

## **AIRPROX REPORT No 2014108**

**Date/Time:** 13 Jul 2014 1258Z (Sunday)

**Position:** 5147N 00156W  
(10nm SE Gloucester)

**Airspace:** London FIR (Class: G)

**Aircraft 1** **Aircraft 2**

**Type:** Dakota PA28

**Operator:** HQ Air (Ops) Civ Pte

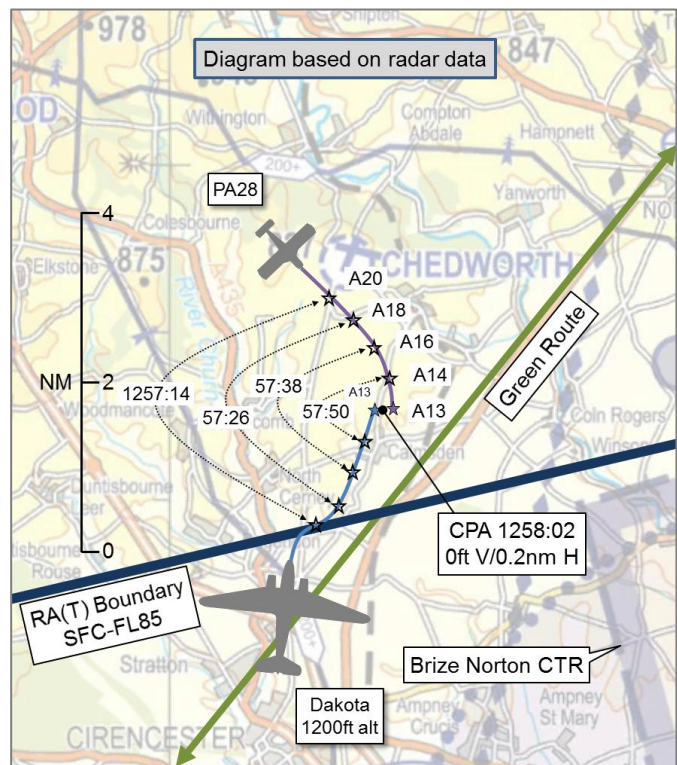
**Alt/FL:** 500ft 1400ft  
agl QNH (NK hPa)

**Conditions:** VMC VMC

**Visibility:** 10km 10km

**Reported Separation:**  
0ft V/200ft H 200ft V/400m H

**Recorded Separation:**  
0ft V/0.2nm H



## **PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

**THE DAKOTA PILOT** reports being established in a holding pattern prior to further flypast events en route having departed from the Royal International Air Tattoo (RIAT). The green and grey camouflaged aircraft had strobe and navigation lights selected on, as was the SSR transponder with Modes A and C. The aircraft was not fitted with an ACAS or TAS. The pilot was operating under VFR, in VMC, in receipt of a Traffic Service from Fairford, he reported<sup>1</sup>. Whilst established in a north/south hold, heading 010° at 125kt and 500ft, Fairford Approach passed Traffic Information on a contact in their left 11 o'clock at a range of 3nm, he recalled, crossing left to right, 400ft above. The right-hand-seat occupant saw a white and blue 'PA28 type' aircraft just right of the nose at a range of ½nm, co-altitude, on a reciprocal heading; a break manoeuvre to the left was carried out. During this manoeuvre, the conflicting aircraft was seen to roll left and pass within 200ft at the same altitude.

He assessed the risk of collision as 'High'.

**THE PA28 PILOT** reports flying inbound to Kemble airfield. The white, blue and red aircraft had strobe and navigation lights selected on, as well as the anti-collision beacon. The SSR transponder was selected on with Modes A, C and S. The aircraft was not fitted with an ACAS or TAS. The pilot was operating under VFR in VMC, in receipt of a Basic Service from Brize Zone. He was inbound to Kemble following the 'green route', as designated by the RA(T) established around Fairford. He stated that it 'sounded very quiet on frequency' and that he was cleared for the green route not above 1500ft, he recalled, on the Brize QNH. He stayed at about 1400ft whilst maintaining a good lookout as he was aware of his proximity to Fairford and the possibility of other traffic also using the green route. Whilst passing south abeam Rendcomb airfield, heading 220° at 95kt, he saw a Dakota in his right 2 o'clock position at a range of 400m, travelling in the opposite direction and slightly lower in altitude. They both made turns to the left, at about the same time, as it was 'standard procedure to give way to traffic on the right'. He stated that being at a higher altitude, it was difficult to see the Dakota due to its camouflage colour scheme.

