

**MINUTES OF INSTALLATION OF ENGINEERED MATERIAL ARRESTOR SYSTEM TO ENHANCE
SAFETY(ACP-2022-090)] ASSESSMENT MEETING
HELD ONLINE ON FRIDAY 3RD FEBRUARY 2023**

3rd February 2023

Present

Appointment

Representing



CAA Assessment Meeting Opening Statement

CAA noted that the Statement of Need was received in advance of the Assessment Meeting and confirmed that the documents must be published by the sponsor, together with minutes of the meeting, on the Airspace Change Portal page. CAA explained the purpose of the meeting and confirmed that the meeting was an Assessment Meeting and not a Gateway. The CAA reinforced that the sponsor was required to provide a broad description of their proposed approach to meeting the CAA's CAP 1616 requirements, but the CAA was not deciding whether the proposed approach met the detailed requirements of the CAA's process at this stage. The purpose of the Assessment Meeting (set out in detail in CAP 1616) was broadly:

- for the Sponsor to present and discuss their Statement of Need,
- to enable the CAA to consider whether the proposal concerned falls within the scope of the formal airspace change process, including determining whether the proposal falls within the scope of a scaled CAP 1616 ACP for the introduction of RNP Instrument Approach Procedures (IAPs) without an Approach Control as described in CAP 1961,
- to enable the CAA to consider the appropriate provisional Level to assign to the change proposal.

Additionally, the sponsor was required to provide information on how it intended to proceed to fulfil the requirements of the airspace change process and to provide information on timescales. Lastly, the sponsor was required to provide information on how it intended to meet the engagement requirements of the various stages of the airspace change process.

	ACTION
Item 1 Introduction ■ opened the meeting and welcomed everyone, and each participant introduced themselves	
Item 2 – Statement of Need (discussion and review) ■ explained that there is a construction project ongoing at the airport to install EMAS to enhance safety. This is a key project as it will enable the airport to bring in next generation aircraft which will be more environmentally friendly. As the EMAS change will result in a change to the threshold locations there are some slight amendments required to the IFPs which has resulted in the purpose of this ACP.	

Item 3 & 4 – Issues risk and opportunities arising from proposed change

■ explained that various analyses have been carried out over the last 18 months to support LCY with this project.

Slides 3 and 4 in the presentation which outlined the analyses that had taken place were discussed.

Questions arising from the presentation are outlined below:

■ - have the LOC procedures been assessed as he doesn't have visibility of the report?

■ – Indicative reports have been produced which ■ will forward on to ■

Post meeting update: Following the meeting with NATS, the CAA had a call with the APDO to discuss the reports provided. It is established that further work is required to understand what the expected impact is to the procedure OCA/H of the LOC and ILS procedures which are not yet confirmed.

■ – SDF 1500ft does that take into account the changes to the SDF proposed in the periodic review?

■ – Yes. As we knew there were going to be changes. For the precision segment we have just assessed the obstacle clearance to see if a procedure is feasible with no impact to the minima. We propose to change the SDF based on the 15% slope ending at the fix tolerance
Depending on CAA guidance either solution would work.

■ – Are there any impacts to the fixes for example is the current D2.5 going to be D2.1?

■ – we have conducted an Impact Assessment on the DME move based on the currently published procedures. For example – the SDF D2.5 would be moved to D2.4 .

■ – requests sight of the DME IA and calculations

The approach for this ACP is to implement an interim solution between the EMAS implementation and CAP1732 survey and the subsequent periodic review.

■ mentioned flight validation for the proposed procedures would be necessary for the new 3% Mapp CG and move of step down fix procedure, but acknowledged that this could be done in coordination with the flight inspection.

■ and ■ agreed to have a call to establish/agree scope for final procedure design submission as this might aid future conversations for this ACP

No further questions were received on slides 3 and 4

■ to send report to ■

■ to send reports to ■

■ and ■ to arrange call

Item 5 – Provisional indication of the scale level and process requirements*

■ confirmed that the CAA Environmental Regulator has concluded that there would not be any significant environmental impacts. Agreement that the environment assessment can be scaled to a qualitative description. If there are changes to the lateral positions or heights these need to be quantified and presented to stakeholders along with any difference in noise impacts.

