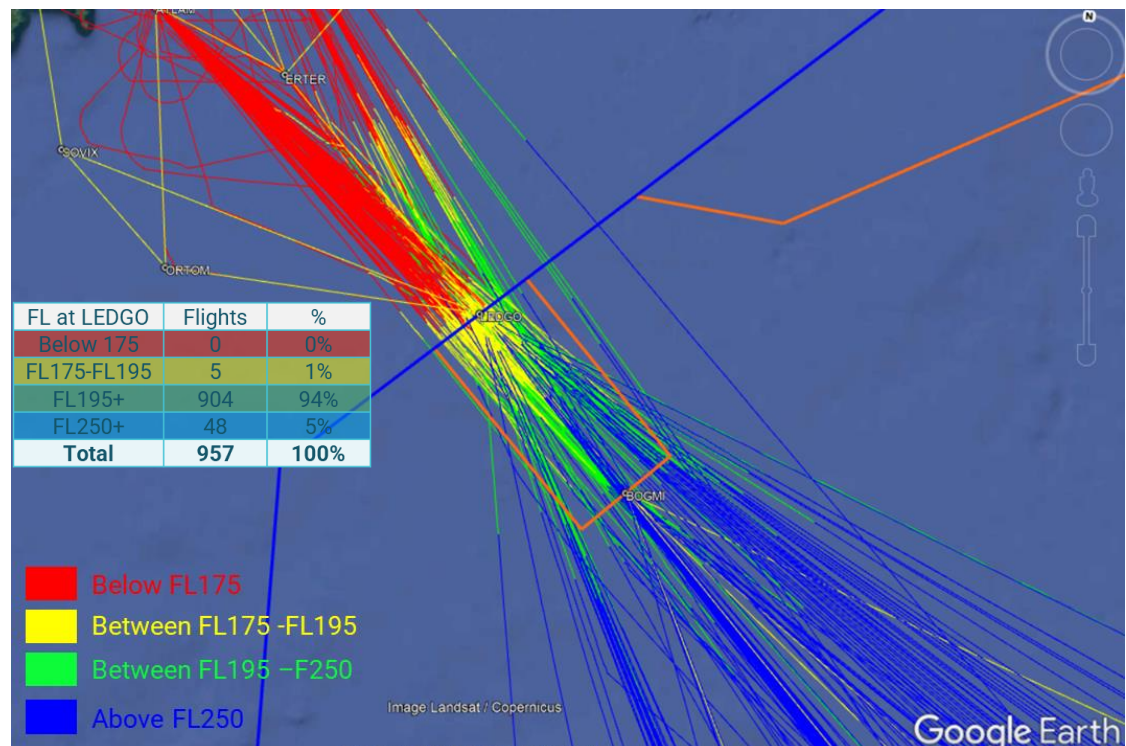


Figure 6 Departures from EICK, showing level bands (map shows data for Sep 2024)

² Traffic sample based on 1 October 2023 – 30 September 2024.

Operational efficiency, complexity, choke points, delays

- 2.4.10. At recent interface meetings between ATC Shannon and NERL, it was identified that the current airspace design creates inefficiencies within the network:
- Flights are restricted by the vertical limits of the current CTA 6, therefore levelling off in descent, and increased descent gradients are commonplace.
 - Co-ordination is regularly required between London and Shannon ATC due to the current design with a single inbound and outbound route. This leads to increased controller workload and RT (radio transmissions) for both units to resolve conflicting traffic.
 - The current lateral constraints of the CTA leads to increased workload with the co-ordination required for the current parameters.

2.5. Design Principles

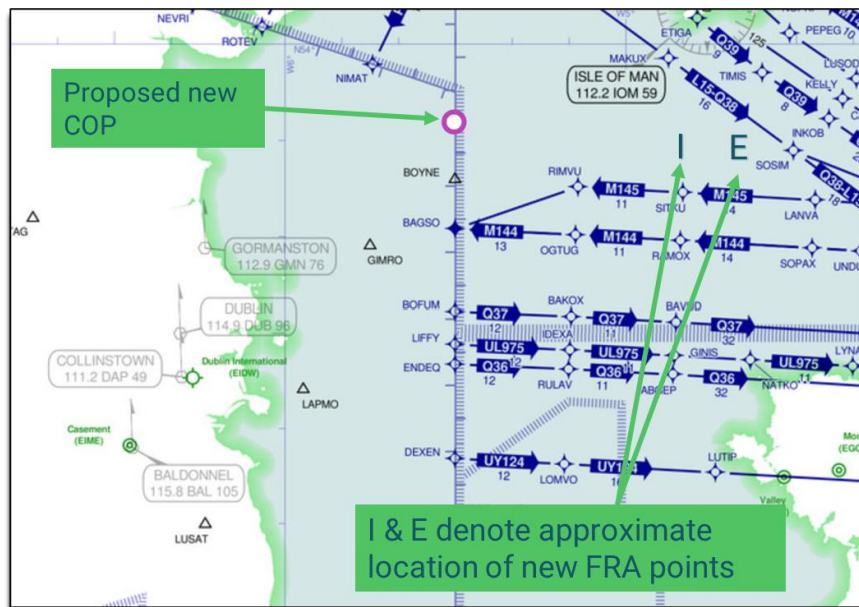
- 2.5.1. The CAA assessed that this ACP is only required to utilise the mandatory design principles. Design options are evaluated against these.

