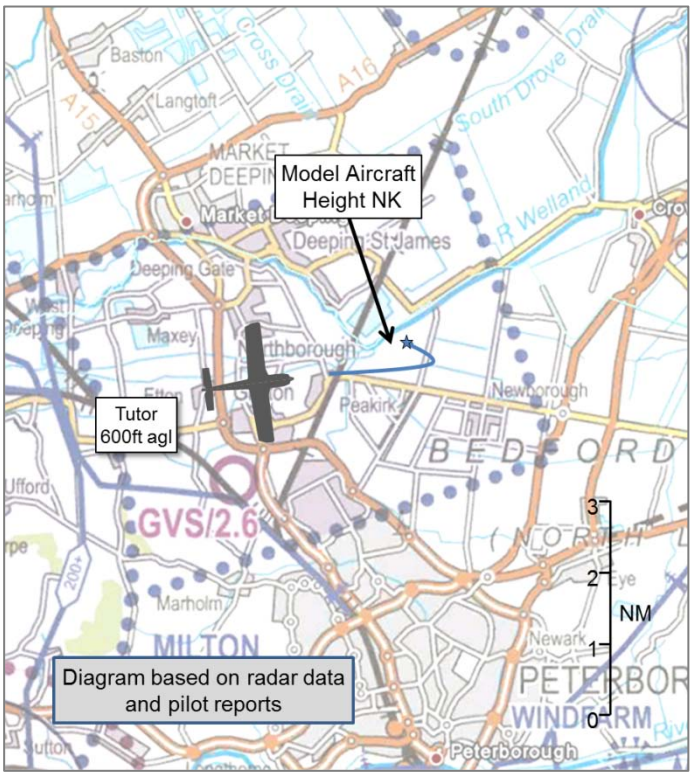
AIRPROX REPORT No 2014009

Date/Time: 4 Feb 2014 1353Z

Position: 5239N 0016W (8nm NE Peterborough)

Airspace: Lon FIR (*Class*: G)

	Aircraft 1	*Aircraft 2*
Type:	Tutor	RC Model –Seagull extra
Operator:	HQ Air (Trg)	Civ Club
Alt/FL:	600ft RPS (998hPa)	150ft
Conditions:	VMC	NA
Visibility:	40km	NA
Reported Separation:	0ft V/40ft H	NK
Recorded Separation:	NK	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE TUTOR PILOT reports flying a white and blue aircraft with all lights illuminated and transponder squawking Mode 3A and C. He was conducting a sortie to demonstrate, and then instruct, initial point (IP) to target runs in different locations on a low-level nav-ex. Entry to the third IP, northeast of Peakirk went without incident when the student reported seeing two white birds, these were then identified as model fixed-wing aircraft at the same height, 12 o'clock, flying in the opposite direction: the instructor took control and took avoiding action, breaking hard left in a 4g turn. Once clear and straight–and-level, the model aircraft were again seen flying left to right at the same height, but on a diverging heading and no conflict; a climb and orbit was commenced and the student started noting the details of the model and the field it was flying from. He reported the incident to Wyton ATC, and asked them to notify the civilian police. The Tutor then returned to base without further incident.

He perceived the severity of the incident as 'High'.

THE REMOTE CONTROLLED (RC) MODEL AIRCRAFT PILOT reports flying his white, low-wing Seagull RC Model aircraft in the normal site of the model flying club. It was good visibility and his aircraft was heading north when he saw an aircraft approach from the Peakirk area, at a height of "4 or 5 houses, 100-150ft". As the other aircraft reached the edge of the site, it banked sharply north and followed the model aircraft he thought, at this stage the pilot could clearly see two people on board the plane. Worried about losing control of the model due to the distance, he turned in an anti-clockwise direction to head south and assessed that the Seagull was now above the other aircraft. The other aircraft made various passes at higher levels before departing. The pilot acknowledged that it is difficult to judge height from the ground, but opined that at 600ft his aircraft would be too small to see and fly safely from the ground, he estimated the top height of his aircraft to be 200-250ft agl.

Factual Background

The weather at Wittering was recorded as:

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METAR EGXT 041350Z AUTO 18014KT 9999 SCT029 07/03 Q0997
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CAP 658 Model Aircraft: A Guide to safe flying, states the articles from the ANO which pertain to model aircraft flying. In particular:

Article 138 – Endangering safety of any person or property

'A person must not recklessly or negligently cause or permit an aircraft to endanger any person or property.'

