Slipstream

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A Rare Man

A new permanent exhibit at the Fleet Air Arm Museum in Nowra is unusual for it contains several components from a Royal Navy Grumman Wildcat. Australians serving in the wartime Fleet Air Arm were few and far between so what is the link to these rare artifacts? Andy Wright looks at the man who pranged the Wildcat.

Head wounds tend to bleed profusely and this one was no exception. Sub-Lieutenant Fred Sherborne had struggled to see through the blood as he forced his ailing Wildcat V onto its belly in a field near Avignon in the south of France on 19 August 1944. He had been hit before, but this was the first time he'd had to pull off a forced landing. It had been a long war for Fred Sherborne and it was far from over.

Born in Cottesloe, Western Australia, on 10 June 1920, young Sherborne enjoyed everything the coastal lifestyle of Perth and Fremantle had to offer in a time before urban sprawl had effectively made the latter a suburb of the former. A keen and talented sportsman, Fred was well known for his rowing, rugby and tennis abilities and was part of a championship crew of the Fremantle Rowing Club in 1939. He would have been a familiar sight at the club's sheds, halfway between Point Walter and Fremantle Harbour, and, like any good Western Australian, would have revelled in the hours he got to spend on and in the Swan River.

Perhaps this love of water made him enlist in the Royal Australian Naval Reserve as an ordinary seaman in late 1939. Fred was briefly trained in gunnery at the Flinders Naval Depot (HMAS *Cerberus*, Victoria) and assigned as a DEMS gunner to the Blue Star Line's MV *Imperial Star* on 1 June 1940. Naval personnel crewed the few, often old, weapons carried by Defen-

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Wildcat V JV368 down in the field. Note the damage to the windscreen particularly the bulletproof flat section. Fred was a lucky man. The large 'S' refers to the aircraft operating from HMS Searcher while the '6' is the 882 NAS code. [All photos via Sherborne family unless stated]

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sively-armed Merchant Ships (DEMS). A total of 1,070 Australian naval personnel served in this role alongside many more from other navies of the then British empire.

Fred's time on the *Imperial Star* was eventful. In the second half of November 1940, the ship was part of the convoy that delivered the first elements of RAF units to Greece. He was on board when the ship was damaged during a bombing raid when docked at Liverpool on 12 March 1941. His association with the vessel finally ended on 27 September when it was hit by a torpedo, dropped by an Italian aircraft, when part of the Operation Halberd convoy destined for Malta. A destroyer took off the 300 passengers while another took the merchant ship in tow. As it settled deeper, the crew was taken off the *Imperial Star* before it was sunk by its escorts.

Back in England, having hopefully enjoyed his 28 days of survivor's leave, Fred, now a Leading Seaman, was undergoing some training when he noticed men volunteering for aircrew postings with the Fleet Air Arm. In what was later regarded as "an unconventional and individual way", he managed to convince the interviewers that his name had been left off the list, was accepted for flying training and soon found himself in Florida at NAS Pensacola. He was halfway through his training when things finally caught up with him. His first flight, in a Spartan NP-1, was on 18 May and, a little over thirteen hours flying later, he soloed on 10 June. Fred progressed to the Boeing N2S-4 in early July and began flying "Basic Landplanes", the SNV-1 (the naval BT-13 Valiant) and the OS2U Kingfisher. By early January 1943 he had

ABOVE: "Myself, Pawson, Tubby" is all that describes this photo of three young FAA pilots ready to take on the world. Pawson could possibly be Canadian Hugh Pawson, a Corsair pilot who saw action over the Palembang refineries and with the British Pacific Fleet, but other confirmed photos of him suggest otherwise.

spent several months at NAS Miami and added the North American SNJ and Brewster Buffalo to his repertoire. With just under 300 flying hours to his credit, he was rated "Above Average" at the completion of the RN Fighter Course!

Fred flew the Grumman fighter he was to become so familiar with for the first time at the end of February. The type was still known as the Martlet in Fleet Air Arm service. The next few months were spent in California, based in San Diego, sharing his flying between Martlets and SNJ-4 trainers. Despite his time on these two aircraft, Fred's first carrier landing was performed in a Grumman Avenger on 3 May. He landed on the escort carrier USS *Altamaha* which had just returned from supplying the US Pacific fleet with replacement aircraft. It was an inauspicious arrival for Fred, with his logbook recording "Undercart" and "Barrier" for this first deck landing. His next visit to the ship, towards the end of June and after weeks of interceptions, bombing

A formation of 898 NAS Wildcats. The '7' denotes which squadron they belong too. The FAA dropped the Martlet name at the start of 1944.

and gunnery practice, and formations, was much better.

Interestingly, at the end of June, Fred "joined HMS *Victorious*", but "went U/S until Sept". He did not fly at all in July and August. At the time, the aircraft carrier *Victorious* was operating as 'USS *Robin*' in the Pacific to bolster the US Navy's beleaguered carrier force. The British ship was recognised as having superior fighter control personnel, equipment and procedures, so her Avengers were transferred to USS *Saratoga* and USN Wildcats came the other way. Both ships spent most of July at sea with *Victorious* ordered home after arriving in Noumea on 25 July. It is not known whether Fred joined the ship in Noumea, but it is possible he "went U/S" entry in his logbook refers to him being ill. Either way, the carrier stopped briefly in San Diego before transiting the Panama Canal on 26 August and arriving at the Norfolk Navy Yard Virginia on 1 September. This was also the date of Fred's first flight in more than two months when he flew off a Wildcat and landed at NAS Norfolk. Now part of 882 Naval Air Squadron (NAS), he flew his first operational sortie on 16 September when escorting Avengers to *Victorious*. The ship crossed the Atlantic and, ten days later, Fred flew off and landed at RNAS Eglington in Northern Ireland.

A Spartan NP-1 similar to the one Fred flew his solo in. Only 201were built.

The next two months consisted of intensive training as the squadron worked up, often in conjunction with 898 NAS. Fred joined the escort carrier HMS *Searcher* on 9 December. The ship sailed with an Atlantic convoy in late December and Fred recorded his first flight upon his return to the US as departing from Floyd Bennett Field on 10 January. He had finished 1943 with a rating of "Above the Average". The squadron trained in Maine until early February, while the ship underwent repairs in New York, before its return to Northern Ireland.

March 1944 was hectic with an emphasis on wing rendezvous (consisting of three other squadrons and at least one formation flown under 300 feet altitude), escort and strafing attacks on ships. It was a sign of things to come as, on April 3, Operation Tungsten was launched.

Six Royal Navy aircraft carriers, including HMS *Victorious*

Wildcats of 882 NAS running up on the deck of HMS Searcher. Note the deck crew on the chocks.

A full deck of fighters ready to launch from HMS Victorious or, more accurately, 'USS Robin', somewhere in the Pacific. Used as a fighter carrier, she operated mix of sixty USN Wildcats and FAA Martlets. [via Nathan Howland Collection]

and Fred's HMS *Searcher* (with 882 and 898 NAS on board), and their attendant escorts, had joined forces the day before as they sailed for Norway. The planned attack on the German battleship *Tirpitz* had been brought forward when decrypted communications indicated the ship's departure from its lair deep in the fjords was imminent.

Fred flew one of thirty fighters that provided low-level escort for the Fairey Barracudas of the first strike. Leaving the fleet just after 0430, the formation skimmed the waves at fifty feet to avoid detection. As they approached land just before 0500, the strike leader, Lieutenant Commander Roy Baker-Falkner, briefly ordered his aircraft to "Get some height". Less than half an hour later the Barracudas began their dives on the battleship.

The escorting Wildcats and Hellcats were tasked with flak suppression. They strafed anti-aircraft positions on land and on the *Tirpitz* herself. Fred wrote that they "Shot up Flak positions and establishments and anything else we could see".

Pilot Lieutenant Cockburn-Yorke later reported that "Our Wildcat fighters were playing merry hell with enemy gun positions, shooting them up all over the place. The Hellcats and Wildcats of the escort flew low over the battleship, machine-gunning her gun positions and superstructure. Others banked around, strafing any suitable targets and set *Tirpitz's* supply tanker alight…" His colleague, Lieutenant Howard Emerson, a Kiwi, was equally impressed: "Martlets strafed AA positions as they dived. They made a very awe-inspiring sight as they went in streaming red tracer."

There were no casualties among the strafing fighters despite the rather hostile environment they had thrown themselves into. The Barracudas scored many hits on the *Tirpitz,* setting her adrift and on fire. Their losses were light, but would probably have been heavier if it weren't for Fred and his mates. It was the beginning of a hectic couple of months for 882 Squadron. Fred

Members of Nos. 882 and 898 NAS in front of, according to Fred's note, the CO's aircraft. Note that, based on the codes on the cowl, it is possibly the same aircraft Fred crashed in. Fred is in the back row, fourth from left and he stands among eight Kiwis and fifteen Englishmen. New Zealander Alan Sharpe, front row, second from right, was killed by flak on the same day Fred was forced down, possibly on the same strike.

Formation 882 NAS Wildcats

was part of its two attempted attacks on *Tirpitz,* but both were thwarted by the weather. A bombing strike on Bodo was flown on 26 April. Fred became the first 882 NAS aircraft to be hit when he received damage from 40mm flak in his starboard wing. A successful attack on a convoy off Kristiansand on 6 May saw Fred attack a flak ship and share in the destruction of two Bv138 flying boats circling the convoy. He followed this up two days later when he "left a destroyer smoking". The formation was also bounced by German fighters. Two Hellcats were lost, but three enemy aircraft were claimed in return.

After a very quiet June escorting slow convoys, HMS *Searcher* sailed for the Mediterranean and 882 NAS (now larger after absorbing 898) spent the last few days of July on Malta practicing dive-bombing with two 250 pounders per aircraft as his ship joined several other RN and USN escort carriers. Fred flew more than 11.5 hours in seven days as the squadron worked up to support the invasion of southern France. The first three days from 15 August were spent covering the fleet and the beachhead. An eventful armed recce was flown in the Avignon area on 18 August before another fleet cover sortie later in the day. The next day was expected to be much of the same.

"Although the flak put up was accurate, there was not much of it and to our group who had just left the very heavily guarded and armed convoys and installations of Norway, it was all a very easy piece of work. It was reckoned to be such a 'piece of cake' that one looked upon it all more as training than actual warfare and by D-Day plus 4 we had all been lulled into a false sense of security and took to the air with a rather condescending blasé air.

D-Day plus 4 marked the change. On that day four aircraft were shot down and I was one. The others had not the luck, two being killed and the other being taken Prisoners of War. All four were shot down within ten miles of one another…

My flight had just dropped bombs on and near gunposts outside Orange in the face of light AA – not intense. I received one 20mm in my stbd wing, which made little difference, and carried down on the deck for my get away. Once out of range, I climbed up to four thousand feet to carry out a strafing attack on two a/c which I had noticed on an airfield earlier in the recce.

As we entered the dive for the high speed strafe, the 40mm and lighter stuff started coming up and just as I was about to fire my guns my machine, a Wildcat V, was hit by several 20mm. One hit the cockpit, luckily on the armoured glass directly in front of my face. This stopped the main force of the shell but I received a big piece on my forehead and smaller pieces round my eyes and nose.

Just about this time the whizzer stopped turning and there was quiet all round.

All of this time I was jinking both to avoid more shells and to make Jerry think I had not been hit. All of this was at treetops and below. There was of course no hope of bailing out nor was there a chance of picking a suitable field for a landing as it would have given my position away

Fred, perched in the middle, during the liberation parade in late August 1944. Marcel and Siméon are standing behind him with the latter holding a flag.

completely … I therefore tightened my harness, opened the hood, switched off all the switches and trusted to luck and the hardiness of the machine. This takes some time to relate but it all happened in seconds. Luckily as the speed dropped off I sensed rather than saw, blood over my eyes made it fairly difficult to properly see, a small field surrounded by bamboos. Straightaway I pushed the nose into those on the near side of the field, hoping that they would slow me down sufficiently, which they did, and I found myself stopped on the ground right side up."

Fred had put his aircraft down in one of the many rectangular fields shielded by cypress trees (the "bamboos") that make up the farming land of the Château Renard region of southern France. He was fifty miles behind the lines, wounded and a little shaken. Fortunately, he met up with two farmers soon after. They hid him overnight before taking him to one of their residences and hiding him in a loft above a chicken run. He was then moved into the attic of a farmhouse. Fred had his wounds tended to and was well fed, despite the damage to his teeth caused by his final moments in the Wildcat, and perhaps saw a little too much wine for his liking in the end. He was hidden for just over a week, but came down with a fever halfway through. By the time he recovered, the Germans had retreated and the French celebrated their freedom with a victory parade with Fred as the centre of attention. Soon after, on 29 August, the accidental hero was spirited away and flown from Saint-Tropez to Naples. He was back flying on 21 September when he landed on HMS *Searcher* as she steamed for Alexandria, Egypt. He flew several operations over Crete and escorted mine-hunting Catalinas during October before the squadron returned to Northern Ireland.

Fred did not fly again until mid-February 1945 when he joined 757 NAS. This unit was the FAA Operational Training Unit based at Puttalam in Ceylon. There he flew the Corsair, Hellcat and Harvard for the first time and completed No. 23 Fighter Leaders Course. He continued in an OTU training role until October. He did not fly again until the end of October 1946 and, after a flight in a Mustang on 14 November, did not record his next flight until 14 August 1948. He had been demobilised in December 1946, but joined the RAN's Fleet Air Arm at the start of 1948. The flying in August of that year was in the U.K. as the Australian pilots of 805 NAS worked up to receive their new Hawker Sea Furies. This continued into March 1949 when the new aircraft were cocooned for

Fred with the brave families of Marcel Bellin and Siméon Manoha who hid and fed him and tended to his wounds.

20th CAG Pilots Left to right: Henry Young, Tony Robinson, 'Jimmy' Bowles, Peter Seed, Fred Sherborne and Dickie Dyke.

their long voyage to Australia on board HMAS *Sydney*. In 1951, the now Lieutenant Commander accepted a two-year exchange with the RN and flew his first jet aircraft. It was during this time that he returned to France to find the people who had helped him. Sadly, Fred was left with the wrong impression they had been killed by the Germans for harbouring him. This affected Fred greatly and he never talked about his time in France, or much of the war for that matter.

Following his exchange with the RN, Fred took command of 805 NAS and was posted to HMAS *Melbourne* as Commander Air and Fleet Aviation Officer. He was Commander Air at HMAS *Albatross* from August 1958 and then Staff Officer Air in London from early 1962 before serving as the Naval Attaché to Indonesia from January 1966. Following his retirement in October 1969, Fred followed business interests in Indonesia for several years before returning to Australia. He passed away on 30 October 1985.

While Fred worked away in Indonesia, there was a stirring of interest in the mysterious flyer who had bellied into a field in southern France. Local historians began to try to identify him. They knew his surname to be 'Chebon' or 'Cherborn'. They at first thought he was Canadian, but research by former Barracuda and Avenger pilot who had moved to the region came to the attention of an RAN officer who knew Fred well. 'Digger' Bourke brought the research to the Sherborne family's attention who, to say the least, knew next to nothing about Fred's adventures. They were amazed at the French efforts to remember and honour Fred and, in 2004, travelled to Château Renard to meet the descendants of the families and participate in a re-enactment of the 1944 victory parade. Fred's grandson, wearing the old flyer's jacket, played the role of his grandfather, the symbol of the liberation. The family was also shown numerous repurposed components from the downed Wildcat.

It is the deep and long-lasting connections and mutual love and respect between the Sherborne family and the people of Château Renard that has seen the donated Wildcat parts displayed at the FAA Museum at HMAS *Albatross*, Nowra. They tell part of the story about a man who served from the first day of the war to the last and who was one of the very few Australian wartime naval pilots. A rare man indeed.

(Published with permission of the author of this article, Andy Wright. First published in 'FlightPath Feb-Apr 2018 Volume 29 No.3. Andy also manages the 'Aircrew Book Review' website located ***here*** *(for online subscribers) or URL https://aircrewbookreview.blogspot.com/ for non-online users; a site I'd recommend to members . . . . .Ed)*

Next Issue the plan is to tell the story of Henry Young, another 'Rare Man' who still is an active member of the SA Division at 99.

Henry first became involved with the RN FAA through the RNZNVR in WWII and trained at NAS Pensacola. He transferred to the RAN FAA post WWII.

An Accidental Hero

Guy Sherborne, Fred's son, has written a book, 'An Accidental Hero', that concentrates on the family's discovery of his father's survival in France, the French research to identify the pilot, and the subsequent celebrations of the Sherbornes and the citizens of Châteaurenard as they joined to remember events sixty years ago. The book is available from the FAA Museum at Nowra.

SA Member's Pathway to a Dream

Kalell Kemp an Associate member of the SA Division next to the Robinson R44 after returning from his first solo flight. Photo taken by his Instructor

TS Noarlunga Navy Cadet, Kalell Kemp has set his goals on becoming a Naval helicopter pilot. Following his PPL training on fixed wing light aircraft, Kalell set his sights on the helicopter. He'd already decided this was the path he wanted to follow.

"The R44 is a great helicopter to fly but, I prefer flying the Schwizer 300 for the following reasons:

First, the R44 has a governor while the Schwizer has a correlator which means when flying the Schwizer, I have to use the manual throttle more often as I much prefer and enjoy using the less automated controls." Kalell said.

He added: "Since the Schwizer has four oleos as part of the landing gear, it is more prone to ground resonance[1] (especially when the four oleos are not balanced' i.e. compression/rebound rates and resting height) than the R44. Kalell continued: "I have never experienced ground resonance while flying the R44, but have several times in the Schwizer. Therefore, this provided me with several first-hand experiences in recognising and recovering from such.

"The funny thing was, my instructor tried to induce ground resonance but after several attempts he was unsuccessful. So we went on to practice some slope landings and it was then (when we didn't want it) we ended up getting into ground resonance," Kalell said

"This experience is good to have particularly when you have an instructor with you, and especially on the first occasion it occurs." He added

"The other thing I like about flying the Schwizer is that the cyclic is of the traditional design, centred between the pilot's legs, whereas the R44 has the T-bar design. When the Instructor is demonstrating a manoeuvre in the R44 and the student is following on the controls, the cyclic is not in the position it would be when students are performing the manoeuvre," he added.

The enthusiasm of this young man to follow a career in the Navy as a helicopter pilot should be encouraged. No doubt members of SA Division are clearly indicating the road ahead. One would hope the Navy Recruiting Officer SA already has him marked as a potential pilot candidate? Hopefully, we'll soon see Kalell appear before an Aircrew Officer Selection Board.

