



# Outlook

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## AHSA News

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Vol. 39 No. 2 April 2023

**When the bureaucrats select  
the aircraft...**



The Vickers Vulcan G-EBET at Longreach during March 1934.

Newsletter of the  
Aviation Historical  
Society of Australia, Inc.  
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**Aviation Historical Society of Australia Inc.**  
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#### Our 2022/23 Committee:

<b>President:</b>	Dave Prossor president@ahsa.org.au
<b>Vice-President:</b>	Derek Buckmaster vp@ahsa.org.au
<b>Secretary:</b>	Derek Buckmaster secretary@ahsa.org.au
<b>Treasurer:</b>	Robert Van Woerkom treasurer@ahsa.org.au
<b>Membership Secretary:</b>	David Knight membership@ahsa.org.au
<b>Committee Members:</b>	Dion Makowski Phil Vabre

Outlook AHSA News is the quarterly newsletter of the Aviation Historical Society of Australia Inc.

#### Outlook Contacts:

Postal address: PO Box 461  
Lilydale, Victoria, 3140  
Editor: Derek Buckmaster  
Email: outlook@ahsa.org.au

#### AHSA Meetings:

Melbourne meetings are held on the 4<sup>th</sup> Wednesday of each month, at the RAAF Association offices in Camberwell Road, Hawthorn. Meetings are also streamed online with Zoom.

Membership of the AHSA Inc. for the 2023 calendar year costs \$50 in Australia and \$60 for the rest of the world. A membership application form can be downloaded from our website: [www.ahsa.org.au](http://www.ahsa.org.au)

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**Stop Press: The RAAF Museum at Point Cook has re-opened. But visitors must pre-book before arriving. Use the website: <https://www.airforce.gov.au/community/visit-and-learn/raaf-museum/plan-a-visit>**

## President's Comment

First up, the Avalon Airshow: the good, the bad and the ugly, three ways to describe the 2023 Avalon Airshow.

The good was the great display by the F-22 and the South Korean Black Eagles aerobatic team. I have to wonder how many hours the team put in to perfect their manoeuvres. There was also a huge variety of both local and overseas aircraft on display. The spectators were starved for the show not having taken place since 2019. In one word, COVID-19, was to blame.

The bad. The lack of seating for spectators. The food stands had long queues at noon but for eaters there were few places to sit. The tables under the tent covers were occupied by families who took up residence to watch the afternoon airshow.

The two maps that I was given told me nothing about gates of entry and where the AHSA tent was, nor the warbirds display area or that of the antique & classic aircraft. This year the Avalon organisers did away with the printed program that in the past had the various displays and how to get to them. Yes, there were QR codes that might allow one to read and find the layout but few that I saw used those QR information boards.

There was a whole street of display tents including the AHSA tent but a lot of people after the show said they had no idea where that street was.

The Ugly. Avalon the show has been running for more than twenty years. Over that time the vehicle traffic management, inbound and outbound was managed to a fine art. This year the apparently new team appears to have tossed the "How-To" manual out the window and said 'We will do it our way'. The end result was a log-jam of cars for kilometres. For example: On the Saturday I left home at Keysborough, a Melbourne SE suburb, and it took me three and a half hours to get to park my car at midday. The car queues were kilometres long. Stop-Start was the order of the day. Avalon blamed the traffic contractors. But the Avalon organisation should have had their traffic plan manager overseeing the contractors to ensure a quality traffic flow. Someone fell asleep at the wheel.

#### Coming AHSA Melbourne Meetings:

*26 April - Mr Martin James, RAAF Historian, will speak about the Battle of the Bismark Sea, which took place 80 years ago.*

*24 May - Dr Andy Hansen will speak about the history and development of aerial photography techniques.*

*28 June - TBA*

Various AHSA members, like me, have written to the Avalon Airshow management (AMDA) expressing their thoughts regarding the traffic flow or lack thereof. Some people apparently asked for a ticket refund. Easy to do given that Avalon like a lot of future events will all have to be cashless and pre booked.

Then after the show we received email flyers telling how great the airshow was and that the trade days were a roaring success. But no mention of the traffic issues. The traffic issues may put a lot of people off from attending the 2025 Avalon Airshow.

In 2024 the Avalon organisers (AMDA Foundation) are to take over the running of the Wings over Illawarra Airshow. It will be expanded to a three day event. That will mean year-round airshow organising for the AMDA people. I trust that they get the visitor car flow better arranged. The Illawarra Airshow will be run every second year.

Ian Honnery. Formally a solicitor he was the man who created the Schofields Airshow that morphed into the long running Avalon Airshow. Avalon was the biggest and longest running airshow event in Australia. If one thinks about the work carried out behind the scenes to make the show what it is one could well say that Honnery deserves a knighthood, if such an honour was still available to Australian citizens. Ian we thank you. Australia thanks you.

Trove. That vital record of newspapers online has been saved at the last minute by a Government injection of funds. See article this newsletter. A number of AHSA members wrote to Government commenting that Government needed to help save this vital record keeping facility. It all helped. Good work chaps!

It was pleasing to hear that a plaque was placed at the base of a tree near the control tower at Essendon Fields Airport in memory of aviation enthusiast Gordon Reid. Gordon may be gone but will not be forgotten.

The Queensland Air Museum at Caloundra is to celebrate its 50th Anniversary on 2 June 2023. The museum is well worth making a visit for all in the area.

The subject of collections has reared its head again in recent times. It is not just a case of donating one's collection of printed material and photographic material to a certain library or museum but to also ensure that collection is accessible to others wanting to make use of your work of many years. It is suggested that one leave detailed instructions as to where your collection goes and that it is not to be locked away such that 'Sorry, not available to view' are not the words one wants to hear.

With the decrease of COVID-19 the aviation scene is opening up again. Events and gatherings are on the roll. May that continue! We have all lost some two and a half years due to the COVID lockdowns.

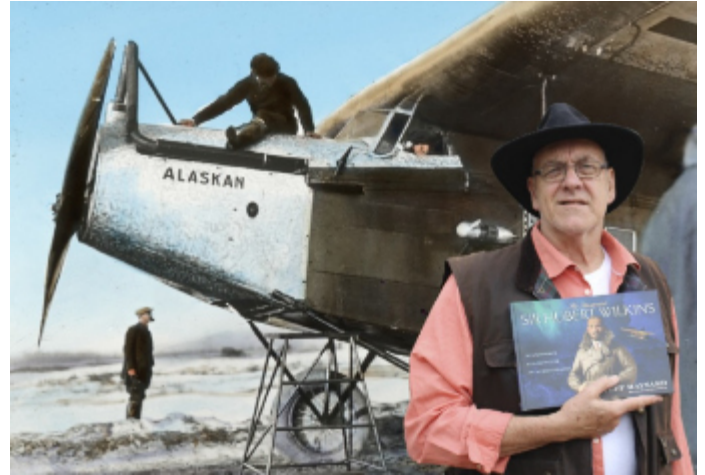
*David Prossor*  
President, AHSA Inc.

## AHSA NEWS

### February Melbourne Meeting:

Our meeting in February was the first monthly meeting for 2023 and we enjoyed a great talk by Jeff Maynard describing the lost archives of Sir Hubert Wilkins and Jeff's efforts to find and preserve these archives. Wilkins was born in South Australia but spent the majority of his life travelling overseas and eventually settling down in the United States, so many people do not realise that he is one of Australia's greatest explorers. Jeff has spent many years seeking out the records which Wilkins created and he has written four books about the explorer and photographer. Jeff's efforts to locate and then to encourage the consolidation of Wilkins' vast collection (at several locations) make a fascinating story.

Jeff has also started a YouTube channel (search for "Jeff Maynard Adventure Historian") containing the results of this excellent research.



Above: Jeff Maynard with his latest book on Sir Hubert Wilkins (image: Jeff Maynard).

### March Melbourne Meeting:

For the March meeting we were privileged to have Annie Flodin as our speaker. Annie is with Boeing Historical Services and has been visiting Australia to explore the locations and archives where various elements of Boeing heritage can be found in Australia.

This exploration tour has taken Annie to numerous facilities, archives and historical groups to catalogue the heritage of companies which have been acquired by Boeing over the years - including archives of the Commonwealth Aircraft Corporation, Government Aircraft factories and Hawker De Havilland. In 2009 these became under the banner of Boeing Aerostructures Australia which currently makes and exports hardware to Boeing, Airbus, Lockheed Martin, Bombardier and other aircraft manufacturers.

Annie was not about to load up a container-full of historical material to take back home but her intent was to find out where the collections of material related to the Boeing story are held in Australia.



Above: Annie in the rear seat of an AT-6C, about to enjoy a flight, but not during her visit to Australia (photo: via Annie Flodin).

Boeing has what can only be described as a massive collection of historical data relating to both Boeing and the companies that it has acquired over the years. It was good to hear that this valuable material has not been lost with the passing of time.

It was an interesting talk. Annie was doing a multi-state tour visiting the various places of interest to her job. Back in Washington State, USA, the Boeing archives comprise a huge collection of historical data going back to the 1920's. Over the years Boeing has acquired other aircraft manufacturers including North American Aviation, Douglas Aircraft, McDonnell Douglas, Stearman, Piaseki and others.



Annie has worked with Boeing as a historian since 2019. In her "spare time" she has been writing the Great Planes aviation themed blog since 2017 ([www.thegreatplanes.com](http://www.thegreatplanes.com)), writing and running photos of aircraft ('airplanes' to her) of interest.

Annie gave an interesting talk about what Boeing Historical Services is all about and what its aims are. A fascinating talk.

(DP)

### AHSA at Avalon Air Show:

An enthusiastic group of volunteers staffed the AHSA tent at the recent Avalon Air Show, spreading the news about the AHSA and signing up new members. This year the AHSA shared a tent with the Civil Aviation Historical Society (CAHS) and this joint arrangement allowed the two historical groups to complement each other. Our location was not felt to be ideal, but we met up with plenty of fellow airshow attendees and enjoyed catching up. Special thanks are due to Dion Makowski for co-ordinating the AHSA booth this year, and in particular to Anne West, who did a fabulous job of organising details as well as reaching out to passers-by.



Above: AHSA members at our tent including David Knight and Phil Vabre (centre). Photo: Anne West



Banners ensured airshow attendees could spot the AHSA/CAHS tent at Avalon. Photo: Anne West



Above: Jim O'Meara from Queensland Air Museum (left) and AHSA President Dave Prossor (right) at the AHSA/CAHS. Photo: Anne West.