He assessed the risk of collision as 'Low'.

<sup>1</sup> Actually a Basic Service.

**THE FAIRFORD CONTROLLER** reports operating from Brize Norton to provide control for the Royal International Air Tattoo (RIAT) at Fairford. He stated that an Airprox was not reported on frequency at the time and that he did not recall the incident.

**THE BRIZE SUPERVISOR** reports supervising LARS at the time of the incident. He was not aware of an Airprox at the time.

### Factual Background

The weather at Fairford was recorded as follows:

METAR EGVA 131250Z 32010KT 9999 -SHRA SCT028 BKN040 19/13 Q1008 BLU NOSIG

The RIAT was subject to a Temporary Restricted Area (RA(T)), as defined in AIC M 052/2014. The AIC is reproduced at Annex A.

The Kemble arrival/departure routes are reproduced at Annex B.

The RT transcript for Fairford is reproduced below:

From	To	Speech Transcription	Time
Dakota	Fairford	Fairford approach this is [Dakota C/S] departing VFR to the north west low level	12:53:16
Fairford	Dakota	[Dakota C/S] Fairford err director pass message	12:53:27
Dakota	Fairford	[Dakota C/S]	12:53:30
Fairford	Dakota	[Dakota C/S] err VFR departure approved err request type of service when leaving controlled airspace	12:53:37
Dakota	Fairford	Basic service for [Dakota C/S]	12:53:44
Fairford	Dakota	[Dakota C/S] roger reset squawk six four six seven	12:53:48
Dakota	Fairford	six four six seven for [Dakota C/S]	12:53:52
Dakota	Fairford	And err Fairford director do you have the err regional pressure setting please	12:54:15
Fairford	Dakota	[Dakota C/S] Cotswold one zero zero three and err new QHN new Fairford QNH one zero zero eight	12:54:20
Dakota	Fairford	One zero zero three and zero eight [Dakota C/S]	12:54:25
Fairford	Dakota	[Dakota C/S] basic service leaving controlled airspace	12:54:26
Dakota	Fairford	Basic service [Dakota C/S]	12:54:29
Fairford	Dakota	[Dakota C/S] traffic eleven o'clock two miles crossing left right indicating four hundred feet above	12:57:32
Dakota	Fairford	[Dakota C/S] looking	12:57:38
Dakota	Fairford	[Dakota C/S] visual	12:57:54

### Analysis and Investigation

#### Military ATM

All heights/altitudes quoted are based upon SSR Mode C from the radar replay unless otherwise stated.

The PA28 pilot was in receipt of a Basic Service from Brize Zone and the Dakota pilot was in receipt of a Basic Service from Fairford Approach (established at RAF Brize Norton ATSU for the duration of the RIAT).

At 1253:37, the Fairford Approach controller approved a VFR departure for the Dakota pilot, out of the RIAT RA(T) airspace, and requested the type of service. At 1253:44, the Dakota pilot requested a Basic Service and this was applied at 1254:26. The PA28 pilot was provided a Basic

Service at 1255:06. The PA28 pilot was in contact with Brize Zone and was cleared to Kemble via Northleach not above 1000ft on Kemble QNH 993hPa.

