

# MINE WARFARE and DIVING

SUMMER 2019 #MAD2019



# EDITORIAL

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Thanks to everyone who has contributed to #MAD2019. Please let us know your suggestions and recommendations for improvements and topics for inclusion in the next edition!

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# CONTENTS

|   |    |
|---|----|
| Foreword.....   | 4  |
| <b>THE FUTURE IS NOW</b>                                      |    |
| Defence Minister Announces Investment In 'MCM In A Box' ..... | 8  |
| Project WILTON .....  | 9  |
| The Replacement For NAUTIS (ORCA) .....                       | 10 |
| What Is Sweep? .....  | 11 |
| <b>CURRENT OPERATIONS</b>                                     |    |
| UKMCMFOR .....  | 18 |
| The Bay Class: Our Flexible Friend.....                       | 20 |
| Operations In The Gulf .....                                  | 23 |
| SDU2 London City Airport Task (Op TAPESTRY).....              | 24 |
| MCM1 Review .....   | 26 |
| MCM2 Review.....  | 27 |
| Elizabethan Divers .....                                      | 28 |
| Life In The UK Naval Support Facility (UKNSF).....            | 29 |
| Return From The Gulf .....                                    | 30 |
| FOST(N) Update.....   | 34 |
| <b>COMMUNITY UPDATES</b>                                      |    |
| 2018 MCM Conference .....                                     | 36 |
| Efficiency awards.....  | 38 |
| Course Photos 2018–2019.....                                  | 38 |
| Logistics Matters, Honest! .....                              | 40 |
| MWC: Doctrine, Trials And You! .....                          | 41 |
| MW Branch Champion Update.....                                | 43 |
| Roles For MW Ratings Outside Of MCMVs .....                   | 46 |
| MCD Branch Champion Update .....                              | 47 |
| Advice from the MWO/MCDO Career Manager .....                 | 48 |
| CIS In A MCMV – So What's The Catch? .....                    | 49 |
| Project Unify .....   | 51 |
| Life as an OiC in FDS .....                                   | 52 |
| Did you know? A guide to deployment allowances .....          | 54 |
| Career manager's top tips .....                               | 55 |
| The DDH Naval Military Diving Team .....                      | 56 |
| Diving Safety & NLIMS Reporting .....                         | 57 |
| SoD Diving & DDST.....  | 58 |
| Operation Stop Gap .....                                      | 60 |
| Mine warfare Association (MWA).....                           | 62 |
| Royal Navy Clearance Divers' Association (RNCDA).....         | 63 |



# FOREWORD



## Capt Ken Houlberg RN

### Captain Mine Warfare and Patrol Vessels, Diving and Fishery Protection

#MAD2019

Welcome to the 2019 edition of the Mine Warfare and Diving (MAD) magazine which builds on a fantastic Mine Countermeasures (MCM) conference organised by Cdr MCM1 and his team last autumn. In addition to traditional print, this magazine is also available as an interactive PDF document for the first time. This will enable it to be publicised more widely within our community and will improve access for you and your families.

Since starting this role in the summer of 2018, I have thoroughly enjoyed meeting our MCM crews and diving units around the UK and overseas. Without exception I have been enormously impressed by the professionalism, determination and great sense of humour I have seen within this cadre. Combine this with the community's extraordinary resilience, grit, and 'can do' attitude and we have a winning combination that is the envy of the world. Indeed, when I called on CTF52 (Cdre Mike Egan USN) last September in the Gulf, he was keen to learn how we in the UK had 'cracked the MCM code'. BZ and keep it up! I am eternally grateful for the loyal support of our families and friends; without this, none of our successes would be possible. However, we continue to face challenges and I am acutely conscious that operational tempo; variety; and a life/work balance that is considerate of families are very important factors for us to get right.

The future of Royal Navy Mine Warfare and Diving is exciting. This cadre is the enabling force for our country's two strategic deterrents: nuclear and conventional – the latter will be centred around our new Queen Elizabeth Class (QEC) aircraft carriers and the Maritime Task Group (MTG) for the next 50 years. How we are going to do this over the forthcoming decades will change, and this was described well by some of our experts – together with industry colleagues – at the MCM conference. We should be optimistic because innovative development is something that, in my experience, the Mine Warfare and Diving community has always done well in order to keep us current, relevant and capable against the very latest threats and adversarial technology. From CDBA to CDLSE, from Oropesa sweeps to influence sweeping, Tons, Rivers, Hunts, Sandowns, Towed Acoustic Generators, PAPs, Seafox, S2093, etc, RN MCM has always evolved and always will.



This year's edition is deliberately styled in 3 sections: The Future is Now; Current Operations; and Community Updates.

#### **The Future is Now.**

Our Secretary of State for Defence recently announced a £75m investment in new technology, including new autonomous mine hunting vessels and a concept called 'MCM In A Box' (MCMiAB), and I am hopeful that there will be further announcements regarding progress with our Mine Countermeasures and Hydrographic Capability (MHC) over the coming months. This section outlines the latest developments with Project WILTON, showcases the autonomous sweep technology that we are trialling, and gives an overview of the new Command System which will replace NAUTIS in our MCMVs over the next few years.

#### **Current Operations.**

A review of Mine Warfare and Diving operational activities undertaken by our fabulous men and women in front-line units around the world over the last 12 months.

#### **Community updates.**

Articles in this 'by the community, for the community' section include: news and top-tips from your Career Managers and Branch Champions; recent awards; diving safety; our heritage; and information about the Mine Clearance Divers' Association (MCDA) and Mine Warfare Association (MWA).

A heartfelt thanks to all those who have contributed to this edition of MAD. I look forward to hearing your feedback along with your good ideas and suggestions for next year's edition. Although I had been away from the small ship and diving community for some time and technology moves on quickly, one thing has remained the same: the high quality and amazing achievements of the people in this tight-knit community who deliver on operations in the UK and abroad every day of the year. I am very proud to be your Captain MFP and I hope you enjoy #MAD2019.



**Cdr Ash Spencer**  
Commander MCM2



**Cdr Al Nekrews**  
Commanding Officer FDS



**Cdr Andy Ashfield-Smith**  
Commander MCM1



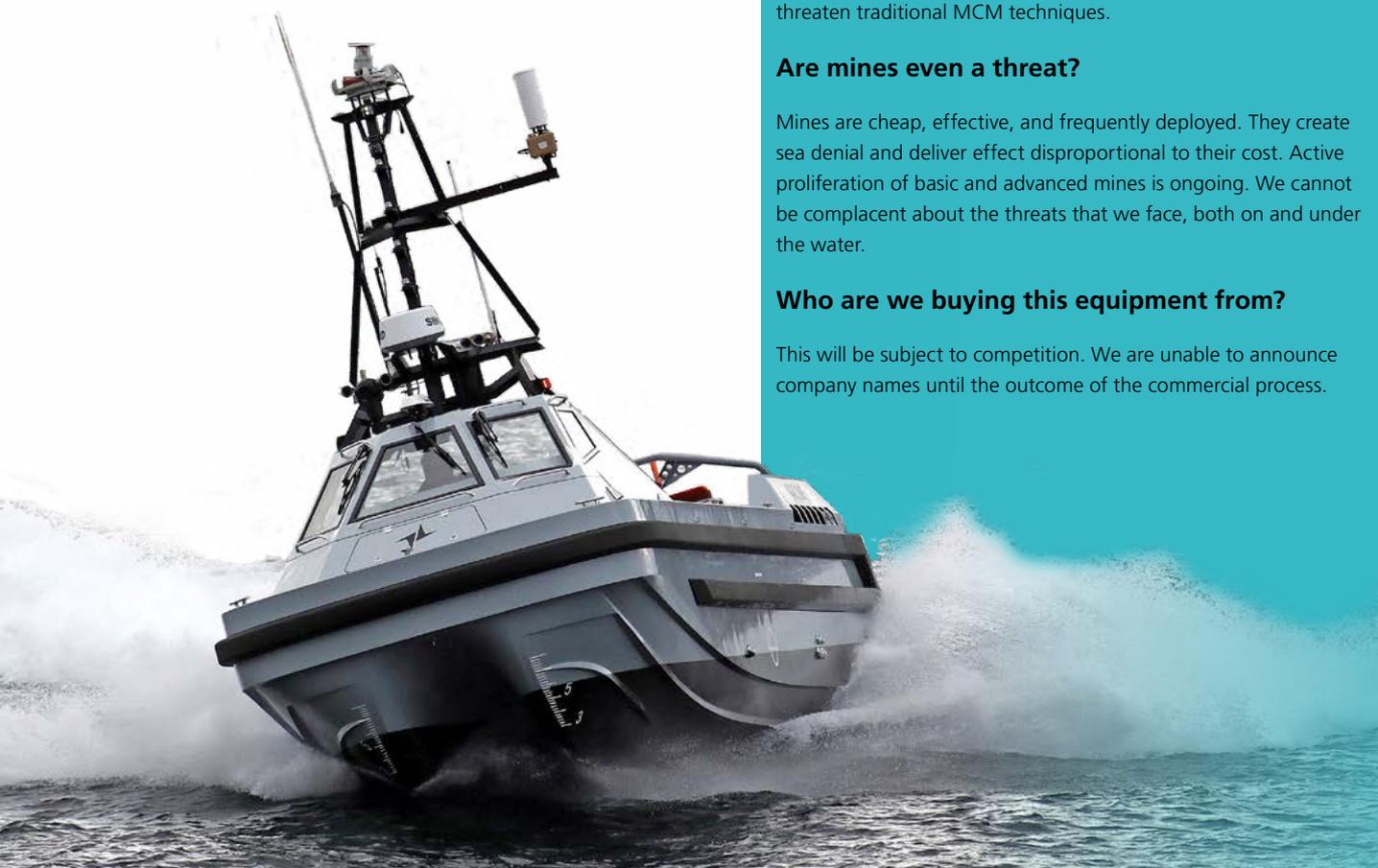
# THE FUTURE is NOW

# DEFENCE MINISTER ANNOUNCES INVESTMENT IN 'MCM IN A BOX'

By Cdr Mark Atkinson

**On Monday 1 Apr at the Defence Transformation Fund launch event the Secretary of State for Defence announced that the RN would be spending £75m on two new initiatives, one of which is called "Mine Countermeasures in a Box (MCMiAB)."**

"As we speak, the Royal Navy's MCM Fleet are undertaking the difficult and dangerous task of locating and destroying the mines that menace global shipping. We believe we can radically reduce the time taken to complete these missions and reduce the risk to our sailors. Imagine a world in which Autonomous Surface Vessels (ASVs) tow ultra-modern Synthetic Aperture Sonars (SAS) at speed to detect those deadly devices and then deploy Unmanned Underwater Vehicles to destroy them. Sounds like science fiction – but our investment will make it science fact. We anticipate our revolutionary robotic minehunters will deploy on operations in the Arabian Gulf within 3 years. We expect to make an investment decision, following competition, later this year."



## Where will these new MCM Maritime Autonomous Systems operate?

This proposal will accelerate delivery of Maritime Autonomous Systems to support UK MCM Operations in the Gulf.

## When will they begin operations?

We plan to deliver this capability within the next three years.

## What about our current minehunters?

If successful, this project should see us transition from the current Mine Countermeasures platform to an autonomous system. This autonomous mine countermeasures capability will be a critical step in this process, allowing us to learn by doing and provide evidence that MCM Maritime Autonomous Systems can thrive in an operational theatre.

## Why do we need MCM Maritime Autonomous Systems? Isn't our work already successful enough?

The planned adoption of the Autonomous Systems to replace conventional mine-hunter capability will enable MCM to evolve to meet the developing underwater threats which are starting to threaten traditional MCM techniques.

## Are mines even a threat?

Mines are cheap, effective, and frequently deployed. They create sea denial and deliver effect disproportional to their cost. Active proliferation of basic and advanced mines is ongoing. We cannot be complacent about the threats that we face, both on and under the water.

## Who are we buying this equipment from?

This will be subject to competition. We are unable to announce company names until the outcome of the commercial process.



# PROJECT WILTON

By CPO(MW) Joe Morton

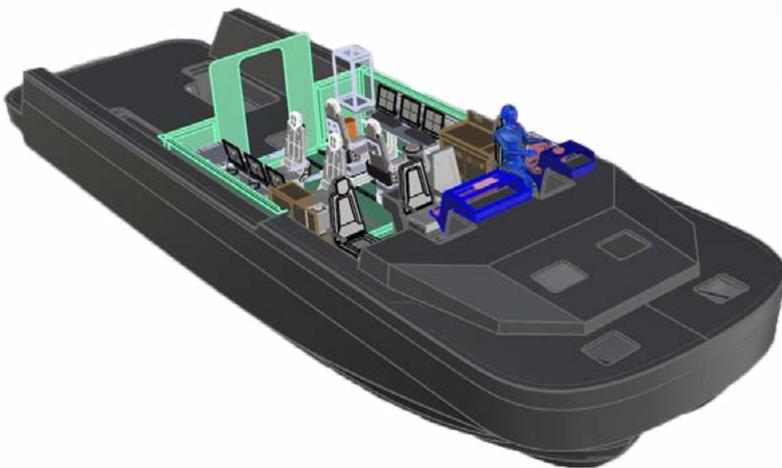
## Project WILTON has two key objectives:

1. To deliver a UK peacetime route survey (RTSV) capability based on the exploitation of Maritime Autonomous Systems (MAS), thereby expediting the introduction of MAS to the Royal Navy.
2. To establish the organisational structures and procedures to support the delivery of future MHC increments delivering MAS. This includes arrangements to support trials, acceptance, training, development of operating procedures and doctrine.

## Manpower

- 1x Lt Cdr to WO – OIC
- 1x CPO(MW) – 2I/C
- 1x PO(MW) – MW Director
- 2x LS(MW) – Senior Operators
- 6x AB(MW) – Junior Operators
- 1x OIC Maintenance – Trade Specialisation and Rank to be decided in line with FARADAY
- 1x Maintainer – Trade Specialisation and Rank to be decided in line with FARADAY

The Project WILTON team and equipment will be geographically based on the Clyde, enabling them to conduct peacetime route survey operations and trials around the north of the UK. This will also bring more shore-based employment opportunities in Scotland for specialist MW ratings. Once operational, the team will provide 100 days of tasking and a further 60 days of trials per year. To meet these objectives, the WILTON team will operate several new autonomous or remotely-controlled vehicles and equipment.



**Vahanna Boat (Hebe).** This is a 15m boat procured as part of the RN's 'replacement workboat' programme. This boat will be capable of operating autonomously in the future, with the vision to prove 'over-the-horizon' operations. Hebe is expected to be delivered in time to begin trials on the Clyde in January 2020.

**Small UUVs.** MASTT is currently operating the REMUS 100 VSW UUV supplied by Hydroid. Two REMUS 100 vehicles will be provided to WILTON from MASTT along with three IVER UUVs; these systems will operate from the new work boat (Hebe).



S2094 Side Scan Sonar

**Medium UUVs.** The REMUS 600s previously operated by MASTT will also be transferred to Project WILTON. This will extend the range of operations and offer a deep-water capability.

**Towed Sonar.** The HM Branch is currently operating the S2094 Towed Sonar from several vessels such as HMS MAGPIE. A version of S2094 is currently being considered as a Side Scan Sonar for WILTON. Since the S2094 is already in-service, new units could be built and supplied to WILTON as soon as Jul 19.

**ROV.** Two new M500 ROVs are due to be procured via the SALMO contract. These ROVs will also be fitted with additional software which allow the vehicle to automatically acquire contacts.

AEUK Remus 100 compact stowage rack



M500 ROV



Remus 600 with LARS system

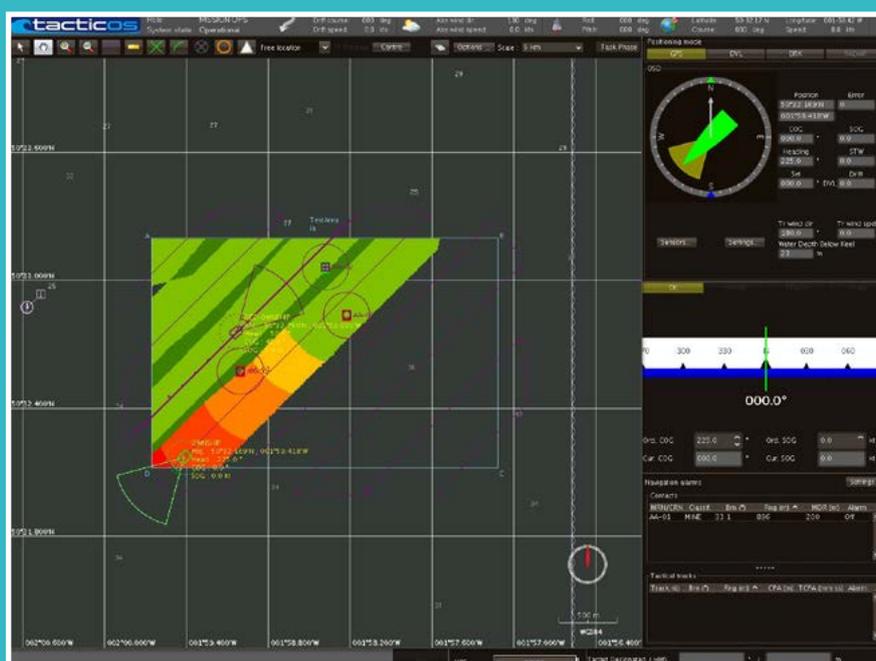
# THE REPLACEMENT FOR NAUTIS (ORCA)

By WO1(MW) 'Stirling' Moss

Four years ago, work commenced to replace the ageing NAUTIS Command System of both RN MCMV classes. Initially 12 companies showed interest in the project, each presenting new and innovative ways to conduct Mine Hunting. These 12 bids were assessed and scored on many criteria and down-selected to just 3 companies, who were invited to re-tender their bids and a final winner was decided.



Hunt Console



Tactical Awareness Screen

## The Winning Bid

The winning bid was Thales UK Ltd, who have an existing solution for the replacement of NAUTIS, requiring only minor extensions to meet our needs. The system is known as Ocean Reconnaissance Common Architecture (ORCA) Mine Counter Measure Management System (M3 or 'MCUBE'), referred to as 'ORCA-M3' or just 'M3'.

M3 has been specifically designed in accordance with the NATO standards for Mine Hunting, which will also include Mine Hunting and Planning Algorithm Definitions. Additionally, the M3 interface is designed to reinforce the operational flows described in the ATPs, leading to improved efficiency and reduced risk of operator error.

## What will it look like?

M3 is currently installed in the MCMVs of the Indian and Lithuanian navies. The first RN fit of this system will take place towards the end of 2019. The system will greatly enhance the efficiency of the MWO and MHD by automating functions and enabling seamless data transfer between systems. As ORCA-M3 is a brand-new system to the RN, operators will see a change to the current Hunt Ops Room setup, but the Sandown Ops Room will change less since the existing NAUTIS casings will be used to house the new hardware. Detailed plans for the Ops Room design will soon be released.

## Training

The training concept will bring commonality to all operators within the MCM community. Operation of the system will be mirrored across Hunt/Sandown with only minor differences. The operators will see the same tactical picture and have the same menus available to them. This training commonality will provide more flexible employment opportunities. ORCA-M3 training, as well as S2093CSP training, will be conducted in Templecombe by Thales until the majority of ships are fitted with the new equipment.



# WHAT IS SWEEP?

By Lt Cdr Dave Stanbury

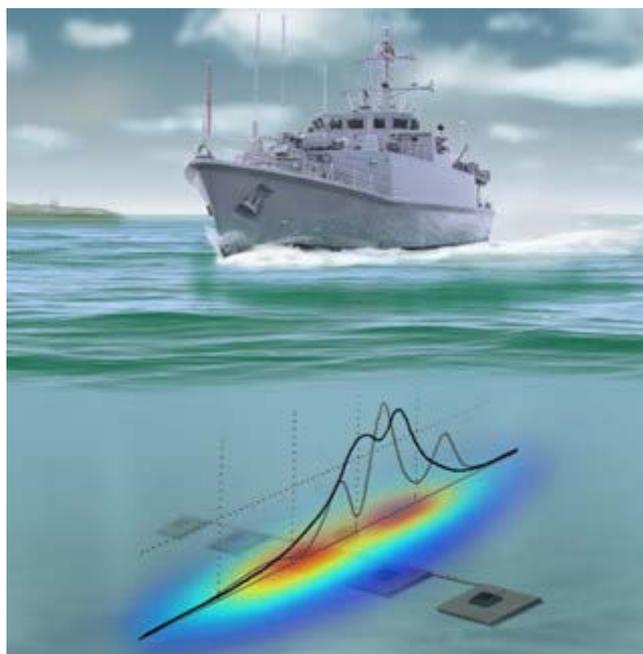
**Minesweeping has a long history of use, as part of a mixed Mine Counter-Measures (MCM) capability, complementing mine hunting in difficult environments. The modern move by several nations is towards a “toolbox” of unmanned systems deploying a variety of MCM equipment – this includes Combined Influence Sweeping (CIS) modules hosted on Unmanned Surface Vessels (USVs) to provide significant operational capability.**

## **Better is Better**

Maritime MCM is one of the first areas in which unmanned systems have been embraced by modern navies. The reasons for this are obvious: the minefield is inherently high-risk to personnel and many MCM tasks lend themselves not only to automation but also to being commanded and controlled at some distance from the area of operations. Remotely-operated systems such as USVs or Autonomous Underwater Vehicles (AUVs) have great potential to deliver Minehunting (MH) and/or Minesweeping (MS) effects.

