



RAEME

CRAFTSMAN

The Corps of Royal Australian Electrical and Mechanical Engineers

Issue No. 71 2020



Army trains its sights on technology

Next to its primary role as a Defence force, the Army has always relished its role in skills training.

By its very nature, the Army has a continual influx of new recruits, and many of them are trained to play a role in the essential support aspects of the service.

As the cornerstone of support, RAEME trains raw recruits into skilled operatives who service and maintain everything from a pump or motor to a tank or helicopter.

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The Asia-Pacific regional office of the 600 Group, Sydney-based 600 Machine Tools, has been a trusted partner of RAEME for several decades, and has supplied a range of machines that are found in the Army's workshops at home and abroad.

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RAEME CRAFTSMAN

The Corps of Royal Australian Electrical and Mechanical Engineers

Issue No. 71 2020

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Head of Corps

BRIG Todd Ashurst – Director General Logistics – Army

It is my distinct privilege and honour to have been selected by the Chief of Army to be the Head of Corps for the Royal Australian Electrical and Mechanical Engineers, The Royal Corps. Having had the privilege of serving as your Deputy Head of Corps previously, I am very excited by this appointment, a pinnacle of my service. Having now been in the role for 8 months, it is heartening to see the current serving members of the Corps and our loyal members in the associations all coping so well with our current circumstances and challenges.

Firstly, I would like to thank the previous Head of Corps, now MAJGEN Andrew Freeman, for his hard work and leadership. His passion for the Corps was clearly evident as he worked tirelessly behind the scenes while also managing 17 Bde, Army's 3rd Line Combat Service Support capability. I wish him all the best in his role in the United States and seeing him back in Australia in the coming years.

The first half of 2020 has seen the Corps deployed on operations across the globe, and just as importantly, here in Australia. For the first time, the Governor General activated the Reserves, and our RAEME part-time workforce were impressive in the support they provided throughout January and February, as they responded to the devastating Bushfire season.

Army is in the middle of its largest modernisation since WW2. The equipment we are increasingly being required to work on is very sophisticated, calibrated and technically complex. The method of repair is changing and the ability to integrate repair requirements across the Army workforce, Defence Logistics and industry requires redefinition. The simple systems of yester-year, Land Rover, Unimog, SLR, Leopard, 77 sets, etc, have been replaced by capabilities that demand the electronic and physical integration of many systems and sub-systems. Designing, developing, testing, evaluating, maintaining and repairing these systems-of-systems requires competent, qualified and technically minded "Crafties", in uniform, but working closely with Industry partners. Our Corps is the means that enables the war fighter to succeed and win in these situations.

In my day-job as the Director General Logistics – Army, my team is leading many initiatives that will impact the Corps in the short and long-term. I want to take this opportunity to highlight some of the bodies of work happening that will shape the next decade. I anticipate that some of these will directly influence the Corps structure, manning, and training systems to achieve the increasingly demanding capability requirements. My team in Logistics Branch (including many Bluebells) has been working hard behind the scenes.

Engineering Workforce Review. The Engineer Workforce Review is reviewing the RAEME Ground Engineer officer workforce. Phase IA of this review will examine the Engineer requirements within Army; while Phase IB will examine the workforce within our

Acquisition and Sustainment Group. Phase 2 will determine the skills requirements for the Ground engineering workforce, across all Service Categories (SERCATs), Australian Public Servants (APS) and contracted supporting agencies. The key outcome will be an Employment Specification and career model for RAEME Ground Engineers, which will articulate the requirements and roles for our people, by discipline, at each rank or skills level, using qualifications and credentialing as a baseline.

This important body of work being progressed by COL Damien McLachlan, the Director of Technical Regulation and Evaluation – Army (DTRE-A) and will establish the baseline for what RAEME engineering officers need to be 'Ready Now' and inform the Technical Workforce Review to determine how we become 'Future Ready'.

Technical Workforce Review. The Technical Workforce Review commenced in late 2019, and takes a Corps-agnostic view of Army's technical workforce (RAEME, RAE, RASIGS). The review has broken the Land Technical Workforce into seven technology sub-segments, allowing the team to analyse similar trades and officer specialisations to determine the benefits and risks of adopting contemporary workforce structures to assure operational effectiveness well in to the future.

At its heart, the review seeks to understand how technical roles and skills will likely evolve to support Army's modernisation, and how we ensure members of the Corps remain current with rapidly evolving technologies. Part of the review is analysing different ways to develop specialist skills, and aligning this to the most suitable times in year and across an individual's career to obtain required qualifications. Put simply, it seeks to define more effective ways to develop our people to meet the increasingly complex requirements of our profession. I wish to thank COL Colin Blyth, Director of Logistics Plans and LTCOL Troy Wilson for their continued great work on this project. I also congratulate Troy on his selection as Commanding Officer of the Army School of Electrical and Mechanical Engineering (ASEME) from 2021.

Training Transformation – Flexible Learning Model Program. Concurrent to these two important bodies of work, ASEME (under LTCOL Rebecca Gordon) are rapidly progressing a modernisation of our training system. Since early 2020, the Career and Advanced Training Wing (CATW) have developed the Flexible Learning Model (FLM). This has been a true collaboration between Army and our industry partners at Wodonga TAFE. This blended training model is outlined later in this edition of the RAEME Craftsman by the OC CATW.

I wish to thank LTCOL Rebecca Gordon and MAJ Babu for their efforts on this important body of work.

Data Enabled Asset Management. While the aforementioned reviews are focused on structuring and skilling the workforce, the identification and prioritisation of work across the increasing number of vehicles and weapons platforms is critical. The aim of this work being led by LTCOL Steve Mencshelyi, from the Directorate of Logistics–Army, is to minimise the burden of maintenance data collection, input, and management.

Readily available technology has the ability to simplify and automate a range of time consuming administrative and manual management functions. Similarly, the same systems also have an ability to track real time platform use. Greater fidelity and confidence in data will allow our Corps members to be better informed when making maintenance and engineering decisions at all levels. Live data will also provide an ability to track, monitor and assure platforms are employed appropriately and legally.

Data, Health & Usage Monitoring Systems, Vehicle Information Management Systems, Business Intelligence and data fusion is progressively enabling Defence to understand its capability like never before. The work done on M113AS4 by our Crafties and industry partners has demonstrated an ability to automate maintenance administration using a variety of Sensor, software, and hardware data. Dashboards using extant data sources coupled with real and near real time data has improved Army's understanding of how fleets are being employed. This is the future of maintenance identification, analysis and prioritisation!

Leaning into Brigades. The final aspect I wish to touch on is a deliberate activity aimed at better enabling materiel availability and preparedness across the force. This is a collaboration between Joint Logistics Command (JLC) and Army to streamline maintenance management. This will be a standardised and formalised approach ensuring Army reaches across the Defence Logistic Enterprise, including our industry partners, Joint Logistic Units' contracted workforce and Army uniformed maintenance personnel to streamline processes and outcomes. We call this initiative "Leaning into Brigades" and it has three main objectives.

- Integrate maintenance effects and streamlines business process.
- Define and generate a deployable maintenance capability.
- Formalising configuration management, modification programs, rework programs and industry inputs.

This is an important body of work commenced by COL Colin Blyth, and being progressed by LTCOL Steve Mencshelyi, to support both

the digital and physical integration of capability, and fuse industry, JLC and Army maintenance effects together in a more streamlined way.

Finally, I would like to acknowledge the great work our two Deputy Heads of Corps have been doing. Both Lieutenant Colonels Rebecca Gordon and Miles Irving are working tirelessly for our Corps, while having demanding Commanding Officer appointments. They have both significantly contributed to the stewardship of RAEME and have ensured we remain contemporary, relevant and forward looking. On behalf of the Corps, I thank you for commitment as Deputy Heads of Corps.

Over the coming months and years, the Corps needs to support these bodies of work being driven out of Army Headquarters. While I had been planning a Corps Conference for last year, due to the effects of COVID19 it looks as though it may be held in the second half of 2021. These are important issues. While some of us may feel uncomfortable with evolutionary outcomes of Army's deliberations; we must look forward to ensure RAEME continues to evolve in the ever changing world of maintenance and support. I am proud of our Corp and humbled by the opportunity to lead it during this complicated time in our history.

Arte et Marte

Colonel Andrew Herbert

AEME Associations of South Australia and Tasmania

2020 has been, for very obvious reasons, a quiet one for the RAEME Associations of SA and TAS. With only a couple of events possible during the year, their respective newsletters kept the members informed and interested in Corps matters. Both committees did a splendid job in maintaining connection with their membership in a challenging year.

Fortunately each State Association was able to conduct their annual Association Corps Birthday function as well as an AGM. We are all looking forward to a more active year in 2021.



Corps RSM

WOI Rick Colefax – RSM ASEME

This has certainly been an interesting year for the Defence Force as well as the Corps. Even though our normal activities have been curbed, the Corps has still been able to provide assistance to the community during both Bushfire Assist and COVID Assist.

Due to this, a lot of activities have been put on hold for the year but, as restrictions ease, we will be able to resume our great work.

The Technical Workforce Review is still progressing and I encourage you to consult your chains of command as to the status and the direction that the review is going in. Once again, with the introduction of differing technologies, RAEME as an entity will need to change how our trades look and how we train in order to provide capability to Army.

As this is my final year as Corps RSM, I would like to thank everyone in the Corps for maintaining the drive and the excellent work you have done for the community. I ask that you provide the incumbent, WOI Scott Collard, the same support that you have given me over

the last three years. I would also like to ask that you continue to advise the HOC Cell via phone or email when our members are leaving Army, I would prefer to have a certificate or parchment recognising their service to RAEME be presented to them prior to leaving rather than finding out on Face Book.

Finally, I wish you all a good and safe Christmas and hope that you all get to spend some time with your families.

Stay Safe

Arte et Marte



Master Artificers – Introductory Message

In the last edition of the RAEME Craftsman magazine the HOC announced the establishment of Master Artificers for each of our trades. The inaugural Master Artificers were selected and announced at the Army Maintenance Effects Conference held in October 2019. The newly appointed Master Artificers will assist the HOC ensuring that our trades are appropriately represented as we go forward and that the Corps remains modern and relevant. Corps Instruction 39 provides guidance on the Master Artificer’s role and responsibilities as well as how they are selected. The appointment as Master Artificer is held for a period of two years.

If you would like to engage with your trade Master Artificers then please firstly engage with your Technical Chain of Command for them to arrange appropriate times and platforms for discussions.

Your Master Artificers are:

ECN 146 – Fitter Armament	WO1 Michael Waters
ECN 226 - Mechanic Recovery	WO1 Peter Marron
ECN 229 - Vehicle Mechanic	WO1 James Grant
ECN 235 - Metalsmith	WO1 Keith Brown
ECN 411 - Technician Aircraft	WO1 Cameron Kerr
ECN 412 - Technician Avionics	WO1 Tony Jenner
ECN 418 - Technician Electrical	WO1 Wayne Davis
ECN 421 – Technician Elec Sys	WO1 Roger Smith

RAEME Corps SUBSCRIPTION FORM

Life Membership Contributions:

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Email: RAEME.HOCCell@defence.gov.au, Ph: (02) 605 54325/54329/52274



RAEME Corps Instruction Number 39 – Master Artificers

Introduction

1. The role of the Head of Corps (HOC) is to represent the Corps as the senior adviser for Corps capability and heritage. There is a lack of capacity within the current Corps appointments to provide appropriate technical capability advice to the HOC. The Corps has implemented a Master Artificer system to provide strategic technical trade advice to inform a wide range of stakeholders including current and future projects for Army. Additionally, the

Master Artificers will assist the HOC by providing advice on relevant trade and professional issues, and be the voice of the Corps for their respective trade.

2. The Master Artificers will assist in doctrine review, trade governance, improving technical competency and, recruiting and retention issues within their trade.

Aim

3. The aim of this instruction is to detail the role, function and responsibilities of the Master Artificers.

Role

4. The role of the RAEME Master Artificers is to act as the key representatives of their trade, with emphasis on trade mastery and input to new trade related capability.

Responsibilities

5. The Master Artificer is to:

- a. seek out and collate all changes in industry best practice to enhance and progress their trade
- b. provide the HOC with technical advice relevant to trade interaction with Army, and wider maintenance considerations
- c. provide analysis and commentary on recruiting and retention issues affecting their allotted trade
- d. improve trade governance
- e. provide trade related input to relevant Working Groups affecting their allotted trade, including EC&TD led reviews and submissions (including ECRC and to DFRT), and doctrine review.

6. Master Artificers are authorised to communicate directly with respective DHOC RAEME on matters affecting their allotted trade. The SO2 Corps is to provide assistance and support to the Master Artificers on behalf of HOC RAEME. The SO2 Corps may provide funds for travel on an as required basis to assist the Master Artificer in the conduct of their duties. At present, the HOC Cell is not sufficiently funded to fully support Master Artificers; however, the SO2 Corps will endeavour to assist.

Entitlement

7. One WO1 or WO2 will be appointed as the Master Artificer to base trades respectively with the Corps RSM precluded from holding an appointment. The following trades shall have a Master Artificer:

- a. ECN 146 – Fitter Armament
- b. ECN 226 – Recovery Mechanic
- c. ECN 229 – Vehicle Mechanic
- d. ECN 235 – Metalsmith
- e. ECN 418 – Technician Electrical
- f. ECN 421 – Technician Electronic
- g. ECN 411 – Technician Aircraft
- h. ECN 412 – Technician Avionics.

Appointment Considerations

8. Master Artificers are appointed by the HOC RAEME on advice from the DHOCs, Corps RSM and others as appropriate.

9. A Master Artificer will retain the appointment for two years with an option to extend if desired. If the appointee is unable to continue, or the HOC desires, the appointee can have their appointment terminated.

10. In selecting a Master Artificer, the following should be considered:

- a. merit and performance as determined by the HOC
- b. a demonstrated capacity to promote the Corps and their trade in Defence
- c. their current role and workload
- d. demonstrated trade governance, technical and subject mastery
- e. an ongoing commitment to serve Army and the Corps.

11. When appointing personnel, the support of the member's supervisor is to be sought to ensure their ability to discharge their duties successfully.

Arte Et Marte



Master Artificer – ECN 146

WO1 Michael Waters

I am very pleased, honoured and humbled to be appointed as the inaugural Master Artificer (MA) for ECN 146, Fitter Armament.

I enlisted into the ARA in 1987 as a 42nd Class Army Apprentice. Since completing my apprenticeship, I have had numerous postings covering all levels of maintenance support, across all commands, with significant time spent within SOCOMD. I attained my current rank in 2010 and subsequently posted to 2 Commando Regiment. Other postings at the WO1 rank have been to ACW and CATW ASEME and as the WO EME, HQ SOCOMD. I am currently posted as the WO Materiel Management within DLOG-A (AHQ) with the primary role of managing RODUM reports.

I consider it one of the greatest privileges to be appointed as the MA for ECN 146, and to have a key leadership role in developing and mentoring the Trade and the Corps on your behalf. I look forward to meeting those of you who I have not yet met when the opportunity presents itself and continuing to engage with the Functional Command ASM's and other key staff within the Corps to champion our trade.

2020 has been a challenging year on its own but it has also brought with it significant undertakings and opportunities within the Fitter Armament trade. When the COVID pandemic hit Australian shores, we have seen personnel from the SOCOMD Rapid Fabrication Cell along with personnel from ASEME and JLU-V, provide engineering design and manufacturing assistance to MED-CON PTY LTD, the sole producer of medical grade PPE in Australia. ACAU personnel undertook detailed design and prototyping of ventilator components. We have also seen 1 CSSB, in collaboration with Charles Darwin University and SPEE3D, undertake Additive Manufacturing (metal 3D Printing) field evaluation trials. These trial outcomes will help shape any future employment of a 3D capability. There has also been a large body of staff work undertaken by HQ FORCOMD in the raising of an Engineering Change (EC) to extend the Technical Inspection interval for small arms systems (F88/eF88) for units with integral fitter/armourer support. The EC, at this stage, will be reviewed after two years and a determination made if this EC will be extended or cancelled.

For those that have provided responses to the Technical Workforce Review, I thank you for your input on the future of our trade. If you are in a position of influence, I encourage you to mentor members of our trade and to allow opportunities for them to build on their base trade skills in order to pursue professional mastery.

If you are one of the many members that will separate from Army this year to take up new challenges, good luck to you in your future endeavours and thank you for your service. For those who are passionate about our trade and are willing to have input and assist in influencing future endeavours of our trade, please feel free to contact me directly at michael.waters@defence.gov.au.



Master Artificer – ECN 226

WO1 Peter Marron

BIO

Postings:

- 1986 1st FD REGT
- 1992 4th FD REGT
- 1996 5th AVN REGT
- 1999 1 CSSB
- 2004 3 CSSB
- 2006 B SQN 3rd/4th CAV REGT
- 2008 3CSSB
- 2009 7CSSB
- 2014 ASEME
- 2019 EC&TD (ALTC)

Operations:

- 1997 Op LAGOON - Bougainville
- 2000 Op TANAGER - East Timor
- 2002 Op RELEX - Boarder Protection
- 2006 Op ASTUTE - Timor-Leste
- 2006 Op ASTUTE - Timor-Leste
- 2012 Op SLIPPER - Afghanistan

Greetings fellow Recovery Mechanics and Corps members. I hope my letter finds you all in good spirits for this time of the year, regardless of the complexities that 2020 has delivered. I feel privileged to have been appointed as the inaugural Master Artificer ECN 226, and now take this opportunity to introduce myself not only to all members of recovery, but also to the wider RAEME community.

I have a strong passion for the Recovery trade, this passion of late, has been absorbed in training design, and how the Recovery Mechanic should be utilised now and into the future. I have been contacted on many occasions to provide advice on training methods and inputs into the Technical Workforce Review, IOT prepare for ECREM in 2021, and develop options out to 2030.

Technical Workforce Review Team (TWRT). This employment modernisation program will align the future requirements to ensure Army’s technical workforce is capable of sustained operations across the full spectrum of warfare by 2030. I have advised on the development of an enhanced job skill’s description for the “Recovery Technician. A draft capability proposition has been tabled for review. This draft is to explore the viability to upskill us in a certificate II in Automotive Servicing Technology. The bill to achieve this is minimal; however, the benefits to our technical employability and capability are enormous.

There are further options that are being briefed, where a concept of integration within the Vehicle Technician stream is being explored. How this will affect the fundamentals of foundation recovery skills, are yet to be articulated.

Recovery Training Concepts. With the introduction of both L121 Recovery platforms into the sustainment continuum. The first Basic Recovery Course containing both platforms has commenced Oct of this year. This course is in trial, and is being reviewed to find efficiencies in commonality of training. The next step in this process is to integrate the L121 Recovery platforms into the Army Reserve (AR) training continuum utilising the two-module approach. Analysis on this is completed and the LMP’s are due for release for comment.

Future intent for the A Veh Operators and Sub 4 CPL Recovery course will still see the facilitation administrated by ASEME; however, the course content will be conducted remotely using SME’s in unit location. The option for distributed point-in-need learning will see flexible delivery of course content over an extended period IOT achieve course outcomes.

Future Battlefield Recovery. Recovery is a key enabler to battlefield mobility – the services of extricating a vehicle casualty from a difficult position to carry on with its mission, or towing it back to a place of repair is essential to a force maintaining momentum on the battlefield.

Part of the battlefield recovery function includes the following key tasks: battlefield recovery (suspend or direct tow); back loading and cross-loading (towing or transport via trailers); extraction and righting (through winching and heavy lift); destruction and denial of materiel, body extraction, body retrieval, route clearance; and obstacle crossing support.

Whilst RAEME as a whole comes to grip with the exact nature of Battle Damage Assessment and Repair (BDAR) requirements. It is essential that we understand each of our key tasks associated with battlefield recovery. We have an understanding of our battlefield recovery requirements; however, there are two elements that will need due consideration/discussion. There is very little information on the tactical procedures involved in battlefield recovery, and even less on methods to train to the requirements. I look forward to the robust discussions dealing with this topic.

The voice of the individuals within the recovery trade has seldom had a central point of expression; therefore, I view the Master Artificer recovery function as a critical leadership role for the trade, not just as an advisor; rather, it is opportunity to widely-engage on trade issues to shape our future recovery capabilities for Army.

I wish you all well, and hope to hear from you in the future.