Above: Catching up at the AHSA/CAHS tent, from left: David Knight, Annie Flodin (Boeing), President Dave Prossor and Peter Dunn (AHSA Qld. Secretary)

### Welcome to Our New Members:

Several new members have joined our ranks since the last edition of Outlook:

Ross Allison (NSW)  
 Peter Antonenko (Victoria)  
 Richard Bowman (NT)  
 Annie Flodin (USA)  
 David Foote (ACT)  
 Brian Grinter (NSW)  
 Dr Lewis Levitz (Victoria)  
 Jeff Maynard (Victoria)  
 Matt Tesch (Queensland)

## COMING AVIATION EVENTS

2023

22-23 April	Wangaratta Historic Motor Show & Fly-in
23 April	Wings, Wheels & Wine, Mudgee <a href="http://www.wingswheelsandwine.com.au">www.wingswheelsandwine.com.au</a>
30 April	Donnington Air Park Social Fly-in Breakfast
6 May	Temora Showcase #2
13 May	Memorial Service for CAC CA-4 crash, Kilmore cenotaph, Victoria
18 August	Surfers Paradise Airshow, Queensland
1-3 Sept	AAAA National Fly-in, Temora, NSW
16 Sept	Temora Showcase #3
21 Oct	Temora Showcase #4

With all events, please check before you make bookings or travel arrangements to ensure the event is still on. The COVID-19 pandemic and extreme weather events have resulted in numerous event cancellations and postponements even at short notice.

A memorial service to mark the 80<sup>th</sup> anniversary of the crash of CAC CA-4 Wackett Bomber A2X-1 is being organised by the Kilmore-Wallan Sub-Branch of the RSL. The service will be held at 10am on Saturday 13 April at the Kilmore cenotaph.

## 100 YEARS AGO IN AUSTRALIAN AVIATION HISTORY

### The Unwanted Vickers Vulcan Fails its Test (or What Happens When the Bureaucrats Choose the Aircraft)

The Vickers Vulcan was a large single-engined biplane, designed by Rex Pierson, Chief Designer at Vickers which featured an enclosed cabin for eight passengers within a deep fuselage of elliptical cross-section. The design was influenced by the earlier

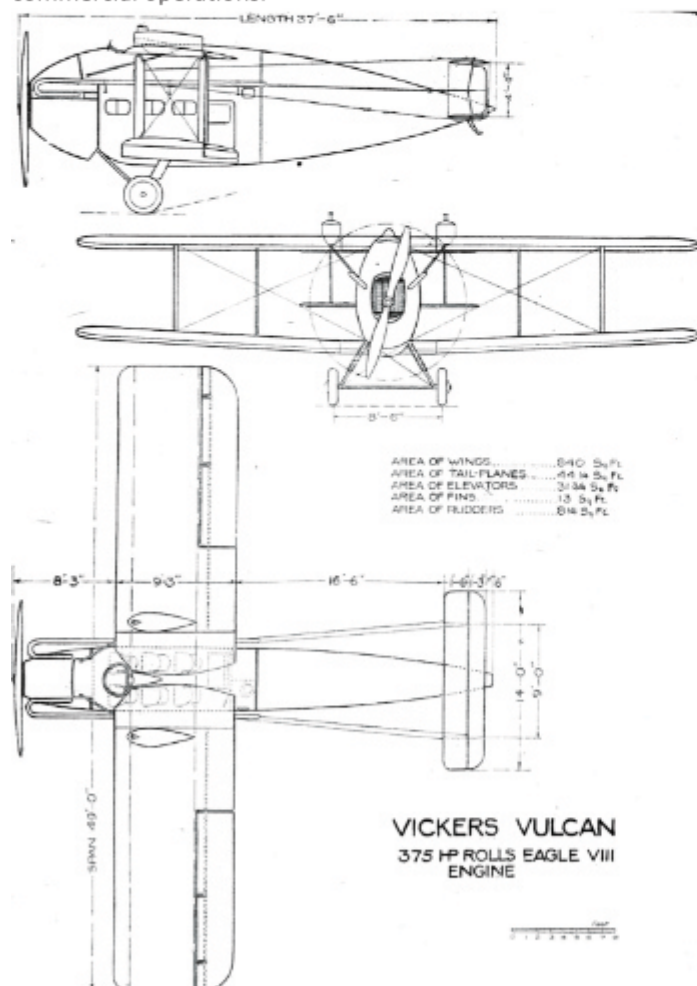


Vickers Vimy Commercial and the Vickers Vernon, but unfortunately it earned the aircraft the unflattering nickname of 'The Flying Pig'.



Above: British pilot Geoffrey Wigglesworth climbs out the cockpit of Vickers Vulcan G-EBET during his trip from Point Cook to Longreach.

The first Vickers Type 61 Vulcan (G-EBLL) was ordered by Instone Air Line Ltd and it flew for the first time in April 1922 at Brooklands, Weybridge, UK. Instone ordered four Vulcans, two for passenger service and two for freight service. Power was provided by a 360 hp V-12 Rolls-Royce Eagle VIII, supplied by the Aircraft Disposal Co. and it was expected that the provision of eight passenger seats, combined with a single engine would result in low operating costs and make it very profitable for commercial operations.



Two aircraft were also ordered by QANTAS in Australia for the Charleville-Cloncurry mail tender which was announced in Federal Parliament in November 1921. But the choice of the Vulcan for this route was not actually made by QANTAS. Colonel Horace Brinsmead (Controller of Civil Aviation) wanted to see new British aircraft types used on the route, and he favoured the Vulcan, despite the fact that it had not yet flown when the tender was announced.

Jimmy Larkin had ordered three Handasyde H.2s (eventually built as ANEC IIIs) to compete for the Charleville-Cloncurry tender - and suggested to QANTAS that they purchase one of these aircraft - and if they did so he would withdraw his competition for the tender.

But Hudson Fysh and Paul McGinness had recently been burnt by the failure of the Avro Triplane and preferred to tender for the mail run using smaller and well-proven aircraft. They requested permission from Brinsmead to tender using two aircraft instead of three as specified, but this request was refused.

Thus on 31 January 1922 Qantas submitted their tender to the Australian Government for the subsidised Charleville to Cloncurry route, using two Vickers Vulcans (as required by Brinsmead) and a de Havilland DH.4 as a back-up.

By the time the tender was submitted, the Vulcan was close to flying in the UK and although Brinsmead had required the Vulcan to be used, QANTAS also specified that the aircraft needed to meet certain performance requirements to be considered suitable. Two aircraft were ordered. QANTAS won the tender and as a condition of the tender it was required to hire experienced English pilots for the Vulcans. Hangars were built at Charleville, Longreach and Cloncurry in Queensland. Charleville to Longreach was 429 km (266 miles), and Longreach to Cloncurry was 500 km (310 miles).

During testing in the UK it was found the Vulcan could only climb to 10,000 ft (3,048 m) in 20 minutes against the 13½ mins stipulated by QANTAS and thus they refused to take delivery of the aircraft. But Vickers decided to send an aircraft to Australia at its own expense. They stood by their guarantee that the aircraft would demonstrate its ability to climb to 10,000 ft in 13½ minutes with a full load.

So one aircraft (G-EBET), a Type 61, was shipped to Melbourne, aboard the SS Cootee, arriving on 14 February 1923. It was assembled at Point Cook, which took a month.

Geoffrey Wigglesworth tested the Vulcan at Point Cook and reports stated that "its climb performance was shocking." The aircraft left for Longreach for final testing at Vickers' expense on 14 March 1923 accompanied by the Civil Aviation Branch's Bristol Tourer G-AUCA flown by Captain E.J. Jones with Inspector R.H. Buchanan and Inspector R.N. Hoddinot as passengers.

Unfortunately the Tourer crashed while trying to land at Bourke on 16 March, leaving all three occupants in hospital, Jones with a broken thigh, Buchanan with a dislocated shoulder and Hoddinot with facial lacerations.



Above: The CAB Bristol Tourer accompanying the Vulcan on its journey from Point Cook to Longreach came to grief at Bourke. Photo from The Argus, Thursday 22 March 1923 p.7.

Wigglesworth continued his journey northwards several days later, but without a knowledgeable guide accompanying him in the Tourer, he became lost on Thursday 22 March after crossing the NSW-Queensland border. He had been instructed to follow the Warrego River and passed over Tinnenburra station heading for Charleville but followed the wrong branch of the river, flying over the township of Eulo on the Paroo River. Realising he was lost, he decided to land and did so successfully at Bierbank Station, 83 miles south-west of Charleville. Extra fuel was sent via train and the Vulcan continued its journey to Charleville the



following day, eventually arriving at Longreach on Saturday 24 March.

Hudson Fysh rode in the Vulcan for part of the journey and said "the Vulcan... was an advanced aeroplane indeed with its beautifully upholstered cabin holding eight passengers."

Sir Hudson Fysh later described this episode in the first volume of his autobiography *Qantas Rising*:

*"The Vickers Vulcan was just coming out and on paper looked good, except that it seemed under-powered for our inland conditions. Colonel Brinsmead was very keen on it, and since we had Larkin tendering against us with the large Handasyde it appeared obvious that we would not secure the contract if we tendered a smaller type.*

*Here was a dilemma indeed...*

*Colonel Brinsmead continued to recommend the Vickers Vulcan.*

*...On the 31st [of January 1922] we tendered with Vickers Vulcans.*

*The aeroplane was ahead of its time for passenger, mail and freight carriage, but with support from the public we felt we would get by somehow. The first thing was for the machine to meet a contract we were preparing as to performance, especially on the all-important rate of climb with full load.*

*We also sounded out agreement to a tender with only two aircraft instead of three, which would adequately cope with our once-weekly service and would entail only about 676 hours' flying a year. No, the tenders were open, and it was felt success would swing heavily towards the tenderer with the lowest price, the most imposing aircraft, and the greatest number of them.*

*At the last moment I heard that a northern tenderer had offered four Vulcans... However we decided to risk it with two Vulcans, and I hastily added a supporting DH4 and put the tender in hoping for the best."*

*"On 2nd February 1922 I was able to wire McMaster [QANTAS Chairman] jubilantly from Melbourne: 'Tender accepted this morning...'*

*I now bought Ray Parer's DH4...and went off to Sydney to work out with our solicitors the contract with Vickers' agents, William Adams.*



Above: The Vickers Vulcan tied down at an unknown location. The streamlined but very deep elliptical-section fuselage is obvious. Photo: NLA

*The [Vulcan] aircraft were to cost us £3,700 each, and in addition to delivery dates and other details the main thing, of course, was performance. We got Vickers to agree to this, and I remember that the critical point was that the aeroplane had to climb to 10,000 feet with a full load in 13 1/2 minutes. This was a rate of 741 feet a minute and we knew that this would just do."*

*Back in Longreach, Fysh and QANTAS set about making plans for the commencement of the service:*

*"We had of course been making all our plans with the Vickers Vulcan in mind, but received a bombshell when a delay in delivery was indicated, followed by extreme doubt as to the suitability of the aircraft. This followed testing of the first aeroplane to be produced, when performance was away down on the contracted figures; the weight was much heavier than calculated."*

*QANTAS hurriedly made plans for substitute aircraft with which to commence their service. Meanwhile:*

*"...the Vulcan was tested in England and could climb to only 10,000 feet in 20 minutes instead of the 13 1/2 stipulated.*

*We refused the aircraft; but Vickers, not knowing our climatic conditions and having no reason to have confidence in our advice, insisted in sending it out at their own expense... to try to induce us to accept. The Controller of Civil Aviation also still had hopes for the aeroplane, and shortly after the service opened he flew to Longreach to see us. The departmental aircraft was a Bristol Tourer [G-AUCA] with a good performance.*

*...He [Brinsmead] met the Board [of QANTAS], was sympathetic in our now dire need, but induced us to defer a final decision till the aeroplane could be tested in our conditions.*

