

ACCIDENT

Aircraft Type and Registration:	1) Mainair Blade 912, G-MZBA 2) Schleicher ASW19B, G-DELA
No & Type of Engines:	1) 1 Rotax 912 UL piston engine 2) No engine
Year of Manufacture:	1) 1996 (Serial no: 1068-0296-7-W870) 2) 1981 (Serial no: 19346)
Date & Time (UTC):	6 May 2012 at 1251 hrs
Location:	Aboyne airfield, Aberdeenshire
Type of Flight:	1) Private 2) Private
Persons on Board:	1) Crew - 1 Passengers - None 2) Crew - 1 Passengers - None
Injuries:	1) Crew - 1 (Serious) Passengers - N/A 2) Crew - None Passengers - N/A
Nature of Damage:	1) Damage to airframe, pylon, wing and engine 2) Damage to right wing, tailplane and fin
Commander's Licence:	1) National Private Pilot's Licence 2) National Private Pilot's Licence
Commander's Age:	1) 62 years 2) 68 years
Commander's Flying Experience:	1) ~ 2,400 hours (of which 17 were on type) Last 90 days - 30 hours Last 28 days - 6 hours 2) 4,351 hours (of which 200 were on type) Last 90 days - 17 hours Last 28 days - 5 hours
Information Source:	Aircraft Accident Report Forms submitted by the pilots, account by duty instructor and further enquiries by the AAIB

Synopsis

An ASW19B glider was on approach to Runway 27S while a Mainair Blade flex-wing microlight was on approach to the intersecting Runway 05. Both pilots made downwind calls but due to a radio problem in the microlight neither pilot heard the other's calls. When the duty instructor (also A/G operator) became aware of

the conflict he radioed the microlight to abort, but this call was not received by the microlight pilot. The glider pilot heard the call but was already committed to landing and did not know from which direction the microlight was approaching – he touched down and looked ahead but did not see any other aircraft. The microlight

appeared suddenly on his left, at about the 10 o'clock position, and he instinctively applied full left rudder to avoid it but the glider's right wing struck the microlight, seriously injuring its pilot.

History of the flights

Account from the pilot of ASW19B glider (G-DELA)

Aboyne airfield is an unlicensed airfield operated by Deeside Gliding Club and used primarily by gliders. It has two parallel paved runways, 09N/27N and 09S/27S (Figure 1), and two intersecting grass runways, 12/30 and 05/23, although Runway 05 is not designated. The pilot of the glider G-DELA was returning to the airfield after a two-hour flight and joined overhead at 1,500 ft aal to determine the wind direction and circuit traffic. He assessed the wind as being a light northerly with occasional variations to the north-east. He elected to use Runway 27S which he stated was "normal for the given conditions" while accepting that there might be a small tailwind. He then saw another glider and

heard it make a 'downwind left-hand 27' radio call. He watched it land and clear the runway and then he heard the microlight G-MZBA make a downwind call for 27, later changing it to 05.

After a short period the glider pilot saw G-MZBA climbing away from Runway 05 to the north-east. The circuit appeared clear so he proceeded downwind and made a "downwind left-hand for 27" call. At this point he lost sight of G-MZBA and did not hear any further radio calls from it. While on the base leg he estimated the wind to be from the north to north-east at 5 kt and on final approach he heard the ground-based duty instructor (also the A/G operator at the time) making a radio call to G-MZBA saying that there was a glider on final, which he followed with a call to abort. As the glider pilot crossed the runway threshold he heard the duty instructor say to him "... there is an aircraft coming towards you". After touching down the glider pilot looked ahead but could not see any aircraft. Suddenly, G-MZBA appeared on his