| Mandatory Design Principles (CAP1616 Ed.5) | |
|---|---|
| MDP Safety | The airspace change proposal must maintain a high standard of safety and should seek to enhance current levels of safety. |
| MDP Policy | The airspace change proposal should not be inconsistent with relevant legislation, the CAA's airspace modernisation strategy or Secretary of State and CAA's policy and guidance. |
| MDP Environment | The airspace change proposal should deliver the Government's key environmental objectives with respect to air navigation as set out in the Government's Air Navigation Guidance 2017. |

3. Stage 2: Develop and Assess

3.1. Design Option Development: Component 1 BAGSO area

- 3.1.1. A single design option for this component was developed in conjunction with Shannon ATC. Workshops were held with Shannon ATC to develop new airspace usage parameters. It was determined the optimal solution would include a new COP and this would distribute traffic better for both ANSPs.
- 3.1.2. The proposal is to introduce a new COP, north of BAGSO (Figure 7). The new COP would be within FRA airspace, with 2 new FRA relevant points for connectivity, for overflight traffic at FL245+. Lower-level traffic will remain via BAGSO.
- 3.1.3. Current constraints to the airspace determine the proposed location of the new COP:
 - 1) it requires sufficient separation from BAGSO (min 7NM)
 - 2) it needs to be within Free Route Airspace for NATS system functionality.



- 3.1.4. Flights would be redistributed between BAGSO and the new COP, dependent on Oceanic Entry Point (OEP) / Irish destination.

3.2. Design Principle Evaluation: Component 1:

- 3.2.1. The design option was qualitatively assessed against the design principles. All design principles are assessed to be met, and the design option was progressed to Stage 3, Consult/Engage.

Table 1 – Component 1: Design Principle Evaluation & Proposal Impacts

| | | |
|------------|-----|---|
| MDP Safety | MET | This change will maintain current safety levels. This flight plannable route is being used tactically as part of an earlier deployment and safety assurance work has identified no issues. |
|------------|-----|---|

| | | |
|-----------------|-----|---|
| MDP Policy | MET | <p>This proposal maintains safety, in conjunction with AMS 'end' Safety.</p> <p>The additional COP will enable flight plannable separation by destination, this reduces complexity of the airspace. The reduced requirement to tactically separate traffic will reduce ATC workload, in support of AMS 'end' Simplification.</p> <p>Optimises flight efficiency by providing operators with preferred flight levels earlier (AMS 'end' Environmental sustainability).</p> |
| MDP Environment | MET | <p>This change optimises flight efficiency by providing operators with preferred flight levels earlier.</p> <p>No impacts on aircraft noise or local air quality emissions as all changes are above FL250.</p> |

3.3. Design Option Development: Component 2: BHD CTA 6/7

3.3.1. Regular interface meetings between London and Shannon ATC identified network inefficiencies. Design option development was undertaken with Shannon ATC.

3.3.2. A workshop was held via TEAMS on 25 October 2024 where NERL and Shannon ATC reviewed initial concepts based on their own requirements (see Annex A). A single design was developed as a result which meets the requirements of both stakeholders.

3.3.3. Key factors were considered:

- Shannon ATC intend to establish a Release for Climb (RFC) box within Shannon FIR (this is outside of UK airspace, and therefore outside scope of this ACP).
- Extending the lateral boundaries of CTA 6 would accommodate more direct routings and offer improved profiles for airlines.
- Lowering the base of CTA 6 would accommodate better continuous descent/arrival profiles and align with the proposed Shannon box.
- Addition of a new COP / parallel routing(s) enables deconfliction of in/outbound traffic flows.
- CTA7 sits above CTA6, and the lateral parameters would need to be realigned. This would impact on TRA001.
- CTA 6/7 are not available when MDA064A is active, however any lateral extension of CTA 6/7 could impact the military due to the impact on TRA001.

3.3.4. The design option is shown in Figure 8 and comprises:

3.3.5. SAMON (current waypoint, used as a COP for traffic above FL285) to be introduced as a bi-directional COP at a lower flight level, enabling separate traffic flows for inbound/outbound EICK traffic. This requires a lateral extension to the CTA to the east, 5nm from SAMON, so CTA boundary is 7.5NM further out from the current CTA boundary as shown in Figure 8.

3.3.6. Extend the lateral CTA depth by 5NM to facilitate better flight profiles; adding 3 waypoints to the revised boundary to enable more efficient flight planning.

3.3.7. A lateral extension to the west of 5NM would accommodate more direct routings to LEDGO, offers improved profiles for airlines and reduces complexity.

3.3.8. Lower entire CTA6 to FL135 to facilitate optimal descent profiles.

3.3.9. This was shared with the military at this stage, to understand any potential impacts at this formative stage, and no revisions were made to the proposed design option (Annex A).