*On 31st January [1923] I had written to Colonel Brinsmead:*

*'I contend that a Vulcan in our conditions and on a hot day, would not get off the ground with full load'.*

*'I hold that this Service and its conditions cannot be compared with the Western Australian Service, unless we have similar machines. A Bristol with a Puma engine is a high-powered machine'...*

*'As I am writing this the thermometer stands at 110 degrees in the shade, only a slight breeze is blowing and today both Huxley and Back [QANTAS pilots] would agree with me that it would be positively unsafe to fly either the Avro Dyak or the Armstrong Whitworths with load between the hours of 11 a.m. and 8 p.m.'*

*'Considering the above, is there any hope of the 'Vulcan' out here on a hot day? Unless the Vulcans will climb fully loaded to 10,000 ft in 13 1/2 minutes, it is impossible for me to recommend their acceptance. Their original specified performance would allow a load of 5-6 passengers, and cruise at under 1650 revs'...*

*'To conclude, I stress that the first aim of this Company is absolute reliability of machines, and safety to passengers, as it is only on these conditions that commercial aviation can be built'...*

*On 13th February Brinsmead replied agreeing that the Vulcan would not meet our requirements efficiently in the summer months and granting us permission to cancel our contract with Vickers if we wished. The machine had arrived in Melbourne and was ready to be tested.*

*...Vickers were still optimistic and we agreed that the machine should come up to Longreach for final testing at their own expense. We ourselves, being on our last legs for aircraft, still hoped for some sort of miracle, and that we would be able to accept.*



Above: Another view of the Vulcan, possibly at Longreach during the flight testing. Fuel tanks mounted above the upper wing are obvious. Photo: NLA

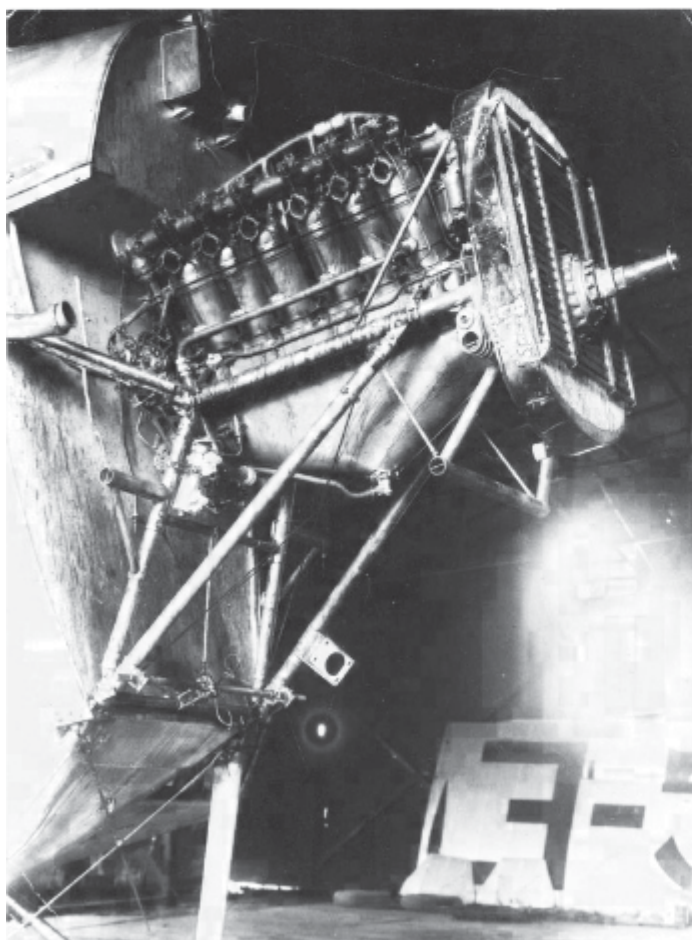




Above: The Vulcan in a hangar. Source: NLA

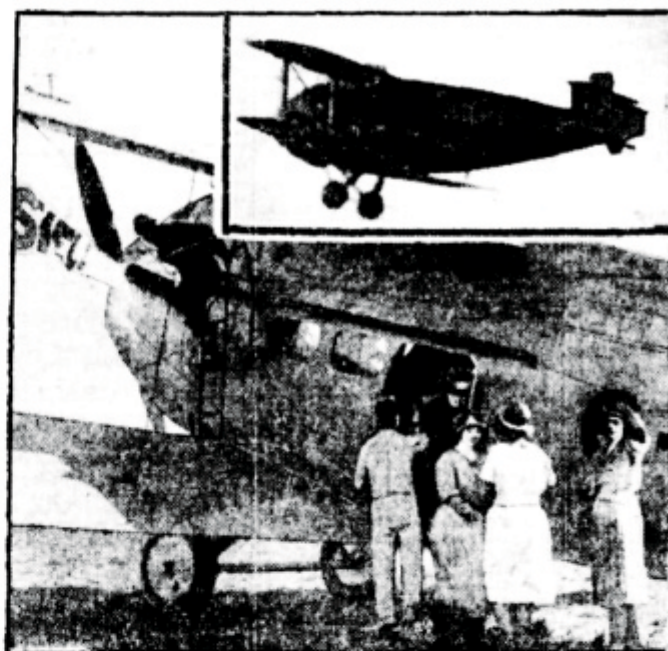
**AEROPLANE FOR QUEENSLAND.**  
**CHARLEVILLE TO CLONCURRY.**  
**MELBOURNE, Tuesday.**—The Vickers-Vimy aeroplane for the Charleville-Cloncurry route leaves Melbourne to-morrow for Queensland. It will take eight passengers. Te journey will occupy four days.

Above: Many newspapers reported on the flight of the Vulcan from Point Cook to Queensland. Several reports incorrectly identified it as a Vickers Vimy. Source: Casino and Kyogle Courier and North Coast Advertiser (NSW) Wednesday 14 Mar 1923, p.2.



Above: The Rolls-Royce Eagle VIII V-12 engine fitted to the Vulcan. The exhaust manifold has been removed, presumably for repair or adjustment. Source: NLA

# EIGHT-PASSENGER MAIL AEROPLANE.



Above: Pictures of the Vickers Vulcan at Point Cook, from The Argus, Saturday 10 March 1923, p.29.

The Vulcan duly flew to Longreach, escorted by Captain Jones and Inspector Buchanan in the departmental Bristol Tourer, after a satisfactory trip from Melbourne. In those days the Vulcan, though rather squat and bulky for its power to the experienced eye, was an advanced aeroplane indeed with its beautifully upholstered cabin holding eight passengers. People came from near and far to see this impressive monster - nothing like it had ever been seen in Australia, and here it was in a small outback town. On 27th March 1923 the Vulcan was tested, most of the Qantas directors being there to take the flight...

Finally Wigglesworth [the Vulcan's pilot] climbed into the high cockpit, the prop was swung, the Rolls came to life with a roar, chocks were away, and without any preliminary run up or taxiing out to the runway, opened up full out and careered away over the soft open downs country of the aerodrome. We cleared the fence by inches.

At 500 feet we just stuck there; not another inch of climb could Wigglesworth get out of her. Circling, we felt the gentle lift of a rising current and began to gain a little with the Rolls booming away full out in its struggle to drag us up against the force of gravity.

The heat in the cabin became terrific as we flew on and on, but at last Wigglesworth had to admit defeat and down we came to a good landing.

The result of the test was that after some forty-five minutes in the air carrying only approximately half the stipulated payload we had not even reached the contracted height, let alone the time stipulated to get there. All we could manage was 5,750 feet. After all, my statement of opinion that on a hot summer's day carrying full load the machine would not get off at all did not seem too far short of the mark.

Off I went [by rail] in a great hurry to see Colonel Brinsmead and, on the way, to negotiate... for cancellation of the Vulcan contract.

In Melbourne, I found the Controller most anxious to assist us...

Returned to Longreach, I found that Jones and Buchanan, Civil Aviation officers who had flown up for the Vulcan tests, had set off for Melbourne only to crash badly at Bourke. They were both in hospital there."

Thus ended the expensive and frustrating saga of the Vickers Vulcan. The misplaced faith of the CCA in the aircraft and the encouragement of Q.A.N.T.A.S. to use it against their own better



judgement fortunately did not permanently sour relations between the airline and the Department. As Fysh notes:

"... early in our history we instituted a policy of working closely and loyally with our authority, the Civil Aviation Department, recognising the fact that we were working together for the one end of furthering the advancement of air transport in Australia."

And, of course, under the patronage of the Department Q.A.N.T.A.S. went on to bigger and better things.

The two Vulcans ordered for Qantas were Type 61s (G-EBES – c/n 6 and G-EBET – c/n 7) and differed from other Vulcans in having modified ailerons. G-EBES was never completed. G-EBET was flown back to Melbourne by Wigglesworth with H C "Horrie" Miller as a passenger. It was dismantled and shipped back to the United Kingdom, and was probably burnt later with other Vulcans. Some documents indicate G-EBES was in fact completed, was registered on 11 August 1922, and was shipped to Qantas with the other aircraft but this did not occur, the aircraft was not completed, and it was scrapped.

Sources: BAE Systems; Aeropedia.com.au; Qantas Rising: The Autobiography of the Flying Fysh by Sir Hudson Fysh, Angus & Robertson, Sydney, 1965; The Argus; The Age.

## 50 YEARS AGO IN AUSTRALIAN AVIATION HISTORY

### First Douglas DC-10 Lands In Australia

Air New Zealand's Douglas DC-10-30 ZK-NZL arrived in Sydney on 3 February 1973, the first DC-10 to land in Australia.

Source: Flypast



Above: ZK-NZL at Kingsford Smith Airport, Sydney, on 27 July 1977. (Photo: Daniel Tanner)

### Victoria Police Trial a Bell JetRanger

During March 1973 Victoria Police tested the specially equipped Bell 206B JetRanger VH-AHV for a ten-day period, on general police duties.

Source: Flypast

## RESTORATION & CONSERVATION NEWS

### Yeoman Cropmaster ZK-CTX Returns to Flight

Craig Dowden's Yeoman Aviation YA-250 Cropmaster ZK-CTX took to the air again in January after a 10-year restoration effort which returned the aircraft to factory-fresh condition. The aircraft made its first public appearance at the Mandeville Fly-In (Southland, New Zealand) over the weekend of 18-19 February.

The aircraft (C/N 19) was the second-last Cropmaster produced, but the last one to fly, as it waited over a year for an engine to be fitted. CTX was in service from 1967 to 1971, never had an accident and accumulated just over 2000 flying hours. 1598 of

those flying hours were in the hands of Craig's father Bill Dowden, who was Chief Pilot for Southern Aviation who owned the aircraft. In fact Bill flew four of the six Cropmasters which were imported into New Zealand, and is likely the highest-time Cropmaster pilot, with 3,913.9 hours in the type. From 1971, the aircraft sat outside until 1975 when it was dismantled and placed in storage. Dowden purchased the aircraft around 2013 and commenced her return to flight.



