Australian Government
Australian Transport Safety Bureau

Near collision between an Extra 300L, VH-KCF and a Robinson 44, VH-OLG

Bankstown Airport, New South Wales, 15 July 2015

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Aviation Occurrence Investigation
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Addendum

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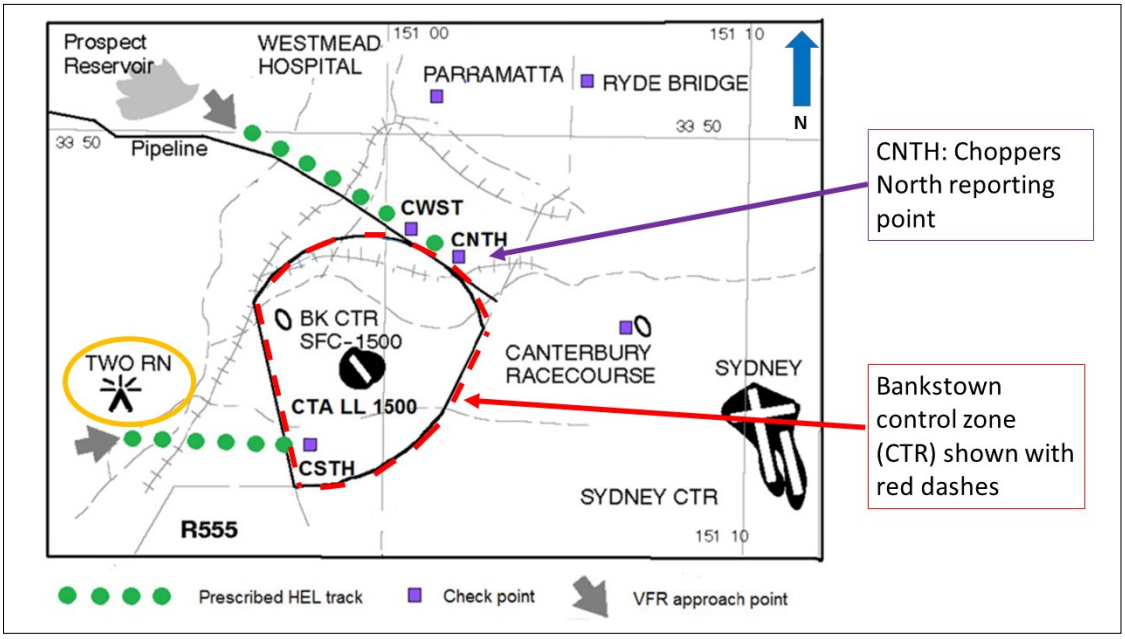
Near collision between an Extra 300L, VH-KCF and a Robinson 44, VH-OLG

What happened

At about 1335 Eastern Standard Time (EST) on 15 July 2015, the pilot of an Extra 300L aircraft (Extra) VH-KCF, was returning to Bankstown Airport, New South Wales, after completing a local, private flight. The pilot, the sole person on board, reported inbound to Bankstown Tower at the TWO RN reporting point (Figure 1). At this point, the Extra was maintaining 1,500 ft above mean sea level. Air Traffic Control (ATC) cleared the aircraft to join the crosswind leg of runway 29R and to maintain 1,500 ft.

Shortly after the pilot of the Extra had called inbound, the pilot of a Robinson 44 helicopter (R44), VH-OLG also called Bankstown Tower with inbound details, from overhead the Olympic Stadium, about 6 NM northeast of Bankstown Airport. The R44, with the pilot and three passengers on board, had just completed a scenic charter flight over the Sydney CBD. ATC requested the pilot to report again at Choppers North (Figure 1). The pilot descended to the required 700 ft and reported at Choppers North.

Figure 1: Helicopter inbound procedures diagram for Bankstown Airport. Note the Choppers North inbound reporting point as used by VH-OLG (purple arrow). On this occasion, VH-OLG was inbound from the northeast. TWO RN, the inbound reporting point for VH-KCF is also marked (yellow circle)



