

PHOENIX



QUARTERLY MAGAZINE OF THE
AUSTRALIAN HISTORICAL FLYING MUSEUM
HISTORICAL AIRCRAFT RESTORATION SOCIETY INC.



Autumn 2008



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The front cover photograph was taken on ANZAC Day morning as our aircraft began their take-offs for the Shellharbour Memorial at 8am.

The photograph shows the Dak holding as the Tiger Moth takes to the skies overhead.

President's Report



This is probably the most difficult President's Report that I have written as we are in the middle of so much at the moment that its hard to see the light at the end of the tunnel.

I know this is the same with other members of the Committee, particularly Robert Greinert who is not only running the restoration business and re-establishing it in the Museum building but dealing with the other issues that arise on site, and then at the same time not only finishing off the Museum building but managing the super hangar construction. He will need a long holiday when this is all over or some peace and quiet to figure out where everything is up to and how to organize the future!

Given the economic conditions prevailing at the moment we need to be cautious with expenditure and projects, but at the same time it is inevitable we have to spend money to keep aircraft operating to generate support from sponsors and the public which won't happen if we leave them tucked away in the hangars.

In dot points I have highlighted a number of things that are happening which we will expand on at the next members' meeting which will be held on Saturday 28 June at 2pm

- Connie painting
- Convair project
- EC121-H cockpit project
- Hunter & MIG 15
- Hangar doors
- Administration centre
- Website

- Southern Cross
- Vampire
- SIDS programme Cessna 310
- Cat blisters and nose turret

We recently honoured our Anzacs with the annual fly over of the Shellharbour memorial at 8am on Anzac Day and a further fly over of the Wollongong March at 10.20am. Thanks to all the engineers and crews who were able to make this happen and, as many of you will have seen, the media reflected on our contribution which leads to more visits.

John Martin has done a remarkable job with his wife Sharon in co-ordinating the visits and although we are only saying we open from Wednesday to Sunday it is rare that he has not got bus loads and pre-booked tours on Mondays and Tuesdays as well. We are still in the process of gearing up advertising to attract visitors and John will need considerable tour guide support as that process unfolds.

Our initial target is to get our visits over the next twelve months up to 40,000 adults at \$10 per head and as you can imagine this will add significantly to our cash flow and support the very large donation base we currently have which has carried us for so long. This target represents 300 people on average a day or 2,000+ a week which is ambitious but, considering we do not promote ourselves at this time, it is realistic, particularly when you add in the 27,000 people who attended our open day on 8 March.

We are in the process of getting ourselves organized to run quarterly engine run days which will add to the attraction and help boost the potential for achieving the objective.

HARS will be attending the open day at Nowra on 25 May and we have been booked for the Coffs Harbour Airshow on 27/28 September, RAAF Amberley Airshow 4/5 October and the HMAS Albatross 60th Anniversary Airshow on 25/26 October.

The Wings Over Illawarra open day was an outstanding success and everybody involved needs to be congratulated, particularly Professor Michael Hough who put so much into the arrangements. We were visited by Temora Aviation Museum with the Canberra Bomber, Roy Fox with his beautifully restored Dragon Rapide, Charlie Camilleri and Jeff Muller with the magnificently presented L39 Albatross, Royal Australian Navy with their Squirrel and the RAAF with the Caribou.

The RAAF had intended to visit with a C130 but it was called to New Guinea at the last minute but they followed by with a visit the following Saturday taking 80 of the local Air Force Cadets for some flying. The Air Force Cadets now operate out of our facilities as do the Air League and we are honoured to be able to give the youth of the district such support.

We had many politicians and local dignitaries visit us on the open day including entrepreneur Dick Smith who has supported the Catalina and had the original idea of a memorial to those who served on Cats during WWII and post war operations with various airlines.

As you will see elsewhere in the *Phoenix* a Christmas in July function has been organized by Julie Hourigan and Wendy Wallace for Saturday 5 July and we also have our annual church parade that day at 3pm.

Look forward to seeing you on these occasions.

Bob De La Hunty

A Boogie Woogie Meeting— or Two

Peter Reardon

On 22 July 2006, an American friend sent me a web link to a photo of a Pan American Airways (PAA) Boeing 377 Stratocruiser similar to the one in the photo below. The Stratocruiser was a development of the Boeing B-29 bombers of World War II and used the same wings, engines and tail mated to a 'twin hull', pressurised fuselage of similar shape to an inverted 'figure 8'.

One particular photo caught my attention as it was taken around 1955 at my home airport—Eagle Farm airport in Brisbane, Queensland, outside the Australian National Airways (ANA) igloo terminal. A PAA Stratocruiser was a very rare sight in Brisbane and I can recall very clearly from my early days as a kid, riding my bike to the airport every Saturday and Sunday at about 5:30am to watch the preparations for the early departures and the subsequent arrivals throughout the mornings. I always had my Kodak Box Brownie with me and took many photos of dubious quality on these excursions.

Whenever the weather in Sydney was bad, as it apparently was on this particular day, some of the international aircraft were diverted to Brisbane and that is how this particular PAA Clipper arrived at Eagle Farm. I was just a 13 year old lad standing at the waist high, chain and steel post (security) fence that separated the public from the aircraft apron and was very impressed by the size and shape of this aircraft and the four huge propellers.

As the passengers disembarked from this monster of an aircraft to go into the



Peter Reardon © 1955

terminal hangar, a large coloured lady with a humungous smile came right over and said "Hi Sonny, you're up early". After explaining that I often came to the airport early at weekends to watch the aircraft she opened her purse and said, "Here's a couple of packets of candy off the airplane and an American coin for you". She handed me two small packets of 'CrystOmint' Lifesavers with the 'PAA Logo' and 'Made in USA' stamped on them with a US one cent coin. As I had never seen an American coin, or CrystOmint Lifesavers, let alone a PAA Stratocruiser at this time, I was pretty impressed by all of this and pondered on how lucky I had been to be there.

Shortly after, an airline official came out from the terminal and asked me if I was the kid that the lady had given the candy and coin to? My immediate thoughts were that it must have been illegal for me to have accepted them without Customs knowledge and approval. But, I indicated that I was the person he was looking for and to my utter surprise, he then invited me to follow him on-board the PAA Stratocruiser for a grand tour.

I was even more amazed at its size once I was up close and entered into the spacious interior. Then, to also find that there was a spiral staircase, just aft of the main entry door, behind the wing, which led to a lower deck lounge configured with sideways seating and a bar was more than I had ever imagined.



Peter Reardon © 1955



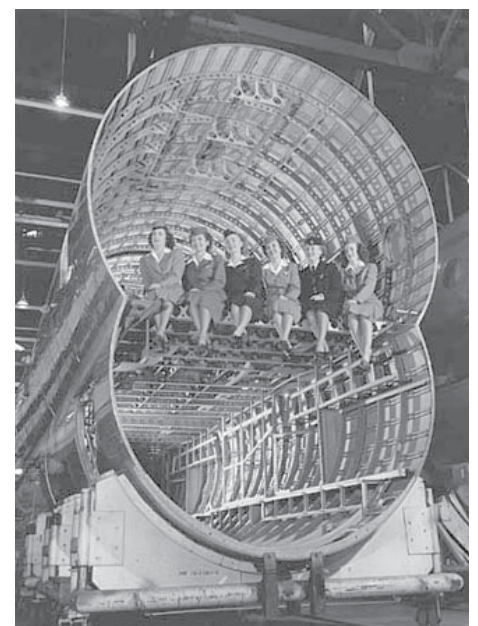
Unknown photographer © Airbornegrafix
Historic Aircraft Archives

How good must it be to fly across the Pacific Ocean in one of these aircraft! I could only imagine and dream of such things.

My escort then took me back to the main cabin deck and demonstrated the seating and sleeper accommodation. There was so much room compared to the inside of the domestic DC-3s and DC-4s that I had been lucky enough to see inside on previous visits to the airline maintenance hangars. I was sure that a couple of DC-3s would fit easily into this monster without doubt and perhaps even a DC-4 on the main deck and DC-3 below?



Unknown photographer © Airbornegrafix Historic Aircraft Archives



Unknown photographer © Airbornegrafix
Historic Aircraft Archives

No inspection would have been complete without a prolonged and drooling visit to the 'business end' and into the cockpit to see where the pilots, engineers, navigators and radio operators conducted their professions. Visibility from the cockpit must have been fantastic for the pilots as there were windows all around the bulbous nose at eye level and still another row of windows above and below that!