(Note[1]:For those unaware, I've been informed that ground resonance is an imbalance in the rotation of a helicopter rotor when the blades become bunched up on one side of their rotational plane and cause an oscillation in phase with the frequency of the rocking of the helicopter on its landing gear. . . Ed)

Kalell after a flight in a Schwizer 300

Ground Controlled Approach (GCA) the forerunner to a Pilot Precision Approach

By SQNLDR Jim Males AM RAAF (Rtd)
Published with kind permission of the Manager 'Wings' located here

Recovering aircraft efficiently and safely in inclement weather – low cloud and poor visibility – was a challenge around the world until the broad adoption of precise electronic glideslope and track guidance provided by instrument landing system (ILS) equipment and more recently GPS precision navigation.

Early military aircraft, particularly tactical aircraft, did not have the compartment or cockpit panel space to accommodate ILS components and displays. Military aviators consequently relied on an Air Traffic Controller providing glideslope and track guidance from a precision radar installation at each field. The equipment was called a precision-approach radar (PAR) and the pilot flew a ground-controlled approach (GCA).

GCA is now a part of RAAF history; phased out of service in 1990 following the arrival of aircraft equipped with ILS and the advent of GPS. But, when in service, GCA played an important role, especially for Sabre, Mirage and Macchi aircraft all-weather operations.

None of those aircraft had accurate navigation systems and the pilot relied mostly on dead reckoning – time, heading and speed, and a tactical air navigation system called TACAN that provided range and bearing from a fixed ground transmitter.

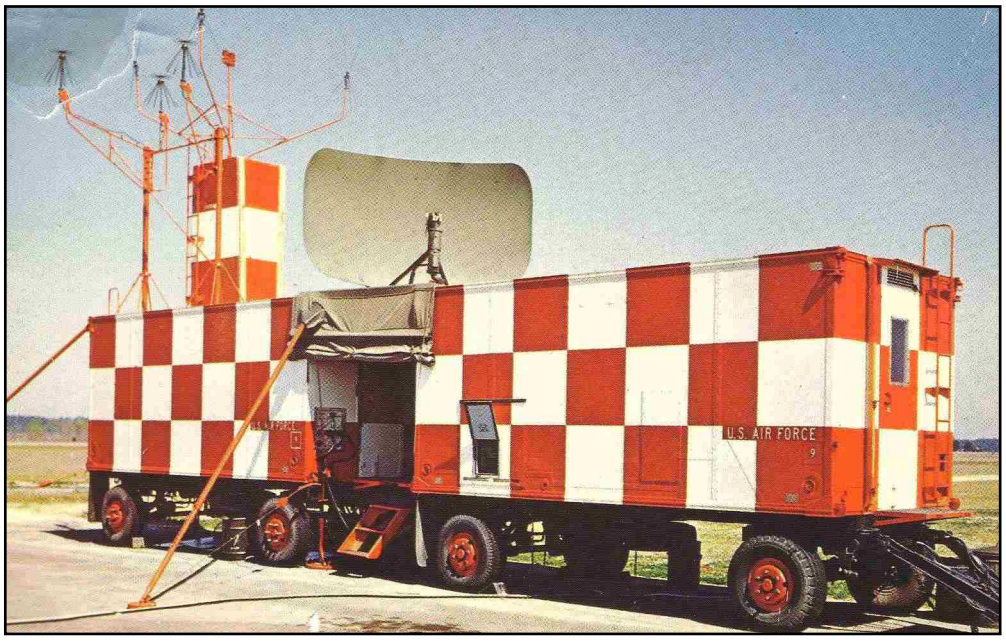
TACAN was notoriously unreliable, limited in range and subject to line-of-sight reception and inherent errors. All aircraft had limited fuel capacity, particularly the Mirage, and efficient recovery in bad weather was essential.

RAAF GCA procedures were introduced in 1956, when an AN/CPN-4 PAR system was purchased and deployed to Essendon Airport for the Olympic Games. CPN-4s were subsequently installed at RAAF Bases Pearce, Williamtown and Amberley.

On other bases, the RAAF installed the smaller and less cumbersome AN/FPN-36 Quadradar, affectionately named to reflect its four radar functions: 360-degree azimuth search; precision approach; height finder; and taxi modes, plus the Indicator Group used by the controller. The Quadradar had 47 individual parameters that could be manually adjusted to refine radar performance. Throughout an approach, the controller continually adjusted radar reception gain – left side of console, while simultaneously working the elevation antenna azimuth servo left and right to keep it pointed at the aircraft – right side of console. One of the best controllers was Vic 'Wingy' Meyn, so called because he had only one arm, but still managed to operate the Quad effectively despite the console ergonomics.

The CPN-4 system, including the control station, was housed in two mobile cabins which were positioned in close proximity to the runway network and had to be moved and reorientated whenever there was a runway change. The working environment was very noisy, particularly with fighter type aircraft (Mirage) taking off nearby with full afterburner thrust.

There were three console positions in the operations cabin; the centre console usually manned by



The original Precision Approach Radar, the CPN-4 located adjacent to the RWY and occupied by three Controllers — one traffic director and the other two as finals Controllers. A number of RAN ATCOs on exchange operated this equipment

FPN-36 Quadradar as used at NAS Nowra. This radar was located adjacent to the intersection of RWY 26/08 and RWY 03/21.

the Traffic Director with a Final Approach Controller in the other two bays. The radar equipment bays were behind the controllers. In wet weather, one of the controllers had to reach into the equipment bay to select circular polarisation to enable the x-band precision radar to "see" through the rain. Snakes were attracted to the warmth of the electronics and took up residence in the compartment. It was a brave controller who blindly put his arm into the equipment bay to wind in the polariser, although no -one was ever bitten.

The standard GCA traffic pattern normally comprised a 10-mile downwind leg during which the pilot was instructed to carry out landing checks. Downwind was followed by a 90-degree base leg, then a 30-degree intercept with the centreline. When close to centreline, the controller would adjust the angle of closure, finally making very small, two-degree adjustments to aircraft heading until established on the centreline. Further small adjustments would be made depending on the crosswind. At 6½ miles the pilot would be advised one mile to glidepath and to prepare for descent. At 6 miles to touchdown the GCA controller advised the tower controller of the GCA traffic on final approach. Near to 5½ miles the pilot would be instructed to commence descent to settle onto the glidepath. Small adjustments to centreline and glidepath were advised continuously to maintain the precision approach. At 3 miles to touchdown, the controller would again contact the tower to obtain a landing clearance or other instructions which would then be relayed to the pilot with a final wheels check.

At decision height (DH – 220ft) the pilot would be instructed to "look ahead and land visually". If the runway was not visible, in fog or heavy rain, the pilot would go around. Often with the Mirage a missed approach would be followed by a minimum fuel GCA, a tight pattern at 1,000ft, a short and five-mile base leg and glidepath intercept at 3½ miles to touchdown. If the runway was still not visible at DH, the controller would continue centreline and glidepath guidance to touchdown if requested, alternatively the pilot would again go around or divert to a secondary airfield, fuel permitting.

Two other types of approach to cater for degraded radar or aircraft systems were practiced and occasionally employed. One, a surveillance radar approach, was used if the precision features of the PAR were degraded. In that situation, centreline tracking was derived from coarse surveillance radar returns and glidepath was the pilot's responsibility with the controller giving advisory heights each ½ mile based on 300ft/mile, for example "you're 3 miles to touchdown, you should be passing 900ft now". The other was a speechless approach practiced in case of facial injury or pilot microphone failure. In that case, the controller would give normal instructions and the pilot would answer by keying a carrier wave on the controlling radio frequency. One blip for "yes", two for "no" and three for "say again".

HMAS *Melbourne* had a ship-based version, SPN-35, and many old RAN controllers will fondly remember conducting a 'carrier-controlled approach' (CCA in lieu of GCA). The SPN-35 was similar to the FPN-36 but had a gyro stabilised antenna group because of ship motion. Talk down commenced as the ship was turning into wind, the final heading for aircraft recovery. It was not uncommon for naval aviators to be given large heading corrections with the ship turning up to 90 degrees to port or starboard; "commence descent and turn left 40 deg" etc. The philosophy was that we were training for war and aircraft were more expendable than the carrier so the ship spent minimal time vulnerable while tracking into wind.

In training for electronic warfare procedures, communication, radar and navigation aids would deliberately be turned off by the ship to avoid detection. In those scenarios, aircraft returning in instrument meteorological conditions (IMC) would initially descend on a signal from a sonobuoy subma-

SPN-35 Quadradar located in the dome at the rear of the island

rine detection beacon located in one of the gun sponsons.

In Butterworth, the STC (Standard Telephones and Cables Limited) SLA3-C PAR had separate screens for centreline and glideslope display and the console was only a couple of metres from the controller's crew room and dart board. Many a game was played by GCA controllers waiting for their next "customer".

Qualification as a GCA controller at Williamtown and Butterworth was a rewarding and challenging responsibility, as Mirages often recovered in bad weather with minimum fuel. To illustrate the precision possible, the controller would position one-third of the Mirage radar return (blip) above the glideslope to account for the high angle of incidence of the delta wing Mirage on final approach. Such was the accuracy, the controller could continue guidance beyond DH right to touchdown. It was an intrepid pilot who said "keep talking to touchdown", as the alternative of wasting the aircraft and banging out (ejecting) was not a cherished option. Many a Mirage pilot bought the GCA controller a few beers after using the service to get the wheels back on the runway.

At East Sale, the GCA procedure was also demanding of both controller and pilot, especially for the HS748 "draggies" that would often return from six-hour navexes (navigation exercises) when thick fog had set in. Often the fog bank top was only 300ft above ground level, so the aircraft would only enter very low visibility conditions just prior to DH and all would hope like hell that the pilot could see the high-intensity approach lights to orientate for landing on the prepared surface. It was therefore critical for the controller to have the aircraft "in the slot" positioned perfectly on glideslope and centreline at ½ mile to touchdown. The School of Air Traffic Control and C Flight at Central Flying School (CFS), RAAF Base East Sale trained hundreds of controllers on the FPN-36. On graduation, controllers would undertake conversion training on the equipment installed at their home base. Operating the FPN-36 required the controller to manually refine the radar beam orientation and sensitivity and most controllers carried a small screwdriver in their pocket as many of the 47 controls were 'tweeked' that way. The centreline cursor was orientated between two reflectors, one each side of the runway threshold, while the glideslope cursor was electronically set to 3 degrees, to give a descent rate of 300ft/mile.

The FPN-36 had search and elevation antennas. In search mode, the horizontal surveillance antenna scanned at 15rpm and was initially used to position the aircraft close to centreline. The controller would than select precision mode and the search antenna would scan 15 degrees left and right of centreline and the elevation antenna would scan vertically from -1 to +6 degrees.

The elevation antenna had a very narrow beam width and the controller had to constantly adjust the antenna left and right to keep the aircraft within the vertical beam.

In 1980, the CPN-4s were phased out and replaced with a much improved Raytheon FPN-802 and the tactical version, TPN-803. Those systems featured a computer-controlled tracking capability to maintained a radar lock on the approaching aircraft for centreline and glidepath guidance. The Raytheon equipment and the Quad radars remained in RAAF service until 1990 when PAR was progressively phased out.

SQNLDR Jim Males AM RAAF (Rtd) carried out more than 2,000 GCAs at Williamtown. Butterworth, East Sale and Richmond during his 22-year career in the RAAF. Jim was proficient on all PAR systems and instructed GCA Controllers at C Flight, CFS. A highlight of his career, Jim qualified on the FPN-802 in 1980 after training at Tinker Air Force Base, Oklahoma, USA.

*(Whilst it's not the same R/T terminology used by Australian Military ATCs, it gives you the general idea of a GCA **here** short version, and **here** longer version. . . . . .Ed)*

SA Division Activities Until March 2022

By Roger Harrison
Hon. SA Whipping Boy

The SA Division ended last year with our annual Christmas lunch held at "The Windsor" Hotel on a hot and uncomfortable 12th day of December. A good turnout (16) considering the stresses lurking, and an excellent fellowship catch up including a good Christmas style meal with drinks provided. President John gave a welcoming speech and wished everyone a safe and Happy Christmas.

Our January General Meeting to be held in the "Wittunga Botanic Park" at Blackwood, was postponed until 16 March at "The Windsor", due mainly to the rapid increase of the latest variant of Covid-19 in South Australia. Safety first.

I paid a visit to the Keswick Barracks Café manager Anthea Williams, with the thought in mind to relocate our Meeting venue more centrally. She was more than obliging with details, menus and a room of our own to enjoy a meal and hold our meetings in that room. In fact, she plans to make the room more Tri-Service. I have a good feeling that this will work for us and be within the Military family, and it is all FREE. I made a tentative booking for March but the President suggested we hold off and put the idea to the March Meeting for ratification so it will be May before we trial the relocation although a coffee morning at the Café like the one the President organised last year, could be beneficial.

The Slipstream Editor, Paul Shiels, who has risked life and limb to visit family in Melbourne, has tasked me to badger member Henry Young for his military service history for eventual printing in the Slipstream magazine. Henry was born 26/09/23, and as sprightly as an 80-year-old after a dodgy curry. Paul is very keen on a few photos of Henry in uniform and not those taken at that sleezy Far-Eastern night club. Uniquely he has served in each of the 3 services and flown in 3 of the World Navies.

Both John Siebert and I have met up with Henry over coffee on the 7 February and sorted most of his collection of photos and military history. A lovely old darling; Happy Birthday Bill Barlow RAN Rtd. Four score years and counting.

Member Vic Grantley Byers has been suffering the loss of his partner Dianne Sally Dudman of 40 years who died after an operation that she seemed at the time, to be recovering from steadily. She passed on 27 October 2021. Vic has a huge support group of family and friends to assist him in the transition of losing a life partner. At the FAAA Christmas lunch, Vic gave a short speech thanking the Members present, for the concern shown to him by the FAAA here in SA as well as his RAAF colleagues throughout Australia. He also received a warm and thoughtful letter of support from the Commanders, Sandy and Peter Coulson. Dianne was Sandy Coulson's PA (Queensland read Personal Assistant) for a few years here at Keswick Barracks.

On 19 January John Siebert and I, took a road trip to visit Michael "Stubbo" Stubbington at Murray Bridge, pick him up and shout him a lunch locally. He had been going through a tough time health wise as well as no longer free to drive. He looked better than I thought he would, and I believe he enjoyed the outing and chatter. His home has the usual Navy photos and personal items we all hold dear for what-ever reason. Pleased John and I did the trip.

16 March sees the SA Division wade through a General Meeting as well as our Annual General Meeting which we try to streamline as smoothly as possible and as such, all Members are invited to attend to observe or become active in the decision making. Usually a bit of fun for us all but finally the following were elected:

President	**John Siebert.**
Vice President	**Roger Harrison**
Secretary	**Roger Harrison**
Treasurer	**Ian McBeath**
Auditor	**Michael Cain**

ANZAC Day, not sure how that will pan out, so details forwarded to you all as we get to hear them from the RSL ANZAC Day Committee. Every chance I will be in the UK visiting my daughter and family through-out April, so I will need an assistant to take charge of the flag, banner, poles etc.

Renewal time is from December to now, so don't forget to remain financial. otherwise we call in Monty who will pay you a visit at 3am to settle the balance.

Regards to you all, stay safe and ask a friend RUOK.
Roger

All 16 gathered together for the Christmas Luncheon

World War II in the Pacific - A Kiwi Perspective

By Max Speedy

Introduction to the RNZAF

In 1923 New Zealand had established its first air force. The New Zealand Permanent Air Forace (NZPAF) was made up of 11 full-time staff in charge of carrying out administration and training. They were backed up by the New Zealand Air Force (NZAF), a territorial unit of around 100 part-time volunteers, most of them ex-First World War pilots who had served with the Royal Flying Corps or with the Australians overseas. It was not until 1937 that the government passed the Air Force Act which established the RNZAF as an independent arm of the military services, equal in status to the army and navy.

With the outbreak of war in Europe, September 1939, New Zealand was not well prepared for any hostilities as far as materiel or men were concerned. The NZ Anglophile population as a whole generally considered that Britain was "Home" and NZ was where they lived. So at the outbreak of war, as with the Great War, men in their twenties volunteered immediately for service overseas motivated by the spirit of adventure yet again. The slaughter of Gallipoli and the trenches of France had not made too many pacifists.

Empire First

War affecting the NZ homeland was not an immediate concern in 1939 but a compulsory three months' military service was introduced all the same. When the Japanese attacked Pearl Harbour on 7 December 1941 and began their advance down through Asia and the Pacific, war looked far more likely and all men were required to join the Home Guard. Defences of the beaches, roads and so on began in anticipation of an attack on the North Island.

The primary equipment of the RNZAF was to have been 30 Vickers Wellington bombers[1] ordered in 1938. The aircraft were built and about to be delivered in 1939 but with the outbreak of war in Europe increasingly likely, the New Zealand government offered the aircraft with RNZAF crews to the United Kingdom in August 1939. Had peace lasted for six months longer, the Wellingtons would have been despatched from the United Kingdom and provided a valuable addition to NZ's defences. There were no modern (in 1939) long-range bombers or fighters in the country.

With only 756 full-time personnel (backed up by 404 territorials), the air force launched a large-scale recruitment drive. Thousands of new recruits were channelled into the Empire Air Training Scheme (EATS), completing their training in Canada before serving with the RAF in Europe and the Mediterranean.[2]

Artist's Impression of Vickers Wellington under attack. The RNZAF ordered 30 in 1938 but with war in Europe looming, they were loaned to RAF 75 Sqn with Kiwi crews.

Around ten percent ended up in one of the RAF's seven 'New Zealand' squadrons – No 75 and Nos 485–490 – set up to maintain a symbolic link to the Dominion. On the declaration of war by Britain, the RNZAF was ordered to mobilise and the Territorial Squadrons likewise. With the outbreak of hostilities, requests

Two RNZAF Hudsons from No.3 Squadron. The RNZAF operated 24 Hudsons that came via the USA – NZ Lend Lease Program.

were made by NZ for bombers and fighters, even operational squadrons, but Britain could not oblige.

My mother's brother, SGT Alan Glover, was one of the thousands who joined up. He became a Wireless Telegraphist Air Gunner. With his pilot, FLG OFF Kingi Te Aho Aho Gilling, they took off from a base in northern Egypt in a RAF 203SQN Martin Baltimore for a shipping search mission. They were reported missing in action on the night of 29/30 September 1942 near Crete.

