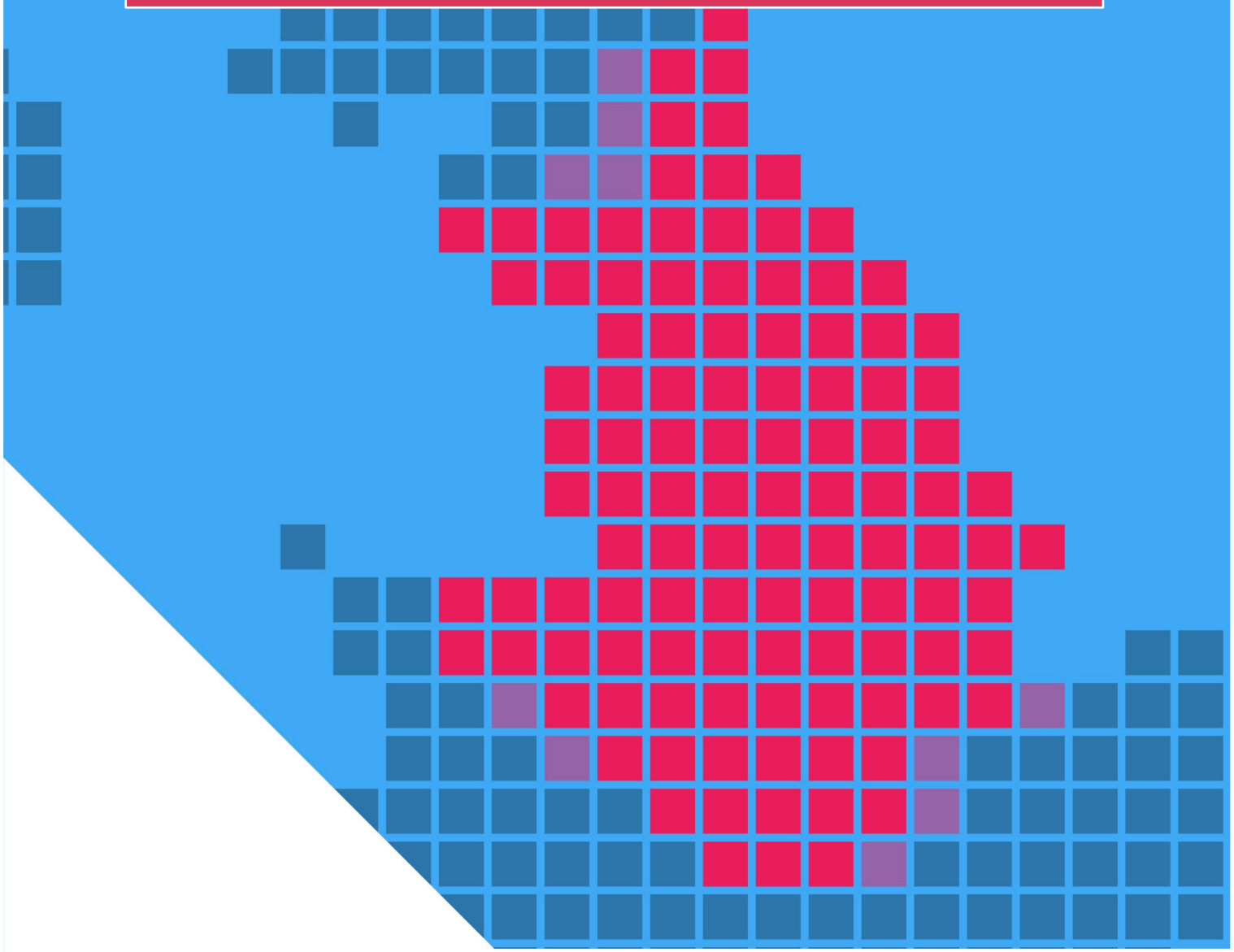
UK Civil Aviation Authority

Airspace Classification Review

AMEND

MANCHESTER LOW LEVEL ROUTE

Operational Impact Assessment – CAP 3027G



Published by the Civil Aviation Authority, 2024

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Executive Summary

This Operational Impact Assessment provides a comprehensive evaluation of the proposed reclassification of the Manchester Low Level Route (MLLR) from Class D controlled airspace to Class G uncontrolled airspace. The assessment specifically examines the operational impacts of this change on key stakeholders, including NATS Manchester, ATCSL Liverpool, and general aviation (GA) users.