Above: Cropmaster ZK-CTX at the end of her flying career with Southern Aviation in 1974 (Photo: via Craig Dowden)



Above: ZK-CTX dismantled and stored in Joe Preston's shed (adjacent to Gore airfield) around 1985. (Photo: John Gallagher)



Above: The CTX restoration team photographed in 2015: From left, Ben Shirkey (Phoenix Aviation), Craig Dowden, Bill Dowden. Photo: Craig Dowden

The majority of the work was carried out at Phoenix Aviation at Gore. Luckily when the wing skins were removed there was very little corrosion to be found. All of the wing skins needed to be replaced, which required rolling new leading edges. Ben Shirkey carried out the restoration work with a high level of attention to detail, and Murray Dreyer at AvParts (NZ) helped with sourcing materials. Restoring the wings was mostly completed by November 2016 and the two wings were joined on 1 February 2017. The Lycoming engine was formerly fitted to a Britten-Norman Islander. Special moulds were made for forming new canopy glazing. Finding a suitable propeller was a challenge, but one was eventually found. The fuselage was largely complete by



early 2018, and then final assembly and painting - plus all the hundreds of small details - took several more years to complete.



Above: Looking stunning in her original factory paint scheme, Cropmaster ZK-CTX sits in front of the Croydon Aircraft Company during the Mandeville Fly-In weekend, 19 February 2023. (Photo: Croydon Aircraft Company)

### Kittyhawk Returns to Flight

Ross Pay's TP-40N VH-EPU took to the air on 9 February 2023 in the hands of Doug Hamilton after restoration work carried out by Precision Airmotive at Wangaratta, Victoria. Two test flights were made totalling 1 hour 20 minutes of flying.



Above: On its first post-restoration flight over Wangaratta (Gavin Conroy / Classic Aircraft Photography)

The aircraft was formerly operated by the RNZAF as NZ3184 (42-105875) serving in the Pacific with No. 2 Servicing Unit, RNZAF and seeing a fair bit of combat. It wore the chin code '75'. It also served at No. 4 (Fighter) Operational Training Unit, at Ohakea. The plane has been sold on to new owners in the USA and will eventually be leaving Australia. Following its flight tests it is being dismantled for painting.

Sources: Precision Airmotive, Facebook, Wings Over NZ

### Hunter Fighter Collection - Pat Hughes Spitfire

Progress continues on the Hunter Fighter Collection's Spitfire Mk 1a X4009 airworthy restoration.

Hunter Fighter Collection Incorporated is raising funds to restore and rebuild Supermarine Spitfire Mk 1a X4009, the aircraft of Australian Battle of Britain fighter ace, FLTLT Paterson Clarence Hughes DFC, to airworthy flying condition.

The aircraft is being restored by Warbird restoration specialists, Vintage Fighter Restorations at Scone, NSW. The aircraft's reconstruction will be a full ground-up restoration, utilising as much original material as possible. Approximately 40% of the original aircraft was recovered from the crash site.

The aircraft's provenance and identity are confirmed and the aircraft has been placed on the UK Civil Aviation Authority Register as G-EMET. Initial restoration work has commenced at Airframe Assemblies on the Isle of Wight in England, with a grant of \$150,000 awarded to Hunter Fighter Collection by the

Australian Government under the 'Saluting Their Service' Commemorative Grants Program.

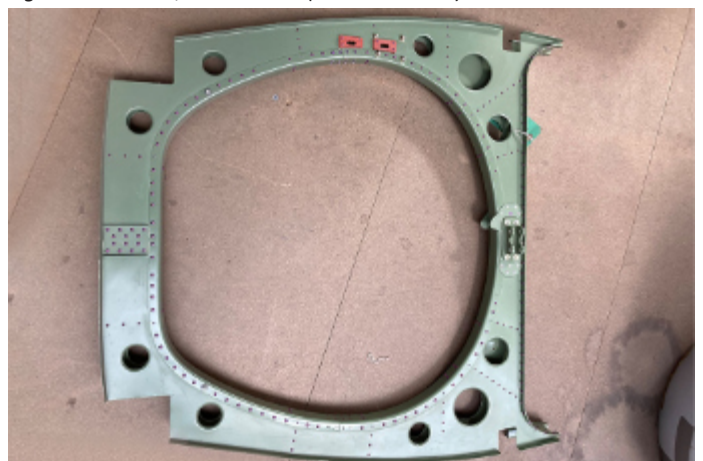
Following this initial work, the restoration of the aircraft will be undertaken to airworthy status at Scone, NSW, Australia, by Vintage Fighter Restorations, leaders in Spitfire aircraft restoration in Australia.

The completed aircraft will reside at Scone, and will be operated as a perpetual flying memorial to Paterson Clarence Hughes DFC. Pat Hughes DFC was an Australian fighter ace of the Second World War, credited with as many as 17 aerial victories during the Battle of Britain before being killed in action on 7 September 1940 at the tender age of 23. His tally made him the highest-scoring Australian of the battle, and the third highest-scoring Australian of the war.

There are legal binding arrangements in place to ensure the aircraft remains in the Australia and under Australian ownership. The aircraft will be accessible to the Australian public as part of the aircraft collection of Hunter Fighter Collection and will be displayed at the Hunter Warbirds aviation attraction, Scone, NSW, in a joint co-operative arrangement with the Upper Hunter Shire Council.



Above: The Rolls Royce Merlin engine from Supermarine Spitfire ready to be packed and shipped from Airframe Assemblies UK to Hunter Fighter Collection, Scone NSW. (Photo: via HFC)



Above: A fuselage frame from Spitfire X4009 which has been restored by Airframe Assemblies UK. (Photo: Via HFC)



### Work Commences on Casey's Fairchild F-24

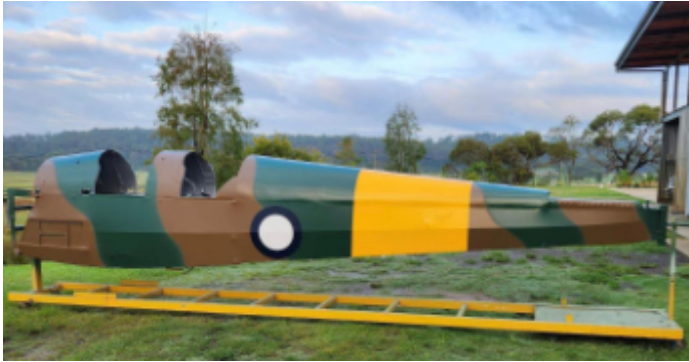
Latrobe Valley Airframes and Welding have started work on restoring VH-ADF Fairchild F-24 (purchased new from the factory by Richard Casey while he was head of the Australian Legation in Washington, DC) to airworthy condition.



Above: The bare fuselage framework of Fairchild F-24 VH-ADF at Latrobe Valley Airframes and Welding. (Photo: LVAW)

### Tiger Moth VH-AWA Progress at Luskintyre

Luskintyre Aircraft Restorations are continuing their progress with the restoration of de Havilland Tiger Moth VH-AWA. The fuselage has been de-bagged, stripped, sandblasted, primed and prepped. It went through the spray booth and is now ready for some free hand camouflage paintwork.



The wings have been painted and RAAF markings have been masked and applied.



(Photos: Luskintyre Aircraft Restorations)

## CIVIL AVIATION NEWS

### Seaplane Trials Between Lake Burley Griffin and Rose Bay

More than a year after Canberra-Sydney seaplane flights were proposed, Sydney Seaplanes and South Coast Seaplanes have conducted trial flights on the scenic route.



Above: Cessna Caravan VH-IOV departing from Lake Burley Griffin (Photo: Sydney Seaplanes)

Sydney Seaplanes flew their Cessna Caravan VH-IOV 'Corsair' into Lake Burley Griffin, with the aircraft still advertising the joint venture with Dovetail Electric Aviation.

The trial flights follow a consultation period during which the National Capital Authority (NCA) sought inputs from lake users and other interested stakeholders. The trial flights are intended to confirm the "best arrangements to minimise disruption to those who use the lake for sporting and recreational activities", a statement from the NCA said.



In 2021, when the idea was being discussed, the Canberra Yacht Club said it presented a "significant risk" to the club's "continued existence", and threatened the safety of lake users. But in March 2023, the club said their concerns had been eased. Yacht Club general manager Steve Hart said he was pleased with the public consultation that had taken place: "What's been great to see recently as part of these trials is the pilots and operators given the choice to land where it's least disruptive and obviously safest on the lake." He said they were also less worried about plans to dock at the museum as long as pilots had the option to land elsewhere. "Once they're on the water they're just like any other boat on the lake and we've worked really well with the ferries and GoBoats and for us, more things on the lake is a good thing."

The use of seaplanes on the lake drew ire from some in the community, with more than 65 per cent of public submissions rejecting the proposal.

Sources: ABC News, 7 News

## Backyard Aircraft

Around Melbourne there are several aircraft in backyards. Some are well known and others not so. One that came to light recently was Piper PA28-161 VH-CIK that went with the sale of a house at 10 Anson Court, Ashburton. The house was sold on March 18 for \$2,370,000. It is not known if the aircraft in the back yard enhanced the sale. It is also unknown if the house sellers, Cameron and Samantha Swell are leaving the machine or taking it with them.



Above: Home owner Cameron Swell in the cockpit of the crashed Piper Warrior he had landed on the roof of his backyard studio to complete his garden. (Picture: Tony Gough)

VH-CIK is really only a fuselage and a propeller decorating the garden. The aircraft is reported to have been bent on August 28 2007 at Wilpena Pound, SA, when it when off the end of a strip. The three POB were apparently not injured.

The aircraft in the back yard comprises only the fuselage plus a propeller as a garden decoration. The colour scheme on the tail would indicate that it was a RVAC aircraft based out of Moorabbin.

Does any reader know of other aircraft in backyards?

(DP)

## Other Snippets:

Leo Opdyke has passed on. Leo started the magazine *WW1 Aero* and later *Skyways*. *WW1 Aero* dealt with building replica WW1 aeroplanes and also touched on the history of flying WW1 aeroplanes. Leo built a Bristol Scout aeroplane and made one flight in it before the magneto failed and he had a forced landing. The machine was damaged. Leo was not. The aircraft ended up in the RN air museum, repaired, in Yeovilton in the UK.

*Skyways* dealt with aviation in the period 1920 to 1940. Leo and his magazines were well known to many Australians. It can be said that he was the reason that so many people elected to build WW1 aircraft types in Australia, New Zealand, the UK, Canada and the USA. If nothing else WW1 Aeroplanes magazine gave encouragement and a place to chase plans and parts. Leo passed away on 3 February 2023. He was aged 93.

The NSW Museum of Arts And Sciences Powerhouse rebuild and

relocation program still draws attention. The Australian newspaper of 25/26 February 2023 included an advert seeking a Director Powerhouse Program. The advert called for a new Director who would manage the Powerhouse museum at four sites – Parramatta, Ultimo, Castle Hill and Sydney Observatory.

On the subject of book sales, it is pleasing to note that in the last few years there has been an increasing number of aviation books published that relate to Australia. Most involve the ADF, with others covering post-war civil activities. The managing director of Dymocks said that the sales of books in Australia has been growing in the last couple of years and in particular sales of printed books and books bought in bricks and mortar bookshops. QBD Books also echoed the comments from Dymocks. Dymocks recently opened a new store at Frankston bringing its total number of book shops to 86. In the range of books coming up for sale there are a number of aviation related books written by new writers. It is interesting to note there are one or two writers who literally are putting out a new title every few months. For anyone who has written a book a good book takes many months and usually over a year to compile so these titles coming out a few months apart can only come from a warehouse of information gatherers with the person pays them taking the title of author.