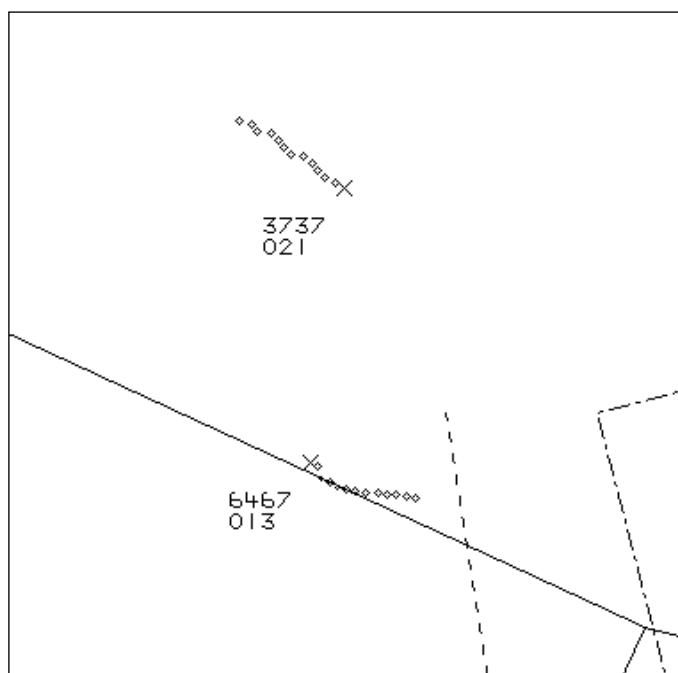


Figure 1: Geometry at 1257:02 (Dakota 6467; PA28 3737)

At 1257:32, Fairford Approach transmitted, “[Dakota C/S] traffic eleven o’clock, two miles, crossing left right, indicating four hundred feet above”, see Figure 2. At 1257:40, the PA28 pilot reported level at 1000ft, believed to be on 993hPa.

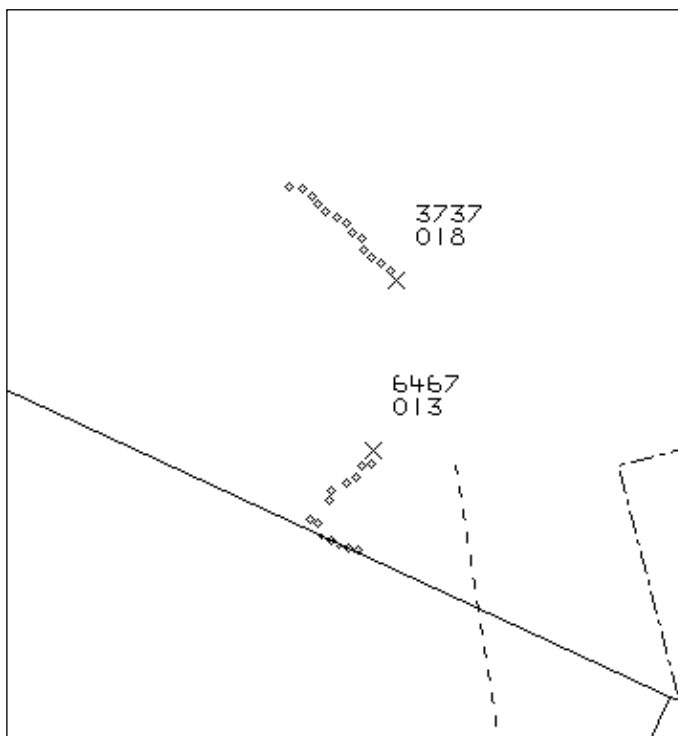


Figure 2: Geometry at 1257:32 Traffic Information with 2nm separation on radar

The Dakota pilot responded with ‘looking’ and declared ‘visual’ at 1257:54, see Figure 3.