Cheers

Pete M



Master Artificer – ECN 229

WO1 James Grant

I was promoted to Warrant Officer Class 1 in 2012 and have served as S4 HQ 6 BDE, ASM 1 CSSB, EMEWO HQ 2 DIV and is currently the Standards WO at ASLO.

Coming to the end of an unprecedented year in which we have witnessed massive bushfires, floods and then a worldwide pandemic most of us may be understandably a little out of touch with our core role and how we are tracking as a Corps and trade group.

Throughout this year IET has continued at ASEME, L121 courses have been affected by border closures and have only managed to capture VIC based personnel. All specialist equipment maintenance, specialist recovery operator and promotion courses have been undergoing transformation to make them more flexible, suited to multiple learning styles and simultaneously delivered in multiple locations across Defence.

The key advantages of these delivery methods are that the individual doesn't have to be away from the workplace, the study can be self-paced to a certain degree and the equipment is being serviced or repaired filling a real time requirement. The following vehicle mechanic courses are being delivered and planned.

Tranche-1 (currently delivering)

- Bushmaster Vehicle Maintenance (Sep 20)
- M113AS4 FOV Vehicle Maintenance (Sep-Dec 20)

Tranche-2 (under development):

- M1A1 Vehicle Maintenance
- M88 Vehicle Maintenance

Tranche-3 (unfunded):

- KALMAR Maintenance
- SOV Maintenance

Further information on this initiative can be found at the CATW website and the Training Transformation article in the edition of the RAEME Craftsman.

How we are tracking now: In order to get an understanding of where we are now with our vehicle mechanics in field units I spoke to 1, 3 and 7 CSSBs and 1 ACR. I was really interested in getting an understanding of how our tradies are performing in an FRT role, conducting maintenance on a much wider equipment base than they have traditionally been expected to in one posting supporting one unit. The feedback I have received has all been very positive, notwithstanding gaps in training the vehicle mechanics are enjoying both the challenge of working on a wide range of equipment as well as performing that maintenance in dependant unit lines, gaining the experience and knowledge of the units they support.

Special tools and test equipment has been a limiting factor for some fleets in the past. This no longer seems to be the case, all the feedback I received indicated that ST&TE is no longer a problem and units have all they require; lots of new cream boxes for the L121 kit.

Overall it is an exciting time to be a RAEME soldier in particular a vehicle mechanic. Looking forward the way we are trained and the capability we provide is being reviewed as part of the Land Force 2030 Technical Workforce Review, more on that next time. If you have not heard of this review hit up your ASM.



Master Artificer – ECN 235

WO1 Keith Brown

I was pleased, and honoured to be appointed as the Master Artificer Metalsmith.

For those of you who I have not had the pleasure of meeting yet, here's the obligatory summation of my Biography. I enlisted into the ARA in 1992 and spent the first couple years of service in Brisbane, posted to what was then an independent Company 106 Field Workshops. I then went through a couple of name changes from 106 workshops to 6 BASB and then on to 7 CSSB without moving. In 1998 I was posted to Sydney to 1 CER where I completed four years and a move to Darwin. In 2002 I was posted to 5/7 RAR and the following year I was posted to 1 CSSB on promotion to SGT. After having what could be loosely termed my best year ever I was then posted back to 7 CSSB at the start of 2004 where I went on what for me was the best bush trip ever across to the Solomon Islands for 4 months. I was then posted to ASEME where I have a couple of different roles over my time there. First off I was a Metalsmith Instructor, then in late 2006 on promotion to WO2 the head of the Welding Cell. I then had a mid-life crisis and for two years I was the

WSMVTW, this was a very interesting time for both me and the vehicle mechanic trainees. After my two years of being that guy I moved on to what was then called Development Group (EC&TD) working on LMPs across four very different RAEME trades ECN's 146, 235, 418, 422. For my penance in 2016 I was posted as the ASM at 145 SIG SQN at Holsworthy Barracks, if you have never been to this type of unit I highly recommend you ask to go. On 01 Dec 18 I was then promoted to WO1 by COL G. Follett (who was one of my LT's when I was posted to 1 CER) prior to my current posting as the ASM/Standard WO at ACW, ASEME.

My responsibilities are as per the Corps instruction for Master Artificers, currently this year I have provided trade/training advice to the Technical Workforce Review over numerous occasions. Worked with CASG to modernise welding repairs to armoured vehicles (this is an on-going project).



Master Artificer – ECN 418

WO1 Wayne Davis

BIO

Postings:

1995	Army College of TAFE
1997	DNSDC
1998	145 Sig Sqn
2003	1 AVN REGT
2006	21 Const Sqn
2007	1 SIG REGT
2009	7 CSSB
2012	2 CDO REGT
2015	20 STA REGT
2017	6 RAR
2019	ASEME
2021	2 CER

Operations:

1999	Op WARDEN – East Timor
2000	Op GOLD – Sydney Olympics
2001	Op BEL ISI – Bougainville
2002	Op CITADEL – East Timor
2007	Op SLIPPER – Afghanistan
2010	Op SLIPPER – Afghanistan
2016	Op HIGHROAD – Afghanistan
2018	Op OKRA– Iraq

What I did in 2020

I was pleased to be appointed as the Master Artificer Technician Electrical (MATE) for the ECN 418; to influence improvements and lead the redevelopment of my trade into 2030. I have a strong passion for my trade and my Corps. My career to date has been accomplished in technical trades and experience, diverse, and above all; rewarding. This year as the MATE, I have been utilised on many occasions as a consultant, to provide strategic technical trade advice on electrical and refrigeration matters, and requested to advise a wide range of stakeholders on current and future projects for Army.

Refrigerant and Air Conditioning. I have worked with CASG, HQFORCOMD and the DLOG-A, to consolidated an Enterprise Risk Management Plan for Ozone Depleting Substances & Synthetic Greenhouse Gas agents used across all Army units. Additionally, I have worked with the FORCOMD ASM, DLOG-A and the VMSE/ General Support SPO to identify a suitable flushing kit for inclusion in the A/C and refrigeration toolboxes for deployed tradespeople. I was also contacted by an ECN 418 CPL, who encountered an issue when renewing his Refrigerant Handling licence (RHL). To be granted the AAC02 code on the RHL, a member is now required to hold a Cert II Auto Air Con (AUR20218); which was never delivered at the time of his ITT. Gap training was identified, with funding and support provided by ALTC to achieve the upskilling through regional TAFEs (it turned out 17 other serving ECN 418 CPL/SGTs were identified with the same problem).

Electrical. I was engaged by AHQ on earthing requirements for maintenance shelters in the field. This resulted in the retrospective issue of earth stakes to all L121 Phase 3B MHC shelters. Additionally, I provided consultation on the configuration of a High Risk Weather Season (HRWS) PPE Kit. Resulting in the establishment of section shelter/administration packs; consisting of tents, generators and admin/CP stores to provide limited facilities for up to 10 personnel for a short notice HRWS task. I also provided advice to the SOI DFI (Land 8140), DTRE-A, AHQ and had direct communications with DHOC RAEME (Ground) on the requirement to hold/issue a Low Voltage (LV) work licence to ECN 418 tradespeople for the conduct of maintenance on generation and field power distribution systems.

Technical Workforce Review Team (TWRT). This employment modernisation program will align the future requirements to ensure Army's technical workforce is capable of sustained operations across the full spectrum of warfare by 2030. I advised on the development of the job description for the Energy Technician and provided general support to the implementation of the Land Force 2030 Technical Workforce Segment review.



Master Artificer – ECN 421

WO1 Roger Smith

I enlisted in Jan 1983 as a 38th Class Army Apprentice, Electronics Technician. Many and varied postings followed, notably, 1st Armoured Regiment (Tank) and Proof and Experimental Establishment Graytown. I consider my posting to the Medical and Dental Contract Management Team as Maintenance Manager, my most challenging and my postings as ASM 106 FD WKSP, 8/9 RAR and 2 DIV to be the most rewarding.

It has been my pleasure to be your inaugural Master Artificer for ECN 421 Technician Electronics. Sadly, I will not be able to continue my appointment into 2021, as I was offered and accepted, a Commission into the Officer Ranks. I will however, still be around in the Corps to assist my successors and the wider Trade!

In my current appointment as ASM 2 DIV, I have travelled to many of our barracks and garrisons; and visited many of our workshops. Thanks to the ASM's of those workshops, I was granted the opportunity to chat with many of the 'boffins', where I listened to their concerns and appropriately, passed these on to the Head of Corps and Deputy Head of Corps.

The most common questions I am asked are themed around the future of the trade and how electronics tradesmen will be employed in the future. Unfortunately, I don't have definitive answers to either of those themes, but I am assured that in a world which is getting more technologically complex, not less, there will be a definitive role for electronics tradesmen that are qualified and skilled in emerging technologies and complex systems.

Technology and technologically advanced systems continue to evolve at a rapid pace. This presents enormous opportunity for the Electronics Technician as a broadly employable, highly skilled technologist both in Army and the wider ADF. Think automated AFV, think Unmanned Ground Vehicles, think Robotic Delivery and Combat Platforms, think Firmware and Process Control systems, think Radar and Wave Technologies!

The other Master Artificers and I continue to engage, and be engaged by, the Technical Workforce Review Team, and the level and frequency of engagement will continue to increase throughout 2021. I encourage all ECN 421 tradesmen to continue to engage with your next Master Artificer, so that your views, your visions and your ideas can be 'brought to the table'.

During a meet and greet with 101 WKSP earlier this year, I mentioned that there were now three pathways to serve the Corps at the highest level – as an ASM, as an RSM and now as a Master Artificer. I have been very fortunate to serve the Corps in two of those capacities. As this is my first, and last, Master Artificer Corps update, I hope I leave the appointment having set the conditions and opened channels to allow my successor to continue to represent you at the highest level in the Corps. ARTE ET MARTE.



From the Editor

MAJ Perri Hobbs

Well, this has been a year unlike most others – not so much as a bang, but a whimper. At least down in Melbourne. Finally we can put an end to the working from home, enjoy some sunshine with friends and family, and celebrate Christmas.

I don't imagine that the Crafties at the sharp end of the Corps would have noticed too much different – most of the Corps is enjoying maintenance based in Sydney, Adelaide, Darwin and all of Queensland. Down here in Melbourne has been somewhat different, and I do envy those of you that have not had to endure months on end of working from home.

I had thought that this year's magazine would have been somewhat shorter than usual—however, despite the various problems imposed on us by COVID 19, the bushfires across most of South Eastern Australia, deployments, and the requirements to provide maintenance support in barracks and in the field to Army units training to provide warfighting capability has kept the Corps more than a little busy.

We now have the Master Artificers advocating for their trade and its direction within Army maintenance – if you wish to know more about the direction of your trade, or have a suggestion on improving it, please get in touch with them. The Corps will likely be conducting a Corps Conference in the next year or two, COVID permitting, and there is much to discuss – your contribution is helpful.

Thank you to all of you that have submitted an article, photo or story for the magazine. While Dave Clarke and I edit it, we do not write it – we leave this up to you, the Crafties, to tell us the story of your year in maintenance. Whether its drone racing, visiting Ferrari World whilst on leave from deployment, assisting State Governments with quarantine, border inspections or bush fires, I do love to see how the Corps has done in the year gone by. I do also love to see

in print and photo, soldiers and officers that I have served with previously and what they are getting up to now. I know I did almost ask the Careers Advisor what positions there were up in the Pilbara Regiment after reading WO2 Marriner's account of 2020 and seeing the photos of what constitutes an FRT in North West Western Australia.

Congratulations to all the entrants of the Corps Awards and the effort you have put in to maintenance and soldiering over the course of 2020, particularly the Craftsmen of the Year – CFN Ned Smith (ARA) of ICER and CFN Sviatoslav Ponomarev (Ares) of 4CSSB.

It is also with some sadness that we have three obituaries for Corps soldiers that have passed away whilst serving in the Corps.

I would also like to apologise for the tardiness of the 2019 Corps magazine – we have tried to trim the cost of publishing and have explored different methods of publishing – not all of them successful.

Finally, I would like to thank Dave Clarke, without whom publishing would be far more difficult – thank you for your efforts.

Arte et Marte



From the Editor

WOI Dave Clarke

Another year, another edition of the RAEME Craftsman. My biggest hope is that you get to see edition 70 (2019), before you see the edition 71 (2020). Edition 70 is available on line on the RAEME website under publications and on the RAEME Association webpage at: <https://raeme.org.au/index.php/publications/raeme-craftman-mag>. Unfortunately, due to some unforeseen circumstances the hardcopy version has been delayed and a reduced number of the printed versions should be out in the not too distant future.

So back to 2020 or should we just forget this year? No doubt it has been a year that will live in infamy. But at the same time it has seen our Corps face challenges no one would ever have thought we would face. Having read all the articles in this year's edition, I can see that once again you have all done our Corps proud. Be it on Operations in the Middle East, supporting the bushfires or out manning hotels/vehicle checkpoints or even processing rental payments during COVID.

About two months ago, I looked at the articles for this year's edition and doubted we would have one. However, the call went out for submissions and we ended up with plenty of articles including lots of Unit Jottings. These are always popular as we love seeing what our mates and previous units have been getting up to. I thank all of you that took the time to write something.

My favourite part about being the Editor, is that it gives me the opportunity to read all the articles first. It has been a long time since I've had the opportunity to get out to the broader Army. However, I find reading the articles helps keep me up to date with what's happening. This edition has a number of very interesting articles about what Units have been up to during this very unusual year.

There are a couple of articles from members on operations on Op Highroad and JSF-11. These members have been doing their very best to represent the Corps with pride, be it in Afghanistan, Al Muthana Air Base (AMAB) or Ferrari World in Abu Dhabi. Whilst there is also a great article taken from Contact magazine about how some RAEME members stepped up during Op Bushfire Assist to help out on a special mission during the fires on Kangaroo Island.

There are also a number of other mentions of Op Bushfire Assist and Op COVID Assist in the Units Jottings. Although COVID may have curtailed the bush trips, it sounds like Units have been kept extremely busy supporting these operations, as well as dealing with their Units maintenance dependencies whilst working with 50:50 manning constraints.

RAMS have submitted an interesting article on what has been happening in the school and the challenges that delivering training in a COVID environment presents. This article also has an insight into how 3D printing can be incorporated into aviation maintenance.

COVID has affected almost everything this year and one of the biggest changes that will be staying with us, is the move to online training. ASEME has spent a lot of time and money implementing On Line learning for Promotion and Specialist Courses. There are two articles from ASEME on how COVID impacted the Basic Recovery Courses conducted this year and an article on how Promotion and Specialist Courses are currently and will continue to be delivered using ADELE.

There is a short, but interesting article on what is involved being a RAEME member of Landing Helicopter Dock (LHD) HMAS Canberra III. The RAEME members of the Pilbara Regt have submitted an article rubbing our noses in the fact that somehow they seemed to be the only people in Australia not impacted by COVID. They also felt the need to submit some photos of their piece of paradise, just to rub it in.

Due to privacy laws we are no longer able to get lists of members that have retired from DOCM or SCMA, so if you would like your service recognised please let us know by sending an email to the Corps RSM. On behalf of the Corps I thank you for your service.

Unfortunately we lost MAJ Keith 'Chas' Chambers this year after a short battle with cancer, there is a tribute to him in this edition. Along with obituaries for CFN Matthew Harrison and LCPL Cody Langham two serving members that were taken way too soon.

The worst part of my job as editor is compiling the list of members that have passed away. Sadly there are too many familiar names on the list this year. Each year we receive a number of emails regarding members that have passed and we also keep an eye on the RAEME Facebook pages. Unfortunately, the details provided can be very light on details at times. Therefore, I've kept the rest of the Vale' notices to just the members name and month they passed.

Can I ask that if you are providing articles for the 2021 Craftsman, we cannot send articles formatted in columns or with the photos embedded in them to the publisher. As such, please send photos separate to the article and labelled as you want them to appear. If you decide to just send photos that's fine, but please provide some sort of explanation of why/where the photo was taken and who is in it.

I hope you enjoy the 2020 edition of the RAEME Craftsman as much as I've enjoyed putting it together.

Arte' et Marte'

Efficient Maintenance

WO2 Colin Davis

During 2019/20, DTR-A staff have been asking two simple questions:

1. What is the role of a tradesperson in barracks? and
2. How many tradespersons do you have access to?

The aim was to start a discussion about maintenance and what 'right' looks like. Interestingly, there were no consistent answers to these simple questions. Organisations are measuring their maintenance outcomes based on historical measures and not what the actual requirement is. To use an analogy, this is like driving your car using only what you see in the rear vision mirror rather than looking through the windscreen and driving to the conditions and requirements.

Let us first look at the Corps motto 'Arte et Marte – By Skill and by Fighting'. The land force needs people with skills – read this as proficient deployable maintainers who fight to achieve materiel availability. In other words, our role in barracks is to generate proficient maintainers capable of operating as competent deployable teams while facilitating the required materiel availability. Let us break this down further to ensure consistent understanding.

Proficient maintainers - are those who can perform the full range of maintenance actions required to support their organisations materiel. A workforce that only conducts Preventative Maintenance activities will become efficient at servicing, but is it the correct proficiency for the unit? We need sufficient time on the tools, be that as maintainers, workshops managers or engineers, to ensure that we are proficient in conducting our maintenance tasks. This does not mean that we spend all of our time in barracks conducting maintenance.

Competent deployable teams - this means a team of maintainers working together who can achieve the full scope of maintenance tasks required. It also means that we have the skills and training to operate as an FRT manoeuvring around the battlespace and when necessary conducting the required combat actions, that is the all-Corps skills. Competent teams do not only come from our own organisation, they also include any supporting agency, CSSBs, and the JLUs. So how do we do this? The simplest way is to ensure that we are actively managing our unit's workload and escalating work above that required for our unit's workforce to achieve its proficiencies to the supporting agencies. There are many examples of units arguing they do not backload work to a supporting agency 'because they are not competent', yet without work – we are denying the opportunity for them to develop competency. We need to help them to help ourselves.

Materiel availability – this does not mean 100% all the time, it refers to the operational need and having the required materiel in the right configuration, at the right location, at the required time and in the right condition to complete the mission. Understanding the next training rotation and the materiel needs, both in terms of availability and physical configuration is important. Understanding the unit's tempo and requirements and adjusting your maintenance outputs to ensure all training and proficiency outcomes are met is critical. Utilising this knowledge enables us to develop a maintenance plan incorporating all the supporting agencies at our disposal. The available workforce includes all of the supporting agencies, the more you use them the more gets done.

TST Commanders, ASMs and EMEOPS need to ensure a balance between achieving all three requirements: proficient maintainers, competent deployable teams and materiel availability. A DCU proficiency set is quite different from that CSSBs and JLUs require. A workshop that is producing 20+ hrs per maintainers per week may well be providing proficient maintainers and good materiel availability. The question is – is this at the expense of building competent deployable teams, developing surge capacity and enhanced materiel availability?

DTR-A has developed a series of predictive indicators that provide insight into the behaviour of maintenance elements, predict changes or trends and provide insight into future performance. The key elements to the process have been developed through consultation with the wider maintenance community and meet the intent of HLC's recently released Leaning into the Brigades Directive. These indicators will be incorporated into a maintenance dashboard in VULCAN. Everyone will be able to see their own performance, enabling consistent measurement of the maintenance process. Additionally, this will enable better planning and produce a more efficient engagement with supporting elements. Generating proficient maintainers capable of operating as competent deployable teams while facilitating the required materiel availability.

Arte et Marte

Training Transformation – Flexible Learning Model Program (a systematic approach to flexible learning for Defence technicians)

As per the Chief of Army's guidance in Army in Motion, modernising our training system plays a vital role to be Future Ready. Therefore in Feb 2020, Career and Advanced Training Wing (CATW) developed the Flexible Learning Model (FLM) in partnership with Wodonga TAFE to optimise CATW's courses. CATW as part of Army School of Electrical and Mechanical Engineering delivers 30 different courses to RAEME and other Defence technicians such as Basic Recovery Mechanics, advanced recovery operator, specialist equipment maintenance, Subject four RAEME courses, RAEME Induction Training, etc.

