Safety and Airspace Regulation Group		
Page 1 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

Title of Airspace Change Proposal	Leeds East Airport, Radar Navigation Performance, Instrument Approach Procedures (LEA RNP IAPs)
Change Sponsor	Makin Enterprises Ltd - Leeds East Airport (LEA, EGCM)
SARG Project Leader	
Case Study commencement date	06/09/2021
Case Study report as at	4/05/23
File Reference	ACP-2016-13

#### 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 Project Leader's efficient Project Management it may be useful that each question is also highlighted accordingly to illustrate what is:

resolved one not resolved Amber not compliant resolved as part of the AR Project Leader's efficient project management.

Safety and Airspace Regulation Group		
Page 2 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

1.	Justification for change and "Option Analysis"	Status	
1.1	Is the explanation of the proposed change clear and understood?	YES	
IAPs and associated Missed Approach Procedures (MAPs) to EGCM runways 24 and 06, with no approach control service and airspace (CAS) to contain the procedures.  The procedures have been designed for CAT A-C (Following the IAP review, the Sponsor chose to remove the CAT D procedure and C procedures, Jul 22 and an Addendum explaining this decision was provided 13 Sep 22) aircraft to recover to EGCM whe would preclude a visual recovery. In order to ensure the procedures are flown safely, there will be a requirement for training procedures, which may be carried out in VMC <sup>1</sup> under instrument flight rules (IFR).  The Sponsor has not included a hold, with an explanation in the safety case v6.11.		the CAT A, B onditions	
1.2	Are the reasons for the change stated and acceptable?	YES	
	The Sponsor states that the reason for the change is because it is in accordance with UK government policy on the implementation of these types of procedure, to facilitate the recovery of suitably equipped aircraft to EGCM. Para 3.1.2 in the ACP (v6.4) states, that the, 'main purpose of RNP approaches is to allow safer, defined and more accurate approaches to LEA particularly during periods of reduced cloud ceiling and/or visibility. The introduction of these approaches at LEA is aligned with international and UK safety objectives related to performance-based navigation (PBN) and CAP1711 UK Airspace Modernisation Strategy (AMS).'  The introduction of these IAPs, specifically at EGCM, 'aligns' with CAP1711, in that they utilise performance-based navigation (PBN). The IAPs, in isolation and as they have been designed accordingly, can be considered safe; however, they could also be considered unsafe if not considered as part of the whole system of location, airspace classification, other airspace users, etc.		
	Para 2.1.2 of the ACP v6.7 the Sponsor states, 'Currently, aircraft intending to land at LEA have to make a visual approach as there are no landing aids provided and many business aircraft operators regulated by an Air Operators Certificate (AOC) have Standard Operating Procedures (SOPs) which do not permit approaches in Class G airspace without a laid down Instrument Approach Procedure (IAP)'.		
	Para 2.1.5 of the ACP v6.7 the sponsor states, 'In order to offer the regularity of a defined instrument approach, an RNP approach is judg option. It is therefore the means by which access can be improved for certain operators and is the subject of this ACP.'	ed the only	

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<sup>&</sup>lt;sup>1</sup> See <u>Skybrary definition</u>

Safety and Airspace Regulation Group		
Page 3 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

Para 3.1 of the Safety Case v5.6 states, 'The proposed change is in support of the development of the airport into a Business and Executive Aviation hub for North Yorkshire as part of the continued transition from military to civil operations. As it is intended to encourage more business general aviation to use Leeds East Airport, RNP approaches are an essential part of the airport's plans to offer increased access across a greater range of weather minima'.

The Sponsor had not stated clearly why CAT C,D procedures were required; 'The use by CAT C & D aircraft will be limited and subject to additional conditions and restriction' (ACP v6.4 para 2.2.5), other than to imply (see paras above) that they are intended to 'encourage' and improve access for larger GA aircraft. The forecasting (ACP v6.7 page 16) shows a maximum of 46 CAT C aircraft per year and zero CAT D, up to and including 2024. Furthermore, aircraft in these categories will be at higher speeds while executing the IAP and therefore the efficacy of 'see and avoid' as a mitigation to a MAC, due to the converging speed with another aircraft, is reduced when compared to a similar scenario for CAT A,B aircraft. This difference in risk is not considered in the safety case however in the pilot brief (v3.9, page 9) it is stated that CAT C (D are removed) training flights will not be permitted.

(The low forecast CAT C/D usage provides a mitigation against the increased risk of operating these speed CAT aircraft in Class G airspace; should the Sponsor see an increase in the number of these aircraft types utilising the procedure they must review their safety case and inform the CAA. This is no longer relevant at point of publication.)

The reasons for CAT D aircraft were not clearly stated or acceptable; there were no forecast aircraft in this CAT and their speed difference within the system of mitigations has not been considered adequately.

The sponsor chose to withdraw the CAT D requirement and align the CAT C with the CAT A/B procedures (Addendum 13 Sep 22).

The proposed RNP IAPs will afford suitably equipped aircraft and in-scope pilots with a defined and systemised procedure to recover to EGCM. Without an Approach Control Service (ACS) or the increased air traffic awareness derived from operating in controlled airspace (CAS), the IAP only provides assurance that, if flown correctly, the aircraft will be terrain safe down to an altitude that should allow the pilot to acquire the runway visually and land safely. The IAPs do not afford any mitigation to the risk of a mid-air collision (MAC) as they will be notified in Class G airspace. Aircraft operators (AOs), of CAT A/B aircraft, may elect to fly the IAPs in VMC for training purposes. The IAPs can only be utilised if a slot is booked (PPR) and the pilot accepts that they are flying in accordance with the rules of the air in Class G airspace.

The ability to reduce the risks associated with recovering to EGCM in IMC, is the reason for the change and as a consequence the sponsor hope to encourage more business usage.

