

## AIRPROX REPORT No 2013059

Date/Time: 26 Jun 2013 1238Z

Position: 5135N 00048W  
(Wycombe A/D  
- elevation 520ft)

Airspace: Wycombe ATZ (Class: G)

Reporting Ac Reported Ac

Type: ASK13 C182

Operator: Civ Club Civ Pte

Alt/FL: 1800ft 2120ft  
QFE (NK) QNH (1030hPa)

Weather: VMC NK VMC NK

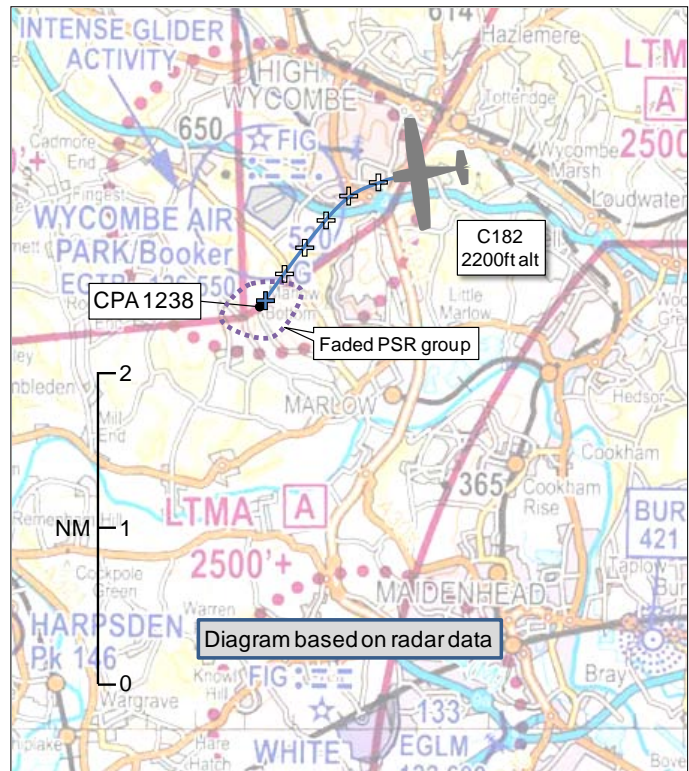
Visibility: 20km 10km

Reported Separation:

50ft V/0m H 550ft V/0m H

Recorded Separation:

NK



## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

**THE ASK13 PILOT** reports conducting a student instructional sortie. They were operating under VFR in VMC, listening out on the 'Booker Gliding Radio' frequency. The blue and white ac was not fitted with lights, an SSR transponder or an ACAS. He took off from RW24 under aero-tow and, after releasing at height 2000ft to the W of the A/D, they preceded to make their way E, back towards the A/D. About 1nm to the S of the A/D, and now at height 1500ft, they entered a thermal and started turning to the L to gain height. They were subsequently joined by 3 other gliders below them. After a few minutes of circling they had gained height to 1800ft, with the three other gliders remaining in view, circling below them in the thermal. Whilst turning through an E'ly heading, he saw a brown coloured high wing light ac flying directly towards his glider. He had no time to take avoiding action and within 1-2sec it passed no more than 50ft below.

He exited the thermal and called Wycombe TWR to report the Airprox and ask if they had the other ac on frequency. They indicated they were in RT contact with the light ac and had cleared the pilot to transit through the southern part of the ATZ, no lower than altitude 2100ft (about height 1580ft).

He assessed the risk of collision as 'High'.

**THE C182 PILOT** reports transiting in level cruise, on the leg from Wycombe to Chilbolton. He was operating under VFR in VMC with a BS from Farnborough, he thought, and in contact with Wycombe TWR, who had advised him of gliders in the area. The strobes and 'running lights' were selected on, as was the SSR transponder with Modes A, C and S. The ac was not fitted with an ACAS. Heading 224° at 132kt and altitude 2120ft [QNH 1030hPa] with the A/P engaged, he saw 3 white gliders, 2 of which were 5-600ft below and the other 5-600ft above, which turned 'across' him from L to R. He did not perceive any danger of collision and remained on course.

