UK Civil Aviation Authority

# Airspace Classification Review

## AMEND

## MANCHESTER LOW LEVEL ROUTE

*Enivronmental Assesesment – CAP3027J*

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# Summary of change

The Manchester Low Level Route is a designated corridor within Manchester Airport's busy airspace, currently extending from surface to an altitude 1300 feet. The MLLR is required to provide north-south access for Visual Flight Rules (VFR) aircraft to transit safely through Manchester Airport’s airspace avoiding longer detours over high terrain or over water. The MLLR is currently classified as Class D airspace, it has an exemption to airspace rules which allows aircraft to fly through the large block of Manchester and Liverpool's adjoining airspace without needing to speak to air traffic control.

In July 2023 the CAA published the findings of a comprehensive review into the MLLR and highlighted a number of safety concerns (see CAP2992A), including the risk of midair collisions and limited emergency landing options due to urban sprawl. After detailed analysis and collaboration with both Manchester Airport’s and Liverpool Airport’s Air Navigation Service Providers (ANSPs), the CAA are proposing an amendment to the MLLR with four core elements:

- Reclassifying the current Class D MLLR airspace to Class G airspace;
- Implementing a Restricted Area within the reclassified airspace;
- Raising the MLLR ceiling by 200ft to 1500ft; and
- Widening the eastern edge of the MLLR by approximately 110 metres.

The proposed changes are intended to improve safety in the MLLR while maintaining equitable access for all airspace users. The outcome of the proposed change would be to be provide more Class G airspace, reduce congestion for GA traffic, and offer more options for emergency landings, further enhancing safety.

While it is difficult to predict the net effect of these changes with certainty due to the unpredictable nature of GA flying activity, it is expected that any potential negative impacts will be minimal. The proposed widening of the MLLR to the east will involve areas that were previously outside its boundaries. While this change would allow GA aircraft to now fly over these communities, it's important to remember that these communities can be, and already are, overflown by larger commercial air traffic. Given this context, the impact on local communities under the expanded MLLR area is expected to be minimal. Commercial traffic and its routeings will not be changed by this proposal and the consideration of GA aircraft, which are generally smaller and less noisy, suggests no significant increase in overflight activity or noise levels for these areas. The widening is also expected to distribute the GA traffic more evenly across the new volume of airspace further mitigating any potential noise and visual disturbances through dispersal.

Currently uncontrolled aircraft are permitted to fly within the MLLR up to 1300 feet. The proposed change would allow aircraft to fly at a higher level up to 1500ft. While we do not expect this change to result in significant changes to traffic or noise levels, it is possible

that the amendment may result in a negligible change in the number of aircraft operating in the area.

It is worth noting that it is difficult to predict whether there will be more GA traffic outside of controlled airspace, as these flights do not require flight plans and can be influenced by various factors such as weather, cost, and the preferences of the pilot. After engaging with both internal and external stakeholders, we anticipate that the proposed changes will maintain approximately the current volume of aircraft operations in the area. However, these changes will enable aircraft to fly in a more dispersed pattern and at slightly higher altitudes.

Therefore, the proposed amendment is not anticipated to change flight paths or intensify aircraft movements and therefore the proposal is not expected to have an impact on noise and the environment.

# Scope of Environmental Assessment

In December 2020, the CAA was given the function by the Government to review the classification of airspace and to amend them where appropriate. This function means that the CAA must regularly consider whether to review the current classifications of airspace, consult airspace users as part of that review and amend the airspace with the CAA acting as the change sponsor in accordance with the CAA's classification review procedure (see CAP1991). The CAA's function to review airspace classifications, is legally and functionally separate from the CAA's approval of changes to the notified airspace design through the CAP 1616 process (see CAP1616).

The CAA's statutory duties and functions in respect of airspace regulation are contained in Section 70 of the Transport Act 2000 and The Civil Aviation Authority (Air Navigation) Directions 2017 (as amended). Section 70 of the Transport Act 2000 requires the CAA to take account of the interests of any person other than an airspace user (which would include those on the ground) and of any guidance on environmental objectives given to the CAA by the Secretary of State when carrying out its air navigation functions as set out in the Air Navigation Directions. For the CAA's function relating to a change in airspace design (i.e. one which goes through the CAP 1616 process), this guidance is the Air Navigation Guidance 2017, last issued in October 2017. However, in respect of airspace classification, the guidance was amended by the Secretary of State's letter of 31 October 2019.