# 1.3 Have all appropriate alternative options been considered, including the 'do nothing' option?

YES

The conceptual options for this ACP are: Do Nothing; Implement Conventional Procedures (including buying the necessary equipment); Implement PBN Procedures. The sponsor states in ACP v6.7 (para 2.1.3) '...the 'Do Nothing' option which doesn't figure in LEA's plans...' and (para 2.1.5) 'In order to offer the regularity of a defined instrument approach, an RNP approach is judged the only option. It is therefore the means by which access can be improved for certain operators and is the subject of this ACP.'

Safety and Airspace Regulation Group		
Page 4 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

This indicates that the sponsor is not considering do nothing as a result of the need to develop economically by offering a procedure that could allow suitably equipped aircraft to recover to EGCM.

The proposed IAPs without Approach Control are a viable and proportionate option. It is proportionate to apply current methodology in terms of assessing the potential impacts of this proposal as described under Part 1c of CAP1616. Therefore, there is no requirement to consider the 'do-nothing' option and that following engagement, the proposed options to each runway are a proportionate response to the statement of need. The selected option also aligns with the CAA's current process under CAP1616 Part 1c.

# 1.4 Is the justification for the selection of the proposed option sound and acceptable?

YES

The justification for CAT A-B IAPs is sound and acceptable given the reason for the change; they should provide regularity and accuracy of in-scope arrivals on a defined terrain-safe approach and improved ability to conduct successful approaches in IMC, thus increasing operational resilience when the weather is poor. The Sponsor's decision to request CAT C/D IAPs is justified for the same reasons, but also on the basis that they will not be used for training purposes and that these categories of aircraft will rarely recover to EGCM (forecast shows zero CAT D aircraft). However, there is an increased risk associated with the speed of CAT C and especially CAT D aircraft when applying the 'see and avoid' principle as a mitigation to a mid-air collision (MAC), which has not been considered by the Sponsor.

(Following the IAP review, the Sponsor chose to remove the CAT D procedures and align the CAT A, B and C procedures, Jul 22 and an <u>Addendum</u> explaining this decision was provided 13 Sep 22).

A published hold, as part of an IAP, should provide a safe procedure within airspace for an aircraft to be delayed due to unforeseen circumstances. The sponsor provides a rationale for not including a hold in Appendix 3 of the safety case v.6.11 and the reasons include, that a hold would serve no purpose for traffic flow management and integration, a hold would be of limited use in the event of poorer than forecast weather, a hold would be of limited use in the event of unforeseen circumstances.

The CAA accepts the Sponsors case for not including a hold, given the nature of the operations at EGCM; it would not be proportionate to require a hold and one would not be needed to mitigate against the risk of unforeseen circumstances. The Missed Approach Procedure will afford a safe route on which to climb, and it would be expected that the pilot would opt to divert to another airfield if the rwy at EGCM was unavailable.

2.	Airspace Description and Operational Arrangements	Status
2.1	Is the type of proposed airspace clearly stated and understood?	YES
	There is no new airspace proposed by the Sponsor. The proposal is for GNSS IAPs (and MAPs) for an airfield without an Approach Cont The IAPs have been designed to broadly replicate current behaviours whilst taking into account local airspace and other airspace users	

Safety and Airspace Regulation Group		
Page 5 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

2.2	Are the hours of operation of the airspace and any seasonal variations stated and acceptable?		
	In line with airport opening hours (including out-of-hours arrangements). EGCM intend to operate a pre-booked slot system, 'This compromaximum 11 slots per day in summer and 8 in winter, depending on slots used by SAC. The slots are shared with SAC on a mutually exclusive permitting only one aircraft to make an approach in the allocated period.' (ACP v6.4, para 1.12). It is not clear if or how this slot system work of hours', therefore clarification will be requested as part of the approval.	sive basis	
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?	YES	
	No international or High Seas aspects.  No identified connectivity with en-route domestic structures.  LoAs are drafted with EGNM (and EGCN, not relevant at point of publication).		
2.4	Is the supporting statistical evidence relevant and acceptable?	YES	
	EGCM traffic is historically light when compared to other local airfields, such as EGCJ. The average is around 6,000 movements (arrivals and departures) per annum. V6.7 of the ACP submission document includes statistics on recent historic usage and projected future usage, including identifying the anticipated demand for IFP approaches and how there is expected to be capacity for the 8 IFP approaches per day in winter (11 in summer) to be shared between Leeds East Airport and Sherburn-in-Elmet Airport.		
	EGCM have provided an updated forecast (page 16 ACP v6.7), based on their expected use of the RNP IAPs in 2021 (if it had been available demonstrate the growth, as a result of the RNP in the years up to 2024. It shows that there will be an overall gradual increase in aircraft both VFR and IFR. The projected total RNP figures are less than 10% of the overall projected annual total movements and there are no for aircraft.	using EGCM,	
	The safety case v6.11 (appendix 3) states that 'the Change Sponsor estimates that demand likely to be in the order of 2 per day initially'.		
2.5	Is the analysis of the impact of the traffic mix on complexity and workload of operations complete and satisfactory?	YES	
	The analysis of the forecast growth in traffic as a result of the introduction of the IAPs shows that there will be an increase in workload a for the AGCS Officer based on them carrying out new tasks, described in the sponsors documentation. The Sponsor is forecasting up to 8 utilising the RNP approaches in 2023/24, 46 of these aircraft will be CAT C. The Sponsor will not permit training flights for CAT C aircraft a	89 aircraft	

Safety and	l Airspace	Regulation	Group
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Page 6 of 22 Airspace Change Proposal - Operational Assessment

Version: 1.1/2019

that aircraft in these speed categories are only granted a slot when the mitigations to reduce the risk of a MAC, as described<sup>2</sup>, are in place. However, due to the shared booking system which only affords a maximum availability of 11 recoveries a day (shared with EGCJ), consequentially limiting the potential for aircraft to operate in the visual circuit, it is considered unlikely that complexity will increase. The traffic mix will change, as a result of aircraft being able to attempt a recovery in IMC, which might not be attempted today.

