PHOENIX

HISTORICAL AIRCRAFT RESTORATION SOCIETY JOURNAL

April 2025.

Celebrating 10 Years at HARS

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Front Cover: VH-OJA, Boeing 747-438 at HARS.
Photo: Howard Mitchell.

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In this edition

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President's Report

Bob De La Hunty OAM
President and Chief Pilot

AS you can see, this issue of Phoenix is extraordinary for a voluntary group of passionate aviation enthusiasts with so many diverse skills from coffee making to heavy aircraft maintenance and everything in between!!. It is a great credit to all of our 850 members and supporters to continue to preserve our Australian aviation heritage. Some members are present almost every day with others fitting whatever time they can spare and some in the background doing great work or making donations in lieu of physical attendance. It all helps to build the pyramid.

The floor painting in Hanger 3 is proceeding well thanks to our contractor, the paint supplier and our State MP for his funding support. Once the work is finished, we will be re-organising how we position aircraft and equipment to complement the look of the Hanger. The H3 bird netting has been a great success. However it needs constant maintenance due to wind and use. Our floor painting "jack of all trades" and his staff are upgrading the workings and undertaking repairs as the netting has been up almost two years now. Could we ask those members working in H3 to look after the netting and make sure it is closed properly, particularly up the top where the birds will look for a gap? Of course, the solution is obvious: build the extension and fit the doors, just need money!!! Failing a lottery win or a big donation by somebody, we wait for the Grant outcome which is still pending. Maybe after the Election we will have an idea of what's next?

The HARS Parkes Aviation Building programme is also waiting on the outcome of the still pending Grant to start building on the site we have secured. Our Museum at Parkes, grew out of just a storage facility, to now, a museum in its own right with growing members and visitors. To support the growth at Parkes, the HARS Committee and HARS Foundation Board members are travelling to Parkes on Friday the 16th May and returning on Saturday 17th May, after holding a joint management meeting and viewing progress and plans. With some seven large aircraft and 9 smaller ones on show and lots of displays, it's worth a visit.

The Avalon Air Show broke all records again, and it is a lead into the ASDU Shellharbour event at Shellharbour Airport in March 2026. We will be working to make sure we do our part to make it a success. Late in March 2026 we will once again, be hosting the RAAUS Fly In at Parkes . Our current focus is preparing Aircraft for our support of ANZAC DAY.

The Boeing 707-138 project has reached another milestone following our difficult, but necessary decision, to disassemble the aircraft and transport it by sea. We held a meeting with Stakeholders, including John Travolta in Brunswick USA recently to confirm that decision and he understood why this had become necessary given the time and FAA Airworthiness directives. The film JT is working on involving a Super Constellation and 707 will include some of our Super Constellation flying, and JT decided to support our 707 project by holding the Australian Premier in our hanger at Albion Park alongside our Connie. The proceeds will be directed to the 707 project. We are also supporting him with his recent purchase of the TWA Super Constellation in Kansas USA and are also working on a documentary of our 707 project with his support.

This week the 707 is back in the hangar at Brunswick having the tail group removed for transport with the engines and pylons. Next will be the wings and fuselage. The goal is for the aircraft to be at HARS intact by March 2026 and JT has agreed to be here as well. Still lots to be done, however we are convinced that the aircraft will be a tourist magnet for years to come.

We are forever grateful to all our members throughout our facilities at Shellharbour, Parkes and Nowra, whose work and determination have made us what we are today with an exciting future. The annual renewal process is about to begin again and your Committee have resolved to keep the membership cost the same as last year, which has been made possible by member donations from those who can.

Please keep safe and we wish you good health as we grow old together and support each other

from the Vice

Maureen Massey
Vice President

LOTS happening this year, with more and more people wanting to hold events here. Our facility is becoming very popular and is it any wonder!!

Membership renewals will be going out this month, with no change in the membership fee.

However, there will be a change in the way we send out the Phoenix Magazine. Because of the rise in cost of postage, we will no longer be mailing out hard copies to those that have elected to receive them. The hard copies of the magazine will be available for collection at the reception desk and held there for you to collect. Interstate and overseas members will receive their copy in the post as usual. For those members who would like an electronic copy please advise your email address and I will arrange for one to be sent to you.

We will continue to produce the Phoenix magazine in both hard and soft copy as it is a wonderful communication tool and goes to many people outside of our organisation.

Cheers!

Maureen

OJA Delivery to HARS

Story: Bob De La Hunty OAM, President of HARS.

The Story Behind the Scenes

ON a Thursday in November 2014 I received a phone call from Alan Joyce's office to say that he was about to sign a contract to send OJA to the desert to be broken up. Before doing so he wanted to know if there was an alternative and had his office call me to see whether we could do something to save OJA. I said very excitedly *"well we certainly should do something to do that"*. I was asked then to send an email in the next 10 minutes confirming our acceptance of acquiring and saving OJA if Qantas were to donate it to HARS.

An email was sent in confirmation that we believed we could handle the aircraft here and that we would get approval to position the aircraft at HARS. The next day I received a call from the Chief of Staff to advise that Alan Joyce was not going to sign the contract and that there would be media announcements the following week to announce its future.

This then started the process of planning with John Cleary and making a major submission to Shellharbour Council that would have a huge impact on tourism to the area. A meeting was held with the Director of Operations, Matt Hule on the Monday and we came away with a provisional agreement from the Council subject to Council approval which I was then able to advise Qantas that we were able to accept OJA and that the Council was supportive of the proposal.

The following Saturday, there was to be a media event to farewell OJA on its last flight to LAX and then to the desert to be cut up, however Alan Joyce was able to announce at this media event that the aircraft would stay in Australia and continue in service and that it would be donated to HARS to have on display at our museum.

There was an AD (Airworthiness Directive) due in January 2015 which required millions of dollars to be spent on the flaps and so the aircraft continued in service while waiting on plans to be finalised at HARS.

Discussions then started in earnest with Qantas, CASA and the Council. The aircrew started simulator training for operating the aircraft into YWOL and Boeing was consulted on reducing the tyre pressures on the landing gear to negate any damage to the runway. Risk assessments were carried out by Council and the Police and to plan for the aircraft's arrival as it was anticipated that there would be a large crowd around the airport to witness the arrival of OJA.

OJA continued in service with its last flight in December 2014 from South Africa to Sydney where it was then grounded due to the AD. A special Ferry Permit from CASA was granted to Qantas to allow the aircraft to be delivered to HARS on 8 March 2015. The actual flight was registered as a Qantas service with the flight number QFA7474 in order for it to be registered as conducting the shortest scheduled flight in a B747-400.

Ex-Qantas B747-438 on the demolition pad in Victorville, CA, October 28, 2014.

How did OJA end up at HARS?

Story & Photos: David Bassford.

Well, it very nearly didn't happen!

HERE'S the interesting back story that changed the original plan and delivered OJA here at HARS.

OJA was already under contract to be sold to a customer & delivered to Mojave, CA in December 2014.

The sale agreement was for OJA airframe only. The engines were to be removed and retained by QF Engineering to support the remaining fleet & the customer would then part out OJA airframe.

By mid-November 2014 all the final arrangements were in place to ferry OJA to Mojave for the sale.

- The sale contract was finalised & the deposit paid.
- OJA was scheduled to operate a revenue QF107 SYD-LAX flight on December 7 2014.
- OJA was then scheduled to ferry as QF6024 LAX-MHV (Mojave) on December 8 2014.
- The Engineering & Flight crews were assigned, hotels, transport booked and all engineering support equipment was prepared to be loaded on OJA.

We were only 10 days from departure when a series of chance events lead to a late change of plan.

In late October 2014, our QF Engineering team in Victorville was preparing a B767 (VH-OGJ) for storage.

On October 28, 2014, our QF Engineering team witnessed an ex QF 747-400 being cut up on the demolition pad in Victorville.

It just so happened that also present on this occasion was one of our Fleet Trading sales guys who took some video on his phone of the ex QF 747 being cut up.

In late November 2014, with OJA already under a sale contract, he was showing this video of the QF 747 being cut up to his manager. By chance the CFO walked past and asked what they were looking at. Upon seeing the video, the CFO commented *we can't let that happen to OJA, see what you can do!*

Fortunately, the customer understood the historical significance of OJA as a museum piece and the Qantas Fleet Trading group were able to negotiate to save OJA and arrange a donation to HARS.

There was then 3 months planning & preparation from Qantas to make it possible to ferry OJA to HARS. With planning, preparations and approvals in place from Qantas Engineering, Flight Ops, Flight Planning and CASA, OJA was ferried under a special flight permit from SYD-WOL on March 8 2015.

The above details are from my personal involvement & recollections with OJA from participating in the original delivery project in 1988-89 thru to delivery of OJA to HARS in March 2014.

Qantas Engineering Team in VCV, October 28, 2014.
L to R: Scott Roberts QF, Rod Wyse QF, Greg Daniel PART, David Bassford QF, Martin Schembri QF.

Ex Qantas B747-438 on the demolition pad in Victorville, CA - October 28, 2014.

Now We Have a Jumbo Coming…

Story: Terry Scanlan
Photos: Tony Crampton.

Let's Get Prepared!

WHEN it became apparent that Qantas would gift OJA to HARS, preparations for its arrival began in earnest. Discussions with various elements of the Shellharbour Council were necessary to determine where the aircraft would be positioned. Other considerations were of course to determine if the weight of the aircraft would cause damage to the runway and taxiway.

The planning for the arrival of VH-OJA commenced in December 2014. Surveyors Craig Robinson and Associates drew plans for Council approval and pegged the site for excavation. Within 5 days of the approval being given, Cleary Bros commenced excavation for the nose wheel slab. HARS members under supervision from Cleary Bros poured the concrete for the nose wheel but after this experience it was decided to leave the main gear slab to the experts.

The complex design of the main gear slab was engineered by the late Ross Sherson who had a long association with HARS. Services were located by Australian Locating Services and Cleary Bros then prepared the site for concreting. The reinforcing steel came from One Steel and Independent Cement and Lime provided the special ingredients to Cleary Bros. Arthur Webster from Webster Consulting liaised with Council and drove the roller compactor. Matt Sullivan Concreting and Shoalhaven Concrete Pumping then completed the job and we then had a 20 x 20mt wide and 900mm deep slab worthy of our soon to arrive B747.

