
# ENGAGE!

## NAVAL WARFARE OFFICERS' ASSOCIATION

**www.warfareofficers.net.au**

**formerly**
**The Anti-Submarine Officers' Association,**
**and incorporating**
**The Saint Barbara Association—Australian Division**

**Patron**
**VICE ADMIRAL C.A. RITCHIE AO RAN (Rtd)**

Volume 10 Issue No 4 September 2014

# THE OBJECT OF THE ASSOCIATION

*"To preserve, promote and foster amongst its members, by such means as the Committee may from time to time deem appropriate, the spirit of patriotism, loyalty and service to the Nation and the Navy enjoyed by members during their period of service and to perpetuate the spirit of comradeship so generated."*

## DATES FOR YOUR DIARY 2014

| | |
|---|---|
| ANZAC Day Reunion, AGM | Friday 25 April |
| Annual Luncheon - Sydney | Friday 7 November 2014 |
| Annual Luncheon - Canberra | Thursday 20 November 2014 |
| PWO51 Graduation | 27 April 2015 |

## OFFICE BEARERS AND COMMITTEE

| | | | | |
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**Minutes of the 2014 AGM have been sent by email. Hard copies will be available at the next AGM**

# President's Report September 2014

Welcome to the spring edition of Engage. You will detect a change in its format by our new Editor, Commander Sean Andrews. Sean is currently serving in Canberra and although his day job has kept him busy, he has volunteered his time to edit our magazine. On behalf of the Association I thank him for his efforts in his first edition. The Centenary of Anzac has now commenced with the anniversary of the commencement of the First World War a hundred years ago last month. Our Navy's involvement in the Great War was most pronounced at the outset and so commemorations over coming months will focus on the departure of the Anzacs from Albany and then the Sydney Emden battle. These events serve to remind us all of our heritage and the pride with which the nation can hold its Navy. It would be great if during this coming period of reflection we could all encourage new members to join us.

Since our successful Anzac Day events in Sydney and Canberra, we have enjoyed the annual mess dinner at WATSON. It was great to see Rear Admiral Guy Griffiths attending this event. He is a regular attendee and the PWO students really enjoyed the opportunity to interact with him. It highlights the power of camaraderie and heritage. Rear Admiral Stu Mayer was the guest speaker at this event and delivered a very poignant message to those gathered. Appointed as the new Fleet Commander only the month before it was especially good to hear his message. As many of you will know, Stu is a very strong supporter of the Association and we congratulate him on his promotion and wish him well in his new role as the Fleet Commander.

The annual Sydney BBQ luncheon was held last month at the RSYS for the first time. In the West Peter Lockwood arranged a reception onboard PERTH. Let's hope that this event helps develop the chapter in WA.

Since the last edition we have a new Chief of Navy. Vice Admiral Ray Griggs has moved to Vice Chief of Defence Force and we congratulate him on his appointment to this important role. Vice Admiral Tim Barrett assumed command of the Navy in early July this year. Tim has come to the position from the Fleet. He is also a strong supporter of our Association. On behalf of the Association we congratulate Tim on his promotion and wish him well in his role as the Chief.

The annual Canberra luncheon will be held in November. This year we are fortunate to have James Goldrick speak to us. Steve Hooke has pushed out a warning order encouraging as many of us to attend as possible, particularly with partners. In the same way the annual Sydney luncheon at RSYS Kirribilli is also coming together. This year Rear Admiral Michael Noonan, Commander Border Protection, will give an address. I would encourage as many as possible to attend this luncheon. Again guests are very welcome.

I hope you enjoy this new edition of Engage.

Yours Aye
Davyd Thomas

***Honorary Life Members***
***(In alphabetical order)***
*Peter Cosarove. Guv Griffiths. John Holman. David Leach. David Price. Brian Robertson. Rav Williams*

# Editor's Comment
## *'Engage Magazine'*, September 2014

Welcome to my first edition of the *Engage* Magazine. I will be on board for the next few issues. Firstly, I would like to acknowledge the work of my predecessor; Greg Glancy who was front and centre of editorial excellence for a number of years. We start this journey with my brief – which was to contemporise the *Engage* magazine. Which put me on the path to firstly, reached out to Commanding officers in the fleet on the Australian station and on Operations to present a series of articles I have dubbed *The Captains Diary*, and secondly to start a debate; so welcome.

We start this journey with a roller coaster of a ride for an article, from the Commanding Officer of HMAS *Darwin*, Commander Terry Morrison on leadership challenges and his activities in the Middle East. Commander Strop Waring chimes in with light hearted, but sage advice that comes from his wealth of experience and of course Commander David Flakelar on his insightful essay on Bletchley Park.

So why the debate, well there are two reasons; firstly, there is anecdotal argument from potential members and lapsed members that the Naval Warfare Officers Association (NWOA) does not provide for its members and a desire for the 'good old days' of the ASW officers association and the Santa Barbara Association to be reinvigorated, so the real warrior types can well - feel like real warrior types. And secondly; for those who know me; will not be surprised that I like nothing more that to "talk tactics" with contemporary's and intellectualise an argument, particularly one that involves the profession of arms. Which has inspired me provide a platform for robust debate.

So, I issue "*The Editors challenge"* and welcome essays and letters (yes letters to the Editors are welcome and will be published) with the theme "What is a "Warfare officer". Samuel Huntington is a good place to start as a point of empirical reference. Moreover, Harold Lasswell term "...The management of violence..." was the skill that determined the difference in officers of the sea, land and air domain from other specialist in the military.[1] I look forward to some debate in the quest to find the new normative that reflects today's Navy.

The Marines have a great baseline – "*Every Marine a Rifleman"*. What would be ours in this Navy that reflects all of us that serve? What unites us makes us stronger; the NWOA needs its officers past and present to enable us as an association to continuously improve. Furthermore, the Navy needs its critical thinkers to continue having a conversation about Australia's maritime strategy and indeed Navy's mission that engages the Australian public in the discussion. But I will leave that to the next edition.

Welcome onboard.

*Commander Sean Andrews, Canberra, August 14*

[1] Lasswell, Harold,' *The American Journal of Sociology,* 'Vol.46, No 4 (Jan 1941) 455 - 468

# *Now hear this…*

**CN HAUL DOWN SIGNAL 29 Jun 14**

1. TODAY MY FLAG WILL BE HAULED DOWN AND I WILL HAND OVER COMMAND OFTHE ROYAL AUSTRALIAN NAVY TO VICE ADMIRAL TIM BARRETT. IT HAS BEEN THE MOST ENORMOUS PRIVILEGE FOR ME, TO BE GIVEN THE HONOUR OF LEADING YOU ALL FOR THE LAST THREE YEARS AND BEING THE PROFESSIONAL HEAD OF THE BEST NAVY IN THE WORLD. IT IS NOT AN HONOUR THAT MANY ARE GIVEN.
2. IT HAS BEEN THREE YEARS WHERE WE HAVE IMPLEMENTED SIGNIFICANT CHANGES, TACKLED SIGNIFICANT CHALLENGES AND ACHIEVED SOME GREAT THINGS. OUR OPERATIONAL RECORD IS WELL KNOWN AND IS THERE FOR ALL TO SEE. EQUALLY THOUGH WE HAVE A NAVY THAT IS NOW IN A FAR BETTER MATERIAL STATE THAN IT WAS THREE YEARS AGO, THIS HAS BEEN THE RESULT OF THE EFFORTS OF MANY THOUSANDS OF UNIFORMED, APS AND CONTRACTOR
PERSONNEL. WE HAD TO GET THAT RIGHT IF WE WERE KEEP DELIVERING ONWHAT GOVERNMENT REQUIRES OF US. AND WE HAVE DELIVERED, IN THE MIDDLE EAST, ON OUR BORDERS, HELPING OUR NEIGHBOURS, SEARCHING THE SOUTHERN INDIAN OCEAN AND GENERALLY CONTRIBUTING TO OUR SECURITY AND PROSPERITY. ITS IMPORTANT WORK THAT WE DO, SERIOUS WORK THAT MANY DO NOT UNDERSTAND.
3. TO DO THIS WORK WE NEED A NAVY BUILT ON VALUES AND BEHAVIOURS. WE HAVE MADE ENORMOUS PROGRESS IN THIS AREA BUT THERE IS STILL MORE THAT WE NEED TO DO. IMPROVING OUR CULTURE IS SOMETHING WE CAN NEVER STOP DOING OR EVER STOP THINKING ABOUT. I NEED YOU TO CONTINUE TO EMBRACE AND STAY THE COURSE WITH NGN - IT IS THE KEY TO OUR FUTURE.
4. WE ARE ENTERING A VERY EXCITING TIME FOR OUR NAVY, NEW HELICOPTERS, NEW AMPHIBIOUS SHIPS, DESTROYERS AND IN TIME NEW TANKERS, PATROL BOATS, FRIGATES AND SUBMARINES. THE ONLY WAY WE CAN MANAGETHIS CHANGE IS WITH MEN AND WOMEN WHO ARE COMMITTED TO WHAT WE DO. I AM IMMENSELY PROUD OF WHAT YOU ACHIEVE DAY IN AND DAY OUT, I AM NOT SURE IF YOU REALISE JUST HOW MUCH YOU INSPIRE ME, THE GOVERNMENT AND
THE PUBLIC AS YOU GO ABOUT WHAT YOU DO.
5. I WOULD LIKE YOU TO THANK YOUR FAMILIES ON MY BEHALF FOR THEIR SUPPORT OF YOU IN THIS WORTHY BUT DIFFICULT LIFE WE LEAD. NONE OF US CAN SUCCEED IN WHAT WE DO WITHOUT THE LOVE AND SUPPORT OF SOMEONE CLOSE, THE CHALLENGE FOR OUR LOVED ONES IS MAGNIFIED BECAUSE OF THE NATURE OF THE ENVIRONMENT IN WHICH WE WORK.
6. I WISH YOU ALL GOOD LUCK IN THE EXCITING TIME THAT LIES AHEAD FOR OUR NAVY. I HAVE NO DOUBT YOU WILL CONTINUE TO MAKE NAVY PROUD AND TO MAKE AUSTRALIA PROUD. I AM HONOURED TO BE HANDING OVER TO VICEADMIRAL BARRETT. IN HIM YOU HAVE A LEADER OF GREAT INTEGRITY WHO UNDERSTANDS WHERE WE NEED TO GO. HE WILL BE A CN WHO WILL DO HIS UTMOST, AS WE ALL SHOULD, TO ENSURE WE CAN FIGHT AND WIN AT SEA.
7. BRAVO ZULU, THANK YOU AND LOOK AFTER EACH OTHER.

