



Australian Government

Australian Transport Safety Bureau

Near collision involving a de Havilland DHC-2, VH-AWD and a Gippsland Aeronautics GA-8, VH-NOQ

16 km NNE of Hamilton Island Airport Queensland on 31 October 2014

ATSB Transport Safety Report
Aviation Occurrence Investigation
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Addendum

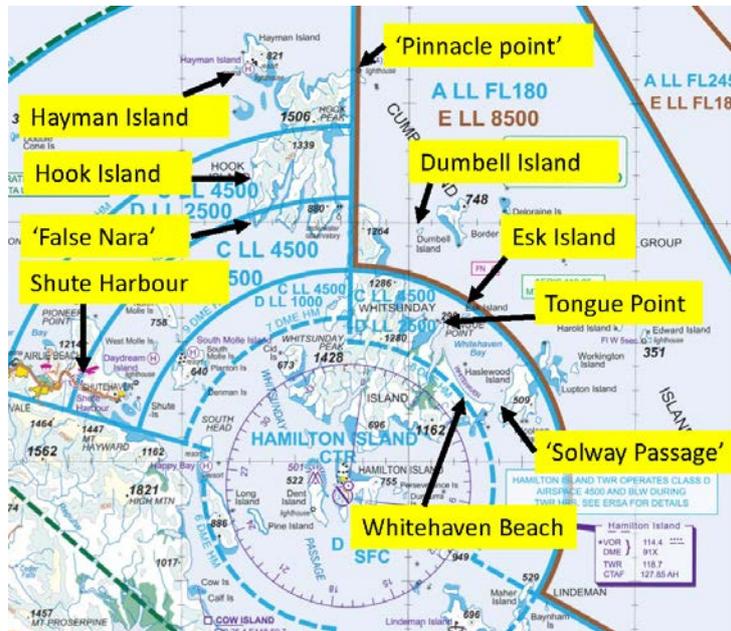
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Near collision involving a de Havilland DHC-2, VH-AWD and a Gippsland Aeronautics GA-8, VH-NOQ

What happened

On 31 October 2014, the pilot of a de Havilland DHC-2 aircraft, registered VH-AWD (AWD), was conducting a scenic charter flight from Hayman Island Water Landing Area, Queensland, with five passengers on board. The aircraft tracked to the north of Hook Island (Figure 1), and climbed towards Pinnacle Point. The pilot of AWD broadcast on the common traffic advisory frequency (CTAF)¹ when passing Pinnacle Point.

Figure 1: Hamilton Island visual terminal chart with reference locations



Source: Aircservices Australia and pilot recollection

The broadcast from AWD was heard by the pilot of a Gippsland Aeronautics GA-8 aircraft, registered VH-NOQ (NOQ), which had departed from Shute Harbour Airport at about 1325 Eastern Standard Time (EST) for a 30 minute scenic charter flight, with four passengers on board. Although he heard the broadcast, the pilot of NOQ did not know where Pinnacle Point was as it was not labelled on the Hamilton Island visual terminal chart (VTC).

The pilot of NOQ broadcast on the CTAF after passing Tongue Point and heading south along Whitehaven Beach. At about the same time, AWD was overhead Dumbell Island and the pilot of AWD was providing a commentary to the passengers. The pilot of AWD heard a broadcast on the CTAF, possibly that of the pilot of NOQ at Tongue Point, but did not hear the contents of the

¹ The ATSB obtained a copy of the CTAF recordings but none of the reported transmissions on that frequency could be verified. This may have been due to terrain shielding and/or the level of signal/noise ratio selected by the airport operator.

