



AUSTRALIAN SOCIETY OF AIR SAFETY INVESTIGATORS



ASASI commends Virgin Australia for celebrating International Women's Day with a flight dispatched, operated, and handled entirely by women.

The Boeing 737, as Flight VA313, departed Melbourne on 8th March at 8:10am and arrived in Brisbane at 9:20am. This initiative was a collaboration between Virgin Australia, Melbourne Airport, Brisbane Airport Corporation, and Airservices Australia as more than 20 women operated and managed VA313, from take-off to touch-down.

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AUSTRALIAN SOCIETY OF AIR SAFETY INVESTIGATORS



President's Message

Ladies and Gentlemen

Everybody has experience, but what is it worth? Those of us that drive cars might suggest it helps us to anticipate potential threats to our personal safety on the road, like watching out for drivers who disregard rules like speeding and ignoring stop signs. In our transport safety industry, it's not too far removed from those same principles.

How do we attain experience? We cannot just whip down to the supermarket and get a box of it. It's not that simple. We continually live through situations and learn from them, hopefully. These lessons take time to experience, and sometimes we might spend a whole career doing so. There is a way to accelerate this process though if we utilise the experience of others.

Way back, Jerome Lederer advised us that 'we must learn from the experience of others, because we will not live long enough to make all the mistakes ourselves'. For a moment, just think about how valid a statement this is? We have learnt from parents, friends, and workmates and usually we file the results in the back of our minds for future use. It would be a shame if all the collective air safety investigation knowledge and techniques held by ASASI members was to evaporate as we progressively begin the processes of career changes and retirement. What can we do to assist our next generation of transport safety investigators, still studying or recently employed?

What if ASASI launched a structured mentoring program to help them in the early career stages? Well, we're doing just that right now. You can read all about it on page 23 of this newsletter. Please give it some thought and consider what you may be able to put back into our industry.

Our ongoing relationships with Flight Safety Foundation and CASA have been strengthened in 2023 by the offers of scholarships to aviation students studying at Australian educational institutions. If you know any students, please make them aware of these opportunities. They do not need to be ASASI members to apply.

I'm happy to report that we had a good response to the request for aviation investigation support to the Victorian Coroner. Nine ASASI members submitted expressions of interest and the Coroner's Office has been delighted with this result.

ASASI membership continues to increase, and you can read about our new members in this newsletter. We are particularly pleased to welcome our volunteer Editor for the ASASI Newsletter, Amelia David. Amelia is a Melbourne based student who shows amazing potential in our diverse industry. She'll be chasing up topical articles soon, so be ready to help her to help us all please!

It almost feels like the world is returning to normal now! Looking forward, we have our ANZSASI 2023 seminar in June at the Novotel Gold Coast. Our early-bird rates for registration close on 30th April.

For our seasoned travelers, don't forget that our European Society (ESASI) colleagues are holding their annual seminar in Bratislava, Slovakia 26 – 27 April. The major international seminar (ISASI) will take place in Nashville Tennessee between 22 – 25 August.

Until next time, stay safe.

John Guselli
ASASI President

The Way We Were - Wynyard Airport Railway Crossing

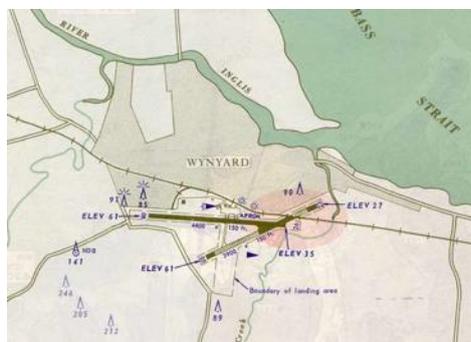


Wynyard Airport, on Tasmania's north-western coast, was quite unusual in that it was one of the few airports in the world to have a railway crossing on a runway.

The railway, running along Tasmania's north coast, was extended to Smithton in 1921. The line, running through Wynyard, was extensively used for haulage by the timber industry and to transport farm produce.

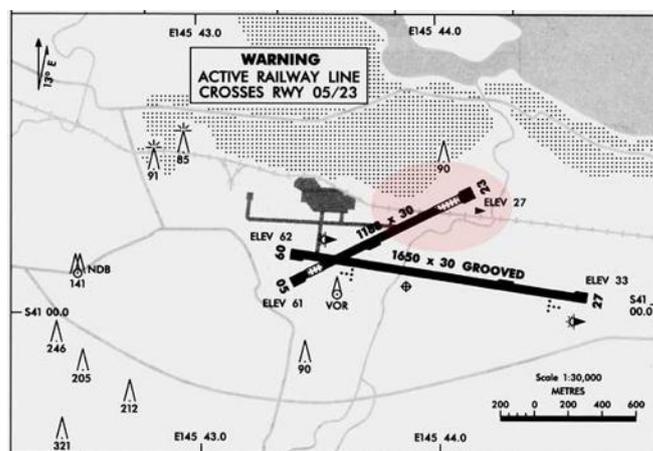
During the late 1930s when the aerodrome at Wynyard was constructed, it was built on the only flat land in the area - the flood plain of the Inglis River. When properly formed runways were constructed, Runway 05/23 was built over the railway line. There was a precedent for this: Sydney's Mascot airport also had a railway line crossing a runway in the early post-War years.

The photo above shows [DCA Merlin VH-CAM](#) posed on the gravel end of Runway 23 for a 1971 photo shoot supporting an article about the railway crossing.



The diagram above from the 15 March 1968 Landing Chart shows the airport layout with the rail crossing highlighted. Interestingly, the chart contains a note (not shown) that the runway lights on the northern side of Runway 08/26 can be confused with parallel street lights (Runway 05/23 was not lit for night flying).

The need to accommodate higher performance aircraft and lack of space to lengthen the main east-west runway led to a new runway, 09/27, being constructed on a more southerly alignment, as shown in the diagram below from the 2 October 2003 Aerodrome Chart. Note that the remains of the old Runway 08/26 are now a taxiway and that the railway crossing at the threshold of Runway 23 was unaffected, although the runway was slightly lengthened at the south-western end and sealed for most of its length. The southern grass landing area has disappeared altogether.