The Sponsor must provide suitable training for the AGCS/Os and ensure that pilots utilising the IAPs understand their responsibilities.

The CAA considered the information in the AAIB records and noted 5 relevant CAT B and 2 CAT C incidents (1 Feb 00 31 Jan 21) within the area relevant to EGCM. The CAA noted the information presented at the Workshop<sup>3</sup> by the local gliding community regarding the use of the class G airspace in the local area.

# 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?

YES

As the stage 5 review has progressed, some LoAs have been signed, some are still draft and there is not certainty as to whether some parties will sign some of LoAs at all, or whether they are necessary.

Some of the LoAs which have been agreed (either formally or in principle) have issues which will need to be addressed as they do not all align with the some of the details descriptions in other documents, such as the pilot brief; however, this is to be expected as the CAA reviews the updated documentation during stage 5 of the process.

Name of Stakeholder	Status
Leeds Bradford Airport	Signed and agreed
Doncaster Sheffield Airport	Signed and agreed
Sherburn Aero Club	Signed and agreed
National Police Air Service	Signed and agreed
Yorkshire Air Ambulance	Signed and agreed
Garforth Airstrip	Signed and agreed
Elvington Aerodrome	Draft produced and agreed.

This table is taken from Para 4 of the Safety Case v6.11.

The Safety Case v5.6 (31 Jan 2022) stated the following; however, Rufforth (York Gliding Centre) Burn Gliding Club and Pocklington (Wolds Gliding Club) have not agreed a LoA with EGCM and that, Breighton and Full Sutton airfields declined to engage in the development of LoAs, however, the risk

<sup>&</sup>lt;sup>2</sup> The Sponsor states that there will be 'special handling' (ACP v6.7 Appendix 3) for CAT D.

<sup>&</sup>lt;sup>3</sup> CAA/DfT Workshop held 31 Mar 22, minutes are <u>published here</u>.

Safety and Airspace Regulation Group		
Page 7 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

assessment re a MAC did not identify that an LoA with any of these airfields was required as a mitigation. (10 Mar 22) The safety case v6.11 (30 Jan 23) retains this information. It is a condition of approval that the draft LoAs, which have been agreed, are aligned with the details of other relevant documents (ie the pilot brief) and the conditions below, updated accordingly and signed prior to implementation. The CAA accepts that those not agreed (see above) are not material to the safety case. Should there be any other aviation activity (low flying, gliding, parachuting, microlight site etc) in the vicinity of the 2.7 YES new airspace structure and no suitable operating agreements or ATC Procedures can be devised, what action has the sponsor carried out to resolve any conflicting interests? The ACP has considered other aviation activity in the vicinity and the proposed IAPs lie mostly within Class G airspace (one of the IAPs to rwy 06 can start in EGNM Class D airspace). The Sponsor attended a Workshop with the local gliding community. The Sponsor has updated the pilot briefs and will continue to engage with the local gliding community. The Sponsor will not operate the IAPs for training purposes if there is known to be a heightened risk of a MAC due to notified gliding activity. The MAP is designed for use in the event of a go around. The Sponsor will not operate the procedures for training purposes if there is notified gliding activity that would increase the risk of a MAC. The CAA will expect the Sponsor to continue to engage with local gliding clubs in order to ensure that the system utilised to book and fly the IAPs is managed effectively and maintains flight safety. 2.8 Is the evidence that the Airspace Design is compliant with ICAO SARPs, Airspace Design & FUA regulations, and YES **Eurocontrol Guidance satisfactory?** IFP review complete. 2.9 Is the proposed airspace classification stated and justification for that classification acceptable? N/A No change from current (Class G). 2.10 Within the constraints of safety and efficiency, does the airspace classification permit access to as many classes of YES user as practicable? Yes, the airspace classification remains Class G. There can be no 'segregation' of airspace in an ATZ. An ATZ must be managed in accordance with the operator's licence and the rules of the airspace in which it sits. It will be the sole responsibility of the pilot flying the procedure to ensure they comply with the rules of the air while operating in the ATZ.

Safety and Airspace Regulation Group		×
Page 8 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

2.11	Is there assurance, as far as practicable, against unauthorised incursions? (This is usually done through the classification and promulgation)	
	There is no change in airspace classification, it will remain Class G and the ATZ is already published, so incursions are not possible. IAP chevrons will be added to the VFR chart to warn other airspace users that there are IAPs into EGCM.  The RWY 06 IAF IAWP2 is within EGNM CAS, the draft LoA with EGNM provides for pilots attempting the IAP from this point. The pilot briefing also provides information regarding the requirement to request a clearance to enter the CAS managed by EGNM. The possibility of an incursion is arguably reduced if the pilot utilises the procedures correctly (Sqks 5077), receives a FIS from EGNM and the onboard equipment does not malfunction. The Sponsor also makes it clear that the RWY 06 IAP cannot be utilised if the EGNM radar is unserviceable, resulting in a refusal of service.  The procedures are intended to provide a safer recovery to EGCJ in poor weather and therefore it is expected that a FIS will be provided. The risk of incursion is increased if a pilot is not in receipt of a FIS.  The PIR will inform any issues regarding incursions of EGNM managed airspace.	
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?	
	No controlled airspace. A reference to segregation of the visual circuit (ACP v6.7 para 2.6.4) will need to be addressed prior to implementation of the IAPs.	
2.13	Are appropriate arrangements for transiting aircraft in place in accordance with stated commitments?	
	No controlled airspace – no transits required.	
2.14	Are any airspace user group's requirements not met?	
	The local gliding community have written to GD SARG to express their concerns about this ACP.  Other airspace users' requirements were considered during the development of the ACP. The design of the preferred option was influenced by the requirements of other airspace users and local ANSPs.	
	The introduction of these procedures will not alter the way (laterally/vertically) in which aircraft can currently recover to EGCM, they will facilitate the opportunity to recover in weather minima that could currently present an unacceptable risk to the pilot. The CAA does not consider that the implementation of the proposed procedures will create an imposition on the concerned stakeholders in terms of their ability to continue to operate as they have been prior to implementation. The requirement to maintain the 'see and avoid' principle while operating VFR in class G airspace remains extant. The opportunity to derive an awareness of aircraft utilising the procedures, through broadcasting on the glider frequency and liaison with	