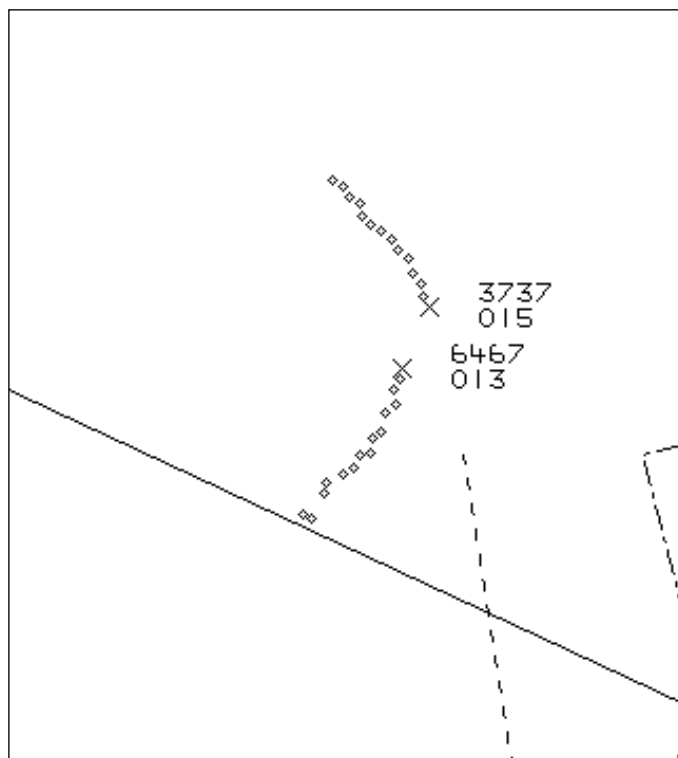


Figure 3: Geometry at 1257:54 as Dakota pilot reported visual

An Airprox was not reported by the PA28 pilot who reported visual with Kemble at 1258:38.

The Fairford Approach called accurate and timely Traffic Information to the Dakota pilot, in receipt of a Basic Service. The PA28 pilot was in receipt of a Basic Service with Brize Zone, on a conspicuity squawk. The Basic Service was provided for 4min; no Traffic Information was passed and the pilot did not report an incident on RT.

Lookout from the Dakota was limited due to cockpit design but this was a known limitation and the experienced crew were well aware of their responsibilities at low-level. Traffic Information from Fairford allowed the Dakota crew to direct their lookout for the PA28.

In the absence of ACAS or TAS information, the barriers of lookout and Traffic Information combined to allow the pilots to achieve visual contact and take avoiding action.

### UKAB Secretariat

The Dakota and PA28 pilots shared an equal responsibility for collision avoidance and not to fly into such proximity as to create a danger of collision<sup>2</sup>. If the incident geometry is considered as converging then the PA28 pilot was required to give way to the Dakota<sup>3</sup>.

### Comments

#### HQ Air Command

Once again lookout was the key to detecting, and then avoiding, an airborne conflict. What is of note here is that both aircraft were receiving an ATS from the same radar room (albeit on different frequencies) and came into close proximity, though it is clear that the Fairford controller passed accurate Traffic Information on the PA28 to the Dakota crew. Given that there was a published route (with an altitude) for non-airshow traffic destined for Kemble (the 'Green Route') the Dakota crew's selection of location and altitude for their hold prior to their next event is questionable and

<sup>2</sup> Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).

<sup>3</sup> *ibid.*, Rule 9 (Converging).

raises the issue of whether or not the Dakota Crew were aware of the 'Green Route'. Additionally, both the PA28 pilot and the Dakota crew may have been better advised to request a Traffic Service in the environs of a major international airshow. Finally, it is regrettable that the Dakota crew did not declare the Airprox on frequency; this requirement has now been re-briefed to all aircrew based at RAF Coningsby.

## Summary

An Airprox was reported when a Douglas Dakota and a Piper PA28 flew into proximity at 1258 on Sunday 13<sup>th</sup> July. Both pilots were operating under VFR in VMC and were both in receipt of a Basic Service, the Dakota pilot from Fairford Approach and the PA28 pilot from Brize Norton Zone.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from the pilots of both aircraft, a transcript of a relevant RT frequency, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board first considered the pilots' actions. The PA28 pilot was inbound to Kemble in receipt of a Basic Service from Brize Norton Zone, descending to his cleared maximum altitude (not above 1000ft on the Kemble QNH) with the intention of following the promulgated arrival procedure 'green route'. This procedure was not included in the relevant AIC but was promulgated to users of airfields affected by the RA(T) and to crews arriving and departing from Fairford. The Dakota crew had left Fairford and were holding at 500ft AGL (circa 1300ft QNH) to achieve a flypast at an event near Gloucester, some 10nm to the northwest. The pilot had negotiated a Basic Service, which did not require the controller to pass Traffic Information. Despite this, the controller did pass Traffic Information on the PA28, at a range of 2nm, which was acknowledged by the Dakota pilot.