## **Reducing the threat**

CIS is a broad term describing the act of causing an Influence Mine to detonate in such a way that it causes no damage to its intended target. As mines are triggered by a wide range of influences from a ship or other target (magnetic, acoustic, pressure, seismic or electric) as well as by their physical presence (contact mines), an effective Sweeping capability must emulate or emit a comparable spectrum of influences to seduce the mine into incorrectly actuating.



## How did we get here?

During the Gulf Conflict in 2003 there emerged a requirement for a new MCM capability as part of an Urgent Operational Requirement (UOR) to provide a Shallow Water Influence Minesweeping capability (SWIMS) which could ensure the safe passage of military vessels into Umm Qasr. As a result of this, a remote minesweeping capability was integrated onto 12 Combat Support Boats (CSB) and 4 Mine Countermeasure Vessels (MCMVs).

Subsequently after the conflict, SWIMS was removed from service. In 2006, MOD Succession Planning for CIS, led to the Flexible Agile Sweeping Technology (FAST) Technology Demonstrator Programme (TDP) from 2007 – 2011. FAST was USV-based, with a remote and autonomous, acoustic and magnetic influence mine sweeping capability. The programme de-risked replacing the out-of-service CIS capability in Hunt-class MCMVs. Subsequently a demonstrator system was brought into production, previously known as the ARCIMS\* USV Mine Sweeping Mission System.

\*ARCIMS is now known as Royal Navy Motor Boat (RNMB) Hussar.

## Where are we today?

The Mine countermeasures and Hydrographic Capability (MHC) Project Team (PT) at DE&S (Abbeywood), contracted Atlas Elektronik UK (AEUK) to deliver a multi-influence mine sweeping system for use in inshore, offshore and brackish estuary waters. This comprises an Unmanned Surface Vessel (USV) and a configurable, portable sweep system that includes a range of magnetic, electrical and acoustic influence devices. Collectively these form the Sweep Module, which can sweep a wide variety of mine types in Target Setting Mode (TSM) or Mine Setting Mode (MSM). The USV and the Sweep Module together form the Minesweeping USV capability.

Part of the capability are 4 International Standardisation Organisation (ISO) containers that store the Sweep Module when not in use and include a Portable Command Centre (PCC) from which the Minesweeping USV may be monitored or operated remotely via Low and High Data Rate Communications.

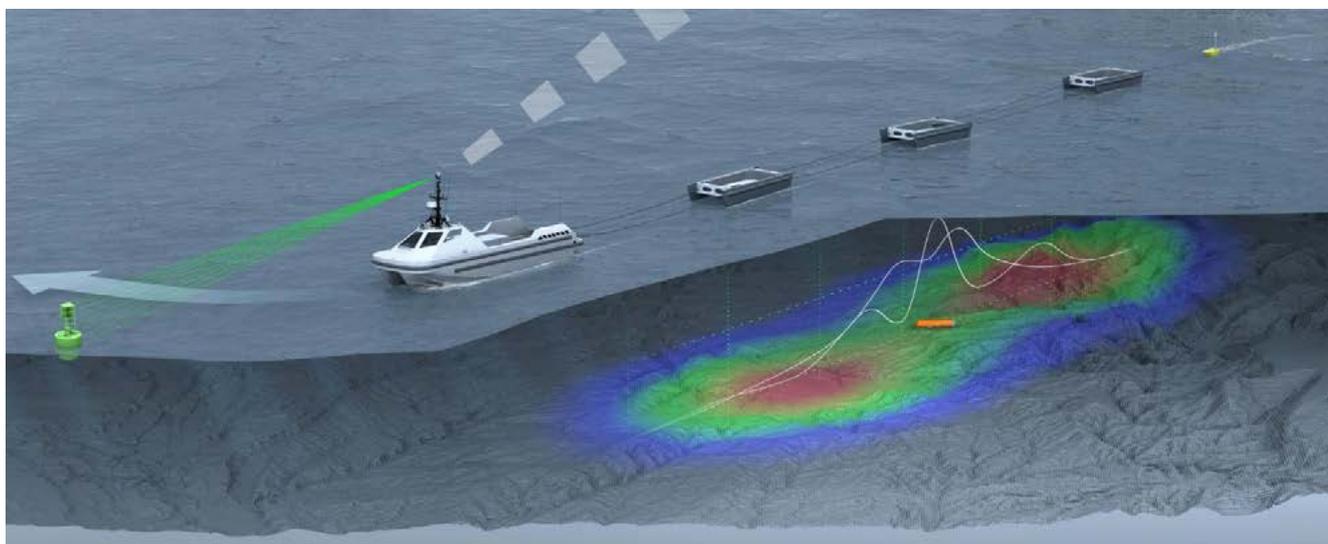
Acceptance Trials (Factory, Harbour and Sea) of the system and its components were conducted by AEUK in 2017/2018, under the supervision of MHC (the Customer) and MASTT (the End User). After the successful completion of the acceptance process, MHC has built upon those trials utilising the Royal Navy's Maritime Autonomous Systems Trials Team (MASTT), by way of Basic User Trials derived from an initial concept paper. These Trials, during 2018, enabled MASTT to gain familiarity with the operation and maintenance of the capability and explore the performance and limitations of the system in a progressive manner.

Refining the processes, procedures and supporting documentation, including the training provided, have enabled the validation of the original requirement. MASTT will continue to provide feedback on the capability to MHC and to other key stakeholders including to Defence Science and Technology Laboratory (Dstl) Porton Down, Navy Command Headquarters (NCHQ) Maritime Capability (MARCAP) and AEUK, through further Sweep Optimisation Trials in 2019.

## What is the Sequence of Operations?

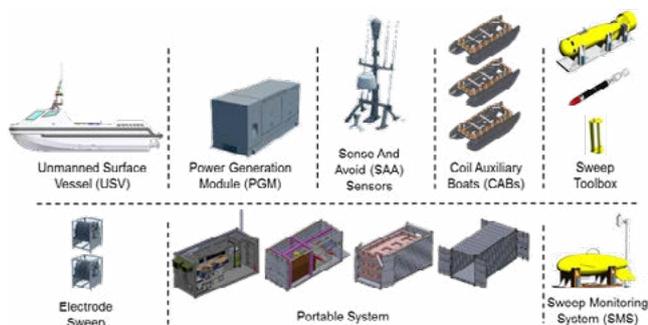
The sequence of operations is divided into phases as follows:

1. Install equipment – Arrive at a 'well-found' port; unload containers and USV from transport lorries; unpack modules; fuel and launch USV using cranes.
2. Prepare for mission – Mission setup and connection of the chosen configuration to be towed by the USV.
3. Transit to minefield – Transit to the operational location.
4. Sweep minefield.
5. Transit from minefield.
6. Replenish, repair and preserve equipment – Recover configuration components and re-prepare for subsequent use.
7. Prepare for transportation.



## What are the requirements to achieve the Operating Sequence?

- (1) The **Portable Control Centre (PCC)** container contains the computer and communications equipment required to operate the Sweep Portable System.
- (2) The **Launch and Recovery (L&R)** container contains the acoustic sweep components and an overhead beam crane with electrical chain hoist for the movement of sweep components.
- (3) The **CAB container** containing the three CABs (deflated) on an innovative stacking system.
- (4) The **Support container** contains storage for the 90m Magnetic Electrode Sweep (MES) Spool, the 150m MES Spool, the CAB Cable Spool and the Transfer Spool. It includes ramps to move the spools in and out.
- (5) **Unmanned Surface Vehicle (USV).**
- (6) **2 x RIBs** or similar (MASTT are currently limited to MIBs) capable of acting as support boat for deployment/recovery, also providing a means of effecting crew transfers to/from the USV.
- (7) A **50m long pontoon**, 1m wide.



## What are the Manning Requirements?

The minimum number of people required to operate the equipment is 5 (single watch). The recommended number of personnel to set-up, deploy and recover the system, is 9:

- Supervisor x 1
- Operator x 2
- Handler x 5
- Engineer x 1

It is expected that individuals will be multi-rolled.

## What Qualifications do Personnel Need?

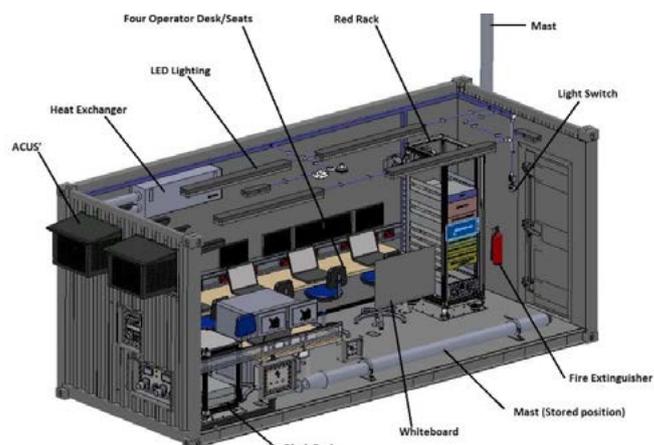
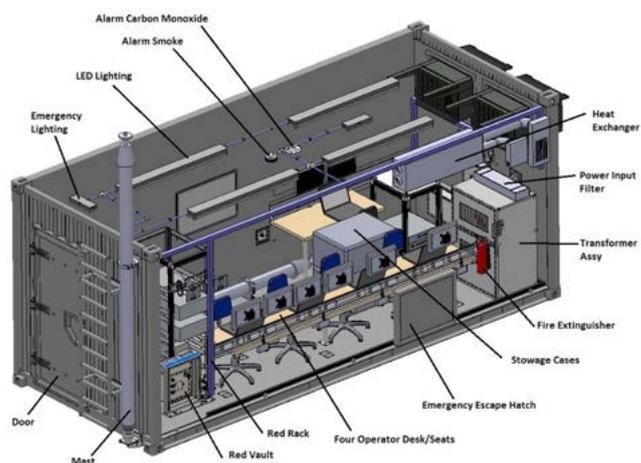
The following are recommended minimum requirements:

- All team members should have completed the Sweep Portable System training course.
- The Supervisor should be a Mine Warfare Officer, STCW 95 qualified.
- USV Coxswains should have a CSB or at least RYA powerboat level 2 qualification.
- USV Operators using the OCC (Operator Control Console) should have at least powerboat level 2 qualification.

## What makes up the Sweep Demonstrator Equipment?

### PCC

The PCC contains the computer and communications equipment required to operate the Sweep Portable System in REMOTE or AUTONOMOUS modes. In addition to the remote operator workstation, it includes support for FERM (Future Exercise and Ranging Mine). It can also be fitted out with Mine Warfare Tactical Support System (MTSS) and Combat Support System (CSS).





## USV

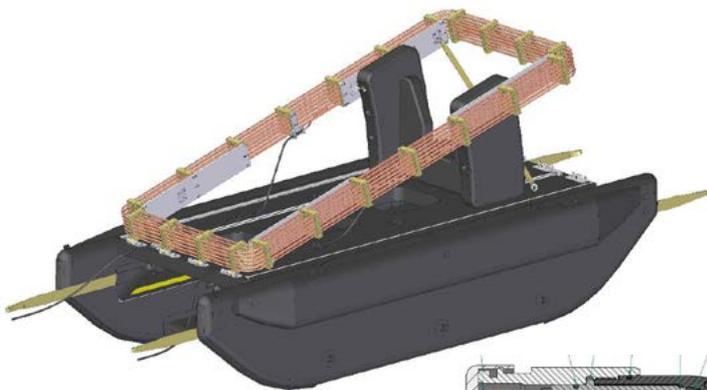
The USV is an autonomous, remote control, or manually operated vessel to power and tow the influence sweeps. It has a catamaran hull and waterjet propulsion which provide maneuverability and shallow water capabilities.

The USV tows the sweep and provides power for it. It has three modes of control:

- MANUAL by an onboard coxswain.
- REMOTE via the Remote Control System (RCS) or Operator Control Console (OCC) in the PCC.
- AUTONOMOUS. Through Mission Command in the PCC.

Autonomous mode is used when minesweeping so that operators do not need to enter the minefield. In Autonomous mode, there is an onboard Sense and Avoid (SAA) system to automatically prevent collisions. Power for the sweep configurations is provided by an onboard Power Generation Module (PGM) containing a diesel engine, alternator, and programmable power amplifier. The sweep configurations are connected to the USV physically and electrically by tow points on the USV transom and the Sweep Connection Block (SCB) mounted on the aft deck.

The outputs of the on-board RADAR, visual and infra-red cameras and USV cockpit microphone are relayed to the remote operator (in the PCC) to provide situational awareness.



Towed Coil Auxiliary Boat (CAB)



Underwater Electric Potential Sweep

## Power Generation Module

The PGM is a diesel generator that provides modulated current to the Magnetic Electrode Sweep and the three Towed Coil Sweeps.

The sweeps can be used in various combinations to suit the operational scenario. Sweep selection and mission planning is carried out using the Mission Planning software which has an integrated Tactical Decision Aid (TDA).

| Influence | Equipment     | Description  |
|-----------|---------------|--|
| Magnetic  | 2 electrodes  | Clip-on open loop buoyant cable.                     |
|           | Axial Coils   | 3 x Coil Auxiliary Boats.                            |
| Acoustic  | Hydrosounder  | Powered acoustic LF hydrosounder and HF transducers. |
|           | HPAS          | Hydro-powered acoustic source.                       |
|           | Echo Repeater | Powered active repeater                              |
| Electric  | TSM electric  | 2 electric   |

## Towed Coils Sweep

The Towed Coils Sweep (TCS) consists of a cable set, three CABs, and two Underwater Electric Potential (UEP) electrodes. Each CAB carries a coil that can be tilted to change the magnetic signature. The cables can be configured for 1, 2 or 3 CABs and allow the CAB spacing to be varied. The cables can also be re-arranged to reverse the current in the coils. The UEP electrodes can be deployed from the CABs to generate a UEP signature.

## Magnetic Electrode Sweep

The Magnetic Electrode Sweep is an open-loop DC magnetic influence generator with consumable electrodes. The positive and negative cables are different lengths to provide an in-water current path.



Magnetic Electrode Sweep

## UW350 Acoustic Source

The Hydrosounder is an electrically powered wideband sound source.



UW350 Acoustic Sweep

## Hydro Powered Acoustic Source

The Hydro-Powered Acoustic Source (HPAS) is a broadband noise generator that uses water flow to create noise.



Hydro-Powered Acoustic Source (HPAS)

## Echo Repeater

The Echo Repeater is an acoustic transponder that simulates active sonar echoes from a ship's hull. It is powered by rechargeable batteries and is hand deployable.



Echo Repeater



## ISO Storage Containers

### Launch and Recovery Container

The Launch and Recovery container stores the acoustic sweep components and miscellaneous handling equipment.

### CAB Container

The CAB container contains the three CABs only. They are stacked vertically with spacers between them. The CABs must be removed using a crane. The container roof is removable to allow this.





### Spool Container

The Spool Container provides storage for:

- 90 m Magnetic Electrode Sweep (MES) Spool
- 150 m MES Spool
- CAB Cable Spool
- Transfer Spool

It has ramps to get the spools in and out, to assist with loading.

### How do we measure/assess the Sweep influence output?

#### FERM

The Sweep Portable System is fitted for-but-not-with a Future Exercise and Ranging Mine (FERM). FERM is an advanced mine-like sensor used to accurately measure the generated influences of the Sweep System, at the seabed. A FERM was used during Sea Acceptance Tests and during operator familiarisation. It will be required again during the Sweep Optimisation Trials and it may also be used operationally in the future.

Future Exercise and Ranging Mine (FERM)



# CURRENT OPERATIONS

# 50 YEARS OF GULF MCM OPERATIONS

## "THE OP NAME MAY CHANGE, BUT WE ARE STILL HERE."

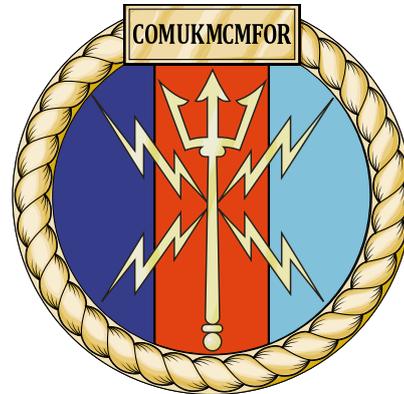
By Cdr Steve White RN, Commander UK MCM Forces

**Our MCMVs have been working in this region for over 5 decades and continue to lead the way. From 1962-1971, 4 Ton-class mine-sweepers, HM Ships APPLETON, KEMERTON, FLOCKTON and CHILCOMPTON, made up the 9th Mine Sweeping Squadron, initially based in Aden and later Bahrain. Once Bahrain and Qatar gained independence from the British Empire, and the Trucial States formed into the United Arab Emirates, the squadron was disbanded. Of note, these ships carried a funnel badge featuring a traditional dhow on a yellow background, a similar design was re-instated in 2013, and the names of the accommodation blocks at the UK Naval Support Facility (NSF) which opened in 2018, are named after the Ton-class.**

In 1984, MCMVs were involved in operations in the Gulf of Suez as part of a tri-lateral Operation Intense Look, and in the late 1980s in the Persian Gulf as part of the Armilla patrols during the Iran-Iraq War. Of the RN warships involved in the 1991 Gulf War, 3 MCMVs remain in service; HM Ships CATTISTOCK, HURWORTH and LEDBURY, with ATHERSTONE being recently decommissioned in Dec 2017. LEDBURY was involved again in the 2003 Gulf War, along with sister Hunt-class BROCKLESBY, and Sandown-class MCMVs, BANGOR, BLYTH, GRIMSBY and SANDOWN. Most recently, the UK's expeditionary MCM Force has been forward deployed at immediate readiness since two Sandown-class HM Ships BLYTH and RAMSEY, arrived in Bahrain on 21 Dec 2006. Since then, a lot has changed, and the Force has been augmented by two Hunt-class MCMVs, currently HM Ships BROCKLESBY and LEDBURY (the oldest ship in the Fleet).

HMS HERALD and RFA SIR GALAHAD were the command and engineering support ships during the First Gulf War. These roles are now conducted by an LSD(A) rotating between RFA LYME BAY (where the MWBS first embarked back in May 2009) and CARDIGAN BAY (currently on task), and the MCM engineering Forward Support Unit (FSU) based in new warehouses in the NSF with the flexibility of embarking in the LSD(A). RFA CARDIGAN BAY is primarily to ensure sustainability of MCM operations through the provision of fuel, water, food, stores and importantly ammunition including Seafox, during 'rafting and replenishment' serials conducted at sea.

Now brigaded within the Maritime Battle Staff (MBS) who have taken on the role as the Force Generation Authority (FGA), the MWBS are the only RN staff permanently forward deployed at RO, on a 1:2 tempo of 6-month operations embarked in the LSD(A) although they can also operate from ashore. They perform the duties and responsibilities of Commander UK MCM Forces (COMUKMCMFOR) with TACOM over approx 300 plus RN/RM, RFA and Army, which can significantly swell in size during Mission Rehearsal exercises, and provide SME advice in MCM, MarEOD and Naval Military Diving to both UKMCC and CTF 52. Whilst in theory, any staff can Command from any location as long as there is suitable communications,



in reality the importance of Commanding from afloat cannot be overstated. It allows the staff to experience the same weather, deal with the same threat, and essentially it allows you to 'Command in context'.

*"For over a decade, the UK's expeditionary MCM Force has been permanently forward deployed at immediate readiness delivering strategic output 24/7/365 on behalf of Defence."*

During this last decade, we have moved from the PAP (Yellow Submarine) to Seafox MDS, CDBA to CDLSE, Deltics to CATs, S2193 CSP is being rolled out, NAUTIS is soon to be upgraded to ORCA. In Bahrain itself, a bridge now links NSA1 with NSA2 negating the requirement to drive through traffic to meetings and try to find space in the 'dusty car park'! The UKMCC HQ has moved into a bespoke air-conditioned building much closer to the waterfront, and the staff and FSU have moved out of hotels/serviced apartments into the UK NSF.



