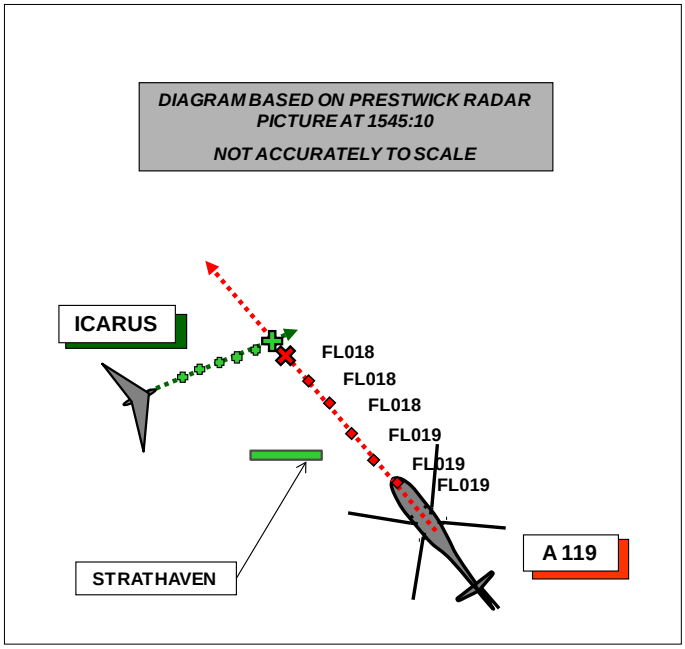
AIRPROX REPORT No 2011063

Date/Time:	20 Jun 2011 1545Z	
Position:	5541N 00406W (Strathaven RW27 RH cct - elev 847ft)	
Airspace:	Scot FIR	(*Class: G*)
	Reporting Ac	*Reported Ac*
Type:	Ikarus C42	Agusta 119
Operator:	Civ Club	Civ Pte
Alt/FL:	800ft QFE (NK)	1968ft QNH (NK)
Weather:	VMC CAVOK	VMC CAVOK
Visibility:	NR	>10km
Reported Separation:	200ft V/0ft H	350ft V/ 2000-3000m H
Recorded Separation:	NR V/<0.1nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE IKARUS C42 PILOT reports that he was instructing a novice pilot on a VFR flight, returning from Bute to Strathaven VFR in an ac with no lights or SSR fitted; he made a radio call on 135.475 (Safety Common) to alert other traffic that he was 2nm to the W of the field and would be joining downwind RH for RW27. He then called downwind for RW27, heading 090° at 70kt and at 800ft QFE. When in the late downwind position, his student alerted him to a white helicopter (registration reported), 350m away in their 2 o'clock position. He assessed a collision to be imminent and took avoiding action by lowering the nose and reducing the power to idle. He saw the helicopter pass immediately overhead, about 200ft above.

He assessed the risk as being high, reporting the incident on landing.

THE AGUSTA 119 PILOT reports that they were on a VFR flight from a private site in North Norfolk to Glasgow in a black and white ac with Modes C, S and TCAS 2 fitted; he was PiC in the RH seat with a co-pilot in the LH seat and the weather was CAVOK.

About 50nm S of Strathaven they had been working Scottish Information, but when they were 30nm SE of Glasgow Airport heading 314° at 136kt, they were requested to change to Glasgow APR on 119.1. On checking in, the Glasgow controller gave them a squawk and a pressure setting but he cannot recall if they were placed on a TS or BS; however, their instructions were to descend from 3000ft for a VFR Zone entry at VRP East Kilbride, not above 2000ft alt. They commenced a descent to enter the Zone at East Kilbride below 2000ft and they were aware of the Strathaven Microlight Site; however on approaching it, neither he nor his co-pilot saw any activity, they had no published RT frequency to call them and they were still above 2000ft [amsl].

He briefly saw a microlight seeming to appear out of nowhere but with hindsight he thought that it had been either on the downwind leg or it was established on right base in a descent. He estimates that the ac was some 300-350ft below him. They received no warning from ATC of this traffic or any other activity at Strathaven.

He assessed the risk as being medium.

From a later telephone call to the club he understands that they were using RW27 with RH circuits. On further checking he determined that the aerodrome elev is 847ft and their circuit height is 1000ft. He also understands from the club that the ac had no form of transponder, so it would not have been displayed on their TCAS.

He retrieved the flight data from their moving map display and enclosed a copy.

On viewing the route recording he thought that they might just have flown over or near the NE corner of the aerodrome at an alt of 2000ft.

[UKAB Note (1); The route data recorder shows the ac passing 1.6km to the E of the centre of the Airfield (over the W edge of Strathaven town at 1968ft amsl, tracking 314°).

ATSI reports that the Airprox took place in Class G uncontrolled airspace between an Ikarus C42 Microlight (M'light) and an Augusta A119 Koala helicopter (A119).