Model:

The FLM provides following three options for student technicians to complete the specialist equipment maintenance courses (traditionally run as residential courses at CATW):

1. Remote (most preferred) – Students complete the course in their Unit locations using locally available resources and the online learning material developed and controlled by CATW.
2. Mixed (less preferred) – Students complete some aspects of the course remotely and the rest by attending a residential course at CATW.
3. Residential (least preferred) – Students complete the course residentially at CATW.

Key Roles:

1. Facilitator: CATW staff member who facilitates the remote learning by liaising with the student and Technical Specialist in the Units throughout the course.
2. Technical Specialist (TS): A qualified technician in the Unit with technical authority to conduct maintenance on the specialist equipment. The TS will supervise the students on maintenance tasks similar to on-the-job training.
3. Student: ADF or Defence partners (Broadspectrum, Wodonga TAFE, NZDF, Fiji DF, etc.) requiring proficiency to conduct maintenance on specialist equipment.

This new model engages learners in online learning content and remote practical demonstration of proficiency. Using a web-based learner management system such as Australian Defence Education Learning Environment (ADELE) and Skills-Tracker that ensures a rigorous process of evidence gathering by the students themselves, TS and Facilitators.

CATW Careers cell also quickly switched targets and developed their full-time and Reservist Subject four promotion courses on ADELE using the 10-12 weeks COVID-19 pause, without any prior online course development or delivery experience. Subject four RAEME promotion courses have now transitioned to the remote facilitated learning mode. The first one delivered using ADELE and GovTeams is the Subject four Corporal course commenced on 25th May followed by Subject four Warrant Officer on 29th June and Subject four Sergeant on 7th July.

Key benefits:

- Students remain in their respective Units to complete courses remotely working on maintenance tasks available locally or when deployed on EX or OPS
- Flexible course duration to complete remotely (three times longer duration allowance to complete courses, however can be completed much quicker as well)
- Potentially increase DTR by removing constraints related to residential aspects
- CATW still control the course via the Facilitator by providing quality assurance, assessments, online learning material and tracking tool (ADELE and Skills-Tracker)
- Travel related cost saving for Defence e.g. \$175,000 per annum for 5x M113 residential courses and \$1.2 million per annum for the Subject four courses

As a pilot project using FLM, the M113 AS4 vehicle maintenance course was decided to be trialled and delivered by July 2020. A program management approach was taken with projects earmarked for delivery after the trial mainly due to existing training delivery commitments. However the COVID-19 pandemic in March 2020 forced all ALTC residential non-essential training to be paused and provided the FLM program an opportunity to accelerate by trialling more courses. Funding was approved to trial six courses (projects) as Tranche-1 has been delivered in September 2020. Tranche-2 is currently funded and being developed for delivery by mid-2021 followed by Tranche-3 (currently unfunded) scoped for delivery in 2022.

Vision: The FLM program aims to ultimately have all CATW courses delivered remotely.

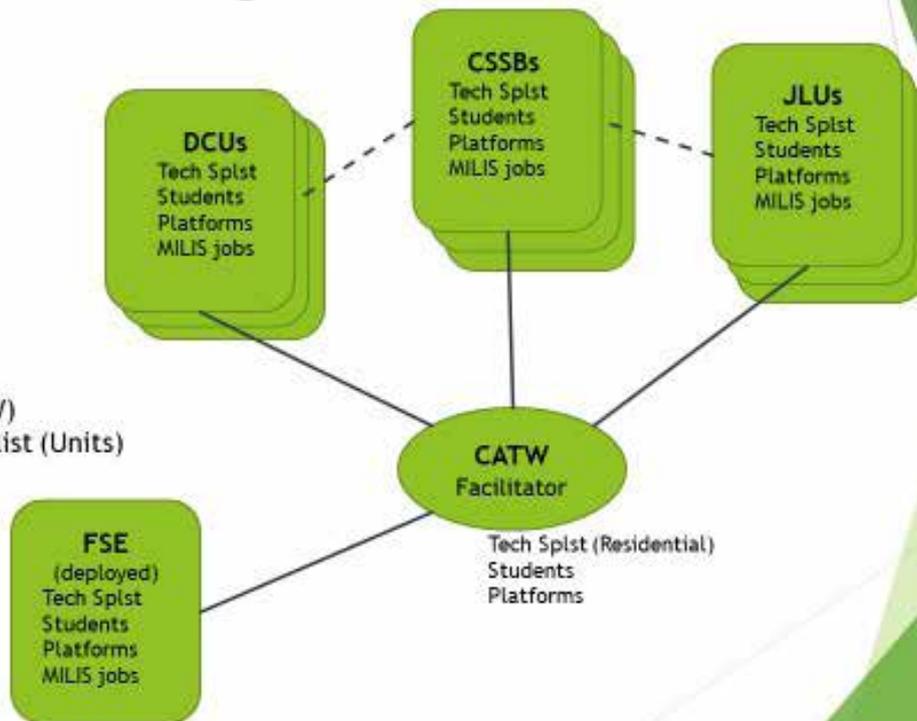
Flexible Learning Model

Modes:

Remote
Mixed
Residential

Key roles:

Facilitator (CATW)
Technical Specialist (Units)
Student (Units)



What is the Flexible Learning Model Program?

- ▶ The conversion of specialist courses from a residential mode to remote facilitated learning mode (not exported)
- ▶ Working on live maintenance tasks at the Units under supervision of a qualified maintainer
- ▶ Using e-platforms (ADELE-U/P, Skills-Tracker, OBJ)

▶ Delivery Schedule:

▶ Tranche-1: (delivered)	Bushmaster Maint (Sep)	M113 Veh Maint (Sep)	M113 Turret Maint (Sep)	M777 Maint & Ordnance Exam (Sep)	Abrams Control Systems Maint (Sep)	
▶ Tranche-2: (Jul 2021)	M1A1 Veh Maint	ASLAV Control Systems Maint	RBS70 Maint	M1A1 Turret Maint	M88 Veh Maint	Recovery Specialist (ARVH, ARVL, ASLAV-R)
▶ Tranche-3: (Dec 2021)	ASLAV Turret Maint	KALMAR	M2A2 Salute Gun	SOV	AMSTAR Maint	

Recovery Training During COVID

LT Christopher Jones

Recovery Platoon within Career and Advanced Training Wing (CATW) of ASEME is responsible for the Initial Employment Training of Recovery Mechanics (ECN 226). The Basic Recovery Course (BRC) is a 147 day course introducing trainees to the Army recovery system. The course consists of many exciting aspects ranging from obtaining a Military Driver License to vehicle extraction in complex bogging and rollover scenarios. BRC culminates in a 10 day field activity in Yackandandah State Forrest (YSF), where all training learnt during BRC is assessed.



The necessary restrictions imposed to combat the risks of COVID-19 have been challenging to the population of Victoria, with ASEME being no exception. The need for social distancing, limitations on the number of people in enclosed spaces and mandatory use of face masks have altered everyday life on a fundamental level. BRC has adapted to these challenges to continue to provide the highest level of training possible to the next generation of Recovery Mechanics within Army.

ECN 226 is currently defined as a priority position, due to the high demand within units for the capability they provide. This places a particularly elevated onus upon the BRC staff to ensure the highest standard of trainee, upon completion of the three courses conducted in the calendar year 2020. Within 9 months, members are trained from the bare basics to being able to solve intricate recovery situations and ready to begin their On the Job Experience (OJE), posted to one of the Combat Service Support Battalions (CSSB), whilst providing immediate capability in a supervised setting.



Upon arriving in the Albury-Wodonga Military Area (AWMA), fresh Kapooka graduates were required to isolate within the barracks environment for a period of 14 days. Every precaution was taken to ensure compliance with government and Defence regulations throughout the courses effected by the pandemic. All course work was scheduled to allow trainees to hit the ground running as soon as this period concluded. Prior to beginning their recovery specific training all Recovery Mechanics are required to be qualified Military Drivers. They are trained to operate the 40M and HX77 at the Army School of Transport, Puckapunyal. This added an additional layer on complexity within the COVID environment as trainees were required to move between locations to complete their training.





Within the day-to-day conduct of BRC, members were required to remain 1.5m apart, a significant challenge given the collaborative nature of many recovery jobs. Great care was taken to ensure a hygienic workplace before and after any work was undertaken. Within the Recovery PL Training Area at ASEME, a large outdoor area, affectionately known as the “Dust Bowl”, acts as the practice stage for trainees roll over scenarios. The Dust Bowl allows the trainees to understand the fundamentals of more complex tasks before they conclude their training in YSF (as can be seen below).

Fortunately, the necessity of outdoor training allowed the vast majority of recovery training and assessments to continue through these uncertain times – in line with Victorian Government COVID regulations. With BRC running ahead smoothly, Recovery PL offered the perfect testing ground for the Land 121 Fleet of Recovery Vehicles, such as the 42M and 45M. Trials prior to roll out into wider Army were incorporated into the training continuum, to allow trainees to experience using the brand new Rheinmetall Recovery Variants.

This added an exciting and new aspect to the already loaded training package.



7 RAR Workshop RAEME Badge

CPL Jamie Osborne

During the end of 2019 Christmas break I decided to test my woodworking skills by creating a small desktop RAEME badge to add a bit of colour around the office and bring in a bit of Corps pride.

I printed it as big as I could on an A4 piece of paper, and gave it a shadowed look by putting in the black background. It turned out well so I decided I would make one for the internal wall of the workshop, but I thought I could go a bit bigger and better.



Desktop size RAEME Badge

I printed off an A3 size RAEME badge and went to work, this time deciding to cut out multiple pieces and lay them on top of each other to get a 3D effect.

I put it on a simple black background as well and added the "7 RAR Workshop", which gave it a nice touch for a one-off piece for the unit. The ASM saw this mounted to the workshop internal wall and asked me how big I could make one to put on the external wall for a big first impression when entering the compound.

After some research about how big you can get Marine Grade Ply Wood, I went home and drew it up on paper at approximately 2.1 metres tall by 1.3 metres wide. With the go ahead from the Ace and some money from the RAEME Association of South Australia, I got to work in my garage at home on making this monstrosity for the workshop.

Here are a few progress photos taken during the build on my garage floor and against the roller door, to give an idea of the size.



7 RAR Workshop RAEME Badge

Below is the final product, once complete and installed on to the workshop wall. From start to finish this project took about 3 months to complete, it is the biggest and most challenging project I have taken on, but rewarding and I think the end result turned out very well.

I hope this has brought a bit of identity for the workshop at 7 RAR as you would have to be blind to not see it when entering the rear gate to 7 RAR, and hope the workshop members are proud to work in such a place for many years to come.



Production photos



Production photos



The completed RAEME Badge mounted on 7 RAR Workshop

Big Moves Army Museum Bandiana

CPL Michael Smith

During Wednesday and Thursday, the 10th and 11th of June 2020, big moves were under way at the Army Museum Bandiana. This was in preparation for the upcoming relocation of the Museums' prized Leopard ASI Main Battle Tank to the Tank Museum in Puckapunyal.

The moving commenced in earnest on Wednesday with trainees from the Army School of Electrical and Mechanical Engineering's Recovery Wing arriving to provide the muscle for the move. The firing up of the Museum's Bushmaster PMV after some minor servicing was a big hit with the trainees. This was followed by removing a number of the static vehicles from the display to make way for the Big Move to come. While this was happening, Museum staff took this opportunity to remove the Ferret MK2 from the floor and transport it to the workshop, as it had some significant oil leaks. Staff are hoping this will be back in service and drivable in no time.

Day 2 commenced with minor servicing and fresh batteries being fitted to the Leopard. After some minor hiccups, she fired into life without issues. Staff were quick to jump on board for the short journey out of the museum, down the road and around to the side entrance where she would be parked in preparation for the upcoming move.

The big move commenced with the Recovery Mechanics arriving at the Museum with their MAN 45M, 10 wheeled Heavy Recovery Vehicle. This was operated by students from the SUBJ 4 CPL course whose scenario was to move the Centurion Main Battle Tank into a new position in the museum, without damaging it or any other exhibits or the building. The Cent was quickly connected to the tow cables of the MAN and delicately moved, taking up prime position on the museum floor.



ASEME Trainees man handling the Centurion



45M at the Museum



Leopard moving into Museum

The Leopard was driven back inside the museum, now close to the side exit door and all other vehicles returned to their positions on the floor. The trainees from Recovery Wing were then treated with a trip in the Bushmaster for their assistance in the Big Move and subsequent cleaning of the floors.

Army Museum Bandiana would like to thank the staff at Recovery Wing for their professional advice and assistance throughout the move.

ADRT - Craftsman Magazine 2020

CFN Jayce Holland

Drone racing has become a sensation within video media, you only have to do a quick search for 'FPV drone' on YouTube and you will see a myriad of racing, freestyle, cinematic and instructional videos. In such a short time, the sport has become something greater. It's a cinematic tool for telling a story, an exciting and unique perspective, a truly free way to experience your surroundings and a fantastic community to become a part of.

The Army Drone Racing Team (ADRT) has truly been a turning point in my own career. My name is CFN Jayce Holland, I was an ARA Avionics Technician for 7 years, posted to 1 Aviation for 4 of those, and an active member of ADRT for the better part of 3 years and posted to ADRT under reserve contract this year.



Within the Army, ADRT offers a huge range of opportunities, 2019 alone saw the team race competitively at both Avalon and Edinburgh Airshows, as well as hold a show on the runway, something never done before internationally. Naturally, Army came out above Navy and Air Force in the racing! Alongside the competitive side of things, ADRT held stands at numerous public STEM events outside of Army,

introducing the sport to kids and parents alike and building a larger pool of people to pursue a STEM focused education. During this, I developed a passion for creating video, joining into the now three strong group of ADRT's media team. In early 2020, the team held a week long drone camp for a hand-picked group of Army Cadets, teaching the ins and outs of all things drone racing. From building, repairing, flying and finally holding a competitive race to find who the ultimate cadet racer was. To this day, AAC and ADRT are still supporting these cadets with equipment to keep them flying, as well as supporting a dedicated cadet drone racing team!



But it wasn't all fun and games, much like the rest of the world this year, coronavirus cancelled every public facing event that ADRT had planned. At this point, I had left the ARA and started working in reserve as SERCAT 3 for ADRT under contract, based out of Bendigo, Victoria, creating social media content alongside a couple of our other pilots. In an attempt to keep the social media train running, our President organised numerous shoots with the Army Land Warfare Centre. Breaking more new ground, not only for Army





but for the global FPV community, ADRT filmed live fire of M1A1 Abrams tanks with extra special thanks to School of Armour for paving the way for us in the future. The results were fantastic, hands were shaking and the risks were high (for the drones that is, the tanks were fine).

What came out of this was some of the most ambitious filming I had personally ever done and more new ground to break. Shoots with The School of Artillery found us pushing the gap between risk and broken drones closer and closer, completing ADRT's first field phase with a 3am wake up in the mud. I was experiencing more 'real Army' than I had as a 7 year Avionics Tech. The Land Warfare Centre was impressed, Army Media and Defence Force Recruiting were chasing the footage but we still had one big event up our sleeve.

Exercise Gauntlet Strike, a 10 day consolidation exercise for Lieutenants to complete their training with the School of Armour. We were there for 8 of those days to film as much live fire as possible from M1A1, M113 and ASLAV. It was also the first time we had drones funded by ADRT to use, there were crashes, puddles, a whole lot of fun and we brought it all together in the last couple days. We captured some of the most unique footage ADRT has taken to date, I strongly recommend checking this one out on our social media.

With my personal plans to move to Europe perpetually postponed, a number of other opportunities arrived, filming a fly-through at Bendigo's Discovery Centre, assisting the School of Armoured to

produce updated material for their officer's course, and a fantastic chance to operate alongside a truly professional film crew on a legitimate, choreographed shoot, creating a fantastic video for Army's internal media.

And suddenly my travel exemption was approved, and I was able to move to Europe after months of waiting. Still carrying out reserve work for the Army Drone Racing Team, now full of experience and confidence to turn my passion into a career as a filmmaker. I'm fully confident that without ADRT I wouldn't be where I am today.

I want to put it to you as a tradesman, you are somebody who is technically minded in some degree and this sport is a technical one, you can be in rehabilitation from an injury and still join in this unique sport. If you're eager to learn a new skill, join a great community and travel around Australia, take a look at our social media pages and send us a message, there is a team pilot in almost every major location that the Army is based, and all of them are eager to bring new people up to speed so you can be soaring with us.

www.facebook.com/AUADRT

www.instagram.com/auadrt/



RAEME in Afghanistan



Over the course of 2020 a number of RAEME Officers, NCOs and Craftsmen have been fortunate to serve on Operation HIGHROAD in Afghanistan. Our RAEME personnel have served in a variety of positions including embedded staff within the NATO Resolute Support Mission and maintenance personnel as part of the Australian Task Group. 2020 has seen the workshop at the Marshal Fahim National Defense University at Qargha close down after many years supporting our advisors and Force Protection platoons, however, also saw the opening of the Field Workshop- Kabul at the Hamid Karzai International Airport (HKIA). RAEME personnel have also been fortunate to serve in senior leadership roles including Colonel Steve Cleggett as the Commander of the Kabul Joint Command-Advisor Team and Brigadier Ed Smeaton as Commander Task Group Afghanistan, handing over to a fellow RAEME officer Brigadier Todd Ashurst. From the snowy depths of winter through to the high plains summer our RAEME personnel have served the mission proudly, supporting the institutional viability for the Afghan Army and Police Force and maintaining the readiness and serviceability of Australian equipment in Theatre.

Commander Task Group Afghanistan and Deputy Branch Head Operational Sustainment – Combined Security Transition Command – Afghanistan (CSTC-A) – Brigadier Ed Smeaton

Following an optimization of our forces in Afghanistan towards the end of 2019 I was fortunate to deploy into an embedded role within Resolute Support Mission's Combined Security Transition Command – Afghanistan (CSTC-A) and also assume responsibilities as the Commander of the Australian Task Group. My work in CSTC-A was a combination of our Capability Acquisition and Sustainment Group, Joint Logistics Command and single Service logistics, a truly fascinating experience to be equipping and sustaining a security force of 300,000 at war. Operational Sustainment Branch managed a budget of around \$USD 1.8 Bn for the procurement and sustainment of equipment and supplies to support the Afghan National Army and Police Forces. This included everything from aircraft through to vehicles, radios and communications equipment and medical supplies. As well as major capital investments we also provisioned fuel, ammunition and spare parts. A big part of the job was to Train, Advise and Assist the security forces from ministerial level down to corps and brigades to help them implement the systems, processes and reforms to build their long-term institutional viability. Working 'shoulder to shoulder' with the Afghan leadership was one of the most rewarding parts of Operation Highroad.



BRIG Ed Smeaton speaking with the Commander of the Afghan Army National Transport Brigade

I also had the great privilege of leading and working alongside our Australian forces right across the Operation and to see first-hand the terrific contribution we were making, from training officer cadets, to mentoring operational level planning, to the provision of health support and embedded staff functions with the Mission. Of course this also allowed me to see all our RAEME personnel doing what they do best – making a difference.



Afghan Army Recovery Mech beside his recovery vehicle



Handing out Spanner Packs in Kabul

Commander Kabul Joint Command – Advisor Team – Colonel Steve Cleggett

There is no better demonstration of the diversity and flexibility of RAEME than in the small seven-man Kabul Joint Command Advisor Team which deployed on 28 April 2020 to Kabul, Afghanistan.

In particular, the RAEME component of the team includes a former Aircraft Technician (and now Education Corps Officer), MAJ Jay "Fix it" Douglas, fulfilling the role of the J1/4 Advisor, and

Colonel Steve "Infinite Capacity" Cleggett, as Commander of the contingent.

The Kabul Joint Command – Advisor Team is responsible for training, advising and assisting Afghanistan's only joint operational headquarters. So far, the team has established the headquarters and a Battle Rhythm which synchronises intelligence and operational effects of the Afghan National Police, Army, and National Directorate of Security across Kabul.

The team has also directly supported the planning and execution of security operations for major cultural and political events. Most

recently, this included the provision of security for the historic Loya Jirga which saw Afghanistan's senior leadership agree to prisoner releases and paved the way for the commencement of peace talks.

Whilst we have a number of months to go before our return, the deployment as part of the Kabul Joint Command Advisor Team has been extremely rewarding, and has come at a critical time for Afghanistan. As always, our RAEME people continue to lead the way.

From our Advisor Team's RAEME contingent, we wish you, and your families, a very Merry Christmas.

Arte et Marte.

