SAFETYSENSE LEAFLET 18
MILITARY LOW FLYING

1 INTRODUCTION

a) The purpose of this Leaflet, which is based on AIC 93/2006 (Yellow 216), is to inform civilian pilots about military low flying training operations in the UK, in the interests of mutual flight safety. The ability to operate close to the terrain is an essential element of an effective air force and regular training in a realistic environment is necessary to maintain operational capabilities.

b) Over the UK, low flying is carried out by the Royal Air Force, the Royal Navy, and the Army Air Corps. A small amount of low flying is also undertaken by other NATO air forces.

c) At all times when low flying, military pilots are required to maintain a minimum separation, in all directions, between their aircraft and the ground, water or any obstacle, and the authorisation for each flight specifies the particular Minimum Separation Distance (MSD) permitted.

2 THE UK MILITARY LOW FLYING SYSTEM

a) The United Kingdom Low Flying System (UK LFS) covers the whole of the UK and surrounding over-sea areas, from the surface to 2,000 ft. This permits wide distribution of the activity in order to reduce the impact on the environment. Military pilots must avoid major built-up areas, Controlled Airspace, Aerodrome Traffic Zones (ATZ) and other sensitive locations. Inevitably, the protection given to these areas creates unavoidable concentrations of military low flying activity where traffic is constrained between sensitive locations. Where necessary, military pilots, except those of helicopters flying below 200 ft MSD, follow established uni-directional flows when flying below 2,000 ft to reduce the risk of confliction. These flow arrangements, which apply in daylight hours only, over areas and through 'choke' points, are published on CAA chart UK AIP ENR 6–5–2–1. 'Areas of Intense Aerial Activity, Aerial Tactical Areas and Military Low Flying System'. However, the published markings only indicate the general direction of flow, not specific tracks.

b) For administrative purposes, the UK LFS is divided into Low Flying Areas (LFA). Certain LFA, nominated Dedicated User Areas (DUA), are allocated for specific use, e.g. concentrated helicopter training, and are managed under local arrangements. Salisbury Plain and the surrounding area is a DUA. It is used mainly by Army Air Corps helicopters, although other military aircraft may be encountered. Civil pilots should be aware that night exercises are frequently conducted in this area without, or with limited, navigation lights. Details of the Salisbury Plain night training area are in the ENR 1.1.5 section of the UK AIP. Similar night exercises may be conducted in the airspace of Northern Ireland. Details are promulgated by **UK NOTAM** when such exercises are conducted in other areas of the UK LFS, and when any major exercise is programmed. Details of these exercises may also be found on the Ministry of Defence website www.mod.uk.

c) In the North of Scotland, the Highlands Restricted Area (HRA), designated EGR 610A, B, C and D, is used for special training, often in Instrument Meteorological Conditions (IMC). To ensure safety, entry by civil and non-participating military aircraft is prohibited during the promulgated operating hours – between 15.00 and 23.00 (local time) Monday to Thursday. Details of the HRA are contained in AIC 17/2008 (Pink 137) and UK AIP ENR 5-1-2-8. During operating hours crossing permission for Areas 610C and D may be available from **Tain Range on 122.750 MHz.** If the HRA has not been booked for specific military flying, access to the whole of the HRA airspace can be obtained from the Low Flying Booking Cell, on the Freephone number given in paragraph 3.1 of the AIC. A civil pilot

will be given clearance to operate in the HRA airspace for up to 3½ hours from the time of the telephone application. The airspace is available for normal use outside the above and during Scottish Bank holidays.