## Factual Background

The weather at London Heathrow was recorded as follows:

METAR EGLL 261220Z 34006KT 240V040 9999 FEW049 21/08 Q1030 NOSIG  
METAR EGLL 261250Z 30006KT 250V350 9999 FEW049 20/07 Q1030 NOSIG

## Analysis and Investigation

### CAA ATSI

The ASK13 pilot was in communication with Booker Gliding Radio on 129.975MHz. The C182 pilot was on a private VFR flight and was in communication with Wycombe TWR on 126.550MHz.

Wycombe Air Park is a non-surveillance aerodrome unit providing Aerodrome Control Services. Wycombe is in Class G uncontrolled airspace and has an ATZ of radius 2nm centred at 513642N 0004830W and extending from the surface to 2000ft aal. The aerodrome elevation is 520ft.

The UK AIP AD 2.EGTB, dated 4 Apr 2013, notifies pilots that:

#### '2.20 Local Traffic Regulations

4 (c) Intense gliding takes place on and around the aerodrome. Pilots should maintain a sharp lookout at all times.

#### 2.22 Flight Procedures

1 (b) Gliders will be flying a circuit opposite to that in use by powered aircraft.

3 (a) (iii) Pilots of aircraft flying within the confines of the Wycombe ATZ are responsible for providing their own separation from other aircraft operating within the ATZ.'

ATSI had access to both pilots' reports, recorded area surveillance and transcription of the Wycombe TWR frequency. Additionally ATSI undertook a site visit to Wycombe.

The C182 pilot had been in receipt of a Basic Service from Farnborough LARS (N) and had been issued with QNH 1030hPa. As he approached Wycombe, on a W'ly track, the Farnborough controller instructed him to free-call Wycombe TWR for an ATZ transit; following which the pilot was instructed to call Farnborough LARS (W). The C182 pilot was instructed to squawk 7000.

At 1230:30, an aircraft reported downwind to land on RW24 on the Wycombe TWR frequency. The pilot reported, "*visual with the gliders*". The incumbent controller reported that he knew nothing about them. A hand-over of operational position then took place. Wycombe ATC had access to the Booker Gliding frequency; however it was not routinely monitored or utilised. Gliders operating in the ATZ were not required to monitor or utilise the Wycombe TWR frequency. Some gliders that may operate within the ATZ are not radio equipped.

The C182 pilot called Wycombe TWR at 1233:50, and at 1234:20 he requested a zone transit, informing Wycombe TWR that he was at 2100ft on QNH 1030hPa. The C182 was 7.1nm E of Wycombe with a surveillance-recorded altitude of 2200ft.

Wycombe TWR approved the zone transit on QNH 1031hPa, "*not below an altitude of 2000ft.*" After a correct read-back, Wycombe informed the C182 pilot, "*we are gliding so ke- keep a good lookout for glider activity within the traffic zone.*". This was acknowledged. The Wycombe Manual of Air Traffic Services (MATS) Part 2<sup>1</sup> instructs controllers as follows:

'Aircraft in transit through the ATZ are to be instructed to fly on the Aerodrome QNH.'

The Wycombe MATS Part 2<sup>2</sup> describes the allocation of ATZ airspace as follows:

'The ATZ is divided into two basic sections to separate glider operations from powered (fixed wing and rotary) operations.

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<sup>1</sup> Wycombe MATS, Chapter 1, Section 1, paragraph 2, dated 15 March 2007.

<sup>2</sup> *ibid.*, Chapter 2, Section 3, paragraph 2.

A Safety Buffer Zone has been established to provide separation between the Gliding Section and the Power Section airspace. The boundaries of the Safety Buffer Zone extend to the limits of the ATZ and are defined on the manoeuvring as follows:

When R/W 06/24 is in use:

The Power Section Boundary is defined as the southern edge of R/W 06/24 Grass. The Gliding Section Boundary is defined as a line positioned parallel to and 30m south of the Power Section Boundary.

...

In order to preserve the value of the Buffer Zone System for safety purposes both the Power and Gliding Sections must promulgate the same runway direction for use, although opposite handed circuits will be flown.