**SUBJ: ASSUMPTION OF COMMAND - VADM TIM BARRETT01 Jul 14**

1. IT IS MY GREAT HONOUR AND PRIVILEGE TO ASSUME COMMAND OF THE ROYAL AUSTRALIAN NAVY. I DO SO, WITH GREAT RESPECT AND APPRECIATION FOR MY PREDECESSOR, VADM RAY GRIGGS, AND I WISH HIM WELL IN HIS ENDEAVOURS AS VCDF. NAVY HAS ACCOMPLISHED MUCH UNDER VADM GRIGGS'S STEWARDSHIP AND ALL NAVY PEOPLE SHOULD BE PROUD OF THE PART THEY HAVE PLAYED.
2. ALL ORDERS, DIRECTIVES AND INSTRUCTIONS ISSUED OR ENDORSED BY VADM GRIGGS REMAIN IN FORCE UNTIL THEY ARE EXPLICITLY CANCELLED, MODIFIED OR REISSUED BY ME.
3. ON ACCEPTING HIS APPOINTMENT THREE YEARS AGO, VADM GRIGGS SET HIS KEY PRIORITIES FOR NAVY: TO GAIN AND MAINTAIN OUR CONTRACT WITH GOVERNMENT AND WITH IT THE TRUST OF THE AUSTRALIAN PEOPLE; TO PREPARE FOR NEW CAPABILITIES; AND TO CONTINUE OUR REFORM AND CULTURAL CHANGE JOURNEY.
4. THESE PRIORITIES REMAIN EXTANT: THEY HAVE PROVEN TO BE THE RIGHT GOALS AND THEY REQUIRE A STEADY PASSAGE TO MATURE. ADDITIONALLY, I WILL LOOK TO FOCUS OUR EFFORTS OVER THE COMING FOUR YEARS ON WORKFORCE REGENERATION. BY 2018 WE WILL NEED A WORKFORCE SKILLED AND CAPABLE OF MEETING NOT ONLY EXISTING COMMITMENTS BUT ALSO THE REQUIREMENTS OF THE RANGE NEW CAPABILITIES WE WILL BRING INTO SERVICE IN THE COMING FOUR YEARS.
5. I LOOK TO THE FUTURE WITH CONFIDENCE IN ALL OF YOU, IN YOUR SKILL, YOUR PROFESSIONALISM AND YOUR DEDICATION TO THE NAVY AND THE NATION. AUSTRALIA

NEEDS ITS NAVY AND THE NAVY NEEDS ALL OF YOU TO FIGHT AND WIN AT SEA.

P 270203Z JUN 14
FM CN AUSTRALIA
SIC Z4P

## SUBJ: COMMAND AND SENIOR STAFF SELECTIONS

1. I HAVE APPROVED THE FOLLOWING COMMAND AND SENIOR STAFF APPOINTMENTS READ IN FOUR COLUMNS

| NAME | PMKEYS | APPOINTMENT | EFFECTIVE DATE |
|---|---|---|---|
| CAPT C.E. SMITH | 8089266 | CO CANBERRA | AUG 15 |
| CAPT B.R. SONTER | 8090810 | CO HOBART | JAN 16 |
| CAPT C.A. POWELL | 8086429 | CO WATSON | JAN 16 |
| CAPT M.L. POTTER | 8083544 | CO STIRLING | JAN 16 |
| CMDR P.A. HENRY | 8117406 | CO SYDNEY | JAN 15 |
| CMDR S.J. HOWARD | 8095118 | CO DARWIN | JUN 15 |
| CMDR C.W.R. STEIL | 8443258 | CO TOOWOOMBA | JUN 15 |
| CMDR M.D. SIROIS | 8211217 | CO NEWCASTLE | JAN 16 |
| CMDR C.E.M. BOURNE | 8096398 | CO MELBOURNE | JUN 16 |
| CMDR C.H AULMANN | 8092820 | CO CHOULES | JAN 15 |
| CMDR M.S. OBORN | 8093009 | CO SIRIUS | JAN 16 |
| CMDR R.C. DAINTY | 8575498 | CO DECHAINEUX | DEC 14 |
| CMDR D.M. THEOBALD | 8084772 | CO SHEEAN | JAN 15 |
| T/CMDR A.J. MUCKALT | 8095148 | CO HS BLUE | JUN 15 |
| LCDR R.P. MORTIMER | 8118190 | CO HS WHITE | JUN 15 |
| CMDR E.S.M. MULDER | 8088239 | COMAUSMCDTG | JUN 16 |
| CMDR P.J. WYNTER | 8092791 | CO 723 SQN | JUN 15 |
| CMDR M.B. ROYALS | 8090821 | CO 725 SQN | JAN 16 |
| CMDR M.A. WADDELL | 8207980 | CO 808 SQN | JAN 16 |
| CMDR A.M. WESTWOOD | 8092678 | CO HARMAN | JAN 16 |
| CMDR I.R. CAMPBELL | 8081932 | CO PENGUIN | JAN 16 |
| CMDR L.R. RYAN | 8110643 | CO RTS | JAN 16 |
| CMDR L.P.J. GAHA | 8065314 | CO NHQ TAS | JAN 16 |
| CMDR J.C. HUNTER | 8088839 | XO CANBERRA | SEP 14 |
| CMDR G.K. MARJORAM | 8506744 | SO WALLER | AUG 14 |
| CMDR A.J. CAPNER | 8089160 | CMDR AIR CANB | JAN 16 |
| CMDR D. STRATTON | 8081252 | TGLC CANB | JAN 16 |
| CMDR S.A. READ | 8071820 | MLO SUCCESS | JUN 15 |
| CMDR A.C. MELVILLE | 8503583 | MEO SUCCESS | JUN 15 |
| CMDR M.J. TREEBY | 8081820 | XO STIRLING | JAN 16 |

2. CMDR M. PAVILLARD IS EXTENDED IN COMMAND OF 816 SQN UNTIL DEC 16

3. CMDR J. NAVIN IS EXTENDED IN COMMAND OF HMAS COONAWARRA UNTIL DEC 16

4. ON BEHALF OF THE NAVY, I CONGRATULATE THESE OFFICERS ON THEIR SELECTION.
BT

# "I usually don't wear a watch"[2]

**By Commander Stephen Waring** RAN. MWO PWO D,
Current Commanding Officer of Aware Three, an ACPB Crew

I have given my teenage daughter 6 different watches of varying styles over the years, all with the same function – to provide the time. You do not have to be a rocket scientist (well actually missile firing is rocket science so I suppose PWO A, D and G officers qualify) to work out why I gave her the ability to tell the time. So what is the point of this? The concept of timeliness both in the conduct of operations and in the general execution of duties.

Now I understand that in the era of immediate communications via Chat, SMS, email on mobile devices, mobile phones etc., that a case can be made for changing on the fly (I believe it also provides an excuse for not doing things thus – "Oh, I didn't get your SMS, email etc.") . The point being is that daily routines are planned, operations have a time components, there are promulgated times to effect an RV, ship is to be alongside at the time stipulated, you should muster at the given and stated hour, minute, second.

Only the other day I provided the guidance to the OOW, to be at a specific point in the ocean at a specific time so we could proceed. On arrival on the bridge I discovered we had not met the waypoint, and the answer was, "oh we will be there in 5 minutes I was waiting for (insert pithy excuse)". I do not have a psychoanalyst qualification to understand where this attitude comes from. I must say it is most prevalent among junior officers, and, also, as a general virus spread throughout those who use a mobile phone for a time piece. Now, it took a good deal of 'guidance' for this young officer to understand what was wrong. I am still unsure whether or not this officer actually thinks they have made an error.

So it can be accepted quite readily that to be late is not good, however the same can be said for being early. On the gun line you do not fire until it is your turn, and, at the correct time (and at the correct target naturally). Remember timed events can be either by a time, on a time, before a time. It is very poor form, for instance, to sail earlier than the promulgated time when the Admiral wanted to visit your ship 5 minutes before you sailed, only for the flag officer to arrive and observe your transom disappearing into the distance.

So with this in mind I have provided a few maxims as follows:

1. TIMELINESS GENERAL MAXIM – In the decision to be early or late – go with early
2. JUNIOR OFFICER WATCH CONUNDRUM – Buy a Watch – Use it
3. TIME GRAMMAR CONTINUUM - Understand the difference - BY, AFTER, AT, ON, PRIOR, BEFORE, FAO, ASAP
4. JUNIOR OPSO CREDO – Add a bit of fat in - time wise – you can always find a way to fill time, but you cannot invent extra time if you are behind
5. SENIOR OFFICER TIME HALF LIFE RULE – The more senior the officer, the less forgiving if you are late (or in some cases early)
6. TRAINING ESTABLISHMENT TIME SAYING – 5 minutes early is 5 minutes late.
7. HODS RUN ASHORE TIMELINE – If you late are a junior officer planning a social event, always tell the other officers to muster 30-40 minutes before you actually need them. This is also known as the HERD CATS RULE.

[2] Phase 4 Officer at Sea 2014

# *The Captains Diary:* A story to hopefully inspire future Commanding Officers.

by CMDR Terence Morrison, RAN, CO *Darwin*

I write this article for *Engage*, in response to a request from the new Editor of the magazine. As the Commanding Officer of HMAS *Darwin*, deployed to the Middle East and Indian Ocean region, the 57th such rotation since 1990; I have been involved in several operational incidents. I wish to assure the warrior audience of this illustrious publication, that although I think this may be a good story, I understand that it pales into insignificance against those who have experienced real combat at sea. I offer this story up in the theme of *The Captain's Diary*, and due to the excellent recommendation of a previous Commanding Officer who addressed my CO/XO designate course; I can confirm that it comes directly out of my diary that I kept on my deployment. Additionally, although I think this is a good story, it is also offered up truthfully, with some of my own failings.

The tasks that we supported whilst deployed included the fight against terrorist organisations, largely by targeting their income streams via counter narcotics; counter piracy; and regional engagement through the promotion of a safe and secure maritime environment. Due to a large number of assets available to support the counter piracy task and the fact that this operation has been very successful, we spent only a few hours of our 5 months on station in direct support of counter piracy. An example of when we supported the regional engagement task was when we located and rescued 13 Iranian fishermen, including two minors, who had been drifting at sea for five days in the wreckage of their fishing vessel which had been struck by another ship and sunk. Other examples were an aero-medical assistance that we provided to a French fisherman who suffered a heart attack whilst 300 nautical miles off the East Coast of Africa and a 36 hour tow of a dhow to port, that had broken down on the high seas, also off the East Coast of Africa. These however are probably the subject of other stories under the theme of *The Captain's Diary*. The incident in question involved one of our 23 boarding's in support of counter terrorism operations, 8 of which resulted in narcotics seizures.