Declining rail traffic forced the closure of the north-western branch line in early 2005 and thus the Wynyard airport rail crossing is no more.

Article: <http://www.airwaysmuseum.com/WYY%20rail%20crossing%201.htm>

(Photo: CAHS collection # 1646/71)

Landing Chart: DCA/CAHS collection

Aerodrome Chart: Airservices Australia/CAHS collection)

And now for something completely different.....Flying police car lands in Oz



The Pegasus E 'flying car' is an Aussie invention that can be driven like a car and flown like a helicopter, giving it greater scope – namely, to take to the air – during high-speed vehicle pursuits, which police forces are increasingly prohibiting due to safety concerns.

On display at the 2023 Avalon Airshow (March 3-5), the dual-mode Pegasus E is powered by a petrol-electric hybrid powertrain generating 120kW, weighs just 265kg dry and can be seen power-sliding around a kart track, demonstrating its on-road agility. The sleek car-copter's top speed on the road is electronically limited to 120km/h, but that increases to 160km/h in the air.

Fitted with a 60-litre fuel tank that requires 95-octane premium petrol, its hybrid powertrain can go for 75km at 100km/h on battery power alone, claims Pegasus, and has a maximum range of 420km once airborne. Flight time is around three hours, using 20 litres of fuel per hour.

Maximum flying altitude is estimated at around 1800 metres or 5900 feet and it has a payload of 101kg.

Unlike a number of vertical take-off and landing (VTOL) vehicles being developed by a range of car-makers and tech companies, its Melbourne-based maker says the

Pegasus E is "world's only true VTOL-capable drivable flying car that can be parked in any general car park or garage", thanks to its automatic folding rotor blades.

"With the consumer and usability in mind, there are no manual inputs between flight and road functions. The transition can be done in three seconds by pushing a single button," asserts the start-up. "When the Pegasus has landed, the main rotors fold in half automatically using centrifugal force. This is our patented technology providing our customers with the ultimate in convenience."

The company's objective is to build commercially-viable flying cars for a range of customers, including law enforcement, government and the private sector.

The company hasn't confirmed a price but says: "In full production, Pegasus will have a price similar to a supercar."

Therefore, it could be pegged anywhere between \$300,000 and \$800,000, depending on one's definition of a supercar. Single- and two-seater versions are in the latter stages of development and Pegasus says it already has an order bank for its flying car.

"With Pegasus, people are now able to shift transportation into the third dimension, saving precious time by effectively escaping traffic congestion," says the company.

"The Pegasus E controls are also extremely similar to cars and rotorcrafts. Our patented three-foot paddle system integrates all driving and flight controls into one package, allowing driving controls to be the same as a normal car and flight controls to be the same as a rotorcraft."

Production of a four-seater 'Air Taxi' prototype will commence later in 2023 while freight 'flying car' and an 'Air Ambulance' are also in development by Pegasus.



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It remains to be seen whether police forces in Australia and abroad will sign up for the Pegasus E, which will require a pilot's licence as well as a driver's licence to operate.

Numerous auto brands including Hyundai, Toyota and Mercedes-Benz have flying car projects in development, while [Uber Air](#) has promised to deploy a flying taxi fleet in three cities globally including Melbourne.

Pegasus E technical data:

Engine: Pegasus 800 – 120kW/160hp

Fuel type: 95 unleaded

Dry weight: 265kg/585lb

Vehicle Height: 1900mm

Wheelbase: 2900mm

Front track: 1800mm

Rear track: 1745mm

Rotor diameter: 5285mm

Fuel capacity: 60 litres (16 gallons)

Ground to air transition time: 3.0 seconds

Ground top speed: 120km/h

Flight data:

Take-off and landing distance: 0 metres

Max air speed: 160km/h/100mph

Max cruise speed: 130km/h/80mph

Max range: 420km

Max flight time: 3 hours

Max flight altitude: 1800m/5900ft (est)

Useful payload: 101kg/222 pounds

Fuel economy: 20 litres per hour

from carsales.com.au. Accessed 7 March 2023





The Way We're Heading - Embraer Unveils Plans for Hybrid Electric, Hydrogen Electric Aircraft

By [Kimberly Johnson](#)

The aircraft maker revealed the two aircraft concepts as part of its bid to attain net-zero emissions by 2050.

Embraer unveiled two new concepts for hybrid electric and hydrogen electric aircraft Monday, which the Brazilian aircraft manufacturer says is part of its plan to attain net-zero emissions by 2050.

The aircraft concepts are part of Embraer's Energia sustainability initiative launched last year, and include new propulsion technology on smaller aircraft.

"Guided by the company's 50 year technical expertise, external inputs from airlines, and joint studies with engine OEMs, these two approaches to net-zero offer a technically realistic and economically feasible pathway to net-zero," the company said in a statement.

Last year, Embraer began studying four aircraft concepts that featured new technology and used renewable energy. Since that time, the company has evaluated different architectures and propulsion systems, according to Arjan Meijer, president and CEO for Embraer Commercial Aviation.

"I believe we have set bold but realistic goals for these concepts to come to market," Meijer said.

Energia Hybrid E19-HE, E30-HE

Among the concepts Embraer is exploring is the Energia Hybrid E19-HE and E30-HE, the 19-seat and 30-seat variants.

According to the company, the aircraft features parallel hybrid-electric propulsion, up to 90 percent CO2 emissions reduction when using sustainable

aviation fuel, 19 and 30 seat variants, and rear-mounted engines. The aircraft would reach technology readiness in the early 2030s, Embraer said.

The aircraft range is 500 nm, and carbon emissions would be slashed 90 percent with SAF, and by 30 percent with jet-A1, Embraer said. The parallel hybrid-electric propulsion comes with an additional environmental benefit: 60 percent lower external noise.

Energia Hydrogen Fuel Cell

Embraer's Energia H2 Fuel Cell E19-H2FC and E30-H2FC variants feature hydrogen electric propulsion, zero CO2 emissions, 70 percent lower external noise, and rear-mounted electric engines. The aircraft range is at least 200 nm.

