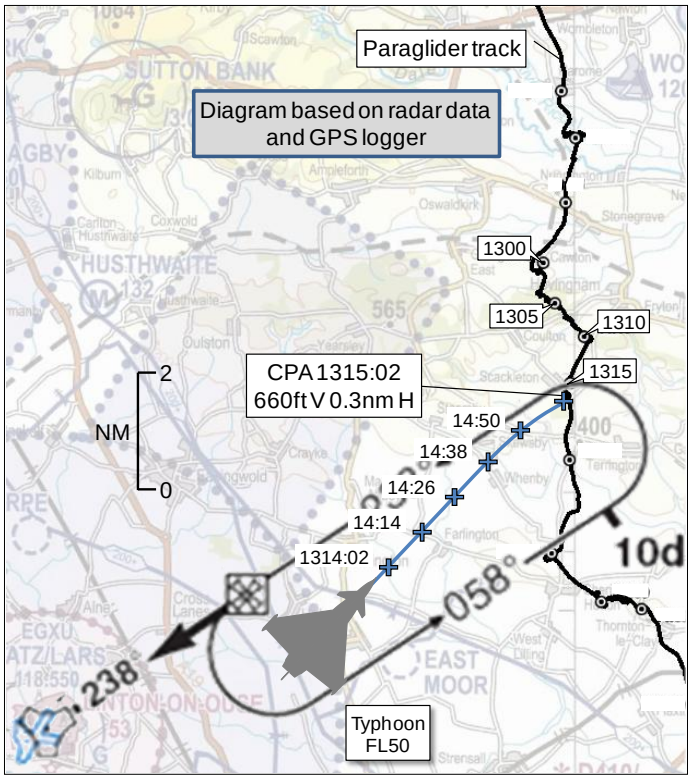
AIRPROX REPORT No 2013053

Date/Time: 25 Jun 2013 1315Z

Position: 5408N 00100W (10nm NE Linton-on-Ouse)

Airspace: Vale of York AIAA (*Class*: G)

	Reporting Ac	*Reported Ac*
Type:	Typhoon T3	Paraglider
Operator:	HQ Air (Ops)	Civ Pte
Alt/FL:	FL50	FL48
Weather:	IMC CLBC	IMC CLBC
Visibility:	8km	NK
Reported Separation:	200ft V/3000ft H	500ft V/1000ft H
Recorded Separation:	660ft V/0.3nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE TYPHOON PILOT reports conducting an instrument rating test in the rear seat, with the examinee pilot in the front. He was operating under IFR in IMC, 200ft below cloud, with a TS from Linton DIR. The grey camouflaged ac had navigation lights and HISLs selected on, as was the SSR transponder with Modes A and C. When established in the Linton-on-Ouse RW03 TACAN hold at FL50, heading 043° at 230kt, DIR passed TI on non-squawking traffic 12 o'clock at 1nm with no height information. Both pilots subsequently became visual with 4 paragliders in the 10-11 o'clock position at an assessed range of 3000ft, which passed down the LH side about 200ft below. Having passed clear of the paragliders, care was taken not to direct jet exhaust towards them. He subsequently curtailed the TACAN procedure and left the hold. He also noted that the ac AI radar was unserviceable.

He assessed the risk of collision as 'High'.

THE PARAGLIDER PILOT reports undertaking a flying task, routeing from the N York Moors to a point 4nm N of Goole, 300ft horizontally and 500ft vertically clear of cloud. He was using a red, yellow and blue canopy and was not equipped with lights, SSR transponder, a radio or an ACAS. He was transiting S, in a loose group of 4 paragliders, when he heard the sound of an ac jet engine and then saw a Typhoon, slightly higher and at a range of about 1000ft, as it passed down his LH side.

He assessed the risk of collision as 'None'.

THE LINTON DIR reports he was with a trainee and was providing a TS to a Typhoon carrying out a TACAN approach to RW03. He noted that the 'air picture was busy'. He endeavoured to call all tracks iaw the agreed service. The Typhoon pilot initially broke off his approach at about 4nm finals and was then vectored back to the FAF where he then completed the approach. He stated that the Airprox was not reported on frequency at the time.