OIC Maintenance – Operational Sustainment CSTC-A – Major Sean Hobson

I have been beyond fortunate to be the most recent in a long line of RAEME officers who have had the opportunity to directly affect and contribute to the establishment of Afghanistan's ground vehicle maintenance capability. The OIC Maintenance position sits within the Combined Security Transition Command – Afghanistan, a United States three star command. The OIC Maintenance position is primarily responsible for management and oversight of the National Maintenance Strategy – Ground Vehicle Support (NMS-GVS) contract. This contract is responsible for establishing a self-reliant ground vehicle maintenance capability within the Afghan National Defence Security Forces (ANDSF). The contract provides maintenance support to ~101k vehicles, and training to the Afghan National Army (ANA) and Afghan National Police (ANP) for all levels of maintenance.

During my time as the OIC Maintenance I've been able to contribute to the mission by:

- planning and facilitating the establishing a level 1 maintenance facility at all 34 Police Provincial Headquarters,
- coordinating the transition of 15 of the 35 NMS-GVS maintenance sites from the contractor to the Afghan security forces, and
- establishment of the first Class IX spare parts Foreign Military Sale (FMS) case using contractor consumption data in support of component overhaul maintenance.

COVID-19 has impacted all operations, maintenance efforts included. It has added an additional layer of complexity in solving the already multifaceted issues. It caused all maintenance training to cease across the country. Training was not able to recommence until a unique, and COVID compliant, solution was devised and fielded. Another complexity has been the reduction of forces under the United States – Taliban Agreement. This has necessitated a rethink of the contract to ensure maintenance can be fully transitioned to the Afghans if required.

To deploy on the Resolute Support mission, as a part of a joint coalition's effort whilst representing my country has been the opportunity of a lifetime. It has been a real challenge, but downright rewarding. I have learnt more than I thought possible, and have renewed confidence in the Army logistic foundation training I have received in my career which set me up for success. I have seven years of Army Aviation experience with Tiger behind me and was apprehensive to step into a strategic level ground maintenance role, but that rapidly dissipated as I settled into the position. My time here representing RAEME has been an absolute honour. ARTE ET MARTE.

Task Group Afghanistan Maintenance Section

Maintenance within Task Group Afghanistan during 2020 has been quite an evolving situation with the effects of COVID-19 greatly affecting the conduct of business.

The rotation of Force Support Element 12 in April saw five members of the 1st Combat Service and Support Battalion take over maintenance responsibility of the Task Group.

CPL James Kennedy (VM), CPL Dan Rocca (Fit/Arm), LCPL Connor Jose (VM) and CFN Kobi Ryan (TES) were all stationed at the well-established maintenance facility within the confines of Camp Qargha. The team were responsible for maintaining all Australian equipment within the Task Group, as well as some additional repairs tasks for other Resolute Support nations.

CPL David Seymour, located at HKIA, was assigned as the Task Group Afghanistan Vehicle Fleet Manager. His role was primarily to oversee the management of all vehicles within the Task Group, both ADF-Owned and leased. In addition, he was responsible for the oversight of maintenance conduct and governance, providing a vital link back to the Force Support Element at Al Minhad Air Base, Dubai.

Throughout their tenure, the team effectively transitioned maintenance capability from the Camp Qargha Workshop to the newly-established Field Workshop at HKIA.

This transition was conducted with the utmost professionalism and with very little to no impact on the provision of maintenance to the task group.

Looking towards the future and transitioning responsibility to Force Support Element 13, the team have worked to consolidate all governance and maintenance procedures at the new facility at HKIA. The team have learnt to adapt their procedures and processes with the presence of COVID-19 still impacting day-to-day business. These lessons will be handed on for teams in the future to hopefully continue providing effective maintenance capability to Task Group Afghanistan.



CPL David Seymour oversees flight line operations in Kabul



PMV Wheel Station Repair - LCPL Jose

Force Support Element II (FSE-II)

September 2019 saw soldiers from 10 FSB, 9 FSB, 145 SIG SQN and 2 FSB deploy to the Middle East as part of FSE-II. 12 deployed to AMAB and five made the trip forward into Afghanistan.

FSE

The AMAB WKSP had their work cut out for them from the start with constant movement of vehicles throughout the theatre and the beginning of the draw down of forward elements. The hope of a quiet rotation of feeding the turtles and watering the garden were soon diminished.

After a month of being in theatre the first respite came in the form of RAEME birthday which saw the WKSP and a small group from the TG TAJI WKSP making the journey to Ferrari World in Abu-Dhabi to ride the fastest rollercoaster in the world. The day was a complete success with the exception being our tall boy Fitter who measures a behemoth size of 204cm resulting in him not being able to ride anything due to his enormous stature.



RAEME Birthday Ferrari World



Too Tall for Rides

Christmas was a quiet period which saw dribs and drabs of the WKSP team proceeding on ROCL and maintenance tasks around the MER. During this time the Tri-colour had mysteriously vanished from the office after hours. The remainder of the week saw the boys down on their luck and missing the one thing that meant the most to them. The FSE Christmas photo shows just how hard the boys had taken the blatant disrespect of our beloved Tri-colour. Later that day a volley ball match with other sections of the contingent was met with a ruthless WKSP team harbouring a strong thirst for revenge. After an absolute demolition of the other teams the flag was anonymously returned the very next day.



Merry Christmas

The RAEME spirit was thriving within the WKSP with a weekly tool meeting resembling some sort of high-morale cult that judged the fate of nominated members due to their own stupidity displayed within the previous week. There was a distinct set of rules but the final decision was always made by the appointed Sheriff of the Tool. The best reasons for getting the tool included someone trying to



RAEME PMV

find a box of sparks for the welder, the great turtle pond flood and the ASM having way too much confidence in his physical abilities by trying to get out of a vehicle on a tilt tray without putting the handbrake on.

The remainder of the trip saw tradesman supporting elements all across the MER with the Eleccy and a Boffin going on a questionable trip to Egypt which ended in them retuning with a bronze glaze, a distinct smell of reef oil and a thick Spanish accent.

One of our VMs broke his arm while snowboarding in Italy and was on the very next flight back to AUS, being down one VM and the vehicle count in Dubai having gone from 6 to 18 PMVs it presented an opportunity to REODEM two more VMs from home base to help diminish some of the ever growing backlog before our HOTO to FSE-12.

The end of the rotation was filled with the rising concern of COVID-19 and conflicting information on whether or not we would be able to return to Australia and what was going to happen once we did. It ended in a wonderful all-expenses paid stay in Brisbane and the Gold Coast with 14 days of no fresh air, hot box style meals and enough daytime "TV" to make you question your inner self on current life choices.

Arte et Marte.

FSE FWD (Afghanistan)

The FSE element that moved forward into Afghanistan was split across 2 locations, the main WKSP in Qargha and the lone RAEME CPL in Hamid Karzai International Airport (HKIA), CPL Irwin. He was the lone tradesman and was conducting the role of multiple positions. He was a VM, Vehicle fleet manager, Postie, push bike mechanic and Afghanistan tour guide.

The Qargha WKSP had tons of work but luckily had the ability to call forward additional tradies to help deal with the damage on the PMV and Up Armoured UNIMOG fleets which was caused by a white Christmas full of snow and ice.

During periods of reduced maintenance they were lucky to be able to work with their UK REME counterparts, after a short period of learning how to understand their accents and colloquialisms they were able help each other and gain some experience on each other's fleets. Gastro ran rampant through the camp at times with certain workshop members managing to spend weeks at a time in quarantine to stop the spread, good training for what we would encounter when we returned to Australia.



FSE Forward

FSE I Sep 19 – Apr 20	FSE FWD Sep 19 – Apr 20	FSE Reo Feb 20 – May 20
WO2 Fagan – ASM CPL Bell – FIT ARM CPL Spokes – VM LCPL Meres – TECH ELEC CFN Andrews – VM PTE Crompton – ECM Storeman CFN Dutton – VM CFN McCormack – TES CFN McGill – METL SMTH CFN Murphy – FIT ARM CFN Ryan – TES CFN Wynter – TES, TA-FRIDGY, TA-WELDER	WO2 Hopper – VM SGT Irwin – VM, VFM, Postie, Push bike mechanic, Afghanistan tour guide CPL Walker – TES, TA VM, Windscreens O'Brian CFN Panozzo – FIT ARM CFN Smith - VM	CPL S Bonning – VM LCPL N Blain - VM

RAEME mafia steal farmer's bed in dead of night

Article taken from Contact Magazine 14/02/2020 Story by Captain Tom Maclean

Army was recently thanked for successfully completing a very unusual midnight raid in front of bushfire-enemy lines on Kangaroo Island, South Australia.



Chaplain Derek Croser with Jodie Meikle, Steven Childs – and 'the bed'.

Six members of the Royal Australian Electrical and Mechanical Engineers mafia from 9th Combat Service Support Battalion carried out the daring night mission for Steven Childs, a 53-year-old farmer and father of two who is a quadriplegic after an accident.

On 7 January, Mr Childs was relocated to Kingscote Hospital to be a safe distance from the fire front, but his empty farmhouse on the west side of Kangaroo Island was at great risk of being destroyed by an out-of-control bushfire.

Inside his home was his high-tech medical bed worth about \$25,000.

The bed is designed to automatically adjust Mr Childs' body while he sleeps, to prevent bed sores.

The bed was only six months old and was very important to the farmer.

If the bed had been destroyed, Mr Childs would have been stranded in a regular hospital bed and returned to a frustrating nightly routine, being woken every two hours so a support worker could roll him on his side so he didn't develop bed sores.

Mr Childs said it could have taken months to get a replacement bed if he lost the one he already owned.

Chaplain Derek Croser became a point of contact for Mr Childs and his support worker, Jodie Meikle, as part of the process in getting the support Mr Childs needed.

They worked with the Australian Defence Force's Emergency Support Force to hatch a plan to save the bed.

"The Army are on their way," Ms Meikle nervously announced to Mr Childs.

A team of six soldiers drove across Kangaroo Island at 10pm, hastily retrieved the bed from the farmhouse and delivered it to Kingscote Hospital at about 1am.

"I was so happy I cried," Ms Meikle said.

Mr Childs said he was very appreciative of the soldiers who saved his bed.

"I just can't thank them enough" he said.

"I grow potatoes so maybe I could feed the whole Army!"

Chaplain Croser said it was great to see the bed delivered safely.

"It's an amazing thing to be able to assist people in times of need," Chaplain Croser said.

"The Army has many ways to help people in unique situations, both practically and emotionally."

And this may have been one of the more unusual episodes to come out of Operation Bushfire Assist 19-20.

RAMS - Army Aviation Newsletter

LTCOL Miles Irving - CO RAMS

There have been a number of significant achievements across RAMS since the publication of the last newsletter. These include but are not limited to: improvement in training delivery, recognition of students, and continuous improvement in aviation safety. Of note, it is very pleasing to see our 'Repo Lab' go from strength to strength through evolving 3D printing and scanning technology. Real innovation and passion on display as RAMS continues on its path of training transformation.

Whilst COVID continues to make noise and provide challenges, RAMS is attempting to stay one step ahead. Training has not stopped, but how training is delivered in some instances has changed. The ARTS course being a prime example, where all Army students are conducting the course remotely from the RAMS classroom through RMIT. The technology implemented enables real-time interactive feedback between teacher and student and vice versa. Innovation is critical for the continued delivery of training without compromising quality. We export where feasible, with a focus on supporting the operational units and minimising travel.

RAMS is undergoing a formal name correction; not change, correction. RAMS is now known as the "Rotary-wing Aircraft Maintenance School", as opposed to the previous "Rotary Wing Aircraft Maintenance School". This small correction eliminates confusion surrounding the acronym and is grammatically correct. Whilst it is minor in nature, it is reflective of the professionalism that RAMS aims to embody as a training institution with a focus on attention to detail with regards to training and its delivery.

You may be aware that RAMS has introduced a Student of Merit award for courses comprising of four or more students. The Student of Merit does not necessarily go to the student that achieved the best academic result but, rather it is awarded to the student who was selfless in nature, a team player, performed well, and had a willingness to help others. In other words, the man or woman that you would want in your FRT, or in Navy's case who you would want in your team at sea. The recipients are gifted a military book kindly donated from the Australian Army Flying Museum, they also receive a framed certificate, and I notify their respective unit CO.

RAMS has an ongoing commitment to continuous improvement of aviation safety. There are a number of initiatives that RAMS has introduced, such as SNAPSHOT of all RAMS staff, and exemplar working at heights systems in the CH47 facility to name but a few. RAMS is also pursuing on behalf of the aviation capability the ability for unit COs to randomly drug and alcohol test their entire workforce regardless whether they are military, APS or contractor. RAMS and the School of Army Aviation (SAA) are completely aligned when it comes to safety and are working together to actively seek improvement in data capture to assure a safety generative aviation maintenance culture.

Finally, the students coming through RAMS have maintained an excellent attitude and understanding throughout. It is important to acknowledge the entire RAMS staff who continue to work tirelessly whilst maintaining a very positive mindset throughout COVID. Their ongoing dedication and passion to the delivery of quality training continues to directly contribute to the aviation operational capability.

Multi Role Helicopter 90 (MRH90) Wing – CAPT Sam Laspina

Overview

MRH Wing continues to develop highly-skilled aircraft and avionics

maintainers ready to support the demands of operational units. To date, a total of 29 maintainers have graduated from MRH Wing this year, which comprises Army and Navy students undergoing Initial Technical Trade Training, as well as Army and Navy Transition students with varying backgrounds and experience levels. The dedicated team of instructors, both military and civilian, work tirelessly to deliver training at the highest standard, while ensuring all learning outcomes, competencies and e-Journal entries are appropriately recorded.

All RAMS members have remained steadfastly resilient and focussed during the challenging period that COVID-19 presented. Another challenge that MRH Wing is facing is the Instructor to Trainee ratio required for the practical phase of training. This ratio is more often than not the deciding factor for course sizes; to eliminate this problem, MRH Wing is aiming to increase its number of instructors. This will help with the surge of trainees' throughput whilst ensuring quality training, continuous improvement and innovation do not cease. MRH Wing courseware is currently undergoing a significant overhaul to align with DASR, optimise Blackhander and Boffin concurrent learning, and deliver a learning package and precis that will benefit maintainers during course, and even serve as a valuable resource at operational units.



MRH90 students learning from the enthusiastic Mr Kurt Jame

Engine GTD

RAMS formally unveiled the MRH90 Engine Ground Training Device (GTD) on Tuesday 14 July in the C07 Hangar, in the presence of AAvnTC Commandant COL Eamon Barton. Witnessing first-hand the product of their labour in 2019 were the Commanding Officer of RAMS LTCOL Miles Irving, Ms Brooklyn Lett (CASG Training Devices Manager and world renowned engineering master), ex-SI



MRH90 Engine GTD Inauguration on Tuesday 14 July 2020 in the RAMS Hangar

MRH MAJ Michael Fairbanks-Smith, and the legendary CPO Paul Wetherspoon. MRH Wing has already integrated the new training aid into the academic and practical courses, to capitalise on the enhanced interactive instruction it provides.

The GTD is a portable, stand-alone, non-sectioned MRH Engine designed to provide technical workforce training across the MRH suite of courses. Prior to the Engine GTD, MRH Wing was required to use the live aircraft to teach engine systems, which forced course managers to de-conflict live aircraft access across multiple, simultaneous courses, and deal with the confined nature of an installed engine.

Aircraft Maintenance Trainer

Development of the Aircraft Maintenance Trainer is progressing ahead of schedule, with 93% of the aircraft systems already handed over to the work preparation stage. Almost all mass consumable items and long-lead items have been delivered, with most components awaiting further assembly steps. Travel restrictions associated with COVID-19 are likely to impact the crucial acceptance checks required to be carried out by MRH Wing, in location in Germany. However, MRH Wing is hopeful that if international travel restrictions are not eased by February 2021, alternative means of assuring design quality can be conducted. Delivery to RAMS is still anticipated in September 2021.

The AMT will replicate a live aircraft, allowing for removal and installation of all major components, while minimising the risk of damage to the live aircraft during training. It is important to note that the AMT will not negate the need for a live aircraft, but will serve as an additional training aid to increase student confidence and familiarity with key aircraft systems, and further support increased throughput of trainees. Furthermore, development of the other training devices has certainly not ceased, with the aggressively task-focused MRH90 Avionics Lead Instructor WO2 Kris Lewis forging a path ahead with train-the-trainer sessions conducted for the MRH90 Avionics Systems Trainer.

Courses

MRH Wing is currently progressing nine Blackhander students in the practical phase of the training, and seven Avionics students who have just commenced their practical phase. Two Avionics Transition students are due to return to 808 Sqn in September. MRH Wing also recently graduated eight students from the Aeroskills Technician Specialist (ATS) trial course. The ATS trial involved selected ECN 411 and 412 members of 16 Avn Bde to complete industry-provided dual licence theory and practical training (B1.3 to B2, and vice versa) as well as unit-based On-the-Job training related to the additional licensing requirements. The ATS trial is focussed on optimising maintenance support to Army Aviation, and presents individuals with a unique and exciting career opportunity.

Status	Course	Date
Graduated	3 x AV ITT Boffins	March 2020
	3 x AE Transition Blackhanders	April 2020
	3 x AV Transition Boffins	May 2020
	1 x AV ITT Boffins	August 2020
	8 x AE ITT Blackhanders	July 2020
	3 x AV ITT Boffins	August 2020
	8 x ATS students	July 2020
Current	9 x AE ITT Blackhanders	Graduation Sept 2020
	7 x AV ITT Boffins	Graduation Dec 2020
	2 x AV Transition Boffins	Graduation Sept 2020
Upcoming	AV Transition course	Starting Sept 2020
	AE ITT and Transition course	Starting Oct 2020

MRH Wing trainee throughput summary 2020



AMT painting performed in June 2020



From the MRH90 Blackhander course 1



AMT Nose Landing Gear and C-17 Flight Loads analysis



From the MRH90 Blackhander course 2



From the MRH90 Boffin course



MRH Wing students conducting Move and Secure element of OJT

From the MRH90 Blackhander course

“While at RAMS I have learned a lot about the MRH and what it takes to be a great technician.....Battle PT was my highlight”.

CFN Charkow

“During my time at RAMS, I have been given a good insight into the operational maintenance environment that awaits me when I graduate and return to 808 SQN. The skills and knowledge I have obtained here at RAMS will help me contribute to the operational capability of the Navy and wider ADF”.

SMN Baldwin



CFN Kaiyev

“I enjoyed the practical stage of training at RAMS and the friendly instructors on the floor. PT is tough and I have gained fitness”.

CFN Kaliyev

“RAMS has taught me what is expected of a tradesman at the unit and I believe it has prepared me for my future career. The PT is great and also are some of the people.”

CFN De Riecraft

“RAMS gave me a good base knowledge on operational maintenance in the Australian Defence Force as well as honing my skills for working on the MRH90”.

SMN Dibella



CFN Seward-Davis

“At RAMS I have learned the technical knowledge required to maintain the MRH90 aircraft in an operational unit. It has adequately prepared me for my future career in the field of aviation maintenance.”

CFN Seward-Davis



CFN Boord

“RAMS has given me the opportunity to develop confidence with my hand skills during live aircraft maintenance. PT has been challenging yet rewarding, as my fitness levels have improved”.

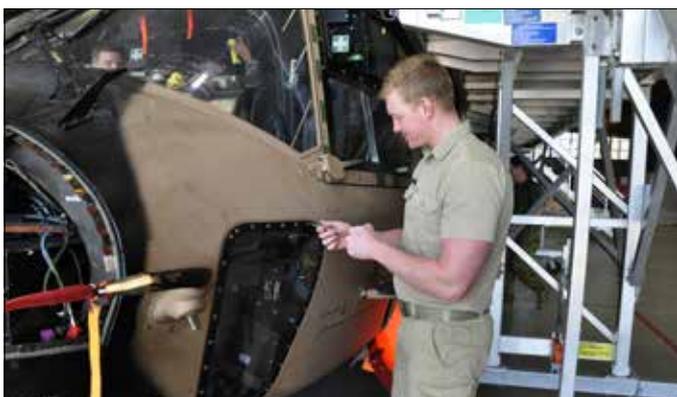
CFN Boord



CFN Kropp

“RAMS has given cutting edge training on live aircraft while challenging me to accomplish my training and strive for a successful future in my Army.”