Getting Airborne

Although the war training organisation was incomplete in 1939, it was decided to proceed at once with a modified war training scheme, using what aircraft and instructors there were, and to expand the organisation as quickly as possible. The programme called for the immediate establishment of a recruit training school and a flying instructors' school. Elementary Flying Training Schools (EFTS) were to be formed at Taieri (Dunedin's Aero Club airfield) and New Plymouth (North Island), and an air-gunners' and observers' school at Ohakea (near Auckland). The Flying Training School (FTS) at Wigram (in Christchurch today) was already in operation, and a second FTS was to be formed at Blenheim (NE corner of South Island opposite Wellington) before the end of the year. A third EFTS and FTS were to form at Palmerston North (north of Wellington) and Harewood (today's Christchurch Airport) respectively in March and April 1940. Other Territorial squadrons had similar roles. The first courses were refreshers for the aero clubs' instructors.

On 11 September 1940 the Air Department issued a call for volunteers, both for aircrew and for ground staff. The response was excellent. Volunteers were required to serve for the duration of the war, either in the RNZAF or in the RAF. For aircrew the age limits were 17 ½ to 28 years, educated up to the standard of School Certificate or University Entrance Examination. The men had to be unmarried and able to pass the prescribed medical examinations.

It soon became apparent, however, that if conditions of enlistment were not changed the supply of men with the necessary educational qualifications would be exhausted fairly soon, while many potentially good men would be lost to aircrew because they did not come up to the educational requirements.[3] In November the requirements were modi-

221 Tiger Moths provided basic training for potential pilots

fied so pilots had to be educated to approximately University Entrance standard; Air observers must have had two years' secondary education; and Air-gunners must be able to be taught to send and receive Morse.

A Flight of RNZAF Harvards along the NZ Coast

An Order of Battle

The NZ aircraft inventory was very poor. The first line aircraft were 24 Hudsons (a twin engine light bomber), 42 Vickers Vincents and 20 Vildebeestes (both wooden twin wing light bombers and torpedo carriers). In Fiji which NZ was committed to defending, there were three De Havilland DH89 Dragon Rapides (bi-plane short haul transports) and two Short Singapore flying boats.

Flying activities were severely curtailed early in 1941 in Fiji when two of the DH89s were destroyed on 20 February by a hurricane. Three days later another aircraft was badly damaged through hitting a truck while being flown low over the aerodrome. As the unit now had only one serviceable operational aircraft, two DH86s were shipped from New Zealand, arriving at Lautoka on 13 March.

Because NZ was mainly geared to training, there were 62 North American Harvards (a tandem trainer), 143 Airspeed Oxfords (twin engine navigation and wireless trainer), 30 Fairey Gordons (bi-plane light bomber already retired from the RAF), 221 DH82 Tiger Moths, a Walrus Amphibian, and a few other light aircraft and some civilian types scattered across NZ. Quite a few aircraft were retro-fitted with guns and bomb racks but not one of these aircraft, the first line or the trainers could have served effectively in slowing the Japanese advance by air, land or sea.

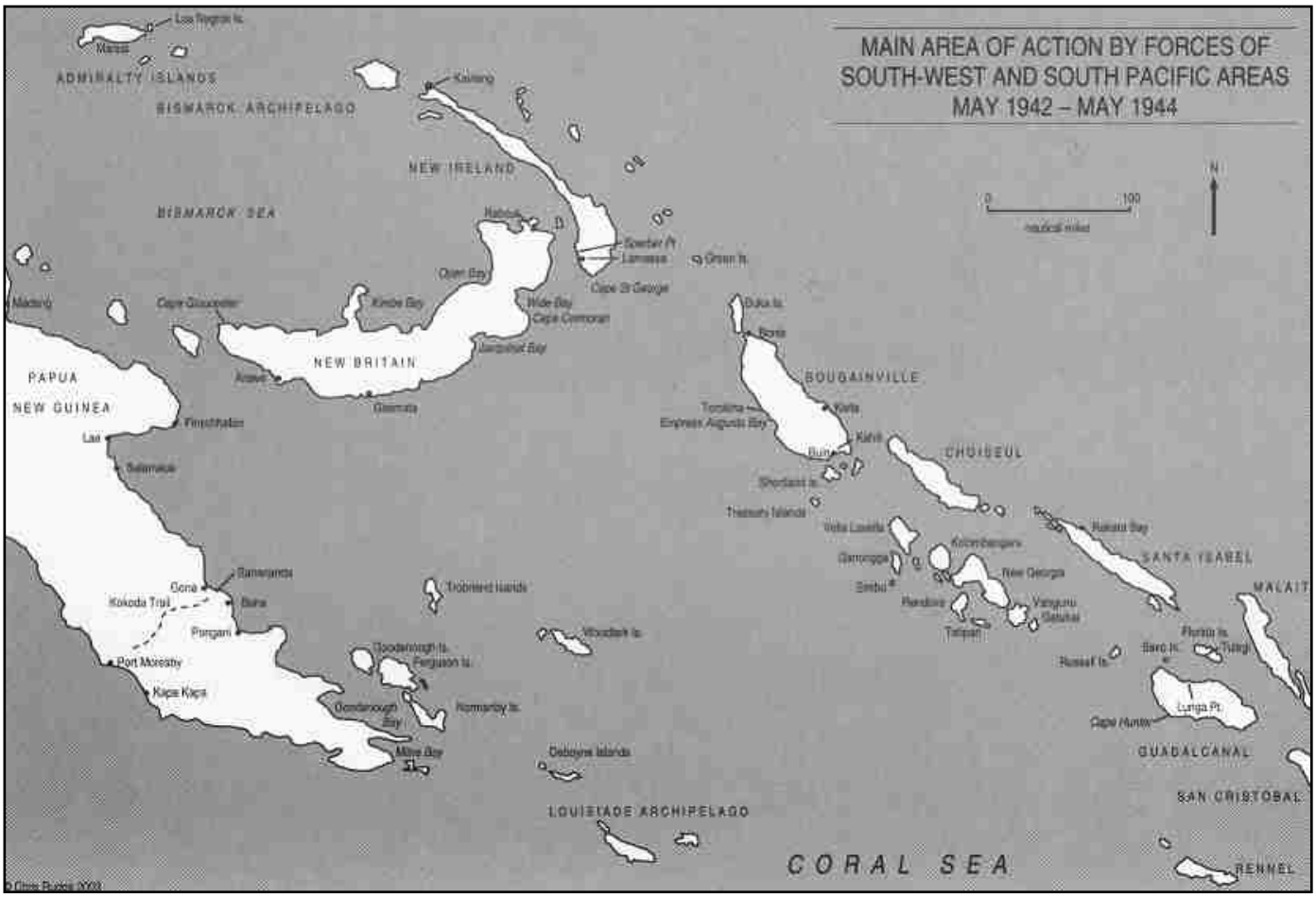
The vulnerability of New Zealand was demonstrated on a number of occasions when a submarine-launched Japanese float plane overflew Wellington (8 March 1942) and again at Auckland (13 March), where it was chased ineffectually by a Tiger Moth. Later in May another Japanese reconnaissance flight occurred north of Auckland.

War Close to Home

The fall of Singapore and its defence as we now know was inadequate. In less than two months the Japanese had arrived in Singapore. In the space of eighteen days RAF 243SQN lost seven pilots of whom six were Kiwis. The RAF personnel and equipment and the Kiwis of RNZAF 488SQN and RAAF 453SQN personnel left over were more or less wiped out as they fell back to Singapore in late January 1942. A resupply of Hurricanes from the UK in January 1942 were put together and flown valiantly but those were soon destroyed. Some RNZAF Brewster F2A Buffalos retired to Java but carried out no successful raids on the advancing Japanese who crossed over from Malaya to Singapore Island on 8 February 1942.

A lucky few were evacuated on 11/12 February 1942 and made it to Java by the ship EMPIRE STAR which was continuously bombed and lucky to arrive. A brave attempt was then made to

143 Airspeed Oxfords a twin engine navigation and wireless trainer were used for the training of RNZAF navigators and R/T operators



fly back to defend Singapore and help the ground crews at Palembang airfield in Sumatra on 14 February but with no success. On 15 February, Singapore was surrendered by LTGEN Arthur Percival.

Very quickly, Java became untenable and the Australians and New Zealanders made it back to Fremantle, Australia. The Kiwis eventually arrived in Lyttleton, NZ in March 1942. These men were to provide an experienced nucleus around which new fighter squadrons, were eventually established.

Curtiss P-40 Kittyhawks of the 14(F) Sqn RNZAF in flight July 1943

American Assistance for NZ

Up until 7 December 1941, the United States public was strongly entrenched in staying neutral. After Pearl Harbour and with Britain no longer able to pay in gold for American materiel, President Roosevelt signed the Lend-Lease bill into law in March 1942. Britain was the first to benefit but the Commonwealth countries followed quickly as did other countries around the world.

New Zealand's Lend-Lease agreement with the United States was more a trading relationship as NZ provided vast quantities of food for the American military. Gradually, America was able to supply New Zealand with aircraft for use in the Pacific Theatre albeit the requests had to be sanctioned through British channels. The Munitions Assignment Committee in Washington nevertheless allotted 36 Hudsons, 80 Curtis Kittyhawk P-40s, and 12 Harvards, all to be delivered between March and May 1942.

In May the Kittyhawks began to arrive, and fighter squadrons were formed. Personnel for 15(F) Squadron followed 14(F) and formed at Whenuapai on 1 June 1942. 16(F) was established at

HMS Exeter entering Malta Harbour

Blenheim in August owing to the need to protect shipping in the Wellington area, and because it was thought that Auckland could be adequately defended by 15(F) and American units which were expected to be based there.

The Japanese Advance South

While Singapore fell in February 1942, the Japanese had already invaded the Philippines, Sarawak, and Northern Borneo. The islands of Wake and Guam along with Hong Kong had all gone. On 4 January 1942, they had attacked Rabaul and Suva, and Fiji was under submarine threat. By the end of January, 5300 Japanese troops landed at Rabaul, more at Kavieng (New Ireland), Bougainville, the Celebes, and Balikpapan, Borneo, and Lae, New Guinea.[4] On 19 February, Darwin had its first air raid, the beginning of sixty-four raids against Darwin and its nearby airfields.[5] On 27 February the Japanese Navy had sunk five Allied ships in the Java Sea and two days later at Sunda Strait, sank USN Ships *Houston* and *Pope,* HMS *Exeter* and HMAS *Perth.*

US GEN MacArthur (with some of his staff, wife and young son) left Corregidor on 11 March for Australia and 78,000 Allied troops were eventually surrendered to the Japanese in April.

USS Houston leaving berth and underway

While the Japanese had landed at Lae on New Guinea's north coast and were bombing Port Moresby, on 4 May they were attempting to make a naval attack on Port Moresby. The Japanese ships were intercepted and the ensuing Battle of the Coral Sea, the first naval air engagement with the fleets out of each other's sight took place. While somewhat of a Japanese victory in terms of ships sunk and aircraft lost, it was a moral victory for the Allies being the first time the Japanese advance had been checked in any way.

The Battle of Midway which took place on 4 – 7 June 1942 inflicted devastating damage on the Japanese fleet that rendered their aircraft carriers irreparable. Had the Japanese won at Midway, their next stop was to have been further attacks on Fiji, Samoa and on to Hawaii again.

HMAS Perth arriving at Garden Island, Sydney circa late 1930's. Fort Denison is in the background

The Importance of Espiritu Santo and Guadalcanal

For Japan, the importance of Guadalcanal and nearby Tulagi Island was for its bombers and sea planes. They were needed to interdict sea lines of communication across much of the Pacific, from the west coast US to Australia.

With Pearl Harbour being frantically repaired and Australia and NZ under threat, the Americans needed a relatively secure forward base from which to launch attacks. Guadalcanal was ideal but in Japanese hands so Espiritu Santo (Vanuatu) was chosen in March 1942 from which to begin the long haul north to Japan.[6] (Espiritu) Santo Naval Base was the first large advance base built in the Pacific. By the end of the war when 500,000 service people had passed through, it had four airfields, wharves, dock repair facilities, and a vast stores supply capability to become the second-largest base in the theatre.[7] From here Allied bombers could reach Guadal-

canal and could go back and forth from NZ.

The idea of the island hopping campaign of the Allies now began to take hold. The Japanese in the Philippines, and elsewhere, had proven to be fierce fighters preferring to die than to give any ground. It was painfully obvious that fighting island to island on a campaign across the Pacific would take time and cost many lives. But at the same time, the Japanese bases had to be neutralized. Rabaul was a major Japanese army, air and naval base and Guadalcanal had to be taken before anything could be done about Bougainville further north when Rabaul itself would be in range of the fighters.

Commonwealth Kittyhawk at Espiritu Santo (Vanuatu) Date unknown. Note roundel under left wing

11,000 US Marines left Espiritu Santo for Guadalcanal and Tulagi in the Solomon Islands group and on 7 August small units landed on Tulagi Island north of Guadalcanal and two tiny islets nearby with a Japanese seaplane base.[8] There was solid resistance but it was soon overcome. The focus of Guadalcanal was to be Laguna Point and its airfield being built by Korean forced labour. The large bulk of Marines landing on Guadalcanal surprised the Japanese who withdrew into the jungles west and east of Laguna.

The generally successful first two days for the Marines was shattered when a failure of intelligence and vigilance resulted in an Allied screening force being surprised by a determined group of seven Japanese cruisers and a destroyer coming from Rabaul. Near Savo Island just before 2am on the morning of 9 August 1942 the cruisers USS *Quincey* and USS *Vincennes* were sunk and HMAS *Canberra* and cruiser USS *Astoria* were both so badly damaged they eventually sank at Savo Island. The destroyers USS *Ralph Talbot* and USS *Patterson* were severely damaged.

Thus began six months of bloody battle to hold Guadalcanal: one of the first prolonged campaigns in the Pacific theatre of World War II.[9] There were many Japanese air raids as well as soldiers forever probing the perimeters and night sorties of ships that shelled the airfield. It strained the logistical capabilities of the combatants. For the US, this prompted the development of effective combat air transport for the first time. Japan failed to achieve air supremacy and were forced to rely on reinforcement of barges, destroyers, and submarines, mostly by night for the soldiers on the island, with very uneven results. Early in the campaign, the Americans were hindered by a lack of resources, as they suffered heavy losses in cruisers and carriers, with replacements from ramped-up shipbuilding programs still months away from materializing.

The US Navy suffered such high personnel losses during the campaign that it refused to release total casualty figures for

Massive Floating Dry Dock at Espiritu Santo (Vanuatu) with a US Battleship undergoing refit

Japanese Soldiers Captured by US Marines on Guadalcanal 1942

years. However, as the campaign continued, and the American public became more and more aware of the plight and perceived heroism of the American forces on Guadalcanal, more forces were dispatched to the area. This spelled trouble for Japan as its military-industrial complex was unable to match the output of American industry and manpower. As the campaign wore on the Japanese were losing irreplaceable units while the Americans were rapidly replacing and even augmenting their forces.

As many as three-quarters of Japanese deaths were from non-combat causes such as starvation and various tropical diseases. The drain on resources directly contributed to Japan's failure to achieve its objectives in the New Guinea campaign and the major base at Rabaul was now further directly threatened by Allied air power. Most importantly, scarce Japanese land, air, and naval forces had disappeared forever into the Guadalcanal jungle and surrounding sea.[10]

In what became Operation Cartwheel with many sub-operations, the American High Command assembled at Guadalcanal in August 1943 to plan the next steps towards Tokyo. GEN MacArthur wanted to take Rabaul via New Guinea but this required more troops than were available. ADM Halsey's plan was more subtle and the by-passing of Rabaul, instead of its neutralisation was sanctioned by the US and British Commands.

The Japanese Navy decided to try to save Rabaul by sending hundreds of airplanes from aircraft carriers based at Truk in December 1943 to counter the US and Australian bombers. The only thing that this accomplished was the destruction of 200-300 irreplaceable carrier aircraft and the loss of experienced naval aviators. This degradation of the Japanese aircraft carrier air fleet led the US Navy to start the Marianas and the Admiralty Islands[11] campaigns starting in late February 1944. After the Allies confirmed that Rabaul no longer had any airplanes. Rabaul's valuable mechanics attempted to leave Rabaul by ship on 21 February, but their ship, the KOKAI MARU, was sunk by Allied bombers and Rabaul became a de facto prisoner of war camp. Even so, on 7 April 1943 a 100 Japanese aircraft raided Guadalcanal from Bougainville – it wasn't over yet.

Bougainville was the next stop for the Allies. The Japanese had three airfields there – north, east and south all to protect Rabaul but nothing on the west coast. An airfield site (Torokina) was chosen on the west coast near a protected anchorage Empress Augusta Bay. With the intervening jungle and mountain range between opposing forces, it would take the Japanese too long to mount an effective counter attack. US forces landed on 1 November 1943 and after about a month, held the island strongly enough. The fighters and light bombers

Artist Impression of Japanese Navy troopship Kokai Maru

could make effective raids on Rabaul harbour and its shipping that the heavy bombers had been unable to achieve previously.

Where was the RNZAF?

RNZAF 9SQN with three Hudson bombers had been at Noumea since July 1942 on anti-submarine patrols and 4SQN was in Fiji on similar work. 3SQN Hudsons had been operating from Espiritu Santo but in November 1942 went to Guadalcanal for reconnaissance and convoy protection while the Americans bombed Japanese airfields on Bougainville and elsewhere.

The first fighter squadron to leave NZ was 15(F). Or rather the crews left NZ for Tonga in October 1942 where they took over some old P-40E Kittyhawks from the Americans. They stayed there for three months while making the aircraft flyable. The unit then flew on to Santo via Fiji. The normal route from NZ to Espiritu Santo and Guadalcanal was in flights eight or more fighters led by a Hudson doing the navigation and another astern to locate and pin-point stragglers who might ditch on the way. With belly tanks, the P-40s had a range of nearly 1000 miles. Three or four legs took them via Norfolk Is, Noumea then Santo and Guadalcanal. Ground crews went in the cramped Hudsons or later on, in Dakotas. 15(F) SQN finally arrived in Espiritu Santo in April 1943.

Flooded! US Marine Corps Camp near Cactus Field circa 1944 (Henderson ex the Japanese airfield under construction by the Korean forced Labour) epitomises just how difficult the whole thing was.

Notes:

[1] The Hudson and Wellington had similar speeds and service ceilings but the Wellington could carry 2000kg in bombs for a range of 2200NM vs the Hudson's 640kg and 1700NM range.

[2] About 7000 Kiwis served in various RAF and RAAF squadrons throughout Europe and the Mediterranean.

[3] There was an element of class distinction in the original higher education requirements too.

[4] The Lae landings were the beginning of the Kokoda Trail Campaign.