Essendon Fields (Essendon Airport) is to have further development with a new 30 hectare industrial estate. The Age newspaper of 7 December noted the new development but the PR handout gave no details of the exact location of the planned new development.

The Age newspaper of April 3 noted that the National Library of Australia's beloved online portal Trove has been saved from the threat of imminent closure after a cash injection of \$33 million from the Albanese government.

The lack of funding certainty prior to this announcement meant that after the end of June the portal was at risk of being shut down. Over the last few years the Trove website has become a goldmine for historians - including aviation historians - in their quest to gather material for historical writing and publishing. We are in an age where the Arts seem to gain more publicity and funds than other areas of interest, including technology, and in the case of Trove, the National Library of Australia. That appears to have been altered, at least for the short term. May it continue.

(DP)

## MILITARY AVIATION SNIPPETS

### DSTG Support to AIR 9000 External Stores Project

Back in our June 2021 issue we reported on the first deployment of RAAF F-35 Lightning II aircraft with under-wing external stores. The development and certification of these weapons was a joint project between four Australian and US organisations.

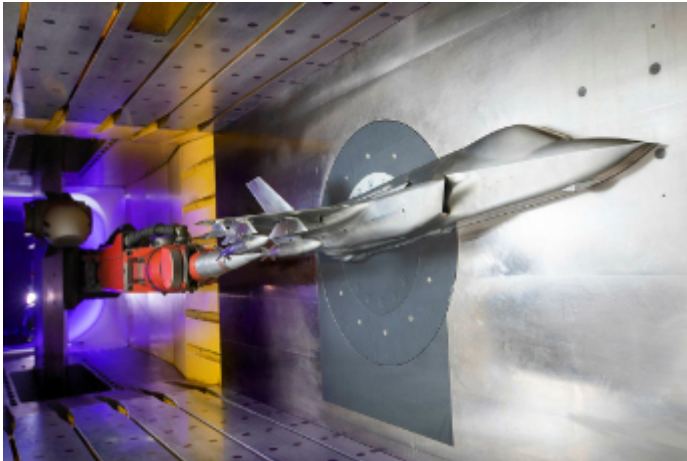
The F-35A Aircraft-Stores Compatibility (ASC) Project Arrangement (PA) created a formal strategic partnership between the Australian Department of Defence and the United States Department of Defense that facilitated the development of common analytical tools and sharing of data resulting in an enduring F-35A ASC capability. The PA also reduced the time and cost of weapons clearance certification and increased operational envelopes over the life of the aircraft for both nations.

Key stakeholders in the PA were the Defence Science and Technology Group (DSTG), the Air Warfare Centre (AWC), Joint Strike Fighter Branch and the US Air Force SEEK EAGLE Office (AFSEO).

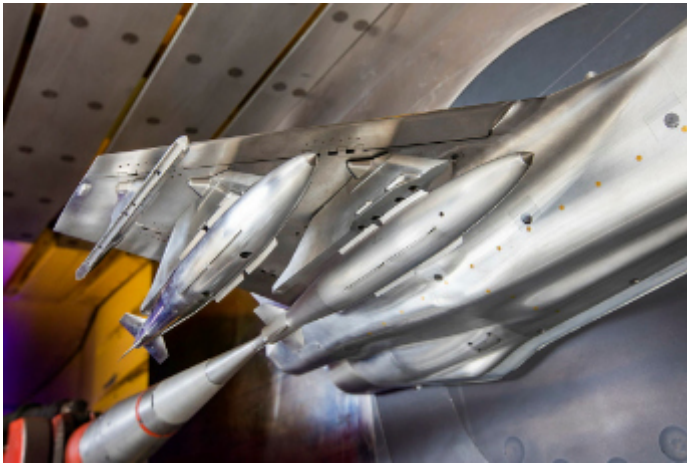
As the principle certification agency for F-35A, AFSEO had been tasked with certifying the 2,000-lb air-to-ground weapon, GBU-31 (V1), for external carriage and release from the F-35A. DSTG, as the science and technology (S&T) program lead, supported this certification activity using a combination of computational



fluid dynamics (CFD) modelling and experimental testing in the Transonic Wind Tunnel (TWT). As part of this activity DSTG implemented advanced, state-of-the-art flow diagnostics techniques in the TWT, including particle image velocimetry (PIV) and background oriented Schlieren (BOS) imaging.



Above: Model of the F-35A mounted on the sidewall of the Defence Science and Technology Group Transonic Wind Tunnel with model of the GBU-31 (V1) weapon near carriage position (Department of Defence).



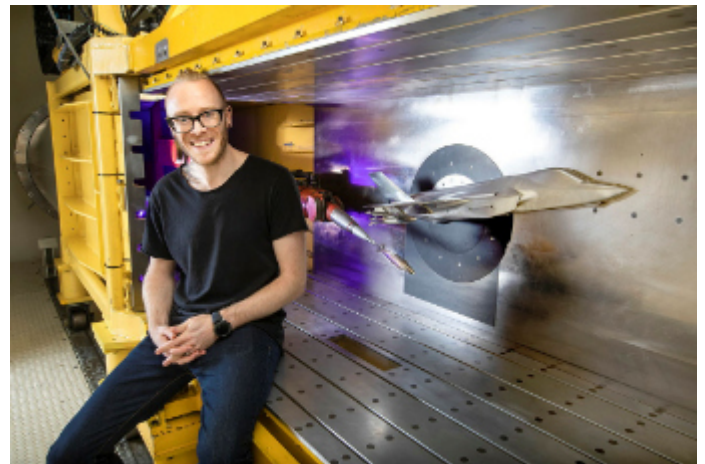
Above: Model of the GBU-31 (V1) weapon in position for safe separation testing in the Defence Science and Technology Group, Transonic Wind Tunnel (Department of Defence).



Above: Model of the F-35A mounted on the sidewall of the Defence Science and Technology Group Transonic Wind Tunnel with model of the GBU-31 (V1) weapon during pre-test grid check (Department of Defence).



Above: Another view of the model of the F-35A mounted on the sidewall of the Defence Science and Technology Group Transonic Wind Tunnel with model of the GBU-31 (V1) weapon during pre-test grid check (Department of Defence).



Above: DSTG scientist Dr Jesse McCarthy (F-35A GBU-31 (V1) Transonic Wind Tunnel Test Lead), at Defence Science and Technology Group's site in Melbourne (Department of Defence).

Source: Department of Defence

## Fast Drone Development



Above: The prototype "Wanderer" drone on display at Avalon Air Show, developed in "record" time for the RAAF (Stew Magnusson)

With a desire to speed up the development of defence technology, two Australian defence innovation groups last year took a paper design of an unmanned aerial vehicle and had it flying in about two months.

WGCDR Paul Hay, director of the RAAF's Jericho Disruptive Innovation group, said that the idea to develop a low-cost, expendable drone to augment current systems came up in August last year. By the end of September, the group — in partnership with the government's Defence Science and Technology Group — had the "paper" design finished. By



November, “the Wanderer” as it was dubbed, had its first test flight.

“These are the kind of timelines we want to get to,” he said at a conference organised by the Australian Association for Uncrewed Systems the day prior to Avalon — the Australian Air Show, where the drone was on static display.

The innovation group now has seven of the Wanderer low-altitude, long-endurance UAVs that are “combat ready prototypes,” a term meaning that they have at least 80 percent of the capabilities needed and can be used in operations.

The current acquisition models in Australia “just don’t work for us. We need to move much, much faster,” Hay said.

“We want to have a more agile process where we are developing things more often and working with them on a regular basis and not having to wait for major programs,” he added.

The design and manufacturing of the drones was all done in house, he said, acknowledging that the process would have taken longer if the groups had asked a vendor to do the work.

The Wanderer is no mere science project, but a drone that the nation’s air force, army or navy can use to augment their current high-end reconnaissance and surveillance UAVs such as the Triton, which U.S. contractor Northrop Grumman is delivering to the Royal Australian Navy. It should be available to them by the middle of 2023, he added.

Although “we do want them to come back,” the Wanderer is designed to be “expendable,” he said. The cost should be about A\$50,000 Australian dollars each - which is in the attritable range, he said.

The Wanderer has a four-meter wingspan, a range of about 1,300 km, can fly up to 1,525 m altitude and can carry a 2 kg payload. It has commercially available avionics, GPS and mission planner, so there are no export restrictions, he added.

One of the key features of the Wanderer and all future Australian drones, is that they be runway independent, Hay said.

“Runways are the air force’s kryptonite,” he said. They’re very easy for the enemy to target and aren’t always nearby, so the new drone was designed to be launched from the top of a moving vehicle. As long as the operators have a small stretch of road, they can put it aloft, he said.

Source: Stew Magnuson, *nationaldefensemagazine.org*

## INDUSTRY NEWS

### First “Flight” by Vertiiia eVTOL

AMSL Aero announced on 23 February the achievement of a major milestone - completion of the first test hover flight by their Vertiiia electric VTOL aircraft. AMSL Aero is run by husband and wife team Andrew Moore and Siobhan Lyndon, and has previously banked significant funding from investors including IP Group Australia, TelstraSuper, Hostplus, St Baker Energy Innovation Fund and two leading superannuation funds.

The tethered test flight hover was carried out by remote control (no pilot on board) near Wellington in the Central West of New South Wales in accordance with Civil Aviation Safety Authority regulations. The prototype has been constructed at the Bankstown headquarters of AMSL Aero.

Since the start of the Vertiiia prototype’s flight testing campaign, AMSL Aero has conducted 11 remotely piloted hover tests. Those flights, during which the aircraft was tethered to the ground, reached altitudes of up to three meters and each lasted for about one minute, with one flight exceeding 90 seconds.

Andrew Moore, AMSL’s CEO and the inventor of the Vertiiia said: “The Vertiiia prototype flew better than we expected. It was remarkably smooth and a delight to fly.”

This is the first time that an eVTOL aircraft designed and built in

Australia has flown.



Above: The Vertiiia eVTOL aircraft hovering at low altitude during its first tethered test flight (AMSL Aero).



Above: Siobhan Lyndon and Andrew Moore standing in front of the Vertiiia eVTOL prototype which made its first tethered flight in February (AMSL Aero).

The Vertiiia features a tilt-wing design with eight electric motors and propellers installed on a seven meter span blown-wing structure. The blown-wing configuration provides the aircraft with the same aerodynamic efficiency as fixed-wing eVTOLs with a much larger wingspan while maintaining the compact size needed to operate in tight urban spaces. The Vertiiia prototype now being tested is slightly smaller than the planned production version, weighing in at 1,500 kg, whereas the production version is expected to weigh around 2,000 kg.