Safety and Airspace Regulation Group		×
Page 9 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

EGCM, does require participation from stakeholders. The IAPs do not constitute a 'barrier' or 'airspace construct' and the fact that an air utilise the IAPS to make an approach to EGCM does not alter how other airspace users should operate in class G airspace.  The CAA has stipulated conditions (see below) in order to provide clarity for other airspace users with regard to the usage of the IAPs.	craft may
Is any delegation of ATS justified and acceptable? (If yes, refer to Delegated ATS Procedure).	N/A
EGCM has an AGCS, there is no delegation of ATS. Pilots wishing to fly the procedure, are recommended to seek a FIS from (EGCN, not repoint of publication) or EGNM depending on their direction of arrival. Pilots who utilise the rwy 06 procedure in full, will require a transit managed by EGNM.	
Is the airspace structure 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
The ACP is limited to the design of the IAPs, with no changes to existing airspace structures or addition of any new ones. The IAPs have been designed to take account of in-scope aircraft performance (subject to IFP check).	
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 formal buffers applicable.	
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?	NO
	utilise the IAPS to make an approach to EGCM does not alter how other airspace users should operate in class G airspace. The CAA has stipulated conditions (see below) in order to provide clarity for other airspace users with regard to the usage of the IAPs.  Is any delegation of ATS justified and acceptable? (If yes, refer to Delegated ATS Procedure).  EGCM has an AGCS, there is no delegation of ATS. Pilots wishing to fly the procedure, are recommended to seek a FIS from (EGCN, not repoint of publication) or EGNM depending on their direction of arrival. Pilots who utilise the rwy 06 procedure in full, will require a transit managed by EGNM.  Is the airspace structure 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?  The ACP is limited to the design of the IAPs, with no changes to existing airspace structures or addition of any new ones. The IAPs have be to take account of in-scope aircraft performance (subject to IFP check).  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).  No formal buffers applicable.  Do ATC procedures ensure the maintenance of prescribed separation between traffic inside a new airspace

Safety and Airspace Regulation Group		
Page 10 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019
The Sport only has (page4). In para 3 RFFS will instruction that part provide a Pilot Brie control in where results that part that part provide a provide a pilot Brie control in where results that part that	isor considers 'segregation of visual circuit traffic' (para 2.6.4 v6.7) and 'informing pilotsthat the circuit is unavailable' as pan AGCS and as such their radio operator cannot provide any instructions or clearances to aircraft, this is made clear in the 2.2.7 v6.4, 'LEA makes provision for out-of-hours arrivals & departures movements. In such cases the ATZ will be reactivated be provided. LEA therefore contends that it has an effective process in place to suspend operations in the aerodrome visual and the AGCS/O to include within the aerodrome information, which is broadcast to aircraft, information that the circuit is une of the approach from arrival at the IAF and until the aircraft has landed or commenced a MAP'. It should be noted that the aminimum of 24 hrs to NOTAM activation of the ATZ.  If v3.9 (page5) states that 'circuit operations in the ATZ at LEA are suspended when the RNP traffic arrives at the IAF.' The AC instruction to aircraft to land or to not take off; they can only 'request'. A condition of approval will be that this pilot brief all levant such as rules re flying in the ATZ, out of hours ops and any rules relating to the use of the visual circuit. (see condition isor has stated that an ATZ provides a 'known operating environment' (Safety Case HAZiD, MAC, mitigation j); Rule 11 of the clear that the pilot must obtain information, but this information is only as good as the pilots passing it. The sponsor correct common environment'.  In onew airspace structure and no ATC procedures. EGCM will provide a AGCS and retain their ATZ within Class G airspace. A relepted to reduce/eliminate risks associated with more than one aircraft conducting an instrument approach at the same times), and to mitigate the risk of integration issues with the VFR operation and other IFR traffic. It is accepted that that the A (RSO) can make a broadcast in accordance with CAP 413 Supplementary Instruction 2021/01, that states 'no known traffic isor cannot control aircraft in the visual circuit, it will require g	by NOTAM, AGCS & pattern by available during Sponsor must GCS/O cannot give a igns with EGCJ n 3). The air regulations, ated the v6.11 safety are (ie introduction AGCS radio station in the ATZ'.

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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?

YES

The IAPs have been designed by an APDO and are subject to check by IFP.

2.20

'should' land or vacate the circuit in order to provide the mitigation stated by the Sponsor.

If the new structure lies close to another airspace structure or overlaps an associated airspace structure, have appropriate operating arrangements been agreed?

YES

Safety and Airspace Regulation Group		×
Page 11 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

The Sponsor has agreed an LoA with EGNM (and EGCN, not relevant at the point of publication), who manage class Class D airspace, which is required as they formalise mitigations that form part of the safety case. The 3000ft IAF (IAWP2) for the IAP to rwy 06 is contained with EGNM's CAS. The LoA makes it clear that the IAP cannot be flown from this point without an ATS from EGNM and a clearance to transit the airspace that ATC at EGNM manage. (No part of the IAPs enter any of EGCN's airspace, however, the LoA encourages pilots to request an UK FIS from EGCN if they are approaching EGCM from the south east, not relevant at the point of publication included for context).