[5] While Darwin took the brunt of the bombings, towns from Exmouth WA across the north to Mossman and Townsville QLD were bombed approximately 100 times between March 1942 and November 1943. On the night of 31 May/1 June Japanese midget subs entered Sydney harbour seeking the USS Chicago but instead found HMAS Kuttabul. On 8/9 June Newcastle was shelled by another Japanese submarine.

[6] There were many other US bases across this whole long series of islands through the war, used and abandoned as required by circumstance.

[7] And was the idea for the musical "South Pacific."

[8] Tulagi Island is 25 miles north of Guadalcanal and tiny Savo Island is just 10 miles off the western tip. Honiara, the capital today, is mid north coast and five miles east is Laguna Point and airfield. Once in US hands, the airfield was renamed Henderson Field (or Cactus) which became a bomber field and a new pair of airstrips east became the fighter fields because of the density of air traffic.

[9] Today's nearly total independence of the US Marines from the USN and USAF derives from their perceived lack of support at Guadalcanal, beginning with the withdrawal of the aircraft carriers to the east on 8 August.

[10] Just at Guadalcanal - For the US 7,100 dead; 7,789+ wounded; 29 ships lost including 2 fleet carriers, 6 cruisers, and 14 destroyers; and 615 aircraft lost. For Japan 19,200 dead, of whom 8,500 were killed in combat; 1,000 captured; 38 ships lost including 1 light carrier, 2 battleships, 3 heavy cruisers, and 13 destroyers; 683 aircraft lost; 10,652 evacuated.

[11] The next step North West of and after Rabaul's neutralisation.

(CMDR Max Speedy DSC RAN (Rtd) was born in Levin, NZ, in 1944 and came to Australia in 1950. After his schooling, he joined the RAN in 1962 initially for Observer training. He later trained as a pilot, went to Vietnam in 1968 with the RAN Helicopter Flight and after all that excitement, settled down to an interesting career that lasted for 25 or so years).

NEXT ISSUE: My father's involvement as a RNZAF pilot in the Pacific in WWII

Use of National Archive & EDP Records

I noticed the two obituaries for John Green and Kevin Wright, which I presume that you compiled from their National Archive profiles. I know that both John and Kevin served beyond 1970, as that was the year I posted permanently to HMAS *Albatross* and they were there after that date.

The NAA digitised records only go to 1970, as stated by the red stamp on each page. Records after 1970 went through Electronic Data Processing (EDP) and they can be accessed, but only from Naval Personnel Records. John Balazic, who manages the Wall of Service is able to provide you with more information if required, (john.balazic@defence.gov.au) .

The FAAAA website membership link does ask for 'Date of Discharge' and 'Rank and Category'. I can speak only for the NSW Division and say that the hard copy membership application asks for identical details. As to whether those records are readily available is another matter.

I hope this is of assistance.

Terence Hetherington
National Secretary

(Thanks for that info Terry. It provides an answer as to why John Green is not shown to be promoted to CPO. Similarly, with Kevin Wright I only used the NAA records. I wondered at the time why they didn't complete 20 years for the DFRB/DFRDB pension? Now you've explained it—they did!

Of the obituaries I complete, a draft is always sent to the State Division for comment and/or amendment as I'm not sure of items that should be added or removed as it was in both these instances.

It would appear that post 1970 records are only available via membership forms, so I'd appreciate Divisions checking the drafts and advising discharge date and rank on discharge).

Broome Remembered

Jack McCaffrie's account regarding HS748s joining HMAS *Albatross* (NAS Nowra), jogged some powerful memories. I did the HS748 course at East Sale in early 1973 – with two Bomaderry Aussie Rules team-mates Steve Keeling & Ted Callister. My only flight in one was on 6 May 1975, with half of 816 Squadron to Broome for Operation Trochus. Two days later I returned to NSW in a RAAF Hercules.

I with half of 816 that went, had day one off. I spent the first afternoon drinking at the wets of our Base on Herbert Street. Although there were two hotels in Broome at the time, the Roebuck & the Continental, this base had a divided wets area. I see a lonely black fella drinking on the other side, & think 'it's segregated'. I yell out at closing time that "Broome was racist". Three uniformed RAAF Officers nearby, take exception. A short time later I am driven into the desert on the pretense of 'going to a party' & dumped in the middle of the Kimberley Desert. Eight hours later I stagger into Broome looking for our Base. I climbed up a window of a portable - a Burmese Oil worker & family were there. I mumble an apology. An hour later in the middle of our Broome Hangar, numb with shock, manhandled by our officer of the day & frog marched to the 816 CO, then made to return to NSW in a RAAF Hercules.

For all that, there are many other better memories of those days.

Robert Wood

Straight Deck Landings Re-visited

Re the latest *Slipstream (Dec 2021)*, once again Frederick Lane expresses his hang up re 2 course {pipeline!}; and gets it wrong re my deck landing article. My article had side bars added to it which contained the alleged errors, they were not mine.

A little history, after we came back from Korea the word was that either Fred or myself were to undergo the batting course in the UK. I firmly knocked it back and shortly after was posted to HMAS *Murchison* to gain a watch keeping certificate, best thing that could have happened to me as two later ship commands attest.

Fred may recall when he was having a little trouble batting, I was told to stand by to "mouse" for him, the term clockwork mouse was the term for an experienced pilot to be batted by a trainee batsman. Unfortunately, I never had the pleasure.

Getting it all off my chest, as most people who know me are aware, I hate being called "Norm", connotations of the couch potato.

Norman Lee

Letters to the Editor

Records of FAA personnel

We have all seen those lists of Fleet Air Arm personnel who have paid the supreme sacrifice within the FAA during active service.

My question: Are there any records kept of those FAA personnel who have been killed through flying accidents or flight deck incidences outside of a military conflict?"

If yes, can you redirect me to the details, if no, then bugger it as I will do my own leg-work.

Roger Harrison

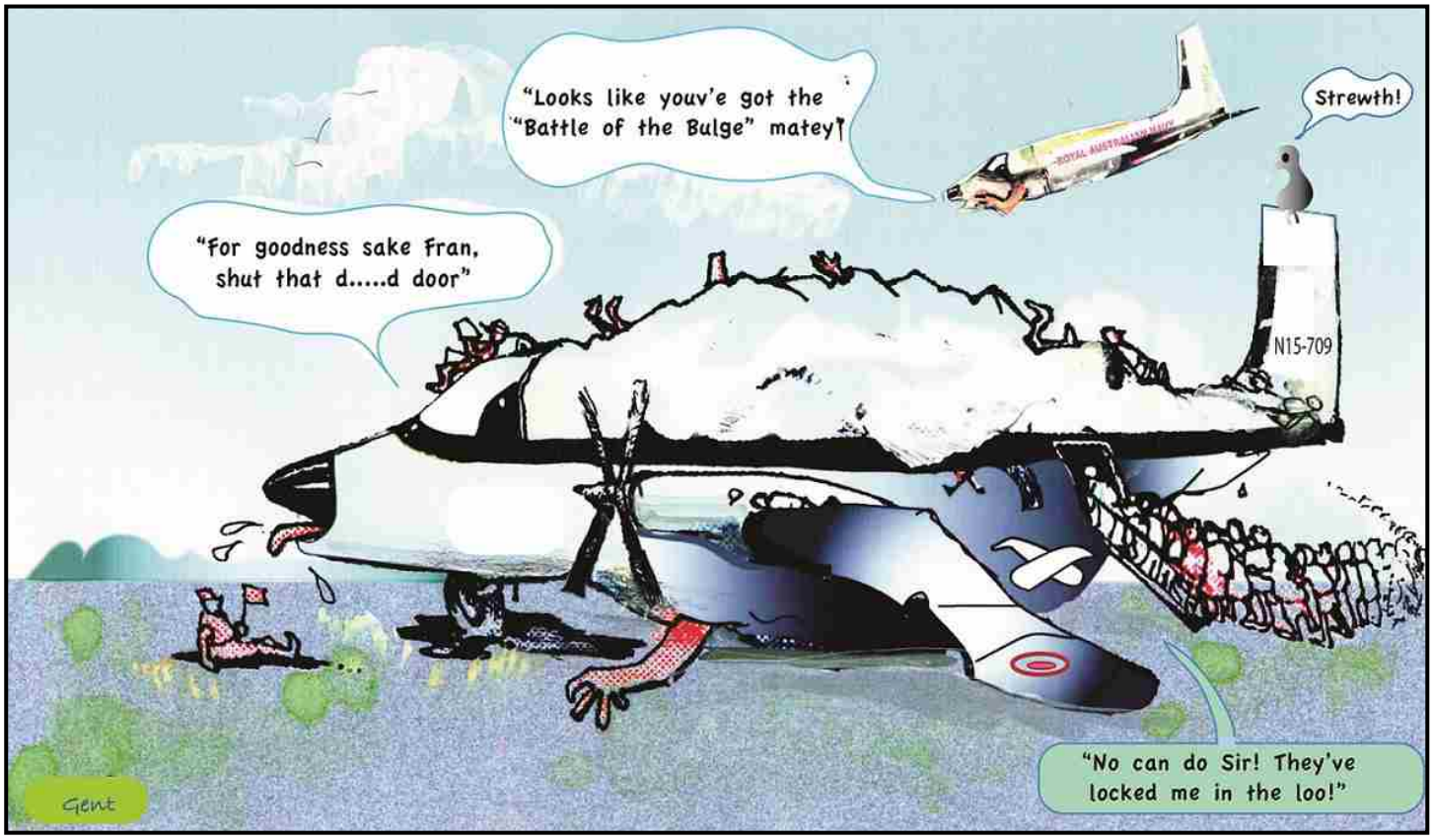
(Thanks Roger for your question. Most of the information you seek can be found in the Member's section of the FAAAA website under Accident Records ***here****. Also civil accidents involving former FAA personnel can be found on the Air Transport Safety Bureau (ATSB) website* ***here****. Unfortunately, you'll need to know the date of the accident or registration of the aircraft. For example, Errol Kavanagh's accident resulting in his death in the MiG 15UTI VH-LSN at Canberra is located* ***here****. Another involving the crash of VH-CIV and the death of Rob Partington can be found* ***here****. All other personal records pre-1970 can by found at the National Archives of Australia by searching the person's details here or the URL for non online subscribers at: https://www.naa.gov.au/explore-collection/defence-and-war-service-records).*

Closing Date for Articles and Reports

1 June 2022

(Remember articles sent in earlier have priority unless Editor determines otherwise)

Email: slipstream_faaaa@outlook.com



China's Type 003 Aircraft Carrier Nears Completion

Looking down on a model of the Chinese Type 003 conventional aircraft carrier. It provides some perspective of the size of the ship

Compilation of You Tube Videos and URLs compiled together and Translated Voice to Text
By Paul Shiels

Aircraft carriers have been the greatest power projecting weapon for the past 80 years. A single Carrier strike group has enough firepower to decimate the entire Navy of a medium size country (e.g. the RAN Fleet). But the importance of aircraft carriers has increased significantly in the 21st century, due to the rising maritime activities such as the Seaborne Trade of Goods and Supplies; Oil and Gas explorations; and Military activities. The aircraft carriers provide a strong deterrent against the disruption of trade routes and sea lanes from rogue states across the world.

Being the second largest economy with over 60% of its trade carried out through sea routes and being a rival of the United States for global domination, China wants to have a massive blue water Navy spearheaded by multiple aircraft carriers. China currently has two operational aircraft carriers, while a third one is under construction, which will be ready by mid-2022.

The Type 003 in Yellow Frame being fitted out in Jiangnan Shipyard in Shanghai, China.

A classified report suggests that China is planning to field six operational aircraft carriers by 2030 and will eventually increase the tally to 10 aircraft carriers by 2040. Unlike the first two aircraft carriers, the Type 003 is indigenously designed and domestically developed by the Chinese engineers in Jiangnan Shipyard in Shanghai. The Type 003 will be much larger and technologically more advanced than previous carriers. It has a displacement of approximately 90,000 tons and is approximately the same size as the US Navy's *Gerald Ford* class aircraft carriers. Comparisons have also been drawn to the American *Kitty Hawk* class aircraft carriers.

The construction of a long-rumoured Chinese Type 003 Super Carrier has now entered the final phase. The primary mast of the third aircraft carrier of the Chinese People's Liberation Army – Navy (PLAN) has been installed as shown in the latest satellite pictures being shared on social media.

The Type 003 aircraft carrier will be the first Chinese aircraft carrier to use a **C**atapult **A**ssisted **T**ake-**O**ff **B**ut **A**rrested **R**ecovery (CATOBAR) system and electromagnetic (EM) launch catapults. Presently, China is operating two aircraft carriers: Type 001 *Liaoning* and Type 002 *Shandong*; both of them are conventionally powered and have ski-jump runways for aircraft takeoff and **S**hort **T**ake-**O**ff **B**ut **A**rrested **R**ecovery (STOBAR) type design for recovery. STOBAR is a system used for the launch and recovery of aircraft from the deck of an aircraft carrier, combining elements of "short take-off and vertical landing" (STOVL) with "catapult-assisted take-off but arrested recovery" (CATOBAR). Aircraft launch under their own power using a ski-jump to assist take-off (rather than using a catapult).

However, the planes are conventional, rather than STOVL aircraft, and thus require arrestor wires to land on the ship. The STOBAR system is simpler to build than CATOBAR. As of 2018, it has been used regularly on Russian, Indian, and Chinese carriers.

This design without catapults significantly limits the maximum take-off weight of Chinese Carrier-based fighter aircraft J-15s and restricts the variety of its embarked air group. To mitigate these deficiencies, the Chinese Type 003 aircraft carrier will use CATOBAR type EM catapult launch system, very similar to US aircraft carriers.

Experts believe that Type 003 will be the largest and most advanced aircraft carrier ever built outside the United States when completed. Powered by Integrated Electric Propulsion (IEP), and approximately 90,000 tons, the Type 003 supercarrier is under construction at Shanghai Jiangnan Shipyard. Current assessment indicates that its length is 320 metres and has a flight deck with a width of 78 metres. It will be equipped with three EM catapults for rapid launching of a variety of aircraft, an angle flight deck with arresting cables and two larger elevators than those used on *Liaoning* and *Shandong*.

China's Type 003 Aircraft Carrier

Class overview	
Builders	Jiangnan Shipyard
Operators	People's Liberation Army Navy
Preceded by	Type 002
Succeeded by	Type 004
Planned	1
Building	1
General characteristics	
Type	Aircraft carrier
Displacement	85,000–100,000 t (84,000–98,000 long tons) (full load)[1][2]
Length	300 m (984 ft 3 in) (waterline)[3] 320 m (1,049 ft 10 in) (o/a)[4]
Beam	40 m (131 ft 3 in) (waterline) 78 m (255 ft 11 in) (o/a)[5]
Propulsion	Conventional with integrated electric propulsion
Aviation facilities	Hangar deck

The Type 003 was originally intended to use steam-powered catapults. In 2013, PLAN Rear-Admiral Yin Zhuo said that China's next aircraft carrier would be equipped with an EM launch system. Multiple prototypes were spotted by media in 2012, and aircraft capable of using the system were tested at naval research facilities.

The change to EM catapults explains the increase in size from previous Chinese carriers. The air group of the Chinese future aircraft carrier will consist of new twin-engine stealth fighters the Shenyang FC-31 Gyrfalcon (it is also known as the J31-land based as well as J35-carrier based which is a Chinese prototype mid-sized twinjet 5th-generation fighter aircraft developed by Shenyang Aircraft Corporation (SAC). The official nickname published by SAC is "Gyrfalcon", though it has also been referred to as the "F-60" or "J-21 Snowy Owl" in some media reports, or "Falcon Hawk" by some military enthusiasts.

J-XX nomenclatures in the Chinese military are reserved for programs launched and financed by the People's Liberation Army, while FC-31 plane was developed independently as a private project by the aircraft manufacturer.

The Type 003 carrier would operate an air group of 40 fighter aircraft, plus propeller-powered transport; and airborne early warning and control aircraft (KJ600). Construction on the supercarrier began in the mid-2010s. It was reportedly delayed in June 2017 by EM and steam catapults tests. By November 2017, the Navy had reportedly developed an IEP system – instead of nuclear power - to power EM catapults, allowing work on Type 003 to resume.

The block modules were moved from the manufacturing facility to the staging area in May 2020, and into dry dock in July 2020. Almost all information is based on satellite and aerial photography suggesting a hull/waterline length of 300 metres - nearly the flight deck length of China's existing carriers and a maximum beam of 40 metres.

In July 2021 satellite pictures showed that construction was moving ahead with the keel and base hull blocks were in the dock

Chinese J15 Fighter trapping on the Type 002 Shandong

by early September 2020; the foremost part of the bow was missing. Measurements of key elements like the superstructure and three catapult launch systems needed to be added to the hull. The projected launch of the third Chinese carrier is mid-2022 and is expected entry to service in 2023. Chinese aircraft carriers acquiring history is a story of hard work, ambition and making dreams come true.

The People's Republic of China have had a desire for aircraft carriers since the 1970s. In 1985, China United Shipbuilding Company acquired the RAN's decommissioned aircraft carrier HMAS *Melbourne* for scrapping. All sensitive electronic and electric machinery was removed before the towing of the ship to China. Upon arrival in China, the scrapping of *Melbourne* was stopped. Rather, Chinese engineers carried out an in-depth study of the decommissioned ship through reverse engineering, something the Australian Government of the day either wasn't aware of or didn't expect. However, as reflected in the December 2021 issue of *Slipstream* the catapult and arrestor wires were removed to a shore-based airfield. It was also revealed many years later that jet fighter pilots were trained on the ground based replica of *Melbourne's* flight deck. The ship was used as an initial template for the development of naval aviation in the Chinese Navy. *Melbourne* was finally broken up in 2002.

China also acquired Russian aircraft carriers *Minsk* and *Kiev* in the late '90s also with the purpose of scrapping them. However, neither were broken down. In 1998, China, through a covert mission using a Macau based company at the front end, bought the half-built 67,500-ton ex-Soviet class aircraft carrier *Varyag* afloat in Ukraine. It took approx. 21 months, from June 2000 to March 2002, for the *Varyag* to reach China. This was due to a very slow speed, long distance and frequent stopovers owing to political/safety issues.

The ship was then towed for 2,820 km from Macau to Dalian Shipbuilding Industry Company in Liaoning Province of China at a speed of only six knots. Upon arrival, the aircraft carrier went through a very long refit. For the first time in 2007, reports emerged that *Varyag* was being refitted for military use. Then in September 2012, it was officially announced that the refit of the aircraft carrier had been completed and it has been renamed *Liaoning*. Later in the month, *Liaoning* was commissioned and handed over to the Chinese Navy. After four years of rigorous trials and fit outs, the Chinese aircraft carrier Type 001 *Liaoning* was declared to be combat ready.

