

SERIOUS INCIDENT

Aircraft Type and Registration:	AS355N Ecureuil II, G-OLCP	
No & Type of Engines:	2 Turbomeca Arrius 1A turboshaft engines	
Year of Manufacture:	1994 (Serial no: 5580)	
Date & Time (UTC):	21 March 2014 at 1405 hrs	
Location:	Peterborough Conington Airport, Cambridgeshire	
Type of Flight:	Aerial Work	
Persons on Board:	Crew - 2	Passengers - None
Injuries:	Crew - None	Passengers - N/A Others - 1 (Minor)
Nature of Damage:	None	
Commander's Licence:	Commercial Pilot's Licence	
Commander's Age:	50 years	
Commander's Flying Experience:	5,750 hours (of which 385 were on type) Last 90 days - 146 hours Last 28 days - 58 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and verbal report from the Airfield Operator	

Synopsis

The helicopter was hover taxiing from its parking position towards the runway. As it did so, the tail of a Cessna 152 parked at a nearby refuelling point lifted and, under the influence of the rotor wash and a relatively strong surface wind, the aircraft came to rest inverted.

Description of the occurrence

The accident occurred as the helicopter was departing for a local survey flight. The weather was fine but windy, with a surface wind of 26 kt from 230°. The helicopter was parked on a grass area adjacent to a hard apron, by which were situated the airfield's fuel installation (Figure 1). Before the helicopter departed, a Cessna 152 had taxied to the installation for refuelling before shutting down. Its crew, an instructor and his student, had vacated the aircraft and the instructor left the scene for a while, leaving his student at the aircraft.

The helicopter started, lifted into a hover and started to hover-taxi towards the runway, but as it did so, its pilot noticed the tail of the Cessna start to lift, so he landed again on the grass. The tail of the Cessna continued to lift and the aircraft came to rest inverted. The student pilot, whose upper body was inside the cabin of the aircraft as its tail started to lift, was able to move clear as it did so and suffered only a minor injury.

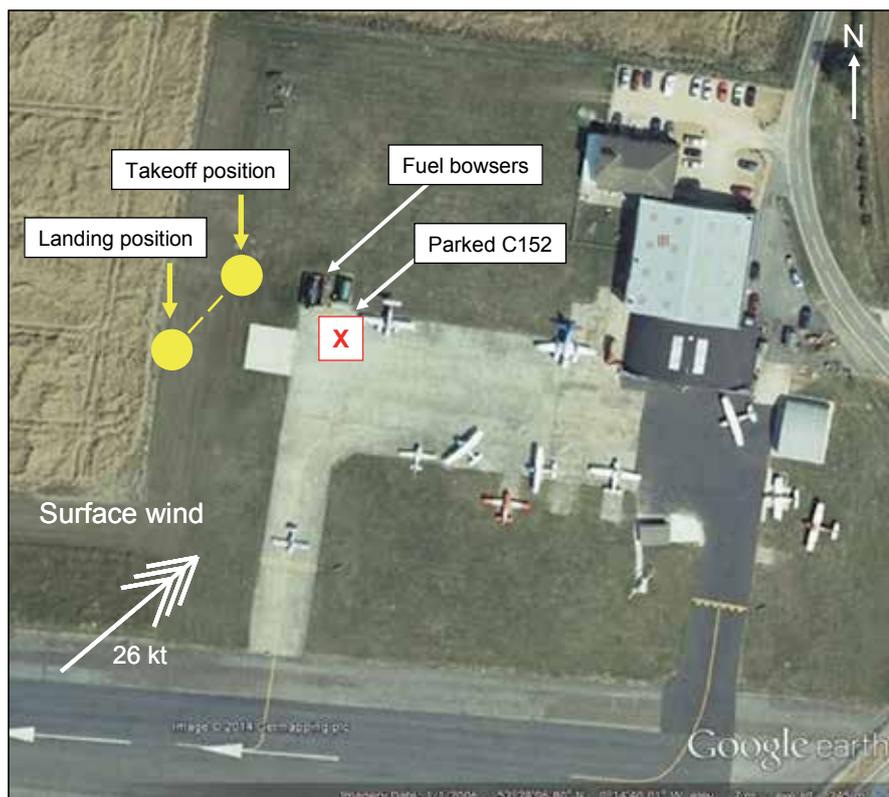


Figure 1
Apron area

The helicopter pilot commented that the Cessna 152 had been parked in a largely downwind position at the fuel installation to facilitate refuelling, and he considered this to be a contributory factor. The airfield operator reported that both aircraft were parked in normal locations before the accident. Although not a stipulation, it was common for helicopters departing from the same area to taxi further west initially, placing themselves over part of the airfield used for agricultural purposes before turning towards the runway, so achieving greater separation from the apron.

Discussion

In its 'Safety Sense Leaflet 17', titled Helicopter Airmanship, the CAA states:

'Always be mindful of the effect your own rotor wash can have on others. It may cause problems for lighter aircraft in flight, or damage to parked aeroplanes and other surface objects. If hovering, your rotor turbulence can affect others out to a distance of three times your rotor diameter.'

In this case, the helicopter (which had a rotor diameter of 10.69 m) was moving away from the Cessna, but as it did so it started to pass upwind of it. The guidance above applies to still air conditions, and may have to be modified when operating in relatively strong winds. In this case, a combination of the Cessna's aspect relative to the wind, the strength of the wind and the helicopter's rotor wash appear to have combined to cause the Cessna to overturn.