Although it seemed like I had been on-board for hours, it was probably only a few minutes in reality, and little did I know then that the memories were to last a lifetime and two reminders would emerge in 2006 and 2008. As I was escorted back behind the chain fence by the official, I thanked him for the tour of the Stratocruiser. He said that it was the lady who gave me the candy and coin that I should be thanking as she asked for me to be taken to inspect the aircraft. He then asked if I knew who the lady was to which I replied "No". Although it did not mean anything to me, he then told me that I had just met a very famous piano player, the one and only 'Miss Winifred Atwell'.

Now, I did not know who Winifred Atwell was, but on returning home, I told my Mum that I had met "Miss Winifred Atwell" at the airport that morning. Mum obviously knew who Winifred Atwell was and that she did not live in Brisbane, or even Australia. My ear was soon burning from the whack she gave me for 'telling lies'. When I finally got my breath and composure back, I produced the two packets of PAA Lifesavers and American coin for my Mum to inspect. A bit late to avoid a thick ear, but she then realised that I must have met somebody important off an American aircraft—even if she was not certain that I had met Winifred Atwell!

Well, that thick ear was the only negative aspect that had turned me into a fan for life—what a great lady Miss Winifred Atwell was and how thoughtful. She could have so easily just kept walking into the terminal, but saw this scrawny kid at the chain fence and diverted out of her way to come over to where I was standing.

One of our neighbours, Jack, was at home and, as I often went to his house to play cricket and listen to him play the piano with this 'Boogie Woogie' music as it was called. I told Jack the story I told my Mum and showed him the PAA Lifesavers and one cent American coin.

When I told him that I had met Miss Winifred Atwell, he immediately realised that I must have done so as he knew she was due in Australia for some concerts. Jack's acknowledgment and confirmation of my morning's excitement was a little bit late to avoid my thick ear from Mum, but I did not care as I had the 'evidence' of my meeting – and a thick ear as well!

I told this story, above, to my American friends in 2006 and little did I know or foresee at the time, that in March 2008, I would again have an 'encounter' relating to 'Miss Winifred Atwell. My wife and I were staying at Kiama, NSW, for a few days while I attended the Historic Aircraft Restoration Society (HARS) facility at the Illawarra Regional Airport in preparation for a 'Wings Over Illawarra' Open Day. During this same weekend, there was also a 'Kiama Jazz & Blues Festival' with various artists entertaining in the local restaurants, clubs, hotels and park.

My wife and I had randomly booked to have dinner at a Kiama restaurant after the Open Day at the airport. To our surprise we found that Jan Preston, 'The Queen of Boogie Woogie Piano', was playing that night. Part way through her concert, Jan asked the audience if anyone recalled Winifred Atwell. As nobody seemed to be responding, and not wanting to show my age, I kept my experience to myself as Jan then played her keyboard as if Winifred Atwell herself was there again in person after all that time! At the break in the concert, I spoke with Jan and told her that I was too embarrassed to put my hand up earlier to respond to her question, but that I had in fact met Winifred Atwell and related this chapter of my life to her. Jan was amazed and said that I 'was truly blessed'.

Jan asked if she could use my story and material in her subsequent shows as she often performed concerts based totally on tributes to Winifred Atwell and would like to add some anecdotes like mine. I of course agreed to provide her with all the details of my 'meeting'. The next day, Jan was performing in the park and at the appropriate time, instead of asking if anyone recalled Winifred Atwell, told the audience that the previous night she was performing in a nearby restaurant and found someone who had actually met Winifred Atwell. Again she played to perfection, Winifred Atwell's 'Black And White Rag' (the signature tune adopted

by the BBC as the theme for the 'Pot Black' snooker program). It sent goose bumps up my spine as I gave Jan a wave from the back of the crowd and once again reflected upon my chance meeting with the great lady herself so many years ago.

Winifred Atwell later emigrated to Australia and continued her travelling and giving concerts until she died in 1983. I never did have the chance to meet her again, but always enjoyed her music and remembered her great kindness.

Some of the Stratocruisers survived the jet era and went on to be converted to 'Mini Guppy', 'Pregnant Guppy' and 'Super Guppy' Stratofreighters to transport rocket components for the Apollo space program, NASA and aircraft components for Airbus. The last of this breed were retired in the late 1990's (like myself!).



Peter Reardon © 1955

Even now, 53 years later, I still have the wrappers off the two packs of four Lifesavers with the PAA logo on them, but sadly have lost the one cent coin. Who would have thought that after all this time I would have had a 'Boogie Woogie Meeting—or Two' to recall pleasant memories of my days at Brisbane's Eagle Farm airport meeting Miss Winifred Atwell in 1955 and meeting Jan Preston in Kiama in 2008?

REMEMBER
to visit the
HARS website
www.hars.org.au

Super Hangar construction

Rob Greinert

At 5am on 21 April the convoy of trucks rolled in and lined Boomerang Avenue from one end to the other. The roof and wall cladding had arrived. Surveying the scene I wondered if the Boon Logistics crane would get it all off in a day.

As the full moon rose that night we found ourselves with one truck still to unload. Fortunately our truckie had a good sense of humor and unhitched his rig and headed off down to the pub for the night.

The roof cladding and insulation is now securely located over our 5000 sq metre roof and will be fixed over the next couple of weeks. For a variety of reasons the wall cladding goes on first followed by the roof. In the interim the concreters have commenced pouring the floor slab. Over 1000 cubic meters of concrete will be consumed in this process. Everything about our Superhangar is big and quantities and dollars are consumed in equal proportions.

The value of the building as an advertisement for HARS can already be measured in the publicity it is generating and the people we are attracting.

Every day somebody from the government or industry drops in to look at our mega structure. The opening line being "I was driving by and saw the building". Most humorous was the fellow from the Union who I think was looking for new recruits. He walked in and demanded to know what shonky roofer was up there on the roof. Was he a member? I replied, "well he is a HARS member and doing volunteer work up there".

The concept was hard for him to comprehend. The process eased somewhat after he bumped into a HARS member he knew. Then he decided that we were a wonderful organisation and since there were no plumbers/roofers to recruit, departed.

The most welcome drop in would have been the New Zealander who advised that he builds hangar doors. He was given the royal tour.

I must confess that I am surprised by the reactions of government and industry when they realize that we are actually owner builders and doing this job ourselves with subcontractors. Needless



to say the volunteer is an important component in this story and it would not be possible to undertake a project of this size without their input.

Epitomising the volunteer is Geoff Morris, plumber extraordinaire, who has undertaken all the hydraulic works for the hangar and without whose assistance we would be incurring considerable labour and financial costs. A big thankyou Geoff.

Rumors abound that we are contemplating Hangar Four. Its all true but probably two years away in the overall scheme of things. It will be mid 2009 before we are done with the finishing details like electricity, hangar doors, sprinkler systems etc. And then your building manager is going on a long holiday...



My Brilliant Career

Walt Smith

ex RAAF (4 years); ex TAA (7 years); ex Qantas (14 years); ex Cathay Pacific (10 years) airways

I read with great interest, the splendid article by Reg Barker in the last edition of Phoenix.

I remember that Apprentice intake at Trans Australia Airlines in 1950 and some of the valuable people who were in it. Particularly I remember John Muir, George Omiros, and Neville Burton. The mention of Ted Anelzark LAME, reminded me of a level-headed, clever and industrious man who treated the apprentices as his own young brothers. What a role model he was.

My story began in the RAAF in 1942 when at age 18, I enlisted as a Trainee Tech, on six shillings and sixpence per day. After being drilled and needled at Bradfield Park just north of Sydney, I was sent to Melbourne to number one school of Technical Training. With about three hundred others I attended Brunswick Technical College to learn basics.

This training lasted three months and we learnt use of hack saws, chisels, drills, files and measuring devices, including micrometers and vernier calipers. We were taught the solving of electrical equations. Also, how to temper metals and to do brazing and soldering. Most of us were until then, totally ignorant of all these things, so the training was invaluable.

After examinations, we were selected to what the RAAF thought we would best be suited, and what they needed most. I was selected for training as an Aircraft Electrician.