CFN Kropp



CFN Cormick

“RAMS has moulded me into a technically minded and operationally focused technician, ready to serve in the Australian Defence Force”.

CFN Cormick

From the MRH90 Boffin course

“RAMS is an amazing unit that enables a craftsman such as myself to develop the skills and knowledge of my trade, to carry out the requirements for my job. I am able to grow as a tradesperson and progress through the army with support from fellow peers and instructors. RAMS provides great opportunities and a healthy

lifestyle, through high quality training and PT, allowing for substantial career pathways for my future within the Army.”

CFN McNally

“RAMS provides a fantastic training environment, with excellent facilities and state of the art training aids, in conjunction with the opportunity to work on live aircraft. Here we get a wide variety of exposure to what we can expect both at the Squadrons and in wider army such as day to day maintenance, catafalque party, parades, intense PT sessions and the student-led PME. The training and work-life balance at RAMS provides confirmation that joining the Army was a great decision, and one that continues to provide excellent career progression opportunities in the future that enables you to build on your own skills and knowledge; driving your career in the direction you want to go.”

CFN Nevinson

Technical Mastery Wing (TMW) – WO2 Dale Murray

This year's Subject Four for Warrant Officer (commonly called the ARTS Course) is currently half way through their Diploma in Aircraft Maintenance Manager (Mechanical/ Avionics) course at Royal Melbourne Institute Technology (RMIT). The big difference this year is that students are still in Oakey. The Army (Oakey) and Navy (Nowra) Students are all learning remotely via online lectures and tutorials delivered by RMIT lecturers in stage four lockdown in Melbourne.

RMIT had already uploaded most of their courses online due to COVID-19. This Military-centric course has been able to be converted to an online course at very short notice using RMIT's existing IT infrastructure and software. RMIT has also provided various paraphernalia to make the remote learning as seamless as possible. It is a credit to both RMIT's staff and the students' who have shown tremendous agility and flexibility to adapt to the volatile environment COVID-19 poses and to adapt seamlessly to these changes.



ARTS Course Student learning Hand Drawing Skills

TMW has continued to demonstrate its ingenuity through 2020 during RAMS 31st Anniversary, Trebuchet challenge. Utilising the sharp minds of its eager engineers as well as the superior hand-skills of the Instructor staff, TMW came up with an innovative (if not over-engineered) solution. Unfortunately, the trebuchet ran into catastrophic failure on the day, with CH-47 Wing claiming victory over the event.



TMW Trebuchet during RAMS 31st Anniversary

As the year has progressed, TMW has continued to provide training to the future Corporals and Sergeants within the RAEME Aviation capability, focusing on providing practical scenarios directly related to practices within the 16 Avn Bde. Training is constantly evolving to meet the fluid environment that is DASR, ensuring the students are provided accurate and relevant training throughout their time at RAMS.

Armed Reconnaissance Helicopter (ARH) Wing – CPL Robert Webb

ARH Wing has once again shown why it is the premier wing within RAMS this quarter, continuing to provide class leading technical training in order to graduate operationally focused and competent personnel, who are able to conduct effective and safe aircraft maintenance in support of the aviation capability. Although ARH Wing lacks the modern training aids of its counterparts within RAMS it has shown that a highly motivated and capable instructor team is the main requirement for providing quality training to its students.

Further to the standard instructional role within RAMS, the ARH Wing supervisors have also been provided the opportunity to work in the Airbus Maintenance Organisation (MO) on a rotational basis. This has been an excellent opportunity for the supervisors to be able to maintain and refresh their trade expertise in an active MO.

RAMS recommenced group PT as the relaxation of COVID-19 restrictions took place. The sight of the ARH members at the front of the pack at every session has provided confirmation that the Wing's instructors provided outstanding physical training over the lock down period. The ARH staff have been gratified to see every member recording personal best results on their Basic Fitness

Assessment over the last month.

The Wing recently competed in the RAEME Anniversary challenge at Swartz Barracks where they competed in a number of challenges, ranging from an obstacles course to the traditional spanner toss. Like all physical challenges at RAMS the Wing came away with the overall win on the day.

The Wing has just posted three aircraft technicians to the 1st Aviation Regiment with another five trainees due to finish their training by the end of the year, and be able to reinforce the Regiments manning into 2021.



CPL Crouch showing his winning form in the spanner toss.

Chinook (CH-47F) Wing – WO2 Kevin Tobias

Although the youngest wing within the school, RAMS CH-47F training capability is considered the premier maintenance training facility. The reputation is for good reason noting the training continuums are delivered through a blended training package from full virtual reality, escalating to high fidelity hands-on virtual reality and culminating with real life training on the Chinook helicopter mechanical training aid serving both Technician Aircraft and Avionic students.

It goes without saying that our training deliverables are easily achieved with personnel expertise from our industry partner Boeing Defence Australia and training aid supported by KRATOS Training Solutions USA. On the Boeing front we will soon have a full quota of staff with two newly appointed members completing their training and qualifying on type by the end of Sep 20. In support of increasing our virtual reality capability KRATOS have successfully delivered the first two of three software updates, these updates will increase capability of the training aids but more importantly provide greater redundancy should it ever be required. As stated previously, this can only be achieved through the unrelenting support of the team at CHMU and their vested interest in advancing the overall CH-47F capability.

For those that may have known him, CPL Bradley Saunders separated from Army back in November 2019. He had aspirations of getting back to his roots of working with livestock but with a difference; he wanted to muster from the comfort of the pilot's seat of an R22 whipping through the tree tops and scaring the pants off anything within cooee of his antics. Due to Brad's new found piloting role we were having trouble getting him back to RAMS IOT officially farewell him from Army. On 28 Jul RAMS personnel had scheduled its 31st

Anniversary celebrations with a day of fun and frivolity to be had by all. Brad happened to be flying in from out west and with a little running around we managed to gain clearance for him to land his R22 at the Oakey airfield. There is great appreciation for the RAMS and AAvtC staff that made this possible, without this support the official farewell would have once again been delayed.



CPL Saunders being farewelled by CO RAMS

The RAMS 31st birthday celebrations on 28 Jul went off without a hitch. Much to the disgust of the much larger training wings, it should be noted that the personnel (predominately students) of RAMS CH-47F training wing were the ultimate winners on the day. The wings team dominated various sporting activities, a competitive food/drink consumption challenge and the engineering masterpiece being the wings trebuchet that defeated, nay annihilated all of its adversaries. It is a tough requirement but I'm absolutely certain our current cohort of students will become accustom to being associated with the winning arm of the maintenance capability.

In closing, I would like to note the availability of the mighty CH-47F Chinook at Oakey is a rare and infrequent sight. That said, on 01 Sep the staff and students from RAMS and the wider AAvtC community jumped at the opportunity to ogle the awe inspiring and majestic presence of these mighty airframes.

Stay safe and keep smiling.

3D Replication Laboratory – SGT James Chapman

Late 2019, RAMS was given the opportunity to bid for funds made available by FORCOMD. One of the successful bids was for a 3D printing capability to help create, maintain, and replicate training aids.

After reviewing the technology and capabilities that were commercially available to meet RAMS needs, a proposal was submitted to FORCOMD requesting an increase in the available funding to procure the necessary equipment to stand up a 3D Replication Lab, as well as the first tranche of consumables, supporting ICT hardware and software. The RAMS 3D Lab is now equipped with the following equipment:

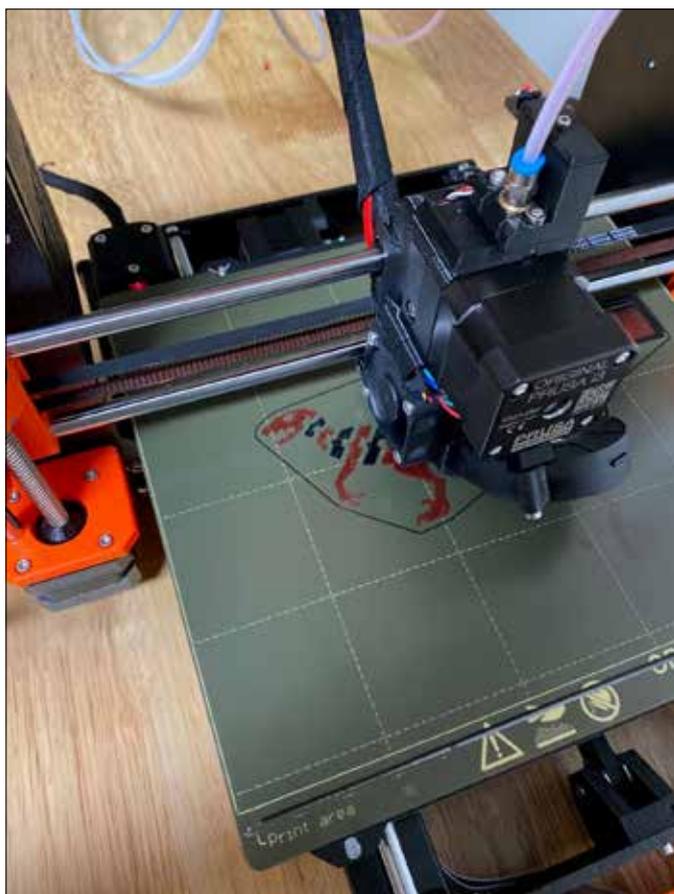


3D Lab 1

- Prusa MK3S FDM (filament) printer with MMU2S allowing multi-colour prints up to 5 colours
- FormLabs Form3 SLA (resin) printer with accuracy up to 25-micron layer height
- Epilog Helix Mini-24 60W Laser Cutter/Engraver with rotary attachment
- MultiCam M1212 3-axis CNC Router
- Artec Spyder and Leo portable 3D scanners
- Geomagic Design X Reverse Engineering CAD Software



3D Lab 2



3D Lab 3

We were also provided a MarkForged Onyx Pro composite printer that we are currently trialling. It prints an outer shell of Nylon, with Fibreglass as the internal support structure. They are also available with Carbon Fibre or Kevlar materials.

The setup of the 3D Lab has not been without roadblocks. Though there are a few additive manufacturing trials being undertaken Army

wide, there is currently no central framework or co-ordination. This meant that all the SOPs, infrastructure requirements, hazard storage, waste disposal, etc. had to be created from scratch.

It has been exciting to be involved in setting up this capability for RAMS. It has given us the opportunity to engage with units such as SOLS and I CSSB as well as to network and share information regarding their trials. As our staff become more familiar with the equipment and design tools, the quality of the final product is improving significantly, and turnaround time on projects is reducing substantially.

Though the primary task of the 3D Lab is to support RAMS, we have started providing support to our fellow schools at AAvtC, as well as AASPO, CHMU and MRHSPO. Some of the projects completed and underway so far include:

- D modelling schematic/flow diagrams into physical demonstration items such as the MRH Main Landing Gear (MLG) Actuator
- ARH Gunner Armament Grip (GAG) models for SAA ARH Pilot Training

- Mud map models for SAA
- Helmet Mounted Sight Display (HMSD) scanning and modelling for MRHSPO to support Helicopter Underwater Escape Training.
- CH-47F bubble window test pieces for CHMU
- S-70 Fast Roping and Repelling Device (FRRD) bolt covers for AASPO
- Aircraft Battle Damage Repair (ABDR) sample designs for next-gen ABDR techniques and training
- 3D scanning of Aeronautical Product (AP) to provide accurate and high-res models for training packages, as well as Artificial Reality (AR)/Virtual Reality (VR) trials

If you are ever at AAvtC and wish to check out the Lab, please contact RAMS OPS to organise a walkthrough. If you have a project that you think we may be able to assist with, once again please send the RFI through to RAMS OPS.



3D printed gear

HMAS Canberra III - Maintenance at sea

CFN M Smith

No matter where you are in Australia, overseas or even in the middle of the ocean, if there is Army equipment around, you will no doubt find RAEME there to support it. Currently there are three RAEME pers posted to HMAS Canberra III, including a Vehicle Mechanic, an Electronics Technician and the Commander of the Amphibious Department. On the day pictured, 9 Aug 2020, the crew and embarked forces of HMAS Canberra III held a memorial service for HMAS Canberra I, which sank during the battle of Savo Island on 09 August 1942. With the island of Guadalcanal looming in the background, 84 servicemen perished that day, and now rest 760 metres below the waves.

As part of the Ship's Army Establishment and working as an integrated element with the ship's Amphibious Division, the RAEME soldiers provide organic maintenance support to Canberra and embarked forces. Their responsibilities include the maintenance and servicing all of material handling equipment, biomedical systems and outboard motor watercraft, as well as participating in all 'whole ship' duties and watches. This includes being part of the Amphibious Beach Element, and Ship's Dive Team.

In current operations alongside and whilst deployed at sea, the RAEME element is an integral part of ship's company and a valuable capability that supports all ship's departments maintenance needs for land materiel. Although this posting differs somewhat from a regular workshop posting, the contribution of RAEME within this tri-service environment is in line with the Corps' ethos of bringing materiel maintenance as far forward as needed; even when it means getting your feet wet.



HMAS Canberra RAEME members

16 REGT RAA, Combat Services Support BTY

“Did you know that CSS BTY won the Hayden Shield this year?”

Welcome to 16 by CFN Tom Nithsdale

At the close of 2019 I received my (unexpected) posting to 16 Regiment (16 REGT), hidden away at the tiny Woodside Barracks smack bang in the middle of the Adelaide Hills. Initially, I had to ask if anyone had even heard of this place.

Aptly named “The Army’s biggest secret”, I was promised a low tempo unit with an abundance of greenery and a relaxed atmosphere. How wrong they all were. 16 REGT might be a small out of the way unit but given its unique role within Army, as the only dedicated Air Defence unit in green, and the “unique” challenges dished out by the first half of 2020; it was fair to say that my first days within the unit were a sprint rather than a dawdle. A frenetic pace quickly became the norm, which has yet to let up.

COVID, Fires and Conference Calls, Part I Adelaide Hills – by CPL Tom Toohey

The year 2020 started before anyone had even returned from the stand down period. With the Adelaide hills bushfires roaring through just before Christmas day 2019 and the base being evacuated with the fire getting as close as 500 metres from the front gate. Just a week later the Kangaroo Island fires started and 16 REGT had to spin up an Emergency Support Force (ESF) for OP BUSHFIRE ASSIST 19 (OP BA). 16 REGT sent a number of members over to Kangaroo Island (see below) and after reading the task order the Reccy Mech, (I) CPL Tom Toohey, was happy as a pig in mud, thinking he would get off the 14 day duty roster he scored for the rear details period. However with 1 ARMD and 9 CSSB already sending a few wreckers to the island the premier Reccy Mech at 16 REGT had to cool his heels until The Adelaide Hills ESF was raised a day later.

Members were called back from leave to fill the ranks of the ESF. Tasked with providing emergency water supplies to households and livestock, CFN Sanders-Carter and I had to come up with a quick-fix solution to getting bulk water to any location throughout the Adelaide hills. With Crafty skills at foot, we devised a 4000 Ltr water pod fitted to the back of a loan pool UNIMOG. The pump set-up was “tech certified” by the ASM (WO1 Mark Ledinek) and the lads set off in our newly christened tanker “Bobby Boucher” as the Waterboys.



Bobby Boucher’ the Water Tanker

A “Confirmed Fills” tally was kept on the window of Bobby Boucher. Each full load of 4000ltrs took 20 minutes to pump out. By the end of the two month operation, the lads had delivered over 200,000 litres of precious water to the grateful fire ravaged communities in the hills.



Confirmed Fills (200 000 Litres)



Bobby Boucher’ filling tanks

Secondary task was fodder for the hungry livestock with many tonnes of donated hay, the HRV and trailer was utilised to pick up and deliver it through the AO due to heavy vehicle permit limitations for newer LAND 121 vehicles. By the end of the OP some 280 large round bales were delivered to the fire devastated properties. The team had to clear tracks with chainsaws and winch trees to access a lot of areas, but it was all done with great Skill and Fighting.



HRV with a load of hay

With a platoon of engineers from I CER added to the ESF and some 30 additional chainsaws purchased, GE's workshop skills were put to use with trade running to repair and service five to six chainsaws a day. The Platoon Commander LT James Pretty was drafted in as a Trade Assistant using his Engineering Degree to clean and reassemble chainsaws as part of the massive team effort, thereby proving that Junior Officers can be useful if correctly supervised. The two OJTs we had during this time obtained a huge amount of sign offs.

As the Numero Uno Reccy Mech for 6 BDE, I managed to get called over to Kangaroo Island to tow a few busted trucks back to the mainland and spent a week over there for the withdrawal. My self-aggrandising claims were indeed true as demonstrated when expertly reversing the 20 tonne onto the ferry one handed.

SGT Shaw and newly arrived CPL Thomas were kept busy during this time keeping on top of all the non OP BA related trade. At the close of the operations the entire team was ready for a return to normal (still waiting on that one, cheers COVID-19). The way the lads conducted themselves during OP BA proved that RAEME soldiers are definitely the most resilient, adaptable and professional Corps in the Army.

COVID, Fires and Conference Calls, Part 2 Kangaroo Island – by CFN Tom Apoyan

The end of 2019 through 2020 has been a wild ride for everyone out there; however, 16 REGT rose to the challenge in order to support DACC taskings on both OP Bushfire Assist (OP BA) and OP COV-19 (more on that later). The year started with SGT Swarbrick, CPL Greaves, LCPL Robins (all filthy greasers) along with multi-trade superstar CFN Apoyan heading to Kangaroo Island, to assist with FRT support to OP BA. In addition to working on the various green equipment fleets, the boys were called upon several times for assistance on civilian equipment from diesel tractors, three phase portable container setups and commercial fridges. While back at Woodside the majority of the remaining REGT was busily providing support to the civilian population of the greater Adelaide Hills region. Notable stand outs from EIR include CPL Jack "Where do you want your Hay" Eldridge and CFN Liam Dean.

With the impending DOOM that is COVID-19, 16 REGT went to work from home arrangements from around March until finally returning to work "as normal" in June. This period saw the better part of CSS BTY undertake study topics ranging from research and personal development tasks, to quick decision exercises to keep us busy at home, when not smashing wing dings and attempting to master the dark art of the conference call. All of which was in support of keeping that unique Air Defence capability fit to fight. In the meantime, the BC MAJ Arron Kinleyside was seconded to work with SA Health to provide logistics and operations advise to the State Control Centre and to Flinders Hospital assisting them to build capacity to manage an outbreak. Thankfully (at the time of writing), the outbreak planning hasn't been needed.

Any hopes of returning to a normal working environment were quickly dashed when a second ESF was enacted, this time in support of OP COV-19, which saw the deployment of future EIR head honcho SGT Jason Page and CSS BTY BSMWO2 Dean Smith, to parts unknown along the South Australian border to protect us from the Victorians. Hopefully the good SGT will be back at CSS BTY in time for the 2021 GAMB Radar Maintenance course.

Those who remained back at Woodside quickly got stuck into the mountain of backlog. The Greasers were busily churning through the maintenance on 16's PMADV fleet, between running PT, leading the CSS BTY IMT competition team to victory in the Hayden Shield (much to the upset of the other "Combat" BTYs and only pausing for breath in order to suck down a brew or smash an Eggs Benny Roll from RVs (no Fronters here, we keep things classy up here in the Adelaide Hills). After all their efforts on OP BA, GE&REC WKSP transformed into a production line tasked with fabricating an endless supply of SCE cages for the REGT. EIR WKSP found itself immediately under the pump with the Giraffe Agile Multi-Beam Radars (GAMBs) deciding to pack-it-in while just sitting there. For once, the Boffins could not just turn it off and on again to fix it, so the highest paying trade had to actually earn their dollars. After multiple cuss words, dirty PDs (Boffins typically having softer skin than other trades will be DUFing moisturiser) and some left-over washers, the Giraffes are once again sticking their necks out. Other great work included keeping the fleet of Harris radios Green Tagged, fixing smashed up BMS equipment on PMVs and ensuring the RBS70s kept on firing.

The rest of the year sees some smaller exercises to make up for lost time, including a recently completed Live Fire Exercise of the RBS70 fleet; which may be one of the last as the new fleet of NASAMs gets closer to being introduced and, fingers crossed, an actual ASM Golf Day.