The LoAs are clear that any ATS provided is subject to unit ATS capacity and that pilots may not receive an ATS; this is no different to today's operation. If either or both EGNM (and EGCN, not relevant at the point of publication) withdraw from the LoAs in the future, then the safety arguments will need to be re-addressed – See condition of approval.

2.21 Where terminal and en-route structures adjoin, is the effective integration of departure and arrival routes achieved?

N/A

No connection to en-route structures.

The approaches to runway 06 start in EGNM airspace. An LoA has been agreed but EGNM appear to desire to adapt it.

3.	Supporting Resources and 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:	YES
	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?	YES
	V6.7 of the Formal Submission Document clarifies that due to the cost involved, the frequency change and coverage increase for the LEA R/T DOC will not be requested until the ACP has been approved. However, there is considered to be sufficient time between ACP Approval and implementation to allow for the RT application to be completed in time for the start of operations. The installation of suitable communications infrastructure will be a condition of approval.  'The present notified Designated Operational Coverage (DOC) for LEA's VHF radio frequency is 10nm and 3000ft. This will be extended out to 25nm and 5000ft to include the IAFs with coverage to allow time for inbound aircraft to establish two-way communications in advance of commencing an approach. However, the CAA has confirmed that due to potential interference with other stations a change of frequency/channel will be required. Due to the high cost of the change including modification to radio equipment and publicity material the change will only be affected after the Implementation phase of the ACP has commenced. CAA reports that the 56-day AIRAC cycle will take longer than issuing the approval hence de-risking the change'.	

Safety and Airspace Regulation Group		
Page 12 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

The EUR Frequency Management manual EUR DOC 011 states: The DOC is that agreed to be the standard for the region (). Values different from those indicated may be used in some cases, as appropriate. Minimum required coverage volumes should be used where frequency congestion exists.

Frequency Managers will try to use the standard DOC when possible but there are many aerodromes that have larger DOC's depending on their Airspace requirements. The CAA will accept a longer DOC in this case.

British Gliding Association have also agreed that EGCM may use the local glider radio frequency to make "blind calls" to inform local gliders of expected IFR approaches. This frequency is already in use the in the relevant area.

It will be a condition of approval that the DOC is increased prior to implementation and that the Pilot brief (page 4 para f) aligns with the actual coverage.

 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? Eg. Navaids – has coverage assessment been made eg. a DEMETER report, and if so, is it satisfactory?

N/A

The equipment required for Navigation is all aircraft and satellite based.

• Surveillance: Radar Provision – have radar diagrams been provided, and do they show that the ATS route / airspace structure can be supported?

N/A

No radar diagrams provided. EGCM does not provide a surveillance service.

The EGCM/EGNM LoA states that the RWY06 approaches will not be permitted if EGNM does not have radar available and aligns with the pilot brief. The Safety Case does recommend that pilots seek an ATS from EGNM (or EGCN, not relevant at the point of publication) depending on the direction of arrival. The opportunity to request and receive an ATS from either EGNM (or EGCN, not relevant at the point of publication) will not change as a result of implementation of these procedures, as the LoAs make it clear that any provision of an ATS is subject to ATC capacity. The CAA does not require surveillance coverage diagrams as the provision of service is not changing.

Where appropriate, are there any indications of the resources to be applied, or a commitment to provide them, in line with current forecast traffic growths acceptable?

YES

EGCM are willing to make blind calls on the local glider frequency to warn of expected IFR approaches. BGA have agreed to this use of the frequency. EGCM have drafted LoAs with the relevant local units. While not all have signed, EGCM have indicated that they intend to operate as if the LoAs had been signed, including coordinating with those specific units which will be particularly affected by individual aircraft on a flight-by-flight basis. Current and forecast traffic movements are well within EGCM's potential capacity without further resources.

Conditions of approval will stipulate the requirement to meet key commitments, such as training and DOC, prior to implementation.

Safety and Airspace Regulation Group		×
Page 13 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

4.	Maps/Charts/Diagrams	Status
4.1	Is a diagram of the proposed airspace included in the proposal, clearly showing the dimensions and WGS84 coordinates?  (We would expect sponsors to include clear maps and diagrams of the proposed airspace structure(s) – they do not have to accord with AC&D aeronautical cartographical standards (see CAP725), rather they should be clear and unambiguous and reflect precisely the narrative descriptions of the proposals. AC&D work would relate to regulatory consultation charts only).	YES
	Indicative diagrams are supplied in the main airspace change package with detailed ones (including precise coordinates) in the IFP Design submission.	
4.2	Do the charts clearly indicate the proposed airspace change?	YES
	Indicative maps show geographical context, IFP submission shows detailed procedures.	
4.3	Has the Change Sponsor identified AIP pages affected by the Change Proposal and provided a draft amendment?	YES
	Coding tables and IFP diagrams have been provided.	
4.4	Has the Change Sponsor completed the WGS84 spreadsheet and submitted it to the CAA for approval?	YES
	Yes.	

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 GAT, on OAT or on VFR general aviation traffic flow in or through the area.	YES
	The proposal has evolved to take account of local traffic in Class G airspace, including local gliding sites, and the Sponsor has developed draft LoAs with as many relevant stakeholders as possible. The proposed IAPs will be flown in Class G airspace in simulated IFR for training purposes (not CAT C aircraft) or under IFR if the weather minima requires it. There should be no impact on other IFR GAT, OAT or VFR GA, as it is the responsibility <sup>4</sup> of all pilots to	

<sup>&</sup>lt;sup>4</sup> See <u>Section 2 of the ANO 2016</u>

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# Safety and Airspace Regulation Group

Page 14 of 22 Airspace Change Proposal - Operational Assessment

Version: 1.1/2019

comply with the rules of the air<sup>5</sup> and ensure collision avoidance while operating in Class G airspace. The proposed RNP IAPs will afford suitably equipped aircraft the opportunity to attempt to recover to EGCM in IMC (this currently should not be done, without consideration of the potential for the increased risks of recovering in IMC). Aircraft operators (AOs) may also choose to fly the procedure in VMC; however, the IAPs can only be utilised if a slot is booked (PPR).