I really would have preferred Armourer because I had a couple of mates who were lucky enough to get this training. They both became air-gunners but neither survived the war.

After the electrician's course, at Melbourne Tech, I was trained to be a wireless mechanic's assistant at Ultimo Tech in Sydney, then trained to be a Wireless Maintenance mechanic, back at Melbourne Tech, then trained to be a Radar Mechanic at The Radar School at Richmond NSW. It was twenty months of full time training with no promotion from AC1 until it was all finished.



20 Squadron catalina at East Arm Darwin 1944



Cats on the concrete East Arm Darwin 1945

Then I got my LAC (leading aircraftsman) and was earning twelve and sixpence per day as a Radar Mechanic (air). Late in 1944 I found myself in 20 Squadron, a Catalina flying boat unit in Darwin. I was installing and servicing airborne Radar. Now I was earning my keep. We were pounding the Japanese in the Dutch East Indies, (now Indonesia), in the Philippines and up to the south coast of China.

I got lots of flying hours around the north-west area as supernumerary crew, because we had lots of 'teething troubles' with this, the very latest type of microwave radar. Also, I did checks down at West Bay where the aircraft were fuelled before each 'bash', which was the name we had for raids against the enemy. I was flown down in the first aircraft and with a resident army coxswain and his little put-put boat, visited each of our aircraft as they arrived, calling out "Radar?" If the gear had performed well on the two hour trip from Darwin, the flight engineer would give me the thumbs up signal. If it had been unserviceable, I would climb in through the portside gun-blister, start the APU and check and adjust or replace as required.

For a while I was the only Radar mechanic in 20 Squadron to have had training on the ASD1, known to the Americans as APS3. You could navigate the Catalina by this gear if you had to, as well as detect sea craft and air craft at up to 100 miles distant. It was magic stuff.

A rambling saga of memories

John Brownjohn

The photo of the Ansett DC3 that collided with a train at Mascot Airport as printed in the last edition of Phoenix under the article written by Reg Barker has kindled some old memories. Below are some that you may enjoy.



An Ansett DC3 after it had crashed into a goods train on the old strip at Mascot

The original north south runway at Mascot finished some distance from what was a railway embankment which carried coal to the Bunnerong Powerhouse (1). The embankment was necessary due to the swampy nature of the area. This line passed over the rail line at Sydenham, crossed the Alexandria Canal, passed on the north of the Qantas hangars, over a bridge at O'Riordan Street and a level crossing between Botany Road and General Holmes Drive (both still there—more later). Around 1948, the north south runway was modified by lowering the railway embankment to runway level and extending the runway to the north. As I remember, the Ansett DC3, on a foggy morning started a take off to the south on the runway extension and collided with a train which was on its way to Bunnerong. Damage to the aircraft was substantial, but as the distance from take-off roll to impact was not great, it was repairable.

Prior to the runway extension, to the north and east of the runway a grove of pine trees flourished (there had been a similar grove at the southern end taken out by a Liberator crashing into them). On one foggy morning we were looking to the north from our hangar and listening

My Brilliant Career

Continued from page 7

When the war ended in Europe I was posted to 2FBMU (Flying boat maintenance unit). It merely meant moving to a new hut. I kept doing the same work until the Japanese surrendered in August 1945.

Discharged from the RAAF in January 1946, I drifted free for a year and then joined TAA in 1947. I applied for and obtained a trade certificate as an Aircraft Electrician from the Department of Labour and Industry in 1948. I was now a recognized tradesman because of my RAAF training and my experience with TAA.

In 1950, I met up with the apprentices named by Reg Barker (*Phoenix*, Spring/Summer edition 2007). Together, we worked on DC3s, DC4s, Convair 240s, DC6s, Viscount 720s. Then, fed up with almost continuous night shift, I left for a day job at Qantas in 1954.

Mostly I worked on the old DC4s, but sometimes on the new Constellations, (L1049s) with Alan Sheppard and Ron Beehag. Frank Rowley was our foreman Electrician.

One day Alex Campbell, one of the founders of the Society of Licensed Aircraft Maintenance Engineers (Australia), told me about the Qantas Technical School.

Len Carolan was the training manager and he quickly recruited me to teach apprentices basic Electrical and Instruments.

I was given instructional methodology courses and thrown into the classroom. I made sure I was at least one page ahead of my students each day.



Teaching 707 to Qantas flight engineers 1962

I was selected to attend the Boeing School in Seattle USA and came back with the course notes and some knowledge to set up the Electrical and Instrument section of the Qantas courses. The school instructional staff are no doubt still remembered by some of the older HARS members, they were; Bill Innes, Sam Rose, Alan Charlton, Ian Stacey, John Spence, Max Jacobs, Jim Peterson, Neville Fountain, Reg Tuchin, George Windle, George Congreve, Bob

Middleton and several others whose names and faces I've forgotten. Sorry guys.

I was glad to be able to give some refresher training on the Lockheed 1049 to HARS people. I did this twice and wished I had been able to do something more. But alas, I cannot climb about on airplanes at 83.

All the best of luck to HARS and its members. I'm proud to belong to such a worthwhile organization.



HARS members refresher course on the Lockheed L1049 in 1999

DON'T FORGET TO BOOK FOR...

CHRISTMAS IN JULY

This is a fund raising opportunity for HARS and it is hoped that it will be strongly supported by members and friends.

We will begin the Christmas in July celebration with the HARS Church Parade. As per previous years, our Pastor, Grahame Abrahams, will conduct a Service commencing at 3.00pm at the Shellharbour Uniting Church. Following the Service, you are invited to stay for a cup of tea with other members of the congregation. Then it's back to HARS for pre dinner drinks prior to sitting down to a Christmas dinner.

Bookings can be made at the HARS shop for either individuals or table groups (up to 8 people). Payment can be made by cash, cheque or credit card.

WHEN: 5 July 2008
WHERE: HARS (somewhere in amongst the aircraft)
TIME: Pre dinner drinks from 5.30pm
DINNER: Serving to commence at 6.45pm
COST: \$35.00 per person

Contact:
Julie Hourigan: 0409 770 803 or
Wendy Wallace: 0413 667 069



A rambling saga of memories

Continued from page 7

to the sound of a Lancastrian on finals to the runway. It finally became visible—too low and heading towards the pines. The pilot applied FULL POWER i.e. ‘through the gate’ (2) and did a go around. A most impressive sight and sound to hear four Merlins at maximum power.

The railway embankment provided a convenient method for Qantas staff to walk from Sydenham Railway Station to the Qantas works. As noted, the embankment passed the Qantas hangar line. It was customary to back the Constellations (749s then) to the embankment and secure the undercarriage legs by wire cables for run up. As HARS members are aware, the Connie sprays a quantity of oil when starting up and running. This oil deposited itself on the railway tracks and caused a great deal of amusement to the staff watching the ‘Bunnerong Express’ (3) climbing the gradient from the runway to the O’Riordan Street bridge. The engine driver would apply sand to reduce the problem on occasions, but it did not help. The solution was to back the train some distance and approach the slippery part at speed, hoping that the momentum would carry the train over the bad patch.

One instance, when the Qantas Staff Christmas party was to be held in the hangar line, some apprentices (none of the 1949 intake) took 5lbs of anti freeze grease (a very thin and slippery compound) and greased some 50 yards of the embankment track. As the Christmas celebrations were in full swing, the Bunnerong Express came along and attempted the climb. As could be expected, the driving wheels spun—no traction. The driver took the train back and tried the fast run. No success. The train then backed to the Alexandria Canal bridge (some distance) and at full throttle, approached the embankment across the runway. It hit the greased section and with the engine driving wheels spinning, mounted the slope and crossed the O’Riordan Street bridge and on (presumably) to Bunnerong. This exercise created a great deal of hilarity among the staff watching from the hangar line (the hilarity was increased in line with the amount of grog consumed at the Christmas festivities).

On one memorable occasion, as a very young sprig apprentice I departed a DC3

on a training session from the grassed parking area in front of Hangar 20. The DC3 taxied away and turned north to the area beyond the railway crossing and out of sight. After a short time, it returned to the parking area. I duly inserted the undercarriage locks, control locks and opened the fuselage door. The pilot came down the steps and I was expecting to hear of an engine problem of some sort. He looked at me and said “have a look at the props” then with the trainee pilot he departed. I was somewhat puzzled by this remark and as requested, had a look at the props. About 50mm was missing from the propeller tips, worn away from contact with the ground whilst under power. Obviously the props had hit the ground with the engine running. I am not sure if this happened during engine run when the control column was not held back, or on initial application of power at take off. Either way, the DC3 bit the dust.

