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MINE WARFARE AND DIVING



PUBLISHED BY THE FLOTILLA STAFF FOR THE MCM COMMUNITY

SUMMER 18



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MINE WARFARE AND DIVING

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Foreword

Captain R R Readwin Royal Navy

Captain Mine Warfare and Patrol
Vessels, Diving and Fishery Protection

I am delighted to welcome you to the first issue of the re-invigorated Mine Warfare and Diving Magazine (MAD). For those of you that attended the Mine Warfare and Diving conference at MWS Collingwood last autumn, you may recall discussion regarding effective communication throughout the community and across all ranks. This MAD magazine is the embodiment of a desire to foster a focal point for communication that provides the reader with updates on current operations, the latest developments in technology and doctrine, and provides a dialogue for the long term future vision of the Mine Warfare and Diving branches.

I remain very optimistic about the future of the Mine Warfare and Diving. We are on the verge of significant change, as we progress existing technologies such as ST2193, the upgrade to ST2093 and the work of the Maritime Autonomous Systems Trials Team (MASTT), which highlights the genesis of off-board systems in the RN. An important point to note, also reiterated during the MWS conference, is that progress in Mine Warfare and Diving capabilities does not indicate a reduction in the community itself. In fact, for the first time since the Second World War, the branches are actually growing in number.

“ *the single greatest contributor to the Operational Capability of the Mine Warfare Flotilla and Diving Groups are its people* ”

I continue to be extremely impressed by the professionalism and attitude of the small ship and diving communities. It is this team ethos and sense of pride in our abilities, which I aim to enrich with the issue of this annual magazine. If we, as a community, are to remain relevant we must embrace the future. There is no indication that the mine and the minefield are going to be any less of a threat in modern naval warfare, as recently proven in the Southern Red Sea, but the way in which we manage and counter this threat, must be dynamic and reliable; this is the future we are striving towards with the Mine Countermeasures and Hydrographic Capability (MHC) and other developments.

As we now begin the transition of MCM into the 21st Century, I wish to remind you all, if you had forgotten, that you are the most important factor as we continue down the Q-route into the future. Some of you may sigh – that old cliché – but I can assure you that the single greatest contributor to the Operational Capability of the Mine Warfare Flotilla and Diving Groups are its people. It also goes without saying, that this is only possible with the loyal support of our families and friends, for which I am extremely grateful; please pass on my sincere gratitude to them all.



The next edition of the MAD magazine will be issued in 2019 after the next MCM Conference, scheduled for 29 Nov 18 (date for all your diaries!). I look forward to hearing your thoughts and feedback on the reinvigorated MAD magazine as I see you out and about on the front line.

FORMATION COMMAND AND THE KIPION JOA

By Cdr Andy Smith RN, COMUKMCMFOR

Everyone in the MCM community is intimately familiar with the Middle East. Since the first Op AINTREE deployment in 2006, the UK has maintained a forward-deployed MCM capability in Bahrain, which has now evolved, via Op TELIC, into a mature and well-supported concept under Op KIPION. These deployments are now the backbone of the MCM Force Generation plot and there are a number of personnel who have conducted seven, eight, or even nine Middle East tours. Despite the ever-constant drumbeat of Force Generation with most Crews deploying to the KIPION JOA once every two years, the area continues to change and the UK MCM Force adapts to the challenges we face.

The physical environment remains as harsh as ever. Everyone remembers the heat of the summer and the impact of high ambient air and sea temperatures have on kit and equipment but equally as debilitating are the regular, almost fortnightly, Shamals in the winter months. The latter often means we are dealing with challenging sea states, however, while the meteorological

conditions are constant the operating environment is increasingly complex. While conflicts on the land in Syria, Yemen, and Iraq have taken the headlines the maritime part of the JOA is becoming increasingly complex and congested. Nations that previous rarely ventured in to the area, such as China, India, and Russia, now regularly operate ships across the middle east, in particular in the Gulf of Aden and the Northern Arabian Sea. Iran continues to send regularly deployments of ships to the Indian Ocean, Red Sea and beyond and though almost all interactions with them are safe, routine, and professional the risk of miscalculation still exists. The choke points of the Strait of Hormuz and Bab Al-Mandeb remain vital ground and of key interest to the United Kingdom in order to ensure the security of our energy supplies and trade with other nations.

So, what does this mean for the UK MCM Force? With reduced availability of frigates and destroyers, our minehunters

“ *these deployments are now the backbone of the MCM Force Generation plot* ”

are being employed in increasingly diverse roles around the JOA. The last six months have seen the ships spread across the Gulf and beyond. Furthermore, the force has been split with simultaneous operations taking place in the NAG and the GOO. Ships are undertaking the usual Detailed Route Survey tasking, which allows the ships to concentrate on their core skills and prepare for contingency operations. However, the intention has been to push the ships away from Bahrain as much as possible. This gives us the chance to visit a wider variety of ports and to give our sailors a more diverse experience and provide the opportunity to conduct Defence Engagement across the JOA. The impact of the MCMVs in these situations and their ability to contribute to the UK's strategic aims and objectives cannot be underestimated. In particular, recent visits to Kuwait, Qatar, and Oman have resulted in very good feedback

Ex Khanjar Hadd 23, the Royal Navy of Oman-led multinational exercise.



MCMV Force Protection Team on watch while in company with RFA CARDIGAN BAY



providing influence with our partners. Most recently, HM Ships MIDDLETON and BLYTH made a particularly strong impact during Kuwait Staff College Sea Days.

Operations in the Gulf are always interspersed with a regular rhythm of exercises primarily with our US partners but also with other key regional players. It is usual to conduct circa 3 US / UK MCM Exercises each year. These seek to not only improve the interoperability between the US and UK MCM forces, but also to work on the integrated and comprehensive approach to MCM operations. UK ships regularly work in close proximity to US air and sub-surface MCM units, which, more often than not, operate from the Afloat Forward Support Base, RFA CARDIGAN BAY. The next US / UK MCM Exercise will involve all of these capabilities, as well as our own FDU3 and will run out the UK's Role 2 medical facility. Such exercises, gives us a glimpse of the future with the "triad"

USN and RN Divers from HMS MIDDLETON working together in Bahrain.

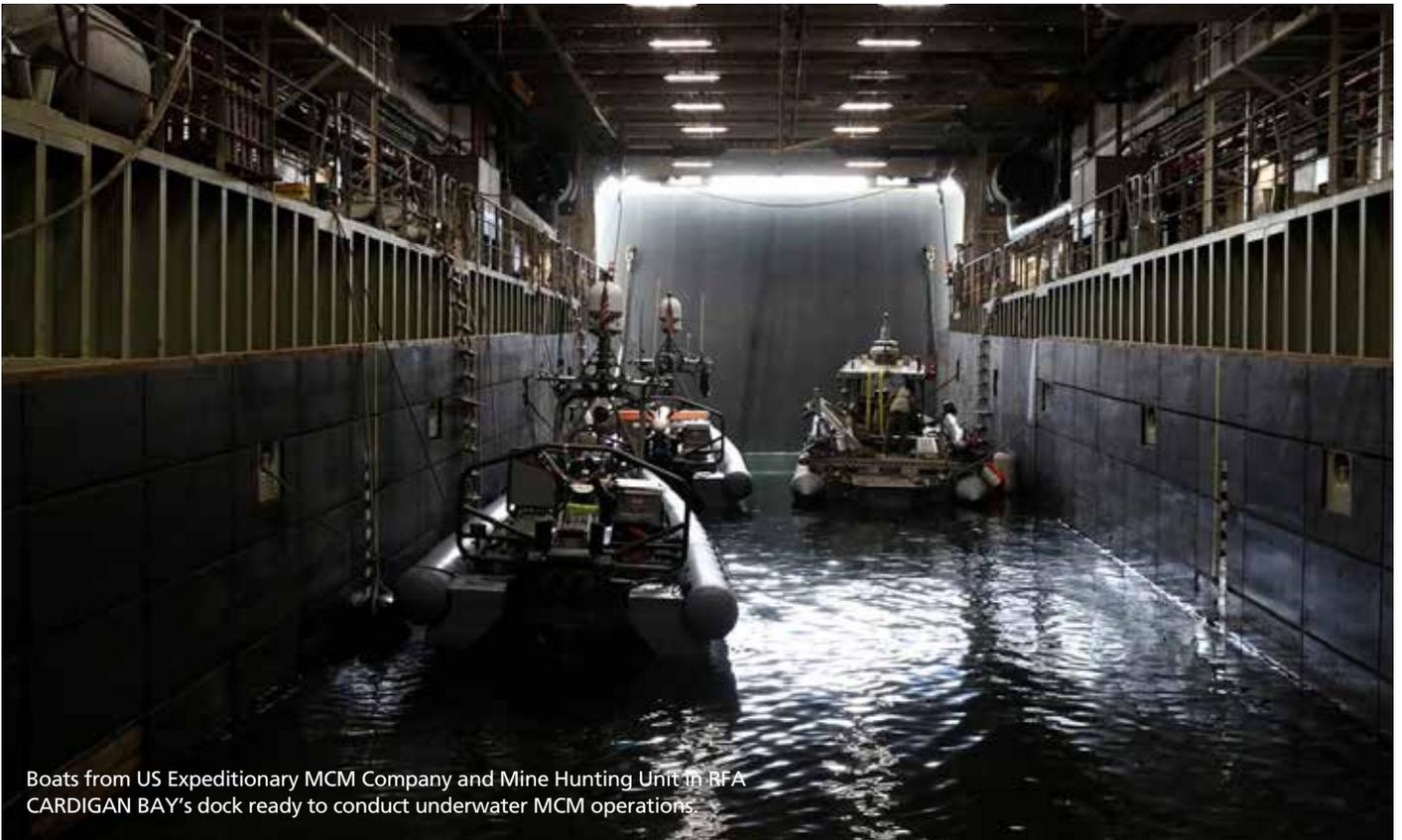


USS GLADIATOR, HMS MIDDLETON and RFA CARDIGAN BAY during USUKMCMEX 18-1.



of MCM – air, surface and sub-surface assets working in a coordinated and harmonized method to achieve clearance operations to the highest levels in the quickest time. In and amongst these vital training periods, the force conducts large scale exercises with regional partners. Most recently, HM Ships BANGOR and LEDBURY took part in Exercise KHUNJAR HADD (Sharp Dagger) with the Royal Navy of Oman but with ships and air forces from France, and the US. This was an excellent opportunity to conduct MCM operations overlaid with realistic multi-threat scenarios.

Commanding such a varied force, operating in geographically separated and disparate locations is a challenge but a rewarding one. The 18-strong staff of the UK MCM Force work hard to develop and deliver a coherent programme that incorporates the operational requirement (Route Survey, Defence Engagement, and Readiness of Contingency), the engineering requirement (Support Periods), and sufficient time for rest and recuperation (Operational Stand-Down (OSD) period – formerly known



Boats from US Expeditionary MCM Company and Mine Hunting Unit in RFA CARDIGAN BAY's dock ready to conduct underwater MCM operations.

as CO's Weeks, and Adventurous Training Weeks). The programme is made of building blocks (for example, support periods, OSD and exercise) that fit together in the world's most difficult Tetris problem. Managing this programme, and the logistics challenges imposed by lengthy supply chains is not without difficulty. However, the value of the UK MCM Force is regularly reinforced by our interaction with our regional partners. It is evident the force continues to punch above its weight providing a niche capability at a readiness that few other nations could even consider. The aim is to deliver a varied and worthwhile programme that is balanced between the needs of ensuring sufficient time for ship and person maintenance while delivering operational affect across the JOA that our sailors see the worth and merit of.

As the Middle East remains a key area of interest for the United Kingdom, the requirement to retain a forward-deployed presence is almost certain to endure. Though each year brings its own unique flavour, the pattern of exercise, route survey and defence engagement is likely to endure. The force must continue to evolve to this growing complexity and build upon the lessons of the past while avoiding complacency. Further work to integrate new technologies while remaining flexible to the threats that we face is essential if we are to retain the prestige and reputation of the UK MCM Force.

USN MH-53 Sea Dragon operating from RFA CARDIGAN BAY during USUKMCMEX 18-1.



Training for Qatari Navy personnel onboard HMS LEDBURY.



HMS MIDDLETON hosts Kuwait Staff College Sea Days.



The MCM component in Exercise JOINT WARRIOR

By Lt Cdr Keith Mabbott RN (COS MCM1) and Cdr Nick Unwin RN (Cdr MCM1)

If you work in or around the Mine Warfare world it is almost a certainty that you will have been involved in – and you will definitely have heard of – Exercise JOINT WARRIOR.

JOINT WARRIOR is a major bi-annual multi-national military exercise which has been in existence since after the Second World War. Originally designed to improve co-operation between the Royal Navy and Royal Air Force in anti-submarine warfare, it was known as the Joint Maritime Course (JMC). In 2006 it was re-branded Neptune Warrior and then Joint Warrior in 2008 to reflect the increasing involvement of all three military branches. JMC exercises took place three times a year, in spring, summer and winter. In 2006 the exercise was reduced to the two current events per year in Spring and Autumn.

Throughout the Cold War the exercises focused on the anti-submarine warfare threat and used a NATO vs 'Warsaw Pact' scenario. Since the late 80s exercises adapted to reflect modern threats and theatres of war such as the Balkans, the Gulf and Afghanistan. In order to represent the threat posed by militant terrorist groups, fictional terrorist groups were introduced to exercises in 2003.

“ *13,000 military personnel, from all three British armed forces, NATO and other allied countries* ”

JOINT WARRIOR is planned and executed by the Joint Tactical Exercise Planning Staff (JTEPS) based in Northwood. During the exercise they are the 'game players', based in Faslane, known as the EXCON (Exercise Control). Essentially they are the exercise referees, controlling training for up to 13,000 military personnel, from all three British armed forces, NATO and other allied countries. Up to 50 naval vessels, 75 aircraft and numerous ground based units. Embedded within the JTEPS team are a number of MCM staff lead by Cdr MCM1, which will include regular and reserve MW personnel. They act as the HICON (High Level Control) but also advise Captain JTEPS and shape the MW aspects of the exercise day to day to ensure that the training objectives are met. As we all know, no plans will ever survive first contact with the Scottish weather, never mind the enemy!

The Mine Warfare community plays a huge role in every Exercise JOINT WARRIOR. Most MW and diving personnel will first experience JOINT WARRIOR in an MCMV, probably working in the vicinity of Loch Ewe. During each exercise 4 Royal Navy MCMVs and a Fleet Diving Unit (FDU) will conduct their mission rehearsal for Op KIPION Gulf deployments. They will be under the Command of the Mine Warfare Battle Staff

who are themselves generating to become the next forward deployed COMUKMCMFOR Staff in Bahrain. They may be based afloat when the right platforms are available (Bay Class AFSB, or SVHO), or more likely, they will set up a mobile HQ in the "cow shed" at the top of Loch Ewe fuelling depot! The MWBS are now validated by the Maritime Battle Staff during the second week of the exercise. Increasingly we are also welcoming additional MCM effort from the Standing NATO MCM Group 1 which very often will have a UK MCMV attached. The NATO group will train under their own commander which adds to the coordination and complexity of the exercise but enables a far wider visibility of MCM operations to the wider defence community.

The MCM effort is part of a much wider exercise scenario, which may culminate in a show of force with a Carrier Strike Group transit up through the Minch (the narrow stretch of sea between the Inner and outer Hebrides), or a large scale amphibious landing. The point of putting all of this together, is to allow units and Command Components to conduct co-ordinated operations (Tier 2 training), where communication and integration with all levels of Command are tested both across our own RN national systems and NATO systems too. All of this activity needs to be validated to make sure that our units are ready to deploy on operations so it is not just the Mine Warfare Battle Staff that is validated during the exercise. Very often a NATO High Readiness Staff is being similarly put through its paces.

All of this takes months to plan, and it involves around 200 UK MW personnel. For decades this has been the testing ground to show that the RN MW community is ready to deploy and to fight and win. It is a process and an exercise which is widely respected and acknowledged to be an extremely comprehensive way to train our people and ships to operate in groups and in coordination with each other. In driving rain, 30+ knots of wind and a Sea State 5, from the bridge of a MCMV it is sometimes hard to remember that overriding reason for JOINT WARRIOR!



MWBS Command Facility looking out over Loch Ewe and the Minches.

What's happening in MCM

By Lt Cdr Giles RN, NCHQ S02 MW

Sonar 2093

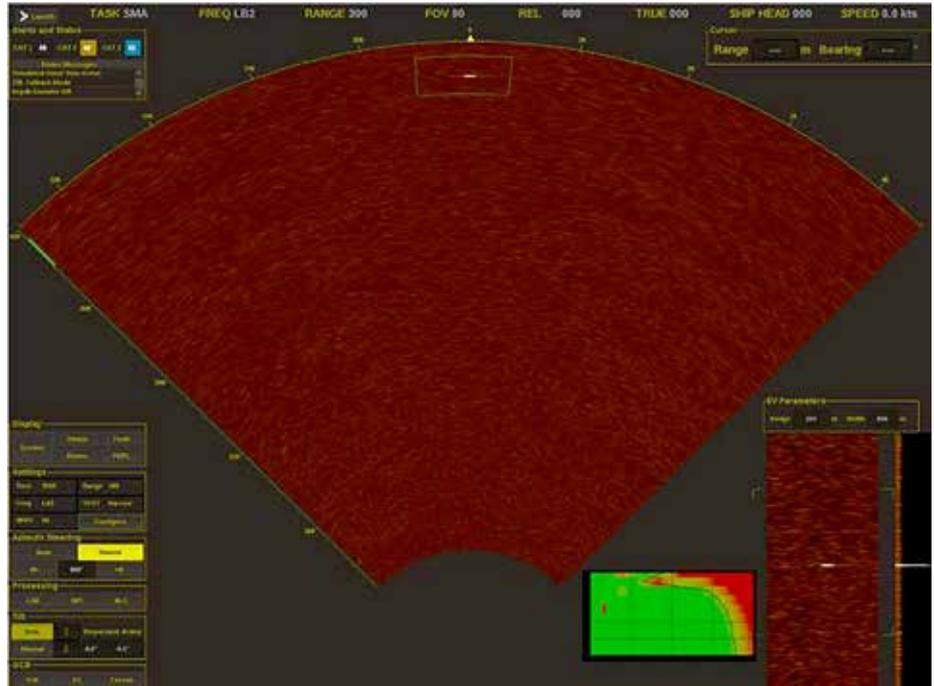
2193 with the advantages of VDS, this is 2093 CSP in a nutshell! At last the Sandowns will not be able to use the excuse that target is beyond the operating limits of the sonar as a reason for failure to detect. Additionally and critically from a user perspective, the display and functionality is (pretty much) identical to 2193, simplifying training and offering the opportunity for MW JRs and most likely SRs, to serve in both Classes. Hunt Class operators will recognise the screen shot of a 2093CSP display below, with the addition of the conditions monitor window, enabling ping by ping visualisation of system performance.

The GMBY fit will not be fully operational until Operational Evaluation has been completed and the system performance parameters bounded. The plan is to start this process during the trials in the early summer, but it will likely be some time before there is sufficient data to be confident of the performance. In the meantime it is intended to use 2193 sonar values as a baseline, but note the planning and evaluation comments in the next section.

Planning and Evaluation

In response to the problems with RTPME an alternative planning and evaluation doctrine has been drafted in the form of a Green Paper. This takes a qualitative rather than quantitative approach and is currently being trialled by the deployed Battle Staff. If the trial is successful it will become flotilla wide doctrine pending a resolution to RTPME shortcomings and NATO adopting new doctrine for planning and evaluating side scan sonars.