The Board felt that although the PA28 pilot was required to give way to the Dakota, the Dakota crew had placed themselves in a position near the green route at an altitude where conflict with incoming traffic was likely; the Dakota crew should have been aware of the green route from their RIAT briefings but the Board felt that they may not have factored its location into their planning of the hold for the subsequent flypast. In the event, the Dakota crew were given timely and accurate Traffic Information but only saw the PA28 at a late stage and had to break left in order to avoid it. The Board felt that the crew could have better correlated the Traffic Information they had received with their knowledge of the likely path of the conflicting PA28 (the green route) to achieve greater separation; they determined therefore that the Dakota pilot had flown into conflict with the PA28.

Some members were of the opinion that effective and timely actions had been taken to prevent the aircraft colliding, but the majority were of the opinion that the separation was such that safety margins had been much reduced below the normal; Risk Category B.

## **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: The Dakota pilot flew into conflict despite good Traffic Information.

Degree of Risk: B

ERC Score<sup>4</sup>: 21

<sup>4</sup> Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.

**AERONAUTICAL INFORMATION CIRCULAR M 52/2014**

**UNITED KINGDOM**

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**Subject**

Airspace Restrictions



**RESTRICTION OF FLYING REGULATIONS – ROYAL INTERNATIONAL AIR TATTOO, ROYAL AIR FORCE FAIRFORD, GLOUCESTERSHIRE – 9 - 14 JULY 2014**