Once implemented, pilots of suitably equipped aircraft can attempt a recovery at EGCM in IMC by flying a systemised RNP procedure and therefore there will be the potential for a change in aircraft behaviours (currently certain operators would not attempt a recovery in IMC due to their operating constraints). However, this cannot be considered as altering where aircraft currently fly or having an impact on traffic flow through the area due to the classification of the airspace and the flight rules that should be followed by pilots of all aircraft while in the area. Aircraft currently fly similar profiles to the proposed procedures today and there is no new volume of CAS or associated restrictions to transiting aircraft, which should alter aircraft behaviours.

If transiting pilots derive information on the scheduled aircraft attempting to fly the IAPs, they should have better awareness of where an aircraft might be and therefore the risk of a MAC should be reduced.

It should be noted that the sponsor does anticipate growth in traffic as a result of the implementation of the IAPs (ACPv6.7 para 3.2.7), given the mitigation to CFIT, that they afford. However, the ability to utilise the procedures is restricted due to the slot sharing system with EGCJ. The impact, in terms of increased arrivals, is expected to be low when considering the forecasted usage of 889 approaches (2023/24), which suggests an average of 2.5 utilisations a day. The slot system, which is shared with EGCJ, allows for a maximum of 8-11 in any single day (depending on the time of year) and growth in this activity is already taking place without the benefit of IAPs.

#### b) Impact on VFR Routes.

N/A

There are no defined VFR routes. The airspace in the area is considered to be an area of intense aerial activity (AIAA) and is marked as such on the charts. This is an awareness label for the area based on the possibility of it being utilised by many different airspace users, including the military. The IAPs do not constitute a 'barrier' or 'airspace construct' and the fact that an aircraft may utilise the IAPs to make an approach to EGCM does not alter how other airspace users should operate in class G airspace. Class G airspace is for all, and pilots must apply sound airmanship in order to mitigate the risk of a MAC in uncontrolled airspace.

c) Consequential effects on procedures and capacity, ie on SIDS, STARS, holds. Details of existing or planned routes and holds.

N/A

No impacts on SIDs/STARs/Holds for existing commercial airports, due to the LoAs with EGNM (and EGCN, not relevant at the point of publication) stipulating any provision of an ATS being constrained by capacity.

The Sponsor is not requesting a hold as part of the proposal and has presented explanations as to why a hold is not required in the IAP design.

<sup>&</sup>lt;sup>5</sup> SERA as referenced in CAP393

Safety and Airspace Regulation Group		×
Page 15 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

#### d) Impact on Airfields and other specific activities within or adjacent to the proposed airspace.

YES

The Sponsor has conducted effective engagement with local minor airfields and gliding sites in order to consider their requirements within the proposal and to develop suitable LoAs.

These IAPs do not alter the classification of airspace. They are RNP IAPs that commence at a point in space and should end with the participating aircraft flying along the procedure and landing safely at EGCM. The routes of the IAPs will have no impact on specific activities or adjacent airfields, as they do not alter the Class G airspace.

There is an LoA in place to share the utilisation of the IAPs (the slot allocations) with EGCJ as this airfield also has proposed IAPs (awaiting regulatory approval.) This LoA should ensure that pilots cannot fly into both airfields concurrently. The LoA will have to ensure the same rules re flying in the ATZ, out of hours ops and any rules relating to the use of the visual circuit. (Should the proposed IAPs for EGCJ be approved, the introduction of IAPs to both airfields will facilitate the recovery of suitably equipped aircraft in weather minima that would currently preclude a recovery without increased risk to safety – ACP2015-04 approved 17 Mar 23). Both airfields sit within Class G airspace and currently pilots recover safely through extant application of the rules of the air.

The local procedures that will have to be followed in order to utilise the IAPs will provide improved awareness to stakeholders (other airspace users) if they choose to derive the available information, such as notification of the booked slots, make best endeavours to receive a FIS<sup>6</sup> and through liaison with the AGCS/O at EGCM, for example. Aircraft operating from adjacent airfields also have to comply with the applicable rules of the air. There is potential for aircraft to routinely fly the proposed IAPs, however, given the extant classification of the airspace, the placement of the IAPs and the strictly shared utilisation of the IAPs with EGCJ, they should not have an impact on adjacent airfields.

#### e) Any flight planning restrictions and/ or route requirements.

NO

There are no flight planning restrictions and/or route requirements as a result of the proposed IAPs.

#### 5.2 Does the Change Sponsor Consultation material reflect the likely operational impact of the change?

YES

The IAPs replicate activity that is already taking place, so the impact of their implementation is expected to be in accordance with what was described in the consultation. There are benefits for the Sponsor and operators of in-scope aircraft; other airspace users will have more accurate information about the path taken by the inbound aircraft due to feathers being added to the VFR charts and the provision of traffic information on request.

<sup>&</sup>lt;sup>6</sup> LoAs have drafted with (EGCN, not relevant at point of publication) and EGNM that will allow participating pilots to request a FIS, subject to ATC capacity.

Safety and Airspace Regulation Group		
Page 16 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

A workshop was also convened by the CAA's Facilitation Team and local gliding club representatives in Mar 22. This workshop resulted in dialogue between the sponsor and local gliding club representatives. The key action was an agreement to continue working together to try and develop and agree LoAs, including areas discussed and agreed at the meeting and a determination to continue to engage on the perceived issues.

