The need for military aircraft to low fly started with the advent of military aviation, over 100 years ago. During the First World War, military aircraft flew low level ground support and reconnaissance missions over the trenches. By the time of the Second World War, low level tactics had been further developed to include a strategic low level role for Lancaster bombers, and a precision low level tactical bombing role for Mosquito and other aircraft.
With the introduction of radar-guided surface-to-air missile and gun systems, low level tactics became vital to enable aircraft to fly below radar coverage to evade or delay engagement, whether for offensive action, or to transport troops and equipment both in fixed and rotary-wing aircraft.
Today, low level tactics are a vital element in our ability to be able to respond to any scenario around the world. Low level tactics are not only used on operational war-fighting duties, but are also a vital part of peace-support and humanitarian operations, and ensure the Nation maintains strong conventional air forces, ready to deploy to meet any crisis.
In the early 1960s, a military low flying system was developed in the UK to ensure low flying training was regulated and conducted safely. Before 1979, the Low Flying System was largely designed around the long-range strategic V-Bomber Force that carried the UK’s nuclear deterrent.

The pre-1979 Low Flying System comprised a number of low flying areas in largely rural areas, linked by a system of routes and corridors.

With the introduction in the mid-1970s and early 1980s of longer-range tactical aircraft such as the Buccaneer, Jaguar and Tornado, the requirement for low flying training increased, but this activity remained concentrated in the limited low flying areas and their inter-linking routes.
In 1979, major changes were made to the UK Military Low Flying System, following two main principles: fairness and training capability.

Rather than concentrating low flying training on more remote rural areas, in principle all of the UK was made available for low flying training, to share any potential impact of this training activity as fairly as possible across all the population.

And by opening up additional airspace for low flying training, tactical aircraft could fully exploit and develop their capabilities over long-range low level sorties.

This is the Low Flying System that is in place today.
The UK Military Low Flying System comprises 18 Low Flying Areas shown in green, and 3 Tactical Training Areas shown in red on the map.

Because helicopters have less range than fast-jet aircraft, much of their training is concentrated close to their bases. These areas are termed Dedicated User Areas, and there are 6 in the UK, shown in yellow on the map.

Low flying is permitted across the majority of the UK except for major conurbations, civil airports and certain key industrial and medical sites. The major avoidance areas are depicted in purple on the map.

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Fast-jet aircraft can fly down to a minimum of 250 feet minimum separation distance throughout the UK Low Flying System. Their cruise speed is limited to 450 kts but higher speeds are possible for certain, short duration events such as target runs.

To realistically train for operations, fast-jets can fly down to a minimum of 100 feet minimum separation distance in the 3 Tactical Training Areas. Tactical Training accounts for about 1% of all low flying.

C-130 Hercules aircraft also fly down to 250 feet minimum separation distance, and can fly down to 150 feet minimum separation distance in Tactical Training Areas.

Fast-jets, C-130s and helicopters also fly low level at night, an increasingly important tactical capability.
Helicopters normally operate down to 100 feet above ground level, but due to the nature of their task, for specific training purposes they may fly down to ground level.

Because helicopters are frequently tasked to support troops on the ground, most helicopters are based in the south of the UK close to Army Units and will therefore be seen more often than in the north of the UK.
Military aircrew train at low level within a clear regulatory framework that sets out what activities they are authorised to conduct, and what limitations are placed on those activities. The regulations and limitations are designed to ensure that training is appropriate for the operational task, and is conducted at a very high level of safety with minimum potential for disturbance to the public.

To ensure confidence in the conduct and control of military low flying training, covert monitoring using Skyguard Radar of both routine activity and major exercises is conducted by the Defence Flying Complaints Investigation Team, a specialist Military Police unit. In addition, this unit is responsible for investigating any alleged infringement of low flying regulations.
Low flying is a demanding skill that is acquired through progressive training and continuous practice. In today’s uncertain world, we can never predict exactly when our armed forces will be called on to protect the Nation, to assist in peacekeeping or to provide humanitarian support. We simply must be ready when we are needed.
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