“ simplifying training and offering the opportunity for MW JRs and most likely SRs, to serve in both Classes



Hunt Class Degaussing

A contract has been placed to provide a new control system for Hunt Class degaussing. The coils as fitted will remain, the amplifiers and masthead magnetometer will be replaced and a new controller rack is installed. It is expected the first fit will be complete before the end of the year with deployed units converted in January and February. The fit is containable within planned Support Periods and including trials, should take no more than 2 weeks. Removing the existing amplifiers and installing the new can be done without the need to open soft patches, so on board disruption should be minimal.

ORCA

Hot on the heels of the DG fit is a replacement for NAUTIS. Bids to provide ORCA (Ocean Reconnaissance Combat Architecture), are currently under assessment and it is anticipated that a contract will be placed in this Financial Year, with the fit programme commencing in quarter 3 2019. The fit will be completed in all ships by 2022. A fundamental principle of ORCA is that it should be adaptable, allowing for the integration of additional functionality, for example the command and control of off board systems such as the Unmanned Sweep. In addition, costed options are included for the provision of command and control functions currently provided to the Battle Staff by the Mine Warfare Tactical Support System. Not only will it be more capable than NAUTIS it will be more user friendly, simplifying the MWO and MHDs' jobs freeing up time for these personnel to work with the operators (MHD) and maintain better wider situational awareness (MWO).

Jicara Update

Reproduced with kind permission, Navy News

DID you hear the one about the fishery protection ship which merged with a minehunter?

No, we've not created a new class of ship – a 'fishhunter', or perhaps 'fish countermeasures vessel' if you like – just a new way of working to bring the curtain down on 15 years of fishery protection work by the first generation River-class ships...

...and help usher in the second era.

In March last year the crew of HMS Tyne joined the first of the new generation of patrol ships, HMS Forth, to bring her out of build and through her sea trials. HMS Atherstone's crew took over Tyne to run her through to the end of her active RN life (next month). The minehunter crew had just a day's handover before receiving the keys to Tyne, little experience of fish and no third watch to swap places with half the ship's company every few weeks to sustain near round-the-clock fishery patrols.

So when it came time to crew a second River-class ship – HMS Mersey – with Mine Warfare experts to allow Mersey's crew to take charge of HMS Trent, the third in the five-ship programme of replacement vessels, Project Jicara (no, we've no idea who picks these names) has been tweaked quite a bit.

Jicara 2 puts some of the crew of HMS Ledbury – just back from a six-month tour of duty in the Gulf – aboard Mersey, living and working alongside the Cod Squad experts.

Mersey conducted fishery protection patrols on behalf of the Marine Management Organisation, training young officers, navigators and conducting escort duties in home waters. This time the mine crew have been given three months to get used to a ship which is 25 years newer than the veteran Hunt, more than twice the size and considerably faster.

And when the three months are up, mine and fish crews will share the running of Mersey – 22 sailors from each vessel, with the same number in reserve for those regular crew changes which help to keep the River class at sea.

Why?

As well as knowledge of some of the systems aboard Mersey, some of the existing crew know their fish inside out and Mersey's seaman specialists possess experience of cranes, davits and daily Pacific 24 RIB operations which the mine hunter sailors do not.

Ledbury's former crew bring bags of front-line operational experience in the Gulf to Mersey... as well as enthusiasm and desire to tackle something new.

"I look at it like this: if you can drive a Mk1 Golf, you will probably be able to drive a 2003 model as well, although it may take some getting used to," said Lt Cdr George Storton, Mersey's CO.

"And although the Hunts are older ships, inside they are not. They possess a lot of technology and equipment which is identical or more advanced than Mersey."

Something deputy marine engineer officer WO1 Michael Parrott is currently getting his head around.

"Hunts are actually closer to the Rivers technologically than you might think, especially with the new engines rather than the old Deltics," he says.

"Otherwise, we are up for learning about new kit – after all, we're engineers. Yes, it's a different world from what we know, but I'm sure we'll get used to fish. And for the young lads, the accommodation is a world apart."



“ *It's a completely new world, but in a good way. Mine warfare is quite a small community and we don't actually spend time with the rest of the Navy, so this is a good way of extending our knowledge* ”

LS(MW) Callum Murray from Weston-Super-Mare nods. He's gone from the very spartan junior rates' bunk spaces to two-berth cabins with en suite facilities.

"The biggest difference is the space – and not just the living accommodation. There's a proper gym onboard," the 26-year-old says.

"It's a completely new world, but in a good way. Mine warfare is quite a small community and we don't actually spend time with the rest of the Navy, so this is a good way of extending our knowledge."

He's found the Mersey sailors "really helpful". "The transition has been really smooth, relaxed, and everyone chips in. There's still that small-ship mentality of a close-knit community.

"Watch rotation is a new concept for us – and a good one. You can now plan your life. It really does help knowing where you are going to be and when."

The combination of the arrival of the Ledbury crew and watch rotation will allow Mersey to maintain her busy patrol schedule, bridging the gap before Forth et al start their fishery duties.

"Fishery protection is the backbone of what we do – and allows us to do so much more: navigational training, young officer training, acting as the Royal Navy's eyes and ears around the UK," says Lt Cdr Storton.

"No one understands shipping movements better than the fishery squadron. We know the ferry routes, the main shipping lanes, we know when there are regattas, so we know what is not normal."

Which brings us on to 21st Century policing of fishery grounds. The squadron does not conduct as many boardings as when the Rivers were introduced 15 years ago.

It's not because the crews have suddenly become lazy, or because there are fewer trawlers out there, rather down to much more targeted operations.

Intelligence is increasingly driving fishery protection patrols.

Trawlers carry electronic logs which they must update regularly with details of their catches, the equipment they are using and the areas in which they are operating.

These logs can be interrogated by Mersey's crew without the need for a formal visit – a boarding typically lasts three or four hours, is cold, wet, smelly and costs the fishermen money.

It means, based on a mixture of experience and intelligence, that the fish ships can choose the vessels they inspect – vessels most likely to have broken the rules.



DT1 Tasking, North Sea

Lt Cdr C Wheen RN, Commanding Officer, HMS CATTISTOCK

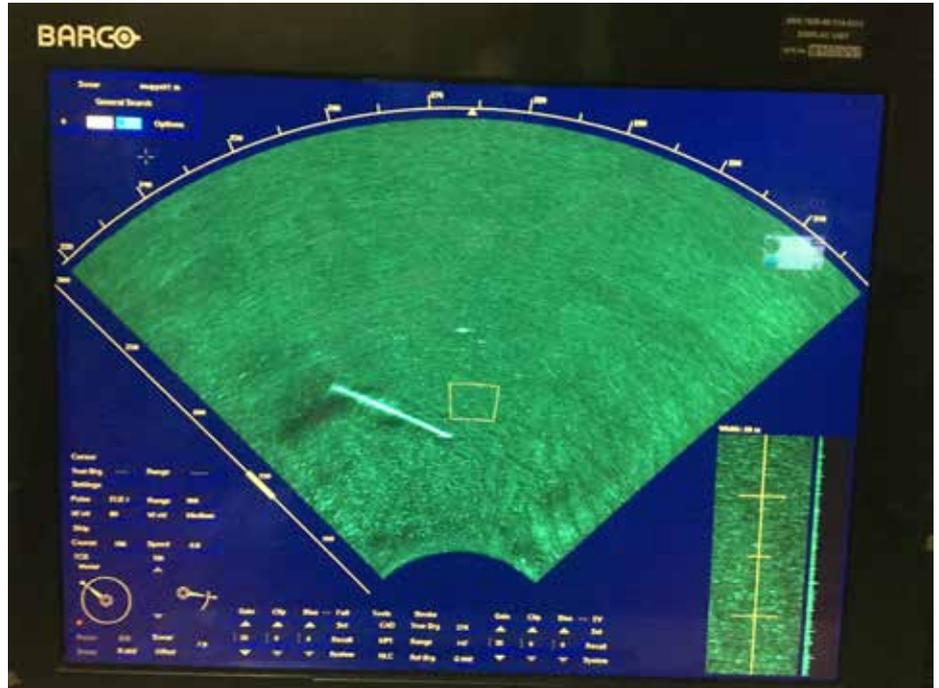
One of our primary outputs in the MCMV community is in support of Defence Task 1 - Defence, Security and Resilience of the Homeland and Overseas Territories. Nominated units are held at Very High Readiness to respond immediately to any emergent tasking requiring the specific (eg. underwater search, EOD, object recovery) and general (eg. SAR, MSO) capabilities of RN MCMVs.

In November 2017, HMS CATTISTOCK (CATT)(MCM2 Crew 8), having completed a comprehensive, six-week maintenance period, took over the DT1 duty.

On Monday 13 November, CATT sailed for a Recovery and Training Period (RTP). Of note, before sailing the Crew had only spent five days at sea since late June and this was to be an important week of shakedown to re-establish basic safety standards, conduct WE equipment trials and to start to rebuild Operational Capability in preparation for a NATO deployment in the new year.

At noon on the following day however, while conducting a Ship's Performance Assessment off Portland, we received notification from Fleet Ops of a likely DT1 activation.

A Dutch trawlerman had just hauled a piece of suspected historical ordnance



Sonar screen from CATTISTOCK.

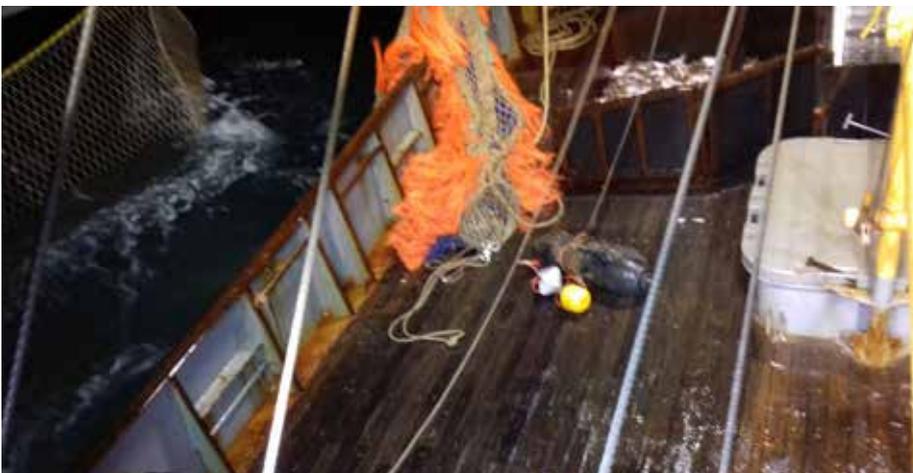
onto his deck in the North Sea, approximately 50 miles NE of Cromer on the Norfolk coast. After taking a photograph of the object (pictured below), the trawlerman carefully lowered it back to the seabed, reporting the position to Humber coastguard.

As the coastguard plotted the position, they were alarmed to note that the object had been lowered to a position in

dangerous proximity to the Bacton gas pipeline – a major pipeline running into Norfolk that carries a large volume of gas into eastern England.

So at 1400 on Tuesday CATT was formally tasked as the high readiness unit to locate, identify, and if necessary, dispose of the suspected ordnance. Given the potential complexity of the task, and noting our low levels of Operational Capability onboard, I was very grateful for the offer of assistance from an old oppo, Lt Cdr 'Central' Heaton, CO Southern Diving Group, and at 2000 that night we embarked a 4-man EOD team and equipment off Portland before proceeding at best speed to the datum position.

Arriving at 1900 on Wednesday evening, we conducted a sonar search of the datum position and, as is clearly visible from the S2193 image (pictured above), we immediately located a strong sonar contact lying just 60m from the exposed pipeline. The object was at a depth of 30m, on a flat and sandy seabed.



Ordnance on the deck of Dutch Trawlerman.

“ Nominated units are held at Very High Readiness to respond immediately

Mine as seen from CATTISTOCK Seafox.



The next task was to identify the object and the subsequent Seafox mission beamed images back into the Ops room confirming that this was indeed the suspected ordnance (most likely a 500lb air-dropped bomb). In strong tidal stream, PO(MW) 'Jimmy' Green did exceptionally well to manoeuvre the vehicle to get different aspects on the contact such that a positive ID could be made.

The Perenco gas company that owns the Bacton pipeline was understandably anxious about the proximity of the ordnance to their infrastructure and so we would have to put the divers down to lift the bomb and tow it to a clear area. With winds forecast to increase throughout the following day, and with short tidal windows to dive, we would soon be out of limits for all MCM activity. So the plan was made to get the divers onto the contact that night in order to mark it and prepare it for a lift at first light the following morning.

Never having worked together before, I was particularly impressed by the seamless integration of CATTISTOCK MW team and the SDU2 divers, in particular PO(MW) Green and PO(D) O'Sullivan, who combined to execute a successful Diving Conning Run, in challenging conditions 50 miles offshore, at night and at the first attempt.

At 30 metres, a diver has just 18 minutes 'no stop' time before he incurs decompression penalties,

and they were anxious minutes on the bridge as we waited for the signal from the boat to indicate 'mine found'. With the tidal stream increasing again there would be no opportunity for another dive that night. But after 10 minutes he did find the mine and he managed to both mark it and attach lifting strops in preparation for the next, short, tidal window a few hours later.

As the NAUTIS screen shot (below) shows, the Bacton pipeline connects the Indefatigable Gas Field (owned by Perenco) to the UK, but it also transports a significant quantity of third-party gas, so the company would not have taken lightly the decision to isolate and de-pressurise a 40km section of the pipe during the lifting phase of the operation. Knowing that the diving window was short, and the weather deteriorating, both SDU2 and CATT divers made good their preparations through the night and were ready to go at 0700 on Thursday morning. The plan was to attach the Enclosed Mine



Nautilus screen shot, position on the right is where the object was located in the vicinity of a North Sea pipeline, position on the left is where the object was lowered to and subsequently demolished.

Lifting Bag (EMLB), raise and then tow the device one mile to the west, lower it back to the sea bed, remove the lifting bag, and finally conduct the demolition. If PO(D) O'Sullivan was feeling the pressure, he certainly didn't show it.

Diving with a lifting bag is challenging even in benign conditions, certainly it is for most MCDOs, and so the difficulty of swimming it down 30m, in a heavy tidal stream, is not to be underestimated. But the combined team of divers repeatedly carried out their drills efficiently and quickly and the device was lifted, towed, and lowered to the seabed, and the lifting bag removed before the tidal stream strengthened again, forcing diving activity to cease. All that remained during the next tidal

window was to conduct the demolition, but by now the wind had freshened to a westerly Force 5 and the sea state was building. Four hours later, in a nerve-wracking climax to the operation, and in what I assessed was both the first, and last, safe moment for the next three days, the demolition was completed. Any experienced MW and Diving specialist will know that these things rarely go off without a hitch, particularly with a non-worked up team, and I was incredibly impressed by the professionalism, accuracy and determination of everyone involved to complete the task in such a short time frame.

To conclude, one needs to look no further than the selection of reporting

in local and national media which I think underlines emphatically the key take-away of this article. And that is the strategically important effect that we in the MW and diving community deliver in support of homeland defence (and OP KIPION, NATO, the nuclear deterrent, and soon in support of Carrier Strike as well).

While CATT's activation was in response to an historical threat, as both the Defence Secretary and the Chief of Defence Staff (CDS) have recently highlighted, we face a growing, present-day threat to our critical underwater infrastructure. Coping with our vulnerabilities here is a national security priority and we in the MW and Diving community have a key role to play in the UKs response to that threat.

Weather deteriorating during the operation.



“ *My observations are from time in MCMV command, as Deputy Commander Sea Training (MPV), and as Commander Mine Warfare Battle Staff.* ”

Mine Warfare Officer - The Perfect Apprenticeship

By Cdr Ashley Spencer RN, Commander Mine Warfare Battle Staff

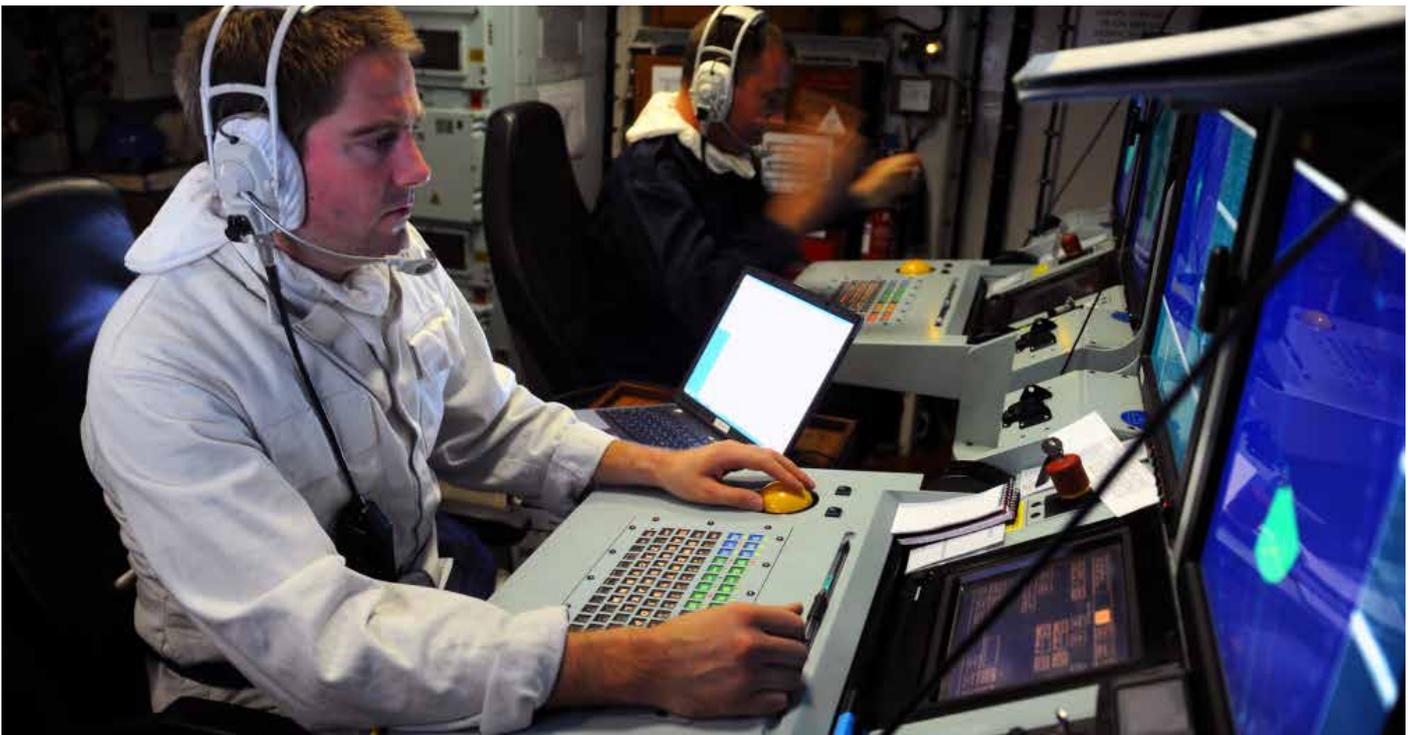
The belief and ignorance which form the perception that Mine Warfare and Anti-Submarine Warfare are somehow slow warfare disciplines needs to be quashed. A little harsh perhaps. In a modern navy, this is no more than jovial banter, but I would argue there remains a latent negative undertone even today. Such belittling attitudes can be de-motivating.