Unless prior approval has been given, no Gliding Section traffic is permitted to enter the Power Section airspace at or below 1400' QFE (1900' QNH). Similarly, unless specifically authorised by ATC and Gliding Co-ordinator, no Power Section traffic is to enter the Gliding Section airspace at or below 1400' (1900' QNH).'

The C182 entered the Wycombe ATZ at 1236:39 (see Figure 1 below).

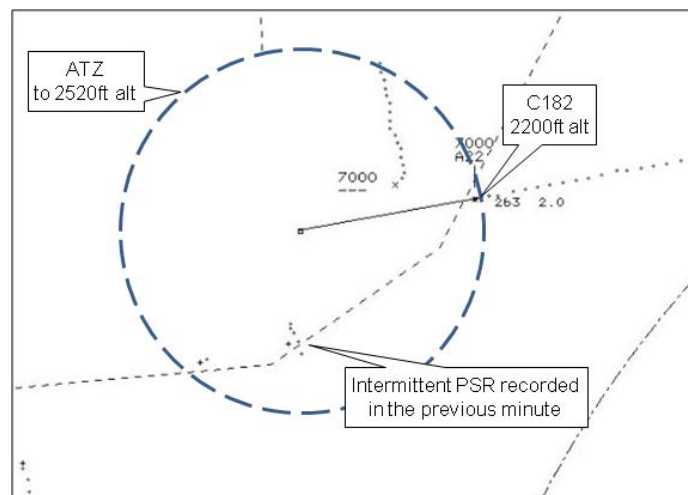


Figure 1: Swanwick MRT – 1236:39

As the C182 pilot approached Wycombe he altered course to the SW (see Figure 2 below).

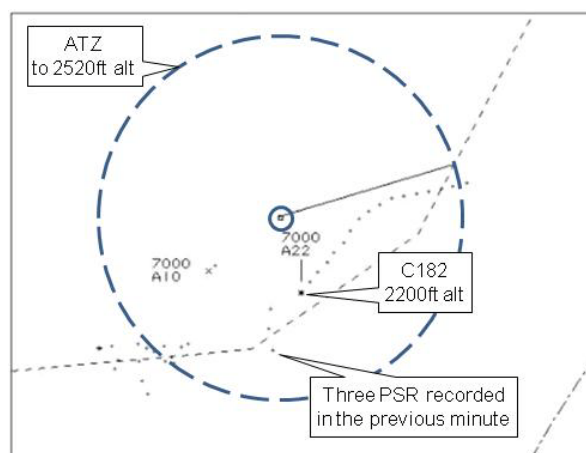


Figure 2: Swanwick MRT – 1237:39

The C182 pilot departed the Wycombe ATZ at 1238:15 at a converted Mode C altitude of 2200ft.

At 1238:30, the ASK13 pilot called Wycombe TWR and asked, “*Did you have the er Cessna one seven two that’s just passed to the south of the airfield about 1800ft in our zone on frequency.*” The controller replied, “*Yeah his clearance is a transit not below two thousand feet on QNH.*” The pilot then stated, “*he was at 1800ft and he’s just gone through a thermal of about four gliders.*” ATSI noted that both the glider pilot’s Airprox report and the ATC unit watch log record the ASK13’s level at the time of the Airprox as 1800ft on QFE.

The Wycombe TWR asked the C182 pilot if the ASK13 pilot’s report had been copied. The C182 pilot replied, “*Roger that my er altimeter says two thousand one hundred feet.*”

The C182 pilot departed the Wycombe frequency for Farnborough LARS (W) at 1242:30. Upon making contact with LARS the pilot requested verification of the aircraft’s Mode C. The Farnborough controller reported that radar displayed the aircraft’s altitude as 2200ft on 1030hPa and the pilot stated his altimeter read 2100ft on 1030hPa.

Wycombe issued a Temporary ATC Operating Instructions (TOI 2/2013) on 4th September 2013, which stated as follows:

‘With immediate effect, when gliding is in progress, ATC must refuse all ATZ transit requests. Pilots must instead be instructed to remain outside the Wycombe ATZ.’

The UK AIP ENR 1.6, paragraph 2.1.4 (e), requests that pilots report their altitude to ATC to the nearest 100ft. ATC will inform pilots of discrepancies in excess of 200ft. Therefore the C182 pilot’s altitude was verified satisfactorily and ATSI consider that the aircraft transited the Wycombe ATZ at altitude 2100ft.

