Australian Government
Australian Transport Safety Bureau

Collision with terrain involving a Cirrus SR22, VH-OPX

near Moree, New South Wales, on 17 September 2015

ATSB Transport Safety Report
Aviation Occurrence Investigation
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Addendum

Page	Change	Date

Collision with terrain involving a Cirrus SR22, VH-OPX

What happened

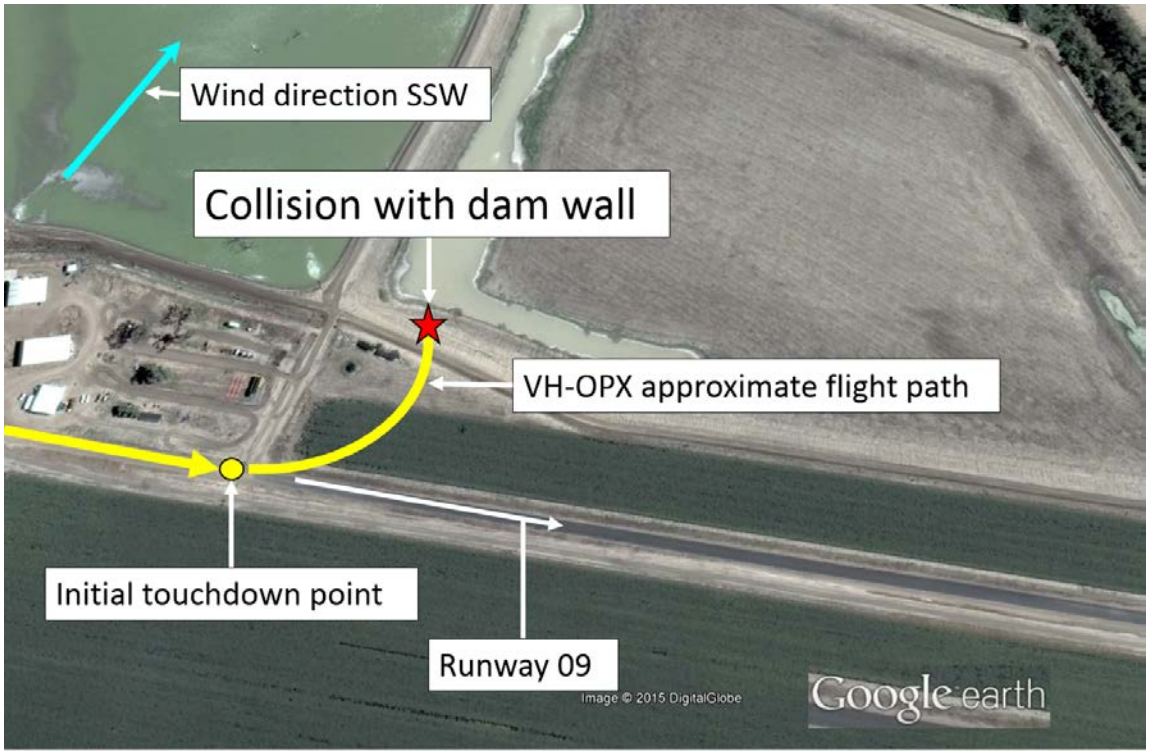
On 17 September 2015, at about 1330 Eastern Standard Time (EST), the pilot of a Cirrus SR22 aircraft, registered VH-OPX (OPX), conducted a short flight from Moree Airport, New South Wales, to a private airstrip about 6 NM to the north. The pilot was the sole occupant of the aircraft.

The aircraft approached the airstrip from the south, and the pilot elected to overfly the runway at the eastern end, then turn left and join the circuit on a left downwind for runway 09. The pilot had observed the wind at Moree Airport to be from a southerly direction at about 15 kt, and therefore anticipated having a crosswind for the landing at the airstrip.

The pilot reported that the circuit and approach were normal. On final approach, the pilot extended full flap, and commenced the flare at an airspeed of about 80-90 kt. To align the aircraft with the runway, the pilot reported applying almost full left rudder and right aileron due to the crosswind.