Embraer's Energia H2 Fuel Cell E30-H2FC variant [Courtesy: Embraer]

"As new propulsion technologies will be first applied on smaller aircraft, Embraer is in a unique position," said Luis Carlos Affonso, senior vice president of engineering, technology and corporate strategy at Embraer, in a statement. "The 19- and 30-seaters are sensible starting points for focused studies since they are likely to present earlier technical and economical readiness. While the challenges of net-zero are significant, in less than 25 years our commercial aircraft have already reduced fuel burn and CO2 emissions by almost 50 percent on a seat/mile basis, using only conventional fuels and propulsion—I'm convinced net-zero is a goal we can reach."

<https://www.flyingmag.com/embraer-unveils-plans-for-hybrid-electric-hydrogen-electric-aircraft/>



The Generation Gap – is it a real thing?

By Sue Rice
Co-Chair Asia Pacific Cabin Safety Working Group



The intent of this document is to raise an awareness and hopefully generate some discussion. If no issue is identified then we will all simply move on.

As each of us mature we may begin to notice differences in the manner in which people communicate, in particular the younger generation(s). Not that there is anything wrong with belonging to a younger generation, after all we were all at some stage in our own lives part of a younger generation.

In aviation operations whether civil or defence, there are ideally clearly documented processes and practices in place to ensure safe operations occur day in day out. For the most part reliance on the 'system' to continue being appropriate for purpose keeps the work environment a safe place to be. However, on the rare occasion when an incident or accident does occur there is a need for review of those systems, processes and subsequent practices. We understand and fully appreciate this is the way things are meant to be and accept that process.

Civil aviation is a 'different place these days'. 'Things just aren't what they used to be'. 'Wouldn't have happened in my day'. 'What were they thinking?' 'Standards sure have dropped compared to when we were there'. These are all sayings we have been hearing for many years and possibly even been known to quote one or two ourselves. For as many identified issues there will likely be as many contributing factors. With the progress of time and the introduction of increased technology things have most certainly changed from two to three decades ago, as they should. So where to from a place where

mature people believe less mature people have got it wrong? In this instance I am referring to physical age as opposed to emotional growth.

There are two words that can go to the heart of operations and how individuals interact with each other within the system that governs their workplace. There is a plethora of other words but for this purpose we will use 'Culture' and 'Respect'. They could be considered the two integral elements for how people relate and behave with each other, whether socially or professionally. These words could be thought of as almost one in the same, even so far as there cannot be one without the other. Industry has been aware of the notion of an organisational 'Culture' and how it can be a positive or a negative influence. That is not only in aviation, it can be across almost every industry. It goes to the human and the individuality of that person that causes them to behave in a certain way.

As a current example of changes that affect attitudes and behaviour, recruitment for ab initio Cabin Crew has changed over the decades. Different qualities and skill set are sort by those conducting the culling process to find those most suitable for the role as it is today. The fundamental role has not changed or been modified, aviation regulatory requirements ensure the role of Cabin Crew is the safety of the travelling public. Whether there be inflight emergencies such as a potentially life-threatening medical situation, through to an emergency evacuation upon landing.

What has changed is the way that children and young adults have been educated, the tools they have available to access information to further their educational knowledge and standards. They are learning differently from any previous generations through far greater interaction with technology. The challenge for those who employ/recruit these people is to be satisfied they will develop an adequate understanding of their role and responsibilities.



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That has been the challenge for decades past. Nowadays how are airline operators meeting this challenge of training and assessment to develop competence, both theoretical and physical in this latest generation coming through.

There are elements of training, in emergency procedures, that will still require physical competence in the handling of equipment, operation of exits and the conduct of emergency procedures, inclusive of directional commands. Having the ability to put into practice the learned procedures can prove challenging under any circumstance. It has been shown through the years that the role is not for everyone, as much as they may seek to make it a lifestyle choice. Having said that, gaining an appreciation for the need to be vigilant and alert can be more challenging for some than others. To be mentored in the initial stages of a career can prove invaluable. And experience is a great way to learn.

The exponential growth within the industry now that the worst of COVID 19 appears to be behind us, has seen enormous recruitment programs underway to employ Cabin Crew. To commence as Cabin Crew the minimum age, in accordance with ICAO recommendations, is 18 years old. It is reasonable to conclude there will be people of that age or a little older at 19 years of age coming through the training organisations. Does the culture within an airline operator accommodate the needs for initial trainee Cabin Crew to learn and gain knowledge in a way that they have been accustomed to? How do they gain the skills necessary to demonstrate practical competence? Are these recruits undergoing 'the same' training and assessment process as has 'always' been occurring? Have operators considered - It has worked for years is there a need to amend our process? Training has and always will be fundamental in the education of crew, has industry acknowledged it is time for a review and subsequent change to how they have previously conducted their training?

An important element necessary to operate as a member of Cabin Crew is to be able to work as part

of a Team. With that comes having 'respect' for the Onboard Manager, other crew members and the travelling public. Being a Team member means to work in a cohesive and efficient manner with those around you. To be alert, vigilant and comply with documented SOP's. These concepts are equally as relevant in today's work environment as they have always been.

However, one could be excused for wondering if the relatively quick shift/transition in the demographic of Cabin Crew is moving towards a breakdown of some of the behavioural 'norms' associated with being a respectful team member. The circumstance where the crew could be predominately quite new to the role with a lack of experienced crew to guide them has potential for non-compliance of necessary tasks. That can occur with the most experienced as well, however, a moment of forgetfulness can cause an abnormal situation, to recover the situation is paramount, and that generally comes with experience.

We have progressed into a new era of moving people from their departure point to their arrival point. Aircraft are continuing to fly further and the technology onboard helps to ensure the travelling public arrive feeling physically better than they otherwise would have only a few years ago. Choosing the lifestyle of a member of Cabin Crew can be rewarding, exhausting and fun. This generation will set about making their own memories and continue contributing to the ongoing safety of the travelling public.

A Most Unusual Accident - Plane Meets Train

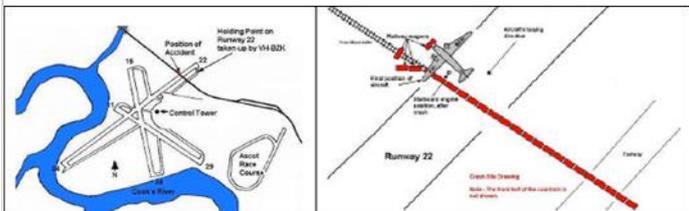
Fred Niven (February 2003) (using info from the following article & book & my own files).

