



UNITED KINGDOM

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**MILITARY LOW FLYING TRAINING IN THE UNITED KINGDOM**

**1 Introduction**

1.1 The United Kingdom Military Low Flying System (UKLFS) is sponsored by the MoD. The Directorate of Airspace Policy and the MoD co-sponsor this Circular to inform civilian pilots about military low flying training operations in the UK in the interest of mutual flight safety.

1.2 Low flying training remains an essential element in the tactical inventory of an effective air force and regular training in a realistic environment is essential to maintain operational capabilities. Over the UK, low flying is carried out by the Royal Air Force, Royal Navy, Army Air Corps and the UK based 16th United States Air Force. To a much lesser degree, training is also conducted by other NATO air forces.

**2 The United Kingdom Military Low Flying System (UKLFS)**

2.1 The UKLFS extends across the whole of the UK and surrounding overseas areas, from the surface to 2000 ft. This permits a wide distribution of activity, which contributes to flight safety and reduces the environmental impact of low flying. Military pilots are directed to avoid major conurbations, built up areas, Controlled Airspace (CAS), Aerodrome Traffic Zones (ATZ) and other sensitive locations. Inevitably, the protection given to these areas creates unavoidable concentrations of military low flying activity where corridors are formed between them. Where necessary, military pilots follow uni-directional flows below 2000 ft to reduce the risk of conflict. These flow structures are published at UK AIP ENR 6-5-2-1.

2.2 The UKLFS comprises the airspace vertically from surface to 2000 ft agl/amsl extending laterally to the FIR boundary. For ease of management the airspace is sub-divided into Low Flying Areas (LFA) by day and a different structure of Night LFAs/Sectors at night (See Annex A and B) The Low Flying Booking cell (LFBC) based at RAF Wittering is responsible for the day-to-day management of the majority of the UKLFS. Certain LFAs, nominated as Dedicated User Areas (DUA), are allocated for special use (such as concentrated helicopter training) and are managed under local arrangements. Civil pilots should be aware that Unusual Air Activity (UAA) and night exercises are frequently conducted in DUAs including aircraft operating without, or with reduced lighting particularly when in formation. A limited amount of UAA is conducted in other areas of the UKLFS, which will usually be promulgated by AUS NOTAM.

2.3 In the North of Scotland, the Highlands Restricted Area (HRA) is used for special training, often in Instrument Meteorological Conditions (IMC). To ensure safety, entry by Civilian and non-participating military aircraft is normally prohibited during the promulgated operating hours. Details of the HRA, and its operating periods, are contained in AIC 40/2005 (Pink 81) and UK AIP ENR 5-1-2-4.

2.4 UK Danger Areas are regularly used for weapons training. This can lead to an increased amount of low flying in the surrounding airspace. Details of Danger Areas can be found in the UK AIP ENR 5.1.

**3 Military Low Flying Activity**

3.1 Military fixed wing aircraft (except light aircraft) are considered to be low flying when less than 2000 ft Minimum Separation Distance (MSD), which is the authorised minimum separation, in all directions, between an aircraft and the ground, water or any obstacle. The lowest height at which military aircraft normally fly is 250 ft MSD. However, in three specially designated areas, known as Tactical Training Areas (TTA), located in Mid-Wales, in the Borders of Scotland and in the North of Scotland, a small number of flights may be authorised to fly down to 100 ft MSD. Military light propeller aircraft and helicopters are considered to be low flying when operating below 500 ft MSD. In practice, most military low flying takes place between 250 ft and 600 ft MSD, decreasing in intensity up to 1000 ft MSD and reducing further in the 1000 ft to 2000 ft height band. Occasionally, however, military aircraft perform high-energy manoeuvres between 250 ft and 2000 ft, during which rapid changes in height, speed and direction of the aircraft will occur.

3.2 The vast majority of low flying training is conducted on weekdays between 0700 and 2300 (Local), although a limited amount may take place outside these times or at weekends. Fast jet aircraft are normally limited to a cruising speed of 450 kt, although speeds of up to 500 kt can be authorised for short periods during simulated attacks and practice interceptions. Of course, light propeller aircraft and helicopters operate at much lower speeds.

3.3 Most low flying takes place in the UK Flight Information Regions (FIR), outside CAS, where ground radio and radar coverage is not adequate to provide a radar service to military aircraft flying at low level. It would be equally impractical for military jet aircraft to achieve de-confliction by contacting ATC units. Military low flying is only conducted in Visual Meteorological Conditions (VMC), where pilots not only fly with visual reference to the surface, but also apply the 'see and avoid' principle regarding other aircraft. The exception to this rule is low flying in the HRA, when active, which is regularly conducted in limited visibility using terrain following radar.

3.4 The LFBC based at RAF Wittering disseminates information on hazards and restrictions, including Civil Aircraft Notification Procedure (CANP) and some recreational aviation activities, to military aircrews via a military NOTAM distribution network. It is also possible for some late warnings to be passed to aircrew by telephone before flight, but once airborne, because of high transit speeds, frequency distribution and terrain screening, there is a limit on the extent to which ground to air communications can be maintained.