According to AMSL Aero predictions, the production Vertiiia, which, being electric powered, emits no greenhouse gases, will be able to carry four passengers and a pilot at a cruising speed of 300 km/h with a range of up to 1,000 km, three times the range of any eVTOL, making it the most efficient eVTOL in the world. AMSL Aero expects to commence deliveries of the Vertiiia in 2026 to customers in the aeromedical, cargo, emergency and regional air mobility sectors.

According to AMSL Co-Founder, Siobhan Lyndon, Vertiiia will enable greater access to medical services for vulnerable remote, rural and regional communities, offering new models of care through rapid and low-cost connectivity: “Vertiiia is not only safe and quiet, but it was also developed for the harsh long-distance conditions in Australia. If it can work in Australia, it can work anywhere. Unlike aeromedical aeroplanes that require a runway, Vertiiia will carry patients directly from any location straight to the hospital, significantly reducing the complexity and time often required to transport vulnerable patients. It will also be quieter and safer than helicopters and will eventually cost as little as a car to maintain and run, transforming aeromedical transport into a far more affordable, accessible, safer and reliable option.”

Sources: AMSL Aero, *InnovationAus.com*, *FutureFlight.aero*

## Alauda Announce Their Mark 4 Flying Racing Car

Alauda Aeronautics announced the development of their Airspeeder Mk4 piloted flying racing car on 21 February.



Above: CAD rendering of the Airspeeder Mk4 flying racing car (Alauda Aeronautics)

This is Alauda's first piloted flying racing car and is being promoted as the world's fastest eVTOL aircraft, with a predicted top speed of 360 km/h. The new model is being designed and constructed in Alauda's Adelaide facility.

It features a sophisticated electric propulsion system, advanced aerodynamics, forecast take-off weight (MTOW) of just 950kg, and a projected range of 300km (188 miles) while producing near-zero emissions.

According to Alauda, the Airspeeder Mk4 is powered by a 1,000 kW (1,340 horsepower) turbogenerator which feeds power to the batteries and four pairs of motors. Specifically designed for use in eVTOLs, this system allows green hydrogen to be used as fuel.

Alauda have been flying their uncrewed Airspeeder Mk3 aircraft in a series of races known as the EXA Series. Airspeeder's announcement states that the first races using the Mk4 aircraft will take place in 2024.



Sources: Alauda Aeronautics, Airspeeder Ltd.

## Jabiru Mark Production of Their 4000th 2200 4-Cylinder Engine

Jabiru Aircraft in Bundaberg marked the production of their 4000th 2200 4-cylinder engine in February. The engine was designed by Rodney Siff and Jabiru have been producing engines since 1992.

In November 2014 the Australian Civil Aviation Safety Authority (CASA) proposed restricting all Jabiru-powered aircraft to day-visual flight rules (VFR) only, without passengers or solo students and within gliding distance of a safe place to land due to the engine line's safety record. The final rule adopted somewhat softened the restrictions, allowing the carriage of passengers and students, but requiring them to sign an acknowledgement of risk before flying and restricting equipped aircraft to day VFR flight and within gliding distance of a safe place to land. Both the manufacturer and Recreational Aviation Australia (RA-Aus) opposed the restrictions as unnecessary and unwarranted.

RA-Aus reported that it was supplied with only a fraction of CASA's source data – just a day before submissions closed – and that CASA seemed to have excluded all engine reliability data post-"early 2014".



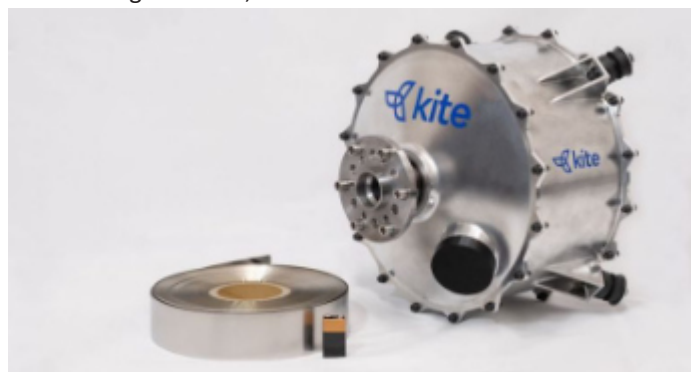
As of July 1, 2016, these restrictions were lifted for "most Jabiru-powered aircraft in Australia. Stock Jabiru engines that are maintained in strict accordance with Jabiru service bulletins and maintenance instructions are no longer affected by the limitations, which were issued in late 2014."

## Kite Magnetics Reveal Their Electric Aircraft Motor

While Jabiru are celebrating the production of 4,000 engines, Melbourne aerospace startup Kite Magnetics has revealed its first aircraft motor – a 120 kW air-cooled electric motor, the world's most powerful electric motor for planes.

The lightweight motor was unveiled at Avalon Air Show, and is made from a unique new magnetic material called Aeroperm, making it more powerful than a small car engine.

Kite Magnetics spun out of Monash University five months ago and raised \$1.85 million in a Seed round in October last year, led by Investible through its new climate tech fund, supported by Breakthrough Victoria, Galileo and Possible Ventures.



Above: The Kite Magnetics electric motor, beside a roll of the special "Aeroperm" magnetic foil used in its construction. Photo: Kite Magnetics.





Above: The Kite Magnetics team with their new motor. (Photo: Kite Magnetics)

Founder and CEO Dr Richard Parsons said his small team of young engineers has developed an electric motor for a new generation of all-electric aircraft to stay in the air for longer, cutting carbon emissions in the notoriously carbon heavy sector.

"We are excited to launch not only the world's most powerful air-cooled electric motor for electric aircraft but also the first commercially available electric motor that uses this new type of magnetic material," he said.

"With our Aeroperm magnetic materials technology, we can reduce the energy wasted in parts of an electric motor by more than 10 times. This means we can use air cooling even at very high power levels. This makes our motors simpler, more reliable and extremely lightweight".

Kite Magnetics are accepting orders and expect to begin shipping to existing customers over the coming year.

Dr Parsons said he's "extremely proud" of his what his team developed in a short space of time. "It's a real testament to the quality of engineering talent here in Melbourne and shows that we have what it takes to build a world-class electric propulsion OEM right here in Australia," he said.

"Using Kite Magnetics electric motor technology, we could board an emissions free electric aircraft in years, not decades."

Source: Kite Magnetics

### Dovetail Electric Aviation To Power Its First Electric Propulsion System

On 28 February 2023 Dovetail Electric Aviation announced the successful completion of their initial ground tests of a small-scale Electric Propulsion System, spinning a three-blade propeller for the first time.



Above: A magniX electric motor mounted on Dovetail's ground test-rig. Photo: Dovetail Electric Aviation.

The ground-test followed Dovetail's strategy of integrating as many off-the-shelf components as possible to quickly achieve

technical milestones.

The Iron Bird function test, named DTX0.5 by Dovetail, was established with a consortium of partners. The purpose of the test was to set up a universal ground test rig which can be used to assess various energy storage systems in system-level testing.

A collaborative partnership with magniX enabled the utilisation of the prototype magni250 electric motor to be integrated into Dovetail's DTX0.5 EPS. The magni250 prototype was a key enabler of the magni350 and magni650 technology, currently progressing to certification by the Federal Aviation Administration for Type Certification.

Dovetail's next steps will include system-level testing of various energy storage systems and system components. The magni250 will also be upgraded to the magni650 (650kW) electric motor from magniX in the coming months.

The Dovetail technical team have worked tirelessly to deliver a successful working system to make this key milestone possible, with the invaluable support of technology suppliers. Sydney Seaplanes, Swinburne University of Technology and magniX generously provided time and resources to enable the Dovetail team to meet their strict timelines.

Dovetail includes among its investors several airlines like Volotea and Air Nostrum in Europe and Regional Express (Rex) in Australia. The company was planning to close a Seed round in March.

This is the first of many technical milestones for Dovetail towards their certification efforts in Australia, the company leading the regional and general aviation industry into a new sustainable era by enabling operators to fly commercially viable routes in nil-emission.

Source: Dovetail Electric Aviation

### Qantas Group Announces Major Jobs, Training and Growth Plans

The Qantas Group expects to create over 8,500 new high skill jobs in Australian aviation over the next decade, including 1,600 pilots, 800 engineers, 4,500 cabin crew and 1,600 airport staff. These new jobs are expected to be driven by investments in new aircraft and increased flying to meet long-term demand through Qantas, Jetstar, QantasLink and Qantas Freight.

The Qantas Group expect to hire more than 30,000 frontline people over the next 10 years, accounting for regular attrition as well as growth. In total, the Group will employ an estimated 32,000 people by 2033 compared with around 23,500 currently.

As it emerged from the pandemic, the Group updated its fleet plan with orders and purchase rights for up 299 narrow-body and 12 wide-body aircraft for delivery over the next decade. The capabilities of these next-generation aircraft will reshape the Group and its network.

Last week, Qantas announced up to 22 mid-life and wet-leased aircraft to arrive in the next two years to help meet growth from multiple sectors, including leisure travel, freight and the resources industry.

The national carrier announced that it will establish the Qantas Group Engineering Academy in Australia, with capacity to train up to 300 engineers a year.

The Academy will provide aviation engineers for the Qantas Group as well as the broader aviation industry, including defence contractors and general aviation – two areas with high demand for these skills. A particular focus will be encouraging more women to consider a career as an aircraft engineer.

Over the next decade, the Qantas Group alone will need around 200 new engineering recruits every year to meet growth as well as attrition as current engineers retire. That number exceeds the current national supply of new aviation engineers each year, meaning a new training pipeline is needed.

Qantas say they will make a multi-million investment to establish the Engineering Academy, which is expected to open its doors to the first students in 2025. A decision on location for the Academy will be made as part of the final design, expected

to be determined by the end of 2023.

Source: Qantas media release

## AMDA Takes On Wings Over Illawarra and Changes its Name

The organisation behind the bi-annual Avalon International Aerospace Exhibition and Airshow, AMDA Foundation Limited, will become the new operator of the Wings Over Illawarra Airshow from 2024, after signing a 10-year licence agreement with Shellharbour City Council.



The air show will remain at Shellharbour Airport south of Wollongong, NSW – but will undergo a name change, be reduced to biennial and increased to a three-day event.

Next year's Airshows Downunder Shellharbour will be conducted from 1 to 3 March 2024, then every even-numbered year in rotation with Avalon in the odd-numbered years.

In keeping with AMDA's mission to promote Australian aviation and industry, the event will be expanded for the general public and greater industry involvement will be developed.

AMDA Foundation CEO Justin Giddings said Wings Over Illawarra had built an excellent reputation as an event for the general aviation and light sport aviation communities in Australia: "It has an exciting airshow covering the breadth of vintage, warbird and modern aviation and a highly regarded careers and skills day to help attract the next generation, it also provides an important means of promoting general aviation to the general public. AMDA Foundation intends to build on that and create an event that promotes the Australian general aviation industry, while providing an exciting airshow for all the family."

Wings Over Illawarra founder Mark Bright said AMDA Foundation's resources and expertise would help the event achieve his original vision: "Wings Over Illawarra was created to give the general public a great airshow and help promote affordable recreational aviation in Australia, and AMDA Foundation's great experience and resources will take the airshow to the next level. Their experience in operating major events such as the Australian International Airshow will help the airshow grow and increase its ability to promote aviation in Australia."