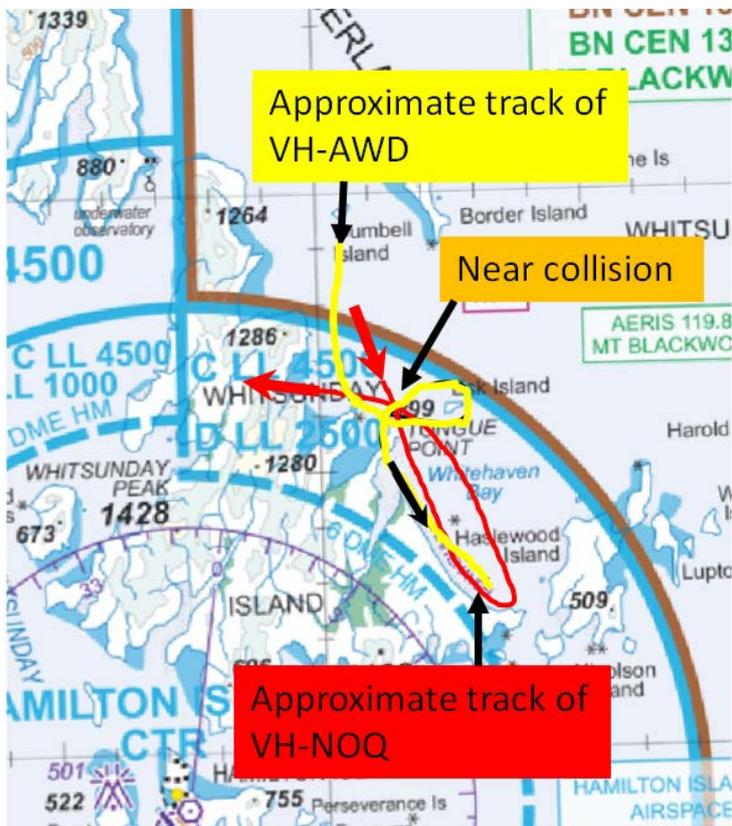
broadcast. As he missed the broadcast, the pilot of AWD then broadcast his position and intentions, and did not receive a response.

NOQ then tracked to the southern end of Whitehaven Beach, turned and headed north returning to Tongue Point. When just south of Tongue Point for the second time, the pilot of NOQ broadcast on the CTAF, detailing his intention to track to Hamilton Island and advising that he was changing to Hamilton Island air traffic control (ATC) Tower frequency. The pilot then commenced a left turn, selected the Tower frequency and was no longer monitoring the CTAF.

At about 1352 Eastern Standard Time, the pilot of NOQ advised Hamilton Island Tower that NOQ was at Tongue Point at 1,000 ft and tracking via the Northern Tip to Shute Harbour.

At about 1354, and at a height of 1,300 ft, as AWD approached Tongue Point from Dumbell Island (Figure 2), the pilot of AWD commenced a left turn to head towards Esk Island. While providing commentary to the passengers, and glancing out at the beach to ensure the aircraft was positioned correctly, the pilot sighted NOQ on a reciprocal track and estimated the aircraft passed on his right about 50 m away and about 50 ft above AWD. Both aircraft were turning left at the time.

Figure 2: Aircraft tracks overlaid on Hamilton Island visual terminal chart



Source: Airservices Australia and pilot recollection

The pilot of AWD then attempted to communicate with the pilot of NOQ on the CTAF but did not receive a response. He then checked the frequency selected, the avionics COMM selector, and the squelch, and confirmed the radio was functioning normally. AWD then completed a left turn around Esk Island and the pilot broadcast on the CTAF approaching Tongue Point for a left turn followed by a water landing at Southern Whitehaven and did not receive a response. The pilot of NOQ did not see AWD at any time. AWD then landed in the southern corner of Whitehaven Beach.

Pilot comments – VH-NOQ

The pilot of NOQ provided the following comments:

- He heard the pilot of AWD report at Pinnacle Point, but did not know where that was. Other pilots and ATC referred to locations that were not on the visual terminal chart (VTC) and as this was only his fourth flight in the area, he did not know where they were.
- He started and finished both radio broadcasts on the CTAF when in the vicinity of Whitehaven Beach with 'Whitehaven Traffic' in an attempt to alert other aircraft to his location.
- The radio transmissions from AWD were distorted and could be hard to hear.
- Use of a distance from known points, for example 1.5 miles north of Tongue Point, instead of features that are not depicted on the VTC would assist in understanding where an aircraft was operating.
- When entering controlled airspace, pilots were often required by ATC to report at Tongue Point or Solway Passage – which is also not marked on the VTC.
- Tongue Point is a crossover point for traffic in multiple directions.
- He had all the aircraft lights on: taxi lights, strobes, navigation lights and the beacon.
- He heard the broadcast from the pilot of AWD but did not know where Pinnacle Point was. In future he would call the pilot directly and request clarification of the aircraft's position.
- The second radio was on company frequency as they were travelling with two other company aircraft.