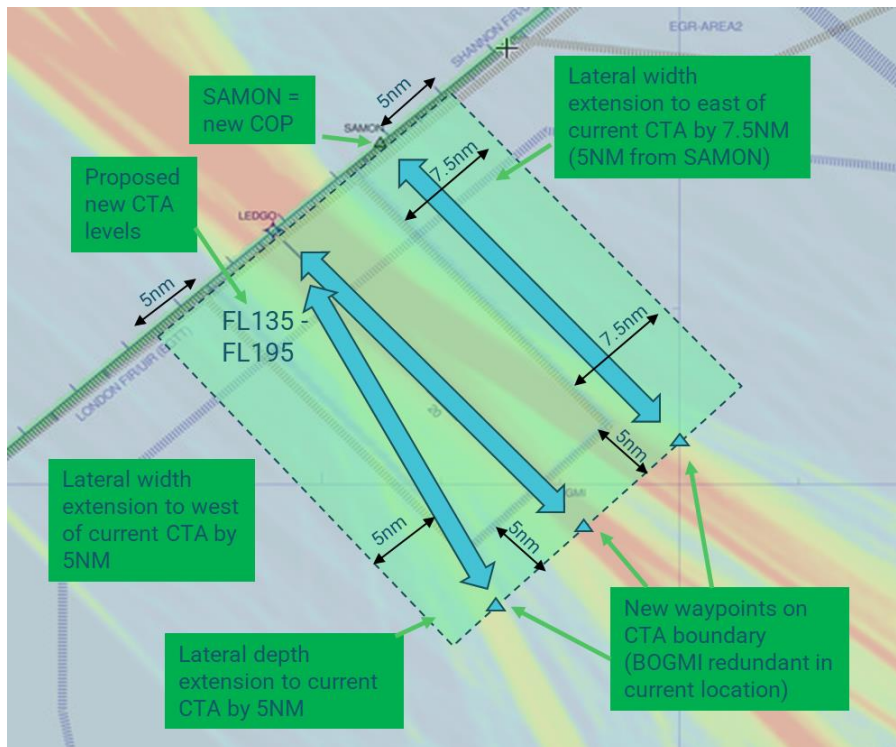


Figure 8 Design option for component 2: CTA 6/7

3.4. Design Principle Evaluation: Component 2

3.4.1. The design option was qualitatively assessed against the design principles. All design principles are assessed to be met, and the design option was progressed to Stage 3, Consult/Engage.

Table 2 – Component 2: Design Principle Evaluation & Proposal Impacts

| | | |
|-----------------|-----|---|
| MDP Safety | MET | This change will maintain current safety levels. Increasing the dimensions of CTA 6 and additional routings will enable flight plannable dispersal of traffic. |
| MDP Policy | MET | This proposal maintains safety, in conjunction with AMS 'end' Safety. The extension of CTA6 will impinge on TRA001; the military have been engaged and see no significant operational impacts (integration). The additional COP will reduce complexity of the airspace, with less requirement to tactically separate traffic. This will reduce ATC workload, in support of AMS 'end' Simplification. Optimises flight efficiency by providing better descent profiles and more direct routings (AMS 'end' Environmental sustainability). |
| MDP Environment | MET | This change optimises flight efficiency by providing operators with preferred flight levels earlier. No impacts on aircraft noise or local air quality emissions as all changes are above FL250. |

3.5. Habitats Regulation Assessment

3.5.1. Q1. Are there any changes to air traffic patterns or number of movements expected below 3,000 feet due to the airspace change proposal?

3.5.2. No. The changes are all above FL70 and affect traffic over the sea. The Habitats Regulation Assessment is not required.

4. Stage 3: Consult / Engage

4.1. Engagement Strategy

- 4.1.1. This engagement strategy describes the objectives, intended audience, engagement materials and engagement activities, which demonstrates how we facilitated effective engagement with our relevant stakeholders for this change proposal.
- 4.1.2. The drivers for change are to enable flight plannable environmental benefits and reduce complexity/workload.
- 4.1.3. Given the nature of the change proposed, it was agreed with the CAA that targeted engagement with relevant stakeholders is appropriate for this change proposal, rather than full consultation.

4.2. Objectives

- 4.2.1. The objectives of the engagement are:
- to share design options in their formative stage with relevant stakeholders, informing stakeholders of the impacts of each design option
 - to obtain their views on the proposals and consider any feedback in the design.

4.3. Engagement Audience (Stakeholders)

- 4.3.1. At the Assessment Meeting, it was agreed with the CAA that given the nature of the change proposed (over the sea; limited impacts, providing ATC workload and flight efficiency benefits) the stakeholders would be limited to AirNAV and the MoD, and we would actively engage these organisations with our design development. As the design developed, we have identified some other stakeholders. We have categorised our stakeholders as below:

Key stakeholder groups: AirNAV, MoD

- 4.3.2. Key stakeholders are assessed to be those most impacted by the change, and we *require* feedback from these stakeholders.
- **AirNAV (Irish ANSP):** the ANSP for the Irish airspace adjacent to the change boundary, design options were developed with AirNAV.
 - **Ministry of Defence (MoD):** engaged through Defence Airspace and Air Traffic Management (DAATM). DAATM is a focal point for all aviation matters which may impact military airspace and operations, collecting feedback from all branches of the military which may be impacted to provide a single response.