A 'PAP' aka "The Yellow Submarine"

The common theme throughout all this recent change, and the most important part by far is the sailors that have made this operation (TELIC/AINTREE/KIPION) such a continued success. Many who arrived in Dec 2006, were out here previously during the 2003 Gulf Conflict, and are still here (although they have been back to the UK once or twice) including our RNR(MW) colleagues, many of whom are still deployed under FTRS contracts. With at least one PO(MW) on his 12th MCM deployment since 2003, and others with significant experience, it is not just the MCM sub-specialisations, but also our chefs, communicators and engineers who have contributed so much.

*"It is hugely beneficial to generate and validate as a MCM Force, and then deploy and operate as a MCM Force, arriving in theatre ready to fight tonight."*





Exercise TRIDENT JUNCTURE (TRJE) was the largest NATO exercise since the end of the Cold War, and was used for the validation of MWBS(Red) instead of the bi-annual Ex JOINT WARRIOR which we are all used to. Essentially, instead of hunting mines in Loch Ewe and the surrounding areas and reporting to

JTEPS, the MCMVs hunted in the Fjords of Norway and reported to NATO Maritime Command (MARCOM) Northwood. Embarked on the SVHO, HMS ENTERPRISE, in her secondary role as a MCMTA platform, the MWBS(Red) staff conducted C2 of UK MCM FE@R during their KIPION FGen, which was last proven by a solely RN MWBS during Ex JW 13-2.



The utility and versatility of the SVHO was proven, conducting rafting & replenishment to sustain the MCMVs on operations for longer, and conducting Rapid Environmental Assessment using its organic Survey Motor Launch with data passed to FDU3 ashore.

Task Force Five Two (TF 52) was stood up in January 2009 to coordinate Mine Warfare assets throughout the US Fifth Fleet's area of operations (AOR) and the RN have 2 personnel embedded within the organisation; Deputy Commander (DCOM) currently Capt Andy Lamb OBE, and a N3/5 Plans Officer, currently Lt Cdr Pat McQueen. These assets now include 4 Avenger Class MCMVs fitted with Seafox, Expeditionary MCM Company (USN EOD Divers), and HM-15 Squadron of MH-53 Sea Dragon helicopters. While the disciplines of Air, Surface and UW MCM had previously been split into distinct CTGs, it is now common practice for them to be combined. The UK maintains the unique position as the only standing non-US CTG in the Fifth Fleet AOR, with COMUKMCMFOR also taking on the role as CTG 52.2 with TACON over USN assets during Mission Rehearsals. We remain the de-facto MCM leader of choice by the USN, which is proven on a regular basis. Within 3 weeks of being at sea in the Norwegian Fjords, MWBS(Red) had swapped the snow for the sand, and were at sea in the Gulf executing US/UK MCMEX 19-1 as CTG 52.2 with TACON of US and UK surface and sub-surface assets.

*"Our role as COMUKMCMFOR is to Command & Support MCM FE@R to fight and win (effectiveness), tonight (readiness) and tomorrow (sustainability)."*

*"At present, traditional MCM conducted by MCMVs with an organic CDE remains the most effective and efficient method of detecting and defeating enemy mines."*



Commanding Officers of the UK/US MCM Force at the inaugural MCM table-top-tactics symposium.

### What does the future hold?

By the time of publication, HMS MONTROSE will have arrived in Bahrain, following in the wake of the MCMVs and RFA, being forward deployed with a similar 'crew swap' construct. There is a huge amount the T23 community can learn from the success of the MCM community. Premature de-commissioning of ATHR/QUOR as an In-Year savings measure has had a knock-on impact in the JOA with regards to planning for a reduction in hulls from 4-3. Thankfully that decision has changed and we will retain 4 MCMVs in Op KIPION until further notice. This now provides us with a datum line to move forward from, so we can plan to deliver successful and sustainable MCM for the next decade and beyond.

The aspiration of unlocking the full potential of emerging technologies in the form of Maritime Autonomous Systems (MAS) is still to be realised through MASTT and Project WILTON, as we transit towards MHC. So while the UK continues to 'lead the way' regarding MCM, MAS must be embraced quicker if we are to maintain this advantage. The current MAS is good, but not great, it is expensive, often unreliable and hasn't been tested in anger. The quickest method which has been proven time and time again, remains the traditional surface MCMV which can also do the 'soft power' Defence Engagement, and the presence-posture-profile to simultaneously re-assure and deter.

From a strategic perspective, the UK's expeditionary MCM Force is still held in the highest regard by Commander 5th Fleet (C5F), who recently described it as having "cracked the code" and therefore the benefit of a forward deployed, fully validated, bespoke staff, along with the support functions of MCM FSU and MCM Logs Spt ensuring readiness and sustainability of 4 MCMVs, cannot be overstated.

*"The UK remains the only nation with the 'people, platforms and programmes' who can conduct the broad spectrum of MCM C2 detect-to-engage."*

This is one key area where we lead our USN colleagues; however, if we are to maintain this strategic advantage, we must guard this reputation with pride and continuously seek to improve and evolve, to become more effective and efficient. Otherwise we will be left in the wake of others!



# THE BAY CLASS: OUR FLEXIBLE FRIEND

By Lt Cdr 'Sammy' Seal

**They may look like the maritime version of a 1970s Volvo 240, but when it comes to the Bay Class there is certainly more than meets the eye.**

The Bay Class entered service with the Royal Fleet Auxiliary in 2006 and each ship is designated as a Landing Ship Dock (Auxiliary), or simply LSD(A). This title emphasises the amphibious pedigree of these platforms, but they are extremely versatile and have been employed on exercises and operations all over the world, including:

- Hurricane and disaster relief operations
- Counter narcotic operations
- Support to Special Forces
- Strategic lift
- Scalable medical support (Role 2 afloat)
- MCM Command Platform and Afloat Support Base



One of the Bay Class has been continuously deployed to the Gulf region for more than 10 years, serving as the 'Command Platform' and 'Afloat Support Base' (AFSB) for the UK MCMVs and other MCM units contributing to Task Force 52 based in Bahrain. RFA Cardigan Bay currently fulfils this role, hosting Commander UKMCMFOR and his team who live and work onboard - directing the day-to-day activities of the MCM Task Group.





As well as providing an Operations Room and accommodation for the staff of the UKMCMFOR, Cardigan Bay's sheer size means that she can carry the fuel, stores and engineering personnel from FSU to sustain our MCMVs at sea for long periods. The ship's propulsion system is capable of 'Dynamic Positioning' which enables her to maintain an exact position in the ocean. This allows MCMVs to berth – or 'raft' – alongside to conduct replenishment and repairs. Fuel and water can be transferred by hoses, and the crane on the Bay's flight deck can be used to embark stores and ammunition. A brow can also be fitted to enable personnel to embark or disembark, often to go and speak to the MCMFOR staff face-to-face or to visit the Bay's medical officer.

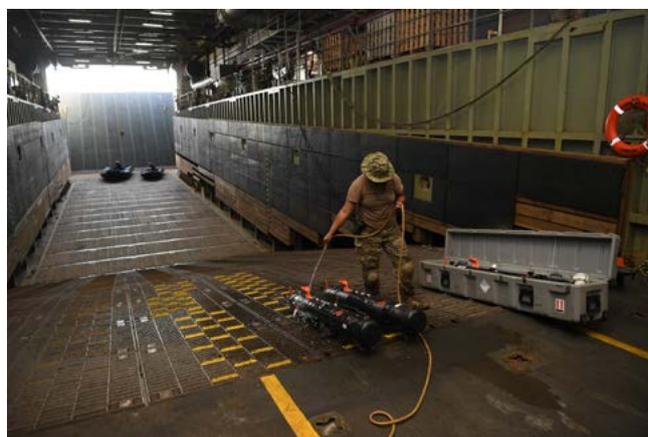




With a floodable dock, flight deck and lots of bunk-space, Cardigan Bay regularly hosts autonomous surface or underwater vehicles (ASVs/AUVs) and she can refuel helicopters as large as the Sea Dragon – the Airborne MCM (AMCM) variant of the Sikorsky CH53 Super Stallion. During Exercise Khunjar Hadd, Cardigan Bay acted as the ‘mothership’ for ASVs and UUVs operated by a detachment from the US Mine Hunting Unit (MHU). US divers from the Expeditionary Mine Counter Measure Company (EXMCM) also operated concurrently with MHU during UK/US MCMEX 19-01. EXMCM has a similar capability to our own Fleet Diving Unit 3, operating UUVs and divers around the clock with the support of personnel from 17 Port and Maritime Regiment (the UK’s only deployable port and maritime specialists, forming part of the Royal Logistic Corps).



A Hunt rafts alongside CARDIGAN BAY



# OPERATIONS IN THE GULF

By SLt Christopher Lewis (M2C6)

**The second half of 2018 was a busy time for the UK MCM Force deployed in the Gulf, with ships and their crews delivering busy programmes on behalf of UKMCC. This included route survey and Maritime Security Operations (MSO) in support of the regional Combined Task Forces (CTFs) and participation in Exercise Saif Sareea 3 (SS3) in Oman – the largest bilateral military exercise since 2001.**



All units of the UKMCMFOR routinely contribute to route survey operations in the KIPION Joint Operating Area (JOA), alongside the US Navy. This involves gathering detailed survey data and clearing any mine-like objects from the seabed in order to prepare for potential mine clearance operations and ensure safe navigation for all.

In the course of their duties on Op Kipion, the MCMVs also conduct MSO throughout the region, helping to ensure Freedom of Navigation and to reassure our regional partners and allies. Although we conduct MSO every time we're at sea (usually in associated support to CTF152), LEDBURY, SHOREHAM and CARDIGAN BAY also conducted two transits of the Straits of Hormuz in company with DRAGON, enroute to and from the Gulf of Oman for SS3.

Exercise Saif Sareea 3 saw 5,500 British and over 65,000 Omani service personnel participate in the largest UK bilateral military exercise since 2001. The maritime component of the exercise comprised two UK task groups; the amphibious TG headed by ALBION carrying the Lead Commando Group (40 Cdo), and the MCM TG including LEDBURY, SHOREHAM and CARDIGAN BAY.

Throughout the exercise in Oct 18, we worked with a wide range of UK and Omani warships and auxiliaries, as well as soldiers, vehicles and aircraft from the Royal Marines, British Army, RAF and Omani counterparts. For the exercise's maritime component this comprised large-scale group operations including anti-air and anti-surface warfare exercises, and a great opportunity to work in a Joint environment alongside the land and air components.

The port of Duqm provided the UK maritime force with a logistics base for the two-week exercise. Our visit to this small but growing port provided an insight to a new and rapidly-developing part of Oman while the ships took on fuel and essential stores.

For LEDBURY and SHOREHAM Saif Sareea 3 was an excellent opportunity to supplement internal exercises with external training as part of a multi-national task group, enabling our bridge teams to conduct manoeuvring, stationing and coordinated warfare exercises alongside the Fleet Flagship, a T45 and multiple RNOV escorts. The warfare exercises concluded with a large scale firepower demonstration involving the Royal Marines of 40 Cdo, who conducted an amphibious landing against opposing forces.

The exercise successfully reaffirmed the UK's enduring defence, security and diplomatic relationship with the Sultanate of Oman.



# SDU2 LONDON CITY AIRPORT TASK (OP TAPESTRY)

By Lt Cdr 'Central' Heaton



SDU2 at work in King George IV dock adjacent to London City Airport

**On Sunday 11 February 2018 at 0730 hours, the Portsmouth-based Bomb Disposal Team, Southern Diving Unit 2 (SDU2), was tasked to investigate possible WW2 unexploded ordnance found during a commercial venture at London City Airport, King George IV Dock.**

DYNASAFE/BACTEC had been contracted to carry out a magnetometer search and diving searches ready for a £450million Expansion Project, and they had come across what they believed to be a 500kg air-dropped bomb. A 4-man duty watch (maintained 24 hours a day, 365 days a year) from SDU2 promptly arrived at 0945 after some careful planning considerations had already been made.

As the airport was still operating flights until 1430 that day, the decision was made (in conjunction with the airport staff, Metropolitan Police, London Ambulance & Fire Brigade) to move all unnecessary equipment and aircraft away from the immediate vicinity of the site, and to allow the public to disperse normally from the concourse, prior to a confirmation dive by SDU2.

At 1500 hours, AB(D) Alex Bonato Dived in King George IV Docks to the marked item at 10.5m depth and in nil visibility. Using his own body measurements and information given to him by PO(D) Craig Tower, the EOD operator in charge, he confirmed that it was a German SC 500kg air-dropped bomb. Due to the close proximity of the ordnance to the runway and its position in a confined stretch of water near to the airport concourse, a cordon of 214 m and a NOTAM to 1000m was established around it. The divers were then able to begin working on the bomb in order to securely lift, tow and remove the item to the Shoeburyness MOD demolition range area. A major incident was declared by Metropolitan Police Gold Command at 2130 that night, and a series of multi-agency meetings convened from 0300 hours.

After 4 hours of rest, diving re-started at 0700, with solo dives by AB(D) Bonato and AB(D) Waller conducted in nil visibility. It took a very long time to remove the clay seabed around the item safely, using non-magnetic spades and hands prior to placing non-magnetic strops around the bomb. Eleven hours' later and after a succession of dives, the bomb was freed and the strops were fitted. An Enclosed





Mine Lifting Bag (EMLB) was secured to the device, and the bomb was suspended at 5m in the water column at 1835 on 13 Feb 18 before being towed to the end of the runway. This enabled the cordon around the airport concourse, the Docklands Light Railway and many private residential homes to be collapsed.

A moving cordon of 250m around the bomb was planned and implemented in consultation with Newham Council and the Metropolitan Police. At high water (2230), the Lock Gates were opened and a 3-man team led by PO(D) Scott Eaton safely manoeuvred the EMLB behind the RHIB to tow the bomb out into the River Thames and then eastwards, all the way out of the estuary to Shoeburyness. With a blue-light escort provided by Met Police, Essex Police Marine units and the Port of London Authority, the team arrived in the demolition position some 14 hours later, having worked tirelessly overnight to navigate the busy stretch of water and minimise disruption to businesses on the river, traffic at the Dartford Crossing and the closure of the Channel Tunnel.

On 14 Feb, further dives were completed in austere conditions on the SC500 to remove the EMLB and place a Diver Placed Charge (DPC) by AB(D) Harper-Baylis. At 1211 hours, under the command of PO(D) Tower, the SC500 was sympathetically detonated, sending a 500ft plume of water up in to the air. Having checked the range area after the detonation, the team reconvened at Southend Coastguard Station at 1500. After a full night's rest, SDU2 were back on task for JSEODOC at 0900 the following morning. This was a high-profile, multi-agency MACA task which was achieved through a huge team effort from SDU2 in very challenging conditions.

# MCM1 REVIEW

By Lt Cdr Dave Bailey

**Part of the Faslane Flotilla, but with direct links to the Portsmouth Flotilla for Force Generation (FGen) and Duty Holder issues, First Mine Countermeasures Squadron (MCM1) is based in HM Naval Base Clyde and is integral to the delivery of the Continuous at Sea Deterrent (CASD) by ensuring the security of the routes of the Nation's independent nuclear deterrent. The units of MCM1 conduct route survey operations in and around the approaches to the Clyde and provide ships at readiness to safeguard the routes and water space that the submarines use to access the oceans of the globe.**

The Squadron, based in Cochrane Building – close to the waterfront – provides Guidance; Leadership; Advice and Direction (GLAD) as well as FGen support, assurance and rear-link services to the frontline units allowing them to focus on generation of capability and delivery of effect. The staff has over 100 years of collective MCM experience with time spent at sea, with the Mine Warfare Battle Staff and at FOST; we have probably experienced many of the situations that those on the front-line will encounter and we can provide coherent solutions to most and support where necessary.

In addition to holding units at high readiness for UK contingency, MCM1 has continued to generate units for Op KIPION and for NATO deployments. With one unit in deep maintenance in Rosyth and two in the Gulf, the demands on the crews are great – just as they are in MCM2 – and the continual need to generate and re-generate for operations in the UK and overseas places great strain on our people. The ability to maintain this tempo is a credit to the ships' companies, the Engineering support and the Squadron staff's commitment and professionalism. Achieving all this whilst overcoming the challenges of manpower gapping, training shortfalls, ageing hulls and increasing obsolescence – overlaid on a taut programme – demonstrates the innovative and resilient nature of our crews. Showing true grit and determination to deliver operational effect, our people have made the extraordinary our normal business.

The Sandown mine hunting capability has seen a boost with the recent introduction of S2093 Capability Sustainment Programme (CSP), bringing the 'detect' capability up to par with the Hunt's S2193. With the ability to deploy the sonar to different depths in the water column in VDS mode and the enhanced capability of the sonar, this has significantly improved the capability of the Sandown class. There are now two Sandowns at sea with this capability and the third will be delivered in Q4 2019; a platform with CSP is scheduled to deploy to Op KIPION in 2020. Initial reports from personnel at sea is that the simplified operating interface and greater detection capabilities are a welcome improvement over the legacy S2093.

MCM1 will become the home of Project WILTON and the MCM Centre of Excellence (North). The imminent arrival of the first personnel and equipment for WILTON will soon see the first steps in establishing autonomous systems on the Clyde and contributing to the enduring CASD mission. The aim is to provide a peace-time route survey capability out to the 200m contour that will allow us to fulfil our Op PIKE commitments and gain a better understanding of the water space in our UK operating areas.

Life in Faslane is different to life in Portsmouth. It is more remote and there are far fewer personnel living close to the base when compared to Portsmouth. However, we are fortunate to live on the doorstep of some of the finest walking, climbing, water sports, UK winter sports, history and culture in the British Isles and arguably the world. These opportunities should and can be grasped. The Base works hard to support our ships and our people and provides support to take advantage of these many opportunities.

Based in a land of opportunity, a key enabler to Defence's primary task, the men and women of MCM1 are proud of their achievements in delivering the highest levels of operational capability in and around the UK, with NATO partners and in the Gulf.



# MCM2 REVIEW

By Lt Cdr Catherine Ker

## The Royal Navy's 2nd Mine Countermeasures Squadron (MCM2) continues to generate world-class inshore MCMVs for global and domestic operations.

In January 2019, Commander Ashley Spencer returned from his Command of the UKMCMFOR in the Arabian Gulf and assumed Command of the Squadron from Cdr Ben Vickery. The operational tempo continues unabated; MCM2 HQ supports and assures our Crews throughout Force Generation and Upkeep. We regularly engage with HUNTCOM and BAe to ensure that our ageing platforms are re-invigorated on time. HMS CHIDDINGFOLD (Crew 2) is the latest to emerge from refit.

In the Middle East, two of the Squadron's ships are permanently deployed in support of Operation KIPION. They've been working in tandem with their sister platforms, the Sandown class MCMVs, ensuring that MCM capability is continuously available in the Arabian Gulf. This vital work demonstrates the RN's commitment to maintain stability and freedom of navigation in the region. Since last year's edition of MAD magazine, HMS MIDDLETON (Crew 2) returned home to Portsmouth and was relieved by HMS BROCKLESBY (Crew 3). During HMS MIDDLETON'S 3-year stint she was manned by 5 different crews, covered 40,000 nautical miles and conducted 4,000 hours of MCM operations.

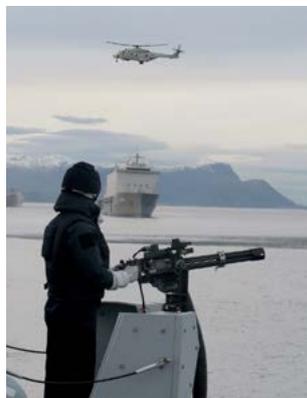
Back in the UK, HMS HURWORTH (Crew 1) was activated over summer leave (2018) to escort the Russian frigate Admiral Makarov through the English Channel. In coordination with air assets in the form of Wildcats from 815 Naval Air Squadron, she successfully provided a UK presence as the Admiral Makarov passed through the channel. This further reinforced the utility and adaptability of the Hunt class and the crews of MCM2 to fulfil tasking which is traditionally allocated to larger units in the fleet.

As part of the RN's enduring commitment to NATO, vessels from both MCM2 and MCM1 took prominent roles in exercise Trident Juncture 18 (TRJE). TRJE was the largest NATO exercise conducted in the last 30 years – a complex, joint, multinational exercise with HMS Enterprise acting as the MCM command platform. MCM2 provided 2 of the 7 RN units participating in this exercise, with HMS HURWORTH (Crew 1) and HMS CATTISTOCK (Crew 8) deploying to Molde, Norway. This provided the challenge of operating in a very different environmental conditions when compared to our more usual operations in the Arabian Gulf and around the UK.



HMS CATTISTOCK on exercise in the Norwegian fjords

HMS CATTISTOCK (Crew 5) joined the Standing NATO Mine Countermeasures Group 1 (SNMCMG1) in March 2019. Later in the year Crew 6 will also be undertaking a further NATO deployment, demonstrating the Squadron's continuing commitment to NATO operations.



