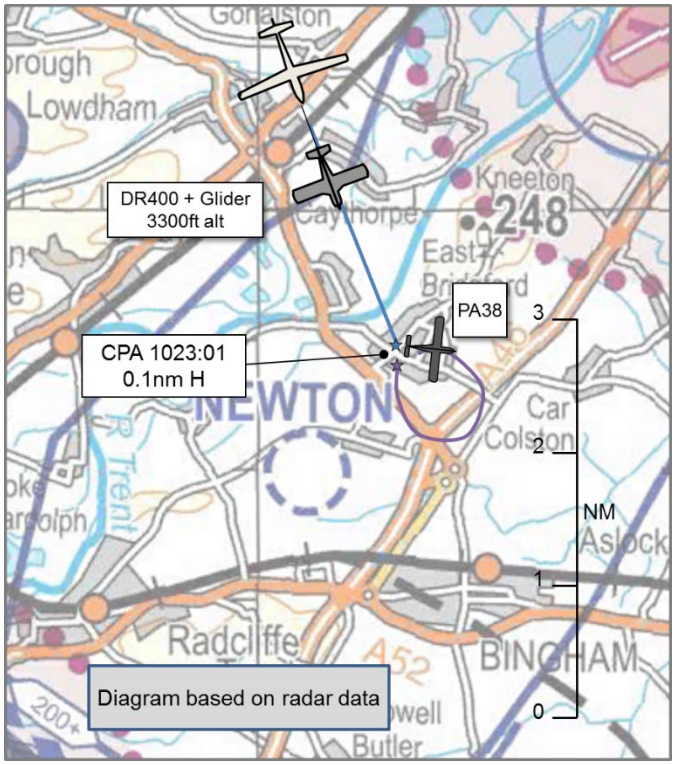
AIRPROX REPORT No 2018022

Date: 16 Feb 2018 Time: 1023Z Position: 5258N 00058W Location: 5nm SW Syerston

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DR400 + glider	PA38
Operator	HQ Air (Trg)	Civ Trg
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	Basic
Provider		East Midlands
Altitude/FL	3300ft	
Transponder	A, C	A
Reported		
Colours	Yellow, White	White, Orange
Lighting	Strobes, Nav	Nav, Strobes
Conditions	VMC	VMC
Visibility	25km	10km
Altitude/FL	4000ft	3000ft
Altimeter	QFE	NK
Heading	150°	080°
Speed	75kt	92kt
ACAS/TAS	TAS	Unknown
Alert	None	N/A
Separation		
Reported	50ft V/200m H	0ft V/0.3nm H
Recorded	NK V/0.1nm H	



THE DR400 PILOT reports that he was aerotowing a Viking glider; just after passing 4000ft the Viking captain called traffic in the 12 o'clock, below the nose of the DR400. He initiated a gentle turn to the right (because he was towing the glider, more rapid avoiding action was not possible) and saw a civil light-aircraft to the left of the nose, about 50ft below and 300m away on a reciprocal track. A couple of seconds after he first saw it, the light-aircraft initiated a sharp turn to the right and descended slowly, it flew a right-hand orbit and the DR400 pilot lost sight of him behind the wing, but by now it was well below. Another glider pilot called that he was visual with the light-aircraft and it was now well clear of the aerotow combination. He informed Syerston that he would be reporting an Airprox and the glider was released as planned at 6000ft. The Viking captain later reported that he had seen the light-aircraft orbiting previously in the area, prior to the Airprox.

He assessed the risk of collision as 'Low'.

THE PA38 PILOT reports that he was instructing a student's first navigational trip. The student had planned to route from overhead Newton to Draycote Water and back. They departed from Nottingham and, before they left the frequency, declared their intention to orbit overhead Newton, then switched to East Midlands frequency. East Midlands were busy initially, and so it took a few mins before they were able to request a Basic Service; in the meantime they set up in an orbit overhead Newton at 3000ft. The sun was low in the sky at the time, making visibility poor as they turned through easterly headings. The student was busy organising the CTA transit when the instructor spotted the other aircraft approaching from a northerly direction, over the top of their wing. He immediately took control and took avoiding action by stopping the right turn to max-rate turn to the left with an 800fpm dive. At no time did the other pilot announce his intention to tow a glider on either of the frequencies that they had been using, despite the high number of aircraft operating around Nottingham.