The M'light was operating in the vicinity of the grass strips at Strathaven after a flight from Bute and was maintaining a watch/broadcasting its intentions on Safetycom, 135.475 MHz (unrecorded). The ac was not in receipt of an ATS. The M'light was not fitted with a transponder.

The A119 had departed from a private site at Binham, Norfolk and was in contact with Glasgow APR on 119.1 MHz in receipt of a BS while inbound VFR. Glasgow ATC was unaware of the Airprox and, having been notified of the incident, filed a unit report with ATSI in retrospect.

ATSI had access to the following in the course of its investigation:

> M'light and A119 pilots' reports, recording of frequency 119.1 MHz, recorded area surveillance, CAP493 and the UK AIP.

The METAR for Glasgow was:

> EGPF 201550Z 28007KT 240V330 9999 FEW030 SCT040 17/09 Q1009=.

UK AIP ENR 1-1-5-9 (17 Dec 09) states:

> 'Those Microlight Flying Sites where flying is known to take place are listed at ENR 5.5 and are regarded as aerodromes. Sites are listed primarily as hazards to other airspace users…'

Strathaven is notified as a Microlight site (ENR 5.5) and is annotated on ICAO Aeronautical Charts 1:500,000 and 1:250,000 (AIS, VFR CHARTS). The circuit height (vertical limit, column 2) is not notified in the AIP or on the VFR charts.

A VFR Route Brief (www.ais.org.uk) from EGSH (Norwich) to EGPF (Glasgow), 20 Jun 11 1230-1800Z, VFR FL000 to FL030 does not notify Strathaven activity. NOTAMs published in accordance with ICAO standards are to cover information of a temporary nature/short term duration. This can include information concerning the presence of hazards to air navigation.

(On 12 Feb 2011 another similar Airprox occurred in the vicinity of Strathaven between a M'light and an AS355 (Airprox 2011011)).

The A119 pilot contacted Glasgow APR 1538:00, a BS was agreed and the A119 was instructed to squawk 2601. The ac was tracking in a NWly direction, at an alt of 2600ft, approximately 32nm SE of Glasgow Airport and 16nm SE of Strathaven.

Under a BS controllers may provide information useful for the safe and efficient conduct of flight. This may include general airspace activity information. The avoidance of traffic is solely the responsibility of pilots.

The Glasgow APR controller instructed the A119 to be not above alt 2000ft within the Zone.

Glasgow ATC previously reported to ATSI that the unit's surveillance does not always show local activity at Strathaven, which is 16.4nm SE of EGPF with an elevation of 847ft. Strathaven is 2.3nm outside the SE corner of the Glasgow CTR (Class D CAS, surface to alt 6000ft). The base of CAS airspace directly above Strathaven is 4500ft amsl (the Scottish TMA Class D).

The preferred radar source for Glasgow APR is their Watchman primary and Glasgow SSR (Brownfield); Kincardine and Lowther Hill are also available as required but it is not known which source the Glasgow APR controller was using at the time of the incident.

There is no requirement for Strathaven to inform Glasgow ATC when they are active and it is standard practice at Glasgow not to provide information on Strathaven activity.

The M'light, crewed by an instructor and trainee, was manoeuvring to join the aerodrome cct pattern downwind RH for RW27; the direction of circuits at Strathaven is to the N. The M'light pilot reported being late-downwind at the time of the incident and that the ac was at 800ft agl.

At 1542:09 the recorded area surveillance (Prestwick Multi Radar Tracking) showed the A119, 6.5nm SE of Strathaven, at an alt of 2100ft while an intermittent slow moving primary return can be seen WSW of Strathaven on a course towards the airfield. By 1544:00 the A119 was 2.3nm SE of Strathaven at alt 2000ft and the primary only return had manoeuvred into a crosswind position for RW27. At 1544:43, the A119 passed abeam the Strathaven RW27 final position at an (Mode C) alt of 1900ft while the primary only return was in a position downwind for RW27 and the ac were 1.5nm apart; by 1545:06 the ac were 0.3nm apart, 0.6nm N of Strathaven and the Mode C of the A119 showed 1800ft. The two radar returns then merged as the A119 continued on its NW track at 1800ft and the primary return continued on a track downwind for RW27 at Strathaven.

The A119 pilot called entering the Glasgow CTR at 1546:27 and shortly thereafter was transferred to the Glasgow TWR. There was no Airprox report given on the APR frequency.

The A119 pilot reported being aware of the Strathaven site and noted there being no published frequency. The two man crew of the A119 reported that they saw no activity in the vicinity of the site until, at the last moment, sighting the M'light as it passed approximately 300 – 350ft below them.

The primary contact observed on the Prestwick MRT was such that its characteristics indicated it to be the reporting M'light i.e. the track flown and the position of the A119 relative to the primary contact.