1. Bunnerong Power House. This was located roughly where Port Botany/ Brotherton Dock is on the eastern side of Botany Bay. This and the White Bay Power House supplied most of Sydney’s electricity.

2. ‘Through the gate’. The Merlin engine was fitted with a SU carburetor (‘Skinner United’ not ‘Smiths Universal’ which was fitted to many English cars) and a Claudell Hobson Automatic Boost control. This unit allowed the pilot to select the supercharge (Boost) level required and the control would maintain this power up to full throttle height. It had a maximum power level built in which controlled the engine up to full throttle cockpit lever travel (i.e. the carburetor butterflies were not fully open but in a slightly closed position with the cockpit lever in full open position). In emergency, the automatic boost control could be overridden (boost override). This was accomplished by taking the cockpit throttle lever to the full travel stop, moving to one side, and then further forward. This was called a gated throttle and movement to full travel allowed the engine to develop whatever power it could. In the Spitfire installation the boost override was controlled by an instrument panel knob, known as ‘the tit’. Pulling this had the same effect as through the gate. Operation in boost override resulted in a massive increase in fuel consumption and many fighter pilots who used boost override in combat situations eventually ran out of fuel.

I can demonstrate the operation of the throttle and boost override on the Merlin in the Museum to those interested.

3. Bunnerong Express. This was a freight train which operated from Sydney to the Bunnerong Power House carrying coal for the generators. Portions of the track remain and are used (insufficiently) to carry freight from Port Botany.

Australia's first pilot licence goes to daredevil dentist

Submitted by Maureen Massey

The first Australian pilot’s licence went to a Sydney dentist named William Hart. He was a daredevil character, who bought himself a Bristol Box Kite in 1911, just months after the American escapologist Harry Houdini, made the first official flight in Australia.

Hart was a pioneer of inter-suburban flying and confounded the local sceptics when he made the epic journey, following the railway line, from Sydney to Penrith, about 65 kilometres as the crow flies.

He thrilled Sydneysiders on one occasion by keeping up with a train, travelling at a mile a minute.

Hart’s low level flying soon got him into trouble, and he became the victim of Australia’s first spectacular air crash when he collected a tree stump. He had several more accidents, and it seemed only a matter of time before the daredevil dentist’s career came to an end. It did when he crippled himself in a crash from 200 feet (about 60 metres).

Penrith Newspaper clippings read...

Having made two good flights this morning, and when just concluding this third, Mr W.E. Hart, the aviator, had a misfortune to bump a stump and injure his machine to such an extent that his flight to Sydney tomorrow has to be postponed.”

Another headline...

Terrors of Flying Machine – Cows said to have died of fright.

Dairyman Henry Byrne is seeking 20 pounds damages from Australian aviator W.E. Hart for causing the death of his cows after flying low over the paddock in which they were grazing”.



Wings over Illawarra 2008

Michael Hough

It is my pleasure to report on our very successful Open Day—Wings over Illawarra 2008 (WOI 08)—and as the 'airside' aspects are well covered elsewhere (see for example Air Operators and Pilots Association Magazine AOPA April 2008 pp 18-26 for excellent photos and story) this report focuses more on the 'behind the scenes' aspects of planning and running the Open Day

WOI 08 was a co-operative event involving Shellharbour City Council (SCC), the Sports Aircraft Association of Australia (SAAA) and HARS. WOI 08 was run most successfully on Saturday 8 March 2008, and depending upon which report you believe an estimated attendance was 25-30 000 people (WIN TV reported over 30 000 attended).

As WOI 07 attracted approx 12-15 000 people it is clear that the general community relates well to the concept of an Open Day, and it is my opinion that WOI is now well established as a major regional tourist event.

Following this outstanding WOI 08 success, we have now mutually agreed that WOI should be held as an annual event on a predictable day each year, to encourage visiting aircraft owners and stall holders; and supporting organizations such as Car and Bike Clubs to plan their yearly programs well in advance, and so it is with pleasure that we can announce that: Wings over Illawarra will be held on the last Sunday of February each year—

WOI 2009 is Sunday 22 February 2009

WOI 08 was an Open Day rather than an Air Show due to CASA imposed limitations on the airspace over the Illawarra Regional Airport, so our WOI 08 policy was to both display the aviation related capabilities of the Airport, and also attract significant community support from the visiting public through deliberately offering two major aspects:-

- 1) Making the visit as low cost as possible for visitors by providing a large range of activities which were free to visit, and offering 'family friendly' charges where admission was charged.

2) Making the visit experience as attractive as possible by encouraging the involvement of a wide range of interesting displays and activities to supplement the core activities centred around aviation and airports—so consequently we deliberately encouraged attendance and displays by car and bike clubs and related hobbies such as model aircraft and farm machinery groups.

Accordingly, the WOI 08 plan was built around the HARS/AHFM complex but as well as emphasizing the airport's aviation capabilities such as the Aerial Patrol; Flight Training; Charter flights (both fixed and rotary wing); Aircraft Maintenance. Ultralight Aircraft Construction and the NSW Ambulance Helicopter Service. The following activities, events and assets strongly contributed to the attractiveness of the day:

- SCC which committed many more resources this year including hire of bigger PA system, advertising and setup of fencing, and closure of the eastern half of the East-West runway for public parking
- SAAA with a bigger fly-in of approximately 60 aircraft
- Model aircraft displays and three planned flying sessions of model aircraft
- Plastic modellers' displays
- The Rural Fire Service (RFS), which not only took on the invaluable task of controlling the public traffic access and parking on the airfield area, but also provided a very significant display of RFS assets, e.g. fire tankers
- City of Shellharbour (338) Air Force Cadet Squadron and visiting AAFC Cadets from other squadrons provided very welcome extra support in the many staffing tasks and in addition set up a recruiting display
- Both the Albion Park Air League Boys and Girls Squadrons assisted with very welcome support, e.g. by staffing a theatre in the Museum, as well as providing a marching demonstration and running a recruiting display
- Australian Defence Force assets provided a very useful combination of displays and recruiting stands. The RAAF provided a Roulette air display and flew in a Caribou; the RAN provided a Squirrel helicopter and RAN Pilot Training emulators; and Defence Recruiting provided a Maloo ute and a significant recruiting display.

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ANZAC Day 2008

It was a wet and grey morning as HARS aircraft prepared to take part in the annual fly over of the Shellharbour Memorial at 8am on Anzac Day and a further fly over of the Wollongong March at 10.20am.

HARS aircraft to take part in the fly over included both Dakotas, Neptune 273, the Cessna 180, the Winjeel and the Tiger Moth.



Disappearance of the Rainmakers

Ian Johnston

On the morning of 27 October 1952 a DC3 (A65-113) departed from the RAAF base at Richmond, NSW and headed for Mascot. On arriving at its destination it taxied to Bay 22. The ground handler signalled to the pilot to move further forward before cutting his engines. When the pilot disembarked he asked the handler why he wanted him to move forward. The handler replied that there had been heavy rain earlier and he didn't want the passengers disembarking or embarking to have to paddle through a large patch of water.

The DC3 was unusual in its appearance. It had a large construction made out of three-ply wood containing scientific instruments protruding out of the nose and it was said that it contained half a ton of steel ball bearings in the rear of the cabin—near the tail—acting as a counter balance.

Apart from the pilot, no one else left the plane although there were others on board. There was a woman dressed in a WRAAF uniform and also a man dressed in a RAF uniform who had arrived the previous day at Richmond flying a Vulcan bomber from the UK. These passengers were on a 'joy flight' which was not an uncommon event.

Two passengers boarded the plane. One was of a heavy build and medium height. The other was tall and slim with receding hair. They were both scientists from the CSIRO and were involved in rain-making experiments. One of the ground handlers remarked that there was no need to move the plane as the taller man boarding was wearing rubber galoshes over his shoes.

The plane departed on a southerly course towards Wollongong. Later a decision was made that the clouds were not suitable for experiments in that area and the tower at Mascot was advised that the plane was returning. The tower directed the pilot of the DC3 to commence a descent and to descend to 8000 feet. The pilot acknowledged the signal and that was the last message received by the tower.