THE LINTON SUP reports that the local 'Glider Ops Procedure' was in force due to a perceived increase in local glider activity. He noted that the Typhoon pilot had passed a message to the DIR strongly advising a 2nd Typhoon not to carry out a TACAN approach due to the amount of unknown traffic in the vicinity of the TACAN hold. He noted there was no indication at the time that an Airprox had been raised.

Factual Background

The reported METAR for Linton-on-Ouse was recorded as follows:

EGXU 251250Z 30005KT CAVOK 18/05 Q1028 BLU NOSIG
EGXU 251350Z 32006KT CAVOK 18/05 Q1028 BLU NOSIG

Linton-On-Ouse Controllers' Order Book states:

> When the DSS invokes the Glider Ops and Recovery Procedure, all departures will be 'call for release'. Before release is granted, an indication of any glider activity within 15 miles of LOO is to be passed by the Departures Controller. In accordance with the procedure, all departures will request at least a TS. For a VFR departure, a heading will not be provided or suggested subject to the RVC unless requested once airborne and identified. IFR departures will be handled as normal and may be held on the ground if a release cannot be granted. For recoveries, at least a TS will be requested and pilots are to be warned of traffic as normal depending on their ToS. Tower to tower transits from TP and DH will still switch to Linton tower stud 2 directly. Therefore any relevant glider activity is to be obtained from the RA Controller when the ac is prenoted inbound.

A transcript of the Linton DIR RTF is reproduced below:

From	To	Transcribed Speech	Time
Typhoon	LIN DIR	[Typhoon C/S] happy to go traffic service now	13:12:01
LIN DIR	Typhoon	[Typhoon C/S] traffic service	13:12:04
Typhoon	LIN DIR	traffic service [Typhoon C/S]	13:12:06
LIN DIR	Typhoon	Typhoon one eight one Tucano will climb out below you not apologises [Typhoon C/S] there's one Tucano climbing out below you not above flight level four zero	13:12:59
Typhoon	LIN DIR	[Typhoon C/S]	13:13:08
Typhoon	LIN DIR	[Typhoon C/S] apologies established in the hold	13:13:35
LIN DIR	Typhoon	[Typhoon C/S] traffic north four miles tracking south slow moving no height information further traffic north east five miles tracking south no moving no height information	13:13:40
Typhoon	LIN DIR	[Typhoon C/S] looking	13:13:55
LIN DIR	Typhoon	[Typhoon C/S] traffic northwest one mile your speed's keeping you clear further traffic twelve o'clock one mile manoeuvring no height information	13:14:40
Typhoon	LIN DIR	[Typhoon C/S]	13:14:49
Typhoon	LIN DIR	[Typhoon C/S] visual loads of paragliders	13:15:02
LIN DIR	Typhoon	[partial Typhoon C/S] roger report approaching the initial approach fix for the procedure.	13:15:07
Typhoon	LIN DIR	Wilco [Typhoon C/S]	13:15:12]

BM Safety Policy And Assurance Analysis

The Typhoon pilot was operating under IFR on an Instrument Rating Test in the LIN TACAN hold at FL50, in receipt of a TS from LIN DIR; the paraglider pilot was operating under IFR.

The Typhoon was being flown by an OCU student and an Instrument Rating Examiner (IRE), initially at FL50, 200ft beneath an overcast cloud layer in 8km visibility; their AI radar was unserviceable. The DIR was manned by a trainee and an experienced instructor, who described their workload and task complexity as moderate to low; the Typhoon was the only ac on freq with DIR during the incident sequence. However, based on analysis of the transcript, which benefitted from the inclusion of 'off-mic' exchanges between the instructor and the trainee, the trainee appeared to be relatively busy planning for the Typhoon's approach and scanning for conflicting ac.

The incident sequence can be deemed to have commenced at 1313:35, as the Typhoon crew advised DIR that they had entered the TACAN hold on the 058° radial; depicted in Figure 1.