The ASK13 pilot was not in contact with Wycombe TWR: indicated in the pilots report and by the need to request details of the C182, which had been given ATZ transit clearance on the TWR frequency. The ASK13 pilot reported the Airprox level as about 1800ft QFE, which is equivalent to altitude 2300ft; therefore he is considered to have been above the C182’s transit altitude.

In accordance with Rule 45 of the Rules of the Air Regulations 2007 (as amended), aircraft shall not fly within [an] ATZ unless the commander has [obtained] the permission of the ATC unit to enable the flight to be conducted safely within the zone. Therefore, having obtained ATC’s permission, the C182 pilot acted in accordance with Rule 45.

CAA Legal advised ATSI that the form of the Rule 45 permission is not specifically detailed within the legislation; therefore such a permission could be given as specific RTF transmission to an individual aircraft or as a blanket permission as appears to be the case for glider operations at Wycombe. Neither the ANSP nor gliding organisation could provide ATSI with any documentary evidence in support of such a permission for gliders to enter or operate within the ATZ. However, the unit considered that, as procedures for ATZ utilisation were contained within their MATS Part 2, the permission existed. No reciprocal evidence of this fact was produced by the gliding organisation. It was noted that the Wycombe ATZ utilisation procedures have been extant for in excess of 20 years.

Aerodrome controllers will issue information and instructions to aircraft under their control to achieve a safe, orderly and expeditious flow of air traffic and to assist pilots in preventing collisions between aircraft flying in, and in the vicinity of, the ATZ<sup>3</sup>. This aligns with Rule 45, against which ATC give permissions to enable safe conduct of flight.

The Wycombe controller gave a transit clearance of not below altitude 2000ft, which the unit informed ATSI was standard operating practice at Wycombe. Such a clearance provides segregation from any powered traffic operating under ATC instruction within the ATZ. However, since ATC are only aware that gliders are, or may be, present in the ATZ, transit clearances do

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<sup>3</sup> CAP493 Manual of Air Traffic Services, Part 1, Section 2, Chapter 1, paragraph 2.1, dated 4 April 2013.

not provide any assurance of segregation against gliding traffic. Hence, transit aircraft are warned of the presence of gliders. As the Wycombe ATZ is Class G airspace, the responsibility for collision avoidance rests solely with the pilots concerned.

There appear to be several distinct disadvantages to the operation of the Wycombe ATZ:

Any transit traffic in receipt of an ATC permission, which the pilot could reasonably assume provides for safe conduct of the flight, still relies on see-and-avoid. Pilots are warned in the AIP of Wycombe's gliding operations; however, it could be considered unlikely that many pilots of transit aircraft are aware of this information in advance.

The ability of glider pilots to see-and-avoid may not be assisted by their autonomous operation within the ATZ. Being within the ATZ could be interpreted by pilots as providing an element of protection against other traffic. Indeed, the ASK13 pilot stated, "*in our ATZ*". Any agreement between ATC and gliders predicated upon non-radio operations is very likely to be centred on an assumption by the non-radio pilot that he is operating in a reasonably 'controlled' and therefore 'safe' environment. The lack of two-way communication between gliders and ATC, whilst understandable from an RTF utilisation point of view, could compound any assumption of protection.

Any pilot in receipt of an ATZ permission from ATC, in whatever form it takes, might reasonably be expected to challenge, as a point of law, an unsafe situation within the ATZ, which appears to derive from conflicting utilisation of the ATZ airspace.

An Airprox was reported within the Class G ATZ at Wycombe Air Park between an ASK13 and a C182. Surveillance evidence was unable to further determine the geometry of the encounter. The ASK13 pilot was operating in accordance with procedures for gliding operations in the ATZ and the C182 pilot was operating in accordance with an ATC permission.

Wycombe ATC and the C182 and ASK13 pilots all acted in accordance with their own requirements and understanding; however, notwithstanding both pilots' responsibility to avoid collision, the utilisation of Wycombe's ATZ airspace does not support to the best possible extent the integration of transit aircraft when autonomous gliding operations are in progress.