This particular event occurred during the first patrol of our deployment. Since chopping into theatre we had conducted eight previous boarding's, resulting in one seizure of 647 kg of hashish in the Southern Red Sea. The other eight boarding's, which included the simultaneous boarding of three dhows, had refined our procedures to a point where I had gained confidence in the team's ability to react to just about any eventuality; however I was to find out later that this event was going to stretch the team even further.

We were assigned a patrol area, on the high seas to the south of Eastern Yemen, at the end of what is colloquially known as the 'Hash Highway'. As you can guess this is at the terminal end of a known smuggling route for hash, which departs the Makran Coast (the southern coastline near the Pakistan / Iran border) and involves dhows smuggling hash to the area that we were patrolling. Although not confirmed, it was suspected that these dhows transferred the hash to smaller vessels, who would take it to Yemen, for on forwarding to other destinations.

During the week prior, the PWOs, Aviation Warfare Officers (AvWOs) and Intelligence Officer had analysed the information that we had on hand, the most likely direction for the vessels to travel and the best place to position the ship and our aircraft to conduct it's surface search. The aim was to intercept the narcotics prior to them arriving in Yemen. The warfare officers had devised a plan, briefed me and it became our plan. We had spent a couple of days, prior to this event conducting our surface search with the aircraft not picking up anything of significance.

I now refer to my diary and note that the start of my entry on the first day of this event indicated that I had received an email from my wife, wishing me a happy wedding anniversary, our 17th and one of many that we have spent apart. Our S70B2 Seahawk

helicopter, call sign *Blackout*, had launched at 1300 and had proceeded east to conduct a surface search. I also noted in my diary that we had missed *Blackout's* 1400 ops normal call, which caused some concern; however we managed to confirm the aircraft was operating normally through the US DDG, *USS Bulkeley* who was operating to the east of our position and was in radio contact with *Blackout*. We received additional good news, being that *Blackout* had located a Sambuq style fishing dhow, heading towards our position and worthy of investigation.

Over some of our previous activities, I formed the opinion that we were not being aggressive enough in our patrol posture. I sat down with the PWOs prior to this day and let them know that I wanted them to be more aggressive in their patrolling. I wanted them to consider all options and present their recommendations to me and let me be the hand brake, if required. When *Blackout* detected this Sambuq dhow, the Gunnery Officer requested permission to bring on the second gas turbine and sprint towards the contact at 30 knots. Now that was aggressive. However, being aware of the additional fuel this would use, I asked him to support his request with a reason, which he did so by stating that if we proceeded at 30 knots, we could intercept the dhow prior to sunset and therefore obtain better imagery. He also added that he was acting aggressively, so I agreed with this reason and we therefore brought the second gas turbine on and sprinted to intercept.

As we approached the dhow we devised a plan, to proceed past the contact as though we had stumbled across it on our way elsewhere, continue over the horizon and then shadow it. Therefore, as we reached the visual horizon, we reduced speed to 14 knots and maintained a steady 'collision course' with the dhow so that it looked like we were just proceeding on a steady course and not altering to investigate him. We passed with a closest point of approach of approx 500 yards, which was perfect to obtain imagery during daylight conditions and to confirm some additional pieces of intelligence, which justified the aggressive sprint. The ship's company continued on in their normal routines, including the conduct of physical training on the flight deck, whilst our imagery specialist discretely took some imagery. We continued on a steady course until we were well over the visual horizon of the dhow and then we altered back, matched his course and speed, establishing a shadow position, maintaining tracking using our other sensors.

We continued to shadow the dhow for eight hours as it proceeded west, maintaining a steady course at 8 knots along the same latitude. At 0145, the PWO called me and asked me to come to the operations room. The dhow, now 50 nautical miles from the coast of Yemen, had stopped. I did not want to be counter detected so I directed the PWO to alter course to the north-west and not close within 5 nautical miles. Of course we had been darkened throughout the night and with the ephemerals and direction of the wind, I was confident that at 5 nautical miles, the dhow would not detect us. After approximately 30 minutes and with the dhow now to the south-south-west of our position, we noticed it starting to proceed back to the east in the opposite direction at 8 knots, which was the same speed as it had been proceeding earlier. Although we could not detect any other contacts, it was highly probable that we had just witnessed a narcotics transfer to another vessel, too small to be detected by our sensors.

Then came the question of what to do. There was no point in proceeding towards the dhow; it had probably just off loaded the narcotics. Likewise, there was no point proceeding towards the point of transfer for any small vessel would now be proceeding towards the coast, which due to the shape of the coastline was anywhere on an arc from west to north east. We needed to proceed on an intercept course to a vessel for which we had a likely point of origin, being the transfer position; however we could only speculate its destination. During the planning phase of this patrol we had requested information of the known point of destination of these narcotics; however we did not have a conclusive answer. I remember analysing the coast line a few days previously using Google maps and finding what I believed to be the most likely town the narcotics would be proceeding towards and therefore, we increased speed to 24 knots on a course which would intercept a vessel proceeding to this port. It was now 0230

and I thought I had better try and get some sleep, so I instructed the PWO to call me if they detected anything or when crossing into the contiguous zone of Yemen.

At 0345 the PWO called me as we were crossing into the contiguous zone and he informed me that we had just detected a very small contact ahead of us, proceeding at 18 knots towards the coast. Throughout the workup, we were informed that based on the procedures of the Combined Maritime Force (CMF), it was highly unlikely that we would conduct a boarding at night and consequently we were entering territory that we had not really trained for. I was confident that we could conduct a boarding at night, however noting the vessel was fleeing at 18 knots and looked quite small, this was going to be interesting. Also, noting it was night and the boarding team would be in bed, I had to try and wake up personnel very quickly. Therefore I instructed the PWO to hit the General Alarm and send the ship to boarding stations, which had the desired affect. I also instructed the OOW to bring on the second gas turbine, in case we needed to proceed at 30 knots to catch the vessel prior to it departing the high seas.

Throughout all our boarding's on this deployment, I spent the majority of my time prior to low threat, in the operations room. This is a personal preference and was based on the fact that I had all the sensors that I needed, as well as access to a headset, where I could talk to the PWO to follow along with the chat messages and listen externally to the boarding party coordination and the aircraft control circuits. I found this gave me better situational awareness to inform my decisions. Although I know many other COs also prefer this, there are some who prefer to spend their time on the bridge where they could keep an eye on launching of boats and see the vessel they are boarding. Although it was my preference to be in the operations room, I got a feeling that this boarding was going to be different and might require my presence on the bridge. Therefore, after a snappy boarding brief, I proceeded to the bridge wing to try and get eyes on to the skiff we were chasing.

Just prior to departing the operations room, I had a look at our electro-optical sensors, which included infra-red imagery. I noted the vessel was a relatively large skiff and I could see it had two outboard engines and one crew member down aft, who looked to be controlling the vessel. We were less than 500 yards from the contact, which was still unaware of our presence, when I arrived on the bridge wing. Even though we were very close to the skiff, we could not see it, however with the assistance of the operations room calling range and bearings of the contact, we increased speed to 24 knots and started to close. When we were approximately 200 yards away, I instructed the 10 inch lights to be illuminated to try and pick up the vessel. Sure enough after a couple of sweeps, we had him and I instructed the OOW standing on the port wing with me, to increase speed to 30 knots and pull alongside the skiff. As we approached, I also instructed the bridge to sound 6 short blasts and to prepare the Long Range Acoustic Device (LRAD) and to get our embarked interpreter ready. We then started hailing the skiff in every language that the interpreter knew, stating 'to stop and heave to as I intend to board you.' Additionally, just in case, we sent a chat message to CTF 150 requesting permission to conduct warning shots, in order to stop the skiff.

I remember asking through the workup and on deployment whether we should practice warning shots. This was a technique that I had used whilst in command of the Fremantle Class Patrol Boats (FCPB) HMAS *Geraldton* 2003-04 and as operational relief Commanding Officer of HMAS *Gawler* in 2006. It was about this stage, that I wished I had been more forceful in my enquiries of whether we should have practiced warning shots; however I felt I could safely conduct this escalation of force, with personal direction from the bridge wing. Although, it was going to be a little confronting for some team members who had not practiced it.

We had only 9 miles to run until territorial waters, therefore I instructed the OOW to drive right up alongside the skiff at 30 knots. As we arrived alongside, the skiff altered his course to the south, I instructed the OOW to match his course, keeping him on the port side and then he altered his course to the east. Again we matched his course and drove up on his starboard

beam. With a much tighter turning circle then an FFG, the skiff then altered his course approximately 180 degrees to the west and made another run towards the coast. However with his top speed at 18-20 knots and with him bouncing violently in our wake, we quickly altered course and started to close him again at 30 knots. I then realised that I could continue to do this and every time he altered course to the south and east, he was heading away from his destination. Therefore we continued to drive up closely on his starboard side, forcing him to turn away and ended up in total completing eleven 360 degree turns as can be seen in figure 1. Although I was tempted to take the con, I left it with the OOW, who did a fantastic job, gained excellent operational experience in doing so and all I had to do was occasionally encourage him to increase to 30 knots and get a little closer.

Whilst conducting these tight 360 degree turns and keeping the skiff on the port side, we continued to illuminate the vessel with the 10 inch lamp, sound the ships horn and conduct hails on LRAD. I also noted that the person in the skiff, who I had previously seen, was no longer visual and was probably lying down. However, he continued to drive the skiff at speed in circles trying to flee from our chase. As can be seen in figure 2, this gave the skiff an eerie ghost like presence, especially as it was now between morning civil twilight and sunrise.

It took 45 minutes to gain approval to conduct warning shots, most probably due to the time of day, however also because it had been some time since any warship in the CMF had requested warning shots. When I was in command of a FCPB over a decade ago, I had permission to conduct warning shots up to and including 12.7mm (.50 cal) burst fire. Now in command of an FFG, I had to request permission to conduct warning shots of even a 5.56mm, from a two star officer. I understand the reasons for this, including the complexity of working for the CMF with over 30 different countries involved, however this was hardly an example of mission command or driving decision-making down. When the permission to conduct 5.56mm burst warning shots was received, it was quickly followed by the direction from the approving authority, to ensure that '…the warning shots are fired ahead of the vessel'. Ahead of the vessel! That was almost impossible to achieve and another example of direction coming from someone who was not fully aware of the situation. Of course the fact that the approving authority was not aware of the situation was probably my fault, as we were obviously not providing enough information. I assumed the direction to fire warning shots ahead of the vessel was in order to try and allow for the ricochet of rounds as they hit the water, however we were firing small arms and I have seen small arms ricochet in both directions. Although I was yet to request 12.7mm warning shots, I have also seen these ricochet in both direction, so the reason for firing the warning shots ahead of the vessel was lost on me. The skiff was on our port bow and whenever we tried to come up on his beam, he would turn hard to port away from us. Although this was working in our favour to keep him roughly in the same position, it was going to be very difficult to follow the specific guidance of the approving authority in conducting warning shots. There were, however fleeting opportunities when the skiff turned very tightly and we could quickly conduct warning shots ahead of the vessel as he tracked from right to left.