It remains crucial that tactical warfare leaders can exploit the battle-space to their advantage. They must remain cognisant of emission control and be able to reduce threat and risk and thereby give informed command guidance. Administratively, individuals need the capacity to work within a Task Group organisation, monitor external communications circuits, chat rooms and the wider maritime picture, on a series of ad hoc systems. To all my fellow Principle Warfare Officers (PWO) past and present this is utterly familiar. Yet, we are not the only ones with this skill set. I guarantee that if, you the reader, are a Mine Warfare Officer (MWO) you are nodding your head too. Perhaps you are sat in your Operations Room in the Central Arabian Gulf conducting MW operations, part of a large coalition exercise with command platforms in close attendance, Destroyer escorts and ISR over-watch. You are probably furiously typing away in a chat room to your 1 and 2-Up, keeping them abreast of your progress while launching underwater weapons, boats and monitoring a towed sonar body. You have just managed to convince a USN Arleigh Burke Captain that on this occasion you are the expert and that they should follow your advice and stay put. In your off-watch you

are looking forward to writing the shortcast and mustering the cryptographic material. Sleep will have to wait. I can assure you, the planning outputs and weekly reports which an MCMV Operations Officer produces, whether on operations or not, are not proportional to the vessel size.

The Mine Warfare Officer's collective lack of self-confidence is the concern I wish to address; it cannot be solely attributed to my rather flippant opening statement. The more senior of us must encourage this group of Officers and push them forward toward PWO appointments more regularly. The truth is they have a huge advantage over many of their contemporaries. Yet, in my experience, these young, capable, motivated people feel they lack credibility because of 'big ship' experience shortfalls.

My plea to all MWOs: many of you will fall by the wayside because 'MWOs aren't divers' and divers feel financially de-incentivised to depart from sub-specialisation. Have self-confidence. You are highly trained, more robust for having undergone the rigours of the MCMV work/life balance and any gaps in your wider warfare knowledge can be filled. Believe in your abilities. A modern fighting force has no place for amateur leaders. Being an expert in your field does not make you a micro-manger by default. We need Warfare Officers who can exploit the battle-space to their advantage and to one day take command. You have received the perfect apprenticeship to PWO, you just may not know it yet.





Exercise Khunjar Hadd, Oman



HMS LEDBURY (MCM2 CREW 5) THE KIPION HUNT

About

Commanding Officer: Lt Cdr Charles Collins RN
Ship's Company: 47
HMS HURWORTH: November 2016 – October 2017 (UK)
HMS LEDBURY: December 2017 – July 2018 (Gulf)
[See All >](#)

News Feed

Feb 2017: Buoyant drill mine recovered off coast of Portland
Aug 2017: MCM2 Crew 5 escort QE into her new home in Portsmouth
Oct 2017: Joint Warrior, Europe's largest naval exercise in Scotland
Jan 2018: Bilateral Exercises with the US.
Feb 2018: Ex Khunjar Hadd takes place in Gulf of Oman
Mar 2018: Defence Engagement activities.



MCM2 Crew 5 shared **The Heart of the Crew**

2 December 2016 at 11:04



Coming from all backgrounds and regions, MCM2 Crew 5 is a diverse team that draws from a wide range of talent across the UK and Commonwealth. Despite such diversity, all members are united by the drive to deliver operational effect both at home and overseas; an effort that was recognised by the award of the Fleet Efficiency Pennant for the duration of 2017. At the core of Crew 5 is the importance of family, with the ship's programme in the lead up to deployment continually ensuring a balance between quality time at both work and home. We train for excellence in both core and specialist skills so that MCM2 Crew 5 is *ready to fight tonight*.



MCM2 Crew 5 commented on **Force Generation & FOST North**

28 August 2017 at 12:15



The intensive 5-week OST programme laid the core foundations for fighting the ship ensuring that every member of the Crew was fully prepared for the challenges of the operational deployment. Following a highly successful OST, the Crew took part in Exercise JOINT WARRIOR, building upon core training whilst working with international partners in a simulated hostile environment. On completion of the Force Generation and after a year with HMS HURWORTH, MCM2 Crew 5 made the final transit back to Portsmouth at the end of October 2017 to prepare the ship for her next Crew.



MCM2 Crew 5 was tagged by **COMUKMCMFOR**

12 January 2018 at 08:00



Arriving onboard HMS LEDBURY in December 2017, MCM2 Crew 5 had to adapt quickly to the challenges of an operational deployment to the Gulf. Operational Sea Training in Scotland, which the crew completed two months previously, provided a solid foundation of skills; however, the priority was for all members of the Crew to develop their competencies in Theatre. The Reception, Staging and onward Integration (RSOI) acted as a baseline of competence and material OC post RiP; including the Operational Capability Assessment (OCA), Theatre Integration and Weapons Training (TIWT) and Command System Confidence Check (CSCC). Once complete LEDBURY was able to signal UKMCC and COMUKMCMFOR declaring that LEDBURY was Fully Mission Capable (FMC) for tasking.



MCM2 Crew 5 replied with a **comment**

The support to the MCM force within the JOA is top line. Within the established Bahrain base port, FSU and MCMV Spt are able to provide an excellent service to units during the maintenance periods and with emergent concerns. Directly answering to the Mine Warfare Battle Staff, the four MCMVs are able to reach into the N1-9 cell embarked in RFA Cardigan Bay, seeking support and guidance where needed. The MWBS act as the MCMV representative to UKMCC in Bahrain and manage force demands. ...[See more](#)



MCM2 Crew 5 commented on Interoperability with the US

22 January 2018 at 10:25



Integrating with the US 5th FLEET in the KIPION JOA has provided a multitude of opportunities. Operating under CTF52 for bilateral exercises and the bi-annual US/UK MCMEEX. The Clearance Diving Element (CDE) have reached an agreement with the US Dive Teams to operate together, not only with training but through the use of equipment and resource. This stems across the differing capabilities, including that of the autonomous capability within Task Force 56, which operates the REMUS 100/600 in Theatre. The opportunity this provides to further understand the utility of such a capability is planned to be addressed through TACDEV/TACEVAL as seen through the most recent Operations in Theatre.



MCM2 Crew 5 added four new photos - at Regional Engagement

28 February 2018 at 15:32



Whilst there is much focus on operations within the Middle East JOA, the impact of the White Ensign flying in a foreign port cannot be underestimated, contributing to the overall Defence Engagement objectives within ENDURA. MCM2 Crew 5 have been busy working with a number of regional partners prior to joining a multinational task group for Exercise Khunjar Hadd. Port visits continue to play a pivotal role, such as the joint training with the Qatar Emiri Navy in Doha. Throughout the period, visits from the Fleet Commander and Commander Task Force 52 show the impact and the reasoning behind the MCM force being the 'Jewel in the Crown'.



MCM2 Crew 5 is following #FutureMCM#UKNSFBahrain

3 March 2018 at 10:02



The future of the MCM force hinges on the acceptance of new technologies and shaping our current force so it is ready to meet the demands of a new era in the Royal Navy. Working with FDU 3 with the in-theatre REMUS capability and TF56 is one strand that we hope to exploit whilst in Theatre. The planning and development of UK NSF in Bahrain provides a step change in Real Life Support (RLS), with the base reaching operating capability by April 2018. The sailors in MCM2 Crew 5 are looking forward to the official opening whereby they will have the opportunity to use a top of the range gym, stay in great accommodation and access Wi-fi when alongside in Bahrain. MCM2 Crew 5 is confident that developments will play a key role in ensuring that the future of MCM is bright, and that units based in the JOA will be ready to fight tonight.



MCM2 Crew 5 shared an event

7 March 2018 at 14:16



Over the deployment, MCM2 Crew 5 will be attempting to run the distance from Bahrain to their home port of HMNB Portsmouth. This is in aid of the Portsmouth Down Syndrome Society and the RN & RM Charity for which we have close links. The total distance is 6449KM or 4007miles; the final furlong to be run across the finish line of the Bahrain F1 Grand Prix Circuit.



DIVING SAFETY & NLIMS REPORTING

By Cdr D Crosbie RN, Superintendent of Diving

NLIMS reporting over the past 2 years has been consistent across all arms of Military Diving. With almost identical reported incidents coming over 2016 and 2017 reporting periods.

Open and honest NLIM reporting of 'Near Misses' from the MCM Squadrons and Crews, FDS and DDS has remained high. This incident reporting supported by S2022's has provided the ODH and Equipment Authority valuable information for the Diving Life Support (DLS) equipment Safety Case meetings which feed changes to DLS equipment (BR 2807 Series) related MOPs and BRd 2806 equipment procedural SOPs and EOPs.

Areas of weakness which could reduce the number of incidents are:

- **Incorrectly performed MOP2** – before use routine. Not following the instructions which are written down.
- **BRd 2806 (1) & DCOP 20** – Not following laid down regulations or Guidance to the regulations.
- **BRd 2806 (2, 3 & 4)** – Not following SOPs (equipment & procedural),

Decompression procedures, In-water or Omitted Decompression rules.

Regular diving practices, increased diving currency and increased dives to depth in line with BRd 9274 Maintenance of Operational Capability will drive down some of the avoidable NLIMS reported. Failure to achieve the minimum standard of practice will result in the diver losing diving competency, exposing individuals and other unit members to unnecessary risk to life as well as increased likelihood of equipment damage due to un-familiarity. It is every Diving Officers priority to ensure all divers are to exercise to maximum depth in all equipment necessary for that unit to maintain operational capability following the guidance within BRd9274 which remains valid.

An area of concern which needs to be improved upon over the next 12 months is highlighted below. There has been a significant drop in dives carried out in MCM Squadrons over the past 3 years, particularly a relatively low number of dives at depth on CDLSE.

MCM1 & MCM2 Crew Diving Returns 2015-2017

2015 – 2227 Dives

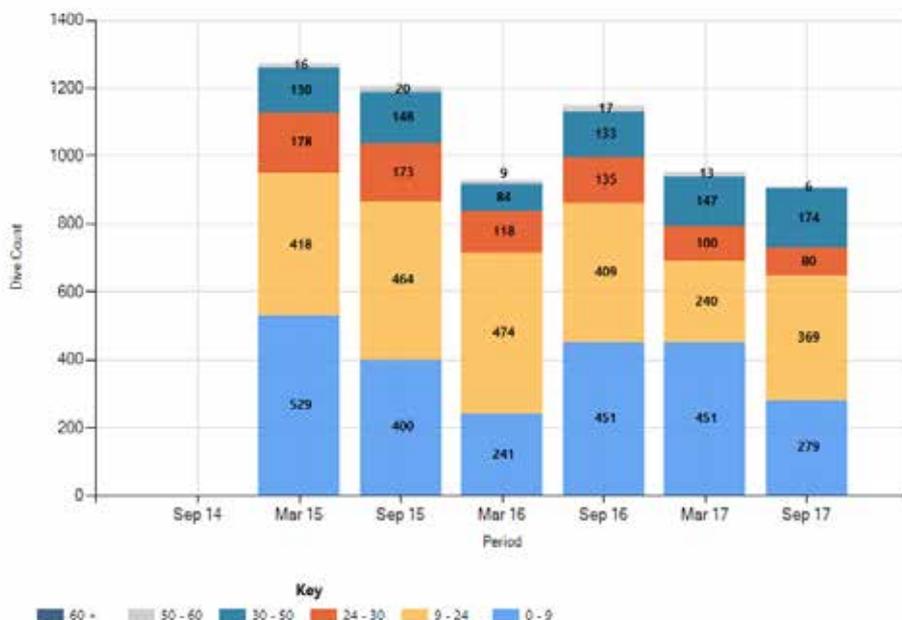
2016 – 1868 Dives

2017 – 1620 Dives

The majority of Near Misses and other significant incidents are reported correctly through the Diving ODH iaw DRI 17/18 - Naval Military Diving Incidents Reporting Policy and Procedure allowing prompt action to direct equipment to be quarantined and investigated. On the odd occasion when the DRI is not followed this leads to a slower reaction from the ODH team and ultimately may lose the opportunity to gather vital equipment evidence. Don't be the team that doesn't follow the guidance!

The perceived higher ratio of incident to dives within the MCMV Crews has highlighted the lack of Diving SQEP oversight within the DDH structure. To address this there is work ongoing to introduce a WO1 Diver within the PORFLOT DDH cell to enable direct waterfront support to MCMVs and permit the DDH to cover Naval Military Diving. It is envisaged that this post will provide SME guidance and SQEP oversight of all DDH diving related activities including DSMSA Certifications and Intermediate Verifications, first POC for all NLIMS investigations and risk management within the DDH.

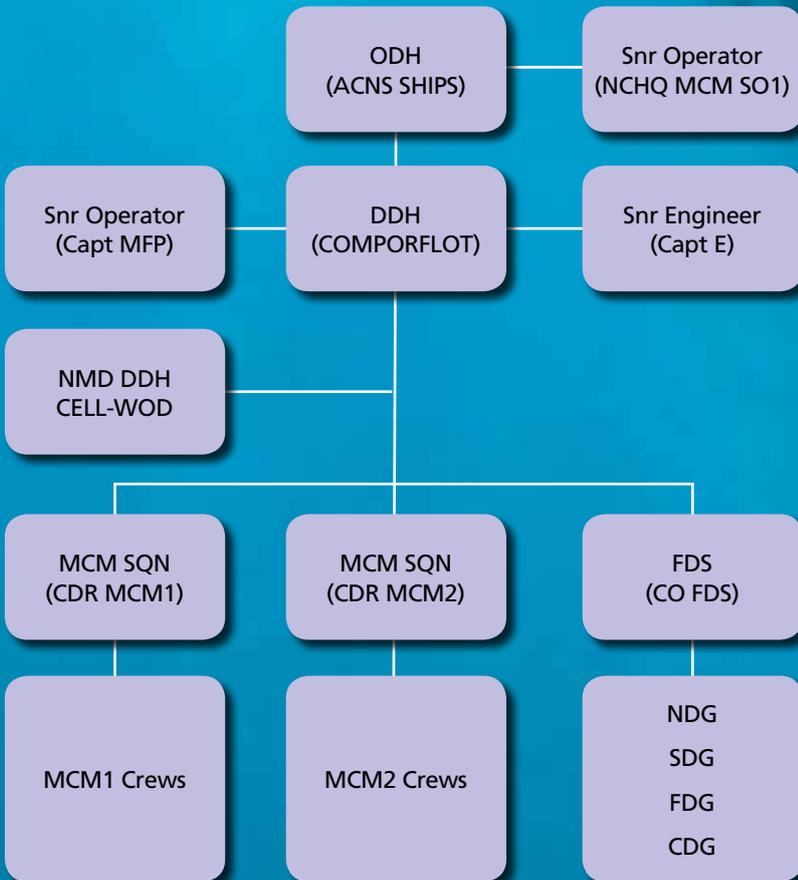
Dives by Depth 30/09/2014 - 30/09/2017



“ NLIMS reporting over the past 2 years has been consistent across all arms of Military Diving

Proposed Diving Duty Holder (DDH)

Note – DDS as a training organisation will comply with DMR and NCHQ direction regarding Military Diving and will report via NLIMS but is likely to not be part of the Duty Holding structure in the future as the Training Environment will not deviate from the Operating Safety Case.



north Atlantic or the Red Sea and Gulf regions. In practice the task group's output can be broken down into three main elements:

- Maximise MCM Operational Capability
- Build capacity and relationships with allies and partners
- Deliver NATO STRATCOM

So what has SNMCMG2 been up to?

During a year under Royal Navy command SNMCMG2 will have: made 40 port visits to 12 different countries; conducted nine PASSEX with allied and partner nations; completed five national MCM focused LIVEX; and delivered the MCM task Group to the major NATO Tier 3 Exercise BRILLIANT MARINER 2017, during which the staff was externally validated for NRF readiness.

The sheer number and variety of foreign port visits is unusual for recent RN deployments. The Mediterranean has been little more than a transit corridor to the Gulf, with few units experiencing more than fuel stops at Gibraltar and maybe before entering the Suez Canal. SNMCMG2's visit programme is best summarised as a blend of protocol, cholesterol and alcohol (in moderation, 2SL – honest!). Starting with official calls, most weekends involve an official lunch and/or a reception, often with 1*

or Ambassador level attendance. Visits associated with a PASSEX or HOD OPS period usually attract more high level attention so the weekend becomes a perfect storm with little time off the result. During port visits media interest is variable: it has ranged from a 25 strong scrum of cameras, microphones and notepads – plus interpreter - to less aggressive interviews with single agencies. Social media is being embraced slowly by NATO. Many nations are still in the "too risky" camp, but that is starting to change. Our independent, but tolerated by MARCOM, Twitter account @SNMCMG2 has attracted 558 followers since July last year, while Facebook remains popular and a good platform for photos and video with over 3000 followers (shameless plug!)

The group has been commanded from no less than five platforms, including the Romanian Ship REGELE FERDINAND (ex-HMS Coventry) during our high-profile visit to Batumi, Georgia. However, the lion's share of the work has been shouldered by HMS ENTERPRISE. This has proven not only the continued utility of the SVHO in its secondary role (MCM support), but also the capacity and flexibility of the staff to split and support me deployed forward in Turkish and Bulgarian MCMVs or a wonderfully familiar frigate. The outstanding support provided by the Cdr Phil Harper RN as the Flag Captain during this time cannot be overstated.

Making use of the spare capacity in ENTP, we also crammed in two weeks of TACDEV / Trials work with the MASTT UUV Team and forged a close relationship to improve innovation with the NATO Centre for Maritime Research and Experimentation (CMRE) at La Spezia. We will embark the AUV scientists from CMRE during the forthcoming Spanish and Italian MINEX. During the deployment we have also taken a total of eight AB2 Seaman Specialists from the PORFLOT GSP and trained them to OPS. Their experience, gained from a lengthy deployment in company with foreign ships, sets them apart from many sailors joining for their first ships.

Regrettably, the resource pressure biting across all navies is affecting SNMCMG2 force flow, which is characterised by short deployments and frequent rotations of ships. Since July last year, no mine hunter has completed more than three months in the task group. On average a new unit has joined SNMCMG2 every three weeks, either for an exercise or as a unit under formal TACOM. This adds to the workload on a core staff of seven – yes seven – which includes a foreign Chief of Staff and a foreign Assistant Staff Officer, while the N4 Logs/Eng, N3/5 Nav functions are delivered by the relevant HODs of HMS ENTERPRISE.



Work and Play: Combined fire fighting exercise and a sports challenge on completion.

The interoperability of the task group must be continuously rebuilt through busy training programmes at sea: there is no smooth trajectory towards war-fighting excellence. The complexity

of tasking a truly multinational MCM group can be seen in the diversity of sweeping, hunting, diving and ROV capabilities in service: every nation has a different diving limitation, no two

MCM risk directive matrices are the same (at least one nation has not moved on from 'alfa-bravo-charlie') and command tolerance of even moderate weather varies wildly across the force.



Romanian Ship Lt LUPU DINESCU conducts double oropesa mechanical sweep (those were the days!) in the Black Sea. Note the absence of cranes onboard the ex-Russian MHC.



TCG EDREMIT and ITS CROTONE raft with HMS ENTERPRISE during Ex BRILLIANT MARINER 2017.