Weight of the aircraft on its landing gear was provided to the engineers and it was found that the runway could comfortably accept the weight of the aircraft on landing however the taxiway couldn't and the aircraft could cause some damage during the push back to its temporary parking space. A solution to this dilemma had to be found and Maybe Hire at Ingleburn were approached as they had Tuff Track matting that would distribute the weight of the aircraft more evenly on the taxiway thereby preventing any damage to it. The Tuff Track matting was made up of a 40mm thick dense material that could support 150 tonnes over its 2.5 x 3.0mt area, a great solution that prevented damage to the area

Site preparation begins.

Concrete pouring of the 20 x 20mt slab commences.

Smoothing out and finishing process.

Some of the Tuff Track Matting from Maybe Hire.

The HARS Boeing 747-438 VH-OJA

The Game Changer March 8 2015

Story: Terry Scanlan, with contributions by HARS members.

OJA Touchdown March 8, 2015 (courtesy Matt De La Hunty).

IT was always thought that having a 'JUMBO' at HARS would be a game changer for the museum and with the arrival of VH-OJA, the Qantas Boeing 747-438 aircraft on 8 March 2015 proved to be an understatement. Thousands of people lined the perimeter of the airport to watch its arrival. For the HARS community, it was a fantastic sight to see this huge aircraft approaching on a left base leg to join final for runway 16 at Wollongong (now Shellharbour) airport.

Many had their VHF radios tuned to the then Wollongong CTAF frequency and with the callsign of Oscar Juliet Alpha, the radio call that everyone was waiting to hear came through loud and clear.

"All stations Wollongong, Oscar Juliet Alpha, Boeing 747 IFR two zero miles to the North inbound on descent, leaving 4,000 positioning for a five-mile final runway 16, estimated landing time 47. Caution wake turbulence, traffic Wollongong".

The timing of the arrival and touchdown was meticulously planned and the significance of the touchdown time of 0747 was remarkable as it was a Boeing 747 that was landing. Taking off from Sydney with 20 tonnes of fuel and an 11-minute flight from Sydney to the Wollongong Airport (now Shellharbour Airport) marked another significant event in the aircrafts history which started in August 1989 with a non-stop London to Sydney record of 20 hrs, 9 mins, 5 secs. The last flight of OJA was coincidentally it's shortest and possibly a record for a B747-400.

The phone call that Bob De La Hunty received from Alan Joyce's Chief of Staff late 2014 triggered a series of discussions with the Shellharbour Council, who at first were very sceptical about allowing the Jumbo to land at the airport due to its size.

In February 2015, HARS member, Geoff Shephard, wrote a piece about why it was possible to land a B747-400 at Wollongong Airport, YWOL (now Shellharbour Airport YSHL). Some information gleaned from the article he wrote is published here with Geoff's permission.

The HARS Boeing 747-438 VH-OJA *continued*

Runway Length

Wollongong runway 16/34 is just over 1800m long or about 6000 ft. 747 aircraft regularly operate into Melbourne's RWY 27 which is a bit under 2300m / 7500 ft and I've even taken off from it to go to Singapore. Landing on RWY27 at about 240 - 250 tonnes I've always been able to pull off at taxiway N which gives a landing distance achieved as 1600m in regular service - even with perhaps a slightly long touchdown, and relatively low braking.

OJA would be about 200 tonnes max when it lands, their speed at touchdown will be about 15 kt less (about 120 kt) so they should easily be able to pull up significantly sooner than my example above. I see absolutely no problem with runway distance available. Oh .. and they would have practiced the landing in the simulator many times before doing it for real. People would be staggered at the preparation that will be done - everyone concerned would want to make it a perfect operation, since their peers are looking on.

Pavement Strength

Wollongong Airport, like many around the country, was built during WWII and would have been built to take the larger aircraft of the day, such as Liberators. Post war passenger aircraft such as the Super Constellation were designed to use those same runways.

The 747 was designed to be able to use the same strength runways as the 707 which in turn was designed to have a footprint comparable to Super Constellations .. so if we can find a runway that a Super Constellation operates out of ..... In addition, OJA will be at half of its max take-off weight when it lands. Note also that a 747 and 707 landed at Longreach which is a similar runway.

In calculating an aircraft's wearing effect on a runway, what matters is not how heavy the aircraft is, but how its weight is spread over the tarmac (and how often it operates). That is why the 747 has 16 main wheels whereas the Connie has 4 and the Neptune 2. Engineers can refer to the runway hardness and load bearing rating and compare it to an aircraft's footprint - they can then determine the fatigue that movement will inflict.

Let's look at the weight per wheel for some aircraft that we've seen here for comparison (these are ballpark figures - I've ignored the nosewheels and probably overstated the weights but they give you the idea - the 747 is not much different to the others):

OJA - 200t - 16 wheels - 12.5 t per wheel

Neptune - 25t - 2 wheels - 12.5 t per wheel

Connie - 45t - 4 wheels - 11 t per wheel

Hercules - 54t - 4 wheels - 13.5 t per wheel

Now, the figures above only give a basic overview - you can't for example directly compare an aircraft's pavement effects from the above - the 747 for example has REALLY BIG wheels which spread the load. A Business jet which might weigh less (say 20 t with 4 little wheels / 5 t per wheel) might have a much more significant pavement effect.

Thank you, Geoff!!

Another consideration to think about was the pilot's 'muscle memory' of perceived height and distance from the runway. Airline pilots are used to flying into large airports with wide runways and so they are able to judge their height and approximate distance from the field by looking at the runway and angle of approach. Flying into an airfield such as YSHL with a much narrower runway would give the appearance of your aircraft being higher and further from the field to what they have been used to. The Qantas crew were aware of this and spent some time in the circuit with Bob De La Hunty in Neptune 273 doing an approach similar to what they would be doing to give them an idea of what the runway looked like from say 2,000 feet.

Many hours were spent in the simulator with the crew practicing the landing so that on the day, they wouldn't have any problems.

On Sunday 8 March 2015 at 0747hrs, the Qantas Boeing 747-438, VH-OJA touched down on Rwy16 using only minimum breaking and idle reverse coming to a stop well before the end of the runway.

The aircraft was then pushed back along the runway and finally to its parking spot adjacent to where it is located to-day.

OJA has been a 'Game Changer' for HARS as it has attracted many thousands of visitors drawn to the museum by the sight of that giant red tail visible from miles away. It has generated huge amounts of revenue from special use activities such as ADF training exercises, being a prop for several movies and advertisements, weddings and of course our specialised tours of the aircraft conducted by HARS members who previously operated that aircraft as crew during their careers at Qantas.

Several members were approached and asked if they could recall any particular stories, they may have of their time on OJA that would be of interest to our members and several of these are detailed below.

Bill Claridge - Gound Engineer

My association with VH-OJA started in September 1989, when I was sent, along with other Qantas Engineers, to the Boeing factory at Everett (Paine Field), Seattle, to assist in the final inspection, and acceptance of the first 3 Boeing 747-438 aircraft bought by Qantas. The first of which was VH-OJA, which now resides at the HARS Museum, Albion Park.

Our task was to inspect the final 'pickups' made by previous Qantas engineers, and then repaired by the Boeing engineers, to ensure they were acceptable to Qantas standards.

This was prior to the 'Customer Walkthrough' and 'Acceptance Flight'

The HARS Boeing 747-438 VH-OJA *continued*

when the aircraft, with all the Qantas engineers on board, was flown out to Moses Field in the eastern end of Washington State, to be put through its paces by the late Captain David Massey-Greene and crew.

Whilst in flight we had to functionally check all systems not located in the Flight Deck. Also to check for any air leaks and for any other abnormalities.

Then back to Everett for the Boeing engineers to fix all defects that we had 'picked up' in flight to our satisfaction.

Finally, after OJA, now "The City of Canberra", was officially accepted by Qantas, we departed it to London, Heathrow, for its record breaking, non-stop flight to Sydney, Australia.

Dave McPhate - Pilot

Although OJA first entered service on 6/9/89, I was not formally introduced until 2 years later, operating Bangkok-Sydney on 24/9/91. That was the first of 46 flights I completed on OJA. All were (for the most part) reassuringly routine, which is exactly what we strive for as crew.

One flight (Sydney-Hong Kong on 18/12/05) presented some unusual challenges when 3 out of the 12 main fuel pumps failed. Being left with 9 pumps might sound like more than enough. However, different types of pumps operate at different pressure, and some will override the output of others. This is a design feature done for good reason, but in our situation was going to potentially lead to a weight imbalance and the need to divert to a landing somewhere en route.

There was no checklist for this condition, so some lateral thinking was required. Over several hours and with expert input from Qantas Maintenance Watch (on SATCOM), we successfully juggled our fuel management all the way to HKG, keeping the aircraft in balance and all 4 engines running! The engineering support team in Sydney had never seen a condition like this before.

Another flight on OJA that stands out was a charter flight to Antarctica on 14/2/99. Leaving Sydney with full fuel tanks (171 tonnes, or 216,000 litres) we flew virtually due south for about 4hr to reach the edge of the Antarctic continent.

Navigation in polar regions can be challenging, as the Earth's magnetic fields begin rapidly changing. Even GPS navigation is often unreliable due to large areas without adequate satellite coverage. So, the inertial navigation system (INS) was our

OJA under construction, January 1989.

The HARS Boeing 747-438 VH-OJA *continued*

principal tool for navigation, as it usually is. Approaching the south magnetic pole, we watched as the magnetic compass began quite an erratic oscillation from side to side, then literally spinning like a top as we passed overhead the magnetic pole! This was something I certainly hadn't seen before (except in a spin! … which I'm fairly confident wasn't the case here).

After 4hr of sightseeing over Antarctica - and virtually every passenger on board visiting the cockpit - we headed north, and landed back where we started, 12:25hr later. And nobody needed to pack a suitcase.

Gary Watkins – Cabin Crew

I did not fly on OJA as crew but the memories of watching crew on board a VIP tour really strikes home the importance of not only the 747-438 but also the 747-238 and 338.

On a tour one day I had a current CSM who mainly worked on the A380 who wanted to show her new partner the 747. She arrived 15 mins late and I told her we had called another CSM out and she laughed but had to explain to her partner what would happen if we were late to work.