Having been involved in warning shots on several occasions in command of a FCPB, I called the XO over and asked him to stand behind the gunner to make sure that everything looked safe. I asked him to ensure the gunner was aiming far enough ahead of the skiff, so that any rounds fired, did not hit the other vessel. After conducting safety checks, I waited for the skiff to turn to port and then gave the order 'Command Approved 5.56mm burst fire 50 to 100 yards ahead of that vessel.' The gunner came up on aim fired one round, 'bang!' I then repeated my command, this time a little more forcefully and with an emphasis on burst fire, 'Command Approved 5.56mm BURST FIRE 50 to 100 yards ahead of that vessel.' Again the gunner came up on aim and fired one round, 'bang!' Finally, I repeated my command, this time very forcefully, including the use of my hand chopping the air in the direction of the warning shots, 'COMMAND APPROVED 5.56MM BURST FIRE 50 TO 100 YARDS AHEAD OF THAT VESSEL!' Finally, after the gunner adjusted the single shot lock out, he came up on aim and fired a burst of 5.56mm. After two more bursts, the warning shots had

the desired effect and the skiff stopped. This was an excellent example of why we should conduct drills and practice this type of activity, prior to putting it into practice.

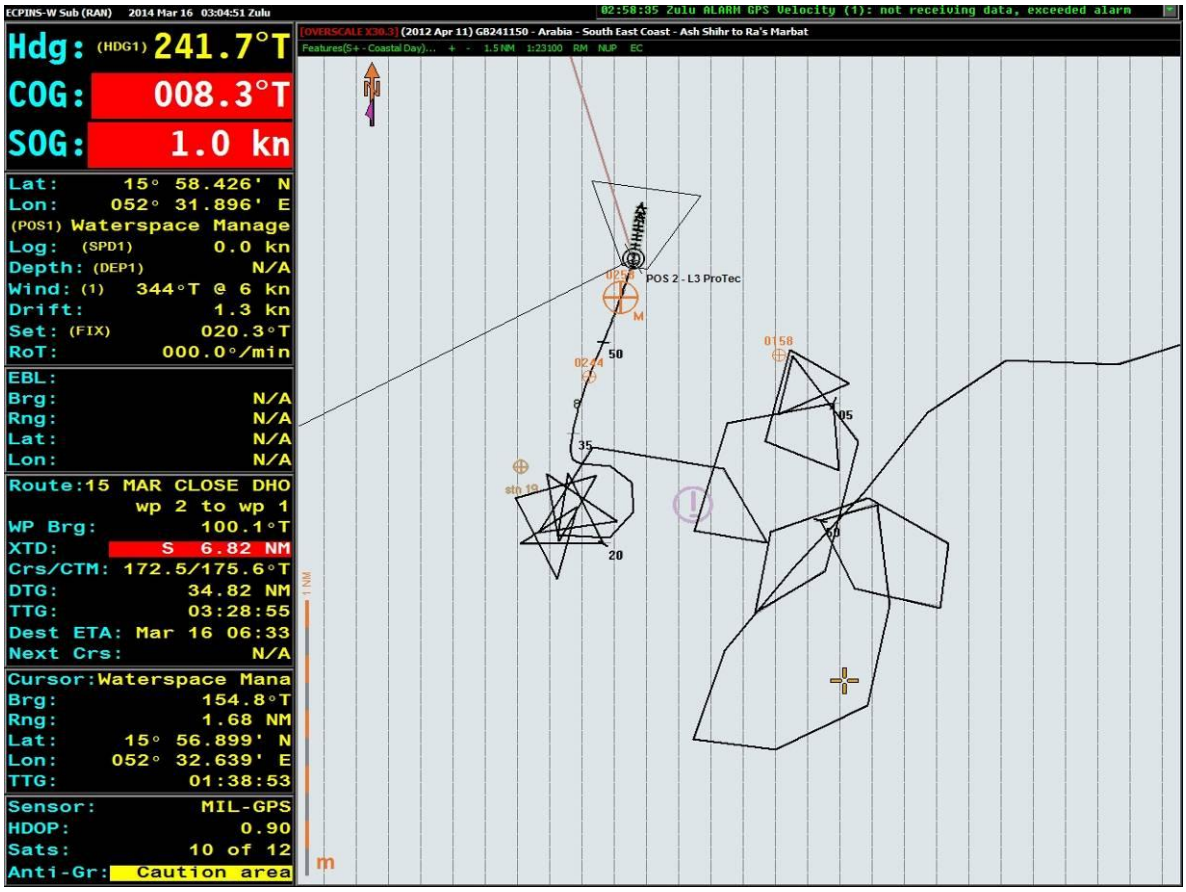
Within two minutes of the skiff stopping, we had the boarding team alongside the vessel in the starboard RHIB. All throughout the heavy manoeuvring associated with the chase, people went on with their jobs, including the starboard RHIB coxswain and bowman, who were grimily holding on whilst sitting in the boat waiting to be launched. I was also informed that there were several people being thrown out of their racks; however fortunately they did not sustain any injuries. Although the full boarding team were ready, only a 6 man boarding element went over in the starboard RHIB, due to the size of the skiff. When they arrived at the skiff and took control three other crew members appeared from below cover and we confirmed there were four crew members, as can be seen in figure 3. The boarding party asked for documentation, which could not be produced, and noting there was also no flag I declared the skiff without nationality. In the skiff there was a hand held GPS, with a waypoint that coincided with the coordinates of the position the dhow had stopped in for 30 minutes. We had now confirmed that it was highly likely that this skiff had rendezvoused with the dhow we had shadowed overnight and therefore we had also confirmed the method of transfer, at the end of the Hash Highway. On the deck of the skiff were several large hessian bags, which the crew declared were coffee, however the substance tested positive to hashish during drug tests. In total we intercepted 3012 kg of hash, as can be seen in figure 4.

During this boarding we had achieved several things that we had not trained or fully prepared for. Our lack of training and preparation was due to assumptions based on what other ships deploying to this region had encountered. This was the first of several boarding's that *Darwin* conducted at night. If we waited until sunrise, the skiff would have entered territorial waters and it would have been game over. The heavy manoeuvring that we executed, although not practiced and quite frankly this would be very difficult to practice, ended up being a very effective means of preventing the vessel from getting away. I had decided that if the skiff was not going to stop, I was going to continue to circle him until he ran out fuel, which would have caused another problem; however I was determined to not let him get away. Finally, I was obviously aware of the option to use warning shots in our Rules of Engagement and I had wondered why we had not exercised these in our work up. I also had plenty of time and capacity to practice this in the time leading up to this event, so I have no one to blame but myself for not practicing this. Although I was happy to be able to safely execute the warning shots with a good team, I kicked myself for some time, for not preparing better for this eventuality. After this event, we practiced warning shots and we made several recommendations for future units deploying to this operation, including preparing to conduct boarding's at night and to practice warning shots.

I am sure the more astute of our modern warriors are wondering whether everything that we did on that morning, was in accordance with a Standing Risk Profile. Obviously, this was not the case and therefore, in accordance with our Operational Risk Management practices, I should have paused and compiled a Command Decision Summary (CDS), pulled out my Hazard Risk Calculator and analysed the risk. What were the additional risks? There was a risk that the crew of the skiff may have had weapons and may have used them, they may have tried to alter course towards, or in front of *Darwin*, we may have altered too close to them and damaged their vessel or injured them, or we may have hit the skiff or her crew with poorly aimed warning shots. I understood the risk and although I did not pause to articulate them on a CDS, or my notepad, I was fully aware of them and I ensured mitigation was in place to prevent the risks from being realised. I believe some times in an operational environment a Commanding Officer has to be willing to accept risk that he is probably 'not authorised' to accept. Alternatively, I could have hauled away from the skiff, analysed the risk and determine whether I was able to accept it. However, had I done this, the skiff would have surely got away.

Prior to being selected for command of *Darwin*, I had been fortunate enough to experience both operational minor war vessel command and to be the Executive Officer of an FFG. This

also opened up the opportunity for me to be the Fleet Executive Officer (FXO), which I fulfilled for two years, prior to my current appointment. All through my career I aspired to command a Major Fleet Unit, a warship, however when I reflect on how much the job has changed in the two decades that I have experienced at sea, I must admit I had some doubts. This was especially the case when I was the FXO and I saw first hand the issues, governance and intimate detail that modern COs must deal with. I know that I am not on my own in these thoughts, many of my peers have shared similar concerns with me and several of my subordinates have also raised their concerns. Unfortunately, I do not think this will ever change, however I want to assure those who aspire to command and who may be having second thoughts, it is worth it. This is one story of many that I have experienced in command and although at times all COs go through dark days, there are many times when they can look back on *The Captains Diary* and smile, knowing they have lead their crew to broaden themselves and achieve great things.




*The Ship and Target track…*

*The target*

*The boarding underway.*

*The record haul of narcotics.*

*Commodore Jeremy Blunden Royal Navy, Commander CTF-150 presents a crest Commander to Terry Morrison, Commanding Officer, HMAS Darwin.*

# Bletchley Park – A Short History

By CMDR David Flakelar RANR (Rtd), Honorary Secretary

## Bletchley Park Beginnings

Bletchley Park (BP) is an English country estate comprising a mansion and stable block (both still in existence) set on 235 hectares of land near a rail junction at Bletchley, Milton Keys and about 50 miles north of London. During World War II it became the centre for Britain's Government Code and Cipher School (GC&CS) which regularly penetrated the codes[3] and ciphers of various grades and numerous languages[4] but most importantly the German Enigma[5] and Lorenz ciphers. For a time it was also the site of Station X, one of Britain's many radio intercept stations. It embraced the key stages of the intelligence process: collection, deciphering, evaluation and dissemination.

Sir Harry Hinsley, the official historian of W*orld War II British Intelligence*, and himself a BP cryptanalyst, has written that the Ultra intelligence produced at Bletchley "shortened the war by two to four years, and that without it the outcome of the war would have been uncertain". Group Captain F. W. Winterbotham, who wrote the first book on BP *The Ultra*[6] *Secret*, quoted the western Supreme Allied Commander, Dwight D. Eisenhower, at war's end describing Ultra as having been "decisive" to Allied victory. Winston Churchill referred to BP staff as "The geese that laid the golden egg and never cackled".