Meanwhile Ronald McDonnell of RAAF Richmond was captain of the RAAF Dakota A65-76 detailed by the

Commanding Officer of No 336 (T) Squadron at Richmond as Search and Rescue standby duties. At 11.43am he was ordered to become airborne to search for a RAAF Dakota aircraft which was overdue at a reporting point at 11.08am. He was told that the aircraft had a call sign LOC and that the pilot had reported from a position twenty seven miles east of Wollongong at a height of 8000 feet that he was returning direct to Mascot, descending on the way. The pilot had been ordered to report to Mascot Control Tower after he had descended to that height, but had failed to do so.

McDonnell was airborne at Richmond at 11.52am and proceeded to Mascot where course was set to position 27 miles east of Wollongong. On reaching that position by dead reckoning navigation, without anything of note being seen, his aircraft was turned on to a reciprocal course. At 12.22pm at a position 151° 11' east and 36° 19' south an oil slick was seen on the surface of the sea. From the appearance of the oil slick and the wreckage which could be seen floating on the surface, McDonnell was certain that this was the scene of an aircraft crash.

McDonnell immediately dropped smoke markers and a search for signs of survivors was immediately carried out. None were seen.

A Department of Civil Aviation (DCA) crash launch which was north of the area was contacted by radio and informed that a submerged dinghy and a small amount of debris were floating at a position 151° 11' east, 30° 19' south and was ordered to recover any debris as quickly as possible on arrival.

A Trans Australian Aircraft (TAA) which was assisting in the search closer to the coast was contacted by McDonnell and requested by radio to proceed to the position of the oil slick and wreckage and verify his opinion. The captain of this aircraft, although dubious at first, finally agreed with him that the oil, dinghy and debris definitely indicated that an aircraft had crashed at that position.

The DCA crash launch arrived at the position of the oil slick and wreckage and recovered certain articles of clothing, the damaged dinghy and several broken portions of a crashed aircraft.

McDonnell observed a RAAF crash launch also join in the search for survivors and he continued to circle

the area in which the wreckage was found for six hours but did not see any survivors.

Long before this, from the short time between the crash and his discovering the site (less than an hour and a half) and from the fact that McDonnell saw relatively inconspicuous pieces of wreckage, but no sign of any of the occupants of the aircraft, he concluded with certainty that there were no survivors from the crash.

He left the area at last light. Six other aircraft from the RAAF base at Richmond carried out extensive searches both north and south of the area during the day but did not report seeing any wreckage or survivors.

McDonnell again searched the area in company with five other Dakota aircraft the next morning but no one reported seeing any trace of the aircraft.

Launch search: Raymond Pitt was on duty at the DCA Search and Rescue base on Botany Bay at 11.25am when he received an order from the Kingsford Smith Aerodrome to put to sea to search for an aircraft which crashed about 5 miles east of Wollongong.

While he was proceeding to an area off Wollongong, McDonnell's aircraft came overhead and directed him by radio in a southward direction to a place which had been marked by a smoke flare dropped from an aircraft east of Coalcliff at 2.25pm.

While Pitt was searching there, within a radius of two miles, he found a number of pieces of wreckage which he was certain came from an aircraft. These included two oxygen bottles, one rubber dinghy, one life jacket, one blue great coat as worn by the Women's Royal Australian Airforce, bearing the name M Costello, one Royal Air Force Officer's cap, one flying suit, one canvas water bottle, one green air pressure tank, several pieces of plywood, and one piece of sponge rubber such as used around the petrol tanks of aircraft and which smelled of petrol. Also recovered was a rubber galosh.

During the search he was directed by RAAF aircraft which were continually overhead until darkness fell. He returned to his base at Botany Bay about 1am the following morning.

Continued next page

Was Watt right?

Brian van der Water

As one born and raised under the Imperial system of inches, ounces and Fahrenheit (I was a 9 pound baby), the transition to the metric system in 1966 involved, for many years, mental gymnastics in converting numbers from metric to Imperial. However, as an engineer, I was from the beginning fully in favour of the metric changeover because the absurdity of the Imperial system offended my sensibilities—children today are spared the concept of 16 ounces to the pound, 14 pounds to the stone, 112 pounds to the hundred weight, and 2240 pounds to the ton!

Now, forty years later, I am almost fully metricised, in that I measure and think in metric units, and no longer have to mentally convert to Imperial. For example, I know my weight to the nearest kilogram (although I won't tell you what it is) and have absolutely no idea, and do not want to know, what my weight is in stones and pounds. (baby weights and mens heights are still commonly quoted in Imperial—but all should now realise that an average baby is 3 kilos, not 7 pounds—and a tall man is 2 metres, not 6 feet).

However, there is one relic of the Imperial era which I cannot discard—and that is horsepower. For example, each of the Wright R3350 engines in Connie has the capability of producing 3400 take-off horsepower (but for reasons which I will not discuss here—our Connie is operated at lower powers than this). In metric units, Connie's engines produce 2535 kilowatts each but, to me, this only evokes a picture of a humming electric generator, whereas 3400 hp somehow

Continued from previous page

All the wreckage mentioned above was recovered from the sea and was handed to Flight Sergeant Constable on board a RAAF crash boat which was also searching the area during the afternoon.

The above story is of personal interest to me (Ian Johnston) as my brother is married to the widow of one of the CSIRO scientists.

Anyone interested in this story can look at the Coroner's report and other documents at the NSW Archives at Kingswood.

epitomises the energy and noise of an R3350 at full bore.

Why am I telling you this? The reason lies in an earlier article published in Phoenix in which I made scale comparisons of Connie and other large piston engine aircraft vs today's Boeing 747. Comparing dimensions and weights present no problems—but difficulties are encountered in comparing Connie's engines with the turbofan engines in the 747. This resulted in quotation of the following figures, with reference to 'equivalent horse-power':

Connie:	Total engine power 13600
747:	Total equivalent horse power 238000

The fact is that horsepower has no real meaning where jet engines are concerned—and you might be surprised to learn that, when the 747 air crew advance the thrust levers to maximum just before brake release at take-off, the engines are producing no power whatsoever!

We have to go back to James Watt to obtain an appreciation of this strange fact. Watt, contrary to common belief, did not invent the steam engine, but he did develop radical changes which made steam engines much more powerful and economic. When marketing his engines to owners of mines (then main users of steam engines) he developed a mathematical formula to give the mine owners a means of assessing how many horses could be replaced by his steam engines. His formula has stood the test of time and is still widely used, particularly in the USA, which is still on the Imperial system.

Calculation of power requires multiplication of force times velocity. Power is expended in climbing a hill with a heavy pack on your back, and the higher the load and/or the faster you climb, the greater the power (a top athlete is capable of exerting about one third horse power for a sustained period).

Until the invention of the jet, engines were measured in horsepower—from the 12 hp of the engine in the 1903 Wright Flyer, up to the ultimate piston engine—the Wright R3350 which reached 3400 hp. At take-off, the piston engine does generate horsepower even when the aircraft is static, as the velocity in the formula appears in the rotation of the propeller. The jet engine has no propeller, but produces thrust, still expressed in pounds in the US, and early jet pioneers

had difficulties in comparing jet engines with piston engines. There is a well known story in jet engine history that, in 1941, Stanley Hooker of Rolls Royce went to Lord Hives, company Chairman, to convince him to manufacture the Whittle jet engine. Hives said it was out of the question because the Whittle engine only produced about 1200 pounds thrust, whereas the Merlin was then nearing 1400 hp. Hooker produced his slide rule and demonstrated that, at speeds over 500 mph, the jet thrust is 'equivalent' to much higher power. Hives was convinced and the rest is history.

So, going back to the 747 about to start take-off roll, the four engines are producing enormous thrust (about 238000 pounds for the -400), but velocity is zero and, from the power formula (FxV), horsepower is also zero. But 'equivalent power' increases as velocity increases—and thrust equals horse power at a speed of 375 mph, and this is the figure usually used in making comparisons with piston engines or turboprops. Equivalent power will be even greater at higher speeds.

I trust that this will leave you suitably confused, but you are in good company as it took an engineering genius, Stanley Hooker, to explain 'equivalent horse power' to the great Ernest Hives in 1941—and I am certainly not in the genius category!