HMS HURWORTH providing force protection during Exercise Trident Juncture



HMS LEDBURY on task in the Arabian Gulf



ADMIRAL MAKAROV in the English Channel



# ELIZABETHAN DIVERS

By Lt Cdr Pete Davis

**It was perhaps difficult to miss the QUEEN ELIZABETH Class (QEC) and F-35B projects achieving a momentous milestone on the journey towards restoring the UK's Carrier Strike capability during WESTLANT 18. However, it is perhaps less well-known that amongst the diverse embarked forces that joined HMS QUEEN ELIZABETH's core Ship's Company for this period, was a small team of Clearance Divers.**



I had the pleasure of contributing to the narrative of Diving in HMS QUEEN ELIZABETH, following my assignment to the Ship as a Principal Warfare Officer (PWO). By accident as opposed to design, I represented the most current Diving SQEP within the Ship's Company and naturally took on the mantle of Diving Responsible Officer throughout my PWO tour. Within this remit, I was challenged by my Commanding Officer to re-examine the requirement for an organic diving element within the WESTLANT 18 Task Group, a capability which had been ruled out previously during the planning process. Much discussion between the Carrier Strike Group, the Ship's Flag Captain, and the RN's operational diving stakeholders would eventually result in this commitment being fulfilled at short notice by personnel from Fleet Diving Squadron. To support this venture and potentially moderate the scale of future deployments, several Fleet Minor Trials were rapidly progressed to test both a Swimmer Detection System and an organic Remote Operated Vehicle (ROV) to enhance Underwater Force Protection for the Class.

In the event, a 6-man element provided a basic SCUBA capability to the WESTLANT 18 Task Group, with personnel being rotated back to the UK throughout the 4-month deployment during the port visits to Mayport, Norfolk, and New York to safeguard Fleet Diving Squadron sustainability. Once embarked the Team were required to re-claim, commission and operate from the Ship's Dive Store and deal with the challenging ergonomics associated with a 65,000-tonne diving platform. Equally, due to the ever-diminishing Diving SQEP in the Surface Flotilla following the demise of the Ship's Diver cadre in 2004, the Team faced a challenge to indoctrinate and engage with multiple departments to ensure that their capability was understood and safely employed.

The majority of the diving activity would be achieved in harbour, due to the priority of flying trials, but came to the fore when a concerning hull rattle developed towards the end of the deployment. This required the Ship to proceed to anchor in the approaches to Atlantic City to enable minor repairs overnight. The hard work of the element – operating at night and in marginal conditions – ensured that the Ship was returned to her priority task without impact upon the trials programme.

Having proven their worth to the audience embarked in HMS QUEEN ELIZABETH it is envisaged that this commitment will be requested again to meet the requirements of the Task Group deploying to WESTLANT 19. Having now departed my role as the Diving Responsible Officer, removing all organic Diving SQEP from the Ship's Company, the next roulement of divers to HMS QUEEN ELIZABETH will have to work hard to ensure that they are suitably represented and supported as a key resource.

Nevertheless, this deployment represents a key opportunity for the RN Clearance Diving community to engage with the Carrier Strike Group; an entity that will dominate RN operations for the foreseeable future. Given the potential growth of diving roles, particularly during the integration of US Marine Corps into QEC, the Diving and EOD community must continue to exploit WESTLANT deployments to fully understand future requirements.



# LIFE IN THE UK NAVAL SUPPORT FACILITY (UKNSF)

By Lt Alex Pethybridge (M1C5)

## The Naval Support Facility (NSF) is a very welcome addition to the services available to the men and women of UKMCMFOR who are permanently forward-based in Bahrain.

Offered to the UK government as a gift by the Kingdom of Bahrain and opened in 2018, NSF now homes almost all of the UK personnel who work in UKMCC or CMF and provides temporary accommodation to those passing through or visiting Bahrain, and joining or leaving ships. It serves as a statement of enduring presence and commitment by the UK government to the region. With a permanent Battle Staff, MCMV and Type 23 Frigate presence, the NSF will prove to be a valuable facility for the Royal Navy for many years to come.

Policy aside, what is the NSF like for those who live and work there? Well in summary, it's a game-changer for the UKMCMV sailor. The facility provides an element of sustainability and permanency that did not exist before the development of the site. For example, MCMV Crews who previously spent their handover periods embarked in overflow messing spaces in RFAs "lugging a deployment's worth of kit and black grips up and down multiple ladder chains to the accommodation onboard" now move into accommodation that is modern, clean, convenient and air-conditioned. Having spent time in the transit accommodation myself, I cannot and would not complain – it's clean, spacious and the air-conditioning works almost too well. However, as seems to be the case with much of the NSF, a downside to its

new, clean design is that it lacks a small amount of character and personality. This, however, isn't warranted as a criticism as the facility is brand new and its home comforts will grow over time as it literally becomes more "lived-in".

There are a couple of stand-out features that the NSF can boast about proudly. The food provided in the all ranks dining hall is outstanding. Serving a variety of options for lunch and dinner daily, you would be hard pressed to find a displeased service person. The food is presented with nutritional information above each item in order to satisfy the pickiest of gym-bosuns and is in plentiful supply!

On the topic of health and nutrition, the gym is of a very good standard. Housed in the welfare building in the centre of the NSF and overseen by a PTI, there are separate weights and cardio rooms providing options for all sorts of exercise. The equipment is new, clean and plentiful too, meaning you might only struggle for weights, spaces or equipment during the busiest of times. Outside of those peak periods, the gym rooms have a novel 'private' feel to them. The NSF also advertises weekly sporting/fitness classes ranging from Krav Maga and Aikido to more conventional boxing and football. In sum, the NSF gives you all you need to stay fit to fight.



The NSF has also provided a social element to the base. There is a small on site cinema, library and bar which is integrated with a communal lounge with televisions and pool table. Further facilities include a coffee shop (serving coffees, cakes and nutty), a chaplaincy, a UPO, a Post Office, an outdoor barbecue area, an outdoor sports/games area and a small shop. WiFi is available in all areas, accessed via your Paradigm account. However, as already alluded to, the modernity is a double-edged sword. The social facilities at the NSF have great potential, and as more Crews begin to rotate through and add unit or personal touches, the rooms will gain more of the 'personality' that people look for.

Accommodation, whilst new, clean and modern, is already at a premium. The transit rooms are allocated on a priority basis. This means that sailors who have bed spaces in their ships will be prioritised behind those who are deployed to Bahrain without any other form of accommodation. However, accommodation will certainly be made available during RIPs and can be booked by your Cox'n for ship maintenance periods, particularly if habitability is reduced onboard

due to invasive maintenance or repairs. The use of shared facilities is commonplace; transit accommodation rooms range from two to six beds – all with shared bathroom facilities. It is also important to mention that the large number of people who come through the NSF – sailors, soldiers and airmen alike – are supported by a small contingent of permanent military and civilian staff and the facility is guarded by soldiers from Royal Gibraltar Regiment.

With future plans to increase the Royal Naval presence in the region, UKNSF will grow in importance and hopefully in character as well. The site has that 'new car' smell; as the facility gets more use it will start to feel more homely.



# RETURN FROM THE GULF

By Lt Joe Pollard (M2C2)

**MCM2 Crew 2 deployed in HMS MIDDLETON for 234 days, with 209 days under UKMCC OPCON and 25 days under COMOPS, and almost all of our deployment was spent working closely with HMS BANGOR (MCM1). HMS MIDDLETON conducted 15 days of Detailed Route Survey, including 69 SEAFOX Runs and 72 Clearance Dives, resulting in 27 miles of cleared Q-Routes (many of which were new routes) thus providing a significant contribution in the overall coverage in the Arabian Gulf. Bilateral exercises increased interoperability between the RN and the Kuwait, US and Egyptian navies. The team conducted Defence Engagement tasks jointly with HMS BANGOR, executing 7 tasks across 5 countries, which included: Ambassadorial visits; a 3-phased operational period inside Kuwaiti TTW; a capability demonstration for UK Secretary of State for Defence; and FCO VIP Sea Days in Bahrain. After a three-year operational period based in Bahrain, it was time for both ships to return to the UK.**



Royal Navy minehunter HMS Middleton returns to Portsmouth



The ships sailed from Dubai in mid-July, in company with HMS SUTHERLAND, after a week alongside for an operational stand-down. Emirati Police Divers had been hosted aboard amongst other Defence Engagement events. Prior to this point, months of joint planning had taken place between the two MCMVs, COMUKMCMFOR and UKMCC to consider every outcome at each stage of the passage back to the UK. The scope of the planning ranged from discussions about how the South West Monsoon would reduce our combined speed to questions about the likelihood of receiving food stores in Djibouti and how we would react under threat in choke points.

The first hurdle was to transit one of the world's most strategically important chokepoints, the Straits of Hormuz. Situated between Iran and Oman, the 20 mile-wide waterway accounts for 35% of all petroleum transferred by sea. Due to the proximity to Iranian territorial waters and the likelihood of interaction with the Iranians, HMS SUTHERLAND was assigned to accompany us through. As soon as we started the transit this decision was vindicated, as over the course of the transit in excess of twenty small Iranian patrol boats arrived in close proximity to the Task Group, intent on making their presence known as we sailed east.

Safely through the Straits, HMS MIDDLETON and HMS BANGOR were detached by HMS SUTHERLAND and proceeded to Muscat, Oman. Here the Crew hosted the British Defence Attaché and COMUKMCMFOR, and made final preparations for the next stage of the transit through the South West Monsoon. Due to its relentless nature during the summer months, the Crew had to prepare the ship to spend three weeks being significantly challenged by the sea and swell whilst ensuring that we moved fast enough to meet our future commitments.

Once the ships sailed from Muscat, we rendezvoused with RFA CARDIGAN BAY, our Afloat Forward Support Base, to passage east for a few hours before the Monsoon's effects were felt. As we rounded the north east corner of the Arabian Peninsula, the wind speed increased to a steady 50 knots and we met 4 metre waves on top of a significant swell height and length. The next two weeks consisted of 'holding on tight'. As the ships headed South West along the Omani coast, there were short pauses in Duqm and Salalah to replenish fuel and stores and to allow the Crew some respite.



MINE WARFARE AND DIVING – SUMMER 2019

After making good progress despite the weather, we sailed into the lee of North Africa and switched focus to a logistical stop in Djibouti, which doubled as a hot-handover with HMS BROCKLESBY and HMS SHOREHAM as they were heading in the opposite direction. For the returning Crews, the vaunted Bab Al Mandeb Straits followed...



The Bab Al Mandeb, or BAM, is the strait located between Yemen and Eritrea; it is particularly important because it connects the Red Sea to the Gulf of Aden. Due to the ongoing conflict in Yemen between the Houthi Rebels and the Forces of the Saudi-led Coalition, additional Force Protection measures were required for the BAM transit. Less than a month prior to our transit, US and UAE vessels suffered anti-surface missile and unmanned explosive boat attacks, launched by Houthi rebels. Additionally, our partner ship (BNGR) was of the same class as the Saudi warships AL-JAWF, SHAQRA and AL-KHARJ, hence there was an increased risk of attack due to misidentification.

Departing together from Djibouti we waved goodbye to HMS CARDIGAN BAY, HMS BROCKLESBY AND HMS SHOREHAM, and rendezvoused with HMS ARGYLL, our escort for the transit through the BAM. Twelve hours later we emerged into the Red Sea without event, ready to proceed with our programmed Defence Engagement to host Saudi Arabian Divers in Jeddah and to conduct Officer of the Watch Manoeuvres with the Egyptian Navy in Safaga.

The fact that we were actually going home didn't seem real until we made it into the Mediterranean Sea. However, we had to navigate the Suez Cana first, with all of the intricacies involved with gaining access to the waterway which accounts for 8% of all global shipping traffic.

Arriving at the southern entrance to the Suez Canal in the early evening, it soon became apparent that all twenty vessels anchored in the vicinity were vying for a position at the front of the convoy. Fortunately warships are typically placed at the head of the convoy, essential for us as our onward programme would have been in jeopardy if we weren't able to assume the most expeditious position.



In the early hours of the morning the first Pilot boarded and instructed us to proceed to the entrance to the Canal. Over the course of the next twelve hours, HMS MIDDLETON led the convoy through the narrow, man-made canal as the sun rose over Egypt, making steady progress to the Mediterranean Sea.

Once we completed the Suez Transit and entered the Mediterranean, the prospect of home became increasingly real. HMS MIDDLETON and HMS BANGOR made a 24 hour logistical stop in Souda Bay, Crete, for fuel, stores, a brief taste of Chania, and to collect our BAE Platform Manager to plan ahead for forthcoming maintenance. A further five days sailing through the azure waters of the Mediterranean brought us to Valletta, Malta. For the Pilotage into Grand Harbour, both ships assumed Procedure Alpha. This gave the Crew the chance to experience the spectacle that is the Grand Harbour in the Mediterranean sunshine. When a City is ruled for centuries by a Caste of Warrior Monks who mostly spent their spoils from privateering on churches and fortifications, the result is one of the most stunning visual sights the Mediterranean has to offer. We had three glorious days experiencing the culture and history of Valletta, such as Fort St. Elmo, the Grand Master's Palace and the Valletta Wine Festival, before we continued west, to Gibraltar.



HMS MIDDLETON and HMS BANGOR were escorted through the Strait of Hormuz by HMS SUTHERLAND

HMS MIDDLETON and HMS BANGOR arrived in the shadow of 'The Rock' after a week's transit. A Sovereign Patrol around UK territorial waters, accompanied by HMS SCIMITAR, preceded our arrival alongside the RN's oldest remaining Naval Base overseas for an overnight logistical pause; a steak followed by an early morning 'Rock Run'. The sight of familiar British high-street institutions such as M&S and Morrisons only made the homecoming feeling stronger, and our subsequent arrival in Tangiers the next day a more glaring cultural contrast. Three days wandering the bustling bazaar and narrow winding streets of the Kasbah gave an exciting taste to the culture of Morocco, in the first visit by British Warships in some time. Defence Engagement extended to a visit hosted by HMS BANGOR and a dinner ashore hosted by the British Ambassador.

Sailing from Tangiers for Lisbon, we arrived twenty-four hours later and, again, conducted Procedure Alpha for the inbound pilotage. Our last Port Visit before the UK, both ships made the most of it. It was at Lisbon that the two ships parted company after almost eight months working together; BNGR sailed a day early to make the additional fuel stop she required for her return to Faslane.

Departing Lisbon into a bout of choppy weather HMS MIDDLETON made best speed for Devonport, the penultimate visit, to conduct a de-ammunitioning serial required for BAE to take Care and Protection for maintenance. Despite the reluctance of some members of the Crew to proceed onto English soil earlier than planned, we anchored in Start Bay and sent a landing party ashore to the Cricketer's Inn for dinner. Coincidentally they stumbled into the local ladies' night; the raiding party arrived to much applause and excitement and left having presented the landlord with a Ship's Crest.

After collecting a small contingent of Devonian visitors, who had won an auction of promises, HMS MIDDLETON passed by the Dartmouth Royal Regatta and continued east to anchor in Weymouth Bay, whereby a local fish and chip shop received a large order for dinner. As HMS BANGOR anchored in Rosneath Patch, HMS MIDDLETON conducted a sunset pilotage through the Needles to anchor at Spit Head for the final night of her deployment.





HMS MIDDLETON arrives in the Spithead Anchorages on the evening prior to her return to Portsmouth.

Fleet Commander, Vice Admiral Ben Key, and WO Naval Service visited HMS MIDDLETON the following morning to welcome her home, providing an opportunity for them to informally walk the Ship, meet the Crew and to present PO Clarke (DWEO) with his LSGC. Cdr MCM2 and Capt MFP followed shortly afterwards to join us weighing anchor and the pilotage into Portsmouth.

Sixteen ports, twelve countries, six weeks, four transits through potentially hostile waterways, one relentless monsoon (and three broken reels of fibre-optic cable) later, at the same time that HMS BANGOR arrived in Faslane HMS MIDDLETON entered 2 Basin, greeted by a RM Marching Band and our families.

On reflection, two relatively junior teams successfully planned, briefed and executed a significant voyage, in company with other warships, with seasonal weather challenges and Defence Engagement commitments throughout. It is, and will be for the foreseeable future, an experience that the MCMV community are seldom exposed to. Both HMS MIDDLETON and HMS BANGOR's Crews enjoyed the opportunity to return to the UK with their ships and it is an experience that other MCMV Crews should look forward to either on the way to, or returning from, KIPION.



HMS Middleton launches her Seafox Mine Disposal system to hunt for mines while on operations in the Gulf

# FOST MCM: THE 'T' IS FOR TRAINING!

By Lt Cdr Ross Balfour

Based in HMNB Clyde, Faslane, the MCM department within FOST N MPV (FOST MCM) provides expert training and assurance to units generating in support of Defence Tasks at home and abroad. Whilst cognizant of the pressure units and crews are under, FOST's aim is to ensure that the MCMV community is ready to fight and win. To achieve this, FOST MCM has embraced coaching and mentoring techniques when delivering training. We are the only team to embed during an assessment phase. This requires talented Senior Rates and Officers who can coach and mentor a team whilst ensuring that the absolute standards required by FOST are achieved and upheld.

FOST MCM staff are increasingly called upon to support individuals to reach TPS and subsequently bridge the training gap to OPS, a challenge which is compounded by increasingly taut FGen timelines and units arriving for training with very limited MCM experience. The mantra 'crawl, walk, then run' is very much applicable. It is apparent and commendable that units benefitting from FOST support are receptive, keen, and quick to rectify any highlighted areas for improvement.

As a critical pillar within the FGen cycle, training is typically delivered in the UK around Faslane and Portsmouth. During 2018 FOST MCM completed 8 RAVs; 22 CT packages; 8 RTAs; 2 DCTs; 12 GCAs and 8 'two-ship' OSTs, concurrently providing advice and guidance to the wider MCM community. They have played an essential part in the professional growth and operational output of 11 crews across both MCM Squadrons. Further afield, the FOST footprint has been felt in Bahrain, Norway, Qatar and Saudi Arabia – all in direct support of the operational requirements of the Fleet Commander and the Chief of Joint Operations.

Beyond our core role, FOST MCM strives to contribute to the pursuit of MCM excellence. Following a first of class fit of the S2093 Capability Sustainment Programme (CSP) into single role mine hunters, FOST MCM was central to the creation of doctrine for this evolution in mine-hunting capability. This involved engagement with the original equipment manufacturer and supporting working groups and trial periods at sea.

Staff at FOST MCM have utilised their experience and expertise to influence doctrinal development. This has included a complete rewrite of BRd 5063 (Chapter 4) on MCM Diving and the establishment of the Diving Training Delivery Working Group, which has formalised operational feedback to DDS. This will have a direct impact on the effective delivery of naval military diving in support of operations. FOST MCM continues to identify areas to improve MCM across the Fleet, revising Standard Operating Procedures, identifying equipment shortcomings, effecting change and ensuring it is articulated to the front-line. The defining characteristic of FOST MCM is our passion to improve MCM proficiency.

The maintenance of UK primacy in MCM remains a focus, and FOST MCM sustain this as a leader or key contributor to numerous working groups (MW Drills and Procedures Committee/MW Capability Working Group/ Diving Operational Safety Working Group/ MCM Conference/Diving Training Delivery to name a few!). When not at sea delivering training, FOST MCM remains engaged at all levels across Squadrons, FDS, DDS, NCHQ, MWOTC and MASTT. FOST MCM, supported by external allies, has successfully achieved the re-seeding of exercise minefields in the UK to provide better training and assessment environments. Additionally, it supported generating units conducting Exercise Trident Juncture.

The Royal Navy is renowned world-wide for its MCM capability and FOST MCM remains a key enabler in delivering this important operational output. Already pivotal in the assurance of maritime EOD across FDS, FOST MCM led the establishment of the ODH/DDH interim verification process and its supporting doctrine. As REMUS, MHC and UK SWEEP progress from a distant vision to modern-day reality, FOST MCM will be in the vanguard to understand the challenges and to adapt training and assurance cycles to ensure that the UK continues to deliver excellence in the field and remain world leaders in MW.

Within the wider FOST N organisation, demand for training will remain high as P2000s and Batch 1 OPV continue to generate, and FOST will continue to lead with the creation of guidance and assurance cycles for the Batch 2 OPV as they reach operational capability.

FOST MCM comprises 1 x Lt Cdr, 2 x Lt, 1 x WO (D), 2 x CPO (MW) and 2 x CPO (D). In another unique and challenging year, their collective efforts have truly supported and enhanced MCM effectiveness. As always, the team is on hand to offer guidance and support to the MCMV community, whether generating or deployed on operations.