Other stakeholder groups: Airlines, relevant NATMAC members

- 4.3.3. Other stakeholders are assessed as having an interest in the change, but less impacted. We *invite* feedback from these stakeholders.
- **Airlines:** For Component 1, we identified the Top 10 airlines which currently flight plan via BAGSO (70% of traffic on this route). For Component 2, we identified that 2 airlines comprise 85% of traffic. We have engaged these airlines as those most affected by the change:

| | |
|-------------------|-------------------|
| • KLM | Aer Lingus |
| • Lufthansa | Jet2 |
| • Ryanair | Delta |
| • Air Canada | United Airlines |
| • JetBlue Airways | American Airlines |
| • British Airways | |

Relevant National Air Traffic Management Advisory Committee (NATMAC) members:

- British Gliding Association (BGA) - due to proximity of gliding areas
- General Aviation Alliance - could utilise TRA001

4.3.4. Outside of the formal ACP engagement, NERL will inform airlines through the Lead Operator Carrier Panel (LOCP), which is usual practice for the introduction of similar scale changes which do not require an ACP. This will be done prior to implementation.

4.3.5. Only the organisations listed were formally contacted for feedback. However, NERL welcomes feedback from any individual or organisation which considers the changes within this ACP may impact them.

4.4. Engagement materials

4.4.1. A briefing pack was produced for stakeholders. This describes the scope of the proposed changes, and the drivers for change. For each component, the current day scenario is described, including airspace design and airspace usage for the last 12 months, including radar data.

4.4.2. The issues/opportunities and concept for development are presented. Design options are described in full, and diagrams used to indicate change. A qualitative assessment of the impacts is provided. There is only a single design option for each component.

4.4.3. An online form was used to capture stakeholder responses to the proposed changes. A link to this was included within the briefing pack, and in the email. See Annex A: Engagement Material.

4.5. Engagement Activity

4.5.1. During the initial design development stages, we engaged primarily with AirNAV, with a series of workshops / emails to develop the initial design options. We then engaged with DAATM, as described in 3.3.9, via a Teams meeting, providing a briefing of the proposed changes and the proposed engagement window.

4.5.2. There was only one design option developed for each component. We completed targeted engagement activity on these design options with our identified stakeholders. Table 3 summarises the engagement activity undertaken, with a reference number to the engagement evidence in Annex A

Table 3 Summary of engagement activities

| Engagement period | Stakeholder(s) | Engagement Activity | Annex A Ref |
|------------------------|-------------------------------------|---|-------------|
| 03/05/2024 - 8/10/2024 | AirNAV | Meetings and emails to develop concept of change for BAGSO area - initial design development work and new COP concept. Evidence of engagement: email correspondence | 1 |
| | | Meetings and emails to develop concept of change for BHD CTA - initial design development work & design development. Evidence of engagement: email correspondence | |
| 25/10/2025 | AirNAV | ACP design development engagement | 2 |
| 28/10/2024 | DAATM | Evidence of engagement: meeting minutes | |
| 01/11/2024 - 24/11/24 | AirNAV, DAATM, Top airlines, NATMAC | Engagement materials sent via targeted emails. Feedback requested via MS Forms. A follow up email was sent if stakeholders had not responded to the initial email | 3 |
| 10/12/2024c | DAATM | Final design clarification : Email correspondence | 4 |
| 20/12/2024 | AirNAV | | |

4.5.3. The briefing pack was sent via email to all stakeholders on 1st November 2024. Stakeholders were given 3 weeks to provide feedback on the proposed changes, with responses requested by 24th November. A reminder email was sent to stakeholders who had not responded on 15th November 2024 to encourage responses.

4.5.4. This is deemed proportionate for this engagement given the nature of the proposed changes. There were no public or school holidays within the time period.

4.6. Engagement Summary & Design Update

4.6.1. We received 5 responses on the online form and 1 email from 15 stakeholders contacted. This includes both key stakeholders. We received no emails asking for further time or asking any questions on the change proposal.

4.6.2. This response rate is considered sufficient, and representative given the scope and impact area of these proposed changes.

4.6.3. We engaged our stakeholders on the above proposed design in accordance with our engagement strategy.

Component 1: BAGSO area

4.6.4. For Component 1 (BAGSO area) we asked: 'To what extent do you support the introduction of a new COP north of BAGSO and the redistribution of traffic flows?'

4.6.5. Stakeholders were in support of the new COP (80%) (Figure 9). They were either in support (60%) or were neutral (40%) on the location of the COP and the planned distribution of traffic by OEP/Irish destination. No stakeholder disagreed with this aspect of the proposal.

