

AIRPROX REPORT No 2013089

Date/Time: 24 Jul 2013 1015Z

Position: 5212N 00137W
(Wellesbourne Mountford Airfield
- elevation 159ft)

Airspace: Wellesbourne ATZ (Class: G)

Reporting Ac Reported Ac

Type: PA18 R44 Helicopter

Operator: Civ Trg Civ Trg

Alt/FL: NK 5-10ft
NK NK

Weather: NK VMC CLBC

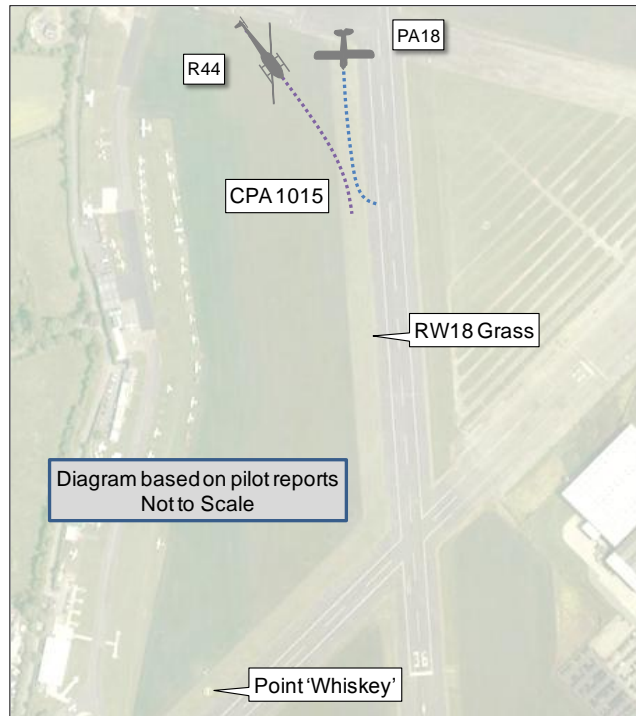
Visibility: NK 10km

Reported Separation:

10ft V/50m H Not seen

Recorded Separation:

NR



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PA18 SUPER CUB PILOT reports she was an instructor on a training flight at Wellesbourne Mountford (Wellesbourne) airfield. The R44 was on final approach to Heli landing point "Whiskey" whilst her PA18 was on final approach to RW18 grass. Both aircraft's instructors had called "Final" for their respective landings; the trajectory of the R44 should normally have been outside the protected zone for fixed-wing traffic. As her PA18 aircraft approached the threshold and commenced the flare, the R44 deviated from the helicopter circuit and flew in a descending profile directly over the grass RWY ahead of her; the R44 appeared to reduce forward velocity and continued to descend such that there was no opportunity for her to go around. Continuing the ground roll on the grass RWY could have resulted in the PA18 passing underneath the R44, or striking it if it descended further. The pupil in the PA18 therefore started to steer the aircraft to the left to exit the grass and to avoid the helicopter. She then took over, steering the PA18 through a gravel margin onto the main RW. A ground-loop to the right ensued, with the PA18 re-entering the grass RWY through the gravel trap once more. She regained sufficient control to pick up the left (down-going) wing approximately a foot above the ground, thus avoiding potential serious damage to the aircraft. The PA18 was brought to a halt pointing 180° from the initial landing direction.

THE R44 PILOT reports that the blue and silver helicopter had strobe lights illuminated and was squawking Mode C. She was supervising a Proficiency Check local flight from Wellesbourne airfield. Her candidate had been given a simulated emergency and a final call was made for helicopter aiming point Whiskey. However, the candidate did not make an approach directly to Whiskey, he made an approach to the hover $\frac{3}{4}$ of the way up the grass that runs alongside the west of RW18. She did not hear a fixed-wing aircraft call final for RW18, and therefore did not realise there would be a conflict. The candidate came to a hover taxi and continued a short distance to turn left down the grass to aiming point Whiskey, moving clear of the RW. At this point she was unaware that an Airprox had occurred. As the R44 approached Whiskey, the FISO contacted her informing her to make a radio call if she needed to use the grass alongside RW18. Within her report she commented that she had flown from Wellesbourne not only through her training but also as an instructor/examiner. As the UK AIP does not indicate a grass RWY at Wellesbourne, and never having experienced the grass area being used as a RW, she did not expect fixed-wing aircraft to land on it. The FISO said he had tried to get her attention but thought his transmission may have been 'stepped on' by other aircraft.