In that letter, the Secretary of State stated that the CAA should consider the environmental consequences of a proposal for amending the classification of airspace, but specifically disapplying the existing Air Navigation Guidance. Therefore, to ensure the environmental consequences are considered, the CAA developed their own guidance within CAP1991.

As per CAP1991, as far as the CAA are able to, the CAA will assess any potential environmental impacts and add this to the proposal. The CAA do not envisage any significant environmental impacts from a classification change, such as might be caused by changes to departure and arrival routes at aerodromes, because these would have been filtered out at an earlier stage in the procedure. The environmental impacts of a classification amendment are uncertain because the airspace is not controlled and therefore the CAA cannot estimate the frequency of new flights or where and at what height they will overfly those on the ground. For these reasons, making any assessment of the environmental impacts for a change to a less restrictive classification is a qualitative not quantitative exercise.

# Environmental Assessment Methodology

Therefore, the environmental assessments required for CAP1991 classification of airspace are based on qualitative statements; data on movement types and aircraft demand where available and known with indications of potential impacts where these can be reasonably predicted. The environmental assessments take into account noise impacts, CO2 emissions, local air quality and impact upon tranquillity, notably on Areas of Outstanding Natural Beauty or National Parks. The impacts shall be summarised, and conclusions described. If there is expected to be no impact there should be a rationale to explain that conclusion.

To ensure all relevant environmental factors are considered, this environmental assessment adopts the environmental requirements from the CAA's Environmental Assessment Requirements and Guidance for Airspace Change Proposals (see CAP1616i) but with the assessment being qualitative.

Adopting the requirements of CAP1616i is consistent with the CAA's guidance within CAP1991, however, it expands on the guidance ensuring a range of effects from impacts are considered and also ensures that impacts on biodiversity, especially those legally required under, The Conservation of Habitats and Species Regulations 2017, are considered.

# Environmental Assessment

In July 2023 the UK Civil Aviation Authority (CAA) published its findings following its review of the Manchester Low Level Route (MLLR).

In this review our analysis identified a number of areas and options available to improve both the safety and efficiency of the MLLR and we are now taking these options through to the Amend stage. This will involve further scrutiny of the airspace and the options before developing a proposed amendment.

This document sets out the strategic direction for the CAA stakeholder engagement and communications on our proposed amendment to the MLLR.

| Environmental Factor | CAP1616 Requirement | MLLR Assessment | MLLR Conclusion |
|---|---|---|---|
| **Traffic forecasts** | year 1 and year 10 for the baseline scenarios and final design option. | The airspace (currently classified as Class D) is predominately used by General Aviation (GA) traffic. The MLLR currently has a speed restriction of 140 kts and therefore this restricts the type of aircraft using it to predominately GA aircraft. Therefore the proposed change will have no impact on commercial traffic.<br><br>In 2023, there were 5,635 GA tracks recorded and 119 military tracks. The proposal is not anticipated to lead to a change in the volumes or type of aircraft using the MLLR and therefore any changes to traffic would have occurred regardless of the proposed changes to the MLLR. | No impact on the volume or types of commercial or General Aviation traffic that would otherwise use the MLLR without the proposed change (i.e. no change in the future baseline scenarios without the reclassification of airspace). |
| **Noise (Adverse impacts)** | Noise exposure contours | CAA CAP1616 states that WebTAG analysis and Leq contours will not be required for any airfield or | The proposal will not lead to a change in the |