Article 166 – Small unmanned aircraft

'(1) A person must not cause or permit any article or animal (whether or not attached to a parachute) to be dropped from a small unmanned aircraft so as to endanger persons or property.
(2) The person in charge of a small unmanned aircraft may only fly the aircraft if reasonably satisfied that the flight can safely be made.
(3) The person in charge of a small unmanned aircraft must maintain direct, unaided visual contact with the aircraft sufficient to monitor its flight path in relation to other aircraft, persons, vehicles, vessels and structures for the purpose of avoiding collisions.
(4) The person in charge of a small unmanned aircraft which has a mass of more than 7 kg excluding its fuel but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight, must not fly the aircraft:
(a) in Class A, C, D or E airspace unless the permission of the appropriate air traffic control unit has been obtained;
(b)within an aerodrome traffic zone during the notified hours of watch of the air traffic control unit (if any) at that aerodrome unless the permission of any such air traffic control unit has been obtained; or
(c) at a height of more than 400 feet above the surface unless it is flying in airspace described in sub-paragraph (a) or (b) and in accordance with the requirements for that airspace.

[UKAB Note: The Seagull RC model weighs less than 7kg and is therefore not bound by paragraph (4) above and the 400ft rule]

Analysis and Investigation

UKAB Secretariat

Unfortunately, only the Tutor's flight profile and Mode C readout can be seen on the radar recordings. Throughout the run the Mode C maintains F011, which, with the RPS at 998hPa, puts the Tutor at approximately 600ft agl (ground elevation 26ft). The Mode C then climbs to F017, which corroborates his reported climb and his subsequent orbit of the flying club field.

Comments

HQ Air Command

The differing perceptions of aircraft height from the Tutor pilot and model aircraft operator are fundamental to this incident; the model aircraft operator believed that his aircraft was flying considerably lower than seemed to be the case, backed up by the evidence of the Tutor's height from radar replays. Therefore, the only means of collision avoidance available to the Tutor pilot and model aircraft operator in this case would have been effective lookout. Irrespective of the height band, if a possible confliction is identified then early positive action to resolve the situation should be taken. This should necessarily include positive lateral separation if the means to ensure vertical deconfliction do not exist.

Summary

An Airprox occurred on 4th February 2014 between a Tutor at 600ft and an RC model aircraft. The incident was not recorded on radar, but the Tutor's flight profile was.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports both from the pilot and operator of the aircraft and the RC model, radar photographs/video recordings and reports from the appropriate operating authorities.

In discussing the height discrepancy in the two reports, the Board noted that it is often difficult to judge perspective, attitude and altitude from the ground. The Board also commented that the small size of the model may have made judging its distance difficult for the Tutor pilot. Due to the radar recording, the height of the Tutor is not in doubt; however, the relative height and position of the model aircraft could not be positively determined. Notwithstanding, the Board noted that the Tutor pilot reported that the model was co-altitude at CPA, and the RC model operator said that his model was above the Tutor at one point.

It was noted that both parties had an equal right to use the airspace, and that the model aircraft operator was not restricted to using his aircraft below 400ft. The Board wondered whether the change of use of RAF Wittering had meant a loss of corporate knowledge of other operators in the area. Of note Peakirk is directly beneath the Wittering MATZ stub, which in the past would have meant aircraft would be unlikely to conduct the nav-ex type sorties there, conversely at 400ft the model flying club would not have affected the aircraft inbound to Wittering be attuned to aircraft flying at 500ft or so (or even below this at 250ft for military aircraft) in the vicinity of their club's airspace. In short, the change in airfield usage had meant that previously unlikely circumstances were now possible, and both operators needed to be aware of this with respect to theirs and other airspace users' operating regimes.

The Board noted that model aircraft flying and the use of unmanned flying vehicles is an increasing factor within UK's airspace and they were alive to the fact that more of these sorts of incidents may well be seen in the future. The Board commended the model flying club for taking part in the Airprox process; understanding these sorts of events would be hugely valuable in safely integrating model aircraft and unmanned air systems in future.

Turning to the cause of the Airprox, it was assessed that this had been a conflict in Class G that had been resolved by the Tutor pilot. The risk was categorised as B, although avoiding action had been taken, safety margins had been much reduced below normal.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict in Class G resolved by the Tutor pilot.

Degree of Risk: B

ERC Score[1]: 20

[1] 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.