THE WELLESBOURNE FLIGHT INFORMATION OFFICER (FISO) reports that a PA18 was carrying out 1000ft right-hand circuits using the grass strip adjacent and to the west of RW18/36. The RWY is not licensed or marked out, but the operator had approval from the airport authority to use the grass for landings and take offs on the basis that it was not to be used at the same time as the adjacent tarmac RW18/36. An R44 helicopter was carrying out standard circuits to the west of RW18 at 600' and using point Heli 'W' as an aiming point, thus keeping the helicopter away from the active runways. When the PA18 reported final for RW18 grass he responded 'Land at your discretion on the grass'. The R44 reported final for Heli 'W', which he acknowledged. He later noticed that the helicopter was getting very close to the PA18 after it had touched down on the grass and he asked the helicopter to move away to the right. There was no reply. At this moment the PA18 veered left and entered a ground loop to avoid the helicopter. Helicopters are expected to ask to use the grass strip adjacent to the runway due to possible conflicts.

Factual Background

The Birmingham weather and an unofficial Wellesbourne observation were:

METAR EGBB 241020Z 19009KT 160V220 9999 SCT022 22/15 Q1014=

Observation EGBW 241025Z 23007KT 9999 SCT030 22/15 Q1014=

The Wellesbourne ATZ consists of a circle 2nm radius centred at 521132N 0013652W on RW18/36 and extending to a height of 2000ft above aerodrome level (elevation 159ft).

The grass runway is not promulgated in the UK AIP, and is only available un-licensed for locally-based 'tail-dragger' aircraft in conditions when the crosswind component precludes the use of the asphalt RW18. Prior permission from the Aerodrome Authority is required, together with a full briefing and inspection of the grass area prior to use. The grass RW18 consists of a strip approximately 35m wide, adjacent to the west side of the asphalt runway, as highlighted in yellow in Figure 1 below.



Figure 1: Grass RW18 highlighted in yellow.

The helicopter circuit pattern is published on the Wellesbourne website¹; an extracted copy of the circuit, together with the helicopter aiming spot whisky (Heli 'W'), is shown in Figure 2 below.

¹ <http://www.wellesbourneairfield.com/dataandmap.htm>

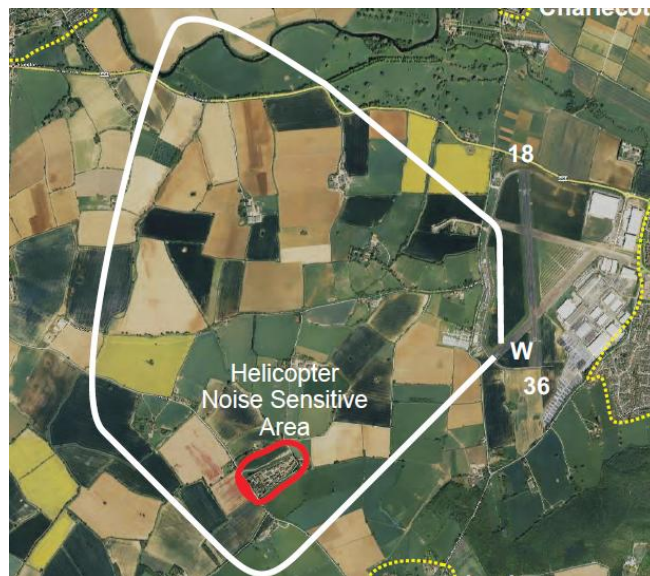


Figure 2 – Extracted from Wellesbourne showing helicopter circuit - RW18.

The Wellesbourne FISO Manual of Local Instructions², states:

Standard Procedures and local instructions will apply to all aircraft when flying within the Aerodrome Traffic Zone.

Non-standard procedures required for training purposes will only be permitted when the traffic situation allows...

... Traffic information will be given to aircraft in the air, where appropriate...

Helicopter pilots will be advised by the FISO of the helicopter circuit height 600ft QFE circuits to align with fixed wing circuit directions, based on helispots Echo and Whisky.

The Wellesbourne Aerodrome Manual³ states:

A Pilots Order Book is kept in all flying schools and gives details of procedures and restrictions relating to the operation of aircraft at Wellesbourne and details of current legislation.'

The following instructions to pilots are promulgated in the Aerodrome Directory of the Aerodrome Section of the UK AIP.

- (a) Circuit height 1000ft agl for fixed wing aircraft, 600ft agl for helicopters
- (b) Runway 18 and 23 right hand circuits...
- (f) Helicopter circuits inside fixed wing circuits avoiding local villages.