COMMUNITY  
**UPDATES**  
NEWS

# THE SECOND ANNUAL MCM CONFERENCE

By Lt Cdr Dave Bailey

**The second Annual Mine Counter-Measures (MCM) Conference took place at HMS Collingwood 29–30 November 2018 and was an opportunity for the MCM community to come together and share the issues, successes and future vision across the cadre.**

It was a pleasure to see so many of the MCM community there but also an opportunity to reflect on how many were absent due to Force Generation (FGen) and operations, demonstrating implicitly the high tempo the MCM cadre maintains. The MCM cadre is heavily engaged around the globe and the contribution of a relatively small part of the service is instrumental to the RN's global success.

This year we were delighted to welcome Rear Admiral Jerry Kyd – then Rear Admiral Surface Ships and Commander UK Maritime Forces, now Fleet Commander. Having just relinquished command of HMS Queen Elizabeth, he offered a current view of the change expected within the service as Carrier Strike returns to the RN arsenal. He emphasised that the MCM community is a key enabler for two of our nation's military

priorities, the nuclear deterrent and the conventional deterrent (provided by our new QEC), ensuring their access to the high seas by providing freedom of manoeuvre to and from the base ports and globally in areas in which they will operate. One of the stand-out statements of the conference was that MCM will not 'win the war' on its own but without it we will certainly lose the war, whether tactically, strategically or diplomatically.

DACOS CTS opened the conference talking about why we do MCM across the globe. He identified three core MCM outputs of Homeland Defence, Forward Presence and Contingency. Each of these outputs are vitally important to our national security.

The team from Defence Intelligence (DI) presented the modern threat, providing an awareness of both the current and future threats facing the maritime world. The conventional threat faced by MW, its future development and the increased presence of improvised explosive devices was highlighted.

Considering the threats presented by DI, Commander MCM1 discussed the MCM Estimate and its future development. Current operations, their significance and the context in which they are conducted

were discussed, before moving into the relevance of the modern threat posed by various organisations and state actors. PROJECT WILTON and the maturing Mine Countermeasures and Hydrographic Capability (MHC) programme will increase our capability and capacity to counter these threats by enhancing and accelerating our MCM procedures.

MARCAP presented a broader look at the future of MCM, with a focus on systems and equipment alongside the HM integration. As Maritime Autonomous Systems (MAS) continue to be developed and increasingly have multi-role features, the relationship between the two communities will grow, with the sharing of data pivotal to wider operations.

We were pleased to welcome reps from the HM branch with whom we expect to have a more active partnership as MHC comes to fruition. There remains a requirement for our distinct specialisations, but there is an increasing overlap of our equipment capability requirements which will support each other's outputs. We are both very good at gathering data, but closer partnership will enable us to analyse and exploit it more effectively for use on operations.



The MW and HM Capability Delivery Team (CDT) presented the MHC roadmap, articulating the exciting and technologically-advanced equipment already in use as well as the numerous developments in progress. The future is all about sharing data between the two branches which will be the key to success in both active and passive operations. By sharing the data gathered through MHC systems and platforms, we can create better situational awareness and a better operating picture for a variety of regions and environments.

This view was reinforced by a presentation from the Fleet Hydrographic Mobile Unit (FHMU). Their effectiveness and the opportunity to demonstrate HM/MW interoperability was shown by the high-quality surveys conducted to gather data in the Clyde. Approximately 6km<sup>2</sup> were surveyed over 20 days with over 500 new objects of interest found and 7 new tidal diamonds created. This survey demonstrated the capability of FHMU and showed how we can potentially operate together in future.

The CDT discussed current and future projects to maintain and enhance our MCM capability, including the NAUTIS-replacement (ORCA); new mine targets; the degaussing programs on the Hunt class; Project Wilton;

and the Sonar 2193 refresh. The CDT also discussed the current challenges facing the diving and EOD branch including the development of the Chalfont Dive Group and equipment life management plan.

A rep from Defence EOD & Search (DEODS) spoke on the future of EOD, highlighting the future equipment and projects being brought into service. Both equipment and doctrine are under constant development and improvement. New land-based equipment is being introduced, including a new heavy RCV being brought into service to replace the Cutlass system and new service vehicles have been selected for introduction over the coming years.

The Conference was also a chance to meet our Industry Partners with whom we are working to develop the future of MCM. These interesting and exciting programs demonstrate how MCM is moving forward into the 21st Century with increased numbers of automated systems. Many of these plans are still in the concept stage, but others such as the Maritime Autonomous Systems Trial Team's (MASTT) Sweep trials are already underway and are due to be trialled from the Hunt MCMV and Bay-class LPD in 2019/20. Seeing the efforts, both in time and financial terms, that our industry partners are making

to meet our ambitions added tangible proof of the MHC vision and the investment being made to meet the current and future conventional and asymmetric threats.

Almost 200 people attended the conference over the course of the two days. As well as discussing MCM, there was the opportunity to recognise members of the MCM cadre. It is important to make sure that we acknowledge the commitment, sacrifices and innovation of our people through awards, commendations and any way we can. We were delighted to welcome members of the Ton Class Association who continue to maintain their close partnership with the RN and the MCM community and remember the traditions, ethos and camaraderie that we still enjoy in the MCM and small ship community.

The next MCM Conference is being planned for Q1 2020 to allow more frontline units to attend before the FGen and deployment roulement commences in earnest. Announcements will be made soon.

Thanks go to all those who made the 2018 conference possible and we look forward to seeing many of you at the next one!



# EFFICENCY AWARDS

## Mine Countermeasure Effectiveness Trophy – MCM2 Crew 2



RAdm Kyd presenting MCM effectiveness trophy to Lt Cdr Morris

Crew 2 has forged an enviable reputation as the most effective UK unit, in pure MCM terms, over the past 12 months. This has been exemplified by a performance as OTC during MCM activity in Kuwait which involved both surface and UW MCM assets, and a performance in the USUK MCMEX which was unrivalled. A Crew with a genuine esprit de corps and perhaps the greatest warfighting spirit across the UKMCMFOR bar none, they would certainly be in the vanguard of MCM activity were it required in conflict.

## Fleet Diving Unit Trophy Winners – MCM1 Crew 5 CDE



RAdm Kyd presenting Fleet Diving Trophy to Lt Ryan Hughes

Throughout a challenging period, which included a NATO deployment, Ex Joint Warrior, Operational Sea Training and a KIPION deployment, M1C5's Clearance Diving Element has consistently achieved high standards of performance and readiness. On returning from the Mediterranean, PEMB sailed for Ex Joint Warrior to conduct MCM training with UK and NATO MCMVs in the North Minches and areas around Loch Ewe. The CDE provided a superb diving capability throughout and was utilised to conduct searches by both day and night on contacts, often in challenging environmental conditions. During the subsequent OST, the CDE achieved a Very Satisfactory assessment overall and received praise from the FOST staff for their enthusiasm, diving prowess, and ability to learn quickly – again in some very difficult conditions.

M1C5 deployed to the Arabian Gulf taking over HMS BLYTH (BLYH) during the hottest months of the year. Faced with soaring temperatures affecting both personnel and equipment, the CDE again began their diving work-up, providing a 60m clearance diving capability to UKMCMFOR within the first few days at sea. Since then, the dive team has remained current, has ensured the serviceability of all diving equipment and boats and has contributed to over 90nm of Detailed Route Survey tasking, hull surveys and maintenance – all completed away from the support of the UK and in some of the most unforgiving environmental conditions that the Royal Navy operates in. M1C5's CDE has demonstrated the very essence that makes the RN Clearance Diving Branch the envy of the world and the team is thoroughly deserving of recognition.

COURSE PHOTOS 2018-2019

### DEFENCE DIVE SCHOOL





MINE WARFARE SCHOOL



# LOGISTICS MATTERS, HONEST!

By Lt Chris Clarke

**The Waterfront Logistics Support Group (WLSG), based within the Dockyard's Old Sail Loft, acts as the hub for all logistics support across the Portsmouth Flotilla. However, a specific section of WLSG, the 'Tenders' organisation, is tasked with offering assistance to the tendered ships community, including MCM2 vessels. Our remit is to support you by providing guidance, advice and direction in all matters logistics, whilst ensuring compliance with Fleet policy and regulations.**

Without organic Logistics Officers, Writers, MAs or Supply Chain personnel onboard, and with no Senior Rate Chefs or Stewards, Hunt Class ships are facilitated in delivering their logistics functions through WLSG. But what do we actually do, and how do we help maintain and increase operational capability?



Most of the work we undertake is constant, yet low profile, engaging with ships to maintain a steady drumbeat of commitments. On a weekly basis, we are engaging with Chefs onboard to conduct food safety training, undertaking messing checks and coaching and mentoring personnel to manage catering accounts which deliver endurance to COs at sea. Our Jack Dusties are routinely inputting, chasing, hastening and delivering stores demands, to achieve defect rectification and replenish stores. Our Receipt and Despatch Cell are receiving consignments, forwarding kit and driving across the country to deliver stores to dockyards or ships via boat transfers. SCs are engaged with analysing and refreshing the items held onboard through the PCVR process, allowing ships to routinely hold critical stores, enabling them to operate as self-sufficiently as possible. The medical team provides first aid training to Crews in order to refresh and advance skills. The Tenders UPO moves and tracks personnel on JPA daily, processes expenses claims, assists with pay casework, advises Coxns on travel and subsistence issues, aids with cash accounts, monitors EPCs and holds JPA forums to provide N1 support. We monitor and submit Compliance Management checks in conjunction with XO's and Tenders hosts numerous courses, briefing P2000 COs, Gunnery Officers, Coxns, Corros and XO's through our office.



Interlayered within all of this, we respond to emerging requirements and provide short-notice assistance. When critical defects emerge, NSKO's are liaising with the Tenders Supply Office (TSO) in order to demand replacement stores, raise MATDEMs and process STOROBS. We have recently established out of hours cover to meet the most urgent of these requirements. SPEEDY demands ensure essential kit is received by ships on the same day, usually within hours. We source Chefs to cover last-minute paternity or compassionate leave. We'll organise CHILCONs when fridges break-down. We ePC essential items to meet operational commitments and allocate personnel on secondment to assist partner organisations.

We're at the start of each generation cycle, conducting SARC1 and SARC2 assessments in association with the wider Flotilla. But we're also stepping-up our engagement at the end of the cycle, offering greater support for ships entering refit and providing a source of continuity in the midst of frequent Crew RiPs. For assurance, we conduct Advisory Visits and Flotilla Logistics Inspections in the UK and around the world. We're at each key milestone, but our real contribution lies with the support we provide to ships and sailors each and every day.

With an expanding tendered ships' community, our remit and output is increasing to meet demand. We are balancing this whilst also managing the implementation of Project Unify, and trialling sending SCs to sea to replace Steward billets in order to assist Chefs and NSKO's. Ultimately, our ethos is wholly geared to supporting you – delivering and facilitating logistics output, in order to support operational capability. Our door is always open, from a management perspective for XO's, all the way through to personnel seeking personal JPA advice. The key is communication, we can only lean-in so far, and can't assist if we're out the loop. Therefore make yourself known, highlight any logistics issues that arise, and develop a working relationship with your WLSG counterpart; we're here to help.



# MWC: DOCTRINE, TRIALS AND YOU!

By Lt Cdr John Bainbridge

The Maritime Warfare Centre (MWC) is based in Marlborough Building HMS Collingwood, and for those of you who are unsure of what MWC does, to quote the home page of our website, 'we are a unique military and scientific establishment that provides direct support to the Front Line with a wide range of expertise that can be brought to bear in solving problems and providing warfare advice wherever and whenever it is needed'. Put simply, we are the central point where through trials, tactical development (TACDEV), engagement with front-line units and outside agencies we are able to develop tactics to enable the front-line to do its job more efficiently and effectively.



The MW and Diving desk sits within the UWW pillar of MWC and consists of one Lt Cdr, one POMW and one dedicated operational analyst (OA), although we can call on the support of more OAs if required. Manpower-wise we are in a better place than we have been for some time with the team being fully manned and the Captain MWC (CMWC), Captain Chris O'Flaherty RN, is also a highly experienced MCDO who is raising the profile of MCM at all high-level meetings and providing the team with top-level support.

Our workload has been ramping up over the year which often means priorities take us away from many projects we would like

to progress but just don't have the manpower for. All that said we remain passionate in striving to increase effectiveness and best practice in the 'here and now' as well as getting the future right. The good news is that many of the current and future issues run into each other, and work on existing doctrine will be of benefit in shaping future systems. In achieving

this we have the benefit of working with NCHQ, FDS, MASTT, MWOTC, DDS, DE&S, DSTL, outside agencies and equipment manufacturers as well as engagement with NATO partners to learn from other nations following the same path.

Our internal brief is to provide realistic doctrine and Standard Operating Practices (SOPs) to serve the front line. If we can make things easier to understand or conduct whilst still maintaining effect, we will. To do this we need the buy-in of all, especially those on the front-line. The heavy workload of operational units is completely understood but if an SOP or tactic does not work, or you think there is a better way to do it, it is imperative that the message gets passed by the correct processes of an S2022, DLIM or post deployment report (PDR). Without these, the benefit of current experience at sea will not be captured and we may be unaware of issues or improvements. So as a plea to the whole community, please give feedback even if – at the very least – you just contact this office so that we know (contact addresses are at the base of this article).



Here are some of the key projects we are running with at the moment:

- Writing the tactical doctrine for Project WILTON and FDS. WILTON (See page 9) is the delivery of autonomous RTSV in the Clyde and forms the first step in a long line of development leading to the potential delivery of MHC in 2030. This doctrine will grow as we get used to our new systems through operational use and trials, so will occupy our minds for many years to come. FDS are inextricably linked within this through port and beach clearance, EOD and IEDD, MCM and contact re-acquisition so doctrine for them will be developed in tandem.
- Introduction of autonomy is going to result in many different systems and sensors working together in MW and diving tasks. We need to understand all of these sensors, how they behave and how they can work most efficiently together. This is not only aimed at autonomous systems but also the new 2093 CSP hull-mounted sonar which is in the fleet and performing well, but assessment of its performance is still vital. Much of this work is conducted during exercises, with lots of activity planned during Joint Warrior 191.
- MCM planning has always been a controversial subject, with doubts over the accuracy and consistency of EXPERT and Dare. The introduction of MOM 8-18 is a reaction to this and offers an alternative way to plan and assess MCM tasks, but it requires validation before operational use. We are undertaking this through trials and feedback from FOST, Ships, MWBS and Squadrons.



- Reviews of current SOPs and equipment, such as: RTPME; diver conning runs; contact re-acquisition outside of existing practices; and the PC Trial (amongst many others) remain a core focus.
- We work closely with NATO partners through working groups and forums to share information to assist in all our tasks highlighted above. We also have a commitment to instruct MW and Diving to the many warfare courses held at MWC.

As you can see there is much to do and MWC recently commenced a scheme whereby we request units conduct TACDEV in order to get information for analysis or development of tactics quickly. This is requested in the form of a Smart Tactical Development Instruction (STINT) where we target relevant units to conduct a simple trial with instructions of what information we require to receive to help us achieve our tasks. This information is invaluable and is a way you – as the user – can assist us to develop the tactics you need or improve the equipment you use.

In summary, we at MWC are here to support you by developing simple, efficient and effective doctrine and tactics. You can help us by feeding back shortfalls and requirements for you to conduct your operations in the most effective way possible and helping us in conducting STINT. We are available to talk at any time even if only to chew the fat on all things MW and Diving. We look forward to the future together.

#### MWC COMMAND INTENT

To develop and disseminate naval Service Doctrine, tactics and procedures that optimise the delivery of war-fighting violence on the Queen's enemies in order to:

- **Enhance Conventional Deterrence**
- **Strengthen Maritime Security**
- **Ensure victory in Maritime combat**

#### CONTACTS

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# MW BRANCH CHAMPION UPDATE

By WO1(MW) 'Stirling' Moss

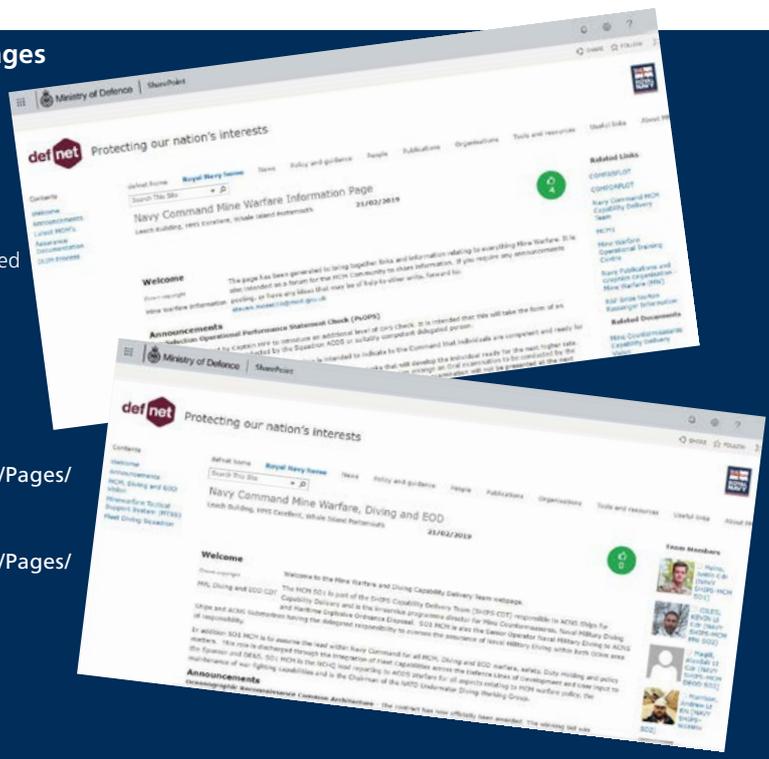
## Mine Warfare, Diving and EOD DEFNET pages

With the launch of DEFNET, all of the MOD's intranet pages are required to be re-published in new formats. The links below will take you to the new Mine Warfare, Diving and EOD pages.

These pages are not intended to replace currently published pages from other departments, but they bring together as many references as possible from other pages, sites, documents etc. They are also intended as a conduit for NCHQ MCM and Diving Capability Delivery Teams to communicate to the wider community.

<https://modgovuk.sharepoint.com/sites/defnet/Navy/Pages/Navy-Command-Mine-Warfare.aspx>

<https://modgovuk.sharepoint.com/sites/defnet/Navy/Pages/Navy-Command-MCM-CDT.aspx>



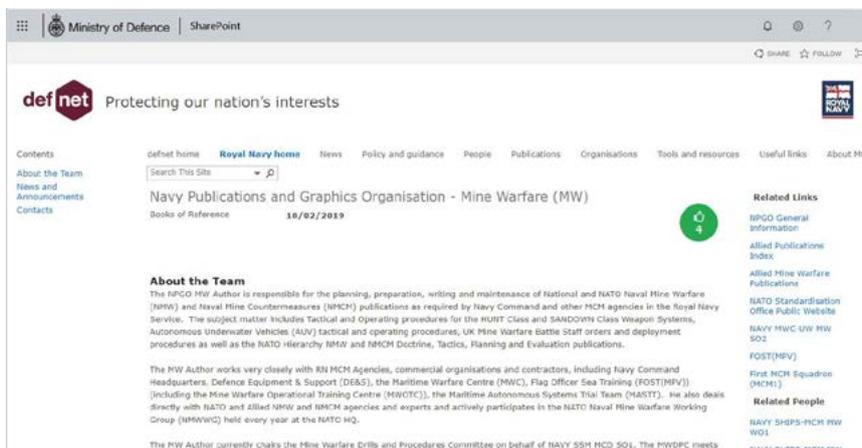
## Mine Warfare Operational Memorandum (MOM) Process

The MOM process has been in place for a number of years and was introduced to disseminate information to frontline units quickly. The process enables any changes to drills, procedures or 'best practice' to be implemented prior to formal updates in the relevant MW publication(s).

MOMs are mainly written by NCHQ; however, deep specialists in the topics being written about may be tasked to compile the paper. Final authorisation of a MOM will always be the responsibility of Navy Ships MCM SO1.

Promulgation of authorised MOMs is the responsibility of Mr Dean MBE, the Mine Warfare Branch Publications Author. Mr Dean will email a copy of a newly-authorised MOM to ALL unit COs, Ops Officers and ORS. This ensures that dissemination is wide-spread. However, the RIP process brings problems with information retention, so MOMs are also accessible through DEFNET using the link below:

<https://modgovuk.sharepoint.com/sites/defnet/Navy/Pages/NPGO-MW.aspx>



When a MOM is issued, it is the responsibility of the Command Team to read and understand the processes detailed within it and to pass on the information to their subordinates as required.