The emotion of our beautiful aircraft started when we showed the video on the upper deck, she cried with joy as it was her favourite aircraft. Her partner was a little shocked and he comforted her.

Then the Cabin tour, well that was great. I asked the questions, and she showed us around telling stories of the adventures on board. I still get messages from her about that day.

Finally, the day the last Qantas 747, OEJ left after flying over HARS and her older sister OJA. My wife couldn't understand why all these crew in uniform were crying as OEJ then departed for the USA.

Toby Gursanscky - Pilot

While Captain Greg Mathews and his delivery crew can claim OJA's shortest and narrowest runway, I lay equal claim to the longest and widest.

On 28 August 2000 I took OJA from LAX to Amarillo, Texas arriving about 2200 local. The runway there is 15000 feet long and 300 feet wide with no centreline lighting and designed for B-52 aircraft with the wingtip outriggers. The ILS localizer is offset from the runway centreline by several degrees, ruling out an Autoland. The ultimate destination was a specialist paint shop to make some warranty adjustments as Sydney was ruled out by environmental considerations.

The effect of all of this was a night landing into a big black hole between the runway sideline lights rendering flare height judgement difficult. I established about a 200 feet per minute rate of descent and ground effect did the rest. I was not concerned about running off the end!

Ken Sargeant – Pilot

2 Aug 1990 en-route SIN-LHR, in Iranian airspace east of Baghdad, with Senator Bronwyn Bishop sitting in the jump seat listening to the BBC on HF as we had been made aware that the bombing of Iraq was imminent. Bronnie suddenly exclaimed "Baghdad's being bombed and the BBC announcer had also stated to all British nationals in the Middle East- you are advised to stay indoors and keep your head's down"

We were met by armoured vehicles after landing at Heathrow for the taxi in.

Paul Hockey – Engineer

I attended the first course at Seattle that Qantas engineers attended. I don't have any particular stories of the old girl but I signed her out numerous times when I was based at Tullamarine (until I went up the ladder a bit and ran a desk). I was the first LAME outside the Sydney guys to be licenced on the 400 series

Dave Body – Pilot

Offline Airports – Typical of a number of offline airports which are not in the big league is Heraklion (LGIR) on the island of Crete. Whilst able to safely accommodate the Boeing 747, the operation is challenging.

I flew VH-OJA into Heraklion on 29 March 1996 and reported, it was different: A VOR approach via a teardrop over the sea, slightly offset inbound radial, threshold markings a bit beyond a 200 foot cliff to the sea and a shortish, one-way runway. Tankering fuel for the return sector added to the challenge. One of those flights you look back on – certainly the kids in the playground of the school adjacent to the turning circle at the end of the runway found a Jumbo staring at them, something worth crowding the fence to look at.

The school building emptied and the teachers came with them. Waving hands made us feel like the Queen had arrived...which of course, she had.

Dave Barnes – Pilot

I first flew on OJA in 1992. I had previously served eighteen months on the Classic Jumbo. 200, 300 and SP series as a second officer. OJA was initially deployed on the Sydney/ London route.

I flew on the 400 for about 14 months and then did my first officer training on the B767. After a number of years, I returned to the B 747-400 as a first officer in 2001. OJA was also used on the Sydney/ Los Angeles/ New York run at this time. I flew OJA on a number of different routes over the years accumulating around 400 hours on this aircraft.

I last flew OJA on a night flight from Hong Kong to Sydney in February 2013. All up I did 12,862 hours on the B747-400.

VH-OJA, our very own Boeing 747-438 may never have its APU started nor the engines running, but to HARS and the general public the aircraft stands as a tribute to this classic aeroplane still revered by many as the greatest airliner ever built.

N707JT B707-138 Update

Story: Bob De La Hunty
Photos: Peter Smith

The B707 with leading edge flaps deployed.

Jim Marshall, David Neaves, Steve Ferris, John Travolta, Michael Neaves, Bob De La Hunty, Wayne Studdert, Alan Halford.

John Travolta looking happy in his old aircraft.

RECENTLY we had a 707-138 Project team in the US, to advance the work on the aircraft, and meet with all parties involved in the project. John Travolta flew up from Florida and kindly spent most of the day with the team going over where we are up to and what's next. JT was pleased to see the aircraft still looking good, although missing engines and pylons, and enjoyed being in the cockpit again with the APU running, deploying flaps and spoilers and making like it was about to fly.

The team resolved, after meeting and reviewing the outstanding major FAA Airworthiness Directives, that we would be many more years going down the path to fly the aircraft to Australia, and JT understood how we had arrived at this decision not to fly and why.

A lot of work had been done on site late last year, exploring the shipping option with a very professional aircraft relocation company. The outcome was to accept that the aircraft can be successfully relocated that way and be reassembled again to at least be able to taxi and maybe after attending to ADs in Australian, who knows?? We have some repair schemes from Boeing who have quoted to do the drawings for repairs but require a large sum upfront after looking at the material we have sent them. To do the work now in the US is out of the question and no longer an option.

The aim is now to have the aircraft on display at the ASDU Shellharbour event in March 2026. We are working with JT on a film release and maybe a documentary about the whole project as well. To do this we are waiting on the relocation company to confirm a date when they can start work and we will then send a team to assist.

The next part after this is to confirm the shipping quotation and timing. The first components, five engines, the four engine pylons and a container with components are already on the way.

A nice place to relax and have lunch.

AROUND THE HANGARS

HARS Static Boeing 707 Cockpit and Cabin Progress

Story & Photos: Terry Scanlan.

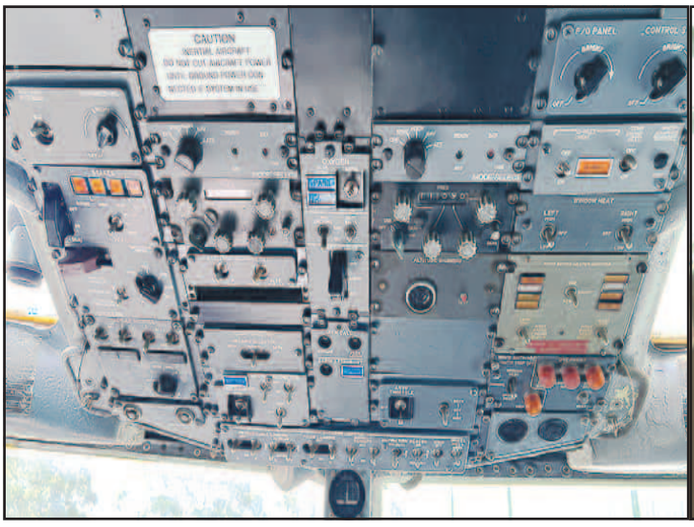
B707 cockpit as it was in 2015.

B707 cockpit as it is now in 2025.

THE rectification work on the cockpit of the HARS based B707 forward section is almost complete with the cockpit fitted out with mostly original instruments and many that have been made up by Dave Barnes. To the unpractised eye you really cannot tell the difference and they serve their purpose to make the cockpit look complete.

The two cabin sections behind the cockpit are still a work in progress and will be addressed by Dave in the coming weeks.

The cabin looking forward to the cockpit.



The overhead panel.

The engineers panel.

AROUND THE HANGARS

PBY-6A Catalina Progress

Story & Photos: Les Fisher.

THE Cat Team has been working on Felix carrying out general maintenance to maintain Felix while working on the left-hand center section trailing edge replacing the badly damaged ribs with some ribs that we recovered from New Zealand.

These ribs from NZ also had some damage but were in better condition than what we had so these were repaired before fitting into the trailing edge.

We have also carried out some in situ repairs to some of the ribs that did not require full removal and replacement.

This left-hand Center section trailing edge will soon start to have a new fabric covering installed.

We can then start on the right-hand center section trailing edge and right hand outboard trailing edge section for repairs to the ribs and mounting extrusion.

The corrosion that was found on the right-hand rear spar has been repaired, and the refurbishing of the aileron control rods and control rod bearing assemblies is progressing.

To the casual observer it may not seem like a lot has been happening, but much has been achieved and the work to get Felix back in the air is progressing.

FELIX the CATalina.

Left hand inboard trailing edge with some ribs replaced. The green ribs are ribs from NZ repaired and installed.

Connie's Grease and Oil Change

Story: Jim Marshall
Photos: Terry Scanlan

Connie undergoing the annual Inspection.

THE Connie is undergoing an Annual inspection of the airframe and engines. The number two engine is almost complete and work is about to start on the last one to rectify a lubrication problem in the nose of the engine.

Plans are in place to paint the walls of the 'tourist' section of the interior of the aircraft in the off-white colour that it should be, and to also replace the seat covers in the original Qantas colours.

This work is planned to be completed in the next couple of months

AROUND THE HANGARS

The DAKOTA report

Captions: John Sims
Photos: Terry Scanlan.

TOP LEFT: VH-EAE is waiting on an AD on it's propellors to be carried out.

LEFT: VH-AES 'Hawdon' is completely serviceable and ready to fly.

ABOVE: VH-EAF is undergoing an annual inspection which is almost complete. The number one engine has also been changed.

Piaggio gets a Facelift

Story & Photos:
Terry Scanlan.

The boys preparing the aircraft for the repaint.

The painting completed and looking like a new one.

NOT often seen out on the tarmac or in the hangars, this aircraft was deteriorating badly out in the elements, so Jacko and his band of merry men decided to put a fresh coat of paint on it and it now looks resplendent in its ANSETT-ANA livery.

AROUND THE HANGARS

VH-TAA, Convair 440

The left-hand engine open and ready for inspection.

Story: Jim Marshall. Photo: Terry Scanlan

WORK on the right-hand engine is all but complete and should be finished in about two weeks and then the ducting and exhaust system will be put back together. Work will then start on the left-hand engine to progress that some more. The aircraft will be made airworthy with the intention to have it flying again.

Southern Cross Replica

Southern Cross Replica.

Story: Jim Thurstan. Photo: Terry Scanlan.

THE Southern Cross replica is nearing the end of its annual inspection. We expect it to be flying again mid-April. It is hoped that we can participate in the Anzac Day flying activities.

Hangar 3 Floor Painting

Story & Photos: Terry Scanlan.