Key Impacts

NATS Manchester

NATS Manchester will no longer be responsible for monitoring the MLLR, leading to a reduction in ATC workload. This change simplifies the operational responsibilities for Manchester ATC and removes the need for certain clearances previously required for aircraft entering this airspace.

Internal adjustments, such as updates to the MATS Part 2 and radar maps, will be managed through existing processes in compliance with UK regulations.

ATCSL Liverpool

The reclassification will affect Liverpool ATC's ability to descend traffic to 1800ft when overflying the MLLR, with the new minimum altitude set at 2000ft. This change aligns with existing approach procedures and is expected to have minimal operational impact.

Emergency procedures, particularly those involving engine failures on departure, have been reviewed to ensure continued safety within the newly classified airspace.

Airspace Users

The majority of MLLR users are recreational GA pilots. The reclassification to Class G airspace will maintain or improve their access to this airspace while reducing operational complexity.

The proposed changes are expected to have a positive economic impact on local GA airfields by preserving current access levels, thus supporting local aviation businesses.

The reclassification will also streamline operations at specific airfields, such as Hawksview and Barton, by removing the need for ATC clearances and simplifying communication procedures.

NPAS and Helimed operators will be unaffected by this change remaining exempt from visibility restrictions thus permitting continued operations at all times.

Airspace Usage

The assessment does not anticipate a significant increase in airspace usage due to this change, as it is designed to maintain existing access levels rather than encourage new users. However, it enhances safety for current users by providing clearer operational guidelines.

Implementation Plan

The CAA will initiate a dedicated communication campaign to ensure all stakeholders are informed of the changes. This will include press releases, social media updates, targeted emails, and face-to-face engagements to prepare for the reclassification scheduled for January 2025.

In conclusion, this assessment confirms that the proposed reclassification of the MLLR will reduce ATC workload, simplify airspace access for users, and support the ongoing safety and efficiency of air operations in the region, with minimal disruption to existing procedures.

CHAPTER 1

Introduction

Background

1.1 In July 2023 the UK Civil Aviation Authority (CAA) published a detailed investigation[1] of the Manchester Low Level Route (MLLR) as part of its ongoing Airspace Classification Review.

1.2 The MLLR, currently designated as Class D[2] controlled airspace (CAS), benefits from a temporary exemption permitting aircraft to fly through it without contacting ATC, with adherence to specific conditions. This exemption, crucial for MLLR operations, is now due to expire on 31st May 2025. The comprehensive review, incorporating stakeholder input and safety data analysis, has identified safety concerns, such as the increased risk of mid-air collisions (MAC). The current configuration of the airspace, along with its temporary exemption status, is not aligned with our long-term operational objectives to simplify airspace. Consequently, we propose reclassifying and modifying the MLLR to enhance safety and efficiency, whilst also aligning it with these objectives.

Purpose

1.3 The purpose of this Operational Impact Assessment is to provide a documented record that the proposed airspace changes and associated operational arrangements are fit for purpose and that they meet relevant regulatory requirements. It assesses if adequate resource exists to deliver the change, and whether adequate communications, navigation and surveillance infrastructure exists to enable the change to take place; that maps and diagrams clearly explain the nature of the proposal; and that operational impacts on all airspace users, airfields and on traffic levels have been considered and mitigated appropriately.

Assessment Scope

1.4 This document provides the necessary assurance for the proposed changes being made to the MLLR volume of airspace. The scope of the impact assessment is as follows:

[1] CAP 2564: Airspace Classification Review: Manchester Low Level Review.

[2] Class D airspace permits entry only to aircraft in receipt of an air traffic control clearance and is defined in accordance with Policy for the Classification of UK Airspace.

Within Scope

- The proposed airspace changes that have been designed through the CAP 1991 amend process.
- The impact of these proposed changes to both NATS Manchester and Liverpool (Air Traffic Control Services LTD) current ATC operations.
- The impact of the proposed changes on existing airspace users and associated traffic levels.