4.6.6. We also asked for comments relating to the proposal, which are shown in Table 4.

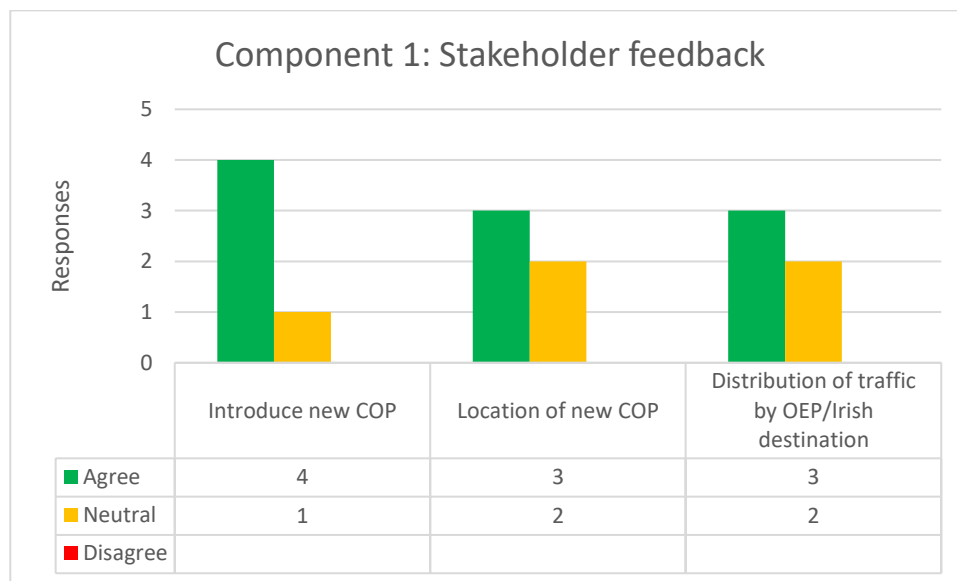


Figure 9 Stakeholder responses to component 1: BAGSO area proposals

Table 4 Component 1: Engagement feedback for BAGSO area

| Stakeholder | Comments | Response |
|-------------------|---|---|
| British Airways | Any airspace changes that improve Flight Efficiency are welcomed by British Airways. | No comments impacting the design. |
| BGA | No comments. | No comments impacting the design. |
| Austrian Airlines | A new waypoint north of BAGSO is long overdue! We highly appreciate that concept. | No comments impacting the design. |
| Lufthansa | Would be interesting to know more on the distribution of traffic between new COP and BAGSO. | No comments impacting the design. Traffic will be distributed by OEP / Irish destination. |

| | | |
|--------|--|--|
| MoD | No concerns with this proposal. | No comments impacting the design. |
| AirNAV | Support new COP. The new COP is close to the Scottish boundary but new release for climb procedures mitigate this. | The design constraints on the location of the COP were discussed and agreed at workshops. No impact on design. |

4.6.7. For Component 1, we received no feedback which impacts the design, so we progress this component as described in Section 4.

Component 2: BHD CTA 6/7

4.6.8. For Component 2 (BHD CTA 6) we asked: 'To what extent do you support the realignment and lowering of BHD CTA 6?'

4.6.9. Stakeholders were in support of the new COP to separate traffic flows (80%) (Figure 9). They were either in support (60%) or were neutral (40%) on the extension of the lateral boundaries of CTA 6, to optimise flight profiles.

4.6.10. They were either in support (60%) or were neutral (40%) on the lowering of the base of CTA 6 to optimise flight profiles. No stakeholder disagreed with this aspect of the proposal.

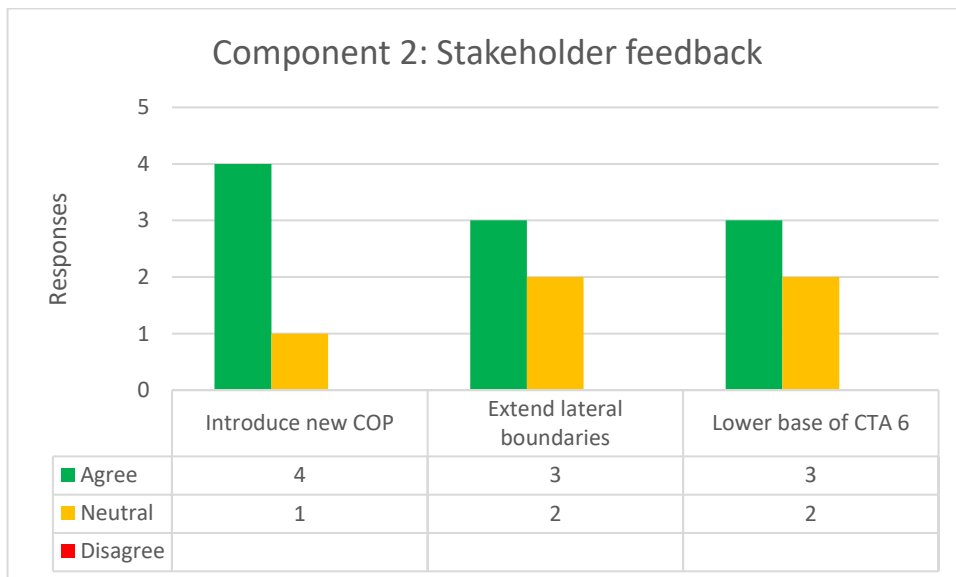


Figure 10 Stakeholder responses to component 2: BHD CTA 6 proposals

4.6.11. We also asked for comments relating to the proposal, which are shown in Table 5.

Table 5 Component 2: Engagement feedback for BHD CTA 6

| Stakeholder | Comments | Response |
|-------------------|--|--|
| British Airways | This is not really an area of airspace that affects British Airways. | No comments impacting the design. |
| BGA | Our only concern in this area is to ensure TRA(G)s are not impacted. | No TRA(G) in affected areas. No comments impacting the design. |
| Austrian Airlines | Doesn't affect our flight ops as BAGSO does. | No comments impacting the design. |
| Lufthansa | Will this impact on route optimisation within FRA. | No changes to route optimisation within FRA, unless inbound/outbound to EICK. No comments impacting the design. |
| AirNAV | This is very beneficial for traffic presentation and environmental efficiency. | The overall dimension of the new CTA box and therefore location of the new waypoints was determined optimal. Routes will be bi-directional. No impact to the design. |

