



**Australian Government**  
**Australian Transport Safety Bureau**

**Chief Commissioner**

16 August 2017

Dr Jane Thomson  
Committee Secretary  
Standing Committee on Rural and Regional Affairs and Transport  
Australian Senate  
PO Box 6100  
PARLIAMENT HOUSE  
CANBERRA ACT 2600

Via email: [rrat.sen@aph.gov.au](mailto:rrat.sen@aph.gov.au)

Dear Dr Thomson

**Inquiry into Remotely Piloted Aircraft Systems – Supplementary information from the ATSB**

Thank you for inviting the Australian Transport Safety Bureau (ATSB) to again give evidence at the References Committee Inquiry into Remotely Piloted Aircraft Systems. I note that the next hearing is scheduled for 29 August 2017.

As previously notified to the Committee, our original written submission was tendered on 23 December 2016 and was based on the data derived from reports in the first three quarters of that year. The ATSB considers that it is important to provide the Committee with the latest data.

In support of the ATSB's appearance at the hearing later this month, I would like to tender supplementary information to the Committee to provide updated RPAS occurrence data.

The only data presented here is what has been updated to that provided in the original ATSB submission. Other parts of the original submission that are unchanged have not been included in this supplementary information.

Since our initial submission to the inquiry in December 2016, the ATSB has observed a significant change in the trend of reported occurrences involving Remotely Piloted Aircraft Systems (RPAS).

Based on the latest available occurrence data reported to the ATSB (until 30 June 2017), the ATSB's modelling forecasts the number of RPAS occurrences in Australia for 2017 is likely to be similar to the number reported in 2016—contrary to previous forecast which predicted a doubling of occurrences:

- from July to December 2016, there was an average of 11.9 occurrences reported per month
- from January 2017 to June 2017, there was an average of 8.5 occurrences reported per month.

The ATSB's data analysis is based on reported occurrences (i.e. accidents, serious incidents and incidents) since 2012. In summary this analysis indicates that:

- 242 occurrences were reported, with half (127) occurring between July 2016 and June 2017
- 154 occurrences were near encounters with an RPA:<sup>1</sup>

<sup>1</sup> Near encounters occur when an RPAS interrupts or is sighted in the proximity of another aircraft. Occurrences only include those encounters where the aircraft had to manoeuvre (or would have manoeuvred if there was more opportunity) to maintain a safe distance from the remotely piloted aircraft.

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- over half (87) occurred between July 2016 and June 2017
- 61 (40%) occurred in the Sydney basin
- where the altitude is known, the majority (80%, 105 encounters) occurred above 1,000 feet.
- 64 RPAS collisions with terrain have been reported:
  - 54% (33) occurred between July 2016 and June 2017.
  - at least 70% (46) had an RPAS mass greater than 2 kilograms
  - around one-third (21) occurred in urban areas
  - at least 15% (10) resulted from a loss of datalink with ground station
  - in 2014, a triathlete sustained minor injuries from a drone collision.
- Around four percent (10) of the 242 occurrences reported were bird-strikes with at least 4 involving wedge-tailed eagles.
- The ATSB has one active RPAS investigation and has published nine reports into other RPAS incidents.

The ATSB published RPAS occurrence data in March 2017 in a public research report *A safety analysis of remotely piloted aircraft systems (AR-2017-016)*. The ATSB intends to publish a second edition of this report reflecting the updated data presented here as soon as possible.

The Committee may also be aware that on 11 July, a SOCATA TB-10 Tobago aircraft collided with an object at approximately 6.30 pm during its final approach at Parafield Airport in South Australia. Due to the nature of the impact experienced by the pilot, he reported it at the time as a 'possible drone strike'. This was widely broadcast in the media around the world.

The Australian Transport Safety Bureau (ATSB) launched an investigation and swabs were taken of the damaged area on the leading edge of the right wing. Those swabs were tested for DNA, and the results established that the object struck was a grey-headed flying fox.

This finding is consistent with the known behaviours of flying foxes, who can travel up to 50 kilometres from their roosts to feed at night.

As a result of this evidence, the ATSB discontinued its investigation, concluding the cause of the incident was wildlife strike.

An additional occurrence that may be of interest to the Committee occurred on 29 July. The crew of a Virgin Embraer 190 reported that at 4,100 feet on approach to Brisbane Airport they passed an RPAS at cockpit height between the fuselage and the wingtip. Following this, a Qantas Boeing 737 elected to track five nautical miles off-track to avoid the area. The ATSB did not investigate this occurrence as the RPAS operator was unable to be identified.