6.	Economic Impact	Status
6.1	Is a provisional economic impact assessment to all categories of operations and users likely to be affected by the change included and acceptable? (This may include any forecast capacity gains and the cost of any resultant additional track mileage).	N/A

7.	Recommendations / Conditions / PIR Data Requirements	
7.1	Are there any Recommendations which the change sponsor <u>should try</u> to address either before or after implementation (if approved)? If yes, please list them below.	YES
	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.	

Safety and Airspace Regulation Group			
Page 17 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019	

- 1) The Sponsor must ensure they continue liaise with the local gliding clubs in order to ensure that the system utilised to book and fly the IAPs is managed effectively and maintains flight safety.
- 7.2 Are there any Condition(s) which the change sponsor <u>must fulfil</u> either before or after implementation (if approved)? If yes, please list them below.

YES

**GUIDANCE NOTE:** Conditions are something that the change sponsor <u>must fulfil</u> either before or after implementation, if indeed the airspace change proposal is approved. If their proposal is approved, change sponsors <u>must</u> observe any condition(s) contained within the regulatory decision; failure to do so <u>will usually</u> 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.

- 1) Prior to implementation all the agreed draft LoAs must be reviewed and accepted by the CAA.
- 2) Prior to implementation the Sponsor must ensure that the documentation which refers to agreed procedures for AGCS/Os and pilots flying the procedures, is aligned with the AGCS phraseology in Chapter 4 of <u>CAP413</u>.
- 3) The slot allocation system (as described in the EGCJ/EGCM LoA) must ensure that there is no possibility of aircraft being booked into EGCM and EGCJ concurrently and be aligned in terms of local procedures with EGCJ concerning visual circuit occupancy (Amend the LoA, see condition 1 and 9).
- 4) Prior to implementation, the Sponsor must provide details, which will need to be accepted, to the CAA on what is meant by 'special handling' of CAT C recoveries (ie no CAT C to RWY 24 if Rufforth are active and RWY 06 if Burn are active) and confirm that CAT C approaches will not be carried out for training purposes.
- 5) Prior to implementation the Sponsor is to provide the CAA with details, which will need to be accepted, on the out of hours operation (OHOs) for use of the IAPs and the CAA will consider approval of the OHOs (are there any differences compared daytime operations, ACP para '2.2.9 An out of hours operation will be available at LEA should the need arise. In such cases the ATZ will be reactivated by NOTAM, AGCS & RFFS will be provided).
- 6) Should the Sponsor see an increase (2019 figure was 76, so anything above this) in the number of CAT C aircraft types utilising the procedure over the next 5 years, they must review their safety case and inform the CAA of the outcome.
- 7) Prior to implementation the DOC for the Fenton Radio frequency must adequately cover the geographical span of the procedures and align with the Pilot Brief (suitable communication infrastructure to be installed and tested.)
- 8) Prior to implementation, any reference to Leeds East ATC or the provision of an ATS is to be removed from the relevant documentation (LoAs) prior to signature (An AGCS is not ATC).
- 9) Prior to implementation, all the mitigations to the hazards, in the safety case, are to be accepted by the operating authority and all outstanding controls/mitigations are to be in place (details to be provided by the ATS Inspector).
- 10) Prior to implementation (at least 28 days) evidence of the completion of outstanding controls and mitigations to be supplied to the CAA.

Safety and Airspace Regulation Group		
Page 18 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

11) On completion of actions required for controls or mitigations, safety hazards are to be reviewed in accordance with the units SMS (CAP760/795) to confirm post mitigation risk.

12) Prior to implementation, evidence of the publication of updated procedures and the completion of training for AGCS/Os, must be provided to the CAA ATS Inspector.

13) A pilot may not make an initial airborne request for a procedure slot, unless in an emergency (update pilot brief accordingly).

14) Following implementation, should the sponsor determine that the risk of a MAC, while flying either procedure, is heightened due to increased glider activity, then the procedure(s) are to be suspended until such time as the activity is considered not to present a heightened risk.

15) Procedures for EGCM should ensure that, in the event of a missed approach, EGCI is advised by telephone to assist in the management of potential conflicts.

16) All periodic post monitoring reports, including performance against SPIs are submitted to the CAA for review (until ad.

7.3 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.

The Sponsor will be sent a separate PIR Letter detailing the requirements of this part of the process, which will be published on the CAA Webpage for this

## Case Study Conclusions - To be completed by SARG Project Leader

ACP.

Has the Change Sponsor met the SARG Airspace Change Proposal requirements and Airspace Regulatory requirements above?

YES

When considering the operational aspects of this proposal, the Sponsor has met the requirements of CAP725, endeavoured to meet updated requirements under CAP1616, and other relevant regulatory requirements (subject to IFP review). On balance, the proposal has been developed through an appropriate and proportionate approach given the low impact of the proposed IAPs when compared to larger airfields. There is not a clear business need for the introduction of IAPs, however, the impact on EGCM's own traffic (resilience) and that of other local airfields has been considered, with feedback taken into account when refining the procedures.

Discussions have been held with the Sponsor regarding the inconsistencies and lack of clarity in some key areas of the submission. As result of this, the CAA has stipulated conditions that must be met and a recommendation that must be followed post implementation. Should the conditions not be met, within 12 months of the approval, the CAA will suspend the approval pending a review.

Safety and Airspace Regulation Group			
Page 19 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019	

Given the acknowledgement from the Sponsor, that they will meet the conditions stipulated above the CAA is satisfied that the Sponsor has met the SARG Airspace Change Proposal requirements.

Third Party Approval	Yes/No
Is the approval of the SoS for Transport required in respect of the Environmental Impact of the airspace change?	МО
Is the approval of the MoD required in respect of National Security issues surrounding the airspace change?	NO

#### **General Summary**

The Sponsor has applied CAP1122 and CAP 760 methodologies and produced a safety case, that results in actions which require completing prior to implementation in order to mitigate risk.