d) 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

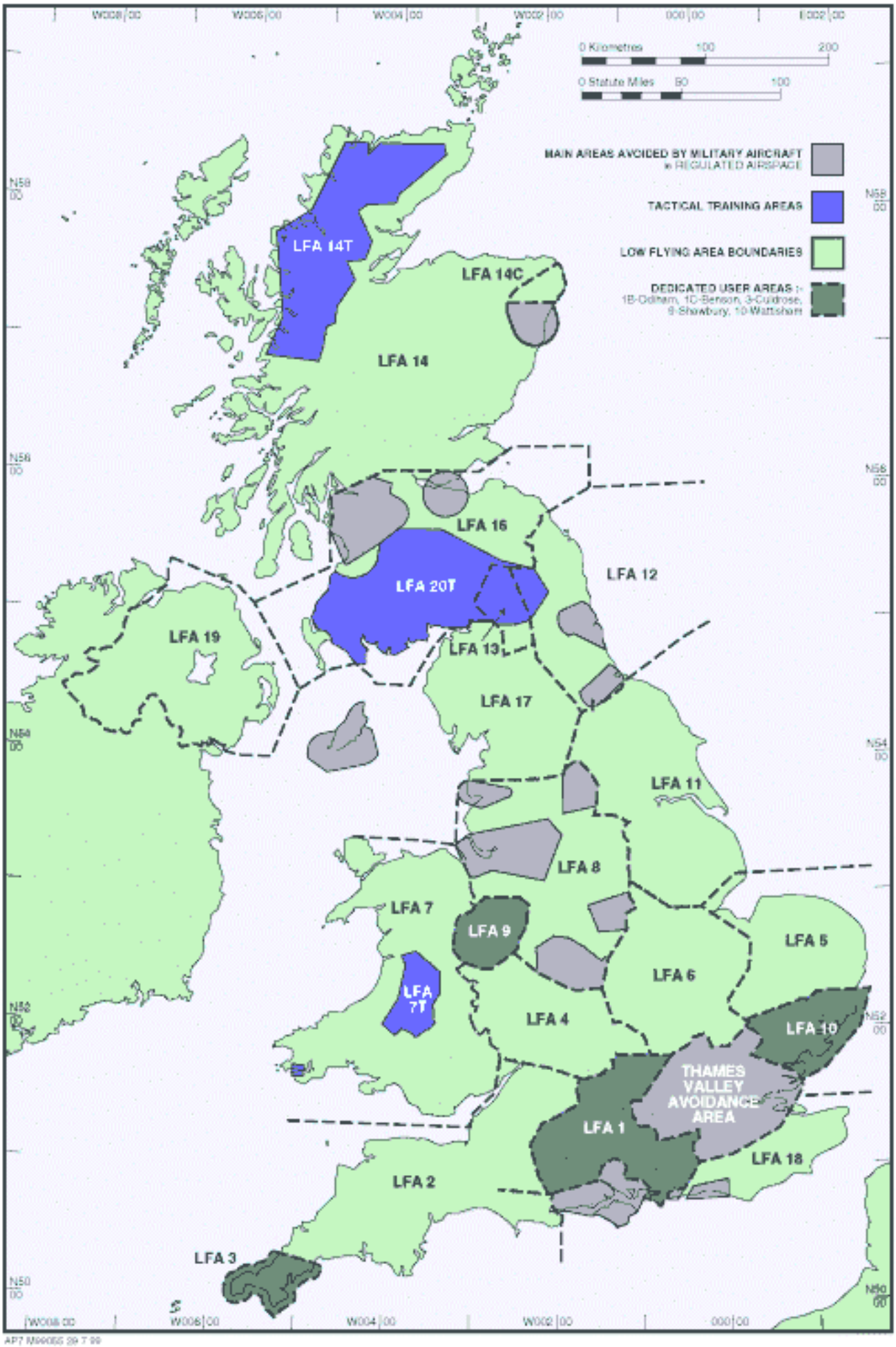
a) Military fixed-wing aircraft (except light aircraft and helicopters) are considered to be low flying when less than 2,000 ft MSD. The lowest height at which fixed wing military aircraft normally fly is 250 ft MSD. However, in three specially designated areas, known as Tactical Training Areas (TTA) located in Mid-Wales, in the Borders/SW 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 below 500 ft MSD, and may be found right down to the surface. In practice, most military low flying takes place between 250 ft and 600 MSD, decreasing in intensity up to 1,000 ft MSD and reducing further in the 1,000 ft to 2,000 ft height band. However, occasionally military aircraft perform high-energy manoeuvres between 250 ft and 2,000 ft during which they rapidly change height, speed and direction.

b) Most low flying training is during weekdays and daylight hours, although it is necessary to carry out some low flying at night and occasionally at weekends. Fast jet aircraft are normally limited to a speed of 450 kt (7½ miles per minute), although speeds of up to 550 kt can be authorised for short periods during simulated attacks and practice interceptions.

c) Low flying takes place in the UK Flight Information Regions (FIR), outside Controlled Airspace, where ground radio and radar coverage is not adequate to provide a radar service. It would be impractical for military jet aircraft to avoid each other by contacting ATC units. With the exception of the HRA, 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.

d) All low flying military aircraft are required to carry and operate a serviceable transponder. An increasing number are fitted with a system which alerts the crew to the presence of any other aircraft which is operating a transponder.