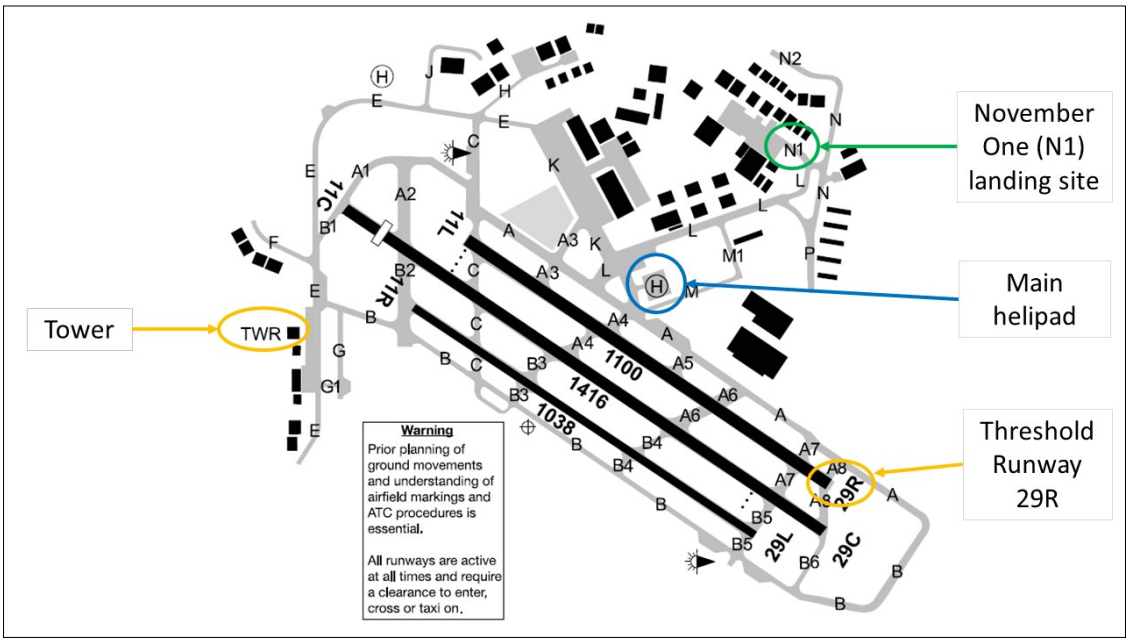
Source: Airservices Australia Enroute Supplement Australia (ERSA) Sydney / Bankstown extract, modified by the ATSB

From Choppers North, ATC instructed the R44 pilot to continue the approach and report on base leg. The pilot complied with this instruction, and reported on an 'early base'. ATC then cleared the R44 for a November One (N1) arrival (Figure 2).

N1 arrival

An N1 arrival could only be conducted by appropriately trained and qualified pilots (such as the pilot of the R44). The arrival allowed a visual approach from the helicopter circuit altitude of 700 ft via an oblique approach to taxiway N1 (Figure 2). In an N1 arrival, the Tower were unable to see a helicopter during the latter part of the approach. So the pilot was required to advise the Tower when they had landed.

Figure 2: Bankstown Airport showing the N1 taxiway used as a landing site for a November One arrival (green)



Source: Airservices Australia – ERSA extract for Sydney / Bankstown

Meanwhile, as the Extra tracked to join crosswind for 29R, ATC alerted the pilot about a conflicting DR-107 One Design aircraft. The DR-107 had been cleared for take-off from runway 29C, and to initially maintain runway direction on climb to 1,500 ft.

The pilot of the Extra reported sighting the DR-107. The Extra pilot then requested a clearance to conduct a touch and go circuit on runway 29R. Once in receipt of this clearance, the pilot left 1,500 ft on descent, making a continuous turn onto base and then final approach. To enhance forward visibility the pilot then sideslipped the aircraft toward the landing threshold (Figure 3).

During the descent and sideslip of the Extra, the pilot of the R44 continued their descent at about 100-150 fpm toward N1. While descending through about 350-300 ft, the passengers and pilot on the R44 saw the underside of the Extra pass from right to left in front of the helicopter. They estimated it was within 100 ft of the R44's altitude and about 70-100 m in front of them (Figure 5).