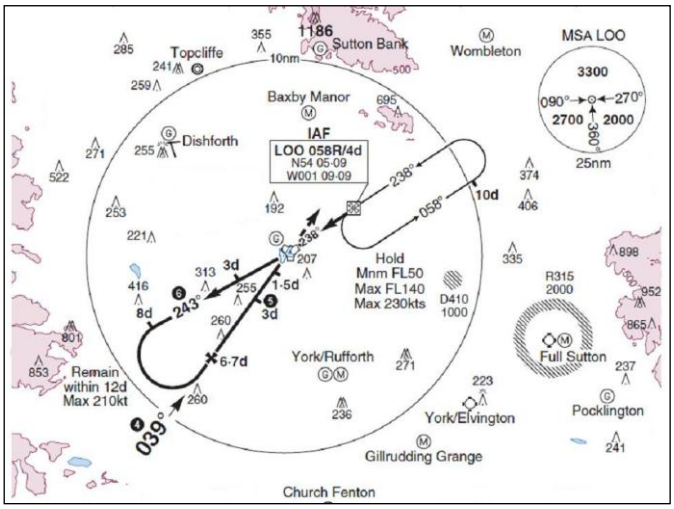


Figure 1: TACAN Approach to LIN RW03

Acknowledging the Typhoon crew, DIR advised them at 1313:40 of, "*traffic north, 4 miles, tracking south, slow moving, no height information further traffic, north-east, 5 miles, tracking south, no moving, no height information*". The DIR could then be heard 'off-mic' correcting himself having described the second traffic as "*no moving*" rather than "*slow moving*".

Although the DIR instructor described the air picture as busy, the TS was not reduced for high traffic density. The unit's investigation determined that the DIR instructor had considered whether to reduce TI due to traffic density; however, with only one ac on frequency, and thus being able to give that ac undivided attention, he felt that all relevant traffic to the Typhoon would be called. He had also decided that if another ac came on frequency, TI would be reduced as the division of attention would require this.

The next transmission from DIR to the Typhoon occurred at 1314:40, advising them of "*traffic north-west, one mile, your speed's keeping you clear, further traffic 12 o'clock, one mile, manoeuvring, no height information*" which was acknowledged. At 1315:02, the Typhoon crew advised DIR that they were "*visual, loads of paragliders*", later reporting 4 ac in the Typhoon's 10-11 o'clock position at a visually assessed range of 3000ft laterally [approx 0.5nm] and 200ft below, which was acknowledged.

The Typhoon IRE reported that the Airprox occurred on the LIN TACAN 058R/10.3d, heading 043°, which would suggest that they were turning inbound to the IAF. Although the IRE was unavailable at the time of writing, the OCU student believed that they had commenced the L turn at the time of the Airprox. However, the turn was not observable on the radar replay until 1315:19, which could suggest a discrepancy between the radar replay timings and those of the RT transcript. Unfortunately, LIN ATC were unable to determine whether a discrepancy existed.

These factors notwithstanding, although the radar replay was unable to substantiate the unit's investigation, they determined that the TI passed at 1314:40 was an update to that passed at 1313:40, rather than further TI on new traffic. Whilst 'good practice' would normally suggest that the trainee DIR prefix the TI with the phrase "previously reported traffic", this is not a requirement within CAP 413. Moreover, based on the approximate speed of the Typhoon, the separation reported by the Typhoon IRE at the point of first sighting and the time elapsed between the updated TI and the report of that sighting, the lateral separation existing at 1314:40 was approx 2nm, rather than 1nm as reported by the trainee DIR.

On the basis of the available evidence, from an ATM perspective, DIR provided the Typhoon with timely TI on the conflicting ac and updated that TI when they considered that it continued to constitute a definite hazard.

The Typhoon unit questioned whether LIN should be avoided as a practice diversion (PD) airfield when local gliding activity was promulgated. When 'significant amounts of glider activity are planned or observed' in the vicinity of LIN, the Duty Senior Supervisor may invoke the 'Glider Ops Departure and Recovery Procedure' which details specific actions for aircrew and ATC. Following this Airprox, LIN SATCO reviewed local training procedures and decided that all aircrews booking a PD would now be notified whether 'Glider Ops' had been instigated.

HQ Air Command commented that the Typhoon crew did not declare an Airprox at the time but otherwise took appropriate action to remove the collision risk by terminating their hold and advising their other element to do the same. The change of procedure to ensure all PDs are notified of busy gliding periods should also help to reduce the likelihood of conflict in future.