| | | |
|-----|--|---|
| | The new points could be closer to the Shannon FIR however understand this needs to be optimal for London too. Would like all routes to be bi-directional to reduce introduction of inefficiencies. Very happy overall with proposal. | |
| MoD | No significant impacts with revision to TRA001, so long as the current agreement/procedures for the activation of EGD064 versus CTA6 remain in place. | The current agreement/procedures will remain in place. No comments impacting the design. |

- 4.6.12. For Component 2, we received no feedback which impacts the design, so we progress this component as described in Section 4.
- 4.6.13. During internal validation work, it was identified that the new waypoint 'ENICO' is similar to 'ENITO', in the North Sea area. Whilst there are no routes which could flight plan both points, ENITO will become obsolete following the implementation of ACP-2021-061 (changes in the North Sea area) in March 2025, so it will be removed as part of this change.

5. Stage 4: Update & Submit

5.1. Final Design Option & Impacts

5.1.1. Following the engagement, the final design options are described and presented below:

Component 1: BAGSO Area

Table 6 Summary of proposed airspace changes & impacts: Component 1 BAGSO area

| Current structure/ Routing/ Procedure | Proposed structure / Routing / Procedure |
|---|---|
| <p>Single COP BAGSO</p> <p>All traffic flight plans via BAGSO, via ATS routes M144/M145</p> | <p>New COP: WETFI - FRA intermediate point (I)</p> <p>New waypoints provide FRA connectivity:</p> <ul style="list-style-type: none"> • OZRAT – FRA intermediate point (I) • DEJEM – FRA entry point (E) • ABLUC - FRA entry point (E) <p>Current waypoint with revised FRA significance:</p> <ul style="list-style-type: none"> • SOSIM – FRA entry/exi (EX) <p>Traffic will flight plan either BAGSO or WETFI depending on destination / OEP</p> |

Summary of Change/Impacts

5.1.2. The additional COP and FRA waypoints for connectivity will enable flight plannable traffic distribution between BAGSO and WETFI. This will enable flight efficiency and workload benefits.



Figure 11 Final design option: Component 1 BAGSO Area new COP & FRA connectivity.