He assessed the risk of collision as 'Low'.

Factual Background

The weather at East Midlands was recorded as follows:

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EGNX 161020Z 21011KT CAVOK 04/00 Q1024=
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Analysis and Investigation

CAA ATSI

The PA38 pilot contacted East Midlands Radar at 1020:40, requested a Basic Service and a clearance to cross their controlled airspace (Figure 1). The East Midlands Radar controller instructed the pilot to remain outside controlled airspace, and to select transponder code 4562. The code appeared momentarily on the area radar replay at 1021:35 before reverting to 0000. It then reappeared correctly at 1022:00 (Figure 2). Levels indicated are FL – add 300ft to obtain altitude

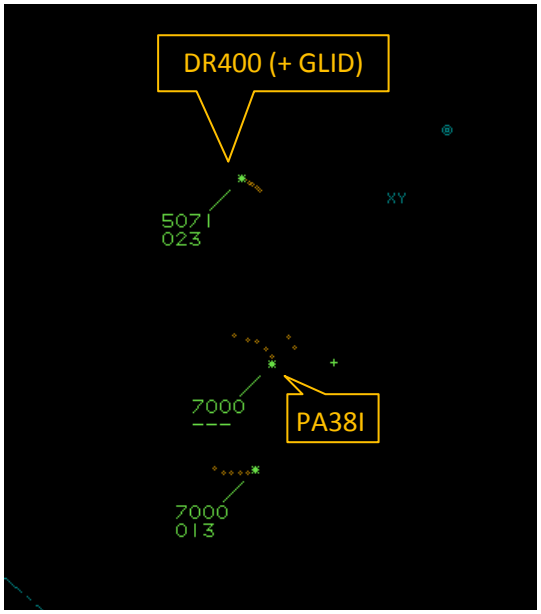

Figure 1 – 1020:40

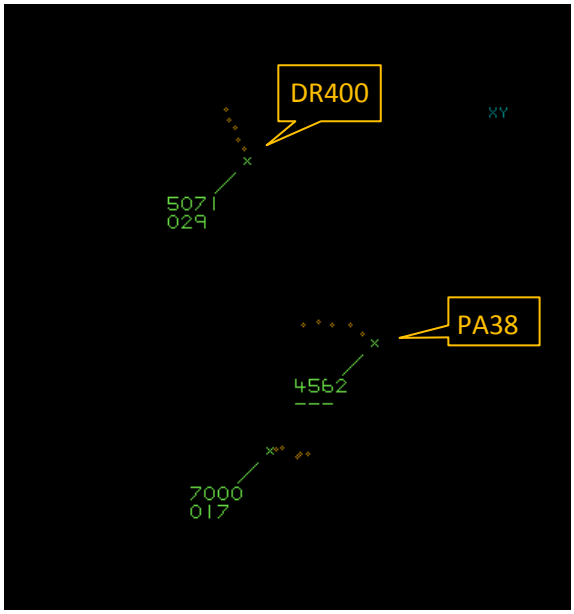

Figure 2 – 1022:00

The controller then became preoccupied with other aircraft calls and the passing of Traffic Information, but returned to request the PA38's details at 1021:50. Another aircraft then made an initial call before the PA38 was able to reply, at 1022:22 (Figure 3).

