CAA Operational Assessment

Title of airspace change proposal	East Midlands RNAV Substitution of Eligible Conventional Procedures
Change sponsor	East Midlands International Airport Ltd
Project reference	ACP-2024-009
Account Manager	[redacted]
Case study commencement date	13 Aug 24
Case study report as at	16 Dec 24

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 Lead it may be useful that each question is also highlighted accordingly to illustrate what is:

resolved YES not resolved PARTIALLY not compliant NO

Executive Summary

The high-level aim of this ACP is to remove the dependencies on the Daventry (DTY) and Trent (TNT) DVORs at East Midlands Airport (EMA) prior to them being removed from service by NATS. This will be achieved by RNAV-substituting all eligible procedures, and removing unwanted procedures and associated symbology from charts. Following a CAP1781 Impact Assessment and development of the final design via a Level 3 CAP1616 ACP, the sponsor proposes the RNAV substitution of 4 SIDs (2 of which are also proposed for shortening under a separate ACP, ACP-2023-039) and 4 IAPs. Additionally, 2 airport charts are affected and would require minor amendments.

The EMA Future Airspace project (ACP-2019-44) will provide the long-term airspace design solution for the airport, fully removing their dependencies on ground based navigational aids (noting that there is a need to consider resilience in the event of issues/outages with GNSS). However, this will not be completed in time to meet the current schedule for the removal of the DTY and TNT DVORs under the NATS DVOR rationalisation project. The age/condition of the remaining DVORs is a concern for the sponsor, and as such they wish to implement the changes as soon as practicable. The sponsor has determined that the vertical and horizontal profile of arriving and departing traffic will remain unchanged.

1.	Justification for change and options analysis (operational/technical)	Status
1.1	Is the explanation of the proposed change clear and understood?	YES
	Whilst the sponsor has not fully adopted the standard template format for the final submission, the information presented is sufficient to understand the nature of the change.	
1.2	Are the reasons for the change stated and acceptable?	YES
	The sponsor is pursuing an interim airspace design in accordance with CAP1781.	
1.3	Have all appropriate alternative options been considered, including the 'do nothing' option?	YES
	The options for such scenarios are defined in CAP1781 and were assessed by the sponsor in an Impact Assessment that was accepted by the CAA. The sponsor adopted a more complex Design Principle Evaluation than was necessary for this level of ACP, especially through the use of Discretionary Design Principles. Whilst there are some minor issues with this assessment, they do not affect the final outcome and the key aspects of the Mandatory Design Principles are sound. The main document for considering the appropriate options is the CAP1781 Impact Assessment, where the options for the sponsor to consider are laid out. The CAP1781 process requires the CAA to accept the Impact Assessment prior to the commencement of the CAP1616 process.	
1.4	Is the justification for the selection of the proposed option sound and acceptable?	YES
	The CAP1781 Impact Assessment was accepted by the CAA prior to commencement of the CAP1616 process.	

2.	Airspace description and operational arrangements	Status
2.1	Is the type of proposed airspace design clearly stated and understood?	YES
	Whilst the sponsor has not fully adopted the standard template format for the final submission and has over-complicated some aspects of the process, the information presented is sufficient to understand the nature of the change. Two of the SIDs in scope for RNAV substitution are presented as being 'truncated to SAPCO' – this is subject to a separate ACP that was approved on 5 Dec 24. This introduces an extra degree of complexity; however, the sponsor has made reasonable efforts to explain this dependency within the submission.	
2.2	Are the hours of operation of the airspace and any seasonal variations stated and acceptable?	N/A
	No change.	
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?	N/A
	No change.	
2.4	Is the supporting statistical evidence relevant and acceptable?	YES
	Whilst data on current airspace use has been provided, the ACP does not introduce any change to the traffic flows.	
2.5	Is the analysis of the impact of the traffic mix on complexity and workload of operations complete and satisfactory?	YES
	The sponsor has deduced that there will be no changes that affect the complexity and workload of the operation.	

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?	N/A
	No change.	
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
	No change.	
2.8	Is the evidence that the airspace design is compliant with ICAO SARPs, airspace design & FUA regulations, and Eurocontrol guidance satisfactory?	YES
	The procedures already exist, and the sponsor is pursuing the changes in accordance with CAP1781. All redesigned procedures are subject to checks by IFP regulators.	
2.9	Is the proposed airspace classification stated and justification for that classification acceptable?	N/A
	No change.	
2.10	Within the constraints of safety and efficiency, does the airspace classification permit access to as many classes of user as practicable?	N/A
	No change.	

2.11	Is there assurance, as far as practicable, against unauthorised incursions? (This is usually done through the classification and promulgation.)	N/A
	No change.	
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?	N/A
	No change.	
2.13	Are appropriate arrangements for transiting aircraft in place in accordance with stated commitments?	N/A
	No change.	
2.14	Are any airspace user group's requirements not met?	N/A
	No change.	
2.15	Is any delegation of ATS justified and acceptable? (If yes, refer to Delegated ATS Procedure).	N/A
	No change.	

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?	N/A
	No change.	
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.)	N/A
	No change.	
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?	N/A
	No change.	
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?	N/A
	No change.	
2.20	If the new structure lies close to another airspace structure or overlaps an associated airspace structure, have appropriate operating arrangements been agreed?	N/A
	No change.	

2.21	Where terminal and en-route structures adjoin, is the effective integration of departure and arrival routes achieved?	N/A
	No change.	

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?	N/A
	No change.	