Goodbye to old faves and hello new faces by SGT Adam "not a Tom" Somerville

Another year and another posting cycle sees a rotation of old friends go and a batch of new fresh faces join the WKSPs ranks. The first of these being the changing of the guard between outgoing ASMWO1 Heath Arblaster and incoming WO1 Mark Ledinek. 2020 also saw a RAEME officer take the helm of CSS BTY with MAJ Kinleyside taking over the role as BC from outgoing MAJ Gale. The close of 2019 saw EIR stalwarts CPL Brad "How hot is my Hair-net" Harper and CFN Jake "The better Treasurer" Kusters post out and CPL Jack Eldridge and CFN Gage Raymond be promoted to Civilian. We welcomed to the cohort CPL Luke Stopp, LCPL Greg Hall, CFN Andrew Gyimah and CFN Pantelis Markobotsaris. By the time this article is published EIR WKSP will also say happy trails to Semi-SGT Joshua Russell and CPL Mark "Comms-Guru" Cooper who are moving on to hopefully quieter postings in 2021. By year's end the gurus at GE will hooroo to CFN Sanders-Carter and SGT Shaw, while the greasers will get a complete reshuffle with the exit of SGT Swarbrick, CPL Wells, LCPL Robins and CFN Trevallion. To round out the rotation CSS BTY HQ will farewell CAPT O'Callaghan and LT Pretty.

On closing, here is hoping that 2021 brings fair weather. Good luck and Arte et Marte.

102 Field Workshop, 3 CSSB

Leading into the end of the year, 102 Fd Wksp has been involved in several activities and tasks to prepare us for the coming year. The workshop has provided maintenance support to 3 RAR's M113AS4 fleet, received Military Police Dog demonstrations, conducted several weapon courses, prepared for COVID Assist and provided technical support to external units. While this year has been different and tough at times, the workshop has made the best of it by seizing the opportunity to conduct training that is usually not done in the workshop due to time constraints. For example, the Military Police demonstration mentioned above was held at the Workshop and provided an insight into the working dogs of the Army.



Dog subduing a threat

Pictured above is a working dog from 1 MP Bn subduing a threat after not complying with the handler's instructions. These working dogs are considered the most extreme "less than lethal" capability the Army possesses.



Dog with equipment

The handlers from 1 MP Bn brought two of their dogs and their equipment, including their "doggies" seen above.

A Vehicle Platoon was required to assist 3 RAR in maintaining their fleet of M113AS4s due to their workshop deploying on COVID Assist. Pictured below is a Craftsman working on one of the vehicles with an On The Job trainee (OJT). B Vehicle Platoon has been busy



102 FD WKSP VMs repairing M113AS4

tasking FRTs to support external units such as 10 FSB, where

CFN Pye and LCPL Vincent provided technical maintenance support and were able to teach several members the basics of maintaining their vehicles.



CFN Pye assisting 10 FSB

In addition to reducing the back-log of the workshop, General Engineering Platoon took the opportunity to run courses in CSSB to qualify their members on specialist weapons such as the MK47 Automatic Grenade Launcher. Pictured below is CFN Dix running the OC through the basics of the MK47.

The workshop also had the pleasure of presenting the Brigade Commander, Brigadier Fegan, with a set of Protective Dress (PDs) to informally induct him into the workshop.

While this year has been challenging and at times very unpredictable, the workshop has made the best out of it by conducting training opportunities that are not familiar to us, running training in CSSB that is usually conducted at ASEME and even taking the time to educate the other units in basic maintenance. As we move into the holiday period, the workshop is still working hard and preparing for tasks interstate in response to the ever changing COVID requirements.



Brigadier Fegan in his PDs

I06 FD WKSP 2020 Year in Summary

LT Darius Nooriafshar

What a year it has been for I06 FD WKSP. From OP BUSHFIRE ASSIST to OP COVID-19 ASSIST, working from home and everything in between. The adaptability, capability and leadership of our members has truly been displayed. The year started with a number of I06 FD WKSP members deployed to Victoria on OP BUSHFIRE ASSIST. The range of tasks our members conducted included providing logistics and maintenance support to communities that were in desperate need of support. Our members repaired and serviced vehicles, provided aid and undertook distribution tasks of supplies and fodder to assist local farmers and the wider community. The members of I06 FD WKSP rose to the occasion and helped make a meaningful impact and this was only the start of 2020.



A FRT conducting maintenance work on Emergency Services Vehicles within the Alpine Shire



Flying the ANF and Corps flags at a display during OP Bushfire Assist

Due to COVID-19, working from home presented a unique challenge that was met by our innovative members. It was an opportunity for us to work on a different skill set. The initiative and leadership displayed by our members during this time was outstanding. As we returned to work and got back to the workshop floor bustling, the announcement of OP COVID-19 ASSIST meant yet again our members would be deploying, having to swap their tools for face masks and gloves.

On the 17th July, 7 CSSB deployed a Coy sized Force Element to Victoria as part of OP COVID-19 ASSIST. The majority of 3 PL within in this Coy consisted of members from I06 FD WKSP. The members conducted a range of tasks ISO of the Department of Health

and Human Services, including manning of the COVID-19 hotline and processing Rent Relief payments. A number of 106 FD WKSP members also utilised their multicultural backgrounds and acted as interpreters at testing sites and on QCM tasks. Again, this operation showed the versatility of our members.



106 FIELD Workshop members processing Rent Relief Payments in service of the Department of Health and Human Services (DHHS)

2020 also saw the addition of a number of new assets to 106 FD WKSP including maintenance shelters and 42M's. The new maintenance shelters will allow our members greater versatility and flexibility to perform their jobs. IOT fulfil the medium recovery capability, three 42M's were issues to 106 FD WKSP. As these vehicles are smaller, lighter and more agile than the 45M, they have the potential to become the workhorse for WKSP's in the field environment.

September was the first opportunity for 106 FD WKSP to deploy into the field environment for 2020. As a part of EX LONG HAI, the Coy deployed two FRG's which each completed a 36 hour shakeout in WBTA. This EX provided the Coy the chance to conduct a short deployment in convoy to rehearse and completely check field deployment stores before BETA. Concurrently to the FRT serials, live fire CMC was conducted IOT ensure that our soldier's individual skills were maintained to a high standard.

At the time of writing we are now preparing for an upcoming FRG deployment to SWBTA as part of a CSST for EX DIAMOND CATALYST. This will be a good opportunity to test and push ourselves within the field environment and do what we do best. In summary, 2020 has not been a traditional year for 106 FD WKSP. It has, however, allowed us to grow and challenge ourselves in ways we could not imagine. We approached all of this with the esprit-de-corps and sound morale of our proud Corps and in particular 106 FD WKSP. We have shown that 106 FD WKSP is, "The Punch Behind the Taskforce Fist". Bring on 2021!



106 FIELD Workshop members processing Rent Relief Payments in service of the Department of Health and Human Services (DHHS)

10 FSB

2019 ended with a fair chunk of the WKSP deploying on Force Support Element 11 (FSE-11). The remainder of the WKSP was left with a heavy burden of maintenance with a reduced work force and the bushfires about to ensue. During the Christmas stand down period the flag went up and 10 FSB TSP deployed a small WKSP element of six personnel on OP BUSHFIRE ASSIST (OP BA) led by CPL Grant, with CFNs Sullivan, Walsh, Atkinson, Quinn and Taylor making up the FRT.

The small WKSP Element supported the road move to Sydney then from there split off into smaller teams. One supporting the helicopter hot refuelling site in Canberra while assisting JLU Canberra in providing power and support to the temporary kitchen on HMAS Harmon. The recovery team was sent all over both AOs assisting civilian and military forces. The final team was working out of 5 CSSB WKSP in Sydney coordinating the recovery and repair tasks being conducted and assisting their hosts when able. Before re-deployment to Townsville, the FRT assisted in the conduct of a road safety stand and general check of all equipment and vehicles used throughout the AO before the commencement of convoys back to their respective parent units.

GE maintained PET OP's gear and other miscellaneous equipment throughout the operation. There was a Refuelling Point Aviation (RPA) set up to refuel various aircraft which the fitters ensured was functional and safe to allow PET OPs to do their job. Consequently this gave aircraft a new location to be refuelled meaning they did not need to go as far to refuel and could carry out their tasks more efficiently.

The effort from the Recovery Mechanic over the duration of OPERATION Bushfire Assist was massive, having covered a vast area of New South Wales. Recovery Mechanic CFN Taylor and vehicle Mechanic CFN Atkinson covered almost 14000km during the OP. Their range of tasks was ever evolving. Some of the tasks that they conducted are the normal routine Army stuff including Bushmasters, G-Wagons, GMV's and running repairs on the HRV. Three standout jobs for the pair were the recovery of a Bulk Fuel Tanker that found itself reversed into a freshly bulldozed firebreak and had begun to slip sideways towards a cliff. Thankfully, the truckie involved noticed his mistake and stopped. To complicate matters the fuel tanker had been resupplied that morning and was the only one in the area.



Bulk Fuel Tanker recovery

Another standout task was the recovery of a NSW Rural Fire Service truck that had been involved in an accident. The fire fighters were driving on a firebreak when a tree collapsed and landed on the truck injuring some of the firefighters. The decision was made

to send the recovery team into the active fire zone to recover the truck before it was lost in the fire.



NSW RFS Truck recovery

The third task that CFN Taylor found himself involved in was the recovery of the four engines and other critical components of the ill-fated Coulson fire-fighting plane which crashed in the Snowy Monaro area.



The ill-fated Coulson Firefighting plane in action

The small but extremely effective remaining team led on the trade floor by SGT Stirzaker and CPL Kaminski, kept the Battalion operating with kit prepped and racked for OP COVID ASSIST, which for us wasn't enacted. There was no shortage of work for the rear-detail maintainers, as we all know that scheduled maintenance stops for no man.

The remainder of the year saw everyone from OP BA and FSE making their way back to the WKSP to bring the team back to full strength, and increase the maintenance outputs to reel back the maintenance hours to a less eye-watering figure than the one that had crept up due to commitment to Operations. The WKSP has completed an incredible amount of work with multiple members earning well deserved awards and promotions. Very well done all round.

In summary the 10 FSB WKSP has consistently displayed the ethos of RAEME by continually supporting multiple operations in Australia and abroad in a unit that has been constantly involved in Operations since its inception in 1998.

2 Cav Regt RAEME – 2020 Recap

2020 started with enthusiasm as the Regiment commenced a busy year of readying. After completing individual training, Support Squadron headed out field to qualify personnel as B-Vehicle Mounted Safety Supervisors, followed by supporting two squadrons of ASLAV in completing their stage 4 and 5 LFX. This exercise was cut short due to COVID, with C Squadron's A1 prepping and deploying to Mt Isa as part of C Squadron's OP COVID-19 ASSIST task. While there, the RAEME members made the most of the situation and assisted 51 FNQR with some maintenance tasks and also assisted Queensland Police and some neighbouring farmers with maintenance as a good will gesture and to promote the RAEME ethos!

May through to July was a busy period of vehicle maintenance and preparation for Exercise BROLGA RUN - a Brigade run Combat Team STX. To the credit of the C Squadron maintainers and GDLSA, 14 Abrams were lifted to the training area and performed exceptionally well. The Regiment's ASLAV fleet had also experienced the luxury of an extended period of maintenance thanks to COVID restrictions and was in very good shape. Throughout the exercise the A1s were busy following their respective CTs through the STX lanes, while the A2 supported with numerous FRTs and bolstered other Brigade CT A1s with maintainers. C Squadron's A1 were kept busy with the tanks being utilised for the full duration of the STX and then backing up with a fire power demonstration. Overall, the support delivered to the CTs from the Regiment's RAEME personnel was above and beyond, with some notable mentions (and thanks) going to 3RAR's TST who provided assistance to C Squadron's A1.

Exercise ADLUM followed on from the firepower demonstration and had BG Eagle performing its traditional formation reconnaissance role. The CRV squadrons were in the box with their A1s while the A2 was kept busy with a few recovery and maintenance tasks.



The A2 conducts a pack lift on a PMV-C to repair an oil leak during EXADLUM.

September was the first time the Regiment complete was back in barracks and a Regimental parade was held with a number of RAEME pers receiving well-earned promotions and recognition for their efforts. Of note were CFN Jacob Gilby being awarded the Soldiers Medallion in recognition of his efforts, while the RASM, WO1 Garry Plumridge, and ASM C SQN WO2 Colin Goulding received the second clasp to their Long Service Medals for 25 years of service!

September also kicked off a busy period of courses within the Regiment and Brigade, with the RAEME pers either on a course or supporting a course. Due to the busy nature of the period within the

Brigade, an opportunity presented for four TST members to conduct an FRT to the tip of Cape York to recover a G Wagon. Led by CPL Dean Enderby, the four members enjoyed the sites and a few bumpy roads to complete a successful and memorable FRT.



TST members CFN Jacob Gilby, CFN Cameron Taylor, CPL Dean Enderby, and CFN Lee Darbyshire on an FRT (Fishing and Recreational Trip) to Bamaga.



Reece Mechs and Emus

With the end of year looming and the pace not slowing, the finish to 2020 seems to be the most normal part of the year!

3 CSR – Being an ASM is the best job in the Army

Gather rounds kids, its story time! Those of you whom know me understand and agree that I am a 'big deal', I would like to tell a story about the best kept secret in the Army; the joy of being an ASM. As much as I could talk all day about what I have achieved personally and professionally whilst I have been posted to 3 CSR I would like to highlight how rewarding and enjoyable the position is. I will attempt to take you on a journey of the past three years and provide an insight into how having a positive 'can-do' attitude has a great enabling effect. I found the role of ASM and leading a dedicated team of professional tradespersons both challenging and rewarding. After posting back to 3 CSR in 2018, the team has achieved numerous milestones whilst also contributing to the enhancement of both FORCOMD and, even broader, Defence. We even had time to do some normal work and deploy field a couple of times too.

When I posted back to the Regt, my ERV was just as I remembered it. With the advent of G-Wagon and more recently MAN FOV, we had to take stock of how we conducted FRT. I said goodbye to my beloved ERV and was introduced to the new MMM on the back of 40M and the GMM. The change from Land Rover to Rheinmetall and the introduction of the G-Wagon GMM has encouraged us to develop ECPs that accommodate the evolving environment we find ourselves in. The new vehicles are extremely capable but lacking in some key areas. Least of which was the fitment of a dedicated communications suite. The team sought to leverage off the existing L121 'comms on the move' ECP to provide a solution for the GMM and analogue PMV-M. The mindset within the team here is one of 'why not', this has led to some awesome innovation.

In my first year back at the Unit, I had CPL 'Red' Alderson here to keep me on my toes. He had been working on a way to reduce the



CPL Alderson detailing the concept of the COMPACT 2400 power supply/battery charger

high turnover of batteries within the PMV-M fleet. The reliance on PMV-M and the high turnover of batteries within digital vehicles gave birth to the first significant ECP of my tenure. The COMPACT 2400 was repurposed as both a power supply and battery charger with some very clever engineering by CPL Alderson. This was endorsed by FORCOMD and additional units were purchased with the cables being manufactured within the three combat brigades that utilise the PMV-M. The ECP is still with BCOG for further development and potential fleet wide implementation. The introduction of the new batteries for the PMV-M has been a significant improvement in the battery management for this vehicle. More recently, we demonstrated to the CA and RSM-A some of the innovations within 3 CSR. This was very well received and provided me with more than one 'proud dad' moment'. 2018 was a bit of a blur and we returned to work in 2019 with a few puddles around Townsville.

If you have not been living under a rock you would know that we had a bit of rain here in Townsville at the start of 2019. 3 CSR was tasked with providing support to dislocated families that were flooded out of their homes and were able to conduct some interesting FRT over this period. During the recovery phase we continued to provide support for drivers of legacy fleet (Unimog) and conducted FRT to service ancient generators that Moses had on the ARK. This provided some unique challenges and opportunities but the team was up for the task. We had a delayed start to 2019 and eventually settled down into the normal battle rhythm of training and exercises. Not least of which was sending a small team to TS19.

For those that were fortunate enough to participate in EX TS19, you would have seen the bright red coffee van that was parked at the entrance to the range. Not only were you able to purchase coffee but they also regularly did pulled pork rolls. As much as there were grumbings about how it was a waste of resources, the head shed still indulged in the morning ritual and obliged in helping the 3 CSR team win the war, one coffee at a time. We still managed to conduct some Sqn activities closer to home up in TFTA later in the year.

In Oct 19, when it was on average 40 degrees in the shade, we deployed to TFTA for a week. I was recovering from dislocating my shoulder, playing in the rugby union finals and was given the privilege of donning the 'OT' patch which precluded me from carrying a 'gat'. The EX was the first time we were able to test out the new L121 'comms on the move' ECP that we and 3 CSSB had been working on. The ECP was still in the early stages of development but we had good results early. We used the capability to good effect and I was glad that I had comms with my FRT as the G-Wagon I was travelling in threw a code and entered limp mode, having comms with the FRT saved our bacon.

The L121 'comms on the move' ECP bridged the much needed communications gap between digital and non-digital vehicles. The ability to move, shoot and communicate with MAN vehicles was somewhat foreign to a lot of people who were still used to kicking it old school in the Unimog and L/R. It was extremely rewarding to see the team raise to the task of being able to solve the issues that the SPO were aware of and had not provided a solution for yet. The transition from legacy equipment to vehicles with cruise control and air con has provided a lot of challenges, least of all is the difference in height.

Having been posted to the Unit previously, I had a head start on all things 'Sig'; however, the introduction of new technology in rapid succession presented a steep learning curve for everyone. That in itself provided a series of teething problems but also having to understand the difference between I-BTN and MPE. There has been

a gradual shift in mindset from every problem being a 'workshop problem' to 'how can I help maintain capability'. This has been driven from the top whereby, all personnel of rank from the CO down, has pushed for innovation to be embraced. This outlook has generated a positive culture, which I have found to be an immensely rewarding experience. Initially, it was limited to TST where we attempted to solve the world's problems one ECP at a time. However, the operators have become more invested in their equipment and even learned the value of submitting a RODUM. I got so busy juggling three jobs and numerous ECP's that I eventually capitulated and reached out to 3 CSSB to assist with the paperwork for the L121 'comms on the move' ECP.



CFN Markham inspecting the L121 comms on the move setup prior to briefing Commander 3rd Bde

We requested support from EIR in 3 CSSB in enhancing the original L121 'comms on the move' ECP and quickly pooled our resources to develop a workable solution. The use of the A-320 cradle coupled with repurposing legacy power cables has enabled effective communications within packets but also between the unit and sub units. FORCOMD have requested funding through AHQ to enable another 350 kits to be fitted to L121 vehicles across FORCOMD. Not surprisingly, I have already put my order in for another five units to equip our fleet. There have been two really good spin offs from this solution; providing digital communications within the analogue PMV-M and developing a similar ECP for our GMM. In between developing numerous ECP we still had a job to support the Regt and Bde on exercise.



WO2 McCulloch, 3 CSR ASM explaining the concept and employability of the A320 cradle as part of the L121 'comms on the move' to 3 Bde and AHQ staff

One of the more memorable exercises that we managed to undertake was EX PEGASUS RUN 20, this saw the majority of OSS deploy in support of 103 Sig Sqn. It seems that it doesn't rain in Townsville until you go on exercise and rain it did. It was nowhere as bad as the floods of 2019; however, it was enough to provide the opportunity for some real life FRT for the team and for the RAEME element to demonstrate 'stunt driving' at its best. When we occupied one particularly boggy section, I made the call to the team over the radio to 'drive it like you stole it and don't stop', well CFN Ash 'don't have to tell me twice' Searle proceeded to send the PMV-L rocketing out of the position like a hover craft. We quickly developed a new exit and left the 'truckies' to conduct vital asset protection on their bogged vehicle. The move to the new position was welcomed with a look of relief from the 'Sigs' as they were standing around a still smouldering 16 KVA that had sent the rocker cover into space. Apparently fuel and water really do not burn/compress at the same rate. Who would of thought? It was fortunate that we had our 'moon tank' with our OSS 16 KVA so we could hot swap the generator for them.