# MW BRANCH CHAMPION UPDATE (CONT)

## Operational Performance Standard (OPS) and the 'pre-selection OPS check'

### The issue:

Events over the last 3 years, including the quality of reporting on ratings, have shown that the current 'OPS check' alone is not a sufficient indicator of professional readiness for promotion to the next higher rate. It has therefore been decided that a new form of OPS check will be developed and introduced.

The saying "in my day" isn't always a great start to a conversation, but perhaps we can learn from some of the things which used to happen in "our day". Before the current 'OPS check', ratings took a series of written exams (one on Seamanship and one on Mine Warfare) to gauge whether they were ready for promotion. Failure of either of these exams meant that the rating was not eligible for promotion during that reporting period. Therefore, they had to get their head back in the books and learn more, forcing them to expand their knowledge and experience.

In an ideal world, returning to this method could be an appropriate solution to the declining average levels of experience and knowledge of personnel put forward for promotion. However, this would have a detrimental effect on the speed of advance of personnel and a knock-on effect to the assignments of reliefs for those coming to the end of very busy periods of sea time. Therefore, an alternative solution to a written pre-selection exam is needed. This will come in the guise of a 'Pre-Selection OPS Check'.

## What will the new 'Pre-Selection OPS Check' look like?

Any requirement for additional exams would inevitably slow down the through-put of personnel up the ranks, and therefore an OPS check which prepares an individual for the next higher rate more effectively without producing excessive additional work for the individual or their Command Team is essential. To enable this, it has been decided that a preparatory assessment of individuals will be conducted by the Command Team in the same way that the current OPS Check is. Once the Command Team is content that the minimum requirement has been met, the individual will request an Oral Examination Board, which will be conducted by the Squadron ACOS. On successfully passing the Oral Exam, the individual's JPA will be updated with the correct competency which enables them to be presented to the Promotion Board for consideration for selection for promotion.

## On-Board OPS checks

These will take the form of both practical and verbal tasks aimed at progressing to your next higher rate. Tasks will cover a number of topics such as:

1. Mine Warfare
2. Seamanship
3. Ops
4. CBRNDC
5. Executive
6. Ship's Husbandry
7. Health and Safety
8. General

A Pre-Selection OPS task-book will be produced for Command Teams to monitor an individual's progression.

## Question Bank

All questions/tasks presented within the Pre-Selection OPS check will be available through the DLE portal, with additional questions aimed at broadening ratings' service knowledge. This will enable ratings to gain a full understanding of the requirements. This question bank will also be used for the oral board conducted by the Squadron ACOS. Currently there are approximately 200 questions in the question bank covering all of the topics indicated above. The contents will change as capabilities and roles change. The question bank covers both classes of MCMV, but does not at present contain questions relating to UUVs or any other off-board autonomous system.



## Oral Examination Board

The Oral Board will be conducted by the relevant Squadron ACOS as well as 1 other person of the rank Petty Officer or above as a minimum. This person may not have day-to-day contact with the individual(s) being tested.

If a rating is being employed outside of a Squadron, the conducting ACOS will be required to ensure that Suitably Qualified and Experienced Person (SQEP) panel members are present, with the questions being asked based on the rating's previous class experience (Hunt or Sandown).

Ratings wishing to conduct an Oral Examination whilst deployed will be able to do so, with the MWBS Ops Room Manager being the Board Chair in place of a Squadron ACOS.

Oral boards will be programmed during the 6 months prior to a promotion board sitting.

## Pass/Fail

The Oral Examination has a pass or fail criteria, with the pass mark set at 80%. Each question being asked will have a minimum and maximum score associated with it. Ratings achieving the minimum score for each question will not necessarily pass the exam. The idea is for the individual to present as much information regarding the question being asked as possible, thus showing the ACOS the depth of knowledge that the rating holds. Achieving a maximum score for every question will ensure that the rating gains the maximum score achievable for the exam.

The conducting ACOS will be presented with a series of random questions from the questions bank. These questions will be based on the next higher rank of the individual (AB-LH, LH-PO) as well as the rating's platform experience (Hunt or Sandown). When these questions are presented to the ACOS they will also receive a set of answers which would enable the minimum mark to be achieved.

Ratings achieving a score less than 80% but greater than 60% will be invited to re-sit the Oral Examination during the same reporting period. However, ratings failing with a score of 59% or lower will not be able to re-sit the oral exam during the same reporting period.

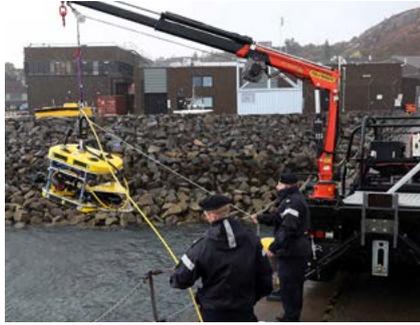
Oral Board re-sits will be programmed during the final 2 months prior to a promotion board. This will ensure that ratings have ample opportunities to attend (and, if eligible, re-sit) a board and are not disadvantaged.

## Summary

Any changes to current processes will inevitably cause a little confusion at first, but it has been agreed that action is required to regain the E in SQEP. Having a deeper experience and knowledge of one's roles and responsibilities will better prepare individuals for duties in the next higher rate.

# ROLES FOR MW RATINGS OUTSIDE OF MCMVS

By WO1(MW) 'Stirling' Moss



**There is a lot of talk about branch expansion and employment opportunities increasing, but what are these mythical positions and where will they be located? As stated at the MCM Conference in 2018, there is an appetite to accelerate the Mine Warfare and Hydrographic Capability (MHC), proving concepts and equipment in stages. To enable this there are several teams which have been developed.**

## Project Wilton

This is probably the most talked about team at present, as this team will be responsible for the first operational set of 'off-board' systems (for more details, see the Project WILTON article elsewhere in this publication).

Wilton will consist of a team of 13 personnel from several specialisations and will operate around the north of the UK. Most of these positions are being established on 1 June 2019; however, the CPO(MW) and PO(MW) positions are due to be established on 1 April 2019. The initial team will consist of:

- 1x Lt Cdr to WO – OIC
- 1x CPO(MW) – 2I/C
- 1x PO(MW) – MW Director
- 2x LS(MW) – Senior Operators
- 6x AB(MW) – Junior Operators
- 1x OIC Maintenance – Trade Specialisation and Rank to be decided in line with FARADAY
- 1x Maintainer – Trade Specialisation and Rank to be decided in line with FARADAY

## Fleet Diving Unit 3

Although this team sits within the Fleet Diving Group, the autonomous capability is run entirely by MW ratings. The team's primary role is as an expeditionary UUV team, able to deploy at short notice and operate in high-threat areas. Their secondary role is as a trials team, and at present they are developing underwater Force Protection systems for HMS QUEEN ELIZABETH. The team is closely supported by a diving element, which gives them a neutralisation and underwater maintenance capability. The MW element consists of:

- 1x PO(MW) – UUV Manager
- 2x LS(MW) – UUV Supervisors
- 6x AB(MW) – UUV Operators

## Maritime Autonomous Systems Trials Team

A well-known team initially developed as the Fleet Unmanned Underwater Vehicle Unit (FUUVU) almost 15 years ago which has now grown into the Maritime Autonomous Systems Trials Team, better known as MASTT.

MASTT is responsible for the trials and development of any new MW equipment. Previously these trials have been centred around Unmanned Underwater Vehicles (UUVs), but lately and with the acceleration of MHC, MASTT has taken delivery of the first off-board sweep system.

With the generation of the Wilton team, compensating reductions had to be found elsewhere. This has left MASTT with a team of 15 personnel of mixed specialisations as follows:

- 1x Lt Cdr – OIC
- 1x CPO(MW) – 2I/C
- 1x PO(MW) – PO Director
- 4x LS(MW) – Senior Operators
- 6x AB(MW) – Junior Operators
- 1x OIC Maintenance – Trade Specialisation and Rank to be decided in line with FARADAY
- 1x ME Maintainer and Stores Support – Trade Specialisation and Rank to be decided in line with FARADAY

As with everything new that is implemented into the RN, it almost always has an impact on personnel. However, the impact is always carefully considered before approval of any changes. All of the positions mentioned are controlled by the relevant Career Managers (CM), with each position being a 2 to 3 year assignment. The length of each assignment is decided by the CM based on front-line priorities.

The way we do our business is changing and will be almost unrecognisable once the transition to MHC is complete. Embrace the change and enjoy the future – MW and HM are the only capabilities receiving significant investment at the moment!



# MCD BRANCH CHAMPION UPDATE

By WO1(D) 'Frank' Spencer



WO1(D) Simon "Frank" Spencer

As your "Branch Champion" my main role is to act as the conduit between you, the branch, and Senior Command. During my tenure I intend to relay honest and open feedback to the Senior Operator Military Diving and to Captain Mine Warfare and Fishery Protection.

Of course, this can only be achieved if I receive regular updates from you – the community. To that end you can contact me on **93832 5453** or email **simon.spencer408@mod.gov.uk**.

Alternatively, the WO(D) cadre meets annually in March. I know what you're thinking – all of us in one room to discuss current issues that are impacting the branch. Please feel free to pass any concerns to your nearest WO(D) so that they can be discussed during the meeting and on completion I will endeavour to respond with an answer.

The RN Clearance Diving Branch has maintained a high operational tempo since the last publication of MAD Mag. The discovery of a German SC 500 air dropped bomb near London City Airport highlighted the continuing danger that remnants of war present to the UK's infrastructure.

Over a four-day period a CDE safely towed the large air-dropped weapon along the Thames to its final disposal site near Shoeburyness. This arduous, protracted task gained significant media coverage which successfully showcased the RN's ability to manage a major incident in the nation's capital.

Once again, the CD Branch has had a productive year for which it received due recognition in the New Year's Honours List. I'd like to pass my personal congratulations to all of you that are on your way, No1s in hand, to the tailor, but I am sure that you'll all agree with me when I say that individual success is always dependent on the support of a strong team. BZ!

Looking ahead, NCHQ is currently working on the SABA MOD1 replacement. Trials are due to commence later this year with the replacement due to roll-out across the Fleet shortly afterwards. Other projects include the procurement of new Diver Hand Held Sonars, the MEOD FP MTE kit refresh, and the introduction of the replacement Dive Support Vessels.

The ODH will shortly assume all responsibility for updating BRd2806 including the Record. BRd5063 has been updated – thank you all for your input – and should hit the streets soon. Can I ask that you take the time to read the revised BRd5063 and forward any comments to me?

Lastly, implementing change is often slow. NCHQ is committed to supporting the operational needs of the branch. However, we can only implement changes that are backed by sound evidential data. To that end, I'd ask you all to input a S2022 for any piece of equipment that fails to meet your requirements. Hopefully this auditable trail will allow us to implement changes that support you, the user.

## Safe diving...Frank.



### Minister for the Armed Forces Mark Lancaster said:

"Our armed forces are on standby 24/7 to keep the people of the United Kingdom safe. I'm immensely proud of the Royal Navy bomb disposal teams who have worked in very difficult conditions over the last 36 hours to safely dispose of this Second World War bomb. Whether on operations overseas or held at high readiness for contingencies at home, our priority is always the safety and security of the UK."



The historic ordnance was found in the George V Dock during pre-planned construction work near London City Airport.



PO Daz Carvell MBE

During his time as a clearance diver, Daz was responsible for the safe disposal of over 150 items of explosive ordnance, including WW2 bombs, and he conducted several remarkably challenging diving operations.

# ADVICE FROM THE MWO/MCDO CAREER MANAGER

By Lt Cdr Jason White

**Acts of God do happen. Whilst trying not to turn this into a theological debate, you do see some strange things in career management. Imagine a Career Interview where someone asks if they can attend the US Advanced Staff Course in Rhode Island as an Acting Commander and have a house on the beach overlooking the bridge. The natural response to this, whilst trying not to laugh, is to explain how unlikely it is, the myriad of reasons why not but that you will bear it in mind. The next day, a desperate email appeared in my inbox asking whether I have anyone who could attend the Staff Course in Rhode Island in two weeks' time! This is a true story and I've seen a picture of the beach and bridge.**

So, a year into the job of Career Manager and I've truly found out what a demanding and rewarding position it is. Unfortunately, with the current manning within the Mine Warfare community, I seem to be giving out more bad news than good. However, things are improving...

The state of the nation. We are currently 35% down on SO3 MCDOs and 25% down at SO2. This is being managed through the continued excellent work of MWOs at sea and in shore positions, doing more and more MCDO jobs. I am also limiting how many of the plot can broaden in CAPPs positions and keeping personnel within core Mine Warfare positions. This doesn't mean that there aren't opportunities available, just that they are limited by Service need; however, acts of God do happen...

The good news is that recruiting doesn't seem to be a problem, with a bulge of manpower waiting to be trained. The issue is getting that bulge into the second and third job space with training places at sea diminishing, notably with the loss of QUORN and ATHERSTONE (my first ship). We are seeing a much higher take-up of training as MWO and MCDO, with 16 people currently in the training pipeline hitting the trained strength from Jan 20.

The offer remains the same, with Ops and XO of an MCMV as first assignments, with additional opportunities within the Mine Warfare Battlestaff. With the GSX training pipeline under even more pressure than our own, the MCM route remains the fastest and most effective way to prepare individuals for PWO Course and future SASB assignments. There is also the opportunity to take broadening assignments within FOST, MWS, DEMS and FDS. The gaps are currently at sea and MWBS, but these will begin to fill as the plot improves in 2020; so jam tomorrow as always! The best way to get promoted to Cdr is to qualify as a PWO and pass CQ2. There is a full career for specialist MCDOs and MWOs, but the requirement for non-PWO MCDO SO1s is limited; promotion is rare and based on need.

**I thought I'd end this with some Career Manager's wisdom and some points below. Don't take them too seriously...**

1. The Career Management principles are: *"the assignment of individuals in accordance with endorsed current and future Service requirements, exploiting skills, career development needs and, whenever possible, personal preferences, whilst providing advice on future career paths"*. You might think they are different to this – trust me, you are wrong.
2. Believe it or not, Career Managers do have feelings and are just doing their job. Being annoyed with them and getting on their bad side isn't always advisable. You might be surprised how many people ignore this advice.
3. No matter how much of an amazing cool diver you are, you are unlikely to be successful at Special Forces/Op SAMPSON selection straight after your Ops job. Think about number 2 before you request this.
4. You might be the best, most handsome/pretty, diver in the world but threatening to put your notice in because you don't like your next assignment is not the silver bullet you think it is. Everyone leaves the Navy and assignments are only two years long.
5. 50% of first and second jobs are in Faslane, alongside an MCM Staff, FOST and a Diving Group. Putting Faslane as your non-preference area will just lead to personal disappointment.
6. Be honest with your Family. I can manage your career but not their aspirations for you being home 24/7. The Separated Service threshold remains 660 over 3 years.
7. You might think you are a bomb disposal god, but most of our jobs are Mine Countermeasures and Diving. Don't be surprised if I can't meet your aspiration for a *"career in EOD to meet my full potential."*
8. Acts of God happen... There are some amazing opportunities in the RN and if you work with number 2 they could happen if you ask for them.



# CIS IN A MCMV – SO WHAT'S THE CATCH?

By LET(CIS) Ryan Hopson

**Firstly I'd like to say 'hello and thank you' to everyone who takes the time to read about what the last 12 months have been like in a busy Main Communication Office (MCO). Many of the Ship's Company don't really know what goes on behind the often closed door, and it's good to have the opportunity to tell people more about it.**

MCM2 Crew 1 (M2C1), 'The Fighting Aces', have had an extremely busy year in 2018 – just as I know most other MCMV Crews have. The MCO team in M2C1 has undertaken many challenges: completing 4 RIPs; Operational Sea Training (OST); and participating in Exercise TRIDENT JUNCTURE in Norway. Much of this has been whilst holding the Defence Task 1 duty, which included an activation over Summer Leave to escort Russian units through the Dover Straits. And all of this before deploying to the KIPION theatre in Jan 19 for a 7 month tour.

Normal running for MCM Crews perhaps, but what does that mean for the Engineering Technician (ET) Communication Information Systems (CIS) branch on day-to-day basis?

The Relief in Place (RIP) process is arguably where it all starts and what I would say is undoubtedly the hardest part of being in the MCM community – it basically means picking up where someone left off. Due to differing thought processes between Crews, it can sometimes be extremely challenging for the Team. Getting to grips with the equipment onboard is the first task, ensuring that during the handover all the little tweaks that individual pieces of equipment need in order to function are learnt and retained. Serving in 4 hulls in the last year alone, it is amazing how the equipment differs between each unit!

Then there is the process of learning all the new passwords in order to make life easier and to speed up the services that we are expected to provide on a daily basis. Sounds easy perhaps, but as we found in LEDBURY on arriving in theatre, the incoming team need to be ready to go straight away for

contingent operations. And that means every system, from LC2 to CENTRIX, needs to have all accounts set-to-work and ready for passing command critical information.

But it is these challenges that bring the team closer together and ultimately leads to maximum output of services from the MCO.

Once you've got your feet under the table onboard, the generation process really begins. Assurance is managed through a number of different stages, beginning with the Ready To Train Assessment (RTA). Typically you don't have long to prepare, and for us the timeline was even shorter as the assessment moved left at short notice due to a defect on another platform. So the MCO spent their time checking that equipment was functioning correctly, even though on the day of assessment you can guarantee that something will not work no matter how many times you checked it!

With every new platform the process of making sure all your logs are up-to-date also starts again: checking that every publication and log is at the most current amendment state; double-checking that all the equipment is channelized correctly; and driving the team to complete the jobs assigned... then checking again to make sure that it has been done to the 'OST standard'. But on the day of the races all you can take away from RTA, no matter how well you've done, is that you are 'ready to train'.

Nevertheless, it's an important milestone to achieve and move forward.

And the fun doesn't stop there with the start of BOST still a few weeks' away. The Ship continued a busy programme of training whilst hosting MCMG weeks, conducting training for student MW ratings and officers overlaid with the usual daily Fire/Flood/SPF exercises. At sea you will be practising for all of the serials you may encounter at OSR, even before reaching Faslane: Action Stations, Defence Watches and normal cruising routines. During the Mine Hunting serials it can be really difficult for the MCO team, losing the on-watch ET for up to 60 minutes to help launch or recover Seafox, interrupting the services provided by the MCO and the cleaning needed for MASC!

Arriving at OST with good preparations in place is of course key to getting on the right side of the the FOST staff. But you can never arrive 100% ready. Our Team ran in to a broadcast modem defect two days before MASC, meaning a few changes to our procedures were needed at the last minute.

As we all know, the training BOST provides is designed to assess your ability to operate under strenuous conditions, including very early starts and late finishes.

After managing the day's serials, the MCO team then needs to set up for the next day to get ahead of the game. A lot of lessons are learnt during OST, especially how to make snap decisions on the spot whilst under pressure and thinking logically about



problems that arise. Dealing with simulated battle damage and reconfiguring or prioritising circuits over others to meet the Command Aim is challenging, especially as you always get that one person who knocks on the door and asks about JPA or who has forgotten their password at just the wrong moment!

The team was assessed as a strong SATISFACTORY, meaning we could hold our heads up high. At the time it felt like we had been through hell and back, but looking back on it now it wasn't too bad. By the end of it, you have learnt a lot about the systems, their redundancy modes and what they can really do. MCO equipment held out to the very end of OST when an IFU blew during Final Inspection – typical!

Deploying to Op KIPION, a lot has changed since the last time the Crew was out here in 2017. Firstly, it was sad to leave HURWORTH having taken her through BOST and having got to know her systems well. And it was frustrating completing the RIP process into a new hull and immediately running into satellite communications (SATCOM) issues and being forced to revert to secondary SATCOM. This isn't as easy as it sounds and it reduces a lot of the MCO's capabilities. Services which are usually taken for granted, like accessing JPA, become much more difficult.

Despite the frustrations, there are also a lot of good things to look forward to. One of our ETs is deploying for the first time and it's easy to get caught up in his excitement. We have had some good 'runs' already, including Muscat in Oman. Plus we have been able to deliver on task despite our SATCOM issues, working with UK, French, US and Omani units during Exercise KHUNJAR HADD. So there is a lot to enjoy and lots of opportunities for professional satisfaction too.

So, having talked about what we do, what does it actually mean to be a CIS in the MCM community? Firstly, in my experience it is a great way to get promoted. ETs are expected to complete not only the daily tasks expected as a junior CIS rating in a Frigate or Destroyer, but also gain the knowledge and understanding of more senior hands pretty quickly. Being a small team, you are often forced to be proactive and think on your feet. Whilst at first the new lads feel overwhelmed with the amount of knowledge expected of them, they soon build a huge amount of expertise during the generation process and deployment, including experience of systems they might never touch in a big ship. It means that you develop quickly and are generally ready to step up to the next rate sooner because of all you've learned.