| Environmental Factor | CAP1616 Requirement | MLLR Assessment | MLLR Conclusion |
|---|---|---|---|
| | above 51 dB LAeq,16h daytime and 45 dB LAeq,8h nighttime and evaluated by Department for Transport's transport analysis guidance (TAG) for impacts on health and quality of life | aerodrome with fewer than an average of 30 movements per day. In 2023, there were 5,635 aircraft tracks recorded, which is equivalent less than 30 aircraft movements per day and therefore the current noise exposure is unlikely to exceed 51 dB LAeq,16h at locations on the ground beneath the block of airspace.<br><br>The proposal is not expected to lead to a change in traffic volumes or flights paths and therefore there is not expected to be a change in noise exposure from today and hence it is not anticipated that noise following the change will increase to a level that would be considered adverse (i.e. above 51 dB LAeq,16h). | number of people significantly affected by adverse impacts from aircraft noise. |
| **Noise (number of aircraft noise occurrences at or above a given noise level)** | Number above contours: N65 for daytime and N60 for night-time noise | Measuring noise from GA presents challenges due to its variable nature. Despite this, given that air traffic is observed to be concentrated closer to the centre of the MLLR, and is expected to remain so after the proposed airspace reclassification, only a minimal number of flights are anticipated to fly into the eastern extension. It is anticipated that aircraft events exceeding 65 dB LAmax in the new areas will be infrequent, occurring less than once a week, based on expected aircraft numbers and distribution. | In the current extents of the MLLR there will be no change in the number or location of noise events above 65 dB LAmax (daytime) and 60 dB LAmax (night-time) predicted from that which would otherwise occur in the baseline scenarios. |

| Environmental Factor | CAP1616 Requirement | MLLR Assessment | MLLR Conclusion |
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| | | The proposed amendment would also allow airspace users to fly at an increased altitude of up to 200ft higher, from 1300ft to 1500ft. However, this 200ft change in operational altitude is unlikely to have any noticeable impact on the environment. | In addition, aircraft events exceeding 65 dB LAmax in the eastern extension are anticipated to occur less than once a week. |
| **Overflight** | Overflight contours | In the current extents of the MLLR, the proposed re-classification of airspace is not expected to change the volume of aircraft or aircraft track over the ground), however aircraft are anticipated to take advantage of the additional 200ft of airspace from raising the MLLR ceiling from 1300ft to 1500ft. This will mean that aircraft are higher over the ground.<br><br>The raising of the ceiling height from 1300ft to 1500ft would however increase the area overflown by single aircraft events by widening the overflight swathe by approximately 110 metres (i.e. by 55m either side of the centreline according to CAA definition of overflight[1]).<br><br>Although the eastern edge of the MLLR has been widened, aircraft are not anticipated to transit regularly within this new portion of airspace and will instead remain | In the current extents of the MLLR there is anticipated to be no change in overflight from the number of people overflown that would otherwise occur MLLR without the proposed change (i.e. no change in the future baseline scenarios without the reclassification of airspace).<br><br>In the eastern extension new locations will be overflown however flights within these new locations |

[1] CAP1498: Definition of overflight | Civil Aviation Authority (caa.co.uk)

| Environmental Factor | CAP1616 Requirement | MLLR Assessment | MLLR Conclusion |
|---|---|---|---|
| | | operating in the central volumes of the airspace. Due to the nature of Class G airspace being uncontrolled it is not possible to predict how aircraft will fly but we anticipate aircraft flying in this extension will be infrequent, occurring less than once per week based on current volumes of traffic and distribution.<br><br>The eastern extension has been proposed to increase safety by aligning the north-south boundary to the east of the airspace with multiple ground reference points, providing clear reference points to increase a pilot's situational awareness, as well as resilience against GPS jamming, spoofing or device failure. In addition to these ground reference points the new boundary is in alignment with the line of longitude 02'30''W. This makes it easy for pilots using a GPS device to remain outside CAS, as well as the line itself also being clearly displayed on VFR chart | are anticipated to occur less than once a week. These locations newly overflown include (North to south) Great Budworth, Upper Marston, areas of central Northwich, Leftwich, Davenham, and Mere Heath. |
| **Operational diagrams** | Operational diagrams | Not required. CAA CAP 1616i para 4.2 identifies that operational diagrams are useful communication tools with limited applicability in the assessment process, CAP 1616i para 5.36 goes further to say operational diagrams portray a representation of how the airspace is to be used, however they do not portray noise impacts but can assist understanding of the change, | N/A – not required for assessment purposes. Operational diagrams are provided within the consultation document to help assist the understanding |