THANKS to Travis Harpley and his crew for continuing the monotonous task of painting the floor in Hangar #3. It seems to be a never-ending job, but thanks to his drive and determination, it is progressing well and looking really good.

Brent from Norglass kindly sponsored the paint, and we at HARS are extremely grateful for that.

The painting of the hangar floor was a result of HARS being successful in getting a Government Grant, driven by primary sponsor, Gareth Ward MP.

A portion of the Hangar floor being prepared.

A finished section of the floor in Hangar 3.

Parkes Aviation Museum

Story & Photos:
Ian Poulter.

P2V-4/5 Neptune 302 is now located on the new museum site, together with one of the museum's Bofors guns.

The Convair 580.

New Parkes Aviation Museum site

THE proposed new museum facility has received Development Approval from the Parkes Council. Commencement of site works is planned for the near future.

Convair 580

During March, engineers and pilots from Albion Park visited Parkes to continue work on the Convair 580. The aim is to return the aircraft to airworthy status.

In March there were some significant achievements, with the APU finally up and running again, which in turn enabled both engines to be started. The testing of systems was done, including brakes, flaps and electricals.

Some taxiing of the aircraft was then achieved.

New Addition – Vampire

A de Havilland D-115 Vampire has been added to the collection.

Reassembly of the aircraft was not without its challenges with the tail boom proving to be particularly challenging. Comments have been made to the effect that "we will not be removing those – ever".

Hence, when the de Havilland Goblin engine is ready for installation, a crane will be used to lift it into place.

The aircraft also requires some repairs, particularly to the wooden fuselage, and parts of the wings and booms. This work is progressing and once complete the aircraft will be given a new coat of paint.

Upgrades to reception and shop.

The museum entrance and shop have been upgraded to enhance the visitor experience. A room has been built which is air-conditioned and incorporates reception, museum artifacts and an expanded shop.

As part of the upgrade, a reliable internet connection is now operational, enabling visitors to pay by card!

Parkes High School Students.

This year we have a new cohort of students from year 10. They are fitting in very well and hopefully their experience at HARS will encourage some of them to take up a career in the aviation industry.

The de Havilland D-115 Vampire.

Reception and shop.

Iroquois 898 Conduct a Tandem Flight

Story: Terry Scanlan.
Photos: Howard Mitchell.

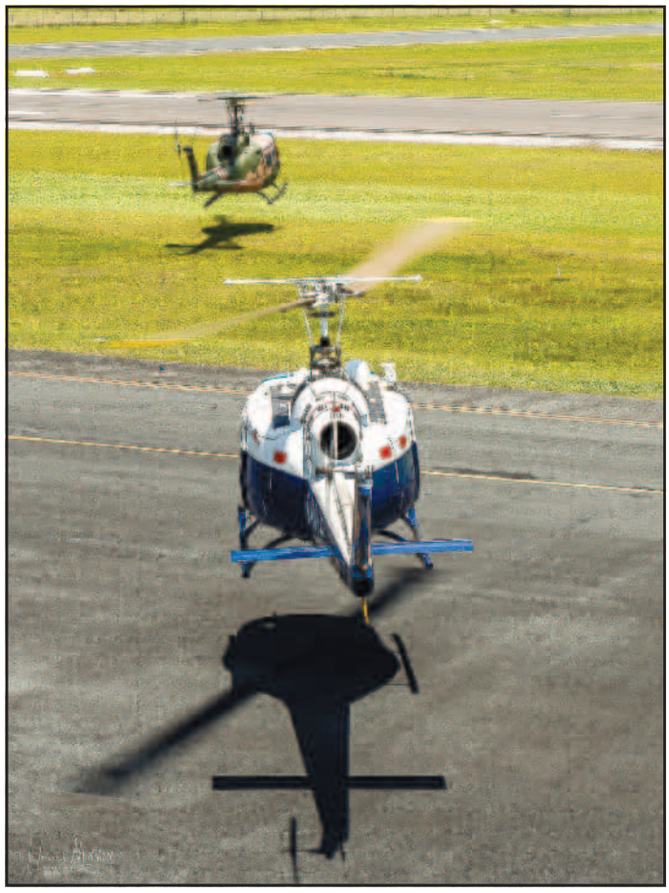
793 and 898 over Lake Illawarra.

IN December 2024, two HARS Hueys did a tandem departure from the Shellharbour airport and flew around the local area creating a unique sight and sound experience that may have brought back some memories of any Vietnam Veterans that live in the area.

The sequence was photographed by Howard Mitchell in the Kiowa Helicopter flown by Brett Leech

What's In a Name: Have you ever thought why the Iroquois Helicopters are called Hueys?

Their military designation was HU-1. The Huey name came from the phonetic sound of its initial designator and has been carried over even when HU-1 became UH-1, Utility Helicopter in 1962.



Above: 793 leads 898 in an air taxi to the departure runway.
Left: The Kiowa 'chase' helicopter flown by Brett Leech.

Hotel Alpha Romeo - HARS'

WAY back in the beginning of HARS there was a lot of activity collecting bits and pieces of older aircraft both civil and ex-military, ranging from instruments to mostly complete air frames with the intention of restoring and preserving these aerial artefacts to at least static condition and, most members were comfortable with this type of arrangement. I remember that at one of our early "lounge room" member meetings in early1980, I caused quite some amazement by announcing:

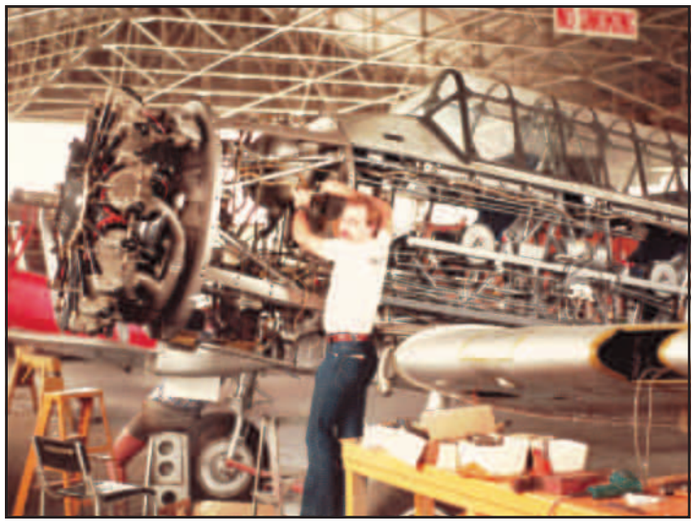
"We are the Historical Aircraft Restoration Society so, let's get a Flyer underway". Shock, Horror was the general consensus but 3 other members were excited enough to form a syndicate to obtain such an aeroplane. The original syndicate members were 1st and 2nd Presidents Gary Volkers and the late Dennis Baxter, Queensland member Ray Ingram and myself.

The Ex-RNZAF Harvard in the Backyard.

I knew of an Ex- RNZAF Harvard languishing in a backyard in Auckland and on one of my business trips there, I decided to check it out. Instructional airframe #188 / NZ-1007, a 1942 NAA AT6-C Harvard Mk IIA * was, albeit in pieces, mostly complete from the firewall rearwards but missing the go bits, the QEC and propeller and, was in very restorable condition.

After reporting back to the other syndicate members who were then all in agreement of the acquisition, I negotiated the purchase with the then owner and for the princely sum of $4,440.00, HARS had its potential 1st Flyer.

Now, all I had to do was get the aeroplane back to its new home in Australia. Brambles were most helpful in providing transport on one of their Ro-Ro ships and it was on a dark early morning in late February 1981 that a few stalwart HARS members met at Walsh Bay docks to transport our Harvard to its new temporary home in Gary Volkers' driveway at St. Ives. This involved towing the fuselage backwards on its main gear with the tail wheel secured in a borrowed flat top truck along with the wings, tail feathers and other bits and pieces, over the Harbour Bridge and up the Pacific Highway to Gary's place. With 2 Eveready torch "Nav Lights" taped to the centre section sides and Rob Greinert bringing up the rear in his little red Mazda with hazard lights flashing and a hand drawn "Wide Load" sign, off we went, hoping to beat the inevitable Sydney peak hour traffic.



The Author Hard at Work on the Harvard.

In hindsight, this exercise was probably highly illegal given that we had no permit, no official traffic escort and probably no insurance if we came to grief. However, our confidence was boosted by the fact that Gary was a serving NSW police officer and if we did get nabbed by the law, he would somehow get us out of the poo. Luckily, that did not happen and we had a mostly uneventful trip (except for a few irate motorists and two bemused Police outside North Sydney police station) until we arrived at the Mona Vale Road turn off railway bridge. We did not account for the fact that this bridge was quite low and the whole convoy came to a standstill as did the growing peak hour traffic as we came to the realisation that we may not fit under it. As luck may have it, we just made it by 10 centimetres! It was all downhill from there proceeding to Gary's back yard. We then moved the aircraft to HARS' new Scheyville storage facility in 1981 and then to Bankstown in February 1985 to commence the restoration in earnest. The syndicate members had changed during this time and the final team members were Bruce Simpson,

First Flying Aeroplane

Story: Phil Heesch
Photos: Phil Heesch and Mike Madden.

Jeff Muller, the late Peter Walker and me. During those intervening years at Scheyville, the syndicate members and I were busy tracking down the missing bits we needed to make her airworthy. I secured two R-1340-AN1 radial engines in Tamworth, well-worn ex-crop duster motors, and sent them to Peter Brooke the re-builder who recently zero timed our Southern Cross Jacobs radials. From the two, Peter produced a magnificent fresh example of one of P&W's finest 9 cylinder radials. I also tracked down a suitable Hamilton Standard 12D-40 propeller in Zimbabwe that would be delivered to me in the back of a QF Jumbo courtesy of one Captain F.W. Pike of Rebel Air fame. We secured the balance of the parts required, NOS from suppliers both in the UK and the US.

The HARS Harvard in Flight.

When the restoration became serious,
Bruce became head engineer of the project and his brother Paul, a L.A.M.E. also contributed much to the rebuild. Pete and Jeff worked on the airframe and I worked mainly on the electrics. Various other engineers helped out here and there and the rebuild progressed at a pace in the old Illawarra hanger at Bankstown.