References :

'Flightwatch' article for 'Radio & Communications' by David Rolls (Oct. 1998). 'The Story of the Sydenham to Botany Railway' by Neville Pollard, via John Lau.

This is the strange story of the collision of Ansett Airways Pty. Ltd.'s Douglas DC-3 (C-47A-25-DK) VH-BZK & a N.S.W. Railways coal train at Kingsford Smith Airport, Mascot, on Sunday 18 June 1950. Much detail has been omitted, for the sake of brevity.

The basics are as follows - At approximately 2000 hours on 18 June, 1950, Ansett Airways' DC-3 taxied into empty coal wagons (which were part of a train consisting of a D50 locomotive, 53 empty coal-wagons & 1 brake-van) on Runway 22 at Kingsford Smith Airport, Sydney. The DC-3 was extensively damaged & five of the empty coal wagons were derailed. Only the DC-3's First Officer received minor injuries. The following show (1) the basic layout of the runways, the rail line & the approximate position of the collision & (2) the crash layout details :



There were 3 runways available for use that night - 11/29 (1085m/3580ft), 16/34 (1190m/3950ft) & 04/22 (1787m/5900ft). These are shown clearly in the 1st drawing, above. The following photo (by E.A. Downs) shows the view at about that time, looking east towards Runway 22:



Some 150m from the northern end of Runway 04/22 ran the Sydenham-Botany rail line, which was, supposedly, protected by special safety controls. A north-east extension of Runway 04/22 had been opened on 22 October, 1945, for the 1st time crossing the rail line. A special signaling system was introduced, to allow the train Firemen to communicate with the Mascot Rail Goods Office Control Office & through them seek instructions from the Airport Control Tower. The control tower had facilities to instruct trains whether the rail line was 'clear', or 'obstructed'.

At approximately 1916 hours, DC-3 VH-BZK (Capt. R.G. Gibson, F/O Havilland Knott, Hostess Margaret Reid) arrived at Kingsford Smith Airport Runway 16, from an Essendon-Wagga-Wagga-Sydney flight. By 1943 hours, the Control Tower had decided to use Runway 11, instead of Runway 16 & from then until the accident, all take-offs & landings were made on Runway 11. VH-BZK, readying for a flight to Coffs Harbour & Brisbane, with the same crew of 3 & 15 passengers, called the control tower at 1945. The Airport Controller, W.L. Jeffrey, claimed that he cleared the aircraft to use Runway 11. His assistant, D.R. Morrison, stated that he confirmed that clearance. The Controller then moved on to another aircraft & did not keep track of VH-BZK. However, Capt. Gibson stated that he was instructed to use Runway 22, rather than Runway 11, proceeded along the apron, on the taxiway adjacent to Runway 22, crossing the rail line, without lighting, or problems. At approximately 1955 hours, the signalman in the Mascot Goods Yard phoned the control tower, to seek permission for an empty coal train, from the Bunnerong Power Station to cross the runway. The permission was



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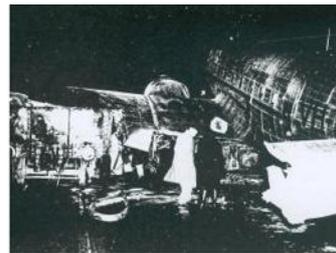
given for the train to proceed. However, at 1958, the Controller called VH-BZK & advised that he was cleared for take-off, believing that VH-BZK was at the end of Runway 11, rather than Runway 22. The Captain advised "Tower, Baker Zebra King with you. Ready for take-off. I notice that there are no runway lights." After commencing taxiing, the Captain noted the lights on Runway 16. The Control Tower again contacted the aircraft & asked their intentions. The Captain advised that they proposed to take-off, on time, at 2000 &, according to the Captain's evidence to the subsequent inquiry, further advised "I am sitting at the end of Runway Two-Two, because I am under the impression that we were instructed to use Runway Two-Two. As the lights of Runway Two-Two are not on, do you wish us to use Two-Two, or One-Six?" The Control Tower replied "Now I am muddled. It is not One-Six. It is now One-One". The Captain then advised that he queried "Am I clear to taxi down Runway Two-Two for Runway One-One holding position?" The Control Tower replied "Baker Zebra King, clear down Runway Two-Two to One-One. Stand by & I'll turn on the lights." The lights were turned on & Captain advised the inquiry that they cleared down the runway & took up a holding position, facing the runway. He then put on his headlights & proceeded to taxi onto Runway 22. After lining-up on the runway & confirming that it was clear, he switched off his headlights (because of the rain, which reflected the glare in the darkness). He proceeded to taxi down Runway 22 at some 10-13km/h (6-8 m/ph) (some later reports suggested that it was considerably faster). After taxiing some distance, the F/O shouted "Hold it!" At the same moment, the Captain saw a dark object just in front of the aircraft & immediately applied brakes. VH-BZK then hit something (which it was later revealed was the 25th empty wagon) its starboard side & slewed sideways for several seconds. The Captain immediately turned off the fuel supply, which was lucky, as the port engine burst into flames, but was quickly extinguished. The emergency hatch was opened & the crash scene sighted. The Captain then notified the Control Tower & asked for fire tenders - "Tower, Baker Zebra King, pan, pan, pan. Request fire tenders. We have had a collision & are evacuating." The crew then arranged for the passengers to evacuate the aircraft. Once satisfied that all passengers had left the aircraft, the crew also left the aircraft. Considering the possible results of such a collision (the train & empty wagons were estimated to weigh some 450 tonnes), it is remarkable that only the First Officer received any injury, slight lacerations to his face. The aircraft was nowhere near as lucky, suffering far more, including the engines, the port wing, the port tail

assembly & the lower fuselage in the cockpit area. It was later repaired by the Fairey-Clyde works, at a cost of £16500. To cover the temporary loss of DC-3 VH-BZK, T.A.A.'s DC-3 VH-TAG was chartered while it was repaired. The 25th coal wagon did not roll over, but ended up sitting under the aircraft's port wing. In addition to the derailed wagons, part of the track was ripped up.