The Type 003 aircraft carrier will have an operational range of 10,000 nautical miles without the need for a single replenishment. That's more than twice the size and range of the *Liaoning* and *Shandong* aircraft carriers, which have a total displacement of 45,000 tons and have an operational range of 4,000 nautical miles. The Type 003 will accommodate 2,700 crew members, and a detachment of 85 marines to carry out search and rescue operations.

The first two aircraft carriers of the Chinese Navy, the *Liaoning* and the *Shandong* have very small aircraft carrying capacity. The *Liaoning* can only carry 26 aircraft and thus is mainly used for training purposes. Whereas the *Shandong* can carry 40 fighter aircraft. But the *Shandong* too

USS Gerald Ford at sea. The Chinese Type 003 aircraft carrier Is expected be comparable with three EM catapults and similar tonnage

is restricted as it can only launch the J15 fighters with reduced payload capacity. This is because of the non-availability of an EM catapult launch system. That's why both of these aircraft carriers are using heliborne early warning radar systems instead of fixed-wing AWACS.

However, the Type 003 will have the capacity to carry 84 fighters and AEW aircraft. It will carry the J15 fighters with full payload capacity as well as the newly developed 5th generation J35 stealth fighters (also known as the FC-31 and J31).

The Shenyang J35 is a twin-engine carrier-based 5th generation fighter aircraft, which is considered to be as capable as the F35 operated by several Allied countries.

A 1⁄4-scale model of the J-31 was shown at the China International Aviation & Aerospace Exhibition 2012, hinting at a desire to offer the aircraft for export, as an alternative for those countries that could not purchase the F-35.

The J-31 airframe was publicly unveiled on 12 November 2014 at Zhuhai Airshow. In TV broadcast of the unveiling, Aviation Industry Corporation of China (AVIC) chairman Lin Zuoming claimed that funding for the aircraft came entirely from the company, with no input from military.

Above is the KJ-600

The KJ-600 would be fitted with an advanced active electronically scanned array, or AESA, radar which could enable it to spot stealth aircraft such as US F-22s and F-35s. The new surveillance plane could also become a command center in the air. It is very similar to the E-2 Hawkeye, the US Navy's all-weather, carrier-borne tactical airborne early-warning aircraft.

The PLAN had urged the Shenyang Aircraft Corporation to develop a carrier-compatible version of J-31.

In June 2020, reports surfaced that a third variant of FC-31, albeit a more production-ready version with smoother lines, bigger radome for bigger radar, and a closer alignment of control surfaces for reduced radar signature, has been developed. The "new fighter' had been referred to by some as J-35.

On 29 October 2021, the modified naval variant of the FC-31, dubbed J-35 by commentators, made its maiden flight.

Image of Chinese FC-31 (known as the J35 for carrier based) Stealth Fighter with hook down about to trap. The aircraft is understood to be as capable as the F-35

These aircraft are planned to operate from the Type 003 aircraft carrier. The naval variant is based on the second prototype of the FC-31, but also includes a catapult launch bar and a wing-fold mechanism.

It's planned for the Type 003 to carry two squadrons of J35 fighters as part of its air group as well as the capability to carry airborne early warning aircraft, ASW aircraft (KJ-600) along with several transport helicopters.

Experts believe the Type 003 aircraft carrier will give a massive potential boost to the Chinese Navy due to its sheer firepower, and its ability to be deployed for long distances. Type 003 will be equipped with an EM catapult launch and recovery system rather than the traditional Ski jump ramps to launch STOVL aircraft.

This will have immense significance in increasing the number of sorties an aircraft carrier can generate. The use of an EM catapult system will allow the Chinese Navy to operate larger and heavier aircraft at faster rates. As expressed earlier, the Chinese Navy used to operate the existing J15 fighter aircraft with reduced payload capacity, due to the lack of an EM catapult launch

A closer aerial view of the Chinese Type 003 aircraft carrier in dry dock at Shanghai Jiangnan Shipyard

system on its first two aircraft carriers. But now with the introduction of the EM catapult system in the new aircraft carrier, they will be able to launch and recover the Shenyang J15 and fixed-wing airborne early warning platforms with full payload capacity. Not only that, the EM catapult launch system and arrested recovery will enable the carrier to launch long range combat drones from its deck.

But unlike the United States aircraft carriers that are powered by nuclear propulsion system, the Type 003 aircraft carrier will use the integrated electric power and propulsion system consisting of two gas turbine generators and four diesel electric generators. Together they will produce approximately 150 Megawatt of power. The Type 003 aircraft carriers will be using four shaft propellers, which will provide it with the top speed of 30 knots and regular speed of 28 Knots.

However, the Chinese Navy's Type 004 aircraft carrier, which is currently in the design phase, will be powered by a nuclear reactor. The nuclear-powered aircraft carriers have greater efficiency, durability and range, as compared to conventionally powered ones.

In terms of sensors and radars, Type 003 will be equipped with dual-band active electronically scanned array radar systems. Its radar system consists of Four S-band dragon eye type 346 radars and four smaller X band radar panels. These radars will be mounted on the top of its island for better area coverage and have a detection range of 400 kilometres for target with a radar cross-section of the one-metre square. For anti-submarine warfare, Type 003 will be accompanied by frigates and destroyers, but it will still be equipped with multiple towed array sonars as well for detection and protection against submarines.

The Type 003 command management of a battle group and its supporting elements have been improved greatly as compared to previous aircraft carriers of the Chinese Navy. These systems are like the US Navy's *Gerald Ford* class aircraft carriers. Some defence experts even allege that Chinese Engineers collected intensive information about the integrated command and control system for over a decade, and now have built the replica of the command system used in the US carriers.

For self-defence against incoming projectiles, Type 003 will be equipped with a layered defence network of the long, medium, and short-range air defence systems. For long and medium-range protection, the ship will be equipped with multiple VLS of HQ-9 air defence systems. It will also be equipped with a seven barrelled 30mm Gatling type 730 close-in weapons system for short-range protection against projectiles. This weapons system can fire up to 4,200 bullets per minute on incoming missiles. Apart from that, the Type 055 class destroyer will also provide an air defence umbrella to the Type 003 three aircraft carrier. Its coastal and shipboard missile defence systems, have enabled the Chinese Navy to carry out task group operations at increasingly long ranges. This alone places a small RAN fleet at even greater risk where an adversary has the potential to launch missiles from ships via aircraft positioned midway between their Fleet and an opposing Fleet. The easiest way to reduce this threat is to equip the RAN LHDs with F-35B aircraft to be used in a similar capacity as proposed by the Chinese Navy, and as AWAC aircraft.

The increasing of range/ accuracy of the Chinese Navy's capability to match the military might of the US, helps it project power as a true blue water Navy.

The development of the Type

J15 shortly after land on to one of Chinese STOBAR aircraft carriers folding wings.

003 aircraft carrier can be seen as a most important asset of the Chinese Navy that will help it counter the US Navy dominance in the Pacific Ocean, especially in the first island chain in the South China Sea.

Chinese aircraft carrier Type 002 *Shandong* was the first aircraft carrier that was constructed in China based on China's design. *Shandong's* construction began in 2013 and it was commissioned on 19 December 2019. It has a displacement of 70,000 tons. Although *Shandong* has been derived from *Liaoning,* it is far more improved and advanced than *Liaoning*.

The speed of Chinese advancement in military technology has worried the west. Last month, China tested the first hypersonic glide vehicle that circulated the globe before aiming towards its target. Chinese Tiangong Space Station is also likely to be fully operational sometime in 2022.

If this data is freely available on the internet, then information collected by the 'five eyes' must prove for interesting reading?

Acknowledgements:

[1] *J-35 China's New Carrier based Stealth Fighter* ***here*** *or URL https://www.youtube.com/watch?v=sQuLnOWXRV0*

[2] *How good will the J-31 be?* ***here*** *or URL https://www.youtube.com/watch?v=81E_eRXPaLA*

[3] *China's New Type 003 Supercarrier Near Completion* ***here*** *or URL https://www.youtube.com/watch?v=R1mcy8bZU38*

[4] *Type 003 aircraft carrier update* ***here*** *or URL https://en.wikipedia.org/wiki/Type_003_aircraft_carrier*

[5] *STOBAR Recovery System* ***here*** *or URL https://en.wikipedia.org/wiki/STOBAR*

[6] *Shenyang FC-31 (also known as the J-31 and J-35) here or URL https://en.wikipedia.org/wiki/Shenyang_FC-31#:~:text=The%20Shenyang%20FC-31%20Gyrfalcon%20%28Chinese%3A%20%E9%B9%98%E9%B9%B0%29%2C%20also%20known,fighter%20aircraft%20developed%20by%20Shenyang%20Aircraft%20Corporation%20%28SAC%29.*

[7] *Electromagnetic Aircraft Launch System* ***here*** *or URL https://en.wikipedia.org/wiki/Electromagnetic_Aircraft_Launch_System*

The life of RADM Colin Cooke-Priest CB CVO FRAeS RN

The following advice was sent to me by John Clarke who attended the Service of Thanksgiving for the life of RADM Colin Herbert Dickinson Cooke-Priest CB CVO FRAeS held in Portsmouth Cathedral on 15 March 2022

A number of aircrew will recall that Colin Cooke-Priest served on loan or exchange service with the RAN FAA as an Observer in Wessex aircraft.

He was a member of the crew of Wessex N7-211 when it ditched on 13 November 1969. While transferring stores to the destroyer Vampire, the Wessex winch cable snagged on the ship's superstructure. The cable snapped as the ship rolled, and rebounded into the helicopter's rotor blades, causing it to crash into the sea. All aircrew survived the ditching.

Colin held two appointments as a Rear Admiral: as Deputy Assistant Chief of Staff (Operations) to the Supreme Allied Commander Europe 1989–90, and as Flag Officer Naval Aviation 1990–93, when he was the first observer to head the RN FAA.

His last duty in uniform was to award Observer wings to his son Nick.

Attached is a copy of the Order of Service provided by John Clarke **here** or at the following URL: https://issuu.com/slipstream2/docs/colin_cooke-priest_order_of_service

John DaCosta

The Late RADM Cooke-Priest RN

RAN HS748s Help Evacuate Survivors of Cyclone Tracy

N15-709 one of the RAN HS748s that took part in the Evacuation of Darwin following Cyclone Tracy

By Phil Landon and Pete Adams
With contributions from
Barry Diamond
Jack McCaffrie
Owen Nicholls

During the early hours of Christmas Day, 25 December 1974, Cyclone Tracy hit Darwin with wind gusts of 200 kph plus, devastating the city. More than 70 percent of Darwin's buildings were destroyed with 80 percent of houses gone and 71 people killed. With many of the population now homeless a massive evacuation was necessary.

NAS Nowra was first alerted to the possibility of supporting Darwin when the Commanding Officer, CDRE A. J. Robertson received a call at 1300 from the Deputy Chief of Naval Staff direct on Christmas Day 1974 informing him that Cyclone Tracy had devastated the northern city. NAS Nowra was called upon to provide two HS748 aircraft and to make available helicopters for embarkation in HMAS *Melbourne* and HMAS *Stalwart.* While NAS Nowra had a responsibly to collate all naval aircraft assets to be brought to a state of readiness, the HS 748s were the first to be deployed. The relief efforts were for one of the most devastating natural disasters in Australian history[1].

The Duty Executive Officer (DXO), NAS Nowra commenced a recall of VC851, HS817 and HT725 at 1305 on 25 December 1974 (Christmas Day) followed shortly after at 1400 of a recall of VS816. By 1530 the two HS748 aircraft were reported as serviceable with two crews standing by to fly. The last squadron to be alerted was HT723 at 2359[1].

During the period that followed cyclone Tracy's devastation of Darwin; NAS Nowra was not only called upon to assist by providing aircraft evacuation support in the form of HS748 aircraft but to also provide helicopters for embarkation in *Melbourne* and *Stalwart* in 'Operation Navy Help Darwin'. NAS Nowra also expended considerable effort providing vital supplies initially in the form of medications, clothing; and food; and later items of hardware, via normal stores channels and local purchases.

The RAN contribution to rescue effort was considerable, including 13 ships and the Wessex helicopters. However, this article concentrates on the lesser-known aspects concerning the HS748s and the initial preparation and embarkation of the Wessex helicopters to *Melbourne* and *Stalwart.*

At 1900 on Christmas Day six Wessex helicopters of both HS817 and HT 725 were reported as serviceable. At the same time a decision was made not to launch the HS748s because of unknown weather conditions and the lack of navigation and

landing aids in Darwin. Thus, it was planned to arrive in Darwin in daylight[2].

At the time, because of the restrictions on the use of the HS748s and pilot training, only had three HS748 pilot captains and one of those had appendicitis - so there were only two available Jim Campbell and Pete Adams. Lyall O'Donohue joined the Darwin evacuation later when he had recovered from his illness.

By 1530 on 26 December 1974 HS817/HT725 had embarked seven (7) Wessex helicopters in *Melbourne.* HT723 assisted in the embarkation by ferrying personnel and stores from NAS Nowra to the ship. Trackers crews were now stood down to 12 hour standby.

The aftermath of Cyclone Tracy

The first HS748 (709) commanded by Jim Campbell with Barry Diamond as co-pilot departed NAS Nowra at 0612 on Boxing Day for Darwin via Sydney. In Sydney, HS748 endorsed pilot Phil Landon joined the flight where both Barry and Phil shared the co-pilot duties. The first aircraft was initially tasked to carry a Navy medical team, but on advice from Darwin this was changed by National Emergency Operations Centre (NEOC) to a Red Cross Blood Bank Team. The route to Darwin was via Alice Springs for fuel and to get sandwiches for the Red Cross Team. 709 was the second aircraft arriving at Darwin around 1600 on 26 December. It also carried two maintainers whose presence was invaluable for much more than refuelling and servicing. "Their care of traumatised passengers was compassionate and professional, and I am disappointed that I did not record their names in my logbook" Phil said later. The second HS748 (710) under the command of Pete Adams followed 2½ hours later also via Sydney where it collected Clearance Diving Team 1.

HS748 co-pilots and observers were drawn from VC851, VS 816, VF 805 and the Weapons System Trainer (S2 simulator)[1]. Generally, the pilots were from the Grumman Tracker and familiar with twin-engine aircraft. Barry Diamond an A4G Skyhawk pilot had never flown the HS748. However, he was a very experienced aviator and was apparently the only option in those early stages. In fact, Barry undertook two return flights to Darwin in 709. The first flight was on the 26 December 1974 returning next day and the second flight was on 28 December 1974 also with Jim Campbell returning to NAS Nowra on the 29 December 1974. At the time Barry was Senior Pilot of VF805.

709's approach to the Darwin airfield was made over a relatively unpopulated area so the full devastation of the Cyclone was not immediately apparent to the crew. However, Jim Campbell, later said that the force of Tracy was evident when he saw a large white refrigerator firmly wedged in the branches of a tree about 40 to 50 feet (12-15 metres) above the ground.

At around 1515 as 709 approached Darwin radio contact was made with someone on the ground and the HS748 was in contact with another aircraft on descent to arrange separation. None of Darwin's navigation aids were working but 709 was able to use Katherine's aids un-

Evacuees boarding a TAA B727 at Darwin. Smaller and similar lines joined the RAN HS748s

til the aircraft descended out of range.

After landing and the Red Cross team had departed, the crew were picked up and conveyed to the shore establishment HMAS *Coonawarra* and invited to find a dry office to camp in. "Later, I ended up in what was left of the Senior Sailors' Mess looking for a beer. The building housed a mass of dispossessed civilian and navy families and single members of the ship's company. As I was about to head off for some rest, a civilian approached me and asked if we could take his son down south with us; his son's body was in the boot of his car" Phil explained.

Darwin based RAAF Dakota blown across roadway and damaged by Cyclone Tracy

Pete Adams following in 710 gave an even more detailed account when he said: "It is some time ago now, but it is hard to forget the impression it made on me flying into Darwin on Boxing Day to see just how much devastation Cyclone Tracy created".

That evening the aircrews of the HS748s were briefed on the situation and what supplies were required and told to be ready to fly south in the morning. The unofficial list of urgently required supplies included baby food, nappies, female underwear, hygiene products, makeup, and bread. Pete Adams crew on an overnight in Brisbane was to find next morning their aircraft filled with hundreds of freshly baked loaves of bread - apparently a gift from a local bakery. Darwin then was desperately in need of bread, so at the time was very welcome. "Later in the evacuation I recall someone asking us not to bring any more bloody bread!" Phil said.

On the 27 December 1974 HT725 embarked two Wessex helicopters in *Stalwart*. Later in the day the two HS748s returned to Nowra via Brisbane and Sydney. After a quick turn around both HS748s departed for Darwin on the 28 December. The same day saw VS816/VC851 Trackers and crews stood down and no longer required.

On 29 December one of the HS748s ferried 29 passengers to Brisbane. Arriving late in the day the crew overnighted in bunks in HMAS *Brunei*, a navy landing-craft docked at HMAS *Moreton* in Brisbane. A surprise was a friendly airline filling our Esky box with cans of cool drink and ice without charge.

After flying passengers to southern cities, the aircraft would load up with whatever supplies it could. The list of items was long, but one of the unusual items was a load of disposable nappies, also pharmaceuticals and magazines which were in short supply. And so, it went - with evacuees going south and resupply cargo going north. Interestingly, some of the squadron maintenance people who accompanied us doubled as flight attendants, then serviced the aircraft overnight before returning to Darwin. Remarkably in the midst of all this, on 6 January, one the 748s was diverted to Hobart with a team of divers, because a ship hit the Tasman Bridge collapsing a large section of the bridge decking. The story of the HS748 involvement in the Tasman Bridge disaster will be covered in the next issue.

A Naval Sub-Lieutenant chatting to survivors of Cyclone Tracy

On 31 December, one of the HS748s had to commence a 'D' service. ASU were recalled to undertake this task. These maintainers worked around the clock in shifts until the job was completed on Sunday 5 January 1975. For the remainder of support for Darwin, the two HS748s ended working on a two day turn around. One day NW-DN then the second DN-NW travelling via various routes. The trip

A light twin upended by Cyclone Tracy

north comprised of a mixture of stores and supplies with the southbound leg carrying evacuees.

"One incident - not funny at the time - happened as we flew into Alice Springs during a rainstorm. Standard procedure is the captain flies on instruments while the co-pilot looks ahead for the runway, when sighted the captain takes over and lands. With all going well I told the co-pilot to turn on the windscreen wipers for touchdown, but as we slowed to taxi the cockpit filled with smoke. We radioed the control tower, shut down and quickly evacuated the passengers into the pouring rain. Upon investigation it was found that the co-pilot had turned on the duct heaters instead of the wipers which overheated. So, after refuelling at Alice Springs, we reloaded 27 wet passengers went on our way" Peter recalled.