Pilot comments – VH-AWD

The pilot of AWD provided the following comments:

- The aircraft was fitted with two radios. The primary radio was selected to CTAF and the secondary radio was selected to company frequency as he did not intend to operate inside controlled airspace. If he were going to enter the Control Zone, he would use the secondary radio to monitor the CTAF and use the primary radio to obtain a clearance from the Tower prior to entering the zone.
- The aircraft is noisy but the radio is quite audible.
- Due to the frequency change requirements associated with the Hamilton Island control zone, there was a greater risk of collision at Tongue Point, Solway Passage and Happy Bay. There were no local procedures specifying traffic direction or hazard alerts at those points.
- He had the aircraft rotating beacon on but not the landing lights at the time of the incident.
- To avoid similar incidents occurring, aircraft fitted with two radios intending to enter controlled airspace should monitor the CTAF until entering the control zone.
- Pinnacle Point is the lighthouse on Hook Island and has been used for many years by local operators. In comparison, the 'Northern Tip' location is a recent term, is not marked on the VTC, and has been used to refer to different islands by both ATC and pilots. ATC also use False Nara as a standard inbound reporting point and it is not marked on the VTC.
- Some radio calls may have been affected by terrain shielding.

Airservices Australia comment

Airservices Australia provided the following comments in relation to the investigation:

- The Hamilton Island Tower Local Instructions for air traffic controllers contain a list of local places and flight strip abbreviations which are used by ATC for the provision of traffic management, a number of which are not identified on the VTC.
- Currently the Aeronautical Information Publication (AIP) does not prevent a pilot from reporting positions that are not identified on the aeronautical charts, as long as they positively fix the aircraft position by visual reference to features shown on a topographical chart at intervals not exceeding 30 minutes ([AIP ENR 1.1 19.2.1 \(b\)](#)).

Safety action

Whether or not the ATSB identifies safety issues in the course of an investigation, relevant organisations may proactively initiate safety action in order to reduce their safety risk. The ATSB has been advised of the following proactive safety action in response to this occurrence.

Aircraft operator: VH-AWD

As a result of this occurrence, the operator of VH-AWD sent an email to all company pilots reminding them to maintain a diligent listening watch in all high traffic areas, and particularly when approaching a radio frequency boundary. Pilots were recommended to monitor both Hamilton Island Tower and the common traffic advisory frequencies until established within the Tower control zone boundary.

Aircraft operator: VH-NOQ

As a result of this occurrence, the operator of VH-NOQ sent an email to all company pilots reminding them of the following:

- Keep a vigilant lookout when transiting between the control zone and the CTAF.
- Always include the phrase ‘switching to tower frequency’ on the last CTAF call prior to entering controlled airspace. Following this call, wait 5-6 seconds before actually changing frequency to allow any conflicting aircraft to make contact on the CTAF.
- If possible, continue to monitor both frequencies by using two radios.

Airservices Australia

Airservices Australia advised that they are planning to seek industry input at the North Queensland Regional Airspace and Procedures Advisory Committee (RAPAC) meeting on amending reporting points on the VTC. Pending the outcome from industry and internal consultation, Airservices will determine any actions required for continual safety improvement.

Safety message

Issues associated with unalerted see-and-avoid have been detailed in the ATSB’s research report *Limitations of the See-and-Avoid Principle*. The report highlights that unalerted see-and-avoid relies entirely on the pilot’s ability to sight other aircraft. Broadcasting calls on the appropriate frequency is known as radio-alerted see-and-avoid, and assists by supporting a pilot’s visual lookout for traffic. An alerted traffic search is more likely to be successful as knowing where to look greatly increases the chances of sighting traffic. The report is available at www.atsb.gov.au/publications/2009/see-and-avoid.aspx.

This incident highlights the importance of broadcasting radio calls on, and monitoring, the appropriate frequency, to alert pilots and assist in see-and-avoid practices. It serves as a reminder to keep a good lookout for other aircraft, particularly around high traffic areas and radio frequency zone boundaries.

General details

Occurrence details

Date and time:	31 October 2014 – 1354 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Near collision	
Location:	16 km NNE Hamilton Island Airport, Queensland	
	Latitude: 20° 13.90' S	Longitude: 149° 01.55' E

Aircraft details: VH-AWD

Manufacturer and model:	de Havilland DHC-2	
Registration:	VH-AWD	
Serial number:	1066	
Type of operation:	Charter	
Persons on board:	Crew – 1	Passengers – 5
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

Aircraft details: VH-NOQ

Manufacturer and model:	Gippsland Aeronautics GA-8	
Registration:	VH-NOQ	
Serial number:	GA8-07-127	
Type of operation:	Charter	
Persons on board:	Crew – 1	Passengers – 4
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

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.