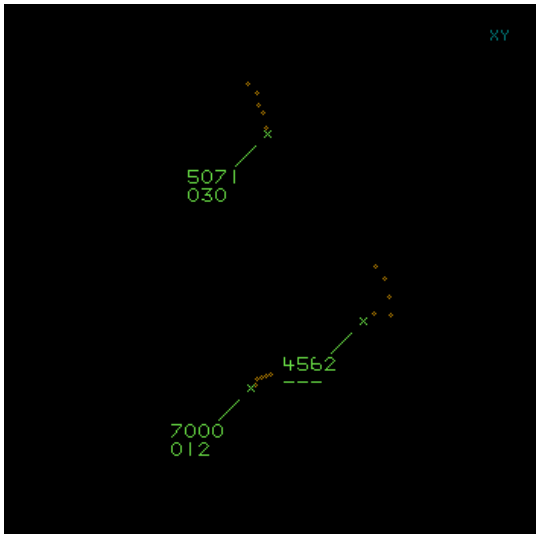

Figure 3 – 1022:22

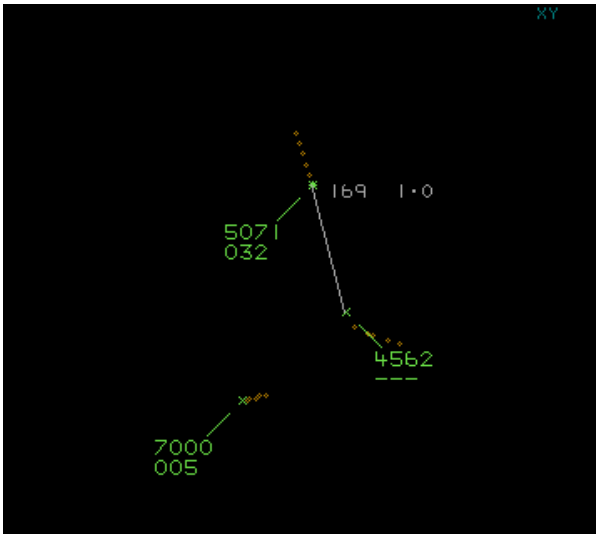

Figure 4 – 1022:43

Having received the PA38's routing request, the controller repeated the instruction to remain outside controlled airspace, and advised that the parachuting site at Langar, to their south-east, was active. The controller then asked whether the PA38 was Mode C equipped, (which the pilot confirmed it was not). At 1022:30 the controller asked them to confirm the level which they were requesting for the transit of East Midlands controlled airspace, which the PA38 pilot, at 1022:43, reported as being 3000ft (Figure 4).

At 1022:48 the controller issued a clearance for the PA38 to cross controlled airspace not above 3000ft (Figure 5). The PA38 pilot's readback of the clearance ended at 1023:03, coincidental with CPA (Figure 6).