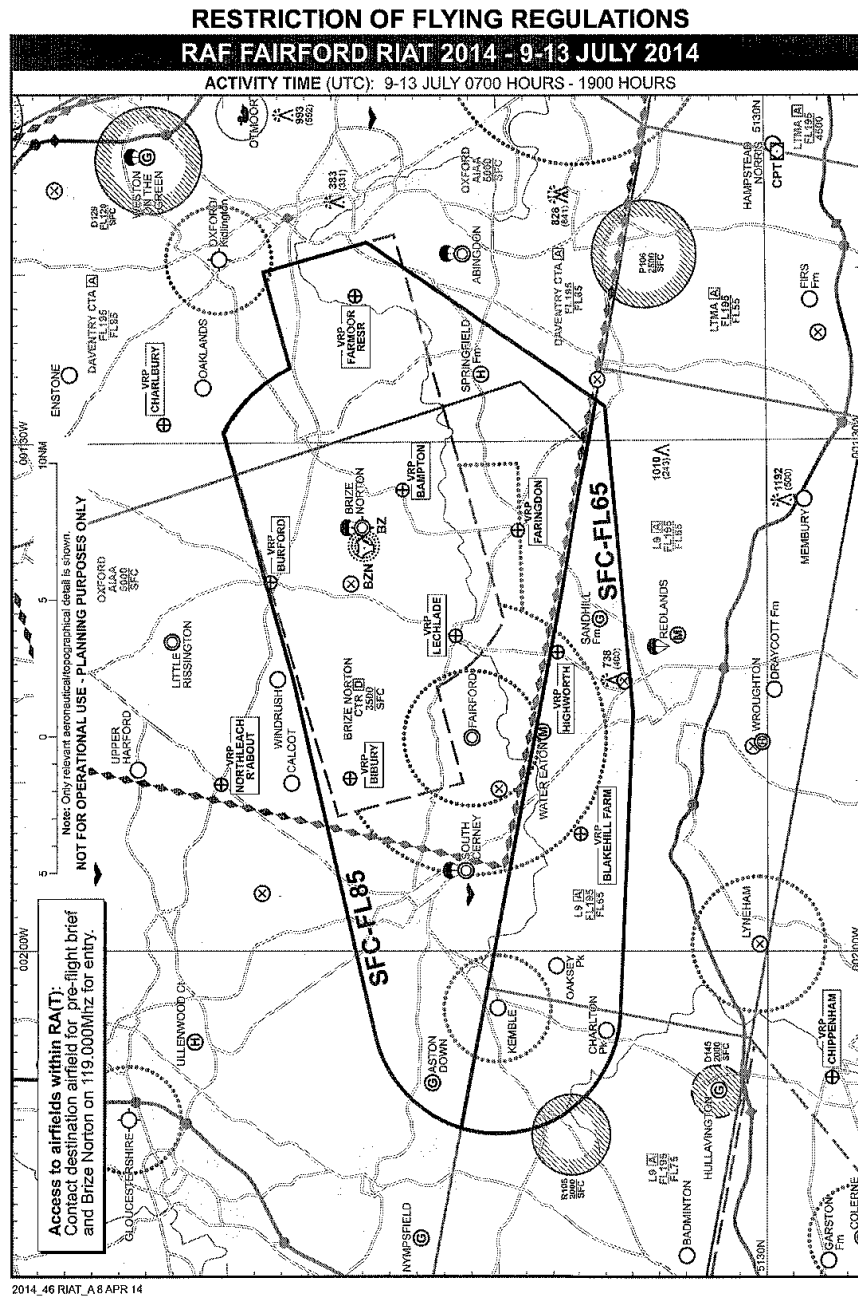
- 1 The Royal International Air Tattoo 2014 (RIAT) flying display will be held at RAF Fairford from 9 to 14 July 2014 inclusive. This flying display will include flypasts and high-energy aerobatics by British and foreign military and civilian aircraft. The Secretary of State for Transport has therefore, decided that it is necessary to introduce the following Restriction of Flying Regulations under Article 161 of the Air Navigation Order 2009 (military aircraft should comply with The Manual of Air Traffic Management, Chapter 4, Paragraph 27):
- (a) Subject to paragraph (c), between 0700 hours and 1900 hours (All times UTC) from 9 to 13 July 2014 inclusive, no aircraft is to fly below FL 85 within the area bounded by:
    - (i) straight lines joining successively the following points:
      - (1) 514433N 0020502W;
      - (2) 514733N 0014405W;
      - (3) 515006N 0012925.
    - (ii) the clockwise arc of a circle having a radius of 5.5 nm whose centre is at 514513N 0013334W between 515006N 0012925W and 514737N 0012537W;
    - (iii) thence by straight lines joining successively the following points:
      - (1) 514834N 0011958W;
      - (2) 514445N 0011816W;
      - (3) 513621N 0012737W;
      - (4) 514124N 0021027W; and
    - (iv) the clockwise arc of a circle having a radius of 4.6 nm whose centre is at 514005N 0020322W between 514124N 0021027W to 514433N 0020502W.
  - (b) Subject to paragraph (d), between 0700 hours and 1900 hours (All times UTC) from 9 to 13 July 2014 inclusive, no aircraft is to fly below FL 65 within the area bounded by:
    - (i) straight lines joining successively the following points:
      - (1) 514124N 0021027W;
      - (2) 513621N 0012737W;
      - (3) 513600N 0012800W;
      - (4) 513600N 0012800W
      - (5) 513500N 0014600W
      - (6) 513530N 0020341W; and
    - (ii) the clockwise arc of a circle having a radius of 4.6 nm whose centre is at 514005N 0020322W between 513530N 0020341W and 514124N 0021027W.
  - (c) Subject to paragraph (d), between 0800 hours and 1600 hours (All times UTC) on 14 July 2014, no aircraft is to fly below 5000 ft amsl within the area bounded by straight lines joining successively the following points:
    - (i) 514343N 0015711W;
    - (ii) 514410N 0013753W;
    - (iii) 513811N 0013733W;
    - (iv) 513747N 0015652W; and

(v) 514343N 0015711W

(d) Paragraphs (a) to (c) do not apply to any aircraft flying in accordance with a clearance issued by the Air Traffic Control Unit at RAF Brize Norton.