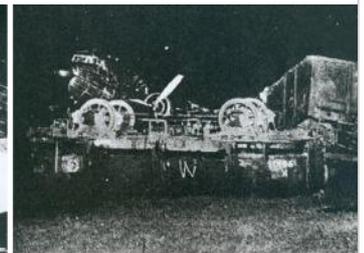
Space does not permit detailing the various claims & counter-claims of the parties involved (the Control Tower had run out of tape on its recording machine & there were therefore no recording of the conversations). However, there was considerable discussion on the matter & legal opinion of the time suggested that the Tower Controller would have been considered as negligent, for approving DC-3 VH-BZK to move to Runway 22, having already given approval for the train to cross that runway. In a later, out-of-court, settlement, the Federal Government compensated Ansett Airways with £27000, for its costs, which resulted from the accident [damage to the aircraft (£16500) & the cost of leasing of VH-TAG]. The N.S.W. Railways were compensated with £485. As a result of this accident, industry wags came up with the saying "Don't miss your train connection, fly Ansett".

On 10 December 1951, four aircraft traffic lights were installed, to help prevent a repeat of the accident.

On 22 March 1960, the rail line was moved some 200m north of its previous site, outside of the airport boundary fence.



Crash scene from port, rear.



Crash scene from port, forward.



DC-3 VH-BZK (1950s) (Cus Grulke, via John Wilson)



DC-3 VH-BZK in later years (Photo via John Wilson)



Flight Safety Foundation Establishes Asia Pacific Centre for Aviation Safety In Singapore

Regional Centre to work on raising safety standards and capabilities as air travel recovers to pre-pandemic levels in Asia-Pacific.

by FSF Communications Staff | March 22, 2023

SINGAPORE — Flight Safety Foundation will set up the new Asia Pacific Centre for Aviation Safety in Singapore to help aviation stakeholders in the Asia-Pacific region raise safety standards and capabilities to restart and ramp up operations safely as air travel recovers to pre-pandemic levels. Supported by the Civil Aviation Authority of Singapore (CAAS), the Centre will develop an annual work programme to meet the needs of regulators and industry in the region and undertake projects and studies to provide a deeper understanding of safety challenges and build capabilities in technology, data analytics and safety management processes. The establishment of the Centre was announced by Mr. S Iswaran, Singapore's Minister for Transport and Minister-in-charge of Trade relations at the inaugural [Asia Pacific Summit for Aviation Safety](#) organized by the Foundation and CAAS.

The Centre will adopt a data-driven approach in its studies and projects. Through the collection and analysis of safety data and information, the Centre seeks to provide insights and recommendations to advance safety in the region. For a start, it will work on three key projects in 2023:

- **Regional Safety Assessment.** This project will pull together available safety data across regulators and industry to identify region-specific risk areas, review safety indicators and occurrence trends, and develop targeted safety solutions.
- **Safety Culture Leadership.** This project will study the essential elements of knowledge and capability needed to maintain effective safety leadership and organizational effectiveness in the Asia-Pacific region, considering cultural differences.
- **Pilot Competency and Training Capabilities.** This project will study best practices on pilot training methodologies to better screen, recruit

and train pilots to meet rising demand and support the growth of air travel.

More projects will be added to the annual work programme in consultation with regulators and industry in the region. CAAS will help fund the Centre to support the initial set-up and its activities for the first five years.

The Foundation has appointed Mitchell A. Fox, a former airline pilot and long-time executive with the International Civil Aviation Organization, to serve as Centre Director. He will be based in Singapore. During his 30 years with ICAO, Fox served as the Chief of the TRAINAIR Programme, Chief of the Operational Safety Section and Chief of strategic planning and regional affairs coordination within the Office of the Secretary General. He also served in the United Nations (U.N.) as the Director of Air Transport Service, managing the more than 200 aircraft that support U.N. peacekeeping missions worldwide.

More information on the Asia Pacific Centre for Aviation Safety will be available soon on the Flight Safety Foundation website.

Mr Han Kok Juan, Director-General of CAAS, said: "Aviation safety must be a top priority of the Asia-Pacific region as air travel recovers to pre-pandemic levels. It requires close collaboration amongst regulators and industry across countries, given its cross-border nature. The setting up of the regional safety centre is timely and provides a common platform for such collaboration. Singapore is deeply honoured to host the centre to do our part to contribute to thought leadership and aviation safety standards in the Asia-Pacific region."

Dr. Hassan Shahidi, President and CEO of the Foundation, said: "As commercial aviation in the Asia Pacific region rebounds and recovers from the pandemic, it is important that all stakeholders have the resources and capabilities they need to ramp up operations safely. Working with aviation stakeholders in the region, the Centre will aim to accelerate regional aviation safety enhancements and support the safe growth of the aviation sector in the region."



Rotorcraft Asia-Pacific Pty Ltd - Special Autumn Report - Looking Ahead – Post COVID

Australia Helicopter Industry Data

In brief: the purpose of this report is to share with industry our recent research to determine what impact the Covid pandemic has had on the annual growth rate of the Australian helicopter industry.

Fortunately, we identified three distinct phases of the growth of the helicopter industry. They have produced a better overall result than our general aviation aeroplane cousins.

Phase 1. Prior to the Covid pandemic. Historical data indicates the helicopter fleet usually achieved an annual growth rate of twice the National GDP, at around 6 to 7%. (NZ usually achieved a similar growth rate of 1% to 2% less than Australia, but this was still a good achievement).

Phase 2. Covid Pandemic. This report shows how covid halved Australia's annual helicopter growth rate, which fell to around 3.5% per annum. (Still a good result). Which was still slightly above the National GDP at that time. However, NZ suffered badly due to lengthy border closures. By comparison, the general aviation aeroplane industry also suffered badly due to major setbacks associated with domestic border closures and cancellation of a large number of overseas pilot training contracts at Australian flying schools.

Phase 3. Looking ahead to Olympic Games. Due 2032. Our monitoring of helicopter fleet changes is showing a somewhat unexpected strong annual growth phase. This is due to a stronger financial results, military restructuring, and tourism yet to reach 100% of pre-covid figures. (Now 60%) and other geopolitical issues (China).

Today, our studies suggests we have passed the pre-covid annual flees growth rates of 6 to 7%. But

we are buying more larger multicrew helicopters. And of course, tilt rotor helicopters and heavier AAM aircraft may soon enter our data bases!