At the RAAF Base, the Officer Commanding, Group Captain (later Air Commodore) Hitchins, AFC took charge of the air evacuation of military families. As he explained in an oral history interview in 1987:

"One thing that should be said about the general business of the air evacuation arrangements was that some days elapsed before General Stretton announced that he wanted 'x' number of thousand people evacuated per day. I've forgotten the figures and it doesn't matter very much but while that decision was being arrived at, I, with the full knowledge and cooperation of the Army and Navy commanders, started evacuating our own people using our own aircraft, and there were a couple of Navy aircraft involved, evacuating the few medical cases we had, one or two urgent civilian medical evacuees and Service families. We had an agreement between the three Services as to how that would be done, and we got on with doing that in the belief that we would fairly soon be asked to evacuate civilians and that we wanted to be free to get on with that task when we were asked to do it so we got on in the first instance and evacuated most of our own people."

At a conference on the morning of 27 December, GPCPT Hitchins explained that during the air evacuation:

(a) Normal niceties of aircraft loading would not be possible. We would load to the maximum numbers possible without exceeding AUW limits. (the airline representatives agreed to this readily).

(b)It would be futile to attempt selective loading by destinations, but that all capacity must be utilised.

(c) QANTAS aircraft would be confined to operations between Darwin and Sydney.

(d)The Evacuation Committee must keep 500 people at the civil terminal at all times to ensure a rapid turn-round of aircraft.

Our flight south on the morning of the 27 December, 709 carried a few urgent civilian medical cases and Navy families. The lucky ones had a seat, several were sitting on the floor leaning against the side of the fuselage, others were sleeping where they could fit – there were babies and kids everywhere. The route was Darwin – Mt Isa – Sydney – Nowra; around 9.5 hours flying time.

Overnight at Nowra the aircraft was loaded with gasoline powered generators and chainsaws (possibly a NEOC initiative) and relief supplies

HMAS Arrow wrecked after being caught up in Cyclone Tracy

donated by the Nowra community and local businesses. Goods included hundreds of loaves of bread, nappies, baby food, underwear and toys. The relief supplies did not appear to be a product of Stretton's National Disasters Organisation but word of mouth request from *Coonawarra* and was based on obvious and urgent need.

On the morning of 28 December 709 with Jim Campbell as captain and our route to Darwin which was via Oodnadatta and Alice Springs because of the heavy cargo and the high ambient temperatures expected.

709 launched from Darwin on the morning of the 29 December packed with evacuees. The route taken was Alice Springs – Adelaide – Melbourne – Nowra. On preparation to depart Qantas 747 EBB called for taxi clearance with a POB (persons on board) of 697.

According to the Hitchin Papers:

"Between 26 December and 21 January, the two HS 748 were to complete fourteen Nowra-Darwin-Nowra flights. These flights involved 222 flying hours and the carriage of 485 passengers and 50,000 pounds of freight."

In a final act of appreciation Pete Adams said: "When we finished all the Cyclone Tracy flights, I thought it would be a good thing to thank the cooks and stewards from *Coonawarra* at Darwin who looked after the flight crews so well during our overnight rest periods. So we took them on a joy ride down to Halls Creek where we stopped for lunch then back over Katherine Gorge sightseeing. We also had them up front in the co-pilots seat. It was great to give them a well-deserved day out which I'm sure they enjoyed".

Jack McCaffrie's observations were: "My time in the 748s pretty much came to an end in late 1974 with a posting back to VS 816. Yet there was a brief interlude at the end of 1974. Like many others, I returned from leave immediately on Boxing Day 1974 and after driving nonstop from Adelaide and a few hours sleep, was heading for Darwin in one of the HS748s. We evacuated two groups of people, the first to Brisbane and the second to Sydney".

Jack too became involved in the Tasman Bridge disaster flight which will be addressed in the next issue as stated previously.

Owen Nicholls experience revolved around his return from leave on Sunday 29 December to be greeted by the DXO with "where the f**k have you been – we have been looking for you", notwithstanding Owen had recorded his whereabouts on leave in the Wardroom Leave Address Book. The DXO retorted that "nobody used that". He'd also notified the Eden Police in the event the Navy were looking for him. The fact Owen hadn't flown H748s for six months and had transferred to VS816 in July seemed to fall on deaf ears.

Owen's first flight to Darwin was on 31 December. As he was preparing for the flight with Pete Adams as aircraft captain some of the crew attempted to obtain ice from the base canteen for cold drinks in our Esky, only to be told they couldn't have any because there was a New Year's Eve party that night. Eventually some was obtained from one of the messes. In contrast, some of the crew went into Davies News Agency in Nowra and asked if they had any magazines such as Women's Weekly that had not been sold and were being returned to publishers (mums on southbound flights had been rather bored and had nothing to do when children were sleeping). The crew members were told that there were no unsold magazines but, in contrast to the ice request, were told to help themselves to whatever they wanted – magazines, games, pens, pencils and drawing paper etc.

DEATH NOTICES

BIRD William (Dickie). Ex-CMDR (O) RAN (Rtd). Dickie passed away in North Nowra on 25 January 2022 after a long battle with dementia at the age of 93.

His funeral was held on Friday 11 February 2022 at the St Andrews Presbyterian Church, Kinghorn St, Nowra .

John DaCosta

DOBSON Leon (Baldy). Ex-RAN. Leon crossed the Bar on the 28 December 2021. He was laid on Thursday 13 January 2022 at a Service at the Shoalhaven Crematorium Chapel. Our condolences go out to family and friends.

Dick Martin NSW Division Secretary

LITCHFIELD, Geoffrey Brian. Ex-LEUT (P) RAN. Died at Wauchope Hospice on 8 March 2022 after a long battle with brain cancer. A private funeral was held in Port Macquarie on 24 March.

John DaCosta

POWELL Leslie (Les). Ex-LCDR (O PHOT) RAN. Les died on 8 March 2022 after losing a long fight with Prostate Cancer. He was aged 90. Les's funeral took place on Friday 25 March 2022 at White Lady Funerals, Belconnen ACT .He is survived by his wife Sally.

John DaCosta

PURVIS, Doug. Ex-LCDR (P) RAN. Doug passed away on 8 January aged 67. He had battled illness for quite some time. For many years he helped keep the dream alive for Tracker 844 to return to flying, assisting with maintenance and engine running. He is survived by his wife Julia, his two sons Daniel and John, and two loving granddaughters.

The family plan to hold a celebration of life and wake at some time in the future when Covid restrictions permit.

Owen Nicholls

N15-709 in dispersal awaiting to be manned for a further flight

"On arrival at Darwin I have a strong memory that when stepping out from the aircraft stairs that I could see the sea at Fannie Bay from the RAAF base tarmac. This was not normally possible, but the trees to the north-west of the base had been stripped of leaves and small branches by the cyclonic wind", Owen said. On the drive to *Coonawarra* there were memories of the apparent randomness of destruction – a freezer up a tree, rickety looking structures apparently undamaged with a substantial looking structure nearby demolished, steel power poles bent over to the ground.

At *Coonawarra* we settled into our home for the night – mattresses on the floor of the Pay Office. The XO and his family were similarly sleeping on the floor of his office. "I recall a WRAN who thought I was almost a saint because I was able to give her a comb", Owen said. Small commonplace items can become a luxury when unobtainable. Another WRAN was wandering around with a tube of toothpaste which she explained was to freshen up her mouth after the effects of drinking warm champagne! We arrived back at Nowra the following evening after stopping at Mount Isa again for fuel and Sydney to drop off evacuees. Owen too, took part in the Tasman Bridge disaster flight.

"The two aircraft worked brilliantly throughout the emergency. The Rolls-Royce dart engines were incredibly reliable and the ability to inject water/methanol into the turbine to increase air density and therefore increase take-off power was important when operating at maximum weight out of high/hot airfields like Alice Springs and Mount Isa." Phil Landon said

He also said: "The three HS748 captains, Jim Campbell, Pete Adams and Lyall O'Donoghue were smooth and unflappable, and I enjoyed every hour that I flew with them.

Phil further explained: "The squadron maintainers who flew with us were fundamental to the success of the operation. They kept the aircraft flying; they refuelled, they serviced, they kept them clean, they emptied the toilets, they sourced water and food, they loaded and unloaded cargo and luggage, they cleaned up vomit and during the long flights they comforted tired children and anxious mothers. Those men worked harder than any of the aircrew. There was no complaining, just professionalism.

"I flew another four round trips after the first two with Jim Campbell, two with Pete Adams and two with Lyall O'Donoghue. The 4 January trip with Pete Adams was 19.4 hours - Nowra – Mt Isa – Darwin – Mt Isa – Longreach - Brisbane – Sydney – Nowra", Phil Landon said.

Note:

[1] Enclosure to Annex 8 of NAS Nowra letter 2-1-4 'Operation Navy Help Darwin' Report.

A P31 Chieftain blown into the side of an F27 while another light twin is blown upside down nearby—the after effects of Cyclone Tracy

F-35B Debate Continues Part 2

A Photoshop impression of an F35B launching off HMAS Adelaide whilst another lands on amidships

Video and voice transmission by YouTuber 'hypohystericalhistory' found here (for online subscribers. URL https://www.youtube.com/watch?v=0QIA4bn4Pvc) Converted from video to text and Edited By Paul Shiels

The *Canberra* class were specifically designed to meet the requirement of amphibious operations along with the transition of 2RAR into the army's dedicated amphibious warfare battalion and the development of the ADF's joint amphibious warfare doctrine. The primary role of the *Canberra* class is to move an amphibious warfare force and deploy it within the region by 2019.

This whole amphibious force has now been certified for deployment providing the ADF with a world-class amphibious warfare capability. Undeniably, the use of fixed-wing aviation was never realistically considered during the *Canberra* selection and acquisition process although close air support is always valuable to amphibious forces. The potential threat the Australian military would face in a regional failed state scenario like east Timor is reasonably low. The ability of the ADF to deploy assets like the M1 Abrams main battle tank, M triple 777 155-millimetre howitzer and forthcoming AH 64e Apache Attack Helicopter would provide an over-match capability for the kind of militaries and non-state actors in Oceania.

Therefore, in a region without any other first tier military powers the omission of fixed-wing naval aviation in a capability which is designed to operate in a low to medium threat environment is a logical force structure. However, we are now entering into a very different strategic era. Australia's strategic concerns are no longer limited to the breakdown of law and order in Oceania and the presence of Islamism terrorist organizations in the region.

Unlike the last 20 years where the international system was dominated by US power, the coming decades will be a story of geopolitical competition between Washington and Beijing as is illustrated by the 2020 defence strategic update. Canberra's almost sole strategic focus is now on the possibility of large-scale high-intensity warfare between the great powers in the indo-pacific. One of which, the US is Australia's treaty ally and primary security partner.

Therefore, the whole ADF is now facing the possibility that its assets will be deployed into a kind of conflict which is much different to those characterised by failed states and non-state actors which dominated the global war on terror period, rather than the reality now of conflict against the armed forces of an emergent superpower. In the event of that kind of conflict the threat environment is likely to be far higher than any faced by the ADF in decades. Therefore, many of the assumptions of the defence of Australia and global war on terror periods, including fixed-wing naval aviation's lack of utility in the ADF now deserve serious scrutiny. Australia's wider region is a vast area of maritime geography dominated by island chains and maritime choke points.

Although clearly not the original intention behind the Canberra class acquisition in a high-

A map of SE Asia showing the transit time to and from the South China Sea and time on Combat Air Patrol (CAP) a total of nine hours or 36 hours if four F-35As are used

intensity conflict between the western alliance and China, amphibious forces will be extremely valuable. The ability, for example, to rapidly establish island bases in Micronesia or the Indonesian archipelago where assets such as anti-ship missiles can be deployed could be critical in both maintaining Australia's communication with its allies and holding enemy naval assets at arm's length. In a situation such as this where the amphibious operation is likely to be unopposed by ground forces, the advantage of having additional air cover would be a far more value than deploying the larger amphibious force.

In fact, these kinds of operations could very well determine the course of such a conflict and a reasonably large and capable amphibious force forward deployed in the region would not only be a critical capability for Australia but, the alliance as a whole. However, without any deployable air cover the cruise missile threat posed by the Chinese long-range maritime strike capability alone would effectively prevent the use of Australia's amphibious forces over the majority of this vast area of maritime geography. Obviously long-range land-based missiles such as the DF-21D also pose a threat, but these can be counted by shipboard defences such as the hypervelocity projectile and advanced air defence missiles. This is the primary advantage of the F-35B option. It would allow the ADF to deploy its amphibious forces in a vastly higher air threat environment which could very well be a critical capability in the event of a high-intensity regional war. This advantage is in addition to the improved strike, recon, close air support and maritime strike capability that a squadron level deployment of F-35Bs would provide.

RAAF KC-50 Tanker refuelling two FA-18 aircraft.

The question has been asked: "Can't the RAAF just use its current fighter force with tanker support?" One of the major objections to the F-35B option put up by the RAAF is the existence of the RAAF's tanker fleet. Currently the RAAF operates seven KC-30 multi-role tanker transports,

Troops briefed on the forward lift of HMAS Adelaide

and an additional two units are under consideration. Given this reasonably extensive tanker fleet, why can't the RAAF simply deploy its fighters from its own bases one would ask? The short answer is it can and currently this is the primary way the ADF intends to provide air cover for its amphibious forces. But if land-based air cover can effectively provide air defence for naval forces, then why do other naval powers such as Japan who face very similar operational circumstances bother with naval aviation? They have large tanker fleets too. The reason so many powers are investing in naval aviation is the simple fact that relying on land-based aircraft has substantial limitations and only provides a bare minimum of air cover for task force operations.

The primary problem with relying on land-based fighters is transit time. Let's imagine a hypothetical operation to establish a base in the real archipelago during the opening phases of a regional conflict, with the objective of effectively closing the Java Sea. The closest RAAF base to this area is RAAF Curtain which is around 1500 nautical miles away. The RAAF's primary fighter is the F-35A which has enough fuel to fly about 600 nautical miles, conduct an air combat mission and then return home. This is called a combat radius.

The F-35A cruises at around 500 nautical miles an hour or knots, meaning it will take about three hours to reach the target area. It then requires a substantial amount of fuel to loiter over the task force. So, let's say we want to provide a three hour combat air patrol over the task force. The flight of four F-35A's would deploy from RAAF Curtin, then refuel about halfway to the target area. It would then refuel again from a tanker deployed as close to the task force as possible. After a three-hour transit flight, it conducts a three-hour combat air patrol, refuels again and begins the three-hour flight home.

The problem here is the drastic losses in asset efficiency. As we can see every time a flight of fighters spend three hours on station, it spends six hours in transit. This means for every four fighters above the task force 12 must be airborne as eight are in transit at any one time. One flight inbound and one outbound. What compounds this problem is the amount of time a fighter must be on the ground between sorties. After every mission a large number of maintenance operations must be conducted on the aircraft, in addition to refuelling and rearming. Therefore, currently around 40-man hours per flight hour for the F-35A, although this should come down over time.

If we imagine 20-man hours per flight hour (6 transit + 3 on CAP = 9 x 20 = 180) for an F-35A each aircraft will require 180-man hours of work depending on how well staffed the ground crews are and how much sleep they've had, the aircraft may be operational again in eight hours or so. Therefore, if we take this example which has obviously been simplified for clarification

US Carrier Battle Group at sea

to maintain a 4-aircraft combat air patrol over the task force at 1500 nautical miles range requires the commitment of 24 F-35As (12 in the air and 12 on the ground readying for their next sortie) although these assets are much less maintenance intensive the same logic applies to the RAAF tankers. Having two on station would probably require at least one more committed to the operation or probably two.

Therefore, simply to provide a combat air patrol over the task force would require assets from two RAAF fighter squadrons and the majority of its seven tankers all in the context of a large-scale regional conflict where the RAAF will certainly have a handful with other tasks. Now, if we compare that to the F-35B option, assuming the same maintenance requirements because there is no transit time the four fighters airborne above the task group only require an additional four fighters preparing for their next sortie. Indeed, you may not even require a combat air patrol as the fighters are deployed with the task force you may be able to provide the same level of air defence by only having a single F-35B airborne acting as a quasi-awac aircraft and maintaining a flight of F-35B on alert 5 status. This status essentially means waiting to launch at any time within 5 minutes of the call to scramble (although the example here has been simplified to illustrate the concept and may not be completely accurate).

The elimination of transit losses means a 66% reduction in the fighter assets required, 75% if the alert 5 posture is used, and a 100% reduction in tanker assets. This difference in efficiency is another way of looking at term proximity equals capability and is one of the main reasons why so many nations still invest in naval air power even though they have large tanker fleets.

Another question proffered is: “Can't we just rely on our allies to provide air cover?” Australia’s treaty ally and primary security partner is the United States. The greatest naval power on earth. The United States Navy currently deploys 11 dedicated aircraft carriers; 10 *Nimitz* class and one of the new *Ford* class. Displacing over 100,000 tons these massive vessels are the most powerful warships ever deployed, each containing a peacetime airwing composed of four strike fighter squadrons; one electronic attack squadron; one airborne early warning squadron; and an ASW helicopter squadron. This collection of air power is more capable than the air forces of most nations on earth. With allies capable of deploying such impressive amounts of naval power why would the ADF need to provide for its own?

At first glance this argument seems convincing, but a more detailed analysis reveals its limitations, although the United States carrier capability is truly overwhelming, these are not vessels that can be everywhere simultaneously. The United States is a power which has global commitments, and the deployment of its carrier strike groups reflects this global posture and like any vessel, not all are operational at any one time.

