ACCIDENT

Aircraft Type and Registration:	Helio H-295 Super Courier, G-BGIX
No & Type of Engines:	1 Lycoming GO-480-G1A6 piston engine
Year of Manufacture:	1974
Date & Time (UTC):	12 May 2009 at 1100 hrs
Location:	North Weald Airfield, Essex
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Left wing tip, left main landing gear wheel, left stabilator
Commander's Licence:	Private Pilot's Licence
Commander's Age:	75 years
Commander's Flying Experience:	515 hours (of which 245 were on type) Last 90 days - 2 hours Last 28 days - 1 hour
Information Source:	Aircraft Accident Report Form submitted by the pilot

Synopsis

The aircraft landed on Runway 02 at North Weald aerodrome with a strong, gusting wind from the right. Shortly after touchdown, the right wing lifted and the left wing tip contacted the runway surface. It is probable that a sudden gust exceeded the crosswind limit for the aircraft.

History of the flight

The aircraft was being flown from Fanners Farm, a private airstrip some 5 nm north of Chelmsford, to North Weald aerodrome for its Certificate of Airworthiness (C of A) renewal inspection. Weather for the flight was fine, with visibility greater than 10 km and no cloud. However, there was a strong, gusting north to north-easterly wind which was forecast to be 020°/20 kt on arrival at North Weald.

The Helio H-295 Super Courier is a high wing, single engine, tailwheel aircraft, with seating for up to six occupants, which was produced for the United States Air Force. It was specifically designed as a robust Short Take Off and Landing (STOL) aircraft, capable of using unprepared strips. The aircraft is fitted with electrically powered wing flaps which may be selected to any angle up to 40°. The leading edge slats are in four sections, two on each wing, and extend across the full width of the wing. Each slat section is independent of the others and deploys automatically, depending on

the airflow over the wing. They normally extend at approximately 50 to 60 mph. The maximum crosswind component for landing is 10 kt.

After departure from Fanners Farm, the aircraft climbed to 1,000 ft for the 20 minute transit to North Weald. Flying conditions were turbulent and the aircraft joined the left hand circuit for Runway 02 at North Weald. The flaps were lowered incrementally in the circuit, with the fully down position being selected on the final approach. The pilot normally only used 30° of flap for landing but, due to the strong, gusting wind, he elected to use 40°. The airspeed was reduced to some 60 to 65 mph on the approach, with the pilot describing the turbulence as severe and the worst he had encountered. ATC reported the surface wind as 060°/17-28 kt, which the pilot acknowledged, and, as the approach progressed, he found that he had to point the aircraft more into wind to maintain the final approach track.

Just before the aircraft touched down, the pilot attempted to reduce the drift and the aircraft landed on the left main wheel. Almost immediately he sensed that the aircraft had been caught by a gust of wind from the right. Despite applying full into-wind aileron to counteract the roll to the left, the right wing lifted and the left wing tip contacted the metalled surface of the runway. The pilot estimated that the surface wind at the point that the right wing lifted may have been more in the region of 070°/25 kt, due to a gust.

The aircraft slowed down, settling onto all three landing gear and was taxied to the maintenance organisation. Inspection of the damage revealed that the left main landing gear wheel rim was cracked and the tips of the left wing and left stabilator had abrasions.

Analysis

The pilot considered that the aircraft had encountered a strong gust at touchdown which probably exceeded the aircraft's crosswind limit. He explained that the light wing loading needed to give the aircraft its STOL performance meant that a crosswind gust of the magnitude experienced, at low air speed, resulted in the ailerons being unable to prevent the right wing lifting.