Shellharbour City Council CEO Mike Archer said the council was thrilled to partner with AMDA: "AMDA's expertise and experience in the aviation industry will help transform the city's airshow into a nationally and internationally significant aviation event. This is an exciting opportunity to bring even more people to Shellharbour City, further cementing our local government area as a top tourism destination."

AMDA Foundation acknowledges the support and commitment of Destination New South Wales in development and promotion of Airshows Downunder Shellharbour.

AMDA Foundation Limited is an Australian not-for-profit corporation established to promote the development of aviation and Australia's industrial, manufacturing and information/communications technology resources in the fields of aviation, aerospace, maritime, defence and security. AMDA Foundation currently runs four major events:

- AVALON Australian International Airshow and Aerospace & Defence Exposition
- INDO PACIFIC International Maritime Exposition
- LAND FORCES International Land Defence Exposition

- ROTORTECH Helicopter and Unmanned Flight Exposition

Its genesis can be traced back to 1976, with the commencement of the series of seven spectacular Schofields Air Shows held by Schofields Flying Club in north western Sydney between 1976 and 1985. In recognition of the strength of the Air Show organisation it had established, Schofields Flying Club was appointed by the Australian Bicentennial Authority to conduct the Australian Bicentennial Air Show as the "aviation centrepiece" of the Bicentennial celebrations in 1988. Held with support from the RAAF at Richmond Air Base (NSW) in October 1988, the Australian Bicentennial Air Show was an outstanding success and regarded as one of the best air shows in the world during 1988.

As a lasting legacy of the collaborative achievement by Schofields Flying Club Limited and the RAAF at Richmond, Schofields Flying Club established the not-for-profit Aerospace Foundation of Australia Limited in 1989 with a substantial endowment from funds generated by the Australian Bicentennial Air Show. And, thus, AirShows DownUnder was born. The Australian Bicentennial Air Show was followed in 1991 by the RAAF 70th Anniversary Air Show, also at Richmond, conducted by Aerospace Australia Limited in collaboration with the RAAF.

At the invitation of the Victorian Government, AirShows DownUnder then moved to Victoria. Aerospace Australia Limited staged the first Australian International Air Show at Avalon Airport (near Geelong, Victoria) in 1992. Held biennially (except for the COVID-19 pandemic interruption), there have been 14 air shows in the series so far at Avalon.

Strongly supported by the RAAF, the Avalon Air Show is recognised as one of the world's great air shows and is a hallmark major event for Victoria and an event of international significance for the nation. In 2021, the next Australian International Air Show and Aerospace & Defence Exposition will be the celebratory centrepiece of the Centenary of the Royal Australian Air Force.

Since 1991, the organisation's mission has broadened and while remaining the "signature" event in the program, the biennial Avalon Air Show has been joined by other major industry-focused events, including the biennial Pacific International Maritime Exposition in Sydney (conducted with support from the Royal Australian Navy) and the biennial Land Forces International Defence Exposition in Brisbane (with support from the Australian Army).

Over the last three decades, the organisation has undergone a major transformation, evolving from an almost entirely volunteer organisation into a professionally-managed group of not-for-profit public companies. It continues to rely on the major contribution made by its large team of enthusiastic volunteers, particularly for the Avalon Air Show. In 2000, Aerospace Foundation of Australia Limited expanded its charter and established two not-for-profit specialist operational subsidiaries – Maritime Australia Limited and Aerospace Australia Limited. To reflect their extended objectives, the Foundation changed its name to Aerospace Maritime Defence and Security Foundation of Australia Limited. The name of Maritime Australia Limited was then changed to Industry Defence and Security Australia Limited. All three corporations share a common mission and are not-for-profit organisations registered under the Australian Charities and Not-for-profits Commission Act.

To best achieve its current objectives, Aerospace Australia Limited has changed its name to AMDA Foundation Ltd and the corporate structure of the group is being simplified. All of the group's operations and resources are being consolidated into AMDA Foundation Ltd as the single ongoing corporate entity. Based on the four decades of proud tradition which it has inherited, AMDA Foundation Ltd will now conduct all of the events and activities formerly undertaken within the group.

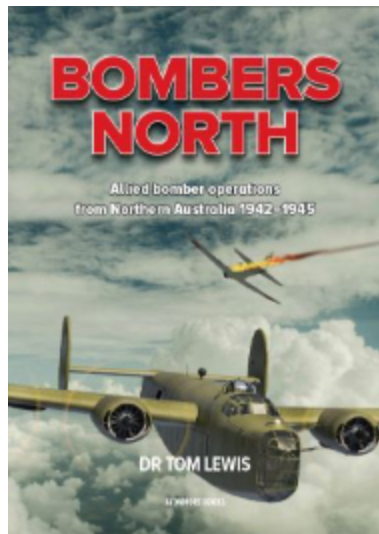
Sources: AMDA Foundation, Illawarra Mercury



## NEW AUSTRALIAN AVIATION HISTORY BOOKS

Below is a notable new release on Australian aviation history:

### Bombers North by Dr Tom Lewis



In early March 1942 Allied forces in the Netherlands East Indies surrendered and the lightning Japanese conquest of South East Asia was complete. Amid fears of a Japanese invasion of Australia, two understrength RAAF squadrons of Lockheed Hudsons began a brave fight back against the enemy from the Darwin area. These modest initial efforts were the beginnings of an unwavering campaign by Allied bombers waged from Northern Australia until the end of the war in August 1945.

As the Hudson squadrons were rebuilt throughout 1942, they were joined by a unique Dutch squadron operating B-25 Mitchells. From 1943 USAAF Liberators joined the fight, and their great range enabled them to attack targets deep within the NEI. From 1944 they were replaced by RAAF Liberators.

Other RAAF squadrons used an assortment of aircraft including Vengeances, Beauforts, Mitchells, Venturas and Catalina flying boats. The last type waged an important mining campaign against Japanese held ports in the NEI and later to the Philippines and beyond.

Drawing on a wealth of new sources, Bombers North presents for the first time the full story of a little-known bomber offensive waged from remote northern Australia.

From the introduction of the book: *The purpose of this book is to detail Allied bomber operations flown from northern Australia during the period March 1942 to August 1945, or specifically from the North-West Area (NWA). The NWA was an RAAF command zone comprising the Northern Territory and the north of Western Australia.*

During that time Australia was part of General Douglas MacArthur's wider South West Pacific Area (SWPA) command, and the vast majority of combat operations took place in the New Guinea theatre. From September 1942 these were the responsibility of the US Fifth Air Force, which assumed operational command of RAAF units in that theatre. The subsequent New Guinea campaign was both complex and wide ranging, with a vast array of USAAF and RAAF squadrons seeing service there.

However, the Fifth Air Force did not generally have operational command over units on the Australian mainland, which remained under RAAF control. So a lesser-known air campaign was fought between Japanese air units in the Netherlands East Indies (NEI) and Allied units in the NWA, centred on the northern town of Darwin. In recent years several books have focused on the defensive efforts by Allied fighter units over Darwin, but works describing Allied bomber operations taking the fight to the Japanese from the same area have been sparse.

Probably the best work is Bob Alford's *Darwin's Air War*, first published in 1991 and followed by a larger second edition ten years later. This provides an excellent general overview of the campaign, both defensive and offensive, but understandably lacks detail in certain areas.

Hence the purpose of this book, partly inspired by my friendship with RAAF bomber crewman Brian Winspear. Brian experienced the bombing of the Darwin RAAF base on 19 February 1942 after

flying Hudsons from Timor during the NEI campaign. He later served with Vengeance and Beaufort squadrons, and his full story is told in Appendix 2.

Indeed, the offensive campaign from the NWA commenced with two understrength Hudson squadrons taking the fight to Japanese forces in nearby Timor in 1942, aided occasionally by USAAF B-17s, B-25s and B-26s. They were later joined by a Dutch B-25 unit, which gave a unique flavour to NWA operations. From 1943 USAAF B-24s added a new dimension to the fight, as their long endurance could reach deep into the NEI. Other RAAF types to see offensive service in the NWA were Vengeances (very briefly), Beauforts, Venturas, B-24s, B-25s and Catalina flying boats. The last type waged an important mining campaign against Japanese held ports in the NEI and later to the Philippines and beyond.

Generally, the NWA and New Guinea campaigns are distinct. However, there was some blurring due to the operations of certain units, namely those with long endurance that operated B-24s and Catalinas. Hence some New Guinea missions are also mentioned in this narrative as they concern units primarily operating in the NWA.

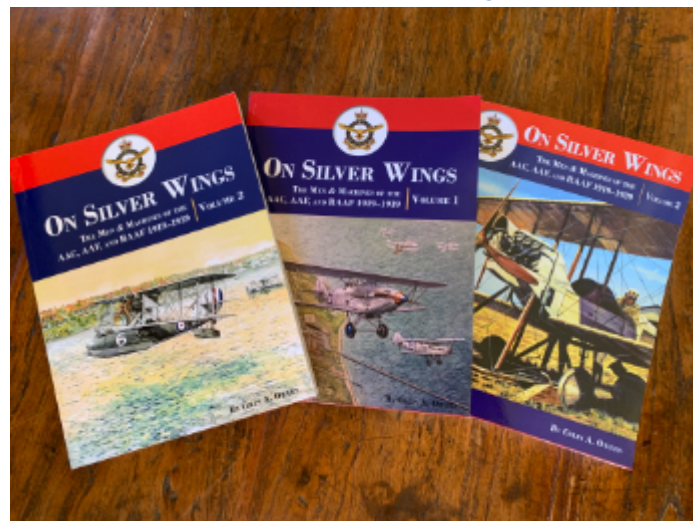
I trust this book brings to life this little-known campaign for a current generation of readers and serves to remind us of the sacrifice of so many brave airmen all those years ago.

Full colour, fully illustrated, 250 x 176mm, 156 pages. Published by Avonmore Books, 2023. ISBN 9780645246995 RRP \$39.95

## BOOK REVIEWS

If you have read a good book about Australian aviation history, please send us a review and let others know what you thought!

### On Silver Wings: The Men & Machines of the AAC, AAF, and RAAF 1919-1939 by Colin Owers



This magnificent 3-volume set covers the early years of military aviation in Australia, providing detailed descriptions of 26 different aircraft types operated by the Australian Air Corps (from January 1920), the Australian Air Force (from March 1921) and then the RAAF (August 1921) until the outbreak of World War II in September 1939. Many writers refer to this period between the wars as the "golden age of aviation" and it was certainly an age of rapid growth and development in aviation.

Colin Owers explains in the Foreword that this manuscript was mostly completed back in 1988, based on laborious research in the National Archives at St Kilda, Victoria and Mitchell, ACT and the RAAF Museum archives at Point Cook. But he could not find a publisher that viewed the work as a commercial proposition. He therefore published numerous sections of the manuscript as articles in publications such as *Aviation Enthusiast*, *Aviation News*, *Small Air Forces Observer* and *Cross & Cockade*.

The manuscript was recently reviewed and updated and has finally been published by the specialist early aviation publisher

Aeronaut Books, Reno, Nevada. For his original work, Owers interviewed many early air force luminaries, who were still alive at the time of his early research. They include Sir Wilfred Brooks, Brian "Blackjack" Walker, George Booth, Eric Read and P.G. "Paddy" Heffernan. Many photos from the collection of Kip Porteous are included.