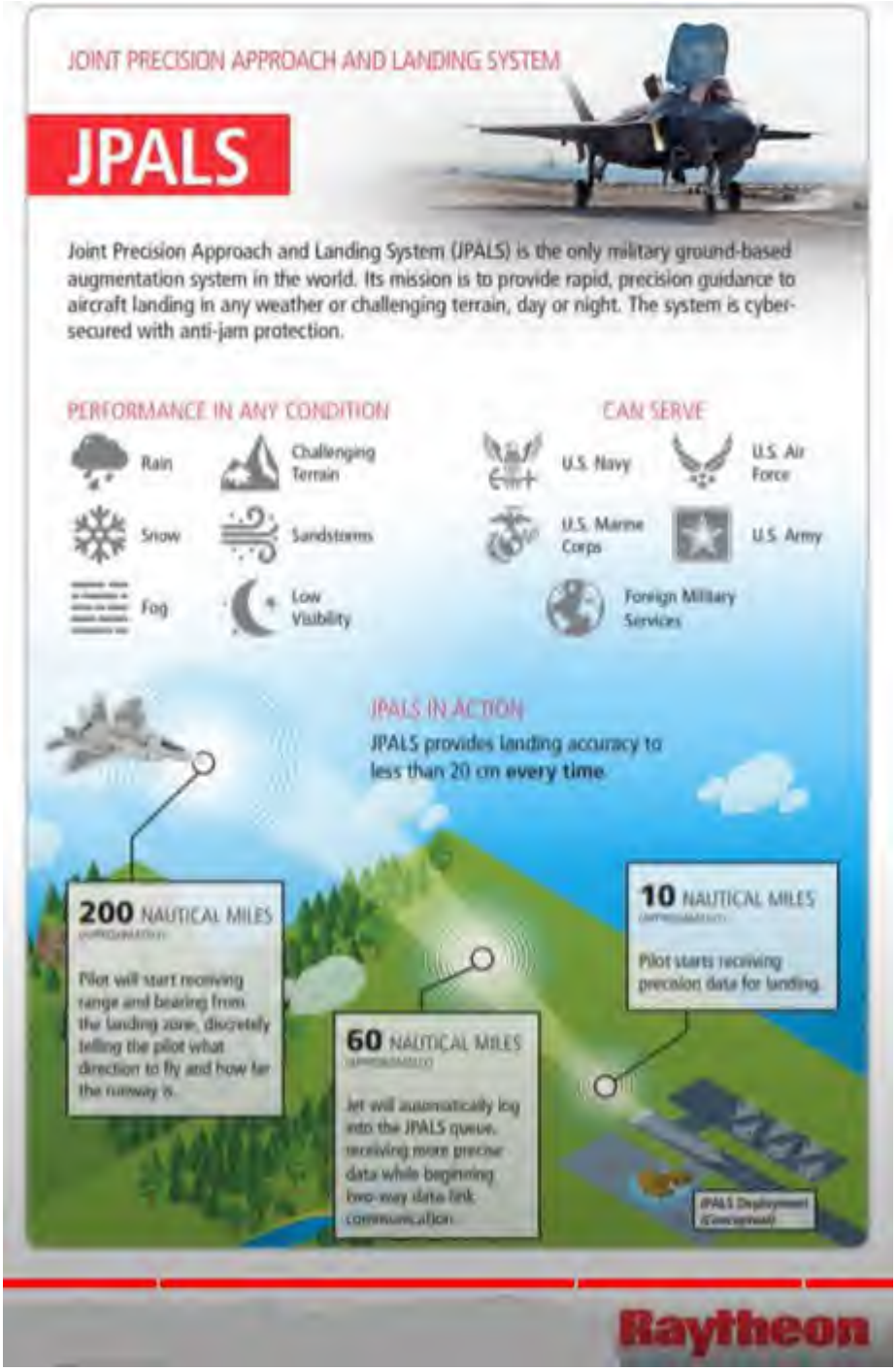
Only one is based in Asia currently the USS *Ronald Reagan* which is forward deployed to Japan and the United States Navy routinely deploys carrier strike groups to the Mediterranean and Persian Gulf. This global posture means that in the event of a sudden outbreak of conflict within the region, it may take up to a month for the United States to reposition the bulk of its carrier formations to the theatre. For example, if one of the *Nimitz*-class

carriers stationed at San Diego was operational fully armed and ready to depart, literally ideal circumstances it would still take about two weeks to reach the east coast of Australia. The forces deployed in the Atlantic or Europe would take even longer. Therefore, in the critical opening phases of a general regional conflict, a period which could be up to a month the United States is unlikely to be able to provide naval air cover for Australian Navy Task Groups.

We also need to remember that as powerful as the United States is it is not omnipotent. The USN may only be able to deploy five or six carrier strike groups to the whole of Asia given its other commitments and there simply may not be enough resources to cover ADF operations in such a large-scale conflict. Even if there is, there may be other more pressing missions for the United States carrier forces. If the ADF can provide its own fighter defence at the level of a squadron, this will substantially reduce the burden Australia places on its allies. In addition to increasing the possibility of using the RAN surface forces over a much larger area of the region. This is especially important in the early phases of a conflict where seizing bases and dominating maritime choke points may be critical. Again, the Japanese have a US carrier strike group based in Japan and they are still investing in the F-35B and their own carrier capability. "The whole thing will just cost too much;" The final argument made against the F-35B option is cost that the whole idea would just be prohibitively expensive. The true costs of large-scale military acquisition and upgrade programs are often hard to estimate and can even be hard to determine once completed. Some estimations of acquisition cost will include things like through life cost accounting for maintenance and mid-life upgrades which can confuse matters.

This example is even more difficult as we do not have an open source accounting of exactly what is required to refit the Canberra class for F-35B operations. This opacity allows for detractors of the F-35B concept to hide behind the lack of information allowing for easy exaggeration without an accurate cost estimation, there is no way for an informed public debate over this capability and there is also limited opportunity for external analysis. Nonetheless, the best we can do is try and come up with an order of magnitude estimation. Australian Strategic Policy Institute (ASPI) for example, whose analysis and conclusions have been critiqued heavily assess with an estimated $AUD 500 million per ship that could be expected. But just how accurate is that? As discussed previously the *Canberra* class have a substantial latent aviation capability. However, they require some significant upgrades to allow for F-35B operations.

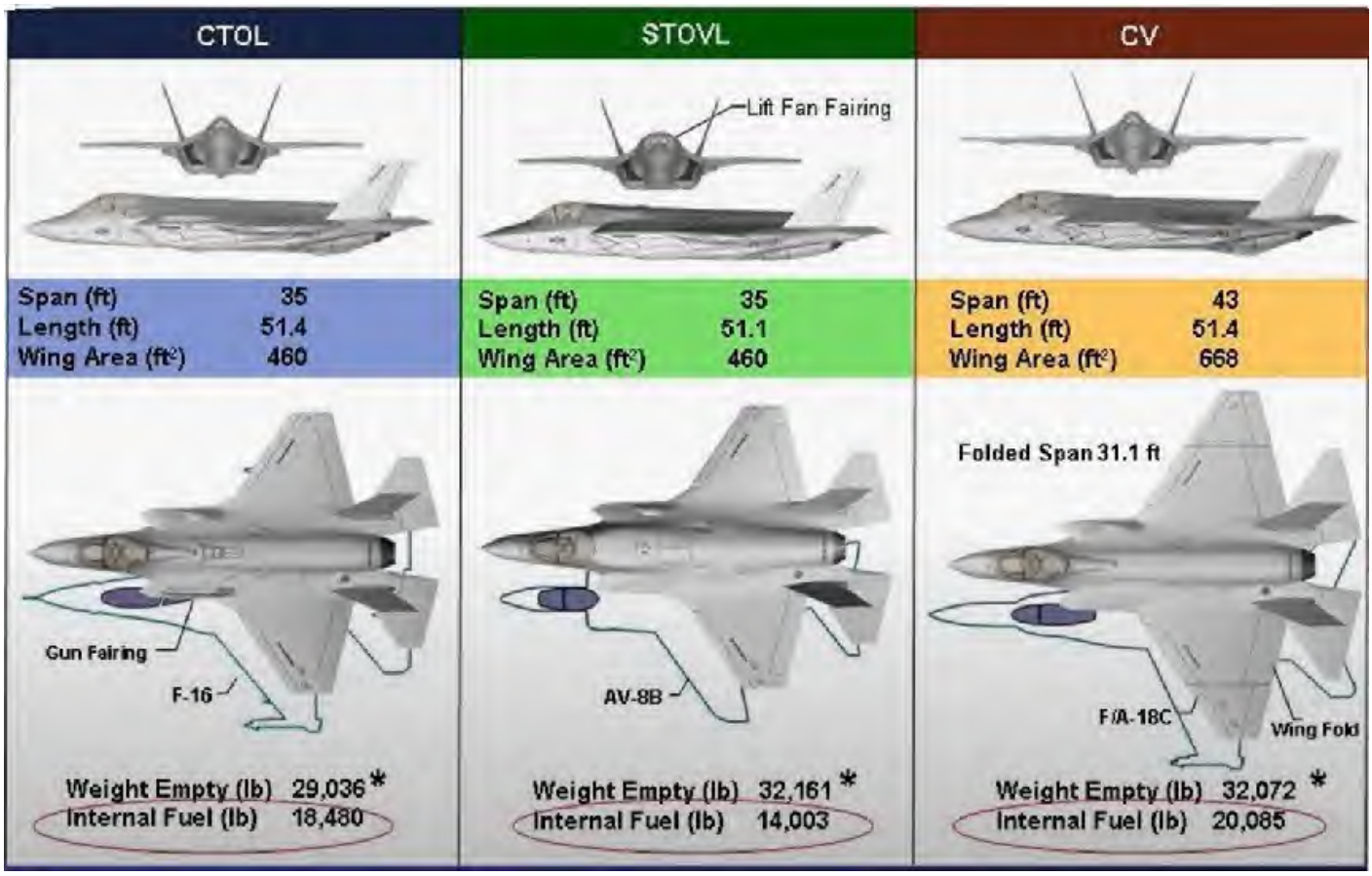
The first is a new deck coating to protect from the F-35Bs exhaust heat. There are several companies which have developed deck coatings which have solved this problem. Fermion is used by the US Navy reportedly spending $US27 million dollars per year on all of its east coast ships. Given the scale of the United States Navy we could estimate this cost



to be in the order of one to five million Australian dollars for both the *Canberra* and Adelaide. The second major upgrade is the integration of an instrument landing system. Currently the United States is upgrading its F-35 capable warships with the Raytheon joint precision approach and landing system. J-pals is a very small system designed to be moved and deployed on a C-130 transport aircraft. It's about the size of a truck. In 2019 the USN signed a contract with Raytheon for 23 systems at the cost of $US234 million per unit cost of just over $US10 million. Obviously, installation costs would be substantially more than this. However, we are certainly still in the tens of millions of dollars.

It is unclear just how much modification would be required to the fuel and ammunition handling systems but, they are certainly already designed to support helicopter operations. The Royal Navy uses the highly mechanised weapon handling system which is a fully automated ammunition delivery system that automatically delivers palletised munitions directly from the magazines to the loading areas. The system cost the UK government 17 million pounds per unit in 2008; about $AUD 38 million in 2021. This system is cutting-edge technology and may not even be required in the Canberra class but, it is an example of the cost of an ammunition handling system. Additionally, the fuel lines may need to be upgraded within the Canberra class but, again the cost for this is likely to be at maximum in the tens of millions. The obvious unknown here is the cost of installing these various systems but, this is unlikely to be in the hundreds of millions of dollars, unless there needs to be substantial work upgrading the ammunition lifts in the ship which is unlikely given how similar the Canberra class is to the Juan Carlos I. This is actually a reasonably minor refit as a point of comparison as part of the anti-ship missile defence upgrade program.

The RAN's eight Anzac class frigates received a totally redesigned superstructure with 4000 metres squared of new steel sheet; a brand new primary air warfare sensor system with two new radars and an x-band illuminator; and an upgraded combat system. Each ship required 600,000-man hours of work to go through the program. Unless there is a major element which is missing in this analysis perhaps something that is classified the kind of refit being proposed for the Canberra class is much less than the same program. Therefore, it is very hard to see where the informal estimation of $AUD 500 million per vessel comes from. Given the analysis conducted here, the costs seem to be more in the range of 50 to 100 million dollars. An order of magnitude less the other major cost is the F-35B itself. In the fourth structure proposed here, number one squadron super hornets would be replaced with F-35Bs



The F-35A is the conventional take-off and landing (CTOL) variant of the JSF. The F-35B short take-off and vertical landing (STOVL) variant for the US Marine Corps' Japanese Defence Force, Royal Navy, Spanish Navy, Italian Navy and the Turkish Navy to date. The F-35C carrier-based variant (CV) is for the USN

crewed by RAN aircrew or a combination of RAAF and RAN aircrew as with the RAF/RN[1] instead of the current plan which is to replace them with F-35As. Therefore, the only additional acquisition cost, indeed the only major additional cost in general, is the difference between the versions.

Current contracted prices for the F-35A are $US78 million for lot 14 jets in the same lot the USMC will pay $US 101 million for each F-35B, a difference of $US23 million. Therefore, the total acquisition cost would be $US 552 million about $AUD 700 million. Operating and manning costs between the F-35 variants are very similar. So, the additional acquisition cost really is the only major difference. Therefore, given the analysis conducted here the total cost to convert the Canberra class and add the F-35B to the RAAF's order of battle would be around $AUD 1 billion. That sounds like quite a bit of money until one realises that the current annual ADF budget is $AUD 42.7 billion which will grow to over $AUD 70 billion per year by 2030.

Indeed, defence intends to spend $AUD 8 billion on a developmental hypersonic weapon over the next 10 years alone; a very speculative and high risk program, even if the estimate here is off by a factor of four and the total cost is more like $AUD four billion dollars. The F-35B option would clearly be within Australia's means, if the ADF decided to acquire the capability.

Although this presentation may seem like a glowing endorsement of the F-35B option that was not actually its intent. There are indeed some very major downsides to acquiring the F-35B, outside of expeditionary warfare, either using the Canberra class as a light carrier or operating from a rough forward operating base. The F-35B is simply an inferior F-35A when operating from the RAAF bases in a more typical fashion, the ADF would be paying a 25% premium for an aircraft that has less range, less internal payload, and a lower g limit. Should the RAAF and/or RAN[1] purchase the F-35B, essentially it could be said that it weakens the primary role of the RAAF in the ADF's expeditionary warfare capability. This is certainly something which needs to be considered. However, as the analysis conducted in this presentation has hopefully shown the current public debate over the F-35B option is polluted with disinformation. Surprisingly much of this very poor reasoning which sometimes verges on dishonesty emanates from some of Australia's most respected academics and think tanks, and ADF personnel. The very subject of naval aviation often generates a strangely strong response from those who oppose the idea. One which is simply a military capability like any other. Historically;

Table 1 Total Defence Funding Profile 2020-21 to 2029-30 (Including the Australian Signals Directorate)

	2020-21 $m	2021-22 $m	2022-23 $m	2023-24 $m	2024-25 $m	2025-26 $m	2026-27 $m	2027-28 $m	2028-29 $m	2029-30 $m	Total Decade 2020-21 to 2029-30 $m
Defence Funding (including ASD)[1]	42,151	46,037	50,170	53,318	55,567	58,175	61,239	64,639	69,986	73,687	574,969

other militaries have been plagued by organisational factors which can inhibit rational decision making. Obviously, one cannot assume that these organisational issues are distorting the argument here. However, we cannot rule out the possibility. Organisational resistance to change can be driven by forces such as inter-service rivalry and doctrinal conservatism. Historically many militaries have suffered from organisational dysfunction such as inter-service rivalry and although the ADF has expended much effort to become a joint and integrated force we cannot rule out these kinds of internal pressures. For example, the army has expended a vast amount of effort over the last decade to become a fully competent amphibious force.

Even substantially altering the order of battle and taking on an amphibious identity given that context are key members of the hierarchy likely to support the idea that the vessels they need to fulfill their amphibious mission may be filled with RAAF and/or RAN fixed wing aviation assets and used as a carrier. Or perhaps is the army's leadership more likely to be hostile to such an idea? Unlike organisations like the USMC, the RAAF has never had a maritime identity is its leadership going to be supportive of one of the four fighter squadrons becoming navalised and spending a good deal of its time operating from the Canberra class. Perhaps the RAN should revert back to this role; or joint RAAF/RAN as is the case with the RAF/RN operating F-35Bs from HMS *Queen Elizabeth*[1].

Perhaps the RAAF is simply going to see this as an unwelcome distraction from what it believes to be its core mission conducting an air battle to Australia's north. In fact, the RAAF or for that matter the RAN has never considered the F-35B as a realistic option. In this situation each of the services may be looking to pursue their own priorities rather than viewing the ADFs capability overall. However, there is no evidence that that is what is taking place here. These kinds of organisational pressures can often distort decision-making and have historically been evident in other militaries. Another factor which can prevent a military from readily adapting is doctrinal conservatism. This kind of conservatism manifests when individuals in dominant positions within the military hierarchy are unwilling to adapt because of their prior beliefs about the nature of warfare.

This was infamously the case with the persistence of US tank destroyer doctrine during World War II. Often these prejudices can permeate throughout the wider strategic community; again, that is not to say that these processes are at work within the Australian military but, they are pitfalls of which we must be aware. The F-35B remains a tantalising option for the ADF. To many Australians the prestige of reforming an Australian carrier capability will always stimulate interest in this form of military platform. In fact, it may be the desire to avoid having an ornamental carrier; one that is of little practical military use which drives some of the prejudice against the idea. Nonetheless, there are sound strategic and operational grounds for seriously considering the acquisition of the F-35B. Australia's strategic landscape is not what it was in 2004 when the decision to acquire the Canberra class was made and the strategic assumptions which may very well dominate Australia's conception of its amphibious capability, including the role of its amphibious warships demand re-examination. If the F-35B really would improve Australia's strategic position and its ability to wage high-intensity warfare in a maritime environment, then surely it demands cool rationale and most importantly fair consideration.

Note[1]: Editor's suggestion that the F-35B be operated by the RAN or jointly by RAN/RAAF as occurs in the UK

(It's a pity I haven't been able to track down this author who, I believe provides a detailed analysis of the Canberra Class LHDs operating F-35B aircraft.

This article complements the article written by Steven George, an F-35B aeronautical engineer in the June 2019 issue.

Obviously what is not known by the author is that USMC trains and operates its aircraft as part of the USN; similar to the Royal Marine aviation who train and operate as part of the RN FAA. . . . .Ed)

AGM Elects New Committee in Victoria

By Mal Smith

Greetings to all members from the Victoria Division.

We are returning to some form of normalcy and have been able to hold several meetings since our last report.

Our Christmas function in early December was a success with our best turnout for some years and an enjoyable time was had by all.

We held our Annual General Meeting in early February and the committee for 2022 is as follows:

President	***Chris Fealy***
Vice President	***Scott Myers***
Secretary	***Mal Smith***
Treasurer	***Paul Thitchener***
Committee	***Rob Gagnon***
Committee	***Ken Pryor***
Committee	***Ron Christie***
Committee	***Jeremy Butler***
Auditor	***Rob Gagnon***

A warm welcome to Jeremy (Harry) Butler who has only recently returned from five years in the UK and is a welcome addition to the committee.

I am also delighted to say that Ron Christie has agreed to serve another term on the committee. Ron is a foundation member of the Victoria Division, Korean Veteran, Life Member, former Secretary and immediate Past President. His experience and knowledge is a great help to all of us.

ANZAC Day fast approaching and at this stage we are unsure what form the march will take. We would hope that the shortened and compressed march of last year will not occur again but are awaiting advice from the RSL. A meeting in early March should give us some guidelines. We regularly have interstate members join us on ANZAC Day and should anyone require details please do not hesitate to contact me.

10 February the annual memorial service to commemorate the HMAS *Melbourne / Voyager* collision was held at the Shrine of Remembrance. I was honoured to participate in this service as a representative of the Fleet Air Arm Association.

Some time ago we formed a sub-committee to survey members as to their thoughts on the association, where we were heading and possible future directions. Due to COVID restrictions we had been unable to get together to discuss the findings. A meeting has at last taken place and a plan of proposed functions / get togethers distributed to all members. It is to be hoped that we receive some constructive feedback in the near future. The first of the get togethers to come out of this process is a weekend trip to the Tocumwal Air Show in early April and a visit to the Benalla Aviation Museum where member Mark Carr is involved. The main driver behind this project has been committeeman Rob Gagnon and we thank him for his efforts.

Yours Aye
Mal Smith

Obituary—LEUT (P) Geoffrey Litchfield RAN (Rtd)

I have been advised that Lieutenant Geoff Litchfield passed away in the Wauchope Hospice on 8 March 2022 after a long battle with brain cancer.

I have found it a little difficult to compile an appropriate obituary regarding Geoff's RAN service. However, I have put together the following drawn from the internet (a posting by the Hastings District Flying Club), advice from one of Geoff's contemporaries Lieutenant (O) Bill Vallack RAN (Rtd), and a conversation with Geoff's partner Muriel. Mal Smith, Victoria Division Secretary also provided some details.

Geoff was a foundation member of the FAAAA Victoria Division and served for many years as Secretary and Committeeman. In the last few years he moved to the mid north coast of NSW and health issues prevented him travelling back to Victoria.

Geoff was one of the early pilots to train on the All Weather Sea Venom Fighter. He was born in Glen Innes and grew up in Tamworth. Geoff joined the RAN in January 1952, and was awarded his 'Wings' at Point Cook in May 1953. He was then posted to the UK for OFS and Night Fighter Courses, during which time he flew Firefly, Sea Fire, Sea Fury, and Meteor Night-Fighter aircraft. Geoff completed the All Weather Fighter OFS on the Sea Venom in the UK before returning to Australia where he did a tour in Sea Furies in HMAS *Vengeance.* Ultimately he ended up in 808 Sqn on Sea Venoms. Geoff also served in 723, 724, and 805 Sqns.

He retired from the RAN in the early 1960s and commenced a second, much longer, career in civil aviation (TAA).

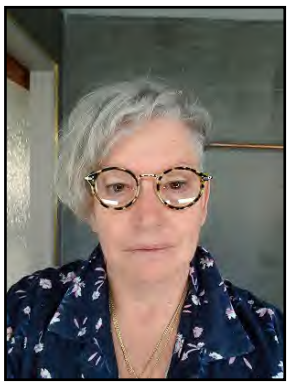
A private funeral was held in Port Macquarie on 24 March.

Geoff's partner Muriel Gartland, at muriel.gartland@gmail.com is happy to be contacted by email and is interested in copies of any photographs of Geoff that you may have.

John DaCosta

WA Committee Unchanged for 2022

By Sharron Spargo



Hello everyone,
I hope this finds you all well and safe from fire or flood in this sunburnt land. While we in the West have experienced our hottest summer on record, our hearts go out to those in Queensland and New South Wales who continue to battle the elements and the ongoing Covid threat.

W.A. is now learning what the rest of Australia has been dealing with for the past two years and as our borders open next week, our fingers are crossed that our vulnerable loved ones will come through. At the time of writing, we have 4,713 active cases, 13 in hospital and ten people have died. To my knowledge, all our members remain well although the ongoing heat is keeping us indoors as much as possible. Management at Synergy (our only electricity provider) must be rubbing their hands with glee!

While the wider world is in turmoil, life continues apace, with our AGM being held this month and there were no changes to our line-up.

President ***Greg Kelson***

Secretary ***Keith Taylor***

Treasurer ***Mike Keogh***

The HMAS *Perth* and USS *Houston* memorial regatta and Anglican Parish service has been held with Doris and Keith Taylor and Ann and Greg Kelson attending. As HMAS *Perth III* was in port the ship was well represented with the ship's padre conducting the service. The HMAS *Voyager* Memorial saw an impressive crowd gather in Kings Park, under a cloudless hot blue sky. This memorial attracts a larger crowd each year and for those attending for the first time, it was a moving experience which many look forward to attending again next year. Keith Taylor and Jim Bush again represented our membership.

At this stage the Anzac Day dawn service is set to go ahead, although it will be a ticketed event. We are hopeful of the march being held but as with everything else, it's a matter of wait and see. We live in hope.

Mike (Treasurer) and Lyn Keogh, along with our Social Committee have organised a four-day mid-week get away for our members this month. We'll be heading down south to the Margaret River region to relax in the cooler climes and to partake of numerous wineries, breweries and the world-famous chocolate factory. As our borders are about to open to the hordes of Eastern Staters and International visitor's it was decided that an extensive quality control evaluation was needed. Challenge accepted. You're welcome.

Until next time,

Stay safe and well.

Sharron.

Obituary—LCDR (O PHOT) Leslie Powell RAN (Rtd)

I regret to advise of the passing of Naval Observer and Photographic Officer Lieutenant Commander Leslie (Les) Edmund Powell RAN (Rtd) in Canberra Hospital on 8 March after losing a long fight with Prostate Cancer.

Les joined the Australian Army in August 1951. After serving in Charlie Company, 3 RAR, in Korea from June 1952 until July 1953, he was discharged from the Army on the same day as hostilities officially ended in Korea.

In January 1954 Les was selected for aircrew entry into the Navy on NAAC Course 10 and, subsequently, RAAF pilot course No 18. In 1955 Les transferred to Observer aircrew and joined the first Observer Training Course conducted in Australia. He graduated top of his class and went to the UK to undertake All Weather Fighter training. He returned to Australia in 1957 and served in 808 and 724 Squadrons in Sea Venoms and in 816 Squadron in Gannets.

He was promoted to Lieutenant Commander in 1965 and served as the Senior Observer in 725 Squadron and 817 Squadron.

January 1971 saw Les, accompanied by his family, posted to the Australian Embassy in Saigon, South Vietnam, as the Assistant Military Attache during the last years of the Vietnam War. The family returned to Australia in January 1973 and settled into life in Canberra. In October 2016 Les, and seven others, were invited to Korea to commemorate the 65th anniversary of the two major battles involving Australians - Kapyong and Maryang San. In March the following year, the self proclaimed "magnificent eight" met at the Australian War Memorial to commemorate 65 years since the end of the Korean War. Later that day Les and the other seven veterans were invited onto the floor of Federal Parliament for the reading of statements by both the Government Minister and the Opposition Shadow Minister for Veterans' Affairs.

Les and his wife Sally were popular and much loved by those serving in the FAA at the time and after his retirement from the Navy.

Les's funeral took place on Friday 25 March 2022 at White Lady Funerals, Belconnen ACT .

John DaCosta

Obituary—CMDR William 'Dickie' Bird RAN (Rtd)

I have been advised of the death of Commander William 'Dickie' Bird RAN (Rtd).

Dickie joined the RAN on 16 June 1949 and was streamed as a Probationary Naval Airman (Pilot) on Number 5 Course at RAAF Point Cook. He was recategorized in September 1950 for Observer training and undertook the Royal Navy Observers' course at various RN Air Stations, returning to Australia in June 1952.

Promotion to Acting Sub-lieutenant (O) in July 1952 saw Dickie join 816 Squadron for duties in Firefly AS.5 and AS.6 aircraft and he saw service in Korea onboard HMAS Sydney, post-Armistice, from late-1953 to mid-1954.

He returned to the UK in 1957 to undertake a Night Fighter course in Sea Venom aircraft and on returning to Australia he served in 724, 805 and 808 Squadrons ashore and in HMAS Melbourne.

Upon qualifying as a seaman officer with a full Bridge Watchkeeping Certificate in the destroyer HMAS Tobruk, Dickie went on to serve as a training officer in the former aircraft carrier HMAS Sydney (1963) and then as the Executive Officer of the destroyer-escort HMAS Yarra (1966-68).

Having been promoted to Commander, Dickie was posted to the Directorate of Sailors' Postings in 1969, followed by Command of the Manus Island base, HMAS *Tarangau*. A return to the world of naval aviation came about when he was appointed as Executive Officer of HMAS *Albatross* in 1972, serving alongside Captains D. A. H. Clarke and H. E. Bailey and then Commodore AJ Robertson.

Dickie saw out his engagement in the RAN as the Commanding Officer of HMAS *Encounter* and as NOIC South Australia through until early 1976. In retirement he returned to the Shoalhaven district and was very active in the Berry, NSW Sub-branch of the RSL.

Dickie passed away in North Nowra on 25 January 2022 after a long battle with dementia at the age of 93.

His funeral was held on Friday 11 February 2022 at the St Andrews Presbyterian Church, Kinghorn St, Nowra .

John DaCosta

Obituary—LCDR Doug Purvis RAN (Rtd)

Doug Purvis joined the RAN on 21 May 1972 and undertook No.86 RAAF Pilot's Course at RAAF Point Cook and RAAF Pearce earning his 'Wings' on 13 September 1973.

Posted to HMAS *Albatross,* he joined VC851 Sqn to complete an S2E Tracker OFS. During 1974 Doug undertook two months seamanship and aviation training in HMAS *Melbourne* and he re-joined VC851 where he not only qualified on the Tracker but also on the HS748. He was posted to VS816 in October 1977 where he flew the S-2G Tracker, replacements for those burnt in the *Albatross* hanger fire.

Whilst in VS816 Doug flew from *Albatross*, embarked with the Sqn in *Melbourne* and was part of VS816 DETDAR (Detachment Darwin), carrying out daily flights for Operation SEAWATCH, which was the patrol of northern-Australian waters for approaching Vietnamese refugee boats.

He was posted back to VC851 in November 1978 as well as performing instructional duties in the Tracker Simulator. Most likely the highlight of Doug's military flying career was his posting in January 1982 to RAAF East Sale for a QFI course followed by instructor's duties at RAAF Point Cook.

Doug on the day he was awarded his 'Wings'

Doug returned to *Albatross* in January 1983 to an Instructor role at the Tracker Simulator Complex until his discharge in October 1983. He also performed supplementary duties as Museum Officer where he indulged his passion for heritage aviation, particularly with the two Fairey Firefly aircraft which were Museum exhibits at the time.

Doug set his course for a career in commercial aviation, and while engaged as a Jindivik pilot at the Jervis Bay Range Facility, he studied for and gained his Air Transport Pilot's Licence qualification. In June 1987 Doug commenced employment as a Boeing 767 Second Officer with Qantas Airways. He flew the 767-200 and -300 for a total of fourteen years, gaining his Captaincy in 1998. Conversion to the Boeing 747-300 occurred in 2002 and Doug captained that type until his retirement on medical grounds in 2008.

Concurrent with his Qantas flying career, Doug engaged in the RAN Reserves in August 1992, remaining on the Reserves List until his 65th birthday in 2019. Doug's most influential and successful Reserve position was as Course Officer for Midshipmen aspiring to be Naval Pilots and Aviation Warfare Officers. These young officers, referred to as Naval Officers Year One (NOYO's), underwent Fleet Air Arm familiarisation training, including basic flying skills, before completing their chosen degree courses at the Australian Defence Force Academy.

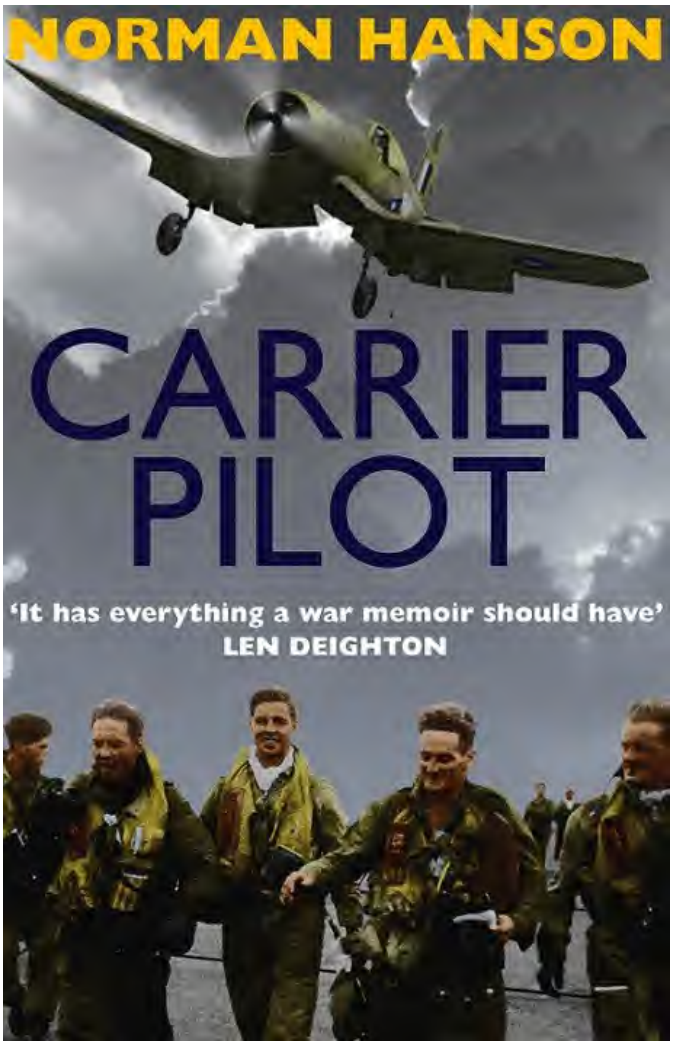
The debilitating condition that caused Doug to take early retirement from Qantas worsened as the years went on, to the point where his devoted wife Julia became his full-time carer. Doug succumbed to complications caused by his illness on 8 January this year, leaving behind Julia, his two sons Daniel and John, and two loving granddaughters. During his life Doug forged many close friendships and associations with people in the worlds of military, airline and historic aviation.

Terence Hetherington

Carrier Pilot

by Norman Hanson

BOOK REVIEW



Carrier Pilot by Norman Hanson tells the story of the author's early training and FAA appointments before moving onto carrier operations off HMS *Illustrious* with the British Pacific Fleet.

After an introduction to war, the book goes onto describe the efforts the author had on being released from a protected industry (Civil Servant) for active service. On call-up Norman Hanson had the choice of joining the Royal Marines or the Fleet Air Arm. In selecting the latter, he was quite surprised to be selected for pilot training given his age (26).

Initial entry saw him commence training at HMS *St Vincent* before being selected to undergo pilot training at the Naval Air Station Pensacola along with 30 other RN, RNVR, RNZNVR and 100 RAF personnel. The Navy pilots on graduation were destined for fighters whereas the RAF graduates were heading for Flying Boats. Norman Hanson describes in detail both his pilot training and life in Miami.

On completion of pilots course, the author continues explaining the newly arrived SBLTs RNVR back in the UK completing a 'knife and fork' course at the RN College, Greenwich. Soon after he found himself at RNAS St Merryn on a temporary attachment to 762 training squadron, initially flying Fulmars before moving onto Martlets, Still on the same aircraft Norman then moved to RNAS Yeovilton for ADDLs, formation and night flying. Following a short leave, it was off to the training Aircraft Carrier HMS *Argus* for deck training practice.

Following deck qualifications Norman joined a RNAS at Dekheila just outside Alexandria on the edge of the western desert. Here the book reflects his time flying Fulmars on mail runs, Fleet support and other non-combatant tasks over 12 months. Following this short interlude a number of RNVR and RNZNVR pilots returned to the US for fighter training on the Corsair which turned out to be an extremely difficult aircraft to handle for the inexperienced pilot. He describes the handling characteristics of the Corsair in detail.

On return to the UK, the author was posted for operations in *Illustrious.* With his RNVR Sqn of Corsairs, he joins the ship whilst still in UK waters. At the end of 1943, the ship then proceeded through the Mediterranean and the Suez to Ceylon.

China Bay, Ceylon was the base *Illustrious* operated from, with the exception of a short interlude in South Africa for refit. After a period 'working up' out of Ceylon the book describes *Illustrious* venture into the eastern Indian Ocean and South Pacific. It was around this time the author found his squadron engaged in both aerial and ground attack combat providing graphic descriptions of the actions.

The main encounter in this area with the Japanese was in Sumatra and around Palembang where 68 Japanese aircraft were destroyed—38 on the ground and 30 in the air.. After the action at Palembang, *Illustrious* headed for Australia, disembarking aircraft to Nowra with the ship transitting to Sydney for another refit. This was followed by a description of the Nowra area in 1945.Then it was time for aircraft to re-join and to proceed to the Pacific War where it suffered a continuation of attacks by Kamikaze aircraft off Formosa and Okinawa.

The book concludes with *Illustrious* in mid-1945 returning to the UK via Sydney after disembarking the Corsairs at Bankstown . *Illustrious* was the first RN ship to return to the UK from the Pacific.

The detail gives this book an informative and interesting authenticity making it hard to put down. I found the book very readable and competes well with many post WWII books on carrier operations. Norman Hanson returned to civilian life in 1946. He died in 1980 shortly after the publication of *Carrier Pilot*.

Paul Shiels

Help WANTED!!

Why not become Part of the Project?

Book on RAN A4G Skyhawks

A project has begun to write a book on the service of the A4G Skyhawk in the RAN. It will be in the style of the line of books made popular by "Buccaneer Boys". As such it will be focussed on the stories of the people who flew, maintained and supported the Skyhawk during its life on VF805 and VC724.

Ever Flown an A4?

Fixed, Fuelled, Armed A4s or Rode in the back seat of a TA4?

What about talking to A4 Pilots?

Any of the above then Contact one of us

CONTACT DETAILS
David Prest
(davidmprest@gmail.com)
Peter Greenfield
(purpsg@gmail.com)

"Those associated with the A4 will undoubtedly have a story to tell. We would like to hear from you"

The project concept is to produce a hard cover illustrated book, with proceeds assigned to the Naval Aviation Museum.

Merchandise For Sale

SHIRT $10
SHIRT (CHILDREN SIZE—Large only) $5

ASSOCIATION TIE $25

MUG $2

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LANYARD $1

CARRY BAG **$1**

Please contact Jock Caldwell via email flynavy@shoal.net.au or phone/text to 0411 755 397, with your request, and address details. He will then get back to you with pricing and payment details (payment either via EFT or cheque)

Postage approximately $10 — $15