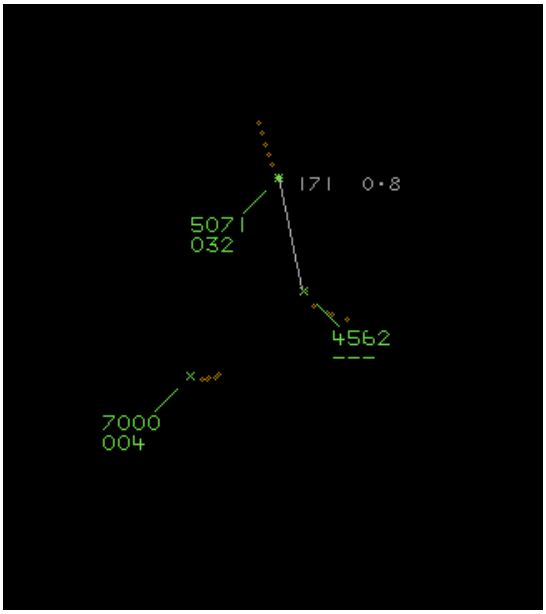

Figure 5 – 1022:48

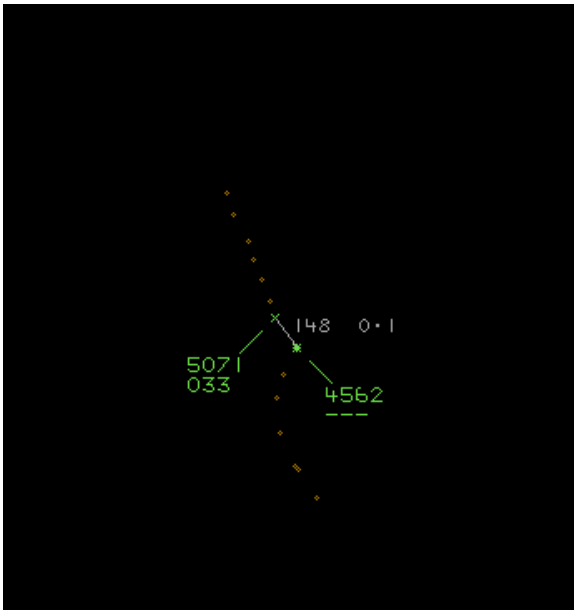

Figure 6 – 1023:03

At 1023:05 the controller confirmed the Basic Service, and advised the PA38 pilot to maintain a good lookout, advising that they had traffic in their vicinity, 600ft above (Figure 7). The PA38 pilot acknowledged this, and advised that they were visual with an aircraft towing a glider, by which point, at 1023:10, the aircraft had crossed and were diverging (Figure 8).

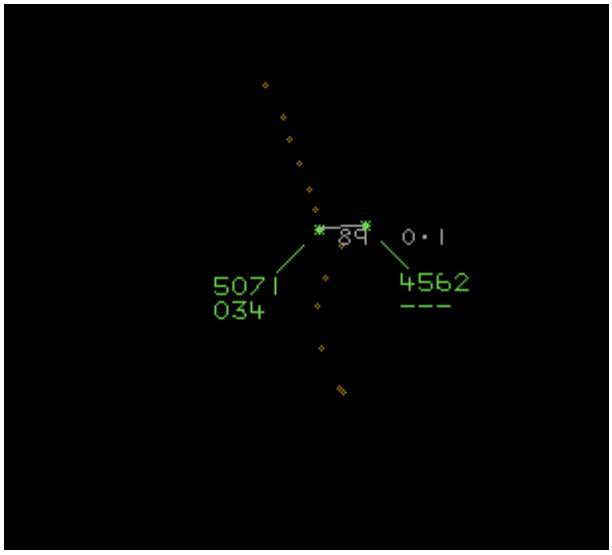

Figure 7 – 1023:05

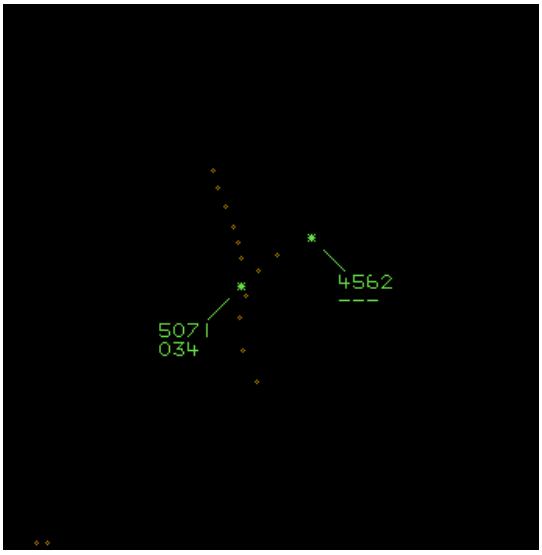

Figure 8 – 1023:10

East Midlands ATC reviewed the incident but did not submit a formal report. It cannot be determined at what point the controller identified the PA38 nor when they spotted the potential confliction. Having not yet confirmed the level of the PA38, and with no Mode C available, the height separation

between the two aircraft reported by the controller was based on the (correct) assumption that the PA38 was already maintaining the 3000ft the pilot had requested for transit of controlled airspace. It is likely that the Traffic Information was passed as, or just after the PA38 had taken avoiding action.

Under a Basic Service, whether Traffic Information has been provided or not, the pilot remains responsible for collision avoidance without assistance from the controller.[1]

UKAB Secretariat

The DR400 and PA38 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[2], notwithstanding, the PA38 pilot was required to give way to the glider-tug combination[3].

Comments

HQ Air Command

This incident took place in reasonably busy Class G airspace, with both pilots relying mainly on lookout. The PA38 pilot had requested a Basic Service from East Midlands and the DR400 pilot had chosen to remain on the air-to-ground frequency manned by the duty instructor at Syerston, thus neither pilot attempted to take advantage of a surveillance-based radar service that may have been available. The PA38 should have been detected by the TAS on the DR400, albeit with no altitude information – it is unclear why there was no presentation to the DR400 pilot of the presence of the PA38. The pilot of the glider under tow became visual with the PA38 and advised the tug pilot, whereupon the DR400 pilot initiated a gentle turn away and then sighted the PA38 a few seconds before the PA38 pilot sighted the combination and took avoiding action.