Out of Scope

- The impact of these proposed changes to any ongoing Airspace Change Process that is encompassed by FASI(N).

CHAPTER 2

Operational Impact

NATS Manchester

2.1 Manchester ATC will no longer be the designated controlling authority responsible for monitoring the safety of aircraft operating in the MLLR and issuing traffic information to pilots when deemed necessary. Airspace users will still have the option to request a service outside of controlled airspace from either Manchester or Liverpool ATC and the use of Frequency Monitoring Codes (FMC) will be actively encouraged. It is reasonable to expect that this change will reduce the workload of Manchester ATC.

2.2 A further small reduction in workload will be achieved by the removal of the requirement for aircraft operating at Hawksview airfield to obtain a clearance to enter CAS.

2.3 All arrival and departure procedures at Manchester Airport remain the same and are unaffected by this change.

2.4 Internal changes at an ATC unit, such as MATS pt2 updates and radar maps etc, will be managed through internal “change to a functional system” processes in accordance with UK Regulation (EU) 2017/373 and subject to normal regulatory oversight.

2.5 The Restricted Area (RA) that forms a key part of this airspace change will be implemented in line with the requirements set out in the Policy for the Establishment and Operation of Special Use Airspace. NATS Manchester will be the designated authority for processing any applications for exemptions to the restrictions. It is anticipated that this would be handled through NATS’ Non-Standard Flight (NSF) application procedure, as per any other requests to operate (non-standard) in airspace attributable to NATS Manchester.

2.6 NATS Manchester has several Letter of Agreements in place in relation to the current dimensions and operation of the MLLR, which will have to be changed and updated to reflect the planned changes. Details of these can be found in the ‘Operational Agreements’ section of the submission document and it will be the responsibility of NATS Manchester to ensure these are updated accordingly as part of the implementation of any changes.

ATCSL Liverpool

2.7 Liverpool ATC will no longer be able to descend traffic to altitude 1800ft when overflying the airspace currently known as the MLLR. Currently usage of 1800ft was described as “very rare” in meetings with Liverpool ATCO SMEs.

2.8 When the MLLR airspace becomes Class G the lower limit of CAS will be 1500ft meaning the lowest altitude available at which Liverpool can offer a service will now be 2000ft. The current published approach charts already define 2000ft as the altitude used to overfly this airspace at this stage of the approach up until the FAF at 5.9D when arriving for runway 27. Runway 09 arrival operations are unaffected.

2.9 All standard departure operations for Liverpool will be unaffected by this change.

2.10 Runway 09 departures suffering an engine failure on departure may be affected by a requirement to “level-off” and increase speed prior to continuing their climb. This may, dependent upon the level defined on airlines individual procedure, mean an aircraft levels off its climb at an altitude which will leave CAS and pass through the RA. This aircraft is unlikely to abide by the restrictions in place for the RA, however the provisions of SERA.2010 (a)3 apply due to the emergency status of the aircraft in question.

2.11 This is an emergency procedure designed individually and varies dependent upon factors such as aircraft type, engine variant, departure airfield, ATC service availability, ground based obstacles and terrain. Airspace classification is not usually taken into account. A typical engine out procedure (with no terrain or obstacles to consider) is a “straight ahead” departure. At almost all airports in the UK this will lead an aircraft to leave CAS at levels below 1500ft and is considered “normal”. For example runway 27 departures at Liverpool suffering an engine out would also leave CAS at 10NM from the airfield if below 1500ft.

2.12 Internal changes at an ATC unit, such as MATS pt2 updates and radar maps etc, will be managed through internal “change to a functional system” processes in accordance with UK Regulation (EU) 2017/373 and subject to normal regulatory oversight.

2.13 As is stated in the previous section, airspace users will still have the option to request a service outside of controlled airspace from either Manchester or Liverpool ATC and the use of Frequency Monitoring Codes (FMC) will be actively encouraged.