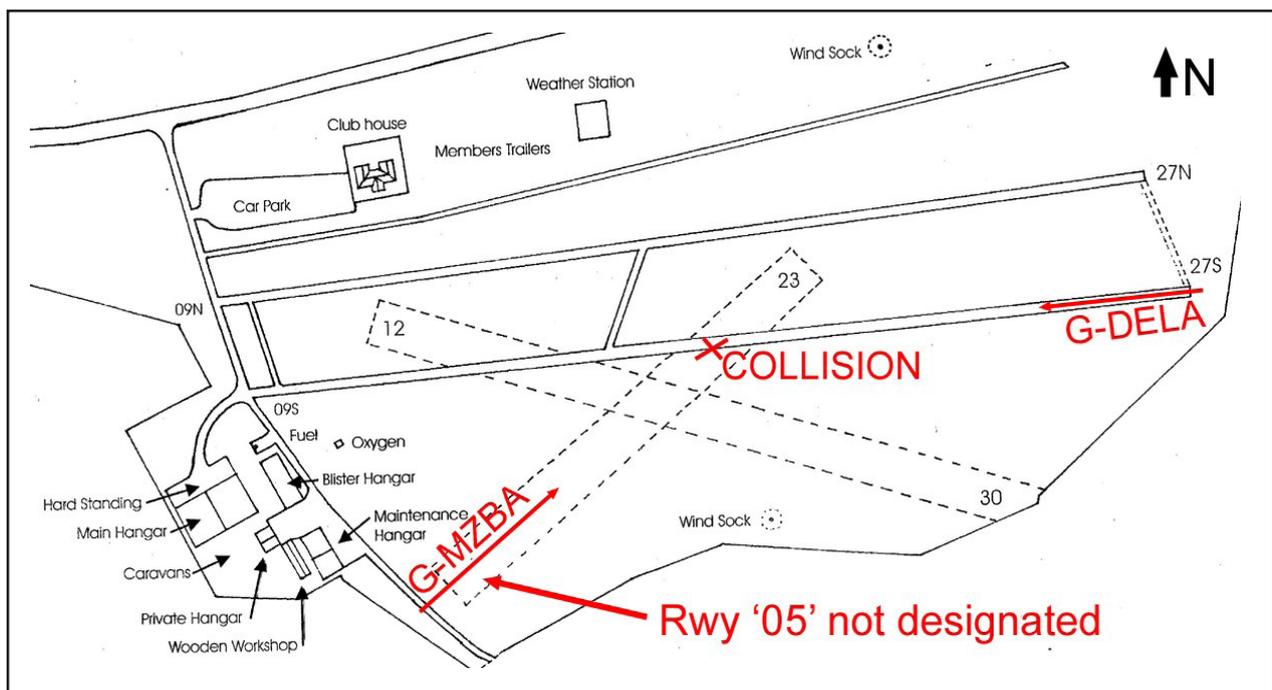


Figure 1

Airfield diagram courtesy Deeside Gliding Club

left at about the 10 o'clock position, and he instinctively applied full left rudder to avoid the microlight, but then there was a loud bang as the glider's right wing struck G-MZBA. When the dust cleared he found that his aircraft had come to rest on the northern side of the runway facing towards the north (Figure 2). He was not injured and was able to exit the glider unaided.

Account from the pilot of Mainair Blade microlight (G-MZBA)

The pilot of G-MZBA had planned a local flight from his home airfield of Aboyne to Inch and back. He was an experienced glider, hang-glider, and powered fixed-wing pilot but only had 17 hours on flex-wing microlights and was therefore careful to avoid strong crosswinds. His radio checks on the ground at Aboyne were satisfactory but on arriving at Inch he was asked why he had not responded to radio calls from the airfield. He carried out another radio check on the ground and his radio appeared to be operating satisfactorily.

While approaching Aboyne on his return flight he listened to the appropriate Aboyne Air/Ground radio frequency but did not hear any traffic. He knew that there was flying activity so he assumed that he must have an intermittent problem with his radio.

When he arrived overhead Aboyne at 1,000 ft aal he assessed the wind as being moderate from the north, varying from north-west to north-east, with gusts. He decided that his first approach would be to Runway 30 and radioed his intentions when downwind. On final approach he saw that the windsock was indicating a wind from the north-east so he aborted his approach at 600 ft aal and made a radio call that he was going around. He then decided to use Runway 05 and entered a left-hand circuit at 800 ft aal and made a downwind call – he could not see any other aircraft in the circuit.



Figure 2

Damage to right wing of G-DELA
(photograph courtesy Martin Gallagher)

While on final approach to 05 he saw from the windsock that the wind was almost straight down the runway. The landing was normal and as he was slowing down he suddenly saw the glider, G-DELA, immediately in front of him turning to the left, and realised that he was going to hit its right wing. The next thing he could remember was lying on the ground with an ambulance crew in attendance. The pilot was wearing a helmet but this had been damaged as he sustained an injury to his head and left eye. He also suffered three broken ribs and broken bones in his left hand.

The pilot of G-MZBA stated that he had been aware that he probably had a radio reception problem and was aware that Runway 27 or 09 was likely to be the operating runway for gliders. However, he did not see any gliders in the circuit so he believed it was safe to make an approach to Runway 05. He said he remained high on the approach to 05 to avoid any potential turbulence from the maintenance hangar close to the end of the runway. While on final approach his attention was focused on the runway ahead and checking the wind direction, so he did not look closely for traffic on the final approach to Runway 27. By the time he saw G-DELA it was too late to avoid a collision.