Reflection

Making SNMCMG2 the best it can be, with aging ships alongside those recently built, operating virtually obsolete to state-of-the-art equipment, with differing language skills amongst the crews has taken tact, diplomacy and a great deal of patience. There are plenty of STANAGs in NATO, but no two ships are the same. Avoiding loss of face by accepting less than a finely-honed fighting edge is not instinctive in the Royal Navy. There remains a place for the painful truth and rest assured SNMCMG2 does not report 'green' across the board. But, taking everyone with you, to maintain the broader political cohesion of NATO as it adjusts and adapts in a complex theatre, is sometimes more important than sacrificing relationships on the altar of honesty. Thinking far enough ahead of the group to enable the discussions necessary for 'command by consent', rather than 'command by dictat' has been essential. Protocol, alcohol and cholesterol have all played their part in this collaborative process, but gaining the trust of such passionate and enthusiastic Commanding Officers has been the most rewarding element of the deployment. Empowerment and encouraging mission command has not always been easy, but has always unlocked the potential of some capable individuals being held back by a culture of authoritarian, centralised control. This is the small part I have contributed to a remarkable team effort. The attributes required for Formation

Command quoted at the start of this article apply equally to every one of the remarkable staff that I am privileged to lead. Achieving so much with the diversity of units, cultures, and tasks, in a diplomatic manner that has (mostly) avoided loss of face at all levels, has been inspiring. Would I volunteer to do it all again, knowing what I know now? Yes – in a heartbeat. This is truly a command like no other.



Skiing in Montenegro

“ *As one would expect, my father was, to me, a great chap of whom I was immensely proud* ”

TON Talk - A Young Lad Remembers

Lt Cdr Tom Stewart RNR, ex - Clyde Division, Bridge of Weir,

Reproduced with kind permission, The Ton Class Association

I have long considered putting down a record of my memories as a young lad aged 7 whose dad was a Lieutenant Commander RNVR, Senior Officer of seven trawlers of the 145th Group of Minesweepers, and in command of HMS ANDRE et LOUIS, (shown below at anchor in the Firth of Clyde), based on HMS FORTITUDE, the minesweeping base for the Clyde and Western Approaches. The memories I have are in bits, quite vivid, but of course, not necessarily exact! As one would expect, my father was, to me, a great chap of whom I was immensely proud. The ship was a big French trawler, taken at Dunkirk and had the scars of enemy action still in evidence.



HMS ANDRE et LOUIS c1943.

My story goes back to the summer holidays of 1943, of a school boy, and the occasional visit to the ship at Ardrossan, Greenock or sometimes Glasgow. Mines were dropped in the River Clyde during the blitz of Clydebank and after. Highlights that I recall are the Big Gun (12-pdr) mounted on the fo'c'sle, Lewis guns of the bridge wings and an Oerlikon aft. In the magazine there was a big box of spent .303 cartridges, which made me very popular at school. On one occasion the ship's cat had just had kittens but I was not allowed to take one home. There was a strange Hammer-like thing over the bows and a steel deckhouse amidships, lit by a bright green light which contained a diesel generator. I was also in awe of the shiny machinery in the engine

room that gave her eight or nine knots, depending upon the state of the boiler, the heat of the boiler room, the coal bunker - and the smell of it all! There was a rifle rack in the wheelhouse, just at the top of the companionway that led down to my father's

cabin. Climbing up the vertical ladder to the bridge was quite an adventure; the chart table stood at the back, and the voice pipes, the big Standard (magnetic) Compass, Aldis Signalling Lamp, and wooden box for the large Binoculars which had four interchangeable lenses – all very exciting! I wonder now at the differences, when I compare "father's bridge" with the relatively sophisticated array of instruments on the bridge of a Coastal Minesweeper. In order to stream the Loop it had to be manhandled by all hands walking aft and passing it over a wooden roller mounted on the stern. On recovery, again it was walked forward and round what had been the hatch of the fish hold where it was stowed on brackets welded at the ship's side to take the Loop – no nice big electric winch to take the strain. Just imagine on a cold winter's day, in a heavy sea and all you had for your freezing hands was a pair of string gloves, made by the knitting clubs of ladies of the Navy League as part of their "comforts for sailors". I have often thought it most unfair that the VITAL role which the minesweepers played in winning the war has never been

properly told [see below]. Is it because there was no glamour, no dash, or big headlines in the papers? These little ships performed miracles daily, keeping our seas open and safe for the convoys approaching their various destinations; ships of all kinds: Tankers, General Cargo Ships, great big Liners carrying entire American Army Divisions into the Clyde etc. This being done often in horrendous weather conditions and always under the threat of attack while the U-Boats continued to lay their mines as well as firing torpedoes.

I feel that it is important to recall the absence on equipment on those sweepers that we took for granted on our Coastals: Gyro Compass, Radar, Decca Navigator, Radio Telephone, a sweep deck designed for the task, albeit still crowded. Those wartime sweepers were slow coal burners heavily-reliant on the Mark One Eyeball! ANDRE et LOUIS was transferred to the French Navy in 1944 and participated in minesweeping the approaches to the D-Day Normandy landings.

German forces laid over 126,000 mines in European waters; sweeping them cost us 327 minesweepers, plus 4,600 sailors of all ranks. One of the best accounts of the work of the trawler minesweepers in WW II is the novel "Proud Waters" by Ewart Brookes, originally published in 1953. Set on the east coast, it describes the demands of their role, lifestyle, equipment, tactics, working conditions and support facilities. It is also chillingly exact about being under fire, losses sustained, plus the morale and humour of their ships' companies.

The Ton Class Association

The Ton Class Association is an Ex Royal Navy Organisation that brings together numerous members of the mine-warfare and diving communities not only from the Ton class minesweepers of the 50's and 60's but also more modern classes of sweepers and hunters. Their association magazine 'TON Talk' is published bi-monthly, membership costs £15 a year.

FOST Mine warfare & Diving Update

By Lt Cdr R Balfour RN, SWO MCD to FOST MPV

FOST MPV has been busy over the last year, not just as you would expect with the sea training side of life but also in our participation in a number of work strands designed to improve the training on offer and support squadrons with the N1 challenge faced by the crews. For those who have not noticed the subtle change at FOST MPV which has been occurring over the last 8 months the organisation has expanded with the addition of 7 extra staff (not a huge amount but significant when you consider we were only 42 strong to start with!) which is the first increase to manpower here for a very long time. This is a temporary measure designed to meet the increased training requirement brought about by the Batch 2 OPV entering service and delivering the additional SARC work required for each of the new hulls. That said this manpower uplift also enables MPV to respond and meet additional training bids in other areas where previously we would have had to decline.

FOST MPV has been involved with a number of working groups and projects in consultation with the Force Generating Authority, MCM1, MCM2 and FPS which have led to a number of initiatives that will directly benefit crews during their generation. MPV conducted a review of MCM training during KIPION work up as a result of the fall out of Ex Poseidon Assurance and some of the measures that fell out of that are described later in this article. We successfully delivered the NATO DCT for CATTISTOCK in the Portsmouth area in Dec 17 and will look to do so again in the future if the programme allows. We were involved from the start of Project JICARA to shape and deliver the run on of TYNE and MERSEY with crews from MCM2 and will work with the crews when they return to their HUNT.

The Force Generation process has not significantly changed for MCMVs deploying to KIPION over the past few years but during this time period there have been numerous small but

important changes to the OST MCM programme. We have worked diligently to update and improve the entire scenario, incorporating a variety of supporting assets to increase the level of realism and better exercise the Command teams' thought process and threat assessments.

In order to support units proceeding into Phase 2 of OST the CET/FIT day provides an opportunity to exercise State 2 manning and routines. With MW staff embarked we assist in the development of the Watch and Station Bill to ensure it is fit for purpose prior to starting MCM Ops. This has been well received with consistent feedback that it proves to be one of the most valuable days within the OST programme.

The ability to react correctly to a rapidly increasing threat is an essential skill for all deploying units; this is now assessed during the PATROLEX, an integral part of OST Week 3 which is augmented by a range of external assets including fixed wing and rotary aircraft. Combining the extensive range of responses and actions required from an MCMV in a high threat environment this serial now comprehensively tests units Force Protection capabilities.

The considerations necessary for transitioning between State 2 and State 1 are critical to success, requiring a careful balance of many contributing factors. In order to exercise Ships in this process we provide multiple opportunities for interaction with supporting surface assets (SMIT Craft), simulating various vessels from within the scenario. In particular this is exercised during Week 4 when units conduct a choke point transit in the Kilbrannan Sound with threats overlaid to create a complex situation which requires careful co-ordination between in company units.

Our Diving staff have not rested on their laurels and also continue to enhance and refine the training package to ensure that Clearance Diving Elements (CDEs) are provide with a



“ *FOST MPV has been involved with a number of working groups and projects* ”

relevant and challenging training package. Following the training mantra of crawl – walk – run, the CDEs are introduced to diving CDLSE in the manual configuration (DDIV locking collar removed) initially in a pool environment where we can safely develop essential EOR/EOD skills such as conducting a slow deliberate approach to ordnance. This is consolidated with an enclosed water dive where the skills learnt must be demonstrated whilst managing the additional task loading of vector search (with ARTEMIS) and using exercise mine shapes. The EMLB is also introduced requiring the CDE to complete a Raise Tow Beach (RTB) scenario. During the MCM phase the CDE will be tested in their ability to sustain high tempo diving operations, conduct MCM diving to maximum depth and prove themselves capable of delivering a neutralisation capability with a Diver Placed Charge (DPC). Throughout this period the staff will endeavour to coach and mentor the CDEs ability to apply DCOP regulations, produce a safe Dive Project Plan (DPP) and hone their ability to react to emergencies whilst ensuring a safe system of work is apparent during all diving activity.

Extensive effort has gone into updating all of the often overlooked but essential enablers. All FOST exercise minefields have been recently re-seeded to offer realistic targets for live firings and more opportunities for detection, classification and prosecution during the MCM phase. A Common Shortfalls Database (CSD) has been generated, providing an excellent and highly recommended resource to enhance pre-OST preparations. A complete review of all signals was conducted in accordance with the latest references providing a ready decode guide to units as they conduct their training. MCM EXPERT remains in service and is trained at OST, to aid in this and to coincide with Operational practice we have produced an OST database for use by all units conducting Tier 1 training.

We also provide a range of lectures throughout OST, covering: MCM Review, Oceanography, MCM Efficiency, Leadthrough Operations and MCM Force Protection. These are reviewed after each OST and updated regularly to ensure they remain in accordance with the latest references and direction.

We strive to maintain a direct link between our training package and the methodology of in theatre tasking to achieve this we mirror much of their documentation to provide a level of commonality of thought. These documents include the MID, OPGENs and the standing OPTASK NMW. To assist in theatre integration we also provide basic guidance on the use of CSS/ CENTRIXS, command conference call via J Chat and provide links to a range of useful CSS webpages.

All these continued improvements are driven by the FOST team and our response to the highly valuable feedback from OST units. It is important to collate, quantify and qualify your experience at OST and provide feedback to ensure we can continually improve our training and prepare your units to deploy trained and ready to meet the myriad demands of operational and contingent tasking. We receive and review all units IDRs and PDRs and as well as participating in the crew debriefs to DACOS OPS we convene our own Learning from Experience (LfE) committee to respond and amend training where appropriate.

FOST MPV is here to train and assure units during their FGen process but we are most certainly 'friendly forces' so please use us, programme allowing, we will look to support units at any stage of their generation and meet any request for assistance – your friendly MPV Fostie is only a phone call or e-mail away.....

Mil: 93255 6856

Dii: NAVY OP TRG-FOST N MPV SWOMCD



“ *The ships of the Hunt Class are the longest-serving warships in our Fleet today.* ”

Decommissioning, December 2017

By Lt Cdr S Jane RN, COMPORFLOT MCM2 Chief of Staff

Last year the MoD took the decision to decommission HMS QUORN and HMS ATHERSTONE. To mark the passing of these two ships with the respect and honour that reflects the hard work, commitment and dedication of the countless sailors which have called these ships their home, a decommissioning ceremony was arranged at Portsmouth Naval Base on Thursday 14 Dec 17 in the Vernon Complex Ship Hall.

The ships of the Hunt Class are the longest-serving warships in our Fleet today. They were introduced into Service through the 1980s to provide a modern minehunting and minesweeping capability, as well as a versatile platform from which fishery protection patrols and boarding operations have been conducted. At the time of their construction by Vosper-Thornycroft in Southampton, they were the largest ships to be built entirely out of glass-reinforced plastic.

Their prime weapon as they were brought into service was minesweeping. Alternatively they were capable of performing influence sweeps which would acoustically or magnetically mimic a ship's signature and thereby detonate the mines once they had passed over them.

However, during the 1990s it was identified that, with the ever more complex evolution of sea mines, a new approach was required. Accordingly, minesweeping was gradually phased out, and the focus switched to minehunting, which required ships' teams to identify, classify and dispose of individual mines. The role of the Hunts therefore

shifted to the use of sonar and Mine Disposal Systems, as well as their embarked complement of clearance divers and it is this function that has continued to the present day.

This HMS QUORN is the third Royal Navy vessel to bear the name. The first, launched in 1916, was a Hunt-class minesweeper. She was succeeded by the World War Two-era Destroyer, launched with pennant number L66 in 1944. Like many ships of her class, QUORN was employed for convoy protection between the United Kingdom and Iceland but, due to limited speeds and fuel efficiency, she was best suited to coastal patrol tasking, which she conducted up until 3rd August 1944 when she was sunk by a German explosive boat off the Normandy coast. The third and current HMS QUORN was launched in 1988, the last in her class to be commissioned. The presence of her Ship's Company in the Gulf immediately prior to the 1991 conflict is notable for their having trialled the crew rotation process that has since become such a successful facilitator for our continued MCM contribution in the Gulf region. The reports from this time make for fascinating reading: the Crew were working amidst extreme international tensions and with the very real chemical threat from Iraq looming large. In 2006, QUORN was involved in a search in Kåfjord in Norway for a miniature submarine lost during the raid on the German battleship TIRPITZ. The Crew endured arduous days at the tail end of the Nordic winter that saw the seas freezing around them. The following year, she disposed of a legacy German G-series mine in the vicinity of the Nab Tower, Portsmouth.



HMS ATHERSTONE is also the third ship to bear the name. Like QUORN, the first ATHERSTONE was launched during the First World War, not as a Hunt, but as a Racecourse-class paddlewheel minesweeper. The second ATHERSTONE, pennant number LO6, was another Hunt-class destroyer of the Second World War era; tasked for much of the war with coastal and channel patrols, she also saw service in the Mediterranean. Launched in 1986, the current ATHERSTONE, M38, has seen varied and active service. She was engaged in minesweeping operations during the First Gulf War, seeing a high mine-disposal rate during the height of the conflict.

The removal from service of these two Ships does not indicate a reducing need for mine counter-measures activity in the world. In the modern era, when 90% of the world's freight and crude oil is transported by sea, the importance of a capable and credible minehunting capability to keep routes open, and safe for shipping cannot be overstated. As with the other ships of their class, ATHERSTONE and QUORN have seen extensive service in the Arabian Gulf, ensuring that freedom of navigation is maintained and that international

trade is guaranteed. Their sister ships continue at the forefront of mine countermeasures activity in the Gulf, the Bab-el-Mendeb straits and supporting, indeed commanding, NATO efforts.

So in summary, these tough, capable ships have, between them, sixty years of operational service, and it is naturally a sad day that sees them passing out of service. However, their decommissioning comes at the end of a job well done, of which every single man and woman who has served in them and those that have supported them should be immensely proud. It also gives us the chance to look back with satisfaction at the careers of these two ships, and simultaneously to a bright future. The Royal Navy is regenerating and reinvigorating its capabilities, and with exciting possibilities being explored in the area of remote-controlled minehunting the Royal Navy is about to enter a new era of mine countermeasures capabilities.



HMS ATHERSTONE

Lt Cdr	J Bailey	08 Jul 86	29 Nov 88
Lt Cdr	P J Long	29 Nov 88	08 May 90
Lt Cdr	N Davies	08 May 90	05 May 92
Lt Cdr	N C Funnel	05 May 92	24 Nov 92
Lt Cdr	C A Snow	24 Nov 92	29 Jun 93
Lt Cdr	B Lambert	29 Jun 93	26 Jun 95
Lt Cdr	P Lambourn	26 Jun 95	06 Dec 96
Lt Cdr	P Bennett	06 Dec 96	25 Mar 98
Lt Cdr	A J Adams	25 Mar 98	08 Nov 98
Lt Cdr	M T G Durkin	08 Nov 98	23 Aug 00
Lt Cdr	M J Evans	23 Aug 00	23 Feb 01
Lt Cdr	M Atkinson	23 Feb 01	08 Aug 02
Lt Cdr	N B Washer	08 Aug 02	14 Jun 04
Lt Cdr	R A Pethybridge	14 Jun 04	21 Jul 06
Lt Cdr	G Dale-Smith	21 Jul 06	12 Sep 07
Lt Cdr	D H Morgan	12 Sep 07	04 Jul 08
Lt Cdr	S A Holloway	04 Jul 08	13 Dec 08
Lt Cdr	M T E Bowden	13 Dec 08	13 Apr 09
Lt Cdr	G W D Ruddock	13 Apr 09	21 Jul 09
Lt Cdr	C S Nelson	21 Jul 09	15 Jan 10
Lt Cdr	G W D Ruddock	15 Jan 10	29 Oct 10
Lt Cdr	A R Ingham	14 Dec 10	25 Jun 11
Lt Cdr	R J Bird	25 Jun 11	8 Aug 11
Cdr	R J Bird	22 Aug 11	30 Aug 11
Lt Cdr	J Hains	30 Aug 11	11 Dec 12
Lt Cdr	B Vickery	11 Dec 12	15 Jun 13
Lt Cdr	S J P Rogers	15 Jun 13	07 Dec 13
Lt Cdr	A J E Smith	07 Dec 13	28 Jun 13
Lt Cdr	S Pressdee	28 Jun 13	15 Jan 15
Lt Cdr	J M Cromie	15 Jan 15	15 Jul 15
Lt Cdr	M J Headley	15 Jul 15	28 Aug 16

Battle Honours of HMS ATHERSTONE

English Channel	1940-1942
St Nazaire	1942
North Sea	1942-1943
Atlantic	1943
Sicily	1943
Salerno	1943
Mediterranean	1943
South France	1944
Adriatic	1944
Kuwait	1991

HMS QUORN

Lt Cdr	N D B Williams	07 Nov 88	07 Feb 91
Lt Cdr	J A Humphreys	07 Feb 91	09 Feb 93
Lt Cdr	M Harriman	09 Feb 93	08 Mar 94
Lt Cdr	J J Ovens	08 Mar 94	9 Jan 95
Lt	S Dainton	09 Jan 96	07 Jan 98
Lt Cdr	M C Jones	07 Jan 98	17 Aug 99
Lt Cdr	M C Allibon	17 Aug 99	21 Jun 00
Lt Cdr	J A Scott	20 Jun 00	09 Dec 01
Lt Cdr	M I Newland	09 Dec 01	20 May 02
Lt Cdr	M Hart	07 Jun 02	11 Jul 02
Lt Cdr	M Lister	11 Jun 02	26 Jan 03
Lt Cdr	S M Allen	26 Jan 03	09 Dec 03
Lt Cdr	D H Wilkinson	09 Dec 03	21 Sep 04
Lt Cdr	T A Price	21 Sep 04	17 Jan 05
Lt Cdr	R Allen	13 Mar 05	03 Mar 06
Lt Cdr	M Taylor	03 Mar 06	10 Jul 07
Lt Cdr	M T E Bowden	10 Jul 07	13 Dec 08
Lt Cdr	S Holloway	13 Dec 08	20 Jan 09
Lt Cdr	T Neild	20 Jan 09	15 Dec 10
Lt Cdr	J E Humphries	15 Dec 10	31 Mar 11
Lt Cdr	P E Dennis	1 Apr 11	08 Dec 11
Lt Cdr	S J P Rogers	08 Dec 11	10 Jul 12
Lt Cdr	J E Buck	10 Jul 12	11 Jan 13
Lt Cdr	S P Kelly	11 Jan 13	13 Jul 13
Lt Cdr	E Stack	13 Jul 13	11 Jan 14
Lt Cdr	S E Yates	11 Jan 14	23 Jul 15
Lt Cdr	J Baker	23 Jul 15	04 Sep 15
Lt Cdr	J M Cromie	04 Sep 15	07 Apr 16
Lt Cdr	C M O'Neil	07 Apr 16	18 May 16