The right main landing gear touched down first, and the aircraft bounced back into the air. The pilot immediately applied full power to initiate a go-around. However, the left wing dropped and the aircraft yawed to the left. The aircraft's left wing and propeller then collided with a dam wall (Figure 1). The aircraft stopped abruptly and spun around. The engine separated from the aircraft and came to rest about 20 m away, the tail broke off and the nose landing gear collapsed. The pilot suffered minor injuries, and the aircraft sustained substantial damage (Figure 2).

Figure 1: Accident site



Source: Google earth – annotated by the ATSB

Figure 2: Damage to VH-OPX

Source: NSW Police Force

Pilot experience

The pilot held a private pilot licence and had about 1,400 hours of aviation experience, with 80 hours experience in the Cirrus aircraft. The pilot had not flown into that airstrip before the accident flight.

Airstrip information

Prior to conducting the flight to the private airstrip, the pilot contacted the owner and obtained information about the runway condition.

The runway was about 850 m long – unsealed for about 150 m at the western end, then sealed with bitumen for about 700 m. The runway was situated east-west, and the pilot elected to land towards the east. The aircraft initially touched down on the dirt, just prior to the start of the sealed part of the runway, which was slightly beyond where the pilot anticipated it to land.

As the aircraft overflew the runway, the pilot looked for, but did not see, a windsock by which to verify the conditions at the airstrip. The owner of the airstrip reported that there were three windsocks located at various positions near the runway.

Wind

The Bureau of Meteorology provided the ATSB with the wind recorded at Moree Airport. Table 1 depicts the calculated downwind and crosswind components based on the runway direction of 090° magnetic (101° true) of the airstrip 6 NM north of Moree. As seen in the table, at 1334, a significant wind gust of 22 kt from 242°, would have equated to a downwind component of 17 kt and a crosswind of 15 kt. If the aircraft had encountered similar conditions during the landing, this may have affected the pilot's ability to control the aircraft.

Table 1: Wind direction, speed, gusts and calculated downwind and crosswind components

Time (EST)	Wind direction degrees true	Wind speed (over 1 minute) knots	Maximum wind gust (over 1 minute) knots	Crosswind component speed/gust knots		Downwind component speed/gust knots	
1330	206	16	18	15	17	4	5
1331	200	16	21	16	21	3	3
1332	213	16	17	15	16	6	6
1333	218	15	17	13	15	7	8
1334	242	19	22	12	14	15	17
1335	234	19	22	14	16	13	15
1336	211	20	22	19	21	7	8
1337	209	18	20	17	19	6	6
1338	201	18	20	18	20	3	3
1339	201	17	19	17	19	3	3
1340	216	15	17	14	15	6	7

Safety message

This incident highlights the importance of the identification and management of risks associated with operating into unfamiliar airfields. Pilots should carefully assess the environmental conditions, runway surface and surrounds before attempting to land at an airfield.

The Civil Aviation Safety Authority *Out-N-Back* video Aircraft landing areas and precautionary search and landing, stated: 'A precautionary inspection of an unfamiliar airstrip before landing is a logical and effective way to satisfy yourself that you have chosen a suitable landing area for your aircraft, and for your skill level'. This airborne inspection includes assessing the wind velocity and direction, and whether any terrain surrounding the field may affect a go-around.

General details

Occurrence details

Date and time:	17 September 2015 – 1338 EST	
Occurrence category:	Accident	
Primary occurrence type:	Collision with terrain	
Location:	near Moree, New South Wales	
	Latitude: 29° 24.32' S	Longitude: 149° 53.50' E

Aircraft details

Manufacturer and model:	Cirrus Design Corporation SR22	
Registration:	VH-OPX	
Serial number:	2509	
Type of operation:	Private – Pleasure/Travel	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Crew – 1 Minor	Passengers – Nil
Damage:	Substantial	

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.