I contacted the then Department of Transport (CASA) as to a suitable registration mark and to my surprise, HAR was available and I quickly reserved that mark for our soon to fly aeroplane. A good omen I thought. They say good things come in threes, HARvard, (VH) HAR and of course our own society, HARS.

Finally, the fruits of our labours culminated on April 22, 1987, the day of the first flight. A small gathering of interested (let's see if it works!) Avio nuts assembled at our Bankstown hanger for the occasion. Bruce, with DOT examiner "Kit" Carson in the back, took VH-HAR aloft from runway 29 for a 40-minute trouble free test flight and, as they say, the rest is history! We all then started to enjoy the aeroplane. The final touch was to paint her in her current period camouflage scheme.

Since that time she has performed at many airshows around Australia and has starred in numerous movies and miniseries including Heroes, The Thin Red Line, Paradise Road, the remake of South Pacific and the soapy, A Country Practice. Even 'Top Gun' star Tom Cruise flew her from the back seat in mid-1999.

Disguised as a Japanese Zero for a Movie.

The aircraft has changed hands a few times since then and currently, VH-HAR is airworthy, still on the register and resides close by at Tumut aerodrome. The current owner keeps the aeroplane in very good order and securely hangered. Future visits to HARS are planned.

Hotel Alpha Romeo is a VERY important part of our history and needs to come back home... eventually. It is my passion as well as a few current HARS members to bring Ol' Number One back to her roots at HARS headquarters, Shellharbour Airport. Let's hope we can do that one day in the not-too-distant future.

Air Traffic Control (ATC) ~ The Way it Was

FOLLOWING the completion of a two-year Air Traffic Control (ATC) course with the Department of Civil Aviation, which included field training at Sydney Airport, I was posted permanently to Sydney in 1968.

My first attachment was in Sydney's 3rd control tower, which was situated near the intersection of Runways 16/34 and 07/25. Runway 07/25 was the prime runway at 8,300 feet (2,527m) in length, whilst Runway 16/34 was just 5,500 feet (1,676m). Construction was underway to extend Runway 16/34 into Botany Bay, along with the diversion of General Holmes Drive. The first extension to 9,100 feet (2,774m) was completed in 1968 and construction on a further extension to 13,000 feet (3,962m) began in 1969 and completed in 1972.

Warwick Bigsworth was an Air Traffic Controller for much of his working career, including 12 years at Sydney (Kingsford Smith) Airport during the late 1960s and 1970s. He went on to a supervisory and management career including involvement of the EIS's associated with the Sydney Airport parallel runway and Western Sydney Airport. Warwick recalls some of the differences between yesterday's facilities, standards and procedures and what is commonplace now.

The opening of the first extension to Runway 16/34 brought about the introduction of noise abatement procedures, enabling jet aircraft to depart over Botany Bay using Runway 16 when weather conditions permitted. Noise abatement procedures feature not only a curfew for jet aircraft, (11.00pm until 6.00am), but also preferred runways and preferred flight paths at all times for aircraft with a MTOW above 5,700kg. The preferred runways and flight paths were predicated on the airline schedules of the day. The two-airline policy ensured that timetables were parallel and an Ansett-ANA and TAA aircraft would each depart more often than not, on the hour, to the same destinations starting at 7.00am. All arrivals were required to land on Runway 34 until 6.45am unless weather conditions precluded the use of that runway. During the next two decades some concessions were made to permit aircraft departing prior to 6.45am to use Runway 25 or 07, but it wasn't until 1989 that the preferred Runway 34 for landings was mandatory only prior to 6.00am.

The control tower was staffed by the Surface Movement Controller, who was responsible for ground movements; the Aerodrome Controller, who issued clearances to land and take-off; and a traffic co-ordinator. The ADC had a bright display radar in the console to monitor arriving or departing aircraft.

The route structure between Sydney – Brisbane and Sydney – Melbourne was based on the use of straight-in approaches at Sydney: Runway 07 from the south and south-west and Runway 16 from the north. These runways were nominated for in-to-wind and up to 5 knots downwind for arrivals, whilst Runway 16 was the preferred departures runway with the same nomination criteria. The terminal airspace became more complex because of the necessary crossovers of departure and arrival routes when Runways 25 or 34 were nominated due to downwind and/or crosswind on the preferred runways.

Sydney's 3rd Control Tower with a Vickers Viscount departing.

Although Pan American commenced operating 747s into Sydney in 1970, most international flights were still operated by Boeing 707s, Douglas DC-8s (of various lengths) and Vickers VC-10s until the mid-1970s, whilst Lockheed Electra's crossed the Tasman until the early 1970s. By the mid-1970s, wide-body 747s and DC-10s were progressively introduced on international flights. Although these aircraft were able to carry more passengers than the narrow-body aircraft, they introduced additional time and distance separation standards for take-off and landing due to wake turbulence. Domestic services were operated by Ansett-ANA and TAA Boeing 727s, Douglas DC-9s, Lockheed Electra's, Fokker Friendships, and until 1970, Vickers Viscounts. DC-6Bs were retired by 1968. East West Airlines and Airlines of NSW

Story: Warwick Bigsworth.
Photos: Courtesy of the Sydney Aviation Historical Society.

Inside the Control Tower with A Qantas B707 taxiing past.

operated Friendships and some special purpose DC-3s. Domestic cargo flights were operated by DC-3s, DC-4s, Convairs and after 1972, Electra's. Commuter airlines were emerging with Cessna 402s, Beechcraft Queen Airs and Piper Navajos and later Embraer Bandeirantes plus a number of smaller types all of which merged into the peak hours scheduling mayhem. There was no slot management system in place so airlines could, and would, schedule numerous flights at the one time. Hence delays were inevitable.

Sydney ATC was responsible for controlled airspace within the Sydney Flight Information Region, which extended from the Murray River in the south, to Armidale to the north, from about Griffith to the west and to 163deg East over the Tasman Sea/Pacific Ocean. The dimensions of controlled airspace (CTA) were 10,000 ft base and FL400 (40,000 feet) top, with steps into controlled aerodromes. The lateral dimensions encompassed the main IFR routes from Cairns via major capital cities to Perth. Specifically designed narrow corridors across the country were designated as Transcontinental Control Areas (TCTAs) incorporating two-way IFR routes and which included Sydney via Parkes and Alice Springs to south-east Asia ports and via Mudgee, Cunnamulla and Mt Isa or Groote Eylandt to Hong Kong or Manila. TCTA base was FL250 (25,000 feet) and top FL400. In oceanic areas, there were much wider lateral dimensions that incorporated two-way routes, with vertical limits from FL250 to FL400. Control of these areas (Area Control) was divided into Sectors. The Sectors and Approach/ Departures control were located in the Area Approach Control Centre (AACC), co-sited with the then Meteorological and Pilot Briefing office, which was opposite the TAA terminal and on the site of the now demolished car park.

By 1969 I was an En-route controller responsible for airspace from 30nm south of Sydney down to the Melbourne ATC boundary. The position was also responsible for arrivals into and departures from Canberra Airport plus interaction with Nowra ATC for transit of its airspace by civil aircraft and transit of civil airspace by Fleet Air Arm Douglas Skyhawks and Grumman Trackers.

Standard Departure Clearances were the order of the day, rather than the more detailed Standard Instrument Departures (SIDs), which were introduced later. All IFR tracks were designed on a one-way route structure and aircraft were required to plan at standard flight levels. The air routes between Sydney and Melbourne were in a race-track pattern: Sydney – Wollongong – Williamsdale- Corryong, or Sydney – Marulan – Canberra – Corryong to Melbourne and inbound via Wee Jasper – Bindook – Sydney. Radio navigation aids were Non-Direction Beacons (NDBs) or Very High Frequency Omni-Ranges (VORs), but until the early 1970s, there were still several Visual Aural Ranges (VARs) in service. Distance Measuring Equipment was primarily the 200mhz Domestic DME, but international aircraft could utilise the International 1000Mhz DMEs at some capital cities or the DME function of the Canberra TACAN (military Tactical Air Navigation System).

The main deficiency in the system was the limited availability of radar. Range Surveillance Radars (RSR) were situated at Brisbane, Sydney, Melbourne and Adelaide. Their range was 160nm which left large gaps in the airspace between those centres. They rotated at 5rpm and provided a televised image of raw radar via means of a scan-converter and displayed to controllers on a Bright Display system which could be viewed in a dimly lit environment. The minimum radar separation between aircraft was 5nm. Due to the radar's line-of-sight limitations, flights departing Canberra to the north appeared on Sydney radar when above about FL150 (about 15,000 feet). Aircraft arriving at Canberra from the north faded from Sydney radar below

The first extension to RWY34.

Air Traffic Control (ATC) ~ The Way it Was continued

Bright Display with the Shrimp Boats.

FL150. Aircraft departing to, and arriving from the south of Canberra were outside Sydney's radar coverage. All aircraft had to be procedurally separated prior to leaving radar coverage, with the minimum procedural distance between say two jets at the same altitude and no closing speed being 20nm by DME. Widespread surveillance coverage utilising Automatic Dependent Surveillance (ADS B) was decades away.

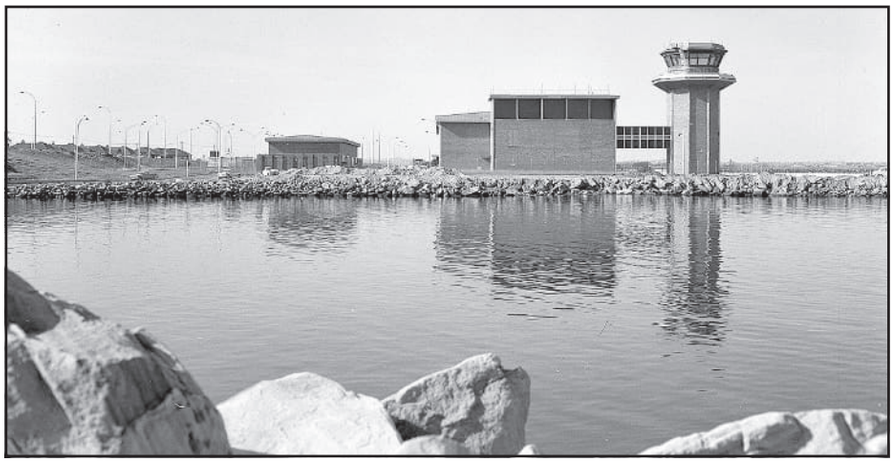
Identification of aircraft was maintained with the use of shrimp boats – a small rectangular piece of Perspex with the callsign written upon with felt pen. The shrimp boats would adhere to the plastic radar screen overlay with a bit of moisture. Secondary Surveillance Radar (SSR) was not yet available.