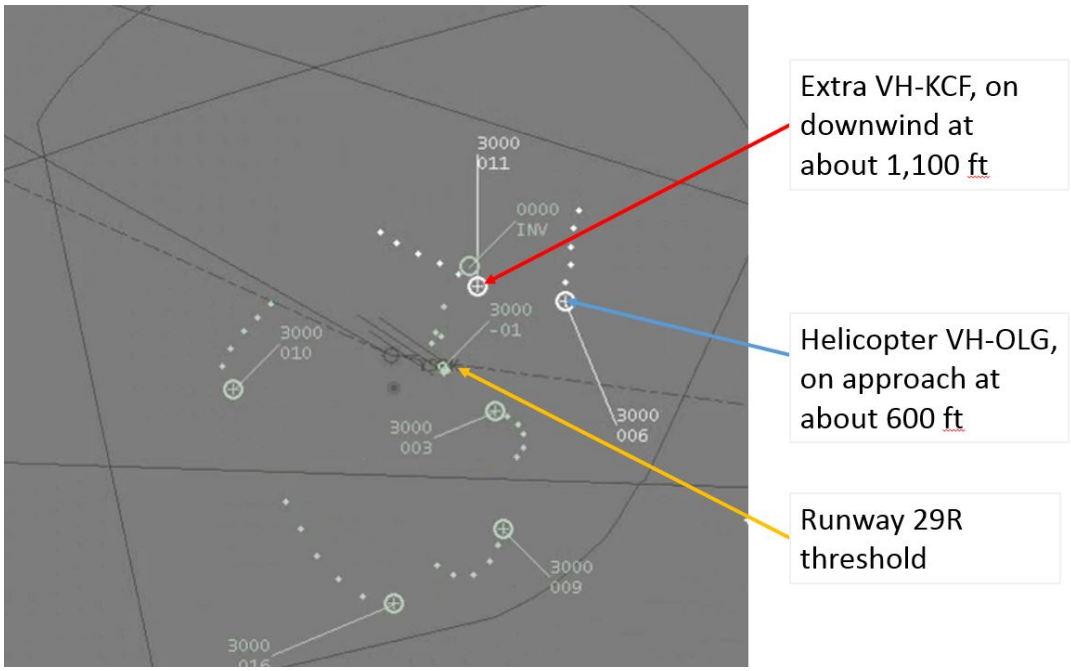
ATC again advised the pilot of the R44 to report after landing. The pilot replied to ATC that the Extra had just passed very close by them. The pilot of the Extra responded with a comment that they had seen the traffic.

The R44 pilot continued with the landing onto N1, reporting to tower after landing, and the pilot of the Extra, who was still not aware of the helicopter, continued with the touch and go prior to being cleared to land on runway 29C at the completion of another circuit.

Figure 3: An example of an Extra 300 L aircraft showing the seating position of the pilot. This gives an indication of the reduced visibility with the aircraft nose slightly raised, which occurs when the aircraft is at a slower speed

Source: Jim Groom

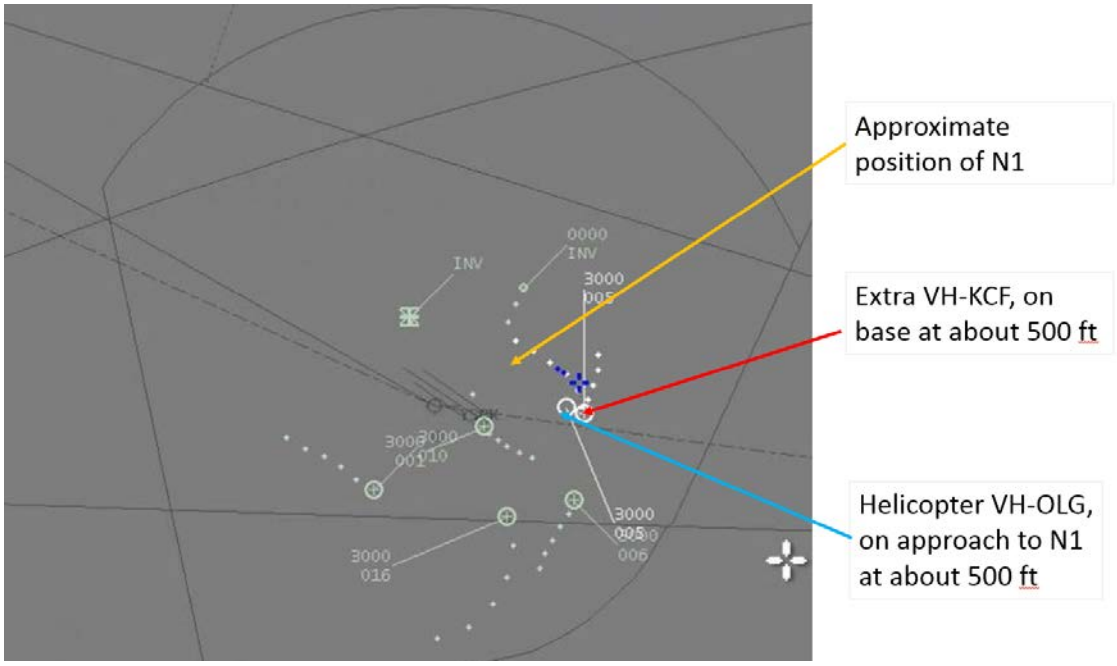
Figure 5: Radar plot showing both aircraft approaching their relative landing areas



Source: Airservices Australia

Note: Tower Situational Awareness Display (TSAD) was not available for the provision of separation to the controllers in Bankstown tower. These images are included to show what was recorded.

Figure 6: Radar plot showing the R44 VH-OLG (light blue) at about 500 ft tracking toward N1 and VH-KCF (red) on a continuous descending approach to runway 29R



Source: Airservices Australia

Note: Tower Situational Awareness Display (TSAD) was not available for the provision of separation to the controllers in Bankstown tower. These images are included to show what was recorded.