It was a story of remarkable people, of scientific geniuses, brilliant engineers and dogged ordinary people. The BP story is remarkable on a number of counts: the success achieved against a seemingly impenetrable cipher, the remarkable way in which the secret was maintained for 30 years during and after the war and the size of the intellectual and military effort and commitment.

## How Enigma Worked and How it was Used

For an understanding of the history that follows it is useful to have an understanding of how Enigma worked.

There were many Enigma variants over time and between Services and commands. Equally there were differences in operating procedures. What follows is a generic description.

Essentially the Enigma machine comprised four elements connected by cabling to a battery. These were a keyboard, (not dissimilar to that of a typewriter), the rotors, the Steckerbrett (plug board), and a lamp board. After setting up the machine to the daily settings, the plain text message was keyed-in, letter-by-letter, at the keyboard. Each plain text key stroke lit up an encrypted letter on the lamp board. This was copied to a pad for subsequent Morse code transmission.

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[3] A code is a system whereby words and phrases, likely to be used in communications, are given say a four digit or a four alpha character code. For example "Proceed to grid reference..." might have the code 6325. Obviously both sender and receiver require access to a Code Book. On the other hand enciphering or encrypting is a process whereby each alphabetic character is translated or scrambled into another alpha character. U-boats commonly used a coded weather report that was subsequently encrypted by Enigma before transmission.

[4] BP cracked German, Italian, Russian, and eventually Japanese codes.

[5] "Ultra" was the name given to the plain text deciphered from the German Enigma machine. The name arose because Enigma Sigint was considered more important than that designated by the highest British security classification then used (*Most Secret*) and so was regarded as being *Ultra* secret and ultimately became known as Ultra Top Secret.

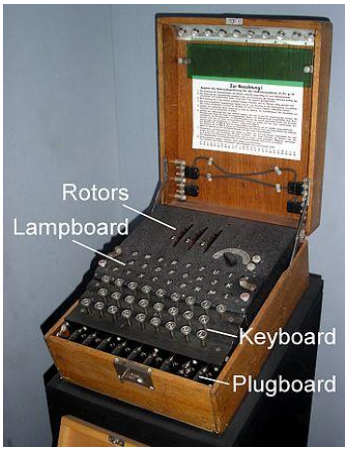
[6] "Enigma" was the electro-mechanical cipher machine the German military used to encrypt secret enemy telegraph and teleprinter communications.

Another essential part of Enigma operations was a key book, or key sheets, showing the daily setting to be used by all stations on the net. There were three rotors selected and assembled from the five available. When assembled they could rotate on a common spindle. The rotors were assembled in a prescribed sequence given by the daily settings for the net. Later the German navy reduced the thickness of the rotor so that four rotors could be fitted to the spindle.

Each rotor comprised a disc, not dissimilar in size to a ice hockey puck, with 26 brass spring loaded pins on one face arranged in a circle and on the other side and aligned with the pins, a corresponding number of circular electrical contacts designed to engage with the spring loaded pins on the adjacent rotor. The pins and contacts represented the 26 alpha characters – A to Z. The pins and contacts on a rotor were connected by a complex pattern of internal wiring. Whilst the wiring was random it was identical in each rotor number. That is, all Type I rotors had identical wiring. There were five rotors: I, II,III,IV and V. Each rotor was fitted with a ratchet and pawl mechanism so that with each key stoke the right hand rotor indexed 1/26 of a full rotation, after which it caused the middle rotor to index one 1/26 of a rotation. In a likewise fashion after another 26 key strokes, the middle rotor indexed the left hand rotor 1/26 of a rotation. It was not dissimilar to a odometer with 26 movement each rotation rather than ten. With each key stroke a switch was closed and an electrical current flowed through each rotor. Thus the internal wiring of each rotor and its position on the spindle relative to each other determined which lamp was lit. It required 26x26x26 keystrokes before the same series of encrypted characters (lamps) was repeated Thus, unlike mono alphabetical ciphers this polyalphabetical machine provided 17, 576 cipher alphabets. Accordingly, it did not allow attack by character frequency analysis. Most visible on the rotor was an outer alpha ring and finger wheel. These rings rotated the rotor and were used to set the message key chosen by the operator.

The point at which the second and third rotors indexed was controlled by a key ring on each rotor that could rotate relative to the rotor during set-up. This was known as the day key setting and was set according to the key sheet.

Later refinements included a plug board (Steckerbrett) which was an array of jacks for each alpha character into which patch cords could be inserted to further ‘scramble’ the electrical circuit.




*An Enigma machine. Note lid had to remain open for the rotor message settings to be accessed.*


*Two adjacent rotors showing spring loaded pins,rachet, finger wheel and outer alpha wheel (used for message key set-up).*

Further refinements were added to significantly increase the number of cipher alphabets. A reflector was added at the left hand end of the spindle which was a bit like a rotor except it remained stationary and its random internal wiring connected all 26 contacts. Electric current entered one side and was ‘reflected’ back to contacts on the same side, then back through the three rotors but along a different route.

For a message to be correctly encrypted and decrypted both sender and receiver machines had to be set-up in an identical manner and this was done using key sheets issued months in advance Key sheets contained keys for a month and daily settings were shown on each line all written in water soluble ink. Each printed day row was in reverse day order on the sheet so that after use, settings for the day could be cut off and destroyed.

Each day, before encryption began, an officer would set up the machine using the day's setting from the key sheet. He would select the prescribed left hand rotor, rotate the inner ring to its day setting and insert the rotor into the first rotor position in the machine (left hand end of spindle), and likewise the second and third rotors. If there were five rotors available then there were (5x4x3=) 60 rotor combinations. The rotor start positions would be set using the outer alphabet and finger wheel, then the connections on the plug board would be made, and finally the lid would be closed and locked. The machine was now ready for the first and subsequent messages each to be given a unique three letter key.

The operator would select at random a three letter code, say NHU. This message key was encoded twice to minimise the risk of error. For example the trigram would be entered (NHUNHU) resulting in say LMITFR. Next the operator would move the rotor's position using the outer ring and finger wheel to show NHU and begin to encrypt the message. When sent, the encrypted message would begin with the encrypted message key LMITFR. Having already set his machine to the daily settings, the receiver would enter LMITFR which would yield the original plain text key of NHUNHU. His machine rotors would then be set to that key and message decryption would begin.

Depending on the number of rotors and plug cables in use there were 1015 setting to be tested if all alternatives were to be evaluated. Little wonder that the Enigma inventor Scherbius thought his machine was invulnerable.

However the above procedure had a security flaw. The message key was encoded and sent twice, resulting in a relationship between first and fourth letter, second and fifth, and third and sixth. In the pre-war years the Polish Cipher Bureau was quick to exploit this and were able to crack all German Enigma traffic. From 1940 however the German military recognised the procedure was flawed and new message key procedures implemented.

Whilst only alphabetic characters were available both numbers and punctuation could be enciphered and sent. Numbers were either spelt or coded using the prefix Y and an alpha character corresponding to its alphabetical location. The number 26 would be shown on the plain text message pad as YBYF. Presumably the receiver could determine from its context whether the "Y" related to a number or plain text. Unusual letter combinations were used for punctuation. For example ZZZ=comma, X=full stop.

**British Signals Intelligence (SIGINT) – The Beginnings**

Britain's SIGINT capability had its beginnings at the start of WWI when a number of radio intercept stations were created which were supported at the Admiralty by linguists, cryptanalysts and radio traffic analysts7. The aim was to decipher German military radio traffic. In time a radio direction finding capability (HF/DF or Huff Duff) was developed. At the outset, the organisation was located in Room 40 at the Admiralty and this name remained even when the organisation was re-located. Room 40 had some notable successes including its part in decrypting the Zimmerman Telegram8. One of its greatest admirers was the First Lord, Winston Churchill. The value of SIGINT was to be recognised by Churchill again when he became First Lord and then Prime Minister during WWII.

Room 40 was de-activated in 1919 when merged with military intelligence (MI1b). In 1922 early successes led its transfer from the Admiralty to the Foreign Office under the administrative control of Britain's Secret Intelligence Service (SIS). It was given the cover name of Government Code and Cipher School (GC&CS). An Air section was later added and further impetus for growth was provided by the Italian invasion of Abyssinia and the Spanish civil war.

[7] Traffic analysis is the process of intercepting and examining messages in order to deduce information from patterns in communication. It can be performed even when the messages are encrypted and cannot be decrypted.

[8] "Zimmerman Telegram": The telegram was a diplomatic proposal for a military alliance between Germany and Mexico. It was sent by the German Foreign Minister, Arthur Zimmerman, to the German Ambassador in Mexico and was sent in anticipation of unrestricted submarine warfare against US merchant shipping. When released it outraged the American people and helped to generate support for the US to enter the war against Germany.

**The Early Development of Enigma**

The Enigma machine was first commercialised in 1918 when a German inventor, Arthur Scherbius, and his close friend Richard Ritter founded the company Sherbius and Ritter and patented the Enigma machine. Scherbius was an electrical engineer and one of the projects the new company embarked upon was to replace WWI pencil and paper ciphers with a mechanised form of encryption that was simple to use and would allow a far greater level of complexity, and thus security, and at the same time speed-up the encryption and decryption process.

The commercial version of Enigma was not taken up because the price was about £20,000 in today's money and initially the German military were equally unenthusiastic because they were oblivious to the damage caused by their insecure ciphers. They believed the Zimmerman Telegram had been stolen by American spies in Mexico rather than a failure of German cryptography.

Eventually the German military were shocked into appreciating the value of Enigma as a result of two British documents coming to light - from unlikely sources. Firstly, in 1923 Winston Churchill published The World in Crisis in which he spoke of the success of Room 40 in breaking German ciphers during the war. Additionally, in 1923 the Royal Navy published its official history of WWI. This reiterated the fact that the cryptanalysis of German communications during the war had provided the Allies with a clear advantage.

In 1925 the German military held their own enquiry into how to avoid a future fiasco and concluded that Enigma offered the best solution. It went into military service the following year and in the next two decades Scherbius provided the German military with some 30,000 machines. It was the most secure encryption system in the world and at the outbreak of WWII it seemed that the Enigma machine would provide the Germans with a decisive advantage. Because of Bletchley Park however, it would ultimately be part of Hitler's downfall. Scherbius did not live to witness his success and failure. He died in a horse accident in 1929.

**The Polish Connection and How the British Acquired Enigma**

After WWI, Room 40 continued to successfully decipher German communication until 1926. With Enigma however the British, French and Americans were stumped. It has been claimed that this in part was because the dominant position enjoyed by the Allies after WWI ended. Without the fear and the need, the zeal and quality of British cryptography deteriorated. However, Poland was one nation that was vitally concerned about the Germans and could not afford to relax. After the war Poland had became an independent state. Sandwiched between Russia, a nation with ambitious goals to spread communism, and Germany, anxious to regain territory ceded to Poland after the war, the Poles were desperate for German intelligence and formed its own cipher bureau, the Biuro Szyfrow. The Poles acquired commercial variants of Enigma but found the rotor wirings were different and thus were little or no help. Espionage became Plan B.