I have 2 communicators in my team but also an additional ET onboard for training. This is a benefit not only to me, but also the whole ship as it shares the burden of Dii administration and the additional manpower helps with whole-ship tasks. It means we have the flex to assist on the back-end with vehicle and boat launches. There is also the opportunity for me to coach and mentor someone straight out of Phase 2, which is a great challenge and privilege in itself.

MCMV crews must have good working relationships onboard as you are part of such a small team. It means we are able to deliver a massive work output, providing what the MCM commander needs, when it is needed. And for a CIS rating, you get involved in a variety of things you wouldn't normally do in another platform. Living conditions onboard may not be the most luxurious, but the new MEA rate of £5 a day is a step in the right direction to making life easier, and with opportunities for quick promotion, professional satisfaction – and even some fun along the way - serving in Hunt Class MCMVs has been a positive career choice for me!



# PROJECT UNIFY

By Lt Chris Clarke

**In order to modernise stewarding output at sea and overcome historic recruitment issues, 2SL has endorsed a radical overhaul of the branch, known as Project Unify. This is the creation of an amalgamated Catering Services specialisation, by joining Chefs and Stewards into a single Catering Services role.**

Amalgamation has already been instigated at the Senior Rate level, but Project Unify will extend this to the Junior Rate cadre. Project Unify will also change the nature of work onboard ships, reducing the stewarding service provided to RN officers at sea, whilst retaining support to Commanding Officers (of FFDDs and above) along with continued provision of expertise to support Official Hospitality and wider Defence Engagement. Amalgamating both branches will reduce overall billets at sea, but increases focus upon high-end Official Hospitality and Defence Engagement. The future CS rating will rotate through a diverse range of positions, including Galley, Catering and 'front-of-house' services.

Cross-training between branches is currently conducted on a voluntary basis, and personnel who do not wish to transfer, will remain employed. Categorically no redundancies will result from Project Unify. A trial of the proposed changes is currently underway in HMS KENT, with results expected soon. The first cross-training course from AB Steward to AB Chef is also due in early 2019, and is expected to last 21 weeks.

The existing recruiting and training pipeline for Chefs will be maintained, until introduction of the AB(CS) Ph 2 course in Apr 20; with the final specialised Steward course taken from the Jan 19 intake. CS badging will commence from Q1 19, upon successful completion of top-up training, marking an individual's transition to the new cadre.

New information and greater detail is emerging all the time, about how and when Project Unify will be fully integrated into the Naval Service. WLSG will soon be hosting a Forum, to allow all Catering Services personnel to attend an update, and field questions to the Deputy Fleet Logistics Officer to enable personnel to gain a greater awareness of how these changes may affect them.



HMS KENT

# LIFE AS AN OIC IN FDS

By Lt Cdr James Preston

*It is undoubtedly the aspiration of every young MCDO to be selected to become Oic of one of the operational Diving Units on completion of their XO time.*

The opportunities within the units are no secret; however, they are probably misunderstood. Becoming Oic of FDU1 is about far more than becoming parachute-qualified and cutting around in Rab jackets. There's much more to being Oic FDU2 or FDU3 than deploying to sunny climes and topping-up your already bronzed and sculpted physique! And of course, the role of the Oic in an area Diving Unit is much more than just travelling the country conducting CMD tasks and making things go 'bang'. The role of the CDG remains less well-known but will provide an exciting opportunity as the Oic of a niche capability.

The challenges of each role should not be underestimated, and each brings an enormous amount of personal and professional job satisfaction. As an Oic in FDS you are privileged to Command some of the most professional, well-motivated and personable characters within the British Military. The expertise within the various units is amongst the best in the world – the men and women that you will work alongside will without doubt help to improve your specialist skill-set and will re-shape your understanding of the unique capability that the Clearance Diving Branch provides to the RN and UK Defence.

The outputs of each unit are vastly different, each providing their own FGen, doctrinal, assurance and currency challenges:

**Area Dive Units (SDU 1, SDU 2, NDG)** – Based in Plymouth, Portsmouth and Faslane, providing support to UK civil authorities through the provision of EOD and IEDD teams at immediate readiness. The area teams also provide in-water operational engineering support for Ships and Submarines, as well as supporting the NATO Submarine Rescue System. Recently the teams have provided key support to the QE Carrier project, and in the future will provide diving expertise to the Carrier Strike Group.

**FDU1** – Maintained at immediate readiness in support of Maritime Counter Terrorism (MCT) operations, providing assault IEDD support to RM Poole. JS IEDD (DEOC), SOBA, Para and Blue-Light trained.

**FDU2** – Worldwide operations including underwater force protection and maritime IEDD, as well as Expeditionary Very Shallow Water MCM utilising UUVs and divers in support of the Amphibious Task Group/Littoral Strike Group.

**FDU3** – Expeditionary Mine Counter-Measure specialists delivering a full 'detect to engage' MW capability utilising AUVs and divers. Mine Investigation and Exploitation alongside DSTL .

**Chalfont Diving Group** – Specialist diving operations from RN Submarines in support of RM Poole.



An OiC must be an all-rounder. You will need to be physically fit, a capable diver and EOD operator, and a leader. You will expand your skills in each of these areas, but you will also need to develop links with other organisations and become a skilled Staff Officer to be effective. Whilst it is entirely natural for the OiC to be operationally-focused, your responsibilities involve far more than simply Force Generating your team for its specialist roles. Your time as an OiC will be demanding and your core skills will be tested frequently, often in the guise of IEDD licensing or validation exercises. Rest assured that you will be supported by experienced people who are more than willing to help you bridge the gap between qualification and real-world experience. Your responsibilities will include:

- **Capability Development.** Future concepts, including equipment and doctrine development.
- **Budget management.** Managing large budgets for support operations, training and equipment procurement on behalf of CO FDS.
- **Defence Engagement.** Planning and liaison with other nations to build existing and new relationships.
- **Force Generation.** Training to ensure that every member of your team is qualified, current and competent to perform its role.
- **Safety.** Close liaison with the Duty Holder chain and DSA to ensure that your unit is safe to operate and operating safely.
- **Personnel management.** Don't forget this important role which underpins everything else – you are still a DO with people to support and SJARs to write!

Whilst the role of each team is different, the opportunities and responsibilities as OiC are similar. After an assignment as an OiC you will almost certainly be a more rounded and competent officer, and you should feel well-prepared to continue your chosen career path, armed with some good dits and the knowledge that you have worked alongside the very best in the business.

## My time with FDU1

Within each unit there are various additional courses that you must complete in order to qualify in your role prior to holding a duty. FDU1 is no different – in fact alongside CDG, FDU1 has the longest training pipeline. Programme dependent, new joiners can expect to be in the training pipeline for around 7 – 10 months. Although I can't give full details in this publication, quite simply the training is awesome fun!

However, the training for FDU1 is hard and it will continue to be so. By proving yourself through earning qualifications and then routinely throughout the Force Generation cycle, you will have earned the right and the credibility not only to work alongside your FDU1 counterparts, but with the elite RM Poole Operators as the only 'non-badged' personnel in the first wave of assault.

When not training for your role, the real work begins. Time in the office is spent addressing equipment or compliance shortfalls, planning training opportunities, and liaising with external organisations. Maintaining momentum is a hard task, but it is a privileged position to be in and ultimately your efforts as an OiC are vital to the delivery of safe and effective operations.

For FDU1, relationships with Poole continue to thrive, training opportunities are increasing and it remains an exciting time for the unit. Is being an OiC within FDS a good job? **ABSOLUTELY!**



# DID YOU KNOW?

## A GUIDE TO DEPLOYMENT ALLOWANCES

By Lt Cdr Paul Irving

**When you are deployed you receive a variety of allowances which increase your net pay significantly. As an AB on your first deployment you could be entitled to the following in addition to your basic salary:**

| ALLOWANCE   | DAILY RATE               | INDICATIVE VALUE<br>If you are deployed for 182 days<br>(6 months). |
|---|--------------------------|---|
| Longer Separation Allowance (LSA)   | £7.24 <sup>1</sup>       | £1317   |
| MCMV Environmental Allowance (MEA)  | £5.00                    | £910  |
| Local Overseas Allowance (LOA)  | £19.76 <sup>2</sup>      | £1438 <sup>3</sup>  |
| Operational Stand-Down Hotel Allowance<br>for KIPION MCM units (RNTM 01-007/17)<br>[max 6 nights]       | £150 <sup>4</sup>        | £900  |
| Overseas Subsistence Allowance (OS)<br>[can only be claimed in conjunction with<br>OSD HA – max 6 days] | UAED 331.99 <sup>5</sup> | £406 <sup>6</sup>   |
| <b>Total value (before tax)</b>   |                          | <b>£4971</b>  |
| <b>Total value (after tax<sup>7</sup>)</b>  |                          | <b>£4525</b>  |

You will also continue to accumulate one day of 'sea-goers' leave per month and up to 10 **GYH(S)** journeys per year. You can use GYH(S) to travel from a UK port to a nominated address (claimed as a rail warrant or motor mileage allowance).

### You may also be entitled to:

**Council Tax Relief (CTR).** If you pay council tax on a property which you own or rent in the UK (including SFA), you are eligible to claim 50 percent of the average cost of council tax in England (**£3.44<sup>8</sup> per day**). CTR is paid as a **tax-free** lump sum after deployment, based on the number of days spent away (**£626.08 for a 182-day deployment**). Remember that you are always responsible for paying council tax directly to your local authority throughout deployment, and you will have to complete a form in your UPO if you wish to claim tax back on your return.

**Families Assistance for Visits Abroad (FAVA).** If you are deployed on a seagoing unit outside UK waters continuously for 182 days or more, your spouse/ civil partner and/or dependent children may be able to visit you during a leave period in an overseas country. In such an instance, the FAVA Scheme consists of 2 elements:

- It provides an allowance towards the cost of food and accommodation for your visitors, which is claimed via the JPA Expenses Claim system.
- It makes available an advance of pay to assist you with the cost of a single or return flight.

**Always consult JSP 752 for the latest information.**

A handy guide is available at: [http://defenceintranet.diif.r.mil.uk/libraries/0/Docs3/20180424.1/GuidetoAllowances\\_LOW.pdf](http://defenceintranet.diif.r.mil.uk/libraries/0/Docs3/20180424.1/GuidetoAllowances_LOW.pdf)

1. Level 1 LSA (1-280 days). 2. Single/unaccompanied rate for AB and Leading Hand. 3. Based on a 60/40 split of time at sea and alongside Bahrain. 4. A maximum of 150 a day paid for a maximum of six days. 5. Rate correct 1 Jan 19 for UAE (eg Dubai). 6. Exchange rate 18 Mar 19. 7. Basic income tax rate applies to LSA and MEA. 8. Effective from 1 May 2018.



# TOP TIPS FOR SJAR FRONT PAGES

By CPO(MW) Andrew Osbourne

**Some SJAR 'Front Pages' continue to be poor, reflecting a lack of understanding and ownership by the subject (you!) and a lack of support and oversight from the reporting chain (your Div SR and DO). The points below (which are very similar to last year's guidance) can genuinely make the difference in being selected for promotion or not.**

Set SMART objectives – and strive to fulfil them! Your personal objectives should give your 1RO lots to comment on in the 'performance' narrative of your report. Take the time to use a spell-checker and get your DO to check them before you enter them into JPA. Completing your RNFT is not a personal objective, it is a mandatory Core Maritime Skill. Don't wait until your report is due – objectives should be set at the start of the reporting period, but you can update them at any time and you should review them with your DO/Div SR during your MPAR. Ensure that you set a date for each objective which falls within the reporting period so that they will populate your SJAR.

Ensure that you complete the Career Aspirations and Comments boxes. This is your chance to sell yourself to the board! The reader wants to see how dynamic, professional and highly-motivated you are and why you are the perfect candidate for an assignment in the next higher rate. Your CM will take into account comments which state that 'you only want an assignment in Portsmouth because you take the kids to school every morning', but this is unlikely to be a 'career aspiration'.

Use your preference and negative area boxes sensibly. If Portsmouth is your first location preference and Faslane is your negative choice then that's fine, 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



# THE DDH NAVAL MILITARY DIVING TEAM

By WO1(D) 'Yoyo' Ravenhall

**The Delivery Duty Holder (DDH) Naval Military Diving (NMD) team is located in Cochrane Building (formerly Lancelot Building) in HMNB Portsmouth and was established in September 2018 to support COMPORFLOT in his role as the DDH.**

The DDH NMD team is made up of the DDH's Senior Operator NMD (SO1 MCDO) and the DDH's WO(D). The DDH Senior Operator NMD has delegated authority from the DDH to oversee assurance activity, investigate all NLIMS and adjudicate concessions. The WO1(D) within the DDH cell directs and manages the 1st Party Assurance (1PA), in the form of an Intermediate Verification (IV), of all NMD teams within MCM1, MCM2 and the Fleet Diving Squadron. He is also the administrator for NLIMS reporting within the NMD domain.



## CONTACTS

DDH NMD POC: Cdr Richardson

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tel: 9380 27055

DDH NMD POC: WO1 (D) Ravenhall

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## Key Roles for the DDH NMD

The primary role of the DDH NMD organisation is to ensure that equipment and personnel are Safe to Operate and are Operating Safely. This is achieved through the following:

- Promoting a strong safety culture through the NMD user group.
- Providing the NMD community with Guidance, Leadership, Assurance and Direction (GLAD) for all military diving related matters.
- Managing the reporting procedure to capture all diving incidents and promulgate lessons identified. All records of personal injuries, incidents, accidents and near misses occurring within the NMD community will be analysed and investigated to ensure that lessons are identified, learnt and shared with all stakeholders via the NLIMS process.
- Providing a clear process to formally request a departure from operating safety guidance.
- Directing and managing Military Diving Safety Management System (MDSMS) IV and Level 2 assurance activities for crews, units and vessels.
- Directing support from the Diving Life Support Equipment Authority.

The DDH NMD team is the frontline unit's first POC for GLAD on NMD matters. They are available to Commanding Officers, Diving Officers, diving teams and elements for advice on all diving-related matters, especially those relating to safety and regulatory compliance. This is particularly key during generation of diving teams and elements. Ships' Diving Officers are encouraged to engage early during the generation process for consultant diving advice.

## Concessions

Any departure from the Operating Guidance is to be sought in the first instance from the DDH Diving Safety Team with suitable justification and an assessment of Risk to Life (RtL). Depending on the assessed classification of the RtL (Class C or below managed by DDH/Class B or above referred to ODH) a DH concession will be formally considered to TOLERATE an increased RtL or departure from Operating Policy. Requests must be carefully considered before submitting, balancing operational value against risk. The request should include detailed information on how the activity can be shown to be compliant with DSA 02 and DSA 03 / DCOP 20, as well as what the operational benefit is, including how this will improve safety in the longer term. It is recommended that requests are submitted NLT 6 weeks before the planned activity if it is novel or contentious, and NLT 4 weeks for routine matters.

## Assurance – The Intermediate Verification Process

The DDH is required to receive regular and full assurance that NMD is being conducted safely, and he is responsible for providing 1st Party Assurance (1PA) through IVs to all Naval Military Diving Teams (afloat and ashore). The IV process complements the Certification process run by Superintendent of Defence Diving (SoDD) as a DMR Authorised Person. It is accepted that the 2nd Party, Level 2 Assurance provided by the SoDD is of sufficient rigour and detail that it remains extant for a 24-month period. IVs are to be conducted at the intermedicate point (9-16 months) after Certification.

The NMD DDH team is here to help you with any Naval Military Diving matter. The kettle is always on and we welcome visitors at any time to discuss whatever is bothering you. I am very happy to visit units and crews outside of the Portsmouth area to assist with DSMSA-IV and Certification preparation, or just to act as a sounding board for DivOs with questions. I am also happy to attend DSM Committee meetings as an SME with plenty of experience of FGen and C&C recovery plans.

References: DRI 11/18 and DSA02 (DMR Defence Diving Regulations)

# DIVING SAFETY & NLIMS REPORTING

By WO1(D) 'Yoyo' Ravenhall

## Navy Lessons and Incident Management System (NLIMS) reporting over the past 12 months has been consistent across all arms of Naval Military Diving.

Open and honest NLIMS reporting of 'Near Misses' from the MCM Squadrons and Crews, FDS and DDS has remained high but we have also seen a significant drop (22%) in diving incidents reported in the last 12 months. NLIMS reports, supported by S2022s, provide the ODH and Equipment Authority valuable information for the Diving Life Support (DLS) equipment Safety Case meetings, which feed changes to DLS equipment (BR2807 Series), related MOPs, and BRd 2806 equipment SOPs and EOPs.

## Common areas of weakness

- Incorrectly performed MOP 2\* (Before Use Routines).
- Incorrect Incident Reporting (see DRI 11/18 and BR 2806 Vol 1 Chap 9 Annex 9E).

## Common areas of good practice

- Increased Numbers of Dives (FDS & MCMVs).
- Increased Number of Dives to Depth (MVMVs).
- Diving Incidents down 22% on the previous 3 years.

\*The number of diving incidents that relate to incomplete MOP 2s (Before Use Routines) is a cause for concern. Complacency and over familiarity with the equipment are not excuses for failing to follow the MOP procedure. Management direction and oversight is essential if we are to eliminate potentially life-threatening errors. Life Support Equipment will only support life if it is prepared correctly!

Regular diving practices, increased diving currency and increased numbers of dives to depth in line with BRd 9274 Maintenance of Operational Capability are starting to drive-down some of the avoidable NLIMS reported. Carrying out more relevant dives, rather than 'blowing bubbles' at depth, is a way of reducing NLIMS further (eg simulated stops; live stops; drifting stops; operating at depth with SMMRO, search-line and Artemis).

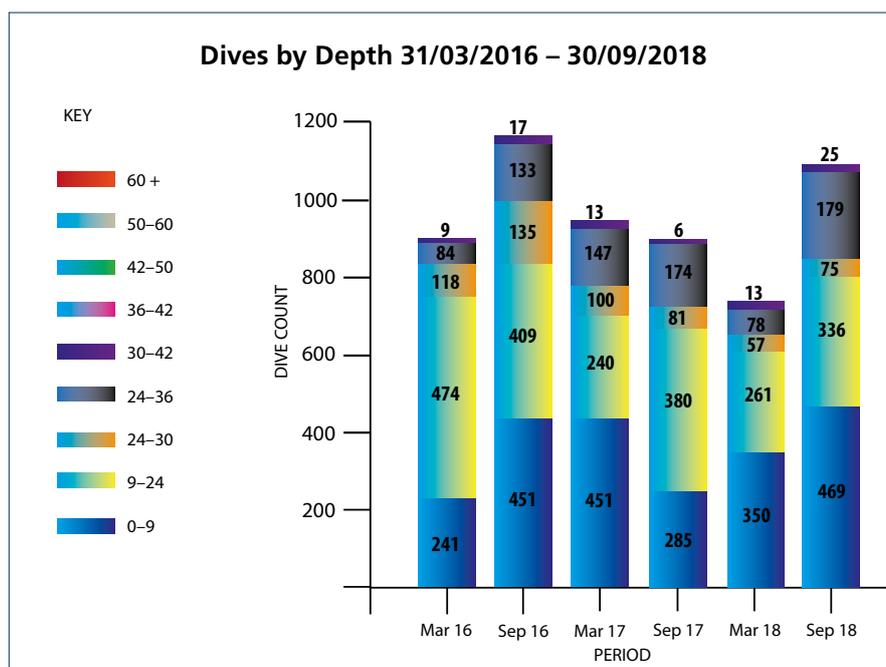
Preparation is key to producing a current and competent diver or supervisor; both facets are crucial to safe diving.

A real positive from the past 6 months has been the increased level of diving conducted by the MCMV Crews of MCM1 and MCM2. This increase in diving activity has seen the numbers of MCMV NLIMS reports decline, highlighting the importance of being a well worked-up team. It is a regulatory requirement for the Commanding Officer to provide the CDE sufficient time to maintain diving currency.

## Leading Diver's Supersession routines

During recent Crew RIPs, there has been a lack of compliance with the Diving Capability Supersession procedures and report. The procedures have either not been completed at all or were completed poorly. The procedure is laid down in DRI 13/18 (Diving Capability Supersession & MCMV Diving Capability Supersession Report). This is a requirement set by the ODH and must be completed thoroughly and in good time (warts and all). Do not s\*\*\* on your relief. It is to be signed by the LD, Coxn and Commanding Officer. Not correctly completing one for your relief will NOT be accepted by me.

PTWs (Diving /Safe to Dive Certificates are still not being completed correctly in all cases. Safe to Dive Certificates and PTWs (Diving) can only be signed-off by the CO or DCO. RNTM 325/16 (Diving in Vicinity of Vessels) refers.