As the A119 approached the Glasgow Zone boundary, and in order to comply with the ATC requirement of 'not above 2000ft in the zone', the A119 descended.

The cct altitude at Strathaven is 1847ft (847ft elevation plus 1000ft height). The A119 flew less than 1nm to the NE of Strathaven at an alt of 1800ft. The M'light pilot reported being at 800ft agl. Therefore the M'light was at an altitude equivalent of 1647ft (847ft elevation plus 800ft height). By this calculation the vertical distance between the ac may have been less than that reported by both pilots.

The Airprox occurred when the A119 flew within the vicinity of Strathaven at about circuit height. The encounter was pre-disposed by several factors:

The location of Strathaven in relation to the Glasgow CTR means that traffic routing inbound from the SE beneath controlled airspace will likely pass-by the vicinity of Strathaven.

The A119 had descended in order to comply with Glasgow ATC's requirement for flight within the Glasgow CTR.

Whilst Strathaven is notified in the UK AIP as a microlight site (and depicted on standard navigational maps), there is no notification of the circuit height used at the aerodrome.

Both ac were flying in uncontrolled airspace where responsibility for collision avoidance rests with the pilots. Glasgow APR had no information to suggest there was flying activity at Strathaven and was not required to provide such information. Surveillance capabilities at Glasgow are not reliable in discerning activity in the vicinity of Strathaven.

Recommendation: In light of this and the previous Airprox of 12 Feb 2011 the following recommendation is addressed to the Civil Aviation Authority's Aeronautical Information Management Regulation department (DAP):

The CAA should determine whether or not the entry for the Strathaven Microlight Site in the UK AIP should be amended to include details of the vertical limits of activity at the site.

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 photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authorities.

Members observed that this is the second similar Airprox in the last 12 Months (2011011). Further they noted the specific circumstances and location of Strathaven relative to Glasgow and its surrounding CAS make it vulnerable to overflights both by traffic inbound to Glasgow and VFR traffic transiting through the Class G 'corridor' to the E of the CTR. Also its height of 847ft meant that such traffic is often at, or just below, cct height.

It was observed by a GA Member that the A119 crew were aware of Strathaven but its grass RWs surrounded by other areas of grass make the airfield difficult to break out; he observed that the helicopter flew along the edge of the town minimising any noise nuisance but in doing so came close to the airfield boundary and therefore close to the microlight in the cct.

While agreeing that it is good airmanship to give microlight sites a wide berth, Members understood why the A119 had routed to the W rather than to the E of Strathaven airfield and town which would have added a few track miles to his route. Members also observed that the pilot's selection of ATC agencies and types of service selected had been appropriate to the profile of his flight and no other agency was available that would have given a better level of service.

Members discussed at some length whether or not ATC had played any part in the incident. It was agreed that 2000ft amsl was a reasonable alt for VFR traffic to enter the Glasgow CTR and also that routeing the A119 via VRP East Kilbride was also sensible. Members also noted that the controller had no knowledge of the activity at Strathaven either from a warning or from radar information; that being the case Members agreed unanimously that the Glasgow controller had acted entirely appropriately and could not have prevented the incident.

Notwithstanding the issues above, the incident took place in Class G airspace where the respective pilots had an equal and shared responsibility to see and avoid other ac. The Microlight pilot, perhaps because he had been concentrating on instructing his student on his first cct and landing, had seen the helicopter late after his student pointed it out to him. The sighting however, had not been too late for him to take effective avoiding action by lowering the nose, throttling back and descending sufficiently to remove any risk of the ac colliding if the helicopter maintained its flightpath which it did.

Although the helicopter pilot 'caught a glimpse' of the microlight this was altogether too late for him to initiate any avoidance. A combination of these factors, Members agreed, had been the cause of the incident.

In discussing how such incidents could be avoided in the future, Members were unable to determine a practical measure that would work reliably and without significant disadvantages. Controllers thought it impracticable to issue warnings regarding Strathaven as, prior to VFR traffic reporting at a VRP (after passing Strathaven), they would not normally be aware of the ac's precise position, particularly since low level radar coverage is poor in that area. Further, any procedural warning of Strathaven traffic was likely to be inaccurate and out of date; therefore Members agreed that it would not provide meaningful information to the passing pilots. Members also observed that pilots should be aware the cct height at such airfields is normally 800/1000ft agl therefore a warning of the alt of activity on VFR charts was unnecessary and would 'clutter' the chart. It was also observed that different agencies use different criteria for information on VFR charts and databases; one Member familiar with VFR avionics/mapping suggested that the A119 would most likely be using a system on which microlight sites are not displayed.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Effectively a non-sighting by the A119 crew and a late sighting by the Ikarus pilot.

Degree of Risk: C.