The AW609 took to the air in Philadelphia on 13 Oct '22 testing general handling and systems

Register Update – 20 March 2023
Ref: CASA Aircraft Register dated 9 March 2023.

Editor Rob Rich



Phase 2 uses data from 30 Sep 2019 to 19 Mar 2023. Covering three years and five months or 41 months.

Includes most of COVID era. On 19 March 2023, the CASA website stated Australia had 16,200 aircraft.

Of these 13,611 were aeroplanes and 2,589 helicopters which made up 16% of the registrations.

All CASA registrations during this period moved from 15,647 to 16,200 an increase of 553. A growth rate of around +1% pa over 41 Months.



AUSTRALIAN SOCIETY OF AIR SAFETY INVESTIGATORS

Register changes from 30 Sep '19 to 19 Mar '23.
(Forty-one months).

- Helicopter registrations increased from 2,313 to 2,589 = 278 (+12%)
- RW's an annual growth rate was approx. 3.35%. National GDP is about 3 to 6% pa.
- Aeroplane registrations increase from 13,335 to 13,611 = 276 over 41 months. Effectively a zero-growth rate.

Australia's global position – It appears Australia is ranked second in the western world for helicopter registrations. (It would be third after Russia which has mainly heavy machines and a small number of small privately-owned machines).

On 19 Mar '23, Australia had the largest fleet of light – medium helicopters in the world, after the USA. Australia's fleet was 2,589.

SE Total: This list consists of 2,290 single engine helicopters. (Down from 2,310 = -1%).

SE-P: Of the above, 1,567 are piston engined helicopters. Up from 1,413 or +11%.

SE – Total turbine: 1,030 are turbine powered helicopters. Up from 897 or +15%

SE-T: Of this number 729 are SE engined helicopters. Up from 630 or +16%.

ME–T: 301 are listed. Up from 267 or +13%.

Note: ME Categories. 5,700+ may need MCC(H) crews?

ME below 5,700 kg are 209. Up from 180 +16%

ME number 5,700+ kg are 92. Up from 87 +6%.

The Robinson Helicopter Company dominates the Australian register with 1,351 machines, or 53% of all helicopter registrations. Up from 1,201 or +15%.

The Robinson fleet summary:

- R22 was 617 now 679 up +10%.
- R44 was 553 now 625 up +13%.
- R66 was 30 now 48 up +60%.

Locations. Almost 50% are north of the Brisbane line due to rural and tourist operations in remote areas.

By numerical order – over 41 months .

- QLD was 758 now 940 up by + 24%.
- NSW was 526 now 543 up by +3%.
- WA was 290 now 361 up by +25%.
- VIC was 331 now 310 down by -6%.
- NT was 191 now 227 up by +19%.
- SA was 77 now 120 up by +56%.
- TAS was 48 now 65 up by +35%
- ACT was 9 now 17 up by +88%

NEW ZEALAND

NZ Population 5.22 million. (Australia 26.30 million)

The NZ aircraft register totals 5,409 of which 922 are helicopters, which make up 17% of the total. Almost no change during our reporting timelines.

Robinson helicopters make up 22% of the NZ, down by 3%.

- Probably due to NZ government 's campaign against Robinson. And introducing mandatory safety courses.



AUSTRALIAN SOCIETY OF AIR SAFETY INVESTIGATORS

As a result, current Robinson registrations are down 14% from 245 to 205. Fleet numbers are:

- R22 – 64
- R44 – 136
- R66 – 5

At present, New Zealand is recognised as a country with more helicopters per head of population than any other. They have 922 helicopters for only 5.22 million people.

The following figures for per head of population for Australia, NZ and the USA are interesting.

NZ – Population 5.22 m. Civilian aircraft 5,409 of which 922 are helicopters.

- People per helicopter 5,661.

Australia – Population 26.30 m. Civilian aircraft 16,200 of which 2,589 are helicopters.

- People per helicopter 13,158.

United States – Population 334.51 m. Civilian aircraft est: 250,00 of which 18,500 are helicopters.

- People per helicopter 18,082.

Additional New Zealand info:

Other piston types are well represented and probably make up about another 15% of the registrations. The turbine fleet is dominated by single engine Bell 206 and Airbus 350 series used for agricultural and tourist operations. The latter has a good lead over the Bell 206 numbers.

Due to the need for high-performance helicopters that can comfortably operate in mountainous terrain, the New Zealand twin-engine fleet consists mainly of light twins capable of SAR and aeromedical work. Smaller types work well in New Zealand by comparison to Australia where longrange operations

required larger helicopters which can reach out to remote areas.

The AW 139 which is becoming very popular in Australia which now has 60 on the CASA Register. It is considered a large helicopter by NZ standards. There are only three in NZ, due to the higher operational costs.

QUIZZ? NZ vs QLD? NZ with 5.22 m has 922 helicopters. By comparison, QLD with 5.41 m has 940 helicopters – who is in front? A: NZ.

Australia & NZ's role in APAC.

Australia with 2,589 and NZ's 922 = 3,511 helicopters

- 53% of APAC's est. 6,600 helicopters

APAC has around 21 nations.





Members in the News

Deborah Lawrie A.M.

Many ASASI members are partially familiar with the story of Deborah Lawrie and her pioneering struggle to fly for the now defunct airline, Ansett Australia. She was recently interviewed by the ABC program **Conversations** and the complete program can be accessed through this link <https://abclisten.page.link/JzrGLHywUvB3nNxAg>

When you hear the full story in her own words, it is well worth recalling how far we have come in our industry since the late 1970's with respect to equality and discrimination across the board. The following text is adapted from the Australian Aviation Hall of Fame.

Deborah was born in Sydney. Her family would later move to Melbourne, where she would graduate in 1974 with a degree in science from the University of Melbourne.

At age 18, Lawrie obtained her private pilot licence in 1971. This was quickly followed by her commercial pilot licence, which she achieved in 1973. By 1976, Lawrie had already swiftly logged 2600 flying hours and had become a charter pilot and flying instructor.

These years of experience and significant passion for aviation led her to apply to Ansett Airlines. However, after sending applications for another two years, Lawrie had still yet to receive any response. After finally reaching the interview stage of application in 1978, she was ultimately rejected. In the meantime, the Ansett pilot training program had continued to accept multiple fellow male flying instructors.