Analysis and Investigation

CAA ATSI Analysis

CAA ATSI had access to area radar recordings together with written reports from the FISO and the pilots of both aircraft. Wellesbourne are not required to record RTF and therefore no RTF recording was available. Area radar recordings did not show the Airprox event.

² Paragraphs 2 and 2.5

³ Paragraphs 3.8.1 and 4.15.1

The FISO reported it had been a busy day.

The PA18 was carrying out visual right-hand circuits on the RW18 grass strip at 1000ft, meanwhile the R44 helicopter was carrying out right-hand helicopter visual circuits at 600ft from holding spot Heli 'W', to the west of RW18 (see Figures 1 and 2). The FISO, who was providing a Basic Service to both aircraft, had an expectation that the helicopter would follow the standard helicopter circuit pattern centred on Heli 'W', operating inside and remaining segregated from the fixed-wing circuit (Figure 3). At the time of the Airprox the R44 was conducting a Proficiency Check, simulating an emergency.

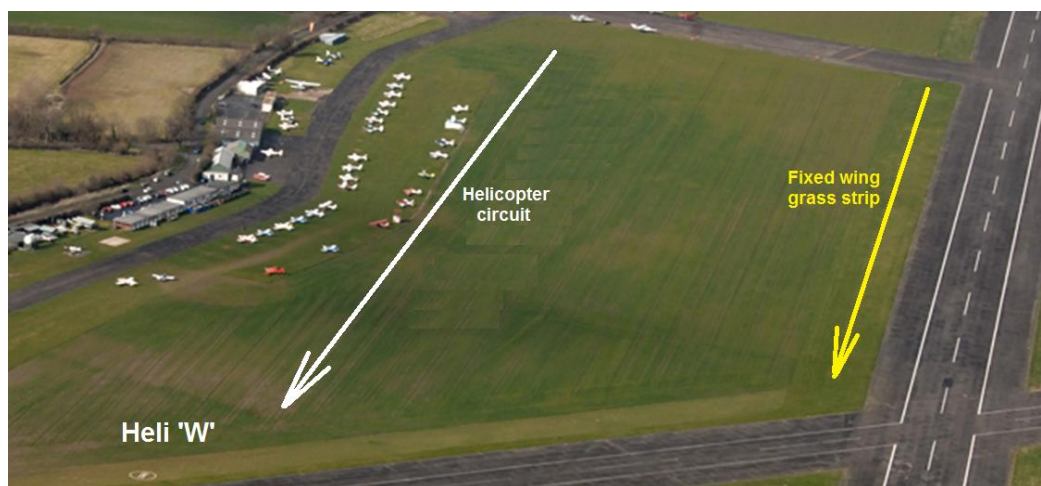


Figure 3 – position of the circuit patterns on the airfield

The PA18 pilot had received approval from the Aerodrome Authority to operate on the grass strip for landings and take-offs provided that it was not used at the same time as the adjacent tarmac runway.

Just prior to the Airprox the PA18 reported on final and the FISO advised the PA18 to, 'land at your discretion on the grass'. The R44 pilot, who reported that she did not hear this RTF exchange, called final for aiming point Heli 'W' which the FISO acknowledged. The R44 had initiated a simulated emergency for an approach to the hover $\frac{3}{4}$ of the way along the grass that runs alongside the west of RW18.

When questioned, the FISO was surprised to learn, subsequently, that the R44 pilot was not aware that the grass RWY was being used. The FISO was asked if perhaps the R44 had just joined the circuit and may have been unaware of the PA18. However the FISO, to the best of his knowledge, believed that both had been established in their segregated visual circuits and considered that they were aware of each other.

The ATSU indicated that as a result of this Airprox, they have taken, or intend to take, the following action:

- a) The Airprox was discussed at an Airfield Safety meeting on 27 July 2013 and was subsequently discussed with the helicopter training school concerned in order to ensure that helicopter circuits are strictly adhered to.
- b) FISOs will be required to provide a warning when the grass strip is in use and this will be incorporated into the Wellesbourne FISO Manual.
- c) A review of the arrangements for grass strip operations will be completed and consideration given to an appropriate entry in the Wellesbourne Aerodrome and FISO Manuals together with a reference in the UK AIP regarding its restricted use.