[3] Rules of the air > Section 2 – Applicability and compliance > SERA.2010 Responsibilities states: (a) Responsibilities of the pilot-in-command: The pilot-in-command of an aircraft shall, whether manipulating the controls or not, be responsible for the operation of the aircraft in accordance with this Regulation, except that the pilot-in-command may depart from these rules in circumstances that render such departure absolutely necessary in the interests of safety.

Airspace users

Current users of the MLLR

2.14 The majority of MLLR users are recreational general aviation (GA). Our analysis using the CAA's Airspace Analyser Tool revealed 5,635 aircraft tracks in 2023.

2.15 It is important to note that this data may not include all aircraft. Only aircraft with certain on-board conspicuity devices such as FLARM4, ADS-B5, or a Mode-S6 transponder being received by 3 or more ground stations simultaneously, are displayed in the tool. Aircraft with no such conspicuity devices will not be displayed as the tool does not utilise radar data, which would normally be used by ATC to track such aircraft.

2.16 Around 66% of the MLLR's 2023 traffic consists of fixed-wing aircraft, with MoD aircraft constituting about 2-3% of movements, 119 in 2023, mainly helicopters operating into and out of Royal Air Force (RAF) Shawbury and also some CH47 aircraft.

Impact of changes

2.17 It is expected that this proposal will have a broadly positive impact on the aviation community when compared with allowing the ORS4 exemption to expire and the airspace returning to standard Class D operation.

2.18 When designing our proposal, we have focused on providing, at a minimum, the same level of access to this volume of airspace while improving its safety. The change to Class G airspace not only achieves this by upholding current access levels but expands its volume both laterally and vertically benefiting the wider aviation community.

2.19 It is also expected to have a positive economic effect, especially on local GA airfields in the region by maintaining or improving access to them. By avoiding the reversion to Class D airspace this proposal helps ensure that these airfields can continue their current operations unhindered, supporting local economies and aviation businesses.

2.20 Operationally, costs are expected to remain consistent with current levels. However, it is important to note that if the airspace were to remain Class D but

[4] FLARM is a collision avoidance system used primarily by smaller aircraft, such as gliders and light sport aircraft. It functions by broadcasting the position, altitude, and speed of an aircraft.

[5] Automatic Dependent Surveillance-Broadcast, is a surveillance technology in which an aircraft determines its position via satellite navigation and periodically broadcasts it, allowing it to be tracked. This information can include the aircraft's identification, current position, altitude, and velocity.

[6] Aircraft-based equipment which provides detailed information to radar systems such as aircraft climb/descent rate, altimeter pressure setting and a specific aircraft ID.

without the exemption, this would likely necessitate increased staffing to manage GA access, imposing significant annual costs on Manchester Airport. Operational flight costs such as fuel and maintenance for GA aircraft pilots and owners would also increase with the extra track mileage required to route around the large Class D volume in the likely scenario that ATC unable to provide a service.

2.21 The proposed changes are not expected to have any adverse impact on commercial traffic using Manchester or Liverpool airports. These aircraft do not currently use the existing MLLR or proposed extended volumes, and arrival and departure routes to these airports are unaffected by this proposal. We have worked closely with Manchester and Liverpool airports to ensure that this amendment still enables them to continue carrying out their ATC operations in a safe and sustainable way.

2.22 Flight operations at Hawksview airfield currently require pilots of aircraft to contact Manchester ATC for a clearance to enter CAS in order to arrive at or depart from the airfield. Whilst not a significant part of the ATC task, this adds to the already high workload of Manchester ATC. This amendment would place the boundary of CAS to the east of Hawksview allowing for the requirement to obtain a clearance to enter CAS to be removed thus simplifying access to the airspace and simultaneously reducing workload for both Manchester ATC and the pilots of these aircraft.

2.23 Flight operations at Barton will be improved by simplification following the proposed change to the airspace and it will remain possible for aircraft to enter the airspace as a “short-cut” to/from the eastern edge of the RA (formerly MLLR boundary). The operation is simplified by the removal of the requirement to squawk a Manchester listening frequency (and the incumbent requirement to monitor the frequency also). This allows pilots to contact Barton whilst still within the confines of the RA to aid situational awareness when arriving at the airfield. This was not previously possible and was a concern raised by respondents to the “Call for Evidence” associated with the “Barnsley review” which helped inform the content of CAP2564.