After a short-term transfer to PNG in 1969 and 1970, I returned to Sydney and operated on the northern sector which covered aircraft operating in CTA between Sydney and Brisbane and Coolangatta as well as regional ports such as Armidale, Coffs Harbour and Tamworth. There was frequent interaction with RAAF Williamtown, primarily for military aircraft transiting civil CTA. Access to RAAF Williamtown and its Restricted airspace by civil aircraft was limited at the time. I also operated the sector responsible for oceanic airspace as well as aircraft operating to and from the west of Sydney, including flights to Adelaide and Perth, flights to regional centres such as Parkes and Orange, international flights to Singapore and south east Asia as well as direct flights between Brisbane/Coolangatta and Melbourne. Because of the limited radar coverage, flights had to operate at standard levels and above FL290, 2,000 feet vertical separation was the standard. No RVSM (Reduced Vertical Separation Minima) which enabled 1,000 feet vertical separation. Those aircraft arriving from the west and north west had to be procedurally threaded between aircraft operating at standard flight levels on the Melbourne – Brisbane route, as radar coverage did not extend further than 160nm from Sydney.

Before the introduction of 747s, which were equipped with Inertial Navigation System (INS) and DC-10s which had either INS or Omega, navigation on oceanic routes was by the use of Doppler and/or Loran A or C. Most trans-oceanic flights also carried a navigator. Flights via TCTAs were navigated via ground-based navigation aids, VOR and NDB. Direct tracks using GPS were still decades away.

Air/ground communications were on VHF in CTA, but outside that coverage, communications with Flight Service (FS) on HF could be made. Aircraft on oceanic routes communicated with Sydney FS on HF and position reports and clearance requests were passed by FS to ATC. Aircraft on TCTAs could use HF, or, if travelling to or from the north-west, via VHF to FS Units at Longreach or Charleville. Communications between those Units and Sydney ATC were via magneto phone, as no landline was available. International aircraft were equipped with SELCAL to alleviate the need to listen out on the scratchy and static-laden HF. No Controller Pilot Data Link Communications (CPDLC) in those days.

During 1972 I was endorsed as an Approach and Departures controller. There was one radar console for each of those positions. For departing aircraft, the Aerodrome Controller would advise the departure sequence and the Departures controller would issue an initial radar heading and any altitude limitation. After separating departing aircraft with other departing or arriving aircraft within 30nm of Sydney, the aircraft would be transferred to the En-route controller. The Approach controller would position arriving aircraft to final approach, provide identification to the Aerodrome Controller and instruct the aircraft to call the tower frequency at about 10nm from touchdown. The RSR was not an ideal approach radar, but improvements were on the horizon.



The new Sydney Tower at Kyeemagh.

Controllers operation the Sydney Area Approach Control Centre (AACC).

There was a Category 1 Instrument Landing System (ILS) on each of Runways 07, 16 and 34. Minima were cloud base 300 feet and visibility not less than 800 metres. Runway 16 also featured a Twin Locator approach utilising West Pymble and Sydenham Locators, Runway 07 had a VOR/DME approach as did Runway 34. Runway 25 had a VOR/DME approach and an NDB/DME approach utilising the Eastlakes NDB. There were no Performance Based Navigation (PBN) systems – Area Navigation (RNAV), Required Navigation Performance (RNP) or Ground Based Augmentation System (GBAS) – in use, as satellite navigation was yet to come.

There were, however, special procedures for the Ansett Sandringham flying boats alighting at Rose Bay. If unable to make a visual approach to Rose Bay, they would undertake an instrument approach based on the Eastlakes NDB. If ever required, it would in effect close operations at Sydney Airport until the Sandringham became visual and joined final approach to Rose Bay.

In late 1972 a new AACC and control tower were commissioned at Kyeemagh, near the mouth of the Cook's River. The new Centre accommodated more En-route Sectors and an enlarged Approach/ Departures facility. There were now two approach consoles – aircraft arriving from the north and east were controlled by Approach North and arrivals from the south and south-west by Approach South. Two Departure consoles: North managed aircraft departing to the north and east and South managed aircraft departing to the south and west.

Importantly, new radars were commissioned shortly thereafter: a Terminal Area Radar (TAR) for Approach/ Departures and remote radars at Canberra Airport and The Round Mountain. The TAR rotated at 15 rpm with a range of 40nm and provided a more effective tool to process terminal area traffic and reduce the minimum separation standard to 3nm, but still subject to wake turbulence separation standards. The Canberra radar enabled a radar service for arriving and departing aircraft at Canberra and a continuous radar service in controlled airspace between Sydney and Melbourne. The Round Mountain radar enabled a continuous radar service in controlled airspace between Sydney and Brisbane.

Further enhancements to the radar system occurred in 1974 with the introduction of Secondary Surveillance Radar (SSR) at Sydney. An Interim Label Display System (ILDS) was commissioned, allowing non-discreet codes without Mode C (altitude data) and displayed as geometric designs depicting identified aircraft. This was not digitised, so the geometric symbols were fuzzy squares, rectangles and circles. Radar identification could be established by instructing the aircraft to "squawk ident".

Standard Instrument Departures (SIDs) were introduced in the mid-1970s and these provided specific instructions to aircrew to prepare the initial part of the flight after take-off rather than being issued with a radar heading with the take-off clearance. By 1989 the number of SIDs had increased exponentially to 87, until a review was undertaken later that year to reduce the number to about 10.

I moved on to the Flow Control position, which communicated with other controllers rather than aircraft. The Flow Controller would establish the landing sequence at Sydney and instruct the En-route and/or Arrivals controller to delay or sequence aircraft to enable a steady flow of arrivals. Landing times were calculated by distance to run, speed and the runway in use. Two to three minutes between consecutive arrivals would permit a departure between two such arrivals. The further introduction of wide-body aircraft often reduced the landing rate because of additional wake turbulence separation standards.

I also returned to the "new" tower (No.4), described above, in order to regain currency on all tower positions. I needed to undergo such re-familiarisation as I was to assume a check control role where I would do routine bi-annual assessments on rated controllers and initial checks on controllers being trained in new roles. Routine checks would only be one or two shifts, whereas a final check for endorsement on the position could be up to five days. It was important to ensure that the controller in the latter situation, whether it be in tower or Approach/Departure positions, was competent in all runway scenarios.

In 1980 I took up a supervisory position and later a management role, so no longer could I tell pilots where to go.

Wessex Helicopter 832 Misshap

IN November 1974 I had my first experience as an embarked birdie on board HMAS Stalwart during a deployment for Exercise Warm Waters to be held off Queensland in November of that year. Two Wessex 832 and 834, aircrew and maintenance personnel were provided from 725 Sqn for a period of approximately one month. This is setting the scene for what was to become a memorable trip and a unique experience.

On the 12 Nov 832 crashed during a forced landing onto a beach in the Shoalwater Bay training area after experiencing loss of engine power at about 30 meters. The following are my recollections of events following the crash and may be a little hazy considering this month is the 50th anniversary.

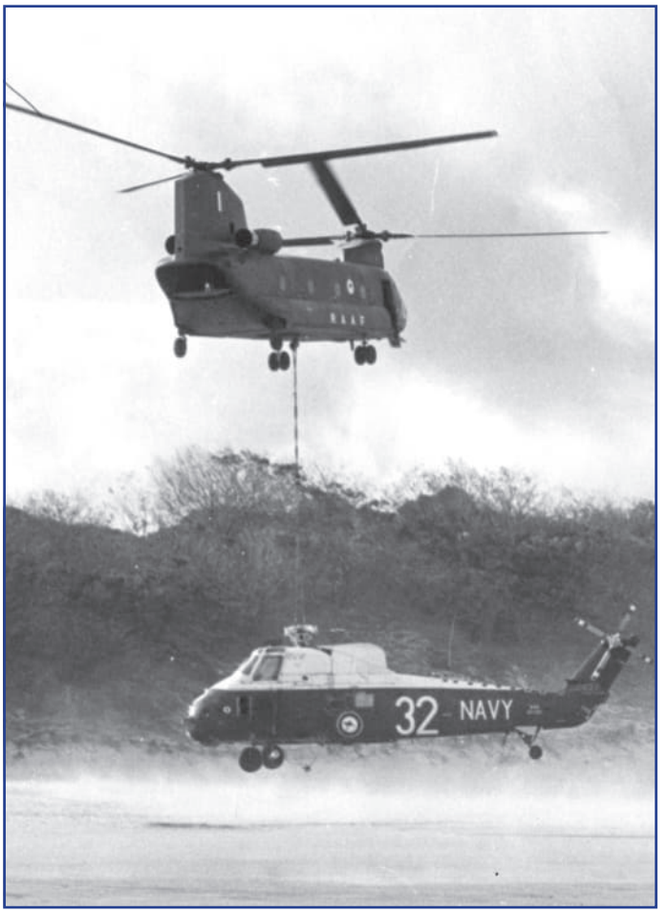
The Aircrew were fine, damage to the aircraft was significant, namely a caved in nose torn port oleo and the external fuel tank and carrier left somewhere along the beach. It became apparent to senior management that the only option of moving the aircraft from the beach would be for it to be lifted, the result being that a RAAF Chinook was dispatched from Shoalwater Bay.