#### **4 Civilian Low Flying**

4.1 Civilian pilots engaged in low level aerial work might be subject to aircraft manoeuvring limitations and/or restricted lookout. CANP exists to provide military aircrews with information on civil aircraft below 1000 ft agl engaged in crop spraying, photography, surveys or helicopters carrying under-slung loads. Military aircraft flying at speeds in excess of 140 kt will avoid the notified CANP areas of operation either laterally or vertically, with a separation of not less than 500 ft. Recreational activities will not normally attract CANP avoidance areas, but military aircrew will take account of some specified activities when planning low flying sorties. Information on the use of CANP is published in AIC 91/2006 (Yellow 214) and UK AIP ENR 1-10-13 to 1-10-17

4.2 To reduce the risk of conflict with low flying military aircraft, civilian pilots conducting transit flights under Visual Flight Rules (VFR) during the working week are recommended to fly above 2000 ft agl if possible. In particular, they should avoid operating in the 250 ft to 1000 ft height band. When departing from aerodromes in the FIR, pilots should endeavour to reach 1000 ft as quickly as possible, and to delay descent below 1000 ft for as long as possible when approaching such aerodromes. Military pilots are directed to avoid ATZs. Where an ATZ is established, civilian pilots are recommended to fly circuits and procedures within the ATZ as far as they can. In the vicinity of aerodromes without an ATZ, military pilots will apply the 'see and avoid' principle.

#### **5 Conclusion**

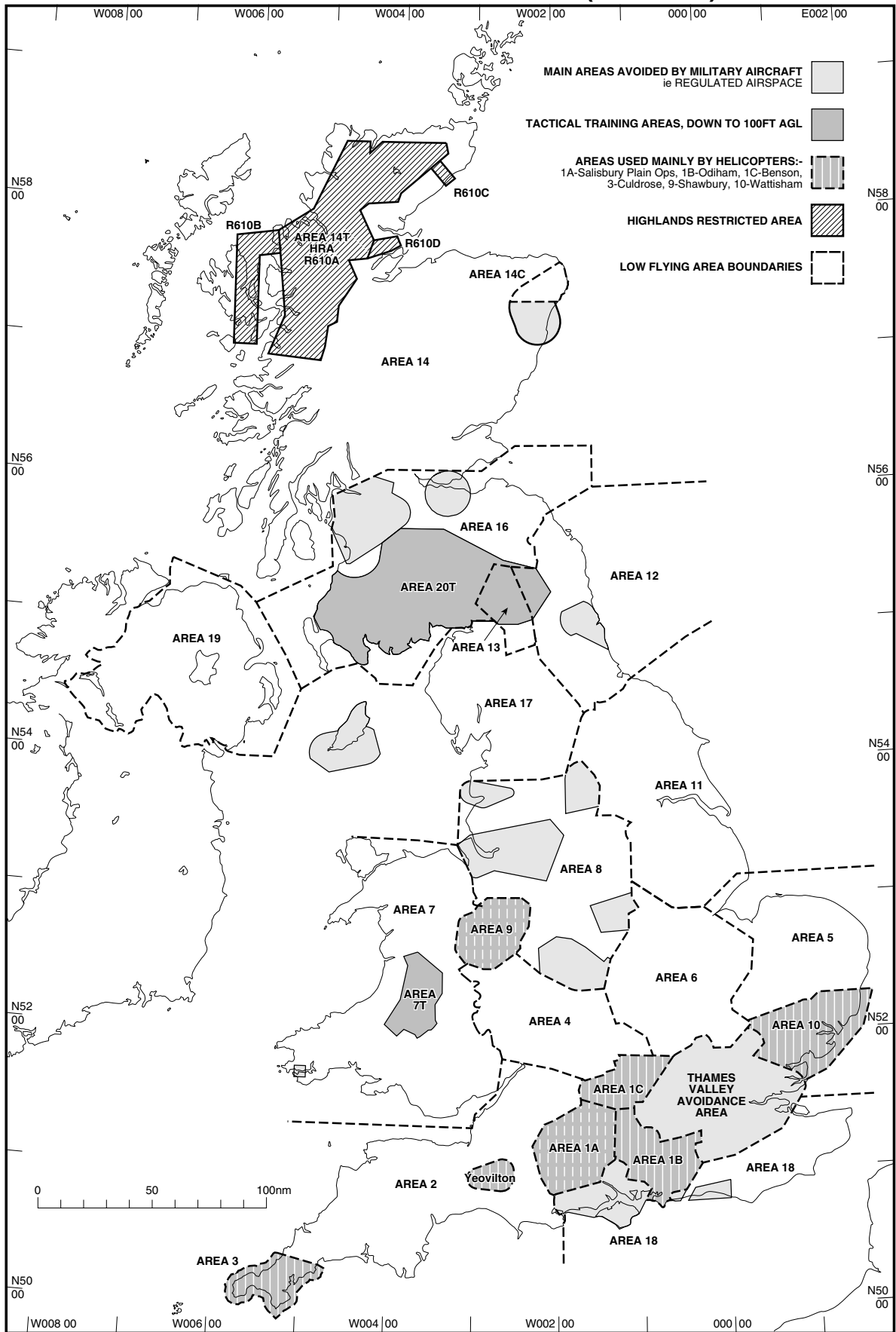
5.1 In UKLFS airspace, as elsewhere in the FIR, de-confliction depends on pilots seeing and avoiding other aircraft. Civilian pilots can make a considerable contribution to flight safety by flying above 1000 ft whenever possible and remaining aware that some military flying occurs in the 1000 ft to 2000 ft height band.