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
	Adequate diagrams and chart extracts are provided to indicate the changes required. Coordinates and technical details for developing the changes to the procedures and charts will need to be included with the IFP technical submission.	
4.2	Do the charts clearly indicate the proposed airspace change?	YES
	See 4.1.	
4.3	Has the change sponsor identified AIP pages affected by the change proposal and provided a draft amendment?	PARTIALLY
	An appendix to the main submission provides details of the changes required to the AIP. The final procedure designs and chart amendments are subject to confirmation from IFP regulators. This is also subject to the outcome of the periodic review of the current procedures and ACP-2023-039 for the shortening of 2 of the SIDs. **CONDITION:** Prior to submission of the changes to AIS, the sponsor must have a final design and implementation plan that takes account of any factors raised in the periodic review of the current procedures. It is also subject to the confirmed implementation of the proposal to shorten 2 of the SIDs. Should ACP-2023-039 not result in shortening, the sponsor must review their submission for this ACP to determine if any amendments are required. This may require the development of supplementary documents; where this is the case, they should be uploaded to the portal.	

4.4	Has the change sponsor completed the WGS84 spreadsheet and submitted to the CAA for approval?	N/A
	The changes are required to be presented as part of an IFP package.	

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
	The changes are supported by engaged Airline Operators. No changes affect OAT or GA flights.	
	b) Impact on VFR Routes.	N/A
	No change.	
	c) Consequential effects on procedures and capacity, i.e. on SIDs, STARs, holds. Details of existing or planned routes and holds.	YES
	Whilst there are no anticipated changes to the performance of aircraft or capacity, the proposal describes the intent for the sponsor to shorten x2 of the current SIDs. This is subject to a separate proposal (ACP-2023-039) that was approved on 5 Dec 24.	
	d) Impact on airfields and other specific activities within or adjacent to the proposed airspace.	N/A
	No change.	
	e) Any flight planning restrictions and/ or route requirements.	YES
	The impact on operators is expected to be minimal. A small number of flights may still require ground-based navigation aids and will be unable to fly the procedures. These will be handled on an individual basis with routing coordinated across ATC units.	

5.2	Does the change sponsor consultation material reflect the likely operational impact of the change?	YES
	The sponsor carried out a programme of engagement, mostly with affected airline operators. Through mail shots and 2-way dialogue, the likely operational impacts of the changes were described and considered.	

Case study conclusions – to be completed by Airspace Regulator (Technical)	Yes/No
Has the change sponsor met the SARG airspace change proposal requirements and airspace regulatory requirements above?	YES
The sponsor has pursued the development of this proposal via the CAP1781 process. This requires the sponsor to establish a plan to monitor the tracks for conventional routes and procedures pre and post implementation of RNAV Substitution. They are also required to demonstrate within their CAP1616 submission that track will not change as a result of RNAV substitution. In their submission, the sponsor states that, using the envirosuite Aircraft Noise and Operations Monitoring System (ANOMS), track-keeping of aircraft using RNAV Substituted procedures will commence one month before implementation and continue for 12 months post-implementation to ensure tracks have not altered. There is also analysis of the impact of tracks over the ground, with the conclusion that RNAV substitution will not alter them.	

RECOMMENDATIONS/CONDITIONS/PIR DATA REQUIREMENTS	Yes/No
Are there any Recommendations which the change sponsor **should try** to address either before or after implementation (if approved)? If yes, please list them below.	NO
GUIDANCE NOTE: *Recommendations are something that the change sponsor* ***should try*** *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 sponsor is reliant 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 **must fulfil** either before or after implementation (if approved)? If yes, please list them below.	YES

GUIDANCE NOTE: *Conditions are something that the change sponsor **must fulfil** either before or after implementation, if indeed the airspace change proposal is approved. If their proposal is approved, change sponsors **must observe** any condition(s) contained within the regulatory decision; failure to do so **will usually** result in the approval being revoked. Conditions should specify the consequence of failing to meet that condition, whether that be revoking the ACP or some alternative.*

CONDITIONS:

Prior to submission of the changes to AIS, the sponsor must have a final design and implementation plan that takes account of any factors raised in the periodic review of the current procedures. It is also subject to the confirmed implementation of the proposal to shorten 2 of the SIDs. Should ACP-2023-039 not result in shortening, the sponsor must review their submission for this ACP to determine if any amendments are required. This may require the development of supplementary documents; where this is the case, they should be uploaded to the portal.

The sponsor shall supply the allocated ATS inspector with all the required evidence in support of the change and be in receipt of an approval from the ATS inspector prior to implementation.

As part of the continuous monitoring process, the sponsor is required to investigate any detected anomalous path behaviours. Such incidents must be reported to the CAA at the earliest opportunity.

Are there any specific requirements in terms of the data to be collected by the change sponsor for the Post Implementation Review (if approved)? If yes, please list them below.	YES

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.*

PIR DATA REQUIREMENTS

The sponsor is required to provide a Post-Implementation Report that details the process taken to baseline current ground tracks and monitor the performance of aircraft on the RNAV-substituted procedures.

The sponsor is required to provide a Post-Implementation Report that details the track-keeping performance of aircraft using the RNAV-substituted procedures.

General summary
The premise of this proposal is straightforward and in keeping with the CAA's expectations for RNAV substitution as an interim measure. This change is complicated by the sponsor's separate proposal to shorten 2 of the affected SIDs; therefore, this matter needs a confirmed implementation plan prior to changes being submitted to AIS. There are unlikely to be any material changes to the operation as a result of RNAV substitution.

Comments and observations
The sponsor has arguably over-complicated the process somewhat when considering the scale and impact of this change, especially when considering that it has already been subject to a CAA review of a CAP1781 Impact Assessment. The submission has a number of administrative and clarity issues, but it is sufficient to provide appropriate details on the nature of the change and the anticipated impacts.

Operational assessment sign-off	Name	Signature	Date
Operational assessment completed by Airspace Regulator (Technical)	[redacted]	[redacted]	16 Dec 24