Sensing that there were unequal practices in play, Lawrie decided to take the case to the recently formed Victorian Equal Opportunity Board and dispute Ansett's rejection on the grounds of equal opportunity legislation.

Founder of Ansett Airlines, Reg Ansett denied that these allegations of discrimination were true. However, he nonetheless clarified his own view that women were unsuitable to work as

airline pilots. The objections to the employment of women as pilots included 'lack of strength' despite a lack of a strength test for pilots.

In response, public demonstration marches and a 'girl-cot' were organised; Ansett lost more than 50 per cent of its business travel as result of women transferring their travel accounts to Trans Australia Airlines in protest.

After deliberation, it was ruled by the Victorian Equal Opportunity Board that the rejection was discriminatory and thus, illegal. Ansett was ordered to award damages and include Lawrie in their next pilot training program. However, the battle was not over yet.

Lawrie was faced with many hurdles during her time undertaking training. Ansett attempted to claim that she had been at fault for a near-miss incident, though she had been exonerated by an inquiry. While male trainees were assigned to training aircraft, Lawrie was not. While Ansett may have faced defeat in their legal case and was denied a further appeal, such prejudice still existed and created significant barriers for women pilots.

Lawrie became a Member of the Order of Australia in 2019, where she was recognized for her significant service to aviation.





A/Prof Nicole Connelly

The 2022 Australian Awards for University Teaching have recognised ASASI member Nicole Connelly for her teaching excellence at the recent awards ceremony.

The basis for these awards is described as:

These awards recognise the most outstanding teachers and programs across the sector, celebrating university teachers at different stages in their careers, from early career academics to those who have devoted a lifetime to learning and teaching. We congratulate this year's winners and hope their example will inspire current and future leaders in education.

ASASI congratulates her on this incredible achievement. Well done Nic!



2022 AWARDS FOR TEACHING EXCELLENCE ENGINEERING - EARLY CAREER

A/PROF NIC CONNELLY **RMIT University**

Ms Connelly is passionate about aviation and loves sharing this with her students. As an Associate Professor in Aerospace Engineering and Aviation, teaching for her is an infusion of passion and experience, combined with curiosity and enthusiasm, which ignites both teachers and students to read the world and respond and educate accordingly. As an air traffic controller Ms Connelly was considered a guardian of the sky, choreographing the complex airspace above, safeguarding millions of lives as they moved across the sky. Today she considers herself a guardian of our future, by shaping young minds and creating possibilities through educating, inspiring, and motivating our prospective aviation industry leaders. Ms Connelly believes that the more interactive the learning journey is for students, and the more authentic the learning is through industry contextualisation, results in flow on effects that ensure a meaningful academic experience for students, leading to competent and well-equipped future leaders for our aviation industry. Her approach to implement courses in a blended learning mode required an integration of real-world scenarios, complex problems and their solutions, role-playing, case studies and, supported by flexible learning methodologies using technologically enhanced approaches to suit the students' needs, with a purposeful focus on authenticity of the learning journey.



New Members

Amelia David

Amelia David is currently a Bachelor of Aviation (Flight Operations) student at CQ University. She is currently working towards her Private Pilot Licence at Moorabbin Airpot and hopes to continue her studies to one day work in aviation safety. If any member is interested to provide mentorship or work experience please get in touch with her.



Andrew Baker

Originally from Victoria, Australia, Andrew's worklife commenced as a member of Victoria Police where accident investigation is a key skill acquired through exposure and coaching from experienced hands.



With a lifelong passion for aviation, it was only a

matter of time before he acquired a pilot licence -1979 actually; later transitioning to full time helicopter operations with VicPol Air Wing in 1988.

After success in that LEO/SAR/EMS role there came other advancement in 1995 to:

- Queensland Emergency Services – SAR EMS – Cairns, Queensland.

- Westpac Northern Region Helicopter Rescue SAR EMS – Lismore, New South Wales.
- Esso - Oil and Gas support – Bass Strait, Victoria.
- CHC (Africa) – Oil and Gas, Antarctica Senior Pilot.
- CHC (Australia) – Regional Manager/Air Ambulance contract manager.
- Esso Australia – Chief Pilot – Oil and Gas.
- Avion Pacific – 3 years Project Manager Bohai Sea area – Oil and Gas, China.
- Kuwait Air Force – S92A Instructor Pilot on contract.
- Westpac Chief Pilot - SAR EMS – Lismore, New South Wales.
- Australian Helicopters (later Babcock) 5yrs – Head of Flying Operations, Chief Pilot.
- CareFlight – Fleet Manager – EMS and Fire/Flood response Sydney and Darwin.

Andrew is married with three sons and currently holds a Senior Flying Operations Inspector (heavy helicopters) position with Civil Aviation Safety Authority (CASA) in Brisbane.

Career Highlights – Living in China for 3 years and 700 hours of Antarctic operations over 3 diverse seasons. NTSB Helicopter Accident Investigation course USA. Simulator IOS AW139 at Thales AW139.



New Members

Gary Burns

Gary is currently a First Officer and a Fleet Safety Investigator with National Jet Systems. His current job role is split as a Managerial position within safety as Fleet Safety Investigator for the B717 operation.

This role complements his main duties as a First Officer on the Qantas Link B717 aircraft. Other duties include managing and conducting LOSA observations within the Group.



Mikaela Struber

Mikaela commenced a career in Aviation in 2011 as an Aircraft Maintenance Engineer Apprentice concentrating in the Mechanical field of Rotary Wing Aircraft.

Over the past 12 years she has had the opportunity to experience and participate in various roles within the industry. From Jr AME learning how to identify maintenance faults, to Head of Airworthiness and Maintenance Control interpreting aviation legislation and then as an Operations Manager coordinating flight risk assessments. Mikaela is currently the Quality & Safety Manager for a Fixed Wing and Rotary Wing heavy maintenance facility in Cairns, FNQ.



From being a self-declared practical learner in 2007 after graduating from Stuartholme Girls College in Brisbane, by the end of 2022 Mikaela had completed courses in both 'Safety and Lead Auditing' and 'Aviation Risk Management' and was the winner of a Women in Aviation (WAI) scholarship supported by Southpac Aerospace to complete the units required to achieve a Diploma of Aviation Management.