Account from the duty instructor (A/G operator)

The duty instructor was handling the radio as the A/G operator at the time of the accident. He reported that they were using Runway 27N for launching gliders by aerotow and were using Runway 27S for landing by both gliders and the tug. He said the wind was light and variable at about 5 kt. He saw G-MZBA returning to the circuit and recalled hearing it call 'downwind left-hand' for Runway 27, but then a call from G-MZBA changing it to 05. He then saw it appearing to start an approach to Runway 05, but then aborting and turning to the right before turning left and heading west. He heard no further calls from G-MZBA.

The duty instructor then heard the pilot of G-DELA call 'downwind left-hand' for Runway 27. The duty instructor had no concerns at this stage because G-DELA was established on the downwind leg and he could see G-MZBA joining downwind about half a mile behind for what he assumed would be a landing on Runway 27. When G-DELA was on finals he saw the microlight passing to the south and then make a left turn to line up on Runway 05 without hearing any radio calls from it. He now realised that there was a potential conflict and he radioed to G-MZBA to "Abort, abort, abort". Not receiving a response he radioed to G-DELA that there was conflicting traffic approaching from the left, but at this time G-DELA was committed to landing on Runway 27S, due to its low height. When the collision occurred the duty instructor immediately radioed the clubhouse to request an ambulance.

In the duty instructor's opinion the wind conditions were such that a landing on Runway 05 was unnecessary. He said that he could only recall one previous occasion when an aircraft had landed on Runway 05 and that was when a glider had suffered a cable break at low height.

Deeside Gliding Club operations

Aboyne airfield is operated by Deeside Gliding Club and is used primarily by the club's glider pilots and by visiting glider pilots. Some powered aircraft are permitted to land for maintenance purposes. In 2012 permission was granted to the pilots of three microlight aircraft and one motor-glider to operate from the airfield, including the pilot of G-MZBA who was also a member of the gliding club.

The club's '*General Flying Rules*' state that the north runway is for launching and the south runway is for landing in normal operations. It further states that:

'The two grass runways 12/30 and 05/23 are for landing only. The use of 23 must be treated with extreme caution to avoid conflict with aircraft landing on 27. In general 23 is available when strong southerly/south westerly are blowing or a glider has a poor crosswind performance.'

There is no specific reference to landing on Runway 05 and this runway is not designated as a runway on the club's airfield chart (Figure 1). However, the pilot of G-MZBA had worked on the construction of Runway 05/23; he commented that the reason the '05' was not marked on the ground or on the chart was because there had been insufficient funds for paving slabs for the '05' numbers and he considered that Runway '05' was available for use. The Chief Flying Instructor commented that in glider operations any grass area on the airfield is considered available for landing and thus, although Runway 05 was not designated, landing on that section of grass was not prohibited by the club's rules.

Analysis and pilot comments

The accounts from the pilots and the duty instructor differed in terms of G-MZBA's initial manoeuvres in the circuit; however, there was agreement on what had occurred once G-DELA was established on the approach to Runway 27S and G-MZBA on the approach to 05.

The pilot of G-DELA stated that he was unaware that G-MZBA had rejoined the circuit behind him as he had not heard any radio calls from it. By the time he

received the warning from the duty instructor he was already about to touch down. He looked ahead but did not see any aircraft and was not expecting an aircraft to be landing on Runway 05 and by the time he saw G-MZBA it was too late to avoid a collision. The pilot of G-MZBA stated that he believed it was safe to make an approach to Runway 05, he did not look closely for traffic on the final approach to Runway 27 and by the time he saw G-DELA it was too late to avoid a collision.

If the radio on G-MZBA had been operating correctly the pilot would have heard the duty instructor's calls to abort and the accident could have been avoided. Had the radio been working, both pilots would also have been aware of the other's location in the circuit before the conflict was set up. Since the pilot of G-MZBA was using a runway that was rarely used and was not designated by the club, it would have been necessary to be extra vigilant for traffic approaching 09/27S. However, he was inexperienced on the aircraft type and was concerned about the wind conditions so his attention was focussed primarily on the task of flying so he did not see G-DELA until it was too late.

Safety action

The Chief Flying Instructor stated that after conducting a review the club decided to stop promulgating Runway 05/23 as an available runway and would remove any reference to it in the operating procedures for the airfield.