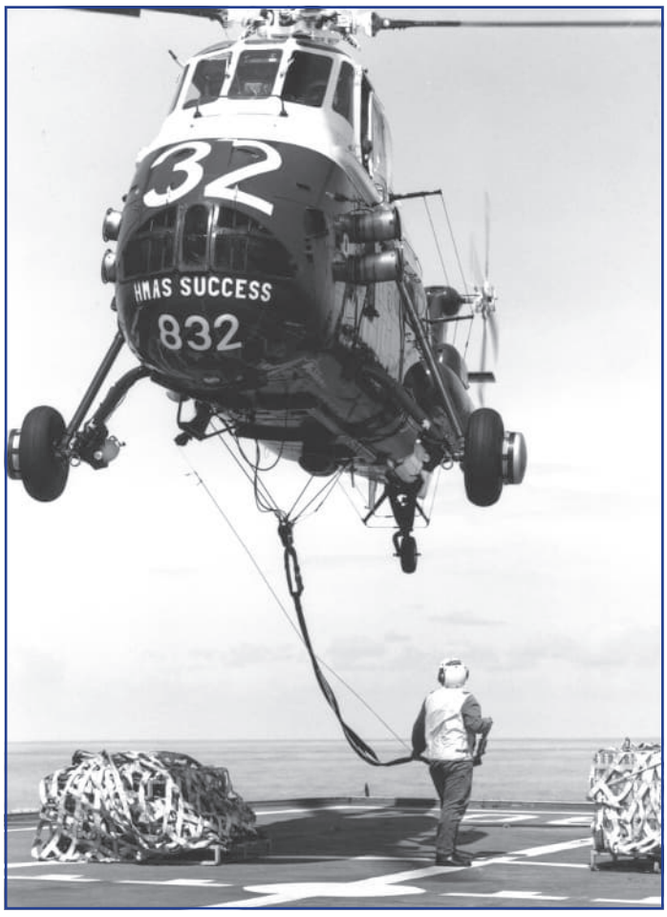
In the meantime, 834 was sitting unserviceable inside Stalwart's hangar. The part required to fix it was available in 832. A couple of us maintenance personnel were sent ashore in the ships RIB to remove the required part whilst it was still available on the beach. On the return trip and due to the surf, we were required to wade out to the RIB carrying the aircraft part. In due course the Chinook arrived, 832 was made ready for the lift and after a couple of attempts it was pulled free from the sand and it was on its way to Rockhampton airport; all this was viewed from Stalwarts flight deck.

Running parallel to this another Wessex was dispatched from Nowra to Queensland as a replacement for 832. In addition to a couple of additional maintainers, included was a Palouste to enable further starts during transit.

In the meantime, 832 was being prepped for road transport to be taken from Rockhampton to Gladstone where the ship was to dock. 832 was delivered to Rockhampton, it was loaded athwartship directly in front of the hangar for return to Sydney. This enabled one aircraft to still operate whilst the other was confined to the hangar. Then we were on our way home! ~ ***Mark Morris.***

Story & Photos courtesy of the RAN Fleet Air Arm Association Newsletter "Flyby".





Left, 832 being lifted back to Rocky by an obliging Chook. Right, 832 serving aboard HMAS Success some time after the Shoalwater Bay accident.

The Aircrew Perspective.

Wessex 31B 832 Forced Landing - Stockyard (North) Beach- 12 November 1974 by Geoff Ledger (copilot)

In late October 1974, two Wessex 31B helicopters from then HT 725 squadron embarked in HMAS Stalwart for a four-week Army exercise in the Shoal Bay region Queensland. I'm not sure why the Wessex were selected, perhaps the Huey's were grounded for some issue, anyway, it was an exciting and eventful training exercise for the embarked crew.

On this particular day the Flight Commander, LEUT John Leak and myself were flying a low-level reconnaissance sortie just to the south of Shoal Bay along Stock Yard (North) beach adjacent to the Byfield National Park. This was about 50 KM from the closest town of Yeppoon. The many readers who have worked on Wessex engines would remember a small issue of the Inlet Guide Vanes 'wandering' – a pilot's technical term.

On this day at low level 100 knots and 100 feet, Wessex N7-222 suffered an engine surge and serious loss of power, which resulted in rapid descent and forced landing on the beach well below the high-water mark. As you can see in the photo, the port oleo was smashed and some serious blade tip damage also occurred. Due to our low level, there was no chance to transmit a distress call; this was done after the aircrew egressed the helicopter via our SARBE radio. We needed to inform 'Mother' (HMAS Stalwart) of our predicament.

I was detailed off to swim out through the surf to a passing small tinny about 300 metres offshore. Of all my physical attributes at that time, swimming was not high on my strength. Notwithstanding, I made it to the tinny much to the amusement of the two locals who had a reasonable catch of snapper and bream. I asked them to take me to the Stalwart which was about fifteen miles to the north around a couple of headlands. Off we went – a rough old ride and my old mate says "halfway there we might run out of fuel before we arrive". Thankfully the tinny makes it to the Stalwart, which was at anchor. Also, thankfully it had its ladder-way out, so I did a swan dive out of the tinny, and really struggled the last 5 metres to make it to the ladder-way landing as the ship was surging up and down, pushing

Wessex Helicopter 832 Misshap *continued*

The 832 survived any other aircrew attempts on its life and was retired in due course. Here it is being craned onto a low loader for its final journey to HARS, where it has been refurbished.

me away. The POCD grabbed me by the scruff of the neck and dragged me onto the platform, whereby I scrambled up to the midships area where the skipper, Captain Burnside was waiting. He looked at me in amazement and asked where the bloody helicopter was. I nervously replied we had crashed on said beach some distance away. He rolled his eyes and said 'f**** birdies'. Stalwart provided some fuel for the tinny to get home.

Luckily, we had an ATC Officer in the detachment, Paul Shiels. He managed to contact RAAF Air Command that day and they authorised the first operational Chinook lift in the ADF – fortunately there were two Chooks in the exercise area. The 725-maintenance crew removed 832's blades and prepared the helicopter for the lift. The Chinook then lifted the old girl above the high-water mark and plonked her down on some tea-tree scrub. It stayed there until the 15th whilst the RAAF formally determined the lifting capacity of the Chinook, when it was lifted to Rockhampton.

A replacement Wessex (825) was flown up to Rockhampton two days after the accident.

Footnote:

832 was repaired and returned to service, including a spell as HMAS Success's aircraft (see image). It was subsequently used as a training aid at the Air Technical training school at RAAF Wagga, before being sold to the Historic Aircraft Restoration Society in November 2018. It was moved to HARS' Albion Park facility the following February and restored as a static display where it can be seen to this day.

Iroquois 893 Now Represens an ex-RAAF B Model

Iroquois 893 being hoisted ready for loading

On the truck and ready to go.

Story: Vic Battese
Photos: Howard Mitchell

893 in the hangar at Douglas Aerospace Wagga.

HARS acquired two ex-RAN 'B' model Iroquois in 2019 and an Ex RAAF/ARA 'H' model in 2023.

One "B' model and the 'H' Model have been fully restored. One Huey, 893, is still being restored. The paintwork on that helicopter had deteriorated in some areas and needing a repaint.

As we already had the RAN and the Australian Army represented in our historical fleet, a decision was taken to re-paint 893 in the livery of a 'B' model Huey as operated by the RAAF No 9 Squadron in Vietnam in 1966. Funds for the repaint were provided under the Department of Veterans' Affairs "Saluting Their Service Commemorative Grants Program".

The paintwork on 893 has been completed and the helicopter is now back with the Huey team to complete the restoration which the team hopes to complete by the end of this year.

893, Now in RAAF livery arriving at QinetiQ Air Affairs.

The three Iroquois Helicopters, Navy 898, Army 703 and RAAF VH-NVR.

DC-3 Drops in For a Visit

Story: Terry Scanlan.
Photos: HARS Facebook.

Crew member giving the thumbs up.

A very young Captain of the DC-3.

WHAT a pleasure it was to see another fully operational DC-3 drop into Shellharbour Airport and pay a visit to her cousins at HARS.

I first noticed ZK-AWP when I heard the distinct sound of the engines flying nearby. Looking out to the east over Bate Bay (Cronulla) the DC-3 could be seen heading South along Victor 1. Flight Radar identified the aircraft as ZK-AWP and it was headed down to Shellharbour Airport for a stop on its way South.

The aircraft, now owned by an Australian Company in Darwin, was previously operated by Air Chathams doing scenic flights in New Zealand and will be sadly missed as it was one of three remaining DC-3s in New Zealand. Another DC-3, ZK-DAK, is rumoured to have been bought by the Darwin based company leaving only ZK-JGB remaining as the last operational DC-3 in New Zealand.

The NZ DC-3 on the ramp at HARS.

Inaugural Life Members Luncheon

Story: Maureen Massey
Photos: Sherryl Sherson

HARS has a remarkable membership and over the years many have contributed to make our organisation what it is today.

There are others who have gone the extra yards and supported HARS in ways that have provided not only financial security but given the Organisation a strong structure and a clear path into the future.

Particularly in the early days, when HARS was in its infancy and a few aviation orientated people decided to meet in a garage and discuss how to try and save Australia's rich aviation heritage. This resulted, of course, in the collection of aircraft bits and pieces, which eventually over time, became a collection of historical aircraft and memorabilia second to none in the world.

To these members we are extremely grateful, and for the first time it was decided to acknowledge their contribution formally.

An Inaugural Luncheon was held on Saturday 14th December on the mezzanine level at HARS and all Life Members were invited to attend. The Luncheon was organised and catered for by Sherryl Sherson, HARS Event Manager, and was a truly memorable event.

The Life Members who attend were Bob De La Hunty, Robert Greinert, Denis Baxter (passed away 3 weeks later), Jim Marshall, Jim Thurston, John Meares, Gary Volkers, Jim Hayes, Trevor Wallace, John Cleary, Warren Goodhew, Gary Squire, Don Hindle, Graham Smith and Maureen Massey.

Other Life Members who could not attend were Mike De La Hunty, John Hewitt, Clive Gibbons and Bill Smith.

During the lunch, Bob gave a short speech acknowledging the contributions of the "Lifers" and the gratitude from HARS. Bob also paid tribute to our past Life Members, Mal Hallowes, Kevin Taylor, Gordon Glynn, Tony Duggan.

The menu was delicious, with starters of Pumpkin, Sage & Prosciutto Arancini Skewers and Smoked Salmon. The main course was Spring Lamb or Chicken Ballotine followed by dessert of Lemon Meringue or Strawberry Eaton Mess, both served with Ice Cream and/or Cream. Of course, Sparkling wine, Cabernet Merlot and Brokenwood Semillon were welcome guests!

Many thanks to Sherryl and her helpers for providing that wonderful meal and venue, it was really special.

We hope to continue with this form of recognition into the future.***Cheers ~ Maureen.***

The 'Lifers'.

The table setting for the lunch.