Summary

The Airprox occurred within the Wellesbourne airfield ATZ, whilst both aircraft were receiving a BS from the FISO. The PA18 was carrying out right-hand circuits to the grass RW18. The R44 was operating in the right-hand helicopter circuit to Heli 'W'. The helicopter circuit is designed to segregate it from the fixed-wing circuit and relies upon the helicopters following the published circuit pattern to Heli 'W'. The R44 pilot was not aware that the PA18 was using the grass RWY when her helicopter was positioning to the grass area adjacent to RW18. This resulted in the R44 descending into close proximity to the landing PA18 which took avoiding action by commencing a left turn on the ground during which a ground loop ensued. The grass RW18 is not promulgated in the UK AIP.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both aircraft involved, the FISO's report, and a report from the appropriate ATC authority.

The Board first considered the actions of the PA18 pilot and then the R44 pilot, both of whom were operating on the Wellesbourne FISO frequency.

The PA18 was operating on a training flight to the grass RW18. The pilot was aware from the RTF that a helicopter was on final approach to Heli 'W' but, because the helicopter circuit and the fixed-wing circuit are segregated at Wellesbourne, she expected the helicopter to be outside the 'protected zone' for fixed-wing traffic. However, approaching the grass runway threshold, she became aware that the helicopter had deviated from the helicopter circuit and was descending over the grass runway ahead of her PA18. A civil pilot member explained that from her seat in the back of the aircraft, because of the high wing, it would not have been possible to see the helicopter any sooner, whilst it was descending in her direction. Action was taken which resulted in a 'ground-loop' and the wing nearly touching the grass.

Turning to the R44 pilot, at the time of the Airprox she was supervising a Proficiency Check in the helicopter circuit. In the view of several members, she had become absorbed in that task and was not sufficiently aware of the presence of the PA18, even though its pilot had reported on RTF that they were making a final approach to RW18 grass. They also found it most surprising, in view of her experience at the airfield, that she did not know of the presence of the grass runway. However, in her defence, the Board noted that, at the time of the Airprox, no reference was made to the grass runway in the Wellesbourne Aerodrome and FISO manuals, nor is there any reference on the relative page of the UK AIP entry for Wellesbourne. The Board considered that this lack of formal information was a key contributory factor in the occurrence. On approaching the airfield on this occasion, instead of positioning well to the west of the main RWY and routeing towards Heli 'W', in accordance with the helicopter circuit procedure, she allowed her candidate to approach towards the main RWY and, consequently, the grass RWY alongside, in the mistaken belief that her aircraft was the only one in the circuit pattern. Because neither she nor her candidate were aware of the presence of the PA18 landing on the grass RWY (despite radio calls being made to that effect), the Board therefore considered that the cause of the Airprox was that the R44 crew flew into conflict with the PA18, which they did not see.

The Board then considered the Category of risk. It was apparent that this was a very serious incident whereby, effectively, the PA18 pilot was presented with a situation where timely avoiding action was not possible. The fact that the PA18 pilot was able to swerve clear whilst on the grass was fortuitous, albeit nearly resulting in an accident in its own right. Some Board members thought that the action taken by the PA18 pilot had prevented the collision, albeit with safety margins much reduced below the normal. However, the majority felt that this was a far more serious incident, that an actual risk of collision had existed, that it had been avoided only by the very slimmest of margins and that nothing more could have been done to improve matters. It was agreed that an aircraft accident had only been narrowly avoided; therefore, it was decided that the risk Category should be A.

Following this incident, the Wellesbourne ATS Unit took action to address formally the use and promulgation of the grass runway. The issue has been discussed at two Air Safety Committee meetings, which comprise representatives from the airfield users, to ensure that pilots are briefed appropriately. FISOs now provide, as suggested, warnings on the RTF when the grass RWY is in use; there are now also appropriate entries in the Wellesbourne Aerodrome and FISO Manuals. No decision has yet been made by Wellesbourne Mountford regarding whether there should be a reference to the grass runway in the UK AIP. However, because the Board assessed that the lack of entry about grass runway operations in the UK AIP was a contributory factor to this Airprox, it was considered that a recommendation should be made to Wellesbourne to review and update their AIP entry with respect to grass runway operations.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	The R44 crew flew into conflict with the PA18, which they did not see.
<u>Contributory factor:</u>	The Wellesbourne Mountford Aerodrome, FISO manuals and AIP entry did not include information with respect to grass runway operations.
<u>Risk:</u>	A.
<u>ERC Score:</u> ⁴	20.
<u>Recommendation:</u>	Wellesbourne Mountford review and update their AIP entry with respect to grass runway operations.

⁴ 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.