Dates to remember

HARS members meeting

Saturday 28 June at 2.30pm

HARS Church Parade

Saturday 5 July at 3pm

Christmas in July

Saturday 5 July commencing at 5.30pm

Coffs Harbour Airshow

27/28 September

RAAF Amberley Airshow

4/5 October

HMAS Albatross 60th Anniversary Airshow

25/26 October

Kim's photo album

Kim Slattery



Airlift Douglas DC7



Douglas Globemaster



P2V5 Neptune



P3 Orion and Avro Shackleton



RAF Shackleton



RCAF Canadair Argus

I served in the RAAF as an aircraft engineer before turning to teaching at the British Aerospace Flying College. My main posting in the RAAF days was to the base at Richmond. That period was from the mid 1960s.

RAAF Richmond was a hive of activity in those days, being the primary transport squadrons base (36 and 37 Squadrons) which operated C130 Hercules, as well as 38 Squadron with Caribous. In addition, 11 Squadron (Maritime) were based there operating P2V5 Neptunes before relocating to Edinburgh in the late 1960s.

The USAF, RAF and RNZAF air forces were regular (almost daily) visitors to RAAF Richmond. Hence the small selection of photos showing a variety of aircraft that you would now only see in a museum or 'bone yard'.

The photo of the 11 Squadron P2V5 aircraft was taken near the end of their working life. As a member of Neptune Flight at Richmond, we serviced both the P2V5 and P2V7 Neptunes. It is one of those 'if only' type photos that says why didn't someone preserve an example for later generations?



US Navy C47



RAAF Bristol Freighter



USAF Convair



RAAF C47

The USAF Convair was another visitor that did VIP transport work around the Australian bases and airports.

The Bristol Freighter was another visitor from New Zealand. I believe the photo attached was a RNZAF model which flew across the Tasman on regular visits. They were very slow, but as a type, also saw service with Air Express (freight work) operating out of Essendon in the 1970s.

The RAF Shackleton (maritime aircraft) was an irregular visitor, usually from 205 Squadron in Changi. The RAF flew them to Richmond to compete in the Fincastle Trophy, which was a competition between the Maritime squadrons of the Commonwealth countries. The RNZAF arrived in P3 Orions, the Canadian Airforce in the Canadair Argus and the RAAF of course had 2 x Neptune squadrons (later, 11 Squadron operated P3 Orions, which in the late 1970s also became the aircraft for 10 Squadron).

The Shackletons usually came in pairs or sometimes three aircraft. They were a unique aircraft, being a last link with the Avro Lancaster Bomber. They were fitted with Rolls Royce Griffon engines, which were a final development based upon the Rolls Royce Merlin engine. They had contra-rotating propellers to absorb the power of the Griffons (fuel injected V12, supercharged, water cooled engines).

It remains one of my many pleasurable memories from those days to hear them start up and then take-off. A colleague said that it was probably the closest we would get to hearing a squadron of Mustangs or Spitfires taking off at the same time. Being a four engine aircraft, the noise was spectacular, not to mention the long sheet of blue flames visible at night time.

The C47 (Dakota) aircraft (A65-68) was about to do a post 'D' service check and engine run. Neptune Flight also serviced these aircraft, mainly following the fitment of Collins radio modifications.

It was a wonderful period at Richmond in those days.

Neptune "geezers" finish flying refreshers

Pamela J Podger of the Missoulian
(Reproduced with approval)

Inside the bustling Neptune Aviation hangar in Missoula, two airtankers dwarf the half-dozen mechanics and others who are prepping for the 2008 wildfire season.

The massive P2V planes, built by Lockheed Martin in the late 1950s and early 1960s, loom 27 feet tall, with a wingspan of 96 feet and a length of 99 feet.

Mechanics climb ladders, checking for stress fractures, testing the landing gear and doing other inspections as a faint smell of grease permeates the hangar. Last Wednesday, Neptune—one of three privately owned airtanker companies in the nation—was awarded a five-year contract for its 11 slurry-dropping aircraft by the U.S. Forest Service.

"It's great," said company President Kristen Schloemer-Nicolarsen. "It is extremely beneficial to have a longer contract. It is a huge sigh of relief and a direct reflection of the hard work we've done."

Neptune's pilots are wrapping up their intensive flight training, which began Feb 25 and runs through Tuesday.

Chief pilot Gene Wahlstrom said the company's 22 pilots traveled to Seattle in January for ground training in full-motion in-flight simulators. They reviewed everything from fire behavior to federal aviation regulations to aircraft systems, including electronics and hydraulic controls.

"That gets our heads back into the cockpit," said Wahlstrom, 60.

Recently, they've completed several weeks of flight training, sharpening their approaches and departures, and other federal requirements. At 150 feet above the ground, each pilot practices drops from airtankers loaded with 2080 gallons of water.

"Ideally, you want to shower the tree and not just paint one side, allowing the fire to go up the backside", Wahlstrom said.

"Our primary job is to support people on the ground. Our mission is to slow the fire down so the people on the ground can better manage it."



Pilots cope with stress and heat, with some fires raging up to 2000 degrees Fahrenheit.

"You don't get a real ripping fire without a lot of wind," Wahlstrom said. "If you have a really hot fire, it is drawing in wind to fuel it. We allow for that as we navigate."

Neptune's pilots travel around the country fighting fires.

Historically, the wildfire season begins March 1 on the East Coast, then shifts southwest to New Mexico and Arizona in May. Next, the airtankers head for the Pacific Northwest and Rocky Mountain states of Montana, Washington and Oregon—in mid-July to mid-September.

Then flights move to Southern California and a secondary fire season in the Southeast, including Alabama, Georgia, North Carolina, and South Carolina.

Already, one airtanker has been in Oklahoma for about a month in an early start to the fire season.

In 2007, Wahlstrom spent 268 consecutive nights in hotels. Another pilot, Terry Johnson, 65, spent 257 nights in hotels that same year.

A two-person mechanic crew follows the airtankers, servicing them each night. While there is typically a break in each fire season, Wahlstrom said the pilots worked 12 months fighting fires during both 2002 and 2003.

"It's a nomadic life," he said. "Because of this, if you have a family it is a very difficult lifestyle. It's the primary reason for turnover."

Neptune's pilots range in age from 36 to 69. The company has four female pilots

Convair project



William (Bill) Smith

Many of you will know that we are well underway with our Convair C131-F project, with the aircraft located adjacent to the PIMA Air & Space Museum maintenance facility at Tucson Arizona.

These surrounding photos give you an idea of the aircraft and the work that is being undertaken to prepare for its flight to Australia, probably in the second half of 2009.

The aircraft was an Admiral's VIP transport and the US Navy flew it for 13,000 hours before putting it into storage at the Davis Montham facility in Tucson.

This is a similar adventure to the recovery of our Super Constellation, and for those who were on that project it is bringing back many fond memories. The absence of pigeon guano however, has been a welcome change but, as you can see from the photo of our engineer, William Smith, there is plenty of dust and dirt to be enjoyed in this project. Bill is in fact reclaiming parts from a number of airframes languishing in the wrecking yards. As you can see from other photos, our aircraft is in far better condition than the one that Bill is recovering components from.



Greg, Rob and Bob making a claim, Nov '07

HARS has taken the step to save considerable money over the duration of the project by renting a very nice house 10 minutes from the airport, and buying a Ford 7 seater for transportation. This we can sell, together with all the furniture, at the conclusion of the project unless other projects keep us in Tucson!!

Ed Harrow, who many will remember was the Director of the PIMA Air Museum on the Connie project, is managing the property and the vehicle for us and is, with the help of his daughter Julie, looking after the needs of the crews when they are in Tucson. Ed is a retired US Air Force Colonel, having flown B52s in Vietnam and is a great supporter of HARS.

You might also be interested to know that HARS recently had a memorial brick added to the entrance of the US Air Force Base at Davis Montham as recognition of the help from the US Air Force and its personnel during our projects.

Various teams have already been on site and there will be opportunities for many others over the coming year, not only to work on the project, but also to enjoy the hospitality and attractions of the south western United States.

The first team to Tucson in March 2008 and our Convair (inside and out)



Wings over Illawarra 2008*Continued from page 11*

(Postscript:- Of particular note is the fact that a C130 Hercules was also allocated but was redeployed on another operational task late Friday afternoon and was a 'no show', but to their great credit the RAAF crew flew the Hercules in on the following Saturday morning to honour their commitment and providing familiarization rides for the AAFC Cadets!)