A copy of the latest trend analysis has also been provided under separate cover to the Civil Aviation Safety Authority (CASA).

Thank you again for the opportunity to provide further evidence into this inquiry. If you require any further details or clarification of any information provided by the ATSB, please contact my office on 6274 6144.

Yours sincerely

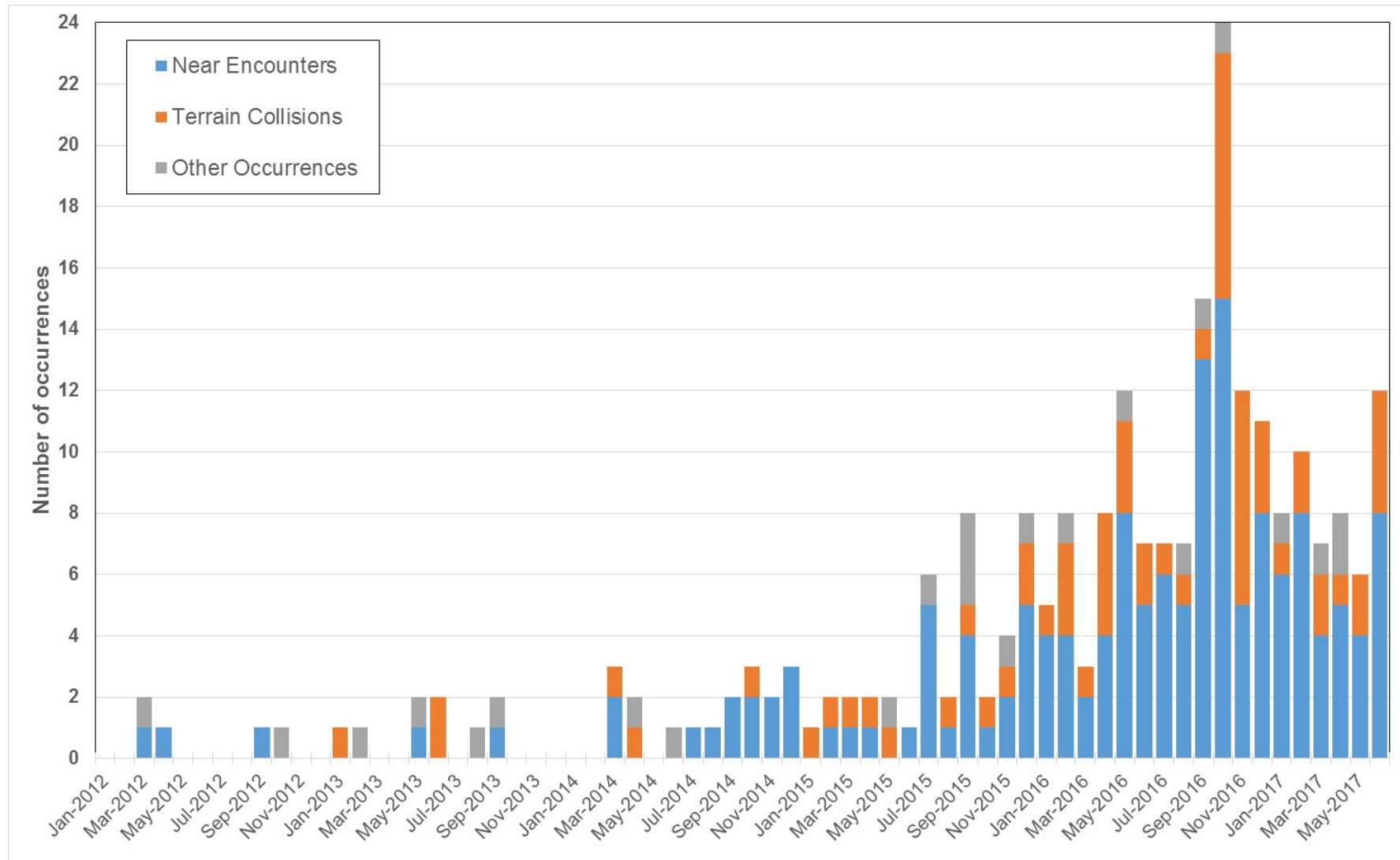
Greg Hood

Attachment:

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- Figure 1: Number of reported occurrences involving an RPAS per primary occurrence type (January 2012–June 2017)
- Figure 2: Location of reported RPAS-related occurrences in Australia (January 2012–June 2017)

**Figure 1: Number of reported occurrences involving an RPA per primary occurrence type (January 2012–June 2017)**



**Figure 2: Location of reported RPAS-related occurrences in Australia (January 2012–June 2017)**