2.24 Police, Air-Ambulance and Search and Rescue flights will be exempt from the restrictions that will be implemented as part of this change. Due to the nature of their task, it is essential that the crews of these aircraft have access to this airspace at all times, and therefore visibility requirements shall not be enforced should the aircraft require to operate outside of the criteria specified. It is expected on this basis, that there will be no impact on the way that these users will operate in the airspace post implementation. Something that has been ratified in the engagement we have conducted with these specific stakeholders throughout this process, details of which can be found in the Engagement Response document that forms part of this submission.

Airspace usage

2.25 We do not expect the type of airspace user, or the number of them, to increase significantly following the introduction of this proposal. However, the accurate prediction of airspace use in Class G airspace is not possible due to the number of factors that affect GA aviation. Current access levels are maintained through this change and it is not intended, aimed for, or expected that this will encourage new users to the area and is instead designed to lower the risk of existing users.

2.26 Conversations with military users indicate no change in their use of the airspace is likely following this change. The weight restriction applied will permit continued operations in line with previous usage.

2.27 As per all Class G airspace it remains the responsibility of the VFR pilot to avoid wake turbulence. However, included within the communications will be a reminder to pilots wishing to fly through the restricted area that wake turbulence remains a possibility within this airspace both from commercial traffic transiting overhead whilst operating to/from Manchester and Liverpool Airports, as well as from other users within the airspace such as larger CH47 helicopters.

Implementation

2.28 As part of the submission, we have provided a list of all of the charts and AIP entries that will need to be updated to reflect the changes should they be approved. These will be submitted to the Aeronautical Information Service (AIS) to be updated as part of AIRAC 01/25 for implementation on 23/01/2025.

2.29 Ahead of this implementation the CAA is committed to ensuring that it engages with as many airspace users and other stakeholders affected by this change as possible to ensure that they are informed and aware of the changes. Should these changes be approved by Airspace Regulation and an implementation date identified, a dedicated communications campaign using the CAA's full suite of channels will be initiated over a period of several months in the build up to that implementation date to engage with and inform as many airspace users and other affected stakeholders as possible. The channels we will look to use will include:

- Press releases targeted at relevant stakeholder groups
- Social media (both organic and paid for advertising)
- Skywise updates
- Targeted stakeholder emails
- Podcasts

- Updates through the CAA's existing stakeholder communications e.g. monthly GAP email
- Face to face engagement at relevant LAITs and RAUWGs
- Working with stakeholders to raise awareness amongst their members and customers through their own channels

2.30 Alongside this, we intend to publish a Yellow AIC on 12/12/2024. This will contain a written description of the changes due to be implemented in January and also include an illustrated excerpt produced by AIS depicting the new airspace constructs as they will appear on the VFR 1:500,000 chart.

2.31 The new updates will also be depicted in the VFR chart update service on the AIS website, initially as "Amendments Yet To Become Effective", and post implementation as "Amendments Already Effective".

2.32 Moving map software providers will be contacted through the AIS user forum, or individually, in addition to their normal map update procedures to ensure readiness for the change.

2.33 In order for the Restricted Area to be implemented as part of this amend, it has to be underpinned by an associated statutory instrument (SI), giving legal status to the airspace. The power to approve RAs and restrict flying rests with the Secretary of State for Transport and we have engaged with the Department for Transport (DfT) throughout this process. They have had sight of a draft example of the SI that sets out the specific restrictions and the DfT are content that it is feasible and legitimate option under article 239(1) of the Air Navigation Order. Once a decision has been made by Airspace Regulation on whether to implement the changes set out in this submission, DfT are in a position to publish the SI in advance of it coming into force, with the implementation of the SI aligned with AIRAC 01/25.

CHAPTER 3

Conclusion

3.1 The impacts and implementation of the proposed changes to the MLLR have been appropriately considered and addressed throughout the amend process. This has been further ratified through effective stakeholder engagement to support each element of the change and it is reasonable to argue that the impacts are minimal and proportionate when considering the benefits that this change will introduce.