Detailed noise modelling would be disproportionate for this scale of change. Differences in noise could be described qualitatively (i.e. aircraft are higher/lower and therefore resulting in lower/higher noise impacts). This description can be supported by using the mathematical inverse square law formula: change in dB = $20 \log R2/R1$ where R2 and R1 refer to new and previous heights of aircraft over ground at the nearest noise sensitive receptor respectively. The sponsor's presentation already included these figures.

If the changes are negligible this will need to be referenced to this in the ACP. Recommendation from the CAA is to carry out a calculation to identify the difference between current and proposed noise (using typical aircraft types), and this will indicate the degree of changes and whether this is significant or negligible.

As this ACP will enable different types of aircraft to operate at the airport, the ACP will need to be able to quantify the difference in the noise output of those aircraft compared to the ones in place to allay any fears from stakeholders.

The Sponsor has suggested that these would be quieter and more fuel-efficient new gen aircraft and therefore there is no worsening of current noise impacts unless this ACP also promotes an increase in traffic numbers. It was suggested that the Sponsor can reason this in a similar qualitative way in their submission supported by a comparison of manufacturer indicated noise levels of the main representative aircraft operating at the airport today and the new gen ones.

The Sponsor must also consider the implication of this ACP on their FASI ACP. The FASI ACP will need to consider a baseline that includes this change and the resulting change in fleet (new gen aircraft or any traffic increases) must also be accounted for in the Sponsor's traffic forecast for the FASI ACP. The FASI ACP will include noise modelling and therefore the Sponsor can reason such detailed quantified impacts will be presented then.

■ advised that engagement activities, due to the negligible impact, would be limited to the LACC.

■ confirms that this ACP will fall within the CAP1616 Airspace Change Process and the provisional level to be assigned will be a Level 2C.

■ acknowledges that based on the information presented thus far, the changes should be minor and the impact on stakeholders negligible.

Proposal is to categorise as a Level 2C but will be scaled. Stages 1, 2 and 3 will be not required, therefore will move straight to Stage 4. Timescales will be compressed.

<p><i>*When the sponsor submits their gateway materials for each Gateway at the agreed submission deadline, the period between this and the gateway decision will be an analysis by the CAA Airspace Regulatory team (Airspace Regulation) of the documentation submitted, for the purposes of making a recommendation to the CAA Gateway decision maker(s). In conducting the gateway assessment, the CAA is assessing the process employed and its compliance with the guidance stipulated within CAP 1616. It is not an assessment of the merits of the submission itself, which is reviewed at Stage 5 - Decision. We may request documentation from the sponsor that is referred to in the gateway submission but has not been provided as part of the Gateway submission materials. We may also request the sponsor to provide information by way of clarification relating to statements or assumptions made in the submission. Any further information sought by Airspace Regulation at this stage is for clarificatory purposes and is only for determining compliance with the CAP 1616 process.</i></p> <p><i>In any instance where a sponsor has not met the requirements of the process, we will inform them after the gateway decision and advise of next steps.</i></p>	
<p>Item 6 – Provision process timescales*</p> <p>LCY are targeting for a May AIRAC (05/2023). It was noted that to achieve a May AIRAC documents would need to be submitted by 17th February.</p> <p>█ advised that targeting for 05/2023 is not realistic, and AIRAC 06/2023 (June AIRAC) would be ambitious.</p> <p>CAA will check with resourcing to check that they will be able to support a June AIRAC.</p> <p><i>Post meeting update: LCY are now targeting a June AIRAC (06/2023) with AIS Submission deadline 17/03/2023</i></p> <p><i>The timeline agreed may become subject to change by the CAA. This is because the Secretary of State for Transport has directed the CAA to prioritise RNP Instrument Approach Procedures (IAPs) without an Approach Control proposals; this may impact Airspace Regulation resource and consequently timelines.</i></p>	<p>█ to add dates to slide pack</p>
<p>Item 7 – Next steps</p> <p>Draft Assessment minutes to be reviewed by all parties and finalised minutes uploaded onto portal</p> <p>Agreement on AIRAC cycle to be targeted.</p> <p><i>Post meeting note: the earliest target the CAA can agree to is AIRAC 06/2023 (15/06/2023).</i></p>	
<p>Item 8 – Any other business</p> <p>None</p>	