Owers has a great attention for detail and has included many technical drawings of the aircraft which he covers, as well as illuminating diagrams of equipment and information from service manuals and maps of locations. This is all complemented by numerous colour profiles drawn by Juanita Franz. Detailed end-notes accompany the text for those wishing to follow up with deeper reading, and Owers includes a selection of individual aircraft histories at the end of each section, mostly gleaned from RAAF Form E/E.88 Record Cards.

The aircraft described in each volume are listed below:

#### Volume 1

- Chapter 1: Avro 504K
- Chapter 2: Avro Anson
- Chapter 3: Avro Cadet
- Chapter 4: Bristol Scout
- Chapter 5: Bristol Bulldog
- Chapter 6: Commonwealth Wirraway
- Chapter 7: De Havilland D.H.9
- Chapter 8: De Havilland D.H.9A

#### Volume 2

- Chapter 9: De Havilland D. H.50A
- Chapter 10: De Havilland D. H.60 Moth
- Chapter 11: De Havilland D. H.89 Rapide
- Chapter 12: De Havilland D. H.82A Tiger Moth
- Chapter 13: Fairey IIID
- Chapter 14: Hawker Demon
- Chapter 15: Miles Magister
- Chapter 16: RAF B.E.2
- Chapter 17: RAF S.E.5a
- Chapter 18: Sopwith Pup
- Chapter 19: Supermarine Seagull III

#### Volume 3

- Chapter 20: Supermarine Seagull V & Walrus
- Chapter 21: Supermarine Southampton
- Chapter 22: Tugan Gannet
- Chapter 23: Vickers Vimy
- Chapter 24: Wackett Widgeon
- Chapter 25: Wackett Warrigal
- Chapter 26: Westland Wapiti

The work includes a bibliography for further reading, but does not include an index. There are an astounding 1,271 photographs (some of them in colour) and 47 colour profiles of 26 aircraft types.

Not surprisingly for such a specialised work, the books are relatively expensive, being available on Amazon for a total of A\$277.97 at the time of writing (for all three volumes), and the books are printed on demand with soft covers and "perfect" binding (i.e. the pages are glued together at the spine). The

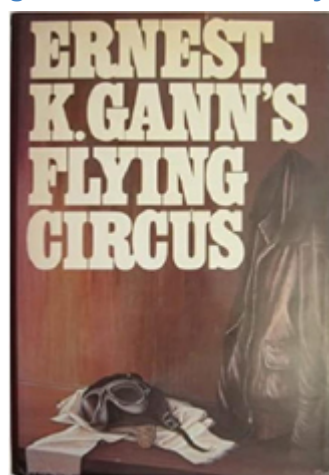
paper quality is good and the printing is very crisp. But the binding method unfortunately means that they will not be very robust, and the books should not really be opened flat or the spine will split.



This work provides an astounding amount of detail on a large number of little-known RAAF aircraft types and will serve as a valuable reference for any RAAF history enthusiast. It is very pleasing that Owers has been able to complete the publishing of his intensive life-long research journey.

Publisher: Aeronaut Books; Released: 10 March 2023; Paperback, 310/349/312 pages; ISBN-10: 1953201679; ISBN-13: 978-1953201676; Dimensions: 21.59 x 1.88 x 27.94 cm

### Ernest K. Gann's Flying Circus: Flying with a great aviation writer by Ernest K. Gann



There are writers and there are pilots. Seldom do we get writers who are pilots and pilots who are writers. If one or the other they often get it wrong.

In recent times I have read the book from the pen of Ernest K. Gann. Gann was the doyen of aviation writers. He shot to fame with his book 'Fate is the hunter'.

On the wall of my study is a photo of Gann taken from the cover of the December 1992 issue of American Flying magazine. 'A Gentleman of Adventure' is the subtitle. I

have to agree.

Gann was a pilot in early airliners who survived into retirement. There may have been better pilots and better writers but Gann was one who melded the two together to put into print books and stories that leave one spellbound.

Recently I obtained a copy of the Gann book, 'Ernest K Gann's Flying Circus' from the book sales stand in the Moorabbin Air Museum.

Flying Circus is a collection of flying tales and stories by Gann. I always wondered what the K stood for. Now I know. It is Kellogg.

Gann's Flying Circus is a collection of stories of the development of commercial aviation, in particular in America. He gives a chapter on many types of early airliners including both the ones that he flew and a few overseas models. In Chapter 22 I noted two flaws. One being his spelling of Qantas. He got it as Quantas. A still not uncommon flaw with Americans. In the same chapter he has notes on a number of non-American built airliners. For the DH-86 he does not mention that Qantas used the type and that there were issues with it. Grr!

Gann started flying in 1935. He was 25. He had studied at Yale



University and tried his hand at movie script writing without much success. He then turned his skills as a private pilot into commercial flying. He flew aircraft on barnstorming flights in a leather jacket with flying helmet and goggles flying rag and tube airplanes. He graduated to closed cockpits There he would make notes while in cruise that he later turned into the pages of a book. Gann wrote a number of aviation books. Some of those got turned into movies. Those notes talked of the issues with some of those early airliners and the fates of some pilots. His flying helmet got turned into a pilot's hat, something that made him stand out as a pilot. Perhaps we should see more of that today. He notes the good and bad points of many of the early airliner types. He also writes about German, Italian and French airliner models and their use, something that we do not hear a lot about.

The final chapter in the book has Gann in a DC-3 on a ferry flight from San Francisco to Apia in Western Samoa with a crew of three. Gripping. This was in the days before GPS.

Ernest K. Gann passed away on December 19, 1991, at Friday Harbour, Washington, USA, of liver, kidney and heart issues. He was aged 81. He had flown some 20,000 plus hours, many without an auto pilot. He was married twice and had three children. Gone but never to be forgotten.

*(Review by Dave Prossor)*

*Ernest K Gann's Flying Circus*. 234 pages. Hardcover. 1974. Hodder & Stoughton. Second hand, the price will vary from \$10 to \$40. Possibly available via eBay or Book Depository.

## The Aircraft Projects of Commonwealth Aircraft Corporation by Joe Vella



We previously provided details of Joe's book in an earlier edition of Outlook. This quarter we can provide the following review by Tony Todaro, a former CAC employee:

The Commonwealth Aircraft Corporation was an innovative Australian aircraft manufacturer that was in existence from 1936 to 1987 building many licence built, highly modified and indigenous designed high performance aircraft and engines. *Aircraft Projects of the Commonwealth Aircraft Corporation* is a book that gives a detailed look into the history of CAC and the many ground-breaking projects it undertook and attempted to undertake in an environment that often lacked support from the local Australian government and its military forces. It is a real tribute to the company, its founding leadership and workforce

over 50 years and its enduring legacy.

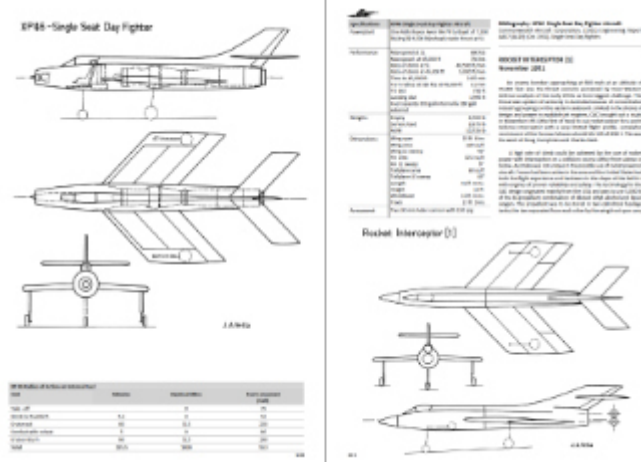
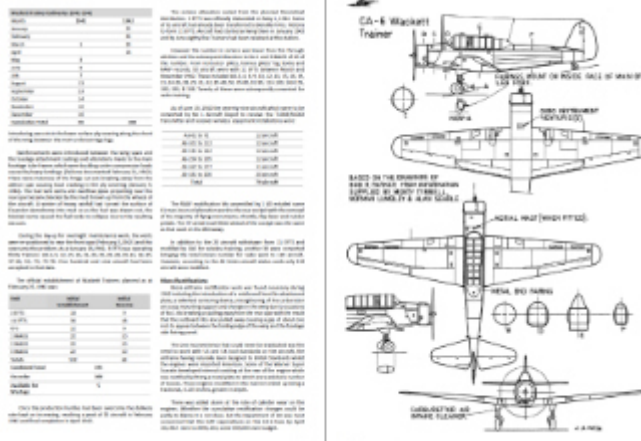
With additional quality detailed technical artwork and scale aircraft plans of future concepts drawn by the author depicting what could have easily been obtainable had circumstances and the market been more supportive of sourcing locally.

The book captures the chronological history and development of the Fisherman's Bend site and the many projects undertaken.

An impressive collection of well researched photos, drawings, advertisements and hilarious caricatures recounts the story of a resilient adaptable workforce and the strong culture built out of necessity of getting the job done in a local aircraft industry that often lacked the volume of work, resources and opportunities available to much larger aircraft manufacturers in the Northern hemisphere.

A highly recommended read and invaluable resource for future historic reference in any aviation collection.

*(Review by Tony Todaro)*



*Above: a selection of pages from Joe Vella's book.*

## Air Mail - Correspondence

### Confirming the Queen's Second Constellation

In our October 2022 edition (Vol 38 No 4) we featured a broad range of the aircraft which were utilised by Queen Elizabeth II during her royal visits to Australia. Qantas provided two Lockheed L749 Constellations for the royal visit, and we included two photos of the primary aircraft, VH-EAF 'Horace Brinsmead', one on the cover (incorrectly captioned as VH-EAG) and one along with the story (page 7). This prompted Ron Cuskelly to provide the photo shown below, which was given to him by Henry W. Pryor who was a TAA porter at Eagle Farm at the time. Ron had forgotten that he had it. This magnificent image confirms that the back-up Constellation was VH-EAC 'Harry Hawker'.

such loans could be sought through the war.

Joe has a different photo of A20-2 on page 340 of his book, from the starboard side, as the aircraft was passing along Swanton St, near the corner of Collins St, as of 28 April 1944.

He wonders if that was Victory Loan Parade No. 1 or if the photo was wrongly dated and it is the same parade you have portrayed, just in a different location. Joe imagines the parade content would have been repeated across a number of possible dates. He was not able to locate any Melb parade dates, and the photo in his book is a copy he made from the late Frank Smith's collection.

Can anyone shed light on the various Victory Loan Parade dates in the capital cities?



### Victory Loan Parade Dates?

Joe Vella noted the photograph of "Wirraway" A20-2 on parade through Melbourne's city streets in our February 2023 edition (Vol 39 No 1) on pages 6 and 7.

He was interested in the dates of the Victory Loan Parades, noting the photos of A20-2 parading in the city on 27 October 1944 as the second Victory Bonds Loan Parade which should be correct if it comes from the State Library.

According to PM John Curtin there was the possibility that four