Summary

A Typhoon and a paraglider came into close proximity 10nm NE of RAF Linton-on-Ouse (LIN) at 1315 on 25 Jun 13. The Typhoon was operating under IFR on an Instrument Rating Test in the LIN TACAN hold at FL50, in receipt of a TS from LIN DIR; the paraglider was operating under IFR and was not detected by NATS Ltd radars.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar video recordings, a GPS logger file, reports from the air traffic controllers involved, and reports from the appropriate ATC and operating authorities.

Board members first considered the actions of the pilots concerned and their associated responsibilities for collision avoidance. It was agreed that they were both entitled airspace users, that they had equal responsibility for collision avoidance, and that the paraglider had right of way due to it coming under the definition of a glider[1]. It was also noted that there is no discrimination between VFR and IFR flight with respect to right of way under Section 4 (General Flight Rules) of the Rules of the Air 2007; therefore the rules therein, including Rule 9 (Converging), apply whether the aircraft are operating under VFR or IFR.

Some pilot members questioned the legality of a paraglider pilot flying IMC and therefore, by definition, under IFR. The CAA Flight Operations advisor stated that the requirement to hold an instrument rating for IFR flight was a licensing requirement, that a paraglider pilot is not required to be licensed, and therefore that the requirement to hold an instrument rating did not apply. Notwithstanding this, parts of Section 6 (Instrument Flight Rules) of the Rules of the Air 2007 did apply; because paragliders cannot be considered to be in level flight, paragraph 34 (Quadrantal rule

[1] ANO 2009, Part 33, Paragraph 255 (interpretation): A paraglider comes under the definition of a 'glider': a non-power-driven, heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

and semi-circular rule) did not. On this occasion he remained outside CAS and hence paragraphs 32(2)[2] (Instrument Flight Rules) and 33[3] (Minimum height) only were relevant.

The Board noted that the Typhoon pilot had received TI that correlated with the paragliders, and had sensibly curtailed his holding pattern on making visual contact with them; although he saw the paragliders at close range, separation was such that no avoiding action was required. The Board commended him for his decision to advise the following Typhoon pilot to cancel his planned instrument approach, and welcomed the comments from the Typhoon unit and Air Command regarding the use of Linton-on-Ouse as a Practice Diversion during busy gliding periods. The Glider member opined that safety of flight could have been improved by the use of the CANP scheme by the paraglider pilots, as recommended on the British Hang Gliding and Paragliding Association website[4].

Turning to the cause and risk, the Board opined that although they were on conflicting flight paths, the Typhoon and paraglider pilots saw each other as soon as the prevailing conditions allowed, and that, as a result, separation was such that safety margins were not significantly reduced below the normal.

The Board agreed that the safety barriers pertinent to this Airprox were 'ATC rules and procedures', 'controller action', 'aircrew rules and procedures', 'visual sighting', 'aircrew action' and 'SA gained from RT'. The Board concluded that all the pertinent barriers had been effective, so the Airprox was allocated a score of 2 on the Event Risk Classification Matrix.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict in the Linton-on-Ouse RW03RH TACAN hold.

Degree of Risk: C.

ERC Score: 2.

[2] Rules of the Air 2007 Section 6 Paragraph 32 - (2): For flights outside controlled airspace rules 33 and 34 shall be the Instrument Flight Rules.

[3] Rules of the Air 2007 Section 6 Paragraph 33 - (1) Subject to paragraphs (2) and (3), an aircraft shall not fly at a height of less than 1,000 feet above the highest obstacle within a distance of 5 nautical miles of the aircraft unless (a)it is necessary for the aircraft to do so in order to take off or land; (b)the aircraft flies on a route notified for the purposes of this rule; (c)the aircraft has been otherwise authorised by the competent authority in relation to the area over which the aircraft is flying; or (d)the aircraft flies at an altitude not exceeding 3,000 feet above mean sea level and remains clear of cloud and with the surface in sight and in a flight visibility of at least 800 metres. (2) The aircraft shall comply with rule 5. (3) Paragraph (1) shall not apply to a helicopter that is air-taxiing or conducting manoeuvres in accordance with rule 6(i).

[4] http://www.bhpa.co.uk/documents/safety/canp/