Operations in Class G airspace are conducted under the principle of 'see and avoid', though this should not be taken to indicate that this is the most reliable barrier to MAC. As can be seen in this incident, and many other Airprox, a late sighting often leads to separation being eroded below that which is 'comfortable'. A surveillance-based ATS *may* have been available here, to either aircraft, which might have provided an earlier alert to the presence of a conflicting aircraft and allowed an earlier decision by either pilot to ensure safe separation.

Summary

An Airprox was reported when a DR400/glider combination and a PA38 flew into proximity near Syerston at 1023 on Friday 16th February 2018. Both pilots were operating under VFR in VMC, the PA38 pilot in receipt of a Basic Service from East Midlands and the DR400 pilot not in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Board first looked at the actions of the DR400 pilot, he was towing the glider to 6000ft and members wondered why he was still on the Syerston frequency when climbing so high. Even though they were operating close to Syerston, the Board thought that at that level a call to East Midlands, who are the designated LARS provider in the area, would have been merited; not only would they have been able to tell the DR400 pilot about the PA38, they would have been able to pass Traffic Information to other

[1] CAP774 Chapter 2 Basic Service Para 2.9
[2] SERA.3205 Proximity.
[3] SERA 3210 Right of Way

pilots in the area. As it turned out, members noted that it was the glider pilot who had spotted the PA38 and alerted the DR400 pilot, who, having subsequently sighted the PA38, was able to take action to avoid.

Turning to the PA38 pilot's actions, members speculated that, in orbiting at 3000ft as his student arranged for route clearances, he may have understandably assumed that he was above most of the Syerston glider traffic; as it transpired, Syerston gliders do frequently operate at higher altitudes as was the case in this incident. Members noted that the PA38 pilot had called East Midlands for a Basic Service, and that although they were not required to do so under the terms of this service, they had been able to give him Traffic Information, albeit at the same time that he saw the glider anyway. GA members commented that this area was often quite busy, and they opined that the PA38 pilot may have been better served by requesting a Traffic Service which would have cued the controller to look for him specifically and call the traffic sooner. Notwithstanding, the PA38 pilot saw the DR400 and glider, albeit at a late stage, and was able to take avoiding action.

The Board briefly looked at the actions of the East Midlands controller and agreed that they had correctly prioritised giving Traffic Information to aircraft receiving a Traffic Service over confirming the Basic Service for the PA38. As mentioned above, under the conditions of a Basic Service they were not required to monitor the PA38 on their radar or to pass Traffic Information unless they perceived a definite risk of collision. In this case they did pass Traffic Information but, unfortunately, it was at same time that the pilot saw the DR400 and so it didn't materially affect the outcome; nevertheless the controller had discharged their duty appropriately.

Finally, the Board discussed the cause and risk of the incident and determined the cause to be a late sighting by both pilots. In assessing the risk, they agreed that in sighting each other at a late stage, safety had been much reduced below the norm; Category B. Returning to the topic about the frequency that the gliders and tug were operating on, the Board felt strongly enough to make a recommendation to HQ Air Command that they review the radio procedures for CGS (Central Gliding School) activities at Syerston, especially when conducting aerotows above 2000ft.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by both pilots.

Degree of Risk: B.

Recommendation: HQ Air Command review the radio procedures for CGS operations from Syerston.

Safety Barrier Assessment[4]

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

ANSP:

Situational Awareness and Action were assessed as **not used** because the tug/glider combination was not in receipt of an available ATS and, although the PA38 pilot was under a Basic Service with East Midlands they were not required to pass Traffic Information; although ultimately they did, it was given only at or around CPA.

[4] The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the UKAB Website.

Flight Crew:

Situational Awareness and Action were assessed as **ineffective** because neither pilot had any situational awareness about the other.

Warning System Operation and Compliance were assessed as **ineffective** because the TAS on the DR400 did not alert.

See and Avoid were assessed as **partially effective** because both pilots were able to take avoiding action, albeit late.