Airservices Australia

According to the Manual of Air Traffic Services, (MATS), in Class D airspace such as Bankstown, ATC should provide a traffic information service for visual flight rules (VFR) to VFR aircraft about other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision..

As per Bankstown ERSA section 14.1 (b), the helicopter was required to remain within the fixed wing circuit during the N1 arrival, thus traffic information would not normally have been provided.

Airservices Australia advised that the tower controller on duty did not assess the traffic to be in confliction, and did not sight the incident.

They also advised that the controller complied with the requirements of the Manual of Air Traffic Services (MATS) and the Aeronautical Information Publication (AIP) in relation to traffic information.

Extra, VH-KCF - Pilot comments

The pilot of the Extra held a Commercial Pilot's Licence for both fixed wing aircraft and helicopters. They had about 450 tailwheel aircraft hours and about 150 of these on the Extra, VH-KCF.

When flying the Extra, as on this day, the pilot completed a continuous descent once cleared for a visual approach on downwind. As per normal in the Extra, the pilot side-slipped the aircraft down final approach. Side-slipping allowed the pilot better forward visibility at the slower approach speed, while also keeping the runway threshold continuously in sight.

The pilot realised in hindsight, that when the potentially conflicting traffic (VH-OLG) was passed late in the circuit, they had assumed ATC was referring to the previous traffic alert involving the DR 107. The pilot was not aware of the R44, nor that a N1 arrival could cause a conflict.

R44 helicopter, VH-OLG - Pilot comments

The pilot held a Commercial Pilot's Licence (Helicopters) and a Grade 2 Instructor rating (Helicopter) with about 1,300 hours on helicopters. The pilot also held a private licence for fixed wing aircraft and had about 1,000 hours on this category of aircraft.

The pilot stated that Bankstown ATC manage both the fixed wing and helicopter circuits well. However, in recent times felt that there have been a few more 'near collisions'. This may be due to the increase in helicopter movements, and overall increase in aircraft movements.

The pilot commented that they thought that the pilot of the Extra would not have been able to see the helicopter during the sideslip.

ATSB Comment

A search of the ATSB's occurrence database for near collision incidents at Bankstown Airport between January 2013 and May 2015 did not reveal any near collisions involving helicopters.

There was one separation occurrence, (201408721), which involved the N1 approach. On that occasion, an inbound helicopter did not track as cleared to N1 and conflicted with another helicopter about to depart N1. ATC issued a safety alert to the helicopter departing N1.

The ATSB monitors trends on all occurrences recorded in its database, including near collisions. Recent trend monitoring identified that another Class D Airport, Jandakot, had a disproportionate rate of aircraft near- collisions. Specifically, between 2013 and 2015 Jandakot Airport had a near- collision rate that was at least three times higher than other similar metropolitan Class D airports across Australia. In response to this identified transport safety matter, the ATSB has commenced an investigation to identify the factors that increase the collision risk to aircraft operating at Jandakot Airport (see AI-2015-063 available at www.atsb.gov.au).

Safety message

This incident serves as a reminder to keep a good lookout at all times, including in Class D airspace. Pilots are responsible for maintaining separation in Class D airspace. The Civil Aviation Safety Authority pilot guide for Bankstown Airport, along with seven other Class D airports has been incorporated into the "On Track" pre-flight visualisation tool for both fixed and rotary wing pilots. This tool for VFR pilots is available on the CASA website.

A safety education publication and e-learning tutorials on Class D operations are also available on the CASA website. Note that all these publications are for safety education purposes and do not replace information in the Aeronautical Information Publication (AIP), the en-route supplement Australia (ERSA) and / or Notices to Airman (NOTAMS).

General details

Occurrence details

Date and time:	15 July 2015 at 1332 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Near collision	
Location:	Bankstown Airport, New South Wales	
	Latitude: 33° 55.47' S	Longitude: 150° 59.30' E

Aircraft details – VH-KCF

Manufacturer and model:	Extra-Flugzeugbau GmbH EA300L	
Registration:	VH-KCF	
Serial number:	1182	
Type of operation:	Private	
Persons on board:	Crew – 1	Passengers – Nil
Injuries:	Nil	Passengers – N/A
Damage:	None	

Aircraft details – VH-OLG

Manufacturer and model:	Robinson Helicopter Company R44	
Registration:	VH-OLG	
Serial number:	10337	
Type of operation:	Charter - passenger	
Persons on board:	Crew – 1	Passengers – 3
Injuries:	Crew – Nil	Passengers - Nil
Damage:	None	

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.