The introduction of the proposed IAPs will mean that pilots who would not currently elect to recover to EGCM in IMC, will be able to do so by following an approved procedure. This will change aircraft behaviours, however, the forecast maximum usage due to the agreed slot system is low when compared to the overall arrival forecasts. The IAPs are not an airspace structure and therefore cannot create an imposition on other airspace users or impacts in class G airspace as they do not hold any status that requires other airspace users to alter how they operate today. The IAPs will be highlighted on VFR charts by feathers, however, these are intended to increase awareness and should not be viewed as a barrier to prevent flight through class G airspace. Pilots are strongly encouraged to contact the airfield and as a result of the slot system, there will be the opportunity to be made aware of any aircraft attempting the IAPs.

The system stated by the Sponsor, if utilised accordingly, should reduce the risk of a MAC; however, any pilot who chooses to fly the IAPs will have to accept that there are intrinsic risks associated with flying in Class G airspace. Nor the CAA or the Sponsor can force a pilot to brief/plan; however, it is expected that good airmanship will be applied. The CAA does not expect pilots to fly the IAPs without permission from EGCJ, which will mean the proposed mitigations, within the system, are applied.

Aircraft currently recover to EGCM without the benefit of a notified IAP, along similar routes to the proposed IAPs. Pilots operate today by applying the rules of the air and there is an opportunity to request an ATS from EGNM (and EGCN, not relevant at point of publication). The implementation of the IAPs is intended to support flights that already take place and any changes to flight behaviours are unlikely to be noticeable by other airspace users or parties on the ground. It should be noted that the sponsor does anticipate growth in traffic as a result of the implementation of the IAPs (ACPv6.7 para 3.2.7), given the mitigation to CFIT

### Safety and Airspace Regulation Group

Page 20 of 22

# Airspace Change Proposal - Operational Assessment

Version: 1.1/2019

that they afford. However, the ability to utilise the procedures is restricted due to the slot sharing system with EGCJ. Stakeholders will be able to derive awareness of aircraft utilizing the IAPs from the AGCS/O at EGCM, due to the slot booking system and the broadcasting on the common glider frequency<sup>7</sup>.

The Rules of the Air Regulations 2015, Rule 11, sub paras (5),(6) and planning (understanding the Pilot Brief and use of the slot booking procedure) apply as the key mitigations to a MAC for an aircraft utilizing the IAP vs transiting GA and aircraft within the ATZ. The Sponsor has endeavoured to produce a safety case that would demonstrate that the introduction of the IAPs would maintain a high standard of safety. The CAA considers the threshold of maintaining a high standard, against the current situation, ie how aircraft are safely operated and recovered into EGCM today. The CAA's key duty, under S.70 of the Transport Act 2000, is to only approve an ACP if it maintains a high standard of safety.

CAT C aircraft will not be able utilise the IAPs for training purposes. EGCM should not allow use of the procedures when they are aware that increased gliding activity is taking place and could heighten the risk of a MAC, while utilizing the procedure (see condition 14).

The CAA has noted some inconsistencies within the documentation that have been discussed with the Sponsor and rectification of these points is a condition of approval. The proposed introduction of GNSS RNP IAPs at EGCJ, which is 3NM from EGCM, does mean that an LoA has been developed between both Sponsors and as such they will share slots for arrivals wishing to utilise the procedures. Both airfields have forecast growth in their proposals, but not more than 10% of 2021 levels or as a result of the introduction of the procedures. Growth in traffic figures would take place without the approval of the procedures and pilots could choose to fly a similar track to the procedures, remaining clear of CAS, today.

The procedures have been designed to be safe in terms of terrain clearance and flyability. The CAA continues to ensure pilot standards through extant regulatory oversight and approval of this proposal does not introduce any new requirements.

The use of GNSS on board equipment when coupled with approved IAPs constitutes an 'aid to let down', under Art 183 of the UK ANO 2016 and should warrant an Approach Control Service (ACS). However, following consideration of the safety arguments presented by the Sponsor and consideration of the current responsibilities imposed upon a pilot operating in Class G airspace, the CAA accepts that the system (AGCS information, IAP slot booking, briefing, LoAs, broadcasts, etc) being employed by EGCM, to maintain a high standard of safety when utilizing the RNP IAPs, is satisfactory.

EGCN (DSA) withdrew the provision of an ATS early Dec 22. As a result of this the CAA is sponsoring an ACP (2022-082) to safely manage the withdrawal of EGCN from the UK AIP. This ACP has been impacted by the closure of EGCN and as a result the sponsor was asked to consider the impacts accordingly. This has resulted in modifications to the IAPs, such that they do not require design dispensations, should the EGCN airspace remain permanently de-notified. If the EGCN airspace (as currently published) is re-notified, then the sponsor, subject to CAA approval, can revert to the IAPs that take account of the EGCN airspace.

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<sup>&</sup>lt;sup>7</sup> Safety Case page 15.

Safety and Airspace Regulation Group		
Page 21 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019

#### **Comments & Observations**

This ACP began under a process which has now been withdrawn, however, the CAA has endeavoured to apply current processes, policies and standards where it is relevant and proportionate to do so, in order to provide transparency and better understanding to relevant stakeholders. The change sponsor has provided 3 versions of the ACP and updates to associated documents that have provided clarity with regard to procedures that will be employed to maintain a high standard of safety.

Safety and Airspace Regulation Group				
Page 22 of 22	Airspace Change Proposal - Operational Assessment	Version: 1.1/ 2019		

Operational Assessment Sign-off/ Approvals	Name	Signature	Date
Operational Assessment completed by:			
	AR Case Officer		17 Apr 23
Operational Assessment approved:	Mgr AR		5 May 23

Mgr AR Comments:

Noted, comments are contained in the Decision Log

Hd AAA Comment/ Approvals	Name	Signature	Date
Operational Assessment Conclusions approved:			
	Hd AAA		10 May 23

Hd AAA Comments:

Noted, comments are contained in the Decision Log