RAEME Pride

When we were working from home during the height of COVID-19 restrictions we looked to develop new ways of doing business. CFN Moon had been sitting on a pearler of an idea to develop and build a dedicated fuel tank for the in-service 16 KVA generator. As part of COVID-19 HLW he began to research and research and research. I had no idea there was so much I did not know about the storage of fuel until he proceeded to give me a back brief on all the things that he had learned. This led him to develop a prototype over several weeks of singular days at work. In June when we returned to relative normalcy he, and CPL Thompson, built the first tank out of aluminium. Not to be outdone, CFN Moon presented his excellent idea to, not only RHQ staff, but also the 3XC. This then led to the Brigade Commander demanding the "Moon Tank" be implemented across the Brigade. In Sep he demonstrated his ECP, which was also his Subj 4 project, to MAJGEN Thompson. More recently LTGEN Burr toured Lavarack as part of his CA trip and was amazed at the innovation with 3 CSR and was pleased that we were demonstrating excellence in striving to be best we could be.

Having an attitude of 'how can I be better today than I was yesterday?' and to see this demonstrated in the team has been extremely rewarding. One of the most enriching aspects of the position is to engage in conversation with the equipment owners and ask 'how we can make this better?' and, 'can we enhance this capability through this modification?'. The team at 3 CSR thrives on the challenges presented. The workshop have shown the ability, and willingness, to work with operators to provide a more reliable, and enhanced capability. The level of maintenance varies dependant on the platform; however, we have been fortunate to have excellent support from the CoC and having the freedom to develop workable solutions to problems.



Left; CFN Moon explaining the intricacies of the fuel delivery system on a 16 KVA generator

Upon reflection I have found developing ECPs as one of the most rewarding parts of being an ASM. The one that stands out from the rest for me it came when CFN Chris Markham asked a simple question; "Hey Ace, with these DAGR cables that are being replaced because of the breakdown in the heat shrink, can we just cut, replace the heat shrink and re-join?" I immediately engaged with the SPO as for my mind it was a no brainer, why train our people to conduct maintenance and then have a repair by replacement mindset. We were fortunate as the SPO agreed, albeit reluctantly as he had already ordered more of the DAGR power supply cables, at a cost of \$731.23 each. This talks to an attitude and mindset of 'why not' as opposed to looking at reasons why we can't. ECP aside, I am proud

to have been able to have a positive influence on the culture within 3 CSR that looks for ways to improve capability and be able to achieve mission success regardless of the obstacles put before us.

As I move on to the inevitable CASG position on promotion I am a 'proud dad' having the pleasure to have served both as an ASM and to work alongside some of the smartest and best tradesman in the Army. If you get the opportunity, embrace it as I believe it will be the best job you will ever do.

Arte Et Marte

Technical Support Troop – 4 Regt RAA

2020 started like most years; the North Queensland sun was shining, the Craftsman were smiling and the mandatory briefs were being pumped out like hot dinners at the ORs Mess.

After a successful Regimental CPX in February, the Regiment deployed to TFTA for the first field exercise for the year, Exercise Shot Start. It was during this exercise, that the A1 and A2 Echelons successfully maintained mission essential equipment, setting the Regiment up for a cracking start to 2020, or so we thought. In March, the world as we knew it changed before our eyes, COVID-19 had arrived. As RAEME do best, the Workshop improvised, adapted and overcame the wrath of the pandemic, working on a 50:50 split work rotation plan to ensure the 4th Regiment's equipment was maintained to an incredibly high availability level. 2020 was not lost.

GE (God Section)

2020 started with the posting-in of CPL Lowe, CPL Watson, LCPL Snoeks and CFN McDonald (Metalsmith). They were welcomed with open arms from CPL Fraser who ticked over his 6th (soon to be 7th) consecutive year at the Regiment.

Throughout the year, GE section has completed many challenging tasks, starting with CFN McDonald's job of rebuilding the grandstands located at WONCO NQ for the 4th Regiment's 60th Birthday (which ended up being cancelled due to COVID-19). He completed the grandstands with such skill and precision, it is rumoured that they Photoshop the SUB I CPL courses onto the grandstands to prevent them getting filthy.

The Fitters this year have finally defeated the drawn-out three year battle with Hardened Down Bore Residue (HDBR) that had formed in the M777A2 barrels with the assistance of the Airnesco Bore cleaner. This feat had caught the attention of the brass and even warranted a visit from the Brigade Commander. During the visit from the Brig, CPL Fraser found his true calling as a model/information specialist and local hero (his modelling portfolio can be found on the 3rd Brigade Facebook page).



CPL Lachlan Fraser saves a hedgehog.

CPL Watson (when he isn't piloting planes, scuba diving, crashing drones into Mt Stuart causing bush fires and studying engineering degrees) can mostly be found lurking in the depths of TFTA trying to find an M777A2 to fix. He is the only soldier in 3rd Brigade to have completed more hours at TFTA than on MILIS (avg. 3hrs/week).

LCPL Snoeks has had a busy year conducting re-work and re-inspections of the work conducted by his previous counterparts.

He spends most of his time hiding within the armoury conducting inspections, AKA keeping outside of audio range of CFN McDonalds 'awesome' music/singing.

CPL Dylan Lowe

EIR Section

The year started like any other year for EIR, the air-conditioner set to freezing and all the lights switched off, until the world pandemic hit. The Regiment was at a loss at the thought of losing their hard-working and lively Boffins and Tech Elecs to the enforced COVID-19 work-from-home period. During this time, the EIR team spent their days reviewing Technical Documentation, conducting online courses, and also doing the usual nerdy things, like playing video games, guzzling energy drinks, and slamming down pizzas.

Once the clouds lifted and the sun came out again, the Boffins returned back to their air conditioned office at TST, and hit the ground running by completing BMS upgrades and Technical Inspections. However, most importantly, they assisted the ASM in the rollout of the Mobile Maintenance Devices, which allowed the ASM more time to practice for his new role at McDonalds. It is rumoured that during quiet periods, the words "would you like fries with that?" echo down the Workshop hallways.



Would you like fries with that?

The Tech Elec's after the mandatory quarantining at home, returned back to the workshop floor diligently spent their time conducting maintenance on the regiment's generators, assisting the greasers to conduct auto electrics, air conditioning tasks and most importantly

conducting the regiment's electrical integrity testing throughout the year. The most notable part was when they provided much needed power to the desired TST brew fridge, to boost the morale of the workshop and to fund the ASM Golf Day. This fridge is commonly referred to as the "Transport Section's centre of gravity."

CFN Adrian Wood

Vehicle Section

Despite the unique challenges offered by 2020, the Vehicle Craftsmen of 4 Regiment performed with poise and grace, achieving 100% equipment availability for PMVs within the Regiment – a feat not seen in years. While some may postulate that the lower tempo caused by COVID-19 allowed the Vehicle Section the time they needed to accomplish this, the truth is apparent to anyone who has seen them in action; they completed the task through cunning and daring, years of training and experience, and sheer force of will.

Maintenance support to the entire Regiment was not interrupted by the cold, merciless grasp of COVID-19. In spite of social distancing

requirements, mandatory quarantining at home and the looming threat of experiencing shortness of breath, cold-like symptoms or death, the Mechanics were able to support numerous training exercises and field activities throughout 2020, allowing the 4th Regiment to become certified and join the rest of 3 Brigade in becoming "Ready".

CFN Tim Martin

Despite the friction of the COVID-19 pandemic, the TST of the 4th Regiment, Royal Australian Artillery has had a successful year in 2020, accomplishing 100% PMV availability and ridding the M777A2 barrels of HDBR to achieve 90% availability. These accomplishments have got us all wondering, is there anything that TST cannot do? Stay tuned in 2021.

With the year coming to an end, TST would like to farewell WO2 David Owen (ASM), CPL Daniel Jaynes (EMEOPs) and LCPL Jake Tinnock (EIR). TST would like to thank them for their time within the Regiment.

6th Battalion, The Royal Australian Regiment

Technical Support Platoon CPL A Wendt.

I'm sure everyone can agree 2020 has been a very unique year; this has been no different for Technical Support Platoon (TSP), 6 RAR. The platoon had a turnaround of approximately 15 new personnel posted into the WKSP. This included our new PL SGT and two RAInf OJTs who had seen the light and were in the process of transferring to RAEME.

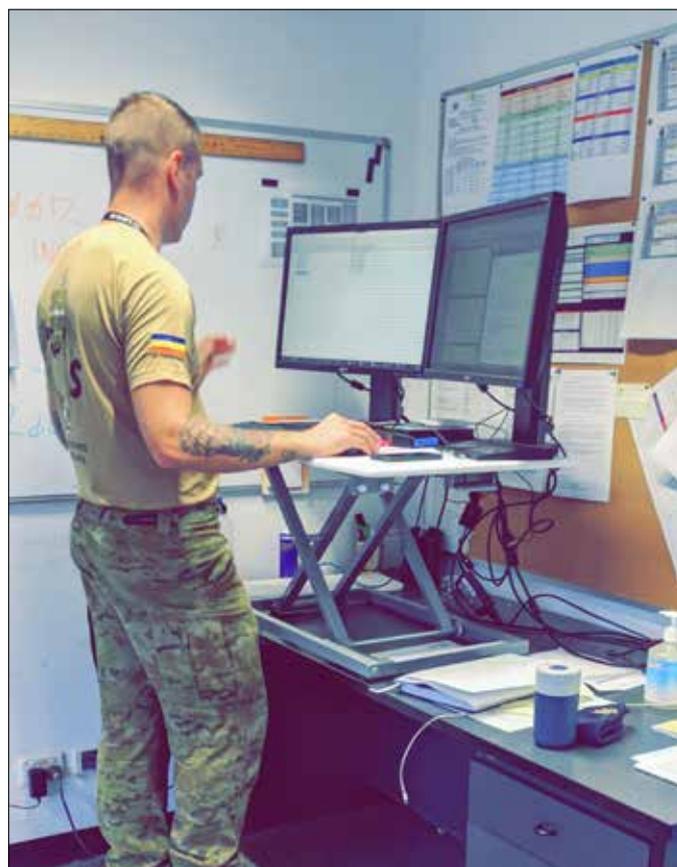
Usually production would be underway early in February in order to prepare for the Battalion CRAWL/WALK exercises in March, but nature had other ideas. The preparation for OP BUSHFIRE ASSIST 20

was quickly underway. Rather than sparks and spanners being thrown around the Workshop, it was DPI checks, RSO&I briefs and vehicle prep, as 80% of the WKSP was assigned to FRTs for the Battalion. Surprisingly, only four WKSP members ended up deploying on the Operation.

On completion of TSP's involvement in OP BUSHFIRE ASSIST 20, the WKSP didn't even have time to unload the FRT vehicles before we were once again called upon to be on a short Notice To Move for OP COVID-19 ASSIST. This meant even more DPI checks,



6 RAR A VEH – CFN H Peardon



6 RAR EMEOPs – CPL B McCarthy

paperwork, everyone's favourite ADELE courses and very, very little production.

Although no TSP members deployed on OP COVID-19 ASSIST, as the pandemic escalated, the WKSP was instructed to go onto a 50/50 roster. Much to the ASM's despair, this meant half our members would come to work, whilst the other half would conduct PME from home, then rotate each week.

Because of the excellent ability of the QLD population in adhering to COVID restrictions, things were back to "normal" after approximately six weeks. Production was in full swing and courses back up and running, albeit most now conducted online. This also saw FRTs called on to support SUBJ 2 CPL RAINF, M1 I3 Drivers Course and Basic Reconnaissance Course to name a few. One of our own elite tradies, CFN Van Zyl from EIR section even managed to be awarded Student of Merit on the 6 RAR M1 I3 Driver's Course.

With training put on a halt for the first half of the year, it was time for the Battalion to head out field to make up for lost time. EX DIAMOND CATALYST 20 would be conducted over the month of October in Shoal Water Bay Training Area. Due to other commitments, the WKSP deployed without the ASM and PL SGT leaving the fate of the lads in the hands of Big Benny (CPL McCarthy).

Following EX DIAMOND CATALYST 20, the WKSP looks forward to winding down on RAEME birthday, ASM's Golf Day/EOY function (hopefully) and farewelling all the members posting out. This year has been one for the books, working from home, minimal field, online promotion/specialist courses and we've even had an AUSTINT PLCOMD come through. As of 07 Sep, TSP had conducted 7181 hr of production.



6 RAR TSP – Thursday Volleyball



6 RAR TSP

TSP Nominal Roll 2020:

PHQ: LT J Compton / LT T Crowhurst, WO2 S Weber (ASM).

EMEOPS: CPL B McCarthy, CFN J McRae.

A VEH: CPL L Keen, CPL R Wiggins, CFN M Bond, CFN A Bush, CFN N Crick, CFN J Lee, CFN H Peardon, CFN D Sarquis, CFN R Smits, CFN N Spann, CFN D Standring.

B VEH: CPL K Smith, LCPL A Moran.

GE: CPL A Wendt, CFN J Hallett, CFN C Hess, CFN H Ikin, CFN J Kent, CFN B Nash, CFN J Panozzo, CFN M Radovich.

EIR: LCPL M Baker, LCPL J Lunn, PTE L Iki (OJT), CFN L Metcalf, CFN J Robinson,

CFN L Stanborough, CFN M Van Zyl.

REC: LCPL D Rogerson, LCPL M Scollen.

RPS: SGT B Johns (PL SGT), CPL J Goodman-Jones, CPL V Hundric, PTE R Dumre,

PTET Emmerton, PTE S McDonald.

Arte et Marte.

9 FSB in 2020 – A year to adapt.

CPL Adrian Hartge

2020 has been an interesting and different year for the world as a whole, and that is no different for 9th Force Support Battalion Workshops. It took two days of 2020 for 9 FSB to be thrown the first curve ball in what would be a tumultuous year. With a little under 12 hours from the initial recall,

9 FSB managed to have an FRT on the road to Sydney to board HMAS Adelaide the next morning to join in the efforts for Op BUSHFIRE ASSIST in the south coast of NSW and a second FRT formed and sent to Puckapunyal. The following week saw another FRT formed to travel to Kangaroo Island in South Australia. These FRTs oversaw the maintenance of a vast fleet of vehicles, not only from 9FSB, but from multiple other units in the area as well as liaising with civilian contractors and businesses to assist in the maintenance of civilian firetrucks and plant equipment. Tech Elecs were sent into smaller isolated communities via road and rotary wing aircraft to provide much needed power supplies to local communities that were affected by the fires. They were also tasked to provide power to field kitchens IOT supply food to emergency services and civilians who had been evacuated. But as is expected of RAEME, we went above and beyond our trade roles to assist the local emergency services and civilian population. Members were also involved in assisting in the recovery of a crashed helicopter from the bottom of a dam.



Ditched Chopper

While bushfires continued, COVID-19 struck, and as a result 9 FSB Workshops formed a further FRT to deploy to assist with Op PINCER on Christmas Island. Here the workshop members were responsible for vehicle maintenance of both military and civilian vehicles, as well as repairs and servicing of greenkeeper tools, mowers and vehicles. Outside their regular job descriptions, workshop members brought out their inner man scaping skills and maintained appropriate lawn care for the facility.

COVID-19 also saw 9 FSB adapt a Force Preservation 50/50 manning schedule which developed a whole new range of challenges. These ranged from people management to facilitate production output and maximise efficiency to developing a range of work from home packages to ensure we were still able to provide an asset to defence.

The Close Maintenance Platoon Amberley (CMP-A) has also had a busy year supporting its dependencies. COVID-19 has provided the

smaller dependencies with an opportunity to allow the CMP to catch up with their maintenance and prepare for upcoming field exercises. This year the CMP has supported 7 SIG Regt more than ever, deploying multiple forward repair teams of all trades, notably GE and VMs. The CMP also took over the maintenance liability for 11 CHC from 7CSSB. CMP has built relationships and a very good rapport, conducting daily maintenance with 11 Close Health Company (11 CHC). The two man GE section has been very busy making ensuring that the armouries of; IMP D Coy, 10 FSB 2pl and 4pl, 11 CHC, 7 SIG and 1 Int BN stay functioning. Recovery section has not had



HRV & Emergency Services at Chopper Site

much opportunity for live recovery but managed to attend a mini recovery camp at WBTA with 6 ESR Rec Mechs. They have been full steam ahead assisting with running courses for 9FSB, conducting unit HOTO and continuing to maintain the small CMP-A fleet. So far this year the CMP-A has completed FRT's from Toowoomba to Wide Bay and the year is surely only going to get busier.

With all of these Domestic operations taking place and requiring a large input from the 9 FSB workshop, as well as seeing multiple members of the workshop depart on FSE-13, 2020 has truly tested both workshop members and their families flexibility to adapt to an everchanging work environment and constant fluctuating roster. We have seen many members separate from defence and are on our second Platoon Commander. Additionally our once favoured Prod Clerk, now Planner, CFN Will Pollard was awarded a Soldiers Medallion for exemplary service. While it may not be a year anyone would like to repeat, it has surely been a valuable one in character building for 9 FSB Workshop.



Home & Dryish

The Pilbara Regiment

2020, what a year to be in regional WA. #WhoisthisCovidfella?

The Pilbara Regt workshops started the year with the following new members:

ASM WO2 Anthony Kuilboer
VM CPL Jason Arnold
Fitter CPL Tobias Stiller
Fitter CFN Allen Blake

With the following only just hanging on from the previous year:

Boffin CPL Joshua Bonanno
VM CPL Steven Morton
VM CFN Johnny Harding
RPS CPL Blake Hodgson (who we share 20-80 with Main Q... Sorry Blake)

After the yearly induction training and the new ASM laying down the law, claiming the workshops as his own, the year kicked off at a run. Within the first weeks cyclone Damien or 'Damo' as the locals called it, decided to drop past in the early weeks of Feb. This was the largest cyclone that The Pilbara and the town of Karratha (where RHQ and OSS are located) had seen in a while. Coming across the coast at Cat 3. This caused production to stop for a week or so as we cleaned up members' homes and backyards, getting some hours up on our personal chainsaws (no course required).



Our little town of Karratha

With the cyclone long gone, and after a quick and long overdue workshop clean up and reshuffle, the yearly FRT's were next on the list. These FRT's are conducted out to the Sqn Depots within The Pilbara Regt. These include the following locations (in FRT order):



Conducting RPC Maintenance in the Archipelago

Exmouth, Carnarvon, Geraldton, Newman, Port Hedland, and Tom Price. There was even a couple trips to Perth to visit 3sqn to TI their weapons and assist JLU-W with Regional Patrol Craft (RPC) maintenance. Suffice to say if you love travelling, and getting the Km's up on the road, The Pilbara is the place for you.

The beauty about being at The Pilbara Regt is that we have access to some of the best locations within Australia. With Exmouth being a tourist hotspot with the Ningaloo reef around the corner, Tom Price being on the door step of the amazing gorges of Karijini National Park, and even our home town of Karratha has some of the best fishing you can find just off the coast in the archipelago. You would be stupid to think that we don't visit these on our FRT's (once the work is done of course).

This year the workshop was lucky enough to even pick up a trip to Broome to assist NORFORCE, as by this time that COVID-19 fella had caused WA to lock down its borders, making travel from the NT impossible.

COVID-19 had little to no effect on The Pilbara Regt with the end of March into April being the only time it had any real impact. With the WA border locked down and the regions closed to unnecessary travel, hardly any COVID cases made it up to Karratha – any that did were quickly shipped back to Perth. This meant that workshop life continued pretty much unchanged into the rest of the year, apart from trying to keep 1.5m away from each other.



Gorges of Karijini National Park



Karijini National Park - Fern Pool

2020 also saw the first time OP RESOLUTE had been conducted on the WA coast since 2016. This saw workshops provide support to two rotations ROT5 and ROT 7. ROT 5 was chosen to be conducted out of Exmouth, which CPL Hodgson deployed as a RPC coxswain, and the FRT made up of CPL Stiller, CFN Blake and CFN Harding provided support. ROT 5 went off without a hitch - apart from one of our RPCs having to get sent to JLU-W for hull repairs. Which allegedly had something to do with bad weather, a LCM-8, and if you ask the reserves 'maybe' a grounding? – Definitely a grounding. ROT 7 was conducted out of Geraldton, seeing CPL Stiller and CFN Harding providing support again. With CPL Stiller shipped off to the Abrolhos Islands with two RPCs, leaving CFN Harding in the Geraldton depot to run amok by himself.

As we draw a close to the year that has been, we are still foot to the floor with the unit running courses, with a large amount of reservist drawn from all over our large patch of turf. Not to mention two of our member moving on to bigger and better things. So farewell to CPL Morton and CPL Bonanno, all the best – even though both are staying on as reserve members, so we haven't fully gotten rid of them yet, bugger... Bring on 2021.