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This Circular is issued for information, guidance and necessary action.

# Annex A

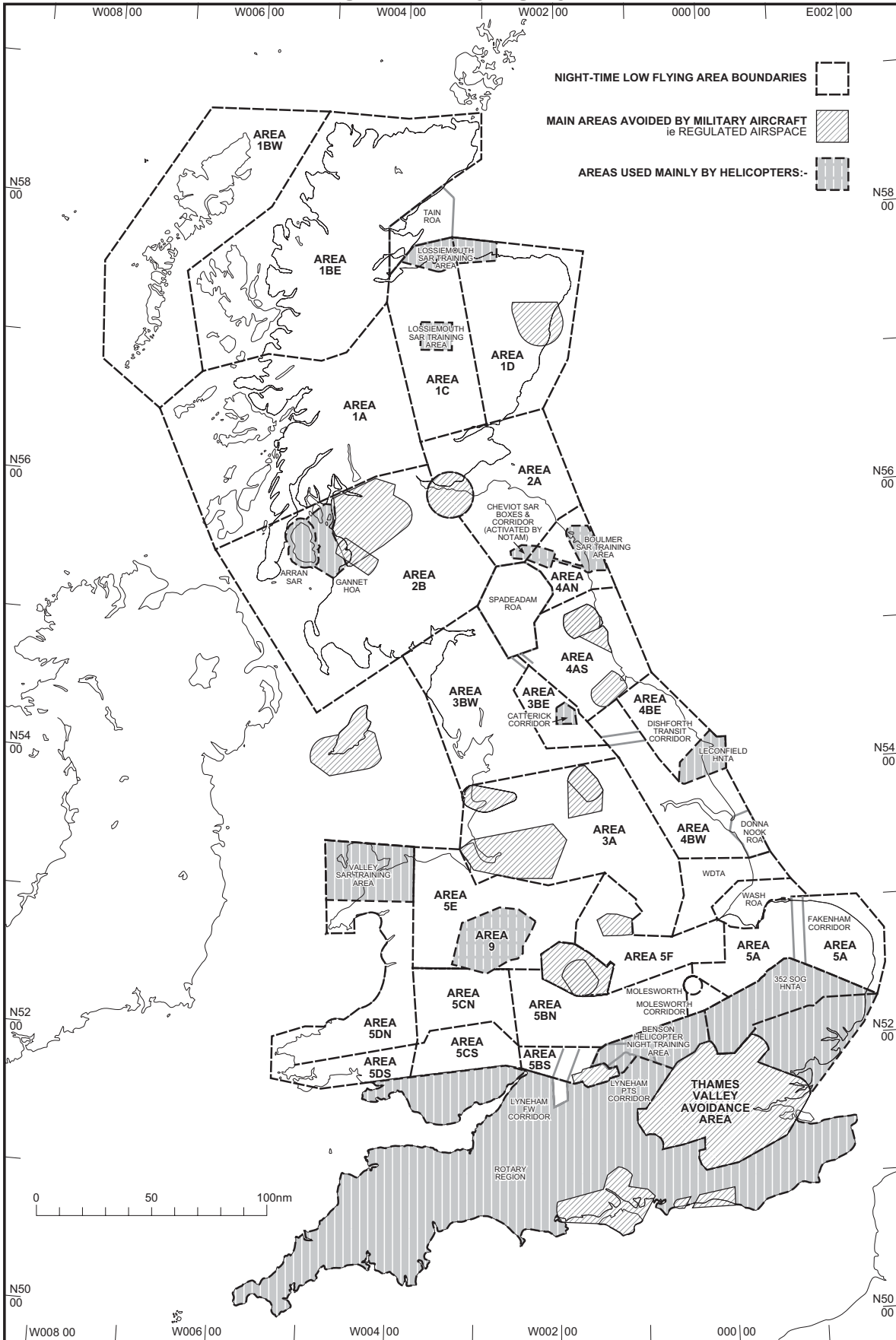
## UK DAY LOW FLYING SYSTEM (UK DLFS)



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# Annex B

## UK Night Low Flying System



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