Hans Thilo-Schmidt was a disaffected WWI German officer and failed businessman. Through the patronage of his brother, Rudolph, Hans-Thilo Schmidt he was given employment in Berlin at the Chiffrierstelle, Germany's centre dealing with encrypted intelligence and in particular Enigma. Living in Berlin away from his family, impoverished and isolated and envious of his brother's success at the top of Chiffrierstelle, Hans-Thilo realised he could earn good money, gain revenge and damage his country's security by selling Enigma secrets. While on a visit to Paris he made an offer to French intelligence. His offer was accepted by Captain Gustave Bertrand of French Intelligence, and he received from the French the codename Asché. The Enigma documents handed to the French made it possible to recreate an accurate replica of the military Enigma but because of the enormous number of message settings it did not allow the French to encipher actual messages.

Ten years earlier the French had signed a military agreement of co-operation with the Poles. In accordance with that agreement, the French passed on photographs of Schmidt's Enigma documents and left what seemed to be a hopeless task of cracking Enigma to the Biuro Szyfrow.

Traditionally it had been assumed that the best cryptanalysts were experts in the structure of languages, but with an electro-mechanical device such as Enigma the new approach was to select recruits from bright students with scientific and mathematical backgrounds. The Biuro

organised a course in cryptology and invited twenty mathematicians to participate. Each was sworn to secrecy and because of their birthplace, was fluent in German. Three of the twenty were recruited. The most gifted of them was a twenty-three year old who had specialised in statistics, Marian Rejewski. His strategy for attacking Enigma focused on the fact that repetition is the enemy of security; repetition leads to patterns and cryptanalysts thrive on patterns. The most obvious repetition was in the Enigma repetition of the message key which was enciphered twice at the beginning of every message. Rejewski vastly simplified the overall key problem by separating the task of finding the rotor settings from the plug board settings. Attacked singly both of these problems he found were solvable. His breakthrough allowed all pre-war German communications to become decyphered. His attack on Enigma is considered one of the truly great accomplishments of cryptanalysis. The Polish success, it was said, can be attributed to fear (of German intentions), mathematics and espionage.

The Poles successfully used Rejewski's techniques for several years and even when the Germans introduced minor changes Rejewski fought back. This required the development of a mechanised version of his cataloguing system that would automatically search for the correct rotor settings. It was an adaptation of the Enigma machine and it was necessary to have six of them working in parallel each one representing one of the six rotor combinations. The machine was about one metre high and it was capable of finding the day key in about two hours. It was called a bomba perhaps because the ticking noise they made was reminiscent of a ticking bomb.

In 1939 the Polish cryptanalysts suffered a crippling blow. The total number of rotors available was increased from three to five thus increasing the number of rotor combinations on the spindle from (3x2x1=) 6 to (5x4x3=) 60. Additionally the number of patch cables was increased from six to ten. Overall the theoretical number of keys9 increased to 159x1018 and, not surprisingly, the number of decrypts fell to zero.

The Poles were determined that, if their country was to be invaded, then its cryptoanalytic successes should not be in vain. Perhaps they thought, Britain and France, with their extra resources, could fully exploit the concept of the bomba?

uly 1939, only weeks before the German invasion of Poland, a meeting was held between the head of Biuro Szyfrow and his French and British counterparts to discuss some urgent matters concerning Enigma. They were staggered to be offered the fruit of the gallant Polish cryptanalyst's work. The treasure included one of Rejewski's bombes, two spare Enigma replicas and working drawings of Enigma. The British and French were astonished to learn that the Poles had been breaking Enigma for years and that they were ten years ahead of anyone else in the world. It was one of the most signal services rendered by one ally to two others.

**Establishment of BP**

With war clouds looming, GC&CS needed a new home well clear of the bombing that London was likely to suffer. Bletchley Park was ideal. Bletchley was a rail junction on the main railway line to the North west and the main trunk road (A5) was nearby. Importantly Bletchley was also on the rail link between Oxford and Cambridge (apparently this rail link will be re-opened in 2015). It was recognised that these two centres were to become fertile recruiting centres for BP. Near to Bletchley was a telegraph and telephone repeater station.

In 1938 the Bletchley Park site was purchased by SIS after an evaluation by a group using the ruse of "Captain Ridley's shooting party" shown below.

[9] It has been calculated that further refinements during the war increased the number of possibilities for each letter encoded to $15^{22.}$

*Captain Ridley's Shooting Party at the Bletchley Park Mansion*

As more and more people arrived the original mansion was found to be totally inadequate and various sections were moved to timber huts which for security reasons were only known by their hut number.

**Recruitment**

Traditionally cryptanalysts at Room 40 and later in GC&CS were from a background in linguistics and classics. The Polish breakthrough had demonstrated that mathematicians and scientists had an equal part to play and in 1939 an attempt was made to redress the balance. On the day that war broke out, Alastair Dennison, the operational head of GC&CS from 1919 to 1942, wrote to the Foreign Office about recruiting "men of the professor type".

The genius mathematician, Alan Turing, was recruited. Much later in a speech to the British House of Commons, Barak Obama put him alongside Newton and Darwin. His work was to become of crucial importance when he went on to develop the electro-mechanical bombe (used to determine daily settings) based on his earlier academic paper "On Computable Numbers, with an Application to the Entscheidungsproblem". In 1952 Turing was convicted of homosexuality by the UK government. He had the choice of serving time in prison or accepting chemical castration for his 'disease'. He chose the latter and died two years later from cyanide poisoning. Because of the Official Secrets Act, he could not reveal the vital part he played at BP. On 24 December 2013 Queen Elizabeth II signed a pardon for Turing's conviction for gross indecency, with immediate effect. A well know British human rights activist, Peter Tatchell, criticised the decision to single out Turing due to his fame and achievements, when thousands of others, convicted under the same law, had not received pardons.

Harry Hinsley (later Sir Francis Harry Hinsley) was a history undergraduate at St. John's College, Cambridge in 1939 when the British Foreign Office recruited him for BP. He was to make a very significant contribution to naval intelligence using traffic analysis. He later became Master of St John's College and Vice Chancellor of Cambridge University.

It was felt that cross-word experts may make good cryptanalysts and GC&CS placed an anonymous notice in the Daily Telegraph asking for entrants in a cross-word competition. Five completed the test in less than 12 minutes and were invited to join GC&CS.

It would seem that many were recruited via old-boy networks - both men and women. The word went out to Oxford and Cambridge college dons to send your most brilliant young scholars, of any discipline - the brightest, not necessarily the most qualified. The recruiters had no idea how they would be used.

At one time there were three British Chess champions at BP. They caused a near security breach in 1944 when it was announced in *The Times* that Bletchley Park had defeated Oxford University 8-4 at chess. The Germans, had they been closely monitoring *The Times*, were entitled to ask why there was such a concentration of chess experts at a quaint country estate near a rail junction.

Churchill made several visits to BP. After he had met some of the 'long haired' cryptanalysts he expressed his surprise at the bizarre mixture of people and their motley appearance. He muttered (hopefully with a wry grin) to Sir Stewart Menzies, head of SIS, "I know I told you to leave no stone unturned to get staff, but I didn't expect you to take me literally".

**Life at BP**

BP staff was drawn from both non-service and service backgrounds. Whilst there was a hierarchical structure it was independent of military rank, background or academic seniority. Military personnel could report to civilians, and junior ranks could oversee their seniors. The only discipline was that which was self imposed.

BP was comprehensive in terms of the way intelligence was grafted onto cryptography and these two partners were set to work in adjacent huts. Producers and consumers worked cheek-by-jowl and the constant interchange, mostly by word of mouth, was a major element in their joint achievement. BP was unique. There was only one, both figuratively and literally. It was so much more efficient than either the American, or German equivalents, where there were six or seven cryptographic organisations "who fought each other almost as venomously as they fought the enemy".

There was a vibrant social life which included amateur dramatics, chess, tennis, fencing, bridge, rounders and discussions on political, economic, educational and philosophical matters. Romance flourished!

The work of BP was well recognised by Churchill perhaps resulting from his exposure to Room 40 when he was First Lord during WWI. He made a number of visits to encourage and remind the cryptanalysts of the value of their work. At one stage it was felt by Turing and others that progress was being hampered through lack of funds and personnel, particularly with regard to the construction of bombes. They wrote direct to Churchill. His reaction was immediate. He penned a note to his Chief of Staff which said:"ACTION THIS DAY: Make sure they have all they want on extreme priority and report to me that this has been done".

When posted to BP, after initial training at Inter-Service Special Intelligence School, staff worked a six day week, and rotating three shifts each day with a half-hour meal break at an on-site cafeteria. There were no residential facilities on site. Staff was bussed–in, walked or rode push-bikes. They were billeted at pubs, boarding houses or private homes.

The working conditions by modern standards were appalling. The huts lacked ventilation, were noisy, crowded, freezing in winter and stiflingly hot in summer. They have been set-up in the Bletchley Park Museum with the wooden chairs and trestle tables used in the war: there are overcoats on pegs, full paper trays even full ashtrays together with recorded voices that might have once been heard. Just close your eyes and you can be transported back 70 years.