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| | | especially when viewed in conjunction with noise metrics. | of the change. See CAP2992[2]. |
| **Noise (other additional metrics)** | Other noise metrics where relevant | Not required. Other noise metrics are considered appropriate for allowing communities to understand the noise impacts that could result from the proposed change. It is concluded there are no adverse noise impacts because of this change and therefore no requirement for additional noise metrics. | N/A – not required for assessment purposes. |
| **Noise (call-in)** | Assessment of whether the anticipated noise impacts meet the criteria for a proposal to be called-in by the Secretary of State (paragraph 7(c) of Direction 6 of the Air Navigation Directions 2023). | As per CAA CAP 1991 para 37 to 39 there is no ability for the Secretary of State to 'call-in' a CAA proposal under this procedure. | N/A – not required for proposals submitted under CAP 1991 |
| **Greenhouse gas emissions** | Annual CO2e totals and | In Class G airspace (i.e. uncontrolled) there are no | The proposal will not lead to a |

[2] https://www.caa.co.uk/publication/download/21963

| Environmental Factor | CAP1616 Requirement | MLLR Assessment | MLLR Conclusion |
|---|---|---|---|
| | evaluated by Department for Transport's transport analysis guidance (TAG). | restrictions on which aircraft can use it and the routes they take. However, it is anticipated that there will be no change to traffic volumes or flight paths over the ground and therefore no change in greenhouse gas emissions from the current situation. | change in greenhouse gas emissions from that which would otherwise occur in the baseline scenarios. |
| **Local air quality** | Explicit consideration of, and evaluated by Department for transport analysis guidance (TAG) where necessary. | Within the MLLR there are currently several AQMAs including the Warrington AQMA number 4. The widening of the MLLR to the east encompasses a portion of the Warrington AQMA number 1, which, is on the junction of the M6 and M56 motorways.<br><br>Although AQMAs are in the vicinity of proposed changes, there are not expected to be any changes to aircraft ground tracks or an increase in aircraft volumes and therefore no change in aircraft operations below 1,000ft and hence no change in local air quality emissions. Due to the effects of mixing and dispersion, emissions from aircraft above 1,000 feet are unlikely to have a significant impact on local air quality. | The proposed reclassification will not lead to a breach of a legal air quality limit, or worsening of an existing breach. |
| **Tranquillity** | Explicit consideration of impacts on National Parks, Areas | There are no National Parks, Areas of Outstanding Natural Beauty or nominated Quiet Areas located inside of the proposed boundaries of the MLLR or within 405 m of the proposed boundaries. The distance | There are no National Parks, Areas of Outstanding Natural Beauty or nominated |

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| | of Outstanding Natural Beauty (AONB), National Scenic areas (NSA), designated Quiet Areas and any other locally identified tranquillity areas using overflight contours or operational diagrams. | of 405 m is based on the CAP1498 definition of overflight for an aircraft at 1500ft. | Quiet Areas overflown by traffic operating within the MLLR. |
| **Biodiversity** | Explicit consideration of impacts on European sites and other locally identified biodiversity areas using overflight contours or operational diagrams. assessment under habitats regulations assessment | Within the boundaries of MLLR, there are several Special Areas of Conservation (SAC), Sites of Special Scientific Interest (SSSI), Ramsar sites (wetlands), and Local Nature Reserves. These European habitats are already within the MLLR boundary and as such will not be affected by any of the proposed changes. The Witton Lime Beds SSSI is under the eastern extension of the MLLR, however SSSIs are not considered under the requirements for HRA assessment.<br><br>There are no anticipated changes to air traffic patterns or number of movements below 3,000 feet due to the reclassification of airspace and therefore there will be no additional | The proposed reclassification of airspace will not cause additional impacts to protected habitat sites from that which would occur during the baseline scenarios. |

| Environmental Factor | CAP1616 Requirement | MLLR Assessment | MLLR Conclusion |
|---|---|---|---|
| | requirements as specified by the CAA. | impacts on protected European habitats (i.e. Special Areas of Conservation (SAC), possible SACs, Special Protection Areas (SPA), potential SPAs, Ramsar sites (wetlands of international importance) or proposed Ramsar sites).<br><br>The distance of 3,000 feet is based on the CAP 1616 early screening assessment. If no changes to air traffic patterns or numbers of movements are expected below 3,000 feet due to the proposal, then the habitats regulation assessment is no longer required. | |