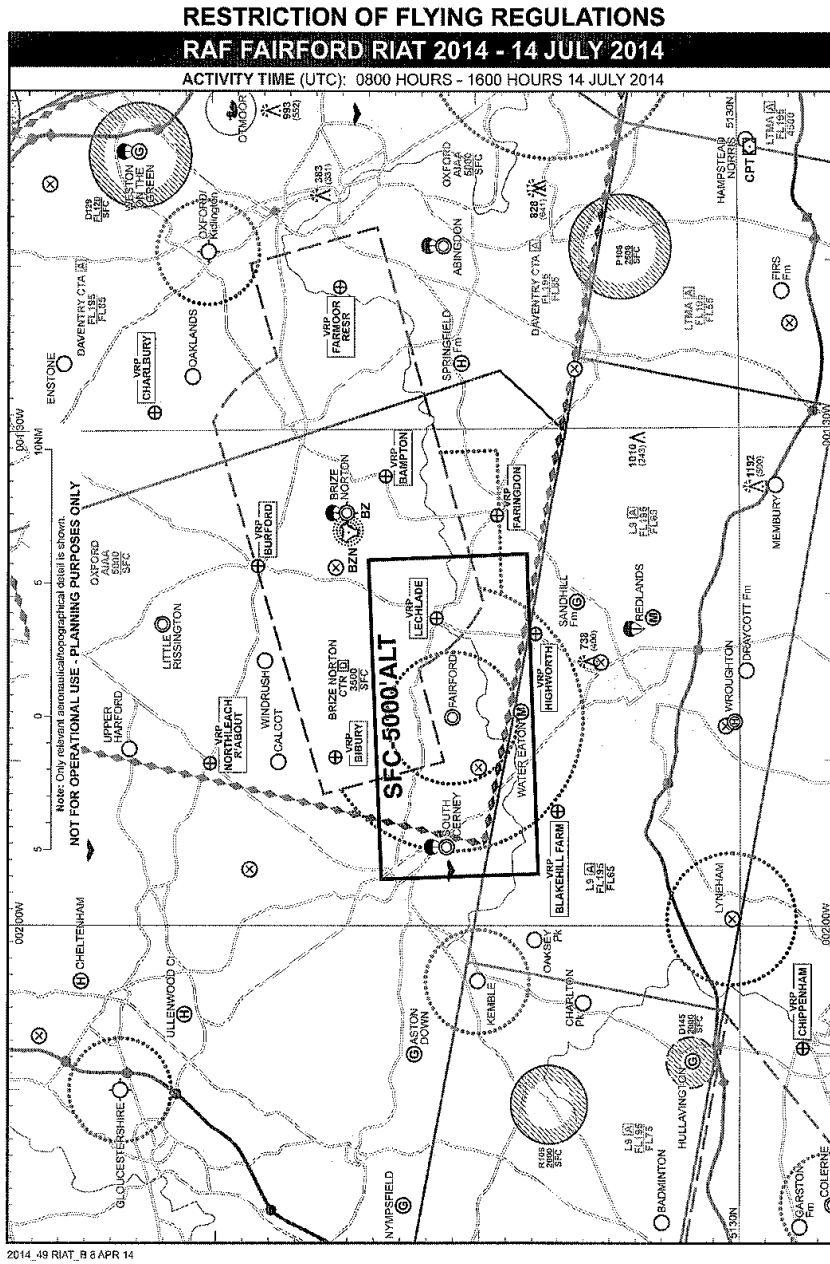
- 2** Access to aerodromes contained within the Restricted Area (Temporary) should be possible, subject to the approval of Brize Norton ATC; pilots are urged to contact their destination aerodrome for a pre-flight brief.
- 3** Pilots are to be aware that when routing to the south of the Restricted Airspace (Temporary), there is likely to be increased aerial activity due to helicopters departing RAF Fairford via:
  - (a) Blakehill Farm;
  - (b) Highworth; and
  - (c) Bibury.Furthermore, pilots are to avoid Redlands Microlight and Parachute sites.
- 4** Aircraft may, under certain circumstances, be given a clearance to transit through the Restricted Area (Temporary) under a positive clearance from RAF Brize Norton Air Traffic Control. However, during displays by jet formation display teams no requests for clearances will be considered, or issued, for routings within 6 nm of RAF Fairford.
- 5** Details of Restricted Airspace feature in the daily AIS Information Line message (0500-354802 and 020-8750 3939) and will be included on the Pre-flight Information Bulletins (PIB) through the AIS Web site at <http://www.ais.org.uk>.
- 6** Further enquiries of the Civil Aviation Authority can be made to Mr R E J Gratton, Safety and Airspace Regulation Group, Principal Airspace Regulator, Telephone: 020-7453 6586.

ANNEXE A





ANNEXE B



Kemble arrival/departure routes:

