



# FLYBY

ABN 3007 129 1677

See our website [here](#)

A periodical of the Fleet Air Arm Association of Australia  
Edition 46, June 2021.



*Image: Australian manufactured Beauforts of the type used at Nowra.*

1942, the year RAAF Nowra was officially formed, was perhaps the darkest time of the war for Australia.

Earlier that year Darwin and Broome, along with smaller communities in the north, had been bombed with heavy loss of life. Since November 1941 the RAN's cruisers HMAS *Sydney* and *Perth* had been sunk also with major loss of life. The Malayan peninsula had been over-run after the sinking of the RN's battleship and battlecruiser *Prince of Wales* and *Repulse* in December 1941, leading to the capture of Singapore in early February 1942 and the loss of almost 2000 Australian troops killed and 15000 captured. Ambon, Rabaul and Timor had been lost. The battle of Port Moresby was underway and the battle of Coral Sea being

fought as the establishment of RAAF Nowra was announced. PM Curtin had only just with difficulty convinced PM Churchill to release Australia's 7<sup>th</sup> Division to assist in the defence of Australia. The submarine attack on Sydney was to occur later in May 1942.

These events are the back-drop to RAAF Nowra's beginning in WW2. They must have seemed desperate times indeed. Many anticipated that invasion of mainland Australia was imminent.

The lesson is perhaps not so much that the Mark 13 torpedo was ineffective and the Beaufort still an immature system as the aircraft entered service. It is that RAAF Nowra, primarily 100 and 8 Squadron RAAF

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## Ghost Riders Patch



The image above appeared in an old edition of Slipstream and was obviously a patch from the days of the Sea Venom, which served in the RAN between 1956 and 1970.

We are keen to find out more about this patch, however. Was it an 'official' one worn by all aircrew who flew the Venom, or was it a local manufacture which made a brief appearance? In short, any information would be welcome, and, better still, has anyone got a better picture, or can you get your hands on one of the remaining patches?

Any reader's assistance would be very much appreciated. Simply email the FlyBy Editor [here](#).

Three old FAA Veterans are at the doctor for a memory test. The doctor says to the first old fellow, who had been a pilot:  
"What is three times three?"  
"274" was his reply.  
The doctor worriedly says to the second, ex-Observer veteran, "It's your turn. What is three times three?"  
"Tuesday" he replies.  
The doctor sadly says to the retired Chief ATA.  
"Okay, your turn. What's three times three?"  
"Nine" says the wily fellow.  
"That's great!" exclaims the doctor. "How did you get that?"  
"Jeez, Doc, it's pretty simple," he replied. "I just subtracted 274 from Tuesday." ✈

## Historic Sea Fury Badly Damaged

Navy Wings Hawker Sea Fury T20 G-RNHF (VX281) was forced to conduct an emergency landing in a field close to RNAS Yeovilton earlier this week following a problem with the engine. Both pilots escaped injury but unfortunately the aircraft has been severely damaged.

The Sea Fury, which was on a routine training flight, suffered a significant drop in engine oil pressure shortly after taking-off and climbing away from the airfield. The pilots, both highly experienced former naval pilots, immediately carried out the appropriate drills and transmitted a PAN call.

They turned back and lined themselves up perfectly up for a precautionary landing on Runway 04. However, shortly before reaching the runway on close finals, the engine stopped, changing the



speed and angle of glide of the approach dramatically, and they were forced to put the aircraft straight down into a field just outside the airfield boundary.

"The pilots' skilful execution of an extremely hazardous situation was exemplary," said Commodore Jock Alexander CEO of the Charity.

"We are all extremely relieved that they are safe and well. RNAS Yeovilton Air Traffic Control



reacted immediately, and the Emergency Fire and Medical Services were very quickly on the scene. The support of the Air Station has been outstanding.”

The aircraft wings and engine detached during the impact and the fuselage rolled upside down but both pilots were able to escape unaided. They were taken to Yeovil hospital as a precautionary measure, and one was retained overnight for observation.

The Air Accident Investigation Branch (AAIB) and the Civil Aviation Authority (CAA) have been informed and investigations have begun into the causes of the accident.

“The Sea Fury is a classic and much-loved Fleet Air Arm aircraft, and the accident has been a shock to everyone in the Navy Wings community,” said Jock Alexander. “It is too early to say whether it is feasible to rebuild her and if she will ever fly again.”

The Charity’s Chief Engineer Jim Norris said “Great skill and calm was shown by everyone in the post-crash management team. We are grateful for the overwhelming support we have received. The aircraft will be recovered to the Navy Wings Heritage Hangar for the investigation.”

Although the Sea Fury T20 has been a favourite on the air show circuit, Navy Wings has worked hard in recent years to build greater resilience into the flying collection so that when the unexpected happens the Charity always has other aircraft that can continue to display to the public.

The Navy Wings collection also includes a Sea Fury single seat FB11, two Fairey Swordfish, the Sea Fury’s successor, a Sea Hawk and a growing number of other heritage aircraft, allowing these wonderful examples of our national aviation heritage to operate in the skies of the UK for many years to come.

From the [Navy Wings](#) website. ✈

## TRITON: What’s Happening?



Back in 2018 Australia committed to purchasing a number of Northrop Grumman MQ-4C Triton drones, together with the US Navy, but delivery was at risk due to a production pause under the Trump administration.

A more recent contract with Northrop Grumman will prevent that pause. Production of the first of Australia’s aircraft commenced in October last year, and the first aircraft is due to be delivered here in 24/25.

The three Tritons will be based at RAAF Tindal with Operations HQ at RAAF Edinburgh.

The Triton is a large, unmanned aerial vehicle capable of cruising at around 50,000 feet and loitering in an area of particular interest, or of circumnavigating the entire continent in one 24 hour sortie. Equipped with a range of sensors it can communicate with ground stations, ships or other aircraft either directly or via satellite.

It is also a very expensive vehicle – each one costing more than an F-35. As one Defence Analyst put it: “...its exquisite capability makes it exquisitely expensive.” We can only afford a small number, which raises questions about the sustainability and viability of the capability.

You can see a short video of Australia’s Triton program [here](#), which gives a good idea of the capability of this extraordinary aircraft. ✈



*Northrop-Grumman initiates build of first Australian Triton (image Northrop Grumman)*

# REUNION CORNER

## MG-99 Reunion 30 June 2021

This is a gathering of all those who were directly or peripherally involved in the rescue of 99 refugees by HMAS Melbourne on 21 June 1981, forty years ago. The invitation list includes Tracker 851, which has since been refurbished and which will be the star of the show. Details are:

Where: HARS Aviation Museum, Albion Park Rail.

When: Sunday 30 June 1300-1600.

Who: Register your interest with [Carl Robinson](#).

## Vietnam Veterans 16-18 August 2021



You are invited to join us for three days of activities to commemorate Vietnam Veterans Day, concluding with a Service hosted at the Old Bar Public School.

An outline of the program is as follows:

- Monday Aug 16<sup>th</sup>** Meet and greet from 4pm
- Tuesday Aug 17<sup>th</sup>** Lunch with the RSL, and Reunion Dinner.
- Wed Aug 18<sup>th</sup>** Brunch. Vietnam Veterans Parade and Service. Farewell Dinner.

Enquiries to: John Macartney. Phone (02) 6557 4165 or 0427 787 296 or email [here](#). ✈

## Aircrew Reunion 22-23 October 2021

An Aircrew Reunion is planned for **22-23 October** at the Historic Aircraft Restoration Society at Albion Park Rail.

Details are to be advised, but get the dates in your Diary as places are expected to go quickly once bookings are open.

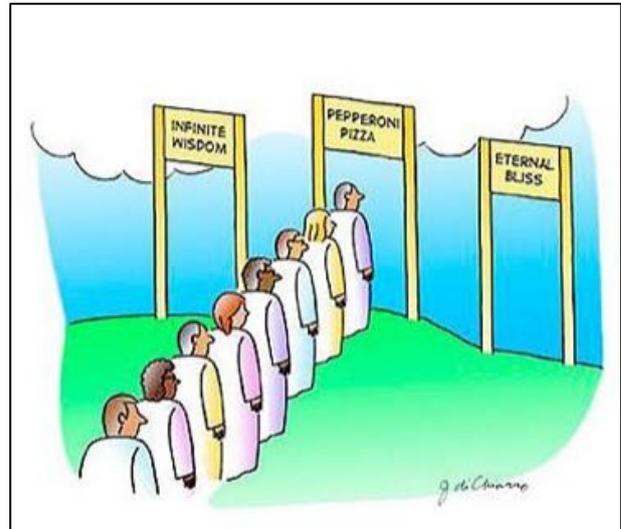
More info in future FlyBy newsletters. ✈

## Wall of Service Update

Order Number 49 is now open for applications, with 2 names on it so far (below).

J.R. MACARTNEY R93356 POEAC Jul 61-Jun73.  
E.M. GANGLOFF S112549 CPOATA Jul72-Dec92  
S.J. FLETCHER S125766 LSATA Oct79-May97

For those who don't know, the Wall of Service is a unique facility which records the names of people who have served, or are still serving, in the RAN Fleet Air Arm. Members of allied Forces (eg RN) who were posted to an RAN FAA unit are also eligible. More details [here](#).



## HAVE YOU PAID YOUR MEMBERSHIP SUBSCRIPTION?

It's that awful time of year when the Division Committees around the country are extinguishing the membership of those who haven't yet paid their annual subscription.

Nobody likes to do that, but the Association can't afford to support those who have not renewed, and nor is it fair on those who have paid.

So, the process to remove non-financial members from distribution of this newsletter has started. After this edition you may not see it in your mailbox again. Similarly, *Slipstream* distribution is being amended.

The good news is you can easily stop this process, simply by paying your subs. It is quick and easy, and surprisingly cheap when compared to other things in this expensive world.

If you aren't sure of your membership status you can contact the webmaster [here](#), who will be happy to advise on whether your membership is current, and, if not, how to pay.



*Above: A Bristol Beaufort dropping a British Torpedo. The anti-shipping role required a very low/slow drop envelope on a predictable course. It was hazardous flying, especially at night. (Public domain image).*

*(continued from page 1)*

along with the Base Torpedo Unit (BTU) did the best they could with the resources provided. There was no option. They fought with what they had. This is why I believe we should remember and commemorate RAAF Nowra and BTU.

### **Why Torpedoes?**

The aircraft launched torpedo was viewed as a very effective weapon in the early period of WW2. The RN's attack at Taranto in November 1940, the attack on Pearl Harbour and the sinking of HMS *Prince of Wales* and *Repulse* also in December 1941 seemed like spectacular torpedo successes. It is only in recent times that wrecks have been found and studied, previously classified documents released and research completed that shows the airborne torpedo was perhaps not quite as effective as had been thought in 1942. Indeed, the weapon's adoption by RAAF may have been misinformed about the capabilities of the US airborne torpedo by the USN.

One of the operational roles designated for RAAF Nowra was the training of personnel in the maintenance and operation of the United States Navy's (USN) Mark 13 air launched torpedo. Australia's Department of Defence records (DOD letter 579/3/262 of 7 August 1975) record the role was designated in

November of 1941. And at that time the Nowra airfield, which had been in July of 1941 declared available for (RAAF and civil) use, was being extended and improved to provide for the operational upgrade.

RAAF Nowra was formally established on 7 May 1942. The first unit to undergo torpedo training was not RAAF, however.



*Above: A Mk 13 being serviced by USN ordnancemen, as they did at Nowra. The conditions were probably similar to this, which were hardly ideal for such a delicate machine. This appears to be an early model of the Mk13 as there is no propellor ring fitted. (Image: Public Domain).*

Early 1942 the United States Army Air Corps (USAAC) had expressed interest in conducting torpedo training at Nowra for the 22 Bombardment Group which operated B26 Martin Marauder aircraft. This training was scheduled to commence 1st June 1942 but was delayed until later that month due to the crash and loss of a Marauder aircraft reportedly due to deficiencies of the airfield.

Notwithstanding, training of USAAC B 26 and reportedly Netherlands East Indies (NEI) B 25 crews was conducted during June and July in two courses involving 4 and 8 aircraft respectively. Improvement of the airfield's runways continued.

The first training of RAAF crews from 100 Squadron RAAF was with No 1 and No 2 Beaufort Courses during August 1942 when training of USAAC appears to have ceased. Although no complete training records from 1942 are held, anecdotal history recalls that the training of aircrew consisted of classroom technical lessons on the Mark 13 torpedo, torpedo tactics and airborne training which concentrated on very low level over water flight including in formation; and finally the release of a practice weapon capable of running and then its recovery for re-use. Some of this was conducted at night. Concrete simulated torpedoes were used to provide a representation of the weapon's weight and drag upon the Beaufort's airframe. Beaufort torpedo training aircraft operated from both RAAF Nowra airfield and the satellite field at Jervis Bay.

Fitment of the Mark 13 torpedo was also undertaken on Catalina aircraft at St Georges Basin by BTU.

The airborne Beaufort/Mark 13 training was considered very demanding indeed and was conducted over a very short period. (It compares with the flying limits imposed upon RAF's 617 Squadron for the dams operation) And it is relevant that the Australian built Beaufort had begun entering operational service only eight months before in December 1941 and therefore in mid-1942 was still encountering many of the usual problems associated with introducing a new system.

These difficulties were compounded by the Mark 13 torpedoes' initial incompatibility with the Beaufort airframe (and the weapon's unreliable performance).

The training of maintainers was also to a



*Above: One of the RAAF Torpedo Storage Bunkers at Nowra, just off BTU road. (Image: [acomos.com](http://acomos.com)).*

demanding standard. The (sparse) record indicates that only the most competent personnel were selected for the training, which was of varying duration depending upon the skill grade required of the graduate.

The Australian Government had earlier requested provision of the appropriate British Mark 12 torpedo but the request was declined because (presumably) none could be spared from RAF operational requirements. The US Government reportedly also denied purchase of the Mark 13 torpedo by Australia.

It is not clear how the Mark 13 was eventually procured by RAAF but according to anecdote, RAAF was authorised by General Macarthur to retain a pool of the weapons and that initially this pool of (apparently) 60 weapons was to be located at Nowra. It seems possible the "pool" may have been that provided by USDOD/USAAC authorities for the training of 22 Bombardment Group crews. These weapons may have been approved for transfer to RAAF. Subsequent logistic support of the Mark 13 torpedo in RAAF service is unknown and not mentioned in the official history recorded in Australia in the War of 1939 - 1945. Series 4 - Civil, Volume V - The Role of Science and Industry (1st edition, 1958), Chapter 13, Torpedoes and Mines, pp. 282-300. (Support of the Mark 13 torpedo in RN British Pacific Fleet service is mentioned by the online record of the RAN Torpedo Establishment but that is later in the war.)

### **The Role and Location of the BTU**

A record of when the extensive BTU's facilities were constructed has not been found. It is presumed that the facilities were commenced in late 1942 and completed during 1943. An important feature of the training and torpedo

maintenance was that at least initially, and perhaps for the entire time the role was performed by RAAF Nowra, these functions were provided by a USN detachment of 16 officers and 46 enlisted (non-commissioned) personnel. Local recollection is that the USN personnel were accommodated in Nowra and therefore apart from RAAF personnel. (The *OZ at War* website identifies the name of the USN detachment as "Navy 87" but no further records of the unit have been found.)

The main infrastructure of the Base Torpedo Unit (BTU) was located where Boral sawmill is now located. And some of BTU's facilities remain in use. The original function of BTU is still clearly evident in the remaining concrete structures and main work-shed of the mill. The living site and administrative HQ of BTU were located opposite the saw mill on the southern side of BTU Road which obviously was named after the WW2 unit.

Evidence of building foundations are still visible across the road from the BORAL saw mill. "Igloo" concrete storage buildings are located along both the north and south sides of BTU road for about a mile westward of the former HQ site. There were believed to be 15 of these and most remain but now are located on private and Council land as rezoning has impacted since WW2.

### The Mk XIII Torpedo

The Mark XIII was the most common US air launched torpedo of World War II. In appearance quite different from airborne torpedoes of other navies in that it was "short and fat" rather than the usual "long and thin" of the air weapon. The Beaufort's bomb bay was designed to accommodate Royal Navy's Mark XII torpedo which was 18 inches in diameter whereas the USN Mark XIII was 22 ½ inches and therefore could not be carried internally by that aircraft.

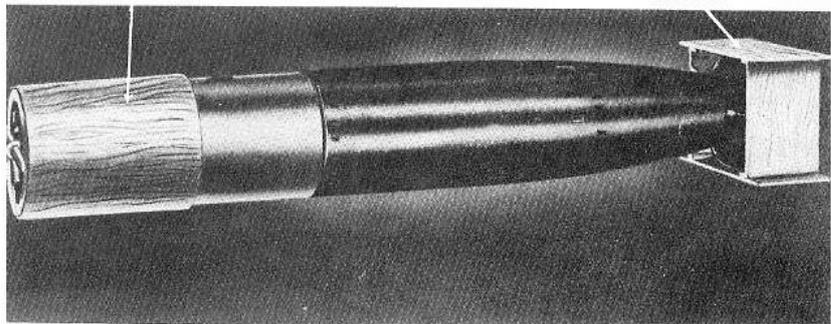
The Mark XIII proved to be an unreliable weapon in the early war years. This performance eventually alerted the USN to the probability that the weapon was defective. An analysis of 105 torpedo drops conducted by the USN in mid-1943 found that more than 36 percent had critical deficiencies which rendered them ineffective. The early models (particularly MOD 1) operated by the RAAF were particularly unreliable and further handicapped by the need to drop

them low and slow - typically 50 feet (15 m) and 110 knots which made the torpedo planes (Beauforts in RAAF service) carrying them vulnerable to attack.

These problems were greatly reduced by the latter years of the war. By then Mark 13 torpedoes had fin stabilizers, nose drag rings and tail shroud rings added, all of which worked to slow the torpedo after it was dropped so that it struck the water nose-first, at an acceptable speed and without spin. These improved the drop characteristics such that the recommended aircraft maximum launch parameters were increased to a height of 2,400 feet (730 m) and a speed of 410 knots. Other modifications were implemented as a result of a rigorous improvement program conducted by the USN but the RAAF appears not to have benefited from this effort before the torpedo role was cancelled by RAAF in 1944.

The Mark 13 in USN service went on to be highly effective and was even used by USN patrol boats who were apparently able to launch the weapon by rolling it over the ship's side rather than ejecting from the usual launching tubes.

By 1943 USAAC commanders in the South West Pacific Theatre of operations had lost confidence or interest in the aircraft launched torpedo, preferring the low level skip bombing method of attack as was used with great success in the battle of the Bismarck Sea March 1943. By this time RAAF also was losing interest in the role. Trials conducted at Jervis Bay mid 1943 confirmed the results of the USN trials which had concluded the



*Above: The early parameters for dropping the Mk 13 were 50 feet at no more than 110 knots – which made the parent aircraft an easy target. Throughout the first part of WW2 US Navy pilots urgently requested modifications to allow a faster/higher envelope, and so a 'Fast Kit' was developed for the weapon. On the torpedo's tail a box like structure of wood acted like a tail to eliminate pitch and yaw, whilst on the nose a wooden drag ring, commonly called 'the pickle barrel' slowed the weapon in the air and absorbed some of the impact when it struck the surface. Both structures disintegrated on hitting the water. These, with other modifications, allowed drops as high as 2000 feet and 350 knots, although a 1000ft/260 knot envelope was more realistic. (Image: [wwiiafterwwii](http://wwiiafterwwii)).*

unmodified Mark 13 weapon was ineffective. And by this time Australian manufactured torpedoes were beginning to be produced and required trial. BTU became involved in this work but locally produced torpedoes were not available for operational use during WW2.

By 1944 RAAF Nowra had ceased torpedo training for RAAF and the station was vacated and handed



*Above: The US Mk13 could be a very effective weapon on targets other than maritime, as shown in this image of the Hwachon Dam in South Korea, pictured during a torpedo raid on 01May51. Six of the eight Mk13s struck on or near the floodgates. One floodgate was torn away and the dam was breached and holed on both sides. The damage wiped out electrical power over a vast area and thwarted a planned enemy offensive. National Archives photo.*

over to the incoming RN British Pacific Fleet in September 1944. BTU continued to provide support for the Mark 13 torpedo which was carried by the RN US built Grumman Avenger aircraft and for torpedo trials until about mid 1946 when former RAAF Nowra was vacated by the RN. The base was handed to Department of Navy December of 1947 and has remained the home of the RAN Fleet Air Arm since.

Quoting from David Wilson's "The Eagle and the Albatross Australian Aerial Maritime Operations 1921-1971" (available online) In 19 attacks made between 7 September 1942 and 4 December 1943 (the final torpedo sortie by RAAF) No 100 and No 8 Squadrons dropped 56 torpedoes in anger with inconclusive results though some successes were claimed. The cost was seven Beauforts lost and 26 aircrew killed or declared "missing in action" and two made POW.

*Author's Note: This very brief overview provides a little of the history of the USN Mark 13 torpedo in RAAF service 1942 to 1944 and the work of the torpedo training establishment at RAAF Nowra named both Base Torpedo Unit (BTU) and 6 Operational Training Unit (OTU). I have not dealt in any detail with the administrative and name changes that occurred within RAAF Nowra during the period.*

*The anti-submarine war fought just off the NSW including by RAAF Nowra coast is another story*

*Cris George. April 2021*

### **Interesting Sources**

Please see [this](#) website for an overview of the Mark 13 torpedo in the Falklands war.

And [this link](#) will enable you to read the last operational use of the Mark 13 torpedo in USN employment, when a North Korean Dam was successfully attacked (the article's described launch envelope appears to be for an early configuration of the Mark XIII as later envelopes were far less restrictive in terms of release height and speed of the launching aircraft.)

The [FAAA Other Accident Records](#) covers non-RAN accident information including the attrition of aircraft and crews undergoing torpedo training at RAAF Nowra. Most of the personnel killed in accidents are buried in the Commonwealth War Graves Commission Cemetery at Nowra.

[Midair Collision](#) - Aussie Bristol Beauforts collide and crash -

YouTube is a link to the 14 April 1943 collision of two Beauforts over Jervis Bay resulting in the loss of two



*Above: Dramatic footage of a mid-air collision between two Beauforts from 8OCT, captured over Jervis Bay. Eight aircrew lost their lives. Image from YouTube clip [here](#).*



Above: A rare photo of the BTU workshop floor taken by SGT Alan Smith who was posted there from Oct43 to May 44. We are advised they are Mk.13 torpedoes but are missing the warhead assembly, which gives them a different look. The image gives a good idea of the rudimentary nature of the BTU facility. Image SGT Smith.

aircraft and 8 crew who were killed. A link to the YouTube footage of the crash is under the photo.

[Torpedo Mark 13 \(hnsa.org\)](http://hnsa.org) is a link to an archived USN manual for the Mark 13 Torpedo. Chapter 10 of the publication provides an idea of the maintenance and servicing required by the weapon and therefore the work undertaken by the BTU.

**Plane Sailing:** The archaeology of aircraft losses over water in New South Wales, Australia | Tim Smith - Academia.edu is a link to a paper covering plane wrecks in NSW. Pages 116 and 117 cover a brief account of torpedo recovery in support of torpedo training conducted by RAAF Nowra.

[Dummy Concrete Torpedoes](#) and [Tarat Discovery Centre](#) are links to British (RN) concrete simulated torpedoes which may have been the principle and guide followed by BTU in the manufacture of concrete torpedo shapes for Mark 13 training.

[The War at Home](#) is a link to WW2 sites in NSW including an image one of BTU's igloo structures at Nowra.

References:

1. John Lever, *No. 6 OTU, Base Torpedo Unit,*

*and RAAF Beaufort Torpedo Operations.* Red Cliffs, Victoria: The Sunnyland Press, 1999. ISBN 0-9587218-2-3.

2. *The Eagle and the Albatross: Australian Aerial Maritime Operations 1921-1971.* Thesis by David Joseph Wilson. University College of NSW Defence Force Academy.

3. *Official History: Air War against Japan, 1943-1945* by George Odgers.

4. *The Battle of the Bismarck Sea* by Lex McAulay. Banner Books.

5. Department of Defence Letter 579/3/262 of 7 August 1975.

6. *World War II Torpedoes of the United States of America - NavWeaps* ✈

### † REST IN PEACE †

Since the last edition of 'FlyBy' we have become aware of the loss of **Ray Hawkins, Rob Hobba, Nigel Lee, Mike Killingsworth** and **Petro Fenwick**.

You can read a little more on our Obituary pages [here](#), and, if you are a member of the Association, you can leave a comment there if you wish. ✈



**We've all seen it – perhaps with a ship inside it, or maybe empty – and haven't given it a second thought. But The Captain Cook Graving Dock in Garden Island was one of the greatest engineering feats of its time, and built of desperate necessity.**

The need for a naval graving dock in Australia became critical with the deteriorating world situation in the 1930s. There was little doubt that Australia's security would depend on its commercial sea lanes. The country's ability to maintain the rate at which its naval forces could be repaired and returned to sea would play a large part in its ultimate survival.

After investigations, three sites were identified and it was decided that the construction of the graving dock between Garden Island and the foreshore would best fulfil all the requirements. It was already well protected, provided easy entry for the fleet, and would enhance the importance of the existing Garden Island Naval depot.

The Prime Minister, R.G. Menzies, told parliament on 1 May 1940: "A dry dock of a larger size than any in Australia has been an important strategic consideration since the size of capital ships has

increased so greatly. I do not need to elaborate the great value to Australia of a dock capable of accommodating not only the largest warships but also merchant ships of great tonnage. The possession of such a dock would make Australia a fit base for a powerful fleet and would, in certain contingencies, enable naval operations to be conducted in Australian waters without the necessity for ships to travel 4,000 miles to Singapore for purposes of refit and repair. It is estimated that three years will be occupied in the construction of the dock."

In addition to the construction of the graving dock, new workshops and modern machinery would be provided on the island, together with construction of a repair wharf with a 250-ton crane.

This would be the greatest engineering feat in Australia's history surpassing even the Sydney Harbour Bridge. It would involve the reclamation of 30 acres between Potts Point and Garden Island and the construction of the graving dock approximately 1,140 feet (345 metres) long, 147 feet (45 metres) wide and 45 feet (14 metres) deep.

Sheet piling (170,000 feet) and approximately 800,000 cubic yard of stone and core filling were





used to form a huge coffer-dam from which the sea was pumped, leaving a large basin in which the dock would be built. The coffer-dam, known as the "Burma Road", was commenced in December 1940 and completed in February 1942. The fall of Singapore to the invading Japanese on 15 February 1942 added to the urgency of the work. The dock in Singapore was now unavailable and Cockatoo Island was engaged in the construction of new ships for the Navy.

Work on the graving dock continued day and night, with additional labour being hired as the project progressed. Pumping of the water enclosed by the coffer-dam commenced on 17 February 1942. The average workforce was 1,750, rising to a peak of 4,125 in July 1943. It was an amazing sight, especially at night when the blaze of lights illuminated the work area contrasted by the darkened city.

Most of the plant required for the dockyard was manufactured in Britain and shipped to Australia. This was a risky undertaking, given the possibility of attack from German U-boats, bombers and Japanese submarines during the long voyage, but fortunately only two shipments were lost through enemy action.

While the dock was itself being constructed, the

caissons were also being built within the area enclosed by the coffer-dam. There being no suitable launching facilities available. Their construction was one of the most difficult undertaken in Australia up until that time. The caissons, made of welded steel, were fitted with buoyancy tanks, tidal chambers and ballast tanks designed to enable their floatation and sinking within the dock grooves as required.

The dock was ready for initial flooding in September 1944 and pumps allowed the dock to be emptied of its 57,000,000 gallons (259,122,000 litres) of water in about four hours. The construction was sufficiently advanced to allow the emergency docking of HMS *Illustrious* on 2 March 1945, three weeks before the official opening by the Governor-General, the Duke of Gloucester on 24 March 1945. The graving dock was named in honour of Captain James Cook, R.N

In the inauguration speech delivered at the opening ceremony the following was noted, "It was indeed a bold move at the time for Australia, which had no capital ships of her own, to decide to construct a dock for such ships. The war with Japan has clearly shown how vital such docking facilities are to naval forces of the Empire and of our allies. I extend my sincere congratulations on the skill and workmanship which has brought this great project to completion. ✦"



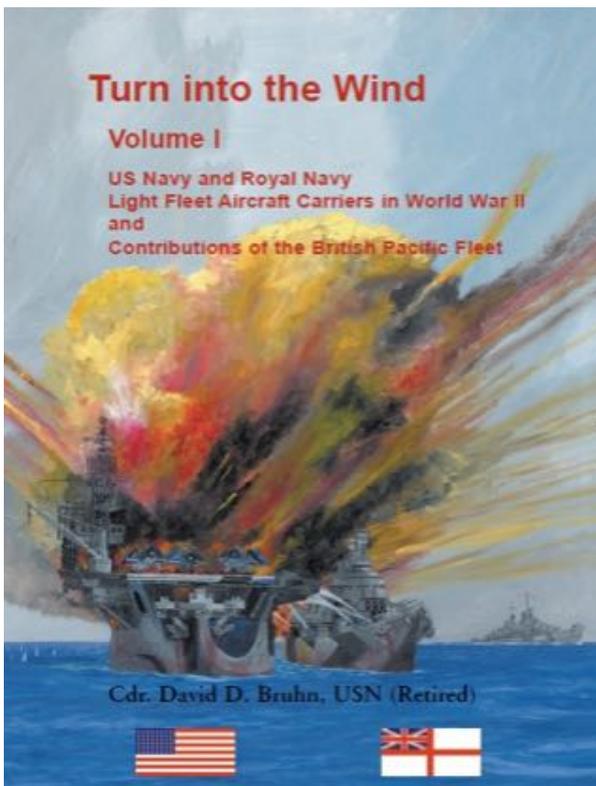


Dear Editor,

American writer **David Bruhn** has just released a book called "Turning into the Wind". It is about carriers, WW2 and Korea. Commodore Hector Donohue (RAN) wrote a biography about my dad, **Commander Guy Beange**.

This chapter will be at the end of Vol 1 of the book. I thought readers of Flyby might be interested in the book which is available on Amazon, Heritage and Barnes and Noble books. If you google David Bruhn homepage, you should be able to see the book there. Vol 1 is about WW2, and Dad's bio is at the end of that. Vol 2 then tells the story of Korea and the Commonwealth, HMAS Sydney etc.

Kind Regards, **Guy Beange**



*By Editor. Looks like a compelling read for anyone interested in WW2 Naval Aviation, Guy, so thank you for drawing it to our attention. The website referred to can be reached by clicking [here](#). ✦*

Dear Editor

The photo of the Albatross Sailing Club at Lake Illawarra was taken by none other than your Historian **Kim Dunstan** on the 25th February 1962 which was easy for me to remember. One, it was the occasion of my 21st Birthday and Secondly, along with my forward hand, **Les Kube**, we won the Southern Zone Open 12-foot Championship in an RAN Firefly sailing dinghy for the Albatross Sailing Club. The second photo of the Club House was the site of much celebration that night plus weekend.

The Albatross sailing Club came about as a result of a meeting held in 1958 of the then Nowra White Ensign Club Committee, the Nowra Business Council, the Shoalhaven Shire Council, the Commanding Officer of HMAS ALBATROSS (VAT Smith) and Albatross Staff as a part of the enhancement program of the Shoalhaven River foreshore, a facility could be made available for RAN personnel to form a Sailing Club. The land for this Club would be on the upriver side of the Nowra Bridge on Scenic Drive, on an area vacated by a Saw Mill and a Boat Building site at the bottom of the cliff face under the site of the Nowra Hospital. An agreement was reached on this proposal and a Club House was built by the Shire Council and the Department of Housing on an existing site at the entrance to the old Saw Mill. The Club House was completed in 1959/60 and comprised of a shed to house boats including a social area with electricity and water, a wharf and ramp area as well as a large existing ramp to the main gate. The entire complex was secured by a large wire fence.

Next can the boats, The Navy initially provided four, standard issue 14 foot clinker built sailing boats as well as four, 12 foot 'Firefly' class dinghy's that had been used by Australia in the 1956 Olympic Games then transferred to the RAN. Thus the Albatross Sailing Club was in business under the guidance direction of our first "Commodore" COL ANDREWS. Also about the same time the Nowra Sailing Club was formed by the Council downriver from the Bridge so the two Clubs combined for racing on a Saturday and the 'Tross' Club would always (weather permitting) social sailing on Sundays exploring as much of the Shoalhaven River as possible.

It was during this initial period that the RAN supplied the Club with a rescue boat, a 20 foot

Ships Cutter with a massive single lung flywheel start engine, this boat was so heavy that a mooring was established for it at the end of the wharf. It is interesting to note that this cutter was used in many aspects other than rescuing the crews of overturned yachts, before the Shoalhaven River Dam was built the river would flood nearly every year and a team from Albatross would be based at the Club House to protect the RAN assets as well as provide assistance the civilian services as required, this would include using the cutter to float cows off Pig Island situated in the middle of the river, evacuating houses cut off by the flood, providing food and services to stranded houses plus any other service that would require our cutter.

As the years progressed the Albatross Welfare Committee provided the Club with four canoes (thanks to **Pat Stewart**) and a Rowing Club (can't remember which one) donated a Racing Four shell to us and we actually raced it in a couple of races - not to win but for fun. Not to be outdone a member bought his own Ski Boat and used the Club House as his HQ at the weekends for use with other members.

By the mid 60s the Fireflies were feeling their age as the ply construction was starting to de-laminate and one boat was too dangerous to use. They were all returned to Garden Island and were replaced by brand new 420s which were another Olympic Racing craft. These boats were well received and sailed in regattas around the State and even to Adelaide for the Australian championships. Although never winning one, our members certainly did not disgrace themselves.

One thing that I must mention is that over the weekends the Club was the centre of socialising in Nowra, every Saturday night was BBQ night or if the weather was bad just up the road was the White Ensign Club with hot showers, hot food, good beer and a good bed if required. Although there was always a crowd at the weekends there was never any trouble with the locals due to the siting of the Club House. The only problem at times was the fridge wasn't large enough for a big night-post sailing party.

Like all good things of the period things had to come to an end, like so many other Clubs whose sponsorship by ALBATROSS was lost e.g. The Gliding Club, the Car Club, the Gun Club and the Golf Club to name a few. The demise of the Sailing Club slowly came in the 70s when the 14-footers and were returned to Garden Island leaving just the 420 s, and the membership dropped. The final nail in the coffin was when the Nowra Council required the land back to further extend the

foreshore of the river up to the site of the old Saw mill.

The Sailing Club may be gone but the memories linger on especially on how many from Albatross learnt the art of sailing from the facility that allowed them to learn and relax.

Hope this answers a few queries.

Regards, **Jock Campbell** ✈

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Dear Editor

The article re the death of Bob Barnett brought back strong memories of the fatal day.

We were working up to go to Korea to relieve HMS Glory which was having catapult problems and was scheduled to head south to do a short refit at Garden Island.

Glory's problems highlighted the need to have alternative means of launching from a crowded deck with three squadrons onboard, which led to the idea of RATOG as a backup.

None of us had done a RATOG launch from the deck or even from shore.

I was a very recently qualified naval aviator in my first squadron flying MK V Fireflies, having embarked in *HMAS Sydney* for the first time.

The Firefly was fitted with four RATOG rockets, and came the day my briefing was very simple, apply as much power as possible against the brakes, on release hit full power and full left rudder to overcome the massive torque reaction, and when you reach a man on the port side of the deck holding a large red flag, hit the button on the end of the throttle.

On hitting the button all four rockets fired and I immediately experienced a massive pitch up which needed the stick in the instrument panel to hold it.

The next aircraft after me was flown by **Bob Barnett**.

That stopped the launching program, as planned, because the rockets were not cleared for jettisoning and we had to land at JB for the rockets to be removed.

As a very junior sub lieutenant I was appointed officer of the Board of Inquiry, responsible for ushering in witnesses and well recall that it was inquiring into the loss of His Majesty's aircraft and not the Pilot.

I'm certain that if the Board had known what we subsequently found out about the unreliability of the RATOG system, they would been better placed in considering likely causes. In later launches ashore we had one instance where the rockets

fired one after the other, and in another the rockets broke lose shooting forward removing the airscrew.

An edict was subsequently issued that a RATOG launch from the deck must be preceded by having one from shore, however I can't recall it ever happening again.

I well recall on joining the Air Station for the first time being greeted by Bob who was Air Officer of the Day; very friendly and welcoming, not like other ex RAAF members who tried to be very RN.

One can't help but think of fate where my launch was successful and his was not. I have survived today into my ninety second year, he only made it to twenty five.

**Norman Lee** Canberra. ✈

### Remembering Charlie Rex



**Charles Robert Rex**, affectionally known by one and all as 'Charlie', passed away on 11 June 2021. He was a notable FAA personality known and admired by many, and served honourably including with the Helicopter Flight Vietnam.

The fact that two of Charlie's three sons were working overseas during a global pandemic conspired against having a memorial service at the time, but it is now planned to hold one at Nowra, probably on a Friday in early August. The timeframe is yet to be confirmed, but you may wish to note it in your diary should you wish to attend. We will bring you updates as they come in. ✈

### New Members This Month

The Editor forgot the "New Members" column in May's 'FlyBy' and has received a good thrashing for his lack of attention to detail.

At the time of going to print the following new members have joined since the April update.

|               |               |
|---------------|---------------|
| Dennis Newton | Martin Toy    |
| Murray Smythe | Brian Abraham |

|                  |                    |
|------------------|--------------------|
| Mark Deasy       | Greg Davis         |
| Grant Barnett    | Eugene Gangloff    |
| Kyle Langford    | Christopher Donald |
| Julie Robinson   | Mark Jerrett       |
| Greg Dawes       | Martin Cowley      |
| Brian Winterburn | Adrian Sorensen    |
| Steve Long       | Michal Stewart     |
| Brett Thompson   | Nicholas Kous      |
| Graham Hendy     |                    |

Don't forget, if you are a member you can log on to our website to get a list of all members and their email address, should you wish to stay in touch.

If you are not a member of the Association why not join today? Full details can be found [here](#). ✈



### Green Setback...



An image showing hundreds of Government electric cars abandoned just outside Paris graphically illustrates the problems with 'green' transport. Their batteries require replacement, but that costs almost twice the price of a new vehicle. Worse still, none of the recycling depots will deal with the batteries, so the cars are rotting in a paddock, leaching oil and acid into the ground.

It seems green wheels have a way to go yet. ✈



**We like to bring stories of what happened to our mates when they left the Fleet Air Arm, and **Anthony Ward** has come to the party on this occasion, as he retires from his life in the Aviation business. He has our grateful thanks, and best wishes for the future.**

I'm actually retiring from my entire working life within in the aviation business. The last chapter out of many with a total 52 years in the aviation business. My final chapter has been, home based here in Toulouse in the South West of France, finishing with the last 21 years representing in front of Airbus Industries, both CIT Aerospace out of NY and lastly Avolon out of Dublin (Ireland), buying and leasing the Airbus latest high tech products into the world of countless numbers of airlines.

From tomorrow onwards I am starting new adventures and different challenges in my new role within retirement.

So, below I have attempted to summarize the last 52 years of my total immersion into the aviation industry.... I had no idea at the age of 18, when I joined the RAN FAA at Nowra (H.M.A.S) Albatross what a fabulous, exciting, engaging, and a never ending challenging high tech industry that I was actually putting one toe into.

I took an honourable discharge from the RAN FAA in 1979 and joined Bush Pilots in Cairns, North Queensland. I was under contract with AWA out of Bankstown, Sydney, where I was made responsible for the opening of an electrical & instrument overhaul workshop in supporting the operations of the Bush-Pilots fleet of aircraft. It was during the following two years that I completed my CASA engineering licensing qualifications and was subsequently endorsed on twin turbo prop pressurized aircraft. In 1980 I was approached by Air Niugini to fill a position as a licensed Engineer based in Port Moresby. It was during the next 5 years that I became multi-licensed endorsed on the Fokker F28, The De-Havilland Dash7, the Boeing 707 & the Airbus A300.

On behalf of Air Niugini I was sent to France in 1984 to take delivery of the Airbus A300-B4 (Regn: ANG) and this was the very first Airbus product to enter into PNG. When I was in France, I was engaged by and later interviewed for a position within Airbus Product Support. I returned to PNG to finish my contract and then decided that I would follow up on the offer from Airbus and I then joined Airbus in Toulouse in 1986 and worked in their Product Support division for next 4 years.

During this period I was representing the technical engineering of Airbus' Product Support in front of the following customers:



By pure coincidence, I was back in Toulouse at Airbus headquarters when I met the folks from Ansett and from then onwards, the rest became history for the next 10 years up until Ansett finally entered into bankruptcy in 2001. All operations ceased after 75 years since its foundation, by Sir Reginald Ansett.

I had joined Ansett Australia in 1990 as part of the team to establish the planning for the entry into service of the new Airbus A320s. I was based in Brisbane, where we were developing the planning and maintenance activities for this newly established Heavy

Maintenance facility. It was planned for Brisbane Heavy Maintenance to include the A320, Bae146, & the B737 type aircraft.

In 1991, I was sent to Cairns as the Ansett Senior Engineer in Charge for FNQ. I stayed for 2 years in Cairns and was then transferred to Adelaide as the Engineering Line Maintenance Manager responsible for SA & NT, (Adelaide, Alice Springs and Darwin) for their daily operations.

Two years later I was transferred back to Brisbane as the Heavy Maintenance Manager where I stayed for a further 3 years. I was then transferred to Melbourne engineering headquarters (Tullamarine) taking a promotion as the European Fleet Manager (Responsible for the Technical Engineering supporting of all daily operations for A320, Fokker F50 & Bae146 fleets) within the Fleet Maintenance group.

When Ansett went into bankruptcy in 1999, I was given the opportunity to move back to France with ILFC. I consulted for ILFC and US Airways for a year, delivering a bunch of A330's/A320's out of an order book of 400. I don't know how many aircraft I actually helped in delivering with those guys at US Airways.

CIT (Capital Investment Trust) was a New York based company and they were starting up a new business into aircraft leasing at both Boeing in the USA and at Airbus in France. I was approached by the senior management of CIT, to see if I had any interest in representing CIT in front of Airbus.

I joined CIT (in Toulouse) in Dec 1999 and worked in Program Management for many years, supporting marketing in placing new aircraft orders with new operators from all around the

- 1986 - 1987 - KLM & Martinair : Based in Amsterdam, Schiphol, Introduced and supported into service for both KLM & Martinair the A310-200's and x2 Upper Deck Cargo Door versions (the only 2 ever built ) into Martinair.
- 1987-1988 - Northwest Airlines : Based in Minneapolis Saint-Paul, as the Technical Delivery Team Leader, Introduced into Northwest Airlines operations the highly technical, fly by wire, A320-200's. These Airbus A320-200's, were the very 1st to enter the USA. This was the beginning of a new era for Airbus' for entry into the USA market, which had up until this time, been only Boeing territory. So it was both quite an exciting and challenging time.
- 1989-1990 - Nigeria Airways: Based in Lagos, Nigeria, I was part of the recovery team for a crashed A310-300 out of Port Harcourt, the River state of Nigeria. (We recovered and rebuilt her to a budget of USD\$25MM and flew her out to London after 10 months of sometimes of intense daily discussions concerning backshish payments & negotiating terms within a very corrupted dictatorship under the rule of the then President General Babangida. I left Nigeria in early 1990 and returned to the Toulouse Airbus headquarters.

Ansett Australia were to be the very first operators of the Airbus A320-200s in the Southern Hemisphere ( In Parallel to the Northwest A320s introduction into the USA).

world. Due to higher demands of the business over the last 10 years for New Aircraft deliveries out of both Toulouse and Hamburg, I then decided to be concentrated mainly on New Aircraft Deliveries. (According to official Airbus records I have delivered/managed a mix of 300 Single Aisle (A320 & A321 CEO's & NEO's) + 65 Wide Body (A330's -200's & 300's, CEO's & NEO's) + 12 Long Range (A350's (-900's) being a total of 378.

Avolon's order books + together with the CIT's Order books and deliveries + the US Airways + ILFC I'm guessing at least 400 + new aircraft deliveries over the last 21 years.

Over the last 12 years I have held senior management positions on the boards of five companies, all of which operated as subsidiaries to the main entities of the CIT (Capital Investment Trust) and CITAI (Capital Investment Trust Aerospace International) groups.

Then last but not at all least, I joined Avolon in 2017 – as Vice President New Airbus Aircraft Delivery Management.

Avolon purchased CIT/CITAI for USD \$17 Billion in 2017 to become the 3rd largest leasing company in the world. ILFC and AerCap remained as 1st &

2nd place holders both in size of their global size of aircraft orders and existing portfolios in the world of aircraft leasing. Today, AerCap has just purchased GECAS to become the N° 1 leasing company in the world and Avolon has then by default, moved into the N° 2 position...

The FAA gave me everything that I needed in preparing me for my the next life in the civil aviation arena and that I have never forgotten, all of those years at NAS Nowra and being onboard with CAG, on the H.M.A.S Melbourne to this very day.

Please pass on to Pincher Martin my warmest regards, he amongst many others, being one of the greats that I had the privilege to work for during my time on 724 & 805 Squadrons.

Wishing you good health for you and your family and that you are able to stay safe throughout this COVID-19 pandemic.

Kind regards, **Anthony Ward** - Ex POATWL.

*Everyone has a story to tell of what they did after leaving the Pusser, and we all want to hear it. It can be as long or as short as you like, and doesn't need to be a contender for a literary award. Simply put a few words together in an email with a couple of photos, and send them to the Editor [here](#). ✈*



Above. Very few of the original 37 RAN Gannets survive, but one lucky one is XG789 which was acquired by the Aviation Museum at Moorabbin. Here is a recent image. It is about to undergo refurbishment to restore the paintwork. (Photo courtesy of Alan Craigie)

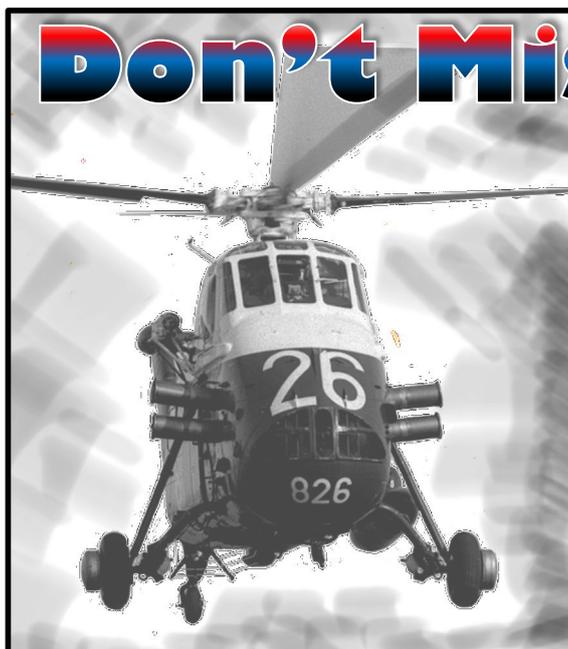
## Operation Bursa Recognition Update

Presentations of the Australian Service Medal, with clasp Counter Terrorism/Special Recovery, for Operation Bursa (training and maintenance of a counter terrorism capability to protect the oil and gas platforms in Bass Strait in the 1980s) were conducted last month in Brisbane (HMAS Moreton) and Cairns (HMAS Cairns)

Presentations are still to be organised for other locations, including Melbourne and Sydney.

Due to lower numbers in those locations, they will be scheduled after the medals for Batches 4 and 5 have been received. Batch 4 is those applicants who were notified of "received and registered" by 14 April (these medals have already started to arrive). Batch 5 is those notified between 15 April and 28 May. Another presentation will be conducted in Nowra for those in Batches 4 and 5 and recipients who were unable to attend the earlier presentations.

So far, the Team has processed almost 300 applications. There are probably still 200 or more



# Don't Miss Out!

If you maintained or flew Wessex or Sea Kings in support of Operation Bursa between 1980 and 1989 you may be eligible for the award of an Australian Service Medal (CT clasp)...but you will need to apply for it soon.

Find all the details on our [website here](#).

people who qualify but are yet to apply. TELL YOUR MATES.

ALL PERSONNEL IN BATCHES 1-3 SHOULD HAVE RECEIVED THEIR ASM AND/OR CLASP. If you have been notified that you were in any of Batches 1-3 (email receipt/notification before 28 Jan 21 and you were invited to a presentation) and haven't received your medal/clasp; advise the Team so we can initiate tracing action.

Details of how to apply for your Operation Bursa ASM can be found [here](#). Should you have any questions the Op Bursa Recognition Team is contactable [here](#).



## Exchanges Ahoy!

Could you kindly recall the RNers who were out instructing at Nowra. I am trying to put together a comprehensive list.

I recall David Blyth, Roy Taylor, Charlie Brown (who was famous for tearing off his shirt tails for handkerchiefs and always looked like a scran bag), and David Anderson

is about those who were at Nowra in my time.

Of course Marcus you were one so maybe you can recall more. Jan Criddle now comes to mind and Paul Bennett.

Further I have the list of 22 who did the QHI course and then went on exchange. I would like to put together ALL the RAN helo pilots who did the QHI course in that time and returned directly for duty with the RAN.

Most thankful for the help.

Cheers, Trevor Rieck

*By Ed. There's already been a bit of email traffic on here, but if you can help fill in the blanks please provide your answers directly to Trev [here](#). ✈*

## What is it?

Reg Walker, one of our readers, asks if anybody knows what this is:



It presents as a weathered piece of canvas with eyelet holes either end, measuring about 1.5 x 1.1 metres and marked with the lettering "F SHAVE FAA FX683051" If anyone has any ideas please contact Reg directly [here](#). ✈

## HELP!

I'm bereft of material for the next FlyBy. Please help by sending me your stories, suggestions, anecdotes, beefs or photos – or it's likely to be the thinnest newsletter on record. Email me [here](#). Ed. ✈