**Secrecy**

The secret nature of the role of Bletchley Park continued for 30 years after the war. During the war it was known simply as "BP" or Station X. GC&CS (quite a bit more than a school!) was referred to by some as the "Golf, Cheese and Chess Society". Wrens employed at BP were posted to HMS Pembroke V. Above all, the 10,000 employed at site, or nearby, were required to sign the Officials Secrets Act(1939) and were periodically briefed on the sensitive nature of the work they were undertaking and its importance to the Allies. A "need to know" culture developed and employees had limited or no knowledge of the role of others. One's job was never discussed with anyone except immediate associates, and that on-the-job. There is a touching story how a married couple learnt they both worked at BP. Their secret emerged in 1970s, when the BP veil of secrecy was lifted and they both received an invitation to a BP reunion.
Extraordinary lengths were taken with the distribution of the Ultra product. In the early days, the Ultra source was not revealed to operational commanders. Rather, a sham cover story was contrived and the source was attributed to say, HUMINT or the result of aerial reconnaissance. In a likewise fashion the Allies did not directly act on Ultra intelligence unless there was an alternative source the Germans could accept,

**How Enigma was Broken**

Of fundamental importance to a good cipher system is an enormous number of setting combinations and a letter sequence that is random[10]. Enigma potentially had both. Thus an attempt to break the Enigma cipher by trial-and-error methods was a daunting, indeed an impossible task. However as a result of poor discipline by the Germans and a poor understanding of 'randomness' they unwittingly helped the British to decipher Enigma. They failed when they introduced structure into what should have been random. For example, there were (26x26x26=) 17,576 ways in which a three character alpha message code could be selected. By allowing the operator to select his own code, the randomness was destroyed and as a result the number of key combinations reduced. (If you ask a group of people to individually select at random a number between 0 and 9, the letter 7 will always be over represented.) Here are some examples of poor procedures or operator discipline:

- Producing an early Enigma training manual containing an example of plaintext and its genuine ciphertext, together with the relevant message key. When Rejewski was given this in December 1932, it "made his reconstruction of the Enigma machine somewhat easier".
- Initially the message key was sent twice to provide a double check for the receiver.
- Messages often began with the same opening text - many began with the word *Spruchnummer* (Message Number), and many Air Force messages began with the phrase *An die Gruppe* (To the Group). Recognition of the possible plain text became known as a crib[11].
- Messages often enciphered routine information, such as weather reports, in a precise and structured fashion. For example phrases such as *Keinebesondere Ereignisse* (Nothing to report).
- Messages often ended with *Heil Hitler*! One particular German operator continually used his girlfriend's name, Cillie, for his message settings (CIL), and so these easy-to-guess indicators became known as 'Cillies'. Cillies in the operation of the four-rotor Abwehr Enigma sometimes included four-letter names and German obscenities.
- The same message was transmitted more than once, with each version enciphered differently or using a low level pen and paper cipher.
- The same message key used repeatedly.
- Message keys using combinations such as "XYZ" or repetitions of the same letter eg. AAA were often repeated. The rules required the operator never to use such sequences. (The probability of ABC occurring in a random three letter set is the same as something that appears totally random eg. XRH).
- There was a rule that on the plug board, adjacent letters should never be connected ie. D should never be connected to E.
- Mistakenly, on the grounds of ensuring randomness, operators were instructed to never have a rotor in the same position on two consecutive days. Once having determined the rotor positions on a given day the cryptanalysts could rule out half of the possible position on the following day.
- Three letter message keys taken from the Enigma keyboard. For example QWE (QWERTY keyboard). Sometimes, with multi-part messages, the operator would not enter a new key for a subsequent part of a message, merely leaving the rotors as they were at the end of the previous part, to become the message key for the next part.
- Encrypting into Enigma a low level message that had already been decrypted.

[10] A random letter is a letter generated by a process, whose outcome is unpredictable, and which cannot be subsequentially reliably reproduced. The probability of any letter occurring is 1/26 and the frequency distribution is uniform.

[11] crib. Used at BP to denote a suspected plain text or a known plain text in the encrypted message.

Cribs were essential aid for breaking the ciphers. It has been calculated that without a crib it would today still take several months to decipher an A4 page of cipher text using a modern PC and trial and error methods.

Occasionally BP was able to task the RAF to say, lay mines in a particular location knowing the Germans would send a warning signal to other craft. The warning invariably contained a map reference but crucially the map reference would be known to BP as a result of an earlier 'pinch'. That map reference could be used as a crib. Sowing mines in harbour approaches to obtain a crib was known as 'gardening' and could be used only infrequently.

German Naval codebooks (the daily key sheets) were eventually captured in number during a spate of daring raids on weather ships and U-boats. The resulting break-throughs meant that BP could pin-point the location of U-boats and the Battle of the Atlantic began to swing their way. But it was reasoned, it would have been unwise to attack every single U-boat so uncovered because an unexplained string of successes would warn the Germans their communications had been compromised. At times, having determined the location of a U-boat's location as a result of an Enigma decrypt, a reconnaissance aircraft would be sent out first, thus justifying a subsequent approach by a destroyer.

On one occasion, a BP decrypt revealed the location of a number of German tankers and supply ships. The Admiralty decided not to attack and sink all of these ships. Two were left as a ruse. However RN destroyers accidently encountered the two ships meant to be spared and sunk them. The destroyers were unaware of the Enigma decrypts or the policy of not arousing suspicion. The Kriegsmarine initiated an investigation but, believing in the invulnerability of Enigma, found the unexplained losses had resulted either from misfortune or espionage.

A major inherent weakness in the machine itself was that no letter could be enciphered to itself. G could never be enciphered as G. This meant that some possible solutions could quickly be eliminated if the same letter appeared in the same place in both the cipher text and the assumed piece of plain text.

**All At Sea**

The Polish experience with Hans-Thilo Schmidt reinforced the lesson that when the brute force of brain-power fails to break a cipher, a good fall-back position is espionage or theft. It was one thing to determine the daily settings to break Enigma, it was another to unravel the code used for short messages. U-boats used two code books namely Short Signal Code Book and Weather Short Code Book. These together with other Enigma material were a highly sought after prize and essential to BP's success. Not surprisingly they were called 'pinches'. In total eight U-boats were attacked, brought to the surface and Enigma material captured. In a similar way, there were five weather trawlers and four supply ships that were attacked and gave-up there precious Enigma material. The German crew was taken as POWs and the ships sunk, usually by gunfire.

The most memorable pinch was from U-559. She was boarded by three British seamen off Egypt in late 1942. Lieutenant Fasson and Able Seaman Grazier drowned with the submarine when it went down Both were awarded the George Cross posthumously. The third, NAAFI Canteen Assistant Tommy Brown successfully captured the U-boat's Enigma key setting sheets with all current settings for the U-boat Enigma network and escaped the sinking submarine. This pinch was immensely valuable to BP who had been unable to read Naval Shark Enigma for nine months. At 16 years old, Brown was the youngest ever to receive the George Medal. He was subsequently dismissed from the navy when it was found he had lied about his age to enlist. He later died when rescuing his sister from a fire.

**The Outside Contribution – Colossus**

In the Lorenz SZ40 the Germans had developed a machine for high level messages between Hitler and German High Command and Generals in the field. It was similar to Enigma but far more sophisticated and complex and could not be broken by the bombe. Max Newman, a BP mathematician, using Boolean algebra, developed a theoretical way to crypto analyse Lorenz intercepts using what today would be called a computer. Initially its development was thought to be impractical, but Tommy Flowers, an Electrical Engineer, and others at the General Post Office

research centre, thought otherwise. They went ahead and built a programmable computer called Colossus using 1,500 thermionic valves for switching devices. These replaced the sluggish Post Office relay used in the bombes. Ten machines were built and were in operation before the end of the war.

**Post-War**

The immeasurable success by BP was not without cost. Many, who were making outstanding contributions, were badgered by family and friends to do something worthwhile and wear a uniform. One was castigated by his ex-Headmaster as a disgrace to his school. After the war, former employees could not be recognised for their contribution or to answer the question "what did you do during the war?"

In 1946, GC&CS changed its name to Government Communications Headquarters (GCHQ) and moved to Eastcote and later to Cheltenham. The GCHQ Training School remained at Bletchley Park until 1987. The entire site was saved from re-development by enthusiasts and many former employees. Under the management of the BP Trust the site has been fully restored and has become a remarkable museum. The mansion remains as does many of the famous huts. The huts have the same internal furnishings and external appearance they had during the war.

At war's end GC&CS had acquired many hundreds of Enigma machines which were generously bequeathed to a number of current and former colonies who, believing the machine to be unbreakable, accepted the British gift with enthusiasm. Little did they know that GCHQ was able to continue to gather valuable training intercepts and Britain was able to enjoy years of valuable Sigint from these countries.

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*A major feature film* **The Imitation Game** *based on Alan Turing's contribution at Bletchley Park will be released later this year. Benedict Cumberbatch, who plays Turing, is likely to be nominated for an Oscar for Best Actor. Here is a link to the film's trailer http://www.youtube.com/watch?v=S5CjKEFb-sM*

# Interesting Navy ‘Stuff’ about Whisky…

CAPT Yawanda Zanzibar, RN (Rtd)

**HMS Queen Elizabeth was officially named by the Monarch at ceremony in Rosyth Dockyard, Fife, 4 July 14.**

HRH Queen Elizabeth raised a bottle to the Royal Navy, on Friday, 4 July with HRH Queen Elizabeth launching the Royal Navy’s latest vessel with a little help from Bowmore Single Malt Scotch Whisky; a bottle of the aptly named Bowmore ‘Surf’. HRH Queen Elizabeth’s special connection to Bowmore goes back to 9 August 1980, when Her Majesty visited the distillery on the island of Islay just of the West Coast of Scotland – the first and only visit The Queen has made to a whisky distillery in an official capacity.

While at the distillery, a special cask of Bowmore Whisky was laid down in HRH Queen Elizabeth’s name. Now bottled, this elegant single malt is handed out by Her Majesty as a gift to visiting royalty and dignitaries.

For those not interested in Whisky (perhaps the rum corps) – some nautical bits….

- Her Majesty described the ship, a giant 65,000-tonne vessel that is the Royal Navy's great white hope which will carry fighter jets and helicopters around the world, as 'source of inspiration'
- She pressed a button to release bottle of Isle of Islay malt whisky to 'christen' ship rather than traditional champagne
- This 65,000-tonne aircraft carrier is the Royal Navy's largest ever ship, and will become fully operational by 2020

## *And in pictures….*


*The Red Arrows perform a fly-past over HMS Queen Elizabeth in Rosyth Dockyard*


*The Queen and Prince Philip arrive at Rosyth Dockyard to formally name the Royal Navy's biggest ever ship*


*The Queen presses the button to release a bottle of whisky to formally name the Royal Navy's biggest ever ship, HMS Queen Elizabeth, at Rosyth Dockyard*

For those who may have wondered, why whisky. The ceremony of christening new ships began very long ago, the Romans, Greeks, and Egyptians all held ceremonies to ask the gods to protect their sailors. By the 1800s the christenings of ships followed similar trends. A "christening fluid" would be poured against the bow of the ship, though it was not necessarily wine or champagne. There are accounts in the US Navy records of 19th century warships being christened with water from significant American rivers.

The christening of ships became great public events, with large crowds assembled to witness the ceremony. And it became standard for champagne, as the most elite of wines, to be used for the christening. The tradition developed that a female would do the honors and be named the sponsor of the ship. And maritime superstition held that a ship that wasn't properly christened would be considered unlucky. A champagne bottle that didn't break was a particularly bad omen.

Contrary to rumors, the *Hobart* will not be christened with a long neck of Boag's…..