- We attracted a superb display from NSW and ACT car clubs (approx. 35 clubs attended with an estimated 300 cars on display)
- We received good support from bike clubs (approx 6 clubs attended with an estimated 120 bikes and side cars on display)
- The NSW Fire Brigade provided two operational tanker units as displays with crews, who actively presented them and encouraged members of the public up into the vehicles
- Cleary Brothers provided a very impressive set of superbly presented historic and current concrete truck displays
- Harrigan Ford sponsored a display of speedway cars as well as an example of a current Falcon GT
- The Ansair Clipper Bus provided by Mr Yabsley was very popular
- The Southern Highlands' Vintage Farm Machinery group displayed and ran a wide range of stationary steam engines and pumps continuously across the day
- The Albion Park Chamber of Commerce sponsored a photographic display inside the AHFM Museum and assisted with the staffing requirements
- The Illawarra Light Rail Museum opened specially for the day, organized and staffed a popular "N Scale" model rail display inside the AHFM Museum complex and ran an airfield shuttle bus service from the public car park around to the Light Rail complex so that the public could enjoy the train rides
- Two 'sister' aviation Museums supported the Open Day:-The Nowra based Fleet Air Arm Museum, and the Australian Aviation Museum (Bankstown) and both sent significant displays which were very popular with the public

- The Scout Air Wing from Camden sent an aircraft to support the Scouts (South Coast and Tablelands Region) recruiting displays and BBQ tent.
- Mobile 1 Communications from Camden provided approximately 50 two way radios and two base stations to assist with the behind the scenes running of the day
- Sponsorship by QBE Aviation Insurance enabled 12 000 'welcome flyers' to be printed in colour, and distributed free to the arriving public by both AAF Cadets and Air League members in uniform
- Sponsorship by Wollongong City Council enabled wristbands of different colours to be used
- The support of the St Johns' Ambulance provided strong, effective first aid support with volunteer crews for the day

With this wide range of 'other' attractions and assets available to support the Open Day and provide a wider range of interesting things to see and do, it is great to report that the 'core' aviation aspects were also very strong in their attractiveness to the visiting public. The highlights included:

- The impressive display of HARS aircraft 'on parade' and the fact that dedicated HARS members had a wide range of aircraft airworthy and flying as well as available for inspection on the day. As usual Connie, the Catalina, Neptunes and Dakotas provided large aircraft interest, whilst the Vampires, Winjeel, Tiger Moth, Drover and a range of Cessnas added strongly to the display
- There was constant aircraft movement across the day and the constraints imposed because it is an Open Day rather than an Air Show means that a traditional flying program is not available to the public. However the expert commentary provided by Peter Anderson (assisted by Alan Edworthy) provided constant value to the WOI activities across the full day from 0930-1530, which was a great effort!
- Defence Force aircraft (Roulette, Caribou and Squirrel) were either open to the public (Caribou and Squirrel) or provided a flying display (Roulette and Caribou)

- Visiting aircraft included: a Canberra Bomber from Temora Air Museum; a Dragon Rapide; a Dragonfly; a Globe Tempo Swift; and a very wide range of SAAA light aircraft which provided an impressive display for the public
- The AHFM Museum complex provided an excellent range of static displays including cockpits, engines, model aircraft, flight simulator, Southern Cross replica, CAC Sabre as well as the aircraft restoration area and HARS shop and Theatre. This AHFM area was consistently crowded across the whole day!
- Hangar 1 (Father Jeremy Flynn Memorial Hangar) provided a venue for a coffee shop, aviation related displays and sales including aviation memorabilia, mini lectures on basic aviation, as well as a NSW Police stand, with static HARS aircraft as an excellent backdrop display.

Overall, it was a marvelous day of which we can all be very proud indeed, and I would like to pay my strong personal tribute to all the HARS members and friends who worked so hard and so well to put our organisation 'on display' so impressively. I also acknowledge the very welcome and strong support from the staff and cadets from both the Australian Air Force Cadets and the Australian Air League. Thank you all very much indeed!

It is very appropriate to finish this WOI 08 report with a reminder and an invitation—

A REMINDER

WOI has now become an annual event and will be run on the last Sunday in February each year to enable long term planning by supporting organizations.

YOUR INVITATION

WOI 09 is on Sunday 22 February 2009

SEE YOU THERE!

Neptune "geezers" finish flying refreshers

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and four females on its maintenance staff. Each pilot must pass rigorous training and a stringent medical examination. Wahlstrom said gaining insurance is difficult past age 70.

"Most of us are geezers," he said. "We got into the industry young and stayed with it. In the next five years, we'll have a big turnover."

At Neptune, "we have quite a few first officers who can do the transition to captain," Wahlstrom said. "They've been waiting a long time to make that move over to the left seat."

Fatigue is always a concern, he said, especially in the middle of the fire season. Each pilot is limited to flying eight hours a day.

Johnson said he has a personal rule of never dropping more than 10 loads and makes sure he gets out of the plane and walks around during the lunch break.

"This business has inherent risks," Wahlstrom said. "You're taking an 80,000-pound plane and flying at low altitudes and low speeds of about 140 mph. You're working in mountains and around hazards of power lines, antennas, and trees."

A wildfire's progress is slowed once one piece is eliminated from the "fire triangle" of heat, oxygen, and fuel, Wahlstrom said.

In some cases, an airtanker will soak trees, grass, or other fuel in an area where the fire is progressing. Retardant can last for several days, unlike water that evaporates and is susceptible to drift in hot, windy fires.

Fire retardants have been used for years, helping the pilots visually with drops and allowing them to stitch a continuous line to slow a fire's progress. The retardant retains moisture and is gummy, sticking to trees and depriving the fire of fuel and heat. In the mid 1950s, retardant was colored with rust and bentonite, but it left a permanent stain.

These days, the retardant has a "fugitive dye" that eventually degrades.

"It is just an evolutionary thing—there is always something about the retardant that people haven't liked," Wahlstrom said. "There has to be some way to modify it and make it safer."

Chris Holm, vice president of research and development at Neptune, said there was "some concern" earlier this year as the company awaited a ruling by a federal judge in Missoula on continued use of fire retardant by the U.S. Forest Service.

"If the judge had put a restraining order, it would be up to the Forest Service to haul water instead of retardant," Holm said. "We can haul both in our airtankers."

The value of the aerial firefighting contracts announced this past week is difficult to determine because it depends on how much time the tankers spend in service. Schloemer-Nicolarsen said the company's five-year contract includes a fee for daily availability—about \$8000 each—from the Forest Service.

Neptune is looking at newer types of aircraft to upgrade its fleet of P2Vs, which were originally designed for submarine and maritime patrols during the Cold War, Wahlstrom said.

A new platform takes years to develop and evaluate, and ultimately requires Forest Service approval.

"So far, we haven't found anything better than the P2Vs," Wahlstrom said.

The Missoula-based company, which has about 100 full-time employees, has several machinists to make spare parts, fashioning them from 85-pound blocks of steel.

"The pilots are the glamorous part, but what they do here is the heart and soul of the operation," said Wahlstrom inside the machine shop. "Most of these engines were designed in the 1930s with a slide rule."

Machinist Eric Stavish, 31, said he cuts many spare parts before each fire season.

"They go through a ton of parts," he said.

Each year since 1997, Schloemer-Nicolarsen said the company has received a diamond certificate of excellence from the Federal Aviation Administration in recognition of its mechanics' training.

She said the FAA is at the company's operations regularly.

"They come in as they need to and do spot inspections," she said. "Our doors are always open to them."

Wirraway Restoration

Rosemary Szabo



The restoration of Wirraway A20-99 has taken off with vigor. The project arrived in a large collection of boxes and pallets and has been secured in the restoration shop. A team of ten HARS members working under the watchful eye of engineer Bill Smith has commenced the refurbishment and installation of the many parts.

Don Payne got in early with the stripping and NDT testing of the main undercarriage wheels. Showing the value of the HARS process, Don so far has only given the thumbs up to one of the four wheels that came with the project. The other three proving to be a bit tired.

Fortunately we are well connected in the Wirraway restorer's world and Rob Greinert called in a favour and has organized for more wheels to be sent up from Melbourne. Our access to parts is considerable and to date we have no trouble acquiring that which is missing or requires replacement.