**ACTIONS ARISING FROM INSTALLATION OF ENGINEERED MATERIAL ARRESTOR SYSTEM
TO ENHANCE SAFETY(ACP-2022-090)] ASSESSMENT MEETING**

Subject	Name	Action	Deadline
Documents	■	To send ■ supporting assessments of the analysis carried out for the EMAS ACP	10/02/23 Closed
Periodic Review	■	Set up call to discuss agree scope for final submission	06/02/23 Closed
Slide Pack	■	Update targeted AIRAC dates to slide pack	06/02/23 Closed

London City Airport Ltd
ACP Sponsor

**ADDENDUM TO ASSESSMENT MEETING OF
INSTALLATION OF ENGINEERED MATERIAL ARRESTOR SYSTEM TO ENHANCE SAFETY
(ACP-2022-090)]**

Following on from the Assessment Meeting held on Friday 3rd February 2023 along with subsequent clarification meetings and correspondence on the approach to deliver the ACP, this Addendum captures the agreement on the scope of work:

Procedures will be introduced in two phases:

- pre-flight validation procedures will accommodate the new threshold locations but will not include the revised Step Down Fix (SDF) locations or altered Missed Approach gradients. These procedures will be accompanied with a higher minima.
- post-flight validation procedures will include all elements for final operations using the new threshold locations. Minima is expected to be lower in these procedures (subject to approval by the CAA).

All assessments shall refer to the 2019 5 Year Periodic Review (5338), EMAS Conceptual (5386), and DME Impact Assessment Reports (5420).

All assessments shall assess the procedure from Precision Segment based on current definition with EMAS thresholds (THR) and new DME locations. An assessment shall be completed for each of the following criteria for the Step Down Fix (SDF) and the Missed Approach Gradient (MAp):

Pre-flight validation Procedures:

- **ILS 09**
SDF 2.5D, MApp 2.5%.
- **ILS 27**
MAp 2.5%
MAp 3.0%
MAp 3.5%
- **LOC 09**
SDF 2.5D, MApp 2.5%
- **LOC 27**
No SDF, 2.5% MApp
No SDF, 3.5%

Post-flight Validation Procedures:

- **ILS 09**
SDF 2.1D, MApp 2.5%
SDF 2.1D, MApp 3.0%
- **ILS 27**
MAp 2.5%
MAp 3.0%
MAp 4.0%
- **LOC 09**
SDF 2.1D, MApp 2.5%
SDF 2.1D, MApp 3.0%
- **LOC 27**
SDF 2.1D, MApp 2.5%
SDF 2.1D, MApp 3.0%

It has been agreed with the CAA that the procedures may be submitted in two phases: pre-flight validation procedures in the first report, and post flight validation in the second submission. Each report will be accompanied by draft charts as specified below.

Using the output of the assessments, obstacle clearances will be calculated and draft corresponding information for the charts. These will be compliant with PANS-OPS and CAA requirements except where the CAA has expressly granted an exemption (i.e., the inclusion of an SDF on the ILS procedure and reduced MOC). Existing obstacle environment utilising data from 2019 as approved by the CAA during the meeting on 22 February 2023 will be used.

The assessment outcomes, any changes to the existing IFPs, and appropriate assurance material will be collated into a Procedure Design Report for the pre-flight validation.

Marked-up IFP charts for the four pre-flight validation procedures: ILS 09, LOC/DME 09, ILS 27 and LOC/DME 27 will be produced. The marked-up IFP charts shall remove the ALKIN hold as agreed by the CAA.

Following submission of the pre-flight validation procedures, the required assessments for the post-flight validation procedures will be produced in a Flight Procedure Report.

Marked-up IFP charts will be produced for the four post-flight validation procedures: ILS 09, LOC/DME 09, ILS 27 and LOC/DME 27. The marked-up IFP charts shall remove the ALKIN hold as agreed by the CAA.

A Flight Validation Plan will be produced for the purpose of validating the Post-flight Validation Procedures which will be subject to review and approval by the CAA.

After Flight Validation the flight validation provider will provide evidence of successful validation of the post-validation procedures and a report will be produced for submission to the CAA. The format of this output may be adapted with guidance and agreement from the CAA.

An ACP report to support the level 2C ACP-2022-090 will be produced and submitted to the CAA.