A Paint Job for “Mossie”

Story: Steve Keddie
Photos: Terry Scanlan

The Mosquito model is now finished.

When I first saw the Mosquito model, formerly owned by our late Gordon Glynn, it was in a somewhat dilapidated condition. The center section of the wings had a basic plywood frame to mount the engines and main undercarriage, and to mate the wing to the fuselage. The overall wing construction was a Styrofoam core with thin balsa wood sheeting glued onto the foam to form the skin. However, most of the glue had dried out and virtually all the balsa wood skin was peeling off. At least the balsa wood strips comprising the wing leading edges were intact. For the rest of the wing, there were no flaps, ailerons, nacelles or propellers, and the existing wing-tip sections had fallen off the wing.

The fuselage was constructed out of fiberglass. However, the rudder, tailplane, elevators and tail wheel were nonexistent.

Re-construction started by building the rudder and tailplane assembly. 3mm balsa wood was used to construct ribs and stringers to build up the core structures. These were then “skinned” with 2 layers of 1.5 mm balsa wood sheeting, glued together to make a 2-ply laminated skin.

The tailwheel mounting assembly was constructed with scrap aluminium, cut and bent to the required shape.

Next were the wings. All the original balsa skin was removed as most of it had peeled off anyway. A layer of 1mm balsa wood sheeting was then glued to the Styrofoam core using PVC glue. The second layer was then glued over the first layer using 1.5mm sheeting using super-strength Araldite. The existing wingtips were then glued into place and then the wing surface was sanded to blend into the wing tips and leading edges.

For the Nacelles, frames were constructed to form the basic shape using 5mm balsa. 3 mm balsa stringers were then mounted fore and aft on the frames. Over this structure were glued two layers of 1.5mm balsa sheeting.

New flaps and ailerons were made using the same techniques that were used to construct the tailplane.

Once all the balsa wood construction was completed, it was given a good coat of Dope to seal the surface. After re-sanding, a coat of primer was applied to highlight all the

The five exhaust stacks.

Master Model Maker Steve with the "Mossie" model.

surface imperfections. A repetitive process of body-filling, sanding and re-priming followed until the surfaces were ready for painting.

The propellors blades were made from scrap aluminium – cut and twisted to shape. The section of the blades near the hub had 3mm balsa sheeting glued to the front and rear surfaces to increase the blade's thickness in this area. These wooden additions were then sanded to "fair" them in with the metal. The wood was then Doped, body-filled, sanded and primed.

The propellor spinners were made from two layers of 1.5mm thick balsa wood strips glued together over a "former" to give the required shape. The very tip of the spinners used a piece of block balsa which was glued in place and sanded to blend in with the rest of the structure.

The original undercarriage legs were simply straight aluminium rods. Given that this would now be a static model, I decided to make undercarriage legs more representative of the real thing. Fortunately, we have a real example of the undercarriage legs in Hanger 2 which I used as a template. The new legs were made from brass tubing and rod which was cut, bent and soldered to shape.

The exhaust stacks were also made from brass tubing, cut, bent and soldered to shape. You will notice that there are only 5 exhaust pipes per side. This is because on some Mosquitoes, the rear two cylinders on either side of the V12 engine used a common exhaust pipe.

When all was ready, the model was painted and decals applied. Then the whole model (except for the wheels) was spray-painted with a 2-pack clear finish.

Side view of the "Mossie".

Air Cadets Passing Out Parade

Story: Terry Scanlan.
Photos: Howard Michell.

The Air Cadets at Parade Rest.

HARS DHC-4 Caribou and Iroquois 703 Helicopter performed a flyover of the No. 338 (City of Shellharbour) Australian AirForce Cadets Squadron's Passing Out Parade on 7 December 2024. HARS aircraft have supported this event for several years.

The Caribou Crew Rod Holzwart, Alex Le Merto and Mark Kelly.

703 in trail with the Caribou.

HARS Aircraft Birthdays 2024 and 2025

Story: Peter Snelling

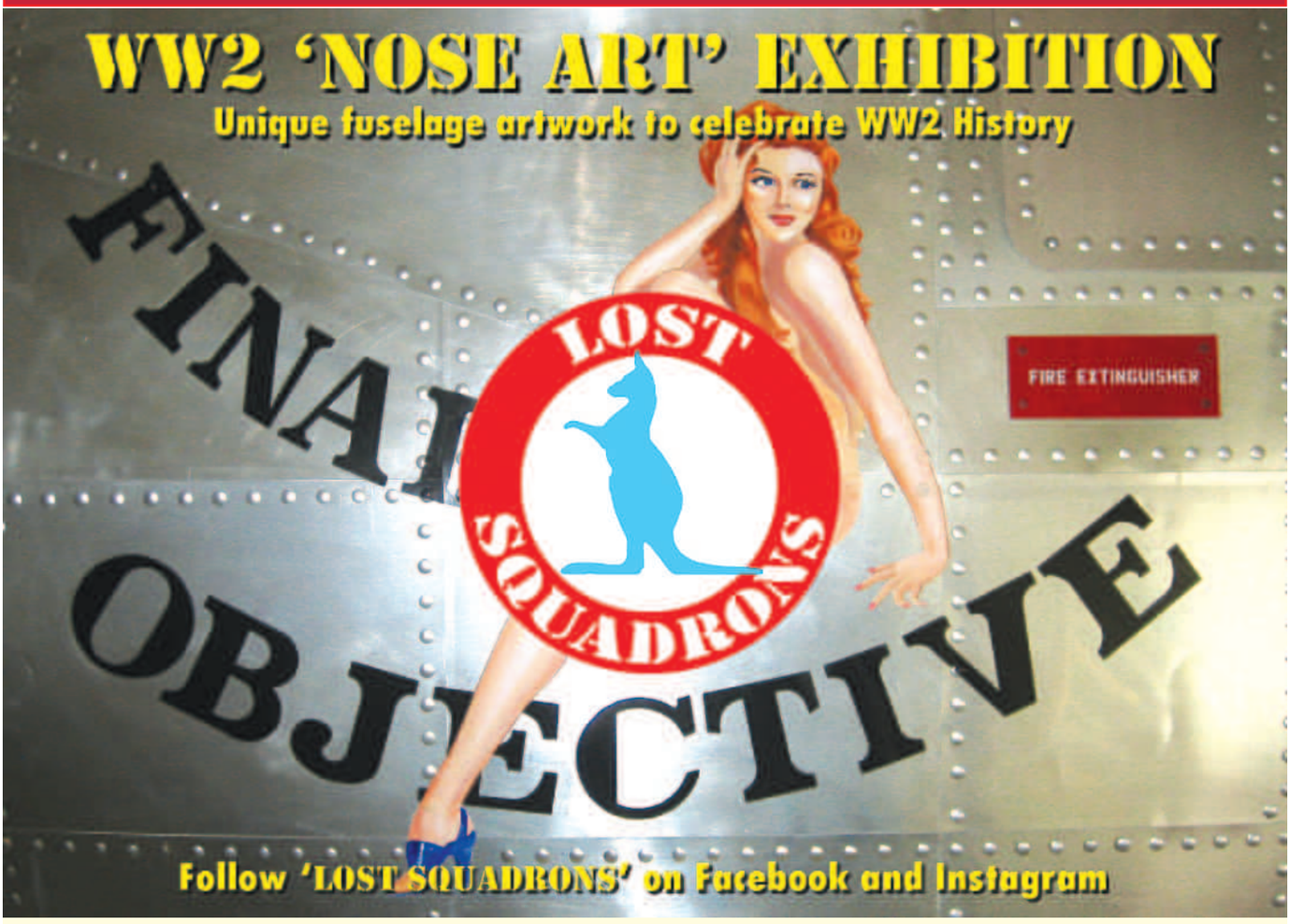
IF you ever wondered if HARS really was a 'museum' – have a look at the HARS 'aircraft birthdays' that occurred during the past year 2024.

AIRCRAFT	REGISTRATION	MANUFACTURED	BIRTHDAY
Convair VC131	DVH-TAA	1954	70 Years Old
Auster J5G	VH-NVY	1954	70 Years Old
Caribou DHC-4	VH-VBA	1964	60 Years Old
Caribou DHC-4	VH-VBB	1964	60 Years Old
Bell UH-1B	VH-NVR	1964	60 Years Old
Boeing 707-138B	N707JT	1964	60 Years Old

HOWEVER – 2025 WILL BE AN EVEN BIGGER YEAR FOR OTHER HARS AIRCRAFT!

SO, IT'S A VERY "HAPPY BIRTHDAY" TO THE FOLLOWING...

AIRCRAFT	REGISTRATION	MANUFACTURED	BIRTHDAY
Douglas DC-2	DC-2-115G	1935	90 Years Old
Douglas C-47	VH-EAF	1945	80 Years Old
Douglas C-47	VH-EAE	1945	80 Years Old
Douglas C-54	VH-EAY	1945	80 Years Old
Consolidated PBY-6A	VH-PBZ	1945	80 Years Old
Lockheed C-121	VH-EAG	1955	70 Years Old
Grumman Tracker	VH-NVX	1965	60 Years Old
Victa Air Tourer	VH-EAQ	1965	60 Years Old
Fokker F-27	VH-TQN	1985	40 Years Old
And while only a youngster – this aircraft has been at HARS for 10 years:			
Boeing 747- 438	VH-OJA	1989	36 Years Old



Fuselage artwork

WW2 Nose Art Exhibition at HARS

LOST SQUADRONS

HARS will host an exhibition titled LOST SQUADRONS. The exhibition will consist of Aircraft Nose Art created by Stephan Portal. Stephan has worked as an Art Director with several major graphic design studios before moving his career to 'Animation'.

His Nose Art creations are inspired by his friendship with a WW2 pilot who flew Handley Page Halifax bombers and his work is dedicated to the pilots of WW2.

The exhibition of Stephans's Nose Art will be on display in HARS Hangar One from mid-April through to the middle of May 2025.

AERO REFUELLERS COMES ONBOARD WITH HARS

Aero Refuellers is a division of K & S Freighters Pty Ltd and has its base at Albury NSW.

They supply fuel throughout regional NSW and Victoria airports and recently have included Shellharbour Airport.

HARS welcomes Aero Refuellers as one of its major sponsors and looks forward to working together in the future.

B707 Homeward Bound

Watch This Space!