# SUPERINTENDENT OF DEFENCE DIVING & DEFENCE DIVING STANDARDS TEAM

By WO1(D) Nick Frost

**Since the last edition of MAD, the Defence Maritime Regulator (DMR) has conducted a review of diving governance across all diving conducted by the MOD: military, AT and commercial. The purpose of the review was to identify areas where the management of diving could be improved, and to examine whether accountability was correctly placed. Having identified several areas for reform, an Organisational Safety Assessment (OSA) was conducted to explore how these reforms could be implemented.**

## **The Role of Superintendent of Defence Diving (SoDD) and the Defence Diving Standards Team (DDST)**

It became clear during the review that legacy arrangements saw the Superintendent of Diving (SofD) involved in diving policy, risk ownership and decision-making, and that this was at odds with the requirement for each Service to establish a Duty Holding structure to actively manage the military diving risk within their area of responsibility. It became obvious that SofD could not be part of this process whilst also conducting independent assurance of it. To correct this, it was decided that SoDD should be placed outside of the Chain of Command and should become a DMR Duly Authorised Person, to direct the DDST as a DMR Duly Authorised Organisation. The key changes are summarised below:

- The Superintendent of Defence Diving (SoDD) is recognised within the Defence Maritime Regulations as the Duly Authorised Person, charged with the direction of the Defence Diving Standards Team (DDST).
- DDST will become a Duly Authorised Organisation and will be accredited by DMR.
- SoDD shall be the arbiter of diving safety and the HSE focal point for all diving commissioned, or conducted, by the MOD.
- In conducting assurance through certification, SoDD will provide DMR with objective evidence which demonstrates that Diving activity is compliant with regulation, statute and law, and is conducted in a manner consistent with Secretary of State's Charter.
- DDST is to remain independent of Delivery/Operating Duty Holders and Platform/Equipment Authorities.

## **Diving Governance**

The OSA also reviewed the Defence Diving Policy, which was subsequently re-issued by ACNS Ships in a DIN 2018DIN03-023. The policy articulates revised governance arrangements that identify ACNS Ships as the Military Diving Capability Sponsor, and Navy Command as the lead Service for Military Diving Policy and Equipment. As the equipment owner, ACNS Ships sets the operating safety case and is responsible for its capability management; however, each of the other Services are responsible for actively manage risks arising from the diving activity within their area of responsibility.

## **Diving Documentation**

Concurrent to the OSA, the Maritime Regulator conducted a review of the DSA02 Defence Maritime Regulations and this gave us the opportunity to revisit the Defence Diving Regulations and the associated DCOPs. Whilst we were content that the DCOPs had been reviewed and contained accurate information, we concluded that they added an unnecessary layer of regulation that blurred the boundary with the Diving Manual (BR2806 series) and was causing unintended confusion on the ground. Having consulted broadly, including with the HSE, it was proposed that a new Defence Safety Authority document would be created – the Defence Diving Rules – to replace the Defence Diving Regulations. These Rules will define how Defence will comply as closely as possible with the Diving at Work Regulations. Guidance on compliance with the Rules is being transferred from the Defence Codes of Practice to BR 2806, and once complete the DCOPs will be cancelled. Currently the BRd is “owned” jointly by SoDD and SO1 MCM (Senior Operator for ACNS Ships), but the intent will be for it to be owned by ACNS Ships as the Military Diving Capability Sponsor, and endorsed by SoDD. This work will be completed as quickly as possible, with the aspiration to publish the new documents by the end of 2019.

## Diving Fatalities

It is with great sadness that we learned of the deaths of two of our fellow military divers. As both deaths are currently under investigation it is not possible to share with you the lessons from these tragic accidents yet, but we will do so when it is possible to. Their deaths are a reminder to us all that our trade is dangerous and that situations can go wrong, no matter how simple the dive may seem.

## Common Trends and Audit Feedback

DDST is now responsible for the conduct of DSMS certification audits only. While you might see members of DDST during your IV audit, they will be operating in support of the DDH. So, your IV should be co-ordinated by DDH. DDST continues to audit the full military diving safety spectrum; from MAB6 to AT, and from the Field Army to the commercial companies operating under MOD contracts. In doing so, DDST sees a diverse range of good and not-so good practices. Here's what's been trending since the previous edition of this magazine:

### Areas for improvement (AFIs):

#### Still Trending

- Lack of understanding of the appointment of supervisors in writing or within TORs: Reg 9. DCOP20. Para 157.
- MOp1s during LD Supersession continue to draw attention. Be diligent during the handover – once you've signed the supersession, the kit is yours. There are no 'mate's rates' during the handover, so be thorough!
- Diligently follow MOPs. The MOPs are there to ensure equipment is prepared safely for diving; cut the corners on the MOp and you're cutting the corners on your diving safety.

## New Trends

- Monthly books. No signatures or feedback given to the log custodian. We give feedback for the benefit of the custodian; if their log is good, tell them. If it's not, then offer them D&G as to how to improve, or where they need to focus. Give written feedback and expect to see their written response in the log. Monthly Books are the very forefront of the 1st Party Assurance (PA), get it right and the remainder of 1st PA should follow suit.
- Lack of detail in Section 7 of the equipment log (defect section). Don't worry if your explanation takes half a page; the aim is that the defect, and what is being done to resolve it, is clearly articulated.
- Diving equipment maintainers are failing to validate their qualification by not conducting an annual MOP during the first 12m of passing course. This results in them invalidating their course, and conducting maintenance as an unqualified maintainer.

## Positives (BZs)

- With the establishment of DDH and their D&G for the 6m report IAW Reg 5 DCOP20 para 31(b) there's been a marked improvement on the content and accuracy of the reports.
- The interaction between departments onboard ships continues to grow. This promotes a just and honest diving safety culture – please keep it going!

# OPERATION STOP GAP

Reproduced from 'Ton Talk' by kind permission of Pete Down, Honorary Secretary of The Ton Class Association

## Operation STOP GAP

February – April 1965

Commander Richard Clarke RD\*\* RNR

**In the autumn of 1964 MoD (Navy) became aware that the frigate due to take over duties as the East Caribbean Guardship would not complete her refit in time to replace the frigate on station. Admiral Commanding Reserves, Rear Admiral H C Martell, proposed that the RNR should provide the necessary cover. Volunteers to man four Tons for a two-month period were called for from RNR List 1. All were given the option to serve for one or two months, and the result was four complete crews for the two-month period. The ships were brought to Devonport and in preparation for the length of the operation and anticipated patrol duties, most of the minesweeping gear was landed, allowing for additional provisions and spares. Mounts for Bren guns were fitted to the bridge wings. The ships' companies joined on 5<sup>th</sup> February 1965. After rapid hand-overs, the ferry crews left and on 6<sup>th</sup> February 1965 Task Group 341 sailed from Plymouth for Operation STOP GAP.**

The Task Group comprised RFA Brown Ranger (Captain J Gulessarian RFA) flying the Broad Pennant of Commodore Sir John Clerk Bt RNR (his RN Staff Officer was Commander George Vallings, later to become FOSNI), with HM Ships WARSASH (Capt John Leworthy RNR), St DAVID (Capt Ian Davenport RNR), MERSEY (Lt Cdr L Foinette RNR), and NORTHUMBRIA (Lt Cdr Richard Clarke RNR). Our first task was to learn the skills of RAS. During preceding years the RNR had only operated in coastal waters, so we were not practiced in this discipline. An extract from WARSASH's Report of Proceedings for Tuesday 9<sup>th</sup> February reads " ... *Second practice RAS went smoother than yesterday's virgin effort. We will soon couple and uncouple as if we had been getting our end away for years ...*".

Our first port of call was Funchal, Madeira where we arrived on 10<sup>th</sup> February. A standard run ashore, with dinner at Reid's Hotel, then a coach trip to visit the Madeira bottling plant, courtesy of Gordon & Co on 11<sup>th</sup>. The Commodore's newsletter noted "... *Good discount but wines not particularly cheap...*" – but then he was a Scot! We sailed at 1700 the next day; quote from same Commodore's newsletter "... *Leaving harbour Negat BZ ...*" – perhaps too much Madeira?

Three days at sea, including RAS, jackstay transfers and OOW manoeuvres during which one junior officer learned that "TURN 170" means Turn to starboard to course 170 degrees", not "Execute a turn of 170 degrees" ...

Our next landfall was Sao Vicente in the Cape Verde Islands. We arrived at this forbidding landscape on 15<sup>th</sup> February. A swimming party took coaches and lorries to Catfish Bay which was apparently shark-free, although the spiky Sea Urchins had to be avoided. Our scratch football team was defeated 8 – 0 by Sao Vicente First Team, which may have been good diplomacy? NORTHUMBRIA had her ship's side repainted by locals, who accepted an old head rope in payment. At 1800 on 16<sup>th</sup> February we set sail to cross the Atlantic to Trinidad. We arrived at Chaguaramas, the American Naval Base in Trinidad on 23<sup>rd</sup> February. During our short two-day stay, the Canadian aircraft carrier HMCS Bonaventure arrived and reciprocal RPCs were held. Before sailing two Trinidadian Coastguards joined each ship, their Coastguard being commanded by Cdr Peyton-Jones RN Rtd. We now split into two groups: St DAVID, NORTHUMBRIA and BROWN RANGER went to St Vincent, while WARSASH and MERSEY sailed to Grenada. In St Vincent I was asked if we would tow a dead whale from a beach in the northeast of the island. I was driven to the beach to survey the carcass but I decided that as it was a windward beach and the animal was very decomposed, the use of sweep wires would not be wise. St DAVID and NORTHUMBRIA next sailed for Antigua, while BROWN RANGER joined WARSASH and MERSEY for their visit to Barbados. St DAVID and NORTHUMBRIA secured alongside in English Harbour, Antigua on 2<sup>nd</sup> March, the first White Ensign ships to do so since the 1920s. Our five-day visit was truly memorable. We carried out the standing requirement that visiting RN ships should continue the upkeep of the dockside in English Harbour. NORTHUMBRIA's Chippy did a splendid job on the winches while our electrical party carried out repairs to the visiting motor yacht Walanka owned by a Canadian supermarket magnate – as a result of which the ship's company was given freedom to use all his yacht's facilities, of which all took full advantage. We sailed from Antigua on Sunday 7<sup>th</sup> March, although on her departure St DAVID did her best to wreck Nelson's Dockyard. One bollard (a cannon embedded in the dockside) fell over when the weight of the headrope came on it and all the wires fell off! Result St DAVID finished up alongside a yacht of the Royal Yacht Squadron.

We then headed towards Georgetown, British Guiana, arriving on 9<sup>th</sup> March. Our approach to the Demarara River at 12 knots was obviously excessive as we experienced dramatic shallow water effects; St DAVID veering 40 degrees to starboard and NORTHUMBRIA 40 degrees to port. We reduced to 8 knots and made a safe passage to join the rest of the squadron in Georgetown.



Stop Gap Atlantic Crossing

MINE WARFARE AND DIVING – SUMMER 2019





A Ton Class off Gibraltar

Those were troubled times in British Guiana as the country moved towards independence. The ships were joined by members of the First Battalion, The Lancashire Fusiliers and of The King's Own Royal Border Regiment. Many areas and establishments were "out of bounds". However, the Governor, Sir Richard Luyt and his staff, the Army and Police Department ensured that we had a trouble free visit. On 11<sup>th</sup> March St DAVID and NORTHUMBRIA sailed 60 miles up the Demarara River, St DAVID to Mackenzie on the east bank and NORTHUMBRIA to Wismar on the west bank. Conditions on board were not pleasant. The wireless office thermometer registered 103 degrees and humidity was 99%. We sailed from Georgetown on 14<sup>th</sup> March and carried out a patrol in the mouth of the Esquibo River. Full action stations, with Bren guns on the bridge wings manned – fortunately we were not required to use them.

We arrived back at Chaguaramas, Trinidad on 15<sup>th</sup> March to prepare for our return to UK. We landed our Trinidadian Coastguards, who had certainly added a new dimension to our ship's company. So on 17<sup>th</sup> March we sailed for Bermuda and arrived there on 21<sup>st</sup>. A standard two-day visit followed, then on 23<sup>rd</sup> March we sailed for our return to Plymouth via the Azores, with a brief call at Ireland Island to refuel from BROWN RANGER. This proved to be the roughest passage of our deployment. Force 8 to 9 gales are not conducive to easy living in a Ton. We opened up to one mile apart and only sighted the other ships in the squadron when we were both on the crest of a wave – how's that for swinging the lamp! A short stop in the Azores followed, which NORTHUMBRIA missed as she was standing by MERSEY who had engine problems.

A quote from SNOWI's signal to CTG 34.1 sent on our departure from Bermuda "... Throughout the West Indies you, your officers and ships' companies have left an imprint of charm and enthusiasm which has been most refreshing. I am most grateful for the work you have done in holding the fort in the Eastern Caribbean. Your visits were most appreciated, particularly up the rivers of British Guiana. I congratulate you on your great effort in carrying out such an interesting operation and wish you good voyage home and good luck in the future".

On 3<sup>rd</sup> April 1965, having steamed over 7000 miles, we returned to Plymouth. To quote Admiral Martell's final signal to us "Personal from ACR. I have followed your progress and read your reports over the past eight weeks with pride, admiration and envy. I congratulate all officers and men under your command on the successful completion of a most valuable and important operation".

[www.tca2000.co.uk](http://www.tca2000.co.uk)

# THE MINE WARFARE ASSOCIATION

@MWAssociation

By Dixie Dean



**The Mine Warfare Association (MWA) is a relatively young association, having celebrated its tenth anniversary in 2018; however, it has much deeper roots having been preceded for many years by an annual reunion.**

On the transfer of the Mine Warfare School from HMS Nelson (Gunwharf), formally HMS Vernon, to HMS Dryad in 1995, the Mine Warfare branch went through a transformation as we joined our other warfare brethren to form part of the Maritime Warfare School. Inevitably training courses came under deep scrutiny as they were integrated into the new system and the structure of courses changed. In particular, in an ever-challenging financial environment a review of course expenditure was carried out, and external training involving travel and subsistence was removed. In 1997 the PO(MW) career course saw the much-loved 'course exped' removed. To put some fun back into the course and to provide a challenging project for the PO(MW) students, the first course of 1997 were tasked with organising a Section BBQ. The late PO(MW) Geoff Palmer, a student on the 1997 course, was given the task of coordinating the event and came up with the idea of opening it out to the wider Mine Warfare community. In conjunction with our current Vice Chairman, ex-CPO(MW) Taff Reader who was the Mine Warfare School Training Coordinator at that time and in contact with many of the local ex-serving MWs, a list of potential attendees was drawn up and invites issued. The event was a great success and so the Mine Warfare reunion was born.

As a resident member of the MW training staff, Taff was in an ideal position to create and maintain a database of serving and ex-MWs to facilitate the reunion becoming an annual event. To give the event a baseline to work from, some basic guidelines were created thus appointing the Warrant Officer of the Training School as a reunion Chairman. Over the years the annual reunions in the form of BBQs (initially at HMS DRYAD) took place and over time in various other venues around Portsmouth, the numbers attending grew and grew as the event became the annual focus for all serving and ex-MWs to meet up. During this time the chairmanship of the reunions transferred to some infamous characters as the Training Warrant Officer post rotated. This included Paul Shockley, Tommo Thomas, Pete Whitehead, Tony Mulrain, Nat Coles and Pete Mills – all of whom helped to build on the foundation created by that initial Section BBQ in HMS DRYAD.

In 2004 the Mine Warfare School transferred to HMS Collingwood, and in 2007 Taff's naval career was drawing to a close, so his future involvement/employment became uncertain and a decision on the future of the reunions was necessary to ensure the database of attendees did not fall into disrepair. During the following months and, over numerous beers, the then chairman ex-WO(MW) Pete Mills and Taff put together some plans and rules for the formation of the MWA. In the summer of 2008 at the annual reunion, the 1st and inaugural Annual General Meeting of the MWA took place where the constitution was agreed and an inaugural committee was formed.

## MWA today

The association continues to grow and adapt today. In recent years the annual reunion has taken to the road, holding events in all regional areas from Stirling in Scotland to Weymouth in the South of England, not to mention some excellent events in Blackpool, Cardiff, Liverpool and Bristol as the MWA tried to reach out to a growing membership now in excess of 120. This includes a good mix of both serving and ex-serving Officers and Ratings of the Mine Warfare fraternity. While these regional reunions took the association around the UK, attendance was often limited to the dedicated few willing to travel and fell short in achieving one of the main objectives of the MWA, to promote links and maintain comradeship between members. At the 2016 AGM a decision was taken and agreed by the membership, to hold future reunions in the Portsmouth area where a large proportion of the membership was based and where many others returned on a regular basis. This is still the case and the annual MWA reunion continues to go from strength to strength and numbers attending continue to increase. This year saw 50 members and their wives/partners attend a very successful function in the Warrant Officers & Senior Rates' Mess in HMS NELSON.

In 2017 at the AGM, members proposed that having a 'Standard' would put the MWA on the same level as other associations and open new opportunities to attend remembrance parades and such like, thus raising the profile of the MWA. This was agreed and thanks to the efforts of MWA member, Lt Cdr Bob Hawkins RN and the generosity of the Inverkeithing Masonic Lodge, the MWA Standard was designed and purchased under the guidance of MWA member ex-CPO(MW)



Sam Cook who liaised with the manufacturer. At the 2018 AGM the standard was paraded by Sam for its commissioning and associated blessing by the MWA Bish, Mrs Debbie Harvey. The MWA Standard received its first formal public parading at the 2018 veterans' parade in Weymouth carried by ex-CPO(MW) Topsy Turner.

2018 also saw the association celebrate its 10th anniversary. In true Mine Warfare style, the celebration was a lavish formal dinner held onboard HMS WARRIOR 1860 in Portsmouth. The event brought together over 100 members and partners who enjoyed a splendid evening of good food and excellent wine with Captain Roger Redwin Royal Navy, Captain Mine Warfare, Fishery Protection and Patrol Vessels (CMFP) as the VIP and guest speaker. The infamous Shep Woolley and the Cabin Buoys provided the music and entertainment. The MWA Standard was also paraded, again by Sam Cook, prior to the dinner. It proved to be an excellent evening with some old acquaintances renewed and some good dits told.

## Future

As we now enter our 12th year, with Chairman ex-WO(MW) Dixie Dean MBE at the helm and with the continued support of Vice Chairman (Taff Reader) and the association Treasurer (ex-Lt George Turnbull RN), the association continues to adapt to the ever-increasing membership. While the number of ex-serving members continues to grow, we continue to reach out further to increase the number of serving members through our Membership Secretary, CPO(MW) Sean Slee, who is currently serving at FOST(MPV). Our website ([www.mwassociation.co.uk](http://www.mwassociation.co.uk)) is edited, managed and maintained by our webmaster ex-CPO(MW) Ronnie Barker, who holds a plethora of excellent information and photos of Mine Warfare miscellany, past and present. The website also hosts the 'Sweepstore' where several MWA goods are on sale at very reasonable prices to members and non-members alike. To add to this, the MWA Facebook page managed

by Shaun Keen continues to provide instant communication and banter between the members.

The MWA remains as strong as ever to achieve its objectives of:

- To organise a reunion for members once a year.
- To support regional events where possible.
- To promote links and maintain comradeship between members and to keep the 'Mine Warfare Spirit' alive.
- To develop identity-based MW Association merchandise

### Membership costs £12 per year

(payable by Standing Order). Application Forms are available on the website ([www.mwassociation.co.uk](http://www.mwassociation.co.uk)) under the 'Membership' tab. If you require any further details, please contact us on [webmaster@mwassociation.co.uk](mailto:webmaster@mwassociation.co.uk). We look forward to welcoming you!

# THE ROYAL NAVY CLEARANCE DIVERS' ASSOCIATION

@RNCDA1

By WO1 Ravenhall

Since the formation of the Royal Navy Clearance Divers' Association (RNCDA) back in January 2012, the Association has seen its ranks swell to a healthy membership of more than 550 members. For the RNCDA to be a success, it relies on serving and former Royal Navy Clearance Divers of all Ranks and all Rates, along with our extremely generous benefactors, sponsors and associate members, to support the committee to achieve the aims and objectives of the Association.

These are listed in the RNCDA constitution (but are not restricted to):

- Maintaining contact between serving and former members of the Diving Branch ('the Branch') and providing social gatherings for them.
- Fostering esprit de corps, comradeship and the welfare of the Branch and perpetuating its deeds.
- Preserving the traditions of the Branch, including the practice of understatement, humility and modesty.
- Perpetuating the memory of those members of the Branch who have died in the service of their country.

Visit <https://www.rncda.com/> or <https://membermojo.co.uk/rncda/joinus> to see how you can get involved!

MINE WARFARE AND DIVING – SUMMER 2019

**CONTACT US AT**  
**WWW.RNCDA.COM**  
**Or Via Email At**  
**Webadmin@rncda.com**  
**Chairman@rncda.com**  
**Telephone 0146957161**

**YOUR RNCDA NEEDS YOU**  
**AND IT NEEDS YOU NOW!**