Battle Honours of HMS QUORN

North Sea	1941-1944
English Channel	1942-1944
Normandy	1944



MINE COUNTERMEASURES AND HYDROGRAPHIC CAPABILITY (MHC) TAKING THE MINE OUT OF THE MINEFIELD

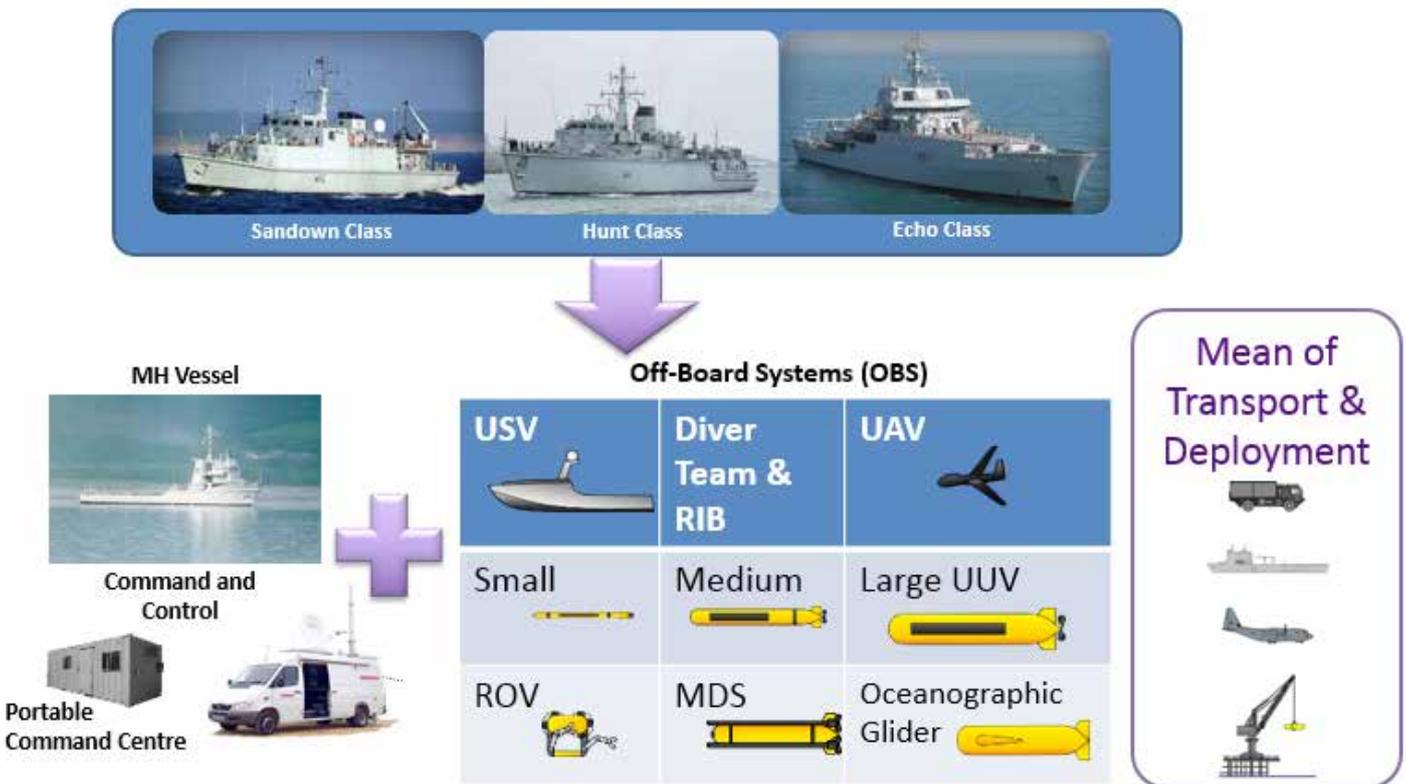
By Cdr M Atkinson RN, MARCAP Minor War Vessels, NCHQ

What is MHC?

The Royal Navy is working closely with a DE&S project team to bring novel maritime autonomous systems into operational reality to replace the MCM and Hydrographic capabilities provided by the HUNT and SANDOWN Class MCMVs, SVHOs and ancillary units. MHC will deliver a modernised capability based on Maritime Autonomous Systems (MAS) deployed from steel ships or from ashore.

“ MHC will deliver a modernised capability ”

The Mine Countermeasures and Hydrographic Capability (MHC) team is conducting an ambitious programme of technology demonstrators supported by the Navy’s Maritime Autonomous Systems Trials Team (MASTT).



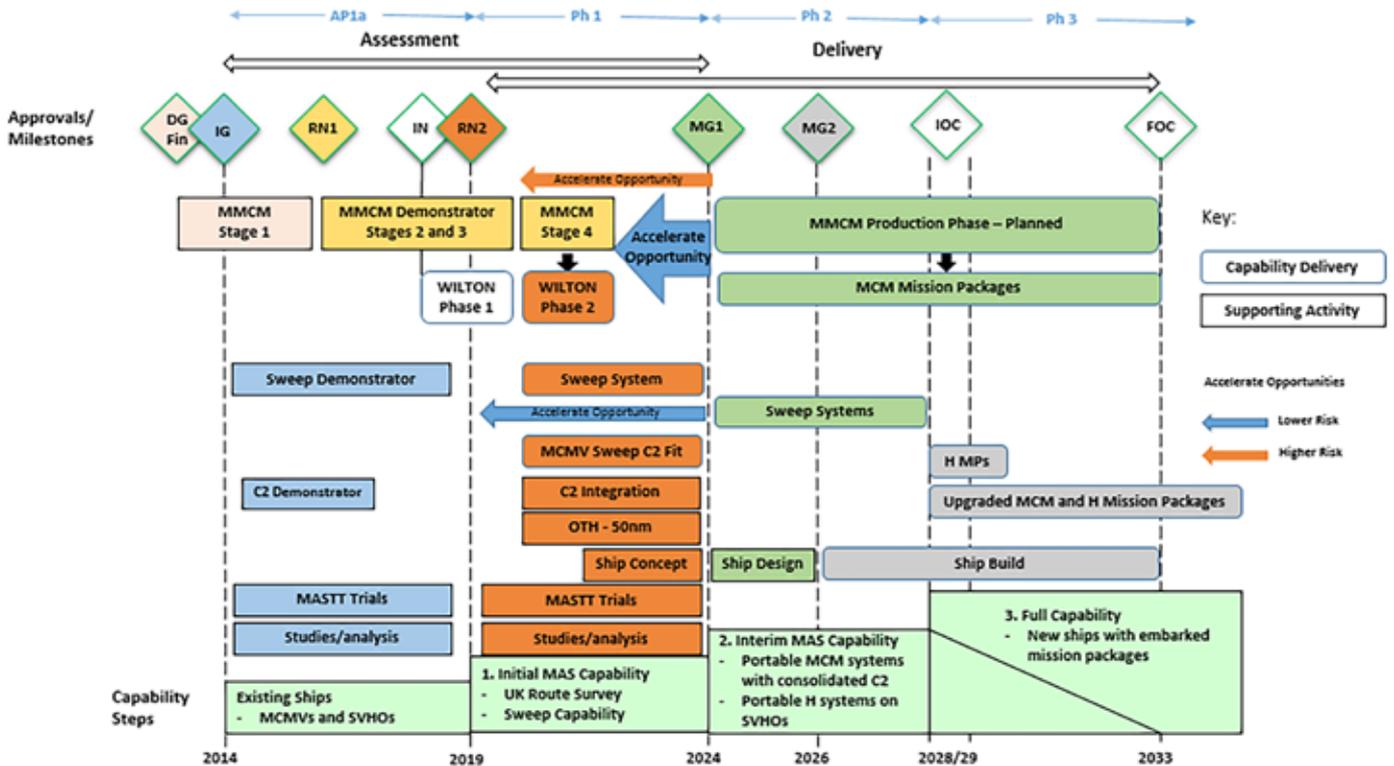
Innovative Procurement

MHC is developing a flexible, incremental procurement strategy. Breaking the programme into stand-alone, yet coherent, capabilities will exploit quick wins, contain risk and limit individual investment decisions.

When will MHC deliver?

Initial capability insertion will be delivered in parallel with ongoing assessment work. The high-level plan below is constrained by the funding profile but shows opportunities to accelerate the programme. It assumes that MCM mission packages are delivered via a FR/UK MMCM production phase.

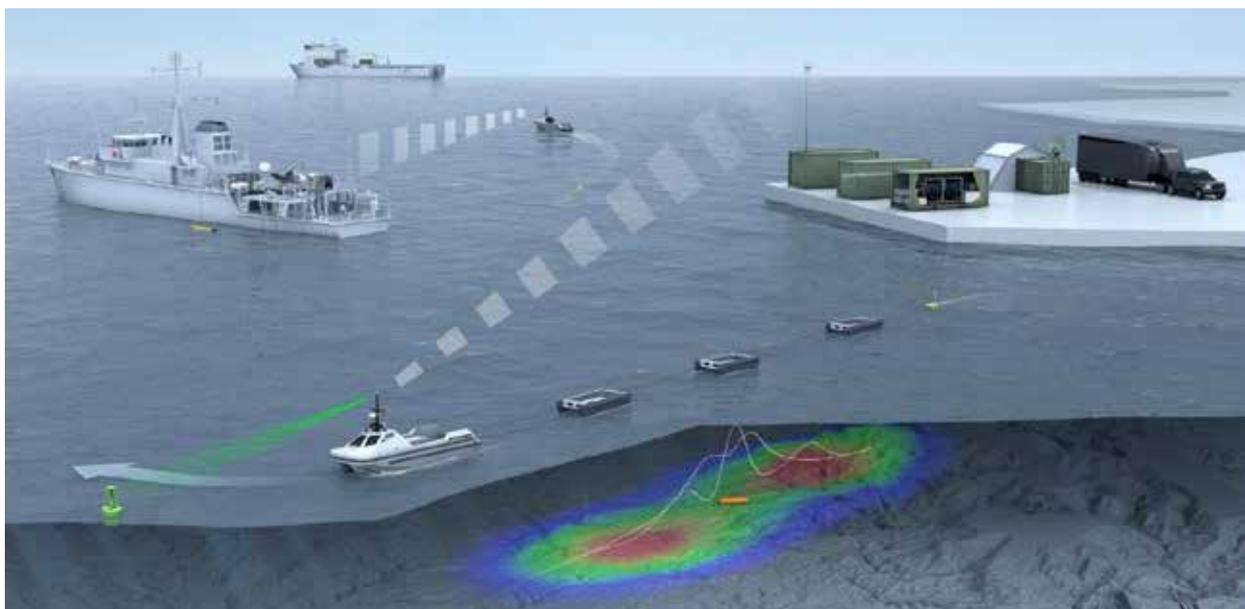
Indicative MHC Programme - Based on an MMCM Production Phase



What is MHC doing now?

First off the blocks is an autonomous minesweeping demonstrator which is now in the sea trials stage. This system consists of an unmanned surface vessel (USV) which tows the

sweep equipment and operated from outside the minefield via a land- or ship-based display. If successful, this system could soon form the basis for an operational capability.



CGI of Autonomous Sweep System

“ Known as the MMCM Programme, this is being delivered in collaboration with France and is expected to complete initial trials in early 2020.



RN Launch (RNL) HUSSAR, RN's first autonomous USV Sweep undergoing trials off Binclieves.

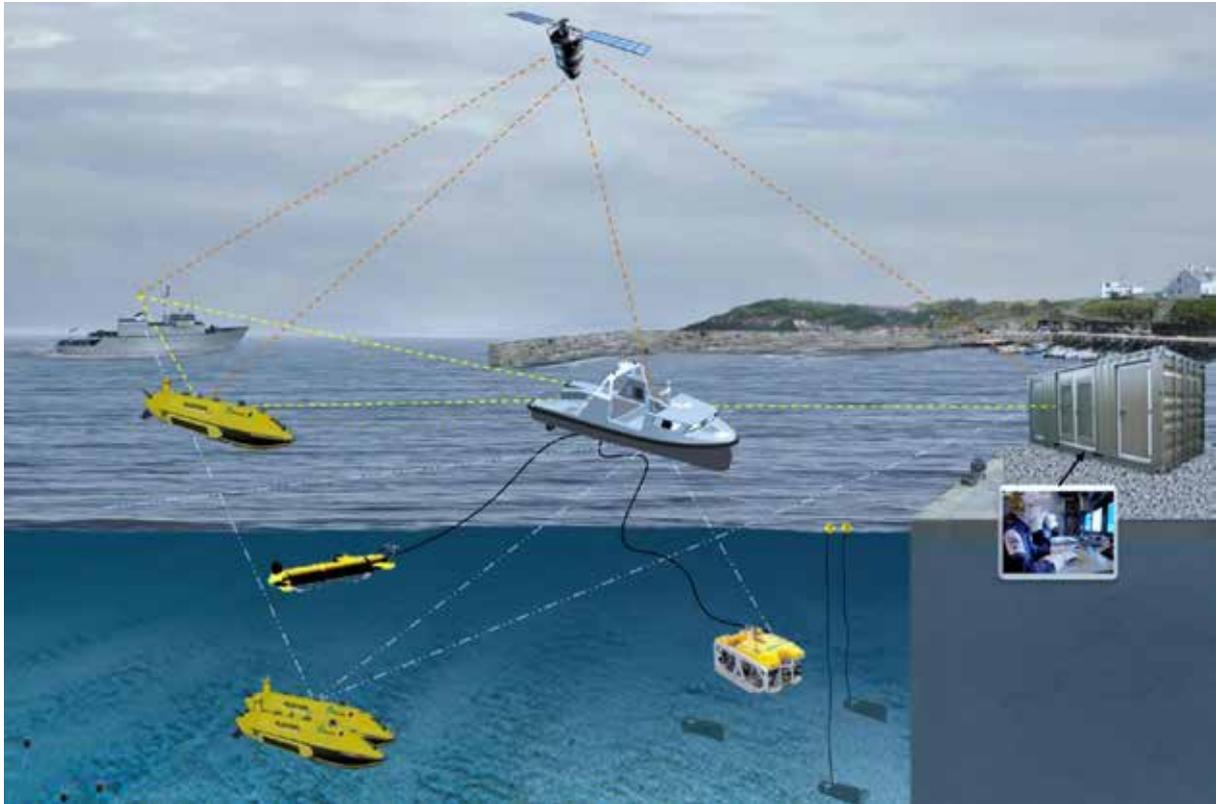


MHC is portable - three CABs stowed in 20' ISO ready for transportation

Left: RNL HUSSAR with one of her three Coil Auxiliary Boats (CAB) alongside during trials.

Also in development is an autonomous minehunting system. Also featuring a USV and a remote operator station, the system uses autonomous underwater vehicles (AUVs) and a towed sonar to detect mines which are then detonated with

disposal charges placed by a remotely operated vehicle (ROV) deployed from the USV. Known as the MMCM Programme, this is being delivered in collaboration with France and is expected to complete initial trials in early 2020.



CGI of Autonomous Minehunting System



RNL HARRIER with T-SAM embarked. Towed HARRIER scheduled for delivery 23 Mar 18.



ALISTER 27 during trials. Note size of vehicle compared to operating personnel.

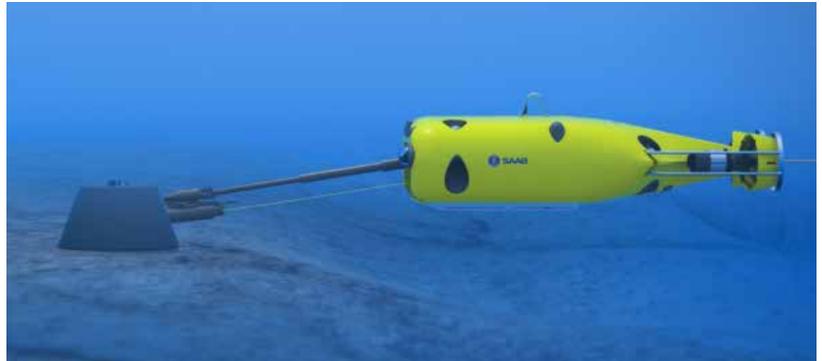


THALES workboat deploying T-SAM Synthetic Aperture Sonar (SAS) during trials.



ALISTER 27 - large USV incorporating SAS.

“ *MASTT trials are building RN experience and understanding of MAS. Studies are defining technical solutions and costs estimates.* ”



SAAB's Multi-Shot Mine Neutralisation System (MuMNS) ROV incorporating 3 disposal charges.



MASTT's RNL HAZARD undertaking UUV autonomous M500 ROV launch and recovery trials using Remus 600.



MASTT operating.

What is Project WILTON?

Following the successful Unmanned Warrior 16 exercise, during which the potential of a range of autonomous systems was demonstrated, the First Sea Lord has announced plans to deliver an initial UK-based autonomous MCM capability.

Known as Project WILTON, this is expected to get underway later in 2018 and will be an important first step in gaining operational experience of autonomous technology and will build on the technology demonstrators.

Mine Warfare SCHOOL



LSMW Course 17/01



POMW Course 17/02



LSMW Course 17/02



MWO Course 17/01



LSMW Course 17/03



MWO Course 17/02



POMW 17/01

Top of the Class Awards 2017
POMW 17/02 - LS O'Dowd
MWO 17/01 - Lt Joshi RN
MWO 17/02 - Lt Bethwaite RN

DEFENCE DIVE SCHOOL



PO(D) Course 16/02



PO(D) Course 17/01



LS(D) Course 17/02



MCDO Course 16/01



MCDO Course 16/02



From a manning perspective, we continue to deliver motivated people to the front-line in a timely fashion

Career Manager's Update

By Lt Cdr S White RN, MCM Career Manager

The MCM community continues to routinely deliver considerable strategic output in three disparate JOAs, with Command of COMUKMCMFOR (the only RN Battle Staff at R0 ready to 'fight tonight') and SNMCMG2, and the only RN OF5 (CTF52 DCOM) in a direct Chain of Command with the USN. From a manning perspective, we continue to deliver motivated people to the front-line in a timely fashion, and whilst we are in a better state than other branches, we continue to face a number of challenges, some of which are generic (lack of inflow), some are new (growing the required strength to fill new liability driving jobs as we grow the RN), and some remain constant (VO, medical downgrades, flow to PWO and SASB1/2).

Growing a sustainable MCM Community

From a manpower perspective, 2017 seen the RN growing in size for the first time since WWII. These new Liability Driving jobs were seen most directly within the MCM community with the creation of a permanent Mine Warfare Battle Staff brigaded within the Maritime Battle Staff, and the new Chalfont Diving Group as part of the expanded Fleet Diving Squadron.