Further to the existing Wycombe TOI it was recommended that the Wycombe aerodrome ANSP, in conjunction with the CAA's ATS (Southern) Regional Inspectorate and all other stakeholders utilising Wycombe ATZ, publish procedures, to be held by all stakeholders, that outline the operations of powered and gliding traffic in the ATZ; and which, in so far as is reasonably practicable in a Class G airspace environment, provide that permissions given by ATC can be discharged such that flights may be conducted safely with the zone.

## **Summary**

A C182 pilot and an ASK13 pilot, on different Wycombe/Booker RT frequencies, flew in to conflict at 1238 on 26<sup>th</sup> June 2013 in the Wycombe Air Park ATZ. The ASK13 pilot was operating from Wycombe and the C182 pilot had received permission to enter and transit through the ATZ.

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

Information available included reports from the pilots of both ac, a transcript of the Wycombe TWR frequency, radar video recordings and a report from the appropriate ATC authority.

The Board first considered the history of operations at Booker/Wycombe Air Park. It was established that civilian gliding started at the then Booker airfield in 1957, with civilian powered aircraft moving to Booker in 1965, and the airfield setting up as Wycombe Air Park in 1966. An ATSU was established in 1991. A civilian ATC member stated that the Wycombe ATZ was effectively split into 3 parts: either

side of the main runway up to altitude 1900ft (1400ft aal); and above altitude 1900ft. Powered and gliding activity occupied the lower split on their exclusive sides, and the airspace above was available to all traffic. Transiting traffic was routinely passed a warning of other traffic in the ATZ.

The Board went on to consider the actions of the pilots. Both were operating under VFR in VMC in Class G airspace and were equally responsible for collision avoidance<sup>4</sup>; the C182 pilot was required to give way to the glider<sup>5</sup>. The C182 pilot had been cleared to transit the ATZ and did so at an altitude of about 2100ft (1600ft aal). The ASK13 pilot reported his height as 1800ft aal, an altitude of 2300ft, and he was consequently in a position above the notified 'Glider Section' of the Wycombe ATZ structure, operating in the shared part of the airspace. The Board opined that this fact may not have been apparent to him at the time, and that this may in turn have led to a misapprehension as to the expected level of deconfliction. Members discussed potential changes to the Wycombe ATZ regulations at length and, notwithstanding the requirement for glider pilots to receive explicit permission to fly within the ATZ<sup>6</sup>, also noted that the arrangements for shared ATZ usage had been in operation for in excess of 20yrs without serious incident<sup>7</sup>.

Board members noted that there was a marked difference between the reported vertical separations during the incident. They also noted that the C182 pilot reported 3 gliders, 2 below him and 1 above, whereas the ASK13 pilot reported being the highest in a thermal of 4 gliders. Members were not able to resolve this geometry or the reported vertical separations and opined that the C182 pilot may not have seen the ASK13. In any case, the ASK13 pilot reported that he had sighted the C182 so late that he had insufficient time to take avoiding action and therefore that his had been an effective non-sighting. Given the reported data, it was concluded that safety margins had been much reduced below the normal.

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

Cause: A possible non-sighting by the C182 pilot and an effective non-sighting by the ASK13 pilot.

Degree of Risk: B.

ERC Score<sup>8</sup>: 20.

Recommendation(s):

1. BGA Instructors' Panel reviews gliding activity at Booker.
2. Wycombe reviews procedures for powered and glider traffic integration in the ATZ.
3. The CAA reviews the education of GA pilots regarding overall awareness of gliding operations with specific emphasis on flight in the vicinity of glider sites.

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<sup>4</sup> Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).

<sup>5</sup> *ibid.*, Rule 9 (Converging).

<sup>6</sup> *ibid.*, Rule 45 (Flights within aerodrome traffic zones).

<sup>7</sup> A search of the UK Airprox Board database resulted in 3 Airprox reports in the last 10yrs and 7 in the last 20yrs. Of these 7 reports, 3 were risk bearing, 1 of which involved a Booker based glider (on 26<sup>th</sup> June 1995). This event occurred outside the hours of operation of the Wycombe ATSU at the time.

<sup>8</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.