UK MILITARY LOW LEVEL FLYING SYSTEM



4 CIVIL LOW LEVEL ACTIVITY

a) The Low Flying Booking Cell disseminates the information notified from the Civil Aircraft Notification Procedure (CANP), to all military flying units.

b) Civil pilots engaged in low level aerial work may be subject to aircraft manoeuvring limitations and/or restricted lookout. CANP exists to provide military aircrew with information on aircraft below 1,000 ft agl engaged in crop spraying, photography, surveys or helicopter underslung load work close to a declared site. Military aircraft at speeds in excess of 140 kt will avoid laterally, or by overflying with a separation of **not less than 500 ft,** the notified CANP area of operation. However, no provision is made for commercial (public transport) transit flights at low level.

c) **Recreational** activities notified under CANP will not normally be provided with CANP avoidance areas. However, where five or more aircraft (gliders, hang and paragliders, free balloons or microlights) plan to operate at a site which is not normally used, or will be outside the published hours, the Low Flying Booking Cell will issue a warning to military pilots.

d) The Low Flying Booking Cell should be contacted **not less than 4 hours** beforehand, but preferably earlier, to discuss CANP. This minimum period of 4 hours for notification is required so that aircrew can be advised during their flight planning. Notifications with less than 4 hours notice will generally be accepted but as the notice period diminishes, so does the likelihood of the message getting through. A Freephone facility is available on **0800 515544** or Freefax on **0800 3892225**. Full information on the use of CANP is published in AIC Y 053/2009 and UK AIP ENR 1.10.

e) Pilots should note that information about the Restricted Airspace (Temporary) associated with Red Arrows displays, **of 6 nm radius**, which may be at country fairs and seaside resorts, is available on **Freephone 0500 354802**. The information, which also includes Temporary Controlled and Restricted Airspace, is updated daily, at about 19.00 hours local, and is also available on 0208 899 2401. During summer weekends the Red Arrows and other display aircraft may transit at low level between displays and on weekdays may fly contrary to the flow arrows during the run-in to a display. A free sticker as illustrated is available from the CAA's Flight Operations Inspectorate (GA Safety Promotion) at Aviation House 1W, Gatwick Airport South, RH6 0YR; please send a SAE.

f) Commercial helicopter operators who conduct pipeline inspection flights should refer to AIC Y 031/2009. 'Pipeline and Powerline Inspection Procedures'.

g) To reduce the risk of confliction with low flying military aircraft, pilots of civil aircraft on Visual Flight Rules (VFR) flights during the working week are advised to:

- fly above 2,000 ft agl if possible;
- particularly avoid operating in the 250 to 1,500 ft agl height band;
- operate their transponder, with altitude facility (Mode C), at all times;
- climb above 1,000 ft as soon as possible when departing from aerodromes (or landing sites) in the open FIR, and remain above 1,000 ft for as long as possible when approaching such aerodromes or sites;
- where an ATZ is established, fly circuits and procedures within the ATZ (military pilots are directed to avoid ATZs)

NOTE: at aerodromes without an ATZ, military pilots will apply the see and avoid principles; and

- keep a good lookout at all times; jet aircraft smoke trails may be visible before the camouflaged aircraft can be seen. (*Safety Sense Leaflet 13, 'Collision Avoidance' may be helpful*.)