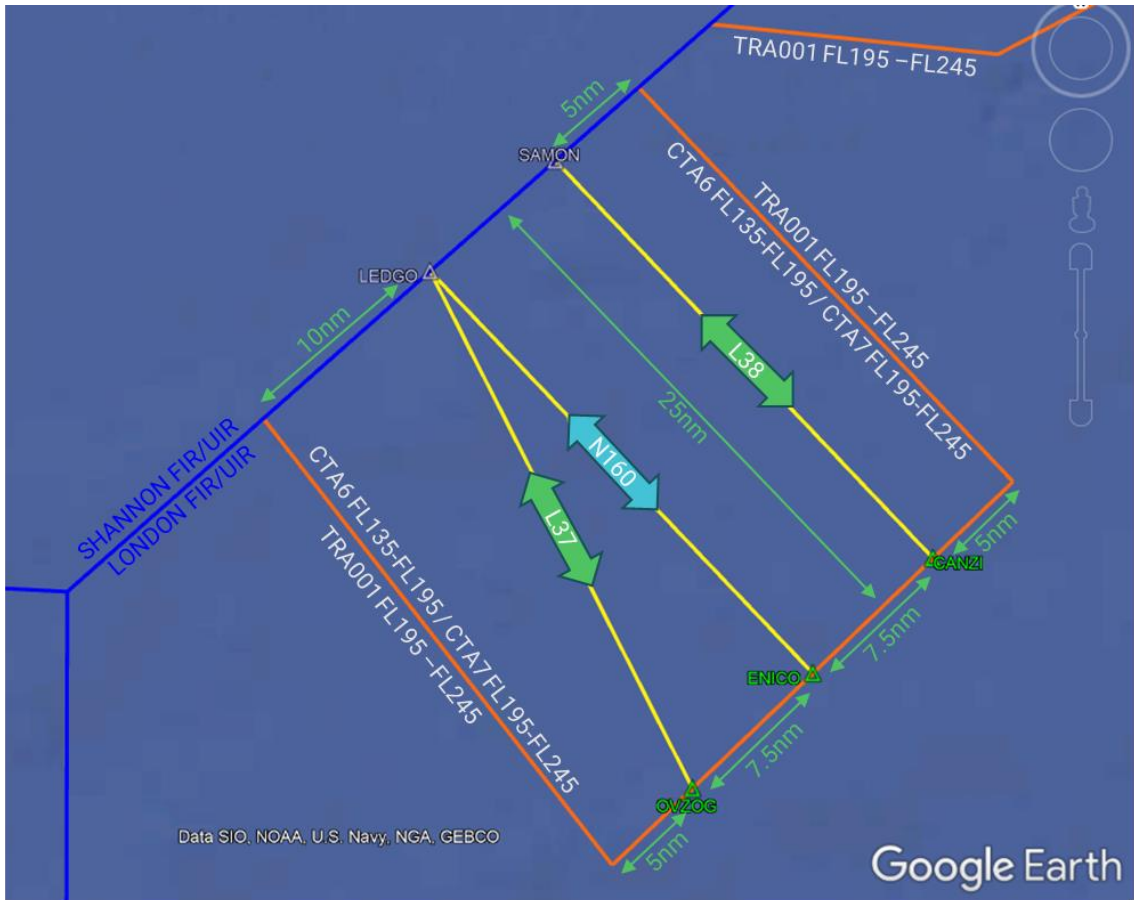
Component 2: BHD CTA 6/7

Table 7 Summary of proposed airspace changes & impacts: Component 1 BAGSO area

| Current structure/ Routing/ Procedure | Proposed structure / Routing / Procedure |
|--|---|
| <p>BHD CTA 6 FL175-FL195 extends 10NM from FIR boundary with CTA7 above FL195-FL245.</p> <p>TRA001 is FL195-FL245.</p> <p>LEDGO is single COP.</p> <p>N160 extends LEDGO – BOGMI</p> | <p>Lateral extension of BHD CTA6 & BHD CTA7; reduction of TRA001.</p> <p>Vertical extension of CTA6 FL135 – FL195.</p> <p>New CDR ATS route L37: LEDGO – L37 – OVZOG (new waypoint).</p> <p>New CDR ATS route L38: SAMON – L38 – CANZI (new waypoint).</p> <p>Extended CDR N160: LEDGO – L160 – ENICO (new waypoint).</p> <p>Delete waypoint BOGMI (N160).</p> <p>Delete waypoint ENITO (L603).</p> |

Summary of Change/Impacts

- 5.1.3. Realignment and lowering of CTA6 for route containment.
- 5.1.4. Realignment of CTA7 and TRA001 parameters to align with CTA6 lateral revisions.
- 5.1.5. New bi-directional ATS routes to reduce controller workload and improve flight efficiency.
- 5.1.6. New ATS routes are CDR – not available when EG D064A is active, as per today.



↔ L37 New ATS route
 ↔ N160 Extended ATS route
 ▲ New waypoint

Figure 12 Final design option: Component 2 CTA 6/7 and ATS routes

5.2. Regulations, Policies and Harmonisation

- 5.2.1. The following regulations and policies will be complied with in delivery of this airspace change:

| Policy | Adherence |
|---|---|
| Significant Point Name Codes (SLNC) and ATS Route Designators (SARG Policy 126) (Ref 3) | New waypoints and ATS routes are named in accordance with this. |
| UK Airspace Modernisation Strategy (Ref 1) | Design options have been evaluated against the 'ends' of the AMS and this proposal is in accordance with the objectives: Safety: the final design will maintain current safety levels. Integration: the extension of CTA 7 into TRA 001 provides optimised routing for commercial traffic with no impact to military users. Simplification: reduces complexity and workload by reducing the need for tactical intervention from ATC. Environmental: improve flight profiles and enables more efficient routings |

5.3. Anticipated Operational Impacts

Air Navigation Service Providers (ANSP)

- 5.3.1. This change has been developed in conjunction with Shannon ATC, and co-ordinated with AirNAV ANSP. The COP location and traffic routing for BAGSO area has been agreed with AirNAV. The revisions to BHD CTA 6/7 were developed with AirNAV.
- 5.3.2. Both aspects of the proposal provide ATC workload and flight efficiency benefits for both AirNAV and NERL. The proposal will reduce the requirements for tactical intervention to separate traffic flows in both areas. This flight plannable separation will also reduce the co-ordination required between the two units.
- 5.3.3. Letters of Agreement (LoA) will be revised in line with the proposed changes. Draft versions showing the changes are supplied to the CAA with this submission.

Military Impacts

- 5.3.4. The extension of CTA 6 into TRA 001 provides optimised routing for commercial traffic with no impact to military users. There are no impacts to the military from the changes proposed at BAGSO.
- Following the finalisation of the design for CTA 6 and CTA7 and the revision to TRA001, we further engaged with the military and they confirmed this is acceptable and will have negligible impacts.

Commercial Airspace Users

- 5.3.5. This change will have minimal operational impact for airspace users. Airlines utilising affected routes will benefit from more efficient flight profiles, and have shown to have no objection to the changes.

Relevant Airports

- 5.3.6. This change will have minimal operational impact for airports. The revisions to the BHD CTA 6 will provide flight efficiencies for Cork traffic filing this route. There will be no changes to airport procedures.

Other Airspace users

- 5.3.7. There will be no impacts on other airspace users.