However, whilst the creation of these new jobs is the driving force to grow the Strength for the MCM community in the future, it takes time to grow these individuals through RALEIGH and BRNC and into the Fleet. The interim period between establishing these new posts and growing the required Strength to fill them is a challenge, but it also brings an opportunity, and both of these initiatives have considerable strategic output which helps continue to raise the profile of the MCM community. It also provides additional career opportunities for individuals.

We are slowly moving in the right direction of growing the required Strength for the MCM community (thanks to the support from the Junior Officer CM, and Warfare Branch

Manager) by getting more individuals into the MWO sub-specialisation with an associated 4 month training pipeline (vice 16-18 months for MCDO) which offers a quicker route to PWO whilst still gaining early Sea Command experience. We do not struggle with MCDO volunteers however a slower progression from BRNC through IFT and through into 1st complement assignments and achieving the BWQ, due to fewer 'training' bunk spaces on operational ships, has the knock-on effect of fewer starting MCDO course. Recent low numbers getting through the diving and EOD phases of course (a combination of failures, medical downgrades, and voluntary withdrawals) has also hampered growth by slowing down GTS to the Fleet, however whilst this causes problems in the short-term, I do not see this as a worrying long-term trend.

Medical downgrades continue to erode Useable Strength, whilst concurrently increased tasking due to less hulls and a seemingly increased demand for exercise augmentees (Joint Horizon, Joint Venture, Joint Warrior, Gulf Shield, Key Resolve) all add an additional burden to a very tight plot, which manifests at OF2 level in gaps in front line ships and diving units.

Growing the RN and the MCM community in an efficient manner falls to the Branch Managers (BMs) being able to model the Strength required for the future based on a number of factors. This is already complicated, but made more so when individuals are not in correctly tagged jobs. PWO MCDs filling OF3 MCD jobs does nothing to help this modelling or to help the 25% deficit in the PWO plot and whilst PWO MCDs filling more mainstream PWO jobs will not solve this problem, it is vital we ensure a holistic approach to the manning problems we face. All this should be known to individuals however to make it clear, once PWO MCDs have achieved O.P.S. and complete their 1st

tour PWO job at sea, they will then move to a 2nd tour job (as most sub-specialisations do) as PWO MCDs, as a COS within MWBS and/or MCM Sqds. The aspiration is that they will then be competing for a SASB1 Command assignment, otherwise they will move between mainstream PWO jobs and PWO MCD jobs.

All PWOs, regardless of sub-specialisation (ASW, AWO, MCD, MWO, N) will be tagged to 1 of the 2 PWO CMs (OCM XU for MWO and MCD) to ensure the overall numbers of PWOs can be more easily tracked and modelled by the BMs. However OCM XMCD will still act as the MCM SME and be involved in every stage of their career development. You will see no difference in your interaction with WB, other than potentially speaking jointly to OCMs XU and XMCD, and you should continue to concentrate on your current job whilst striving towards CQ1/2 and SASB1.

Own your career and your OJAR

Many thanks to all individuals and employers who have supported me during my tenure as the MCM Career Manager. It is not an easy job to grow the MCM community to meet the current and future demands of Defence, however the pragmatism shown in coming up with novel solutions to emerging problems has greatly helped. I hand over to Lt Cdr Jason White and in order to assist him in this role, I would ask you all to ensure your JPA details are completely up to date. This not only includes being in-date for mandated checks (RNFT, medicals, ISSC) but also that your NoK and contact details, including a civilian email address, are correct.

Please also continue to take charge of your own careers by ensuring your Objectives and Career Aspirations are correct on JPA, and getting booked onto JOLC2 RNTM 07-038/17 and NAC 2017DIN07-082 which are pre-requisites for ICSC(M).

Also, please be aware that the Definition of Merit for Promotion now encompasses a minor change iaw 2018DIN01-032.

*“Suitability, capacity and having sufficient experience to be employed in at least the next higher rank **alongside a proven track record of caring for and developing subordinates.** Factors such as: consistency of success, especially in the face of particular challenge; leadership and management acumen; **judgement and the ability to make things happen, especially through innovation, effective management of risk and exploitation of opportunity;** ability to think on a level above peer group; potential flair for command, future employability, in specialist and/ or broader appointments, all constitute merit.”*



Fleet Diving Squadron

by Cdr Del McKnight RN (Commanding Officer FDS)



The Squadron

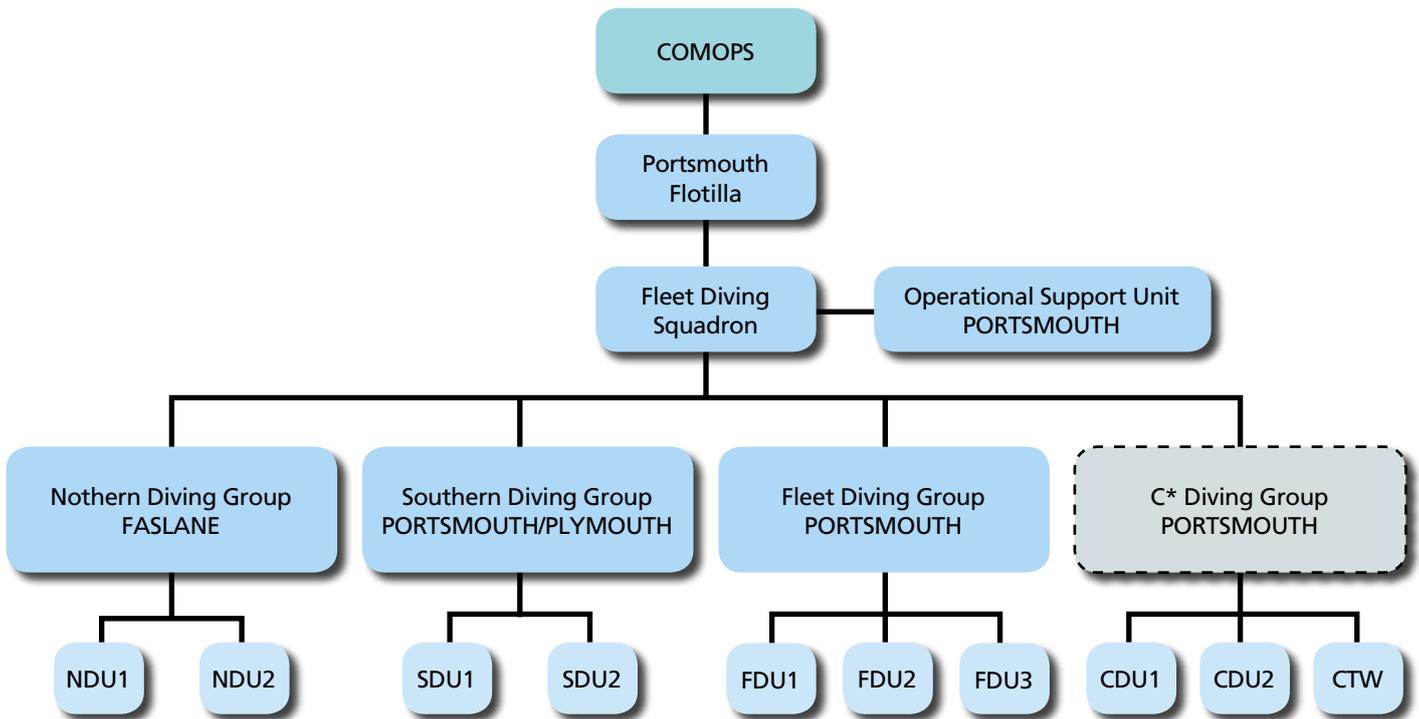
All Royal Navy personnel will have visited a small island located off the northern shore of Portsmouth Harbour, usually to jump into the dark murky waters of the old torpedo testing lake wearing an orange survival suit and immediately trying to locate the safety of a 50 man life raft!

houses the Fleet Diving Squadron (FDS) Headquarters.

The HQ building contains 8 of the 10 Diving Units that make up the Fleet Diving Squadron, namely Chalfont Dive Group (CDG), consisting of Chalfont Dive Unit 1, 2 and Chalfont Training Wing; Fleet Diving Group (FDG), which is made up of Fleet Diving Unit 1, 2 and 3; Southern Diving Unit 2 (SDU2) and the Operational Support Unit (OSU). The other 2 units are located within HMNB Clyde and HMNB Devonport, which are Northern Diving Group (NDG) and Southern Diving Unit 1 (SDU1) respectively.

“ *Horsea Island is also home to multiple RN organisations* ”

However, most may not have realised that Horsea Island is also home to multiple RN organisations, but in particular it



Operationally Focused

FDS thus comprises of over 165 highly motivated and dedicated Royal Navy Clearance Divers, whose training and unique skill set enable them to support UK interests on a global scale, whether that be with diving or Explosive Ordnance Disposal (EOD) support to both the surface and sub-surface flotillas, but also as bomb disposal experts both at home and abroad. In 2016, the squadron was called out

on 442 EOD tasks and 11 Improvised Explosive Device (IED) tasks within the UK in support of OP TAPESTRY (Military Aid to Civilian Authorities (MACA)), which equates to a task approximately every 19 hours. The squadron supports a further 9 named RN operations and 4 defence tasks, with 63 combined UK and global tasks taking place during 2016.

In addition FDS is employing Mine Warfare personnel to man and operate the increasing number of Offboard Systems, such as the REMUS 100s that are integral to the Expeditionary MCM efforts of the Fleet Diving Group and the Underwater Force Protection for QEC.

As you can see from the statistics, the squadron is extremely busy, with 67% of personnel held at R2 readiness (5 days

notice to move) or higher. In order to maintain this level of operational profile the squadron has a mixture of RN and civilian support staff and as the squadron's diving/EOD equipment is mission essential and subject to rigorous maintenance regimes, FDS employs a team of 11 Marine Engineers to ensure its equipment readiness.

The Teams

As stated FDS is made up of 4 Groups. The first is Chalfont Diving Group, or CDG. A new team, tasked with developing operations on Royal Navy submarines. They spend much of their time either in Horsea Island on a new in water training system, or in Faslane working on the Chalfont Training Rig (CTR) establishing the routines for this future capability.

Fleet Diving Group (FDG) is split into 3 very distinct teams. Fleet Diving Unit 1 (FDU1) conducts Maritime Counter Terrorism with elements from across the South of England. They are experts in discrete long endurance swims using oxygen rebreathing devices, climbing the sides of ships and offshore installations and assault Improvised Explosive Device Demolitions. This team recruits only Leading Divers and Senior Rates, and as can be imagined are a tight knit community. This arduous task takes a huge amount of practice and the unit are often found to be wandering in at odd hours of the day and night having just completed or preparing for the next practice, exercise or training course.

Fleet Diving Unit 2 (FDU2) are the Expeditionary Very Shallow Water (VSW) Mine Counter Measures (MCM) experts. The team called upon to ensure

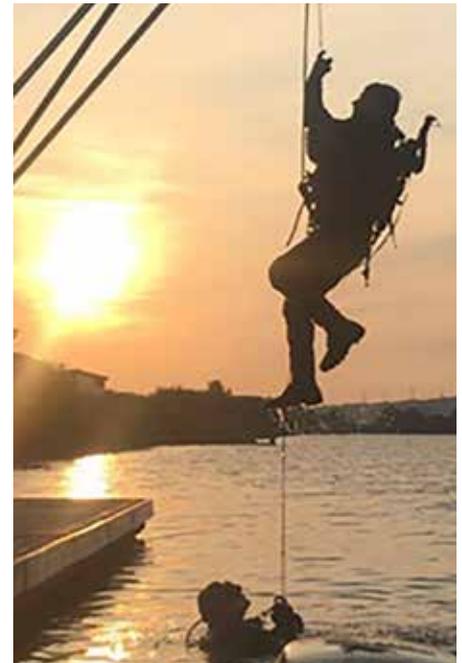


FDU2 Divers practicing beach drills.

any beach that the Royal Marines and the Amphibious Task Group need to use is clear of mines and other dangerous ordnance. Again the team often practice long swims, discreetly at night and then use REMUS to locate the mines and increasingly Hand Held Sonar to relocate, identify and dispose of them. This involves close working relationship with advance elements of 3 CDO Brigade and a high level of fitness and diving competence. FDU2 are also lead on the Under Water Force Protection teams that fly out to join ships overseas. They will conduct jetty and ship's hull searches to ensure no device has been placed that will endanger the ship, and have the ability once it is discovered to render it safe or dispose of it.

Finally Fleet Diving Unit 3 (FDU3) are the Expeditionary Mine Counter Measures (MCM) specialists. Primarily focussed in recent years on supporting Gulf Operations they participate in several exercises a year in the region as well as the wider training and development exercises ordered by Northwood.

The 2 Area Dive Groups are similar, but different. Northern Dive Group (NDG) is made up of two units morphed into one, with numerous tasks from the MACA EOD to supporting the Continuous at Sea Deterrent (CASD) in Faslane. In addition they are on call to supply divers to the NATO Submarine Rescue System (NSRS). A high readiness, tri nation element, made of French, Norwegian and UK personnel that would deploy, using a mini submersible, to rescue submariners from a stricken submarine lying on the sea bed.



FDU1 Divers practicing ladder climbs at dusk.

Southern Diving Group (SDG) is geographically split between Portsmouth (SDU2) and Plymouth (SDU1) but again does MACA EOD tasks as well as supporting the surface ships based in the south of the UK. They too are on call for the Submarine Escape, Rescue, Abandonment and Survival teams, on call to deploy with Recompression Chambers and offer therapeutic decompression to submariners that have conducted a free ascent from a stricken submarine.

Both teams also deploy regularly to areas where old ranges or munitions are found. SDU1 for instance deploy 3 times a year to the Gower peninsula near Swansea where they remove or make safe dozens of old legacy mortar and artillery rounds, many of which are chemically filled and remain quite potent and dangerous to this day.

“ *The Fleet Diving Squadron is an interesting place to work* ”



NDG divers recover the first Highball bomb to the Dive Support Vessel RMAS Moorfowl.

The Activities

NDG were recently asked to help a project to recover Barnes Wallis bouncing bombs from the bottom of Loch Striven, where they had lain since World War II. The Loch had been the site of trials conducted for a type of “Highball” bouncing bomb, the navy counterpart to the dambusters bombs that were used so successfully. The concept was to use it against the German ship Tirpitz that was menacing the Arctic convoys from the safety of the Norwegian fjords, but they were never used in anger. Several bombs were recovered and they will be displayed at the Brookland Museum in Surrey and the DeHavilland Aircraft Museum in Hertfordshire after they have been preserved.

SDU2 have recently completed a MACA task in central London, where a German 500KG bomb left over from the Blitz, had to be removed from the vicinity of London City Airport. The Task involved using lifting equipment to raise the bomb from the sea bed, out through a lock and down the Thames, a transit that took in excess of 10 hours. The device was finally detonated in a military range the day after it was laid back to the sea bed and high ordered, proving that the explosive within was still very much viable.

Southern Diving Unit 1 had an equally exciting task when tasked to help out at an overturned fishing vessel. There was the possibility of personnel still being inside and thus speed was of the essence. Despite already being on another task, they dropped everything and within a short space of time were taking the Dive Support Vessel and the duty team out to rendezvous with HMS ARGYL and the stricken ship. Diving on the upturned fishing vessel was highly dangerous, with the possibility of it losing buoyancy at any moment and sinking, taking anyone inside with it to the depths. However the two divers did not hesitate and searched the hull, recovering a single body, recovering to the DSV just as the fishing vessel did indeed sink beneath the waves.



SDU2 divers that removed the German 500KG bomb from central London.



SDU1 divers that attempted to rescue personnel from the overturned FV Solstice.



FDU3 divers meeting the UK PM Teresa May.

But all the excitement has not been left to the Area Dive Groups, FDG returned at the end of last year from participating in a multinational exercise in Guam. The Western Pacific Naval Symposium exercised the regional navies, including the Australians, Koreans, Singaporeans, and Japanese in surveying and clearing a port after a simulated tsunami had struck. The opportunity to work closely with the Japanese Maritime Self Defence Force was very enlightening and FDU3 found they had much in common with the Japanese divers. They were subsequently asked to visit Japan and brief the visiting UK Prime Minister on what they had been doing to further the close links between the two maritime forces.

Finally SDU2 and the MW team employing REMUS 100 were instrumental in ensuring the sea bed and jetty had been searched prior to HMS QUEEN ELIZABETH arriving for the first entry, and every subsequent entry, into Portsmouth. They have also been heavily involved in developing the underwater force protection plan for the new aircraft carrier along with FDG.



SDU2 divers meeting HMS QUEEN ELIZABETH on her first entry to Portsmouth.

Summary

In truth I could have put a hundred different activities in the activities section, from parachute training to diving on the World War II carrier HMS HERMES in Sri Lanka, from numerous Improvised Explosive Device call outs to unwrapping a fishing net from around an allied submarine in Plymouth. The Fleet Diving Squadron is an interesting place to work,

one that provides varied employment, not just for divers but increasingly for Mine Warfare and Engineers. The options to travel and meet people, including the UK and Japanese Prime Ministers! Drop in and visit some time, there are always more dits to spin! Better yet come and work in the Squadron and be a part of the team!!

“ MASTT evolved following the demise of the Fleet Unmanned Underwater Vehicle Unit (FUUVU)

What is MASTT?

By Lt Cdr J Hunnibell RN, Commanding Officer MASTT

“MASTT, they look like they have some fun. Swanning about in MTP and cutting their own detail in hotels.. What exactly do they do?” Unless you’ve got prior experience working in the Maritime Autonomous Systems Trials Team (MASTT), these are possibly the only thoughts that you’ve had regarding them up until now. So to set you straight.

MASTT evolved following the demise of the Fleet Unmanned Underwater Vehicle Unit (FUUVU), which was predominantly tasked with OPs PIKE and ROCOCO route survey tasking around the UK in conjunction with the Fleet Diving Squadron (FDS). FUUVU was taken as a savings measure following defence cuts in 2010; its manpower liability and REMUS Autonomous Underwater Vehicles (AUVs) were re-shaped and re-tasked into a trials and development unit, with financial and command lines of responsibility shifting across to Maritime Capability and the Fleet Hydrographic and Meteorological Unit in 2012, thereby safeguarding the RN’s stock of AUVs. Aside from 1 LS(HM) and 1 LS(Wtr), MASTT is made up entirely of MW ratings, headed by a Lt Cdr MCDO.

So what does MASTT do?

The unit’s name is highly misleading – Maritime Autonomous Systems Trials Team would suggest that MASTT trial all types of autonomous systems, incorporating ASW, ASuW, AAW and the plethora of Unmanned Underwater Vehicles (UUVs), Unmanned Surface Vehicles (USVs) and Unmanned Aerial Vehicles (UAVs) that those disciplines bring. The team actually only conducts autonomous MCM system trials, on behalf of the Mine Countermeasures and Hydrographic Capability (MHC) Project Team in DE&S Abbey Wood. Although the equipment and concepts on trial are almost exclusively MCM in nature, MASTT is also involved in supporting some HM-related trials in

conjunction with the Fleet Hydrographic and Meteorological Unit (FHMU), again directed by the MHC Team.

What is MHC?