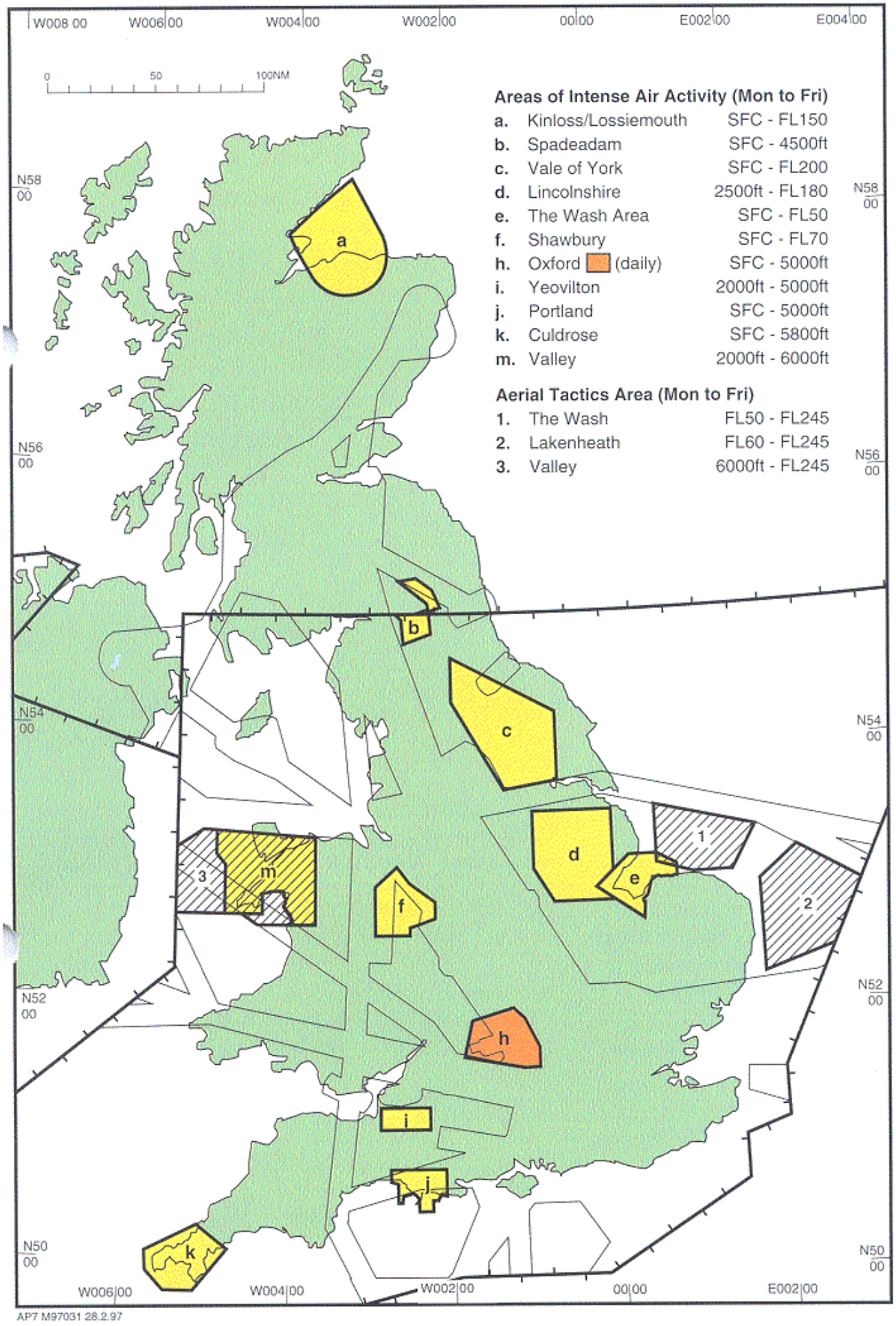
5 OTHER AREAS OF INTENSE ACTIVITY

In addition to the Military Low Level flying system the following areas should also be noted:

- AIAAs (Areas of Intense Aerial Activity), airspace within which military or civil aircraft, singly or in combination with others, regularly participate in unusual manoeuvres.
- ATAs (Aerial Tactics Areas), airspace of defined dimensions designated for air combat training within which high energy manoeuvres are regularly practiced by aircraft formations.

Pilots of non-participating aircraft who are unable to avoid these areas, described in the AIP (ENR 6–5–2–1 and ENR 5.2. 'Areas of Intense Aerial Activity, Aerial Tactical Areas and Military Low Flying System') are strongly advised to make use of a radar service and maintain a particularly good lookout.

AREAS OF INTENSE AIR ACTIVITIES AND AERIAL TACTICS AREA



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6 AIRPROX REPORTING

Whenever, in the opinion of a pilot (or a controller), the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved was or may have been compromised the pilot should:

- immediately report by radio to the ATS Unit with which the pilot is in communication, prefixing the message AIRPROX. If this is not possible, immediately after landing in the UK, report by telephone or other means to any UK ATS Unit but preferably to an Area Control Centre.

Note: In the event of an alleged CANP infringement, in order that radar tracing can be implemented as soon as possible, use Freephone 0800 515544.

- It is highly important that every AIRPROX is reported immediately to the UK Airprox Board, when the incident occurred in UK airspace, with confirmation in writing, using Airprox Report Form CA1094 (available from address below) within 7 days to:

Director,
UK Airprox Board,
Bldg 59
RAF Northolt
West End Road
Ruislip
HA4 6NG

Tel: 0208 8426051 (normal hours),
Fax: 0208 8426056,
Telex: 934725 AFTN: EGGFYTYA.
e-mail: ops@airproxboard.org.uk

7 MAIN POINTS

In the airspace used by the military low flying system, as elsewhere in the open FIR, collision avoidance depends on pilots seeing and avoiding other aircraft. Civil pilots can minimise the risk by:

- being aware that military fast jet activity is of a lower intensity on Friday afternoons and does not normally take place on Saturdays or Sundays. However, there may be a few Hercules flights, some helicopter operations and transits by the Red Arrows and other display aircraft. Public holidays (bank holidays in Scotland) are avoided;
- using the Freephone 0500 354802 to check on Red Arrows Displays etc.;
- giving at least 4 hours notice to the Low Flying Booking Cell of low level aerial work and other activities notifiable under CANP;
- checking NOTAMs etc. for details of military exercises, particularly those which include low flying;
- flying **above 2000 ft agl** whenever possible;
- where possible **avoiding flying below 1000 ft agl;**
- operating a **transponder** with Mode C at all times;
- climbing above 1000 ft as soon as possible when departing at aerodromes and landing sites in the open FIR;
- staying above 1000 ft as long as possible when arriving at such aerodromes;
- keeping their circuit inside an ATZ;
- keeping a good look-out at all times.