Mikaela is excited to be offered the ASASI scholarship to become a member of the Australian Society of Air Safety Investigators and gain further knowledge from others in the industry to pass forward a heightened safety standard for the up and coming personnel in aviation.

Scott Parish

Scott is currently delivering in Safety Management Systems, Security Management, Quality Management, Accident Investigation and Data Analysis. He has decades of experience working within Aviation and Defence sectors, navigating regulations to ensure the safety of flight. He specialises in working with business buyers and sellers involved in the manufacture, maintenance and operation of machinery across a range of sectors including aviation, defence, industrial, mining, agricultural and rotary equipment, among others.

As a military veteran, Scott also offers unique business buying and coaching services tailored for transitioning defence personnel.





AUSTRALIAN SOCIETY OF AIR SAFETY INVESTIGATORS

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Australian Government
Civil Aviation Safety Authority



Coffee break at 37,000 feet. What could possibly go wrong?





Upcoming Events



The Australian and New Zealand Societies Of Air Safety Investigators



NEW ZEALAND SOCIETY
OF AIR SAFETY INVESTIGATORS

ANZSASI 2023 2nd – 4th June



A less than subtle reminder that our annual Australasian ANZSASI Seminar will be held in Surfers Paradise at the Novotel Hotel, 3105 Surfers Paradise Blvd, from Friday to Sunday June 2-4 2023.

The Novotel venue is ideally located, and adjacent to public transport and will follow our usual format with a welcome reception on the Friday evening, two full days of presentations on Saturday and Sunday and a dinner on the Saturday night.

For our partners, the Novotel is in the central shopping area, with easy access to all the Gold Coast attractions.

The holiday break is long past and now is the time to turn our collective attention to seminar attendance. To date, the level of response has been disappointing. Without sufficient numbers we run the risk of losing considerable funds for the deposit, which was made prior to the pandemic and its subsequent issues.

We are still seeking a small number of papers and early bird registration rates close on 1st May 2023.

The registration link is [Registration Form ANZSASI 2023](#).





Be Alert but Not Alarmed

We have it on good authority that there will be some New Zealanders attending the ANZSASI 2023 seminar.

Should you encounter one of our Trans-Tasman friends, the following table may aid the translational processes. Just don't mention the Rugby!

How to speak New illund.

 A is for Arm Uttered when thinking.	 B is for Bull What you're charged for the meal.	 C is for Cuds Children.	 D is for Donut Long version of don't.	 E is for Ear What we breathe.
 F is for Fush Sea creatures.	 G is for Guess Used for cooking or heating.	 H is for Hull Land which isn't flat.	 I is for Ice cream What I do when the All Blacks lose.	 J is for Jug Type of Irish dance.
 K is for Ken's Popular holiday city in Queensland.	 L is for lust Something you write before going shopping.	 M is for Milburn Capital of Victoria.	 N is for Nutter To have a yarn.	 O is for One doze A pane of glass in a wall.
 P is for Pigs Found on a clothes line.	 Q is for Quad Slang term for a British Pound Note.	 R is for Rung Piece of jewellery.	 S is for Sucks The number after five.	 T is for Tin The number after nine.
 U is for Undies West Undies. Good at cricket.	 V is for Volley Area between two hulls.	 W is for Windy A girls name.	 X is for Xylophone It's the same in any langwudge.	 Y is for Yuppie An expression of delight.



Upcoming Events

Development Corner



Are you joining into the monthly training and education webinars facilitated by our NZSASI friends across the ditch?

NZSASI Vice President, Mike Zaystoff, facilitates them monthly and has warmly invited all ASASI members to attend. There is no need to apply to join in, just Zoom in on the day using the details below.

NZSASI & HCAP NZ Monthly Professional Development Webinar

Time: 2nd Wednesday of the month at **10am NZ time (0800 AEDT)**

Join Zoom Meeting at:

<https://us06web.zoom.us/j/98797654960?pwd=NFNYcnBNMDFWUIUrR1QzV2ZwLzVPUT09>

Meeting ID: 987 9765 4960

Passcode: 19291964

Save this meeting ID & passcode. It is the same for every monthly webinar.

Zoom etiquette. *Microphone off* unless talking. *Camera off* to save bandwidth if the number of participants dictate.





ASASI is looking for Mentors!

Australian Society of Air Safety Investigators Student Mentoring Program

Calling All Mentors

ASASI is seeking expressions of interest from those members wishing to volunteer their time and assist our investigators of the future.

Purpose

The purpose of the ASASI student mentoring program is to establish a formal link between experienced ASASI members and aviation students interested in a career in aviation safety.

Goal

The goal of the student mentoring program is to assist our next generation of aviation safety professionals achieve their career goals through guidance and advice from experienced investigators.

Why Become a Mentor?

As a current aviation safety specialist and member of ASASI, you hold substantial knowledge and experience. You know the people, the processes and the pitfalls associated with our niche industry. Rather than letting this experience fade away over time and maybe into retirement, it can be passed along to our upcoming generation of investigators. Voluntarily mentoring a student can provide a rewarding opportunity to achieve this important objective. Our ASASI psychologist members would tell us that, according to Maslow, our highest-level needs relate to self-actualisation, a process by which we can achieve our full potential.

Mentor Expectations?

A commitment to communicate with an assigned student on an *agreed-upon* basis, be a good listener, and share your experience and knowledge. It is envisaged that this can be practically accomplished primarily by email or perhaps telephone as appropriate to your preference. Rest assured; you will only offer *advice* from your experience. You will not be doing assignments! Mentors can offer to assist as little or as much as they choose and have the time to commit to.

Management of the Program

A mentoring coordinator will hold details of student applicants and the volunteer specialist mentors. The coordinator will match requests to prospective mentors and seek their approval to connect a student to them.

What is Needed to Get Started?

A brief bio sketch that includes your email address, telephone number, employer, position, area(s) of specialisation and your likely availability. It will be held securely in confidence.

Please send this information to: asasiexecutive@gmail.com



Contacts

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"No doubt about it, Bob ... You're infected with tiny fighter planes. What's worse ... you're a carrier."



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