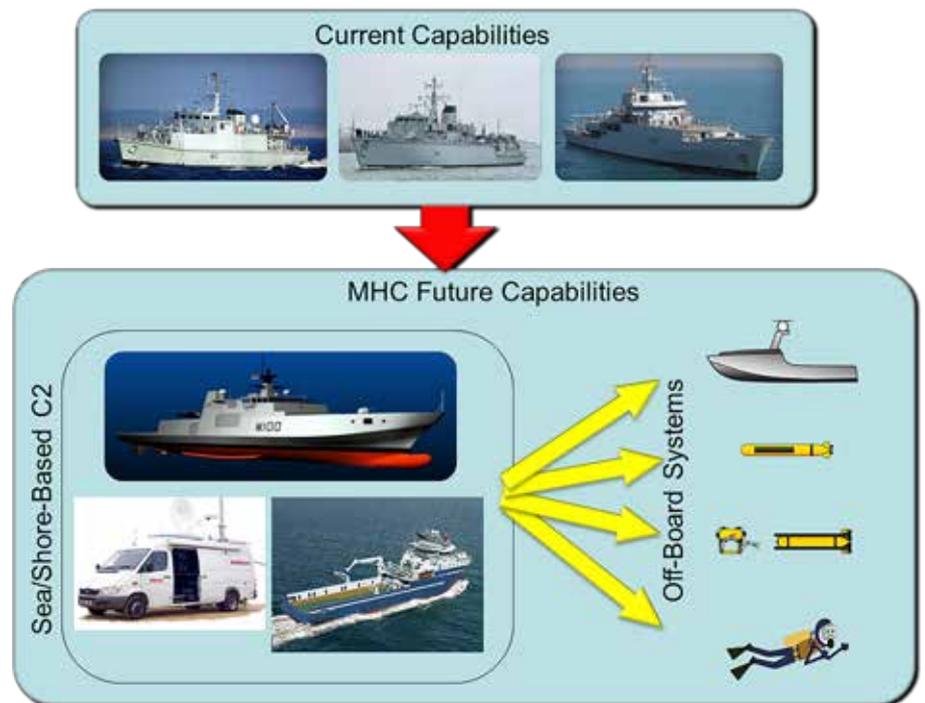
The MHC Concept is covered elsewhere in this issue of MAD – but briefly, it’s a 10-year DE&S project which ultimately seeks to replace existing MCM and Hydrographic capabilities (Hunt/Sandown and Echo-class Ships) with as far as possible, Off-Board Maritime Autonomous Systems (MAS). In theory, MHC will deliver a modernised MCM and Hydrographic capability, based on MAS, deployed from steel ships or from ashore.

What has MASTT been up to?

MASTT’s trials activities have generally revolved around its existing outfits of AUVs (REMUS, plus others), and ROVs; working in conjunction with the likes of DSTL, FHMU and FDS, attempting to provide the MHC team with data on the

reliability and effectiveness of existing technologies (such as navigational accuracy, and mine detection probability).

Generally speaking, Portsmouth and the Solent is not the best sea area for these types of trials (due to heavy traffic, lack of depth and high tidal stream), so MASTT will send an element of manpower to run these trials out of a geographically appropriate area which also offers decent logistical support and accommodation nearby, for example Falmouth, Portland, or the British Underwater Test and Evaluation Centre (BUTEC) in Scotland. The highest profile event in which MASTT played a crucial role was Ex Unmanned Warrior 16 (which you may have been involved in or seen the coverage of on the BBC’s The One Show) where industry collaborated alongside various allied navies to showcase and effectively demonstrate the potential capabilities of MAS.



The Mine Countermeasures & Hydrographic Capability (MHC) concept.



RNMB HAZARD and MASTT personnel deploying a REMUS 100 from RNMB HAZARD during Ex Unmanned Warrior 16.

Wherever possible, MASTT has also engaged in various TACDEV activities in an attempt to further integrate exiting MAS into Service, notably embarking a variety of AUVs plus a team of operators into HMS ENTERPRISE during her deployment as the Command Ship for SNMCMG2 last year, which produced SOPs for launch and recovery of REMUS 600 from an SVHO, doctrine proposals and MCM/H Branch exposure to AUV operations.

What's coming up?

The MHC Project has two significant demonstrator systems in the line-up, for which MASTT will be MHC's trials and development unit: The Unmanned MCM SWEEP demonstrator, which has been designed and manufactured by Atlas Elektronik UK; and the bilateral UK/French Maritime MCM demonstrator, which is currently undergoing the manufacture phase by the prime contractor, Thales. These two systems are ground-breaking in that the Navy is looking not to replace a like-for-like capability (MCMV with another MCMV design), but replace an existing capability with something altogether different which delivers the same effect.

SWEEP A team of 8 MASTT personnel are scheduled to receive training from Atlas Elektronik next month in this new capability demonstrator, which if successful could see a reintroduction of an in-Service influence minesweeping capability for RN since the withdrawal of the Combined Influence Sweep in 2006. The big change being the influence sweep is towed behind a 12m Unmanned Surface Vessel (USV) - of the same design as MASTT's existing workboat HAZARD - which operates up to 12nm from its shore-based C2 container, from where the team of operators monitor the USV's activity. Whilst undertaking the training, the MASTT element will also be contributing to the development of the system SOPs and



REMUS 600 launch drills during the MASTT/FHMU embarkation into HMS ENTERPRISE during the SNMCMG2 2017 deployment.

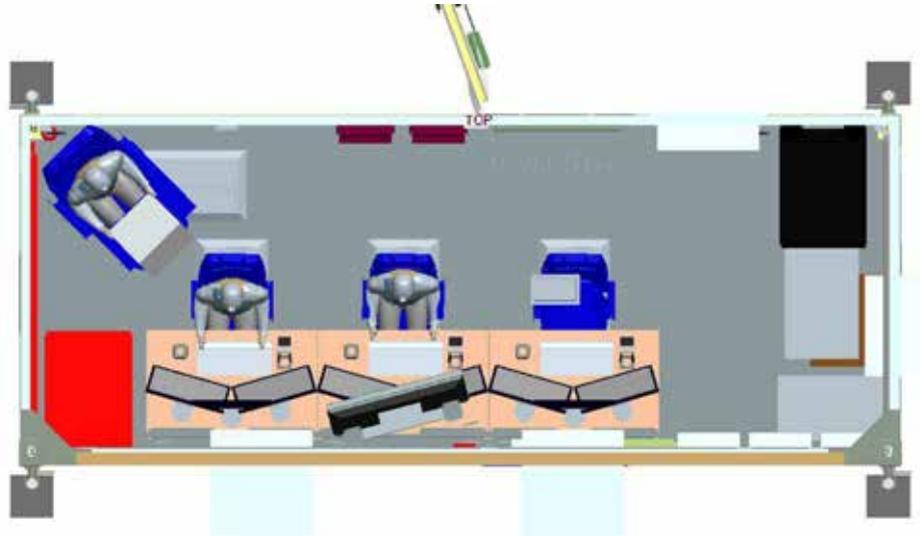
handbooks, in the different modes of operation (manual – man in the boat; remote – boat operated from a shore control interface; and full autonomous). Following the training package, MASTT will undertake verification, validation and reliability trials on the SWEEP system for approximately a year.



Atlas Elektronik's USV SWEEP Demonstrator under trials at Portland Harbour. (Note the 3 magnetic influence 'Coil Auxiliary Boats' (CABS) towed astern of the USV).

UK/Fr Maritime MCM (MMCM)

This high-profile project, a defence collaboration between the UK and France under the Cameron/Sarkozy Lancaster House Agreement, will in theory deliver an entirely autonomous detect-to-neutralise minehunting capability (including Mine Information Exploitation), delivering the same MCM effect as the current Hunt/Sandown ships. This will be achieved with a combination of shore-deployed high-endurance UUVs and a small USV, which is capable of towing a synthetic aperture MCM sonar, and deploying an ROV with camera and mine neutralising charges. As with the SWEEP system, the USV and UUVs will be monitored from its shore-based Portable Operator Container (up



Plan view schematic of the proposed MMCM Portable Operator Container design (housing 3 operators and MWO/MHD) which will control the MMCM system from a 'well-found port'.

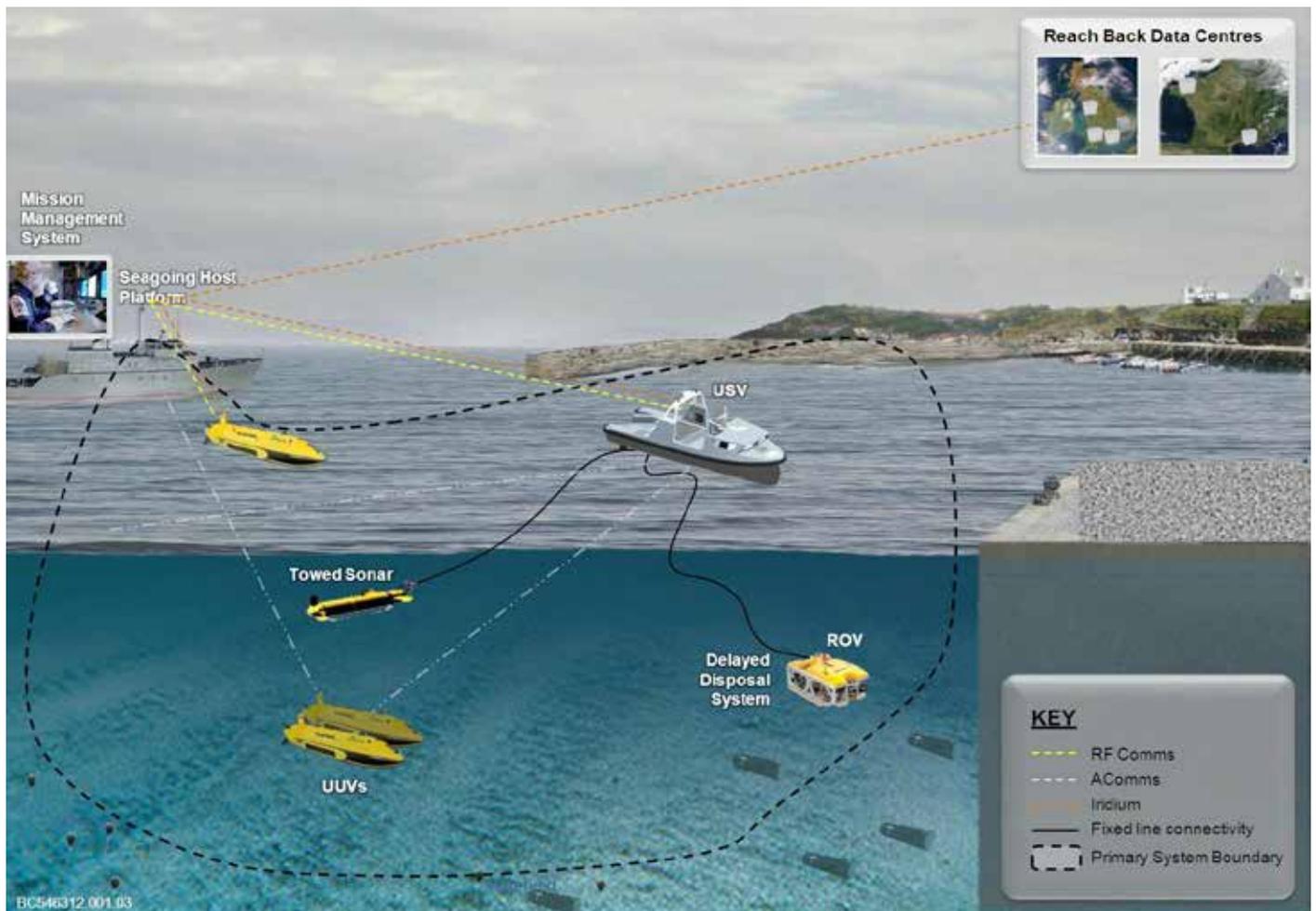


Illustration of the MMCM system showing the USV, ROV (with Mine Neutralisation System), Towed Sonar, and UUV sub-systems. Note that this illustration shows the system being controlled/monitored from a host vessel – the initial MMCM demonstrator is designed purely for operation from a Well-Found Port.

to 12nm comms range for the USV), which is designed to be established within a 'well-found port', where its team of trained operators will plan, execute, monitor and conduct post-mission analysis of the system's tasks.

This system is due for delivery to the RN for trials by MASTT in early 2019, however MASTT has for the past two years been heavily involved in the variety of MMCM project working groups, supporting the MHC Project Team by providing end-user MW subject matter expertise in the system design and use.

It should be emphasised again here that at present these two systems are shore-deployable Demonstrators only – they will not be immediately replacing Hunts or Sandowns as soon as MASTT gets its hands

on them, and following MASTT's trials the designs may well change, and no doubt we will eventually trial these systems for deployment from a seaborne host vessel. As described in another article within this edition of MAD, the principal benefits of these types of MAS over conventional MCMVs would include rapid air-deployability, modularised MCM mission packages which can search or sweep a very large area of sea concurrently using multiple off-board systems, cost effectiveness, and a massively reduced risk to personnel by reducing or removing the requirement for those personnel to be within the Mine Threat Area.

And another thing...

Worth mentioning in case you weren't aware, is that MASTT also incorporates

the RN Mining Unit (for the time being); so all the mines laid for Ex Joint Warrior, TACDEV, trials, or just issued to ships, are done so through the MASTT CPO Ops. Have a query regarding dummy mines? Get in touch: NAVYDEVFLOT-HMUNITMASTTCPO@mod.uk.

OiC HO/TO.

After only 14 months at the helm, Lt Cdr John Hunnibell retired from The RN and handed the MASTT reins to Lt Cdr David Stanbury who will have the privilege of running the trials and validation of the two big upcoming MHC Demonstrator projects, as well as being at the forefront of integrating MAS into the RN MCM and Hydrographic Branches.



Lt Cdr John Hunnibell (left) hands responsibilities as OiC MASTT to Lt Cdr David Stanbury in Feb this year.

'Turning up the Heat' – Operations in the Gulf

Lt B Smith RN – Operations Officer MCM 1 Crew 2 – HMS BANGOR

Mine Counter Measures in the KIPION JOA has been a staple of the Royal Navy's overseas commitments for over a decade. Four hulls; two Hunt Class and two Sandown Class, operating out of Bahrain on three year rotations, with MCM Crews coming out to conduct six month deployments at a rate of roughly one every two years.

This year saw the turn of MCM1 Crew 2, who flew out in January ahead of an eight month deployment, but with the added bonus of being the Crew to return their Ship, HMS BANGOR (BNGR), to the UK on completion.

Despite the process of Crews flying out to conduct Relief in Place (RiP) happening four times a year for the last decade, this is still not a seamless process. RAF flights remain uncertain until days before sailing, and unannounced 24 holdovers in RAF MINHAD due to cancellations are now considered the norm.



Arriving in theatre on 11 Jan, Crew 2 spent five days working with the outgoing Crew, Crew 6, to make sure the Ship was in a fit state, and everyone was ready in their roles onboard in the new environment. During this time Crew 2 lived out of the RFA vessel, CARDIGAN BAY (CRDG) – home to COMUKMCMFOR and his Staff, responsible for both tasking and supporting the MCMVs in theatre.



The MCMFOR Battlestaff go through OST with outgoing crews in the UK and operate similar crew rotations, which allows for better continuity on operations.

Following a successful RiP, Crew 2 began to put BNGR through her paces, with a week of training serials designed to prove full mission capability of both the Hull and the Crew.

Crew 2 immediately started the operational phase with their first tasking, OP NEPTUNE OLIVELLA. Operating off the coast of Oman, BNGR was in company with HMS LEDBURY (LEDB) as well as units from both the United States Navy (USN) and the Royal Navy of Oman (RNO).

BNGR was given Hydrographical and Meteorological based tasking, and worked closely with the Hydrographical and Meteorological Officer embarked in CRDG to provide useful information both to the United Kingdom Hydrographical Office and the Omani Navy on an area which hadn't been surveyed in years, but was vital for local trade in the area.

On completion of her NEPTUNE OLIVELLA tasking, and due to a programme change, BNGR took part in one of the largest multi-national exercises in the region – EX KHUNJAR HADD. Hosted by the RNO, the week long exercise sees units from UK, France, US, Oman and KSA come together to hone their skills in all aspects of Naval warfare.



Both BNGR and LEDB spent the majority of their time engaged in MCM as part of the exercise, however they were also called on to conduct Gunnery, Officer of the Watch Manoeuvres, helicopter winch transfers, and most importantly the Task Force photo.

With OP NEPTUNE OLIVELLA and KHUNJAR HADD complete the Crew was relieved to see a two week Limited Support Period (LSP) next on their program. Alongside Bahrain, a plethora of teams are available to assist in keeping the hulls operational, from FSU to MCM Support, and much needed work took place on the Sonar and propulsion system in order to get BNGR ready for the next tasking.

The LSP also allowed for a bit of down time for the Ship's Company – facilities at the nearby American Naval Base meant that volleyball and early morning swims became regular features on Daily Orders.

“ *Mine Counter Measures in the KIPION JOA has been a staple of the Royal Navy's overseas commitments for over a decade* ”

It also allowed for a tour of the soon-to-be-operational HMS JUFAIR, the UK's new multi-million pound Base in the Joint Operating Area (JOA). HMS JUFAIR will provide a great opportunity for military personnel to both work and relax with some great facilities. Large bedrooms and en suite facilities are being made available to the Ship's

Company whenever they're alongside, as well as an astro turf pitch, a bar, a gym, a games room, and fast WiFi.

With LSP now over, BNGR sees out the remainder of March with Defence Engagement (DE) in Kuwait, Route Survey and the Crew's first Operational stand down Period in Dubai.



“ To ensure this role is effective there should be a two-way communication from all levels

Mine Warfare Branch Champion

WO1(MW) Moss, Mine Warfare Branch Champion

The role of Branch Champion Aka Branch Pillar was introduced to provide a conduit for the lower deck to air their views up to the Senior Command. Currently the responsibility of Branch Champion sits with me Steve "Stirling" Moss within my role as the NAVY SHIPS-MCM MW WO1.

Just like all within the MW and Diving branches there are many hats to be worn and we all have a plethora of commitments and responsibilities to meet, and although the Branch Champion role is not the primary output of the MW WO1 it is one which at times takes priority over other Navy Command outputs. Reporting directly to Captain Mine Warfare and Fishery Protection (MFP) the main emphasis of this role is on N1 or "Personnel".

Unlike most roles within the RN there are no specific goals to meet other than to try and maintain or improve the Moral Component of Operational Capability (MC of OC), Promote Core Values and instil Naval Ethos into all. These 3 topics however; are not the easiest to get right and the adage "You can please some people all the time, you can please all people some of the time, but you can't please all the people all of the time" rings true.

To ensure this role is effective there should be a two-way communication from all levels. I speak quite regularly with Warrant Officers and Chief Petty Officers from the branch to understand their views and concerns. All areas of concern are addressed and where possible improvements are made. In

many of these cases there are no quick fixes, but be assured work still goes on in the background.

It may not seem like it, but the MW Branch is the only Branch in the RN which has grown in manpower in recent years. It is the only branch where long term future investment is guaranteed.

So, what has been happening and what is coming?

Past

Over the past few months the branch has seen a few members leave the service, 2 of which are of note. CPO Gary Burrige retired in August 17 after 32 years service and WO Terry Briggs retired in January 18 also after serving 32 years. Both stalwart members of the branch have moved on to become Yeoman Warders (more commonly known as 'Beefeaters') to guard the Tower of London. Gary and Terry have become YW407 and YW 408 respectively and I am sure the branch wishes them all the best for the future.

