

Air Proximity Hazards (AIRPROX)



Air Proximity Hazards

An AIRPROX (commonly referred to as a 'near miss') is a situation in which, in the opinion of a pilot or an air traffic controller, the distance between aircraft as well as their relative positions and speed, had been such that the safety of the aircraft involved was or may have been compromised. Article 226 of the [Air Navigation Order \(ANO\)](#) lists persons who must report to the CAA any occurrence that endangers an aircraft, its occupants or any other persons.

The submission of AIRPROX reports forms part of the Mandatory Occurrence Reporting (MOR) Scheme. The objective of this scheme is to contribute to the improvement of air safety by ensuring that relevant information on safety is reported, collected, stored, protected and disseminated. The sole objective of occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability. [Civil Aviation Publication \(CAP\) 382: The Mandatory Occurrence Reporting \(MOR\) Scheme](#) provides guidance to those, who by legislation, are involved in its operation and can be accessed through the following link: <http://www.caa.co.uk/docs/33/CAP382.pdf>.

Once a report has been submitted, the matter will be further investigated and all of the accumulated information is presented to the UK Airprox Board (UKAB). The board will assess all of the information included in the investigation report to determine two things: a) what factor(s) caused the AIRPROX and b) the degree of risk of collision. All relevant points from the Board's deliberations are then added to the initial report and on completion, copies sent to those pilots and air traffic controllers involved in the incident. Subsequently, all reports are published so that safety lessons identified can be disseminated in the interest of flight safety for the benefit of all.

You can contact the UK Airprox Board using the following details:

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Whilst pilots and air traffic controllers are constantly alert to the possibility of a reduction of the minimum required separation between aircraft, there are also many warning systems that activate if it appears that safety is going to be, or indeed has, been compromised. The following provides basic information on some of the systems currently in use:

- **Traffic Collision Avoidance System (TCAS):** A system fitted to commercial aircraft that warns the pilot of the close proximity of other aircraft. In certain circumstances, TCAS will advise pilots of a recommended course of action to resolve the situation.
- **Short Term Conflict Alert (STCA):** An air traffic control system that highlights to radar controllers that there is a potential conflict between 2 or more aircraft.
- **Separation Monitoring Function (SMF):** A system that automatically records the flight profile details of aircraft that have been involved in a loss

of standard separation. Whilst SMF will not prevent a loss of separation from occurring, it will mean that an incident is brought to the attention of the air traffic control authorities and will be investigated accordingly.

Some enquiries received by the Aviation Related Environmental Enquiries section come from members of the general public, who wish to report that they have witnessed a 'near miss'. Whilst aircraft may appear to be operating at a similar altitude, it should be highlighted that even for the expert eye, accurately judging the height of 2 or more aircraft can be extremely difficult, especially if the higher aircraft is larger than the other. Nonetheless, the details of any such report are recorded and crosschecked against the MOR scheme database. However, it invariably proves to be the case that whilst the aircraft involved were on converging tracks, they were separated vertically, i.e. they were at different heights. Indeed, vertical separation is fundamental to air traffic systems worldwide, in the UK, at all levels and even in the worst weather conditions, air traffic controllers can cross aircraft 1000 feet above or below each other. In good weather, in areas where an air traffic control service is not mandatory, pilots can significantly reduce this 1000 feet vertical separation and still operate with complete safety on a 'see and avoid' basis.

The responsibility of collision avoidance in Uncontrolled Airspace (UCAS) ultimately lies with the pilot of the aircraft; the UCAS environment relies on the principle of 'see & avoid' whereby pilots acquire visual contact with possible conflicting aircraft and take appropriate action to ensure that safe separation is maintained at all times. This action is also governed by the Rules of the Air (RoA) Regulations and depends on the relative position of the conflicting aircraft. For example, Rule 10 states that:

'When two aircraft are approaching head-on, or approximately so, in the air and there is a danger of collision, each shall alter its course to the right.'

The CAA's [General Aviation Safety Sense Leaflet 13: Collision Avoidance](#) recommends certain operational techniques in order to help minimise the risk of collision. Whilst recommending best practice, the information contained within this leaflet is guidance material only and it should be noted that pilots are not legally required to carry out all of the recommendations within it.

Aircraft at airshows sometimes fly closer together than the normal levels of separation