Sadly, CFN Allen Blake passed away unexpectedly on 29 November. Allen had recently transferred from the ARA to the ARes and had taken up employment in the area.



CFN Harding and CPL Stiller



The Abrolhos Islands

51 FNQR Vehicle Section

Wow... 2020 hey.

Well the year started almost like a normal year with most of the Workshop members remaining from 2019 and a couple of new march-ins.

Planning started on our first round of FRTs to our outstations. The VM CPL was tasked to instruct on a G Wagon Drivers course, leaving the only VM Crafty in charge. Which is nothing new to the manning restrictions within the unit.

And then the plague happened.

While the workshop as a whole were providing support to OP COVID19 through manning, Convoy FRTs and meal runs, 'normal' work didn't slow down due to the higher demands of vehicle support and Op Res. On top of this the units SRV fleet were getting a COMMS upgrade and all the other OEM work required to the G Wagon FOV. All of this required an increased reliance on the reserve members of our workshop.

51 FNQR Workshop had a ring in from 5 AVN, who was 'stranded' in our region due to COVID travel restrictions, the member was a welcome addition as things were becoming a little desperate manning wise.

Half way through the initial wave, the workshop was requested to provide a Close FRT out to Mount Isa as support to their police checkpoints and increased vehicle movements through their AO. This saw members sent to live and work out at the Mount Isa depot for 4 weeks at a time, and conduct maintenance on the vehicles and equipment, which was good as it allowed the equipment to get some much needed love that it may not get otherwise. This FRT was cancelled after approximately 3 months as the police checkpoints then became stationary and vehicle movement slowed to fortnightly resupply runs.

This eased the burden on the members back at Porton Barracks with regards to the local FRT and convoy FRT requirements.

And just for fun, we get to have an ACAU audit in the last quarter of the year while conducting FRT's at Mount Isa and Weipa.

This has been a very demanding year so far and the members of the workshop have conducted themselves in such a manner that is expected of any crafty, providing support, respect and a capability that has been integral to the unit's war on Covid.

Arte' et Marte'.



FRT in the Far North

RAEME Corps Awards 2020

The Corps Awards are an annual presentation to the best ARA and ARes Craftsman, both nationally and regionally, as well as to the best students on the Logistic Officer's Basic Course, Subject Two for Sergeant and Warrant Officer and Subject Four for Sergeant and Warrant Officer.

The following personnel have been awarded the 2020 Corps Awards.

Junior Regimental Award (Sub 2 SGT)

CPL B.Z. Bolwell, 1 RTB

BRIG Martins Award (Sub 4 SGT)

CPL I. George, HQ FORCOMD

Regimental Award (WOLOG)

LT J.W. Nicholas, 10 FSB

Artificers Award (Sub 4 WO)

WO2 D. Waugh, RAMS

LT Peter Jennings Award (LOBC)

LTT. Crowhurst, 6 RAR

2020 Craftsman of the Year (COTY) Recipients

National CFN of the Year

ARA - 1 CER CFN N Smith
ARes - 4 CSSB CFN S Ponomarev

Regional CFN of the Year

Vic/Tas Region
ARA - 4 CSSB CFN C Ward

Nominee awarded national CoTY

Central Region
ARA - 7 RAR LCPL J Brierton
ARes - Nil Noms

Western Region
ARA - Nil Noms
ARes - Nil Noms

Northern Region
ARA - NORFORCE CFN A Geaney
ARes - Nil Noms

NSW Region
ARA - Nil Noms
ARes - Nil Noms

South Queensland Region
ARA - 6 RAR CFN H Peardon
ARes - Nil Noms

North Queensland Region
ARA - 3 CSR CFN A Searle

National ARA



National COTY CFN Ned Smith with CO ICSSB LTCOL K Wright



National COTY CFN Ned Smith with CO ICER LTCOL S Jamieson



National COTY CFN Ned Smith with OC 101 WKSP Coy MAJA Cadona



National COTY CFN Ned Smith with ASM ICER WO1 J Donnelly

NTH QLD ARA



Maj Pontifex presenting CFN Ashton Searle (3CSR) NQ COTY Award

SA ARA



CFN Jonathon Brierton (7RAR) SA COTY. CFN Brierton was promoted to LCPL after receiving this award.

SE QLD ARA



CFN Hayden Peardon accepts the COTY SE QLD award from Commander 7 Brigade, BRIG Jason Blair.

CPL Nathan Reinbott - Australian Army

Commendation - Bronze.

CO 11 CSSB and the RSM presented CPL Nathan Reinbott an Australian Army Commendation - Bronze.

CPL Reinbott is the EIR CPL with only SGT Weir (VM SGT) and SGT Cassidy (GE) making up the ARA Staff within the SE QLD WKSP's. All members were posted in fresh this year.

To start the year off CPL Reinbott helped get everything ready for OP Bushfire Assist and ran three MILIS work groups (VM, EIR, Boffin) whilst SGT Weir was away.

CPL Reinbott was tasked with running all work groups whilst Sgt Weir was absent for 3 months with surgery and SGT Cassidy was on Long Service Leave for 6weeks.

At the same time CPL Reinbott was also hit with the unit/WKSP's to support OP Border Assist JTG (COVID 19). As a result CPL Reinbott had to organise or liaise with dependant units.

- WKSP Manning - Part Time Members.
- BFA's, and all things AIRN.
- Vehicles, JLU, Outstations, internal FRT support.
- RPS.
- Handing back of the Legacy FOV.
- Start the integration of 40 & 77's into 11BDE.
- Organise and conduct a RAEME Induction CSE.
- Maintain four MILIS work groups and run the WKSP's. and
- Be the shop front of all things WKSP's.

On his return to work SGT Weir put CPL Reinbott forward for the Commendation as recognition of his hard work.

CPL Reinbott also received a Citation for OP Fire Assist.

CPL Reinbott has indicated that his time maybe up next year and for him to move on to greener fields. RAEME will lose another soldier who has the smarts to be a bloody great WO1 one day.



2020 7 RAR (SA) COVID RAEME Birthday

The 7RAR Workshop lads have had a full on past 13 months. There were very few members in the Platoon when the ASM first arrived as most of the Wksp were deployed of Operation Bush fire Assist. We eventually got them all back in dribs and drabs.

Then COVID hit, and that sent the Unit into a 50/50 Wksp split, all in all while the RSM 7RAR had us doing infantry minor tactics with the rest of the Unit. Once that finished up, restriction in SA had calmed down and we were allowed to commence some forms of Military training which lead us to prepare for an ICCC at Cultana. We spent a few weeks up there assisting with that course and conducting some CSS training ourselves. Following that we went into a CO's HOTO and close down for the year.

1 Armd Regt were supposed to run the RAEME Birthday this year; however, a spike in COVID in SA saw that cancelled. Our numbers for social gatherings were limited and the OC CSST was keen to organise a small gathering of both our Wksp's but once again COVID said no, so the lads from 7RAR Wksp decided to have our own. We brought a cake, some stubbie coolers and had our own RAEME birthday celebrations.

We lost a handful of great Wksp personnel this year due to postings; however, we are all looking forward to some new faces next year to add to our great family.



7 RAR RAEME Birthday Cake



CFN Burns cutting the 7RAR RAEME Birthday cake



7RAR TSP under CFN Osbourne's RAEME Sign

2020 SE Queensland RAEME Birthday



SEQ Units duck into the first corner of the billy cart race.



SE QLD OJTs take on 7 CSSB.



2/14 LHR narrowly beating 7 CSSB on the second last corner of the billy cart race



CFN Michael Bond From 6 RAR screams instructions at his team during SE QLD RAEME Birthday Tug of War competition.



2/14 LHR winning the Billy Cart Race



CFN Mathew Taylor from 1 Sig



The 2/14 LHR Billy Cart Race Winning Team



LT Jacob Duchesne from 7 CSSB takes part in one of the interactive displays



LCPL Thomas Hamelink from 1 Sig



Col Evans talks to Maj Angela Langdon (OC of 106 FD WKSP) and Darius Naruto from 7 CSSB.



Craftsman of the year Craftsman Hayden Peardon 6 RAR cutting the cake with Commander 7 Brigade, BRIG Jason Blair



CFN Harper 7 CSSB accepting RAEME Birthday Overall Trophy: CFN Alex Harper accepting the days overall winning unit award on behalf of 7 CSSB.

2020 North Queensland RAEME Birthday



Winner of the Spanner Throw | RAR - PTE Nathan Ashton-Brien (soon to be a Tech Elec)



Golf Champions ASEME (WO2 Mick Riley, CFN Samuel Ryann-Winn, CFN Thomas Eather and CFN Mitchell Gunn)



Aug-O-War Champions 3 RAR (CFN Bell, CFN Gadsden, CPL Ratcliffe (Team Captain), CFN Burnet (lying down), CFN Nicholson, CPL McManus, CFN Rival, CPL Brigden)



WO1 Writer watching CFN Jake Sommerlad (Youngest soldier in 3 Bde - 3 RAR) cutting the cake with MAJ Pontifex

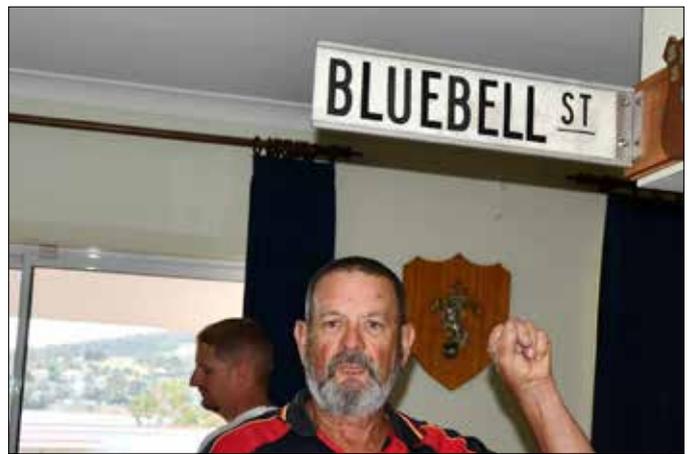


RAEME Birthday Cake donated by the RAEME Association

2020 Tasmania RAEME Birthday



Cutting the Tasmania RAEME Birthday Cake



Vale 8586958 Craftsman Matthew Amos Harrison

8586958 CFN Matthew Amos Harrison born the 3rd of January 1990 in Cairns, Queensland, passed away on the 8th of September 2020 after a battle with mouth and throat cancer. He served his time with the sort of dignity, integrity and compassion that set him apart from his peers and ensured that he will be remembered.

CFN Harrison enlisted into the Australian Regular Army on the 7th of May 2012 from where he completed his recruit course in July of that same year, prior to commencing his Initial Employment Training out of the School of Electrical and Mechanical Engineers, as an Electrical Technician. He successfully completed his apprenticeship and saw postings across Townsville – firstly, at the 5th Aviation Regiment in November 2015 and then with the 3rd Combat Service Support Battalion in 2018. CFN Harrison's final posting was with the 3rd Combat Engineer Regiment in January 2019.

CFN Harrison saw operational service in support of Operation Queensland Assist 2017, supporting the whole of government response to Cyclone Debbie. His service has been recognised with the Australian Defence Medal and the National Emergency Medal.

A celebration and remembrance service was held on the 18th of September 2020. He leaves behind his devoted wife Rebecca. He was an excellent soldier and man who will always be remembered.

Lest we forget.



Matthew and Rebecca



Guard of Honour for Craftsman Matthew Amos Harrison



Matthew and his pup

Vale 8573381 Lance Corporal Cody Allen Langham

Cody enlisted into the Australian Regular Army on the 18 Jan 2011. After completing Recruit Training in Wagga Wagga he was allocated to the corps of the Royal Australian Electrical and Mechanical Engineers and embarked on a traineeship at Bandiana to become a Vehicle Mechanic.

Cody completed his 12 month On the Job training in Townsville in 2013 where he received a Certificate 3 in Heavy Vehicle Mechanical Technology. He remained in this location to take up his first posting as a qualified Vehicle Mechanic at the 2nd Battalion, Royal Australian Regiment.

In 2017 Cody was posted to Brisbane and the 7th Combat Service Support Battalion, 106 Field Workshop, where he was promoted to LCPL. Cody was initially in B Vehicle Platoon and would later become an integral and valued member of EME Operations.

Cody was chosen on merit to deploy on operations to Afghanistan in 2019 and earlier this year to Victoria as part of Operation Bushfire Assist, to help his fellow countrymen.

Cody has received the following honours and awards

- The Australian defence Medal in 2015
- The Operational Service Badge 2019
- Australian Operational Service Medal – Greater Middle East Operation 2019
- NATO Non Article 5 Medal with Clasp Afghanistan 2019.

Cody was an approachable, professional and possessed intelligence beyond his years. He had a big heart and an even bigger smile. He will be forever missed and hold a special place within the RAEME family and our hearts.

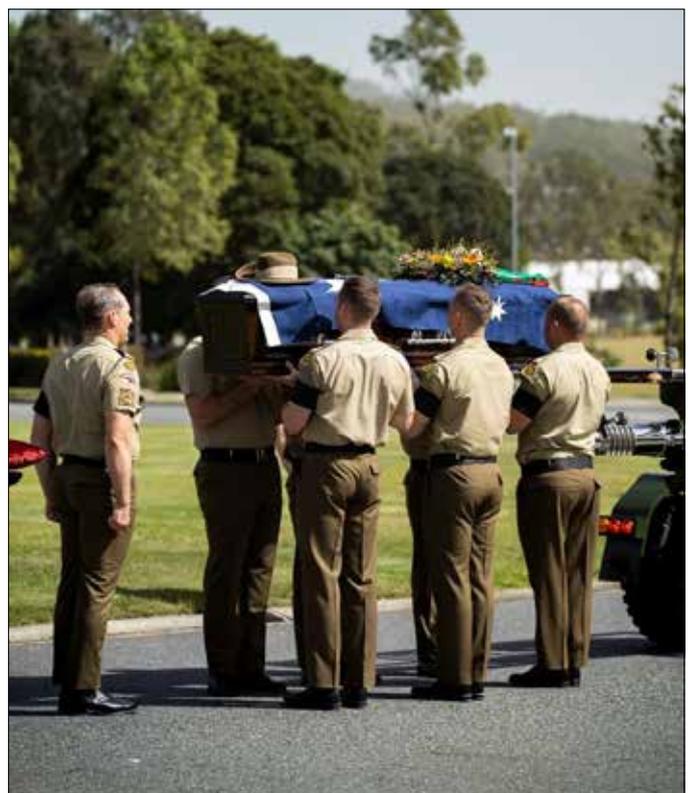
ARTE et MARTE



LCPL Cody Langham



LCPL Langham and pallbearers



LCPL Langham and pallbearers



Vale MAJOR Keith Chambers

20 Dec 1963 – 05 Oct 2020

Vehicle Mechanic/RAEME Officer

2020 has seen the passing of one of our Corps stalwarts, with MAJ Keith (Chas) Chambers losing his battle with pancreatic cancer just a short eight weeks after diagnosis.

Keith was born on the 20 Dec 63, his father Keith, mother Lesley and his brother and sisters, Doug, Susie and Julie were all brought up in Brighton, Melbourne. During his High School years he was an Army Cadet, which on reflection, is where he got the bug to join the Australian Army.

Keith enlisted into the Army Reserve in May 1981 and on 25 July 1984 he transferred into the Australian Regular Army. After recruit training he was allocated to the Royal Australian Corps of Transport. After completing Initial Employment Training, he was posted to the 9th Transport Squadron as a driver. Keith had completed his trade as a Mechanic prior to enlistment, so it wasn't long before he saw the light and Corps transferred to RAEME. He then completed gap training at RAEME Training Centre to become fully qualified as a Vehicle Mechanic within Army.

Keith was a dedicated soldier and officer whose career spanned just short of 40 years. He had a diverse range of postings which included: 2 nd/4th Battalion Royal Australian Regiment, 102 Field Workshop, 1st Recruit Training Battalion, Brigade Admin Support Company Townsville, 3rd Brigade Administrative Support Battalion, 21st Construction Squadron, Headquarters 4th Brigade, 3rd Combat Engineer Regiment, Land Systems Branch, 4th Field Regiment, Headquarters 3rd Brigade, 10th Force Support Battalion, and 5th Aviation Regiment.

Keith was promoted to LCPL in May 1989, CPL in February 1990, SGT in April 1995, WO2 in January 1999 and WO1 in January 2003. He was commissioned to CAPT in January 2005 and promoted to MAJ in January 2011, a rank he held until his passing. He saw operational service on several occasions which included East Timor 1999 – 2000; and three times to Afghanistan during the periods 2006 – 07, and 2012 – 14. Keith was presented with the Meritorious Unit Citation – 5th Aviation Regiment – East Timor 1999 to 2002, Afghanistan 2006 to 2007.

Throughout his military career Keith demonstrated exceptional leadership, attention to detail, a fastidious approach to his work and a thirst for knowledge. He worked hard and gained a Graduate Certificate in Management at Monash University in July 2003 and a



Sub 1 WO with all the RAEME students (1998)

Bachelor of Management and Professional Studies at Southern Cross University in March 2006. Keith was a highly intelligent, motivated and methodical officer who was always loyal to the organisation and could be trusted to deliver superior outcomes. He always made himself available to support and guide others and there are many stories on how he has influenced people through the use of soft skills and always being there to support others. Keith had a cheeky grin, a wicked sense of humour and was always loyal to his close friends and family. A great person to be around and have a beer with.

Keith had a love for getting away to exotic locations as often as possible and posted to Townsville he was quickly drawn to the lifestyle of Magnetic Island where he purchased one of his first properties (Tree Tops). Shortly after he met his life companion Joanne and they married on 30 December 1998. The family grew with the arrival of two daughters, Emily and Elise, who became their focus and the girls developed into mature young ladies, excelling at school and music. The family spent every moment they could enjoying the serenity of Magnetic Island, a place he called 'Paradise'. Keith became president of the Magnetic Island RSL Sub Branch and would often be seen proudly wearing his tropical shirt in and around Townsville. Keith, Joanne and the girls enjoyed numerous family holidays and travelled extensively around the world. This was a family passion and it brought so much joy and happiness to them all.

Keith's funeral was conducted with full military honours by his last posted unit, 5th Aviation Regiment, at Woongarra Crematorium, Townsville with a guard of honour and a fly-past of two MRH 90 Taipan helicopters and a CH47 Chinook.

Keith leaves behind his wife Joanne, daughters Emily and Elise, a large loving family and many hundreds in the Corps lucky enough to call Keith their mate.

MAJ Keith Chambers - Arte et Marte



Keith and his girls

2019

October

Bob Billet

December

Stephen Chapman

2020

January

Anthony 'Tony' Warthold

Kym Whalley

February

Shane Phelps

Father Vincent "Kelly" Frawley

Ray Eacott

March

Alfred 'Ajj' Lee

Harry Lawrence 'Tiny' Brierly

Peter Lindeblad

Stephen "Stretch" Hazell

April

Angus "Gus" Fraser

Peter "Mo" Larard

Kevin Francis Forster

Kim Griffen

Kevin McSween

Brian Richard Windsor

May

Maxwell Simmons

Ronald Irwin

Raymond John McIntosh

Gary Stobie

Lindsay John Millar

June

"Bluey" McAndrew

Laurie Kipping

Paul Rushbrooke

Geoff Parker

Brett Sale

July

Brett Perrin

Ernest Fredrick 'Jim' Morse

August

Cody Langham

Francis "Frank" Benfield OAM

September

Kevin Riley

Mathew Amos Harrison

Gus Allen

Donald Wallace McLeod

October

Keith 'Chaz' Chambers

Bruce Anthony Holt

Doug Jones

John Joseph 'Lurch' McKey

Adrian Mark Blacker

November

Peter John 'Moo' Bull

Wally Swingler

Leo Edward Manser (AEME)

Allen Blake

December

Sandy Lloyd

'Arte et Marte'

Your Corps thanks you for your service.

'REST IN PEACE'

Editor's Note: Our apologies for any inaccuracies or omissions. Vale notices are compiled based on emails sent to the RAEME HOC Cell, entries on the RAEME Association websites, and posts to the 'RAEME' and 'RAEME Mates' Facebook groups. As such the details supplied vary greatly.