5.4. Safety

- 5.4.1. Safety assurance for this airspace change will follow NATS SAF006 (ATC Procedures Safety Assessment) safety process. An APSA will be carried out in due course and prior to implementation.
- 5.4.2. Service Improvement feedback from the Operational Units has identified this change would raise no issues within the terminal and en-route environment. The new flight plannable routes would reduce controller workload and drive better route consistency.
- 5.4.3. The required system updates would ensure current safety levels are retained.
- 5.4.4. The removal of ENITO will remove any potential safety issue in the future with the similar sounding ENICO.

5.5. Environmental Assessment

- 5.5.1. After the assessment meeting the CAA clarified that the requirements of the environmental assessment are scalable and proportionate. In line with the requirements of CAP1616H, this assessment is qualitative only.
- 5.5.2. The objectives of this ACP are to reduce ATC workload and optimise flight efficiency.
- 5.5.3. The provision of a new COP at BAGSO would provide operators with preferred flight levels earlier than today. Currently, the tactical use of vertical separation can limit flights getting to planned levels. This would provide optimised flight profiles and some small efficiency improvements.
- 5.5.4. At BHD CTA 6/7, the current CTA levels restrict continuous descent profiles. The revisions to the lateral and vertical boundaries of CTA 6/7 will enable improved vertical flight profiles and continuous descents into Cork Airport. In conjunction with a new release for climb box in Irish airspace, there will be optimised continuous climb profiles. This will offer small efficiency improvements for Cork traffic.

5.6. List of Supplementary documents

- 5.6.1. The following documents provide further information on the proposed designs and are supplied to the CAA with this submission:
 - Draft LoAs showing amendments - Shannon
 - Engagement evidence pack
 - Aerodata spreadsheet

6. Appendix A: Glossary

| Acronym | Definition |
|---------|--|
| ACP | <p>Airspace Change Proposal - the formal process by which changes to the design or structure of airspace are proposed and evaluated. This process involves collaboration between stakeholders, regulatory authorities, and the public to assess the potential impacts of proposed changes and make informed decisions, currently under CAP1616.</p> |
| AIP | <p>Aeronautical Information Publication – contains static aeronautical data, which is updated regularly, on the regulation, procedures, and other information pertinent to flying aircraft in the particular country to which it relates. The AIP is made up of three parts relating to general, en route and aerodrome information.</p> |
| ANSP | <p>Air Navigation Service Provider - an organisation or agency responsible for managing and providing air traffic control, navigation, and other air traffic services within a specific airspace region.</p> |
| AMS | <p>Airspace Modernisation Strategy - produced by the CAA and Department of Transport, it sets out the ends, ways and means of modernising UK airspace through a series of 'delivery elements' that will modernise the design, technology and operations of airspace.</p> |
| ATC | <p>Air Traffic Control - a service provided by ground-based controllers to guide and manage the movement of aircraft within airspace. ATC ensures safe separation between aircraft, issues clearances, and provides assistance to pilots, contributing to the overall safety and efficiency of air travel.</p> |
| ATS | <p>Air Traffic Service - a system that provides for the safe and efficient movement of aircraft within airspace.</p> |
| COP | <p>Coordination point – waypoint on the FIR boundary between neighbouring ANSPs</p> |
| FIR | <p>Flight Information Region – an airspace of defined dimensions, extending from the surface to a specified upper limit, in which flight information and altering services are provided.</p> |
| FL | <p>Flight level - a standard measure of altitude used in aviation, particularly in high-altitude cruising. Flight Level is expressed in hundreds of feet and is based on a standard atmospheric pressure at sea level.</p> |
| NATMAC | <p>National Air Traffic Management Advisory Committee a non-statutory advisory body chaired by the CAA; the NATMAC is consulted for advice and views on any major matter concerned with airspace management and strategy matters.</p> |
| UIR | <p>Upper Information Region -flight information region in upper airspace</p> |

7. Appendix B: AIP Changes

AIP Changes

ENR 2.1

Amend Berry Head CTA 6 and 7 as per Aerodata.

ENR 3.2

Amend N160 as per Aerodata.

Amend L603 as per Aerodata.

Add L37 and L38 as per Aerodata.

ENR 4.4

Add DEJEM, ENICO, CANZI, WETFI, OZRAT and OVZOG as per Aerodata.

OVZOG FRA Relevance add IA. Remarks add 'FRA (A): EICK'

ENICO FRA Relevance add IA. Remarks add 'FRA (A): EICK'

CANZI FRA Relevance add IA. Remarks add 'FRA (A): EICK'

DEJEM FRA Relevance add E.

ABLUC FRA Relevance add E.

OZRAT FRA Relevance add I.

WETFI FRI Relevance add I. Remarks add 'FRA (I): Shannon FIR'

SOSIM FRA relevance change to EX.

Delete BOGMI.

Delete ENITO.

ENR 5.2

Amend TRA001 as per aerodata spreadsheet.

ENR 6

Update following charts with CAS boundary, TRA boundary, ATS Route and waypoint changes:

ENR6-5

ENR 6-8

ENR 6-12

ENR 6-13

ENR 6-15

ENR 6-16

ENR 6-17

ENR 6-18

ENR 6-50

ENR 6-51

ENR 6-59

ENR 6-60

ENR 6-68

ENR 6-70

ENR 6-75

ENR 6-76

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