ROUTINE. 1712002 DEC 69.
FM MOD NAVY.
TO AIG 1207 (HOLDERS OF A MESSAGE)
NAVAL ATTACHE WASHINGTON
UK NAVAL ADVISER CANBERRA
UK NAVAL ADVISER OTTAWA
UK NAVAL ADVISER KUALA LUMPUR
UK NAVAL ADVISER WELLINGTON
DEPUTY SACLANT NORFOLK VA
ACS (L) SACEUR
ACS APSOUTH
CAS NAVSOUTH
NAVY DEPUTY TO CINCAFNORTH

BT

UNCLAS NGM 057A THE ADMIRALTY BOARD HAVE REVIEWED THE DAILY ISSUE OF RUM IN THE LIGHT OF THE CONDITIONS AND NEEDS OF THE MODERN NAVY.
2. RUM IS A PARTICULAR NAVAL PRIVILEGE OF VERY LONG STANDING AND ONE WHICH IS CHERISHED AND ENJOYED. THE BOARD HAS GIVEN FULL WEIGHT TO THIS FACT. IT HAS,ON THE OTHER HAND,CONCLUDED THAT A DAILY ISSUE OF RUM IS NO LONGER COMPATIBLE WITH THE HIGH STANDARDS OF EFFICIENCY REQUIRED NOW THAT THE TASKS IN SHIPS ARE CONCERNED WITH COMPLEX AND OFTEN DELICATE MACHINERY AND SYSTEMS,ON THE CORRECT FUNCTIONING OF PEOPLES LIVES MAY DEPEND.
3. THE BOARD DECIDED THAT THIS CONCLUSION IS OVER-RIDING AND THAT IN THE INTERESTS OF SAFETY AND EFFICIENCY IN THE FLEET THE RUM ISSUE SHOULD BE ABOLISHED PROVIDING THAT SUITABLE COMPENSATING ADVANTAGES COULD BE ARRANGED FOR THE BENEFIT OF THE FLEET.GROG MONEY AT 3D A DAY BROADLY REPRESENTS THE COST OF THE PRESENT ISSUE TO THE CROWN. IT WOULD NOT PAY FOR A DAILY BEER ISSUE. NOR DOES IT REPRESENT A SIGNIFICANT DAILY PAYMENT TO INDIVIDUALS.
4. BY THE WAY OF FINANCIAL COMPENSATION A LUMP SUM OF £2.7 MILLION WILL BE PAID INTO A NEW FUND FOR THE PURPOSE OF PROVIDING SOCIAL AND RECREATIONAL FACILITIES FOR THE WELFARE OF RATINGS AND RM OTHER RANKS. THE FUND WILL BE KNOWN AS THE SAILORS BEER FUND AND WILL HAVE A SUBSTANTIAL INCOME.THIS WILL BE USED FOR CHARITABLE PURPOSES TO BENEFIT PAST AND PRESENT NAVAL RATINGS AND ROYAL MARINE OTHER RANKS AND THEIR DEPENDANTS.RATINGS WILL TAKE A MAJOR PART IN THE ADMINISTRATION OF THE FUND.
5. IN ADDITION CPO'S AND SNCO'S WILL BE PERMITTED TO BUY DUTY-FREE SPIRITS IN THEIR MESSES UP TO A NORMAL MAXIMUM OF 1/8 PINT PER MAN PER DAY IN HM SHIPS ABROARD AND IN CATEGORY 1 AND 2 SHIPS AT HOME. IN CATEGORY 3 SHIPS PURCHASE WILL BE PERMITTED AT DUTY-PAID PRICES.JUNIOR RATINGS (AND RM EQUIVALENTS) WILL BE ALLOWED TO PURCHASE UP TO A MAXIMUM OF THREE CANS OF BEER PER MAN PER DAY.THEY WILL NOT BE ALLOWED TO PURCHASE SPIRITS. THE NEW RULES FOR THE PURCHASE OF ALCOHOLIC DRINKS WILL PROVIDE FACILITIES THAT ARE REASONABLE IN THE EXACTING CIRCUMSTANCES OF NAVAL SERVICE AND WORK.
6. ACCORDINGLY,THE DAILY ISSUE OF RUM AND GROG MONEY WILL BE ABOLISHED FROM SATURDAY 1st AUGUST 1970.DETAILED INSTRUCTIONS FOR THE SETTING UP AND RUNNING OF THE SAILORS FUND,FOR THE SALE OF SPIRITS IN SENIOR RATINGS MESSES, FOR THE SALE OF BEER TO JUNIOR RATINGS AND FOR THE DISPOSAL OF EXISTING STOCKS OF RUM WILL BE ISSUED SHORTLY BY DCI(RN)

BT

# Frequently Asked Questions About NWOA

**About Us**

The Naval Warfare Officers' Association is a social network for past and present Warfare Officers of the Royal Australian Navy. Our purpose is to continue the patriotism, loyalty, friendships and comraderie of Naval Service within the wider community. Further information can be found at our website http://warfareofficers.org.au/. If you don't have Internet access please contact Membership Secretary and he will arrange to have your details loaded to the website database.

**Who Can be a Member**

The NWOA welcomes those officers qualified in a recognised Naval Warfare course and others who, by reason of their close association with, or interest in, the objects of this Association, the Committee deem to be desirable to be members.

**How to Join the Association**

1. Go to the Association's website using the web address given above or drop "NWOA" into your search engine. If you don't have Internet access please contact Membership Secretary and she will arrange to have your details loaded to the website database.
2. Click the 'Join' tab on the Home page (hidden in the top RH corner) and click on the "JoinUs" tab where you can enter your Name, Email address, Password and About Yourself (show brief details of your warfare course or other reasons for joining NWOA). Click 'Request Membership'.
3. Your application will be automatically sent to members of the NWOA Committee.
4. Pay membership subscriptions as detailed below and notify **Membership Secretary be email** after which you will have full access privileges.
5. If you have no internet access, Membership Secretary will record your email as 'name @no.email'.

**How to Check Whether you are Financial**

Members have the responsibility to ensure they remain financial. To check this, go to the website and Log In. The page will show your membership expiry date. Unless you pay in advance, subs fall due 31st March each year.

**How to Enter, Check and/or Change your Personal Details**

When you have paid your subs and Membership Secretary has registered your payment, you may edit your contact and personal details as follows:

1. Log In using your Email and Password. The screen presented will show the date of expiry of your membership.
2. Click on the three bars on the top RHS and 'People'.
3. Enter your name in the Member Name box and click Find or search the alphabetic Membership List. Click on your name.
4. Click on the gear wheel icon for personal detail or the $ icon for past subscription transactions.
5. Having clicked the gearwheel icon enter/edit the following personal details: Name, Rank, Post Nominals and List eg. DSC RANR (Rtd), Email, Password, Phone No., Mobile, Address details, whether you wish to receive "Engage" by Email, Career details (optional)
6. Click 'Update User'.

**Cost of membership**

Membership subscription for one year is $30.00, three years $84.00 and five years $130.00. How to pay is shown below.

Subscriptions are due 31 March unless paid for years in advance. To check your membership status you need to LogIn to our website. If you do not have Internet access then contact Membership Secretary: LEUT Ross Clarke using the postal address shown below.

Members with WW II service are not required to pay but Secretary needs to know so that he doesn't hound you for unpaid subs. Drop him a line or send an e-mail.

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**Either pay by cheque and mail to:**

**LEUT Ross Clarke RAN**
**School of Maritime Warfare**
**HMAS Watson**
**NSW 2030**

**Or**

**Or pay on-line. Westpac BSB 032 000 Account 100155. Include your name and details of the transaction with the funds transfer and <u>please send details by email</u> to Membership Secretary *ross.clarke1@defence.gov.au***

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Contact Secretary for

| | |
|---|---|
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| Hard cover copies of CONTACT @ $25 each (plus packing and postage $6.50 | Soft cover copies of CONTACT @ $12.50 each (plus packing and postage $6.50) |

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***Westpac BSB 032000 Account 100155***
Please include your name and details of the payment in the transaction and then ***please*** send an email to the Secretary with this information.

Honorary Secretary - David Flakelar at: dfflakelar@tpg.com.au

***Please ensure your mail/email contact details are current!!!***

## The Quiz!

**Question**

1. Name the seven ships of the Australian Fleet that entered Sydney Harbour on 4 October 1913:

2. What is a protected cruiser?

3. What is the difference between a Battlecruiser and a Battleship?

4. Name at least six bars of the Wang.

5. What was the USS Liberty incident?

6. What colour was worn between the rank insignia of the following PQs:
   a. MEO
   b.WEEO
   c. MLO

7. What was the largest naval battle (and the only full scale clash of battleships) during World War I?

8. Who commanded the Grand Fleet at this battle?

9. What is the ball of wood at the top of the main mast?

10. What is Burgoo?

**Answers**

1. Battle cruiser *Australia*, the cruisers *Melbourne* and *Sydney*, the protected cruiser *Encounter*, and the torpedo-boat destroyers *Parramatta*, *Yarra* and *Warrego*.

2. The **protected cruiser** is a type of naval cruiser of the late 19th century, so known because its armoured deck offered protection for vital machine spaces from fragments caused by exploding shells above.

3. A **battlecruiser**, or **battle cruiser**, was a large capital ship built in the first half of the 20th century. They were similar in size and cost to a battleship, and typically carried the same kind of heavy guns, but generally carried less armour and were faster.

4. The Australia Bar, the Nelson Bar (upstairs and downstairs), The Melbourne Bar, The Ship Inn Bar, The Ocean Bar, Navy's Bar, Kangaroo Bar, Golden Hind.

5. Israeli forces pioneer anti-ship use of napalm to disable American technical research ship during the Six-Day War in 1967.

6a. Purple
b. Green
c. White

7. Battle of Jutland, 1916.

8. Admiral Sir John Jellicoe

9. The Truck

10. Porridge

# Future Distribution of *ENGAGE*

Fellow warriors, at the recent NWOA committee meeting held on 10 Sep, the committee had to rationalize the time, effort and expenses involved in producing, printing, packaging and mailing 'hard-copy' *ENGAGE* magazines. The Committee looked at the pros and cons of a hard copy which resulted in a decision to dispense with hard copies of *Engage* and produce an electronic version that will reside on the NWOA website.

Members will be sent an e-mail with the ENGAGE web link when the new edition is published. For those relatively few NWOA members without access to the internet, we encourage family members and friends to print copies of ENGAGE from our website and distribute to their family/friends. Similarly we request that Ship and Establishment COs will do likewise and provide printed copies for the edification of Wardroom and Messes.

This decision has been driven by economics and the need to use technology to solve the problem. We trust NWOA members will support this initiative and continue to contribute to and enjoy future editions of *ENGAGE*.

**We recognize that there will be members that have neither internet access nor friends/relatives that are prepared to print *Engage*. A phone call or letter to the Secretary will ensure the mail-out of a hard copy.**