Present

Branch Badge

Capt MFP announced last year that the old MW Branch Badge would be reintroduced. Pending financial approvals within NCHQ I envisage we could hopefully be sporting our reinvigorated identity by the end of the year.



HMS Jufair

The opening of HMS Jufair remains on track for early 2018. It will offer modern air-conditioned cabins, entertainment and gym facilities, shops and a café as well as free WiFi. To date the allowance package remains a hot topic and is being staffed within NCHQ and once a decision is made this will be promulgated to the MCM community.

Future

Project Wilton

Last September the First Sea Lord announced his intent to see an off board MCM system operating within the Clyde by the end of 2019, principally to deliver a Route Survey capability while also exploring the operational utility of off board systems.

The concept is to use off board systems previously trialled by MASTT including Motorboat HAZARD, towed sidescan sonar, UUVs and ROVs to provide a system capable of meeting planned tasking in support of Operations PIKE, ROCCOCO and DECOLOUR.

In addition to MASTT, this team is envisaged to be principally made up from the Mine Warfare branch and based in Faslane as part of MCM1. The team make up has not been finalised but will consist of MW rates from AB to CPO as well as two engineers (WE and ME) led by an MWO LT.

The concept is up to 140 days per year supporting planned RTSV operations as well as enabling continued trials activity to support the Mine Hunting and Hydrographic (MHC) project.

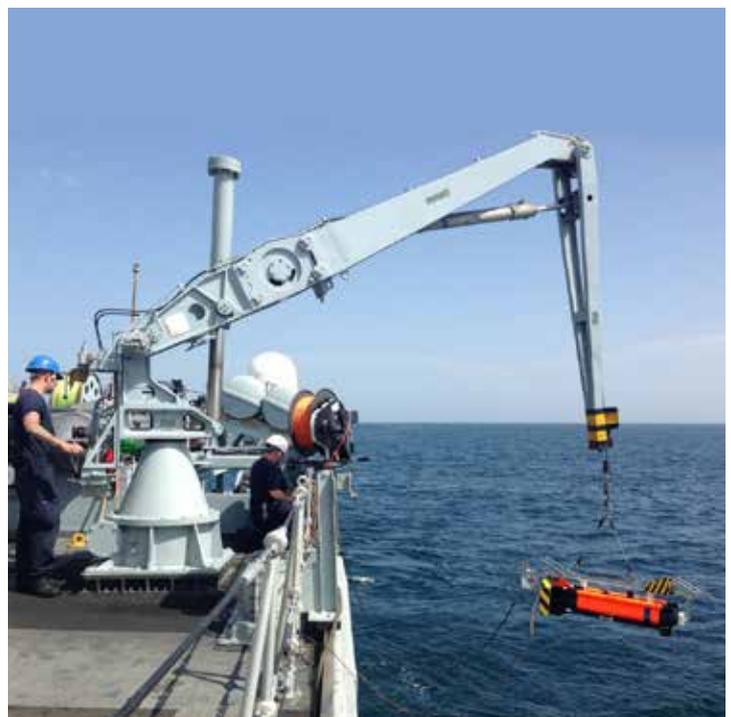
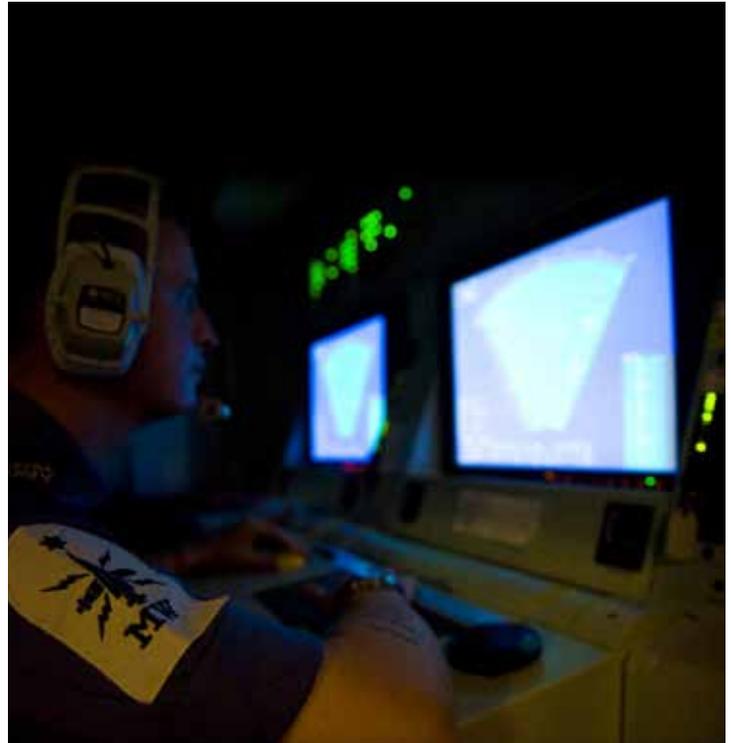
Program ORCA

There is currently a program underway to deliver a replacement to both HUNT and SANDOWN NAUTIS Command Systems. This project has been ongoing for over a year and is in the final stages building up to a contract being awarded. The requirement is to refresh the current technology delivered under the NAUTIS program and to hopefully future proof in order to take into MHC as and when this project matures. The concept is to deliver a system which offers open architecture and enables application based systems to be run as and when needed. My vision is to deliver a "train once use twice" concept where MW ratings will all be trained to the same level on the same system which will enable free movement within drafting cycles between vessel classes without the need to retrain.

We are looking at first fit late 2019 and then 2 platforms a year, with the assumption final fit in 2024.

MMCM and MHC

The next major milestone for the branch is the Maritime Mine Countermeasure (MMCM) and MHC programs. Details of these can be found in MARCAPs article. Delivery of these concepts will inevitably change the way we conduct our business and will alter our processes, this must be a good thing as the last big change in the way we operate was June 1989 when NAUTIS was introduced fitted into HMS SANDOWN and then the move from Mine Sweeping to Mine Hunting. Do not be afraid of change and embrace the future. The MW and HM branches and identity will remain, our processes to gather UW battlespace data will however grow to be very similar which will allow for some cross training potential at the junior rate level.



Message from the Clearance Diving Branch Champion

CD Branch Champion, WO1(D) J, Ravenhall

The role of Branch Champion was introduced to provide an 'honest -feedback' process from the coalface, whether the newly qualified AB or MCDO to the Chief Diver of an FDS Unit to air your views to the Senior Command. This responsibility of Branch Champion currently sits with my position as Diving & EOD Capability Manager (DEOD WO) WO1 John 'Yoyo' Ravenhall (NAVY SHIPS-MCM DEOD WO1)

“ *As with many other WO1 diver positions in the branch, we have multiple roles and responsibilities* ”

As with many other WO1 diver positions in the branch, we have multiple roles and responsibilities to meet which keeps us very busy, and although the 'Branch Champion' role is not a primary output of the DEOD WO it is one which at times takes priority when needed. When able, I keep my ear to the ground and listen to issues being raised reporting directly to the Senior Operator Military Diving or Captain Mine Warfare and Fishery Protection (MFP) if required.

I am always ready to listen when at my desk (93832 5453), and if not I am available by e-mail (john.ravenhall665@mod.gov.uk) - Coffee is always on in NCHQ or if you'd prefer I will visit you (gets me away from my desk) and will offer any advice or guidance if wanted, otherwise I will listen.

The Future of Clearance Diving

The future of the Clearance Diving Branch is looking very exciting from a capabilities perspective. I only wish I was starting my diving career over again!

- FDS are forging the way with EOD in the Maritime Environment (Mar-EOD & Mar-IEDD) training and validation/licencing this will be assisted by enhanced MTE Under-Water Force Protection equipment will be introduced in the next 12 months.
- The CDG are developing Operator and Supervisor training courses, along with SOPs and EOPs and supporting Doctrine for Operations.
- The Introduction to the Cochran Dive Computer and the VVal 79 Table is being developed for CDG, VSW operations and Mar-EOD operations. The VVal 79 Table and the Cochran Dive Computers will be introduced into Military Diving Courses in the next couple of years which will be a significant step change to the way we do some of our diving.
- New Weapons and Body Armour will be introduced into FDS over the next year for the Fleet Diving Group.
- NCHQ are working hard on the introduction of Improved Under-Water Swim Suit Systems, Divers PPE, Hand Held Sonars, QE Class UWFP, ROV and Swimmer Detection.
- The Area Diving Groups and the Defence Diving School will start receiving replacement SDDE Colourwatch Underwater Video replacement in the next 12 months.
- The Fleet Diving Squadron and The Defence Diving School will receive replacement Dive Support Vessels, (Project Vahana) being introduced early 2019 along with replacement RIBs and Inflatable boats, Project Halkett.
- Area Diving Groups and MCMV Divers should hopefully see the replacement 4lb Explosive pack in the next 12 months.







The DST's aim is to act as the focal point of all Diving conducted by the MOD

DIVING STANDARDS TEAM

By Cdr D Crosbie RN, Superintendent of Diving

Overview

The Diving Standards Team (DST) has evolved from a naval assurance team to a fully joint team within the Defence Safety Authority (DSA). The DST works directly for the Defence Maritime Regulator (DMR), Cdre Steve Pearson RN who resides in Abbey Wood with the other Defence Regulators. It is directed by the Superintendent of Diving, Cdr Don Crosbie RN and consists of four teams; DST(Navy and MAB), DST (Army), DST (Adventurous Training) and DST (Commercial). The DST's aim is to act as the focal point of all Diving conducted by the MOD by delivering safety leadership, regulation, assurance and specialist advice whilst promoting diving safety culture through the consistent and coherent interpretation of Regulation and the cross pollination of best practice across the diving domains.

Recent Changes

As you will all be only too well aware, on 1 Apr 17 a new structure to the diving publications was introduced with the release of the new Defence Diving Regulations and their associated DCOPs; these regulations which were written to enable Defence Diving activity to be compliant with the law, have their provenance mapped to the Diving at Work Regulations 1997 and conclusions /recommendations from Defence Lessons. Both DCOPs and BR2806 series are reviewed biannually with changes being published on 1 April and 1 Sep each year. Although it has taken some adjustment, the new publications have been generally well received. The feedback that has been received will be reflected in the next change and will see some guidance transferred from DCOP 21 and BRd2806 Vol 6 into DCOP 20 and BRd 2806 Vols 1-4.

What we do

The main role of inspection teams is to assure compliance with Defence Diving Regulations and certification of diving safety; this also includes the auditing of Duly Authorised Persons or Organisations. Each year the teams conduct on average 90 audits, including Interim Verifications (IVs). To ensure we share best practice within the DST we will, on occasion, mix teams although RN audit are always led by DST (Navy). Other duties and responsibilities of the DST include setting safety and environmental policy, issuing exemptions when a justified requirement to dive outside of the regulations has been identified.

At the higher level we conduct Document of Compliance audits of the main headquarters, NCHQ, MAB, NSRS and Chalfont; this ensures the senior management are aware of their responsibilities, under the Duty Holder construct, for safe diving practices.

The DST is the "first responder" for all diving related incidents however the Defence Accident Investigation Branch (DAIB), within the DSA, has responsibility for investigating all major incidents, including diving incidents to which DST provides specialist advice. All other diving incidents are investigated by the DST in support of the Duty Holders keeping the DAIB informed. Guidance for post incident management and investigation is under review and will be published as soon as practicable.

Common Trends Identified

The DST inspection teams visit all areas of diving; from SF to AT and Commercial to all the Army units and as such see many good diving practices and some not quite so good practices. Identified trends, both good and bad, are listed right.

Negatives

- Dive Officer Log Book checks – Some 3 monthly inspections are not thorough enough missing info that should be in the 'comments' box of the Dive Officer section Pg 11-14 it is not sufficient to put NSTR.
- Not completing CO's report: Reg 5 DCOP 20 - 6 monthly Regulation 5 Para 31(b).
- Not informing of Diving Officer changeover to DSO N, for SofD: Reg 7.
- Lack of understanding of the appointment of supervisor in writing: Reg 9 DCOP 20 Para 155.
- MOP 10 and MOP 1 procedure not being followed correctly, on-receipt inspections not thorough enough, finding missing things later down the line and too late.
- The recording of maintenance/ changing of equipment/recording of defects within the equipment logbooks is not being annotated correctly as laid down within them, this is an issue across all diving equipment logbooks including TMCC.

Positives

- Excellent 2022 report submissions, really good maintenance procedures which has enhanced the 2022s, further highlighted by Abbeywood.
- There is good overall interaction between departments on board ship bringing together a good Diving Safety Management System.

COACHING – “WE’VE BEEN DOING IT FOR CENTURIES”

A vignette from Cdr Ashley Spencer RN, Commander Mine Warfare Battle Staff

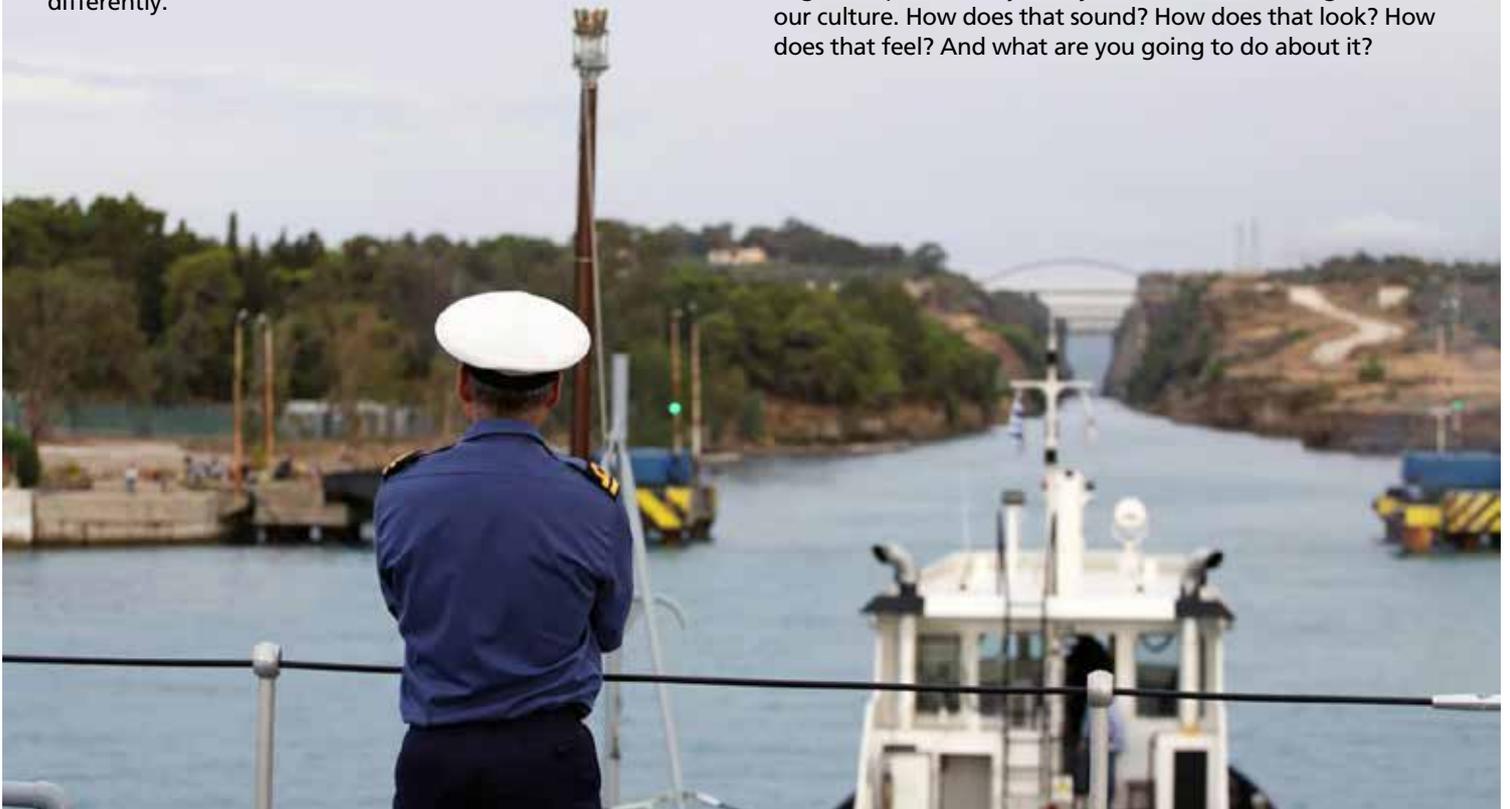
It turns out we haven’t, more like a decade and we have a long way to go. I recently completed the CMI accredited Level 3 Coaching Practitioners Course at the RN Leadership Academy, HMS Collingwood. The course is tri-service and open to all. The 3-day course is almost entirely practical, breaks the preconceptions of what coaching is and takes you to a level beyond which you may have received during your previous leadership training. Coaching is not the panacea to effective leadership and management, but it is a powerful tool that can unlock the potential of the people around you. Cdre Farrage CBE and Capt Mike Young carried out a study into coaching in the Naval Service back in September 2015. A recurring finding was that coaching behaviour significantly increased operational capability by improving the development, performance, motivation and retention of our people; they felt more empowered, had less limiting assumptions, avoided dependency, maximising initiative and responsibility.

Helping individuals and teams realise their true potential has to be attractive to even the cynics amongst you. Instead of coaching out failure, let’s also try as a community to develop the good people and watch them flourish into great people. In order to do this, the RN needs more people with coaching skills. I offer you my own weakness as inspiration to think differently.

I have spent most of my naval career ‘solutionizing’ problems. I confess I have a habit of doing so internally before the person has even finished speaking. I find it a real challenge to stop the little man in my head from taking over and blurting out guidance and advice instead of truly listening. The course offered me the opportunity for self-reflection and gave me the framework for a different approach. I was reminded that active-listening involves listening with all senses.

The RN has divisional and welfare systems for good reason and coaching is not appropriate in all circumstances. However, with personal investment on both sides, coaching can be enormously rewarding for both coach and coachee. The RN is aiming to embed a coaching culture and coaching ethos across the Service and adopt it as everyday language and business from AB up and CO down. How will we know when this has happened? Easy, Coaching Advisory Support Teams will no longer be needed and everyone will stop talking about coaching because it’s part of our culture.

Does my example resonate with you? Do you want to improve your active-listening? Would you benefit from being a coach or receiving coaching? Remember coaching is rank-less, so why not add coaching to your leadership and management tool bag? Be a part of the journey to normalize coaching within our culture. How does that sound? How does that look? How does that feel? And what are you going to do about it?



The Career Manager's Top Tips for SJAR's and Front Pages

By WO1(MW) Moss, MW Career Manager

Since occupying the post of CM for MW SR's and Divers I've noticed a distinct lack of ownership of 'Front Page' on SJAR's. I've enjoyed observing and sitting on promotion boards and noted that the below points can at times mean the difference in being selected for promotion or not;

- SMART objectives – Your objectives should give your 1RO the tools to write your report, the objectives you set out during your reporting year should account for a large section of the written narrative in your performance.
- Ensure you populate the Career Aspirations and comments boxes, this is your chance to sell yourself to the board! The reader wants to hear how dynamic, professional and highly motivated that you are, and not that 'you only want an

assignment in Portsmouth because I take the kids to school every morning'.

- Use your preference and negative area boxes sensibly, if for example you'd like Portsmouth as your first preference and Faslane as your negative then that's not an issue, but don't use boxes 1,2 and 3 to write Portsmouth 3 times. For example;

1st Portsmouth

2nd Plymouth

3rd Empty

Negative Choice Faslane