The engines have been shipped to Peter Brooke's facility in Brisbane where a rebuild to zero time will commence shortly. This \$40,000 overhaul has found a sponsor who wishes to remain anonymous.

Throughout the restoration shop we see various parts of the Wirraway underway. Master sheetmetal worker Jack Smid is overhauling the tailplanes before heading into the wing centre section. Allan Costigan, Brian Acker and others continue to identify, sort and place the thousands of pieces that make up the fuselage airframe. Geoff Cuthbert wonders what he volunteered for when he is presented with boxes of parts for painting.

The Wirraway represents an important time in our industrial and aviation history and will be a valuable addition to our growing collection of historic aircraft. Our thanks to Eric Lundberg for his foresight in sharing this treasure with us and knowing that his dreams of seeing the aircraft fly will be fulfilled.

The Glen Green story

Glen was born in 1935 in Ladysmith, South Africa where his father was a banker. In 1939 the family was transferred to Germiston—an industrial city (named after the Gorbals slums of Glasgow)—just southeast of Johannesburg, where he grew up.

The local airport—Rand Airport—was, pre-WW2, South Africa's first international airport and his high school was literally across the road from it.

During WW2 it became a bomber base, initially using JU52s commandeered from South African Airways, with the 'bombs' being 44 gallon drums filled with dynamite and scrap car parts. One of his earliest memories is of the night Italy joined WW2 and the JU52s were launched to bomb Italian merchant shipping off the East Coast. The general commotion woke him and burned the memory in.

It is now a regional airport and houses the South African Airways equivalent of the QANTAS Founders' Museum. The photographs below show SAA's first 747 being delivered there.

He trained with South African Airways as an aircraft mechanic, working on L18, L749, C47/DC3 and C54/DC4 aircraft and went on to complete a degree in Mechanical Engineering at Wits University in Johannesburg. He learned to fly and worked for Africair/WENELA as a part-time pilot to finance his two last years at university. He flew as a 1st officer on the C47, while getting command experience on the DH89 and the DHC2.

While there he sometimes flew with a memorable captain named Kurt Kaye who had 'flown with the Red Baron' in WW1, then joined Luftreederei—the progenitor of Lufthansa—in 1919. He then flew with Lufthansa until the rise of Hitler. He then emigrated to South Africa and flew for Union Airways—the progenitor of South African Airways. He then flew for South African Airways until WW2, then flew C47s for the South African Air Force on the 'Shuttle Service' (shuttling between South Africa and Egypt, later Italy) throughout WW2, and then flew for South African Airways post WW2 until retirement. He then flew as a contract captain for Africair/WENELA. He remains the only pilot Glen ever met with 40,000 hours in his logbook.

Glen was recruited out of final year engineering by the South African Atomic Energy Board, was sent to Birmingham

University for a PhD and was then sent to France to work in the nuclear power industry, working on the liquid sodium cooled, plutonium fuelled fast breeder reactors RAPSODIE (at Cadarache) and PHENIX (which is still generating 250 MW into the French grid).

On his return to South Africa he became Head Design, responsible for the design of the PELINDUNA O reactor and still has the audio tape of it going critical for the first time, then Head Manufacture for the HELIKON uranium enrichment process.

He was recruited in South Africa by BHP and posted to their Whyalla steelworks. The South Australian Air Ambulance was based there at the time. Their manager asked BHP if he could fly for them part-time. BHP agreed and he did—nights and weekends—being always available because helping to run a steelworks during the day did not count as duty time as a pilot when night emergencies cropped up.

A side result of this was an unusual appreciation of Australian history. The first night he phoned a flight plan to Ceduna in to Adelaide the controller said 'You mean Lilliput?' After some confusion the controller said that by his accent he was a New Australian and explained that St Peters and Goat Islands off Ceduna are Lilliput and Blefescu in Gullivers Travels. Glen's

comment was that Swift could never have known about Ceduna as Australia had been discovered by Cook in 1770. The controller said 'Portuguese maps'.

He checked—and then checked some more. It turned out that Australia was recorded by Marco Polo—as Locac. It turned out that the current border of Western Australia was set by the Pope in 1496. He awarded Western Australia to Portugal and Eastern Australia to Spain.

The Portuguese launched from the southern tip of Africa and, aided by the Coriolis Effect, reached Australia by maintaining its line of latitude, travelled up the West coast, then north from around Darwin and established trade with the Spice Isles (including Timor and Ambon). They then sailed back to Africa using the Trade Winds and back to its southern tip using the Mozambique current and the northeast monsoons.

They circumnavigated Australia. Copies of their charts came into the hands of the French.

On the other hand the Spanish launched from South America—and were defeated by the same Coriolis Effect.

After being transferred to Port Kembla he concentrated on gliding, together with a partner owning in succession a FOKA V sports class aircraft (which was destroyed in a mid-air collision while flying through the starting gate of a NSW State Championship race at Leeton) and a PIK 20B 15 metre racing class aircraft.

In 1988 he snapped his left Achilles tendon in an industrial accident and developed an inoperable DVT in the groin as a complication—which cost him his aircrew medical rating.

So he returned to motorcycling as the nearest he could get to flying without leaving the ground—and still rides a 1200cc BMW. Full 3-axis control, secondary effect of roll is yaw, secondary effect of yaw is roll, a V1 on exiting his driveway as he cannot get his feet on the ground when riding through the stormwater drain, takeoff and landing have to be with the wings level as he cannot hold the 2 tonne bike up if it is not upright at standstill.

In HARS he works in the engine shop at Port Kembla, rails against the de-skilling of Australia (pointing to an Australian-manufactured R1830 in bits) and notes that the R1830 being prepared for the Catalina is a Buick.



Captain clips his wings

(Copied with permission from the March edition of *Qantas News*)

Captain Sandy Howard will hang up his wings this month after a 40 year career with Qantas.

Sandy has spent the past 10 yers as a Senior Captain flying B747-400s, but he began his airline career in 1966 as just one of the third group of cadets to graduate from Qantas Cadet training.

"Training has changed significantly" said Sandy. "The biggest change is the way crews are trained using Crew Resource Management (CRM) to work together, and simulators back then were very rudimentary compared to what we have now."

Sandy said Base Training as a Senior Captain was still one of the best experiences of his career, along with landing one of the last Qantas jets on the tarmac at Kai-Tak, Hong Kong's airport, before its closure in 1998.

Despite many changes to Qantas that have passed during his time at the airline, one change that was significant to Captain Howard is the fact that it is now acceptable for pilots and Cabin Crew to marry and both continue flying. Sandy met his wife Marj when she was studying to become a Flight Attendant and they became among the first married couples at the airline to fly together.

Sandy and Marj are now off on another adventure. Still not content to stay on the ground, they will be dividing their time between sailing and flying vintage Constellation aircraft.

Captain Sandy Howard will captain his last Qantas flight to London on 14 March.



Captain Sandy Howard going through final check from the cockpit



Captain Sandy Howard signs on for one of his final journeys as his wife Marj looks on.



A mounted fan blade from the RB211 that powers the B744 was presented to Sandy at his retirement party.



Marj hard at work in her favourite seat enroute to London from Hong Kong with her husband joining her for a cup of tea. I keep telling her not to bother me at work!!

Things aren't always as they appear

A woman was flying from Seattle to San Francisco. Unexpectedly, the plane was diverted to Sacramento along the way. The flight attendant explained that there would be a delay, and if the passengers wanted to get off the aircraft the plane would re-board in 50 minutes.

Everybody got off the plane except one lady who was blind. The man had noticed her as he walked by and could tell the lady was blind because her 'seeing eye dog' lay quietly underneath the seats in front of her throughout the entire flight.

He could also tell she had flown this very flight before because the pilot approached her, and calling her by name, said, 'Kathy, we are in Sacramento for almost an hour. Would you like to get off and stretch your legs?'

The blind lady replied, 'No thanks, but maybe Buddy would like to stretch his legs.'

Picture this:

All the people in the gate area came to a complete standstill when they looked up and saw the pilot walk off the plane with a 'seeing eye dog'!

The pilot was even wearing sunglasses. People scattered. They not only tried to change planes, but they were trying to change airlines!

True story... have a great day and remember... things aren't always as they appear.

A day without laughter is a day wasted!



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